



MAPPING 2045

Metropolitan Area Planning and Programming: An Innovative Network Guide

Approved by the Saint Cloud APO Policy Board
October 30, 2019

Saint Cloud Area
Planning Organization
1040 County Road 4
Saint Cloud, MN 56303-0643



Resolution 2019-14

OF THE SAINT CLOUD AREA PLANNING ORGANIZATION

Approval of the Metropolitan Transportation Plan for 2045

WHEREAS; pursuant to Title 23 United States Code Sections 134 (a) and (g), the Saint Cloud Area Planning Organization (APO) has been designated by the State of Minnesota as the official Metropolitan Planning Organization (MPO) for the greater Saint Cloud metropolitan area; and

WHEREAS; Title 23, Part 450 and Title 49 of the Code of Federal Regulations (CFR) require the APO to prepare and update the Metropolitan Transportation Plan (MTP) at least every five years; and

WHEREAS; the APO has, through a continuing, comprehensive, and coordinated transportation planning process, worked with its member jurisdictions and agencies in preparing the MTP for planning-horizon-year 2045; and

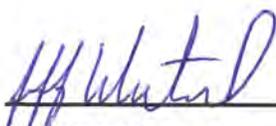
WHEREAS; the APO Policy Board does find that the 2045 MTP meets all federal requirements for process and content; and

WHEREAS; the staff of the APO executed a robust and comprehensive public-input process to solicit, document, and explicitly consider public comments regarding transportation issues, opportunities, and content of the draft 2045 MTP; and

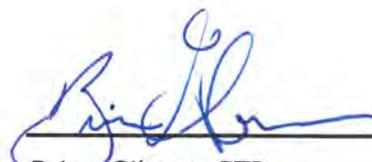
NOW, THEREFORE, BE IT RESOLVED, that the Policy Board of the APO approves and adopts the 2045 Metropolitan Transportation Plan titled "Metropolitan Area Planning and Programming: An Innovative Network Guide".

Adopted by the Saint Cloud Area Planning Organization Policy Board October 30, 2019.

ATTEST:



Jeff Westerlund
Saint Cloud APO Chair
October 30, 2019



Brian Gibson, PTP
St. Cloud APO Executive Director
October 30, 2019

DISCLAIMER

The preparation of this document was funded in part by the United States Department of Transportation with funding administered through the Minnesota Department of Transportation, the Federal Highway Administration, and the Federal Transit Administration. Additional funding was provided locally by the member jurisdictions of the Saint Cloud Area Planning Organization: Benton County, Sherburne County, Stearns County, City of Sartell, City of Sauk Rapids, City of Saint Cloud, City of Saint Joseph, City of Waite Park, and LeSauk Township. The United States Government and the State of Minnesota assume no liability for the contents or use thereof.

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The contents of this document reflect the views of the authors, who are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the policies of the State and Federal departments of transportation.

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GLOSSARY OF TERMS

AADT - Annual Average Daily Traffic: An estimate of the total number of vehicles using a specific segment of roadway (in both directions) on any given day of the year. This estimate represents the total number of cars per year divided by 365 and is developed using traffic counts (usually 48 hours in length), factors to adjust for season, day of the week, and vehicle type.

ADT - Average Daily Traffic: A measured or counted 24-hour traffic volume; often it is the average of two consecutive 24-hour traffic counts.

CB - Commuter Bus: Fixed-route bus systems that primarily connect outlying areas with a central city or urban core. Service is typically provided predominantly in one direction during peak periods with limited stops and routes of extended length.

DAR - Dial-A-Ride: Shared-ride transportation service operating over regular streets and roads, but not according to fixed routes or time schedules. Commonly called "paratransit" service.

EJ - Environmental Justice: Identifying and addressing disproportionately high and adverse impacts of programs, policies, and activities on minority populations and low-income populations to achieve an equitable distribution of benefits and burdens.

FR - Fixed-Route: A transit bus that operates at predictable locations on a predictable schedule.

MPA - Metropolitan Planning Area: The geographic area over which an MPO exercises planning authority and which must include the Census-defined Urban Area, plus other urban and urbanizing areas as agreed to by the MPO's Board.

MPO - Metropolitan Planning Organization: A federally required regional transportation planning body.

MTP - Metropolitan Transportation Plan: The long-range surface transportation plan for all cities and jurisdictions within an urban area.

NHS - National Highway System: This network consists of roadways important to the nation's economy; defense; and mobility; including Interstate Highways, Principal Arterials, Strategic Highway Network (STRAHNET) roads, major strategic highway network connectors, and highways between major intermodal facilities and the other four subsystems.

PMT - Passenger Miles Traveled: The total number of miles traveled by all transit passengers during a fiscal year.

BRT - Bus Rapid Transit: High-quality, fixed-route bus systems that combine passenger stations, dedicated bus-only traffic lanes, off-board fare collection, traffic signal priority or

pre-emption, low-floor vehicles or level-platform boarding, and separate branding of the service.

SEP – Stakeholder Engagement Plan: The document developed and maintained by the Saint Cloud Area Planning Organization which defines the minimum public engagement activities that shall be completed during the development of the MTP and TIP.

SGR - State of Good Repair: A condition in which a capital asset (for example, a bus) does not exceed its useful life, is in good physical condition, and can safely achieve its performance goals.

TIP – Transportation Improvement Program: A document that programs Federal funding for specific surface transportation projects within a metropolitan planning area. TIPs typically cover a four-year timespan of funding, but are updated annually.

ULB - Useful Life Benchmark: The expected lifecycle of a capital asset or the acceptable period of time in service for a particular asset.

UPT - Unlinked Passenger Trips: The number of system-wide boarding's on transit vehicles over a stated time period.

UPWP – Unified Planning Work Program: A document that identifies the planning projects and work activities of an MPO. UPWPs are also the annual budget document of an MPO.

VOMS - Vehicle Operated in Maximum Service: The number of vehicles operated in peak scheduled service by the transit system.

VRM - Vehicle Revenue Miles: The number of miles traveled by all transit vehicles in revenue service, usually reported as an annual number.

VRH - Vehicle Revenue Hours: The number of hours operated by all transit vehicles in revenue service, usually reported as an annual number.

CHAPTER 1 : INTRODUCTION TO MAPPING 2045

This document updates and supersedes the Saint Cloud Area Planning Organization's (APO's) Long-Range Transportation Plan 2040, initially adopted in October 2014.

PURPOSE OF THE METROPOLITAN TRANSPORTATION PLAN

A Metropolitan Transportation Plan (MTP) is a long-range, multimodal, regional surface transportation plan that identifies a regional vision for transportation and the steps toward achieving that vision.

Metropolitan Planning and Programming: An Innovative Network Guide for 2045 – or MAPPING 2045 – **serves as the APO's MTP.**

By Federal regulation, MTPs must have a planning horizon of at least 20 years, and must be updated no less than every five years (or every four years if the region does not meet certain air quality standards).

MTPs are a joint product of all individual jurisdictions within a metropolitan planning area (MPA), and so represent a singular agreed-to vision for the future of transportation within that region. Goals and objectives are defined for the transportation system, as well as individual strategies, policies, and transportation projects to help achieve those goals and objectives.

At a minimum, components of an MTP must include:

1. The projected transportation demand of persons and goods in the MPA over the period of the transportation plan.
2. Existing and proposed transportation facilities (including major roadways, transit, multimodal and intermodal facilities, pedestrian walkways and bicycle facilities, and intermodal connectors) that should function as an integrated metropolitan transportation system giving emphasis to those facilities that serve important national and regional transportation functions of the period of the transportation plan.
3. Operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods.
4. Consideration of the results of the congestion management process in transportation management areas (TMAs). TMAs are urbanized areas with populations greater than 200,000 as determined by the census. The APO is not a TMA.
5. Assessment of capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure and provide for multimodal capacity increases based on regional priorities and needs. A transportation project listed in the MTP is eligible for Federal transportation funding.
6. Design concept and design scope descriptions of all existing and proposed transportation facilities in sufficient detail, regardless of funding source.

7. A discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan.
8. Pedestrian walkway and bicycle transportation facilities.
9. Transportation and transit enhancement activities as appropriate.
10. A financial plan that demonstrates how the adopted transportation plan can be implemented. Cost estimates for future projects are developed and compared to funding sources that are reasonably expected to be available.

The MTP is multimodal, and it includes an analysis of the transportation networks individually and as a whole, including roadways, public transit, bicycle and pedestrian networks, and freight systems. Overall, the MTP is a regional plan that defines the course for future transportation investments.

METROPOLITAN PLANNING PROCESS

Metropolitan transportation planning is the process of examining travel and transportation issues and needs in MPAs. It explores connections between mobility, multimodal transportation systems, environmental conditions, land use, economic development, safety, and security. It includes a demographic analysis of the community, as well as an examination of travel patterns and trends. The planning process also includes an analysis of alternatives to meet projected future demands; and for providing a safe and efficient transportation system that meets mobility needs all while not creating adverse environmental impacts. In metropolitan areas over 50,000 residents, the responsibility for transportation planning lies with the designated Metropolitan Planning Organization (MPO), which uses the 3-C planning process (i.e., Comprehensive, Cooperative, and Continuing) when developing the MTP¹.

In addition to carrying out the 3-C planning process and maintaining the MTP, MPOs are responsible for other requirements such as: public engagement; project selection and alternative evaluation within the planning area; soliciting, prioritizing, and developing a four-year Transportation Improvement Program (TIP); and developing an annual Unified Planning Work Program (UPWP).

MPO BACKGROUND AND LEGISLATION

The Federal Aid Highway Acts of 1962 and 1973 required urbanized areas with a population of at least 50,000 people to identify an MPO to carry out the 3-C planning process. By coordinating with all jurisdictions within an urban area and achieving consensus on a shared vision for transportation, MPOs help minimize conflicts and transportation project delays.

¹ See 23 USC Section 134 and 23 CFR 450 Subpart C for more details

The current surface transportation act, signed into law on Dec. 4, 2015 is the Fixing **America's Surface Transportation Act (FAST)**. The **Fast Act** builds on previous surface transportation acts:

1. Intermodal Surface Transportation Efficiency Act (ISTEA), 1991
2. Transportation Equity Act for the 21st Century (TEA-21), 1998
3. Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), 2005
4. Moving Ahead for Progress in the 21st Century Act, (MAP-21) 2012

ISTEA increased the profile of **transportation's comprehensive value, MPO funding, funding flexibility, and MPO requirements**. The subsequent legislation, TEA-21, continued to balance investments in highways, transit, intermodal projects, and technologies. SAFETEA-LU continued a strong emphasis on safety, equity, innovative finance, congestion relief, mobility and productivity, efficiency, environmental stewardship, and environmental streamlining. MAP-21 enhanced performance-based and multimodal transportation planning and implementation. The FAST Act continues to build on the streamlined and performance-based surface transportation programs and builds on many of the highway, transit, bike, and pedestrian programs and policies established back in 1991.

FEDERAL PLANNING FACTORS

The following Federal planning factors must be considered in the development of the MTP:

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

Consistency between these planning factors and the projects identified in this plan are listed on their respective project pages found within Chapter 9 of this plan. In addition, consistency between these factors and the non-project strategies identified in this plan can be found in Chapter 11.

SAINT CLOUD APO ORGANIZATIONAL STRUCTURE

The Saint Cloud APO is the federally recognized MPO for the Saint Cloud urban area. It originated in 1964 with an agreement between Saint Cloud Township and the City of Saint Cloud to establish a metropolitan development committee. Under the consideration of the transportation planning requirements in the Act of 1962, the committee formalized the APO through a Joint Powers Agreement adopted on May 12, 1966.

The APO is an association of townships, cities, and counties in the Saint Cloud urban area. The decision-making body of the APO is the Policy Board, which is comprised of elected officials from nine local government jurisdictions, as well as a representative from the Saint Cloud Metropolitan Transit Commission, better known as Metro Bus. Local government membership is comprised of three counties (Benton, Sherburne, and Stearns), five cities (Saint Cloud, Saint Joseph, Sartell, Sauk Rapids, and Waite Park), and one township (LeSauk). The Townships of Brockway, Haven, Minden, Saint Joseph, Saint Wendel, Sauk Rapids, and Watab as well as the cities of Saint Augusta, Rockville, and Saint Stephen are located within the designated APO planning boundary, but choose not to participate as voting members on the APO Policy Board. Instead, those jurisdictions are represented through their respective counties. The Policy Board is responsible for adopting regional transportation plans, projects, and policies. All members of the Policy Board are represented by a single voting seat, except for the City of Saint Cloud, which has three.

The APO organizational structure includes a Technical Advisory Committee (TAC) and the Active Transportation Advisory Committee (ATAC). Ad hoc committees are developed for project or study specific advisory purposes. TAC membership includes engineers, planners, and staff from 11 area agencies and jurisdictions who make technical recommendations to APO staff, and to the Policy Board.

The ATAC, which is a subcommittee of the TAC, is a citizen and staff group. The ATAC does not have a formal membership, but averages about 10 to 12 individuals at each meeting. The group meets tri-annually to discuss active transportation (i.e., bicycle, pedestrian, and other non-motorized means of transportation) goals, objectives, issues, and events. ATAC discussion items are reported to the TAC. All meetings for APO boards and committees are open to the public.

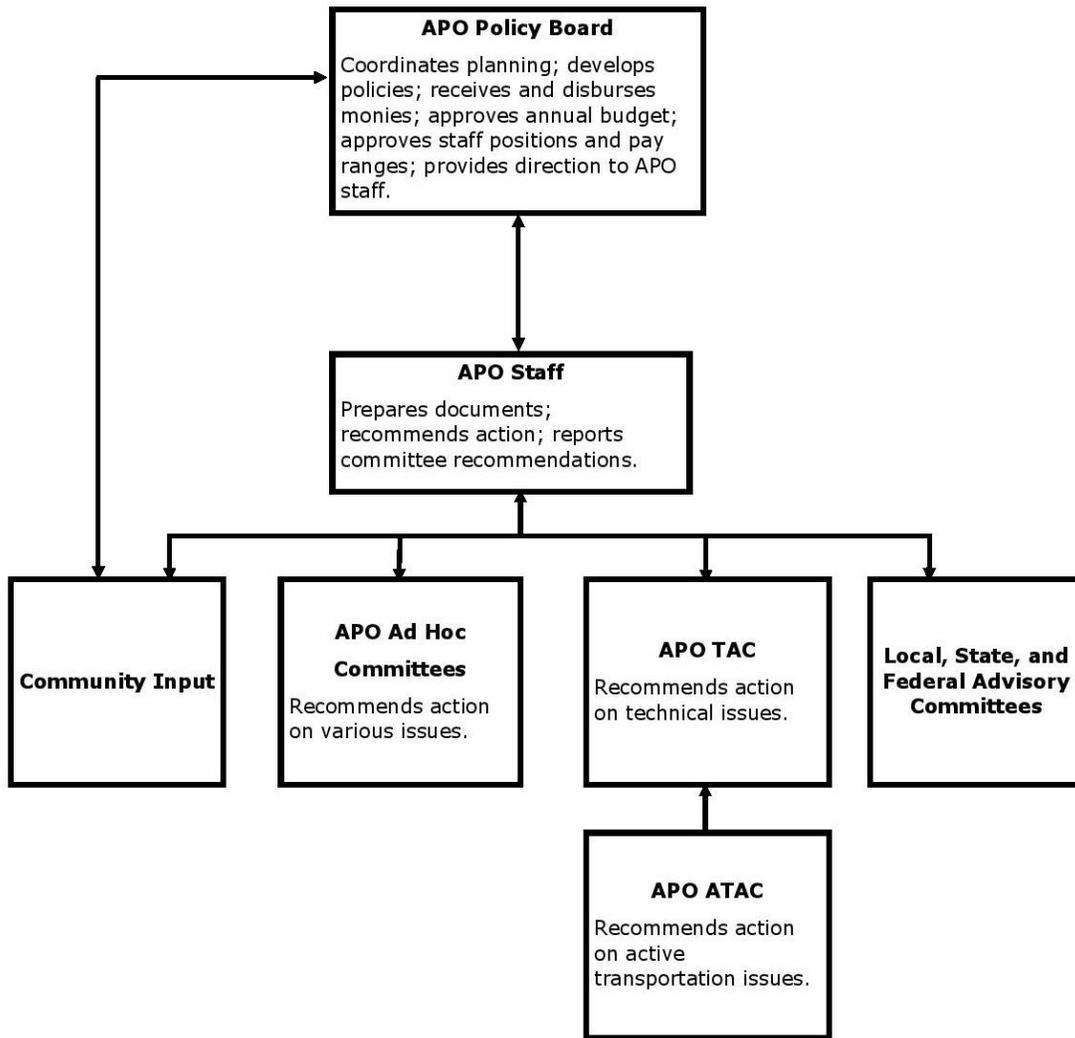


FIGURE 1.1 – APO ORGANIZATIONAL STRUCTURE

The APO has six Board-approved staff positions, but as of the publishing of this document it employs only four full-time staff members and one part-time employee. The mission statement of the APO is as follows:

"The APO is committed to coordinated planning – in a fair and mutually beneficial manner – on select issues transcending jurisdictional boundaries for the betterment of the entire Saint Cloud Metropolitan Planning Area. This mission is accomplished through professional planning initiatives, the provision of objective information, and building collaborative partnerships that foster consensus."

METROPOLITAN PLANNING AREA (MPA)

The Saint Cloud urban area is designated by the U.S. Census Bureau every decennial census year. Criteria for defining this urban area is largely based on population density. The APO Policy Board then reviews the census-defined urban area and adds in additional urban and urbanizing areas to create the Metropolitan Planning Area (MPA).

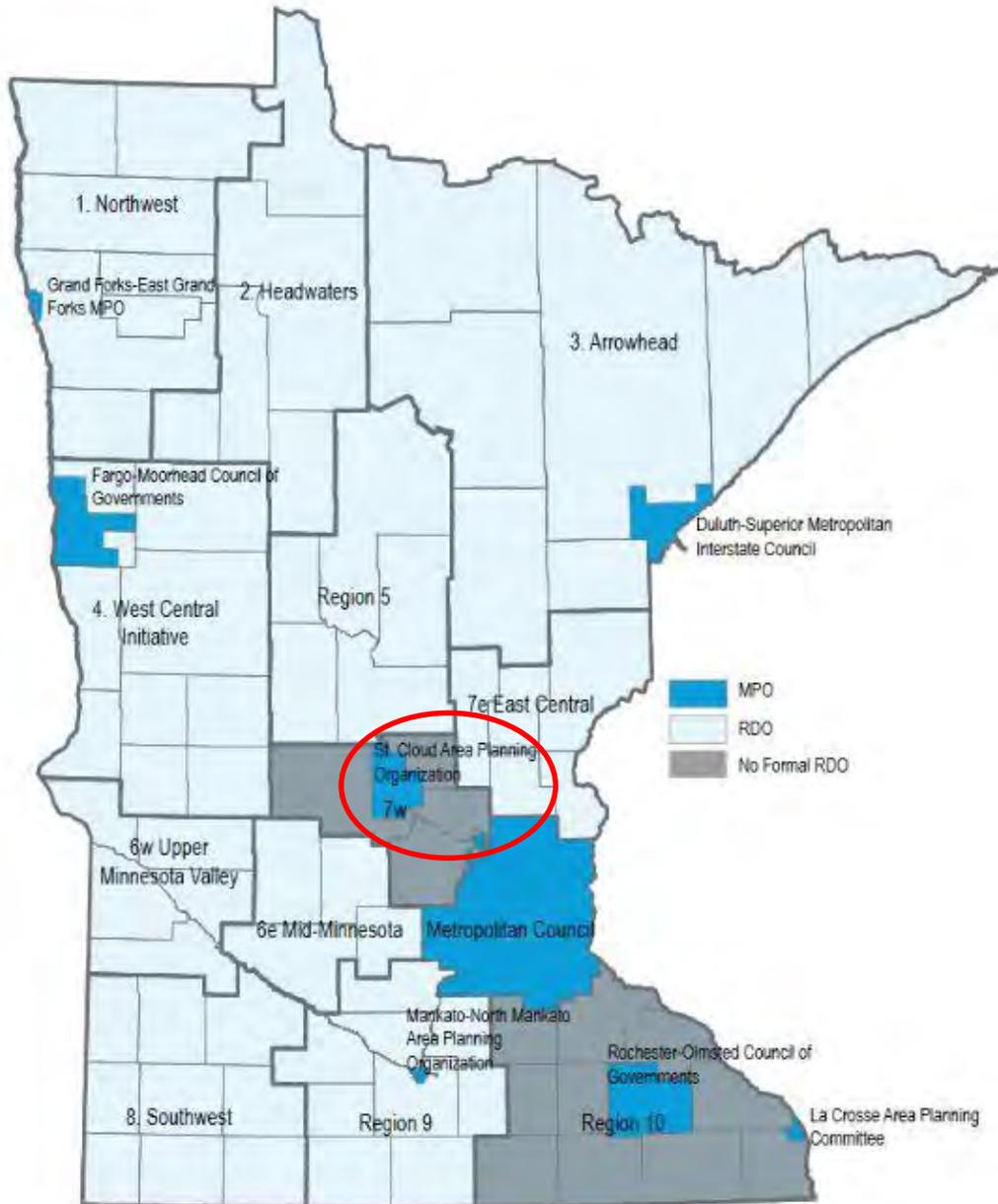


FIGURE 1.2 – LOCATION OF SAINT CLOUD APO WITHIN THE STATE OF MINNESOTA

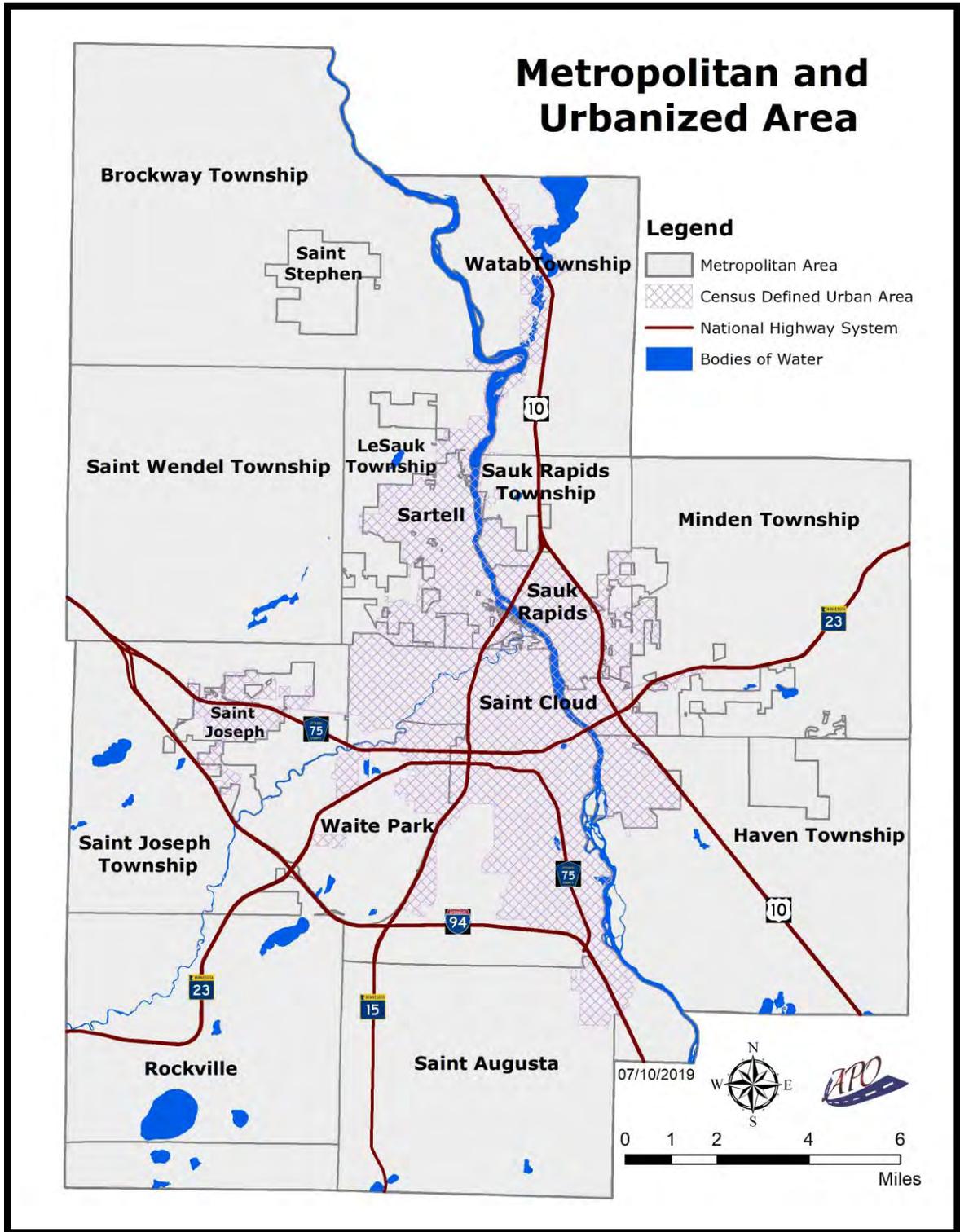


FIGURE 1.3 – SAINT CLOUD APO MPA

IDENTIFYING STAKEHOLDERS & INVOLVING THE PUBLIC

Stakeholders for the MTP include agencies, organizations, and persons with a vested interest in the regional transportation system. APO member jurisdictions and agencies formed the center of the stakeholder group. Member participation occurred on the APO Board and the TAC. The TAC functioned as the primary steering committee throughout the development of this MTP. Local government and public officials from non-member jurisdictions and agencies within the planning area are also important stakeholders for the planning process. Other interested agencies, governments, organizations, and interested citizens also had an opportunity to participate in and add input to the MTP early and often throughout the planning process. The APO maintains a [Stakeholder Engagement Plan \(SEP\)](https://bit.ly/2TGYZ3H) (<https://bit.ly/2TGYZ3H>) that defines the minimum public involvement process for the development of the MTP.

A successful public participation process allows all stakeholders identified above to be a part of the planning and decision-making process for this document. The APO strongly believes the best plans are the result of clear communication and meaningful coordination with a broad body of stakeholders and interested parties who can help identify issues and opportunities for improvement and help shape the regional vision for the future.

Please see Appendix A for the complete timeline of public participation activities used in the development of this MTP.



FIGURE 1.4 – PUBLIC INPUT IS A CRITICAL PART OF THE APO'S PLANNING PROCESS

CHAPTER 2 : EXISTING CONDITIONS

INTRODUCTION

The first step in any planning process is to understand existing conditions and the needs that should be addressed. To assist in the development of a complete picture of existing conditions, APO staff primarily used two sources of information: 1) transportation and demographic data, and 2) public comments and input. The various sources of data are noted in the figures, tables, and graphics that follow. APO staff utilized the most recent data available to them at the drafting of this plan. Therefore, time frames for the data will vary slightly from table to table. Public comments were gathered as part of a robust public input effort that included a series of public meetings and input opportunities held on different dates and times at various locations around the MPA. The public comments are summarized where applicable throughout this chapter. A complete description of the public input process, full listing of public comments received, and their disposition can be found in Appendix A.

EXISTING PERFORMANCE MEASURES AND ATTAINMENT

Federal regulations¹ require this document to contain a system performance report evaluating the condition and performance of the transportation system with respect to performance targets, including progress towards meeting targets in comparison to baseline or prior data. However, the APO produces an annual performance report and rather than reproducing its contents here, we include it by reference. The [2018 performance reports](https://bit.ly/2WoUxEu) (<https://bit.ly/2WoUxEu>) can be accessed online, by contacting the APO by email at admin@stcloudapo.org, or by calling 320-252-7568 and requesting a copy of the annual performance report.

DEMOGRAPHICS AND SOCIO-ECONOMICS

The MPA is comprised of the Census-defined Saint Cloud urban area along with the adjacent rural areas that were determined to be urbanizing or are expected to be urbanized in the next 20 years. Figure 1.3 – found in Chapter 1 – is a map of the current MPA.

WHAT THE DATA SAYS

Census data for the last 15 years reveals population trends by jurisdiction for the MPA.

The incorporated cities have demonstrated significant growth while the surrounding rural townships have lost population. This is a common occurrence around growing urban areas. As the urban area grows and expands outward, it incorporates more and more of the

¹ 23 CFR 450.324 (f)(3) and (f)(4)

surrounding rural townships which then lose population. Overall the Saint Cloud MPA grew at an average of slightly more than 1.1 percent per year.

Population growth among the cities of the MPA was not evenly distributed – some cities grew at a significantly faster pace than others. For example, Sartell (4.6 percent average annual growth) and Saint Joseph (2.9 percent average annual growth) have grown at a much faster rate than Saint Cloud (0.8 percent average annual growth) and Waite Park (0.9 percent average annual growth). The reasons for these disparities are most likely highly complex and difficult to fully explain. The field of Urban Economics is devoted to understanding why some cities grow faster than others, and includes common explanatory variables such as geographic location, tax policies, urban amenities, availability of higher **paying jobs**, “**shocks**” such as natural disasters or the death of a major industry, and (most importantly for our analysis) transportation infrastructure. One of the purposes of this plan is to help ensure that transportation constraints do not unduly constrict economic growth for the region as a whole. **But before digging into transportation performance, let’s continue to explore demographic similarities and differences between the jurisdictions of the MPA.**

Jurisdiction	2000 Population	2010 Population	2015 Population	2000 – 2015 % Change
City of Saint Cloud	59,107	65,842	66,298	12.2%
City of Sartell	9,641	15,876	16,274	68.8%
City of Sauk Rapids	10,213	12,773	13,196	29.2%
City of Waite Park	6,568	6,715	7,429	13.1%
City of Saint Joseph	4,681	6,534	6,749	44.2%
City of Saint Augusta	3,065	3,317	3,486	13.7%
City of Rockville	2,003	2,448	2,481	23.9%
City of Saint Stephen	860	851	953	10.8%
Rural Stearns County (Townships of Brockway, LeSauk, Saint Joseph, and Saint Wendel)	9,193	8,542	7,841	-14.7%
Rural Benton County (Townships of Minden, Sauk Rapids, and Watab)	5,433	5,341	5,118	-5.8%
Rural Sherburne County (Township of Haven)	2,024	1,986	1,841	-9.0%
MPA Totals	112,788	130,225	131,666	16.8%

FIGURE 2.1 – POPULATION TRENDS

Data Sources: U.S. Census Bureau, Census 2000; U.S. Census Bureau, Census 2010; U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

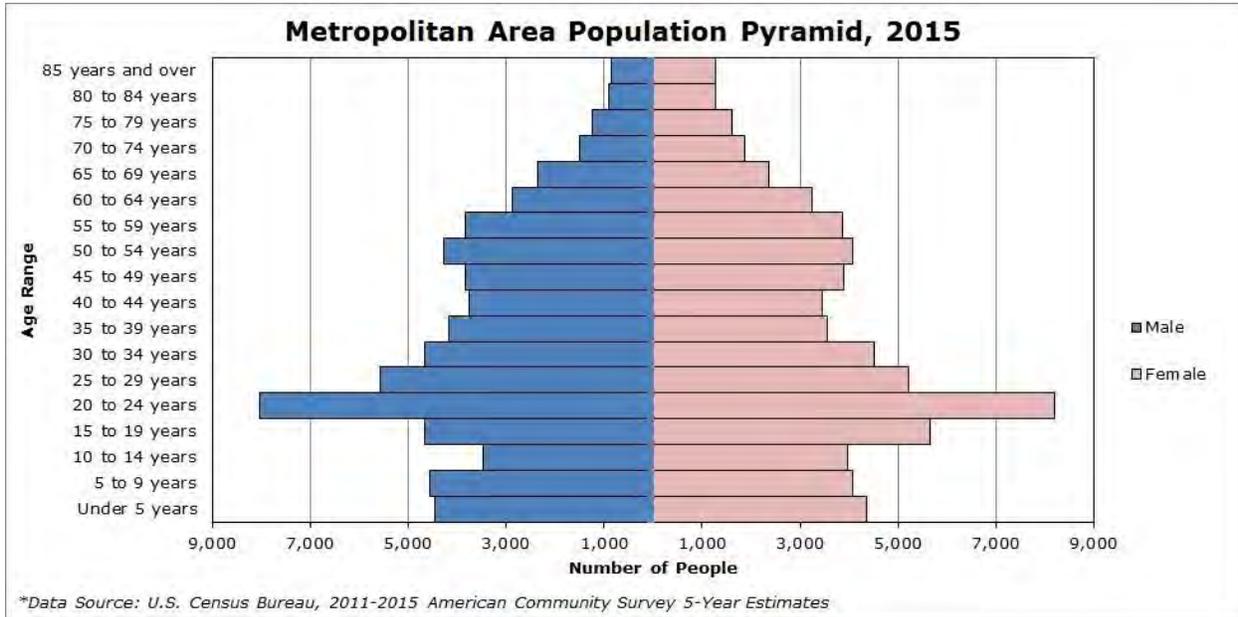


FIGURE 2.2 – SAINT CLOUD MPA POPULATION PYRAMID



FIGURE 2.3 – A MULTIGENERATIONAL FAMILY

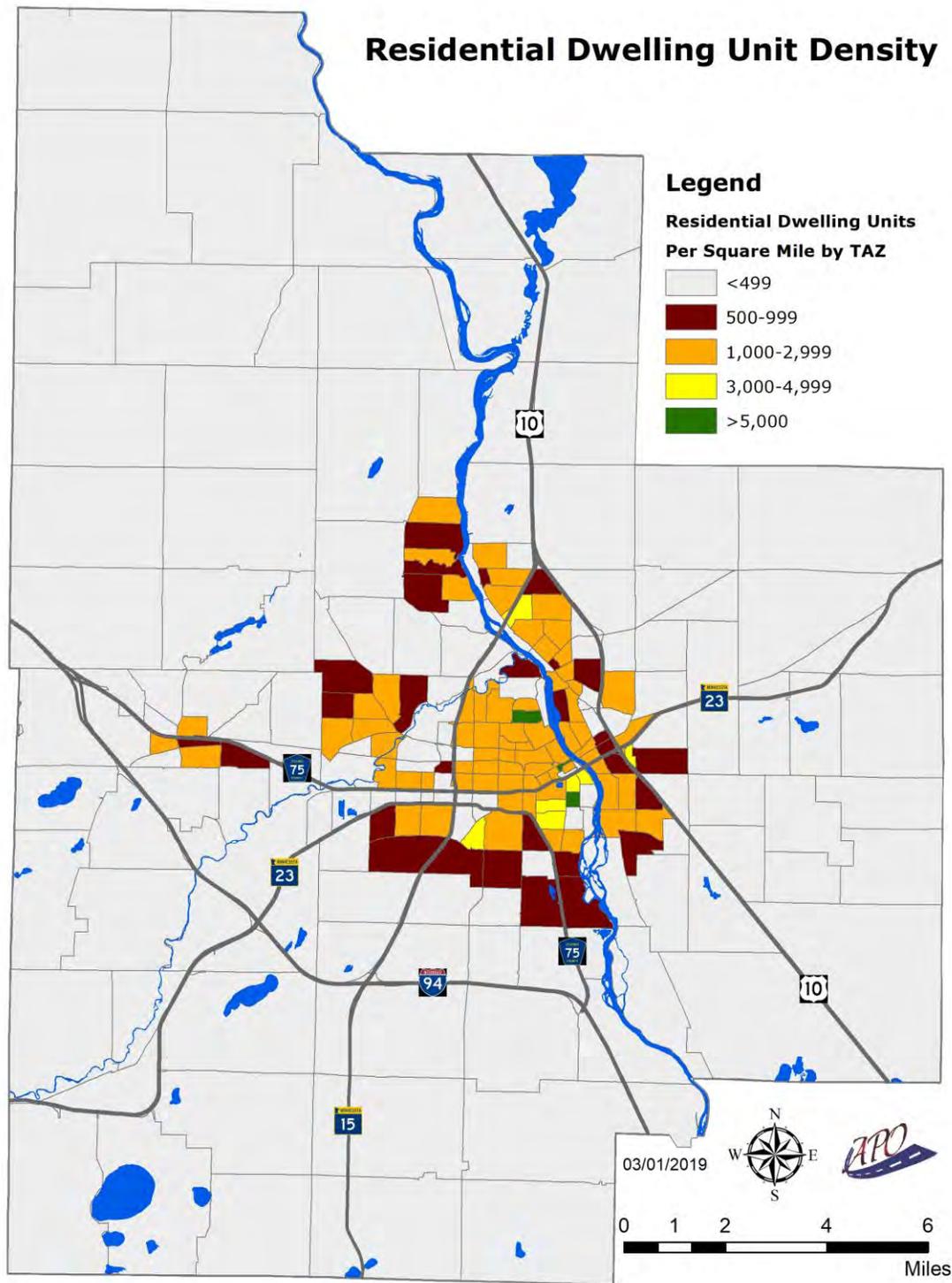


FIGURE 2.4 – 2015 RESIDENTIAL DWELLING UNIT DENSITY BY TRAFFIC ANALYSIS ZONE (TAZ)
 Data source: APO Geographic Information System Analysis

Jurisdiction	2000 Housing Units	2000 Vacant Housing Units	2000 Vacancy %	2015 Housing Units	2015 Vacant Housing Units	2015 Vacancy %
City of Saint Cloud	23,249	597	2.6%	27,150	1,946	7.2%
City of Sartell	3,531	88	2.5%	6,502	299	4.6%
City of Sauk Rapids	4,017	96	2.4%	5,302	87	1.6%
City of Waite Park	3,065	98	3.2%	3,403	81	2.4%
City of Saint Joseph	1,147	27	2.4%	1,834	97	5.3%
City of Saint Augusta	1,000	13	1.3%	1,277	25	1.9%
City of Rockville	722	55	7.6%	1,070	129	12.1%
City of Saint Stephen	294	5	1.7%	342	9	2.6%
Rural Stearns County (Townships of Brockway, LeSauk, Saint Joseph, and Saint Wendel)	3,151	66	2.1%	3,132	68	2.2%
Rural Benton County (Townships of Minden, Sauk Rapids, and Watab)	1,998	65	3.3%	2,184	130	5.9%
Rural Sherburne County (Township of Haven)	675	9	1.3%	739	47	6.6%
MPA Totals	42,849	1,119	2.6%	52,935	2,918	5.5%

FIGURE 2.5 – HOUSING

Data Sources: U.S. Census Bureau, Census 2000 and U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

In the 15-year period between 2000 and 2015, the number of vacant housing units region-wide more than doubled even though the resident population increased for the same time period. It is likely these figures still reflect, to some extent, the impact of the recession and “housing bubble” collapse that began in 2008. The growth in vacancies was not evenly distributed. Housing vacancies in Sauk Rapids and Waite Park actually decreased, while vacancies in other jurisdictions increased. On the upside, there appears to be some vacant housing units available to accommodate future population growth.

Jurisdiction	No High School Diploma	High School Diploma or GED	Some College, No Degree	Associate's Degree	Bachelor's Degree	Master's, Professional or Doctorate
City of Saint Cloud	3,302	9,579	10,154	4,409	7,313	3,861
City of Sartell	527	2,063	2,103	1,481	3,010	1,180
City of Sauk Rapids	712	2,204	2,306	1,191	1,624	554
City of Waite Park	623	1,294	980	610	619	471
City of Saint Joseph	117	520	633	495	566	382
City of Saint Augusta	115	734	488	422	446	156
City of Rockville	140	500	385	190	311	100
City of Saint Stephen	27	223	155	105	81	32
Rural Stearns County (Townships of Brockway, LeSauk, Saint Joseph, and Saint Wendel)	284	1,746	1,251	725	950	611
Rural Benton County (Townships of Minden, Sauk Rapids, and Watab)	157	1,190	980	525	567	302
Rural Sherburne County (Township of Haven)	67	416	350	188	235	143
MPA Totals	6,071	20,469	19,785	10,341	15,722	7,792
MPA Total Percent	7.57%	25.53%	24.67%	12.90%	19.61%	9.72%

FIGURE 2.6 – EDUCATIONAL ATTAINMENT FOR POPULATION 25 YEARS AND OVER (2015)

Data Sources: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimate

Educational attainment is highly correlated to unemployment rates and median incomes, as shown in the Figure 2.7 from the Bureau of Labor Statistics.

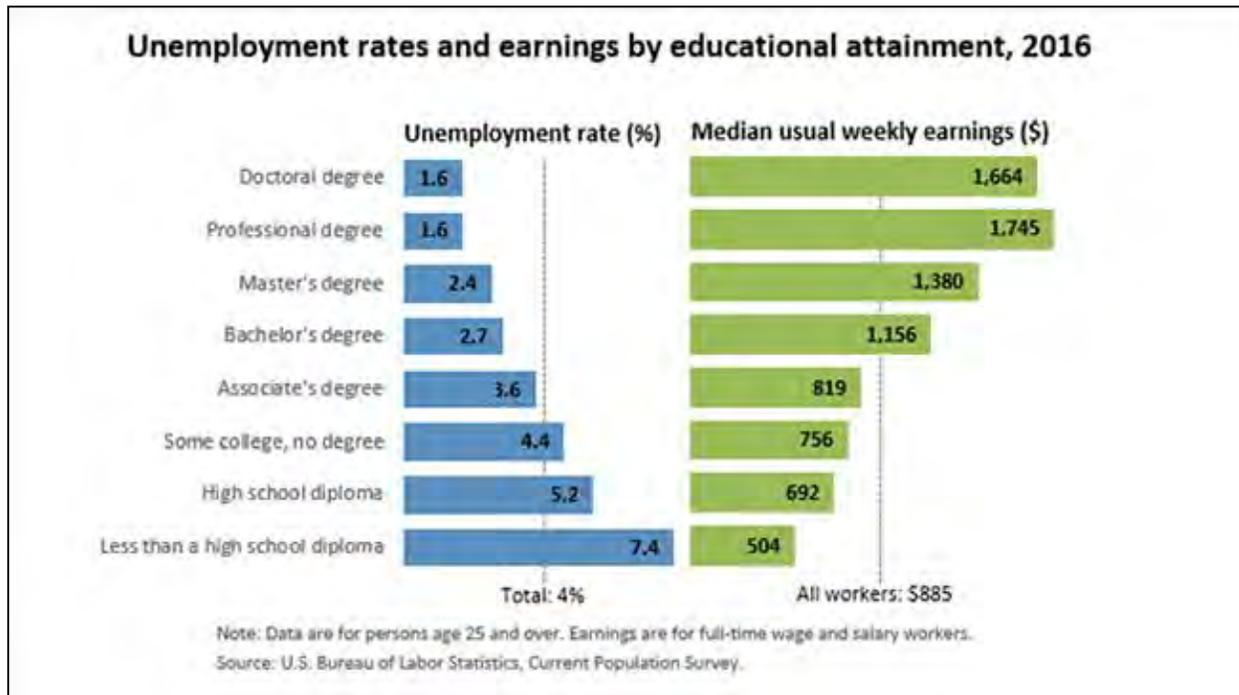


FIGURE 2.7 – NATIONAL UNEMPLOYMENT RATES AND EARNINGS BY EDUCATIONAL ATTAINMENT, 2016

The more highly educated a person is, the more income they are likely to earn and the less likely they are to be unemployed. Over half of MPA residents do not have a post-secondary degree, which puts them at greater risk for higher rates of unemployment and lower weekly earnings, creating economic stress for the household. Transportation to and from work is the largest single source of travel in almost any urban area. Policy-makers and staff should consider that economic stress as they identify transportation policies and projects.

The median household income has risen nominally over the last 15 years. However, when adjusted for inflation, real median household income in the MPA has decreased 9.4 percent (see Figure 2.8). Real income accounts for the purchasing power of each dollar by adjusting it for inflation over time. The overall decrease in real purchasing power means that households, on average, have struggled to maintain their standard living or their standard of living has decreased over time. In terms of transportation, this may mean things such as routine car maintenance or repairs not getting done, the purchase of a new vehicle being delayed or foregone, fewer trips being taken in order to save money, or more households using less-expensive transportation options. In extreme cases, households may find automobile ownership to be prohibitively expensive and may choose to either own fewer automobiles or own none.

Jurisdiction	2000 Median Income	2015 Nominal Median Income	2000 – 2015 % Change	2015 Real Median Income (Adjusted for Inflation)	2000 – 2015 % Change in Real Income
City of Saint Cloud	\$37,346	\$45,437	+21.7%	\$32,899	-11.9%
City of Sartell	\$52,531	\$73,872	+40.5%	\$53,487	+1.8%
City of Sauk Rapids	\$45,857	\$48,410	+5.6%	\$35,052	-23.6%
City of Waite Park	\$33,803	\$39,395	+16.5%	\$28,524	-15.6%
City of Saint Joseph	\$38,938	\$51,265	+31.7%	\$37,119	-4.7%
City of Saint Augusta	\$57,292	\$75,536	+31.8%	\$54,693	-4.5%
City of Rockville	\$53,800	\$70,594	+31.2%	\$51,114	-5.0%
City of Saint Stephen	\$55,078	\$75,583	+37.2%	\$54,727	-0.6%
Rural Stearns County (Townships of Brockway, LeSauk, Saint Joseph, and Saint Wendel)	\$54,089	\$76,589	+41.6%	\$55,455	+2.5%
Rural Benton County (Townships of Minden, Sauk Rapids, and Watab)	\$52,680	\$64,816	+23.0%	\$46,931	-10.9%
Rural Sherburne County (Township of Haven)	\$63,906	\$75,577	+18.3%	\$54,722	-14.4%
MPA Totals	\$42,873	\$53,623	+25.1%	\$38,826	-9.4%

FIGURE 2.8 – MEDIAN HOUSEHOLD INCOME

Data Sources: U.S. Census Bureau, Census 2000; U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimate; and Bureau of Labor Statistics Consumer Price Index Inflation Calculator

labor force



FIGURE 2.9 – SAINT CLOUD METROPOLITAN STATISTICAL AREA (MSA) LABOR FORCE PARTICIPATION

Data Source: Bureau of Labor Statistics

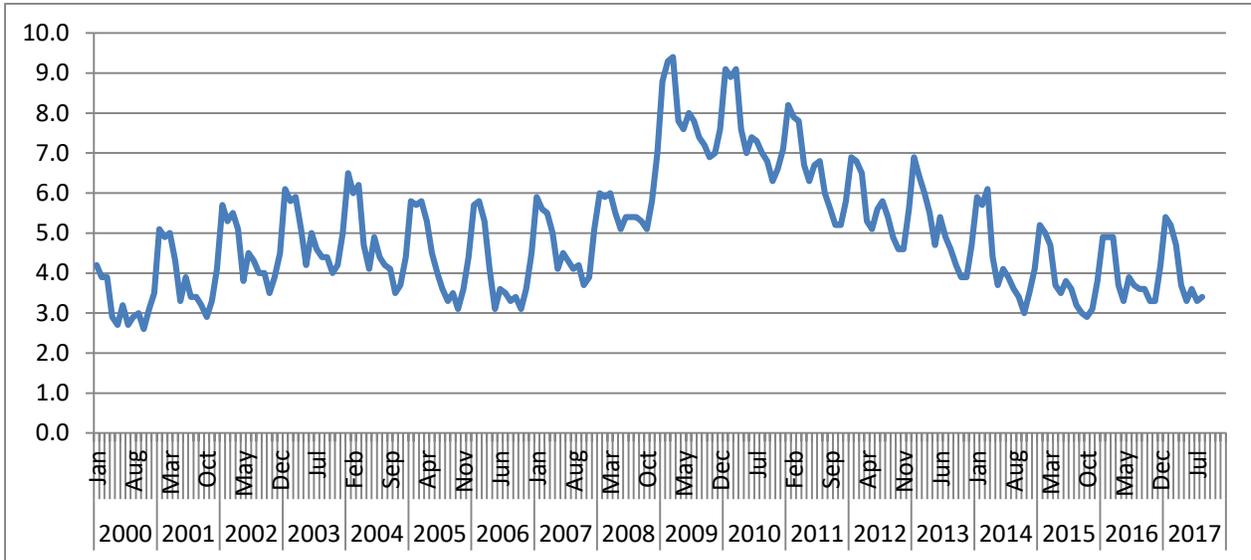


FIGURE 2.10 – SAINT CLOUD MSA UNEMPLOYMENT RATE (NOT SEASONALLY ADJUSTED)
Data Source: Bureau of Labor Statistics

The unemployment rate for the Census-defined Saint Cloud Metropolitan Statistical Area (MSA) hit a 15-year low in 2016, at just 3.9 percent. The overall trend has seen a sharp decrease in unemployment since the March 2009 peak of 9.4 percent.

Combining the data from the previous page with the figure above leads us to conclude that while more people are working they are taking home less income, in real terms, than they did 15 years ago. Traditional economic theory suggests that in a tight labor market, real incomes should rise, but, so far, the data does not show this occurring.

The U.S. Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is in poverty. If a family's total income is less than the family's threshold, then that family and every individual in it is considered to be living in poverty.



FIGURE 2.11 – THE MPA'S LABOR FORCE IS COMPRISED OF PEOPLE IN A VARIETY OF OCCUPATIONS

Jurisdiction	2000	% of 2000 Pop.	2015	% of 2015 Pop.	% Change
City of Saint Cloud	14,382	24.3%	14,375	21.7%	-0.1%
City of Sartell	760	7.9%	595	3.7%	-21.7%
City of Sauk Rapids	1,229	12.0%	2,791	21.2%	+127.1%
City of Waite Park	1,175	17.9%	1,537	20.7%	+30.8%
City of Saint Joseph	355	7.6%	1,528	22.6%	+330.4%
City of Saint Augusta	177	5.8%	76	2.2%	-57.1%
City of Rockville	106	5.3%	251	10.1%	+136.8%
City of Saint Stephen	17	2.0%	17	1.8%	0.0%
Rural Stearns County (Townships of Brockway, LeSauk, Saint Joseph, and Saint Wendel)	615	6.7%	290	3.7%	-52.8%
Rural Benton County (Townships of Minden, Sauk Rapids, and Watab)	382	7.0%	212	4.1%	-44.5%
Rural Sherburne County (Township of Haven)	89	4.4%	125	6.8%	+40.4%
MPA Totals	19,287	17.1%	21,797	16.6%	+13.0%

FIGURE 2.12 – MPA RESIDENTS LIVING IN POVERTY

Data Sources: U.S. Census Bureau, Census 2000; U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimate

Given the general decrease in real income noted earlier, it is perhaps unsurprising that there has been an increase in the number of residents living below the poverty threshold over the same time period. Again, some jurisdictions were harder hit than others. However, it is worth noting that the percentage of the population that is living in poverty has decreased slightly – from 17.1 percent to 16.4 percent. In other words, the overall poverty number is increasing, but at a lower rate than the overall growth in population.

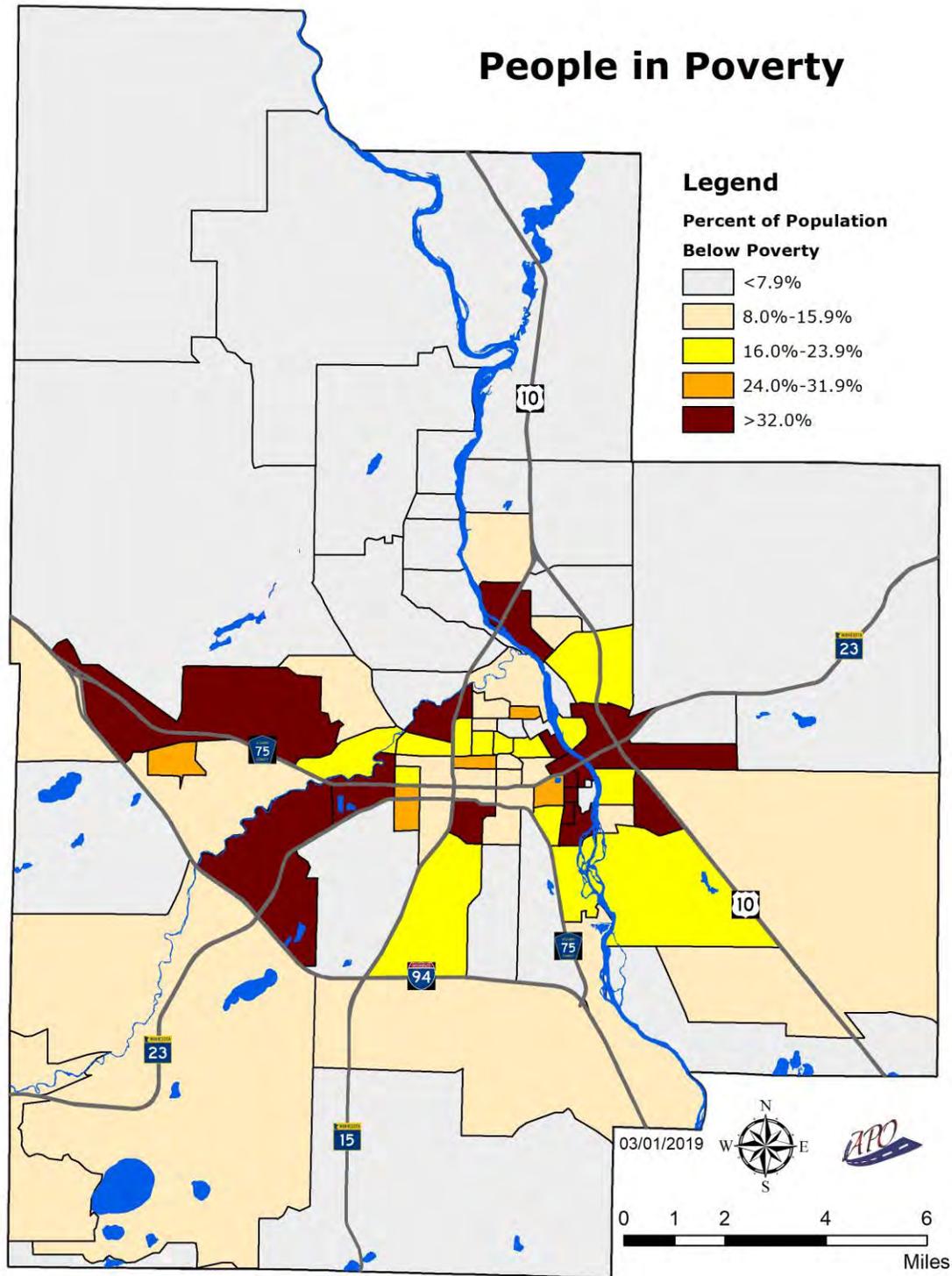


FIGURE 2.13 – RESIDENTIAL LOCATIONS FOR PEOPLE IN POVERTY (2015) BY CENSUS BLOCK GROUP

Data on people-of-color (POC) is collected to help ensure that the transportation system works for all residents regardless of race, and that transportation-related decisions do not disproportionately adversely impact POC and/or low-income populations (https://www.fhwa.dot.gov/environment/environmental_justice/).

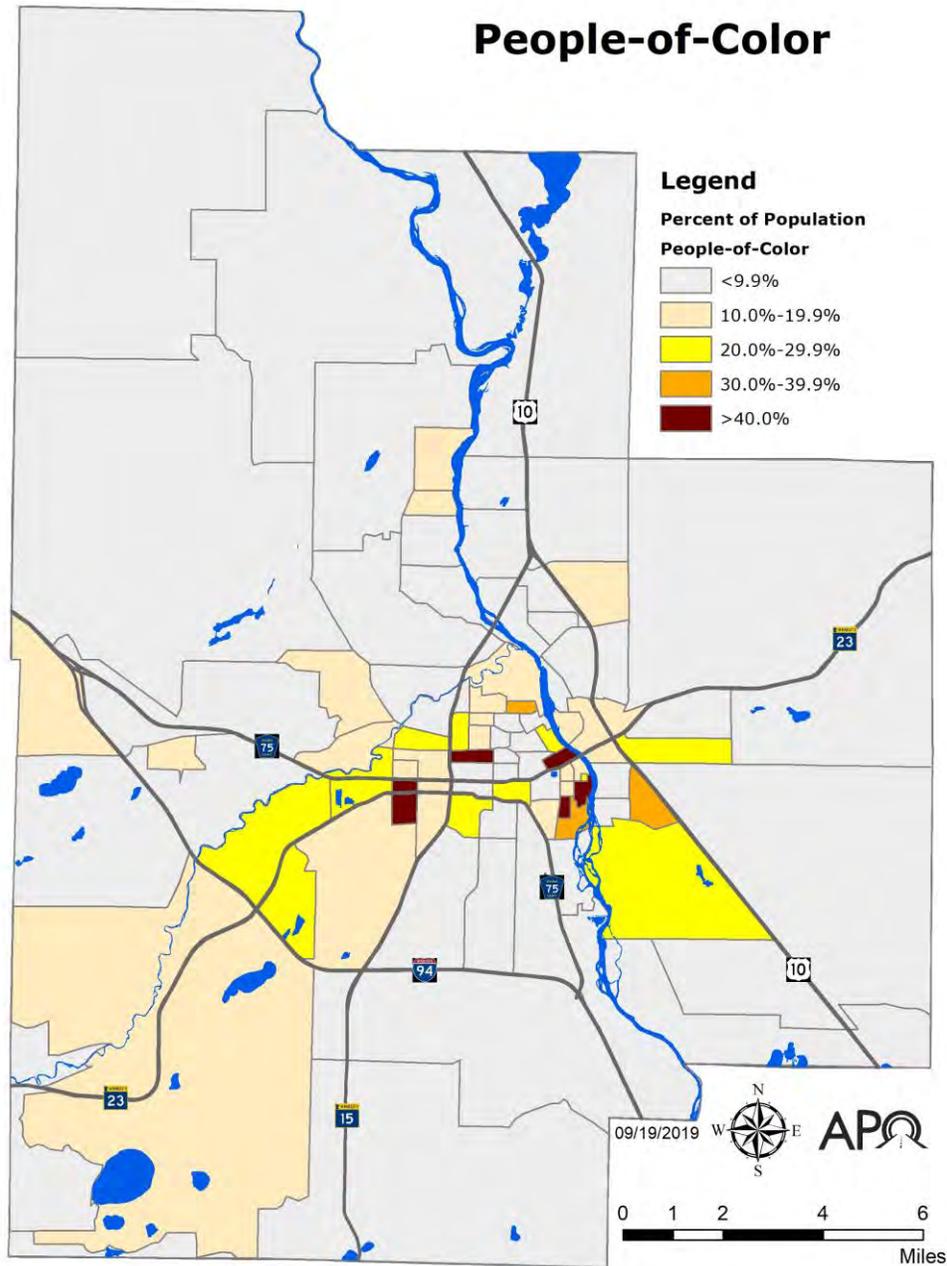


FIGURE 2.14 – RESIDENTIAL LOCATIONS FOR PEOPLE-OF-COLOR (2015) BY CENSUS BLOCK GROUP

Jurisdiction	2000	% POC	2015	% POC	% Change in POC Population
City of Saint Cloud	4,878	8.3%	10,767	16.2%	+120.7%
City of Sartell	249	2.6%	1,097	6.7%	+340.6%
City of Sauk Rapids	295	2.9%	768	5.8%	+160.3%
City of Waite Park	477	7.3%	1,727	23.3%	+262.1%
City of Saint Joseph	155	3.3%	381	5.7%	+145.8%
City of Saint Augusta	37	1.2%	55	1.6%	+48.7%
City of Rockville	41	5.5%	288	11.6%	+602.4%
City of Saint Stephen	8	0.9%	20	2.1%	+150.0%
Rural Stearns County (Townships of Brockway, LeSauk, Saint Joseph, and Saint Wendel)	234	2.6%	206	2.6%	-12.0%
Rural Benton County (Townships of Minden, Sauk Rapids, and Watab)	71	1.3%	53	1.0%	-25.4%
Rural Sherburne County (Township of Haven)	46	2.3%	55	3.0%	+19.6%
MPA Totals	6,491	5.8%	15,417	11.7%	+137.5%

FIGURE 2.15 – PEOPLE-OF-COLOR (POC) POPULATION BY JURISDICTION

Data Sources: U.S. Census Bureau, Census 2000 and 2011-2015 American Community Survey 5-Year Estimates.

For this analysis, People-of-Color (POC) includes:

- Black/African-American alone;
- American Indian and Alaska Native alone;
- Asian alone;
- Native Hawaiian and other Pacific Islander alone;
- Some other race alone;
- Two or more races;
- Hispanic. Of note, due to the way the 2000 U.S. Census collected data regarding people of Hispanic origin, APO staff could not accurately determine the growth rate of the MPA’s Hispanic population from 2000 to 2015.

Overall, the number of POC living in the MPA more than doubled between 2000 and 2015, to 11.7 percent of the total population. This is still well below the national average of 26.4 percent, and the Minnesota average of 15.2 percent. But it does mean that the APO and its member jurisdictions need to exercise additional care to ensure that POC are treated equally in the transportation planning and programming process.

To help ensure that the APO and its members are meeting the needs of those traditionally underserved in the planning and programming process, it is helpful to know what other languages are spoken in the home and whether or not English is well spoken and understood. Collectively, while about 8.5 percent of MPA residents speak a language other

than English in their homes, only about 3.2 percent of MPA residents speak English less than “very well”.

Jurisdiction	Spoken in the Home (Spanish)	Speak English less than “Very Well” (Spanish)	Spoken in the Home (Other Indo-European Languages)	Speak English less than “Very Well” (Other Indo-European Languages)	Spoken in the Home (Asian and Pacific Island Languages)	Speak English less than “Very Well” (Asian and Pacific Island Languages)	Spoken in the Home (Other Languages)	Speak English less than “Very Well” (Other Languages)
City of Saint Cloud	1,124	279	1,404	479	1,430	588	3,136	1,236
City of Sartell	111	15	227	49	313	13	0	0
City of Sauk Rapids	231	85	73	0	126	27	0	0
City of Waite Park	503	312	64	14	204	131	577	207
City of Saint Joseph	33	0	68	0	108	45	211	198
City of Saint Augusta	24	9	6	6	15	13	0	0
City of Rockville	178	173	25	9	0	0	0	0
City of Saint Stephen	9	0	7	5	8	0	0	0
Rural Stearns County (Townships of Brockway, LeSauk, Saint Joseph, and Saint Wendel)	55	3	57	3	33	17	0	0
Rural Benton County (Townships of Minden, Sauk Rapids, and Watab)	43	0	39	0	3	0	4	0
Rural Sherburne County (Township of Haven)	14	4	26	0	2	2	0	0
MPA Totals	2,325	880	1,996	565	2,242	836	3,928	1,641
Percent of Population 5 Years and Over	1.9%	0.7%	1.6%	0.5%	1.8%	0.7%	3.2%	1.3%

FIGURE 2.16 - LANGUAGES SPOKEN IN THE HOME OTHER THAN ENGLISH
 Data Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimate

For residents of the MPA, data is available regarding where they work and how long they must travel to get there.

Home to Work	Count	Share
Less than 10 miles	44,397	67.8%
10 to 24 miles	6,136	9.4%
25 to 50 miles	4,183	6.4%
Greater than 50 miles	10,720	16.4%
Total All Jobs	65,436	100%

FIGURE 2.17 – DISTANCE TO JOBS (2015) FOR RESIDENTS OF THE MPA
Date Source: U.S. Census Bureau, Center of Economic Studies

About two-thirds of MPA residents travel less than 10 miles to reach their place of employment. Short commutes are less expensive to accommodate, and those of 3 miles or less can be done relatively easily through multiple modes of transportation – driving, walking, or transit, etc. Just as investing in a wide-range of stocks can help protect a **person’s overall** financial investment, having multiple transportation options helps build reliability in the overall transportation system and can be a hedge against a major problem **in one mode, such as a person’s car not starting or construction that closes a roadway**. However, we must also recognize that more than 16 percent of work commutes are greater than 50 miles. Given the proximity of the Saint Cloud urban area to the very large Twin Cities metropolitan area, this is perhaps unsurprising, but worth knowing.



FIGURE 2.18 – COMMUTERS IN SAINT CLOUD

County	Job Count for MPA Residents	Share
Stearns County	39,762	60.8%
Benton County	9,051	13.8%
Hennepin County	4,313	6.6%
Sherburne County	2,205	3.4%
Wright County	1,375	2.1%
Ramsey County	1,183	1.8%
Dakota County	817	1.2%
Anoka County	612	0.9%
Morrison County	559	0.9%
Kandiyohi County	522	0.8%
All Other Locations	5,037	7.7%
All Counties	65,436	100%

FIGURE 2.19 – JOBS COUNTS WHERE MPA RESIDENTS WORK (2015)

Data Source: U.S. Census Bureau, Center of Economic Studies

Figure 2.19 reinforces and offers some insight into the previous figure on commute distances. For example, 5,496 residents work in Hennepin County (which includes Minneapolis and its western suburbs) or Ramsey County (including Saint Paul and its northern suburbs). Another 612 work in Anoka County (which includes the far northern suburbs of Minneapolis), and 817 work in Dakota County (including the Saint Paul southern suburbs). This accounts for 6,925 jobs, or about 65 percent of the commuting trips of more than 50 miles. Safe, reliable, and efficient transportation connections between the MPA and the Twin Cities are vital for about one in every 10 workers who live in the MPA.

We can spin the data around and look instead at the people who live elsewhere but who commute into the MPA for work:

County	Count	Share
Stearns County	41,308	50.2%
Benton County	13,275	16.1%
Sherburne County	5,699	6.9%
Wright County	2,945	3.6%
Morrison County	2,767	3.4%
Hennepin County	2,339	2.8%
Ramsey County	963	1.2%
Anoka County	916	1.1%
Crow Wing County	896	1.1%
Mille Lacs County	887	1.1%
All Other Locations	10,270	12.5%
All Counties	82,265	100.0%

FIGURE 2.20 – MPA JOBS COUNTS WHERE WORKERS LIVE (2015)

Data Source: U.S. Census Bureau, Center of Economic Studies

Hennepin, Ramsey, and Anoka counties supply 4,218 workers who commute into the Saint Cloud MPA for their jobs. In addition to the MPA residents who travel to the Twin Cities for work, there is some “reverse commuting” that is occurring as well.

Worker Status	2005	2010	2015	% Change 2005 - 2015
Live and Work in the MPA	37,076	40,838	45,765	+23.4%
Live in MPA, But Work Elsewhere	18,728	17,901	19,671	+5.0%
Live Elsewhere, But Work in MPA	24,163	29,582	36,500	+51.1%

FIGURE 2.21 – MPA WORKER COMMUTE INFLOW/OUTFLOW

Data Source: U.S. Census Bureau, Center of Economic Studies

As shown in Figure 2.20 above, the most growth in the last 10 years has been in workers who live elsewhere, but commute into the MPA for their jobs. Forty-four percent of jobs in the MPA are filled by workers who live somewhere outside the MPA.

In 2017, the top employers within the MPA were:

Employer	Job Sector	Number of Employees
Saint Cloud Hospital/CentraCare Health	Health Care	6,899
Coborn's, Inc.	Grocery/Distribution	2,448
State of Minnesota <i>(Including Saint Cloud State University, Saint Cloud Technical and Community College, and Saint Cloud Correctional Facility)</i>	Government/Higher Education/Corrections	2,340
Saint Cloud Area School District #742	Education	1,732
Saint Cloud Veterans Affairs Health Care System	Health Care	1,724
Electrolux North America, Inc.	Manufacturing	1,200
College of Saint Benedict/Saint John's University	Higher Education	1,022
GNP Company	Poultry Processing	1,053
Stearns County	County Government	842
New Flyer of America	Manufacturing	705
Coldspring Granite Company	Mining/Excavation	690
Sherburne County	County Government	616
Capital One 360	Financial	600
Bernick's	Wholesale Distribution	570
Wolters Kluwer Financial Services	Financial	600
Knife River Corporation – North Central	Construction	553
Bluestem Fulfillment, Inc.	Distribution	550
Sauk Rapids-Rice School District #47	Education	550
Catholic Charities of Saint Cloud	Non-Profit	534
Polar Tank Trailer	Manufacturer	520
Array Services	Financial	447
City of Saint Cloud	Municipal Government	434

FIGURE 2.22 – TOP EMPLOYERS IN THE MPA (2017)

Data Sources: Saint Cloud Area Chamber of Commerce; City of Saint Cloud

Like much of the rest of the country, service industries and health care dominate the MPA job market. However, unlike some parts of the country, the MPA has managed to retain a good number of manufacturing jobs, which is the second-highest employment sector within the MPA. Manufacturing, distribution, and processing of products receive and produce a large number of transportation trips.

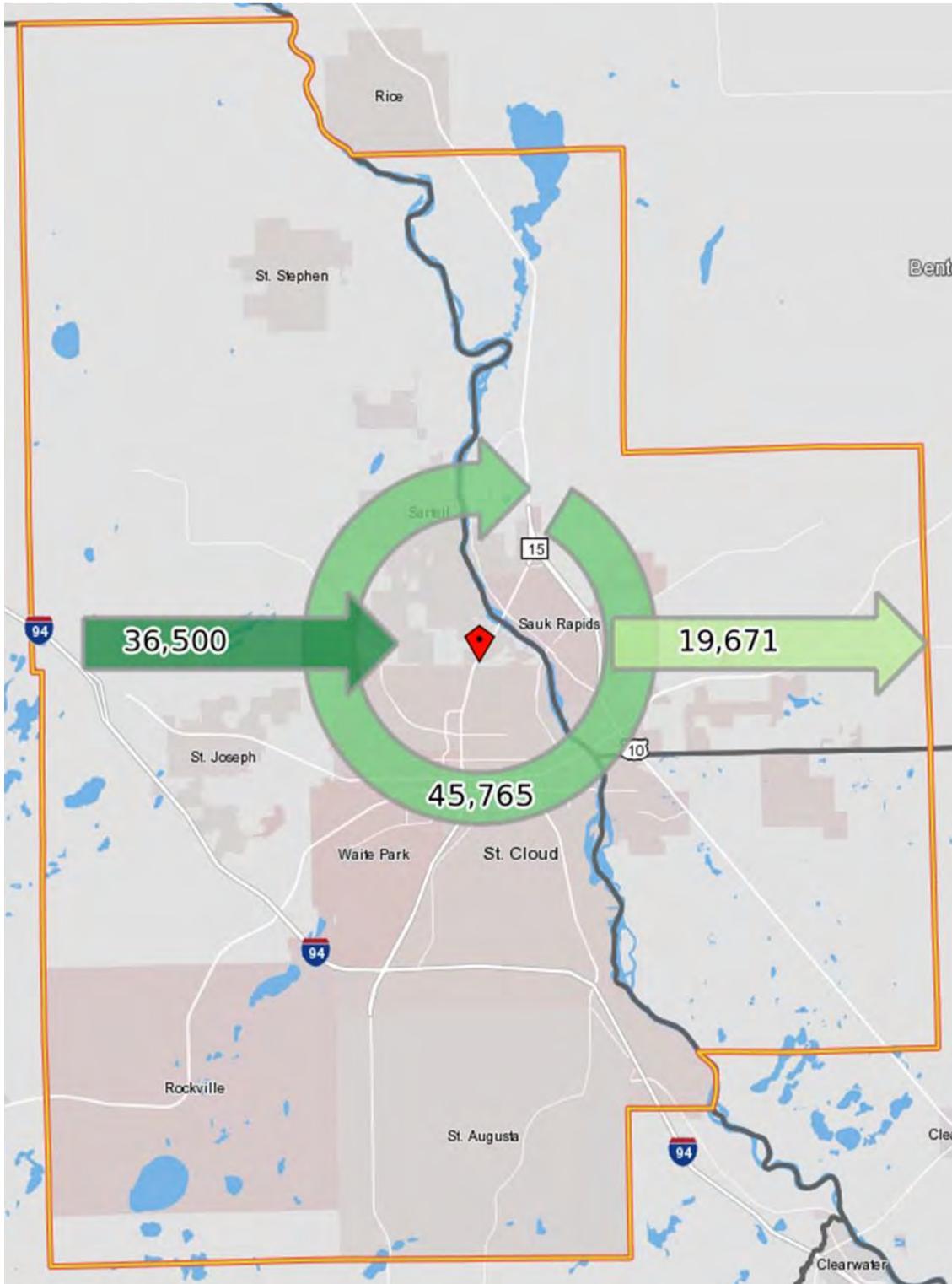


FIGURE 2.23 – WORKER FLOWS IN THE MPA
Data source: U.S. Census Bureau, Center of Economic Studies

WHAT WE HEARD

As part of the APO's on-going effort to engage the general public and transportation stakeholders, staff solicited public input as part of the development of this plan (see more complete details in Appendix A). What follows is summary of the public comments we heard regarding the general demographic characteristics of the MPA. Comments in quotation marks are word-for-word quotes from the public. Comments not in quotations marks are not direct quotes, but express succinctly the idea communicated by the public. When the same or similar idea was expressed by multiple people, we have noted the number of times the comment was received.

- Increasing elder-population; is the region ready?; what can be done for aging drivers? (4 similar comments)
- "Create a plan for affordable vehicle ownership. Public Transportation can't meet everyone's needs."/ Used vehicle purchase assistance, low income vehicle repair programs. (3 similar comments)
- Redesign transportation networks to better serve families, especially those with young children. (3 similar comments)
- "Should be more concerned to make things easier for students too."
- Make sure to consider the health impacts and equity impacts of decisions that serve the entire community and individuals health.
- "Create opportunities (jobs) for everyone. Don't waste money on expansion and making everything 'look pretty.' Take care of the homeless."
- **"Have more conversations with the immigrant and refugee communities to determine their transportation needs."**

We note especially the comments about affordable transportation options that appear to reflect the data on falling real incomes and economic stress in the region. Also, we note the multiple comments about the aging population and the call for transportation services to meet their needs.

ROADWAYS

Roadways are the primary conveyance of transportation and, therefore, are the most important piece of public transportation infrastructure. They are also very expensive to build and maintain. The [American Road and Transportation Builders Association](https://www.artba.org/about/faq/) (<https://www.artba.org/about/faq/>) estimates that it costs between \$3 and \$5 million to build one mile of undivided two-lane roadway in an urban setting. Considering there are 1,362 centerline miles of roadway within the MPA, **it's easy to see that roadways represent** a major public investment. They also have an important influence on most components of life, including economic activity, urban area growth and development, education, quality of life, public health, recreation, social cohesion, and the environment.

In addition, roadways play a vital role in the movement of goods from local freight generators to other destinations within the region, the state, and the rest of the country. It

is important to have strong infrastructure in place such as roadways to support freight movement and economic growth.

More information on freight and the regional freight framework can be found in Chapter 4.

WHAT THE DATA SAYS

WORK TRIPS BY MODE

Jurisdiction	Car, Truck, or Van	Public Transit	Taxicab	Motorcycle	Bicycle	Walked	Other	Worked at Home	Total
Saint Cloud	29,822	996	18	34	506	1,634	217	1,302	34,529
Sartell	8,048	56	0	0	34	109	6	437	8,690
Sauk Rapids	6,104	35	0	0	31	0	51	225	6,446
Waite Park	3,251	44	0	0	75	206	0	153	3,729
Saint Joseph	2,563	293	0	0	0	416	65	593	3,930
Saint Augusta	1,778	0	0	0	0	23	4	87	1,892
Rockville	1,321	0	0	0	6	16	5	91	1,439
Saint Stephen	488	0	0	0	0	0	3	40	531
Rural Stearns County (Townships of Brockway, LeSauk, Saint Joseph, and Saint Wendel)	4,172	17	0	0	8	57	14	206	4,474
Rural Benton County (Townships of Minden, Sauk Rapids, and Watab)	2,430	2	0	8	3	17	16	206	2,682
Rural Sherburne County (Township of Haven)	844	3	0	3	0	4	2	97	953
MA Totals	60,821	1,446	18	45	663	2,482	383	3,437	69,295
2015 MA %	87.77%	2.09%	0.03%	0.06%	0.96%	3.58%	0.55%	4.96%	100%
2012 MA %	87.82%	1.41%	N/A	N/A	0.46%	3.23%	0.66%	6.42%	100%
2012 – 2015 Trend	→	↑	N/A	N/A	↑	↑	→	↓	

FIGURE 2.24 – 2015 PRIMARY MEANS OF TRANSPORTATION TO WORK; 16 YEARS AND OVER
Data Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimate

Trips to and from work are the single most common trip type, and automobiles are by far the most popular mode of transportation for work trips. Interestingly, walking is the second most popular mode. The reader is cautioned to remember that this data reflects only trips

to work. If the data could be expanded to encompass all trip purposes, it may look very different, but the Census asks only about trips to work. A regional transportation survey would help the APO understand trip-making characteristics for all trip types. The last such survey was completed in 1997.

TRAVEL TIME TO WORK

In general, residents of the MPA enjoy relatively short commute times, with almost two-thirds of all trips to work taking less than 20 minutes. However, like the distance to jobs data, there is a minor peak further down the chart, in the 45-90 minute areas. This most likely captures people commuting into the Twin Cities metro area for work, but it may also capture trips such as long transit or walking trips within the MPA.

Travel Time to Work	Workers (2000)	% of Total (2000)	Workers (2015)	% of Total (2015)	Workers (2000-2015 Change)	% Change (2000-2015)
Less than 5 minutes	2,418	4.07%	2,163	3.28%	-255	-0.4%
5 to 9 minutes	10,612	17.84%	10,646	16.17%	+34	0.1%
10 to 14 minutes	15,002	25.22%	14,789	22.46%	-213	-0.4%
15 to 19 minutes	13,123	22.06%	15,120	22.96%	+2,000	3.4%
20 to 24 minutes	7,540	12.68%	8,803	13.37%	+1,263	2.1%
25 to 29 minutes	1,947	3.27%	2,556	3.88%	+609	1.0%
30 to 34 minutes	3,208	5.39%	4,416	6.71%	+1,208	2.0%
35 to 39 minutes	465	0.78%	666	1.01%	+201	0.3%
40 to 44 minutes	441	0.74%	865	1.31%	+424	0.7%
45 to 59 minutes	1,428	2.40%	2,179	3.31%	+751	1.3%
60 to 89 minutes	2,317	3.90%	2,355	3.58%	+38	0.1%
90 or more minutes	981	1.65%	1,300	1.97%	+319	0.5%
Total Commuters	59,482	100%	65,858	100%	+6,376	+10.7%

FIGURE 2.25 – TRAVEL TIME TO WORK IN THE MPA

Data Sources: U.S. Census Bureau, Census 2000; U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

VEHICLE MILES TRAVELED

Vehicle-miles traveled (VMT) is a common measure of the amount of activity that has occurred on the roadways of a given area, and is calculated by multiplying the amount of daily traffic on a roadway segment by the length of the segment, then summing all the segments' VMT to give you a total for the geographic area of concern. The VMT of the MPA reflects trends that can be seen in statewide and national VMT data – namely, a flattening of the trend line from 2008 through 2015.

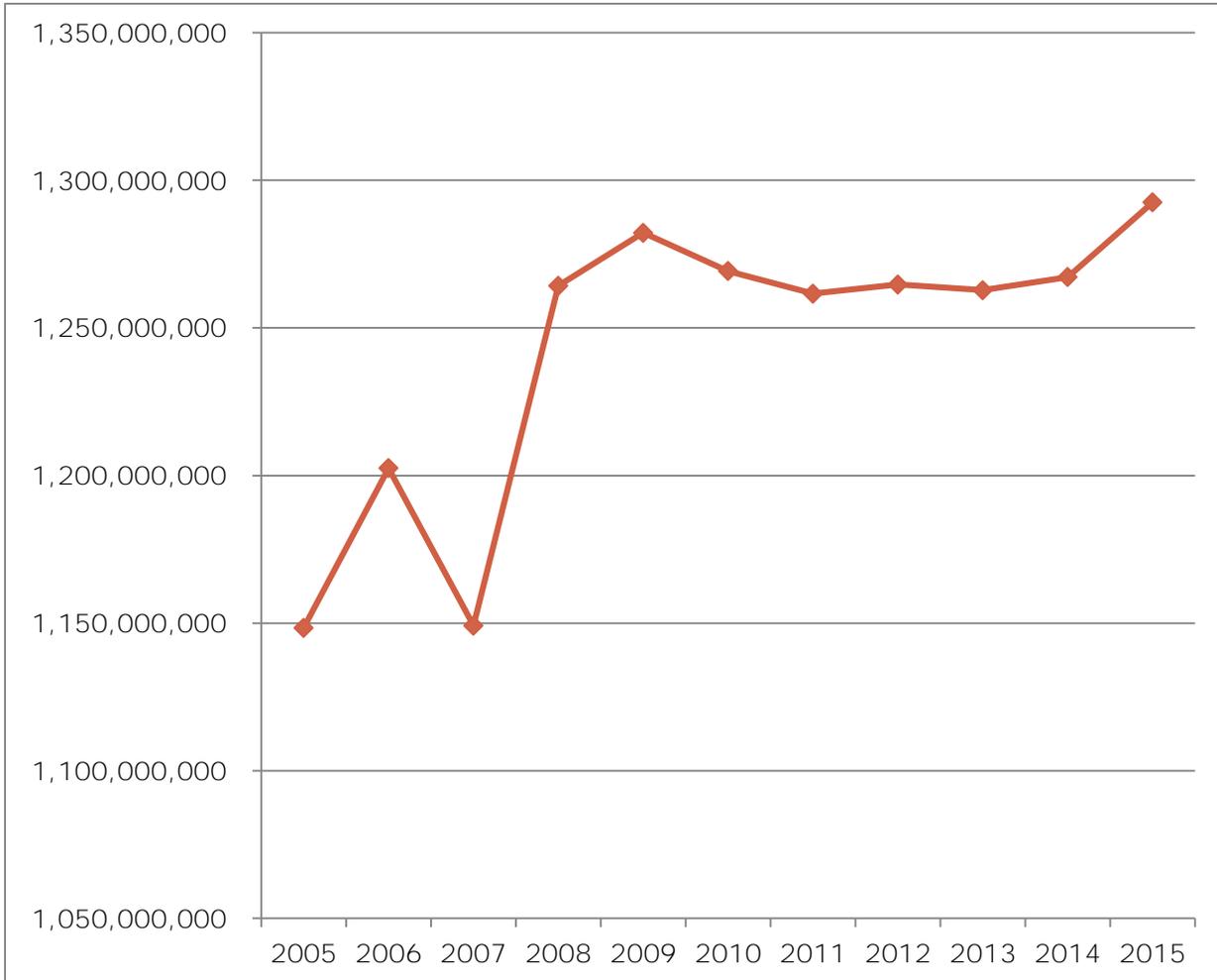


FIGURE 2.26 – ANNUAL VEHICLE-MILES TRAVELED (VMT) WITHIN THE MPA

Data Source: APO calculated VMT based on data from the Minnesota Department of Transportation

The “flattening” of VMT growth between 2008 and 2015 is unprecedented in the history of the data. There have been ups and downs, most notably during the oil shocks of the 1970’s, but never a prolonged period of no growth or negative growth. And while VMT overall appears to have started growing again in 2015, per capita VMT has only just begun to reach the same levels as the late 1990s.

On average, people are just not driving as much as they used to. There are many theories as to why. The economic recession which began in 2008 is a popular choice. Other possible explanations include: 1) a shift in investment away from roadways to alternatives modes of transportation, 2) a shift away from roadway expansion to roadway preservation, 3) an attitude among younger drivers that prioritizes other things above driving, 4) the high-cost of driving in a time of stagnant wages, and 5) technological advances that reduce the need to drive. The answer may be one or a combination of these theories.

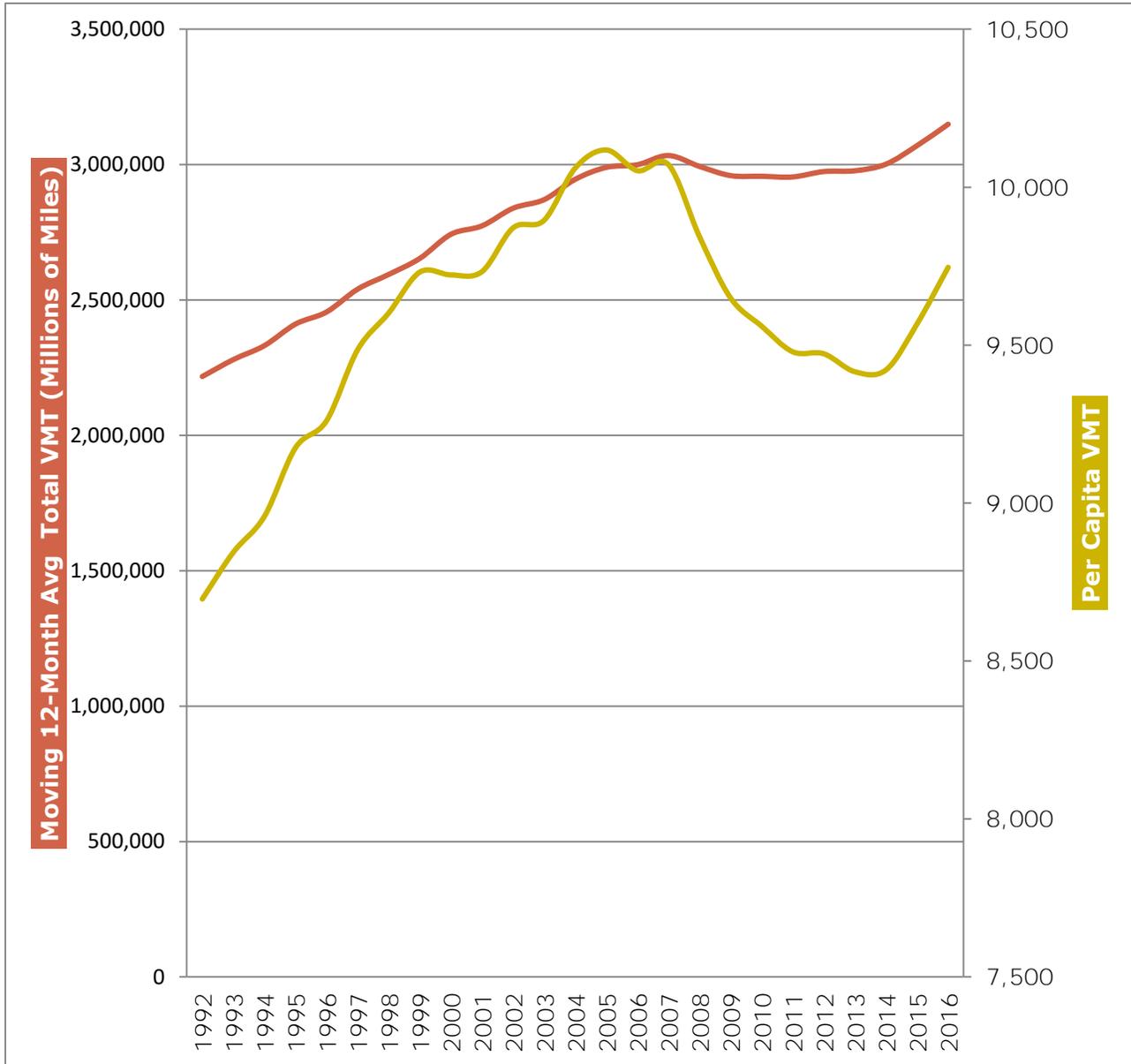


FIGURE 2.27 – U.S. MOVING 12-MONTH AVERAGE VMT AS OF AUGUST 2017

Data Sources: Federal Highway Administration and U.S. Census Bureau

AVERAGE ANNUAL DAILY TRAFFIC COUNTS

Annual average daily traffic (AADT) is the total volume of vehicle traffic on a road over a year divided by 365 days. It is generally calculated by measuring traffic over a 48-hour period, and then applying a series of seasonal and day-of-the week adjustment factors. AADT is a useful and simple measurement of how busy the road is. The maps on the following pages illustrate the 2015 AADT for roadways within the MPA.

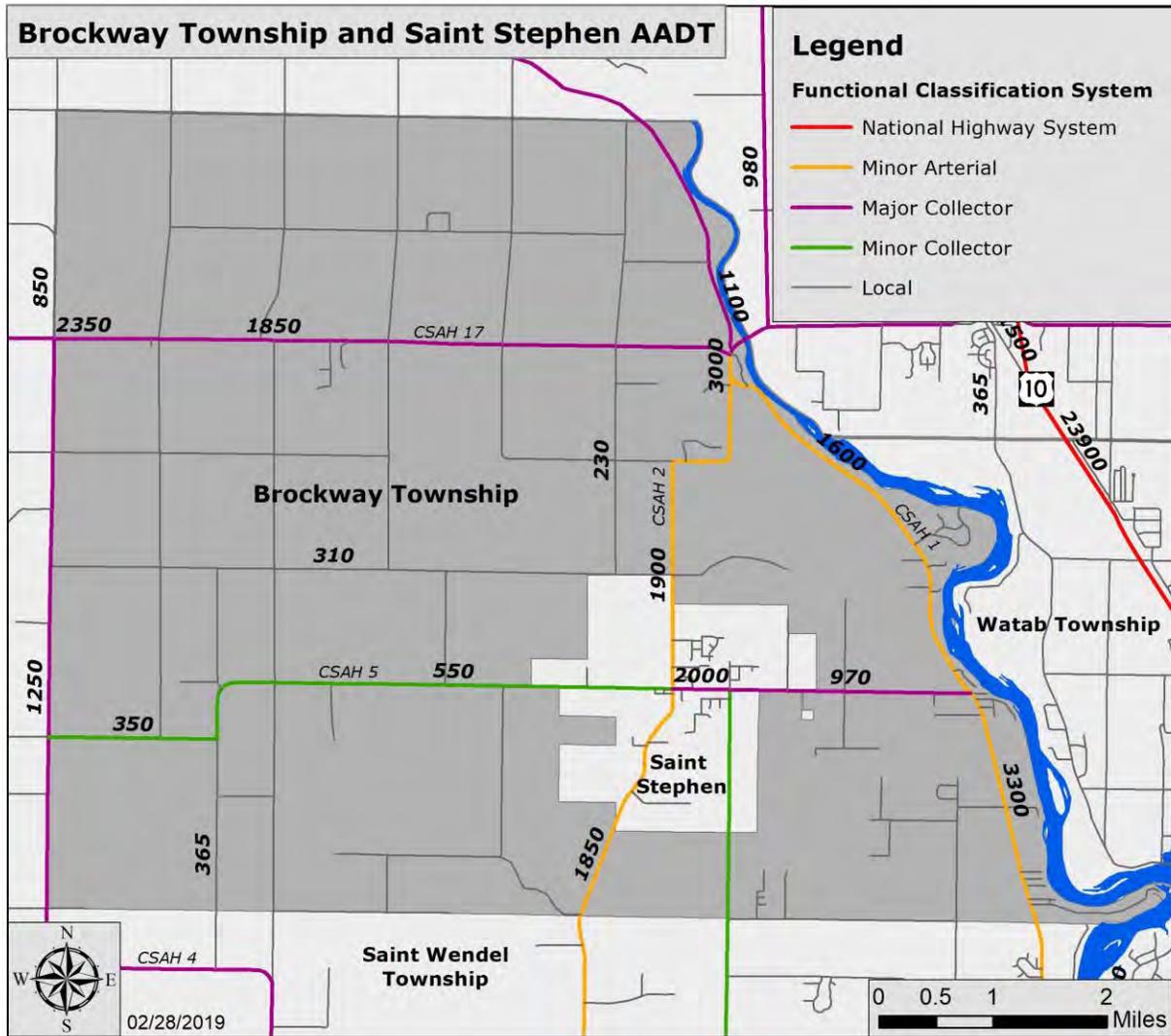


FIGURE 2.28 – BROCKWAY AND SAINT STEPHEN AVERAGE ANNUAL DAILY TRAFFIC (AADT) - 2015
 Data Source: MnDOT and APO GIS files

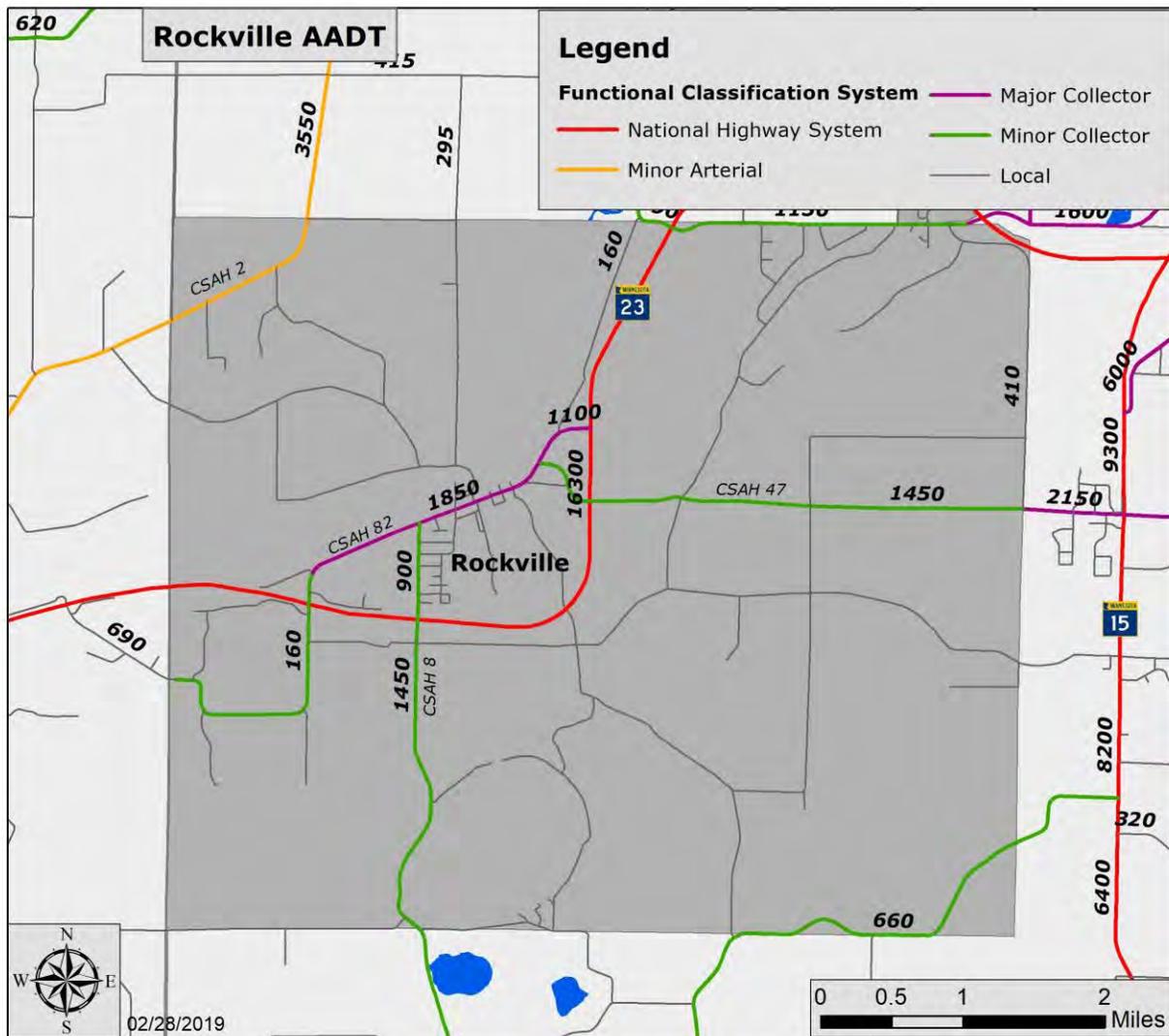


FIGURE 2.29 – ROCKVILLE AADT – 2015
 Data Sources: MnDOT and APO GIS files

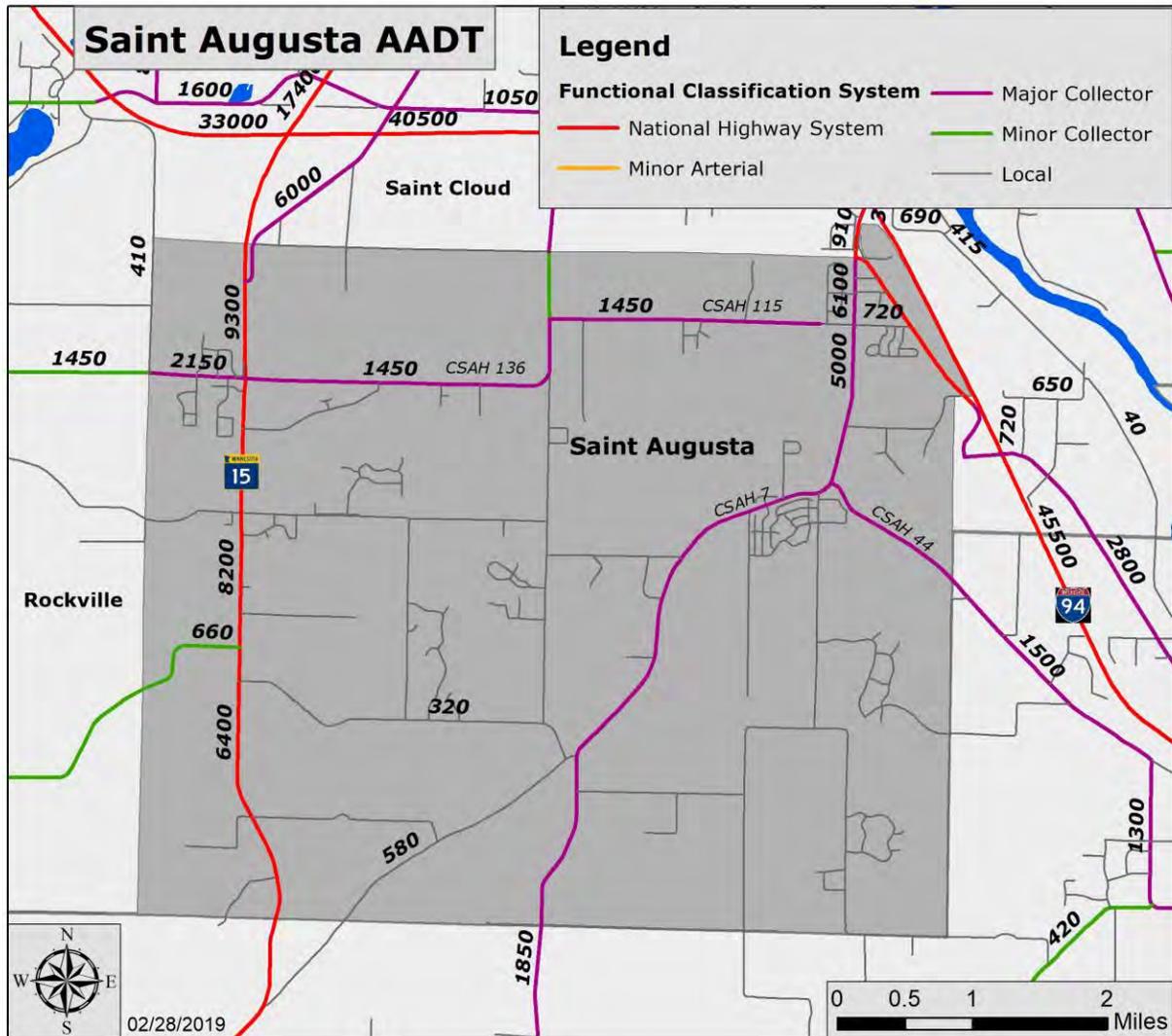


FIGURE 2.30 – SAINT AUGUSTA AADT – 2015
 Data Sources: MnDOT and APO GIS files

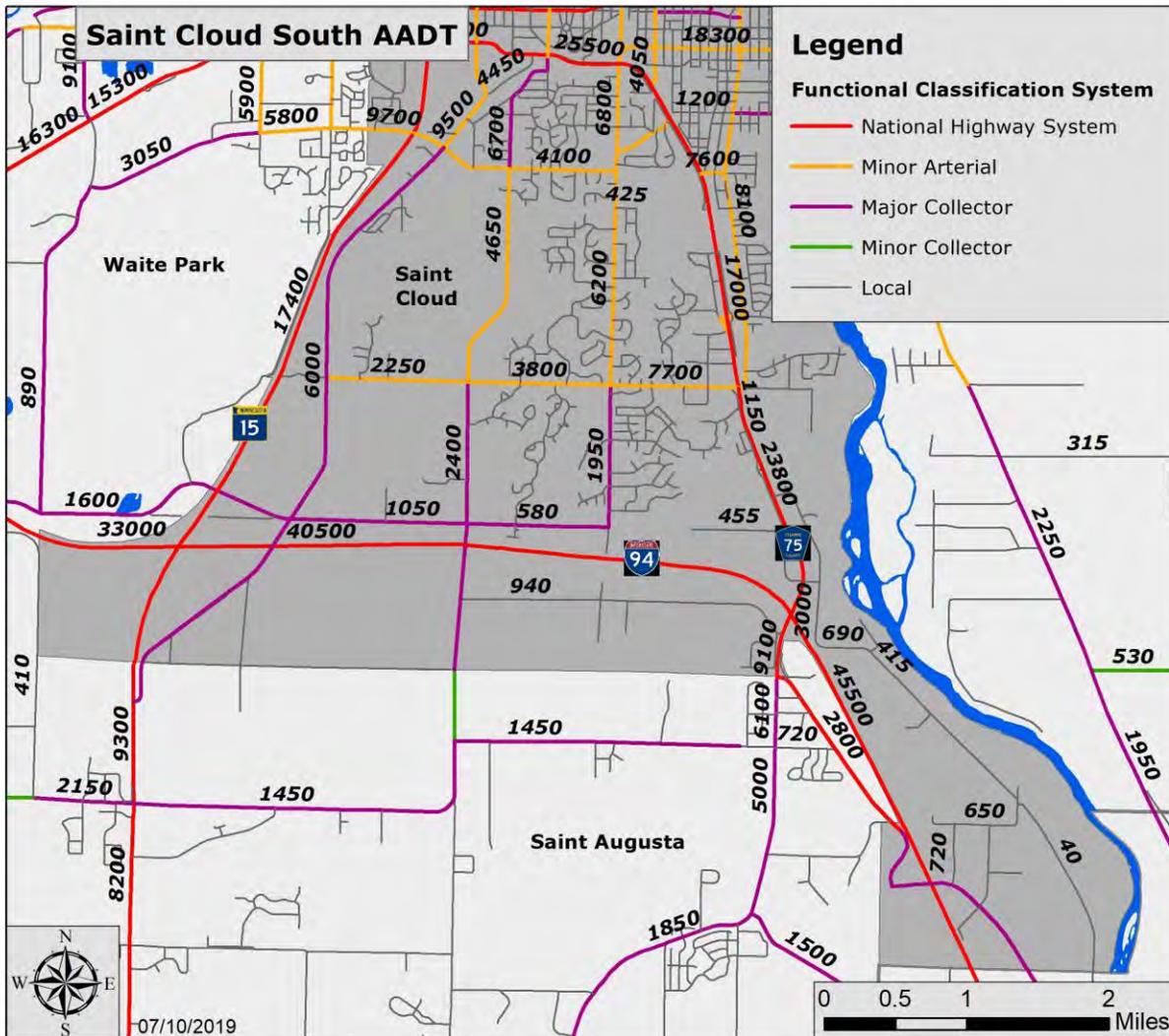


FIGURE 2.31 – SAINT CLOUD (SOUTH) AADT – 2015
 Data Sources: MnDOT and APO GIS files

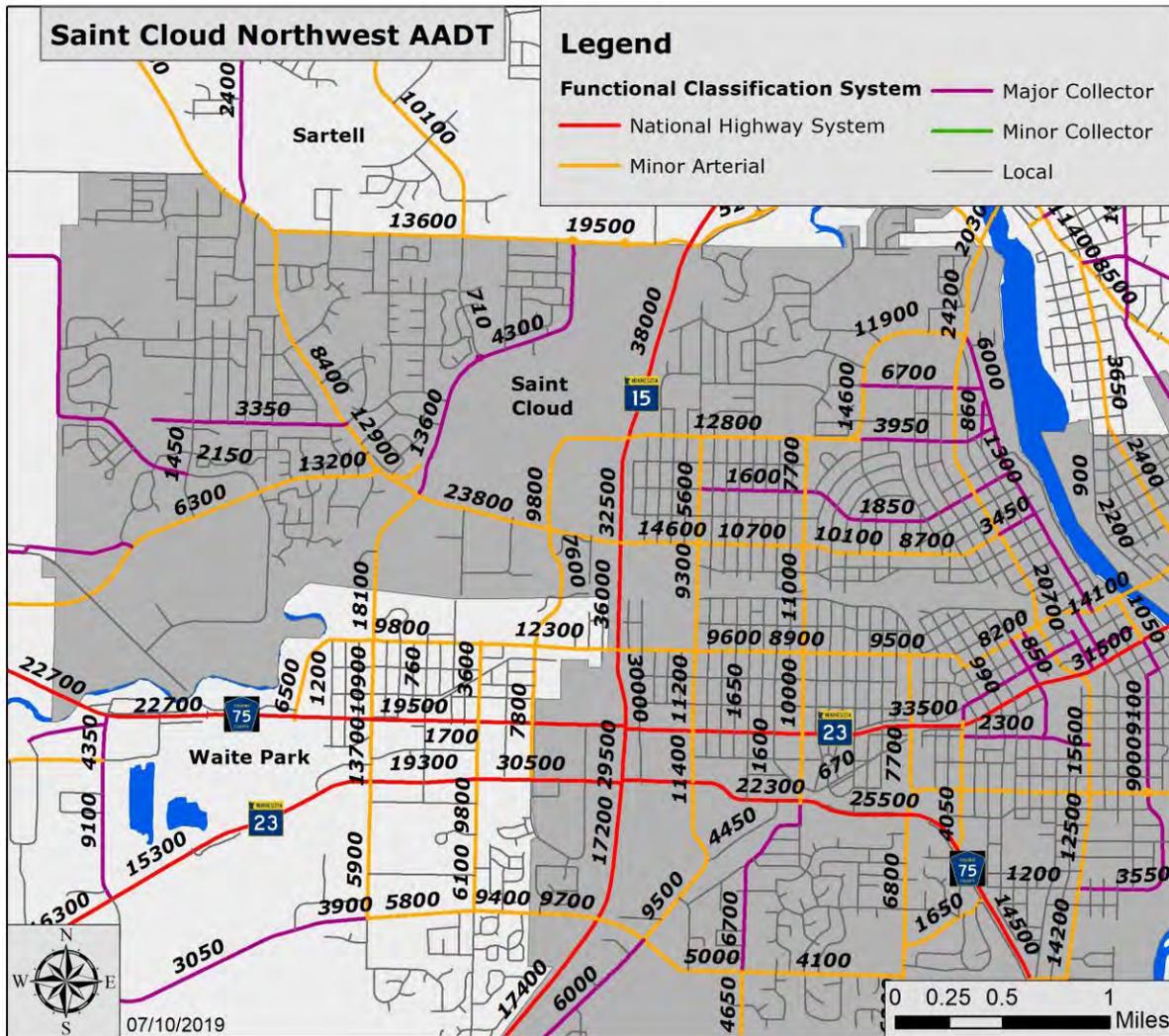


FIGURE 2.32 – SAINT CLOUD (NORTH) AADT – 2015
 Data Sources: MnDOT and APO GIS files

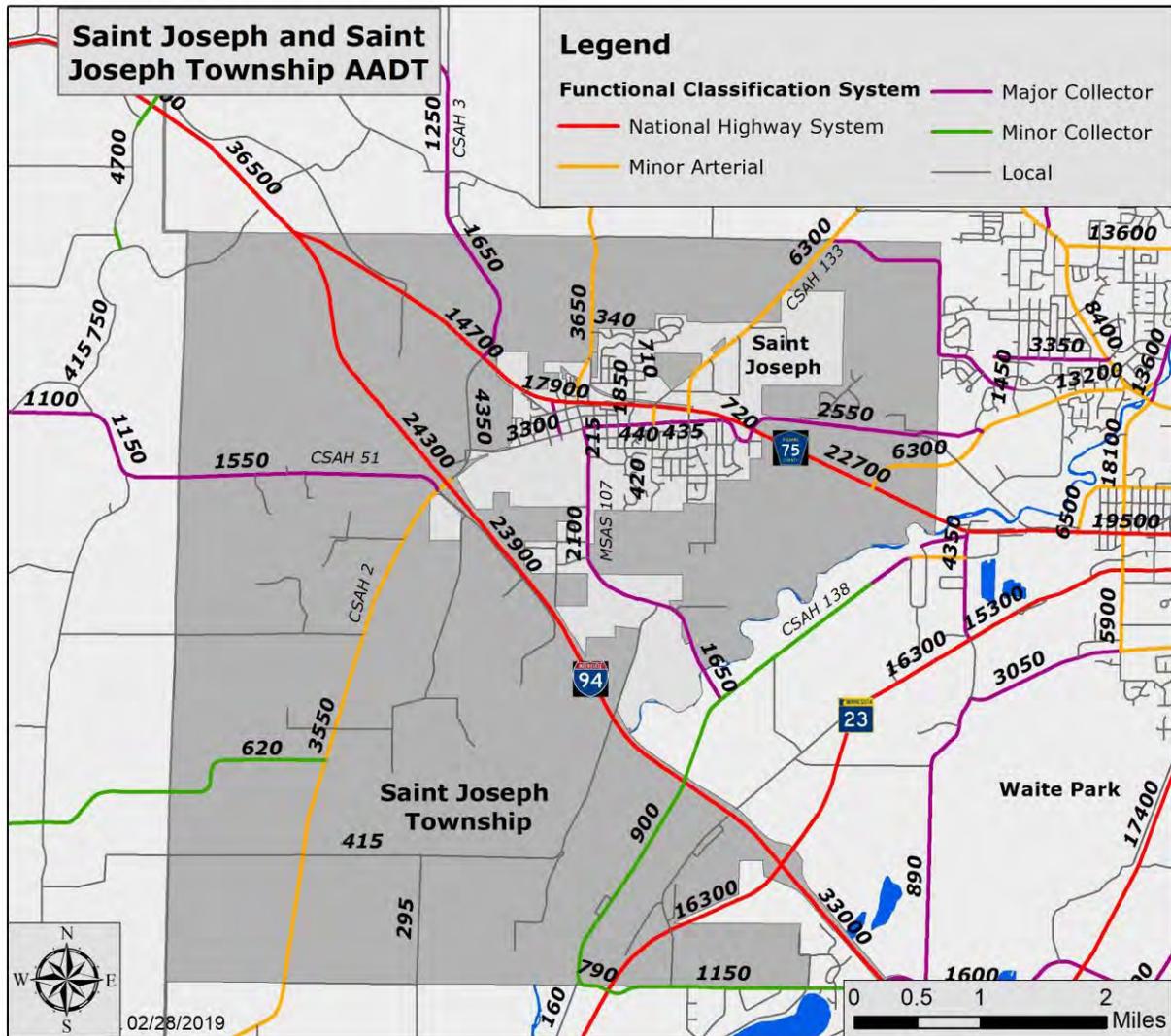


FIGURE 2.34 – SAINT JOSEPH TOWNSHIP AND CITY OF SAINT JOSEPH AADT – 2015
 Data Sources: MnDOT and APO GIS files

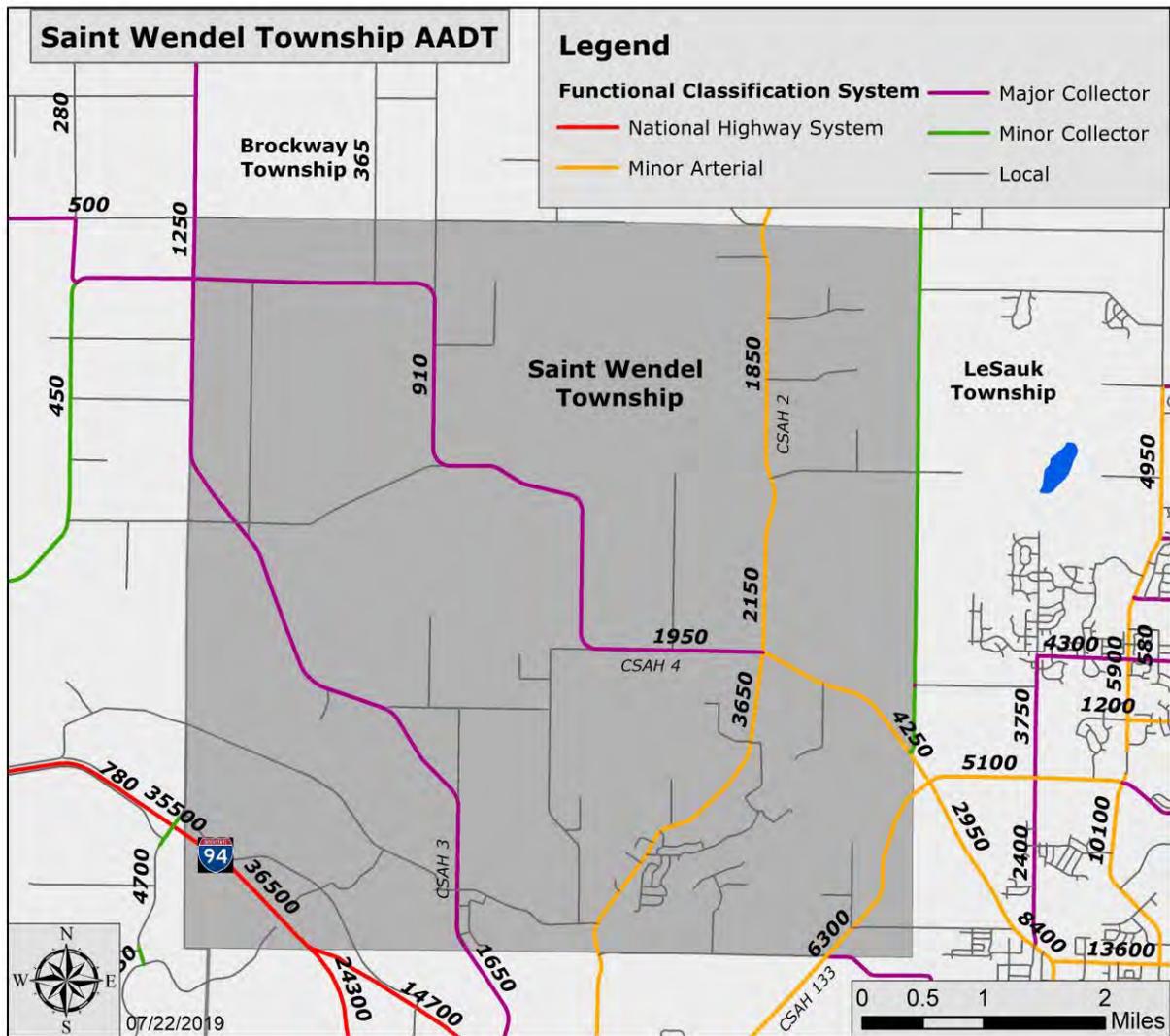


FIGURE 2.35 – SAINT WENDEL TOWNSHIP AADT – 2015
 Data Sources: MnDOT and APO GIS files

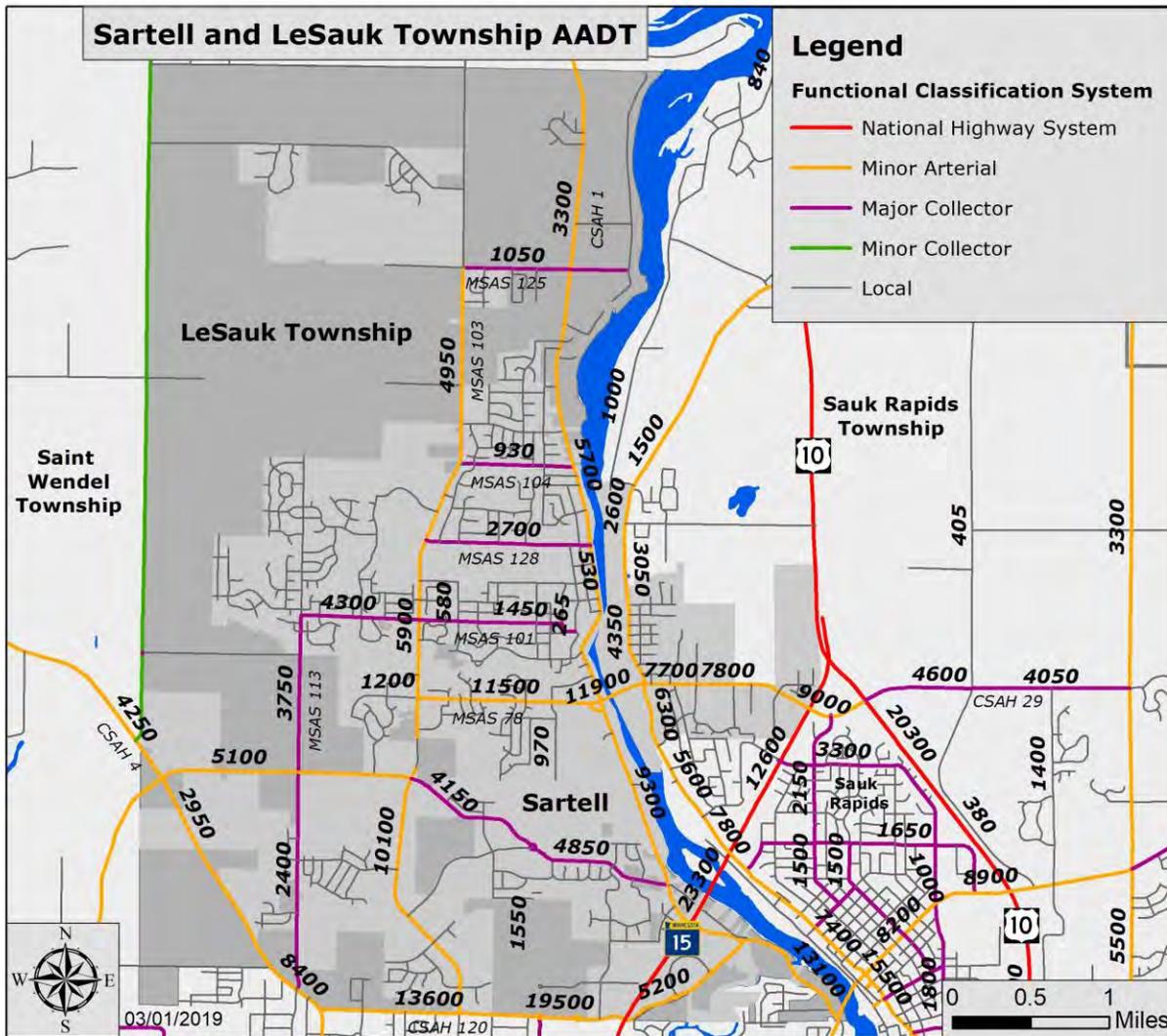


FIGURE 2.36 – SARTELL AND LESAUK TOWNSHIP AADT – 2015
 Data Sources: MnDOT and APO GIS files

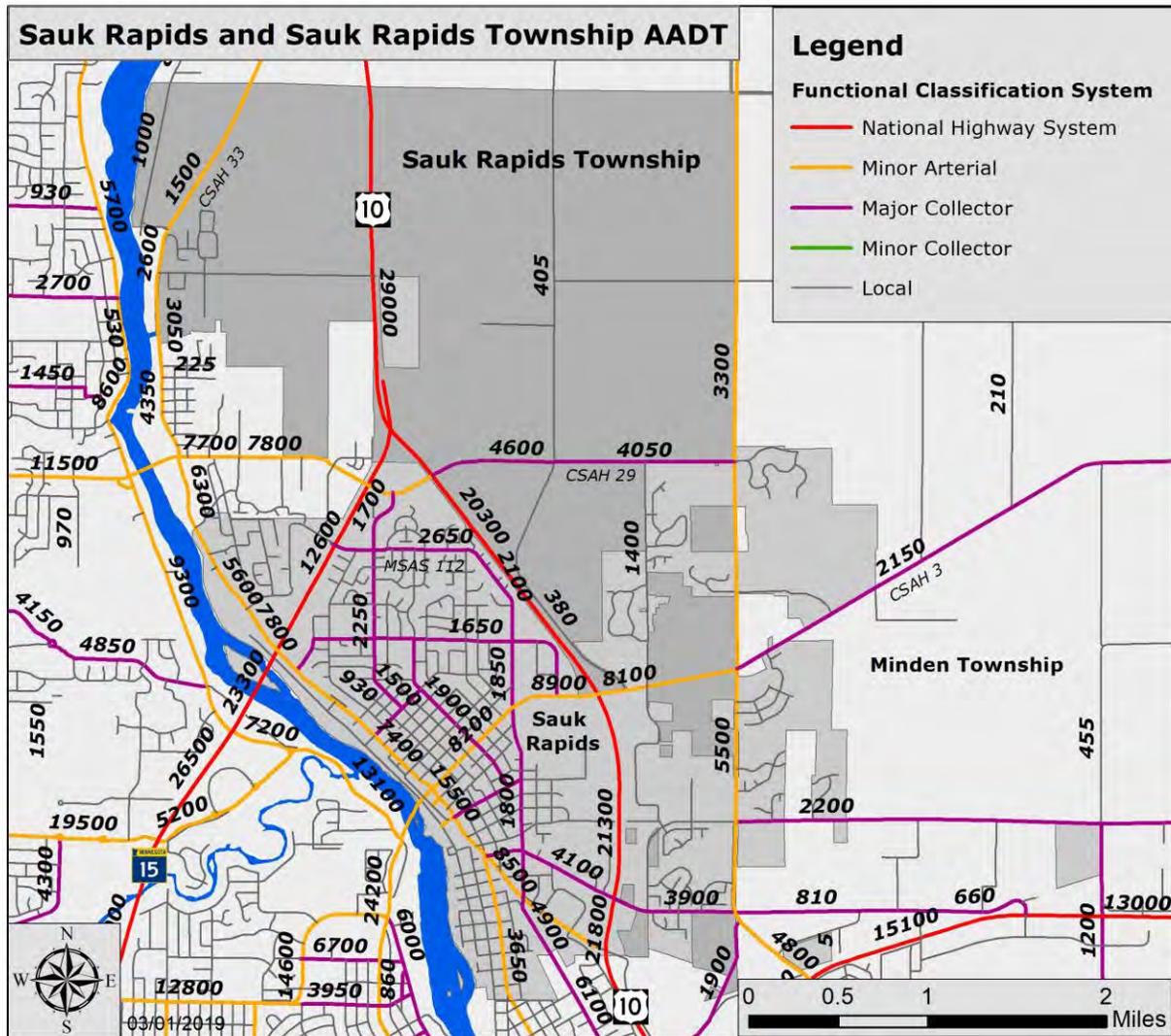


FIGURE 2.37 – SAUK RAPIDS AND SAUK RAPIDS TOWNSHIP AADT – 2015
 Data Sources: MnDOT and APO GIS files

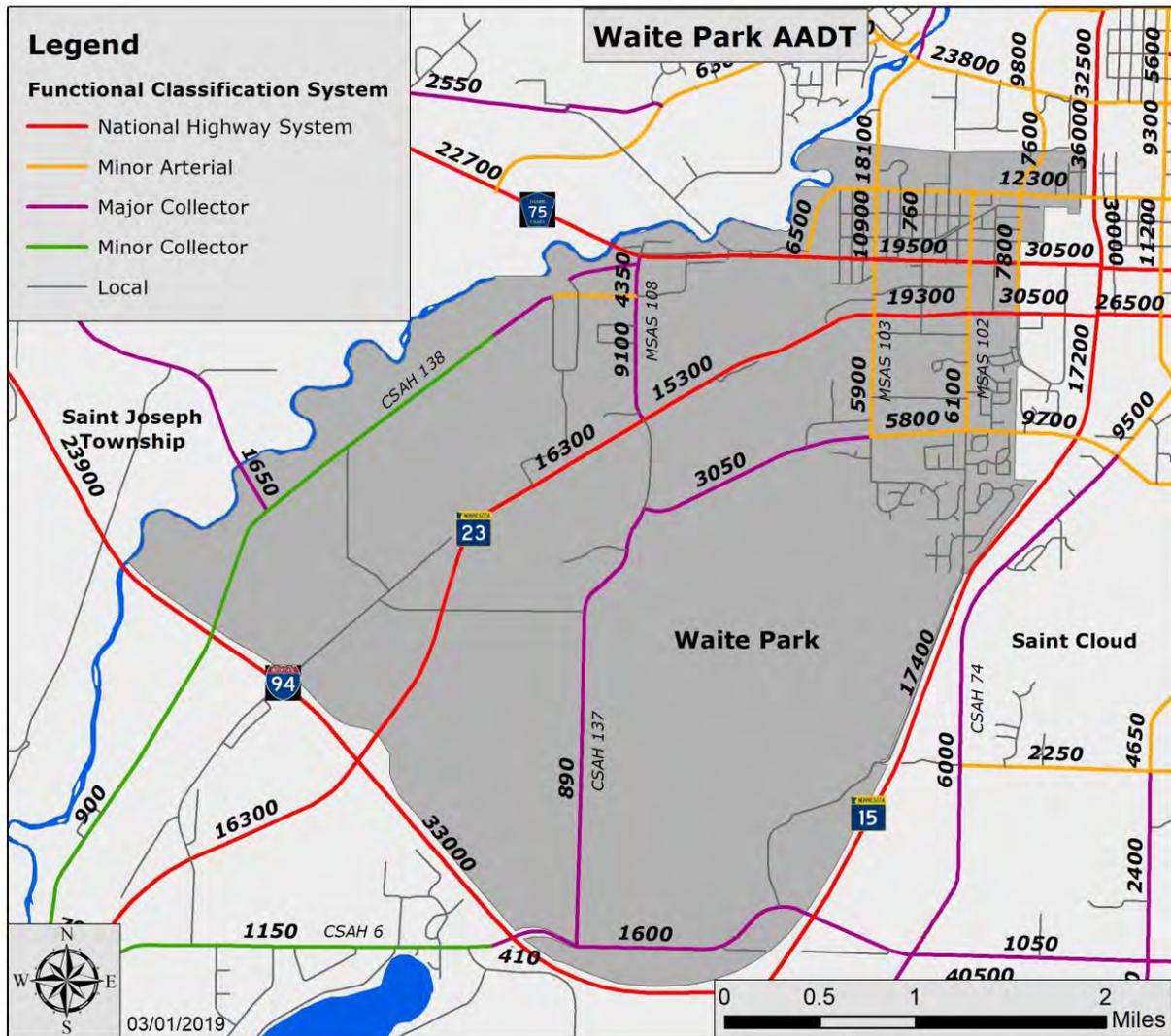


FIGURE 2.38 – WAITE PARK AADT – 2015
 Data Sources: MnDOT and APO GIS files

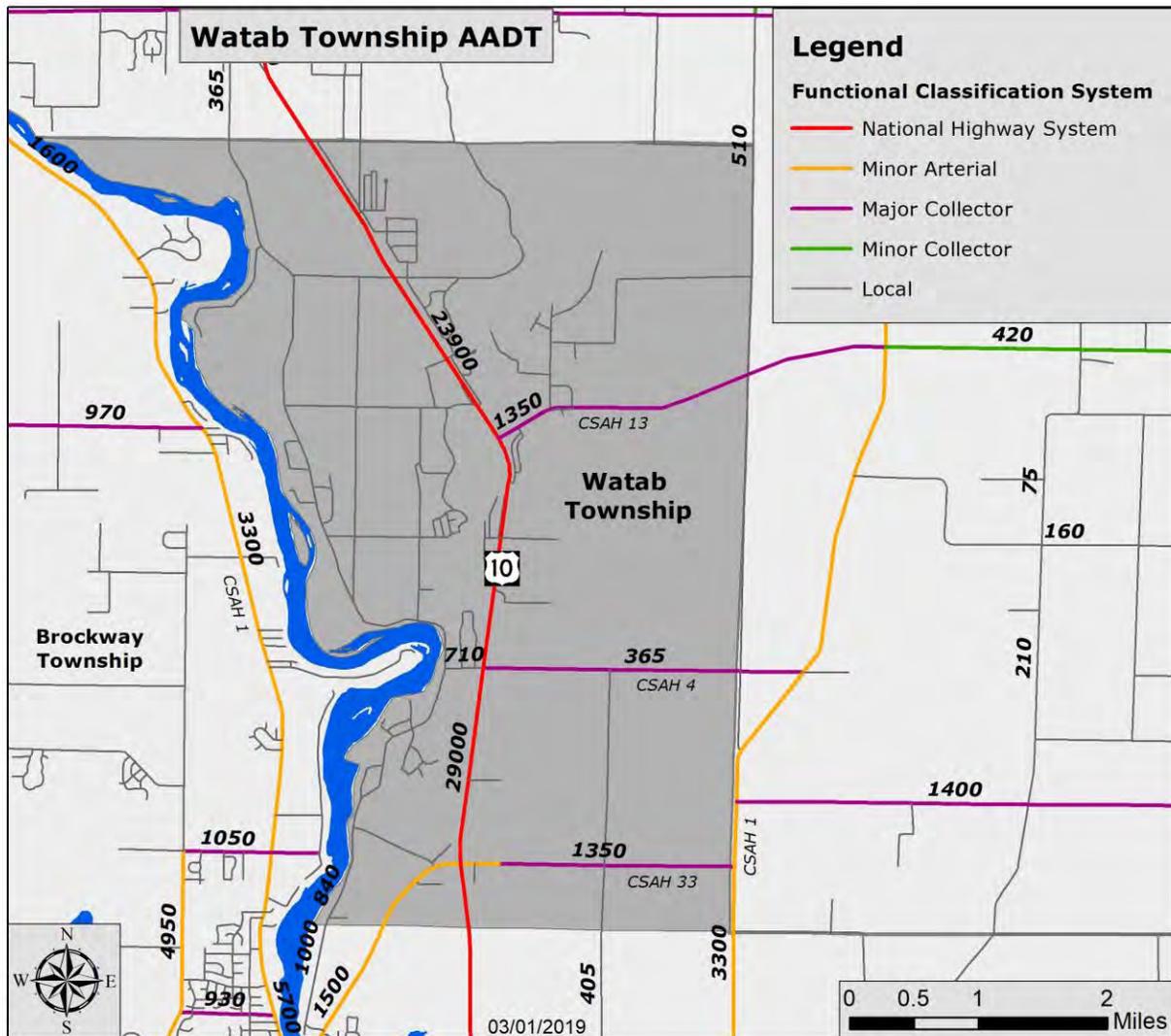


FIGURE 2.39 – WATAB TOWNSHIP AADT – 2015
 Data Source: MnDOT and APO GIS files

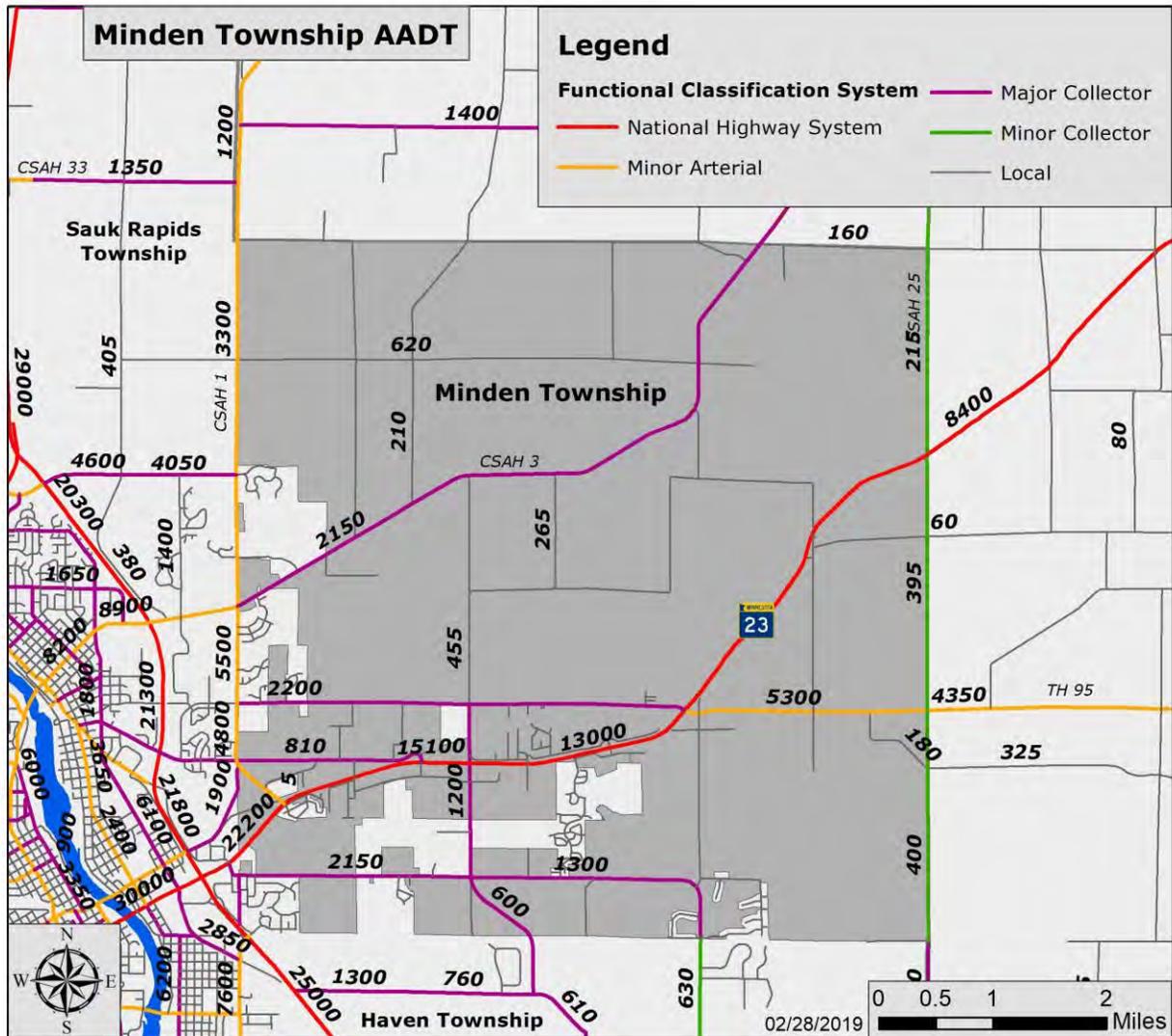


FIGURE 2.40 – MINDEN TOWNSHIP AADT – 2015
 Data Source: MnDOT and APO GIS files

TRAVEL TIME RELIABILITY

While knowing AADT for roadways is useful, it is not necessarily an indication of a problem. For example, 10,000 AADT on a four-lane highway is usually not a problem because there is sufficient capacity to handle the traffic, while 10,000 AADT on a quiet two-lane residential street would be cause for concern. We need some other kind of measure in order to see those areas experiencing traffic flow problems. That is where the Level of Travel Time Reliability (LOTTTR) comes into play.

Time Travel Reliability

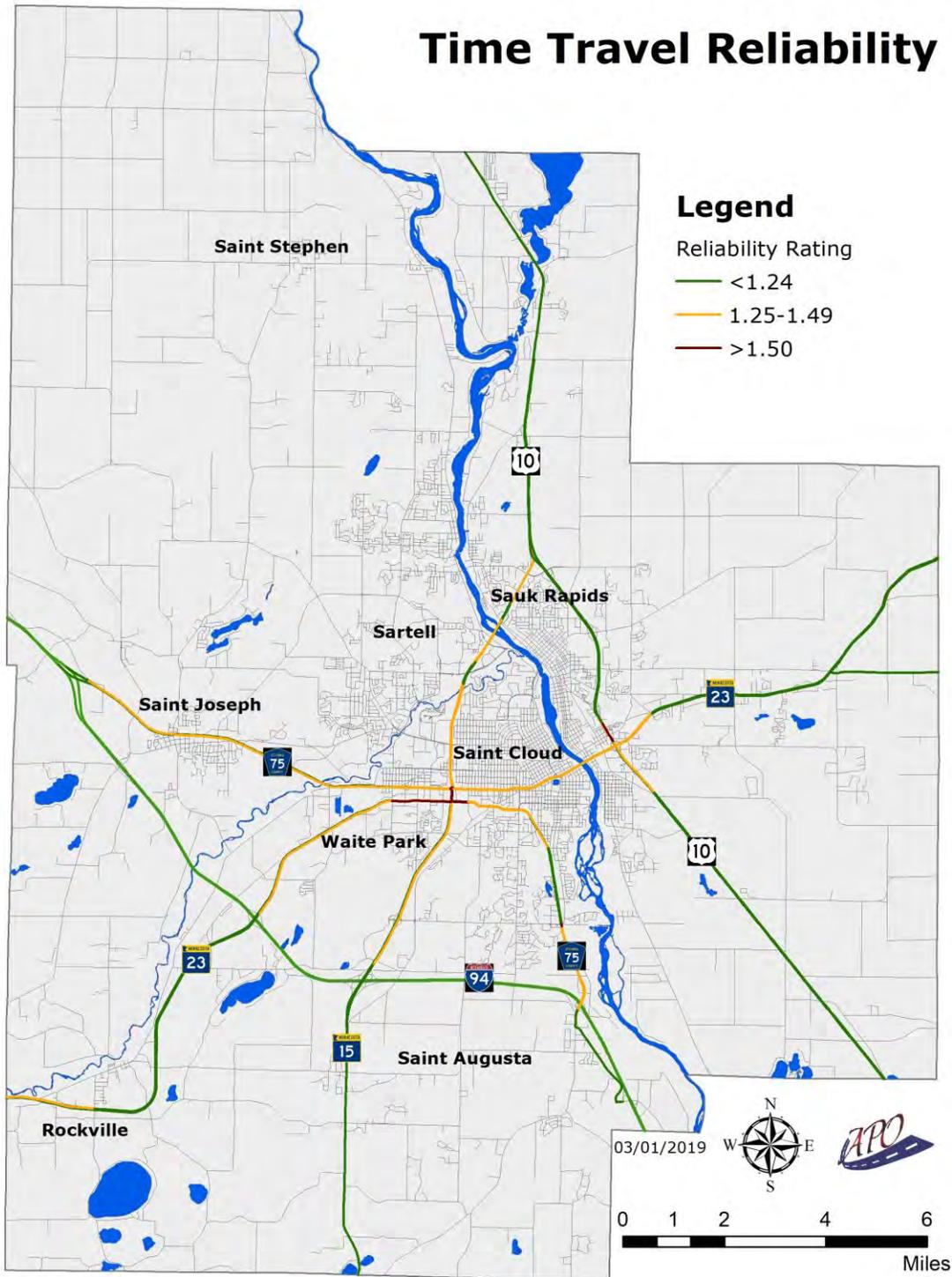


FIGURE 2.41 – 2017 LEVEL OF TRAVEL TIME RELIABILITY ON THE NATIONAL HIGHWAY SYSTEM (NHS)

Travel Time Reliability is a required Federal performance measure for the [National Highway System](http://www.dot.state.mn.us/roadway/data/nhs.html) (<http://www.dot.state.mn.us/roadway/data/nhs.html>). Level of Travel Time Reliability (LOTTR) is defined as the ratio of the “longer-than-normal” travel times (80th percentile) to a “normal” travel time (50th percentile), using data from FHWA’s National Performance Management Research Data Set (NPMRDS) or equivalent. In essence, LOTTR attempts to measure how long it actually takes to travel on certain roadways versus the time one would expect it to take under normal conditions. Data are collected in 15-minute segments during all time periods between 6 a.m. and 8 p.m. local time. Figure 2.41 shows the LOTTR for the NHS within the metropolitan area. Any roadway segment with an LOTTR greater than 1.5 is considered to be “unreliable”. The intersections of MN 15 with MN 23 and the intersection of US 10 with East Saint Germain are the least reliable links for travel time on the National Highway System within the MPA.

TRAFFIC SIGNAL TIMING AND COORDINATION

The City of Saint Cloud and MnDOT have the ability to remotely adjust the timing of some traffic signals based upon traffic conditions (see the red dots in Figure 2.40).

In general, MnDOT is responsible for the signal timing at intersections on MN 23 east of MN 15. There are four signals that are wired for remote control on MN 23 west of MN 15 and which were monitored by MnDOT, but they have recently been offline after the control cable was accidentally cut during some road repair work. You can see those signals represented in orange on Figure 2.42.

The other connected signals are controlled by the City of Saint Cloud’s Traffic Systems

Manager. It should be noted that in some cases, the Saint Cloud Traffic Systems Manager is monitoring and adjusting signals on County Roads – most notably CSAH 75 – at the request of Stearns County. It should be further noted that the Traffic Systems Manager can view the signal timing plans for the MnDOT controlled signals (e.g., MN 23 and MN 15), but cannot make adjustments to them.

While traffic conditions at the connected signals can be remotely monitored and signal timing can be adjusted remotely, there is not, in general, **active** monitoring and adjustment like one would see in a traffic management center. The monitoring of the signals is but one responsibility of the lone Traffic Systems Manager, so monitoring and adjustment is limited to periodic review of signal timing plans and the time frames in which each plan becomes effective. The signal timing plans are set to favor a particular direction of travel based upon the time of day. A pedestrian pushing the pedestrian crossing button or an emergency vehicle that triggers the opticom system on one or more signals can throw the signals out of coordination with their neighbors and it can take several green-red cycles for the signals to become re-coordinated.

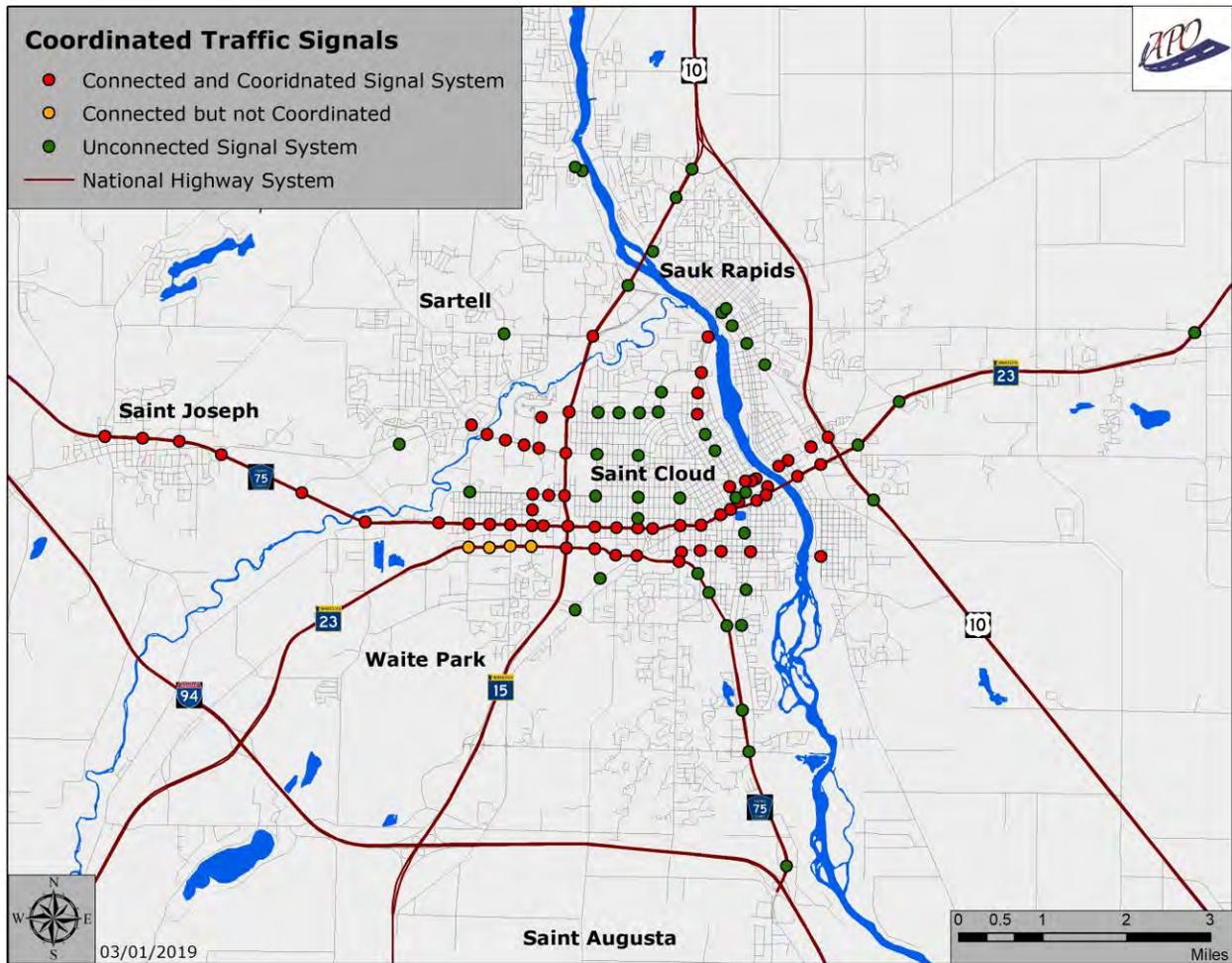


FIGURE 2.42 – SIGNALIZED INTERSECTIONS

PAVEMENT QUALITY AND BRIDGE CONDITION

Building roads and bridges is expensive. Maintaining them in good condition adds to the cost, but is an important part of getting full public value from the asset. A good analogy is purchasing a vehicle. The cost of purchasing the vehicle is substantial. Afterward, the owner can choose to: 1) drive the vehicle without performing any maintenance until the vehicle quits working and then buy another vehicle, or 2) invest regularly in maintaining the vehicle. Option 2 requires an on-going commitment and expense, but usually results in a vehicle that performs better for a longer period of time and results in lower overall expenses over 10- or 20-year time period. The same can be said for roadways.

The impact of regular maintenance on pavement quality is illustrated in Figure 2.43 below:

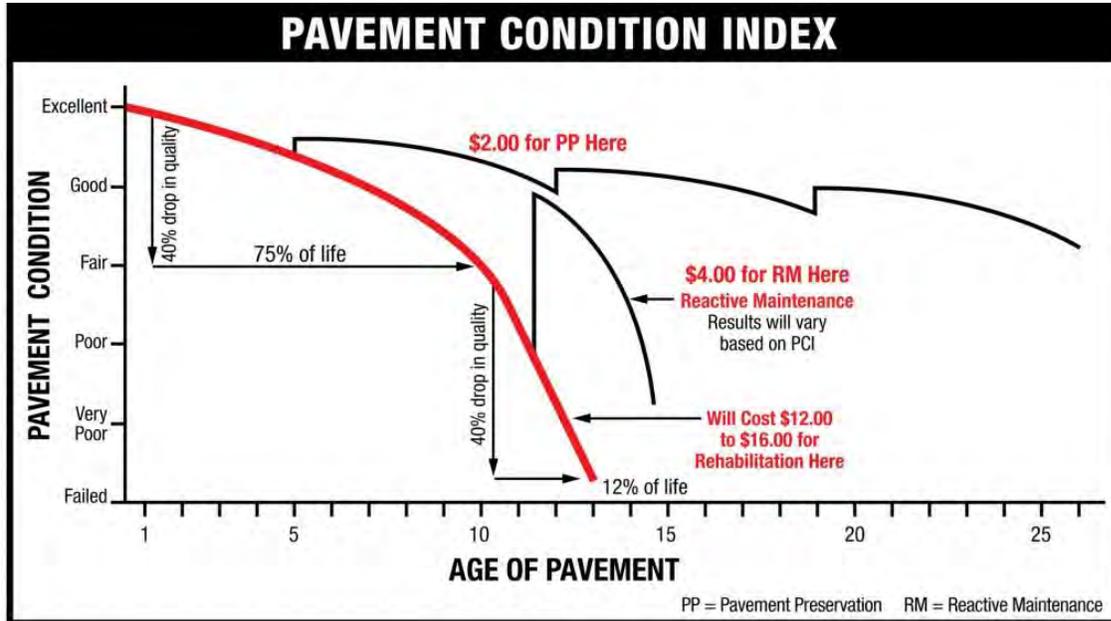


FIGURE 2.43 – PAVEMENT CONDITION INDEX ILLUSTRATION

Pavement quality data from 2015 shows us that less than a majority of centerline miles are in good condition, and 16 percent are in poor condition. As shown in Figure 2.45, the poor quality miles are largely concentrated in the central urban area.

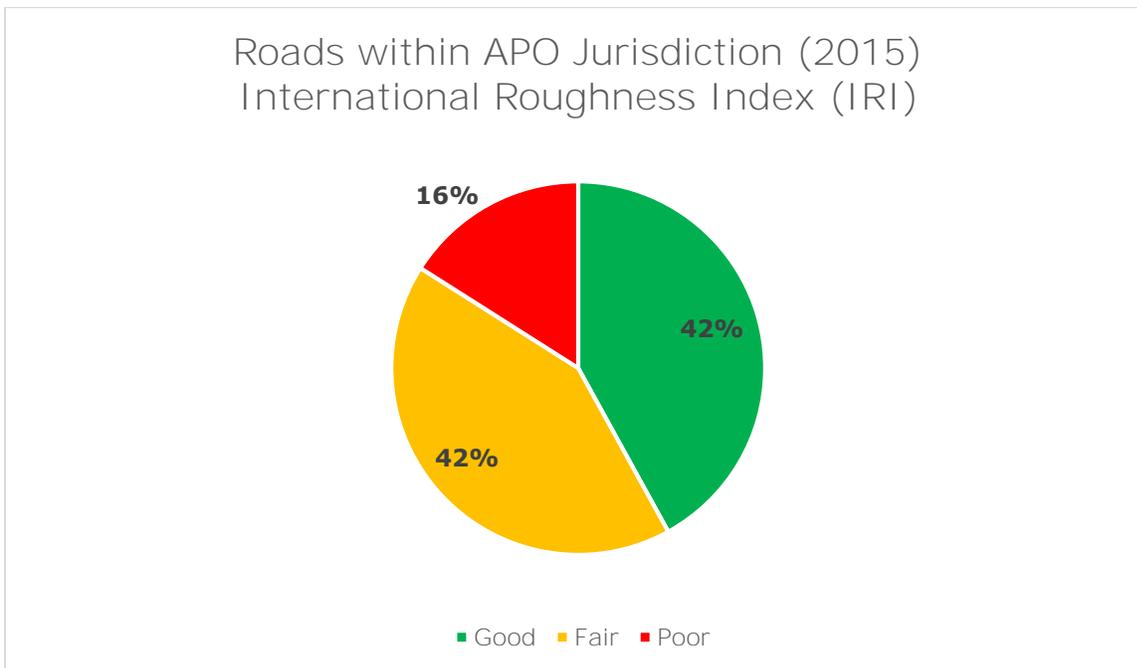


FIGURE 2.44 – 2015 PAVEMENT QUALITY IN THE MPA
Data Source: SRF Consulting & Braun Intertec

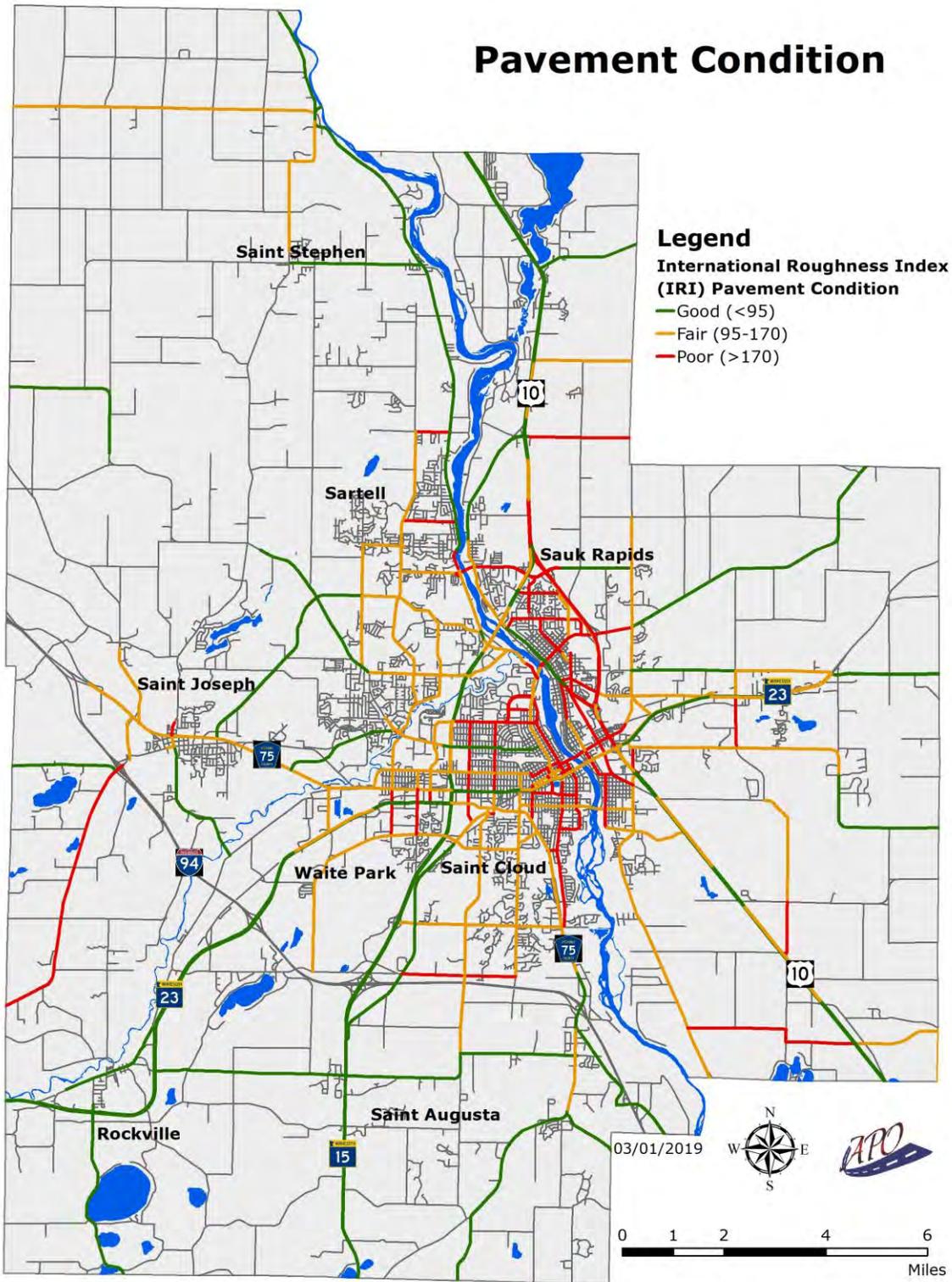


FIGURE 2.45 – PAVEMENT QUALITY MAP (2015)

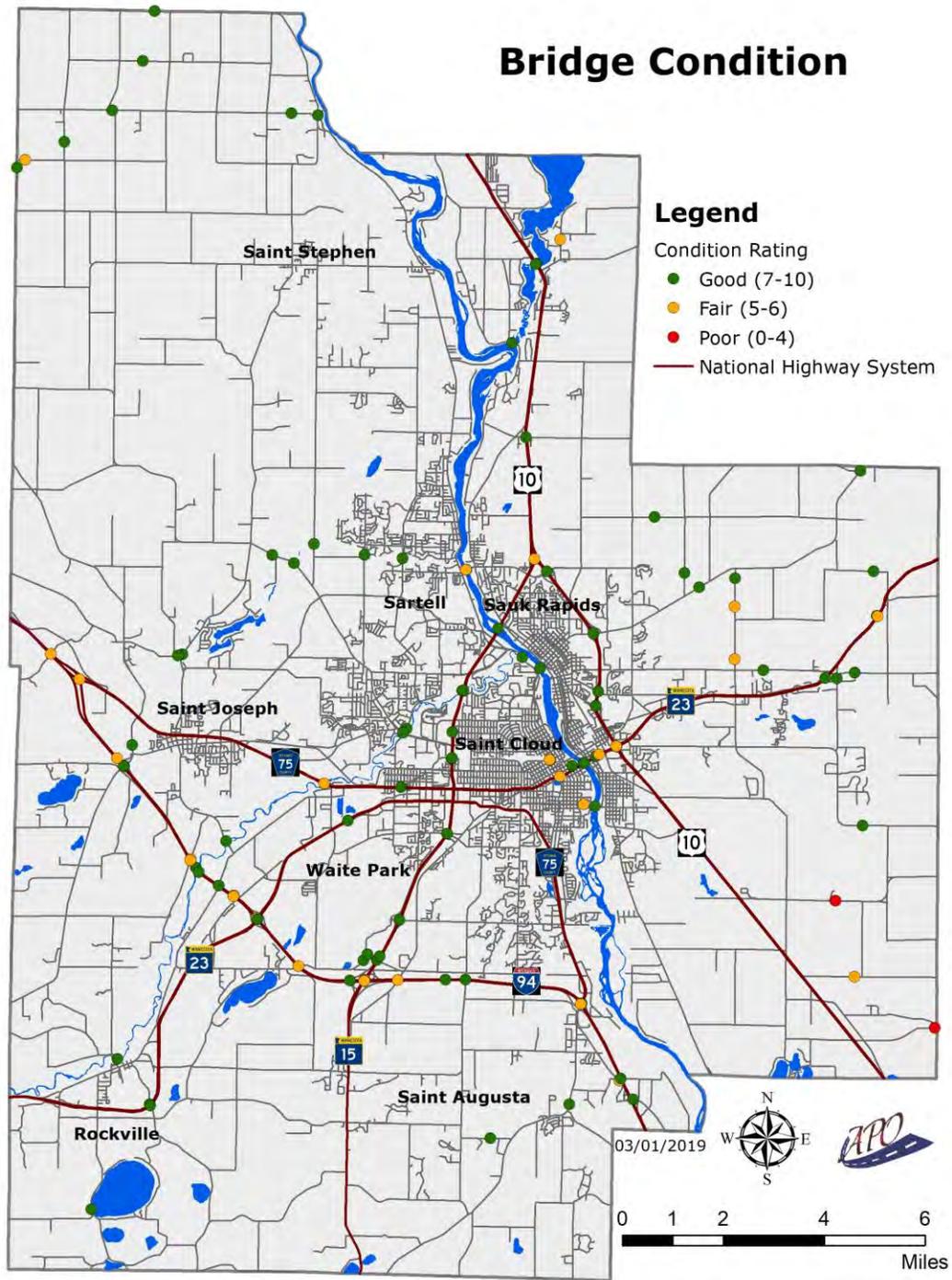


FIGURE 2.46 – BRIDGE CONDITION MAP (2015-2017)

Of note: Bridges are not inspected every year. This data reflects the last time each bridge was inspected. All bridges within the MPA were inspected at least once between 2015 and 2017.

Following the collapse of the I-35 bridge in Minneapolis in 2007, the State of Minnesota invested heavily in bridge inspections and repairs and that investment shows up in the current bridge condition data (See Figure 2.47). Locally, 99 percent of all bridges are in good or fair condition, and just 1 percent are in poor condition. Those bridges with a poor condition rating are not heavily traveled and are on locally owned roadways. However, the bridges in poor condition should still be a priority for rehabilitation or replacement.

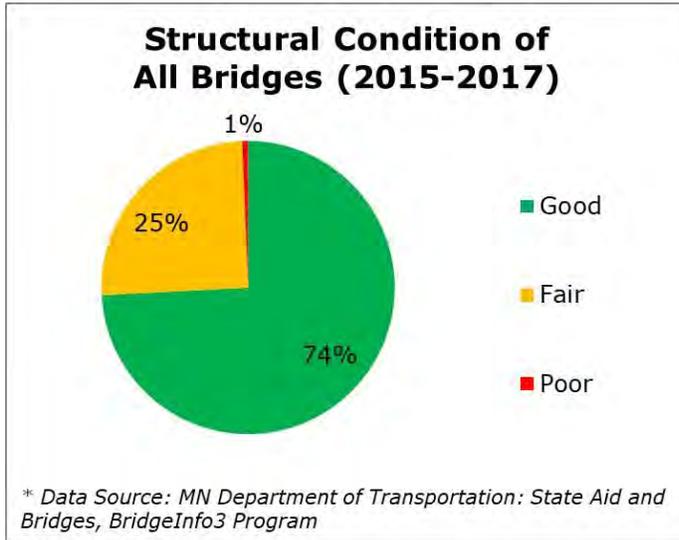


FIGURE 2.47 – BRIDGE CONDITION CHART.
Of note: Bridges are not inspected every year. This data reflects the last time each bridge was inspected. All bridges within the MPA were inspected at least once between 2015 and 2017.



FIGURE 2.48 – 33RD STREET SOUTH BRIDGE IN SAINT CLOUD
 Photo courtesy of Saint Cloud APO

ROADWAY SAFETY

Safety is an important consideration in planning, designing, and operating roadways. See the Bicycle and Pedestrian section later in this chapter for more details on non-motorized fatalities and serious injuries.

Year	MPA Roadway Fatalities (Motorized)	MPA Roadway Serious Injuries (Motorized)	MPA Fatality Rate per 100 Million VMT	MPA Serious Injury Rate per 100 Million VMT	Minnesota Fatality Rate per 100 Million VMT	Minnesota Serious Injury Rate per 100 Million VMT
2006	9	43	0.75	3.58	0.87	3.26
2007	3	45	0.26	3.92	0.89	3.02
2008	7	31	0.55	2.45	0.79	2.71
2009	4	23	0.31	1.79	0.74	2.23
2010	10	20	0.79	1.58	0.72	2.10
2011	6	27	0.48	2.14	0.65	2.04
2012	7	24	0.55	1.90	0.69	2.22
2013	9	23	0.71	1.82	0.68	2.13
2014	6	15	0.47	1.18	0.63	1.83
2015	13	19	1.01	1.47	0.70	1.92
AVG.	7.4	27	0.59	2.18	0.74	2.35
5-Year Avg.	8.2	21.6	0.64	1.70	0.67	2.03

FIGURE 2.49 – MOTORIZED VEHICLE SAFETY PERFORMANCE MEASURES

Data Source: MN Department of Transportation

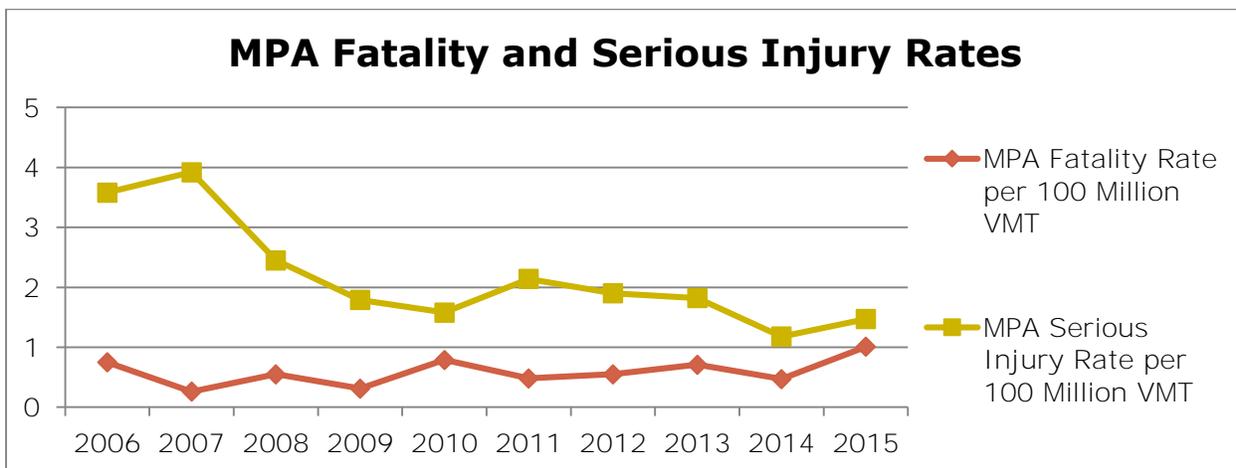


FIGURE 2.50 – MPA MOTORIZED VEHICLE FATALITY AND SERIOUS INJURY RATES

Data Source: Minnesota Department of Transportation

Crash Type	All Crashes	Fatal Crashes	% of Fatal Crashes
Right-Angle	5,028	21	28.4%
Sideswipe (Same-Direction)	2,089	1	1.3%
Run Off Road (Right Side)	1,539	15	20.3%
Left Turn	1,261	5	6.8%
Run Off Road (Left Side)	1,243	5	6.8%
Head On	1,200	12	16.2%
Miscoded	476	1	1.3%
Sideswipe (Opposite Direction)	365	0	0.0%
Right Turn	284	1	1.3%
Unknown/Not Stated	213	0	0.0%
Other	8,841	13	17.6%
Total	22,539	74	100.0%

FIGURE 2.51 – MPA MOTORIZED VEHICLE CRASHES BY TYPE (2006-2015)
Data Source: Minnesota Department of Transportation

Right-angle collisions are the most common type of fatal vehicle crash, followed by running off the road (right side) which usually entails a collision with a permanent fixed object such as a tree or pole. The third most common type of fatal crash is a head-on collision. While there are design and engineering measures that can be taken to help reduce all of these crash types, design and engineering measures are limited in their ability to mitigate poor decisions and other human errors.



FIGURE 2.52 – VEHICLE COLLISION DAMAGE
Photo courtesy of sylvar, Flickr.

Driver Condition	Number	%	# Fatal	% Fatal	# Incapacitated	% Incapacitated
Normal – No Drugs or Drinking	19,677	87.50%	40	54.05%	200	74.35%
Not Specified	835	3.70%	1	1.35%	7	2.60%
Unknown	760	3.40%	22	29.73%	10	3.72%
Under the Influence	659	2.90%	5	6.76%	25	9.29%
Had Been Drinking	201	0.90%	2	2.70%	15	5.58%
Not Applicable	118	0.50%	2	2.70%	3	1.12%
Asleep	84	0.40%	1	1.35%	2	0.74%
Other	66	0.30%	1	1.35%	2	0.74%
Illness	39	0.20%	0	0.00%	2	0.74%
Had Been Taking Drugs	31	0.10%	0	0.00%	2	0.74%
Physical Disability	21	0.10%	0	0.00%	1	0.37%
Aggressive	6	0.00%	0	0.00%	0	0.00%
Total	22,497	100.0%	74	100.0%	269	100.0%

FIGURE 2.53 – MPA DRIVER CONDITION AT TIME OF ACCIDENT (2006-2015)

Data Source: Minnesota Department of Transportation

According to the U.S. Department of Health and Human Services, [in the mid-1970s alcohol was a factor in 60 percent of all roadway fatalities](#)². Today, within the MPA, alcohol is a known factor in less than 10 percent of all fatalities (and a factor in about 15 percent of crashes that result in incapacitating injuries). However, it is worth noting that the law enforcement officers writing the crash reports did not know the driver condition 30 percent of the time, and so alcohol-related crashes are probably somewhat under-reported. Still, alcohol as a crash-related factor has been greatly reduced since the 1970s. It is also worth **noting that “distracted driving” is not a crash-related factor** that is tracked in this data set, but as documented in the next chapter, there is a perception among both the public and law enforcement agents that distracted driving is a significant factor in crashes. Minnesota law enforcement agencies began using a new reporting tool in 2015 that will assist in better tracking distracted driving as a factor in crashes.

² <https://report.nih.gov/nihfactsheets/ViewFactSheet.aspx?csid=24>

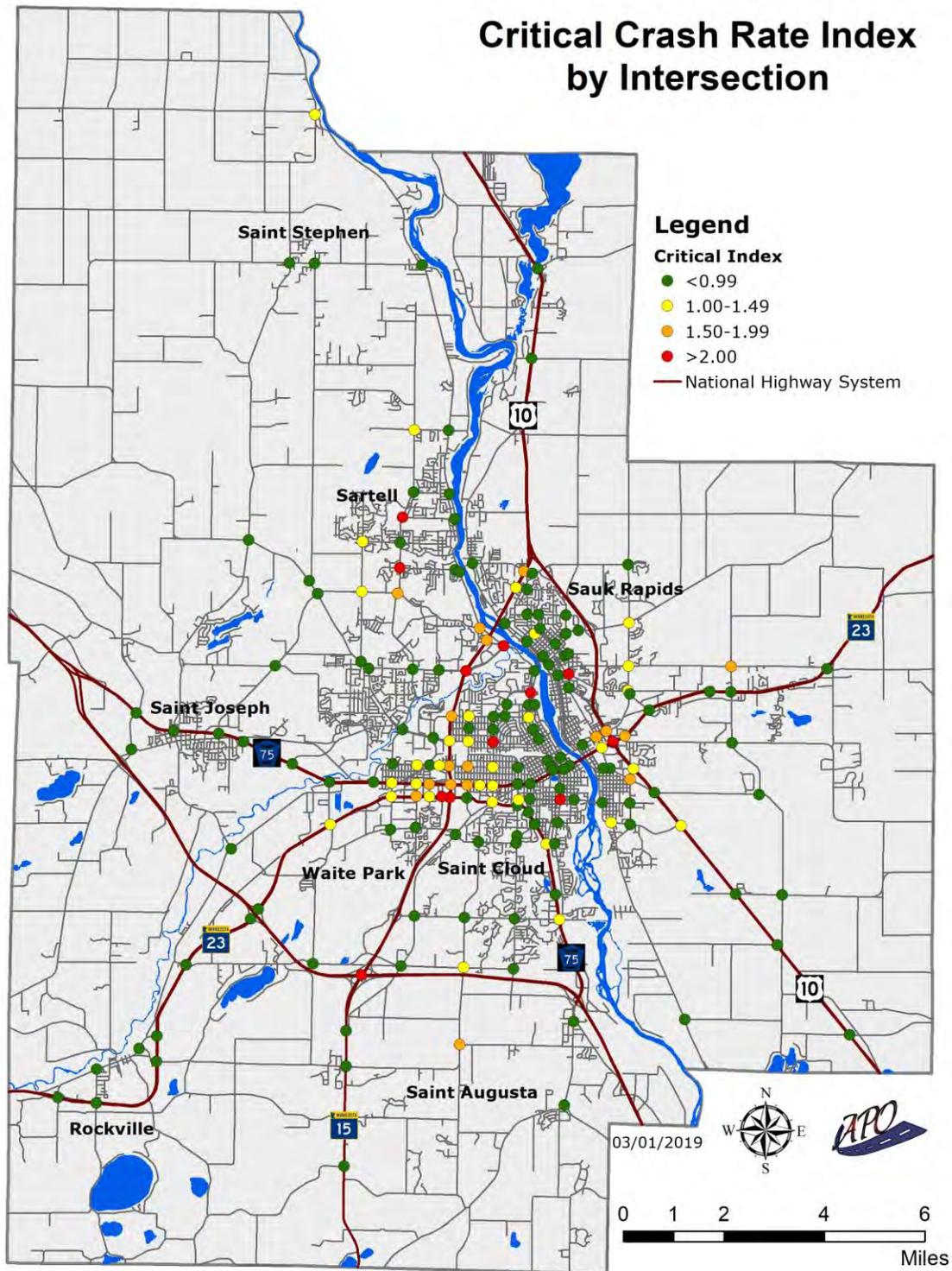


FIGURE 2.54 – 2015 TOTAL CRASH RATE CRITICAL INDEX BY INTERSECTION

Understanding where crashes are occurring is also valuable. Intersections with more traffic usually have more crashes too, but if we compare the total number of crashes to the number of vehicles that use the intersection, we get a crash rate that can then be compared to other intersections across the state with similar characteristics. This Crash Rate Critical Index helps highlight intersections that experience a high rate of crashes and also which experience abnormally high rates of crashes when compared to similar intersections.

In Figure 2.54, any intersection with a Critical Crash Rate Index higher than 1.0 is considered to have an abnormally high crash rate, thus warranting further investigation as to the causes of the crashes and possible mitigation activities. For purposes of this analysis, APO staff calculated the crash rates only at the intersections of two Federal-Aid roadways.

The crash data used for this analysis is from 2015. There are some intersections at which safety projects were completed after 2015. For example, the City of Sartell built a roundabout at the intersection of Pinecone Road and Second Street in part because of the traffic accidents that were occurring at that location. The roundabout installation was completed late in 2015, and so any impact it may be having on crashes is not yet fully reflected in this 2015 data. At the intersection of MN 23 and US 10, MnDOT has already scheduled an improvement project programmed for fiscal year 2023 construction. Still, there are quite a few intersections remaining that deserve further examination.

Given so many intersections, it may be hard to know where to start. APO staff calculated the Critical Crash Rate Index for crashes involving fatalities and/or serious injuries to help focus attention on the worst locations first. Figure 2.56 shows those intersections. Note that some intersections do not exceed the Critical Crash Index Rate for total crashes, but do exceed for crashes involving fatalities and serious injuries.



FIGURE 2.55 – CAR CRASH IN SAUK RAPIDS. Photo courtesy of Saint Cloud APO

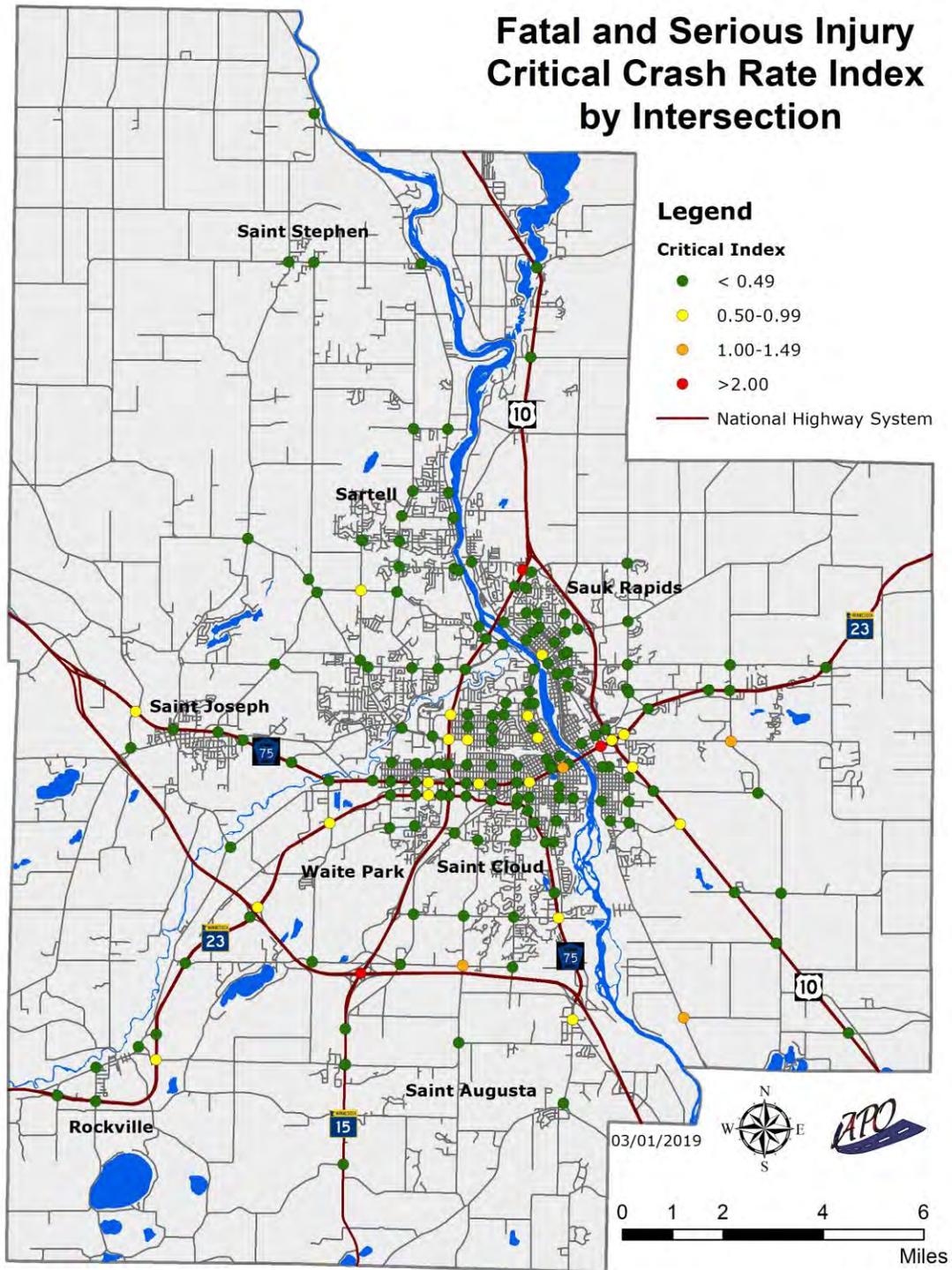


FIGURE 2.56 – 2015 FATAL AND SERIOUS INJURY CRASH RATE CRITICAL INDEX BY INTERSECTION

WHAT WE HEARD

The following is a summary of public comments that we collected regarding roadways, including roadway safety, preservation, and management:

- Roundabouts are good/we want more roundabouts. (16 similar comments)
- Synchronize all traffic lights so that traffic flow is maximized (Especially on Division). (8 similar comments)
- Diverging diamond interchange on MN 15 at CR 120 works well. (5 similar comments)
- **"May want to start looking a bypasses around Waite Park/Saint Cloud"/Consider a ring highway around Saint Cloud.** (5 similar comments)
- Increase opportunities for safe passage and less traffic congestion. (3 similar comments)
- Make all of MN 15 a grade separated highway from I-94 to US 10. (3 similar comments)
- Traffic congestion/commute times are getting worse in the Saint Cloud area. (2 similar comments)
- **"No good way to turn left on Division."** (2 similar comments)
- Concern about funding cuts to buses/light rail/road-bridge-maintenance. (2 similar comments)
- We need more timely snow plowing. (2 similar comments)
- **"Build roads above city [i.e., elevated roadways] with exits into the city like Duluth."** (2 similar comments)
- We need a bridge on 33rd Ave. S in Saint Cloud over the river, especially with Tech HS, congestion will worsen.
- **"Making it easier and quicker to drive across Saint Cloud. Similar cities have much stronger inter-city routes (i.e. Mankato)."**
- **"Do NOT implement toll roads! Everywhere I have used them, they are incredibly inefficient in regards to traffic, create more pollution with cars idling AND the roads are still in a state of disrepair. Florida near Orlando last June is a prime example. And, do not add more lanes to 94, they are obsolete as soon as they are completed."**
- **"Toll roads sound good, but lower income folks then crowd roads without tolls."**
- **"Commit to roadway lighting that is dark-skies friendly; significantly reduce light pollution."**
- Any federal funding for township roads?
- **"Money towards Roads and Bridges – not choo choo trains."**
- **"Examine a future with fewer cars."**
- **"Keep ahead of the curve for innovation technology and new emerging concepts like solar panel streets, driver less car technology, and other advancements. If we stay ahead of the curve and encourage these new ideas we will all prosper as a region."**

- “Studies in transportation economics found that 1. ‘working from home’ does not decrease use of roads. Such workers went to coffee shops rather than to their employers. Still on the road.”
- “Roads around Talahi School, especially student housing areas, are in bad shape (i.e., poor surface quality) and when kids park on both sides of the street it becomes difficult to navigate a bus down the road.”
- “Fill more pot holes around the Saint Cloud and Waite Park areas.”
- “Fix potholes.”
- “Fix I-94 rough pavement.”
- “Redo 30th Ave.”
- “Open 16th Ave. S [in Saint Cloud] to County Road 75 [at Traverse Avenue].”
- “Better freeways and highways.”
- Widen freeway from Twin Cities
- “Replace Hwy 10/Hwy 23 bridge.”
- “Better access.”
- “Adjust almost every light in the area to flash yellow arrows for left turns instead of having the red turn arrow.”
- “Roundabouts do not work for all the elderly using medical facilities. Should never have put them all around CentraCare.”
- Roundabouts have not necessarily improved traffic flow at high times, especially along Pine Cone Road (Sartell).
- “Widen the roundabouts. If you pass through the Princeton roundabout, it is smooth as can be. Any roundabouts in Saint Cloud make you dizzy to go through.”
- “I appreciate the areas two-lane roads for busier areas, especially in Saint Cloud. I also like the roundabouts WHEN they are practical and work well. Some roundabouts seem like they are useless.”
- “I hate roundabouts. Don’t add any more.”
- “Future I-94 interchange at Jade Road in Saint Joseph.”
- Sartell-Saint Cloud connections could be improved.
- “I am only in Saint Cloud due to drive time to MSP and Brainerd being convenient. Traffic is one reason I might decide to just move to the cities!”
- “Fewer stoplights, especially stoplights across a highway. The infrastructure is designed for a Saint Cloud population of 20 years ago.”
- “Nothing in Saint Cloud [works]. It is always congested; the signals do not work in conjunction with the next light you come to. Hwy 15 is the only corridor that works. I can get on it at 18th St. NW in Sauk Rapids and if I time it right I can get all the way down to Holiday Inn at 2nd St. S before I hit a red light.”
- The solar lights on stop signs are great – keep them coming.
- More reflectors on traffic signs are great.
- Complete Streets are great!
- Emergency opticon system for first-responders works well.
- Lighted crosswalks, rapid flash beacons and other safety upgrades are important.

- New Hwy 15 interchange.
- “Left and right turn lanes are really helpful and well placed.”
- “I like the two lanes between Saint Cloud and Rogers. Not very congested.”
- “Excellent use of left hand turn lanes.”
- “Generally good levels of traffic.”

URBAN PUBLIC TRANSIT

METRO BUS

The Saint Cloud Metropolitan Transit Commission was created by the Minnesota Legislature in 1969 to operate as a Transit Authority. The MTC – more commonly known Metro Bus – is responsible for the daily management, operation, and maintenance of both Fixed Route (FR) and Dial-a-Ride (DAR) systems. The transit commission provides service for the communities of Saint Cloud, Sartell, Sauk Rapids and Waite Park.

The Metro Bus fixed route service operates seven days a week and includes 17 regular public routes as well as three routes servicing Saint Cloud State University. The system includes four transit hubs: the Downtown Saint Cloud Transit Center, Crossroads Center mall, the Miller Learning Resources Center at Saint Cloud State University and Epic Shopping Center in Sartell.

There are nearly 70 bus shelters and over 850 signed bus stops throughout the four city transit service area. A majority of the signed bus stops are located with limited sidewalk accessibility.

On average, fixed route bus stops are spaced every other block in the downtown Saint Cloud core. For outlying stops, Saint Cloud Metro Bus places roughly four to five stops per mile.

According to the 2016 Saint Cloud Metro Bus Long Range Transit Plan, the bus stop spacing guideline can be discarded in favor of considering the location of rider concentration. Examples of this include regional shopping malls, hospitals, or educational campuses.

Metro Bus also provides training for new riders and assessments for DAR service eligibility at its Saint Cloud Mobility Training Center located at 700 W Saint Germain St., Suite 100.

Saint Cloud Metro Bus operates 38 FR buses and 36 DAR buses in its fleet as of the drafting of this plan. All fixed route buses are outfitted with bicycle storage options on the front exterior of the vehicle. In addition, Metro Bus operates a trolley bus that is used primarily during the summer months as transportation options from downtown Saint Cloud to Lake George for the area’s Wednesday night summer concert series “Summertime by George!”.

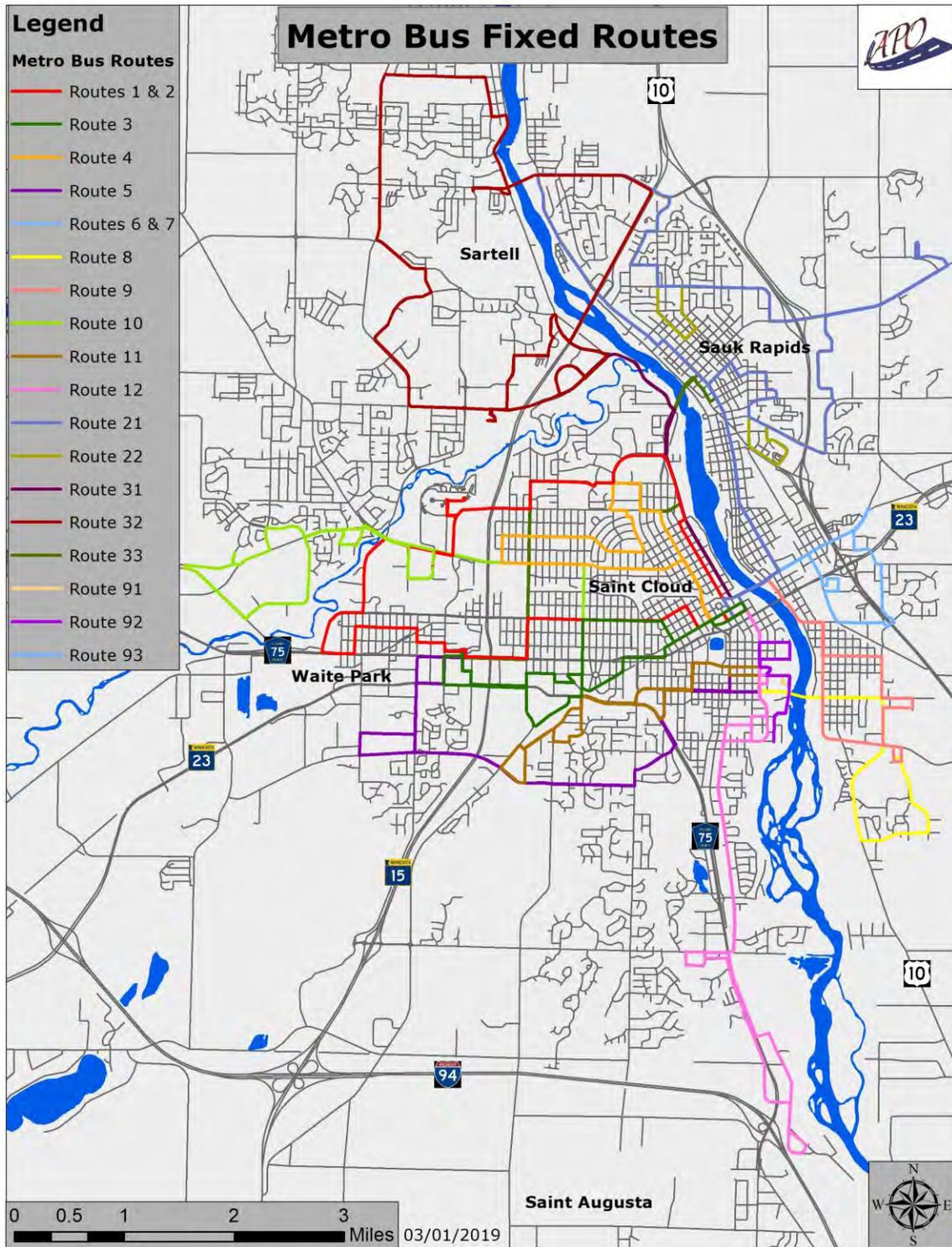


FIGURE 2.57 – METRO BUS FIXED ROUTES 2017

Since 2010, Saint Cloud Metro Bus has made a commitment to convert the majority of its fleet (with the exception of its trolley and Northstar Link Commuter Buses – see section below) to operate on compressed natural gas (CNG). As of July 2019, Saint Cloud Metro Bus has 31 FR and 19 DAR buses that use CNG fuel.

WHAT THE DATA SAYS

FIXED ROUTE

Fixed Route ridership for Saint Cloud Metro Bus has been declining since 2013. Most recently, Metro Bus, which had boasted over 2 million rides annually, has fallen below that mark as of FY 2016.

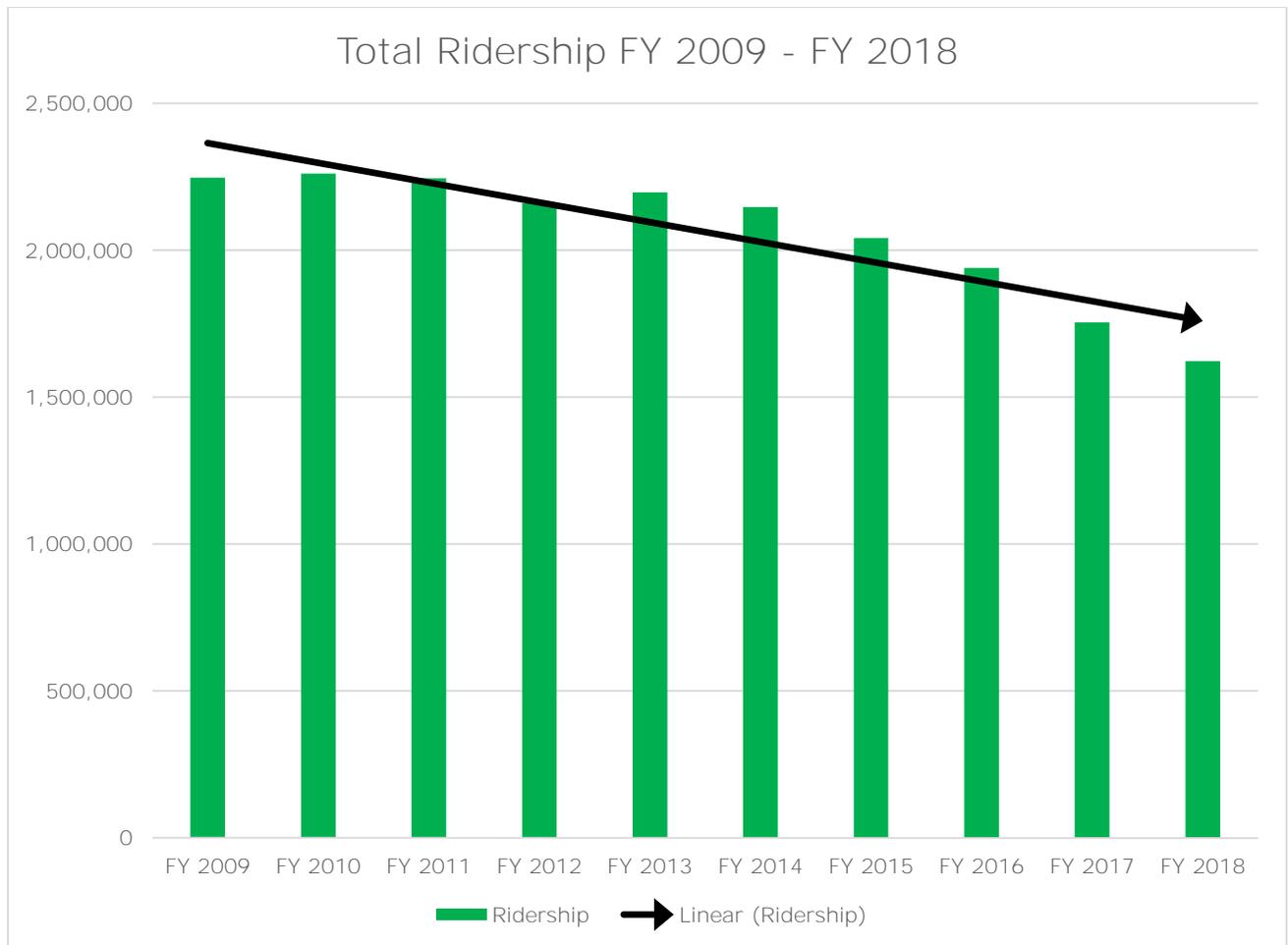


FIGURE 2.58 – METRO BUS FIXED ROUTE RIDERSHIP
Data Source: Saint Cloud Metro Bus

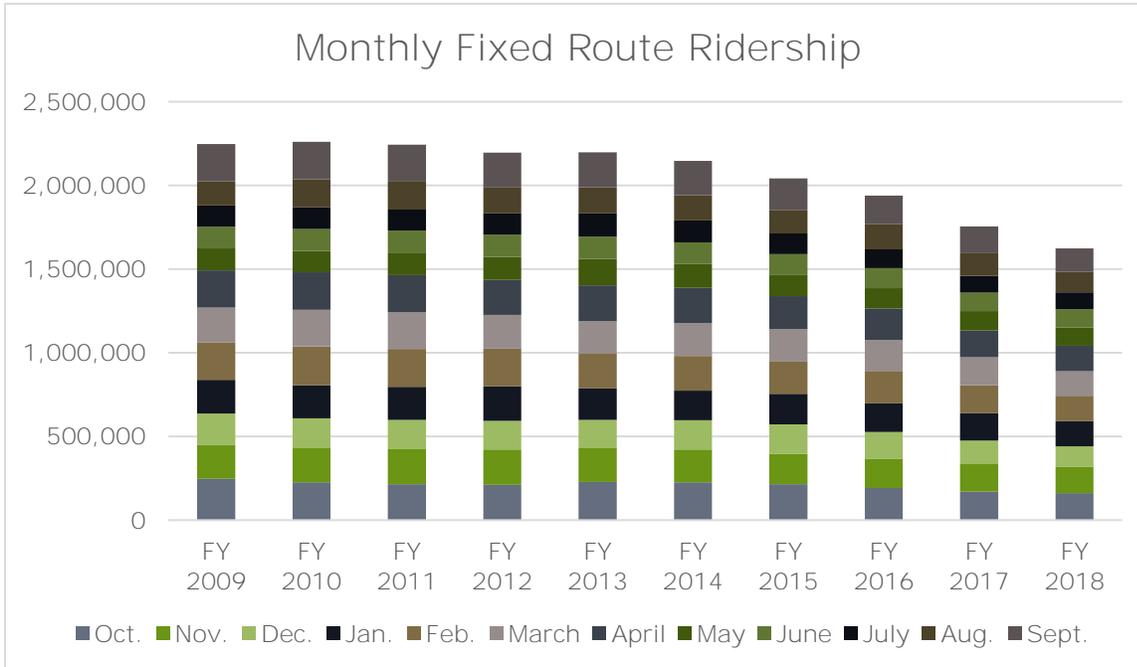


FIGURE 2.59 – METRO BUS MONTHLY FIXED ROUTE RIDERSHIP DATA FY 2009-2018
 Data Source: Saint Cloud Metro Bus

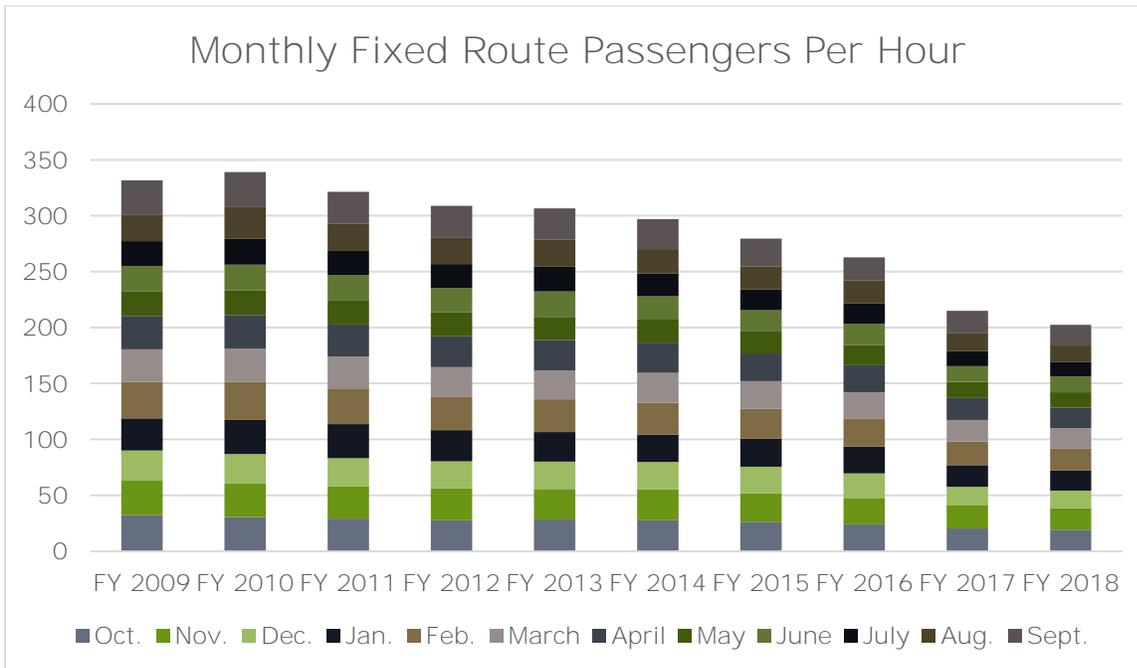


FIGURE 2.60 – METRO BUS MONTHLY FIXED ROUTE PASSENGER PER HOUR FY 2009-2018
 Data Source: Saint Cloud Metro Bus

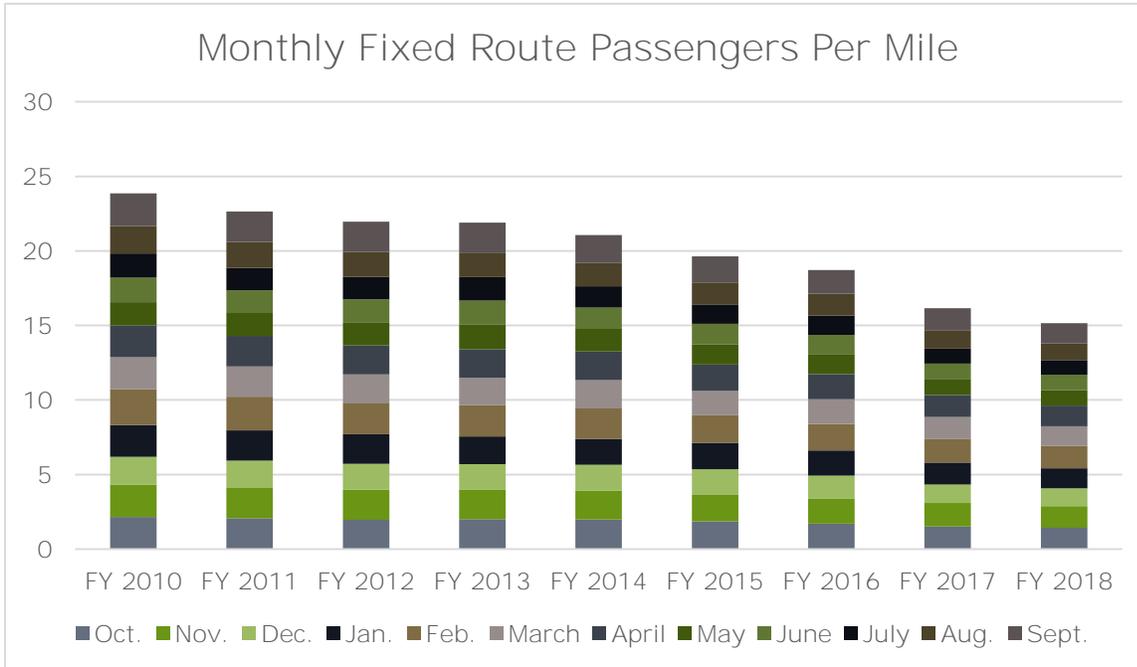


FIGURE 2.61 – METRO BUS MONTHLY FIXED ROUTE PASSENGER PER MILE FY 2010-2018
 Data Source: Saint Cloud Metro Bus. Of note, FY 2009 data was not provided.

While annual ridership has dipped about 20 percent since 2015, Metro Bus has increased revenue hours (+10.4 percent) and revenue miles (+3.5 percent) during the same time frame.



FIGURE 2.62 – FIXED ROUTE BUS
 Photo courtesy of Saint Cloud Metro Bus

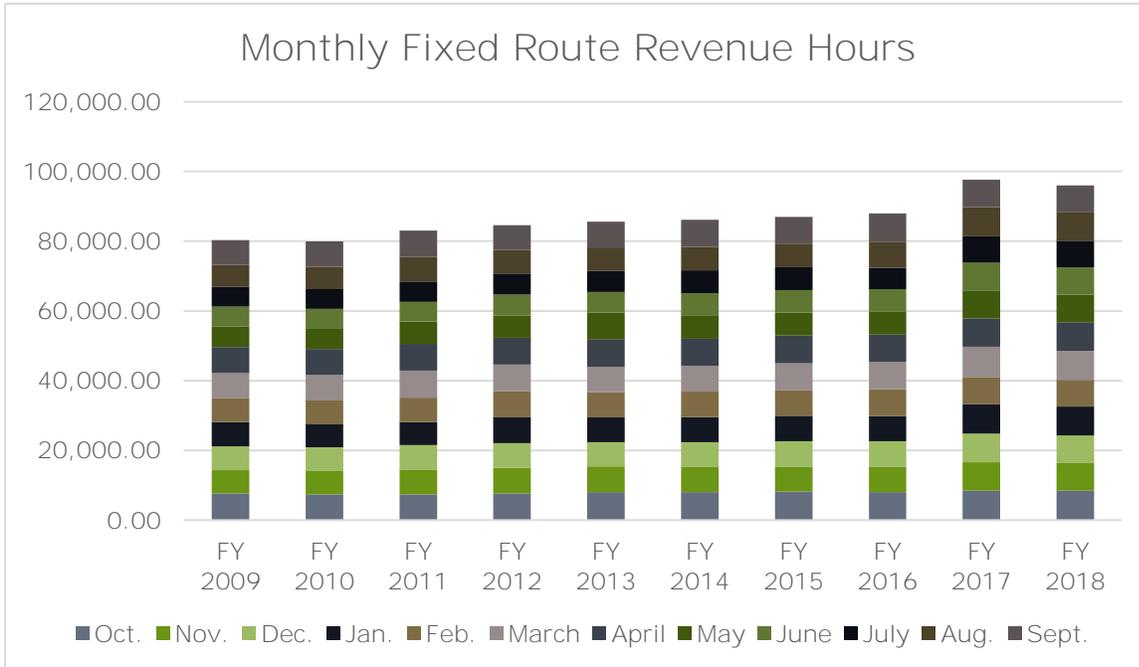


FIGURE 2.63 – METRO BUS MONTHLY FIXED ROUTE REVENUE HOURS FY 2009-2018
 Data Source: Saint Cloud Metro Bus.

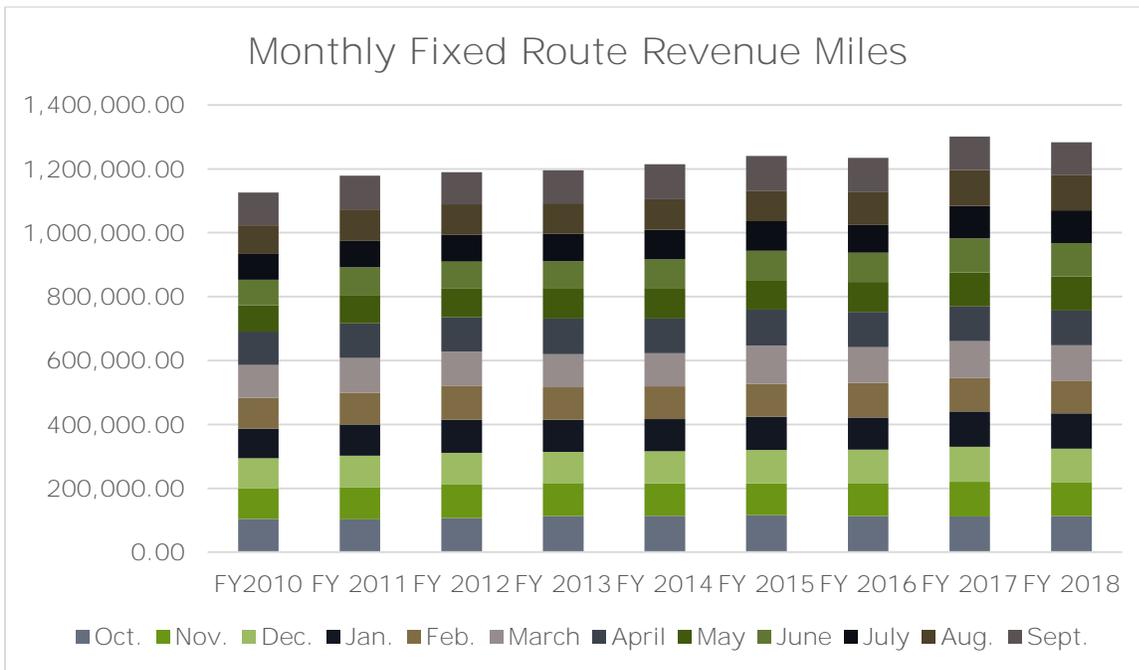


FIGURE 2.64 – METRO BUS MONTHLY FIXED ROUTE REVENUE MILES FY 2010-2018
 Data Source: Saint Cloud Metro Bus. Of note, FY 2009 data was not provided.

The reasons for the decline in FR ridership are being investigated, but some possibilities include:

- Generally improving regional economic conditions since 2014 (though, as noted earlier, real household incomes have largely remained stagnant or have fallen);
- A decrease in gasoline prices from about \$3.45 per gallon in the summer of 2014 to only about \$2.30 per gallon in the summer of 2017;
- Growth in low-cost, on-demand, shared transportation services like Lyft and Uber (see section on Transportation Network Companies later in this chapter);
- Declining enrollment at Saint Cloud State University since 2014, and overall less reliance on in-class attendance coinciding with more online learning;
- Metro Bus route restructuring in August 2016 decreasing the number of transfers needed for some trips; as a result, it may appear as though fewer people are riding Metro Bus when, in actuality, the same number of people are simply taking fewer buses.

In August 2016, Saint Cloud Metro Bus implemented Phase I route restructuring as part of its Long Range Transit Plan. With this phase, Saint Cloud Metro Bus eliminated its campus-schedule specific service routes to Saint Cloud State University and has since incorporated that service into its year-round FR service. Reasons for this switch include declining enrollment at Saint Cloud State University which fell from 15,416 students in 2014 to an estimated 14,500 students in 2017.

As such, trips utilizing the SCSU student identification as payment for fares has declined.

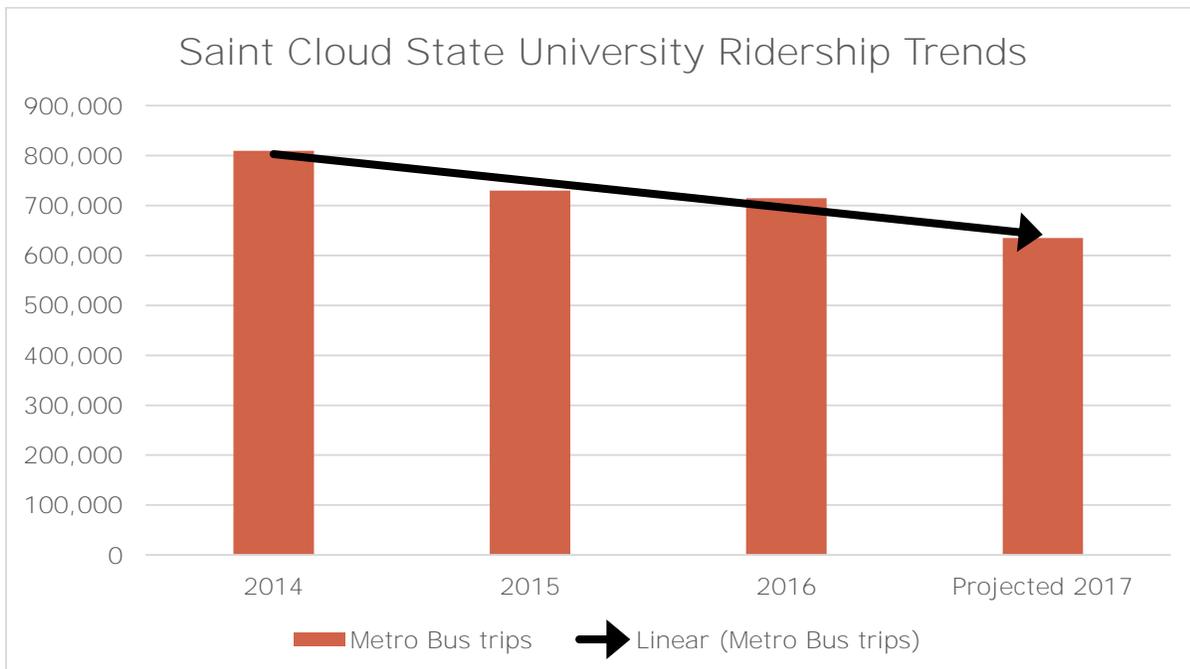


FIGURE 2.65– METRO BUS UNIVERSITY RIDERSHIP 2014 - 2017
Data Source: Saint Cloud Metro Bus

Generally, FR service appears to serve areas of high concentrations of poverty fairly well, with one notable exception being the City of Saint Joseph.

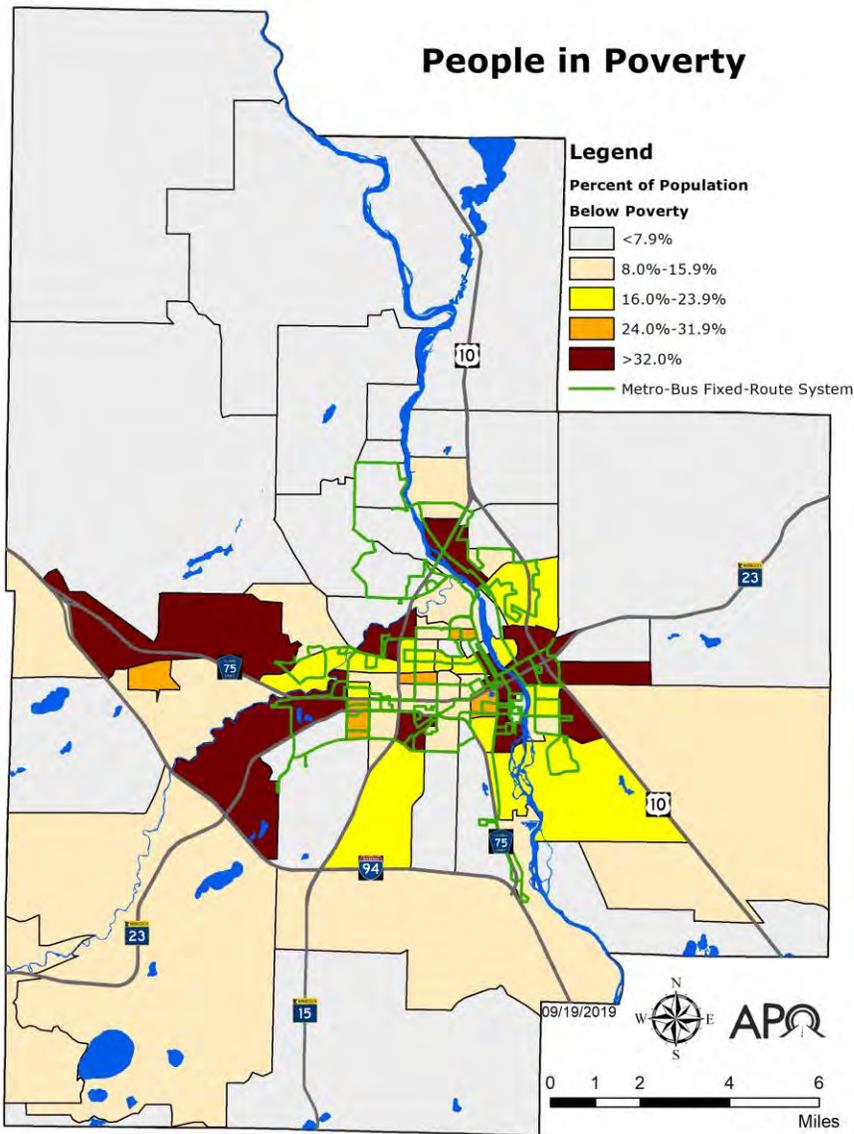


FIGURE 2.66 – RESIDENTIAL LOCATIONS FOR PEOPLE IN POVERTY (2015) BY CENSUS BLOCK GROUP IN RELATION TO METRO BUS FIXED ROUTE SYSTEM

DIAL-A-RIDE

Metro Bus DAR is a shared ride service for individuals with disabilities who are unable to ride the FR system and who require door-to-door driver-assisted service. Over the past 10 years, Saint Cloud Metro Bus’ DAR service has been showing an increase in the total

number of service hours provided. From FY 2009 through FY 2018, DAR service has increased by 16.98 percent.

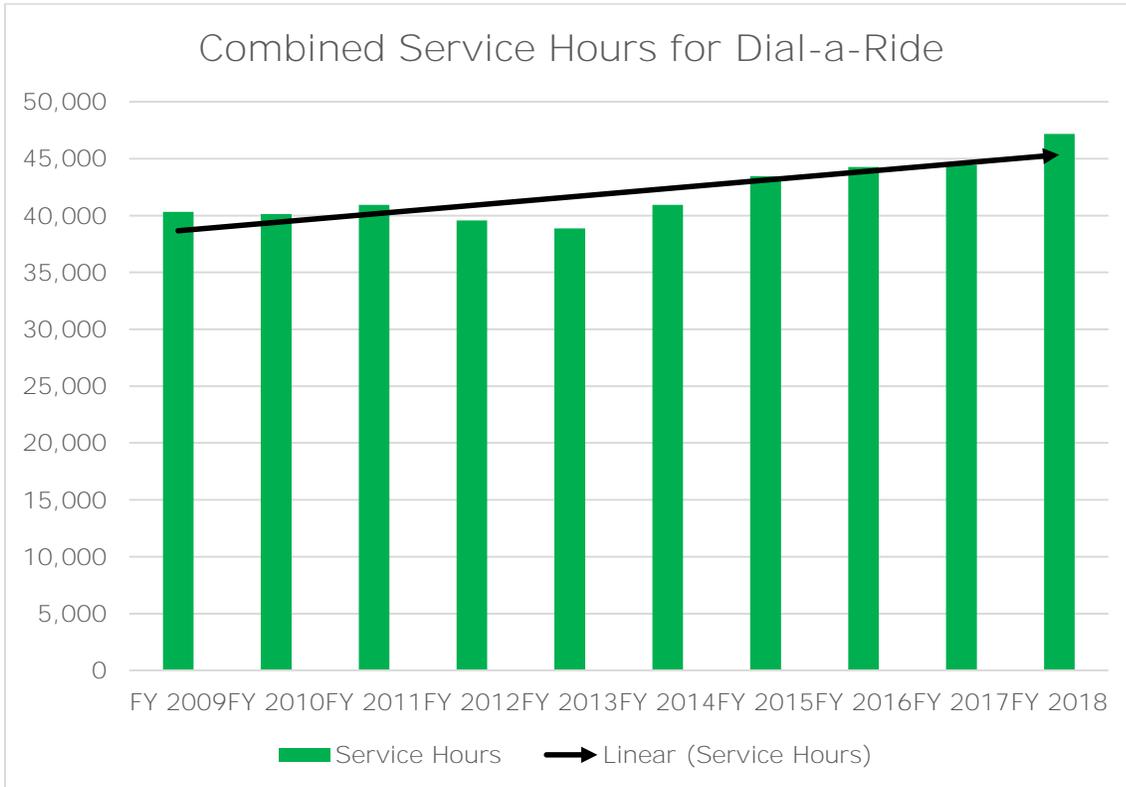


FIGURE 2.67 – METRO BUS DIAL-A-RIDE SERVICE HOURS
Data Source: Saint Cloud Metro Bus

Ridership and passengers per hour have fluctuated slightly during the same time period.



FIGURE 2.68 – METRO BUS DIAL-A-RIDE VEHICLE
Photo courtesy of Saint Cloud Metro Bus

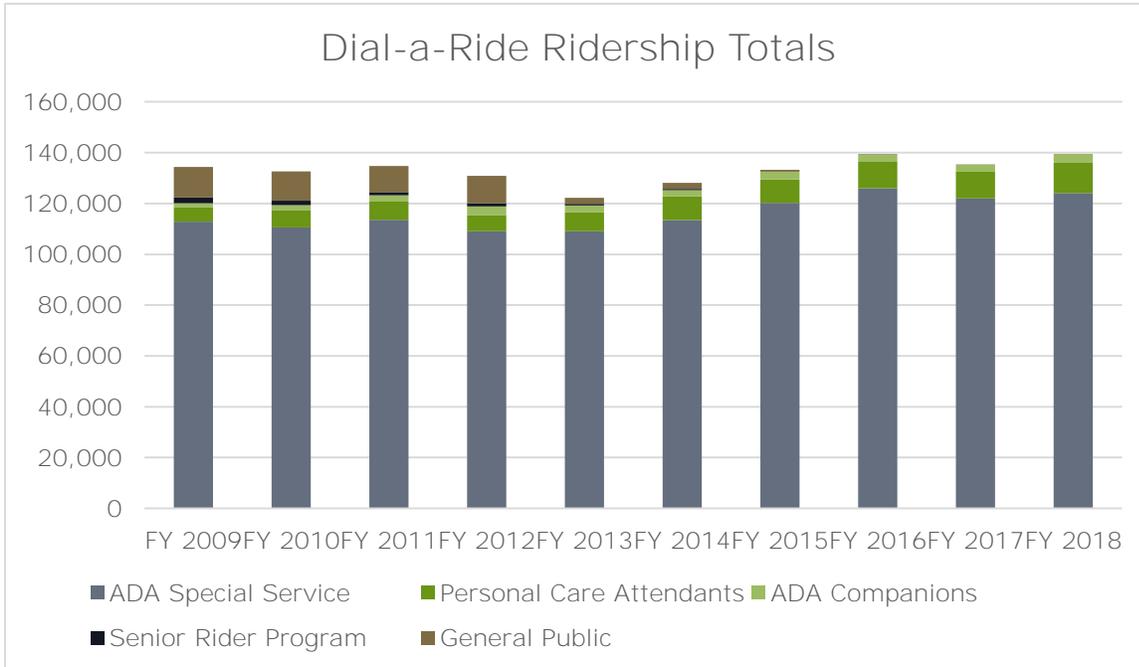


FIGURE 2.69 – METRO BUS DIAL-A-RIDE RIDERSHIP
 Data Source: Saint Cloud Metro Bus

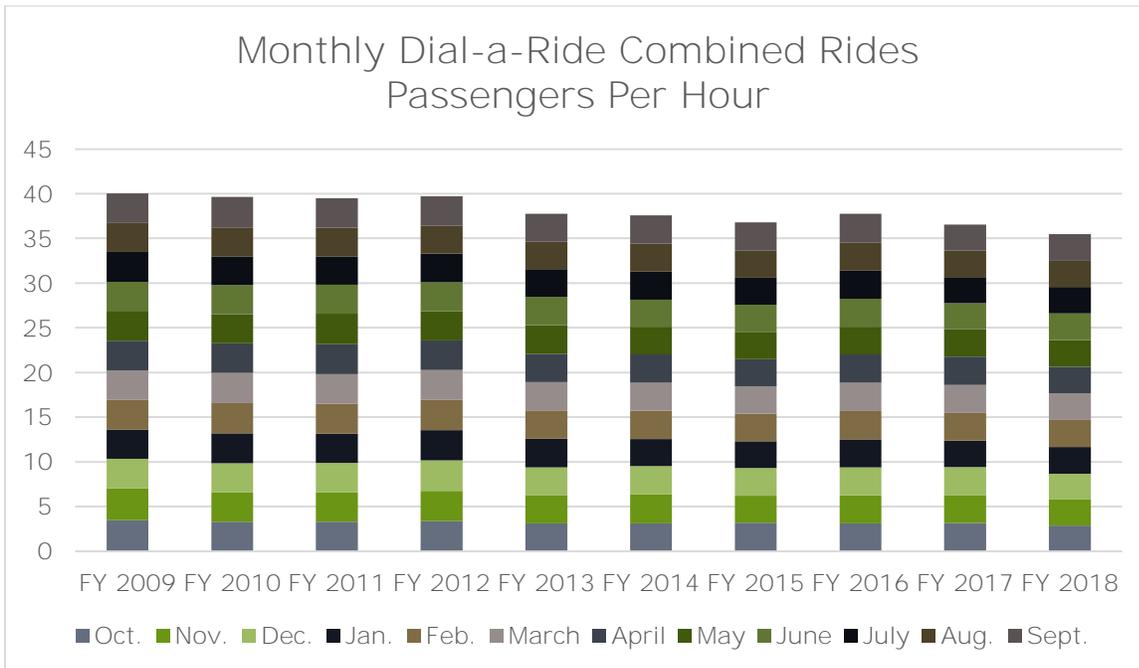


FIGURE 2.70 – METRO BUS DIAL-A-RIDE COMBINED RIDES PASSENGERS PER HOUR
 Data Source: Saint Cloud Metro Bus

According to Saint Cloud Metro Bus, cumulative ridership for the entire system (i.e., FR and DAR, but excluding the Northstar Link Commuter Bus) was down 26 percent from 2009 totals.

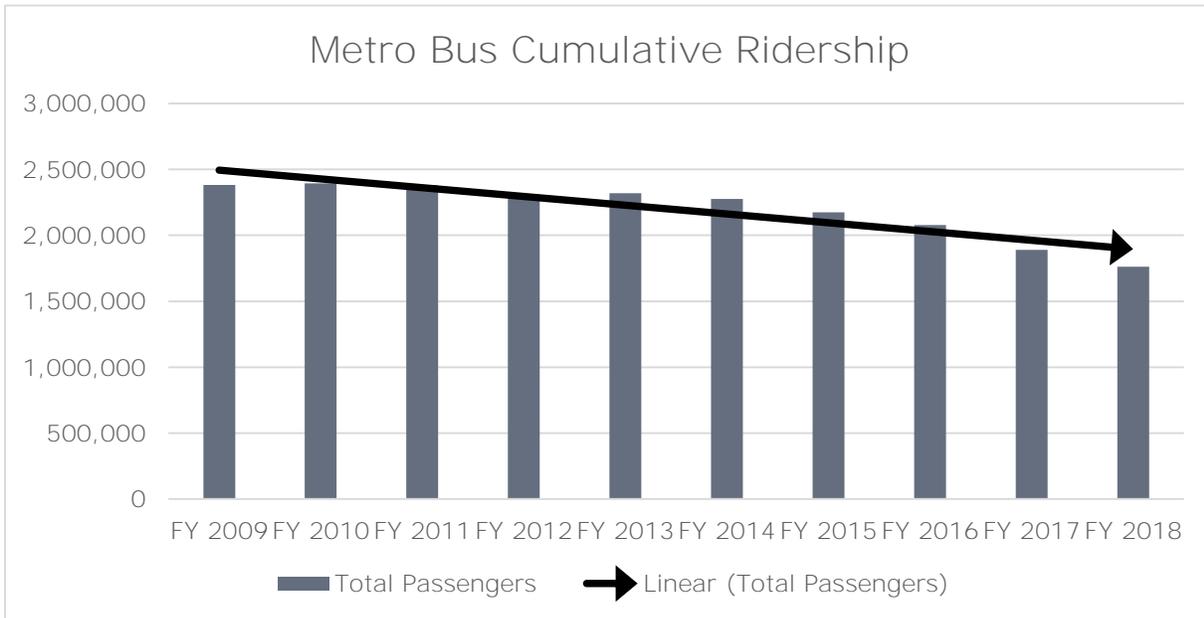


FIGURE 2.71 – METRO BUS CUMULATIVE (FIXED ROUTE & DIAL-A-RIDE) RIDERSHIP FY 2009-2018
Data Source: Saint Cloud Metro Bus

Meanwhile, overall service hours for Saint Cloud Metro Bus have increased over 18 percent over the same time period.

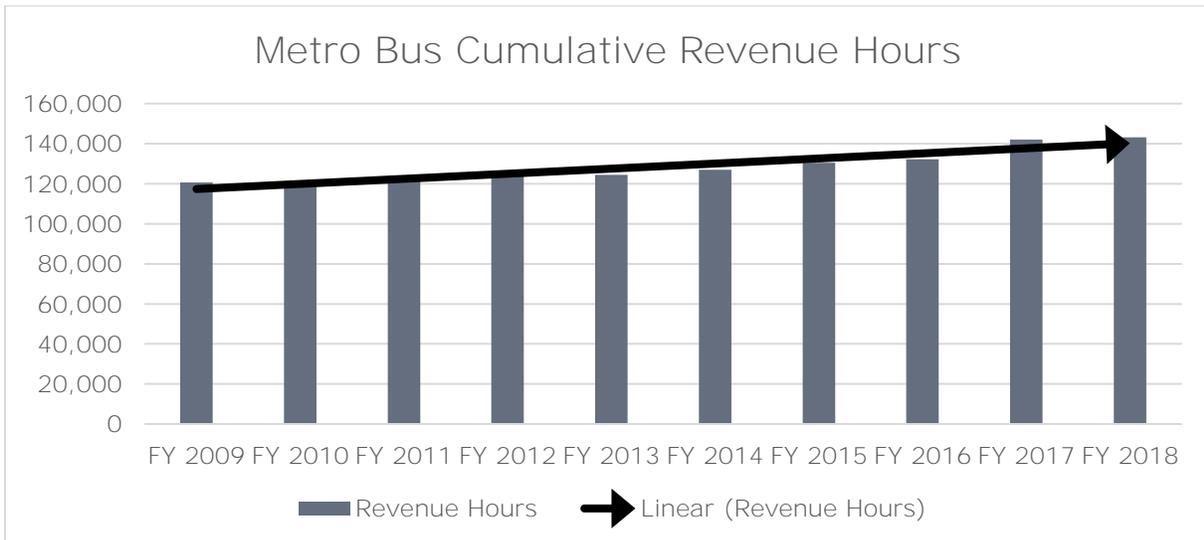


FIGURE 2.72 – METRO BUS CUMULATIVE (FIXED ROUTE & DIAL-A-RIDE) SERVICE HOURS FY 2009-2018
Data Source: Saint Cloud Metro Bus

For FR buses, Metro Bus assumes a useful life of 12 years. Based on that assumption, the future costs of bus replacement can be estimated and accounted for in the APO's long-range planning efforts.

Unit Number	Chassis Model Year	Vehicle Class	Body Conversion Model	Fuel Type
704	2006	700	New Flyer	Diesel
705	2006	700	New Flyer	Diesel
706	2006	700	New Flyer	Diesel
707	2010	700	New Flyer	Diesel
708	2010	700	New Flyer	Diesel
709	2010	700	New Flyer	Diesel
710	2010	700	New Flyer	Diesel
711	2014	700	New Flyer	CNG
712	2014	700	New Flyer	CNG
713	2014	700	New Flyer	CNG
714	2014	700	New Flyer	CNG
715	2014	700	New Flyer	CNG
716	2014	700	New Flyer	CNG
717	2014	700	New Flyer	CNG
718	2014	700	New Flyer	CNG
719	2014	700	New Flyer	CNG
720	2014	700	New Flyer	CNG
721	2014	700	New Flyer	CNG
722	2014	700	New Flyer	CNG
723	2014	700	New Flyer	CNG
724	2014	700	New Flyer	CNG
725	2014	700	New Flyer	CNG
726	2014	700	New Flyer	CNG
727	2014	700	New Flyer	CNG
728	2014	700	New Flyer	CNG
729	2014	700	New Flyer	CNG
730	2014	700	New Flyer	CNG
731	2014	700	New Flyer	CNG
732	2014	700	New Flyer	CNG
733	2014	700	New Flyer	CNG
734	2018	700	New Flyer	CNG
735	2018	700	New Flyer	CNG
736	2018	700	New Flyer	CNG
737	2018	700	New Flyer	CNG
738	2018	700	New Flyer	CNG
739	2019	700	New Flyer	CNG
740	2019	700	New Flyer	CNG
741	2019	700	New Flyer	CNG
1936	2005	700	Optima	Diesel

FIGURE 2.73 - METRO BUS FR FLEET ROSTER AS OF JULY 2019

For smaller demand-response vehicles, Metro Bus assumes a useful life of seven years.

Unit Number	Chassis Model Year	Vehicle Class	Body Conversion Model	Fuel Type
110	2010	400	Arboc	Diesel
111	2010	400	Arboc	Diesel
112	2010	400	Arboc	Diesel
113	2010	400	Arboc	Diesel
114	2010	400	Arboc	Diesel
115	2010	400	Arboc	Diesel
116	2010	400	Arboc	Diesel
117	2010	400	Arboc	Diesel
118	2011	400	Arboc	Diesel
119	2011	400	Arboc	Diesel
120	2011	400	Arboc	Diesel
121	2011	400	Arboc	Diesel
122	2011	400	Arboc	Diesel
123	2012	400	Arboc	Diesel
124	2016	400	Champion	CNG
125	2016	400	Champion	CNG
126	2016	400	Champion	CNG
127	2016	400	Champion	CNG
128	2016	400	Champion	CNG
129	2016	400	Champion	CNG
130	2017	400	Champion	CNG
131	2017	400	Champion	CNG
132	2018	400	Champion	CNG
133	2018	400	Champion	CNG
134	2018	400	Champion	CNG
135	2018	400	Champion	CNG
136	2018	400	Champion	CNG
137	2019	400	Arboc	CNG
138	2019	400	Arboc	CNG
139	2019	400	Arboc	CNG
140	2019	400	Arboc	CNG
141	2019	400	Arboc	CNG
204	2011	400	Arboc	Diesel
205	2011	400	Arboc	Diesel
206	2011	400	Arboc	Diesel
207	2019	400	Champion	CNG

FIGURE 2.74 - METRO BUS DIAL-A-RIDE FLEET ROSTER AS OF JULY 2019

Metro Bus State-of-Good Repair Asset	Number of Assets	% of Assets	Value of Assets	% of Value
Land				
Useful Life Remaining	3	100%	\$783,923	100%
Exceeds Useful Life	-	0%	-	0%
Operations Facility (Overall Condition 3 out of 5)				
Useful Life Remaining	13	48%	\$12,503,354	93%
Exceed Useful Life	14	52%	\$884,560	7%
Transit Center (Overall Condition 4 out of 5)				
Useful Life Remaining	5	83%	\$1,316,052	100%
Exceed Useful Life	1	17%	\$6,025	0%
Mobility Training Center (Overall Condition 5 out of 5)				
Useful Life Remaining	2	100%	\$2,149,376	100%
Exceed Useful Life	-	0%	-	0%
Improvements Other Than Buildings				
Useful Life Remaining	5	33%	\$335,900	59%
Exceed Useful Life	10	67%	\$231,378	41%
Transit Signal Priority				
Useful Life Remaining	4	29%	\$35,707	3%
Exceed Useful Life	10	71%	\$1,034,704	97%
Shelters				
Useful Life Remaining	52	87%	\$1,079,644	85%
Exceed Useful Life	8	13%	\$190,856	15%
Trolley Buses				
Useful Life Remaining	1	50%	\$225,906	98%
Exceed Useful Life	1	50%	\$5,723	2%
Fixed Route Buses				
Useful Life Remaining	35	88%	\$13,316,752	91%
Exceed Useful Life	5	13%	\$1,370,897	9%
Dial-a-Ride Buses				
Useful Life Remaining	27	82%	\$2,835,227	87%

Metro Bus State-of-Good Repair Asset	Number of Assets	% of Assets	Value of Assets	% of Value
Exceed Useful Life	6	18%	\$413,010	13%
Northstar Link Commuter Buses				
Useful Life Remaining	2	100%	\$99,943	100%
Exceed Useful Life	-	0%	-	0%
Furnishings & Misc. Machinery				
Useful Life Remaining	22	17%	\$119,087	35%
Exceed Useful Life	105	83%	\$221,499	69%
IT Equipment – Rolling Stock				
Useful Life Remaining	83	51%	\$566,103	31%
Exceed Useful Life	80	49%	\$1,241,608	69%
IT Equipment – Non-Rolling Stock				
Useful Life Remaining	61	54%	\$364,865	87%
Exceed Useful Life	52	46%	\$56,190	13%

FIGURE 2.75 - METRO BUS STATE-OF-GOOD-REPAIR DATA AS OF 2017
Data Source: Metro Bus

WHAT WE HEARD

The following is a summary of what we heard from the public and stakeholders regarding urban public transit:

- Metro Bus routes need longer daily schedules/start earlier in the mornings and run later at night - including weekends - to better accommodate work shifts and/or to **better accommodate people’s lives (e.g., church services)**. (32 similar comments)
- Metro Bus does a good job. (16 similar comments)
- We need more public transit/more buses at peak hours/more drivers/more frequent service than once an hour. (14 similar comments)
- Expand/improve existing bus routes (such as in Sartell and Sauk Rapids). (11 similar comments)
- Add bus routes to other cities (e.g., Saint Joseph, Albany, Collegeville, Foley). (8 similar comments)
- Make buses and taxis more **reasonably priced**. “Make [transit] free.” “Free for college students.” (5 similar comments)
- “There’s no reason for Route 6 and 7 to be 45 minutes long; the routes don’t pulse with any buses at the Transit Center resulting in extended periods of waiting.” (3 similar comments)

- **Metro Bus needs an improved website (e.g., “The new site on the internet you can’t click the time frame doesn’t work and if you want to see a schedule you have to put in your designation and arrival time then y[ou] get the schedule it should have a spot where u can look at the schedule.” (3 similar comments)**
- Metro Bus routes need more shelters. (2 similar comments)
- Concern about funding cuts to buses/light rail. (2 similar comments)
- Metro Bus drivers should be paid more for long hours and job duties. (2 similar comments)
- **“Buses should run all the time. 24/7/365. It’s public transp[ortation].”**
- **“Can’t get to SCSU-Miller Center in the evenings. Otherwise doing well. [Bus route] #5 is great!”**
- Increase opportunities for mass transit.
- There should be exceptions made during the winter months and if a rider has groceries.
- More connections to cut down on the amount of time it takes to go to destinations.
- Provide transportation for everyone from anywhere.
- Install bus stop outside the Salvation Army Emergency Shelter.
- More stops in high traffic areas.
- **“Have outdoor security always present at the downtown bus station. People that work downtown and have to walk through there are often hassled or made to feel uncomfortable by the patrons of the bus station. You shouldn’t have to feel nervous to walk past there.”**
- **“Have a bus to go to Summerland and Wapicada Golf Course.”**
- Add more heated shelters.
- Make a route that extends out by Opportunity Drive to the industrial park.
- Metro Bus needs better east side routes.
- **“The bus system works well, just need to finish the long term plan on routes so it all ties together and makes a great system.”**
- **“For people like me that do not drive, the public transportation system provided by the bus company is all that we have with a reasonable rate of payment for the service.”**
- **“There should be a bus route that goes down Third Street in Waite Park in front of Famous Dave’s and the library.”**
- Commenter requested more/better service for grocery shopping. Currently limited to carrying no more than three bags.
- **“The corner of E Saint Germain and 12th Avenue needs a bus shelter.”**
- **“E. Saint Germain (commenter did not know the cross street) needs a bus shelter.”**
- **“Route 12 does not run frequently enough.”**
- **“The Transit Center bathrooms need to be cleaned more frequently; they are smelly and gross.”**

- **“Over the past few months, tie-down straps for wheelchair[s] have come off.”**
Commenter suggested Metro Bus staff may need refresher training on proper tie-down technique for wheelchairs.
- Buses are running too tight of a schedule. If a bus is late to the transit center, **connections get missed and it keeps happening to the commenter. He stated “the buses are not dependable.”**
- Commenter felt that those riders with disabilities should get discounted rides on Metro Bus during rush hours – currently they get discounted rides only during non-rush hour times.
- **“Easier access to vehicles by increasing the number of bus stop locations.”**
- **“Get more bus[es]. Hire more people with communication is a must.”**
- **“If a person is 10 yards away running for the bus the drivers are not waiting. This is public not self-service.”**
- **“Route 10 needs to connect to Crossroads Mall or Downtown Saint Cloud.”**
- **“Facilities for students.”**
- **“Better synch #12 for better transfer ability.”**
- **“Could use a bigger bus station with hot food stand or patio.”**
- **“Restore bus from Mall to CentraCare-Urgent Care.”**
- **“Letting new user know that there is bus trainers to help them on info on the routes.”**
- **“More walkable land use development sounds good to young people without mobility issues – yet elderly who struggle with mobility don’t like the idea of walking very much, or stepping up very high to get onto a bus.”**
- Items reported as positive aspects of transportation or things that are working well:
 - **“Continuing the shadowing of Metro Bus NEW riders!!”**
 - **“The downtown hub for Metro Bus.”**
 - **“Ability to put bikes in front-bike racks on buses.”**
 - MTC.
 - Love the summertime trolley.
 - The schedule during the week.
 - Metro Bus employee helped commenter read bus schedule which helped.
 - **“Fares are a good price.”**
 - **“Good: buses quiet/organized.”**
 - **“Bus frequency in Waite Park is good (every 10-15 minutes).”**
- **“More people using public trans[portation].”**
- **“Mass transit options need to be provided which will bring young professionals and entrepreneurs to the area ... growing new business that Saint Cloud lacks.”**
- **“A more multimodal system. More bicycling and walking, smaller city buses.”**
- **“Better public transit to Twin Cities and Brainerd.”**

The overwhelming majority of comments concerned extending the Metro Bus hours of operation, reducing headways (i.e., the time between buses at a specific location), shortening the length of time needed to reach a specific destination, and/or adding routes to nearby towns and destinations. Interestingly, we also received a good number of comments stating that Metro Bus is currently doing a good job. It is worth noting that these two very different kinds of comments are not necessarily incongruous. A fair number of comments dealt with the price of bus fare – some felt it was a good value, while others suggested that public transit should be free of charge. A few comments expressed a desire for more and better bus shelters.

ACTIVE TRANSPORTATION

Using non-motorized methods of transport not only helps prevent traffic congestion on roadways, but also helps achieve other regional goals regarding public health and clean air.

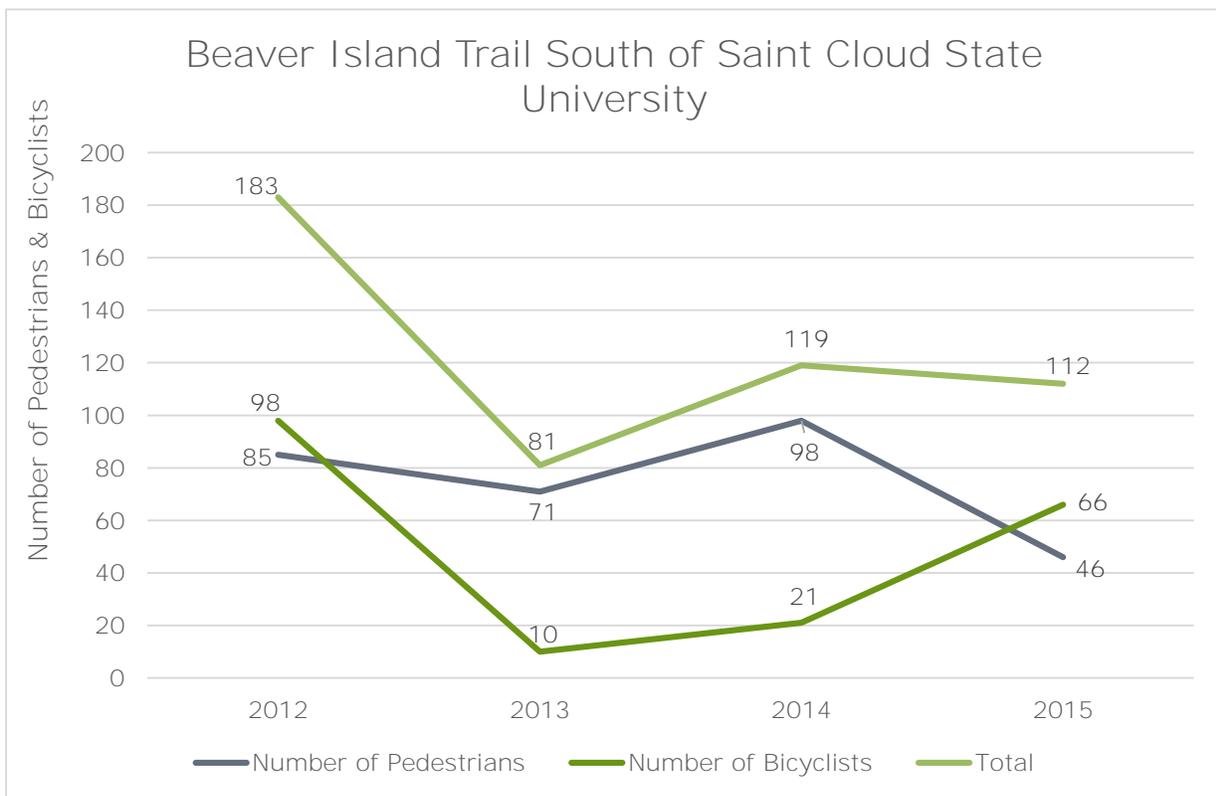
WHAT THE DATA SAYS

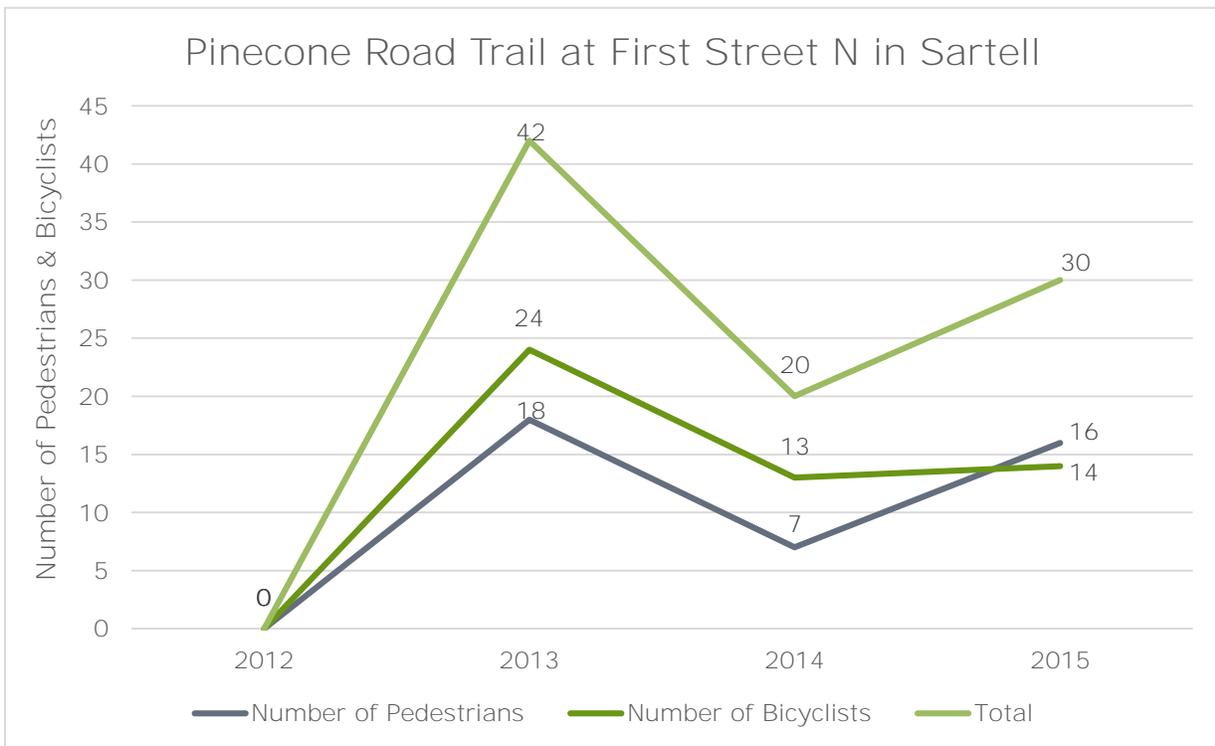
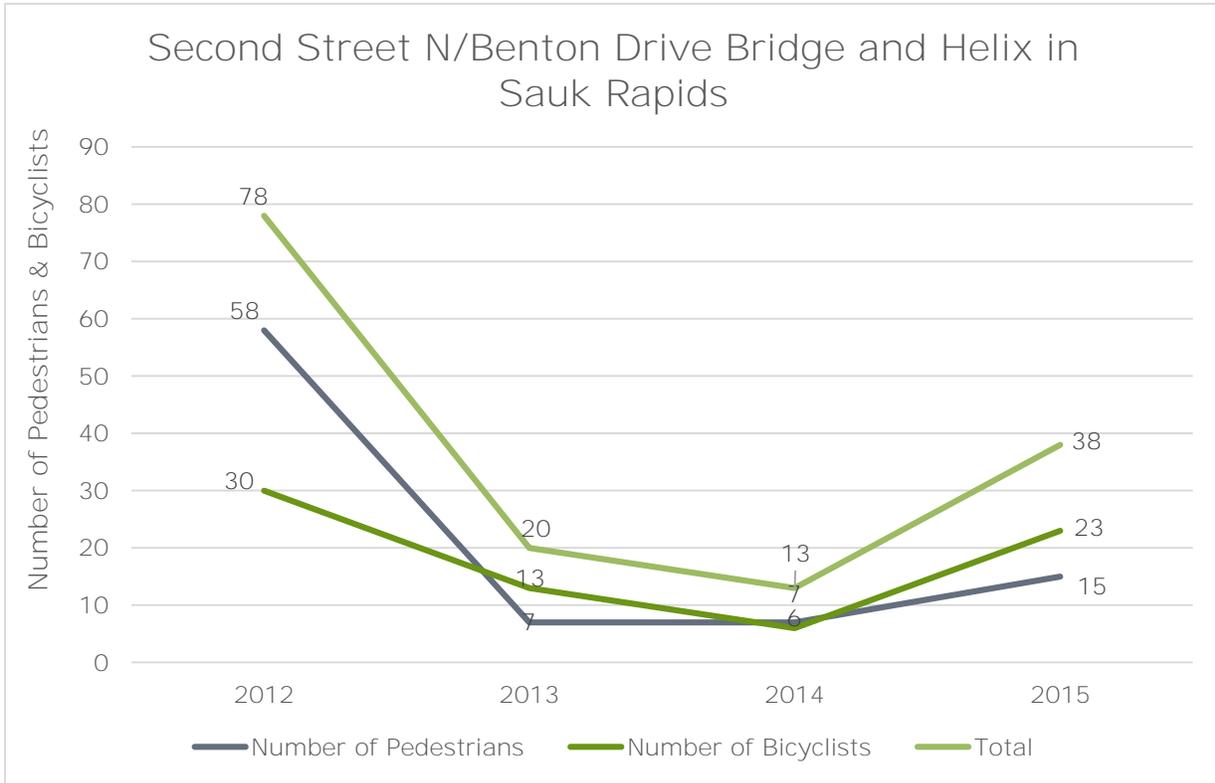
Jurisdiction	Bicycle	Walked	Total
Saint Cloud	506	1,634	2,140
Sartell	34	109	143
Sauk Rapids	31	0	31
Waite Park	75	206	281
Saint Joseph	0	416	416
Saint Augusta	0	23	23
Rockville	6	16	22
Saint Stephen	0	0	0
Rural Stearns County (Townships of Brockway, LeSauk, Saint Joseph, and Saint Wendel)	8	57	65
Rural Benton County (Townships of Minden, Sauk Rapids, and Watab)	3	17	20
Rural Sherburne County (Township of Haven)	0	4	4
MPA Totals	663	2,482	3,145

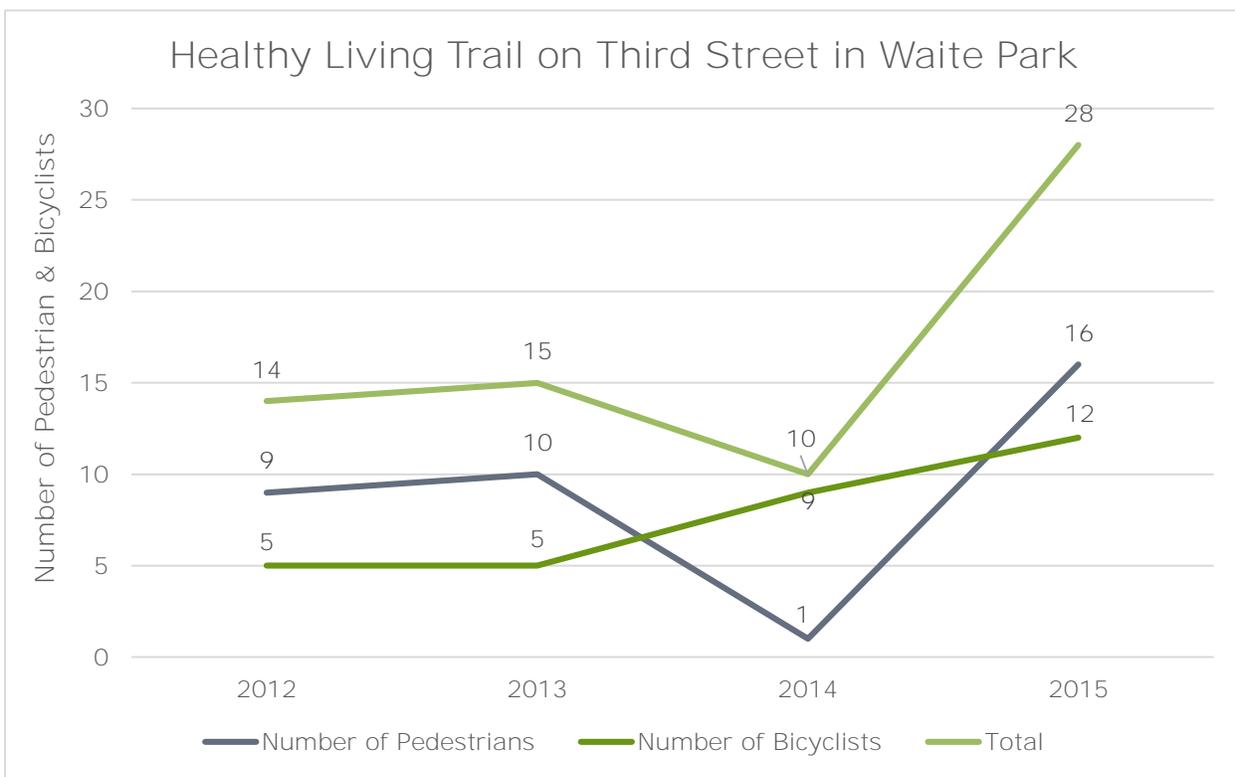
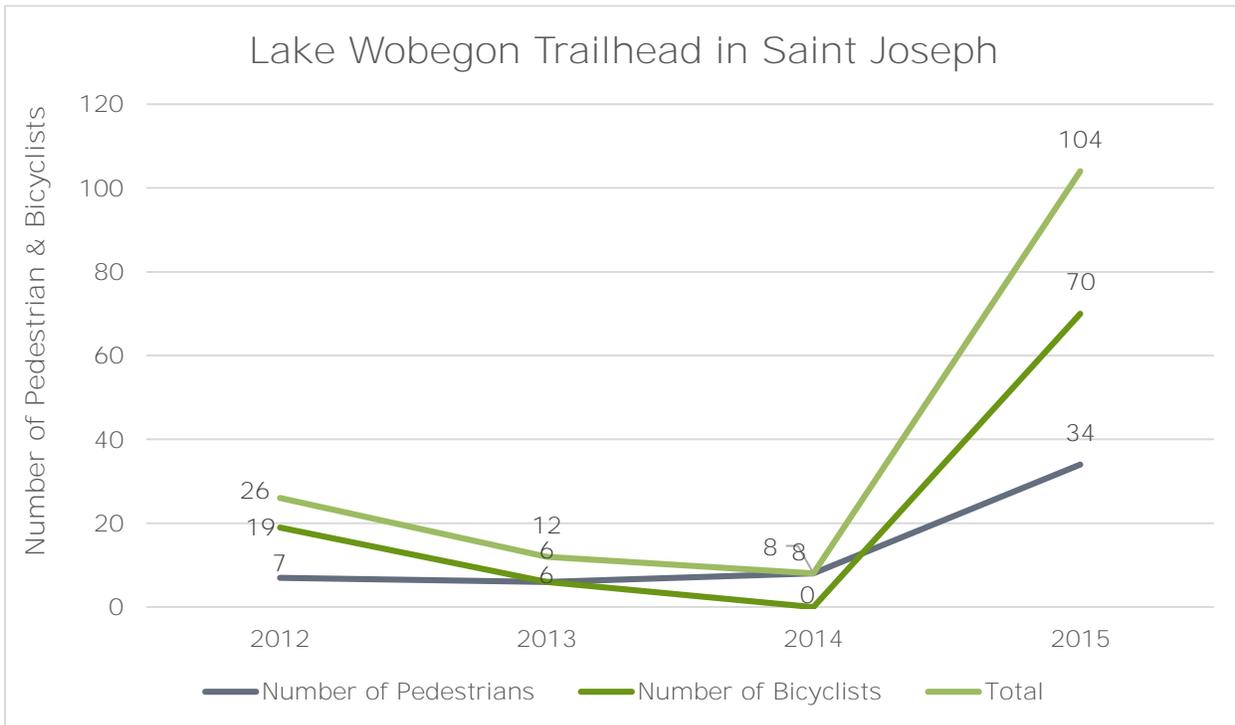
FIGURE 2.76 – 2015 PRIMARY MEANS OF TRANSPORTATION TO WORK; 16 YEARS AND OVER
Data Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimate

Approximately 3,145 MPA residents commute to work by walking or bicycling according to the U.S. Census Bureau’s American Community Survey (ACS). This represents about 4.5 percent of all work commute trips by MPA residents. Obviously this number will vary significantly according to the time of year - census forms are generally completed in springtime – and can vary significantly day-to-day depending upon the weather. It should also be noted that the ACS asks specifically for information regarding work-commute trips and ignores all other trip purposes.

The APO does do limited bicycle and pedestrian counts twice each year, once in the spring and once in the fall. Due to staff and resource limitations, the counts are only done on one day for a two-hour period in the afternoon peak from 3 to 5 p.m. The count data does have the advantage of counting all trips regardless of purpose.







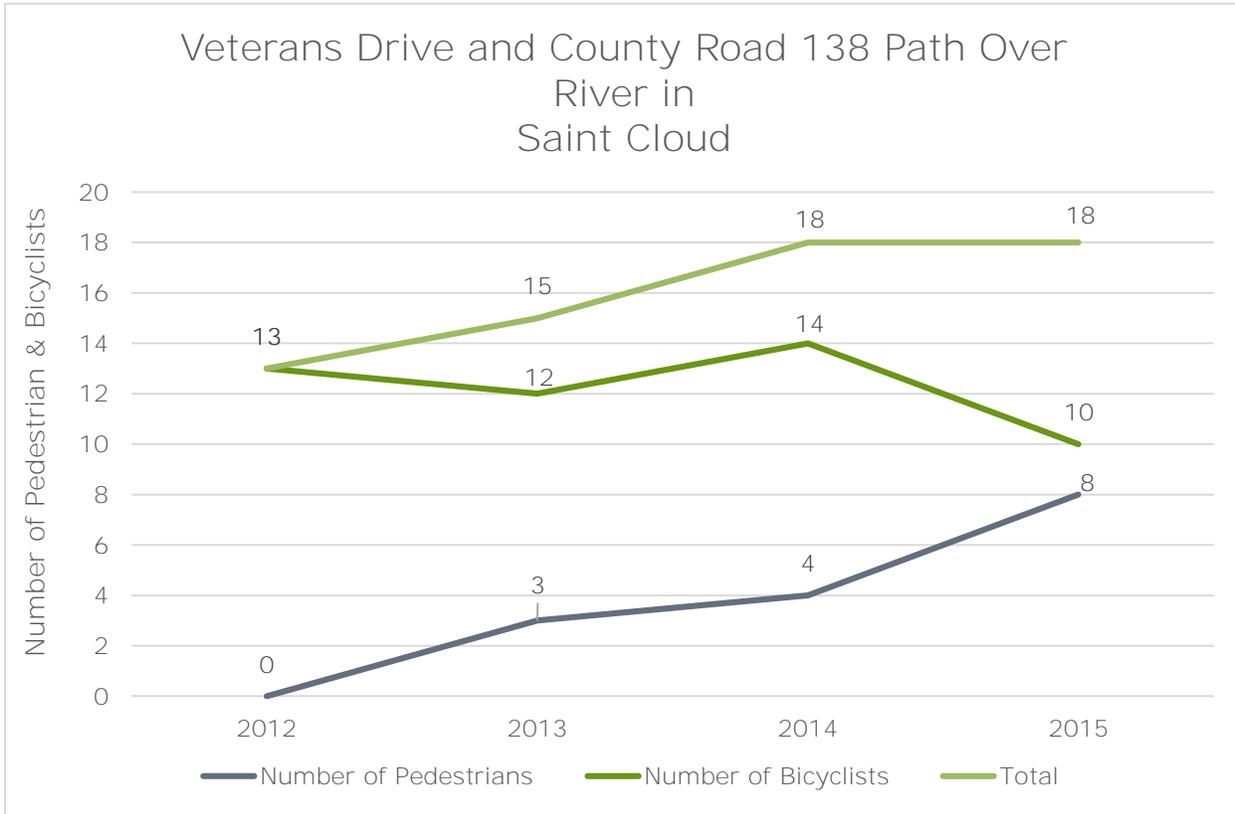


FIGURE 2.77 – BICYCLE & PEDESTRIAN PM PEAK PERIOD (3-5 P.M.) COUNTS AT SELECT LOCATIONS

It is difficult to draw any profound conclusions from such a small sample size. The differences in the count data may be because of demographic shifts, changes in the economy, or perhaps because the weather was nice on the count day one year and not as nice on the count day in another year. Still, the APO will continue to gather and track data over time and will explore options to gather a more robust and complete data set going forward.



FIGURE 2.78 – MINNESOTANS UTILIZING A BICYCLE PATH

	Non-Motorized Fatalities	Non-Motorized Serious Injuries	Minnesota Non-Motorized Fatalities	Minnesota Non-Motorized Serious Injuries
2006	2	4	46	206
2007	0	9	37	211
2008	2	7	38	172
2009	0	8	51	134
2010	1	2	45	132
2011	1	3	45	153
2012	2	5	47	155
2013	2	5	41	146
2014	0	5	22	126
2015	5	7	51	158
5-Year Avg.	2	5	41.2	147.6

FIGURE 2.79 – MPA NON-MOTORIZED SAFETY PERFORMANCE MEASURES
 Data Source: Minnesota Department of Transportation

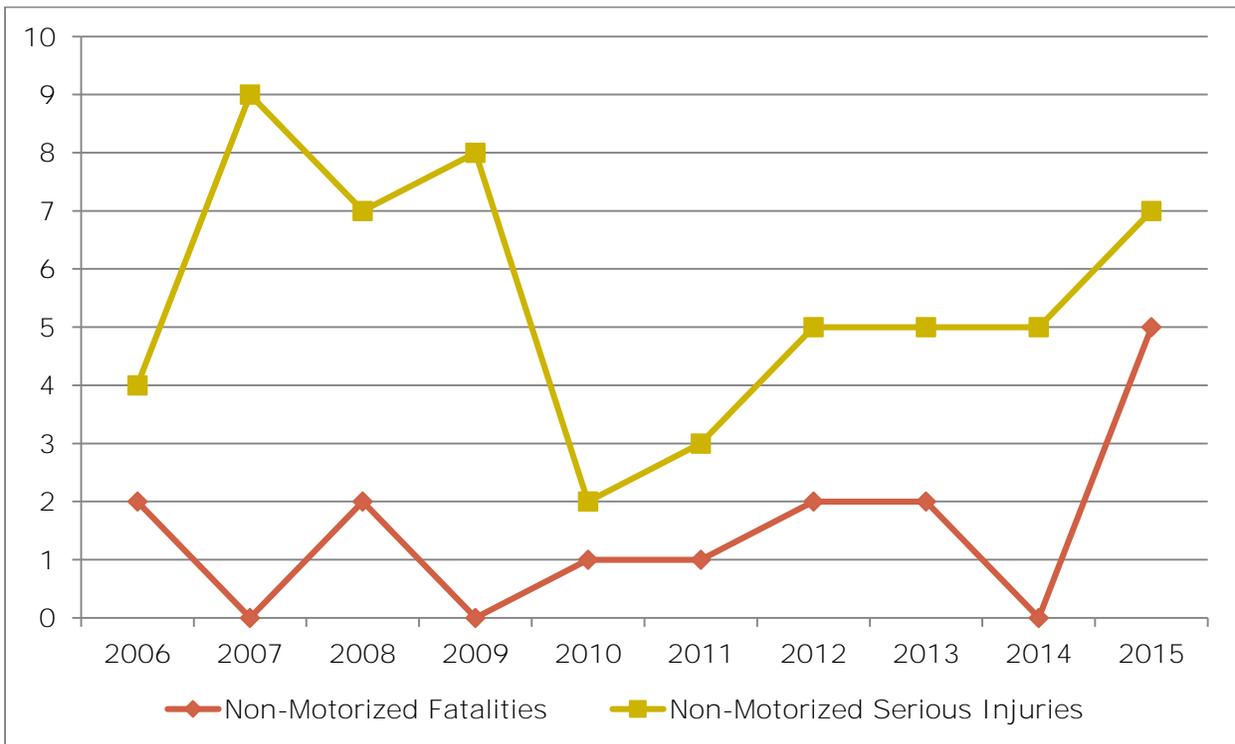


FIGURE 2.80 – MPA NON-MOTORIZED FATALITIES AND SERIOUS INJURIES
 Data Source: Minnesota Department of Transportation

Safety for non-motorized methods of transport is a serious concern, especially when pedestrians or bicyclists are involved in crashes with motorized vehicles. The data shows a troubling increase in both fatalities and serious injuries in 2015. We do know from the ACS data that the number of work-commute trips taken by non-motorized means has increased since 2012, which may help explain some of the increase in fatalities and injuries. If more people are walking and bicycling, all other things being equal, there is likely to be an increase in crashes involving pedestrians and bicyclists. Or, it may simply be an anomaly that will return to its typical average rate next year. APO staff will continue to track this data over time to see if it returns to a more normal level in future years. (See section on Performance Measures beginning in Chapter 7.)

For more analysis on active transportation issues, please see the active transportation section in Chapter 4.



FIGURE 2.81 – BICYCLE AND PEDESTRIAN COUNTER AT THE LAKE WOBEGON TRAILHEAD IN SAINT JOSEPH

Photo courtesy of Saint Cloud APO

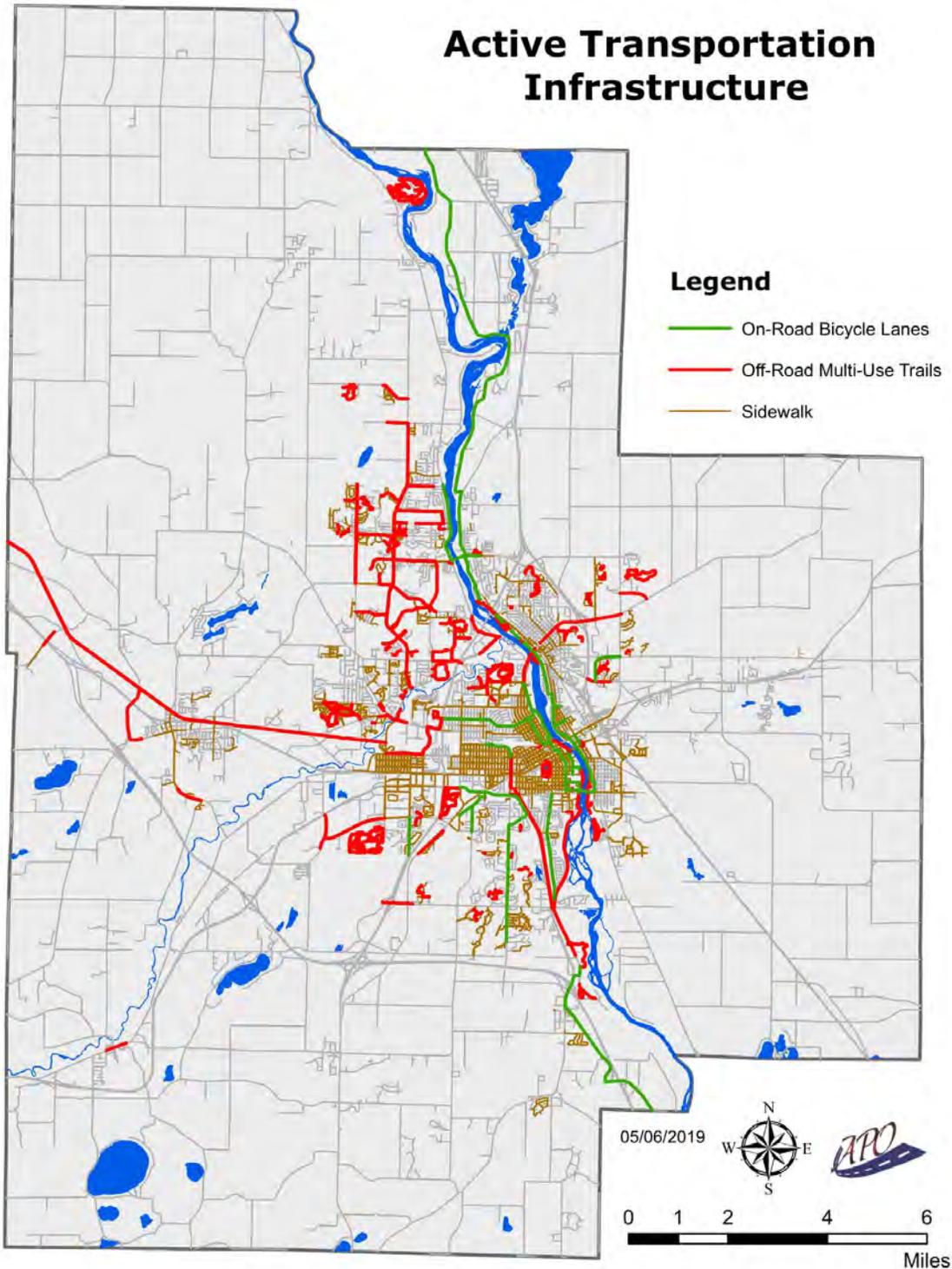


FIGURE 2.82 – MPA BICYCLE AND PEDESTRIAN FACILITIES (2019)

WHAT WE HEARD

The following is a summary of what we heard from the public and stakeholders regarding the bicycle and pedestrian network:

- **“Better bike lanes”/More bike lanes/More bike trails.** (10 similar comments)
- More space and opportunities for bike & ped, and create a culture that encourages safe walking & biking. (7 similar comments)
- More walkable cities. (4 similar comments)
- Safer bike routes for commuters. (4 similar comments)
- **“Start putting the pedestrian and non-motorized user first in reconstruction projects and new road projects.”** (3 similar comments)
- **“Bike lanes along County Road 1/Great River Road north of Sartell and across 27th to the new high school.”** (2 similar comments)
- **“Lots of people walk and bike in this town but do not want to wait all the time for the lights and so they cross traffic when there seems to be enough time, especially on Division. If there was somehow a way for them to get across Division like a walkway ramp, it would at least be a safer option.”** (2 similar comments)
- **“Repave the Beaver Island Trail south of Saint Cloud State University campus to the new section of trail starting at 33rd Street S.”**
- **“Add sidewalks to at least one side of streets.”**
- Bike share program.
- **“Better crosswalks on 5th Avenue S.”**
- **“Connecting the bike paths that already exist should be a priority.”**
- **“Increase the opportunities for non-motorized transportation users including: safety enhancements, infrastructure upgrades, and encouraging education of the benefits of non-motorized transportation (cut emissions, create more money for local businesses, etc.).”**
- **“Saint Cloud also has issues with proper pedestrian laws. Not only do cars not stop, but pedestrians are jaywalking, which creates a cycle where drivers refuse to stop. (Especially around the college).”**
- **“Some state politician was talking about regulating bicycles. That is a dumb idea.”**
- Items reported as positive aspects of the bicycle and pedestrian network:
 - Bike routes. (2 similar comments)
 - **“Bike lanes are great in Sartell.”**
 - **“Bicycles are green.”**
 - **“I am over 60 and bike to work about half the year. It can be done. If you bike you can eat more ice cream.”**
 - **“College campus[es] are laid out well for community biking/walking.”**

Overall, the majority of comments specific to the urban bicycle and pedestrian network were concerned with expanding the current infrastructure in the Saint Cloud metropolitan planning area and developing a safer system to encourage a walking and biking culture within the APO. A few comments were directed at specific locations in the current bicycle and pedestrian network.

OTHER URBAN AREA TRANSPORTATION PROVIDERS

UBER AND LYFT

The Saint Cloud metropolitan area has recently added Transportation Network Companies (TNCs) to its growing list of transportation providers. These TNCs operate using location-based applications on the consumer’s smartphones.

Uber, a rideshare/ride-hailing company, operates in over 700 cities and 63 countries as of December 2018. The San Francisco-based company started operations in Saint Cloud in March 2017. The company has not made public the number of drivers in the Saint Cloud area or the number of rides the company has generated.

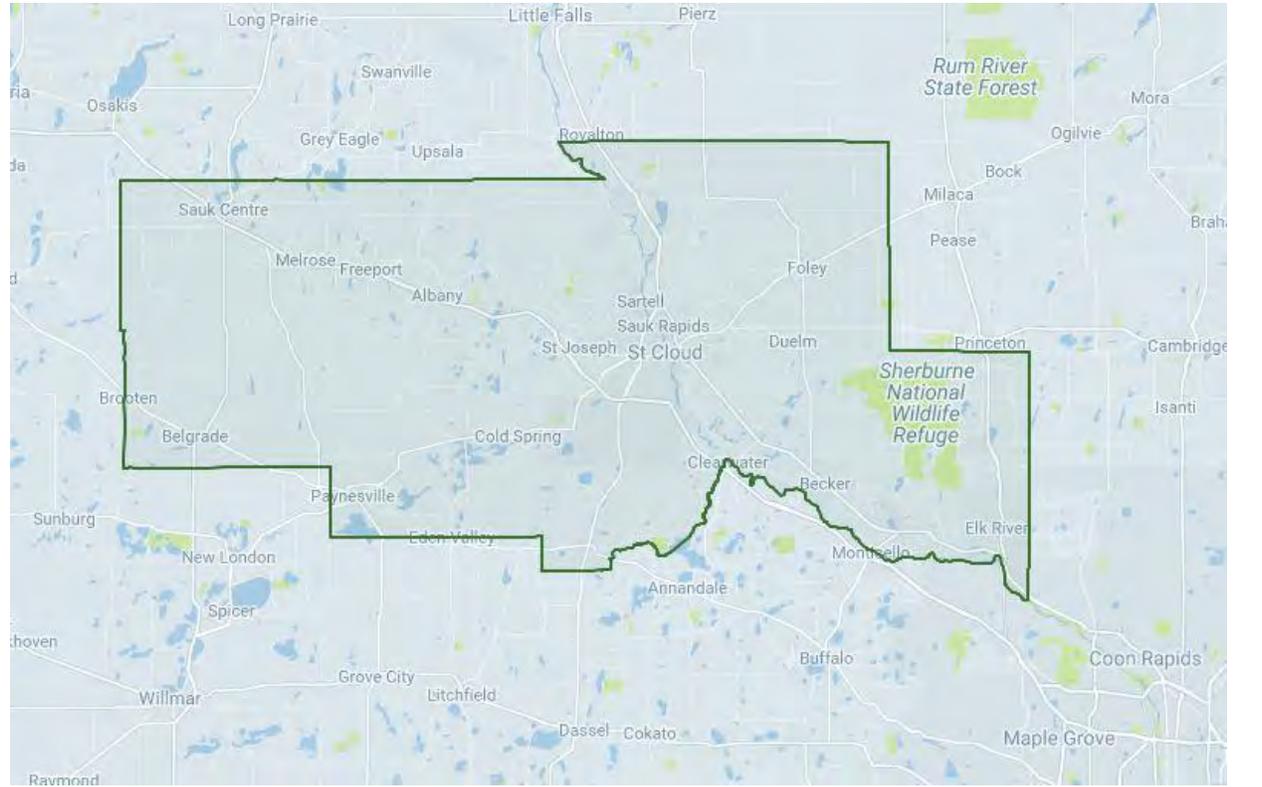


FIGURE 2.83 – UBER SERVICE AREA FOR SAINT CLOUD MA
 Data source: Uber

Lyft, a rideshare/ride-hailing company, operates in nearly 650 cities throughout the U.S. and Canada as of 2019. The San Francisco-based company started operations in Saint Cloud in February 2017. The company has not made public the number of drivers in the Saint Cloud area or the number of rides the company has generated.

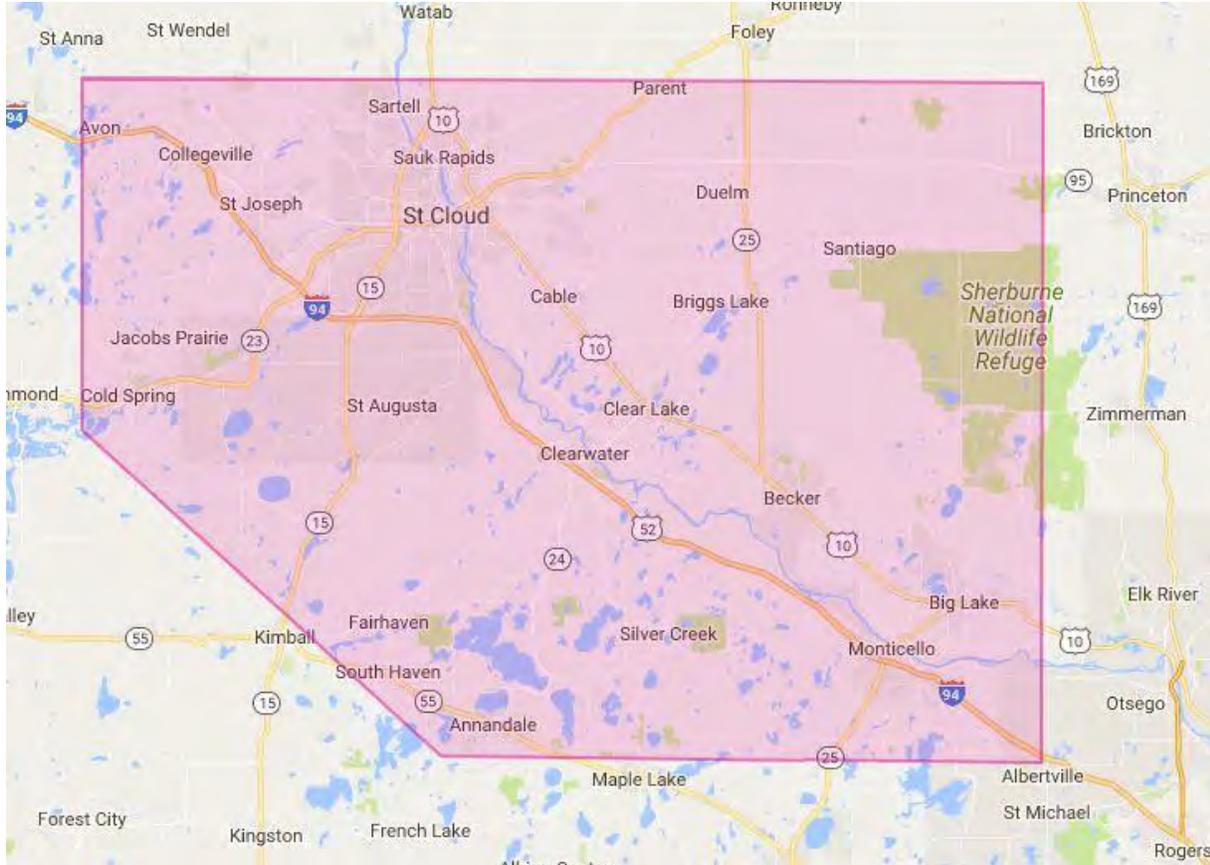


FIGURE 2.84 – LYFT SERVICE AREA FOR SAINT CLOUD
Data source: Lyft

TAXI AND LIMOUSINE SERVICES

The Saint Cloud MPA is serviced by several taxi companies and limousine providers. The following is a list of the prominent taxi and limousine service providers in the area.

- Elite Taxi, 630-30th Ave. N, Saint Cloud.
- Granite City Cab, 152-23rd Ave. N, Saint Cloud.
- St. Cloud Taxi, 626-11th St. S, Suite 302R, Saint Cloud.
- Yellow Cab, 2600 Seventh St. N, Saint Cloud.
- St. Cloud Taxi Party Bus and Limo Services, 1724 First St. S, Saint Cloud.
- King & Queen Limousine, 3685 Plum Creek Drive, Saint Cloud.
- Pearl Limousine, 1310 Sunridge Drive, Saint Cloud.
- St. Cloud Limos & Party Bus, 4000 Clearwater Road, Suite 206, Saint Cloud.

MEDICAL TRANSPORTATION SERVICE PROVIDERS

The Saint Cloud area has providers that specialize in non-emergency medical transportation. Typically, these services are reserved for the elderly or people with disabilities including military veterans. Below is a list of providers that service the Saint Cloud MPA.

- Care Transportation (Care Cab), 2600 Seventh St. N, Saint Cloud.
- Disabled American Veterans (DAV), 4801 Veterans Drive, Building 8, Saint Cloud.
- Elite Taxi—Medical Transportation, 630-30th Ave. N, Saint Cloud.
- County Care-a-Van, 520 First St. NE, Sartell.
- Reliant Transportation, 600-25th Ave. S, Suite 106, Saint Cloud.

SCHOOL BUS TRANSPORTATION PROVIDERS

The Saint Cloud APO is home to three school districts – Saint Cloud Area School District, Sauk Rapids-Rice School District, and Sartell-Saint Stephen School District. The following is a list of transportation providers who service these three districts.

- Saint Cloud Area School District 742, 1000-44th Ave. N, Saint Cloud.
- Spanier Bus Service Inc., 1310 Sunridge Drive, Saint Cloud.
- **Voigt's Bus Companies**, 24243 County Road 7, Saint Augusta.
- Guardian School Bus Co., 2779 Highway 10 S, Saint Cloud.
- **Trobec's Bus Service Inc., 413 County Road 2 S, Saint Stephen.**

WHAT THE DATA SAYS

Because many of these providers are private companies, it is difficult to obtain performance data for them. However, Uber did provide a heat map showing the locations of their pick-up locations through May 2017.

We also know from ACS data that taxis account for a very small number of work-commute trips. However, as noted previously, ACS data ignores all other trip purposes.

It is fair to say that at this time, the APO does not have good, reliable data regarding the number of or character of trips provided by most of the companies listed in this section.

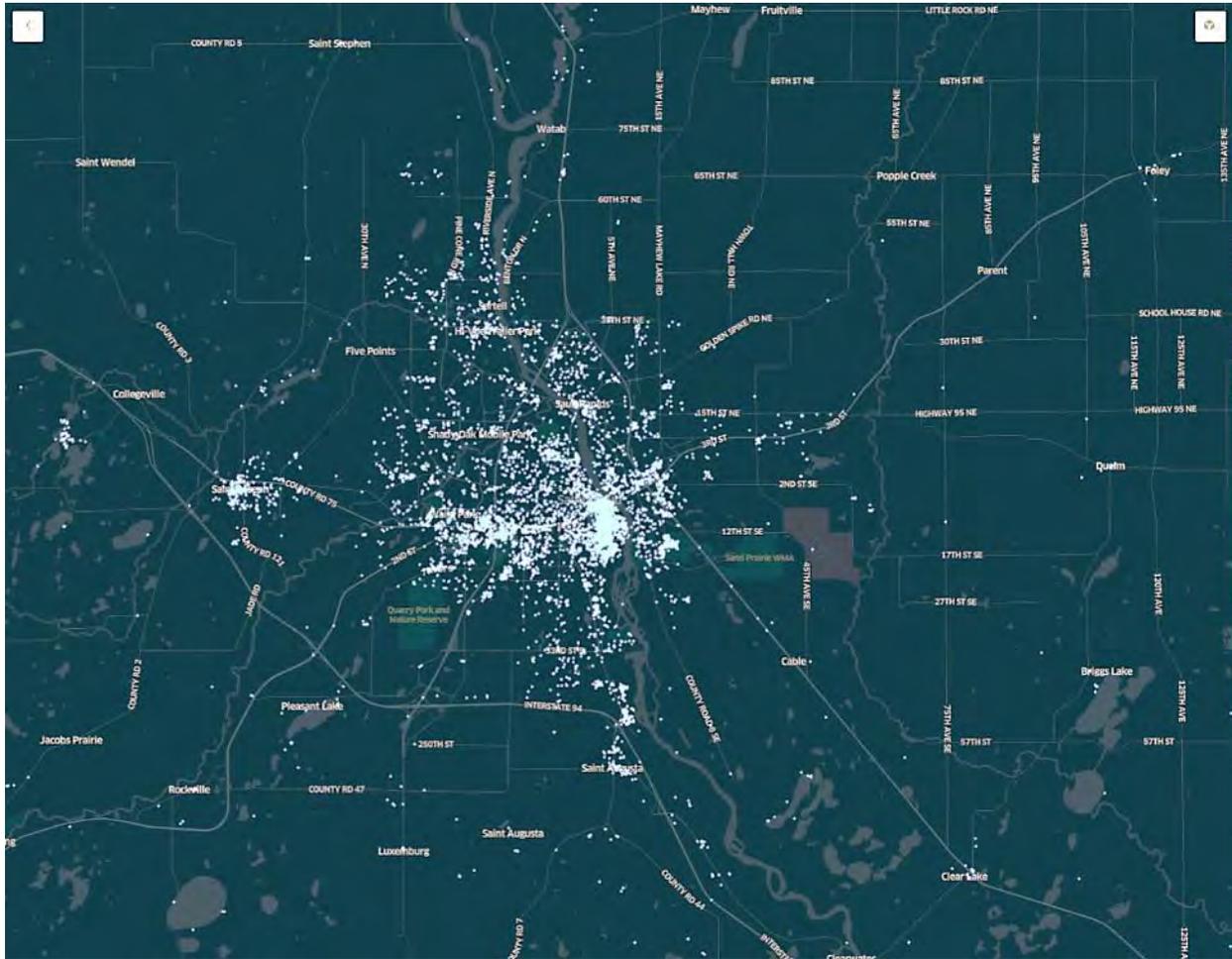


FIGURE 2.85 – HEAT MAP OF UBER PICK-UP LOCATIONS THROUGH MAY 2017
Data Source: Uber

WHAT WE HEARD

The following is a summary of what we heard from the public and stakeholders regarding other transportation modes and services:

- “Takes too long to get a taxi.”

REGIONAL TRANSPORTATION CONNECTIONS TO THE STATE AND NATION

TRI-CAP

Tri-County Action Program (Tri-CAP) is a non-profit organization based in Waite Park that **provides a variety of services to “expand opportunities for the economic and social well-being of our residents and the development of our communities.”** Tri-CAP provides services under three different umbrellas of service: Basic Needs, Self-Sufficiency, and Building Stability.

According to Tri-CAP about half of the services requested by their organization are centered around transportation needs, a service it began in the late 1970s. Tri-CAP provides rural curb-to-curb transportation to portions of Stearns, Benton, Sherburne, Morrison, and Mille Lacs counties. The service uses a Dial-a-Ride (DAR) model but does not have age or income requirements. Tri-CAP rides are generally scheduled at least 24 hours in advance. Rides within the city of origin are \$1.25 one way. Rides outside of the city of origin are \$3 for a one way ticket. Same day reservations can be accepted, but on a very limited basis. Same day registrations cost an additional \$0.75 per one way trip.

The service provides a public transportation option for residents living outside the Saint Cloud Metro Bus service area. While Tri-CAP vehicles do operate within the Saint Cloud Metro Bus area, customers utilizing the service have to reside outside of the Metro Bus FR and DAR service area or have destinations that are outside of the Metro Bus jurisdictional area. Customers whose origin and destination trips are within the Metro Bus area will not be serviced by Tri-CAP.

The Tri-CAP fleet has 26 buses as of May 2019. A total of eight new buses will be ordered in 2019 and will replace existing buses in the fleet in the Waite Park, Elk River, Sauk Centre, and Little Falls locations. All buses within the fleet are ADA accessible.

Tri-CAP provides contracted routes with numerous employers throughout Central Minnesota. These routes are pre-determined and are typically provided specifically for employees of those companies. Tri-CAP will also deviate from those pre-determined routes to pick up DAR customers within a half-mile of those contracted routes.

Tri-CAP Transit Connection hubs out of five locations within its service area: Little Falls, Elk River, Sauk Centre, Waite Park, and Milaca (added in 2019). The main hub and Dispatch Center is located in Waite Park. The majority of service provided by Tri-CAP in the Saint Cloud MPA is done out of the Waite Park hub. From this hub, residents living within a 15-mile radius of the Waite Park facility can receive transportation access to and from areas outside of the Saint Cloud Metro Bus service area.

Services include:

- One contracted DAR route to Options Inc. in Big Lake.

- One contracted DAR route to Functional Industries in Buffalo. This route will eventually end up traveling into Elk River from about 9:30 a.m. until 2 p.m.
- Two contracted DAR routes to WACOSA in Waite Park.
- One contracted DAR route to WACOSA in Paynesville.
- Two dedicated DAR routes within the 15-mile radius of the Waite Park facility. These routes primarily focus on areas like Saint Joseph and Cold Spring.
- One deviated pre-determined DAR route from Sauk Centre to Saint Cloud on Thursdays.
- One deviated pre-determined DAR route from the Waite Park facility to Foley on Thursdays.
- One deviated pre-determined DAR route from Holdingford to Saint Cloud on Fridays.
- One deviated pre-determined DAR route from Little Falls to Saint Cloud by way of U.S. 10 on the fourth Monday of every month.

The Waite Park's primary DAR service area is in the Saint Joseph/Cold Spring area. In addition, Tri-CAP also provides school transportation for All Saints Academy Catholic School in Saint Joseph, Saint Boniface Catholic School in Cold Spring, preschool transportation for the ROCORI School District and Early Childhood Family Education classes (specifically on Fridays).

Tri-CAP also provides a volunteer drivers program where drivers provide rides in their own vehicles to residents of Benton, Morrison, Sherburne, and Stearns counties. This service is externally funded and primarily used by health insurance providers to transport people to and from medical appointments.

Several of the Tri-CAP service counties will also utilize the volunteer driver service for Department of Human Services work primarily centered on foster care. That work is also funded externally. Drivers with this service are reimbursed the federal mileage rate and are provided a stipend for meals. They are initially given a \$4 startup fee as well. As of May 2019, Tri-CAP has approximately 36 volunteer drivers working with this program.

SAINT CLOUD REGIONAL AIRPORT

The Saint Cloud Regional Airport (STC), located at 1550-45th Ave. SE in Saint Cloud, is the only publicly operated air facility within the MPA. STC is owned and operated by the City of Saint Cloud.

About 100 general aviation planes are based at STC. The airport owns 55 airplane hangars and contracts directly with plane owners. As of November 2017, the vacancy rate for these hangars was approximately 15 percent.

Allegiant Airlines is the only carrier that regularly operates out of the airport. Allegiant Airlines has a schedule of two destinations – Phoenix Mesa Gateway International Airport (IWA or AZA) and Punta Gorda, Florida (PGD) – which the airline files to twice a week. The Punta Gorda flight service is seasonal and flies for only half the year during the winter months.

Allegiant Airlines typically services STC with Airbus A319s and A320s which have a seating capacity of 156 and 177 respectively. The airline also operates an MD-80 aircraft out of STC with a seating capacity of 166.

STC will also have chartered flights on occasion contracted primarily through Sun Country. Sun Country provides direct flights to specific destinations like Laughlin/Bullhead International Airport (IFP). Sun Country operates a B737 which has a seating capacity of 159 passengers. Typically, Sun Country charter flights occur between one to two times a month.

From January 2017 through September 2017 Allegiant Airlines has reported an 82.26 percent enplaned load factor with the largest number enplaned passengers occurring in March 2017 (at 92 percent). During that same time frame, Sun Country has reported a 98.19 percent enplaned load factor with a load factor only falling below 100 percent in May, June, and August. Sun Country did not offer chartered flights from STC during March, July or October.

Aside from Phoenix-Mesa, Punta Gorda, and Laughlin, the Saint Cloud Regional Airport does not provide commercial service connections to any other airports. General aviation aircraft such as corporate jets and propeller aircraft can travel to any other public use airport from STC.

The Minnesota Air National Guard operates Blackhawk helicopter maintenance operations at the Saint Cloud Regional Airport. An Army aviation support facility opened in 2009 and continues to operate at the airport.

AMTRAK

Amtrak provides intercity passenger rail services twice daily from Saint Cloud at its depot, 555 E. Saint Germain St. Passengers can ride via the Empire Builder route from Saint Cloud west to Seattle/Portland or south to Chicago via the Twin Cities. The Portland/Seattle-bound train 7/27 stops in Saint Cloud around 12:30 a.m. and the Chicago-bound train 8/28 stops in Saint Cloud around 5:15 a.m.

The Saint Cloud Amtrak station facility is owned by BNSF Railway Co. Amtrak does not provide ticketing or baggage services at its Saint Cloud station.

NORTHSTAR COMMUTER RAIL AND NORTHSTAR COMMUTER LINK BUS

Northstar Commuter Rail currently serves seven stations on 40 miles of existing track between Big Lake and Minneapolis. Northstar Commuter Rail is operated by Metro Transit, which is the public transit operator in the Twin Cities metro area.

The stops along the Northstar Commuter Rail include: Big Lake, Elk River, Ramsey, Anoka, Coon Rapids-Riverdale, Fridley, and Target Field (in Minneapolis).

Limited operating hours serve primarily commuters during weekday rush hours.

The Northstar Commuter Rail operates five southbound runs out of Big Lake starting at 5 a.m. during the week. There is also one northbound run which departs from Minneapolis and arrives in Big Lake just after 7 a.m.

During the evening commute, there are five northbound runs from Minneapolis to Big Lake starting just before 4 p.m. There is also one southbound run which departs from Big Lake just after 5 p.m. and arrives in Minneapolis around 6 p.m.

Service is provided on the weekends as well. Northstar operates one regular southbound trip departing Big Lake at 10:20 a.m. and arriving in Minneapolis around 11:15 a.m. on Saturdays. There is also one northbound Saturday trip departing Minneapolis at 11:30 a.m. There are two southbound and two northbound trips Saturday afternoon as well.

Sunday Northstar Commuter Rail service includes two morning southbound and one morning northbound trips and one southbound and two northbound afternoon trips.

Northstar Commuter Rail also provides service to all home Minnesota Twins and Minnesota Vikings games.

Metro Transit operates six locomotives and 18 cars designated for the Northstar Commuter Rail. On average, there are normally four cars per weekday train.

The Northstar Link Commuter Bus is operated by Saint Cloud Metro Bus in conjunction with the Northstar Commuter Rail's operator **Metro Transit**. **Saint** Cloud Metro Bus operates five MCI diesel buses specifically dedicated to the Northstar Link Commuter route as of 2019.

The Northstar Link route operates from the Metro Bus Downtown Saint Cloud Transit Center, 510 First St. S, to the Big Lake Park & Ride, located at the corner of 198th Avenue and County Road 43 NW, where commuters can access the Northstar Commuter Rail. The Northstar Link makes stops at the Saint Cloud State University Miller Center; the Northstar Link St. Cloud Park & Ride lot, 1919 Lincoln Ave. SE, Saint Cloud; and the Northstar Link Becker Park & Ride lot, at the corner of First Street NE and Willow Street.

Overnight parking is allowed in designated spaces at the various park and ride lots.

During the week the Northstar Link Commuter Bus makes five southbound trips starting at 3:50 a.m. and five northbound trips starting at 5 a.m. during the morning. The commuter bus also makes five southbound trips starting at 3:45 p.m. and five northbound trips starting at 4:55 p.m. during the afternoon.

On Fridays, the Northstar Link Commuter Bus makes one run to Minneapolis. That bus departs the Saint Cloud Metro Bus Transit Center at 10:15 a.m. and makes stops at **Saint Cloud State's** Miller Center, Saint Cloud Northstar Link Park & Ride, Northstar Link Becker Park & Ride, Big Lake Northstar Commuter Rail Station, Elk River Northstar Station, Ramsey Northstar Station, Anoka Northstar Station, Coon Rapids Northstar Station, and Target Field. The Northstar Link Commuter Bus makes one return trip to Saint Cloud. That bus departs Target Field at 1 p.m.

Weekend coverage includes one southbound and one northbound route in the morning and one southbound and one northbound route in the afternoon on both Saturday and Sunday.

The Northstar Link Commuter Bus also provides service in conjunction with Northstar Commuter Rail for home games for the Minnesota Twins and the Minnesota Vikings. On occasion, the Northstar Link Commuter Bus will also provide special connecting services with the Northstar Commuter Rail for special events in Minneapolis.

Fare prices for the Northstar Link Commuter Bus as of the drafting of this plan are \$2 for a one way trip from the three Saint Cloud locations to Big Lake. From Saint Cloud to Becker a one way trip will cost \$1. For the Friday midday route, the cost from Saint Cloud to Minneapolis for a one way trip is \$5.50. Children under age 5 can and veterans who have a service connected disability (with proper identification) can ride for free.

JEFFERSON LINES

Since 1919, Jefferson Lines has provided daily scheduled bus service from Montana to Wisconsin and Minnesota to Texas.



FIGURE 2.86– JEFFERSON LINES ROUTE MAP
Map courtesy of Jefferson Lines

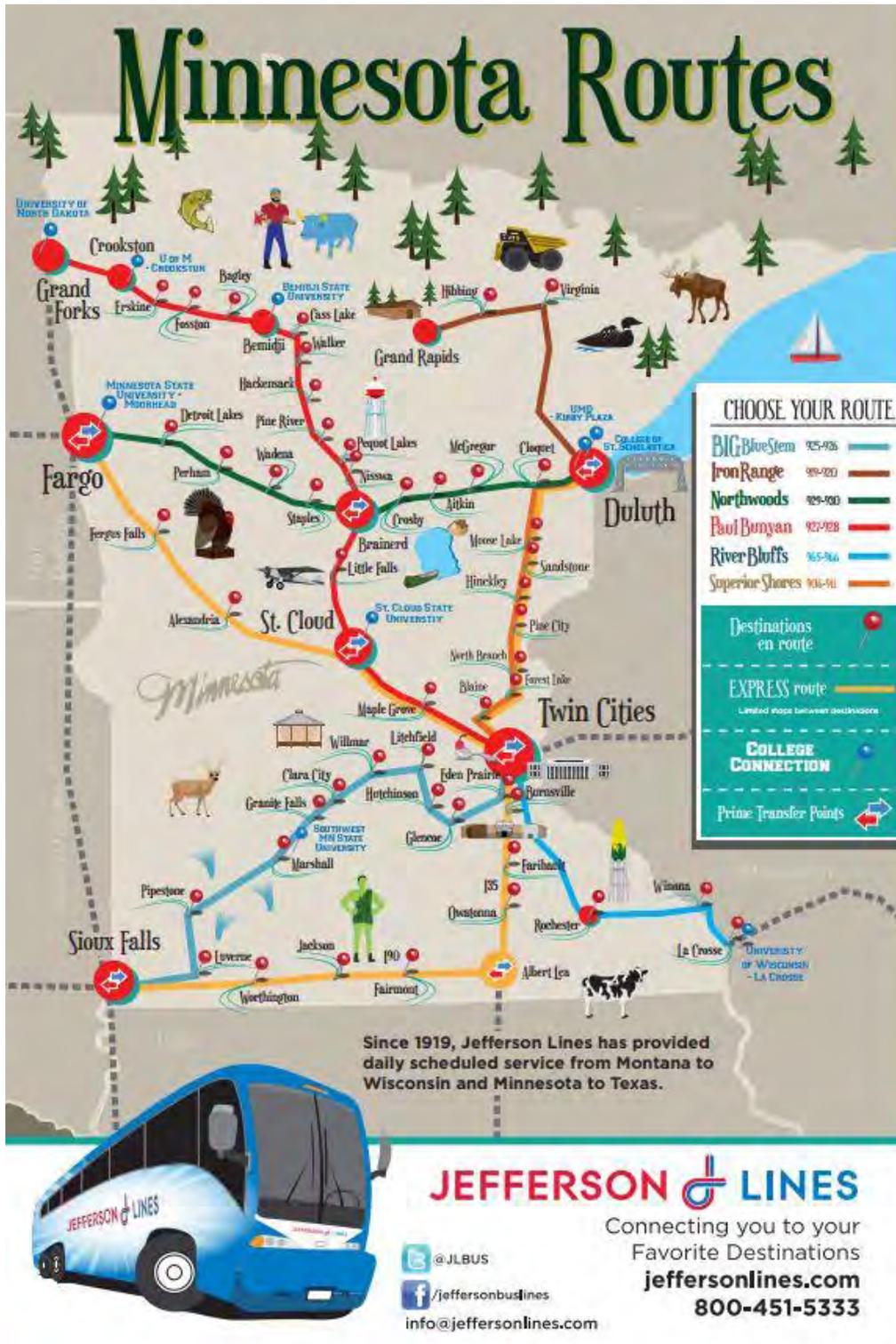


FIGURE 2.87 – JEFFERSON LINES MINNESOTA ROUTE MAP
Map courtesy of Jefferson Lines

Jefferson Lines services three locations in Saint Cloud: 1) The Saint Cloud Metro Bus Downtown Transit Center; 2) Saint Cloud State University; and 3) **Schmidty's Burger King**, 4325 Clearwater Road.

The Saint Cloud Metro Bus Downtown Transit Center is staffed 5:15 a.m. to 10 p.m. Monday through Friday, 7:45 a.m. to 7 p.m. Saturday, and 8:45 a.m. to 7 p.m. on Sunday. This stop is closed on holidays. Services available at the Saint Cloud Metro Bus Downtown Transit Center include passenger stops, ticketing, and package shipping. Ticket sales are available 5:15 a.m. to 9:15 p.m. Monday through Friday, 7:45 a.m. to 7 p.m. on Saturday, and 8:45 a.m. to 6:30 p.m. on Sunday.

The Saint Cloud State University Jefferson Lines stop is located at the northeast entrance to the Atwood Memorial Center, 651 First Ave. S. This stop is staffed 7 a.m. to midnight Monday through Friday, 8 a.m. to midnight Saturday, and 24 hours on Sunday. Services available at Saint Cloud State University include passenger stops, ticketing, and college connection. Tickets for Jefferson Lines are available at the Information Desk inside the Atwood Memorial Center.

Schmidty's Burger King is staffed 6 a.m. to 10 p.m. seven days a week. This stop is closed on holidays. **Services at Schmidty's Burger King include passenger stops, ticketing, and package shipping.**

Jefferson Lines operates two routes in the Saint Cloud area: 1) the Paul Bunyan route and 2) the Express route. These routes do not overlap with each other.

The Paul Bunyan route provides service from Minneapolis/Saint Paul to Grand Forks, North Dakota. This daily route stops at the Saint Cloud Metro Bus Downtown Transit Center on its westbound leg at 1:05 p.m. and stops at 4:10 p.m. on its eastbound leg. The route also makes a stop at the Atwood Memorial Center on the campus of Saint Cloud State University around 4:15 p.m. (eastbound) and 12:55 p.m. (westbound). Travelers taking the westbound Paul Bunyan route have the option of transferring to the Northwoods Line route in Brainerd, which serves as a connection between Duluth and Fargo, North Dakota.

The downtown transit center is also served by Metro Bus fixed routes. Additionally, the downtown transit center is in an area of dense sidewalk connections and approximately a quarter of a mile from the Beaver Island Trail. The transit center also has bike racks available.

Several Metro Bus fixed routes stop in close proximity to the Atwood Memorial Center on the Saint Cloud State University campus. Those stops primarily are located at the James W. Miller Learning Resources Center (the library). This area has very dense sidewalk connections. The campus, situated on the Beaver Island Trail, also provides accessibility for bicyclists. Bike racks are available around the Atwood Memorial Center.

The Express route offers two westbound and two eastbound trips through Saint Cloud each day as it travels between Minneapolis-Saint Paul and Fargo-Moorhead. The westbound legs **depart from the Schmidty’s Burger King** at 11:50 a.m. and 7:10 p.m. The eastbound legs **depart from the Schmidty’s Burger King** at 8:50 a.m. and 4:25 p.m.

Schmidty’s Burger King is serviced by Metro Bus Route 12. This hourly route operates from 5 a.m. to 9:57 p.m. Monday through Friday, 8 a.m. to 6:57 p.m. Saturday, and 9 a.m. to 5:57 p.m. on Sunday. **Schmidty’s Burger King** is located just over a quarter-mile away from the Beaver Island Trail.

<i>Direction of Travel</i>			
<i>Bus Stop Location</i>	<i>Eastbound</i>	<i>Westbound</i>	<i>Route</i>
Metro Bus Transit Center (Downtown)	4:10 p.m.	1:05 pm	Paul Bunyan
Saint Cloud State University	4:15 p.m.	12:55 p.m.	Paul Bunyan
Schmidty’s Burger King	8:50 a.m.	11:50 a.m.	Express
	4:25 p.m.	7:10 p.m.	

FIGURE 2.88 – JEFFERSON LINES SCHEDULE (AS OF SEPTEMBER 2019) FOR STOPS IN SAINT CLOUD

EXECUTIVE EXPRESS

Founded in 1979, Executive Express is an interstate carrier service headquartered in Waite Park as of early 2018. The company also has a facility in Ames, Iowa.

Executive Express has a fleet of 48 vehicles that serve 40 cities in Minnesota and 25 cities in Iowa. As an interstate carrier, the company can transport passengers anywhere in the country.

For private charters, however, the company typically serves the states of Minnesota, Iowa, Wisconsin, North Dakota, and South Dakota. Private charter services include: Private car service, private charter coach bus service, employee transportation, and same-day delivery services.

Executive Express is most known locally for its service to Minneapolis/Saint Paul International Airport. As of October 2017, shuttle service from the Saint Cloud area to MSP occurred 18 times a day.

Executive Express operates on a hub and spoke system. Routes from surrounding communities like Alexandria, Morris, Wadena, Brainerd, and Willmar all make stops at a central Saint Cloud location before departing to MSP.

The primary stop hub for Executive Express in the Saint Cloud MPA as of July 2019 is the **company's facility located at 3105 County Road 138 in Waite Park. This location can be serviced by Metro Bus Route 3 with a stop in close proximity to the Executive Express headquarters. There is no sidewalk along County Road 138.**

WHAT THE DATA SAYS

TRI-CAP

In 2018 Tri-CAP had 128,540 passengers travel one-way system-wide using the DAR service. In addition, the organization had 20,374 riders utilize the volunteer driver program. In total, 2018 saw ridership across the organization sit at 148,914, down from a high of 152,996 in 2015.

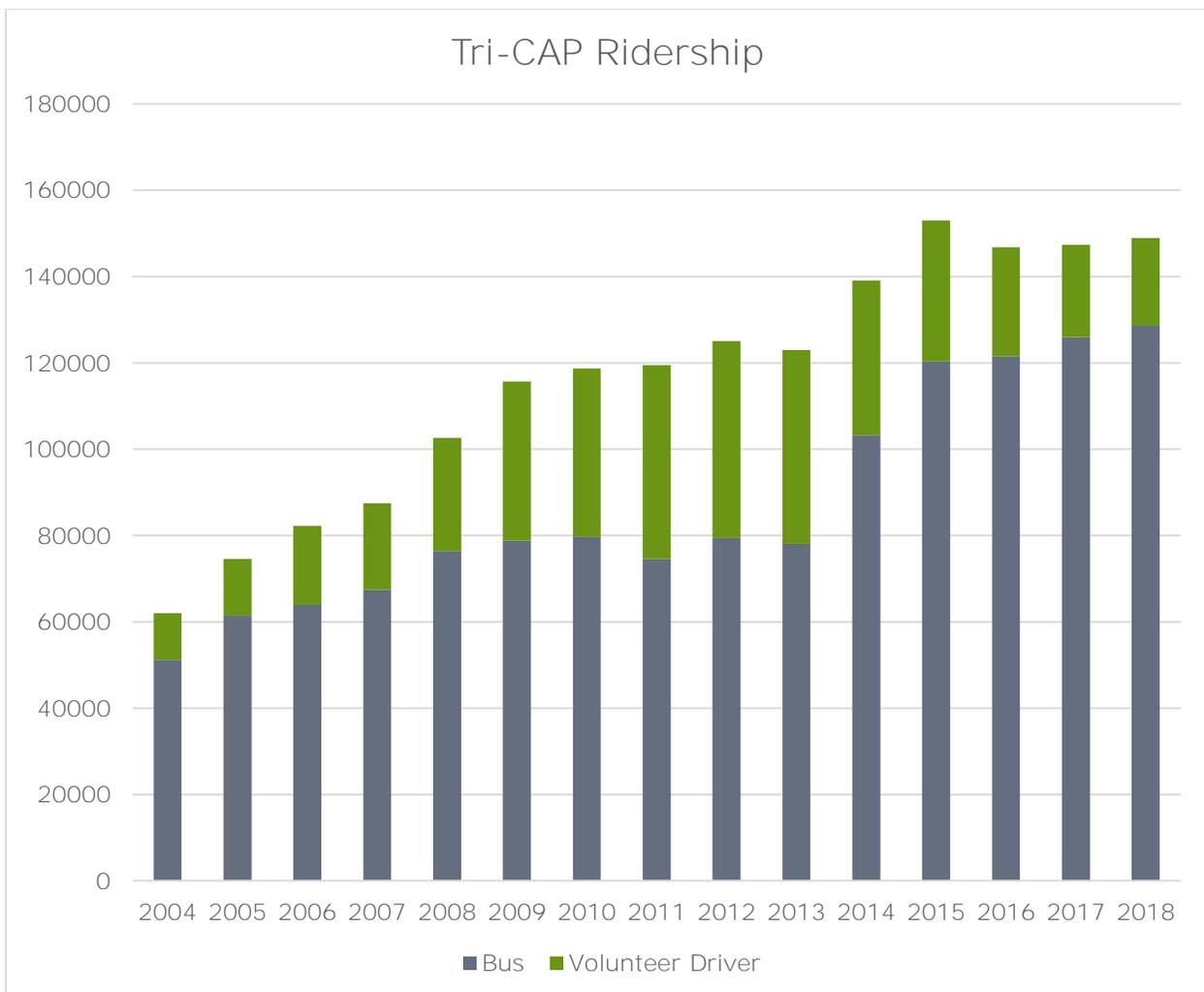


FIGURE 2.89 – TRI-CAP RIDERSHIP 2004 - 2016
Data source: Tri-CAP Inc.

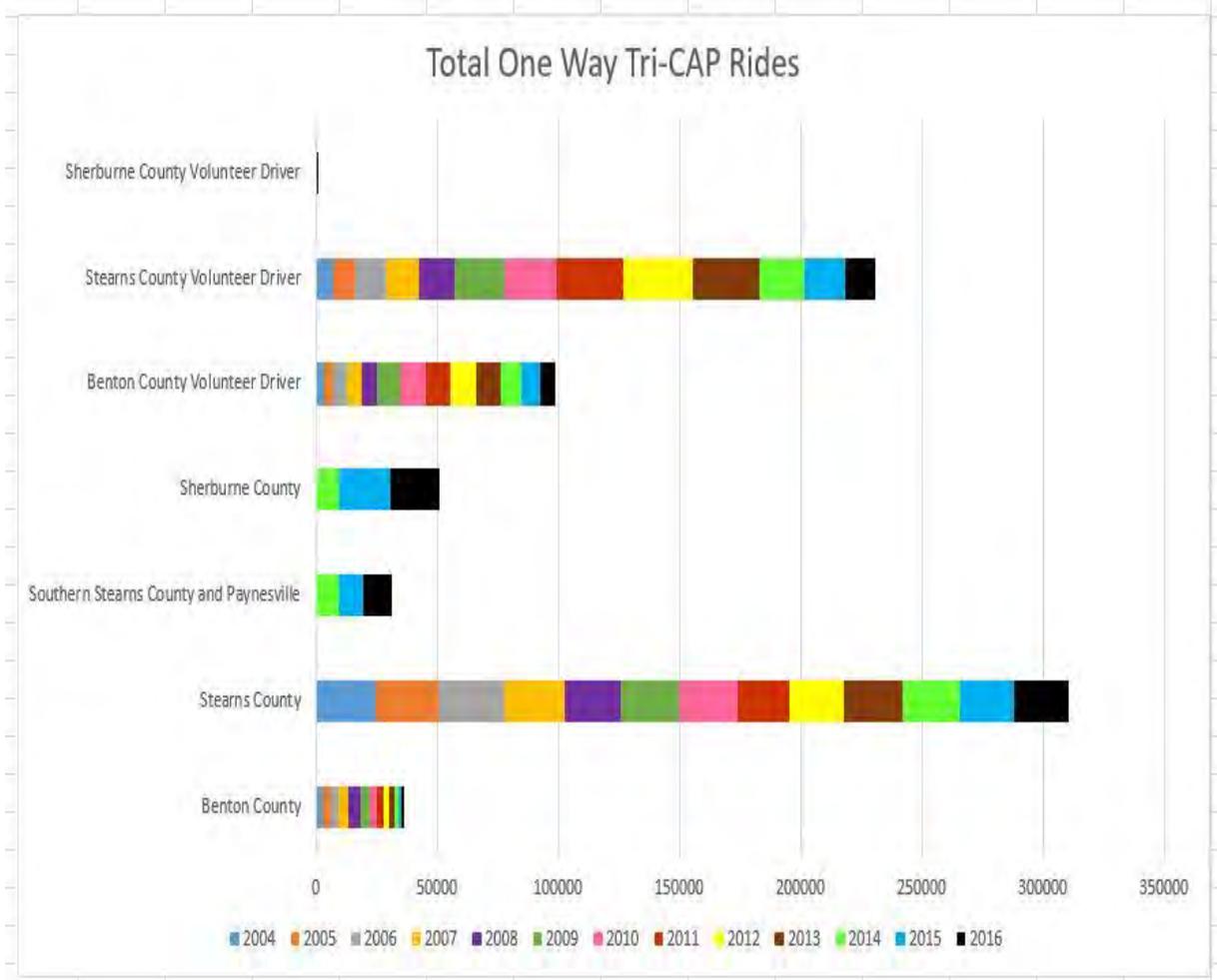


FIGURE 2.90 – TRI-CAP RIDERSHIP CROSBTAB BY YEAR AND LOCATION 2004 - 2016
Data Source: Tri-CAP Inc.

SAINT CLOUD REGIONAL AIRPORT

The airport is not currently served by a Saint Cloud Metro Bus FR bus. However, parking is provided free of charge for any length of time for passengers utilizing STC. There are no sidewalks leading to the STC, and it is several miles from any substantial residential development, so demand for walking trips is probably very low. There are no formal bicycle facilities leading to the STC, but 12th Street SE/45th Avenue SE does have a paved shoulder that could be used by a cyclist. Traffic counts on the corridor are fairly low – about 1,300 vehicles per day.

The Saint Cloud Regional Airport does provide limited freight chartering services out of its facility. Those freight charters are typically delivering or picking up cargo for specific companies within the Saint Cloud area. The airport also has on occasion small cargo twin

turbo props that will do specific pickups for UPS or FedEx. That service is contracted by Bemidji Aviation and is done on a case by case basis.

The majority of freight that leaves the Saint Cloud MPA for air travel is loaded via ground and transported to MSP.

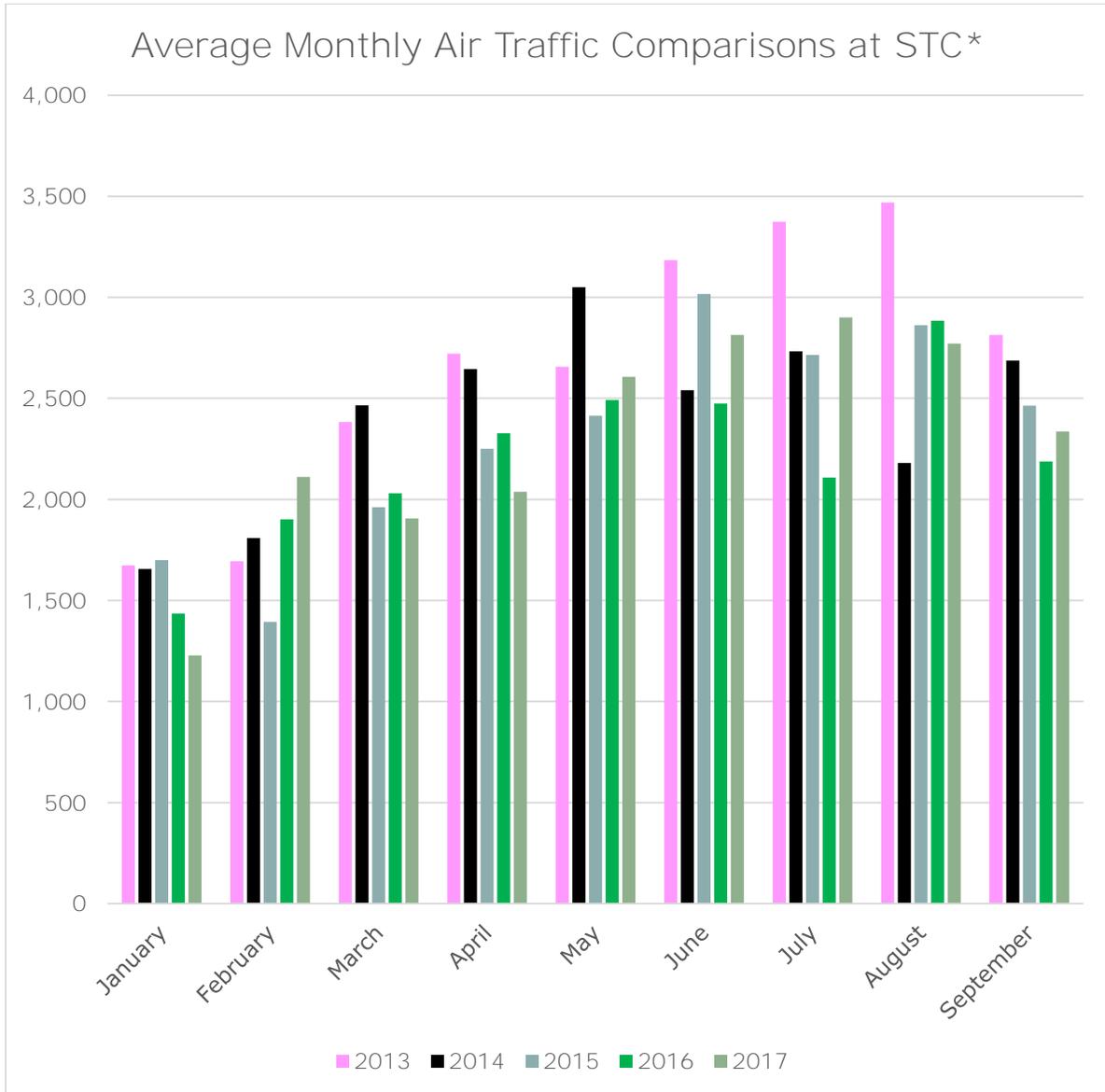


FIGURE 2.91 – STC AIR TRAFFIC BY MONTH 2013 - 2017

*The traffic comparisons indicate the number of takeoffs and landings of all aircrafts at STC. This includes helicopters, military, small engines, corporate jets, and airline aircraft. Numbers are only represented through September to allow for a 2017 comparison.

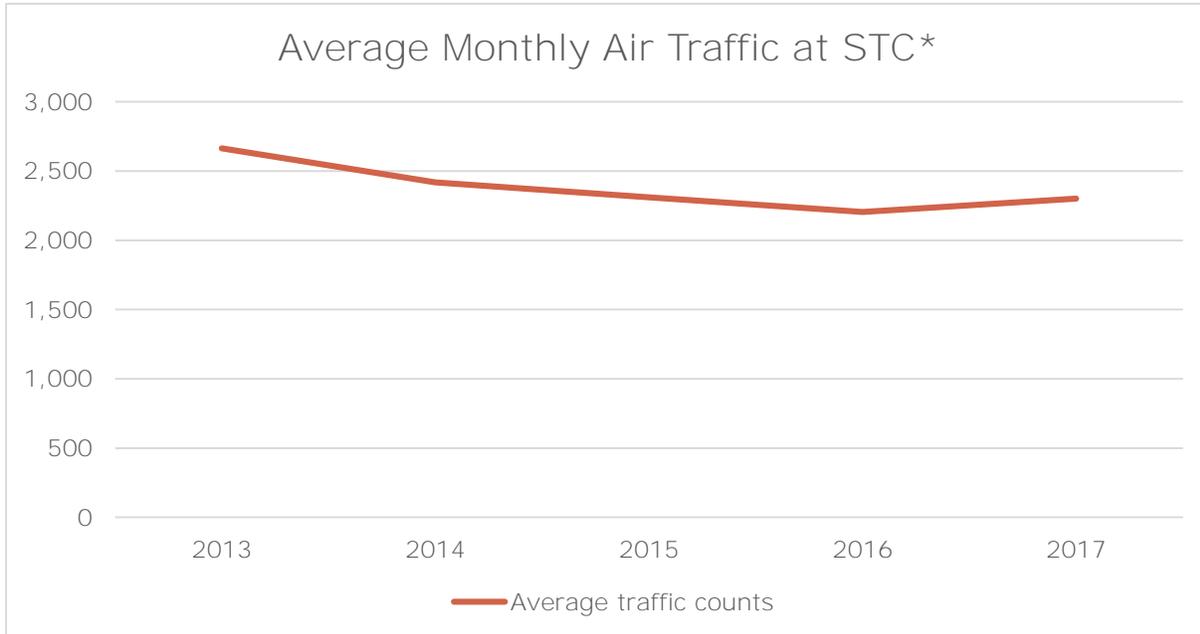


FIGURE 2.92 – STC AVERAGE MONTHLY AIR TRAFFIC BY YEAR 2013 - 2017

**The traffic comparisons indicate the number of takeoffs and landings of all aircrafts at STC. This includes helicopters, military, small engines, corporate jets, and airline aircrafts. Numbers are represented from January through September to all for a 2017 comparison.*

With relatively low air traffic, surface transportation connections to the airport appear to be adequate at this time.

AMTRAK

During fiscal year 2018, 126,721 passengers boarded or alighted the Empire Builder line at its six Minnesota stops – Detroit Lakes, Red Wing, Saint Cloud, Saint Paul-Minneapolis, Staples, and Winona. A total of 9,566 passengers or 7.55 percent of those boardings/alightings took place at the Saint Cloud station.

In fiscal year 2018, the Empire Builder line had an endpoint on-time performance rate of 44 percent. A majority of those delays were due to freight train operations.

In fiscal year 2018, passengers who boarded or alighted from the Saint Cloud station were typically going to Chicago; Williston, North Dakota; or Whitefish, Montana. Other popular ridership city pairs which included Saint Cloud as either the boarding or alighting station were Minot, North Dakota; Portland, Oregon; Milwaukee, Wisconsin; Seattle, Washington; Saint Paul; and Fargo.

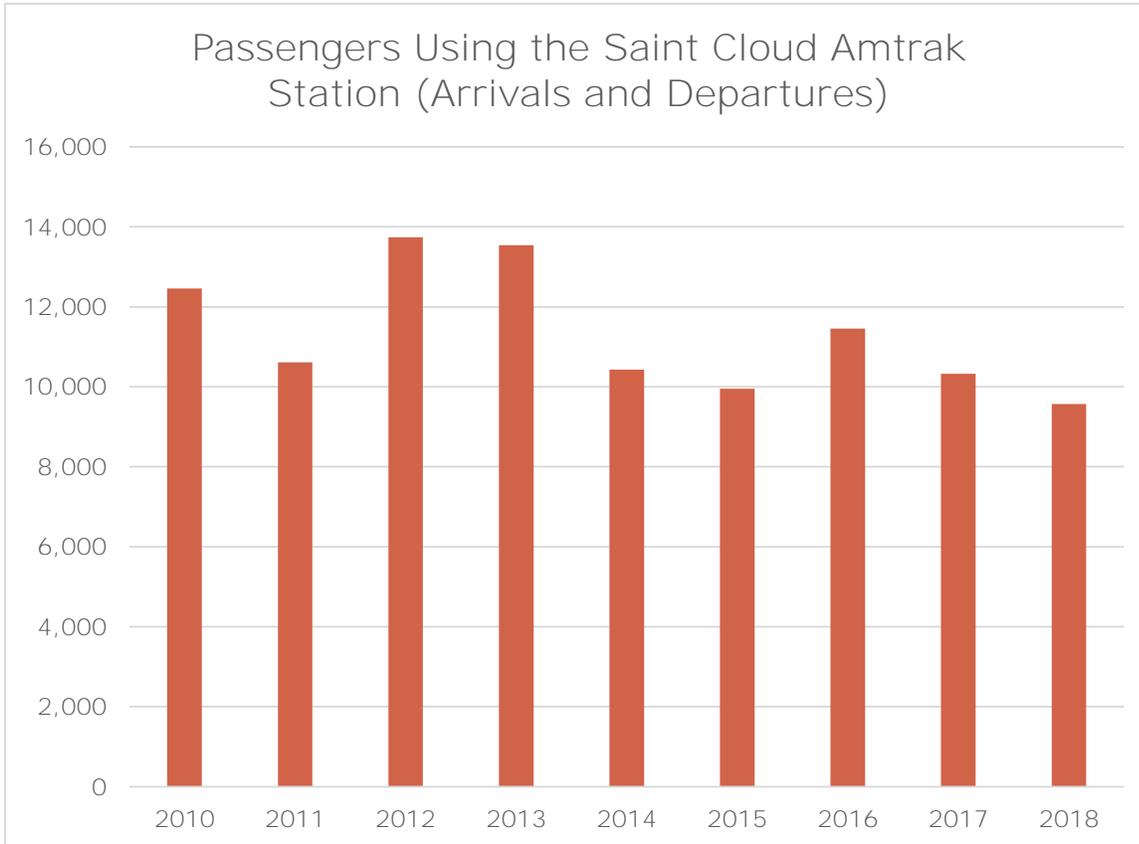


FIGURE 2.93 – AMTRAK ANNUAL BOARDINGS AND ALIGHTINGS AT SAINT CLOUD 2010 - 2018
 Data Source: [Rail Passengers Association \(https://bit.ly/2JwvQTA\)](https://bit.ly/2JwvQTA).

Metro Bus Routes 6, 7, 21, and 22 serve the roadways adjacent to the Amtrak station. Route 6 operates between the hours of 5:06 a.m. to 10:43 p.m. Monday through Friday, 8:15 a.m. to 6:57 p.m. Saturday, and 8:15 a.m. to 5:57 p.m. Sunday. Route 7 operates between the hours of 5:45 a.m. and 6:27 p.m. Monday through Friday. Route 7 does not operate on weekends. Route 21 provides service between the hours of 6:01 a.m. and 6:12 p.m. This route does not run on weekends. Route 22 runs between 5:53 a.m. and 9:42 p.m. Monday through Friday, 8:45 a.m. and 6:45 p.m. Saturday and 8:45 a.m. to 5:42 p.m. Sunday.

The eastbound train is scheduled to leave the train station at 12:30 a.m. and the westbound train is scheduled to leave at 5:15 a.m., making it difficult for a transit dependent person to access Amtrak because the Metro Bus routes do not run during the Amtrak departure and arrival times.

There is sidewalk along Saint Germain Street which goes past the Amtrak station. There is no bike rack available.

NORTHSTAR COMMUTER RAIL AND NORTHSTAR LINK COMMUTER BUS

Ridership on the Northstar Commuter Rail through December 2017 was up considerably from 2016 in part due to construction on Interstate 94 between downtown Minneapolis and Brooklyn Center. Metro Transit estimates 793,796 rides were taken on the Northstar Commuter Rail in 2017 up from 711,167 rides during 2016, an increase of 11.6 percent year-over-year. In 2017 the weekday average was 3,053 rides.

Fare prices for the Northstar Commuter Rail increased in October 2017. Fare prices for one adult from Big Lake – the closest station to the MPA – to Minneapolis is \$6.25 one way during the week and \$5.50 for a one way trip on weekends. Seniors (ages 65+), youth (ages 6-12) and Medicare card holders ride for \$2 for a one way trip.

Residents of the MPA can either drive to the nearest station (about 30 miles away in Big Lake, MN) or utilize the Northstar Link Commuter bus operated by a partnership between Metro Transit and Saint Cloud Metro Bus.

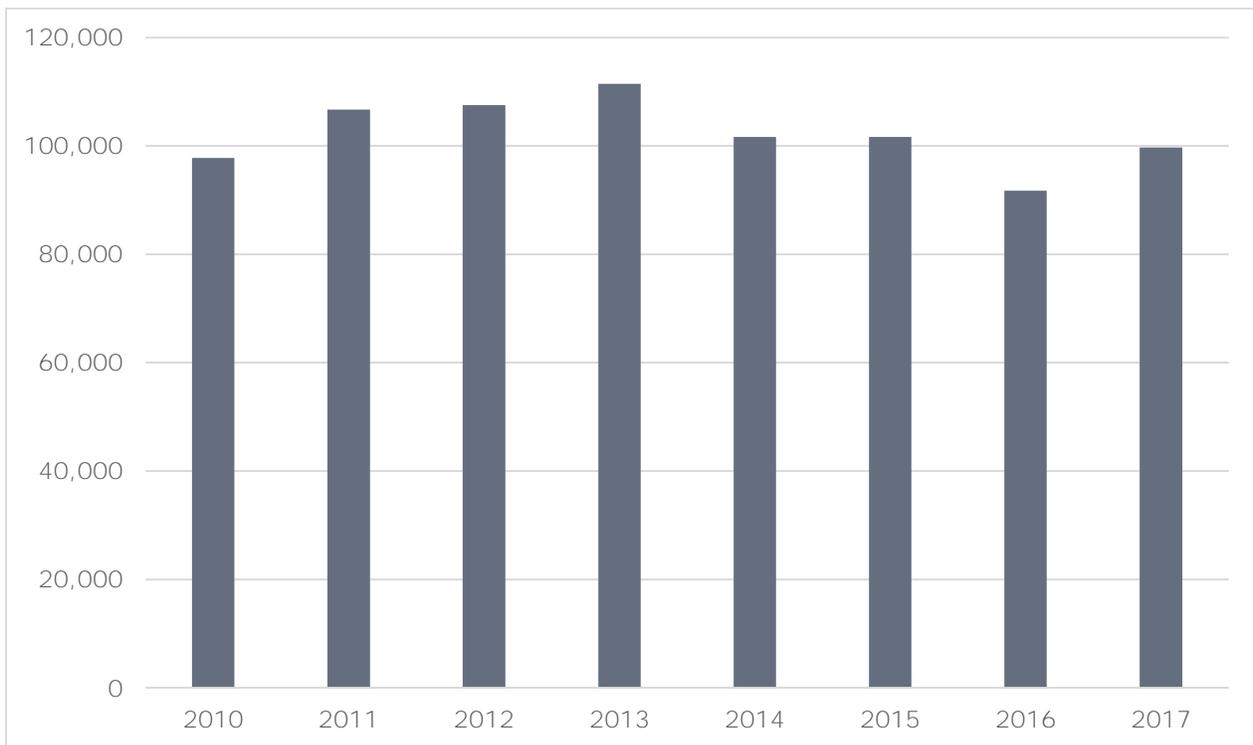


FIGURE 2.94 – NORTHSTAR TRAIN BOARDINGS AT BIG LAKE STATION

Data Source: Metropolitan Transit

The Northstar Link Commuter Bus service began in November 2009. Peak daily ridership for the bus service occurred in 2014 with an average of 162 people riding the bus daily. Since then, ridership has fallen to a reported average of 130 daily riders in 2018.

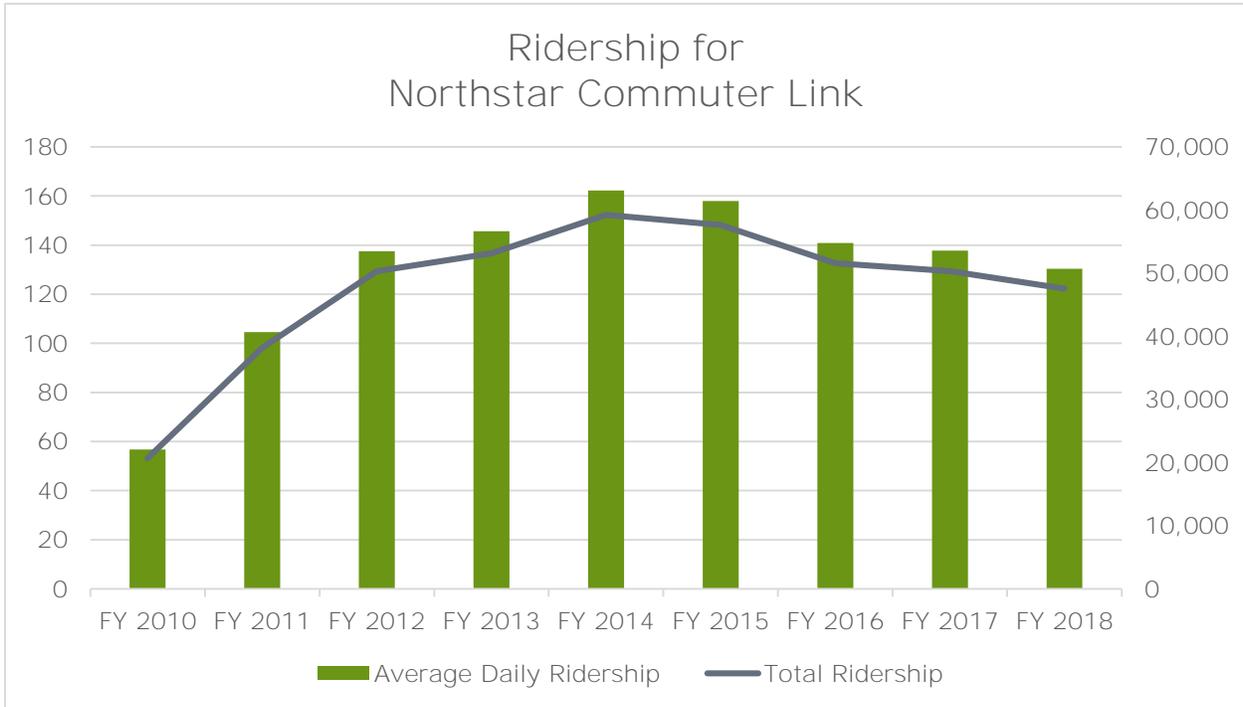


FIGURE 2.95 – NORTHSTAR LINK TOTAL RIDERSHIP AND AVERAGE DAILY RIDERSHIP FY 2010 - 2018
 Data Source: Saint Cloud Metro Bus

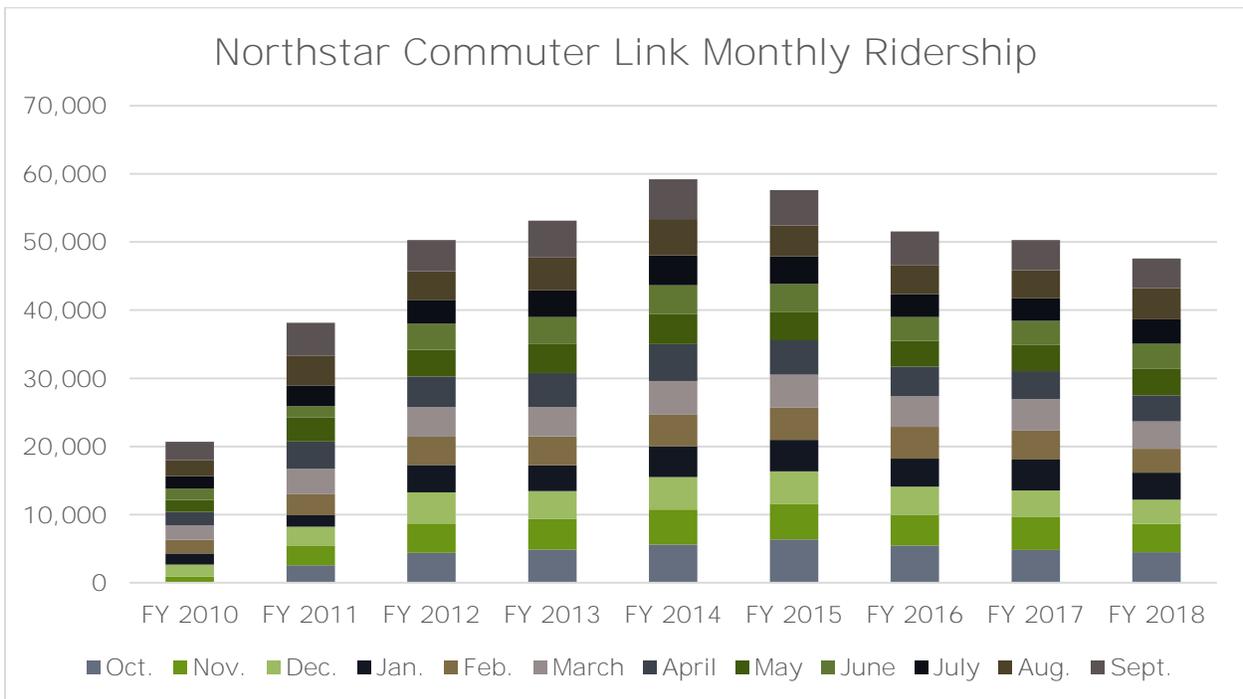


FIGURE 2.96 – NORTHSTAR LINK MONTHLY RIDERSHIP FY 2010-FY 2018
 Data Source: Saint Cloud Metro Bus.

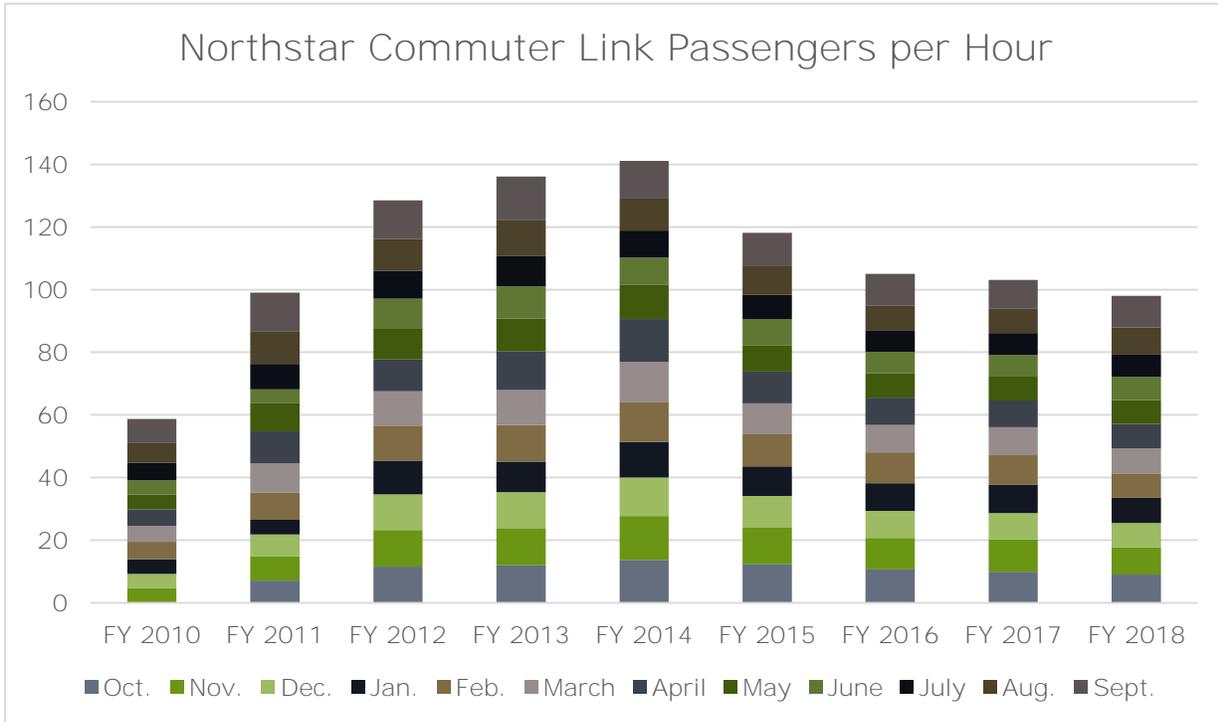


FIGURE 2.97 – NORTHSTAR LINK PASSENGERS PER HOUR FY 2010-FY 2018
 Data Source: Saint Cloud Metro Bus.

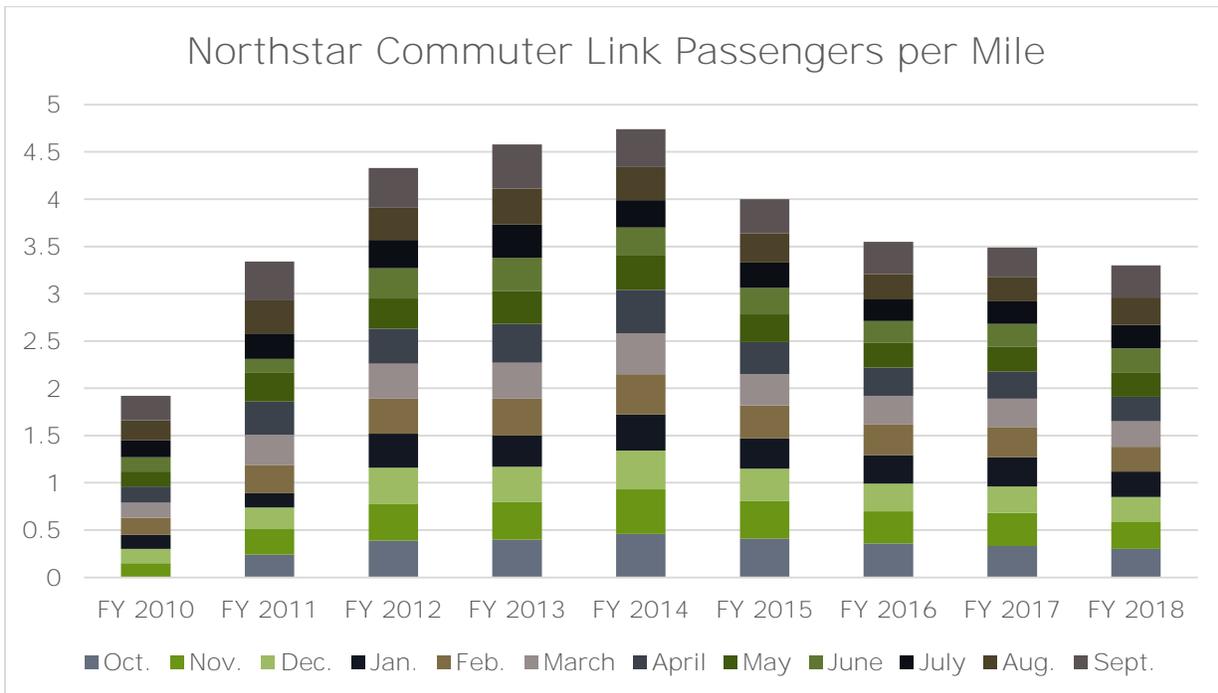


FIGURE 2.98 – NORTHSTAR LINK PASSENGERS PER MILE FY 2010-FY 2018
 Data Source: Saint Cloud Metro Bus.

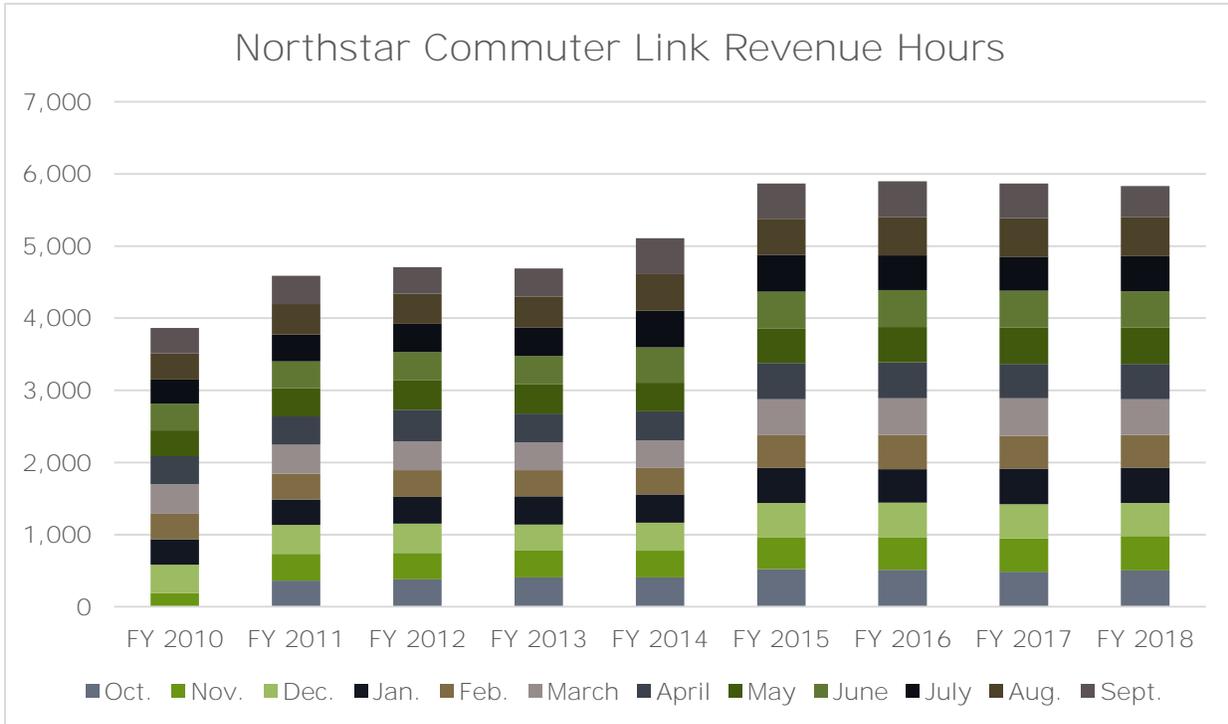


FIGURE 2.99 – NORTHSTAR LINK REVENUE HOURS FY 2010-FY 2018

Data Source: Saint Cloud Metro Bus.

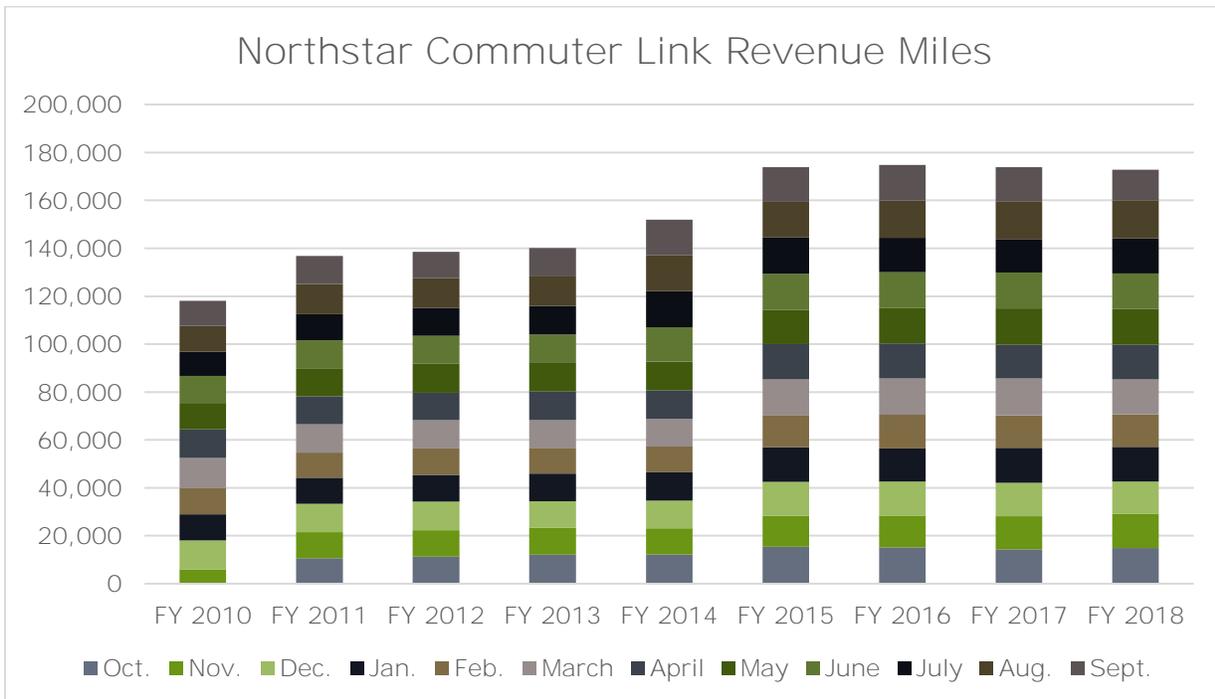


FIGURE 2.100 – NORTHSTAR LINK REVENUE MILES FY 2010-FY 2018

Data Source: Saint Cloud Metro Bus.

The downtown transit center is served by Metro Bus fixed routes. Additionally, the downtown transit center is in an area of dense sidewalk connections and approximately a quarter of a mile from the Beaver Island Trail. The transit center also has bike racks available. In general, the Northstar Link seems to be very accessible to most residents of the Saint Cloud area.

Unit Number	Chassis Model Year	Vehicle Class	Body Conversion Model	Fuel Type
810	2017	700	MCI	Diesel
811	2017	700	MCI	Diesel
812	2017	700	MCI	Diesel
813	2019	700	MCI	Diesel
814	2019	700	MCI	Diesel

FIGURE 2.101 – NORTHSTAR LINK FLEET ROSTER AS OF JULY 2019

Data Source: Metro Bus

JEFFERSON LINES

Ridership data for Jefferson Lines is not publically available.

EXECUTIVE EXPRESS

In 2016, Executive Express served approximately 108,000 customers companywide.

WHAT WE HEARD

The following is a summary of what we heard from the public and stakeholders regarding area transportation connections to the state and nation. This section is broken down by comments specific to various forms of transportation connections.

- **General comments**
 - "Connect Saint Cloud to Twin Cities."
- **Saint Cloud Regional Airport**
 - "Bring back direct flights to Chicago."
- **Amtrak**
 - "Move the Amtrak station to either the Northstar Park-and-Ride lot or the old paper mill."
- **Northstar Commuter Rail and Northstar Commuter Link Bus**
 - "Finish the rail train"/Connect Saint Cloud to Twin Cities via Northstar Commuter Rail/Bring Northstar to Saint Cloud/ When is Northstar coming to Saint Cloud? (49 similar comments)
 - Add more train departures and arrivals. Not just for commuting but to get connected with the metro. (2 similar comments)
 - Commenter made additional comments about the Northstar train and seemed to be suggesting that extending the train service to Saint Cloud

would help create additional opportunities by helping people get to jobs outside of the Saint Cloud area.

- **“Money towards roads and bridges – not choo choo trains.”**
- A train/rail/subway system would be awesome to see here. Toulouse, France is about the same size as greater Saint Cloud and they have a subway system!!”
- **“Promoting passenger rail generally results in empty trains. Commuters love the idea hoping everyone else takes the passenger train freeing more space on the highway for them.”**
- **“Build the train station at the site of Champion. Plenty of room.”**
- **“Commuter rail needs to increase availability of ride times during the weekends.”**
- **“The Northstar should run trains later in the evening.”**
- **“When they do the Northstar demonstration project, make sure that veterans get counted.”** Commenter was worried that as a veteran he need only show his VA card to ride and so doesn’t get counted as a rider because he doesn’t by a ticket.
- **“Extending Northstar train to Saint Cloud could be a gateway for crime.”**
- **“Extend a light rail system to reach much further into greater Minnesota, beginning with the Saint Cloud area.”**
- High speed railway connecting Saint Cloud, Mankato, and the Twin Cities. Forget the BNSF and Amtrak (create a new separate rail line).
- **“Trains to Brainerd and Fargo.”**
- Northstar Link works well.
- Northstar from Big Lake to Minneapolis works well.

The overwhelming majority of comments involved requests and inquiries as to the time frame the Northstar Commuter Rail would connect from Big Lake to Saint Cloud. The first phase of the commuter rail line between Big Lake and downtown Minneapolis was completed in 2009. The original vision of the Northstar Corridor Development Authority (NCDCA) included service to Saint Cloud in its second phase, however lack of funding and potential lease agreements between the NCDCA and the rail line owner, Burlington Northern Santa Fe (BNSF), have prohibited further development on Phase 2.

GENERAL PUBLIC COMMENTS

In addition to the comments listed in previous sections, the following is a summary of other transportation related remarks obtained during public outreach:

- (When asked what could be improved) **“Not sure”/“Not much”/“Nothing.”** (13 similar comments)
- **“Everything is good.”** (7 similar comments)
- **“Monitor bad drivers more.”/“Somehow, ‘fix’ distracted drivers”** (4 similar comments)

- Promote programs that help our environment and reduce climate change. (3 similar comments)
- Focus on collaboration within the community to share transportation resources.
- "I think transportation is fine right now."
- "Don't let elected officials get away with mile wide support that's only an inch deep."
- "Examine a future with fewer cars."
- "Everything needs some improvement."
- "We need to have multiple options for people. This is not a one size fits all issue."
- "There just isn't a 'wow' factor to report regarding Saint Cloud transportation."
- "Transportation is directly related to land use. Suburbs like Maple Grove would never have grown like they did if it was not for the automobile and the Interstate Highway system. Encourage smart growth. Like Portland, they have an Urban Growth Boundary. I understand the limitations to this, especially in regards to housing, but there is always a better and smarter way to do things. Work with the local communities who are experiencing growth and encourage them to utilize smart growth within their subdivision or zoning ordinances."
- "Remember victims are fleeing abuse and sometimes the only option is getting on a bus and going to a safe place."
- "To teach the immigrant population how to drive more proficiently."
- Better access to places like fresh markets, community resources (such as Salvation Army – Hwy 10 issue).
- "More tram type routes."
- "I think people make it work. I think that more options need to be available."
- "We have good transportation companies in the area."
- "I don't feel I am qualified to answer."
- "Car."
- "No big digs but well planned incremental adjustments."
- "Service is great as of now."
- "Excited for the new changes."

CHAPTER 3: ENVIRONMENTAL IMPACT MITIGATION

INTRODUCTION

Per Federal regulations, MPOs, like the APO, must consult with “state and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of the transportation plan.”¹ This consultation must include a comparison of transportation plans with state conservation plans or maps or a comparison of transportation plans to inventories of natural or historic resources if available.

The APO is committed to environmental protection and preservation. While APO staff are not environmental planners per se, it is understood that there is a link between transportation planning and the environment.

The National Environmental Policy Act (NEPA), signed into law on Jan. 1, 1970, requires all federal agencies – or those utilizing Federal dollars including for major transportation projects – to assess the environmental effects of their proposed actions prior to making decisions. These environmental factors include, but are not limited to, air, plants, animals, soil, water, public health, and historic preservation.

NEPA compliance includes an ordered approach to mitigation and involves understanding the affected environment and assessing transportation effects throughout project development. Effective mitigation starts at the beginning of the NEPA process and continues through as an integral part of the alternatives development and analysis process.

In addition to the NEPA process, the State of Minnesota has its own environmental policy act – Minnesota Environmental Policy Act or MEPA – which furthers the scope of NEPA within the state. MEPA holds state agencies **accountable and requires them “to consider the impact of governmental actions on the environment, by using ‘all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which human beings and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of the state’s people.’”²**

Consistent with NEPA and MEPA requirements, the APO will assist its planning partners to minimize and/or mitigate environmental conflicts arising from the implementation of transportation projects within the MPA.

As such, this chapter not only shows the APO’s commitment to the NEPA and MEPA processes but also demonstrates the APO’s compliance with other federal regulations as dictated in accordance with the *Fixing America’s Surface Transportation (FAST) Act* as it pertains to the relationship between planning and implementation of various transportation projects and the environment.

¹ 23 USC §450.322(g)

² [Introducing Federal National Environmental Policy Act Practitioners to the Minnesota Environmental Policy Act Process](https://bit.ly/2yyRY94). (<https://bit.ly/2yyRY94>).

The Council on Environmental Quality Mitigation Definition

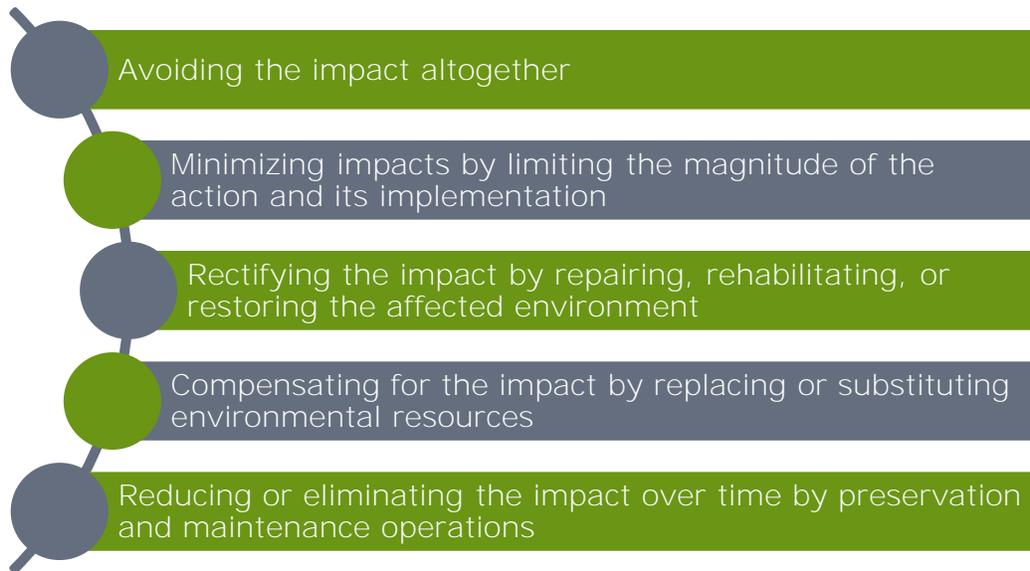


FIGURE 3.1 – THE DEFINITION OF MITIGATION ACCORDING TO THE COUNCIL ON ENVIRONMENTAL QUALITY

Transportation projects vary in type, size, and complexity. Potential environmental impacts are varied and unique to each project. To account for project impact variability, one of three basic reports listed below is often required in order to document how projects comply with NEPA and to document how such compliance is fulfilled.

1. **Categorical Exclusions (CE)/Project Memorandum (PM):** CEs/PMs are issued for actions within a project that do not individually or cumulatively have a significant effect on the environment. CEs and PMs must meet the definition contained in [40 CFR 1508.4](https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-1508/subpart-1508.4) (<https://bit.ly/2Mprkb0>) and not involve significant environmental impacts.
2. **Environmental Assessment (EA):** An EA is an investigatory report used to determine whether a full EIS is necessary for a project. It is used primarily when the significance of environmental impact is not clearly established. Should environmental analysis and interagency review during the EA process find a project to have no significant impacts on the quality of the environment, a Finding of No Significant Impact (FONSI) is issued.
3. **Environmental Impact Statement (EIS):** An EIS is prepared for projects with known significant effect on the environment. An EIS is a full disclosure document that details the process through which a transportation project was developed – including consideration for a range of reasonable alternatives – analyzes potential impacts resulting from the alternatives, and demonstrates compliance with applicable environmental laws and executive orders.

AIR QUALITY

All motorized modes of transportation have an impact on air quality. According to MnDOT, approximately 47 percent of air pollution in Minnesota is from on- and off-road vehicles and equipment.³

But even though the total amount of emissions from highway vehicles in Minnesota has decreased significantly – by 50 percent since 1990 – due to higher vehicle efficiency standards, those benefits have come with some unintended consequences.⁴

“But even as cars get more fuel-efficient, they’re getting bigger. As the economy has gotten better and gas has gotten cheaper, Minnesotans are choosing bigger vehicles again, contributing to growing emissions from light-duty trucks (that includes pickup trucks, SUVs, vans, and crossovers), which make up 38 percent of transportation emissions, up from 34 percent in 2005.”⁵

According to the Minnesota Pollution Control Agency (MPCA), electric vehicles will reduce the amount of emissions released due to transportation over time. But as the [Minnesota Go Statewide Multimodal Transportation Plan’s Environment Trend Analysis Topic Summary](https://bit.ly/2FzbHbW) (<https://bit.ly/2FzbHbW>) states, encouraging less carbon-intense fuel sources such as walking, biking, and public transportation would have a more immediate impact on reducing transportation emissions.

Dense, visible smog in many of the nation’s cities and industrial centers prompted Congress to enact the Clean Air Act (CAA) in 1970. Further amendments to this Act – to curb four major threats to the environment: acid rain, urban air pollution, toxic air emissions, and stratospheric ozone depletion – were passed in 1990.

In conjunction with passage of the CAA, the Federal Environmental Protection Agency (EPA) developed the National Ambient Air Quality Standards (NAAQS). NAAQS measures six major air pollutants – carbon monoxide, lead, nitrogen dioxide, ozone, particle pollution, and sulfur dioxide⁶. Of these six air pollutants, ground-level ozone and airborne particles are the two pollutants that pose the greatest threat to public health⁷.

³[Minnesota Go Statewide Multimodal Transportation Plan Environment Trend Analysis Topic Summary](https://bit.ly/2FzbHbW), MnDOT. (<https://bit.ly/2FzbHbW>)

⁴ [Minnesota Go Air Quality Summary](https://bit.ly/2J0s9dz), MnDOT. (<https://bit.ly/2J0s9dz>)

⁵ [Minnesota Go Statewide Multimodal Transportation Plan Environment Trend Analysis Topic Summary](https://bit.ly/2FzbHbW), MnDOT (<https://bit.ly/2FzbHbW>)

⁶ [NAAQS Table](https://www.epa.gov/criteria-air-pollutants/naaq-table). United States Environmental Protection Agency. (<https://www.epa.gov/criteria-air-pollutants/naaq-table>).

⁷ [Air Quality Index \(AQI\) Basics](https://bit.ly/1U9qR5q). United States Environmental Protection Agency. (<https://bit.ly/1U9qR5q>).

Air Quality	Definition
Good	Current air quality is considered satisfactory and poses little or no health risk.
Moderate	Air quality is acceptable; however individuals who are very sensitive to air pollution may experience adverse health effects.
Unhealthy for Sensitive Groups	People with lung or heart disease, older adults, children and people participating in activities that require heavy or extended exertion may experience adverse health effects.
Unhealthy	Everyone may begin to experience adverse health effects and members of sensitive groups may experience more serious health effects.

FIGURE 3.2 – THE FOUR AQI LEVELS RANGING FROM GOOD TO UNHEALTHY.

Those pollutant levels are measured on a daily basis and are reported using the Air Quality Index (AQI). AQI is designed to gauge how clean or polluted the air is and outlines the associate health effects that might be of concern.

Areas that do not meet the standard air quality measures are designated as “nonattainment” by the EPA.



FIGURE 3.3 – SAUK RAPIDS IN WINTERTIME

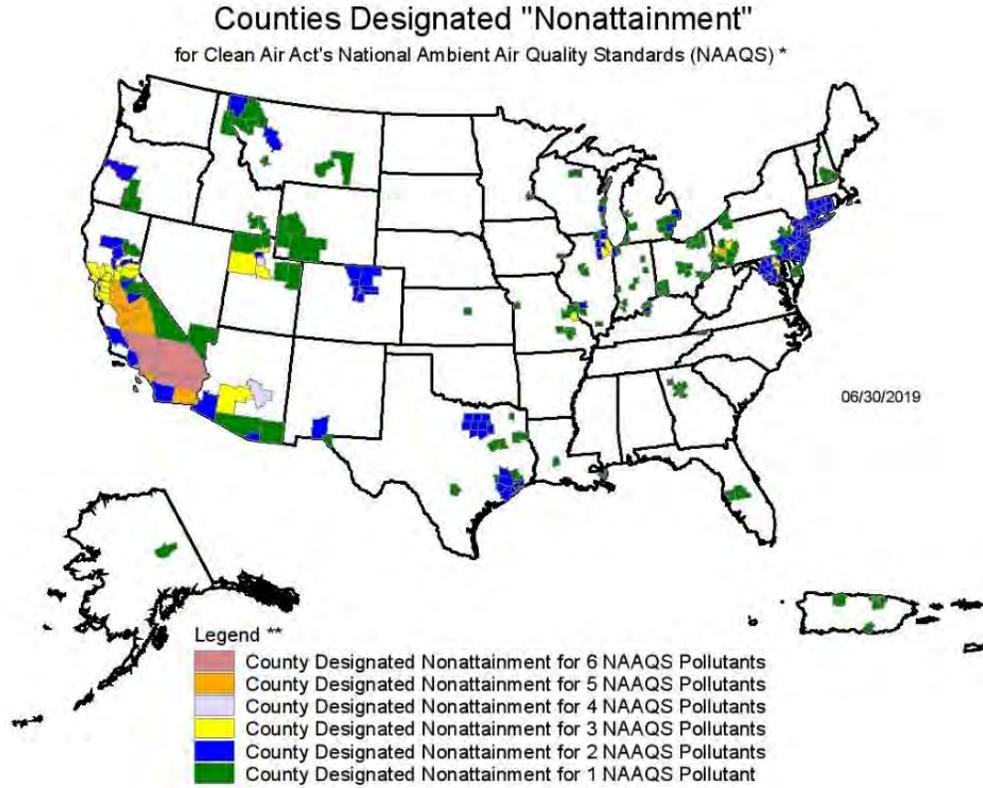


FIGURE 3.4 – COUNTIES IN THE U.S. THAT DO NOT MEET AIR QUALITY ATTAINMENT STANDARDS OUTLINED BY THE CLEAN AIR ACT'S NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS). Source: U.S. Environmental Protection Agency.

The only time the Saint Cloud MPA was found to be in nonattainment was February 1985. In 1993, the EPA re-designated Saint Cloud as in "attainment" and was put on "maintenance" classification. The EPA allowed the 20 year "maintenance" period to expire in August 2013. Since then, the MPA was declared to be in full "attainment". Monitoring continues from the air quality station installed near Talahi Community School in Saint Cloud. The Minnesota Pollution Control Agency (MPCA) monitors this equipment for air quality readings as part of its network in accordance with 40 CFR Part 58.

Demonstrated in Figure 3.4, the MPA has experienced a 28 percent increase in the number of days with good air quality from 2008 through 2017⁸.

⁸ [Annual AQI Summary Reports](https://www.pca.state.mn.us/air/annual-aqi-summary-reports). Minnesota Pollution Control Agency. (<https://www.pca.state.mn.us/air/annual-aqi-summary-reports>).

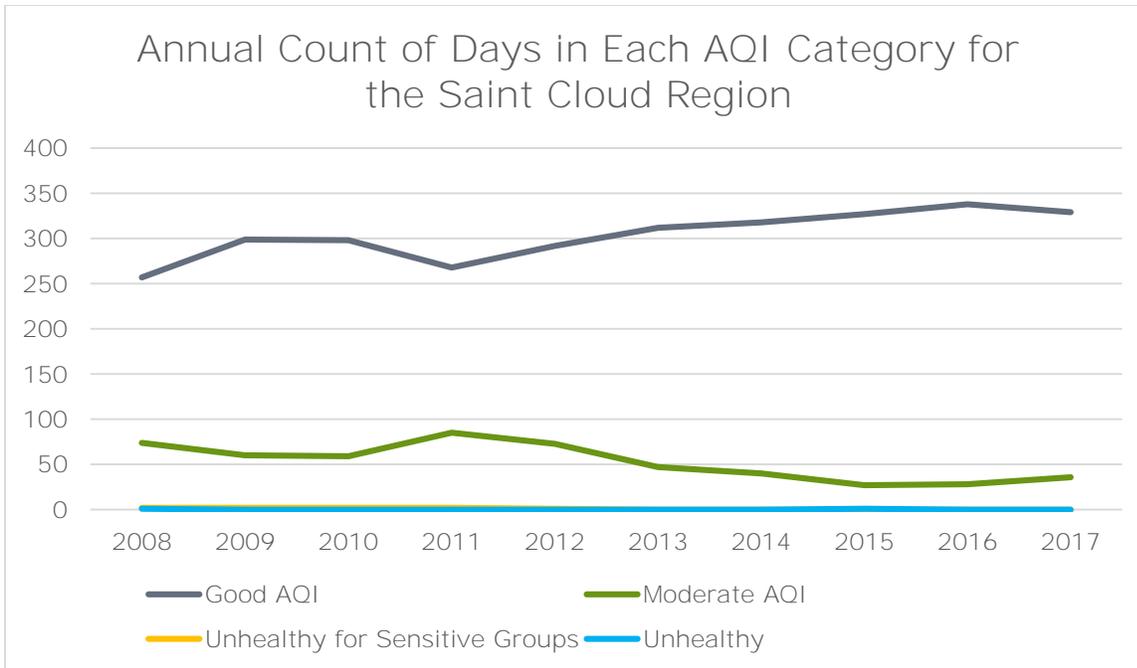


FIGURE 3.5 – PERCENT OF DAYS WITH AQI OF GOOD AND MODERATE IN THE MPA
Data Source: Minnesota Pollution Control Agency. Of note, some region-pollutant-year combinations have less than a complete year of monitoring data.

GREENHOUSE GAS EMISSIONS

According to the EPA, greenhouse gases (GHG) are gases – carbon dioxide, methane, nitrous oxide, and fluorinated gases – that trap heat in the atmosphere. These gases can remain in the atmosphere for different lengths of time, ranging from a few years to few thousand years. The EPA states:

“Human activities are responsible for almost all of the increase in greenhouse gases in the atmosphere over the last 150 years. The largest source of greenhouse gas emissions from human activities in the United States is from burning fossil fuels for electricity, heat, and transportation.”⁹

In Minnesota, the Next Generation Energy Act (NGEA), signed into law by Gov. Pawlenty in 2007, committed the state to reduce GHG emissions by 80 percent between 2005 and 2050, while supporting clean energy, energy efficiency, and supplementing other renewable energy standards in Minnesota.¹⁰ The Act had interim goals for a 15 percent reduction by 2015 and a 30 percent reduction by 2025.

“Although mitigation action have prevented an increase in GHG emissions, Minnesota did not reach the NGEA’s 2015 emissions reduction goal of 15 percent relative to the

⁹ [Sources of Greenhouse Gas Emissions](https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions). United States Environmental Protection Agency. (https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions).

¹⁰ [State and Regional Initiatives: The Next Generation Energy Act](https://www.pca.state.mn.us/air/state-and-regional-initiatives). Minnesota Pollution Control Agency. (https://www.pca.state.mn.us/air/state-and-regional-initiatives).

2005 baseline. Across all sectors, GHG emissions fell by about 5 percent from 2005 to 2016; without actions taken within the state, GHG emissions would have risen over that time.”¹¹

The MPCA tracks seven sectors that are key sources of GHG emissions and storage: transportation; electricity generation; agriculture, forestry, and land use; industrial; residential; commercial; and waste. Of these sectors, four (including transportation) saw a decrease in GHG emissions.

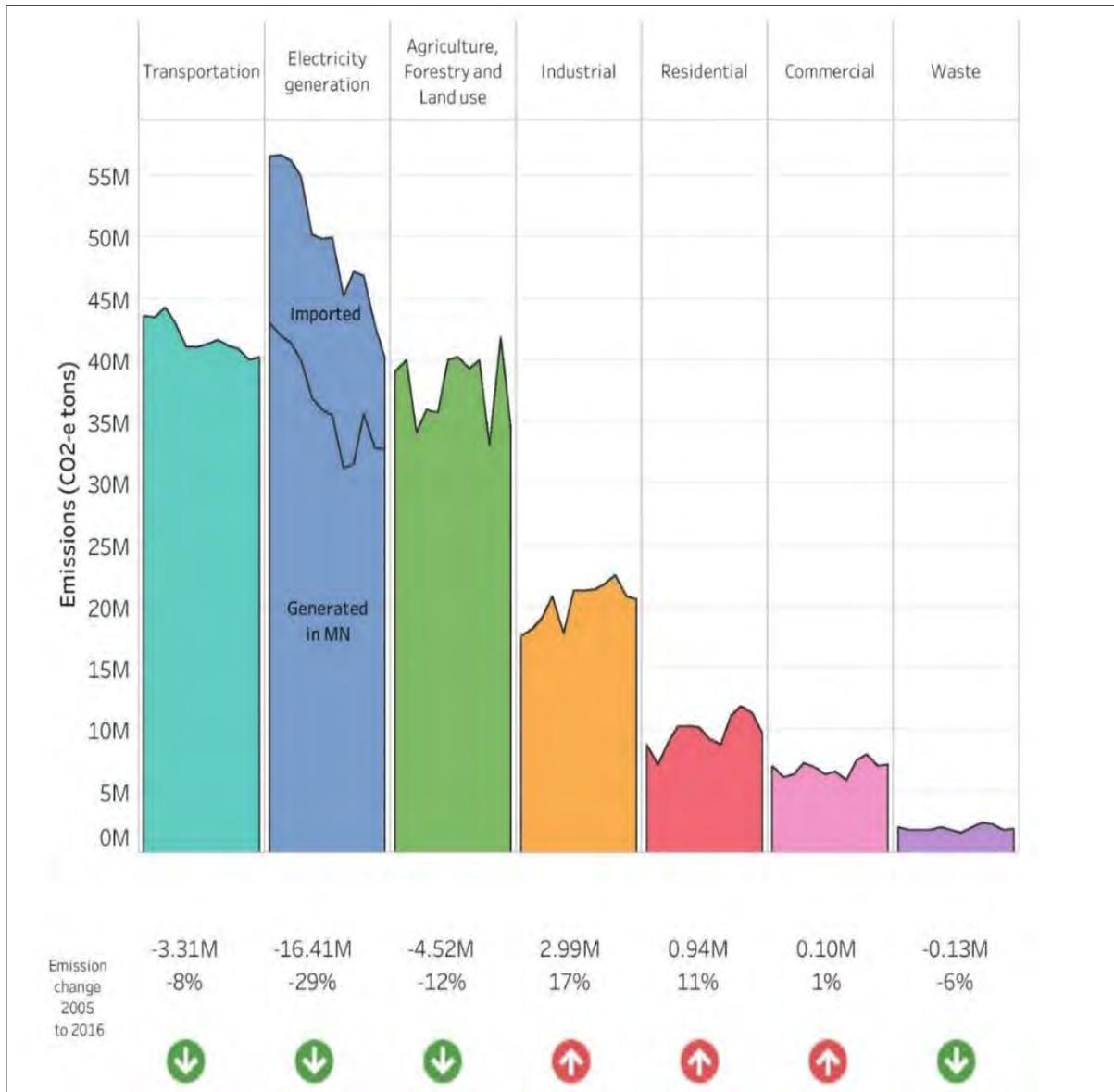


FIGURE 3.6 – GREENHOUSE GAS EMISSIONS DATA IN MINNESOTA FROM 2005 THROUGH 2016
 Data Source: Minnesota Pollution Control Agency (<https://bit.ly/2CLFRsk>).

¹¹ [Greenhouse gas emissions in Minnesota: 1990-2016](https://www.pca.state.mn.us/sites/default/files/Iraq-2sy19.pdf). Minnesota Pollution Control Agency. (<https://www.pca.state.mn.us/sites/default/files/Iraq-2sy19.pdf>).

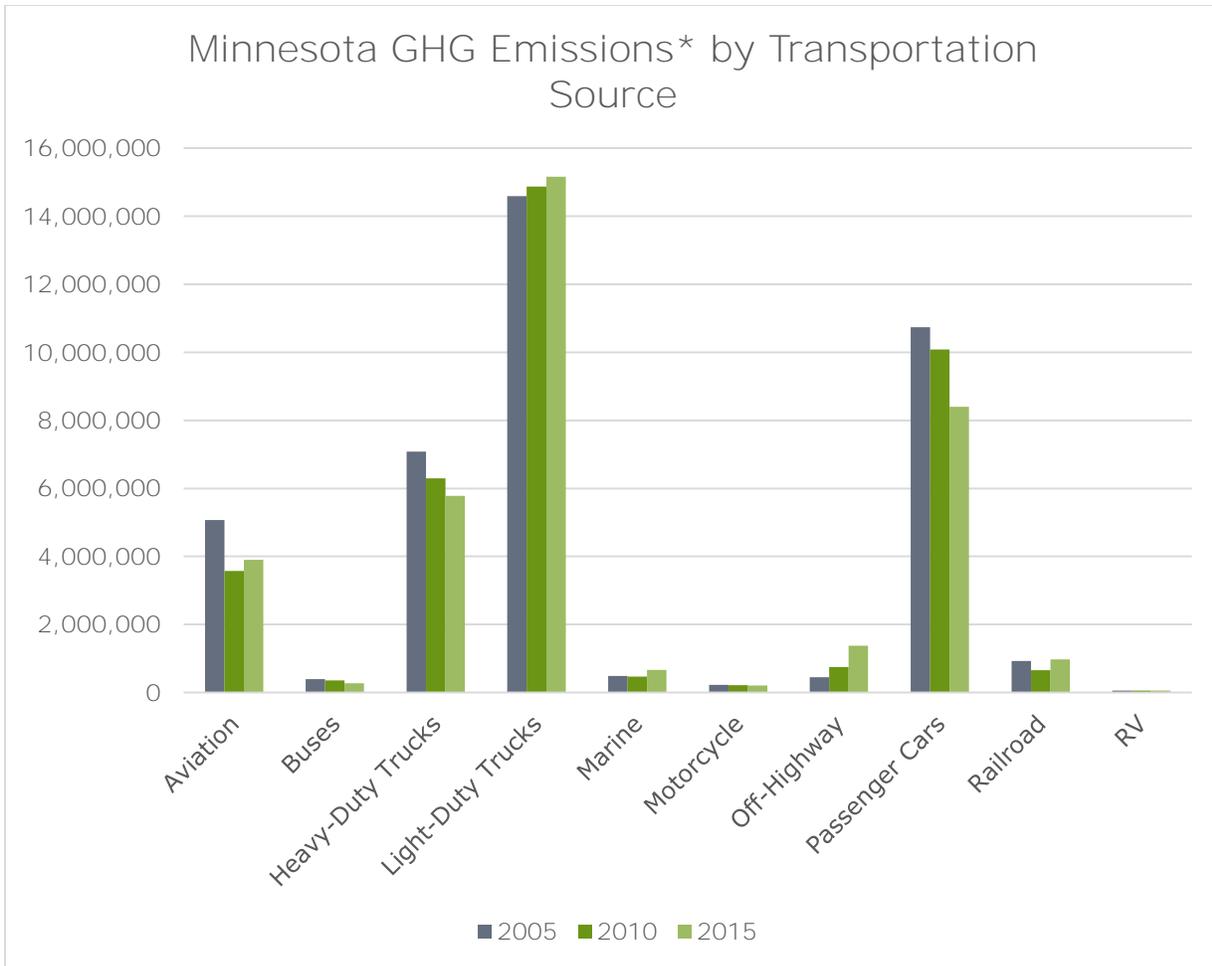


FIGURE 3.7 – EMISSIONS BY TRANSPORTATION SOURCE IN MINNESOTA: 2005, 2010, AND 2015.

Data Source: Minnesota Pollution Control Agency (<https://bit.ly/2CLFRsk>).

***GHG Emissions measured in CO2 e-tons.**

GHG emissions from household auto use within the MPA can be found in Figure 3.8. The data, gathered from the Center for Neighborhood Technology (CNT), is calculated using the modeled values for Vehicle Miles Traveled (VMT), national average fuel efficiency (20.7 mpg), and an average emissions factor (0.438 metric tons of CO2 per mile). This per household measurement divides the total block group emissions by the count of households.

As is evident in Figure 3.8, there tends to be higher GHG emissions per household outside of the central core of the MPA. This could be due to a number of factors such as land use, density, commute time to work, commercial areas, and recreational activities. As was noted in Chapter Two, nearly one-third of residents in the MPA travel greater than 10 miles to and from work. Those who tend to live further away from various trip generators, such as places of employment, tend to drive more and in turn use more gasoline which emits GHGs.

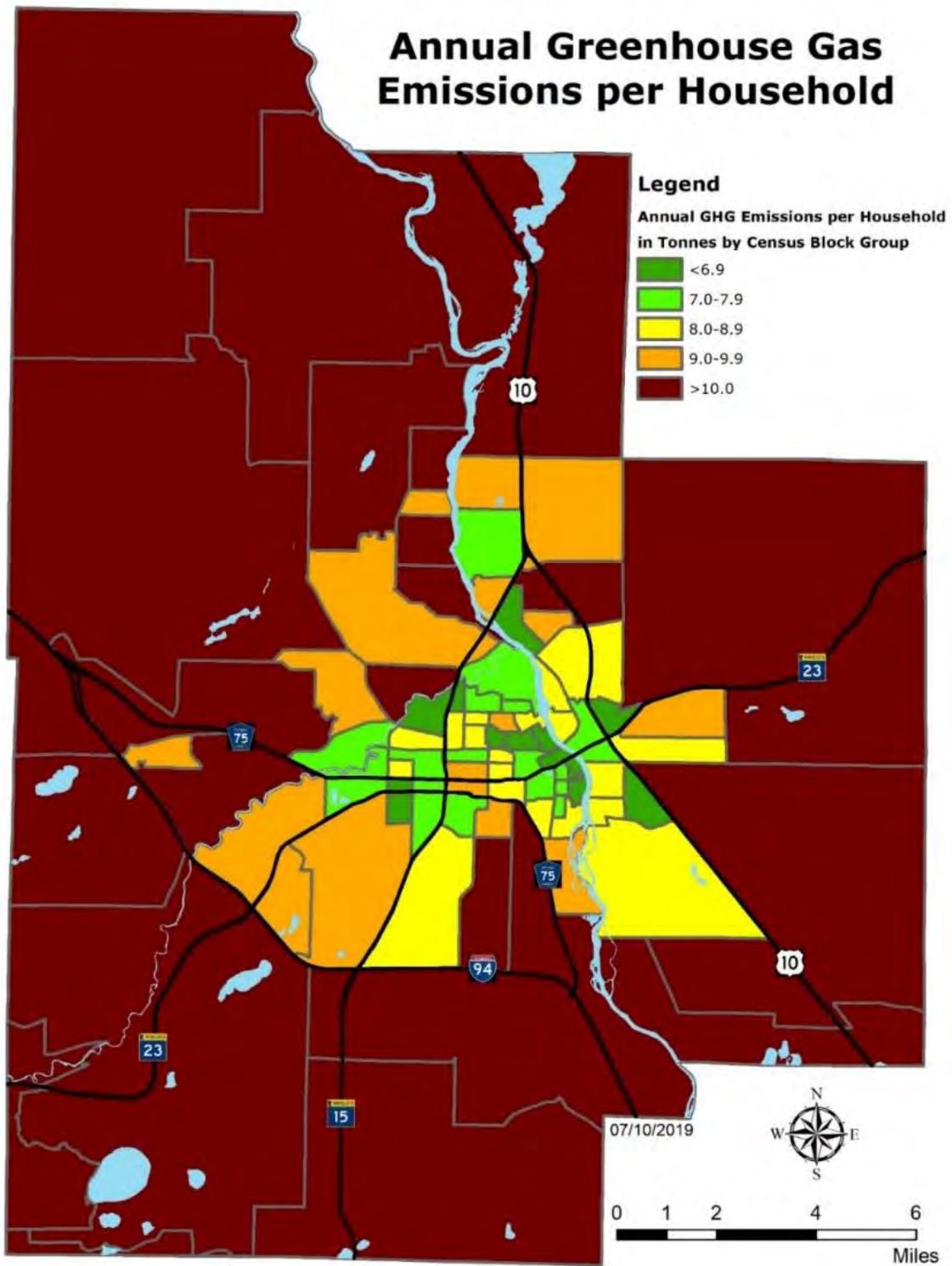


FIGURE 3.8 – SAINT CLOUD MPA GREEN HOUSE GAS EMISSION PER HOUSEHOLD BY CENSUS BLOCK GROUP.

Data Source: The Center for Neighborhood Technology (CNT).

WILDLIFE AND HABITAT RESOURCES

Minnesota has a vibrant ecosystem that supports many unique and rare plants and animals, including threatened and endangered species. According to a 2011 survey by the U.S. Fish and Wildlife Service, wildlife-associated recreation (i.e., hunting, fishing, wildlife watching) is a \$3.7 billion industry in Minnesota.¹² Being cognizant of this fact is an important consideration for the planning and development of future transportation projects.

By understanding the existing natural habitats and ecosystems of native plants and animals, particularly at-risk species, APO staff along with their planning partners, can strive to mitigate undesirable impacts to these areas.

NATIVE PLANT COMMUNITIES

According to the Minnesota Department of Natural Resources, native plant communities are **“a group of native plants that interact with each other and with their environment in ways not greatly altered by modern human activity or by introduced organisms.”**¹³

These native plant communities serve several valuable functions including water filtration, flood moderation, carbon storage, moderation of water-table levels, local temperature moderation, erosion control, and development and enrichment of soil. In addition, these communities provide a natural habitat for several thousand plant and animal species.¹⁴

With the extensive settlement and development of the state since the mid-1800s, a vast **majority of native plant communities in Minnesota have been “destroyed or substantially altered.”**¹⁵ **“High-quality examples can still be found throughout the state in every county, but in most areas they comprise just a small proportion of the total landscape.”**¹⁶

The state of Minnesota is comprised of four ecological provinces – Tallgrass Aspen Parklands, Laurentian Mixed Forest, Eastern Broadleaf Forest, and Prairie Parkland – that contain specific native plant communities. The ecological provinces are further broken down into sections and subsections – grouping similar-style plants together.

The Saint Cloud MPA is situated in both the Eastern Broadleaf Forest and the Prairie Parkland ecological provinces. Native plant communities found within the MPA include:

- Upland Forests and Woodland System.
- Mesic Hardwood Forest System.
- Wetland Forests.
- Upland Grasslands, Shrublands, and Sparse Vegetation.
- Wetland Grasslands, Shrublands, and Marshes.

¹² [2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation: Minnesota](https://bit.ly/2YhgCJo). U.S. Fish & Wildlife Service. (<https://bit.ly/2YhgCJo>).

¹³ [Minnesota’s Native Plant Communities: What is a Native Plant Community?](https://www.dnr.state.mn.us/npc/index.html) Minnesota Department of Natural Resources. (<https://www.dnr.state.mn.us/npc/index.html>).

¹⁴ Ibid.

¹⁵ [Native Plant Community Status](https://www.dnr.state.mn.us/npc/status.html), Minnesota Department of Natural Resources. (<https://www.dnr.state.mn.us/npc/status.html>).

¹⁶ Ibid.

Several rare plant species have been identified through the Minnesota County Biological Survey as being found within the three counties that are part of the MPA. These plant species include, but are not limited to: goblin fern, American ginseng, beaked snakeroot, **small white lady's slipper, hill's thistle, old field toadflax, and cowbane.** However, the exact locations of these plants is maintained in the Natural Heritage Information Systems and is not readily available to the public due to state regulations.

Figure 3.8 shows the overall location of native prairie and plant communities within the Saint Cloud MPA.

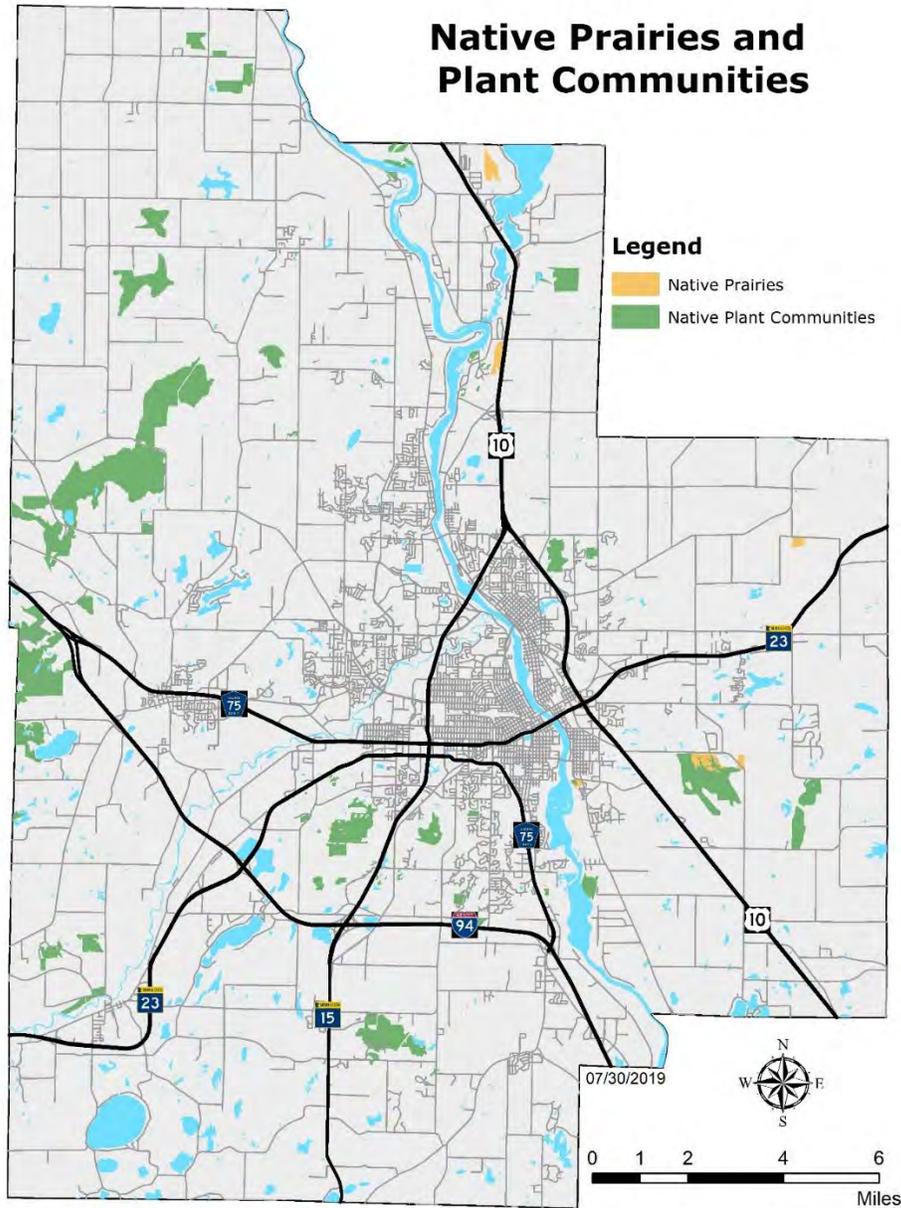


FIGURE 3.9 – SAINT CLOUD METROPOLITAN AREA NATIVE PRAIRIES, PLANT COMMUNITIES AND DNR MANAGEMENT AREAS
Data Source: Copyright (C) MN DNR 2019

NATIVE ANIMALS

Minnesota is home to a wide variety of birds, fish, insects, arthropods, mammals, mussels, reptiles, and amphibians.

Several of these native animals have been placed on the Rare Species Guide (RSG)¹⁷ list developed by the DNR.

Those animals include, but are not limited to:

- Bald eagle.
- Peregrine falcon.
- Greater prairie chicken.
- Burrowing owl.
- Short-eared owl.
- Trumpeter swan.
- Lake sturgeon.
- Eastern pipistrelle bat.
- Northern myotis bat.
- Cougars.
- Gray wolf (timber wolf).
- Heather vole.
- Northern bog lemming.
- Plains pocket mouse.
- Prairie vole.
- Woodland vole.
- Least shrew.
- Smoky shrew.
- Eastern spotted skunk.
- Least weasel.
- Four-toed salamander.
- **Blanding's turtle.**
- Smooth softshell turtle.
- Snapping turtle.
- Wood turtle.
- Bullsnake.
- Lined snake.
- North American racer snake.
- Plains hog-nosed snake.
- Ratsnake.
- Massasuaga snake.
- Timber rattlesnake.

In addition, there are approximately 70 insects that are also included on the RSG list.

PROTECTING PLANTS AND ANIMALS

Environmental planners and conservation officers understand how important the value of preserving existing habitats for native plants and animals is to the ecosystem. It is through their work and the work of the DNR that various initiatives to both promote and protect the biodiversity of these ecosystems have been implemented.

As changes to the climate along with human activities – such as the development and construction of transportation projects – continues over time, the importance of protecting and/or mitigating impacts to the ecosystem will grow increasingly more important.

“In areas where biodiversity is threatened, losing species can affect the ecosystem’s ability to function properly ... Maintaining biodiversity reduces voids and the entire ecosystem maintains a higher degree of resilience.”¹⁸

¹⁷ [Rare Species Guide](https://www.dnr.state.mn.us/rsg/index.html). Minnesota Department of Natural Resources. (https://www.dnr.state.mn.us/rsg/index.html).

¹⁸ [Minnesota Scientific and Natural Areas Program Biodiversity](https://www.dnr.state.mn.us/snap/biodiversity.html). Minnesota Department of Natural Resources. (https://www.dnr.state.mn.us/snap/biodiversity.html).

MINNESOTA'S WILDLIFE ACTION PLAN 2015-2025

In 2005, the DNR, along with over 100 individuals and more than 40 organizations developed a Wildlife Action Plan, identifying wildlife in greatest need of conservation statewide. This plan evaluated potential needs and outlined necessary and proactive steps **to ensure Minnesota's 2,000 native wildlife species were protected.**

In 2015, this same group gathered together once more to update the existing plan to include new goals gained from a better understanding of wildlife conservation needs and strategies.

Those goals include:

1. Ensure the long-term **health and viability of Minnesota's wildlife, with a focus on** species that are rare, declining, or vulnerable to decline.
2. Enhance opportunities to enjoy Species in Greatest Conservation Need (SGCN) and other wildlife and to participate in their conservation.
3. Acquire the resources necessary to successfully implement the Minnesota Wildlife Action Plan.

The Wildlife Action Plan lays out the basis for a long-term vision of a Wildlife Action **Network. According to the plan, this network "composed of terrestrial and aquatic habitat cores and corridors to support biological diversity and ecosystem resilience with a focus on SGCN."**

REGIONALLY SIGNIFICANT ECOLOGICAL AREAS (RSEA)

The Minnesota Biological Survey (MBS) collects, interprets, monitors, and delivers data on plant and animal distribution as well as the ecology of native plant communities and functional landscapes.¹⁹ This data is often gathered on the county-level.

Once the data has been analyzed, MBS ecologists assign a biodiversity significance ranking. **"These ranks are used to communicate the statewide native biological diversity of each site to natural resource professionals, state and local government officials, and the public."**²⁰

According to MBS, a site's biodiversity significance rank is based upon the presence of rare species populations, the size and condition of native plant communities within the site, and the landscape context of the site. Figure 3.10 outlines the scoring criteria. Figure 3.10 contains a map of the RSEA rankings found within the APO's MPA.

¹⁹ [Minnesota Biological Survey](https://www.dnr.state.mn.us/mbs/index.html). Minnesota Department of Natural Resources. (https://www.dnr.state.mn.us/mbs/index.html).

²⁰ [MBS Site Biodiversity Significance Ranks](https://www.dnr.state.mn.us/eco/mcbs/biodiversity_guidelines.html). Minnesota Department of Natural Resources. (https://www.dnr.state.mn.us/eco/mcbs/biodiversity_guidelines.html).



FIGURE 3.10 – EXAMPLE OF MINNESOTA NATURAL PRAIRIE

Rank	Description
Outstanding	These sites contain the best occurrences of the rarest species, the most outstanding examples of the rarest native plant communities, and/or the largest, most ecologically intact or functional landscapes.
High	These sites contain very good quality occurrences of the rarest species, high-quality examples of rare native plant communities, and/or important functional landscapes.
Moderate	These sites contain occurrences of rare species, moderately disturbed native plant communities, and/or landscapes that have strong potential for recovery of native plant communities and characteristic ecological processes.
Below	These sites lack occurrences of rare species and natural features or do not meet MBS standards for outstanding, high, or moderate rank. These sites may include areas of conservation value at the local level, such as habitat for native plants and animals, corridors for animal movement, buffers surrounding higher-quality natural areas, areas with high potential for restoration of native habitat, or open space.

FIGURE 3.11 – THE FOUR BIODIVERSITY RANKS AND DESCRIPTIONS.

Data Source: [MnDNR](https://www.dnr.state.mn.us/eco/mcbs/biodiversity_guidelines.html) (https://www.dnr.state.mn.us/eco/mcbs/biodiversity_guidelines.html).

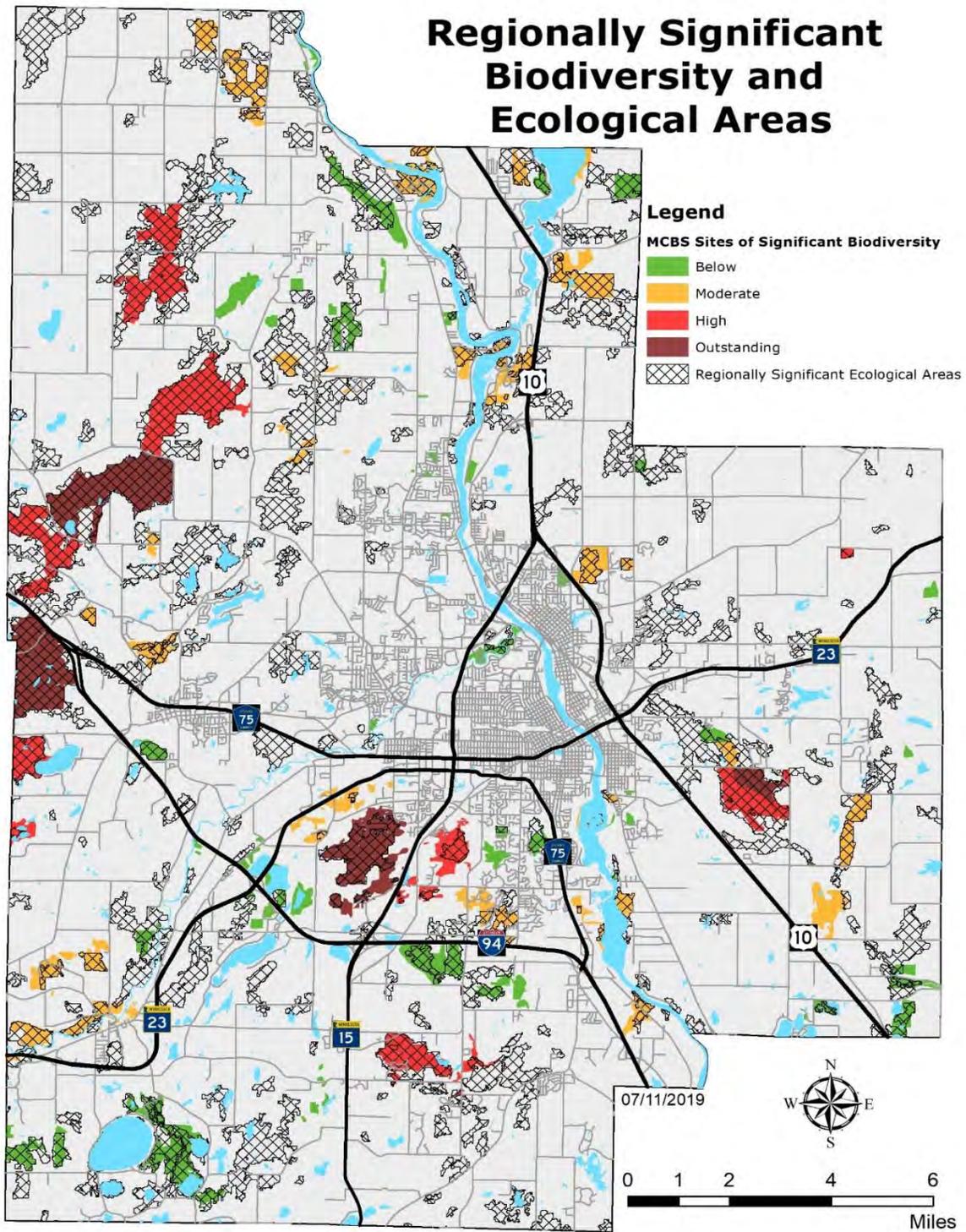


FIGURE 3.12 – SAINT CLOUD MPA REGIONALLY SIGNIFICANT BIODIVERSITY AND ECOLOGICAL AREAS.
Data Source: Copyright (C) MN DNR 2019

DNR MANAGEMENT AREAS

As a function of its duties to conserve and manage the state's natural resources, the DNR maintains three types of management areas. A brief summary of these management areas is provided below.

AQUATIC MANAGEMENT AREAS

The Aquatic Management Area (AMA) program provides "angler and management access, protect(s) critical shore land habitat and provide(s) areas for education and research."²¹

The AMA program was created in 1992 as part of the state's Outdoor Recreation Act. AMAs are established to protect, develop, and manage lakes, rivers, streams, and wetlands that are critical for fish and aquatic life. AMAs also assist in protecting water quality standards.

According to the DNR, as of the drafting of this plan, there were approximately 700 AMAs found in 73 of Minnesota's 87 counties.

There are three AMAs found within the APO's MPA: Baert Island, Luxemburg Creek, and Little Rock Lake. Local AMAs can be found on the map in Figure 3.13 (highlighted in different colored boxes). A closer look at these specific areas can be found in Figure 3.14 with the colored border of each box corresponding to the highlighted boxes found in the previous figure.

SCIENTIFIC AND NATURAL AREAS

Scientific and Natural Areas (SNAs) are public lands in which native plants and animals are minimally disturbed.

According to the DNR, characteristics of SNAs include undisturbed plant communities, rare or endangered species habitats, seasonal habitats for birds or animal concentrations, natural geologic formations and features, and plant communities undergoing succession as a result of natural processes.²²

There are over 150 SNAs within Minnesota as of the drafting of this plan. The APO's MPA contains five SNAs: Harry W. Cater Homestead Prairie, Englund Ecotone, Quarry Park, Saint Wendel Tamarack Bog, and Partch Woods. Local SNAs can be located on the map in Figure 3.13.

WILDLIFE MANAGEMENT AREAS

In order to curb the growing trend of wildlife habitat destruction, the State of Minnesota developed its Wildlife Management Area (WMA) system in 1951. According to the DNR,

²¹ [Aquatic Management Areas](https://www.dnr.state.mn.us/amass/index.html). Minnesota Department of Natural Resources. (https://www.dnr.state.mn.us/amass/index.html).

²² [Minnesota Scientific and Natural Areas: What are They?](https://www.dnr.state.mn.us/snass/index.html) Minnesota Department of Natural Resources. (https://www.dnr.state.mn.us/snass/index.html).

WMAs “protect those lands and waters that have a high potential for wildlife production, public hunting, trapping, fishing, and other compatible recreational uses.”²³

Across Minnesota, there are approximately 1,440 public wildlife areas – totaling about 1.29 million acres according to the DNR.

As of the drafting of this plan, there are two WMAs within the MPA: Michaelson Farm WMA and Sand Prairie WMA. Local WMAs can be located on the map in Figure 3.13.

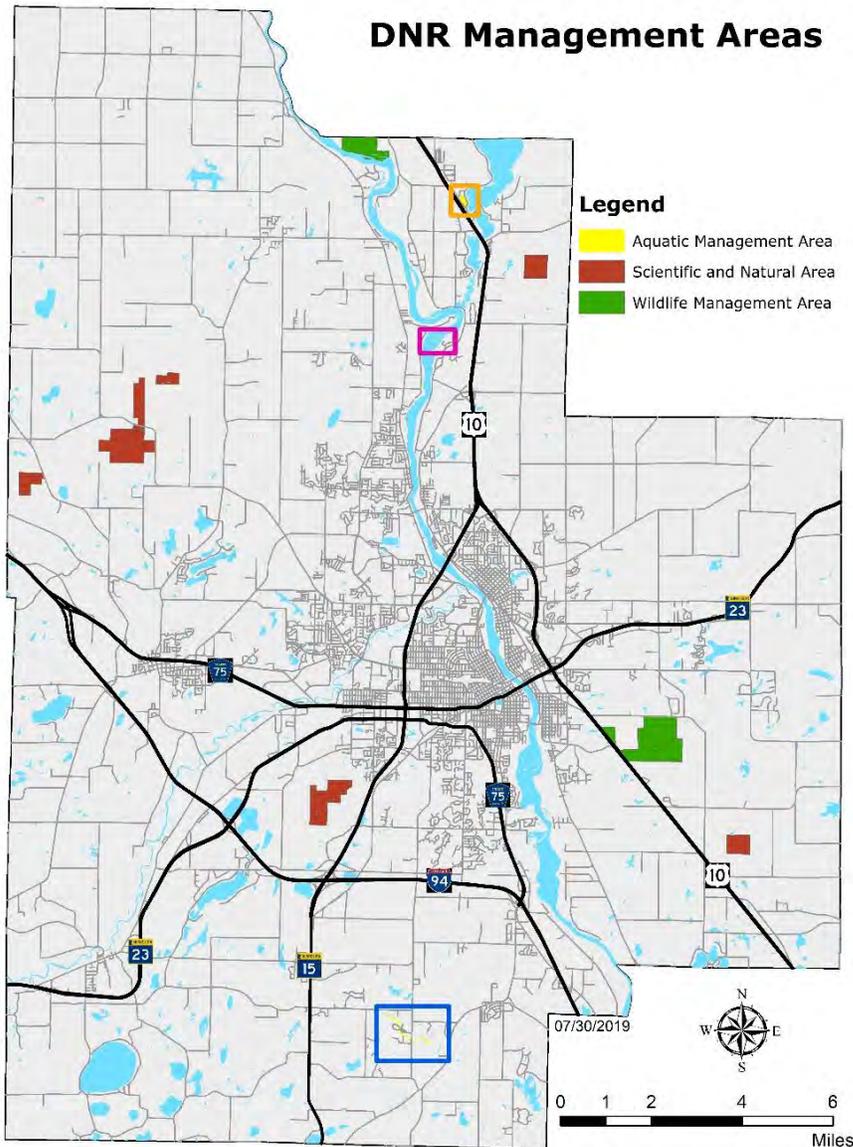


FIGURE 3.13 – SAINT CLOUD MPA DNR MANAGEMENT AREAS
Data Source: Copyright (C) MN DNR 2019

²³ [More about Wildlife Management Areas](https://www.dnr.state.mn.us/wmas/description.html). Minnesota Department of Natural Resources. (https://www.dnr.state.mn.us/wmas/description.html).



FIGURE 3.14 – ZOOMED IN LOOK AT AQUATIC MANAGEMENT AREAS WITHIN THE MPA.
Data Source: Copyright (C) MN DNR 2019

SOIL

“Performance of local roads and streets, parking lots, and similar structures is directly related to performance of the underlying soil in many cases.”²⁴ If the soil quality cannot sustain the development of surface transportation projects upon construction, the cost to maintain those roadways – including underlying structures such as pipelines and conduits – over time potentially will be considerably more.²⁵

Soil formation is attributed to five major factors: parent material, climate, organisms, topography, and time.

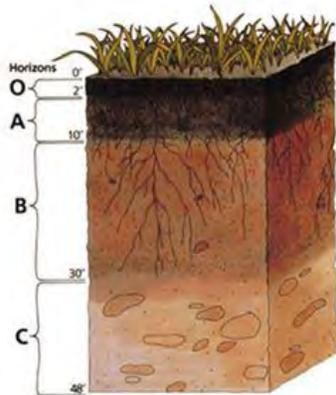


FIGURE 3.15 – AN ARTISTIC DRAWING OF DIFFERING SOIL HORIZONS
Data Source: Natural Resources Conservation Service – Soils. United States Department of Agriculture.

²⁴ Dobos, Seybold, Chiaretti, Southard, and Levin. [SSM – Ch. 8 Interpretations: The Impact of Soil Properties on Land Use](#). Natural Resources Conservation Service – Soils. United States Department of Agriculture. (<https://bit.ly/315wrAV>).

²⁵ Ibid.

Soil Formation Factors	Definition
Parent Material	Parent material within the State of Minnesota is composed of five major sources: Till, Loess, Lacustrine, Outwash, and Till Over Bedrock. In the Saint Cloud MPA, Outwash parent material is the most common. Outwash soil is characterized as being excessively well-drained and has sand and sandy loam textures.
Climate	Temperature and precipitation influence how fast parent materials weather and, thus, soil properties such as mineral composition and organic matter content. Other factors include evapotranspiration – the combination of water evaporated from the soil surface and water transpired by growing plants – and the moisture index.
Organisms	Organisms include all creatures that live in the soil (such as bacteria and gophers) to the vegetation growing on its surface. Soil organisms can speed up or slow down soil formation.
Topography	Slope and aspect are two topographic features that affect soil formation. Slope refers to the steepness from horizontal which affects how much soil material is deposited or eroded. Aspect is the direction the slope faces relative to the sun which affects the amount of water that moves through the soil.
Time	Vegetation and climate act on parent material and topography. Development, not chronological age, determines a soil's age. Factors that will slow soil formation include, but are not limited to: high lime content in the parent material, low rainfall, cold temperatures, high water table, and severe erosion.

FIGURE 3.16 – THE FIVE FACTORS OF SOIL FORMATION AS DEFINED BY THE UNIVERSITY OF MINNESOTA EXTENSION.

Data Source: Five Factors of Soil Formation. University of Minnesota Extension.²⁶

Those five soil-forming factors cause different soil horizons – or layers – within a soil sample comprised of differing physical, chemical, and biological characteristics.

²⁶ [Five Factors of Soil Formation](https://bit.ly/2LTrjwc). University of Minnesota Extension. (https://bit.ly/2LTrjwc).

Soils with similar profile characteristics are then grouped together.

The U.S. Department of Agriculture developed Soil Taxonomy – a soil classification system based on measurable and observable soil properties. This soil classification, also used worldwide, was created to facilitate detailed soil surveys.²⁷

According to Soil Taxonomy, there are 12 categories – or orders – of soil. Each of these orders represents a grouping of soils with distinct characteristics and ecological significance.

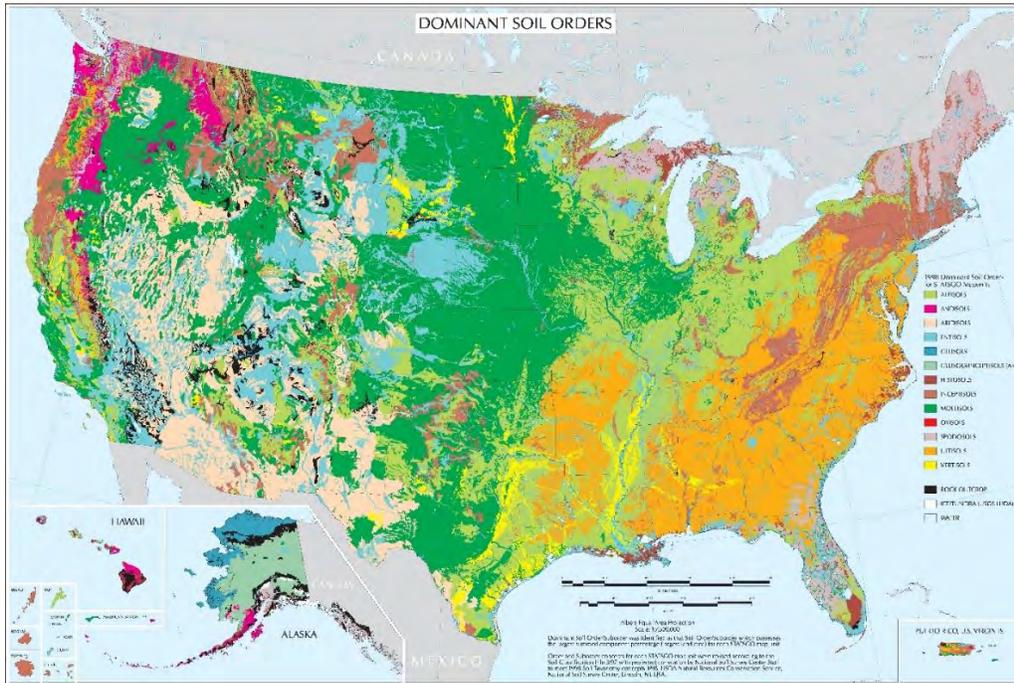


FIGURE 3.17 – DOMINANT SOIL ORDERS WITHIN THE U.S.
Map courtesy of University of Idaho.

According to the University of Minnesota Extension program, seven of the 12 orders of soil can be found within the state: Mollisols, Alfisols, Inceptisols, Entisols, Histosols, Spodosols, and Vertisols.²⁸

Those orders further broken down into suborders, great groups, subgroups, families, and series. Within the state there are more than 1,100 different soil series.²⁹

With so much variation in soil types found within the state, and subsequently within the MPA, it will be impossible to display these on a map given the large current geographic boundaries of the MPA.

However, understanding the makeup of soil on the local level through the use of samples and surveys, has a direct impact on transportation infrastructure.

²⁷ [The Twelve Soil Orders](https://www.uidaho.edu/cals/soil-orders). University of Idaho Department of Soil and Water Systems. (https://www.uidaho.edu/cals/soil-orders).

²⁸ [Soils Orders and Suborders in Minnesota](https://bit.ly/2Yv99TC). University of Minnesota Extension. (https://bit.ly/2Yv99TC).

²⁹ [Five Factors of Soil Formation](https://bit.ly/2LTrjwc). University of Minnesota Extension. (https://bit.ly/2LTrjwc).

Selection of sites with the best soil for roadway construction is an important engineering decision in the building process.³⁰ Soil maps, developed by soil scientists, contain information such as: slope of land surface, soil properties – biological, chemical, and physical makeup – and the potential for water runoff, drainage, and storage.³¹

A good soil for infrastructure has the following properties:

1. A balanced chemistry and neutral pH, so that building materials are not corroded.
2. Stability through wetting and drying cycles, so that expanding soil does not crack roads or foundations.
3. Strength under pressure, so that the weight of the building does not cause it to sink into the ground.
4. Ability to capture precipitation, so that runoff and erosion do not damage structures.

Soil with a good structure is inherently more stable. For example, clay textures are often more stable than sand textures because clay has a better structure – its mix of particle and pore sizes are better for engineering.³²

When soil properties are not ideal for building there are ways to change the landscape and practices to provide for better building sites³³.

Soil stabilization is the alteration of soils to enhance their physical properties. Stabilization can increase the strength of a soil and/or control the shrink-swell properties of a soil, thus improving the load bearing capacity of a sub-grade to support pavements and foundations.³⁴

In transportation, building roads on top of soil that is reliable and durable is a way to lower future costs when it comes to road maintenance. In addition, proper consideration for soil will have the potential to reduce the likelihood of stormwater runoff and soil erosion.

WATER/WETLAND RESOURCES AND FLOODPLAINS

Water is both a plentiful and precious resource within the State of Minnesota. With the abundance of lakes, rivers, streams, wetlands, and underground aquifers (groundwater), the need to preserve and protect not only aquatic life but water quality is necessary.

“Water quality issues need to be addressed whenever a project will add new sources, or additional water to water resources in the project area. In addition, bridge construction and drainage modifications near sensitive water bodies will raise water quality issues.”³⁵

³⁰ [Soils Support Buildings/Infrastructure](http://bit.ly/2ZnJbCJ). Home: Soil Science Society of America. May 2015. (<http://bit.ly/2ZnJbCJ>).

³¹ [Runoff: Surface and Overland Water Runoff](https://on.doi.gov/2Yi1FrJ). USGS. 2019 (<https://on.doi.gov/2Yi1FrJ>).

³² Miedema, R. [Soil Structure: Applications of Micromorphology of Relevance to Agronomy](http://bit.ly/2OwriR6). 1997. (<http://bit.ly/2OwriR6>).

³³ [What type of soil is good for a foundation for buildings or houses?](http://bit.ly/2KgFLvf) *Soilsmatter2011*. Oct. 9, 2017. (<http://bit.ly/2KgFLvf>).

³⁴ [Soil Stabilization](http://bit.ly/2SUuDIc). *Midstate Companies*. 2016. (<http://bit.ly/2SUuDIc>).

³⁵ Tiedeken, Nick. Water Quality. Office of Environmental Stewardship Minnesota Department of Transportation. See Appendix J for full report.

Avoidance, minimization, and mitigation strategies are required for all environmental factors, including those for water resources.

WATER BASINS

According to the DNR, a watershed – or catchment basin – refers to the entire physical area or basin drained by a distinct stream or riverine system.³⁶ These areas are often physically separated from other watersheds based off of gravity or topography.

“Watersheds allow us to evaluate the quality and quantity of our water resources geographically. Only by knowing our local watershed and the system of watersheds in which it resides can we begin to understand why and where small changes can have huge impacts on our state’s water.”³⁷

Those impacts include the location and construction of transportation projects.

The State of Minnesota is divided into eight major basins: Red River of the North Basin, Rainy River Basin, Great Lakes Basin, Saint Croix River Basin, Upper Mississippi River Basin, Lower Mississippi River Basin, Minnesota River Basin, and the Missouri River Basin. Those eight basins are further subdivided into 81 major surface water watersheds and approximately 5,600 minor watersheds.

The Saint Cloud MPA is part of the Upper Mississippi River Basin. The planning area contains three major surface water watersheds – Mississippi River-Saint Cloud, Mississippi River-Sartell, and Sauk River.

WATERSHED DISTRICTS WITHIN THE MPA

MISSISSIPPI RIVER-SAINT CLOUD

The portion of the Mississippi River that flows through the Mississippi River-Saint Cloud watershed is utilized by city of Saint Cloud as a source of drinking water. This watershed district also uses the river a non-contact cooling water source for power plants located in Becker and Monticello.³⁸

The stretch of the Mississippi River within this watershed is designated as a wild and scenic river. According to the MPCA, major threats to this watershed include³⁹:

- Loss of shoreline buffers and habitat due to development.
- Introduction of large amounts of phosphorus, sediment, and bacteria to surface waters.
- The combination of long, moderately steep slopes and easily erodible sandy loam soil that is inherently high in phosphorus.

³⁶ [Watersheds: What Watersheds Are and Why They Are Important](https://bit.ly/315PM5a). Minnesota Department of Natural Resources. (<https://bit.ly/315PM5a>).

³⁷ Ibid.

³⁸ [Mississippi River – St. Cloud](https://bit.ly/21BO5U5). Minnesota Pollution Control Agency. (<https://bit.ly/21BO5U5>).

³⁹ Ibid.

- Increased nutrient, contaminant, and sedimentation loading from stormwater runoff from development and other non-point sources.
 - Protecting drinking water supplies from bacteria impairments.
 - Loss of biodiversity due to competition from invasive species.
- Relatively high percentage of agricultural and urban/residential land uses within the watershed.

A map of the Mississippi River-Saint Cloud Watershed District within the MPA can be found in Figure 3.18.

MISSISSIPPI RIVER-SARTELL

The Mississippi River within this watershed district experiences one of its greatest drops in elevation within the Upper Mississippi River Basin. This portion of the Mississippi River is characterized by the amount of small creeks and streams funneling into it.⁴⁰

“Currently, there are two lakes and several streams within this watershed that do not meet Minnesota’s surface water quality standards for conventional parameter (not including mercury) pollutants.”⁴¹

Major threats to this watershed include⁴²:

- Loss of shoreline buffers and habitat due to development.
- Introduction of large amounts of phosphorus, sediment, and bacteria to surface waters.
- Increased nutrient, contaminant, and sedimentation loading from stormwater runoff from development and other non-point sources.
- Loss of biodiversity due to competition from invasive species.
- Relatively high percentage of agricultural and urban/residential land uses within the riparian or sensitive areas of the watershed.
- Protecting drinking water supplies from bacteria impairments.

A map of the Mississippi River-Sartell Watershed District within the MPA can be found in Figure 3.18.

SAUK RIVER

The Sauk River watershed extends from the Mississippi River near Saint Cloud to within three miles of Alexandria.⁴³ This watershed is composed of 374 lakes and 79 named stream assessment units (AUIDs).⁴⁴

In 2010 the MPCA along with the Sauk River Watershed District conducted an assessment of **the watershed’s surface waterbodies for aquatic life, recreation, and consumption use. This assessment found lake water quality to be modest to poor. The study states: “Land use**

⁴⁰ [Mississippi River – Sartell](https://bit.ly/2ypjYvK). Minnesota Pollution Control Agency. (https://bit.ly/2ypjYvK).

⁴¹ Ibid.

⁴² Ibid.

⁴³ [Sauk River Watershed](https://bit.ly/2KeV6wl). Minnesota Pollution Control Agency. (https://bit.ly/2KeV6wl).

⁴⁴ [Sauk River Watershed Monitoring and Assessment Report](https://bit.ly/332NghN). Minnesota Pollution Control Agency. (https://bit.ly/332NghN). Page 1.

modification and hydrologic alteration including groundwater withdrawal may be contributing factors to the observed poor water quality conditions. While some regions have shown more resilience than others, additional monitoring and protection strategies are **needed to improve conditions and attain water quality standards.**⁴⁵

A map of the Sauk River Watershed District within the MPA can be found in Figure 3.18.

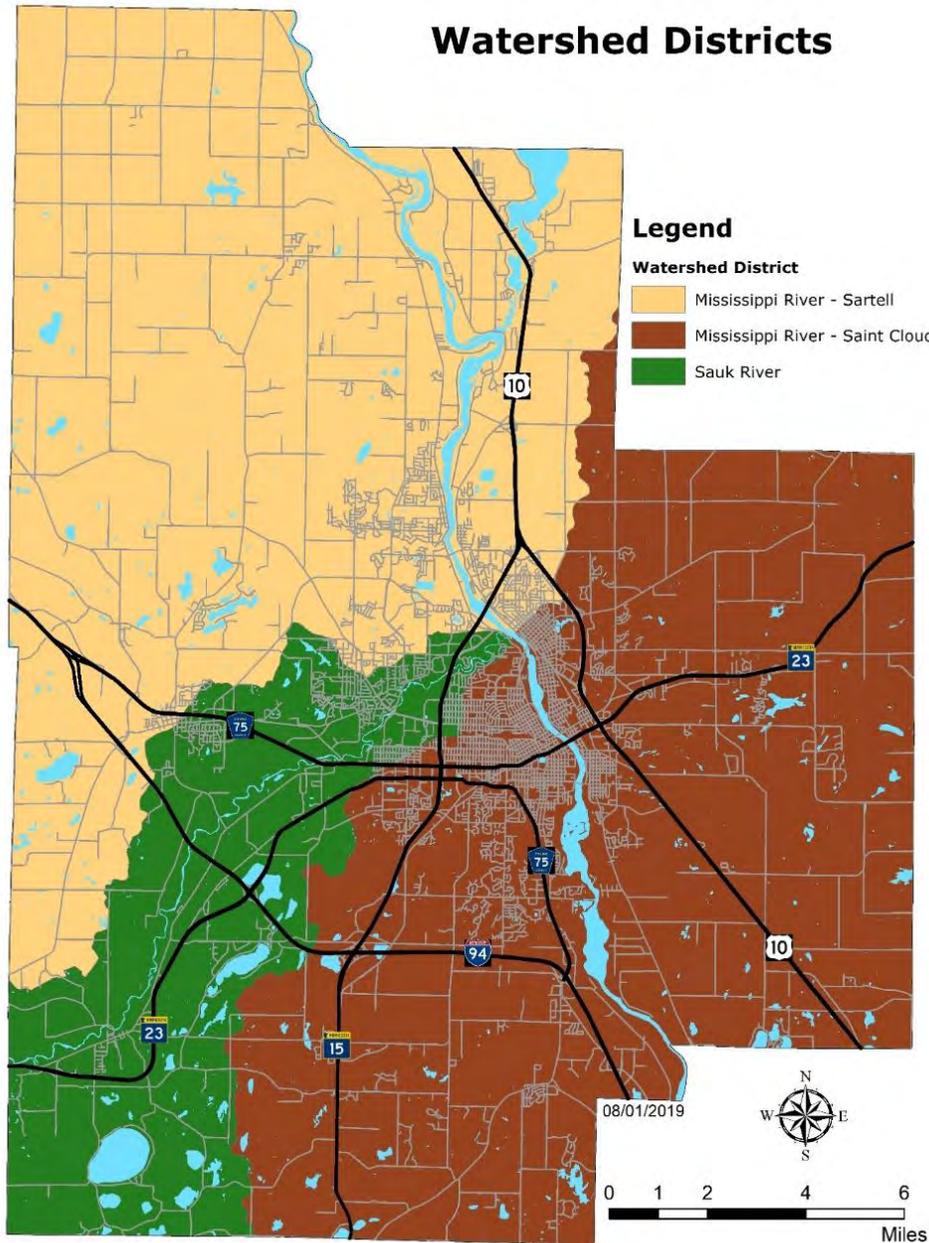


FIGURE 3.18 – WATERSHED DISTRICTS WITHIN THE SAINT CLOUD MPA
Data Source: Copyright (C) MN DNR 2019

⁴⁵ Ibid.

TROUT STREAMS

According to the DNR, Minnesota has 687 designated trout streams and another 1,923 designated trout stream tributaries statewide.⁴⁶

“The DNR works with partner agencies and local governments to improve land management practices in watersheds surrounding trout streams. This is particularly true in cases where natural trout reproduction has been impeded by excessive watershed erosion and sedimentation.”⁴⁷

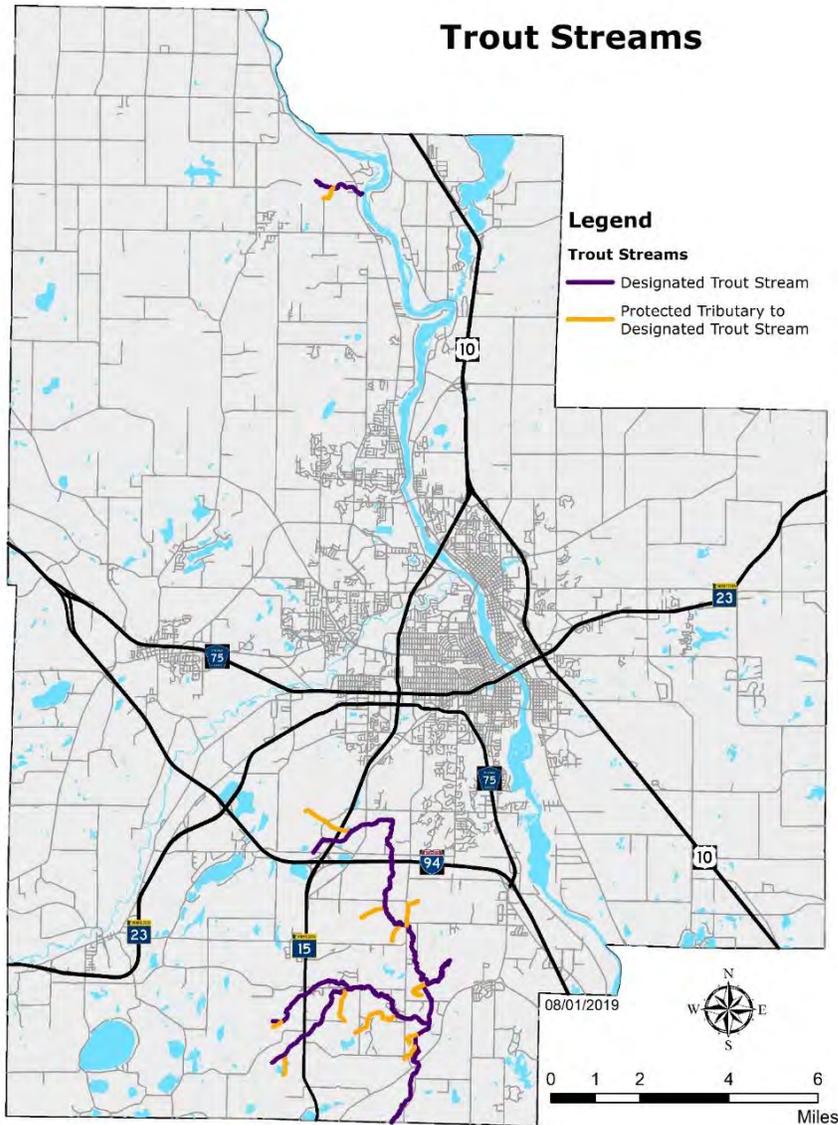


FIGURE 3.19 – DESIGNATED TROUT STREAMS AND PROTECTED TRIBUTARIES IN THE MPA
 Data Source: Copyright (C) MN DNR 2019

⁴⁶ [Trout Streams](https://bit.ly/2GJr1nu). Minnesota Department of Natural Resources. (https://bit.ly/2GJr1nu).

⁴⁷ [Watershed Management](https://bit.ly/2Mvqk57). Minnesota Department of Natural Resources. (https://bit.ly/2Mvqk57).

While most of these streams are found in the southeast and northeast portions of the state, the Saint Cloud MPA does have few trout streams. Figure 3.19 shows the location of **designated trout streams within the MPA: Johnson Creek, Smart’s Creek, Robinson Hill Creek, and Luxemburg Creek.**

SHORELAND

Shoreland, as defined in Minnesota Rule, is land located within a specific distance from public water. For ordinarily high water levels such as a lake or pond, that distance is a 1,000-foot buffer. For rivers and streams that buffer zone is 300 feet (or the extent of a floodplain designated by ordinance on a river or stream, whichever is greater).⁴⁸

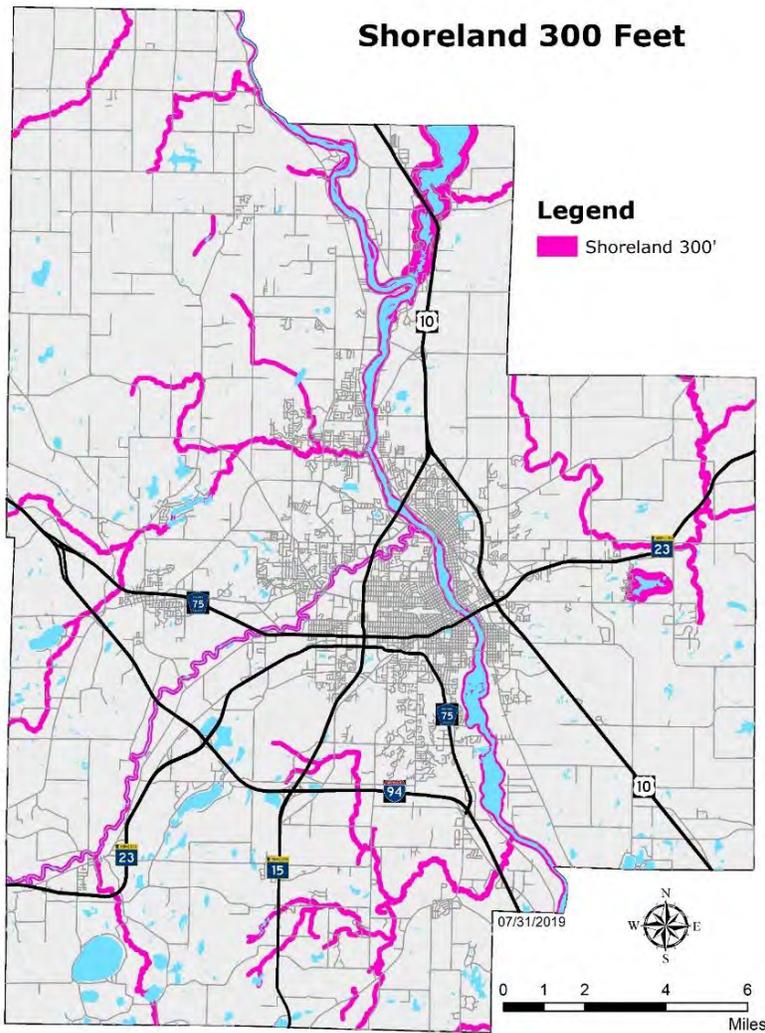


FIGURE 3.20 – SAINT CLOUD METROPOLITAN AREA SHORELAND.
 Source: Copyright (C) MnDNR 2019.

⁴⁸ Minnesota Rules, part 6120.2500, subpart 15.

According to the DNR, shorelands “typically contain important habitat and erodible soils, which present a high risk to surface water pollution if not anchored with natural deep-rooted vegetation. Many of these areas are highly sensitive to development.”⁴⁹

Shoreland regulations – as dictated in the Minnesota Shoreland Management Program – requires all counties to adopt shoreland management controls and regulate septic systems. These rules also include zoning and development regulations.

A map of the 300-foot buffer zone for shoreland within the MPA (Stearns and Benton counties only) can be found in Figure 3.20.

WETLANDS

Wetlands can be described as an intermediary between the terrestrial (land) and aquatic (water) ecosystems. According to the DNR, there are several types of wetlands in Minnesota, ranging from those that are dry most of the year to those that are almost always covered by several feet of water.⁵⁰



FIGURE 3.21 – BOB CROSS NATURE PRESERVE IN SAUK RAPIDS
Photo courtesy of Saint Cloud APO

Types of wetlands include bogs, marshes, shallow open water, swamps, wet meadows, and seasonally flooded wetlands.

Wetlands provide a number of benefits to the environment ranging from erosion and flood control to preserving water quality and acting as a filtration system for groundwater. Wetlands also provide homes to rare species and have economic value to humans in terms of recreation and commodities (i.e., wild rice and bait fish).

It is estimated that Minnesota has lost about 50 percent of its original wetland acreage.⁵¹

A map of current wetlands within the MPA can be found in Figure 3.21.

⁴⁹ [Shoreland Management History and Purpose](https://bit.ly/31bEU5L). Minnesota Department of Natural Resources. (https://bit.ly/31bEU5L).

⁵⁰ [Wetlands](https://www.dnr.state.mn.us/wetlands/index.html). Minnesota Department of Natural Resources. (https://www.dnr.state.mn.us/wetlands/index.html).

⁵¹ Ibid.

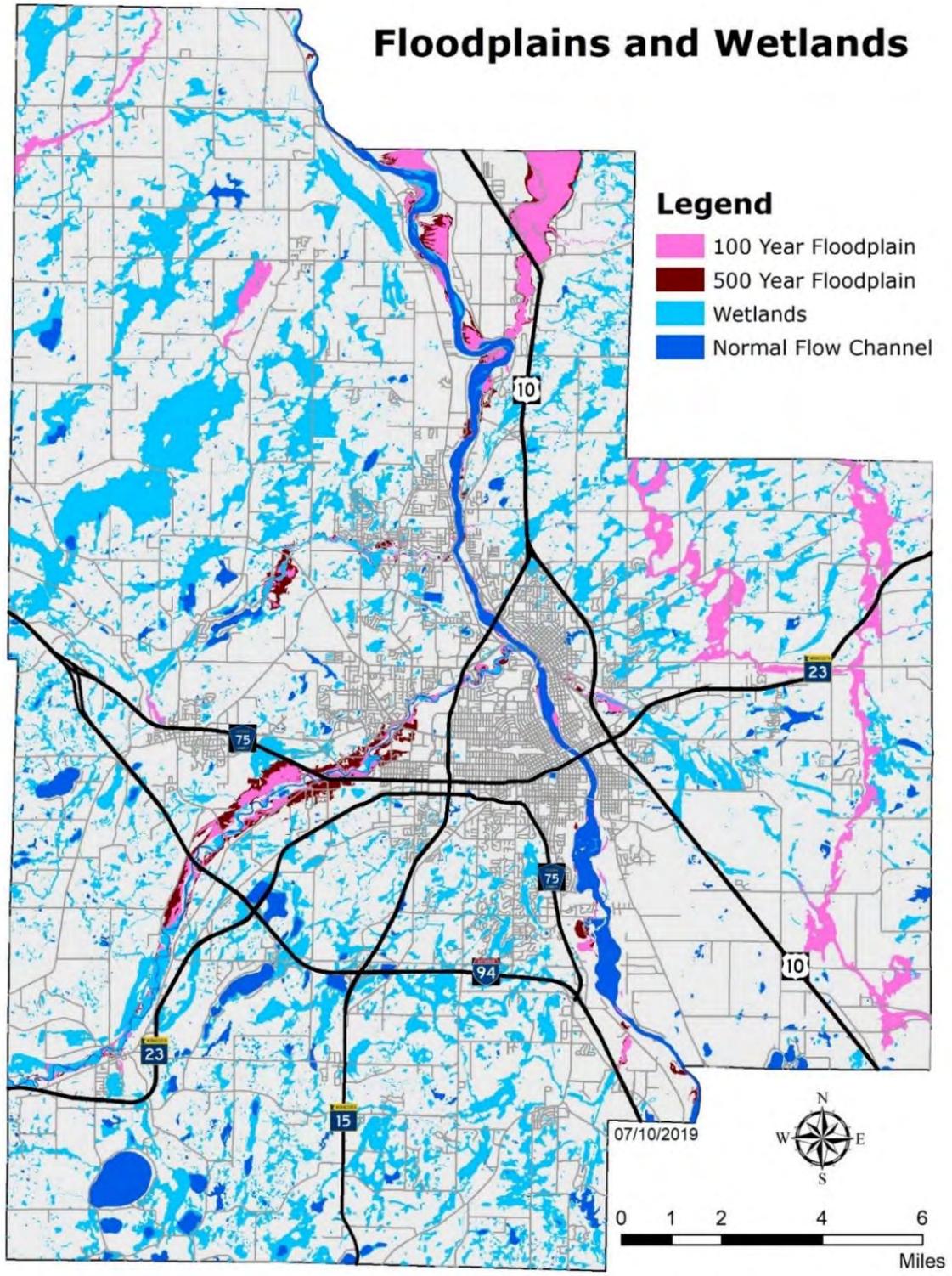


FIGURE 3.22 – SAINT CLOUD METROPOLITAN AREA WETLANDS & FLOODPLAINS.
Source: Copyright (C) MnDNR 2019 and FEMA.

FLOODPLAINS

A floodplain, as defined by Minnesota law, is any normally dry land area that is prone to surface water flooding⁵². **In addition, floodplains can also be “the normally dry areas adjacent to wetlands, small ponds, or other low areas that cannot drain as quickly as the rain falls.”**⁵³ The typical floodplain zone standard for both Minnesota and the Federal Emergency Management Agency (FEMA) is the 100-year floodplain. This means that in any **given year there is a 1 percent chance of this piece of land flooding.** “This 100-year floodplain is the land adjoining lakes and rivers that would be covered by the 1 percent chance (or 100-year) flood.”⁵⁴ An area that has a 0.2 percent chance of flooding in any given year is considered to be in the 500-year floodplain. See Figure 3.22 for a map of both 100-year and 500-year floodplains within the MPA.

Along large rivers such as the Mississippi River, floodplains are typically flooded during the spring as a result of the winter snow melt or as a result of intense and heavy rainfall. In order to minimize and/or prevent damage to existing and future infrastructure, local communities are required to have zoning regulations in place that identify floodplain areas provide guidance on permitted land uses in accordance with the DNR and FEMA.

GROUNDWATER

According to the MPCA, groundwater is the source of drinking water for about 75 percent of Minnesotans.⁵⁵ Groundwater availability varies by region as its occurrence is directly related to **“local geologic conditions that determine the type and properties of aquifers.”**⁵⁶



FIGURE 3.23 – GEORGE FRIEDRICH PARK, SAINT CLOUD

In Minnesota, groundwater is divided into six provinces each characterized by bedrock and glacial geology: Metro Province, South-Central Province, Southeastern Province, Central Province, Western Province, Arrowhead Province, and Cretaceous Bedrock.⁵⁷

⁵² [Floodplain regulations](https://bit.ly/2GDHMAK). Minnesota Department of Natural Resources. (https://bit.ly/2GDHMAK).

⁵³ [Floodplains and Floodplain Management](https://bit.ly/2GARuDB). Minnesota Department of Natural Resources. (https://bit.ly/2GARuDB).

⁵⁴ Ibid.

⁵⁵ [The state of groundwater](https://www.pca.state.mn.us/water/state-groundwater). Minnesota Pollution Control Agency. (https://www.pca.state.mn.us/water/state-groundwater).

⁵⁶ [Groundwater provinces](https://bit.ly/2MCBx3A). Minnesota Department of Natural Resources (https://bit.ly/2MCBx3A).

⁵⁷ Ibid.

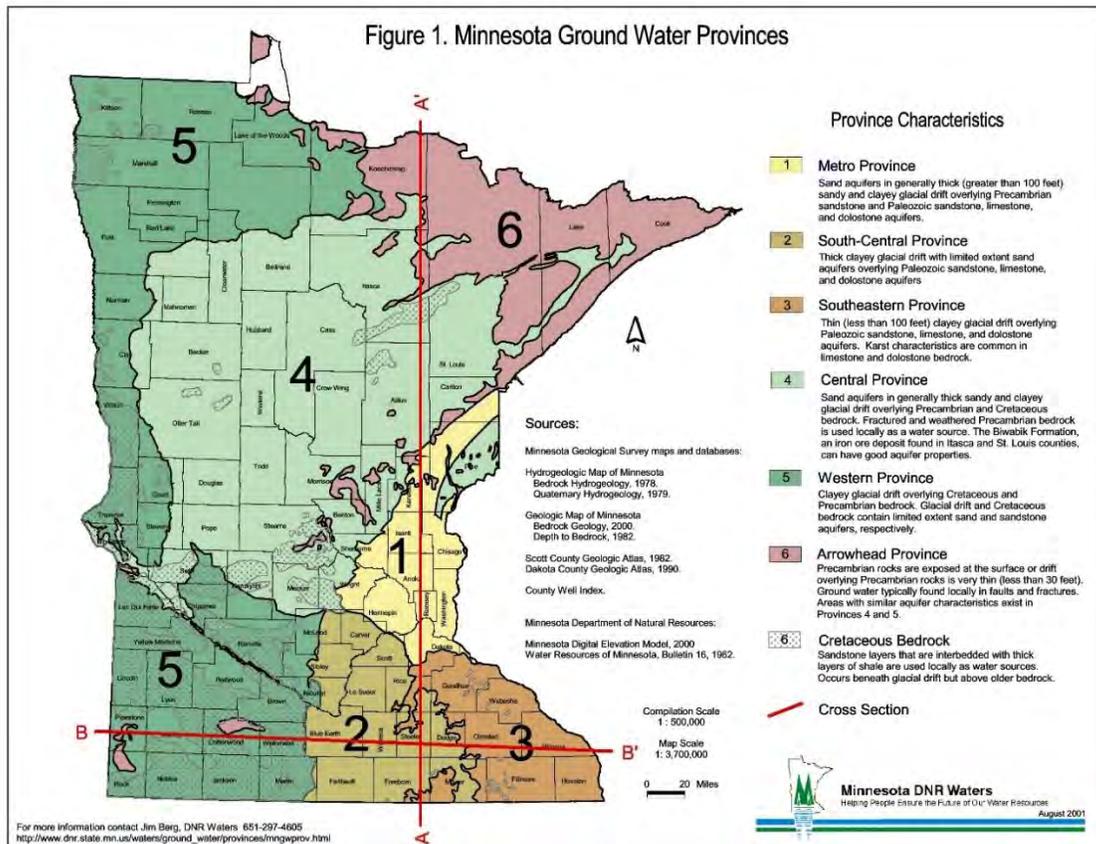


FIGURE 3.24 – MINNESOTA GROUNDWATER PROVINCES
Source: Minnesota Department of Natural Resources.

“The aquifers within these provinces occur in two general geologic settings: bedrock comprising a wide range of rock types and ages, and unconsolidated sediments deposited by glaciers, streams, and lakes.”⁵⁸

Overall, groundwater aquifers within the MPA are classified as part of the Central Province. However, portions of the MPA are included in the Arrowhead Province and Cretaceous Bedrock.

The MPCA finds water within the central region of the state to be readily available. However, that water in about 40 percent of shallow wells (less than 30 feet deep) within the central region of the state have higher nitrate concentrations than allowed under the EPA.⁵⁹

Threats to quality of groundwater across the state include overuse and contamination from pollutants such as nitrogen fertilizers and road salt.

⁵⁸ Ibid.

⁵⁹ [The state of groundwater](https://www.pca.state.mn.us/water/state-groundwater). Minnesota Pollution Control Agency. (https://www.pca.state.mn.us/water/state-groundwater).

PROTECTING WATER QUALITY

The Federal Water Pollution Control Act of 1948 was the first of several laws passed to protect water quality on the national level. In 1972, the law was amended and is now more commonly known as the Clean Water Act (CWA).⁶⁰

The CWA, among other protections, provides the EPA the authority to implement pollution control programs such as setting wastewater standards for the industry and allows for the establishment of a basic structure for regulating pollutant discharges into water sources.

The CWA requires each state to adopt its own water quality standard. These standards, **according to the DNR, “define how much of a pollutant can be in the water and still allow it to meet designated uses, such a drinking water, fishing, and swimming.”**⁶¹

Water Quality Standards (WQS) developed by the state and approved by the EPA for a legal basis for controlling pollutants entering the water. The core components of WQS, according to the EPA, are described in the table below.

Terminology	Definition
Designated Uses	WQS regulation requires that states, territories, and authorized tribes to specify goals and expectations for how each water body is used. Typically, those designations include: Protected and propagation of fish, shellfish, and wildlife; recreation; public drinking water supply; and agricultural, industrial, navigational, and other purposes.
Criteria	States, territories, and authorized tribes adopt water quality criteria to protect the designated uses of a water body. Water quality criteria can be numeric or narrative.
Antidegradation Requirements	Antidegradation requirements provide a framework for maintaining and protecting water quality that has already been achieved.

FIGURE 3.25 – COMPONENTS OF WATER QUALITY STANDARDS

Source: United States Environmental Protection Agency.

In Minnesota, the MPCA is the state agency in charge of ensuring the tenets of the CWA and the requirements under WQS are met. To achieve this, the MPCA samples and monitors surface waters in Minnesota. Figure 3.26 is a map of the MPCA’s surface water monitoring sites within the MPA.

In addition to the work of the MPCA, the Minnesota Department of Health also has a vested interest in the water quality – specifically drinking water.

⁶⁰ [History of the Clean Water Act](https://bit.ly/2h4rcz1). United States Environmental Protection Agency. (https://bit.ly/2h4rcz1).

⁶¹ [Water Quality](https://bit.ly/2ZrorKa). Minnesota Department of Natural Resources. (https://bit.ly/2ZrorKa).

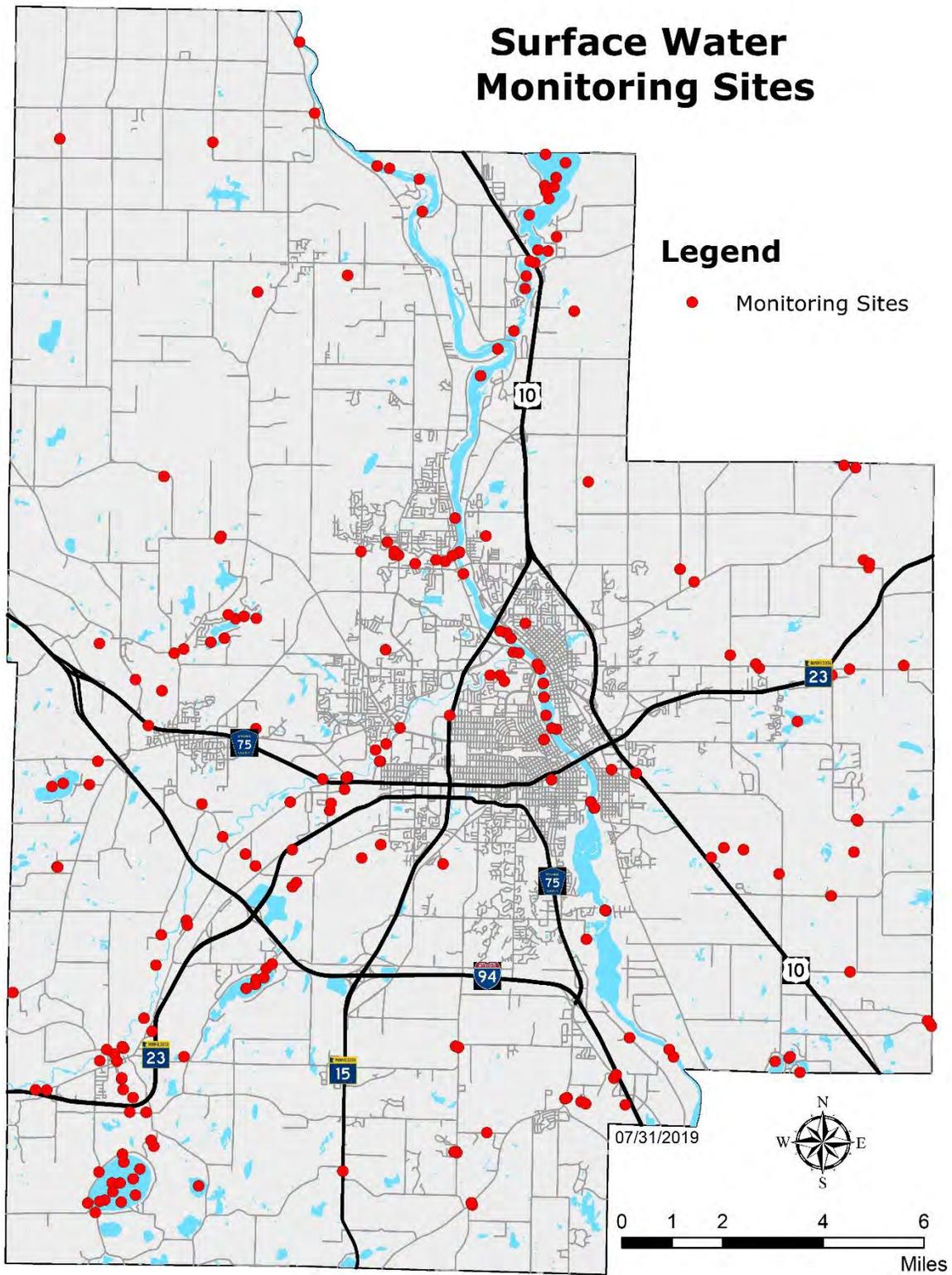


FIGURE 3.26 – SURFACE WATER MONITORING SITES
Source: Minnesota Pollution Control Agency.

Public water systems – either community (such as municipalities that serve consumers in a residential settings) or non-community (such as schools or factories that have their own supply of water which is usually a well) – are regulated by MDH. In Minnesota, there are about 1,000 community water supply systems and over 7,000 non-community public water supply systems.⁶² This corresponds to nearly 80 percent of all Minnesotans receiving their drinking water from a public water system.⁶³



FIGURE 3.27 – TRANSPORTATION CAN IMPACT WATER QUALITY THROUGH RUN-OFF

MDH’s Drinking Water Protection program is responsible for ensuring the quality and safety of public water supplies. This is done through⁶⁴:

- Helping public water suppliers protect the water supply (groundwater, river, or lake).
- Administering grants to protect water supplies and for infrastructure and activities.
- Coordinating training and certification for water operators.
- Reviewing plans for new infrastructure or changes in water treatment procedures.
- Enforcing federal safe drinking water standards through inspections and corrective action.
- Sampling water or assisting public water operators in sampling.
- Helping public water suppliers address contamination problems.
- Communicating important information about drinking water with the public and other stakeholders.

Working with other federal and state partners (EPA, MPCA, and DNR to name a few), DHS conducts water testing for common contaminants and monitors areas that are at most-risk for drinking water contamination. Figure 3.28 identifies those areas of concern in the MPA in terms of drinking water. Of note, the DNR states that relatively high sensitivity does not mean that water quality has been or will be degraded. If there are no contaminant sources, pollution will not occur. Low sensitivity does not guarantee protection. Leakage from an unsealed well for example, may bypass the natural protection, allowing contamination to directly enter an aquifer.⁶⁵

⁶² Ibid.

⁶³ [Minnesota Drinking Water Annual Report for 2018](https://bit.ly/2GIOvt1). Minnesota Department of Health. (https://bit.ly/2GIOvt1).

⁶⁴ [About the MDH Drinking Water Protection Program](https://bit.ly/335A7EO). Minnesota Department of Health. (https://bit.ly/335A7EO).

⁶⁵ [Groundwater Pollution Sensitivity](https://bit.ly/2YLoL90). Minnesota Department of Natural Resources. (https://bit.ly/2YLoL90).

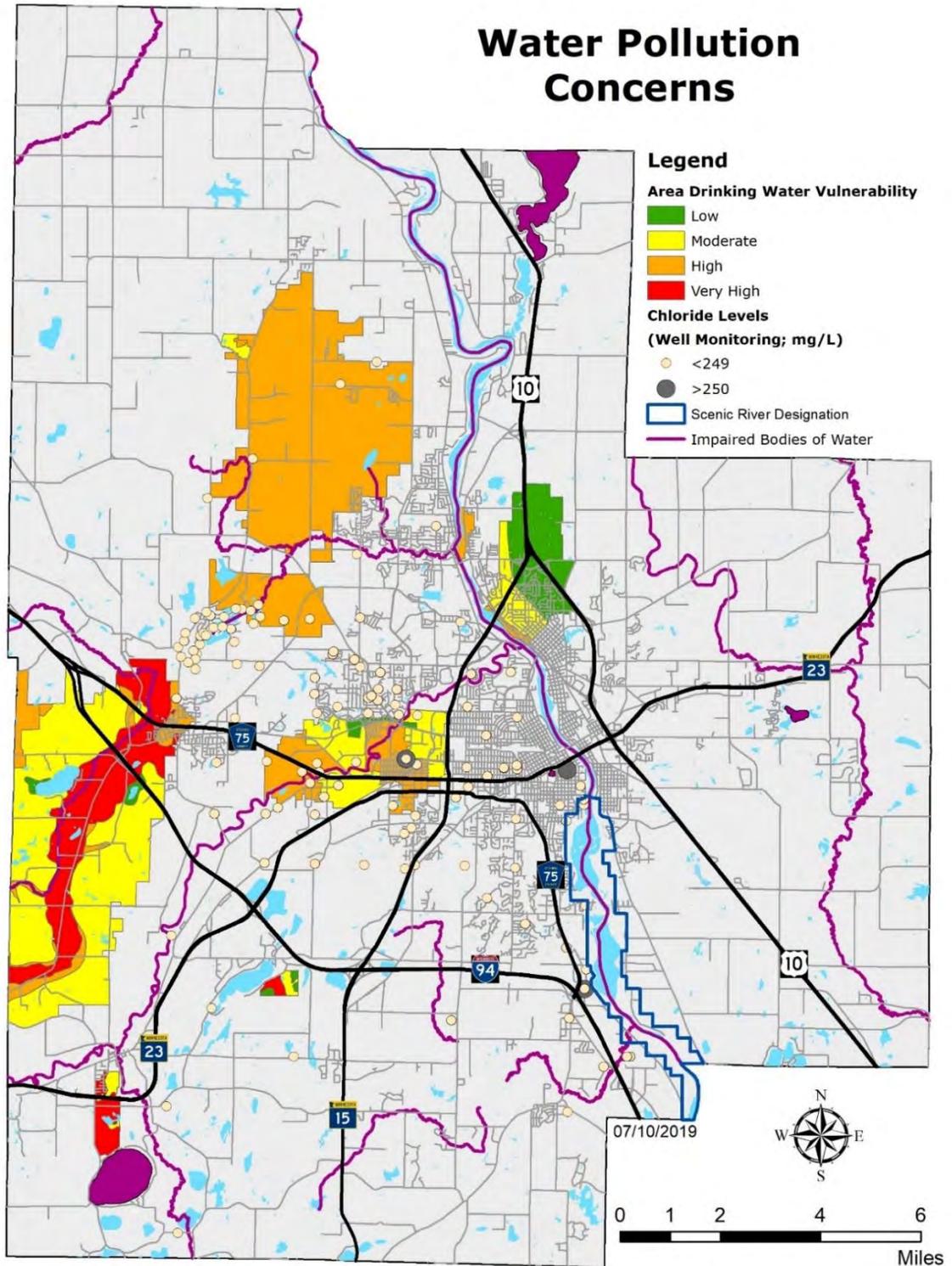


FIGURE 3.28 – SAINT CLOUD METROPOLITAN AREA WATER POLLUTION CONCERNS.
 Data Source: Copyright (C) MN DNR 2019 and Minnesota Department of Health (MDH).

Along with monitoring, DHS's Drinking Water Protection program is responsible for well management by assuring the proper construction of new wells and borings and the proper sealing of unused wells and borings.

MPCA's Wellhead Protection Program was created to "prevent contamination of public drinking water supplies by identifying water supply recharge areas and implementing management practices for potential pollution sources found within **those areas.**"⁶⁶

Minnesota's Wellhead Protection Areas (WHPA) is the MDH approved surface and subsurface area surrounding public water supply wells or well fields that supplies a public water system through which contaminants are likely to move toward and reach the well or well field.

Within the MPA there are several wellhead protection areas MDH is monitoring. Those WHPAs can be found in Figure 3.29.

In terms of private wells, MDH states that it is the homeowner's responsibility to ensure they properly maintain their private well – if they have one. ⁶⁷

POLLUTION CONTROL

Pollution in Minnesota waters comes from two sources – point source and non-point source. **"Point sources of pollution are identifiable localized sources of pollution such as industrial discharge and sewage effluent (liquid waste). Non-point source pollution comes from unidentifiable, general sources like fertilizer or pesticides in urban and agricultural runoff."**⁶⁸

Given these sources for water pollution, there is a direct correlation between water quality and the transportation sector.

ROADWAY DEICING

While runoff from agricultural uses – such as fertilizers – poses one of the biggest threats to water quality, transportation provides another threat through the use of road salt. According to the MPCA it takes only one teaspoon of road salt to permanently pollute five gallons of water.⁶⁹ The components of roadway salt – mainly chloride – is toxic to some forms of aquatic life and can have adverse impacts to plants and animals particularly if groundwater is discharged into other bodies of water such as streams, lakes, and wetlands.⁷⁰

While sand has become another alternative to deicing roadways during the winter months, it has the tendency to collect oil, grease, and other automotive byproducts. If left on roadways or in roadway ditches, this sand could be swept up into storm water catch basins and possibly infiltrate streambeds.⁷¹

⁶⁶ [Wellhead and Source Water Protection Programs](https://bit.ly/2GHDTe6). Minnesota Pollution Control Agency. (<https://bit.ly/2GHDTe6>).

⁶⁷ [Water Contaminants Background](https://bit.ly/2GHSciEO). Minnesota Department of Health. (<https://bit.ly/2GHSciEO>).

⁶⁸ Ibid.

⁶⁹ Ibid.

⁷⁰ Ibid.

⁷¹ [What You Should Know About Safe Winter Roads and the Environment](https://bit.ly/2YEo69U). U.S. Environmental Protection Agency. (<https://bit.ly/2YEo69U>).

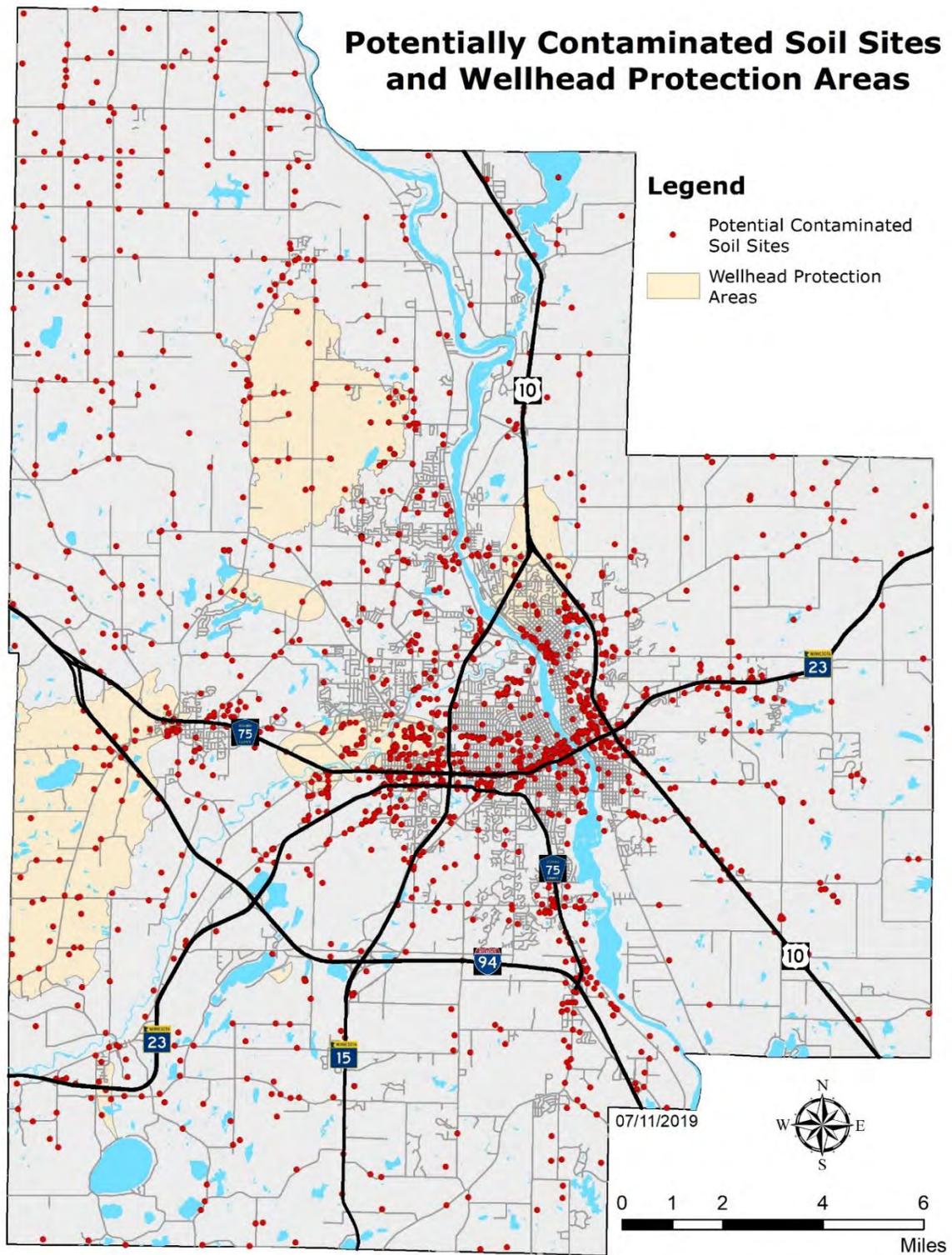


FIGURE 3.29 – SAINT CLOUD METROPOLITAN AREA CONTAMINATED SOILS AND WELLHEAD PROTECTION AREAS.
Data Source: Minnesota Pollution Control Agency (MPCA) and Minnesota Department of Health (MDH).

STORMWATER

The MPCA's Stormwater Program was specifically developed to reduce the pollution and damage caused by runoff from construction sites, industrial facilities, and municipal separate storm sewer systems (MS4s).⁷²

An MS4, as defined by MnDOT is "a conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs and gutters, ditches, man-made channels, storm drains, etc.) that is also owned or operated by a public entity."⁷³

According to MnDOT, stormwater discharges associated with an MS4 are subject to regulation. "The MS4 general permit is designed to help reduce the amount of sediment and other pollution that enters surface and ground water from storm sewer systems to the maximum extent practicable."⁷⁴

In terms of transportation, this means that any jurisdiction responsible for a roadway in a municipality with populations over 50,000, smaller designated cities, and other public entities with significant stormwater drainage systems are required to have an MS4 program⁷⁵.

Part of the MS4 permitting process is the development of a Stormwater Pollution Prevention Program (SWPPP). The SWPPP covers six minimum control measures to help reduce the discharge of pollutants from storm water systems to the maximum extent practicable.⁷⁶

1. Public education and outreach.
2. Public participation/involvement.
3. Illicit discharge detection and elimination.
4. Construction site runoff control.
5. Post-construction site runoff control.
6. Pollution prevention/good housekeeping.

MnDOT is a regulated MS4 and has two separate MS4 permits – one for the Metro District and one for Greater Minnesota including the Saint Cloud area. The entire Saint Cloud MPA with the exception of the cities of Rockville and Saint Stephen and Saint Wendel Township are covered by MS4.

WETLAND MITIGATION

Due to the important role wetlands play within the environment, several regulations have been established to mitigate the adverse impacts of construction and development projects like those related to transportation.

⁷² [Nonpoint source issues](https://www.pca.state.mn.us/water/nonpoint-source-issues). Minnesota Pollution Control Agency. (<https://www.pca.state.mn.us/water/nonpoint-source-issues>).

⁷³ [What is a Municipal Separate Storm Sewer System?](http://www.dot.state.mn.us/environment/ms4/) Minnesota Department of Transportation. (<http://www.dot.state.mn.us/environment/ms4/>).

⁷⁴ Ibid.

⁷⁵ Ibid.

⁷⁶ Ibid.

The most notable regulation within the state of Minnesota is the Wetland Conservation Act (WCA). **“A key component of the WCA is the development of restored or created wetlands as replacement for wetlands that are drained or filled.”**⁷⁷

If a roadway project cannot avoid passing through a wetland area, it is common practice that either minimization or mitigation tactics will be engaged to lessen the environmental impacts to the wetland environment.

The Local Government Road Wetland Replacement Program (LGRWRP) was established to provide **“wetland mitigation for certain qualifying road reconstruction, repair, and rehabilitation projects conducted by local road authorities (cities, townships, counties).”**⁷⁸

Transportation projects that meet LGRWRP requirements for eligibility are as follows⁷⁹:

- Does not involve new roads or roads expanded solely for additional traffic capacity lanes in anticipation of future demand.
- Must involve repair, rehabilitation, reconstruction or replacement of a currently serviceable road to meet state or federal design or safety standards or requirements.
- Must minimize wetland impacts.
- Must provide project plans and information including wetland boundaries, wetland impacts by type and demonstration of wetland impact minimization to the Technical Evaluation Panel at least 30 days prior to construction.

Wetland mitigation in Minnesota is based on a wetland banking program which “includes both private and state-sponsored wetland banks which have ‘credit’ that are used to offset (mitigate) authorized wetland impacts.”⁸⁰

Due to the lack of funding these “credits” have not been sold for many years. As of the drafting of this document, 82.0167 credits were available within Bank Service Area 7 (Middle Mississippi River) which includes the MPA.

⁷⁷ [Wetlands Programs](https://www.dnr.state.mn.us/eco/wetlands/index.html). Minnesota Department of Natural Resources. (https://www.dnr.state.mn.us/eco/wetlands/index.html).

⁷⁸ [Local Government Roadway Wetland Replacement Program](https://bit.ly/2KjjQ6t). Minnesota Board of Water and Soil Resources. (https://bit.ly/2KjjQ6t).

⁷⁹ Ibid.

⁸⁰ [Wetland Bank Credits and Fees](https://bwsr.state.mn.us/wetland-bank-credits-and-fees). Minnesota Board of Water and Soil Resources. (https://bwsr.state.mn.us/wetland-bank-credits-and-fees).



Available Credits

Local Road Wetland Replacement Program

Updated April 24, 2019

Bank Service Area	Available Credits
1	16.7474
2	2.5527
3	45.9373
4	0
5	26.2047
6	0
7	82.0167
8	0.0000
9	21.2523
10	6.7335



Bank Service Areas and Minnesota counties

FIGURE 3.30 – AVAILABLE CREDITS FOR THE LOCAL ROAD WETLAND REPLACEMENT PROGRAM
 Data Source: Minnesota Board of Water and Soil Resources.

PUBLIC HEALTH

As stated in previous sections, the effects of air quality, wildlife habitats (such as plants and animals), soil quality, and water quality all have some impact on human health.

In fact, it was because of these concerns that the EPA was developed in the early 1970s.

“In early 1970, as a result of heightened public concerns about deteriorating city air, natural areas littered with debris, and urban water supplies contaminated with dangerous impurities, President Nixon presented the House and Senate a groundbreaking 37-point message on the environment. These points included:

- Requesting \$4 billion for the improvement of water treatment facilities.
- Asking for national air quality standards and stringent guidelines to lower motor vehicle emissions.
- Launching federally-funded research to reduce automobile pollution.
- Ordering a clean-up of federal facilities that had fouled air and water.
- Seeking legislation to end the dumping of wastes into the Great Lakes.
- Proposing a tax on lead additives in gasoline.
- Forwarding to Congress a plan to tighten safeguards on the seaborne transportation of oil.
- Approving a **National Contingency Plan for the treatment of oil spills.**”⁸¹

Public health is not a new concept – having existed in the early 19th Century – **but it’s** intersection with the physical environment and transportation received an added boost in part thanks to the focus of the EPA and efforts by U.S. Department of Transportation to conduct environmental cleanup efforts and provide for access to alternative transportation modes besides motor vehicles.

“Minnesota’s public health system functions as a partnership between state and local governments, and is designed to ensure that the public’s health and safety are protected statewide while providing local governments with the flexibility needed to identify and address local needs.”⁸²

Adverse impacts to human health caused by changes to the physical environment have been discussed throughout this chapter. Public health, along with guidance from DHS, works to monitor those health conditions and seeks to minimize human exposure to harmful environmental conditions. **Public health “protects** against environmental health hazards by addressing aspects of the environment that pose risks to human health, such as monitoring air and water quality; developing policies and programs to reduce exposure to environmental health risks and promote healthy environments; and identifying and

⁸¹ [The Origins of EPA](https://www.epa.gov/history/origins-epa). United States Environmental Protection Agency. (<https://www.epa.gov/history/origins-epa>).

⁸² [Minnesota’s Public Health System: History and Context](https://bit.ly/2KjWLRl). Minnesota Department of Health. (<https://bit.ly/2KjWLRl>).

mitigating environmental risks such as food and waterborne diseases, radiation, **occupational health hazards, and public health nuisances.**⁸³

In addition to providing public health services, DHS has developed the Statewide Health Improvement Partnership (SHIP) to provide communities with resources to promote active living, healthy eating, and commercial tobacco-free living. County-level SHIP efforts to promote active living through transportation as a means to bolster the physical health of community members was previously discussed in Chapter 4 of MAPPING 2045.

“By collaborating with the Statewide Health Improvement Partnership, cities and counties across Minnesota are working on creating master walk and bike plans; updating municipal plans to include Complete Streets with sidewalks and crosswalks; increasing access to connected walking and bicycling networks; connecting and promoting trail systems; and collaborating on projects that improve walkability and bikeability in **communities.**”⁸⁴

CULTURAL & HISTORIC RESOURCES

Prior to creation of NEPA in the 1970s, Congress in 1966 passed the National Historic Preservation Act. This act was designed to preserve historic and cultural properties of **national significance “in the face of ever-increasing extensions of urban centers, highways, and residential, commercial, and industrial developments.”**⁸⁵

NEPA protection of historic sites can be found within Section 106 of the NHPA. This section states that any federal or federally-assisted project (including transportation projects) must **“take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register.”**⁸⁶

For a property to be eligible for inclusion on the National Register of Historic Places, several factors are considered including:

- **“Age and Integrity: Is the property old enough to be** considered historic (generally at least 50 years old) and does it still look much the way it did in the past?
- **Significance: Is the property associated with events, activities, or developments that were important in the past? With the lives of people who were important in the past? With significant architectural history, landscape history, or engineering achievements? Does it have the potential to yield information through archeological investigation about our past?”**⁸⁷

Within the MPA, consideration is also given to Century and Sesquicentennial Farms – family-owned farms of at least 50 acres in size currently being farmed that have been in existence for 100 or 150 years respectively.⁸⁸

⁸³ [Areas of Public Health Responsibility within the Local Public Health Act](https://bit.ly/31iDMgV). Minnesota Department of Health. (https://bit.ly/31iDMgV).

⁸⁴ [Active Transportation: Communities Help Shape Our Health](https://bit.ly/2ZqTXYJ). Minnesota Department of Health. (https://bit.ly/2ZqTXYJ).

⁸⁵ [National Historic Preservation Act of 1966](https://bit.ly/2hnMfcn). (https://bit.ly/2hnMfcn).

⁸⁶ Ibid.

⁸⁷ [How to List a Property](https://bit.ly/2UdEc8U). National Park Service. (https://bit.ly/2UdEc8U).

⁸⁸ [Century and Sesquicentennial Farms](https://fbmn.org/farm-recognition). Minnesota Farm Bureau. (https://fbmn.org/farm-recognition).

The [Stearns History Museum](http://stearns-museum.org/) (<http://stearns-museum.org/>) monitors and catalogs all historic properties in the Saint Cloud region – including those within Benton and Sherburne counties.

Within the MPA, the City of Saint Cloud is the only jurisdiction that has designated local historic districts as of the drafting of this plan. These districts contain a concentration of older buildings, structures, sites, and spaces that reflect the history and culture of the city. As of the drafting of MAPPING 2045, the [four historic districts within Saint Cloud](https://bit.ly/2YFVhFY) (<https://bit.ly/2YFVhFY>) are:

- Barden Park Historic District.
- Pantown Neighborhood.
- Southside Neighborhood.
- Saint Cloud Commercial District.

Within the City of Saint Cloud, there is also Century Homes Recognition Program. This program, established in 1998, “recognizes homeowners that have maintained their 100+ year old homes’ original architectural character.”⁸⁹

Using data from the National Register for Historic Places (NHR) and the Stearns History Museum, the APO staff have mapped the location of all historic properties in the MPA as reflected in Figure 3.32. Figure 3.33 is a zoomed in look at the City of Saint Cloud’s downtown core.



FIGURE 3.31 – HISTORIC MARKER OF THE FIRST NATIONAL BANK IN DOWNTOWN SAINT CLOUD
 Photo courtesy of Saint Cloud APO

⁸⁹ [Century Homes Recognition Program](https://www.ci.stcloud.mn.us/630/Preservation-Initiatives). City of Saint Cloud Minnesota. (<https://www.ci.stcloud.mn.us/630/Preservation-Initiatives>).

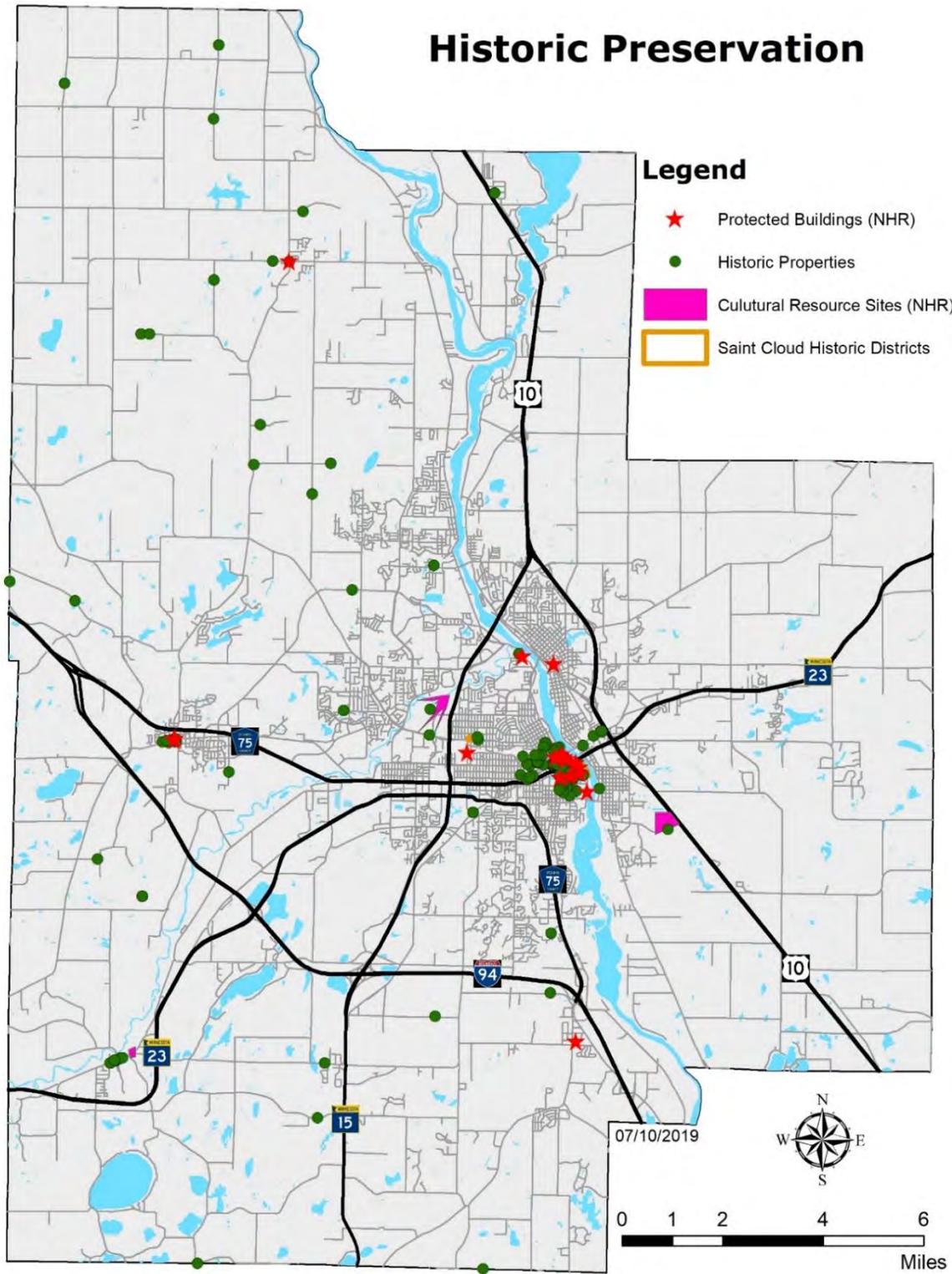


FIGURE 3.32 – SAINT CLOUD METROPOLITAN AREA HISTORIC PRESERVATION.
Data Source: National Register for Historic Places (NHR) and Stearns County History Museum.

Historic Preservation - Downtown Saint Cloud

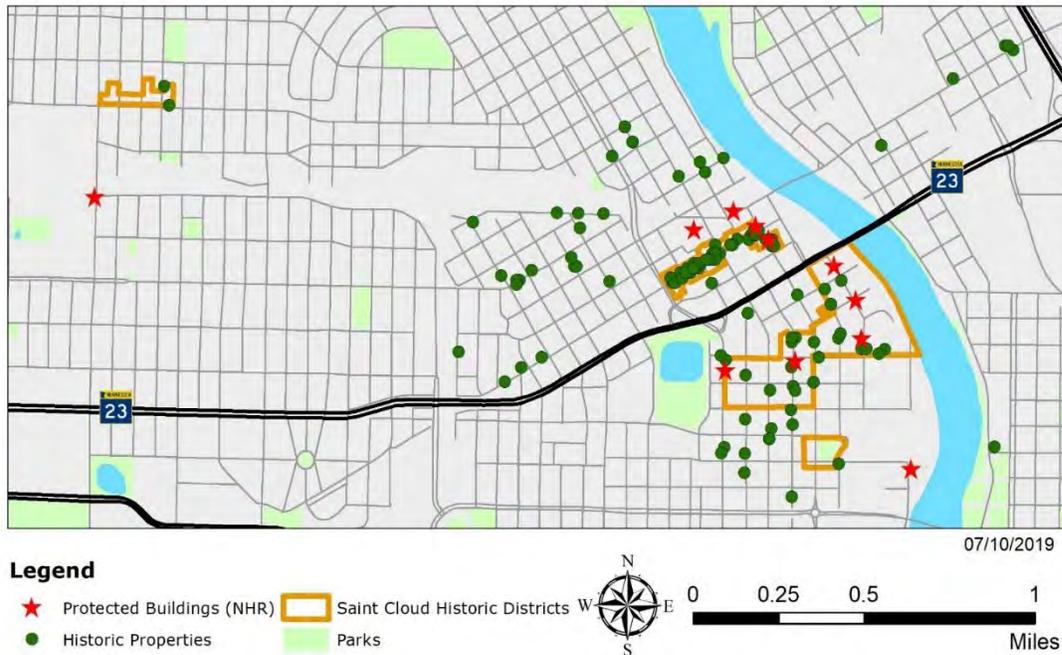


FIGURE 3.33 – DOWNTOWN SAINT CLOUD METROPOLITAN AREA HISTORIC PRESERVATION Data
Source: National Register for Historic Places (NHR) and Stearns County History Museum.

WHAT WE HEARD

On two separate occasions (in 2018 and 2019) Saint Cloud APO staff consulted with environmental resource agencies including, but not limited to, county parks and recreation departments, the DNR, MPCA, Stearns County History Museum staff, Feeling Good MN, county soil and water conservation district staff, and county environmental planners to discuss the environmental impacts of transportation infrastructure and projects.

All environmental comments can be found in Chapter 9.

CHAPTER 4: ANALYSIS OF KEY CONCEPTS

FREIGHT ISSUES

The planning process develops a vision for a desired future. From this illustrative statement, goals are developed to guide investment and decision-making. Similarly, performance **measures provide accountability towards achieving those goals. After all, "you can't manage what you can't measure."** A project team from SRF Consultants, in cooperation with APO staff, developed a vision, goals, and a list of potential performance measures for the future regional freight system.

A key step in the freight planning process is the identification roadway infrastructure that enables the movement of goods from local freight generators to other destinations within the region, the state, and the rest of the country. Multiple designated freight networks already exist at the national and statewide level, but a critical component of planning for freight movement is ensuring the link between those networks and freight trip origins and destinations. This review includes an assessment of freight activity in the Saint Cloud MPA, a summary of the existing freight networks, and a proposed network of local roads to be designated as key links in the regional freight network.

FREIGHT VISION AND GOALS



FIGURE 4.1 - RELATIVE KEY COMMONALITIES FROM DESK SCAN

The planning process begins with a vision for a desired future. From this vision, goals and performance measures are developed to achieve that vision.

To define the freight vision and goals for the Saint Cloud region, a project team evaluated the current Saint Cloud APO Long Range Transportation Plan (LRTP), Region 7W Comprehensive Economic Development Strategy (CEDS), the Minnesota Statewide Freight System and Investment Plan, and federal freight planning requirements. The results of this desk scan were used to identify the commonalities in Figure 4.1.

REGIONAL FREIGHT VISION AND GOALS

A vision communicates the future in clear and definitive language. Using key takeaways from the desk scan and APO staff input, a regional freight vision was defined for the Saint Cloud APO. While this **vision supports federal and MnDOT’s freight goals, it is tailored to meet the specific needs of the region.**

Support economic competitiveness and job creation by providing a reliable, efficient, and safe regional freight system.

The project team developed six freight planning goals to support the overall vision.

Freight Goals	
Traffic	Improve congestion and reliability on the regional freight system.
Safety	Reduce commercial vehicle crashes region wide.
Connectivity	Maintain the Level of Service (LOS and State of Good Repair on the Tier III (local) freight network and intermodal connectors.
Workforce	Connect workers to freight clusters.
State of Good Repair	Capitalize on existing infrastructure.
Environmental	Minimize negative impacts on the region’s vulnerable populations.

FIGURE 4.2 - RECOMMENDED SAINT CLOUD APO FREIGHT PLANNING GOALS

ALIGNMENT OF GOALS

Figure 4.3 exhibits how the recommended freight planning goals align with state and federal freight planning goals and regional transportation and economic development goals.

Saint Cloud APO Freight Planning Goal Areas						
	Traffic	Safety	Connectivity	Workforce	State of Good Repair	Environmental
Saint Cloud 2040 Long Range Transportation Plan*						
Promote safety for all users.		X		X		
Increase accessibility and mobility; mitigate congestion.	X		X	X		X
Enhance the integration and connectivity between all modes.	X		X			X
Efficient management, collaboration, investment, accountability.	X	X	X	X	X	X
Good state of repair using low-cost/high-benefit solutions.	X				X	
Integrate multimodal options for active living and public health.	X			X		X
Promote energy conservation, quality of life, consistent planning.	X	X	X	X	X	X
Improve economic competitiveness, productivity, and efficiency.	X	X	X	X	X	
Region 7W Comprehensive Economic Development Strategy*						
Uphold a high labor participation rate and low unemployment rate.				X		
Increase training for skilled, living-wage occupations.				X		
Foster job creation and business growth.				X		
Increase cross-sector initiatives to support innovation.	X	X	X	X	X	X
Protect and preserve the environment and enhance quality of life.				X		X
Affordable high-speed internet to remain competitive in economy.			X	X		X
Transportation system that supports the economy.	X	X	X	X	X	X
MnDOT Statewide Freight System and Investment Plan*						
Support Minnesota's economy.	X	X	X	X	X	X
Improve Minnesota's mobility.	X		X	X		
Preserve Minnesota's infrastructure.	X			X	X	
Safeguard Minnesotans.		X				
Protect Minnesota's environment and communities.				X		X
National Multimodal Freight Policy Goals*						
Improve economic competitiveness.	X		X	X		
Improve safety, security, efficiency, and resiliency.	X	X	X	X		X
Improve state of good repair.				X	X	
Use innovation/technology to improve safety, efficiency, reliability.	X	X	X			X
Improve efficiency and productivity.	X		X	X		
Support multi-State corridor planning and address connectivity.			X			X
Reduce environmental impacts of freight movement.				X		X

***Goals edited extensively for brevity and conciseness**

FIGURE 4.3 - ALIGNMENT OF APO FREIGHT GOALS

REGIONAL FREIGHT NETWORK

A key step in the freight planning process is the identification of roadway infrastructure that enables the movement of goods from local freight generators to other destinations within the region, the state, and the rest of the country. Multiple designated freight networks already exist at the national and statewide level, but a critical component of planning for freight movement is ensuring the link between those networks and freight origins and destinations. This review includes an assessment of freight activity in the Saint Cloud MPA, a summary of the existing freight networks, and a proposed network of local roads to be designated as key links in the regional freight network.

FREIGHT ACTIVITY ANALYSIS

Analysis of freight activity on local roadways is often hampered by the limited availability of freight data. This assessment used a combination of three data sources to help illustrate the locations of key freight generators in the area and to approximate the intensity of freight truck trips accessing the various freight networks. A description of the data sources and their associated strengths and weaknesses is provided below.

ZIP CODE-LEVEL FREIGHT ACTIVITY ESTIMATES

A new approach for estimating freight activity at both the ZIP code and establishment levels was recently published in [NCFRP Research Report 37: Using Commodity Flow Survey Microdata and Other Establishment Data to Estimate the Generation of Freight, Freight Trips, and Service Trips](https://bit.ly/2Z04SIN) (<https://bit.ly/2Z04SIN>). The research team reviewed several highly-detailed data sources to develop a freight trip estimation model based on the North American Industry Classification System (NAICS) code and the number of employees at each establishment. The resulting trip generation formulas can be applied to establishments if the NAICS code and employment counts are known. The research team also developed an online tool which applies the trip generation formulas to ZIP code level Census Business Pattern data. The results of this tool when applied to the MPA are shown in Figure 4.4. This figure shows a high concentration of freight activity in the southern portion of the MPA in ZIP code 56301, adjacent to the I-94 corridor.

While the ZIP code level estimates are accurate, they are also at too large of a scale to be useful in that form. To make this data more useful to the study, an InfoUSA data set was used to allocate the ZIP code estimates to the Transportation Analysis Zone (TAZ) level.

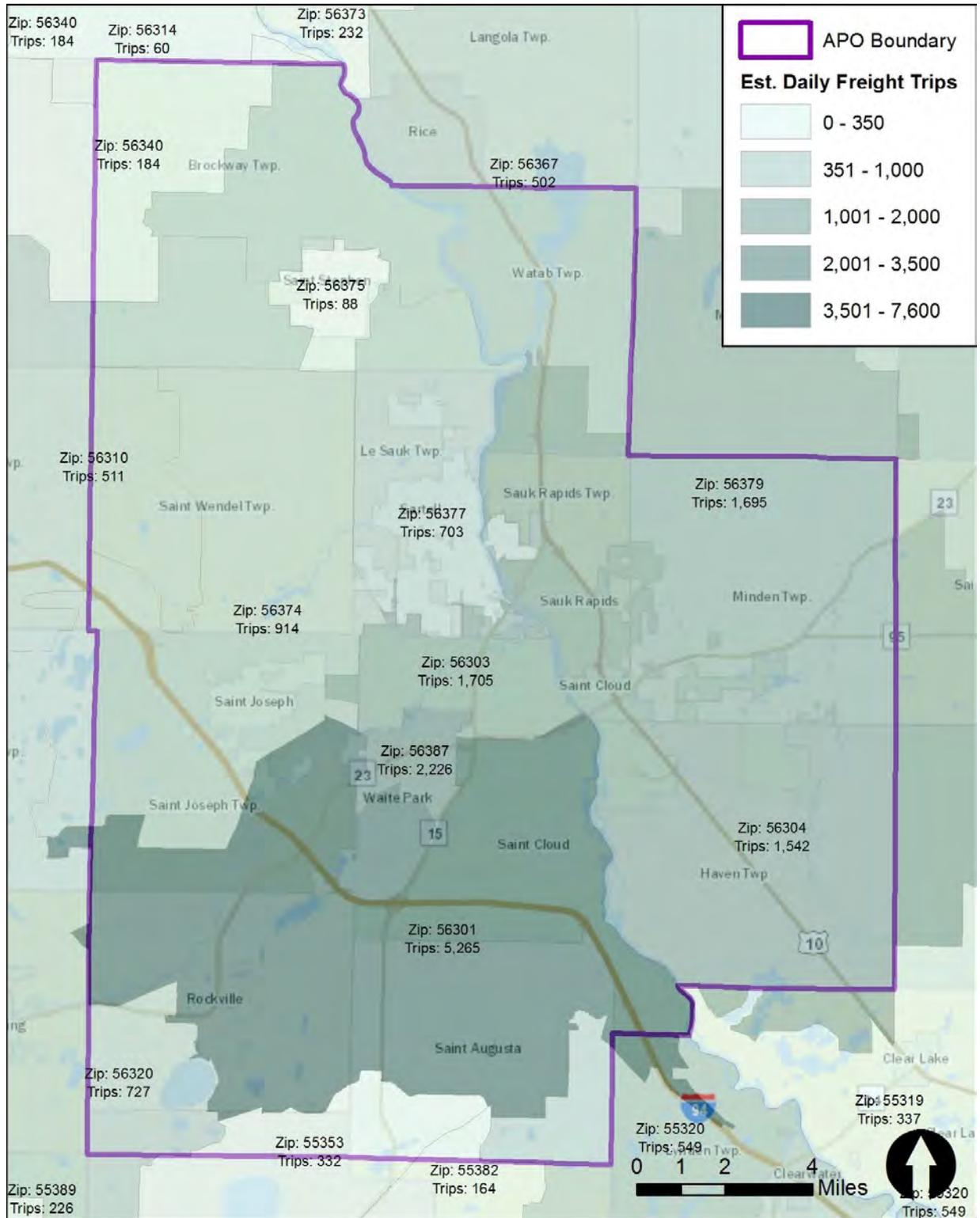


FIGURE 4.4 - ESTIMATED ZIP CODE FREIGHT ACTIVITY

INFOUSA FREIGHT BUSINESS DATA

The InfoUSA freight business dataset is a product used primarily for targeted business marketing efforts. The information is updated routinely and includes information such as business location, NAICS code, estimated number of employees, estimated sales volume, and many other related data points. A set of this data was collected by the MnDOT in 2014 for use in the update to the statewide freight plan and has been repurposed for this analysis. One key limitation of this data is that to lower costs, MnDOT collected it only for businesses with employee counts of 20 or more. Because of this, the data should be considered a sample rather than a complete dataset.

Despite excluding smaller freight businesses, the InfoUSA data still helps to highlight the distribution of key freight generators in the MPA and to provide a snapshot of the main industry categories active in the MPA. A list of the freight-related NAICS codes are summarized along with a classification of freight generation type. Industries classified as “receivers” include businesses such as grocery stores, restaurants, and clothing stores. Industries classified as “generators” include businesses such as manufacturing facilities and natural resource production. Industries classified as “transportation and warehousing” are involved primarily with the movement and storage of freight goods.

Freight Intensive NAICS Sector	Freight Generation Classification
11: Agriculture, Forestry, Fishing, and Hunting.	Generator
21: Mining, Quarrying, and Oil and Gas Extraction.	Generator
22: Utilities.	Receiver
23: Construction.	Receiver
31-33: Manufacturing.	Generator
42: Wholesale Trade.	Generator
44-45: Retail Trade.	Receiver
48-49: Transportation and Warehousing.	Transportation and Warehousing
72: Accommodation and Food Services.	Receiver

FIGURE 4.5 - FREIGHT INTENSIVE NAICS SECTORS AND FREIGHT GENERATION CLASSIFICATION

The distribution of the estimated freight activity by NAICS code in the MPA is shown in Figure 4.6. Relative to freight activity in Minnesota, the APO has slightly higher levels of

retail and wholesale trade, but slightly less activity in the manufacturing and construction industries.

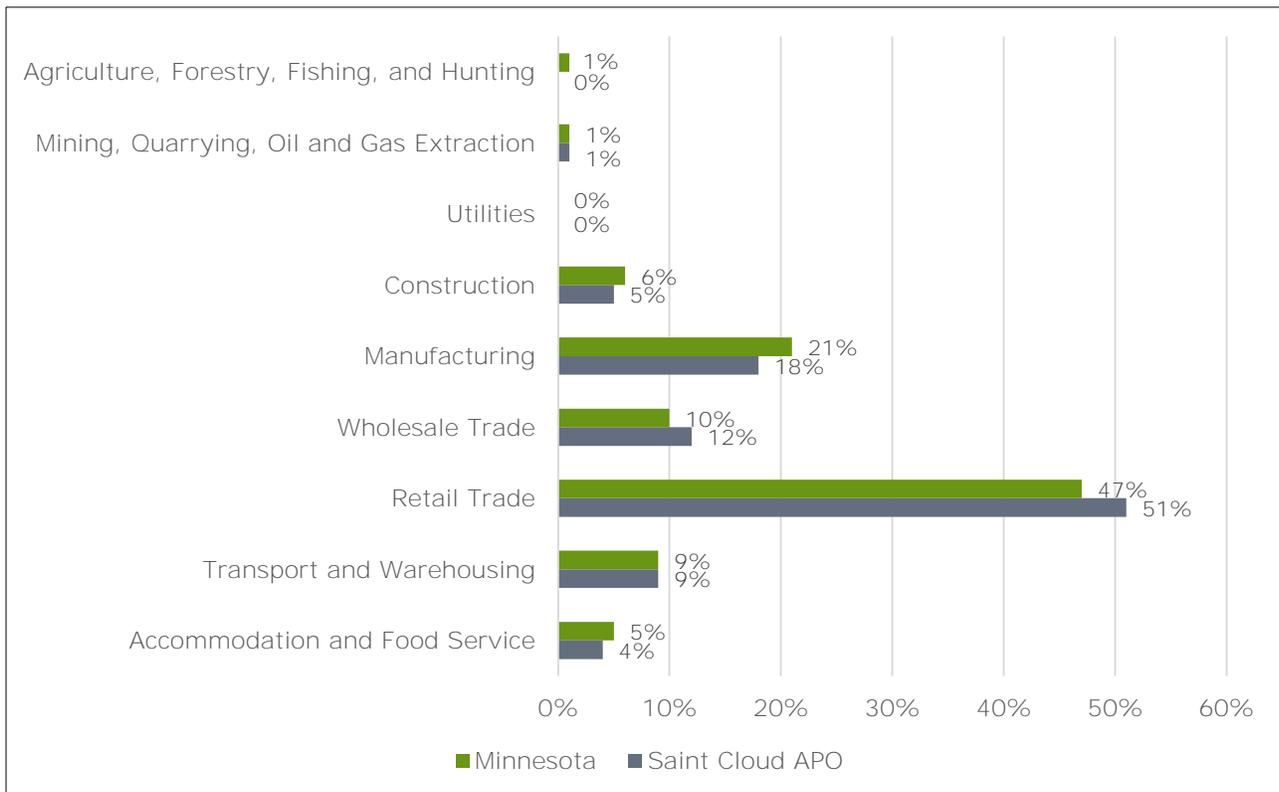


FIGURE 4.6 – ESTIMATED FREIGHT TRIP ACTIVITY BY NAICS CATEGORY

The location of the freight-related businesses and the estimated freight activity by TAZ is shown in Figure 4.7. The TAZ-level freight activity was estimated by allocating the ZIP code-level freight activity to each TAZ based on the proportion of establishment-level freight activity in each TAZ. For example, if the data showed that an estimated 50 percent of the freight trips in each ZIP code were in a single TAZ, then that TAZ would be allocated 50 percent of the ZIP code-level freight activity estimates generated from the NCFRP report estimation tool. This figure shows a high concentration of freight businesses located in Waite Park and Saint Cloud with a more dispersed distribution throughout the rest of the MPA. Other notable concentrations of freight businesses are in southern Saint Cloud adjacent to I-94 and the northwestern corner of Rockville.

TRUCK VOLUMES

The Heavy Commercial Annualized Average Daily Traffic Counts (HCAADT) in the MPA are also shown in Figure 4.7. These counts are routinely collected by MnDOT, but are only available on major highways. One key link that is missing from the HCAADT data is County State-Aid Highway (CSAH) 75 between Saint Joseph and Saint Cloud. There is a heavy concentration of freight businesses along this corridor which is likely generating substantial

heavy commercial truck trips. At the intersection of CSAH 75 with I-94, the HCAADT counts on I-94 increase from 4,050 to 6,500. The 2,450-vehicle difference between these counts is a good approximation of the expected heavy commercial truck counts on CSAH 75.

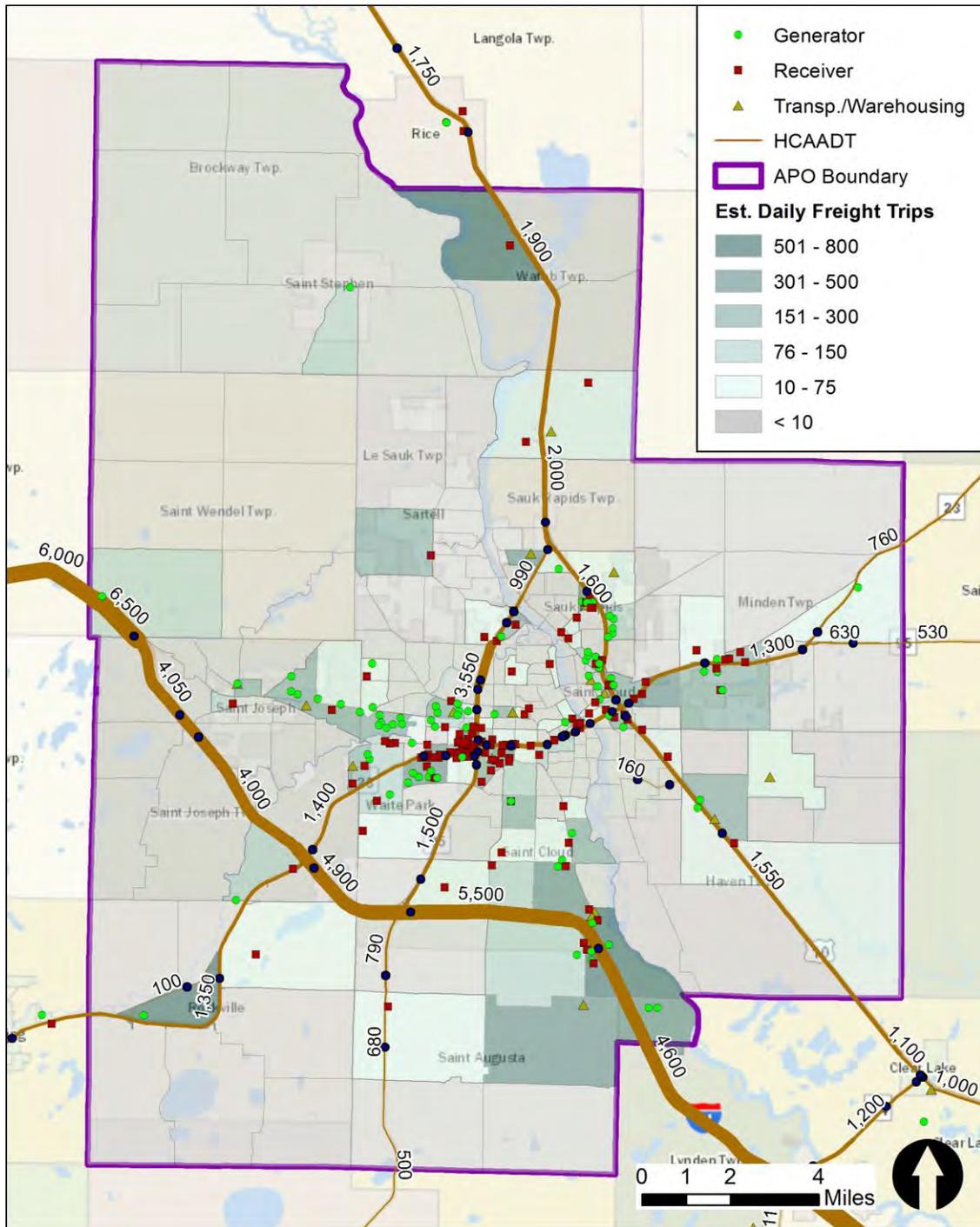


FIGURE 4.7 - INFOSA FREIGHT BUSINESS LOCATIONS AND ESTIMATED TAZ FREIGHT ACTIVITY

DESIGNATED FREIGHT NETWORKS

The designation of an official freight network recognizes the importance of certain roadway links for the movement of freight. This designation can also provide opportunities for focused investment that will benefit the movement of freight in the area. While such freight networks have been designated at the national and state levels, there still exist many gaps in the roadway system between these networks and the final destinations of freight **movement. The “last-mile” of freight movement is often the most difficult for freight** shippers to navigate. The purpose of this section is to provide an overview of the existing national and statewide freight networks in the MPA and to propose a regional freight network. The locations of these networks as well as the locations of the InfoUSA freight-related businesses is shown in Figure 4.8.

TIER 1: NATIONAL HIGHWAY FREIGHT NETWORK

The National Highway Freight Network (NHFN) is a network of major highways identified as part of the FAST Act using objective national data. The purpose of the NHFN is to strategically direct Federal resources and policies in a manner that improves the performance of the freight system. In Minnesota, the NHFN consists of 913 miles of highway, 547 of which are part of the interstate highway system. In the MPA, this network consists of I-94 in an east-west direction through the southwestern portion of the MPA. As shown previously in Figure 4.7, truck volumes on this highway range from 4,000 to 6,500 vehicles per day.

TIER 2: MINNESOTA PRINCIPAL FREIGHT NETWORK

The Minnesota Principal Freight Network (PFN) was identified during the development of the Minnesota Statewide Freight Plan update in 2015. As with the federal NHFN, the purpose of the Minnesota PFN was to identify the transportation infrastructure most critical to the movement of freight in Minnesota. Through a thorough review of existing roadway networks, MnDOT selected the National Highway System (NHS) to be designated as the highway portion of the PFN. In the MPA, the PFN consists of most of the major highways in the area, including US 10, MN 15 and MN 23, and CSAH 75.

TIER 3: REGIONAL FREIGHT NETWORK

Portions of local roadways were selected based on their ability to connect areas with high concentrations of freight businesses to the state and national freight networks. The Regional Freight Network consists of approximately 50 miles of municipal and county roadways as shown in Figure 4.8 and in more detail in Figure 4.9. Of the 247 freight businesses included in the InfoUSA dataset, 220 (89 percent) are located within one quarter mile of either the national, state, or regional freight networks.

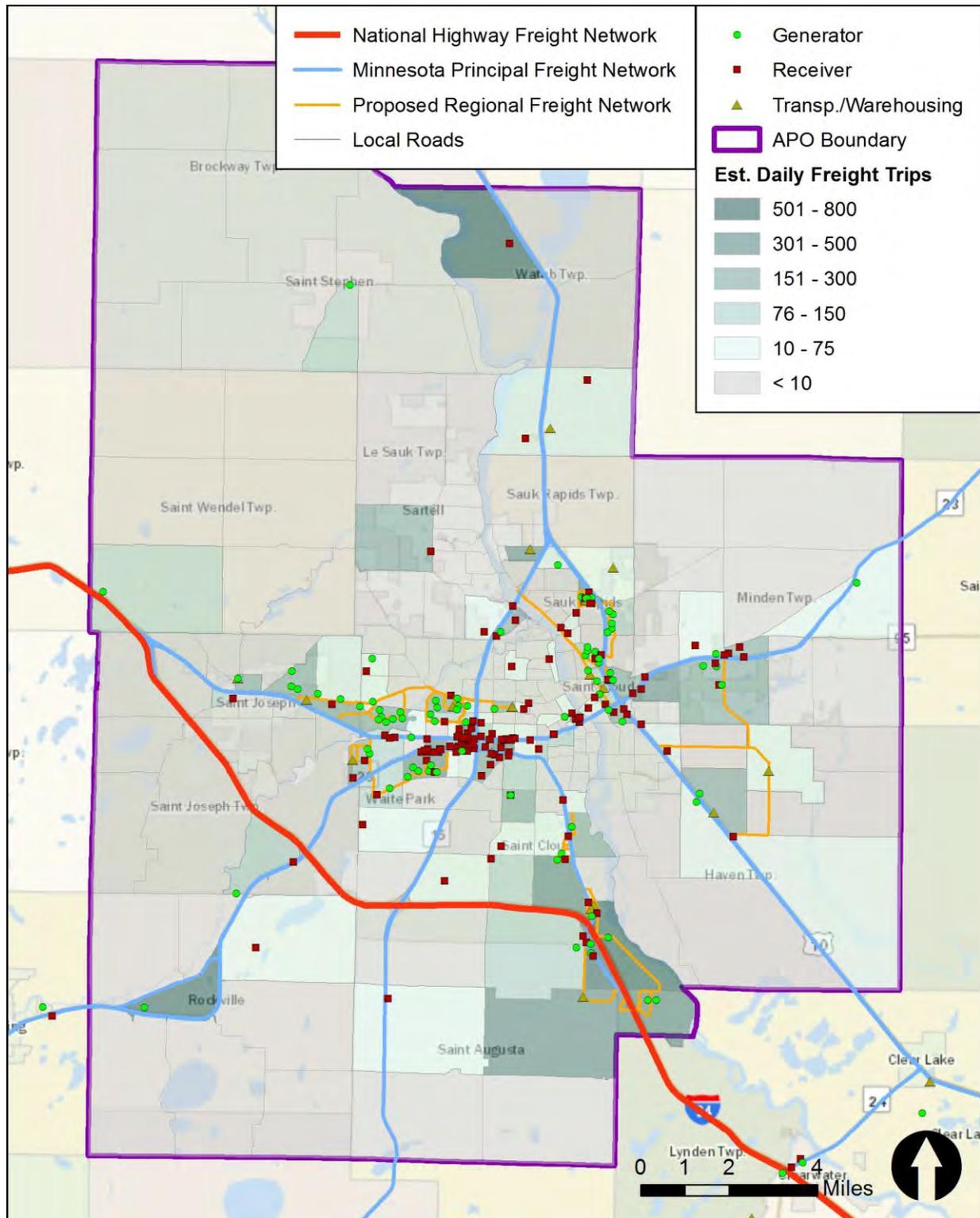


FIGURE 4.8 - NATIONAL, STATE, AND PROPOSED REGIONAL FREIGHT NETWORKS

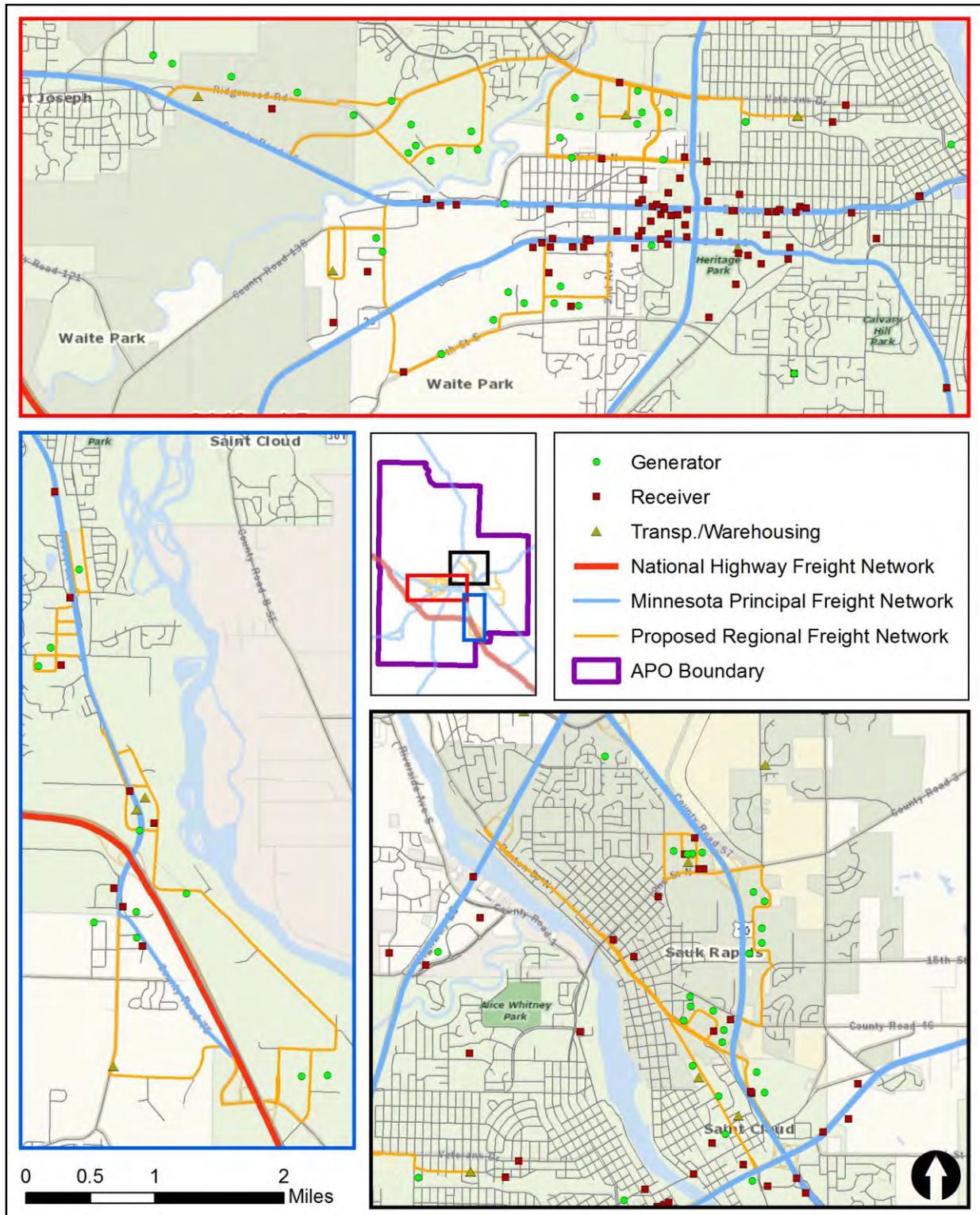


FIGURE 4.9 - REGIONAL FREIGHT NETWORK DETAILED VIEW

FREIGHT PERFORMANCE MEASURES

Performance measures are an effective tool that can be used to focus attention and decision-making on the regional freight planning goals. The APO can use a simple and streamlined performance management program that can improve communication with the public, the private sector, and elected officials. The measures will make the APO more responsive to freight sector needs. Internally, performance measures should serve three distinct purposes:

- **Planning:** Measure the effectiveness of planning elements and alternatives.
- **Implementation:** Enact agency goals within the programming and project selection processes.
- **Accountability:** Track and report progress towards achieving goals.

FEDERALLY REQUIRED FREIGHT PERFORMANCE MEASURES

While many of the Federally-required performance measures may benefit the safe and efficient movement of freight, the Federal Highway Administration (FHWA) requires only one freight-specific performance measure - the Truck Travel Time Reliability (TTTR) Index – which applies only to interstate highways. Details on how the TTTR is calculated can be found in Chapter 7 under Goal 4.

As previously noted, the purpose of this section is to identify important freight corridors at a local and regional level and help overcome any barriers to the safe and efficient movement of freight on that Tier 3 Regional Freight Network. Thus, performance measures for the Tier 3 Regional Freight Network will help the APO to identify barriers to the regional freight movement goals.

EXPLORING POTENTIAL REGIONAL FREIGHT PERFORMANCE MEASURES

Creating valuable performance measures can be complex. They are only valuable if they can be reproduced and sustained over time to make trends and effects of APO actions apparent. They need to be tested, refined, and regularly reviewed for relevancy. Like the freight system itself, performance measures cannot be static. While the measures will meet federal requirements, they must be tailored for the APO to derive maximum usefulness. Criteria for developing performance measures include:

- **Data availability:** The required data and analysis tools should be readily available or easy to obtain. The data should be reliable, accurate, and timely.
- **Strategic alignment:** The measures should align well with the identified goals.
- **Understandable and explainable:** The measures should be easy to communicate to external partners.
- **Causality:** The measures should focus on the items under the APO's control.

- **Decision-making value:** The measures should provide predictive, diagnostic and reporting value to decision makers.

Performance measures are a tool to achieve the plan, not a grade. They must be applied to **something within APO's control** – otherwise the performance measure has no value and only presents risk of the APO being held accountable for results they cannot influence. To help accomplish each goal, Figure 4.10 lists potential performance measures created with the intention of possible incorporation into this MTP.

This special set of performance measures should be applied to the Tiers 1, 2, and 3 designated freight networks to the extent that the required data is available. In those cases where data is not currently available, the APO should endeavor to collect or calculate the required data to help ensure that freight-movement goals are measured on all tiers of the freight network.

EVALUATION AND SELECTION OF POTENTIAL FREIGHT PERFORMANCE MEASURES

APO staff carefully evaluated and discussed all potential freight performance measures. In addition to the availability of data, the APO must also consider the amount of staff time that is available and required to complete the full set of performance measures.

- **Level of Service (LOS) or Vehicle/Capacity Ratio** – Level of service (LOS) is a qualitative measure used to describe the level of motor vehicle traffic flow. LOS categorizes traffic flow based on performance measures like vehicle speed, density, congestion, etc. The regional travel demand model (TDM) will produce an estimate of LOS for each roadway link included in the model network. However, APO staff feels model estimates are not as reliable or accurate as data measured in the field. Models are not reality, they are simplifications of reality. While models can provide valuable insights and some forecasting capability, important factors or details can be lost and the margin of error for estimated data points can be large. For this reason, it is preferable to directly collect the required data in the field. However, it would take some time to define exactly how the APO should measure LOS at a regional scale. A vehicle/capacity ratio is a more quantitative measure based on a peak hour traffic count and the hourly carrying capacity of the roadway based on its physical characteristics. While average daily vehicle counts for Federal-aid roadways are available from MnDOT, peak hour counts are not. Therefore, applying either of these performance measures to any of the freight network tiers would require a systematic and robust data collection effort by APO staff. The APO will investigate possibilities and options for collecting that necessary data, but implementation of this performance measure is probably years away.

- **Truck Travel Time Reliability (TTTR) Index** – This is the federally required performance measure for Interstate highways. The data necessary to calculate this performance measure for interstates is provided by MnDOT. The APO will implement this performance measure for the interstate highways as part of the adoption of this plan. For the Tier 2 and Tier 3 freight networks, the APO will explore possible data sources and/or cost-effective methods of collecting the necessary data.
- **Commercial Vehicle Crashes and/or Severity** - This data is provided to the APO when MnDOT provides their crash data set. The APO will implement this performance measure as part of the adoption of this plan.
- **Pavement and Bridge Ratings on Freight Network Corridors** – Bridge ratings for all bridges in the MPA are currently provided by MnDOT. Setting targets for bridge conditions is a federally-required performance measure and has already been adopted by the APO. Pavement condition is currently collected for the NHS by MnDOT, and provided to the APO. Counties collect pavement condition for CSAHs and County Roads (CRs). The APO contracted in 2015 and 2019 for pavement condition data for other Federal-aid system roadways not already being collected. The APO will ensure that the Tier 3 corridors are part of its pavement condition data collection effort going forward. This performance measure will be implemented as part of the adoption of this plan.
- **Transit Shed of Routes Connecting to Freight Clusters** – For purposes of this planning effort, the APO has defined a “freight cluster” as a TAZ which generates or receives more than 75 freight trips per day (see Figure 4.8 for specific locations). The APO currently possesses the ability to map those freight clusters that are within one-quarter mile of a fixed transit route. This performance measure will be implemented as part of the adoption of this plan.
- **Transportation Improvement Plan (TIP) Investment in Existing vs. New Roads** – APO staff currently possesses the ability to perform this calculation, and this performance measure will be implemented as part of the adoption of this plan.
- **Weight Restricted Bridges** – This information is provided to the APO by MnDOT as part of their regular bridge condition data set. This performance measure will be implemented as part of the adoption of this plan.
- **Transit Shed of Routes Connecting Environmental Justice (EJ) Populations to Freight Clusters** – The APO currently possesses the ability to map the areas in which EJ populations live at the Census block-group level. Layering that data with transit routes and freight clusters can be done, but it does not result in meaningful information. There are transit routes that serve almost all EJ block-groups and freight clusters. It would be more meaningful to map the places that the EJ populations live at a scale such as a city block or even individual residences, but doing so raises legitimate privacy concerns. The APO may explore future options for implementing this performance measure which provide meaningful information but which also protect individual privacy.

- Truck Volumes Within a Set Buffer of Freight Network** – Currently commercial truck volumes are only reported for the NHS. To capture truck volumes on the Tier 2 and Tier 3 Freight Networks would require a systematic program of traffic classification data collection on those networks. The APO will examine the possibility of creating such a program within existing staffing and budgetary limitations, but at this time cannot commit to adopting this performance measure.

Goals	Potential Performance Measures	Relative Costs in Dollars	Relative Costs in Labor	Time Frame
Improve congestion and reliability on the freight networks	Level of Service (LOS) or Vehicle/Capacity Ratio	\$\$\$	\$\$\$\$	Long
Improve congestion and reliability on the freight networks	Truck Travel Time Reliability (TTTR) Index	\$\$	\$\$\$	Medium
Reduce commercial vehicle crashes	Commercial vehicle crashes and/or severity	\$	\$	Short
Maintain the State of Good Repair on the freight networks	Pavement and bridge ratings on freight network corridors	\$	\$\$\$	Medium
Connect workers to freight clusters	Transit shed of routes connecting to freight clusters	\$	\$	Short
Capitalize on existing infrastructure	Transportation Improvement Plan (TIP) investment in existing vs. new roads	\$	\$\$	Short
Capitalize on existing infrastructure	Weight restricted bridges	\$	\$\$	Medium
Minimize negative impacts on the region's vulnerable populations	Transit shed of routes connecting Environmental Justice populations to freight clusters	\$	\$	Short
Minimize negative impacts on the region's vulnerable populations	Truck volumes within a set buffer of freight network	\$	\$\$	Medium

FIGURE 4.10 - FREIGHT GOALS AND POTENTIAL PERFORMANCE MEASURES

FREIGHT CONCLUSIONS

While freight is a critical aspect of the regional transportation system, it is only one aspect. Its recommendations must be applied within the context of the other regional needs and available resources. Features, such as freight goals and performance measures, must be integrated with the larger MTP goals and measures. This integration will be key to building an effective tool that can be used to focus attention and decision-making on the overall system.

Additionally, this chapter serves as a supplement for the APO’s day-to-day freight planning activities. Multiple freight networks already exist at the national and statewide level, but a critical component of planning for freight movement is ensuring the link between those networks and freight trip origins and destinations. This chapter developed a tiered network that identified how local economic activities move from their origin to the rest of the state and nation.

ROADWAY CONNECTIVITY

Connectivity refers to the directness of links and the density of connections in a street network. A highly connected network has many short links, numerous intersections, and minimal dead-ends. As connectivity increases, travel distances decrease and route options increase, allowing more direct travel between destinations and creating a more accessible and resilient system.¹ (Connectivity) affects the need to travel and the attractiveness of walking and cycling.²

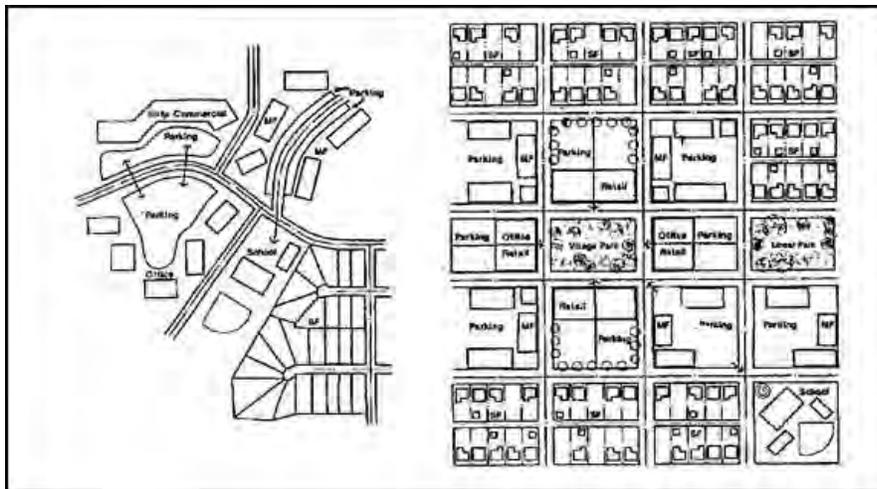


FIGURE 4.11 – EXAMPLES OF LOW-CONNECTIVITY (LEFT) AND HIGH-CONNECTIVITY (RIGHT) ROADWAY NETWORKS

¹ Victoria Transport Policy Institute. [Roadway Connectivity – Creating More Connected Roadway and Pathway Networks](https://www.vtpi.org/tdm/tdm116.htm) (https://www.vtpi.org/tdm/tdm116.htm).

² Welle et al. [Cities Safer by Design: Urban Design Recommendations for Healthier Cities, Fewer Traffic Fatalities](https://www.wri.org/publication/cities-safer-design). https://www.wri.org/publication/cities-safer-design. Page 24

Street connectivity, or the lack thereof, plays an important role in not only a jurisdiction's transportation network, but in the overall efficiency of that respective municipality or region. As with all other planning practices and recommendations, altering street connectivity can have positive or negative ramifications for a municipality and the citizens that live there.

Increasing street connectivity can:

- Develop a dense network of streets that can disperse traffic rather than concentrate it on arterials.
- Provide for continuous and more direct routes that decrease the distance needed to be traveled (including via transit) in order to efficiently complete a trip.
- Provide greater emergency vehicle access and reduced response time.
- Provide multiple alternative routes for roadway maintenance detours and evacuation routes in the case of disasters.
- Improve the quality of utility connections, and enable more efficient refuse and recycling collection and other transport-based community services.

However, an increase in street connectivity can also result in:

- Raised levels of through-traffic on existing residential streets.
- Increased infrastructure costs and impervious cover.
- **Increased homeowners' exposure to special assessments for maintenance of roadways.**
- Reduction of the amount of land and units able to be developed, sold, and taxed.

The APO is implementing performance-based planning techniques as a way to evaluate the roadway network and prioritize funding, roadway expansion, and roadway maintenance **projects. Because of this, the APO has researched ways to evaluate the MPA's street connectivity** and as such developed recommendations on ways to measure the existing and planned street connectivity.

The remainder of this section will discuss the impacts of better street connectivity on traffic congestion and vehicle miles traveled (VMT), non-motorized travel, greater emergency access and improving service efficiency, the role of street lengths, and how the APO applied the connectivity index to the MPA.

IMPACTS OF BETTER STREET CONNECTIVITY

LESS TRAFFIC CONGESTION AND FEWER VEHICLE MILES TRAVELED (VMT)

Published research in the 2003 Planning for Street Connectivity report, shows a relation **between street connectivity and a decrease in traffic on arterial streets.** "This reduction can be attributed to two factors: the dispersal of vehicle trips throughout the network, and a

decrease in total amount of vehicle travel”³. Greater street connectivity can reduce trip distances, reduce the number of trips, or encourage non-motorized modes of travel such as transit, bicycling, and walking.

*Existing studies seem to agree that average trip distance and congestion (relative to the intensity of land uses) will be lower in areas with a rectilinear grid street pattern than in areas with conventional suburban street patterns only if the number of trips made by car does not increase. In a study conducted in Portland, Oregon, analysts found that total vehicle miles traveled (VMT) were 43 percent less in a traditional neighborhood with a highly connected street pattern than in a conventional suburban neighborhood with a largely hierarchical street pattern.*⁴

Metro – the regional planning organization in the Portland, Oregon, area – conducted a study (documented within the 2003 Planning for Street Connectivity report) using the regional travel demand forecasting model to compare street connectivity in five neighborhoods in the Portland area.

*The study found that medium and high levels of connectivity improved traffic flow on arterials. Overall, vehicle hours of delay, vehicle miles traveled, and average trip lengths declined in each area. When connectivity increased from low to medium levels, delay dropped by an average of 14 percent while both vehicle miles traveled and average trip length fell by an average 2 percent. Traffic volumes approaching key intersections also declined by 10 percent. Results for individually selected segments of particular arterials were mixed, but, on average, traffic volumes decreased by 9 percent when connectivity increase from low to medium. The researchers attribute the mixed results to the fact that local trips made up a very small percentage of total traffic on arterials at the start, on average about 4 percent for the low-connectivity scenario.*⁵

The changes in route choice can also have a negative impact. If average annual daily traffic (AADT) is not declining overall but is declining only on arterials, this means that a high level of street connectivity is shifting traffic to another street. More often than not, this means more traffic on local neighborhood streets. This increase in cut-through traffic in the neighborhoods is the result of drivers avoiding congested intersections on arterials. “High connectivity may reduce traffic on arterials but will do so only at the cost of increasing traffic on residential streets. The challenge for communities is to find an appropriate balance between these potentially competing goals.”⁶

³ Handy, Paterson, and Butler. [Planning for Street Connectivity: Getting From Here to There](https://www.planning.org/publications/report/9026848/). (https://www.planning.org/publications/report/9026848/). Page 14.

⁴ Ibid, page 14

⁵ Ibid, page 15

⁶ Ibid, page 16

FACILITATING NON-MOTORIZED TRAVEL

Increased street connectivity not only benefits automobile users, but may have a potential benefit for increased non-motorized travel.

Pedestrian destination or points of interest are normally places that people find useful or interesting or where employment, retail, and leisure uses concentrate. High-quality networks should be provided particularly between key destinations such as residential areas, schools, shopping areas, bus stops, stations, and places of work.⁷

One tenant of a highly-connected street network is shorter block lengths. Shorter block lengths can increase the attractiveness for pedestrians and bicyclists to access nearby amenities and other alternative forms of transportation such as bus and rail stops.

Longer block lengths allow for higher vehicle speeds and are considered unsafe for pedestrians. With fewer junctions that interrupt travel for vehicles, coupled with crosswalks found primarily at intersections – indirectly encouraging unsafe midblock crossings – pedestrian safety can potentially be compromised. More junctions mean more places where cars must stop and pedestrians can cross.⁸

GREATER EMERGENCY ACCESS AND IMPROVING SERVICE EFFICIENCY

Strong supporters of greater connectivity include: emergency medical services, refuse collectors, police, fire departments, and other municipal service providers. The rise in suburban culs-de-sac have produced obstacles for service providers, particularly for emergency services that require quick response times. Culs-de-sac only have one entrance so the first emergency response vehicle to the scene can block subsequent arrivals.

Refuse collectors and police also find that the “doubling back” or “dead heading” that occurs on dead ends adds time and cost to their service. All service providers find discontinuous transportation networks difficult to navigate. Greater connectivity can help to improve the quality and efficiency of emergency and other municipal services.⁹

THE ROLE OF STREET WIDTHS

Most municipalities with ordinances on street connectivity also have regulations on street widths and rights-of-way. According to 2003 Planning for Street Connectivity report these street widths are often narrower than conventional standards.

“The reasons for adopting these narrower standards are twofold: to improve the quality of life in the community and to reduce the potential cost of connectivity requirements for developers.”

⁷ Welle, page 24

⁸ Ibid, page 23

⁹ Handy, page 17

The study states that narrow streets tend to encourage motorists to travel at slower speeds, which can, in turn, increase the attractiveness of other modes of transportation such as bicycling and walking.

As for developers, these narrow street standards help mitigate at least some of the cost increases that would result from the increase in linear feet needed to comply with the **connectivity ordinance**. “The amount of space devoted to streets is especially important to developers, both because street pavement costs them money and because street space **does not produce revenues.**”¹⁰

CONNECTIVITY INDEX

To **determine the level of street connectivity within the APO’s MPA, APO staff have elected to utilize a connectivity index**. This index is comprised of three factors: average block length, links, and nodes.

AVERAGE BLOCK LENGTH

According to the 2004 *Measuring Network Connectivity for Bicycling and Walking* by Jennifer Dill, **block lengths “can be measured from the curb or from the centerline of the street intersection.”**¹¹ The average block length is based on the sum of the length (in feet) of the roadway or pathway segment between either an intersection or end of a cul-de-sac divided by the total number of those intersections or culs-de-sac.

LINKS AND NODES

Links, according to Dill, are those roadway or pathway segments between either an intersection or the end of a cul-de-sac. Nodes are those intersections or the ends of culs-de-sac. The ratio of links to nodes indicates more connections between roads and fewer dead-ends. However, in the absence of considering block length, it is theoretically possible to **have a “perfectly” connected network on a scale where one** block might be one-mile long.

CALCULATING THE CONNECTIVITY INDEX

The connectivity index is calculated using the average block length divided by the link-node ratio.

Taken together, a lower connectivity index means there are more connections between roadways, fewer dead-ends and culs-de-sac, and block lengths tend to be shorter.

Average Block Length = sum of the length of all roads (in feet) between intersections or to the end of a cul-de-sac within a given area/(number of all intersections + number of all culs-de-sac within a given area).

¹⁰ Ibid, page 18

¹¹ Dill, Jennifer. [Measuring Network Connectivity for Bicycling and Walking](http://reconnectingamerica.org/assets/Uploads/TRB2004-001550.pdf). (<http://reconnectingamerica.org/assets/Uploads/TRB2004-001550.pdf>).

Connectivity Index = $1 / (\text{Avg. Block Length} / (\text{number of links} / \text{number of nodes})) * 1000$

APPLYING THE CONNECTIVITY INDEX

The APO’s goal in using the connectivity index is to assist member jurisdictions within the MPA in lowering VMT and travel time while increasing route options for all users.

As shown in Figure 4.12, 8.4 percent of centerline road miles in the APO MPA have a connectivity index below 500. (Given the way the index is calculated, a lower score means the network is more highly connective.) Those areas, as can be seen in Figure 4.13, are areas that were typically developed in the late 19th and early 20th centuries. These roadway networks generally consist of a traditional grid system.

Connectivity Index	Centerline Miles	Percent of Total Centerline Miles
<499	124.4	8.4%
500-999	493.1	33.2%
1,000-1,499	203.8	13.7%
1,500-1,999	231.3	15.6%
>2,000	430.9	29.0%

FIGURE 4.12 – SAINT CLOUD MPA 2018 CONNECTIVITY INDEX TABLE SUMMARY

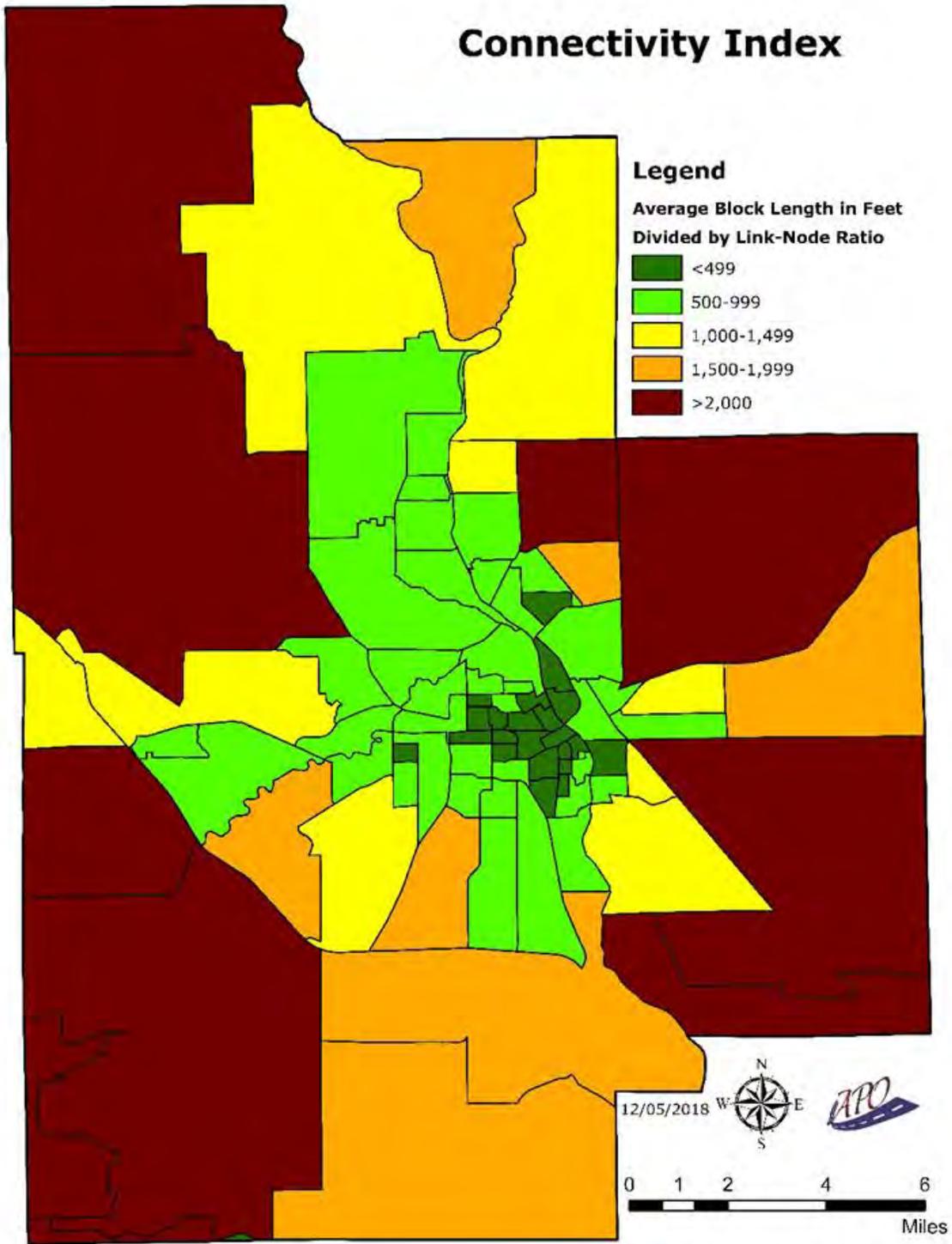


FIGURE 4.13 – SAINT CLOUD MPA 2018 CONNECTIVITY INDEX MAP

The remaining 91.6 percent of centerline miles within the MPA tend to be found in neighborhoods that are characterized by suburban, curvilinear-type streets, longer block lengths, and/or more culs-de-sac. These characteristics have resulted in a decrease in connectivity.

The outlying rural areas within the MPA – typically characterized with a connectivity index of greater than 2,000 – present an opportunity to improve the connectivity index as future development occurs within those areas.

As further development occurs within the MPA, applying the connectivity index has the potential to assist planners and engineers in:

- Increasing connectivity between residential areas and arterials.
- Planning for future street connections through stub-out requirements.
- Decreasing minimum street widths.
- Promoting the use of traffic calming devices.
- Restricting the use or length of culs-de-sac.
- Discouraging gated communities.

TRANSPORTATION SECURITY

Following the terrorist attacks of Sept. 11, 2001, much greater emphasis was placed on planning for transportation security. The challenge for MPOs has always been a lack of **clarity regarding what exactly “transportation security” means, and what role – if any – MPOs can or should play in it.**

Immediately following the 9/11 attacks, there was a lack of coordination in managing the New York City transportation systems. In some cases, transportation operating agencies did not know what other local agencies were doing, and law enforcement agencies were telling transportation operators to cease service (to prevent the escape of any perpetrators or accomplices) at the time when services were needed to move people away from the scene. But MPOs – with some exceptions mostly in very large urban areas – do not operate or manage transportation systems. In the event of a terrorist attack in the Saint Cloud MPA, the APO would have no role to play in operating or managing transportation systems. So, **what does “transportation security” mean for the Saint Cloud APO?**

By its nature, planning for emergencies and disasters includes not only planning for man-made events (e.g., acts of terror), but also naturally occurring events like severe weather and flooding. Transportation security planning has evolved somewhat since 9/11 to include planning for natural but destructive events, and might more appropriately be called **“disaster planning” rather than “security planning.”** In a real sense, it makes no difference **if, for example, a bridge was destroyed by a flood or tornado rather than a terrorist’s bomb.** The point is the bridge is unusable and that creates a transportation problem.

A white paper by Dr. Michael D. Meyer of the Georgia Institute of Technology titled [The Role of the Metropolitan Planning Organization \(MPO\) in Preparing for Security Incidents and Transportation System Response](https://bit.ly/2SvU1Uk) (https://bit.ly/2SvU1Uk) attempted to examine possible roles for MPOs in the realm of transportation security. The paper did not consider the relative size of the MPO nor the size of urban area for which it was responsible. Instead, it attempted to generalize sufficiently to be applicable to all MPOs in all urban areas. Dr. Meyer identified six phases of security incidents and five possible roles for MPOs in each phase. The resulting matrix looked like this:

Possible MPO Security Role

Incident Phase	Management & Operations Planning	Forum Convener	Consensus Champion	Plan Developer	Implement Operations Strategies
Prevention	Lead	Lead	Lead	Lead	Minor
Response/Mitigation	Lead	Lead	Lead	Lead	Lead
Monitoring/Information	Lead	Lead	Lead	Lead	Minor
Recovery	Lead	Lead	Lead	Minor	Minor
Investigation	Lead	Minor	Minor	Minor	Minor
Institutional Learning	Lead	Lead	Lead	Lead	Lead

Lead	Lead MPO Role, Possible, Especially for Some Components
Minor	Minor or Supporting MPO Role Possible
No Role	No Likely MPO Role

FIGURE 4.14 – POSSIBLE TRANSPORTATION SECURITY ROLES FOR MPOS

In general, the paper concludes that given the strength of MPOs as coordinators and conveners of meetings among many stakeholders working toward regional consensus, MPOs were well suited to continue that role regarding planning for transportation security. **Additionally, given MPO’s strengths in technical analysis of data, it could also serve a supporting role in the development of the disaster and emergency plans of other agencies.** To date, the APO has not been approached to serve any role in the disaster planning efforts

of our jurisdictional partners. However, APO staffers are prepared to support the jurisdictions if called upon to do so.

Federal planning regulations (see 23 CFR §450.322(h)) state, “The metropolitan transportation plan should include... (as appropriate) emergency relief and disaster preparedness plans and strategies and policies that support homeland security (as appropriate) and safeguard the personal security of all motorized and non-motorized users.” APO staff reviewed the hazard mitigation plans and emergency operations plans of the member jurisdictions in order to ascertain if there were any appropriate projects, strategies, or policies that should be carried forward into this document. Given the nature of planning for disasters – that is, safeguarding the personal security of citizens – it is not always prudent to widely distribute the information from emergency and disaster preparedness plans. Therefore, we have chosen not to reprint the details from those plans in this document. However, following review of the documents, APO staff did not identify any appropriate transportation-related projects, strategies, or policies for consideration as part of this MTP.

Given the overall importance of disaster preparedness and response, APO staff believes it would be worthwhile to facilitate a general discussion among the jurisdictional members as to the current state of disaster preparedness planning, and develop a general consensus as to:

1. How do we want to define transportation security locally?
2. What role, if any, can or should the APO play in transportation security?
3. How do we want to measure the attainment of transportation security?

ACTIVE TRANSPORTATION

INTRODUCTION

Providing a variety of modes of transportation is critical for the movement of people. Active transportation is one way of improving mobility and accessibility for all people, regardless of income, ability, or age. Active transportation refers to any form of human-powered transportation, such as walking, cycling, using a wheelchair, in-line skating, or skateboarding. Engaging in active transportation is as simple as walking to the grocery store or cycling to work or school. According to U.S. DOT, in order to improve active transportation, agencies such as the APO and its partners must create opportunities for people to shape their day around multiple modes of transport.

Improving bicycle and pedestrian facilities as a way to improve connectivity between important destinations is a crucial component in getting a person active throughout the day. The goal of active transportation is to limit the dependency on motor vehicles while increasing and promoting such programs, partnerships, and infrastructure.

TYPES OF PEOPLE WHO BIKE AND WALK

PEOPLE WHO BIKE

Generally, people’s attitude toward cycling can be thought of as belonging to one of four categories as referred to in Figure 4.15. A more in-depth definition can be found in Figure 4.16.

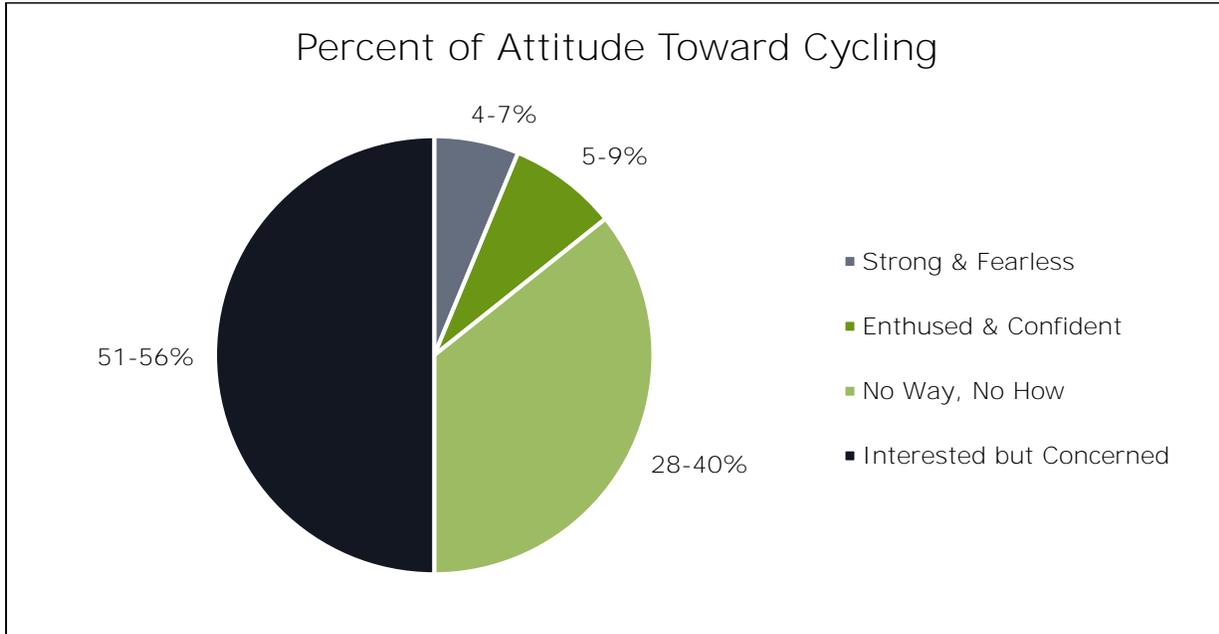


FIGURE 4.15 – THE FOUR TYPES OF PEOPLE WHO BIKE

Type of Person Who Bicycles	Definition
Strong & Fearless	“Will ride regardless of roadway conditions.”
Enthused & Confident	“Comfortable sharing the roadway with automotive traffic, but they prefer to do so operating on designated bicycle facilities.”
No Way, No How	“Not interested in bicycling at all for reasons of topography, inability, or simply a complete and utter lack of interest.”
Interested but Concerned	“Curious about bicycling...they like riding a bicycle, but they are afraid to ride in some conditions.”

FIGURE 4.16 – THE DEFINITIONS OF THE FOUR TYPES OF PEOPLE WHO BIKE

By identifying and engaging with all four population types, it is easier to decipher what kinds of facilities are needed within a community.

PEDESTRIANS

A pedestrian is any person who walks and/or rolls within the transportation network. MnDOT defines two types of pedestrians: **assisted and unassisted**.



FIGURE 4.17 – A BREAKDOWN OF PEDESTRIANS WITHIN A COMMUNITY

At some point during the day everyone can be considered a pedestrian. Providing pedestrians with the resources and infrastructure needed for active transportation can lead to smarter community growth and an overall increase in healthy lifestyle¹².

¹² Litman, Todd. "[Active Transportation Policy Issues.](#)" Victoria Transport Policy Institute, For the Go For Green "National Roundtable on Active Transportation", 10 Apr. 2003. (https://www.vtpi.org/act_trans.pdf).

WHY IS IT IMPORTANT TO PLAN FOR ACTIVE TRANSPORTATION?

Active transportation is shown to impact our communities in at least four ways: boosting our local economies, improving our physical health, promoting environmental sustainability, and providing affordable transportation access for everyone¹³. By creating a balanced transportation system through cost-effective investments, the MPA has the potential to offer improved active transportation and attain the benefits associated with it.

ECONOMIC DEVELOPMENT

According to a 2011 national study on pedestrian and bicycle infrastructure, active transportation infrastructure creates more jobs than road infrastructure¹⁴. It has been shown to contribute to local economies across the United States through job creation, tourism, commercial businesses, and increases in real estate value.

Active transportation projects create direct, pre-project jobs such as engineering and planning. Indirect jobs are also created in products and service industries required in the construction phase such as cement manufacturing, trucking, etc.

Following construction, active transportation facilities can increase tourism and commercial business activity in both affluent communities and communities that are facing economic hardship. The 2011 study *BEAT The Path to Health* by ActNowBC.ca illustrates that active transportation infrastructure creates a substantial return on investment, allowing funds to circulate within the local economy¹⁵. When people spend time and money at local businesses while walking or biking it encourages active transportation.

Real estate values increase when multi-use paths and trails are constructed in neighborhoods. Homes that are located near trails are more likely to sell in a shorter period of time than homes not in close proximity to a trail according to a 2001 study by Texas A&M University¹⁶.

¹³ Cervero, Robert. "[Transport Infrastructure and the Environment: Sustainable Mobility and Urbanism.](https://iurd.berkeley.edu/wp/2013-03.pdf)" Berkeley Institute of Urban and Regional Development (IURD), Oct. 2013. (<https://iurd.berkeley.edu/wp/2013-03.pdf>).

¹⁴ Garrett-Peltier, H. 2011. [Pedestrian and Bicycle Infrastructure: A National Study of Employment Impacts.](https://bit.ly/2NzBUcU) Political Economy Research Institute – University of Massachusetts Amherst. (<https://bit.ly/2NzBUcU>).

¹⁵ Built Environment & Active Transportation. "[The Benefits of Investing in Active Transportation.](https://bit.ly/2IzOx6J)" Physical Activity Strategy. Ed. Andrea Keen. (<https://bit.ly/2IzOx6J>).

¹⁶ Crompton, John L. "[Perceptions Of How The Presence Of Greenway Trails Affects The Value Of Proximate Properties.](https://bit.ly/2C3GMnh)" Sustainable Trails: Doing It Right the First Time - American Trails, Sept. 2001. (<https://bit.ly/2C3GMnh>).

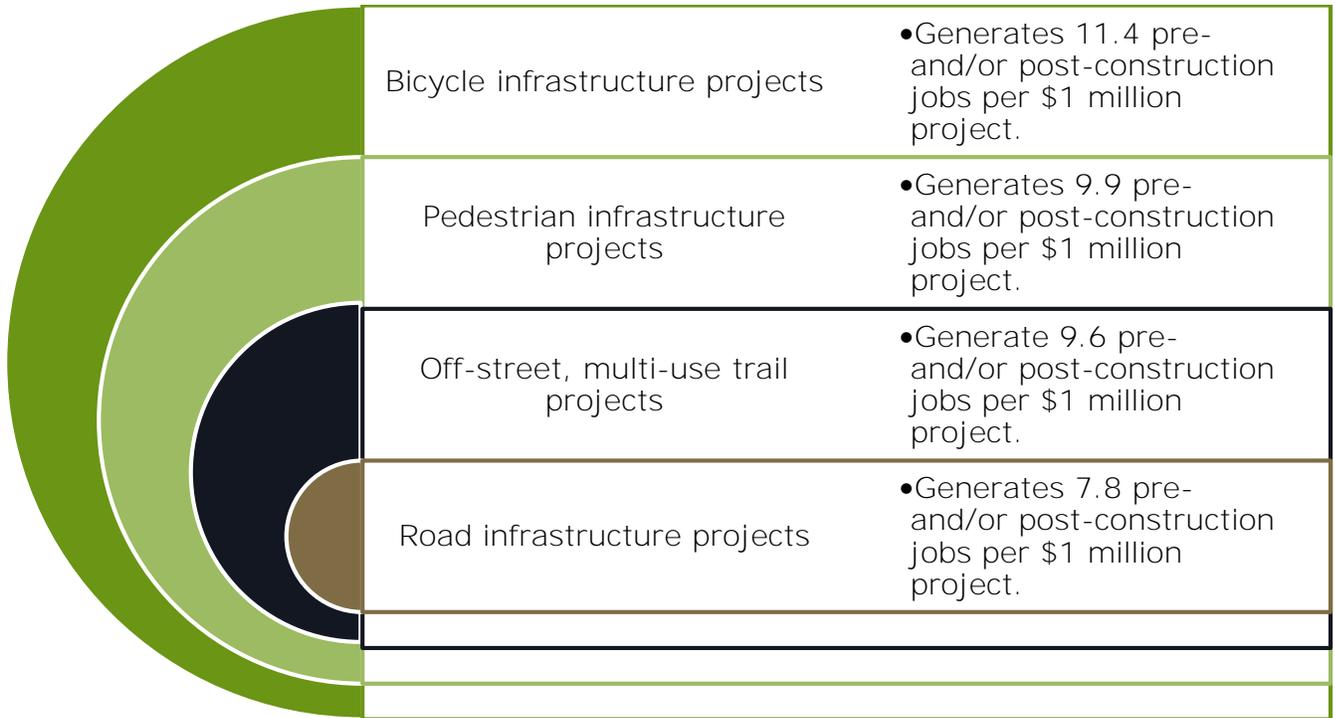


FIGURE 4.18 – JOB CREATION IMPACTS OF ACTIVE AND NON-ACTIVE INFRASTRUCTURE PROJECTS

HEALTHY COMMUNITIES

A June 2000 study by Lars Bo Andersen, Ph.D., highlighted the benefits daily physical activity has on the life expectancy of the average person.¹⁷ Active transportation provides opportunities for citizens to live healthier, more active lifestyles. The APO will continue to work with partners such as CentraCare Health; Stearns, Benton, and Sherburne Statewide Health Improvement Partnerships (SHIP) – a program working to create healthier communities across Minnesota by expanding opportunities for active living, healthy eating, and a tobacco-free living – as well as MnDOT officials to plan active transportation infrastructure that will help reduce the occurrence of chronic diseases.¹⁸

¹⁷ Andersen, L., Schnohr, P., Schroll, M. and Hein, H. 2000. *All-Cause Mortality Associated with Physical Activity During Leisure Time, Work, Sports and Cycling to Work*. Archives of Internal Medicine. 160: 1621–1628. (<https://bit.ly/2MDdAe3>).

¹⁸ MnDOH. "Physical Activity Basics: Taking Steps for Better Health." Minnesota Dept. of Health, 2018. (<https://bit.ly/2K8pECp>).

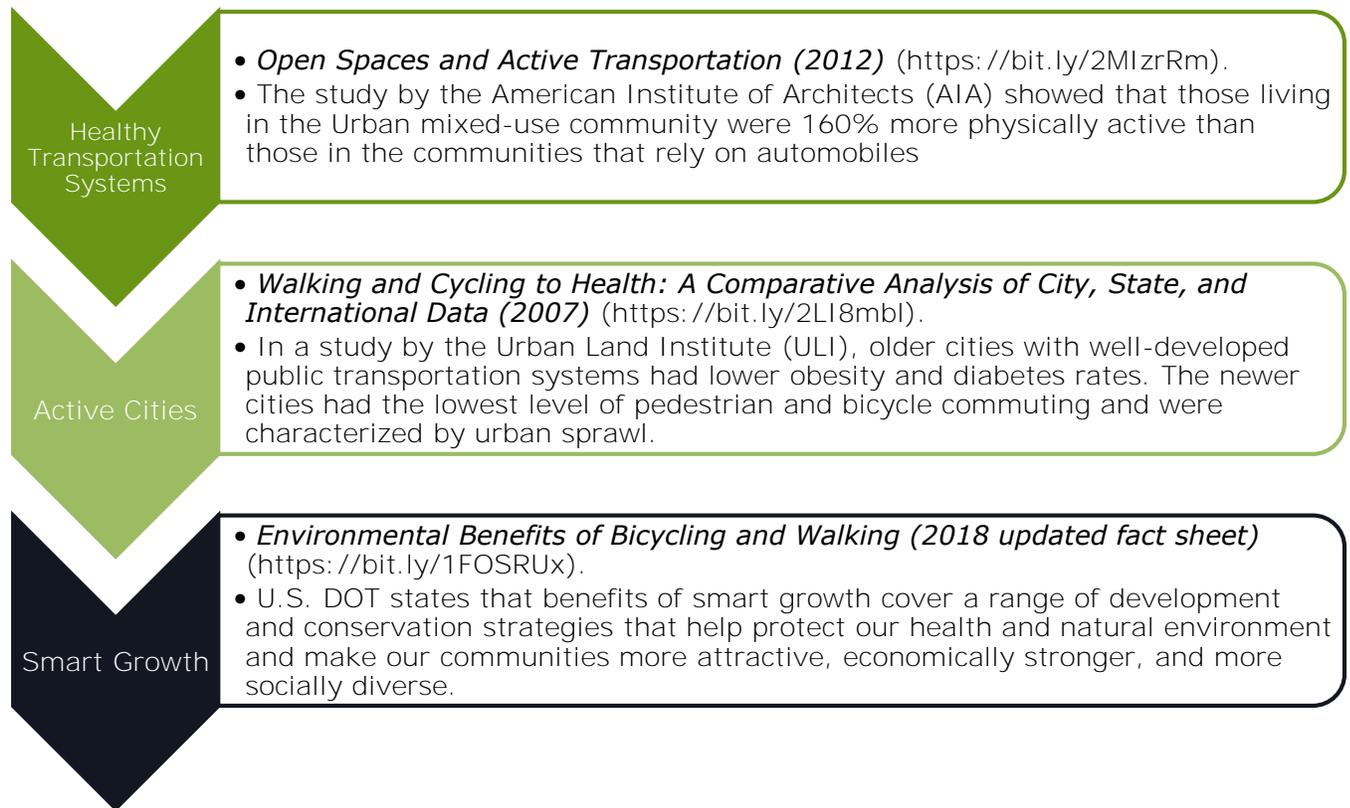


FIGURE 4.19 – THE THREE NECESSITIES TO STRENGTHEN COMMUNITIES IN ACTIVE TRANSPORTATION

ENVIRONMENTAL SUSTAINABILITY

Active transportation features elements such as open spaces, parks, trails, and greenways that are essential for urban conservation efforts and environmental sustainability. Transportation decisions directly affect the green infrastructure surrounding it, with direct impacts on air and water quality. Active transportation infrastructure conserves our natural resources by removing vehicles from congested routes and diminishing the need for highway expansion.

TRANSPORTATION EQUITY

According to a study out of the Georgia Institute of Technology, in the United States there are 80 million Americans – approximately 25 percent of the population – who are unable to independently operate a motor vehicle. Those individuals include people with disabilities, youth, the elderly, and those who are economically disadvantaged¹⁹. U.S. DOT states that

¹⁹ Baxter, John. 2011. [Essential Factors of Active Transportation: Analysis and Recommendations for Downtown Atlanta](https://b.gatech.edu/2LEUFdi). Master of City and Regional Planning Option Paper. (<https://b.gatech.edu/2LEUFdi>).

low income families are nine times more likely to not own a vehicle compared to their counterparts who are above the poverty line²⁰. Therefore, if the automobile was the only possible way to get around, these vulnerable groups of people are placed at a higher economic and social disadvantage because of reduced accessibility to work, services, and social networks. Active transportation facilities provide citizens with more travel options. Safe and accessible sidewalks, trails, and bikeways remove economic and social barriers by providing options for low-cost modes of transportation.

CHALLENGES

As identified in the Existing Conditions chapter, members of the public and interested stakeholders are concerned about improving the walking and bicycling culture within the Saint Cloud MPA. This section will detail the existing challenges and potential solutions to improve the current bicycle and pedestrian network.

In the study *Overcoming Barriers to Active Transportation: Understanding Reasons for Not Cycling in a University Setting* by Kevin Manaugh (2015)

(<https://trid.trb.org/view/1338143>), general barriers to active transportation include distance, effort, safety, cost, presence of infrastructure, and comfort. Regions that have a limited active transportation presence typically have one or more of these barriers present.

Initial public input for this MTP regarding active transportation identified all of Manaugh’s barriers as obstacles within the Saint Cloud MPA.



FIGURE 4.20– SIDEWALK CLOSED SIGN IN SAINT CLOUD
 Photo courtesy of Saint Cloud APO

²⁰ "Transportation Equity." *Pedestrian & Bicycle Information Center*, U.S. DOT, 2017. (<http://bit.ly/2IHfMfq>)

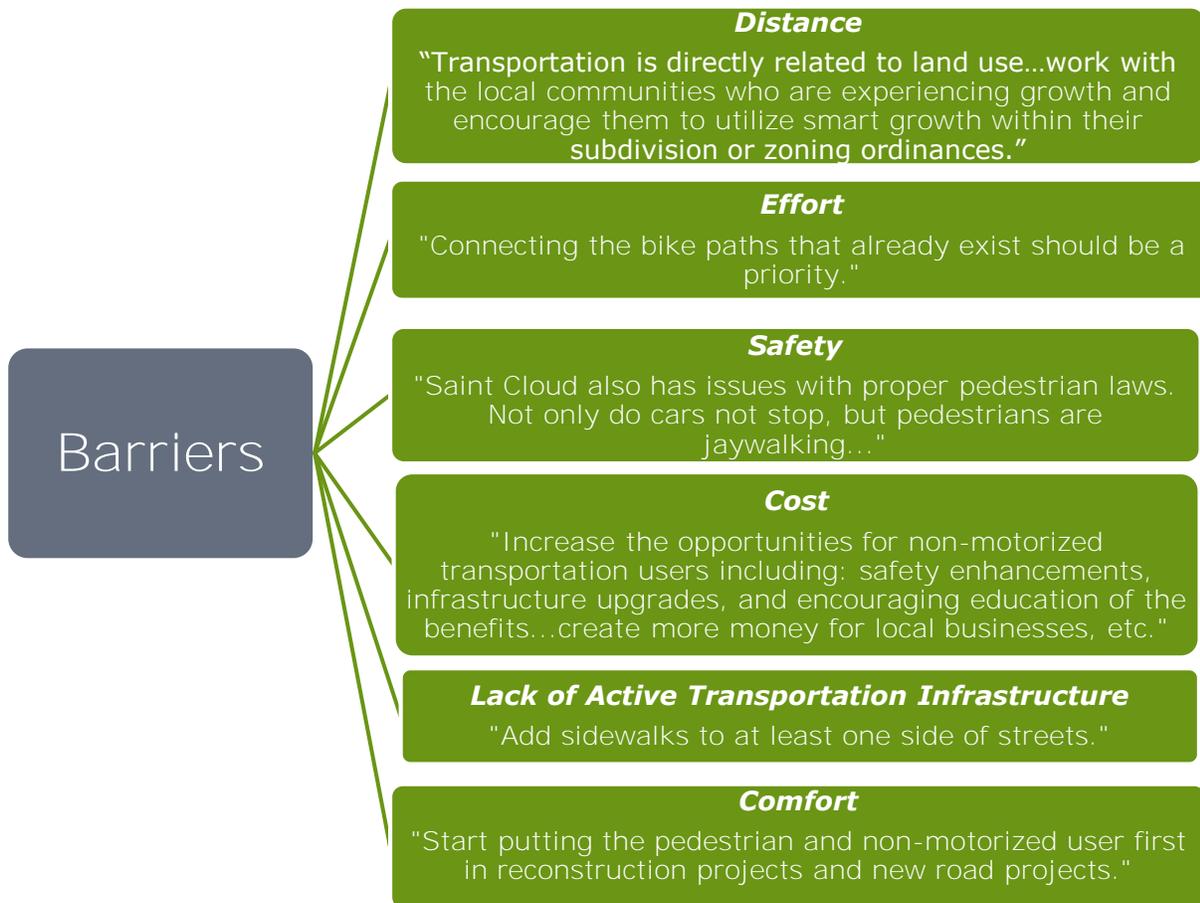


FIGURE 4.21 – CORRELATION OF ACTIVE TRANSPORTATION BARRIERS WITH PUBLIC COMMENTS

DISTANCE

Distance, as inferred from the Manaugh study, is defined as the gap to be traveled from one point to the next. The study found that on average, distance begins to become a barrier when the travel origin and destination is separated by a length greater than 4.5 miles.

In the MPA, approximately 68 percent of residents live less than 10 miles from their workplace. However, according to the U.S. Census Bureau 2011-2015 American Community Survey (ACS) 5-Year Estimates, only about 4.5 percent of the workforce over the age of 16 bike or walk to work.

In a February 2017 Mobility Lab article by Mike McLeish titled ["How far is too far to bike to work?"](https://bit.ly/2OHVK5t) (https://bit.ly/2OHVK5t) McLeish offers up an answer to this gap by listing the distance (miles) and rating the difficulty of the trip based on his research through many discussion forums and questioning veteran cyclists.

Distance (miles)	Difficulty
0-5	Easy
6-10	Do-able
11-15	Hard
16+	Very Hard

FIGURE 4.22– OPINION OF CYCLISTS COMPARING THE DISTANCE TRAVELED TO THE DIFFICULTY FOR AVERAGE CYCLISTS

When considering the 10 miles or less workplace commute distance for the majority of residents in the MPA, the rankings range from Easy (0-5 miles) to Do-able (6-10 miles) based on the chart created by McLeish. It should be noted that the relative difficulty assigned to each distance is based on an assessment of average cyclists. Obviously, the health and ability of any potential cyclist is going to help determine how easy or difficult their ride may be. As with most skills, the more one cycles, generally speaking, the easier it becomes. A new cyclist who may find a two-mile ride difficult today, with time and experience, will usually find that the ride becomes easier and easier.

EFFORT

Effort, according to Manaugh, can be interpreted as the overall work that is exerted or perceived to be exerted to utilize active transportation.

In the Saint Cloud MPA, the majority (65 percent) of commuters travel 20 minutes or less to work by vehicle according to the [2011-2015 ACS 5-year estimates data](http://bit.ly/2IL8Rdv) (http://bit.ly/2IL8Rdv) with nearly 20 percent traveling less than 10 minutes by vehicle.

According to a 2008 study done by Rails to Trails Conservancy titled [Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking](https://bit.ly/2LsylmG) (https://bit.ly/2LsylmG) approximately half of all trips nationwide can be completed within a 20 minute bike ride, which roughly equates to three miles or less. A quarter of all trips can be completed within a 20 minute walk, which is approximately one mile or less.

The study goes on to state, **"riding a bicycle for three miles takes less than 20 minutes – an effort feasible for most ages and fitness levels."**

Rails to Trails Conservancy argues that depending on traffic conditions and available infrastructure – a point that will be touched on later – travel times of drivers and bicyclists

could be comparable. “Even walking can be surprisingly competitive for trips up to one mile, depending on availability of parking and the quality of pedestrian infrastructure.”

SAFETY

Safety can play a major role in whether people choose to walk or bike. According to Manaugh, safety was the number one concern identified among what he describes as “**potential**” cyclists – those who would be most likely to utilize active transportation but are currently not.

This concern has been raised by citizens within the Saint Cloud MPA as well. Data from the ACS – as found in the Existing Conditions chapter – indicates an upward trend for both fatalities and serious injuries when it comes to motor vehicle crashes involving pedestrians and/or bicyclists within the MPA.

Another safety concern in the MPA involves major transportation facilities such as freeways, arterial roadways, and railroads. Commonly, these facilities lack appropriate infrastructure to make crossing them by active transportation modes as safe as possible. Thus these corridors become barriers to active transportation.

COST

Cost can be broken down into two categories: the opportunity cost to utilizing active transportation and the cost for new and/or maintained active transportation infrastructure.

OPPORTUNITY COST TO USERS

Traveling either by bicycle or by walking has the potential to add additional time on to a commute. This, coupled with effort and distance barriers previously discussed, can ultimately culminate in people opting to forgo active transportation alternatives.

The economic principle of opportunity cost can be considered another barrier. If the potential gain from using active transportation – exercise, reduction of environmental footprint, etc. – does not outweigh the marginal cost of using active transportation – longer commute time, change in daily routine, etc. – people will not choose active transportation.

COST FOR NEW AND/OR MAINTAINED INFRASTRUCTURE

Without a dedicated source of funding, it is difficult for active transportation initiatives to occur. In the past, nationwide data has shown there was a connection between national active transportation funding and overall rates of active transportation participation.

According to Edward Weiner, author of [Urban Transportation Planning in the United States: History, Policy, and Practice](https://bit.ly/2wQaWqM) (https://bit.ly/2wQaWqM), bicycling and walking in the 1990s were considered “**the forgotten modes**” of transportation. “An average of just \$2 million of federal transportation funds were spent each year on bicycle and pedestrian projects, and the percentage of commuting trips made by bicycling and walking fell from a combined 10.6

percent in 1960 to 3.9 percent in 1990.” Despite the improvements in federal funding over the last few decades, active transportation still accounts for only 2 percent of total transportation costs nationally.

Within the Saint Cloud MPA, local jurisdictions compete for limited statewide active transportation-specific funding at a MnDOT district level. Federal and state project funding requires, at a minimum, a 20 percent local match.

LACK OF ACTIVE TRANSPORTATION INFRASTRUCTURE

The majority of comments received and documented in the Existing Conditions chapter concerning active transportation focus on the lack of infrastructure.

While Manaugh specifically sites the lack of bicycle parking, active transportation can also include pedestrian infrastructure such as accessible sidewalks and other bicycle infrastructure such as on-road bicycle lanes.

Saint Cloud Metro Bus has made some shifts in developing active transportation infrastructure. As of the drafting of this plan all Metro Bus FR and DAR buses within its fleet are equipped with bicycle racks.

While the Saint Cloud MPA currently has 527 miles of sidewalk, 34 miles of on-road bicycle lanes and 265 miles of off-road multi-use trails – as displayed in Figure 4.22 – a lack of connectivity among this infrastructure has been identified as a concern among the public.

COMFORT

Most people are unlikely to choose active transportation if they perceive the distance to be too great, if the high levels of physical exertion are too much, if it is perceived to be unsafe, if it is inconvenient to compete with driving, or if there is a general lack of ease when it comes to planning a route. The overall acceptance of active transportation by the population and the way in which bicyclists and pedestrians are treated by motorized vehicle drivers can **also impact an active transportation user’s** sense of comfort.

Other factors including heat, cold, rain, snow, and terrain can cause potential active transportation users to choose a more conventional option. In Central Minnesota, cold and snow are obvious issues to be dealt with, but other cold-weather cities such as Minneapolis and New York have demonstrated that providing good active transportation infrastructure and maintaining it throughout the winter can help decrease the inhibiting effect of cold and snow. Additionally, the relatively flat terrain in the MPA may help make active transportation trips a more viable option.

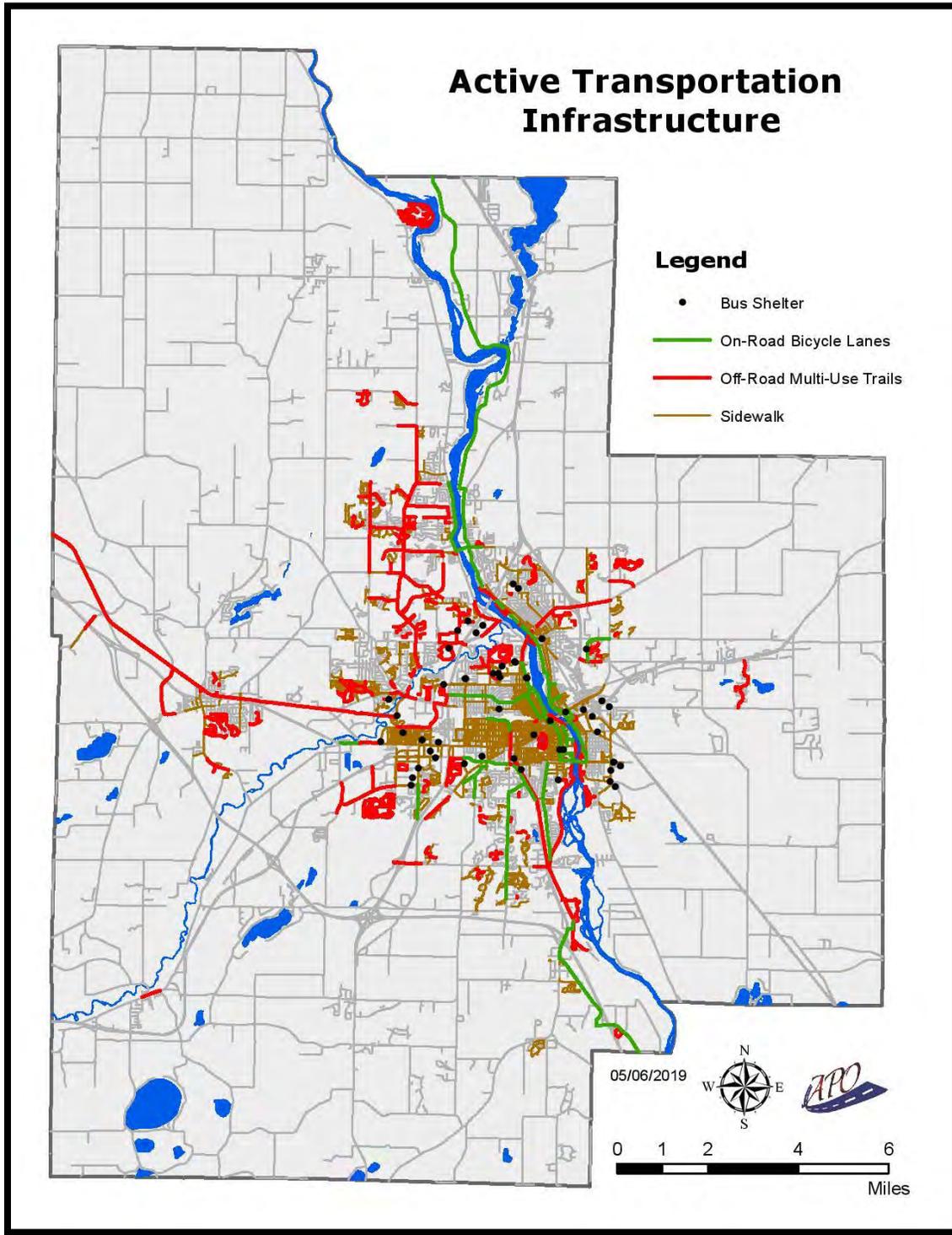


FIGURE 4.23 – CURRENT BUS STOPS, ON-ROAD BICYCLE LANES, OFF-ROAD MULTI-USE TRAILS, AND SIDEWALKS LOCATED WITHIN THE SAINT CLOUD MPA.

POTENTIAL SOLUTIONS

DISTANCE

Connectivity and density are important elements of convenience because of its critical role in determining trip distances. Smart growth policies – a type of economic and community development that attempts to mitigate urban sprawl – within the MPA could have the potential to replace longer motor vehicle trips with shorter bicycling and/or walking trips. A 2010 study found that compact, mix-use, and well-connected cities and neighborhoods establish an ideal framework for shorter and more convenient bicycle and pedestrian trips.²¹ The study demonstrated that, in general, the denser the city the higher the rates of bicycling and walking.

EFFORT

Overcoming the perceived effort to utilizing active transportation is one of the core initiatives behind various groups and organizations within the Saint Cloud MPA. **“Over the past decade, researchers have begun to identify linkages between active travel and public health. Cross-sectional studies indicate that walking and cycling for transport are linked to better health.”²² Members of the MPA’s public health departments, along with organizations like CentraCare Health’s Feeling Good MN and programs like Safe Route to School, have worked toward educating and providing opportunities for members of the public – of all ages – to become more active.**

In addition, connectivity can improve a user’s sense of safety and comfort in the same way it can reduce distance. Currently, the Saint Cloud MPA’s built environment has major gaps within its active transportation network, particularly regarding the connectivity of on-road bike facilities. Below Figures 4.24 through 4.28 are examples of the gaps in the City of Saint Cloud, Waite Park, Sauk Rapids, Sartell, and Saint Joseph. This, in turn, can make getting around the area a stressful task for active transportation users. By identifying the existing gaps, APO staff can work with member jurisdictions to discuss ways to improve connectivity which could potentially lessen this and other barriers to active transportation use.

²¹ Pucher, John and Ralph Buehler, David Bassett, and Andrew Dannenberg. 2010. *Walking and Cycling to Health: A Comparative Analysis of City, State, and International Data* (<https://bit.ly/2LI8mbl>).

²² Ibid.

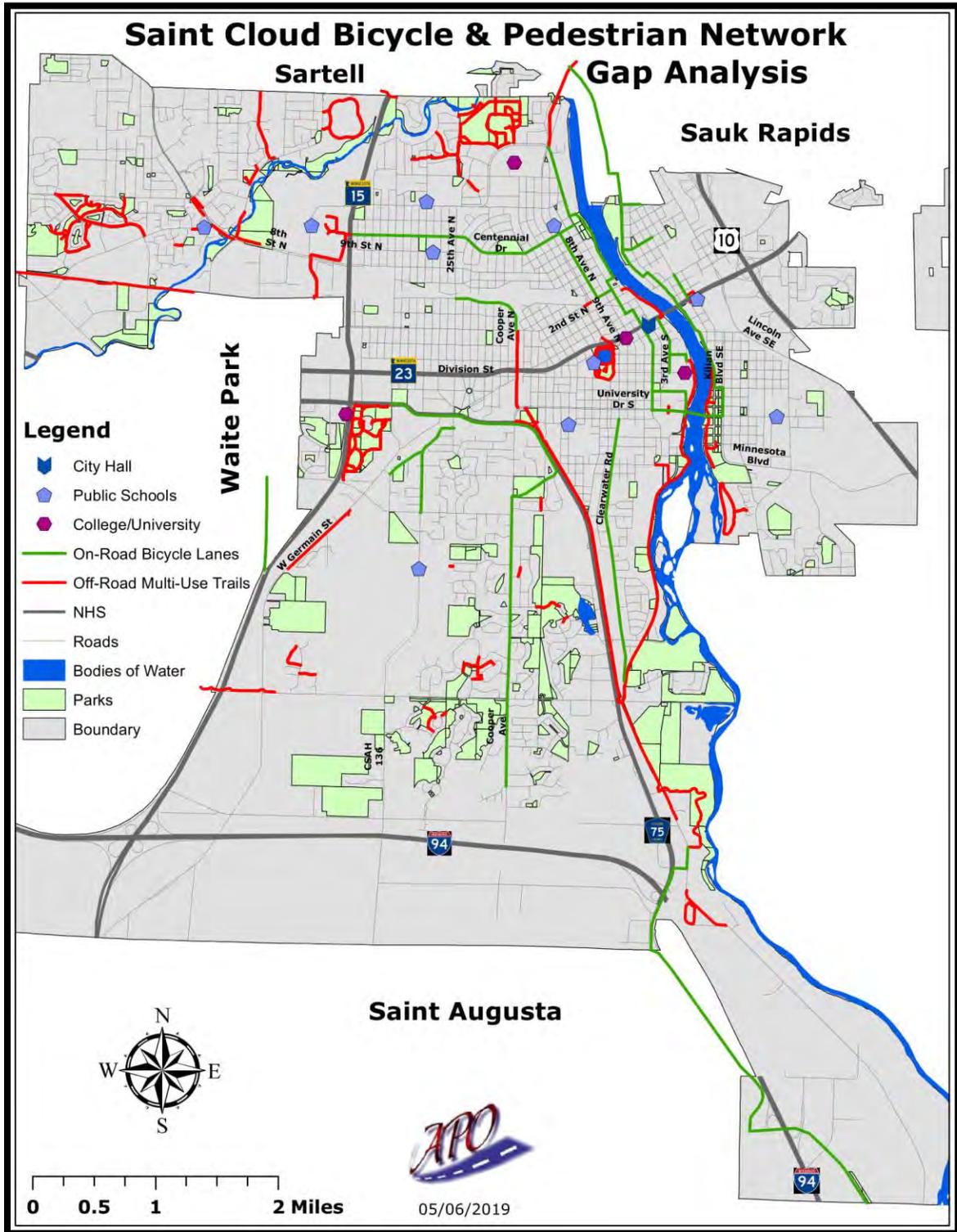


FIGURE 4.24 – BICYCLE NETWORK GAP ANALYSIS WITHIN THE CITY OF SAINT CLOUD.

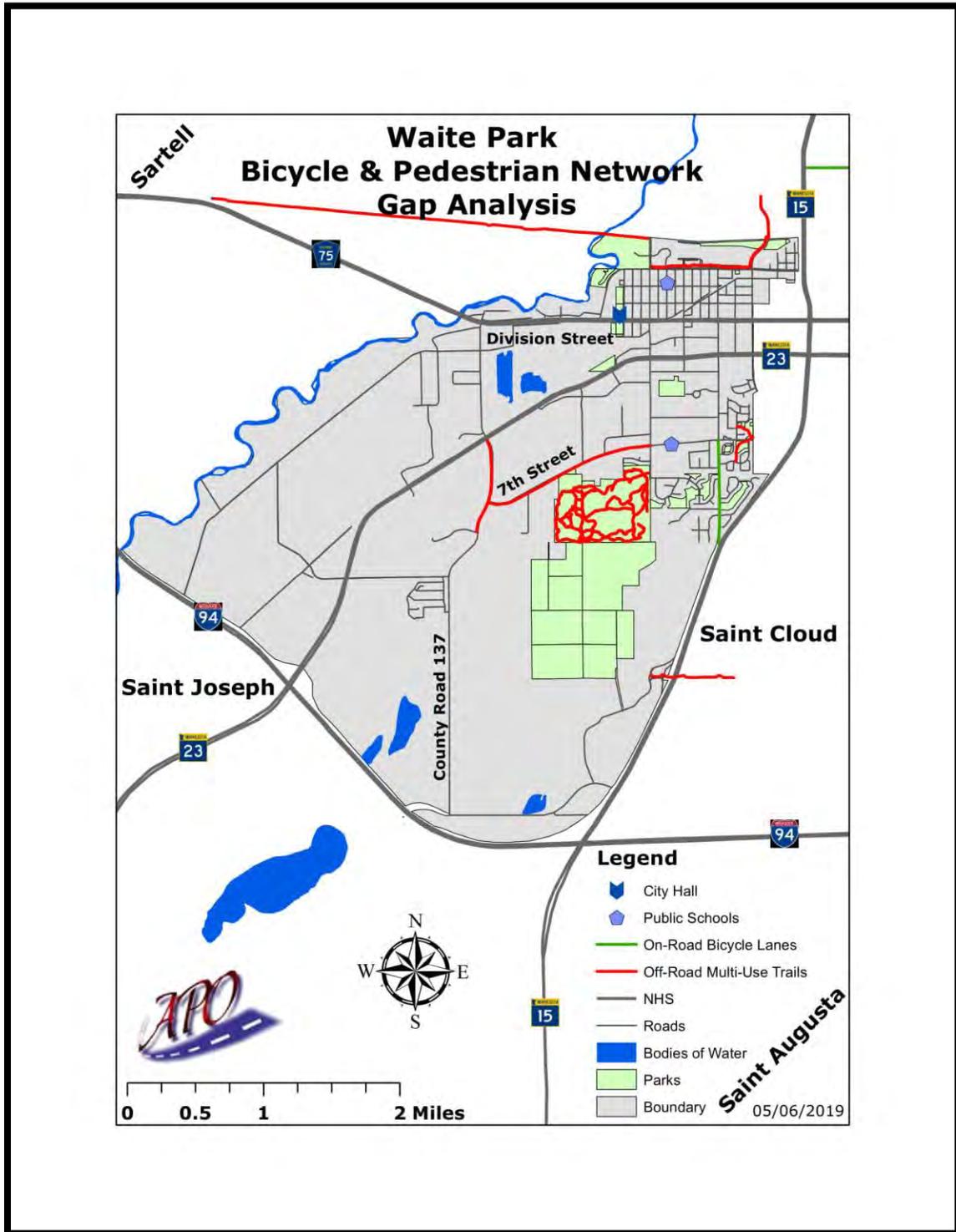


FIGURE 4.25 – BICYCLE NETWORK GAP ANALYSIS WITHIN THE CITY OF WAITE PARK

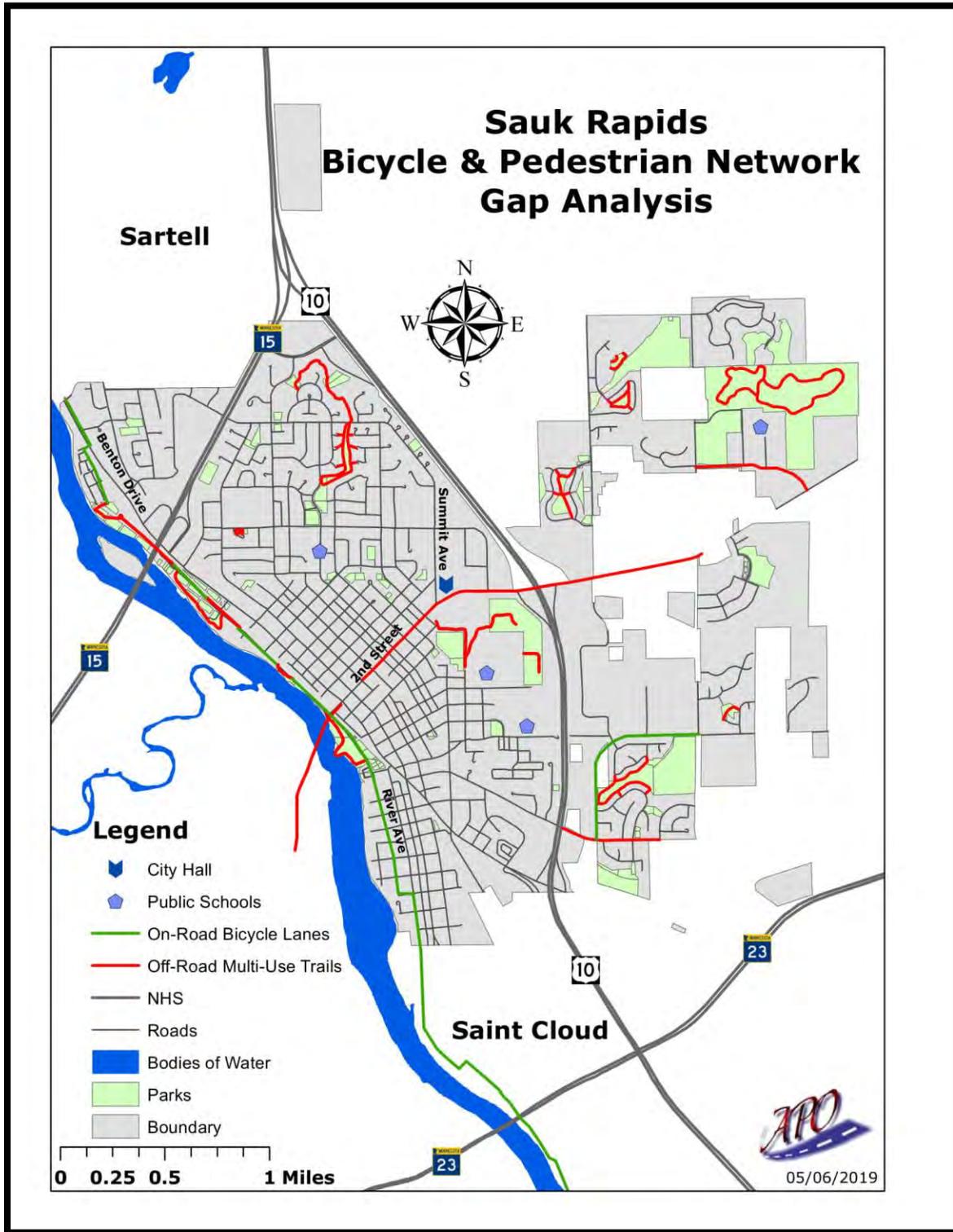


FIGURE 4.26 – BICYCLE NETWORK GAP ANALYSIS WITHIN THE CITY OF SAUK RAPIDS

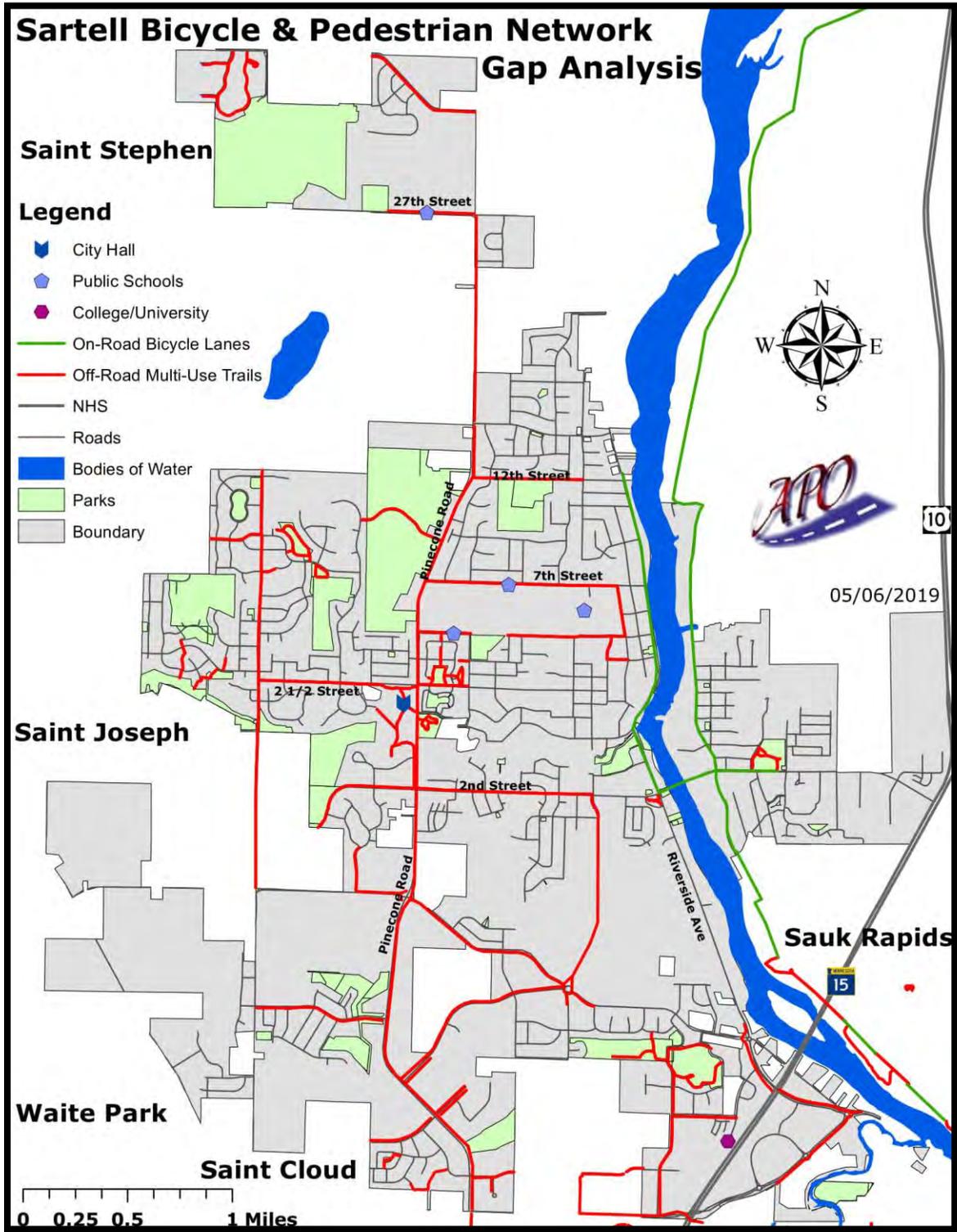


FIGURE 4.27 – BICYCLE NETWORK GAP ANALYSIS WITHIN THE CITY OF SARTELL

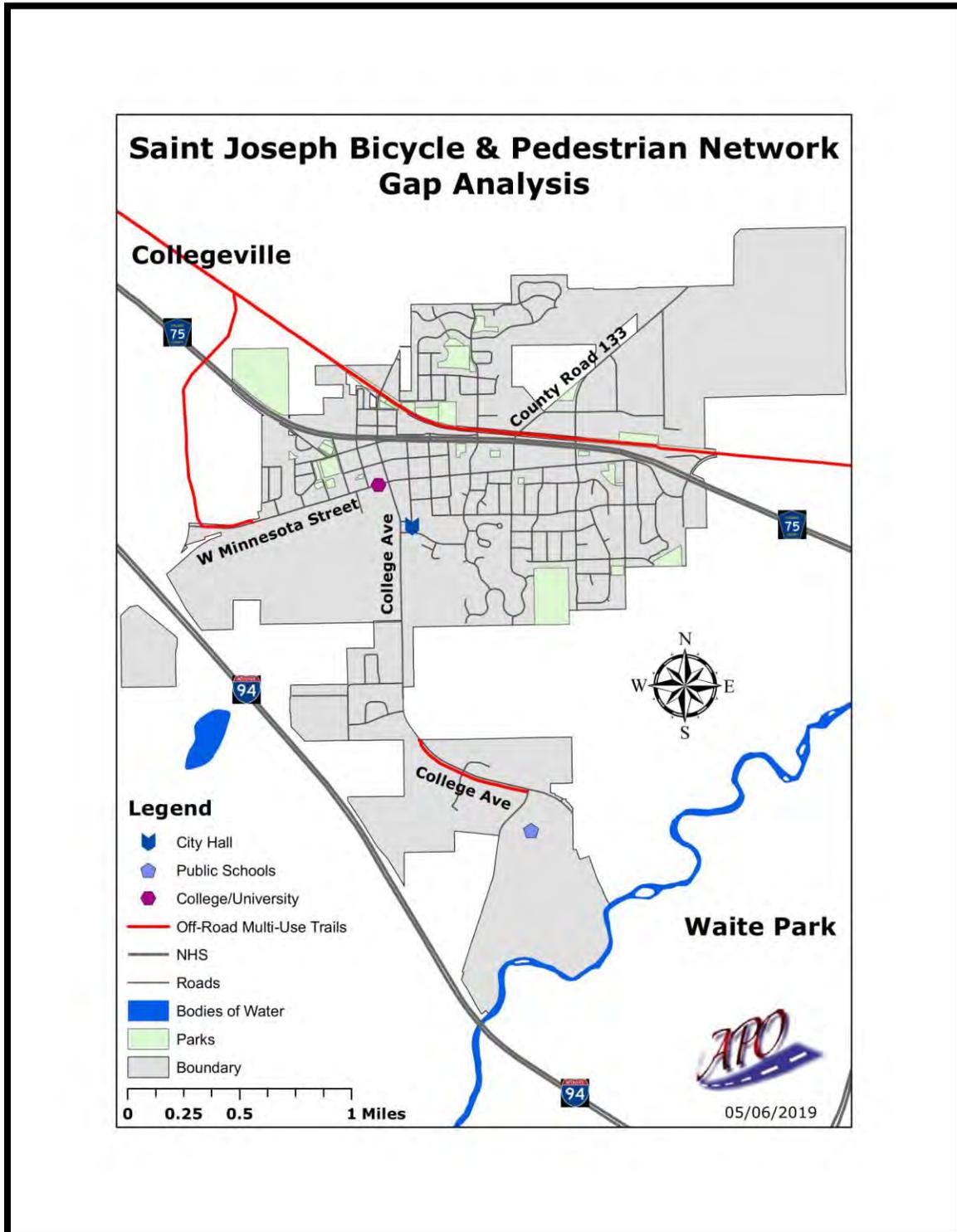


FIGURE 4.28 – BICYCLE NETWORK GAP ANALYSIS CITY OF SAINT JOSEPH

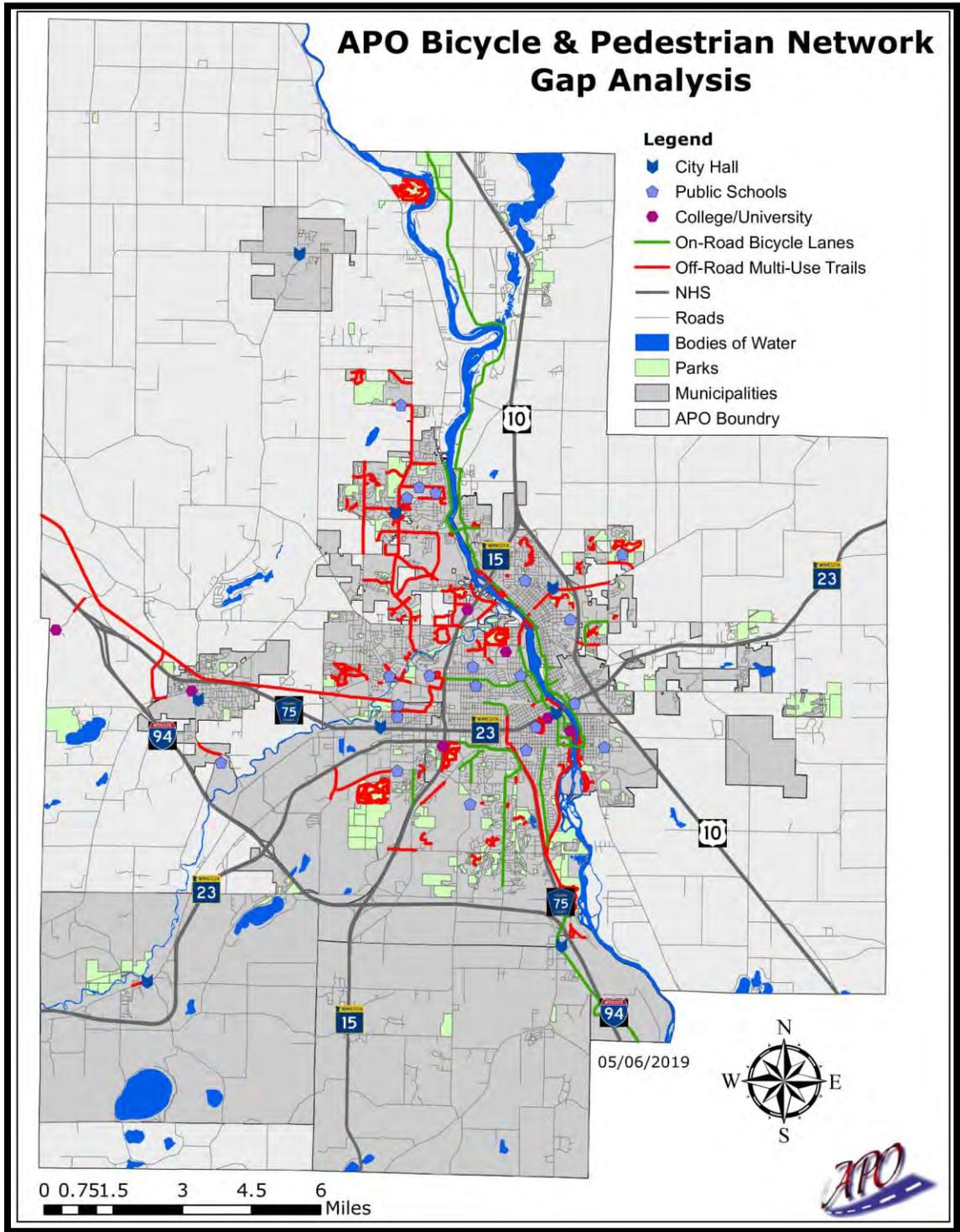


FIGURE 4.29 – BICYCLE NETWORK GAP ANALYSIS WITHIN THE SAINT CLOUD METROPOLITAN PLANNING AREA.

SAFETY

Improving safety can make the active transportation network a more feasible transportation option and increase the number of bicyclists and pedestrians. Safety improvements can include, among other items, adding sidewalks, installing visible signage to alert motorists of pedestrian crossings, and adding island refuges across a multi-lane road to enable trail users to focus on crossing one direction of traffic at a time.

When it comes to bicycle infrastructure and safety, overwhelmingly, a majority of cyclists stated they felt safer if there was some form of separation between them and motor vehicles.²³

In **addition, law enforcement officers from the APO's** member jurisdictions have taken an active role in various community initiatives related to bicycle and pedestrian efforts in the hopes of educating both active and non-active transportation users about how to interact safely.

As stated previously, the MPA has experienced an increase in fatalities and serious injuries between active transportation users and motor vehicles. The APO will continue to monitor this trend.

COST

The APO has very limited impact on influencing public perceptions on the opportunity cost to utilizing active transportation over other forms of transportation. The APO will continue to participate in various efforts and initiatives – as discussed later in this chapter – that specifically focus on educating and encouraging the public to explore active transportation options. The ultimate goal is to encourage each individual to consider and choose for themselves the transportation mode that makes the most sense for each trip.

In terms of costs to maintain or construct active transportation infrastructure, funding can have a significant effect in the Saint Cloud MPA. Sustained access to Transportation Alternatives (TA) grant funding can help supplement local active transportation infrastructure projects. The APO will continue to work to assist local jurisdictions in the grant application process for these and other grant applications related to active transportation infrastructure.

LACK OF ACTIVE TRANSPORTATION INFRASTRUCTURE

As stated in the previous section, the MPA has several gaps when it comes to **the region's** active transportation network. Completing connections between the various infrastructure – sidewalks, on-road bike lanes, off-road multi-use trails, etc. – should be considered essential for making active transportation a part of a larger scope of the transportation

²³ National Institute for Transportation and Communities. 2014. "[Lessons from the Green Lanes: Evaluating Protected Bike Lanes in the U.S.](https://bit.ly/2QJhm3h)". (https://bit.ly/2QJhm3h).

network within the area. The APO is looking into how to connect the gaps within the MPA, and is working with jurisdictions to determine what infrastructure improvements would be the most beneficial for the future of active transportation.

Supporting infrastructure such as the presence of bike parking and wayfinding signage or, in the case of pedestrians, bus shelters and/or benches, should also be considered.

Above all, such infrastructure improvements need to comply with Americans with Disabilities (ADA) guidelines. As of the drafting of this plan, several APO member agencies and jurisdictions have completed or are in the process of scoping and planning for the transition of the roadway and active transportation networks to meet ADA standards.

COMFORT

Altogether, easing the barriers such as distance, effort, safety, cost, and lack of active transportation infrastructure has the ability to increase the comfort level of current and/or potential active transportation users.

IMPORTANT PLAYERS IN ACTIVE TRANSPORTATION

THE APO

To stay abreast of concerns regarding the current condition of active transportation within the MPA, the APO established the Bicycle and Pedestrian Advisory Committee (BPAC) in 2007. In 2019, the name of the committee was changed to the Active Transportation Advisory Committee (ATAC) to better reflect its purpose. The committee, which serves as an **advisory group to the APO's Technical Advisory Committee (TAC)**, is tasked with collecting, discussing, and reviewing bicycle and pedestrian data. The feedback and ideas generated by the ATAC aid TAC members in better understanding the needs of citizens when it comes to addressing active transportation barriers.

COMMUNITY ADVOCACY

Within the past decade, the Saint Cloud MPA has experienced a growing interest in active transportation efforts. Several communities within the planning area have taken the initiative to further explore these options. In addition, several bicycle and pedestrian advocacy groups have sprung up with the intent to further active transportation within the MPA.

COMPLETE STREETS POLICY

According to [Smart Growth America](https://bit.ly/2wna8sY) (<https://bit.ly/2wna8sY>), Complete Streets set the **precedent for a jurisdiction's commitment to creating a comprehensive transportation network that is safe, reliable, comfortable, convenient, affordable, and accessible for all people who use the street.** A network embracing a Complete Streets policy is designed and

operated to enable safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities.

Within the MPA, MnDOT (2016), the Saint Cloud APO (2011), and two cities – [Saint Cloud \(2011\)](https://bit.ly/2GcHIKI) (<https://bit.ly/2GcHIKI>) and Sartell – have adopted a Complete Streets policy. These Complete Streets resolutions can be found in Appendix C. Some of the benefits that come with adopting the Complete Streets policy are helping create livable communities, while also improving equity, safety, and public health. According to a 2016 study, [Effects of Complete Streets on Travel Behavior and Exposure to Vehicular Emissions](https://bit.ly/2wOAZyP) (<https://bit.ly/2wOAZyP>) prepared for the California Air Resources Board and California Environmental Protection Agency, complete streets help reduce transportation costs and travel difficulties. In addition, in 2011, the Saint Cloud APO passed a resolution affirming its support of Complete Streets and the need to provide transportation options for all users of all ages and abilities.

SAFE ROUTES TO SCHOOL

The [National Center for Safe Routes to School](http://www.saferoutesinfo.org) (www.saferoutesinfo.org) believes in the importance and joy of walking and biking safely. Safe Routes to School (SRTS) is an initiative that works to make it safe, convenient, and fun for students to walk and bike to and from school. The goal is to get more students walking and bicycling to improve safety, and increase health and physical activity. In 1969, nearly 50 percent of all children in the United States walked or bicycled to school. Today, that number has plummeted to fewer than 15 percent. Studies show that SRTS programs are effective at increasing rates of bicycling and walking to school and decreasing injuries.²⁴ Concerned by the long-term health and traffic consequences of this trend, in 2005 Congress approved funding for the implementation of the Safe Routes to School programs in all fifty (50) states and the District of Columbia.

In 2013, [Minnesota's Safe Routes to School program](https://www.dot.state.mn.us/mnsaferoutes/) (<https://www.dot.state.mn.us/mnsaferoutes/>) was allocated \$250,000 per year by the state legislature for SRTS non-infrastructure programs. In 2014, the state legislature allocated \$1 million per year to the SRTS infrastructure grant program and increased the non-**infrastructure funds to \$500,000 per year. Minnesota's SRTS program works** in conjunction with approximately 30 individuals representing cities, counties, regional planning organizations, non-profit organizations, educators, and health professionals. Partnerships with the Minnesota Department of Health and local agencies maximizes the programs reach **and leverage to resources. In addition, Minnesota's SRTS program has teamed up with** BikeMN, a program that offers teacher trainings and technical assistance to schools.

According to the interactive map in [Visualizing Safe Routes to School in MN](https://bit.ly/2KoetCM) (<https://bit.ly/2KoetCM>), the Saint Cloud MPA had nineteen (19) MnDOT-funded SRTS

²⁴ [Safe Routes to School National Partnership](http://www.saferoutespartnership.org/safe-route-school), 1 Jan. 1970, (<http://www.saferoutespartnership.org/safe-route-school>).

projects: nine planning assistance grants, six infrastructure grants, three other non-infrastructure grants, and one bicycle fleet as of 2018.

To complement the work of SRTS in Minnesota, the Bicycle Alliance of Minnesota, or BikeMN, has developed the Walk! Bike! Fun! curriculum – a program for schools to help children ages 5 to 13 learn traffic rules and regulations, the potential hazards to traveling, and handling skills needed to bike and walk effectively, appropriately, and safely through their community. More information on BikeMN will be addressed later in this chapter.

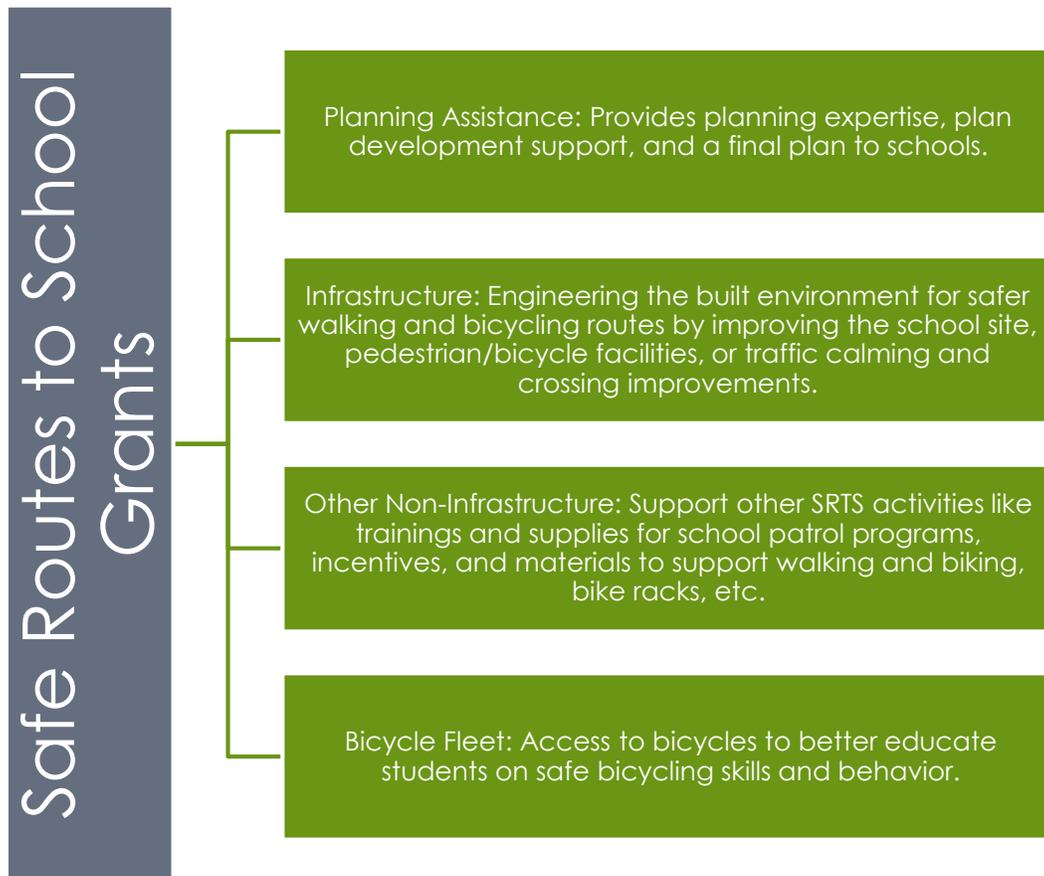


FIGURE 4.30 – SAFE ROUTES TO SCHOOL GRANT OPPORTUNITIES

Getting more students to safely walk and bike to school requires a comprehensive approach otherwise known as **The 6 E’s of SRTS** (<https://bit.ly/2OYnP8O>): **Engineering, Enforcement, Education, Encouragement, Evaluation, and Equity**. The 6 E’s program helps ensure that programs address the full range of challenges that may limit people from walking and biking.



FIGURE 4.31 – MINNESOTA DEPARTMENT OF TRANSPORTATION’S SAFE ROUTES TO SCHOOL LOGO

GRASSROOTS EFFORTS

Social media has been another tool which residents in the MPA have utilized to promote active transportation. As of the drafting this plan, there are two Facebook pages that represent biking and active transportation in the Saint Cloud area created by a local bicycle advocate: BikeCloud (May 2018) and Saint Cloud Area Bike Commuters (March 2012).

According to its mission, BikeCloud represents “A voice for bicycling in the Saint Cloud area. BikeCloud-Bike Loud!” This group’s focus is to develop a sense of community for bicyclists around the Saint Cloud area.

The Saint Cloud Area Bike Commuters Facebook group provides its approximately 100 members – as of the writing of this draft – a platform to celebrate and commiserate with others in the community about bicycle infrastructure and discuss the positive aspects of biking within the MPA.

STATE AND NATIONAL EFFORTS

In addition to local initiatives, the Saint Cloud MPA has seen an influx of state and national active transportation efforts introduced into the area. These efforts, combined with existing community advocacy, are further promoting walking and biking within the MPA.

BICYCLE ALLIANCE OF MINNESOTA (BIKEMN)

In October 2008, a non-profit called the [Bicycle Alliance of Minnesota \(BikeMN\)](http://www.bikemn.org/index.php) (www.bikemn.org/index.php) was formally launched. The Alliance quickly grew to 1,000

members across 130 communities in Minnesota. The success of membership played a large role in maintaining and growing BikeMN's operations.

BikeMN tackles issues facing Minnesota's pedestrian and bicycling communities through four main programs: advocacy, education, encouragement, and technical assistance. BikeMN coordinates three signature events each year including the [Tour of Saints](https://touofsaints.com) (<https://touofsaints.com>) within the Saint Cloud MPA.

BikeMN is also the creator of the [Walk! Bike! Fun!](https://bit.ly/1KdjvNm) (<https://bit.ly/1KdjvNm>) curriculum that has reached over 50,000 students in Minnesota from the winter of 2013 to spring of 2017 (the most current data available at the drafting of this plan). According to the [Visualizing Safe Routes to School in MN](https://bit.ly/1KdjvNm) (<https://bit.ly/1KdjvNm>) interactive map, the cities of Saint Cloud and Sartell have hosted Walk! Bike! Fun! trainings. There are 17 Walk! Bike! Fun! Trainees in the Saint Cloud MPA as of 2018.



FIGURE 4.32 - THE WALK! BIKE! FUN! PEDESTRIAN AND BICYCLE SAFETY CURRICULUM LOGO

BICYCLE FRIENDLY COMMUNITIES

The creation of the [Bicycle Friendly Community \(BFC\)](https://bikeleague.org/community) (<https://bikeleague.org/community>) program in 1995 has given the opportunity for communities across the nation to become a place where people do not just live and work, but thrive. As of 2018, over 450 communities nationwide are recognized as BFCs, providing a roadmap for improving conditions for bicycling and guidance for helping make a bike-able community a reality.

Minnesota is ranked number two in bicycle friendliness with 23 BFCs, 69 Bicycle Friendly Businesses (BFBs), and five Bicycle Friendly Universities (BFUs).

Within the APO's MPA, the City of Saint Cloud was awarded a BFC bronze medal in spring 2017. Saint Cloud city officials have committed to working toward achieving BFC's silver medal through continued efforts in strengthening its Complete Streets policy, developing low stress routes along roadways with connections to existing trail systems, and procuring wayfinding signage. As of the writing of this plan, the city is working with various local stakeholders -- including Stearns, Benton, and Sherburne counties public health departments, APO staff, local law enforcement, bicycle advocates, and statewide partners such as BikeMN to become more welcoming community to cyclists.

In spring 2019, the City of Sartell was also awarded a BFC bronze medal. Similar to the City of Saint Cloud, Sartell is committed to working toward achieving BFC's silver medal. The city has placed more wayfinding signage to promote active transportation and is continuing to pursue additional locations for bicycle parking facilities. With the passage of the city's Complete Streets policy, additional sidewalks and multiuse trails have been added within the city's limits.

These stakeholders have also worked with Saint Cloud State University staff in their effort to become a BFU.



FIGURE 4.33 - BICYCLE FRIENDLY COMMUNITY LOGO

ECONOMIC VITALITY

INTRODUCTION

The U.S. Code of Federal Regulations states the metropolitan transportation planning **process must consider projects, strategies, and services that “support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency.”**²⁵

Historically, transportation planning has focused on freight and logistics – that is to say, connecting resources and supply chains to where industry is located – but that is only part of a larger picture. Transportation moves resources and production inputs to manufacturers; moves produced goods, materials, and agricultural products to market; but in addition, transportation also provides access for people to jobs, housing, and retail stores, among other things. A reliable and efficient transportation system allows businesses to be competitive, as well as providing a dependable system for people of all ages and abilities to move from place to place and live productive, fulfilling lives.

It is important here to distinguish between economic growth and economic development, the former being concerned strictly with the production and output of an economy. Gross Domestic Product (GDP), for example, is a measure of economic growth, which can, but does not necessarily, result in economic development. For example, in the 19th Century, the colonies of industrializing nations often saw rising economic output in the form of growing exports of raw resources, but very little economic development.

ECONOMIC DEVELOPMENT CAN BE THOUGHT OF AS A MEASURE OF THE OVERALL HEALTH, SUSTAINABILITY, AND IMPROVEMENT OF A SOCIETY OVER TIME.

As we will use it here, the phrase “economic development” is a process by which a population improves its economic, political, and social well-being. It is related to an increase in economic growth coupled with improvement in the social and political welfare of a population. It encompasses variables such as housing, education, public welfare, environmental stewardship, public health, livability, and equity of opportunity. Some of the typical measures of economic development include average annual income per capita, poverty rates, employment rates, price stability, average life expectancy at birth (in years), infant mortality rates, access to clean drinking water, and adult literacy rates, among

²⁵ 23CFR §450.306(1)

others. Economic development can be thought of as a measure of the overall health, sustainability, and improvement of a society over time.

Done well, economic growth and economic development exist in a two-way relationship wherein economic growth leads to higher incomes which benefits human and societal development and in turn leads to more spending and more economic growth. In our reading **of the Federal regulations, the intent behind considering economic “vitality” in the transportation planning process appears to be more closely related to economic development rather than strictly economic growth. Therefore, we will address “economic vitality” herein by defining it synonymously with economic development.**

The development of transportation takes place within this socioeconomic context. As modes of transportation become faster, more reliable, and more efficient, the opportunities for economic development generally expand. But we must also be careful to remember that **“more” does not always mean “better.” It is possible to over-**develop transportation to the point that it is sucking limited resources out of an economy that could be better and more effectively invested elsewhere. However, where transportation systems are inefficient, costly, slow, or lack capacity, there is an economic cost in lost opportunities and lower quality of life.²⁶

Ideally, transportation investments find the “sweet spot” of keeping barriers and inefficiencies low, while not over-investing in unnecessary or duplicative infrastructure or services. Transportation investment decisions should also be sensitive to the possibilities of new, innovative approaches to transportation that may be expensive or which at first appear to be of limited value, but will pay back dividends in the long run. For example, the transition from long-distance movement by waterways to railroads during the mid-19th Century must have, at the time, seemed complex and expensive, but the economic development benefits cannot be disputed.

The problem for transportation planners is how to measure or analyze the economic development impacts of transportation. How, for instance, does one measure the impact of transportation – and ONLY transportation – on average life expectancy? It is a difficult question since life expectancy is obviously highly impacted by other non-transportation factors. But, transportation can be, for example, a barrier to accessing health care²⁷ and therefore one of many factors that does influence life expectancy. Separating and measuring the costs and benefits of transportation from other factors that influence economic development performance measures is difficult.

²⁶ Dr. Jean-Paul Rodrigue and Dr. Theo Notteboom, “[The Geography of Transport Systems.](http://www.transportgeography.org/?page_id=5260)” (www.transportgeography.org/?page_id=5260).

²⁷ Samina T. Syed, Ben S. Gerber, and Lisa K. Sharp, “[Traveling Towards Disease: Transportation Barriers to Health Care Access.](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4265215/)” (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4265215/).

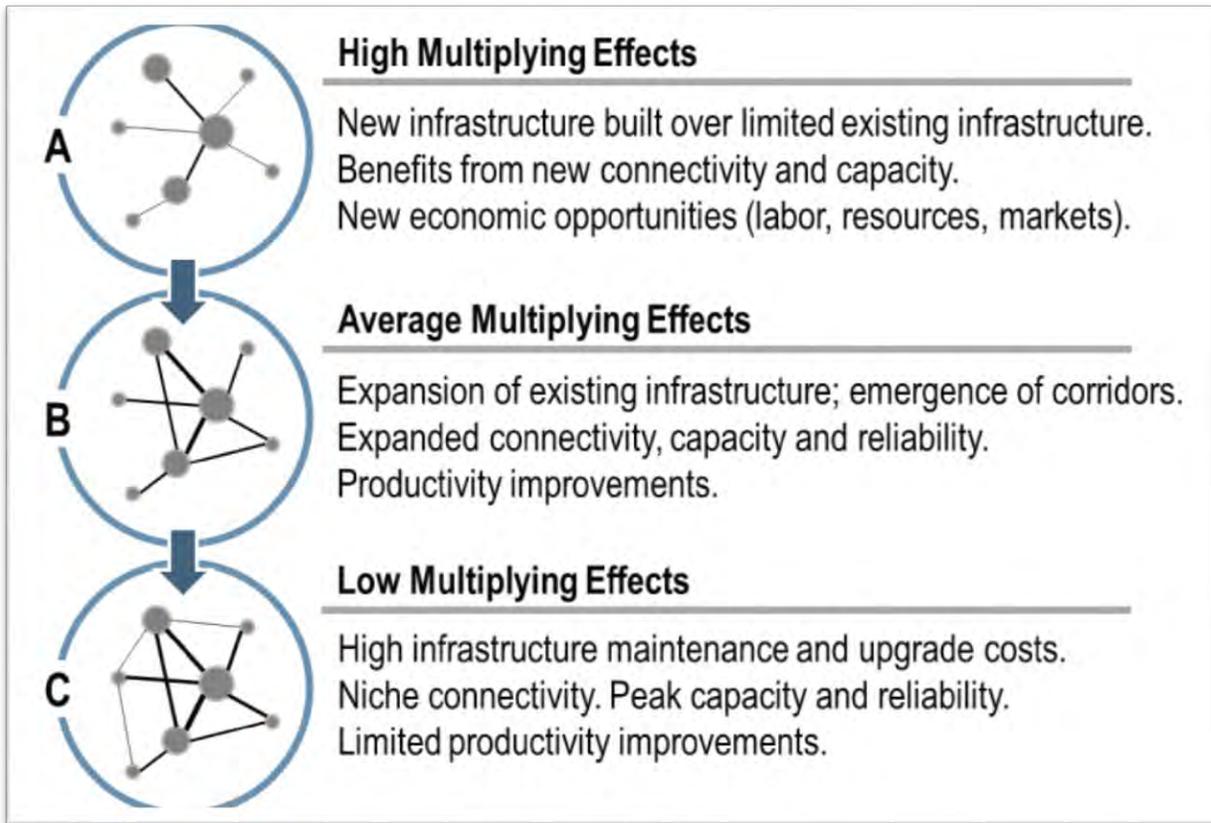


FIGURE 4.34 – ILLUSTRATION OF BENEFITS FROM VARIOUS LEVELS OF TRANSPORTATION INVESTMENT

Transportation can have a *direct* impact on economic development in a few narrow instances, such as a new roadway that provides access to land that was previously undeveloped. However, transportation’s overall impact on economic development is often more indirect and difficult to define. Transportation tends to be more of an underlying catalyst or barrier for economic development rather than a driving force, in much the same way that an athlete’s heart-health can be an underlying catalyst or barrier for athletic performance. Clearly, strength, agility, dexterity, and reflexes can be larger, more obvious influencers of a specific athletic performance, but without a healthy heart and circulatory system, the potential advantages of those other factors are reduced.

TRANSPORTATION AS PART OF THE ECONOMY

Transportation can have three types of economic impacts²⁸:

²⁸ Dr. Jean-Paul Rodrigue and Dr. Theo Notteboom, “[The Geography of Transport Systems.](http://www.transportgeography.org/?page_id=5260)” (www.transportgeography.org/?page_id=5260).

1. **Direct Impacts** – Transportation sector businesses and activities, such as transit systems, bridge and roadway construction companies, or freight brokers, provide employment and buy goods and services from other businesses.
2. **Indirect Impacts** – Businesses supported by transportation sector businesses also employ staff and buy goods and services from tertiary businesses like office supply firms, insurance companies, and equipment suppliers.
3. **Induced Impacts** – An efficient transportation system will result in reduced prices for goods and services purchased by both businesses and consumers, and helps free up funds to meet other needs.

Nationally, transportation's direct impacts account for about 9 percent of U.S. GDP²⁹. The indirect and induced impacts are more difficult to measure accurately.

In 2014 there were about 7,240 jobs in the transportation sector³⁰ within the MPA representing about 7 percent of all jobs in the region.

MPA ECONOMIC DEVELOPMENT AND ECONOMIC COMPETITIVENESS

APO staff spent considerable time searching for useful, reliable economic development information for the MPA. What was found is presented below, but there is clearly a lack of useful information at the appropriate geographic scale. Moving forward, APO staff will regularly search for, analyze, and report data that provides useful insight into the impact of the transportation system on the economic development of the region. Additionally, APO staff will examine the potential and opportunities for first-hand collection of data that is **important to measuring transportation's impact on regional economic development.**

The [Greater Saint Cloud Development Corporation \(GSDC\)](http://www.greaterstcloud.com/home) (www.greaterstcloud.com/home) reports on a number of local economic development metrics, for the time period 2010 through 2016:

²⁹ Bureau of Transportation Statistics, "[Freight Facts & Figures 2017 – Chapter 5: Economic Characteristics of the Freight Transportation Industry.](https://bit.ly/2Mszv87)" (<https://bit.ly/2Mszv87>).

³⁰ U.S. Department of Labor, Bureau of Labor Statistics. [Workforce Data](https://www.greaterstcloud.com/workforce-data) courtesy of Greater St. Cloud Development Corporation. (<https://www.greaterstcloud.com/workforce-data>).

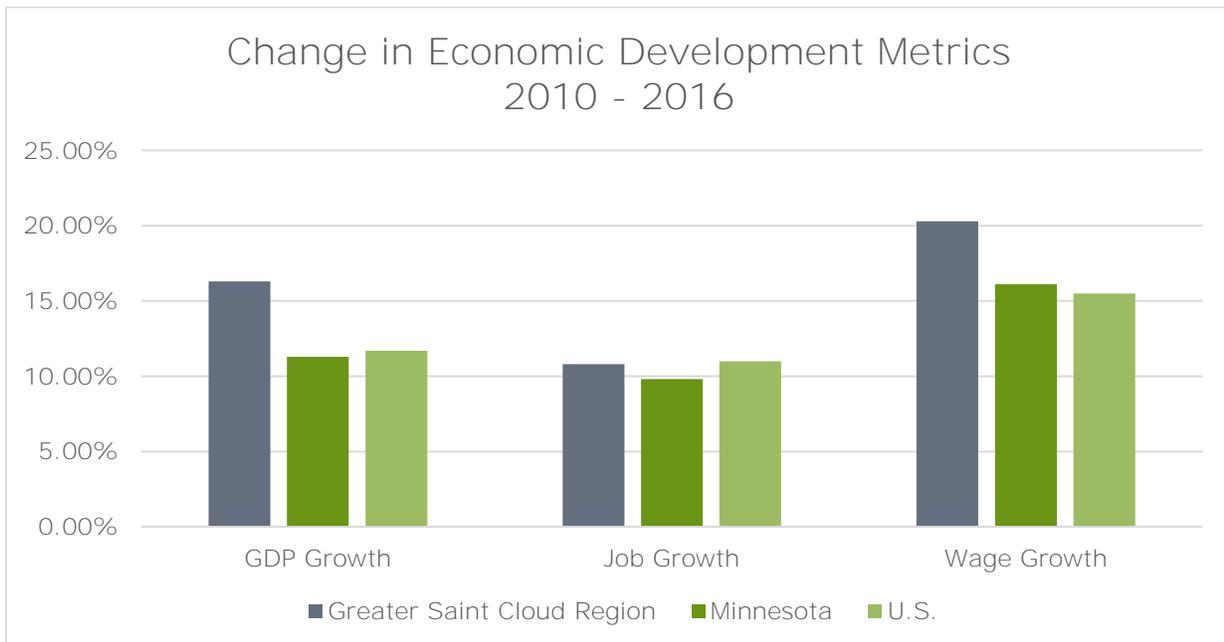


FIGURE 4.35 – GREATER SAINT CLOUD REGION ECONOMIC DEVELOPMENT METRICS
Source: Greater Saint Cloud Development Corporation

For all metrics, the greater Saint Cloud region outpaced the state as a whole. GDP growth, job growth, and wage growth are all heavily influenced by other non-transportation factors, but the data does hint at healthy fundamentals (such as transportation) for the region. If transportation were an efficiency barrier in the MPA, businesses and GDP would be more likely to grow at a slower rate than other areas in which transportation is not an efficiency barrier.

The [Saint Cloud Area Chamber of Commerce](https://www.stcloudareachamber.com) (https://www.stcloudareachamber.com) also reports on a number of combined economic development indicators for the cities of Saint Cloud, Sauk Rapids, Sartell, Waite Park, Saint Augusta, and Saint Joseph, as show in the next three charts.



FIGURE 4.36 – TRANSPORTATION IS AN IMPORTANT FACTOR IN ECONOMIC DEVELOPMENT

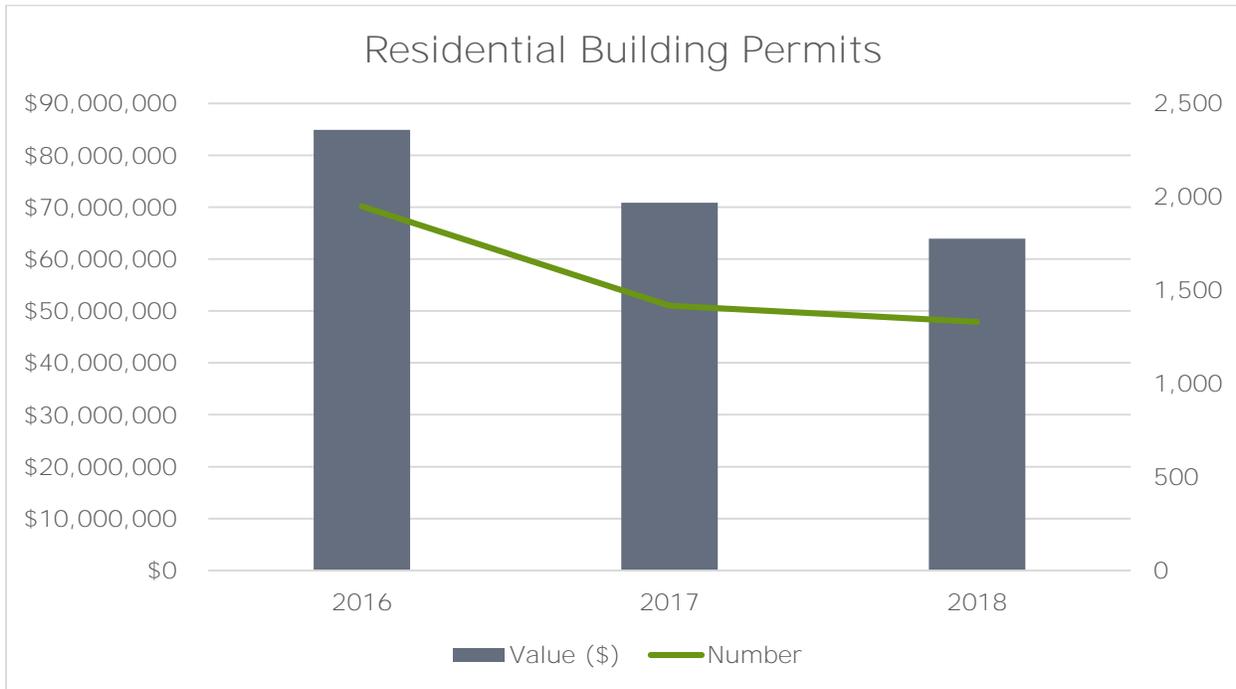


FIGURE 4.37 – TOTAL RESIDENTIAL BUILDING PERMITS ISSUED 2016-2018 IN THE CITIES OF SAINT CLOUD, SAUK RAPIDS, SARTELL, WAITE PARK, SAINT JOSEPH, AND SAINT AUGUSTA

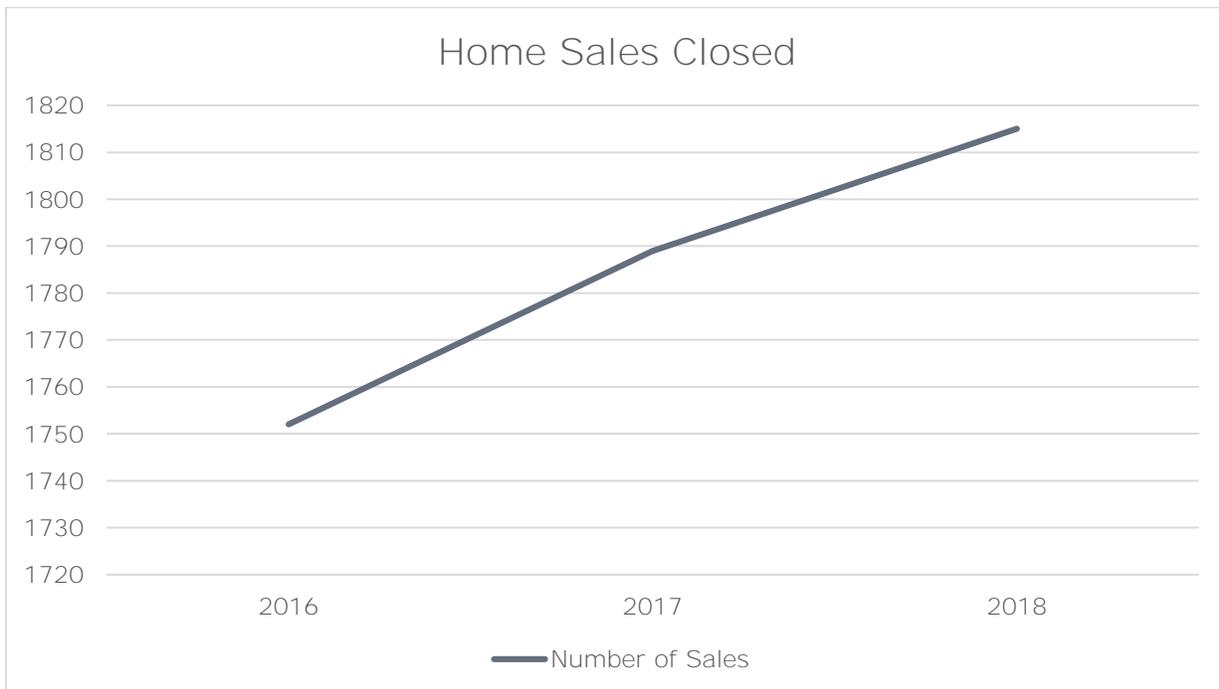


FIGURE 4.38 – HOME SALES CLOSED 2016-2018 IN THE CITIES OF SAINT CLOUD, SAUK RAPIDS, SARTELL, WAITE PARK, SAINT JOSEPH, AND SAINT AUGUSTA

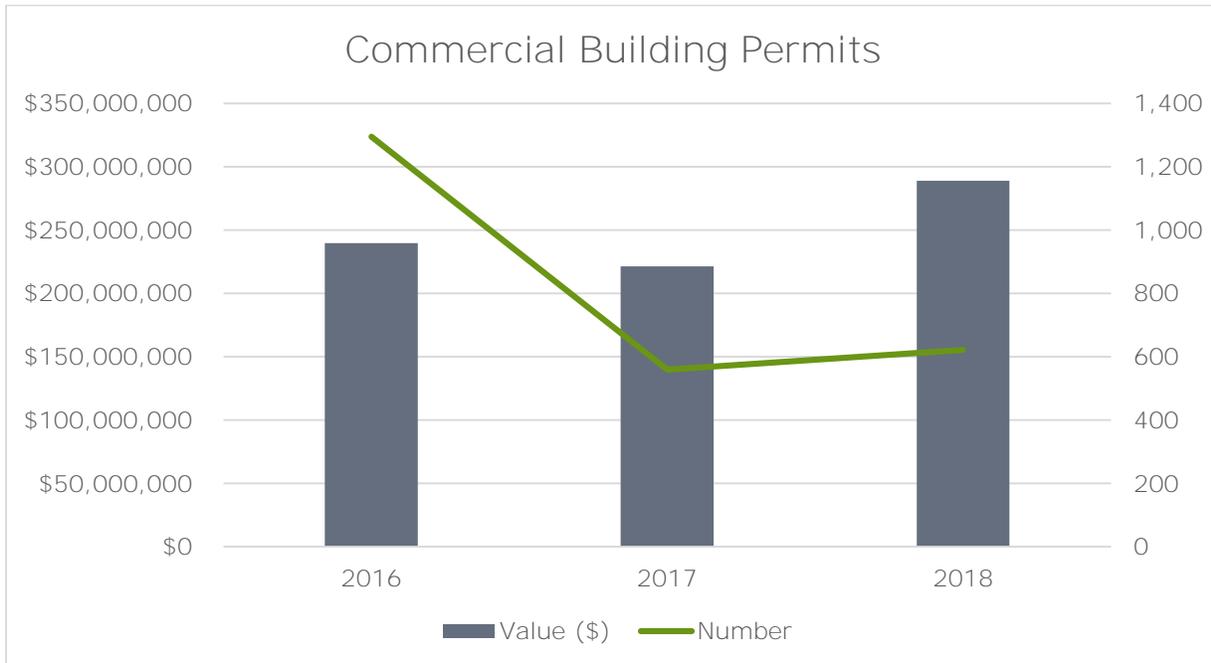


FIGURE 4.39 – COMMERCIAL BUILDING PERMITS ISSUED 2016-2018 IN THE CITIES OF SAINT CLOUD, SAUK RAPIDS, SARTELL, WAITE PARK, SAINT JOSEPH, AND SAINT AUGUSTA

Regional economic competitiveness refers to the ability of a region to compete effectively and prosper within a larger economy³¹. As the phrase implies, it is often viewed as a zero-sum competition wherein Region A’s gain is Region B’s loss. In this competition the Saint Cloud MPA is competing against other similar-sized metropolitan regions, such as Fargo-Moorhead, Duluth-Superior, Rochester, and La Crosse-La Crescent. Therefore, it may be useful to compare the performance of the transportation systems against one another in order to ascertain any relative advantage that one region may have over the others.

³¹Metropolitan Council. "Economic Competitiveness: Local Planning Handbook." Metro Council, May 2015. (<https://bit.ly/2F93wnt>).

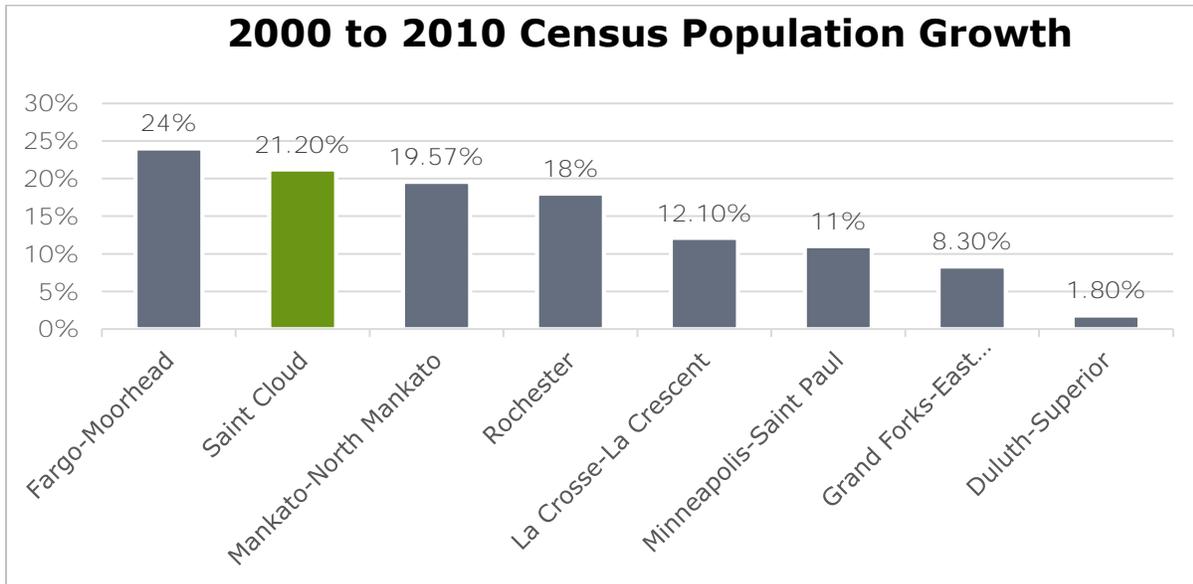


FIGURE 4.40 – COMPARISON OF POPULATION GROWTH IN METROPOLITAN AREAS.
Source: U.S. Census Bureau 2000 to 2010 Populations.

Again, while the impact of transportation on population growth cannot be directly measured, the comparison to other metropolitan areas in the state does hint at good fundamentals and healthy underlying characteristics.

All of these metrics illustrate not only good economic development for the region as a whole, but also in comparison to the rest of the state and the rest of the nation. As noted by the Center for Community and Economic Development at the University of Wisconsin³², **“Outcome measurement does not prove a cause-effect relationship. And when it comes to economic development the actions of one individual or one organization is not likely to be entirely responsible for results within a community.”**

While we can agree that success is shared, that does not absolve the APO from the responsibility of at least trying to evaluate the impact that the transportation networks are having on economic development, especially if those impacts are negative. It is difficult to precisely measure the part that transportation played in attaining the results shown above, but it is fair to conclude that the results would have been difficult to attain if transportation was not operating efficiently.

RETURN ON INVESTMENT

As stated in the introduction to this section, the goal of transportation planning is to help decision-makers find the “sweet spot” of investments such that transportation is operating

³² Matthew Fischer & Associates Inc., [“Performance Measurement in Economic Development.”](https://bit.ly/2JFgT2c) (https://bit.ly/2JFgT2c).

efficiently without wasting public tax-payer dollars. One way to do this is to measure or estimate the return-on-investment (ROI) from various investment alternatives.

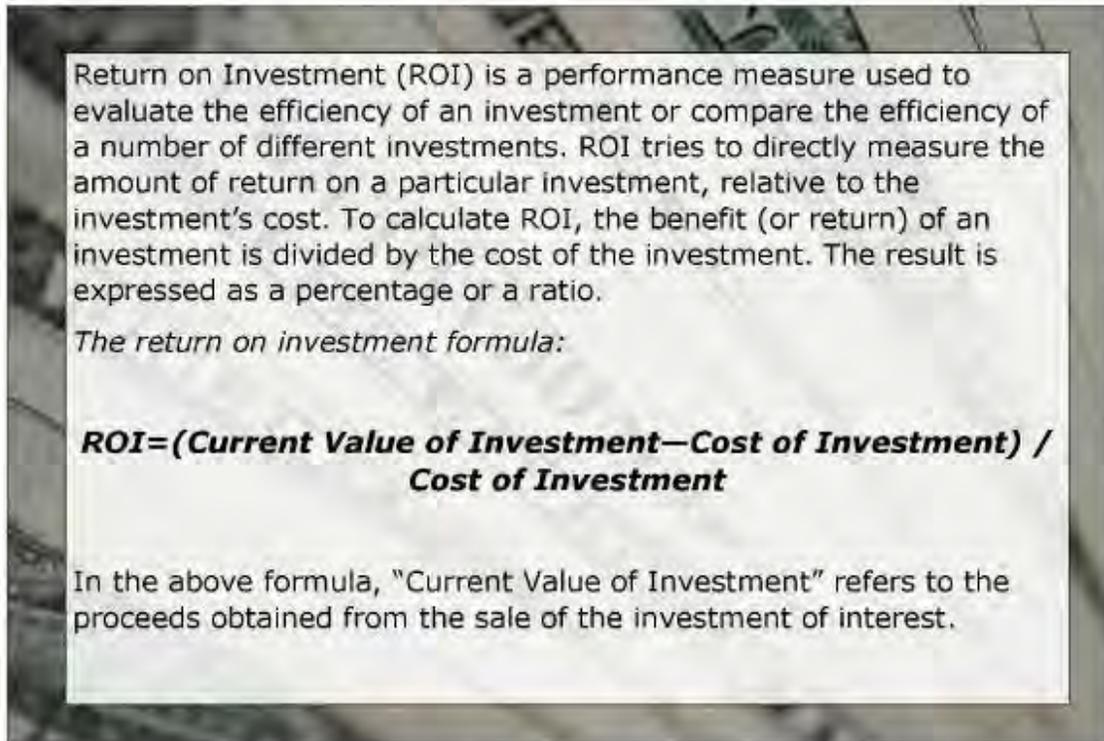


FIGURE 4.41 – INFOGRAPHIC ON RETURN OF INVESTMENT.
 Information courtesy of Investopedia "Return on Investment (ROI)" (<https://bit.ly/2mzrXmY>). Photo courtesy of incurable_hippie.

Here, the 'investment' is a **transportation asset**, such as a roadway, transit vehicle, or bike path. The cost of the investment is the monetary outlay from the implementing jurisdiction to purchase or construct the asset and to maintain it over time. For example, the cost of building a new urban two-lane arterial is generally about \$4.6 million per mile. The actual cost may be higher or lower depending upon the complexity of the project.

Measuring the current value of an investment is more difficult in this context. If we were discussing a stock share, for instance, the current value would be the price at which we could sell the share – or more precisely, the income we could expect from selling the share. But transportation assets are not bought and sold on a market. How then do we measure their value?

Transportation assets do provide "income" to the jurisdiction. A roadway makes land available for development and that land is then taxed by the jurisdiction. A roadway provides customers access to a business, and every sale at that business is then taxed. A

jurisdiction recoups its cost of investing in transportation assets through various income streams related to economic growth and development of the community. A jurisdiction should receive at least as much back in income as it pays out in purchasing and maintaining the transportation assets. **(If it doesn't, it will soon be bankrupt.) Therefore, it should** theoretically be possible to compare the monetary outlays for various investment decisions to the monetary returns or anticipated returns through taxation.

Recently, SRF Consulting Group working on behalf of the APO conducted background research and developed a possible performance measure for describing the ROI of a transportation investment decision in the Saint Cloud MPA. The proposed ROI performance measure would seek to measure the marginal change in land value caused by the improved accessibility resulting from a transportation investment. The proposed ROI performance measure still requires further development, refinement, and validation, which APO staff will undertake over the next several years.

TRAFFIC CONGESTION AS ECONOMIC INDICATOR

As we have already established, very often transportation is only one factor that influences the performance measures related to economic development, and other non-transportation factors may have a larger influence. Ironically, this is true for roadway congestion as well. It is tempting to think of roadway congestion in terms of supply and demand – that is, if demand (vehicles) exceeds supply (space), the solution is to increase supply by widening roadways to add more traffic lanes. In reality, the issue is more complex than that.

First of all, demand is uneven throughout the day. If demand exceeds supply for only a few hours per day, **it may not necessarily be the most efficient use of the public's limited funds** to expend them on a major roadway expansion project, which is often a very expensive prospect. As always, roadway congestion must be weighed against other public needs such as police and fire protection, clean drinking water, education, and other important aspects of urban life. Unfortunately, some members of the public will only experience certain roadways during the peak travel periods and so from their perspective, the roadway is **"always" congested even though it may be under-utilized** the vast majority of the day.

Secondly, congestion simulations, mathematical models, and real-world observations show **that even spontaneous minor events can trigger congestion (i.e., a "butterfly effect").**³³ Therefore, in some instances – especially on heavily traveled corridors – congestion may not necessarily be the result of too little supply of space, but rather human behavior, such as braking too hard or following too closely behind another vehicle.

Third, there is a well-defined inter-relationship between transportation and land-use. In the past, land-use zoning and development choices were often made with little or no consideration for the impacts those decisions would have on transportation operations. For example, building a low-density residential neighborhood miles from the nearest grocery

³³ University of Exeter. "[Traffic jam mystery solved by mathematicians.](https://bit.ly/2MbWF2h)" Dec. 19, 2007. (<https://bit.ly/2MbWF2h>).

store essentially requires more traffic to be loaded onto the network. Recently, there is more appreciation for the inter-relationship between land-use choices and transportation. In fact, in some cases congestion can be thought of as much as a failure to make appropriate land-use choices rather than a failure to provide enough roadway space for traffic. Linking both the land-use and transportation decision-making processes can help prevent some of these problems.

Next, decades of expensive automobile-centric roadway expansion have not resulted in less congestion. In fact, congestion has increased over time. As Figure 4.42 illustrates, public road mileage (supply) has not increased at the same rate a vehicle-miles-traveled (demand). Again, it may be tempting to suggest that we simply need to build more roads, **but the public’s appetite for paying for those roads has been, understandably, inconsistent at best.** Transportation planning and engineering has responded by evaluating programs and strategies to get more utility out of the assets we do have. It is also important to note here that the public does not always respond positively to ever-widening roadways. Rather **than improving traffic flow, they often lead to “induced-demand”³⁴** that again slows traffic, increases the noise and air pollution from traffic, and increases the barrier to cross-flow traffic.

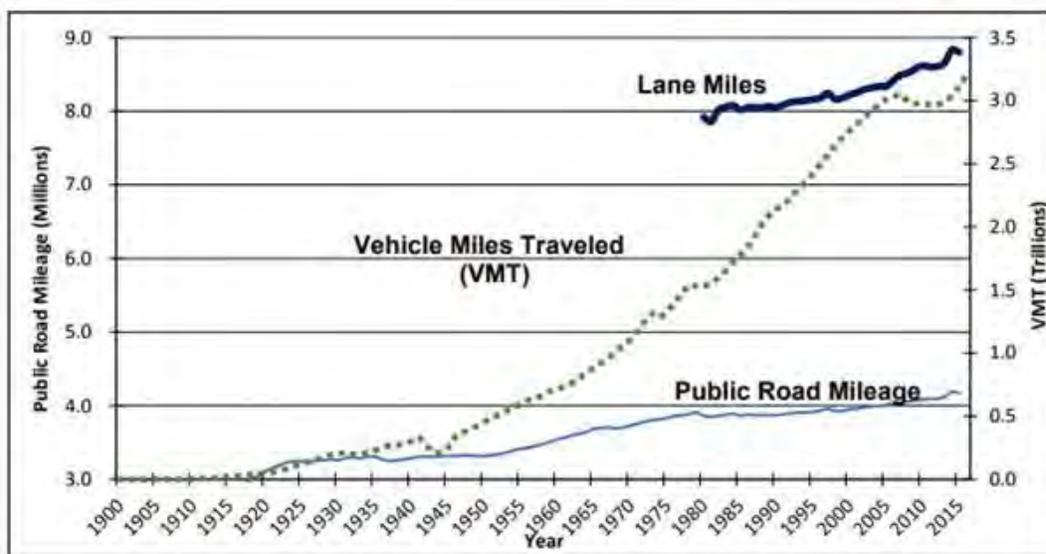


FIGURE 4.42 – U.S. VMT AND PUBLIC ROAD MILES OVER TIME.

Source: American Transportation Research Institute.

Lastly, demand for roadway space can be heavily influenced by factors over which transportation planners have little control. For example, during periods of economic recession ADT counts will typically fall, while during periods of strong economic growth

³⁴ U.S. Department of Transportation Federal Highway Administration. "[Induced Travel: Frequently Asked Questions.](https://bit.ly/2EBegKI)" (https://bit.ly/2EBegKI).

traffic counts often rise. So, from a certain perspective traffic congestion can be thought of as a signal that an urban area is performing well economically, and that a lack of congestion may be signal that something may be fundamentally wrong.³⁵

To be sure, congestion imposes an economic “loss” – or rather foregone economic gains – on a region. But a case can be made that it would be economically inefficient and/or impractical to build a transportation network that never results in congestion. In a high-performing urban area, some economic loss from congestion may simply be unavoidable.

PUBLIC-PRIVATE PARTNERSHIPS

Since 2016, the Trump administration has been suggesting that major investments in transportation need to be made. But, rather than just expending public dollars, there appears to be a desire to use public investment to leverage private investment in transportation assets.³⁶ These types of projects are referred to public-private partnerships (P3s). For example, in 2014 the State of Indiana awarded a 35-year contract to manage a 21-mile stretch of I-69 in exchange for a \$22 million annual payment from the state.

However, in June 2017, the State of Indiana terminated its deal due to delays and cost overruns totaling more than \$550 million. While some P3s have been regarded as successes, the overall track-record is very mixed.

P3s come in a variety of forms. The figure below illustrates some of the most common P3 models and the roles that the private partners play in each model.

³⁵ Robert Steuteville. "[Congestion can be good, study reports.](https://bit.ly/2Ws2KM2)" June 6, 2018. (<https://bit.ly/2Ws2KM2>).

³⁶ President Donald J. Trump. "[Building a Stronger America: President Donald J. Trump’s American Infrastructure Initiative.](https://bit.ly/2smUb7j)" Feb. 12, 2018. (<https://bit.ly/2smUb7j>).

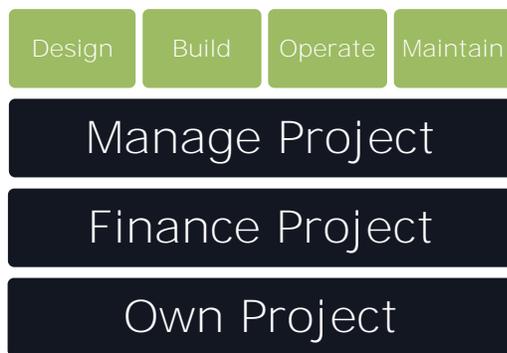
Traditional Public Sector Procurement



Joint Venture



Design-Build-Operate-Maintain



Brownfield Privatization



FIGURE 4.43 – TYPICAL P3 MODELS

P3s can make sense in some instances, but they should not be seen as a panacea for all transportation or infrastructure woes. In general, private investment is made with an expectation that a profit can eventually be realized. Many necessary transportation investments are modest in scope and scale and do not lend themselves well to profit-making. It is unlikely that all roads and buses could be privatized. Some streets and some important routes simply do not attract enough trips to be profitable. Charging for transportation access also creates an equity issue as those least able to pay the charge will, in many cases, pay a greater share of their limited income for mobility as compared to those more well off. This would result in less economic development, not more.

While it has been demonstrated that roadway tolls and congestion charges can be effective at suppressing demand for mobility and thereby reducing congestion, and while the APO will remain open to appropriate opportunities for P3s, we do not expect them to be a major source of transportation funding in the near future.

TOURISM

Tourism cannot exist without transportation, yet the relationship between the two is often overlooked. Historically, there is evidence that expansions in tourism have been correlated to improvements in transportation technologies.³⁷ Unfortunately, there is very little empirical data or research on exactly how transportation infrastructure investment decisions impact tourist travel.

Tourism is traditionally seen as one source of economic growth and development. It brings in dollars from outside the community. As a service-based industry (think hotels and restaurants), tourism tends to employ a high number of workers. However, service-based jobs also tend to be among the lowest paying jobs in the economy. According to data from the Bureau of Labor Statistics for 2018, in the Saint Cloud Statistical Area workers in restaurants, hotels, bars, gaming establishments, retail stores, and other businesses that serve tourists took home some of the lowest median annual wages in the region.³⁸

Within the MPA, we do have some limited data regarding tourism activity.

POPULATION PER HOTEL ROOM			
Metro Area	Population	No. of Hotel Rooms	Pop/Room
Saint Cloud Region	113,425	1,844	61.51
Rochester	114,000	5,393	21.14
Fargo-Moorhead-West Fargo	197,118	5,727	34.42
La Crosse	51,567	1,181	43.66
Mankato-North Mankato	53,274	1,100	48.43

FIGURE 4.44 – POPULATION PER HOTEL ROOM FOR SELECT URBAN AREAS

Thanks to a recent hotel market feasibility study, we know that there are 1,844 hotel rooms in the MPA. Between 2012 and 2017, these rooms had an average occupancy rate of about 65%. Occupancy rates are somewhat seasonal, with average rates between 60% and 70% March through October (See Figure 4.45). Occupancy rates for hotel rooms in the MPA tend to somewhat less than the national average. The market study estimates that in 2013 there were about 1,000 room nights that were unaccommodated – that is, a night when a traveler needed to either cancel their stay or settle for an accommodation of lesser quality than desired because their desired facility had no vacancies. By 2016, the number of

³⁷ Burkart, A. and Medlik R. (1974). *Tourism: Past, Present, and Future*.

³⁸ https://www.bls.gov/oes/current/oes_41060.htm#00-0000

unaccommodated room nights had tripled to nearly 3,000. This suggests that the market for hotel rooms in the MPA has been tightening.

When comparing the ratio of population to hotel rooms, the Saint Cloud MPA appears to have fewer hotel rooms than other mid-sized urban areas in the state or bordering the state. Rochester, of course, has the Mayo Clinic which draws thousands of people from all over the world. Fargo is the largest city in North Dakota and so serves as a statewide “hub” for conventions and other tourist activities. But even smaller urban areas like La Crosse, Wisconsin and Mankato-North Mankato have more hotel rooms per capita than the Saint Cloud MPA. This could indicate a need for more hotel rooms in the region, but given that average occupancy rates tend to be lower than the nation average, it would seem to indicate a lack of demand for hotel rooms relative to other urban areas in and around the state. The MPA appears to lag behind other urban areas as a tourist destination.

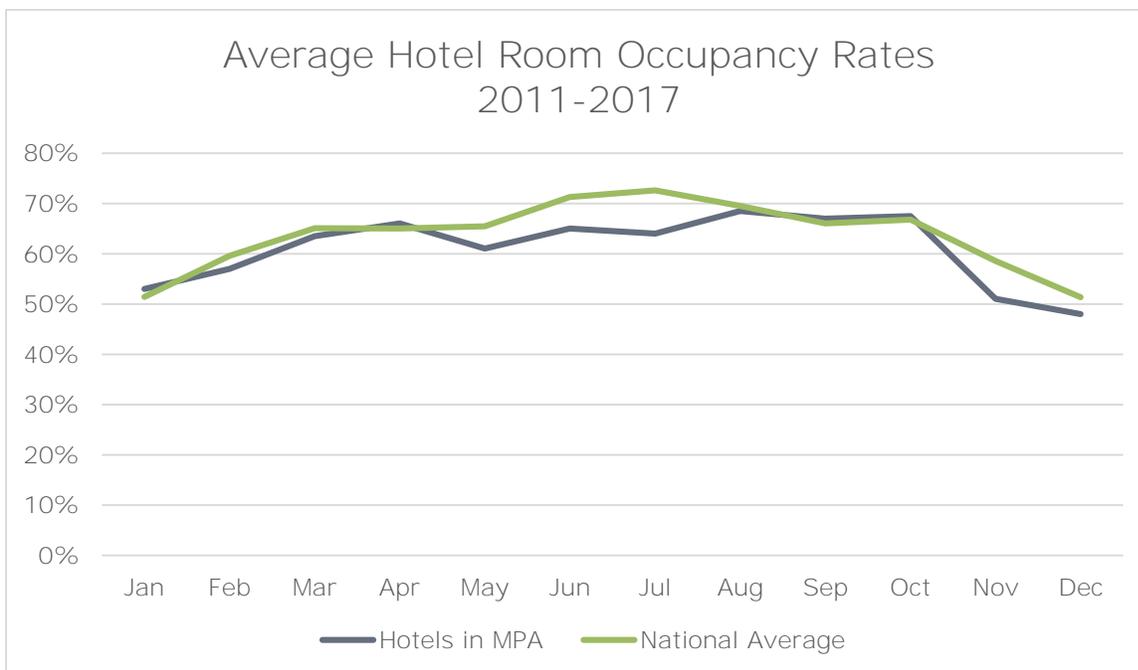


FIGURE 4.45 – AVERAGE HOTEL ROOM OCCUPANCY RATES 2011-2017
Data Sources: Downtown St. Cloud Hotel Market and Feasibility Analysis by Hunden Strategic Partners and <https://www.statista.com/statistics/206546/us-hotels-occupancy-rate-by-month/>

The River’s Edge Convention Center, an 87,000 square-foot facility located in the city of Saint Cloud, held between 325 and 365 events in both 2015 and 2016. The total attendance for all events each year was about 159,000 people. The River’s Edge Convention Center estimates that they have lost 13 conferences in the last two years due to the inadequate number of hotel rooms within a walkable distance of their facility.

We know that a significant amount of tourist traffic passes through the MPA. The region lies between the heavily populated Twin Cities urban area and the “lakes country” in north-

central Minnesota where many people own lake front property or rent camping spots during the summer months. Undoubtedly, some of this traffic stops in the MPA for roadway-related services such as food or gas, but the Saint Cloud region is not their destination. The intersection of US-10 with East St. Germain Street is one of the lowest performing intersections in the region in terms of travel time reliability. Improvements to that intersection should help improve the flow of tourists through the region.

Generally speaking, the MPA does not appear to be a significant tourist destination. However, it does experience a significant amount of pass-through tourist traffic, especially during the summer months. While there is sufficient capacity on US-10 and I-94 to handle the tourist traffic, spot location improvements at the intersection of US-10 and East St. Germain Street could have positive impacts on the statewide tourist economy.

ECONOMIC VITALITY CONCLUSIONS

While Federal regulations require the APO to consider economic vitality in its planning and programming process, the APO currently has very little economic development data at the metropolitan level. Going forward, the APO staff will attempt to develop a more robust economic development monitoring program – especially where economic development may be impacted by transportation – and attempt to collect relevant data. Staff will also reach out to other similar sized jurisdictions to solicit any economic development data that they may have for comparison purposes. APO staff will also continue the development and refinement of an ROI performance measure for the region in order to help describe the expected economic impacts of various transportation investment options.

CHAPTER 5: REVIEW OF JURISDICTIONAL PLANS

The Saint Cloud APO has reviewed several planning documents prepared by member jurisdictions outlining their goals and objectives. These documents include the following:

- City of Saint Cloud 2016 Comprehensive Plan.
- City of Saint Cloud 2017 Community Survey.
- City of Saint Joseph 2018 Comprehensive Plan.
- City of Saint Joseph 2012 Transportation Plan Update.
- City of Sartell 2016 Comprehensive Plan.
- City of Sauk Rapids 2004 Comprehensive Plan.
- City of Waite Park 2005 Comprehensive Plan.
- City of Waite Park 2007 Transportation Plan.
- City of Waite Park 2016 Land Use Study.
- City of Waite Park 2007 Analysis of the Market Potential for Housing, Retail, and Office Uses at the Waite Avenue Redevelopment Area in Waite Park.

Below is a short synopsis of these respective documents in regards to transportation.

CITY OF SAINT CLOUD

SAINT CLOUD COMPREHENSIVE PLAN

As outlined in the 2016 Comprehensive Plan, staffers with the City of Saint Cloud hope to **improve and expand the capacity of the city's roadway network by 2035.**

"New roadway extensions and wider roads have improved local and regional mobility, providing increased access to both older and emerging neighborhoods and destinations. The roadways are designed with safety and efficiency in mind, accommodating alternative modes of transportation such as walking, biking, and transit."

In order to accomplish this vision, the City of Saint Cloud has identified the following goal for transportation development within its jurisdiction:

"Support a highly-connected transportation network that facilitates safe access and mobility for all forms of transportation."

The 2016 Comprehensive Plan outlined key roadway improvements the city should undertake to move the community closer toward its goal, including:

- **33rd Street** - Roadway widening and enhancements including a possible bridge across the Mississippi River.
- **Division Street** - Improving signals and developing a more pedestrian-friendly environment.
- **Heatherwood Road** - Extending corridor to the I-94 Business Park

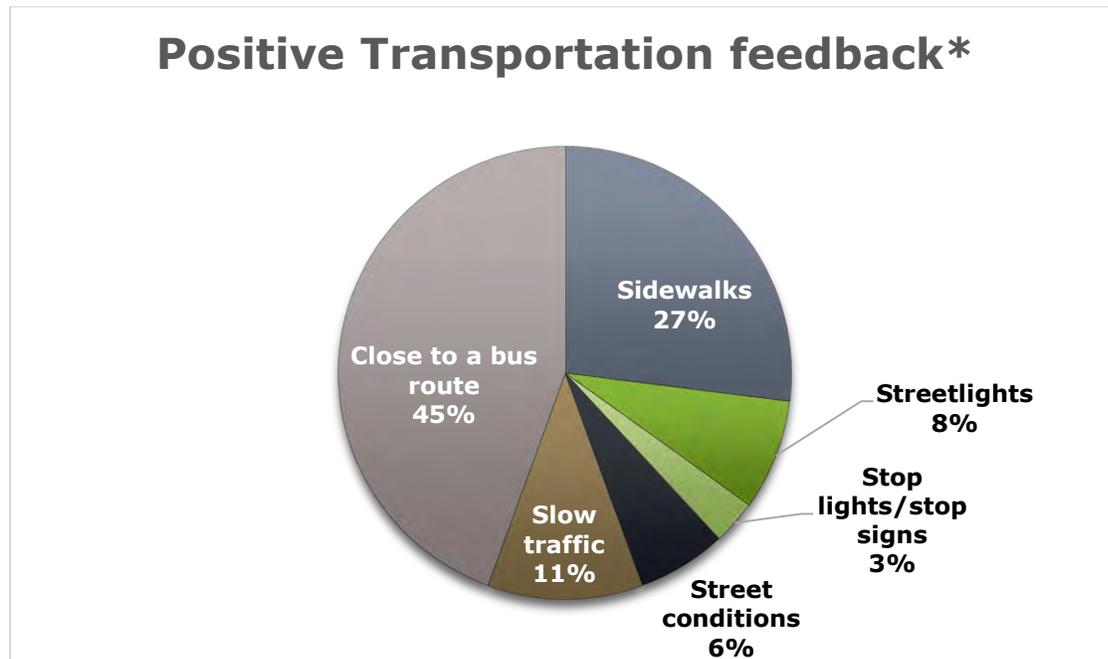
- **40th Street South and Roosevelt Road** - Relocation of the signalized intersection from 43rd Street South to 40th Street South.
 - There is also discussion of developing 40th Street South as an uninterrupted corridor from MN 23 across MN 15 and continuing on to Roosevelt Road.
- **I-94/CR 136 Interchange** - Develop an interchange to help increase access to the emerging growth areas in Saint Cloud and alleviate congestion on Oak Grove Road and 40th Street South.

Downtown and core neighborhood roadways, pedestrian infrastructure – including sidewalks, trails, crosswalks, and Safe Routes to School (SRTS) – and the Complete Streets initiative were also included as part of the key roadway improvements for the city.

The 2016 Comprehensive Plan also outlined support for improved regional transit connections, particularly the extension of the Northstar Commuter Rail from Big Lake to Saint Cloud.

SURVEY OF SAINT CLOUD RESIDENTS SPRING 2017

In the 2017 Saint Cloud Community Survey, 6.3 percent of the 4,460 respondents had indicated that transportation-related issues were some of the best things about living in their neighborhood. Of that 6.3 percent, 45 percent found living in close proximity to a bus route was a positive aspect.

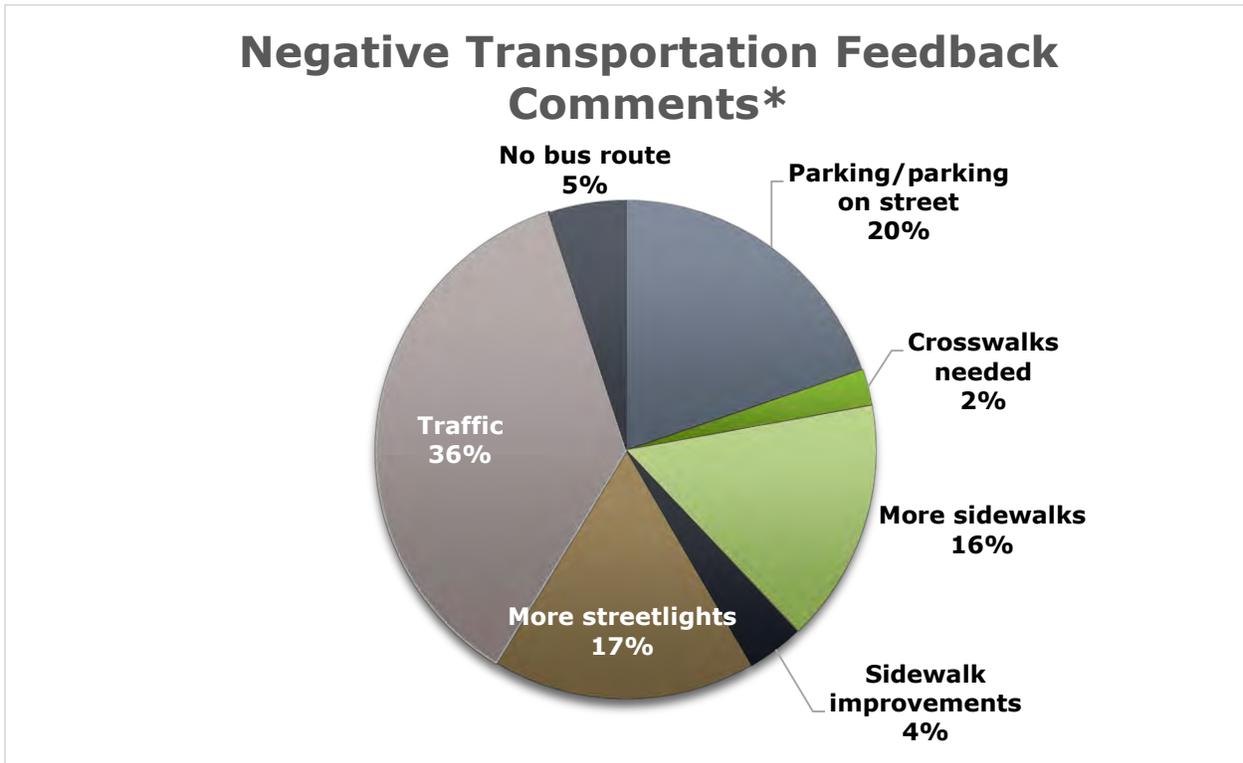


*6.3 percent of the 4,460 identified respondents had transportation-related responses to the question. The percentages in the graphic illustrate what percentage of that 6.3 percent overall various portions represent.

FIGURE 5.1 – 2017 SAINT CLOUD COMMUNITY SURVEY POSITIVE FEEDBACK ON TRANSPORTATION
Data Source: Survey of Saint Cloud Residents Spring 2017

A total of 4,425 Saint Cloud residents responded to the question: "What is the worst thing about your neighborhood?" Of those responses, 29.8 percent were transportation-related responses.

The majority of those negative responses related to transportation centered around traffic – either too much or too fast.



**29.8 percent of the 4,694 identified respondents had transportation-related responses to the question. The percentages in the graphic illustrate what percentage of that 29.8 percent overall various portions represent.*
FIGURE 5.2 – 2017 SAINT CLOUD COMMUNITY SURVEY NEGATIVE FEEDBACK ON TRANSPORTATION
Data Source: Survey of Saint Cloud Residents Spring 2017

In addition, the 2017 Community Survey found Saint Cloud residents pretty evenly split on their perception of driving in Saint Cloud. A total of 4,460 residents responded to the question: "How would you rate the ease of driving around town?"

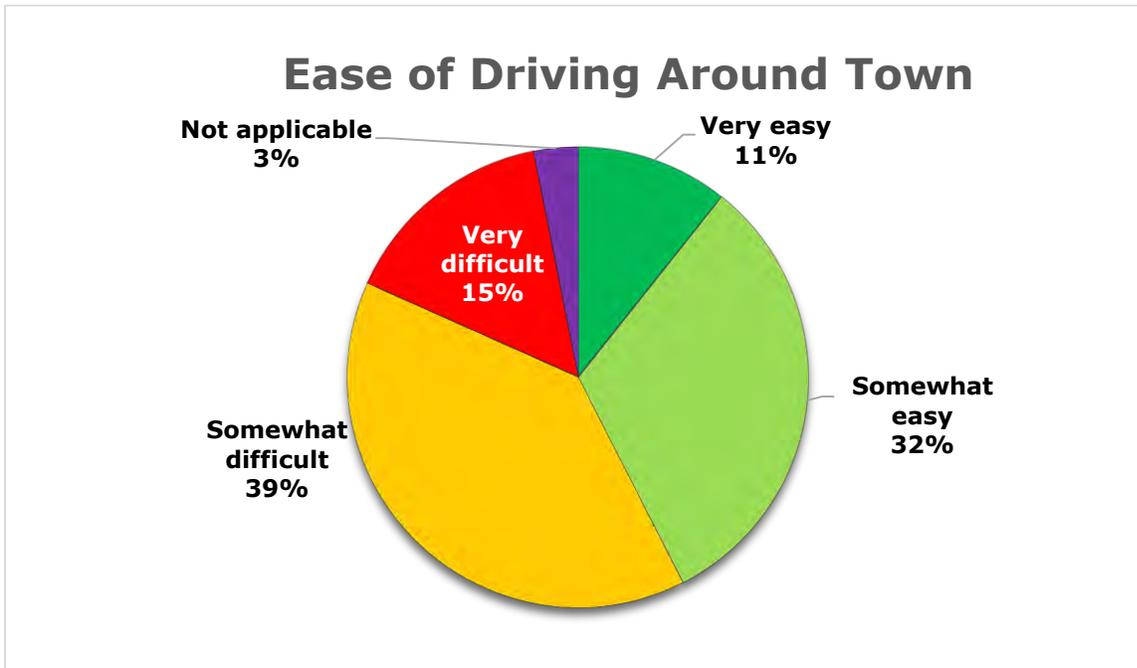


FIGURE 5.3 – 2017 SAINT CLOUD COMMUNITY SURVEY FEEDBACK ON EASE OF DRIVING
 Data Source: Survey of Saint Cloud Residents Spring 2017

Two-thirds of the 4,648 people who responded to the question on the overall physical condition of roads in the city said roads are in either fair or poor condition.

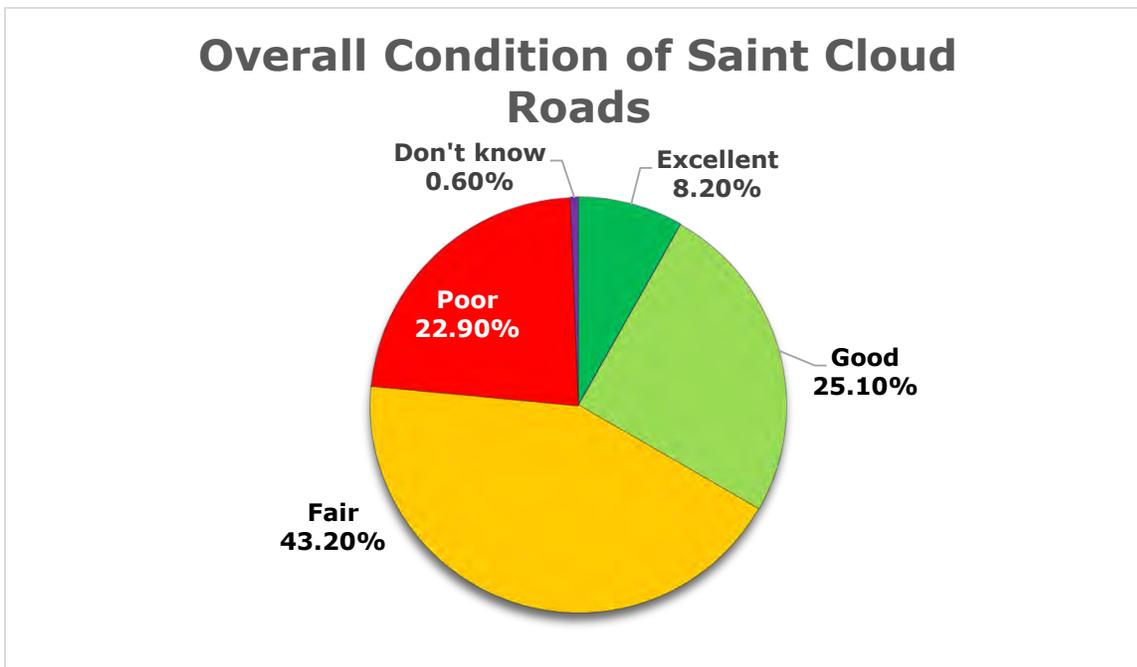


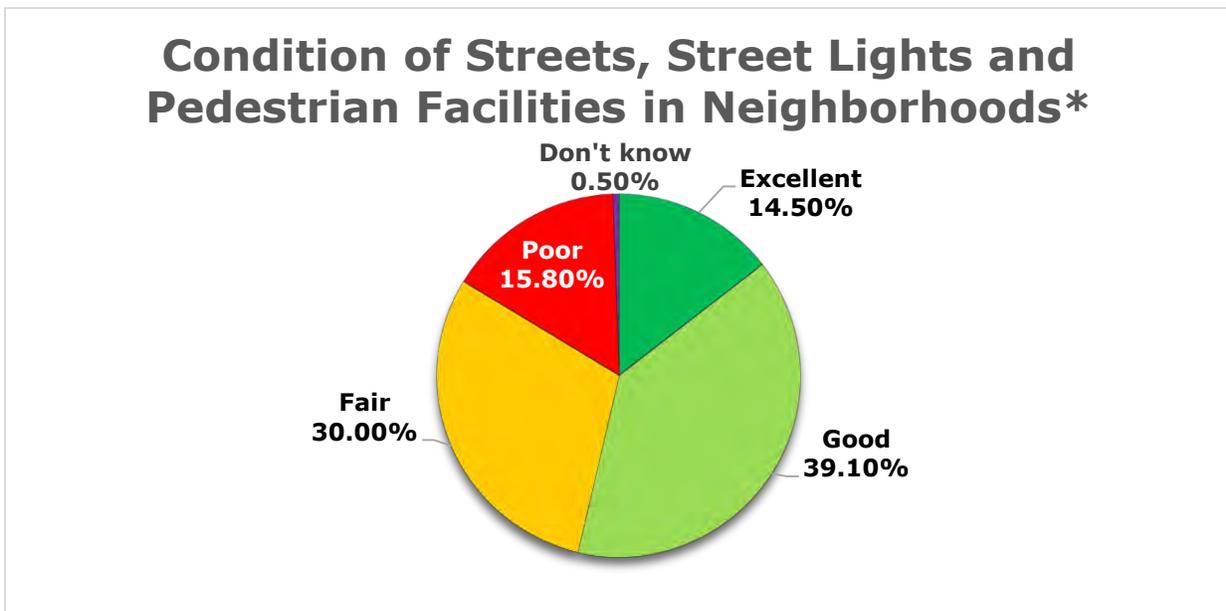
FIGURE 5.4 – 2017 SAINT CLOUD COMMUNITY SURVEY FEEDBACK ON ROAD CONDITION
 Data Source: Survey of Saint Cloud Residents Spring 2017

Other concerns brought up in the Community Survey include quality of existing parks, trail, and greenways in Saint Cloud and the quality of streets, street lights, and pedestrian facilities in Saint Cloud neighborhoods.



*A total of 4,644 people responded to the question: "How would you rate the quality of existing parks, trails, and greenways in Saint Cloud?"

FIGURE 5.5 – 2017 SAINT CLOUD COMMUNITY SURVEY FEEDBACK ON QUALITY OF PARKS AND TRAILS
 Data Source: Survey of Saint Cloud Residents Spring 2017



*A total of 4,672 people responded to the question: "How would you rate the condition of streets, street lights, and pedestrian facilities in your neighborhood?"

FIGURE 5.6 – 2017 SAINT CLOUD COMMUNITY SURVEY FEEDBACK ON CONDITION OF STREET LIGHT AND SIDEWALKS

Data Source: Survey of Saint Cloud Residents Spring 2017

Overall, transportation issues ranked high among Saint Cloud citizens as problems the city should work to address.

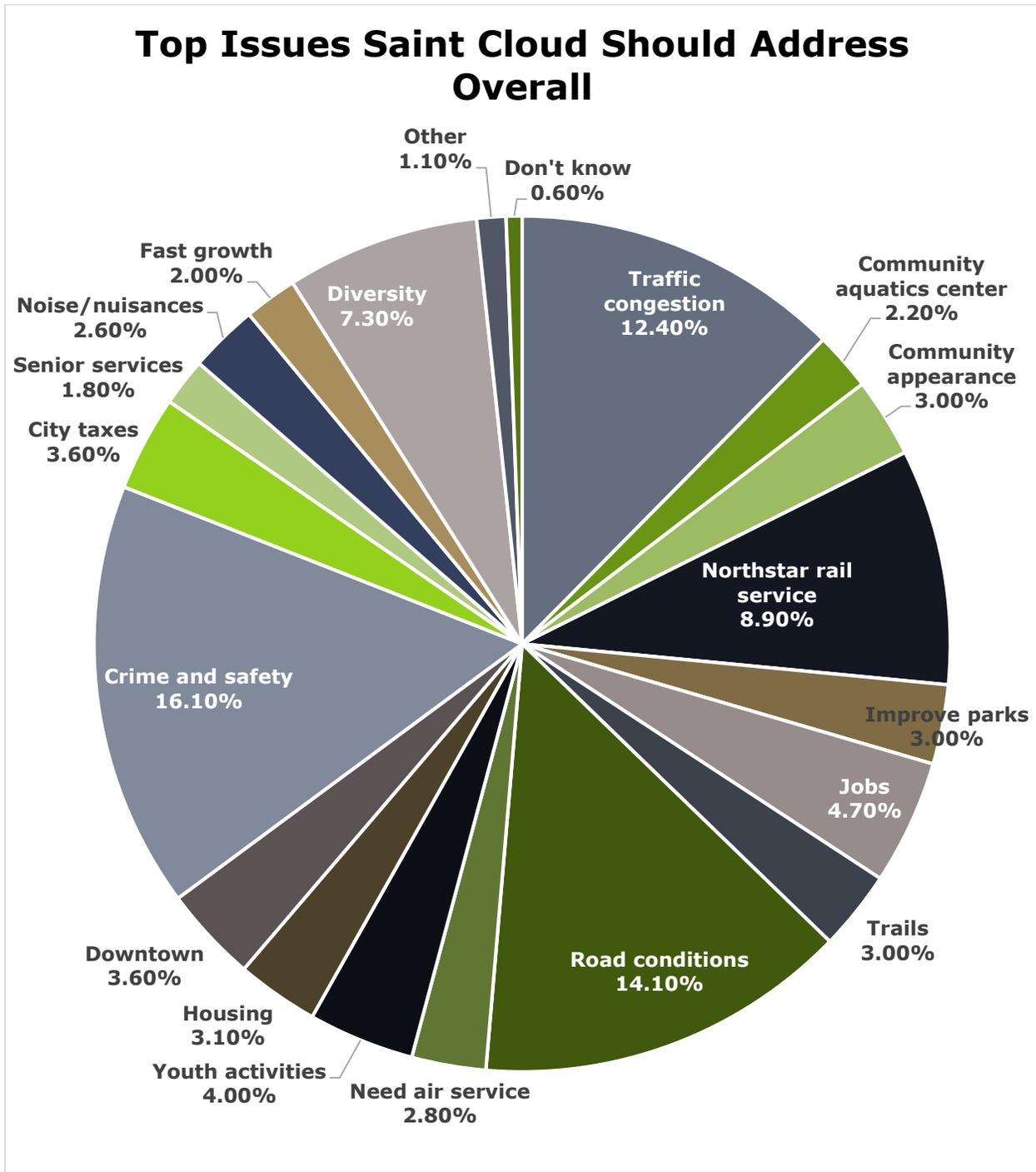
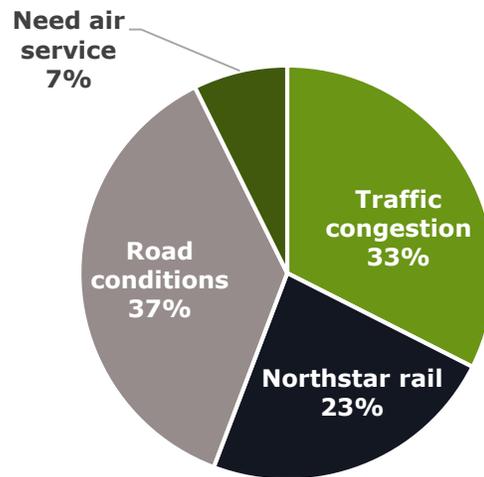


FIGURE 5.7 – 2017 SAINT CLOUD COMMUNITY SURVEY RESULTS ON TOP ISSUES
 Data Source: Survey of Saint Cloud Residents Spring 2017

Top Concerns Identified as Transportation-Related*



*38.2 percent of the identified respondents had expressed these transportation-related concerns as being a priority for the city. The percentages in the graphic illustrate what percentage of that 38.2 percent overall various portions represent.

FIGURE 5.8 – 2017 SAINT CLOUD COMMUNITY SURVEY FEEDBACK ON TRANSPORTATION CONCERNS
Data Source: Survey of Saint Cloud Residents Spring 2017

CITY OF SAINT JOSEPH

SAINT JOSEPH TRANSPORTATION PLAN UPDATE 2012

Staff with the City of Saint Joseph identified several important roadways for the city. Those roadways include: I-94 and CSAH 75.

However, in the case of CSAH 75, city staff identified congestion issues during the morning and afternoon peak hours during the week and occasionally on weekends. The plan states: **“The high volume, high-speed nature of the corridor results in safety concerns for all modes of traffic using or crossing the highway. Critical planning issues along CSAH 75 include spacing of full access signalized intersections and potential reduction of partial access locations if safety problems arise due to growing traffic demands.”**

Based upon the APO’s 2035 Long Range Transportation Plan, the City of Saint Joseph is considering multi-lane configurations for the minor arterial corridors of CSAH 2 and CSAH 133 among others. According to the APO, these roadways are expected to experience average daily traffic (ADT) levels higher than 10,000.

The Saint Joseph Transportation Plan Update also discussed plans to extend, update, and/or realign Field Street and CSAH 2. The plan also featured the possible development of the Southwest Beltway – connecting Saint Cloud to Saint Joseph by way of Waite Park – and an additional I-94 access point along Jade Road.

SAINT JOSEPH COMPREHENSIVE PLAN 2018

Updating the 2008 Saint Joseph 2030 Comprehensive Plan, the 2018 City of Saint Joseph **Comprehensive Plan: A Vision to the Future was drafted to “build upon past and existing planning work and is based on comments, ideas, and guidance from the Saint Joseph community.”**

The 2018 comprehensive plan has identified six adjectives which are used to describe community values – vibrant, lively, diversified, welcoming, proactive, and sustainable. **These values help support the city’s vision statement: “Saint Joseph is a flourishing city where all residents have access to a wide variety of housing options and employment opportunities, and where they can enjoy walkable neighborhoods, a vibrant downtown full of cultural and entertainment activities, and numerous recreational spaces and natural areas.”**

In terms of transportation, the plan identified the importance of continuing the city’s commitment to walkable and bike-friendly neighborhoods and commercial districts. The plan emphasized the need to improve upon those commitments stating “there are limited opportunities for active transportation, especially through residential areas.”

Of the existing transportation infrastructure and its relation to active transportation modes, the plan has identified the need to improve the quality of bicycle routes – by connecting trails, creating separated bike lanes and providing visible and legible bicycle infrastructure – and safe areas for pedestrians and bicyclists to cross CSAH 75.

Other items of note within the plan in regards to transportation include the completion of the first phase of a new east-west collector street (Field Street) in the southern portion of the city and the 2012 realignment construction of CSAH 2 in the northern corridor of the city. The plan states the second phase of the northern corridor realignment is set to include a future east-west street connecting to County Road 133 **“improving traffic movement and opening up opportunities for new development.”**

To address these transportation concerns the city has outlined three goals:

- Improve the transportation framework.
- Plan, develop, and maintain a safe and accessible multimodal transportation system.
- Implement the Comprehensive Transportation Plan (drafted in 2012).

CITY OF SARTELL

SARTELL 2016 COMPREHENSIVE PLAN

The 2016 Sartell Comprehensive Plan states city staff is committed to developing a welcoming and economically rich community. Its philosophy statement reads: **“Sartell is a progressive community, engaged in shaping its own future. The residents and businesses of Sartell are working to capitalize on the qualities and values that have made it a successful and desirable community.”**

The plan identifies concerns related to transportation.

“Traffic is a source of concern, within Sartell and along the roadways, which connect the community to Saint Cloud, Waite Park, Sauk Rapids and beyond. There is a perceived split between the east and west side of Sartell and both often feel disconnected from each other.”

The Comprehensive Plan has listed four goals for transportation improvements to be made over the lifetime of this plan. Those are:

- Improve traffic management and safety.
 - Improve traffic safety around schools.
 - Collaborate with the APO for other regionally significant roadway and trail connections.
 - Financially and otherwise (through platting) plan for recommended future roadway projects.
 - Identify and review potential transportation safety deficiencies.
 - Public transportation accessibility.
- Make local connections.
 - Transform gateway roads.
 - Build more sidewalks.
 - Create better neighborhood connections.
 - Create pedestrian connections to the parks and other public spaces.
 - Where possible, create complete and context sensitive streets.
- Focus on different ways to get around and continue regional transportation efforts.
 - Explore ideas for improved bus service.
 - Encourage carpooling.
 - Create an integrated network of local bike lanes and bike racks in key locations.
 - Develop public education materials for drivers and bikers on road safety.
 - Plan for electric car charging stations.
 - Plan for a commuter rail line and station.
 - Identify and financially plan for recommended future trail projects.
 - Plan and implement safe and convenient facilities for bicyclists and pedestrians to serve as daily transportation, as well as for recreation.
- Design attractive roadways.

- Grow the Adopt a Road program.
- Provide landscaping and cleaning.
- Work with local businesses to secure sponsorship and undertake a landscaping program dedicated to these corridors.
- Paint utility poles and hydrants.
- Implement roadway and trail maintenance and pavement management strategies.

“The transportation plan demonstrates how the City of Sartell will work towards an integrated transportation system to serve the needs of its residents and businesses, support the city’s development plans and complement the portion of the Saint Cloud area transportation system that lies within the city’s boundaries.”

Among transportation concerns, the abundance of roundabouts within Sartell was brought up frequently in the public outreach comments. City staff have addressed these comments **by stating “Aside from moving traffic better, roundabouts reduce the number of crashes, especially severe crashes at the intersections where they are placed.”**

Other issues brought up in public comment were safety concerns for pedestrians and bicyclists and lack of north-south and east-west connector streets in the city.

CITY OF SAUK RAPIDS

SAUK RAPIDS 2004 COMPREHENSIVE PLAN

As of the writing of this chapter in December 2017, the City of Sauk Rapids has not made plans to update this document.

The City of Sauk Rapids has adopted a vision with 10 goals for the community. Those goals commit the city to be:

- A place where natural resources are preserved.
- A place that recognizes the importance of the Mississippi River.
- A place where development is managed and compatible with the existing community.
- A place with economic opportunity.
- A place with a strong, diverse, and growing downtown.
- A place that is aesthetically pleasing.
- A place accepting of diverse populations and opinions.
- A place of quality neighborhoods.
- A place of recreational opportunities.
- A place where an effective public/private transportation system is available.

Sauk Rapids residents have expressed concerns over alternative sources of mobility and the desire to continue and/or expand transit service. Bicycle and pedestrian safety was also identified as a major concern.

Within the 2004 Sauk Rapids Comprehensive Plan staff have identified six transportation concerns. They are:

- Potential for a Northstar station.
- Accessibility to regional business centers.
- U.S. 10 corridor.
- Negative issues tied to the bridge project.
- Lack of infrastructure to accommodate growth.
- Railroad tracks separate community from river.

To address these issues the city has identified the following goals:

1. Provide a safe, efficient, and adequate transportation system that serves and balances both access and mobility needs.
2. Maintain a transportation system that is coordinated and cost-effective.
3. Promote alternative transportation such as bicycling, walking, transit, and rail.

In addition, the city has stated the importance of connecting existing trails within Sauk Rapids to others throughout the region.

“The city’s intent is to improve the trail facilities so as to interconnect existing trails and new trails to create an overall trail system for the community.”

CITY OF WAITE PARK

WAITE PARK 2005 COMPREHENSIVE PLAN

When it comes to transportation, the City of Waite Park is committed to promoting and **sustaining “an affordable, safe, and convenient transportation network including local, county, and state roadways and amenities which balance mobility needs, safety concerns, aesthetic value, and environmental/land resource protection.”**

Waite Park residents have identified several concerns surrounding transportation within the jurisdiction. They are:

- Congestion.
- Safety at the Discovery Elementary School intersection.
- The need for turn lanes specifically at the intersection of 10th Avenue S and Second Street S.
- More sidewalks and/or safer crossings needed along Division Street.

Staff have identified the CSAH 75 corridor and the MN 23 corridor as the two major focal points for the city.

In terms of CSAH 75, **the 2005 Comprehensive Plan states: “Survey participants and those attending public meetings have expressed concerns with the safety and usability of pedestrian crossings contained in the CSAH 75 corridor, especially in the area of Crossroads Center. Transportation officials should review proposed improvement projects relative to their impact on non-motorized forms of transportation. Special emphasis should be placed on minimizing CSAH 75 as a fragmenting barrier and creation of a pedestrian-friendly urban core.”**

Similar sentiment is expressed in terms of MN 23.

“As is the case with the CSAH 75 corridor, the importance of [MN] 23 to the accessibility of businesses that have developed adjacent to it is noted, however, it is further noted the roadway is of primary importance to commuters traveling to destinations either within or external to the Saint Cloud Area.”

The plan also addresses the need to encourage the use of public transit and other alternative forms of transportation to help alleviate traffic congestion.

The plan touches on sidewalks and trails throughout Waite Park. Citizens input includes:

- Provide safe pedestrian crossing of CSAH 75 via underpass/overpass.
- Place sidewalks when new road construction occurs.
- Connecting existing sidewalks.
- Include a mixture of sidewalks and trails to keep rollerblade users off the street.

WAITE PARK 2007 TRANSPORTATION PLAN

In conjunction with the 2005 Comprehensive Plan, the Waite Park 2007 Transportation Plan outlines specific goals and objectives that will assist in guiding the city through mobility improvements with development.

Future roadway network issues identified in this plan include:

- MN 23, CSAH 75, and MN 15.
 - The plan identified these roadways as the major arterials for the city. Solutions on how to alleviate traffic congestion on these roadways were not provided in this document.
- Future location of the Southwest Beltway.
 - The Southwest Beltway would provide connectivity around the Saint Cloud MPA. A corridor study was underway during the draft of this document.
- Future I-94 access.
 - Constituents brought up the possibility of an additional access point to I-94 at County Road 6. This was ultimately left out of the final plan.
- 10th Avenue/Second Avenue north-south minor arterial.
 - A need was identified to develop a north-south arterial between Quarry Park and MN 15. A corridor study was planned to determine the feasibility of this.
- Sauk River Bridge Crossing
 - Two possibilities were discussed as to the location of a bridge crossing the Sauk River within Waite Park. Specific recommendations were not made in this plan.

The Transportation Plan also identified the need to provide a regional connection for the Glacial Lakes State Trail and the Lake Wobegon Trail.

WAITE PARK 2007 ANALYSIS OF THE MARKET POTENTIAL FOR HOUSING, RETAIL, AND OFFICE USES AT THE WAITE AVENUE REDEVELOPMENT AREA

This market analysis centers on the potential **redevelopment for the site “bordered by Division Street N on the south, Waite Avenue on the east, Third Street NE and the Burlington Northern Railroad on the north, and First Avenue N on the west.”**

Location of Waite Avenue Redevelopment Area



Maxfield Research Inc.

FIGURE 5.9 – WAITE AVENUE REDEVELOPMENT AREA

In this plan, conducted in conjunction with Maxfield Research Inc., Waite Park staffers explored options to develop portions of the city.

“The Waite Avenue Redevelopment Area Master Plan is a community-driven document intended to guide and shape the redevelopment of this area.”

The analysis recommends the following:

- Housing.
 - In the short term housing should focus on young singles and couples with and without children; younger and middle-aged singles and couples without children; and empty-nesters and independent seniors. To attract this demographic Maxfield Research suggests construction twin homes and main-level living or single-level attached townhomes. Construction of rental properties was also recommended.
 - In the long term, Maxfield Research recommends construction of senior housing.
- Retail.
 - Retail shops designated for this area would include more high-end retail **clients given the proximity to Crossroads Center’s national large-scale retail clientele.**
- Office Space.
 - Office space is recommended to be built in one multistory retail building. Office space would be confined to the upper levels of the building. There is limited demand for this type of space in Waite Park.

WAITE PARK 2016 LAND USE STUDY

The City of Waite Park commissioned a land use study to be conducted with the assistance of the **Saint Cloud State University’s School of Public Affairs Research Institute.**

“This study included an analysis of strengths, weaknesses, opportunities, and threats related to land use, a community vision survey, interviews with public officials and other land use stakeholders, and data analysis designed to inform the city’s future land use.”

In terms of transportation, the study discussed the importance of linking transportation and **land use planning to Waite Park’s overall future development.**

“Clearly Waite Park is a connecting point for people in their employment role – but there are also opportunities to have them connect to service providers – from health care to accommodations and food service to recreational opportunities. Waite Park has the potential to leverage this inflow of workers (and shoppers) to meet a multitude of consumer demands.”

This study outlined nine recommendations for the city on future land use solutions/ideas:

- Make land use decisions to transform Waite Park into the Minnesota community that is most welcoming to seniors.
- Strategically acquire land along Granite View Road for future development when it becomes available.
- **Become a magnet for the region’s foreign born population through land use strategies.**
- Reconsider plans for redevelopment of Waite Avenue corridor.
- Undertake a community beautification initiative.

- Continue to encourage commercial development along MN 23.
- Make future land use decisions to help Waite Park acquire a reputation as a recreational destination.
- Pursue a mixed land use strategy in the future annexed area.
- Pave the way for the area by becoming a business innovation incubator.

MINNESOTA DEPARTMENT OF TRANSPORTATION

The Minnesota Department of Transportation (MnDOT) has developed several plans related to a variety of transportation needs across the state. Launched in November 2011, **Minnesota GO: A Collaborative Vision for Transportation, is a family of plans to “better align the transportation system with what Minnesotans expect for their quality of life, economy and natural environment” over the course of the next 50 years.** Guiding principles used in the development of this series of plan include the following:

- Leverage public investments to achieve multiple purposes.
- Ensure accessibility.
- Build to a maintainable scale.
- Ensure regional connections.
- Integrate safety.
- Emphasize reliable and predictable options.
- Strategically fix the system.
- Use partnerships.

Plans developed under the Minnesota GO family of plans include:

- Statewide Multimodal Transportation Plan.
- Minnesota State Highway Investment Plan.
- Statewide Bicycle System Plan.
- Statewide Freight System and Investment Plan.
- Statewide Rail Plan.
- Statewide Ports and Waterways Plan.
- Minnesota Walks (formerly known as the Statewide Pedestrian System Plan).
- Greater Minnesota Transit Investment Plan.
- State Aviation System Plan (SASP). Of note, this plan was in the process of being updated at the writing of this document. A review of this plan is not listed below.

STATEWIDE MULTIMODAL TRANSPORTATION PLAN 2017-2036

The Statewide Multimodal Transportation Plan (SMTP) provides overarching guidance and priorities for the entire transportation system. The plan outlines and provides data on the existing multimodal transportation network of the entire state – streets, roads and highways; sidewalk miles; national and state designated bicycle routes; designated trails; bicycle sharing; Twin Cities transit; Greater Minnesota transit; intercity bus; freight rail; commuter rail; intercity passenger rail; airports; Great Lakes ports; river ports; pipelines;

car sharing; and ride-hailing. In addition, the plan details the variety of funding sources available statewide for transportation projects and infrastructure.

The main portion of the plan details the various changes and challenges facing the statewide multimodal network through 2036.

“Minnesota faces a wave of aging roads and bridges that need upkeep. MnDOT typically reconstructs roads when they are between 70 and 80 years old. Bridge replacement typically occurs at 50 to 100 years. Additional needs for maintenance can be found on city and county roads and Minnesota’s airports, railroads, ports and waterways. These needs add to a seemingly ever-growing list of investments that must be made to maintain the quality of the state’s public systems.”

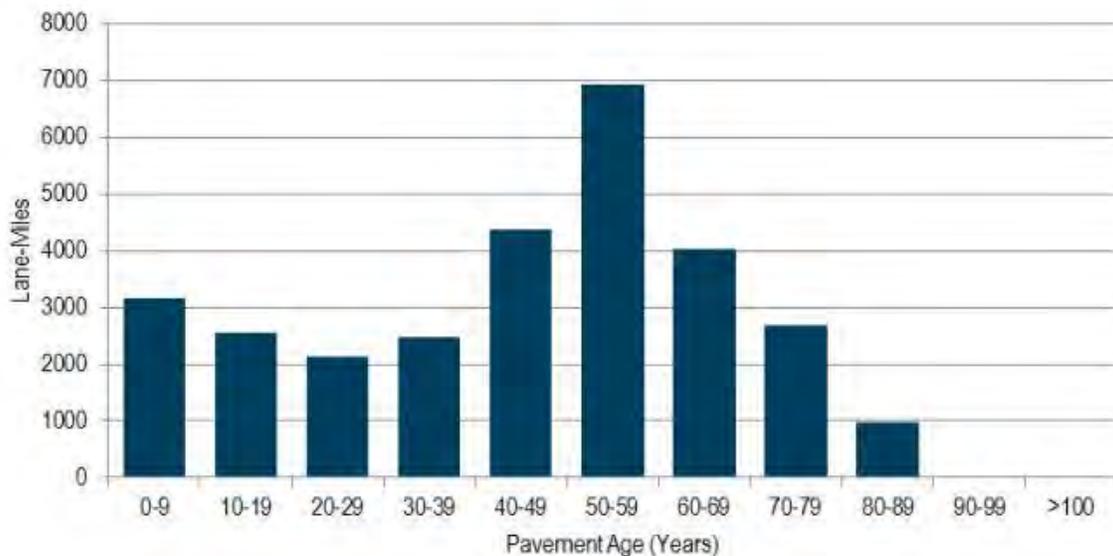


FIGURE 5.10 – AGE OF PAVEMENT ON MINNESOTA’S STATE HIGHWAY SYSTEM, 2014.
Data courtesy of MnDOT

In addition, the plan also highlights the changes in transportation behavior such as the emergence of Mobility as a Service (MaaS), the increasing interest in transit and other forms of active transportation, and the role technology will play in transforming transportation.

As such, the SMTP outlines five objectives along with performance measures and strategies that will “help ensure that progress is made in the coming years.” Those objectives include:

- **Open Decision-Making:** Make transportation system decisions through processes that are inclusive, engaging, and supported by data and analysis. Provide for and support coordination, collaboration, and innovation. Ensure efficient and effective use of resources.

- **Transportation Safety:** Safeguard transportation users and the communities the system travels through. Apply proven strategies to reduce fatalities and serious injuries for all modes. Foster a culture of transportation safety in Minnesota.
- **Critical Connections:** Maintain and improve multimodal transportation connections essential for Minnesotan’s prosperity and quality of life. Strategically consider new connections that help meet performance targets and maximize social, economic, and environmental benefits.
- **System Stewardship:** Strategically build, manage, maintain, and operate all transportation assets. Rely on system data and analysis, performance measures and targets, agency and partners’ needs, and public expectations to inform decisions. Use technology and innovation to get the most out of investments and maintain system performance. Increase the resiliency of the transportation system and adapt to changing needs.
- **Healthy Communities:** Make fiscally responsible transportation system decisions that respect and complement the natural, cultural, social, and economic context. Integrate land use and transportation to leverage public and private investments.

MINNESOTA STATE HIGHWAY INVESTMENT PLAN (MNSHIP)

The Minnesota State Highway Investment Plan (MnSHIP) details the capital investment priorities for the state’s multimodal transportation network through 2037.

“MnSHIP describes how MnDOT will use capital investments to repair, replace, and improve the state highway system. The plan does not address how MnDOT funds the operation of the system or day-to-day maintenance.”

The plan details key investment categories such as pavement condition, freight, traveler safety, and accessible pedestrian infrastructure and seeks to provide context of these categories in terms of the statewide transportation network.

Subsequently, MnSHIP dives further into the existing conditions of each of these investment categories and estimates the amount of revenue needed to bring these categories into a state of good repair using current performance targets established by MnDOT.

“In developing its assumptions for MnSHIP, MnDOT projected the investments necessary to meet state highway transportation needs through 2037. The need was determined by the costs required to meet performance-based targets and other key system goals, such as advancing the state’s economic vitality and supporting Minnesotans’ quality of life.”

Overall, from 2018 through 2037, MnDOT estimates the need for Minnesota’s transportation network to be around \$39 billion with a majority of that need being allocated to pavement condition (34.5 percent). However, it is estimated that transportation revenues for that same time frame will fall significantly short of that need – an estimated \$21 billion in revenue will be available during that same 20 year period.

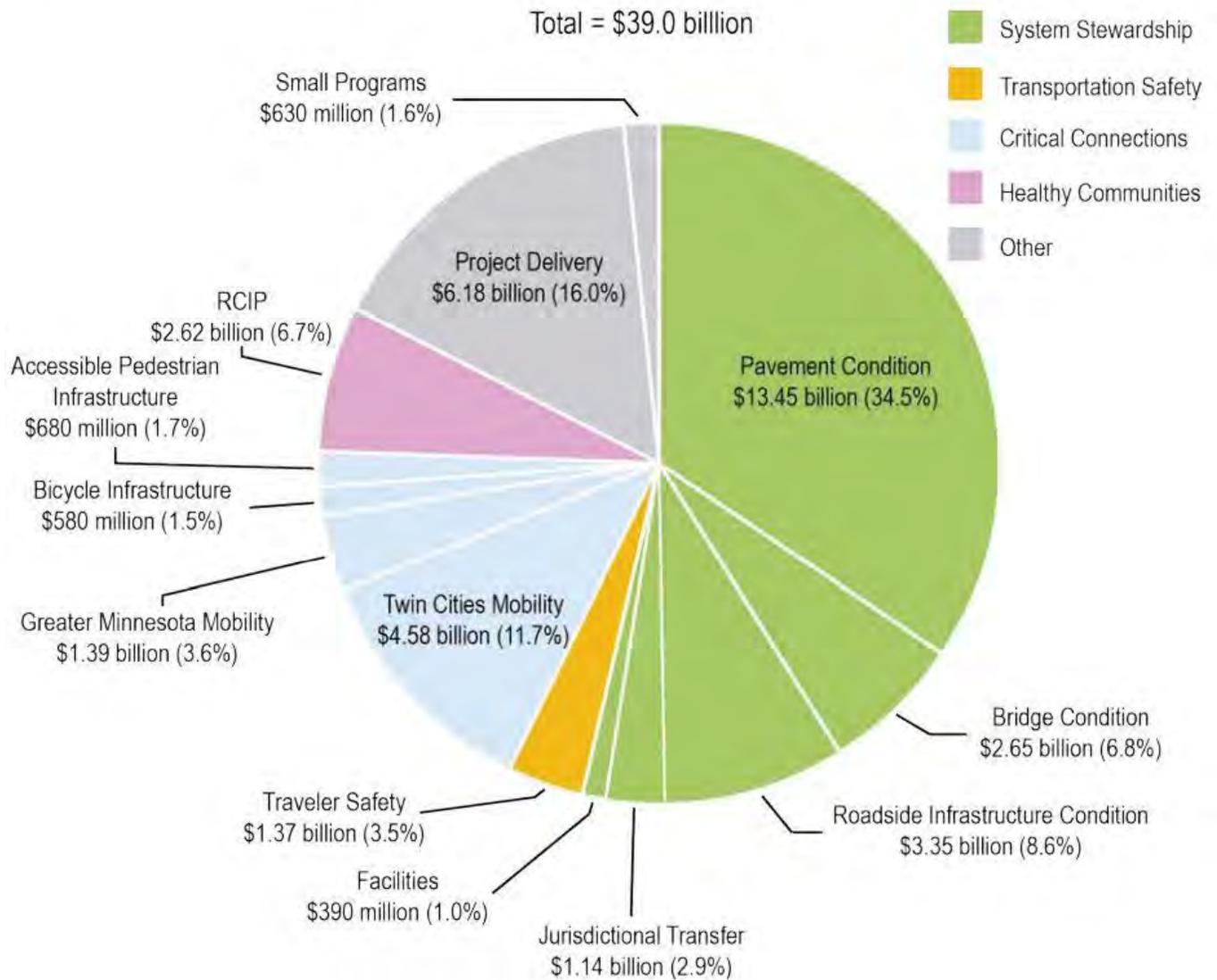


FIGURE 5.11 – TRANSPORTATION NEEDS BY INVESTMENT CATEGORY FROM 2018-2037.
 Data courtesy of MnDOT’s MnSHIP

In order to keep MnSHIP fiscally constrained, the plan recommends focusing investments on maintaining the existing state highway system while making limited mobility investments. As such, MnDOT recognizes the implications that by focusing investment primarily on maintenance it will not meet all of the performance targets established.

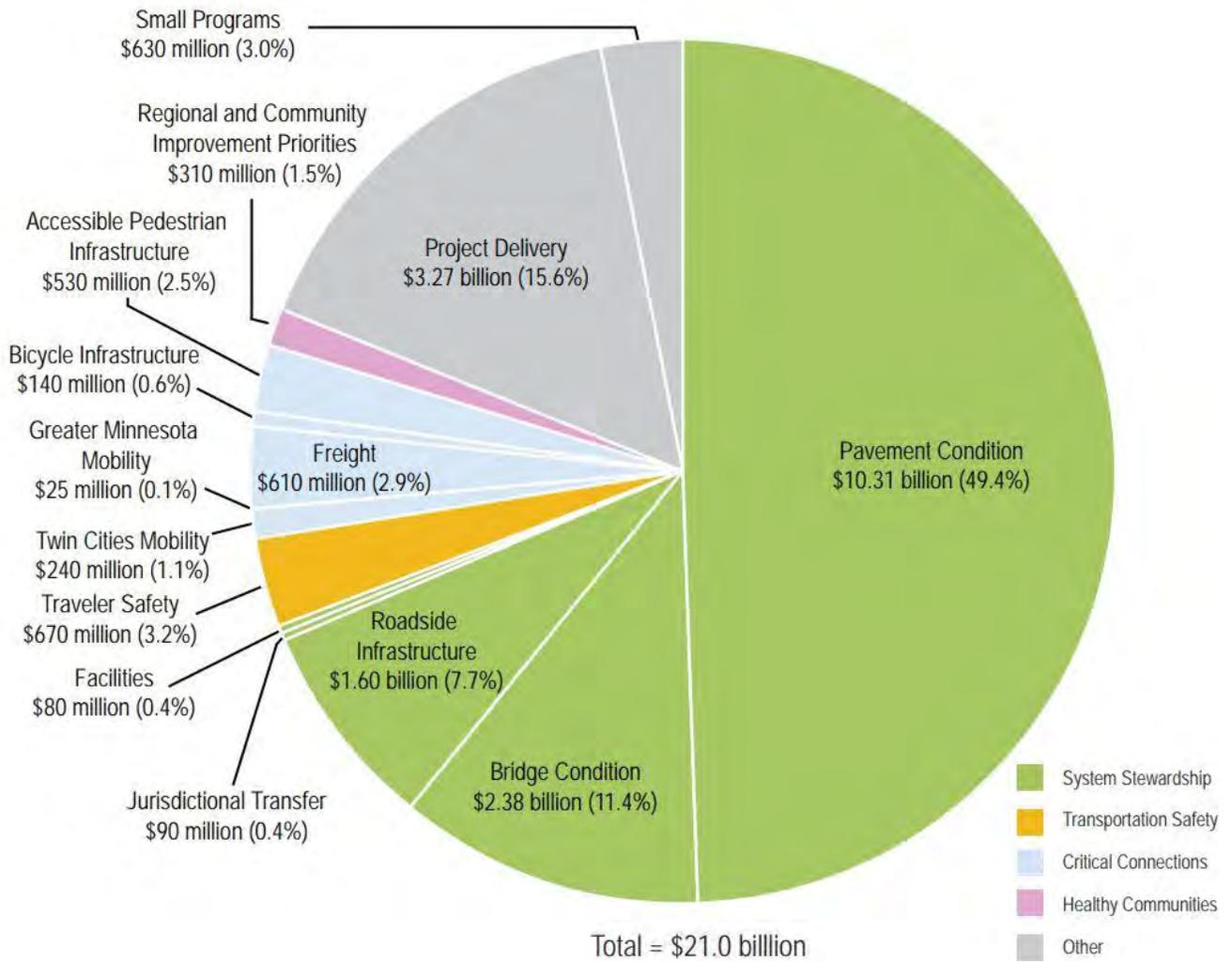


FIGURE 5.12 – CAPITAL HIGHWAY INVESTMENT DIRECTION FOR YEARS 2018-2037.
 Data courtesy of MnDOT’s MnSHIP

The plan does state that if additional resources become available, investment priorities will reflect “the principles, policy objectives, and strategies put forth in the ‘family of plans’ and input received from the public and stakeholders in the development of this plan.”

STATEWIDE BICYCLE SYSTEM PLAN 2016

The Statewide Bicycle System Plan was developed with a vision that bicycling is safe, comfortable, and convenient for all people. In order to achieve this vision, the plan outlines four main goals:

- **Safety and comfort:** Build and maintain safe and comfortable bicycling facilities for people of all ages and abilities.

- **Local bicycle network connections:** Support regional and local bicycling needs.
- **State bicycle routes:** Develop a connected network of state bicycle routes with partners.
- **Ridership:** Increase ridership of people who already bicycle and people who don't.

Throughout the course of public engagement with more than 4,500 people statewide, MnDOT found that 1) the public values state bicycle routes, but people value opportunities for local and regional bicycle travel more, 2) state bicycle routes create opportunities for inter-community travel across the state and beyond, and 3) people prefer riding on facilities separated from motor vehicle traffic.

The plan lists several strategies MnDOT, in coordination with local and regional partners, can do to improve the bicycle networks statewide. Some of those strategies include:

- Develop a process to annually track bicycle infrastructure investments by district and statewide.
- Include bicycling infrastructure as an asset in the formal Transportation Asset Management Plan process.
- Build bicycle facilities that have the appropriate amount of separation from motor vehicle traffic based on the local context.

One of the major priorities identified in the Statewide Bicycle System plan was the need for MnDOT to take the lead on developing a bicycle network along state highways. Priority corridors for this Statewide Bicycle Route Network have been identified with high priority placed on 1) Twin Cities to Grand Portage, via Hinckley and Duluth; 2) Twin Cities to Mankato loop via the Minnesota River Valley and Northfield; and 3) Moorhead to Saint Cloud, via Detroit Lakes, Fergus Falls, and Alexandria.

In Central Minnesota, the state has also identified a medium priority corridor running northeast from Pipestone through Hinckley with stops in Marshall, Granite Falls, and Saint Cloud.

Regional priorities have also been identified and can be seen in Figure 5.13.

DISTRICT 3 REGIONAL PRIORITY CORRIDORS

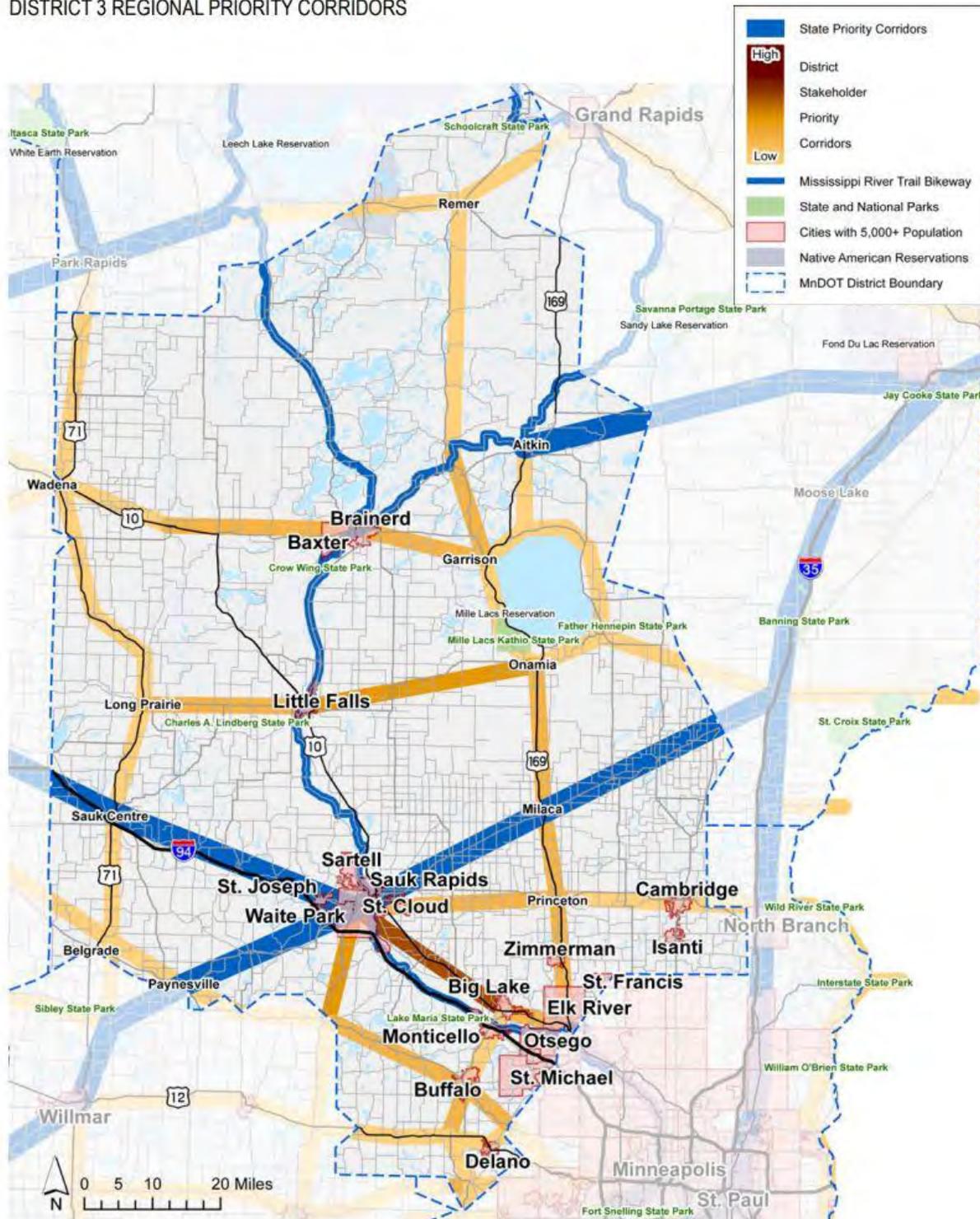


FIGURE 5.13 – MNDOT DISTRICT 3 REGIONAL PRIORITY CORRIDORS FOR BICYCLE NETWORKS.
Graphic courtesy of MnDOT.

The Statewide Bicycle System plan offers guidance on how to prioritize potential bicycle infrastructure projects and how to boost bicycle ridership statewide through the use of the 5Es – Education, Enforcement, Evaluation, Encouragement, and Evolution. Various performance measures have also been included in the plan to accomplish the four goals as stated earlier in this section.

MINNESOTA STATEWIDE FREIGHT SYSTEM AND INVESTMENT PLAN 2018

The Minnesota Statewide Freight System and Investment Plan describes the role the freight **transportation system plays in the “state’s economy, current and emerging industry trends, the performance of the freight transportation system, and current and future issues and needs.”**

This plan carries forward the 2005 Minnesota State **Freight Plan vision: “Provide an integrated system of freight transportation in Minnesota – highway, rail, water, air cargo, and intermodal terminals – that offers safe, reliable and competitive access to statewide, national, and international markets.”**

To accomplish this vision, the plan outlines five specific goals:

- **Support Minnesota’s Economy.**
- **Improve Minnesota’s Mobility.**
- **Preserve Minnesota’s Infrastructure.**
- Safeguard Minnesotans.
- **Protect Minnesota’s Environment and Communities.**

“Trucking is important to all industries, as even goods moving via other modes often use trucks for the first- and last-mile of the trip. Rail and water serve the agriculture, mining, manufacturing, and trade sectors, while air is mostly used for the transport of high-value manufactured goods and consumer produces. Pipeline transport is important for moving **crude oil and other energy sector goods.”**

In 2012, 1 billion tons of freight moved over Minnesota’s transportation system. By 2040, the plan estimates the total volume of freight will increase by 80 percent to 1.8 billion tons.

The Minnesota Statewide Freight System and Investment Plan defines what a freight project would look like since currently MnDOT does not specifically identify projects as freight projects.

The plan outlined **several needs that would be essential to maintaining the state’s freight system with highway system projects being the biggest priority.** In addition, the plan **outlined a series of opportunities that, if implemented “with proper investments and policies, Minnesota’s residents and businesses can realize greater benefits from the freight system in the future than they do today.”**

MINNESOTA STATE RAIL PLAN 2015

Unlike most transportation infrastructure within the state, the railroad system heavily involves private corporations for the most part operating on private infrastructure. The **system is then regulated at the national level “for the purpose of insuring unimpeded interstate commerce among the states, as reserved to the federal government in the Constitution.”**

This 2015 plan looks further into the two types of rail systems found within the state – freight rail and passenger rail – the trends, and the potential for industry growth within Minnesota.

“The state is committed to developing a freight rail system that can support expanded traffic volumes and a changing customer base; and a passenger rail system to support the travel needs of citizens, businesses, and visitors.”

In terms of freight rail, Minnesota is served by four major carriers – BNSF, Canadian National (CN), Canadian Pacific (CP), and Union Pacific (UP). The state is also serviced by 18 smaller railroads. These railroad systems primarily move commodities – coal farm products, chemicals and allied products, freight-all-kinds (miscellaneous mixed shipments), hazardous materials, metallic ores, and agricultural products – across the state to trading partners within Illinois, Wisconsin, Wyoming, Washington, Canada, Texas, and North Dakota.



FIGURE 5.14 – TRAIN CROSSING AT WAITE AVENUE IN WAITE PARK
 Photo courtesy of Saint Cloud APO

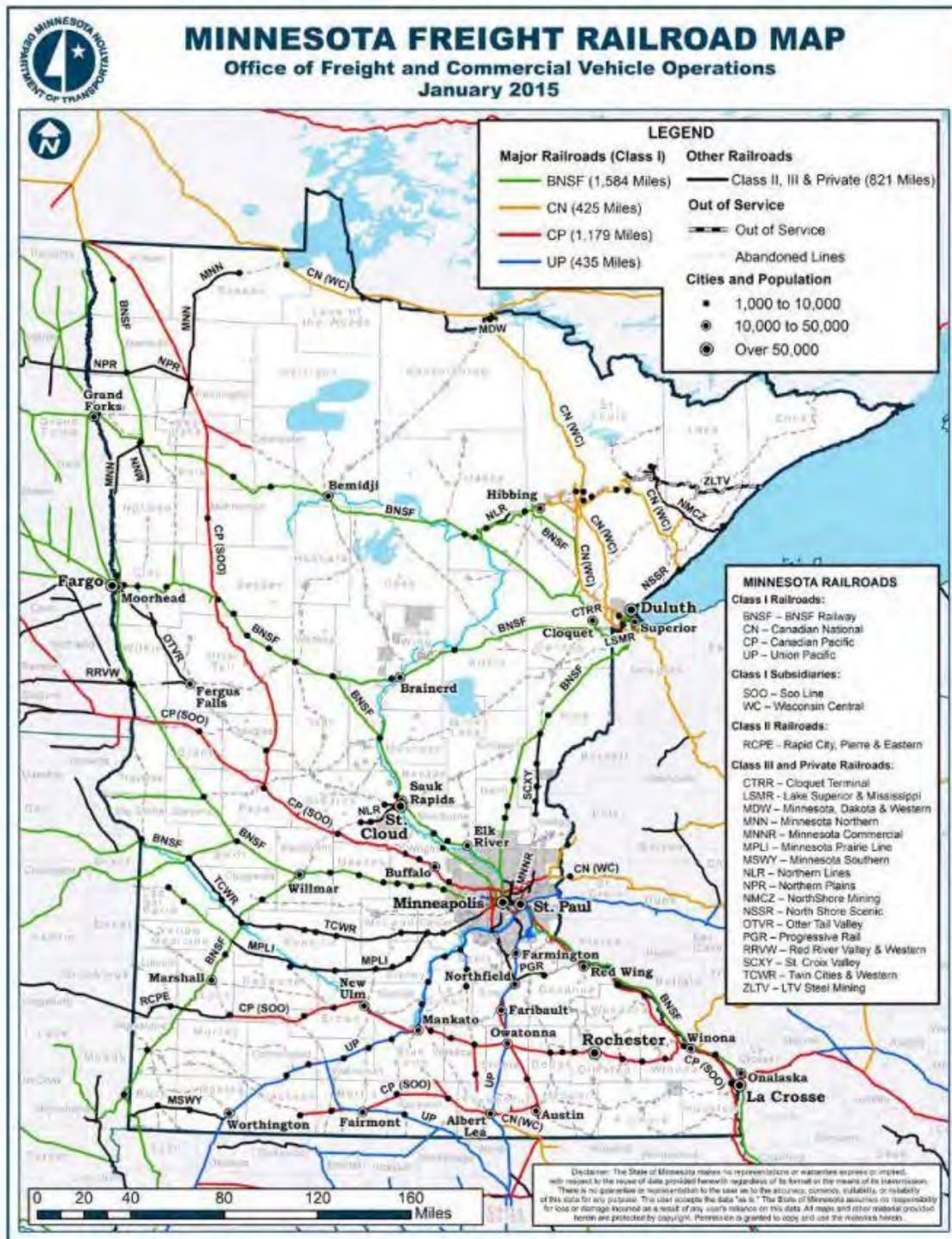


FIGURE 5.15 – MAJOR RAILROADS (CLASS I) WITHIN MINNESOTA
Graphic courtesy of MnDOT

Substantial investments in the rail system have been outlined to correct issues such as major rail bottlenecks and outdated structures. Those investments would address:

- Infrastructure constraints.
- Rail facility and line relocation.
- Intermodal services.
- Positive train control.
- Hazardous material transport.

Proposed improvements for the freight rail system as outlined in this plan are:

- Capacity expansion upgrades.
- Crossing safety improvements.
- Weight, speed and track restrictions.
- Bridges

For passenger rail, the Minnesota State Rail Plan details the state's plan to expand the service in specific corridors in three different stages. In the advanced planning stage, the state has conducted substantive planning work on four projects – a high speed rail service from the Twin Cities to Milwaukee, Wisconsin; a high speed rail service from the Twin Cities to Duluth known as the Northern Lights Express or NLX; a high speed rail service from the Twin Cities to Rochester known as the Zip Rail; and a second Empire Builder line between the Twin Cities and Chicago that would complement the existing daily train.

Phase I projects that have been identified include connection from the Twin Cities to Saint Cloud (and ultimately Fargo, North Dakota), Northfield (and ultimately to Albert Lea and Des Moines, Iowa), Mankato, and Eau Claire, Wisconsin. Those projects have an up to 20 year implementation horizon.

Phase II projects – with a 20+ year implementation horizon include an extension of the Mankato service to Sioux City, Iowa; an extension of the Fargo service to Winnipeg, Manitoba, Canada; and a line connecting the Twin Cities to Willmar (and ultimately on to Sioux Falls, South Dakota).

The plan identifies potential issues that could impact current and future passenger rail development within the state. Those issues include:

- Safety.
- Prioritization and coordination of passenger rail projects.
- Need for increased passenger service reliability.

STATEWIDE PORTS & WATERWAYS PLAN

The Statewide Ports & Waterways Plan seeks to promote the continued enhancements of the ports and waterways systems and its role in providing global, national, statewide, regional, and local transportation connections; the improvement and maintenance of ports

and waterway connections; and bettering the integrated planning within MnDOT and allowing for the greater coordination of various transportation partners.

The plan's long-term goals are:

- **Connecting Minnesota's primary assets** – the people, natural resources, and businesses within the state – to each other and to markets and resources outside the state and country.
- Providing safe, convenient, efficient, and effective movement of people and goods.
- Having a transportation system flexible and nimble enough to adapt to changes in society, technology, the environment, and the economy.
- Designing a system in such a way that it enhances the community around it, is compatible with natural systems, and minimizes resource use and pollution.

Iron ore in the form of taconite is the principal commodity shipped from the Lake Superior ports while agricultural products such as corn, soybeans, and wheat, are primarily shipped via the Mississippi River.

In order to maintain and/or improve the status quo, the Statewide Ports & Waterways Plan estimates that **Minnesota's four** public ports will need approximately \$34 million for projects including:

- Dredging in the dock areas.
- Dock wall construction.
- Creation of new storage facilities.
- Building/road rehabilitation/construction.
- Improving road/rail access to port areas.
- Upgrading to meet safety codes.

MINNESOTA WALKS 2016

"Minnesota Walks was co-led by the Minnesota departments of health and transportation and is the first statewide pedestrian planning framework in the county that includes health as a priority by recognizing the role community transportation designs play in creating **health."**

This plan seeks to achieve the following goals for all Minnesotans:

- More people walking.
- Improving walking for all purposes.
- Healthier people.
- Improving accessibility and encouraging connections.
- Improving safety.
- Stronger communities.

Minnesota Walks outlines several factors that influence the rate and perceptions of walking. Those factors include demographics (small rural community populations, children and youth,

Native American populations, people with low income living in urban communities, older adults, and people with disabilities), individual health and opportunity, and public policy and built environment (social customs, people walking encourage others to walk and comfortable places to walk).

The plan identifies several goals to encourage pedestrian activity across the state. Those goals are as follows:

- Roadway and street design
 - Designing walkways is the first priority when planning roadways and streets.
 - Design roadways and streets to encourage people driving cars to slow down.
- Land use and the built environment
 - Communities in Minnesota are aware of the connection between land use and transportation and strive to be more walkable by encouraging walk friendly development.
 - Better coordinate multimodal transportation networks and land use decisions to improve characteristics of the built environment that impact walking, such as design and the location of destinations.
- Fostering creativity and partnerships
 - Develop streets that are vital public spaces that not only serve travel but also foster social and economic activity.
 - Partners work together across agencies, geographic boundaries and professional fields to find unique, effective and efficient ways to overcome barriers to walking.
- Listening and planning
 - Everyone is given opportunities to engage in planning processes, so planning efforts accurately reflect the needs and desires of the community residents.
 - Integrate walking needs into comprehensive and land use planning, transit planning, safe routes to school, social services, etc. at the local, regional, and state levels.
- Minnesota winter and year round upkeep
 - Maintain year round walking infrastructures by ensuring necessary repairs and clearing snow and ice in a timely fashion.
 - People of all ages and abilities are able to walk in their communities year round without suffering mobility limitations from weather conditions or degraded infrastructure.
- Building a culture of walking
 - Walking for transportation and recreation is integrated into the culture of all Minnesota communities and people who walk are treated with respect and not seen as second class citizens.
 - Communities and elected officials understand and promote the many benefits of making walking safe, convenient and desirable for all.

STATEWIDE PEDESTRIAN SYSTEM PLAN

As of the drafting of MAPPING 2045, MnDOT's Office of Transit and Active Transportation is working to complete a **Statewide Pedestrian System Plan**. This plan will "look to understand ways that MnDOT can make changes so that Minnesota is safer, easier, and more desirable for walking."

The goals for developing this plan include:

- Tell the story of why pedestrian **networks are an important part of the state's** transportation system and about the benefits they bring both to individual communities and the state as a whole.
- Develop a system to prioritize pedestrian investment on the trunk highway system that relies on equity considerations, land use context, and public engagement results among other factors.
- Translate the Minnesota Walks vision into MnDOT-focused policy tools, implementation guides, and training opportunities to make Minnesota a safer, more convenient, and more desirable place to walk.

GREATER MINNESOTA TRANSIT INVESTMENT PLAN 2017-2037

The Greater Minnesota Transit Investment Plan (GMTIP) has calculated the investment **required to reaching a target of meeting 90 percent of transit needs by 2025**. The plan's objectives are to achieve the following:

- Updates the 20 year strategic plan for preserving current public transportation systems while improving mobility for the general public with emphasis on older adults, low-income households, individuals with disabilities, and commuter consumer groups.
- Refines the investment priorities for expanding, maintaining, or reducing transit service according to future state and federal funding levels, as well as the strategic direction of transit in Greater Minnesota.

"As of June 2016, Greater Minnesota had 40 public transit systems and two direct recipient tribes serving the 80 counties. They operate a variety of service formats based on the population, land use, and **the size of the service area.**"

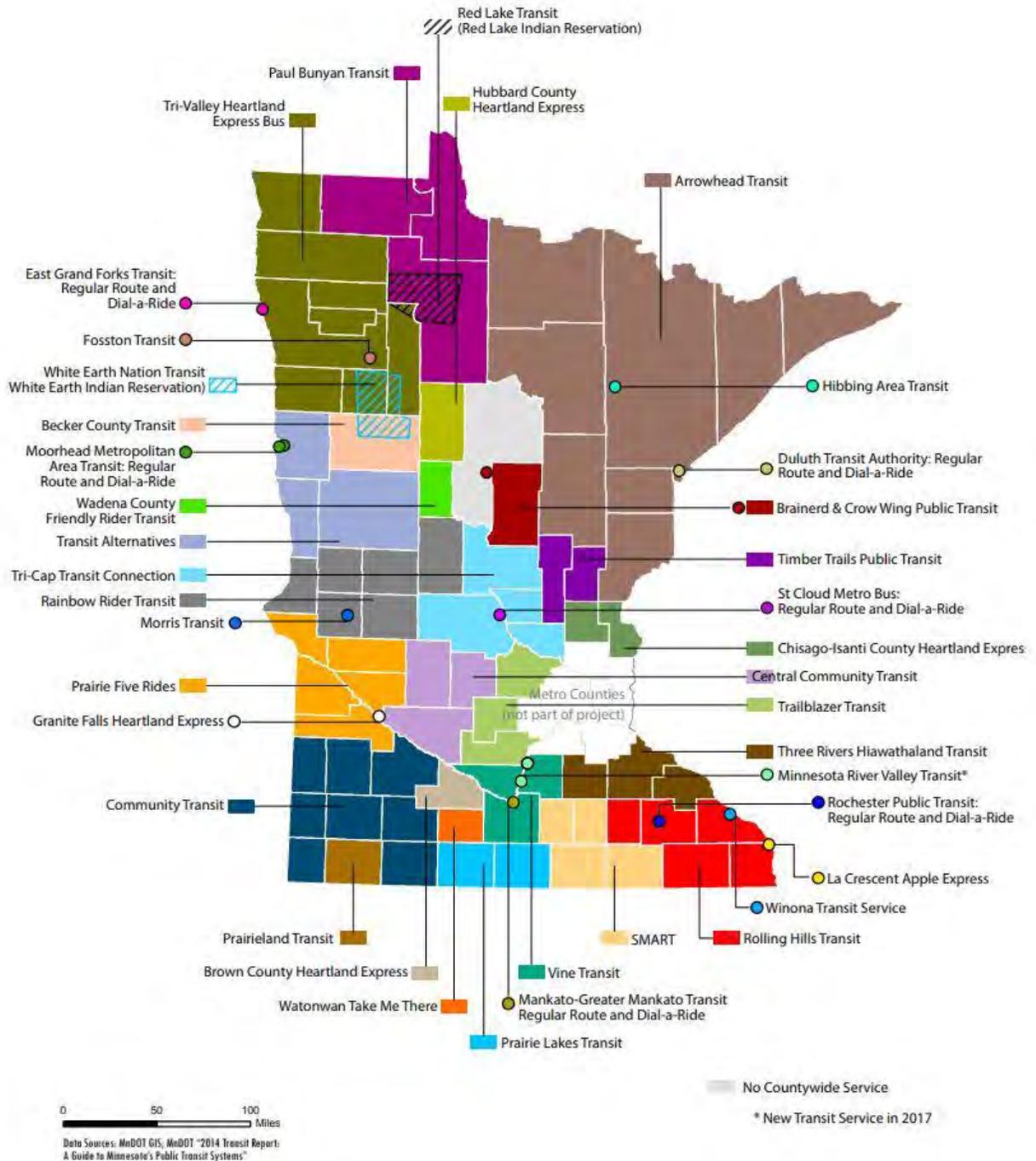


FIGURE 5.16 – GREATER MINNESOTA PUBLIC TRANSIT PROVIDERS. COURTESY OF MNDOT

The plan details the benefits of transit within rural communities such as providing service to transit dependent populations, increasing physical activity for transit users, supporting the local economy, and reducing congestion and emissions.

The GMTIP lists the following investment goals and strategies:

- Enhance transit service to be an attractive and viable transportation option for Greater Minnesota.
- Improve coordination of services to meet transportation needs.
- Increase transit usage across the transportation network.
- Ensure fiscal responsibility as a transit funding agency.
- Support the Minnesota GO Vision for an integrated multimodal transportation system.
- Elevate public information and outreach.

In order to evaluate these goals and strategies, the plan relies on a series of performance measures such as ridership and fleet condition to set standards and targets.

OTHER MNDOT PLANS

In addition to the Minnesota GO Vision family of plans, APO staffers reviewed:

- MnDOT Statewide ITS Plan 2015
- Minnesota Strategic Highway Safety Plan 2014-2019
- Minnesota Plan to Reduce Obesity and Obesity-Related Chronic Diseases 2008-2013

Again, due **to the time constraints surrounding the development of the APO's MTP**, APO staff acknowledge not all plans developed by its member jurisdictions were reviewed. The following plans not reviewed by APO staff include, but are not limited to:

- The 2019 [MnDOT District 3 Bicycle Plan: Guiding MnDOT's Investments in Bicycle Facilities](https://bit.ly/2IQWGvL) (<https://bit.ly/2IQWGvL>).
- [MnDOT District 3 10-Year Capital Highway Investment Plan \(2019-2028\)](https://bit.ly/2mmNVdd) (<https://bit.ly/2mmNVdd>).

MNDOT STATEWIDE ITS PLAN 2015

Of note, during the development of MAPPING 2045 MnDOT released an update to the Statewide ITS Plan in 2018 titled [Minnesota Statewide Regional ITS Architecture Version 2018: Implementation Volume – ITS Initiatives and Project Concepts for Implementation](https://bit.ly/2koDOE7) (<https://bit.ly/2koDOE7>). Due to the timing of this update and the development of the **APO's MTP**, the 2018 ITS plan was not reviewed.

The purpose of the MnDOT Statewide **Intelligent Transportation System (ITS) Plan** is “to identify immediate, short-term, and mid-term ITS needs to meet the goals and objectives identified in MnDOT's Minnesota GO 50 Year Vision adopted in 2011 and the Statewide Multimodal Transportation Plan, adopted in 2012.” The ITS plan “represents a shared vision

of how each agency's systems work together by sharing information and resources to enhance transportation safety, efficiency, capacity, mobility, and security." Besides identifying current ITS capabilities in Minnesota and gaps in services, it provides a common framework for implementing electronic sensors and messaging systems to help motorists and traffic managers collect, disseminate, and understand information related to traffic conditions, provides compliance with the National ITS Architecture (allowing MnDOT to receive Federal funds for ITS projects) and prepare for future transportation needs with regards to connected and automated vehicles (CAVs).

Minnesota utilizes a variety of ITS technologies to help achieve transportation goals including ramp meters, cameras, sensors, Dynamic Message Signs (DMS), road closure flashers, Intersection Conflict Warning System (ICWS, also known as Rural Intersection Conflict Warning System or RICWS), electronic toll systems, Road Weather Information Systems (RWIS), and Intelligent Lane Control Signals (ILCS). The system is often run over an extensive (800+ miles) of fiber optic communications cables that are installed within rights-of-way on arterial roadways and freeways.

In order to preserve and potentially expand the state's ITS infrastructure, the plan outlines three different funding scenarios: fiscal constraint, asset management, and optimization. **MnDOT and its stakeholders have opted for the optimization scenario which will "position MnDOT to proactively adopt new technologies that emerge over the next decade which align with the Agency goals and vision for a transportation network."** This approach requires an additional \$12 to \$20 million for capital investment and \$6 to \$8 million for staffing over the next 10 years – in comparison to the fiscal constraint scenario of \$25 million – to implement.

By selecting to implement the optimization scenario, MnDOT is looking to build out ITS on: Highway 52 and I-35 in MnDOT District 6, Highway 169 in MnDOT District 6, and I-94 in MnDOT Districts 3 and 4.

The plan also briefly touches on the future impact of autonomous and connected automated vehicles and the potential role these could play in terms of the transportation network.

Going forward the APO will continue to support MnDOT's ITS plan and will work with member jurisdictions to design and implement ITS projects where appropriate.

MINNESOTA STRATEGIC HIGHWAY SAFETY PLAN 2014-2019

The Minnesota Strategic Highway Safety Plan (SHSP) is a plan that has been developed **based on data and trends that is designed to provide "insight and direction on how to reduce traffic-related crashes that involve motor vehicles on all Minnesota roads."**

The plan's primary focus to accomplish the goal of reducing traffic-related crashes includes looking at:

- Traffic safety culture and awareness.
- Intersections.
- Lane departure.

- Unbelted occupants.
- Impaired roadway users.
- Inattentive drivers.
- Speed.
- Older drivers.
- Younger drivers.
- Motorcyclists.
- Pedestrians.
- Emergency Medical Services (EMS) and trauma systems.
- Data management.
- Management systems.
- Bicyclists.
- Commercial vehicles.
- Trains.
- Work zones.
- Unlicensed drivers.
- Vehicle safety enhancements.

The plan also seeks to align itself closely with the Toward Zero Deaths initiative with the hope of reducing traffic-related fatalities to 300 or less by 2020.

The SHSP outlined several strategies to help in efforts to reduce traffic-related fatalities and serious injuries. Those strategies included: review data and priorities, ask leaders, talk with stakeholders, review other plans, identify potential strategies, consider risks, and estimate costs and benefits.

As of the writing of MAPPING 2045, MnDOT is in the process of updating the SHSP.

MINNESOTA PLAN TO REDUCE OBESITY AND OBESITY-RELATED CHRONIC DISEASES 2008-2013

While not directly related to transportation, the Minnesota Plan to Reduce Obesity and Obesity-Related Chronic Diseases does outline specific transportation-related strategies and goals that should be considered in the effort to reduce obesity within the state.

In particular, when it comes to physical activity the plan states: "The 2005 Behavioral Risk Factor Surveillance Survey (BRFSS) showed that 49 percent of the Minnesota adult population is at risk for health problems related to an insufficient level of physical activity and 16 percent of the Minnesota adult population reported no leisure time physical activity at all."

With this in mind, the plan looked at the reasons as to why Minnesotans are not meeting their physical activity requirements. Some of those issues include:

- Walking and biking are not feasible transportation options in many neighborhoods because of safety concerns, poor lighting, and unreasonable distances from residences to destinations.
- Sprawling communities, increased road development, lack of mass transit opportunities, and complicated lives make it difficult for employees to walk or bike to work which leads to an increase in time spent commuting or essentially being inactive.

In order to decrease the number of Minnesotans who are either overweight or obese, the plan outlines three long-term objectives: increasing healthy eating among people in

Minnesota, increase physical activity among people in Minnesota, and increase healthy weight among people in Minnesota.

Transportation, according to the plan, can play a role in this through the following implementation strategies:

- Continue implementation of the Safe Routes to School infrastructure grants programs for planning, design, and construction of facility improvements such as sidewalks, crosswalks, bicycle facilities, traffic diversions, and traffic calming.
- Implement pedestrian and bicycle improvements based on community assessments and community engagement.
- Implement policies, ordinances, and zoning requirements that support pedestrian- and bicycle-oriented development and that complement transit-oriented development.
- Create incentives for using non-motorized transportation such as walking, biking, and transit.

Implement Complete Streets policies along with the context sensitive designs and solutions that support a comprehensive, integrated transportation network ensuring the public right-of-way is designed and operated to provide access for all users including pedestrians, bicycles, transit, and motorists.

TRANSIT AND COUNTY PLANS

APO staffers also reviewed the following documents prior to the development of the 2045 MTP.

- Benton County 2006 Comprehensive Plan.
- Saint Cloud Metropolitan Transit Commission 2016 Metro Bus Long Range Transit Plan Update.
- Sherburne County Comprehensive Land Use Plan 2010-2030 (drafted in 2011).
- Sherburne County 2007 Long Range Transportation Plan.
- Sherburne County Community Health Improvement Plan 2015-2019 (drafted in January 2015).
- Stearns County 2040 Transportation Plan (drafted in March 2015).
- Stearns County Comprehensive Plan 2030 (drafted in March 2008).
- Stearns County Community Health Improvement Plan 2015-2019 (drafted in December 2014).
- Stearns County/City of Saint Cloud 2016 Emergency Operations Plan.
- Stearns County August 2010 Highway Safety Plan.

BENTON COUNTY 2006 COMPREHENSIVE PLAN

When it comes to transportation, Benton County officials have adopted following goals:

- Provide and maintain a safe, convenient, and efficient county transportation system for the movement of people and goods.

- Advance the safety of the county transportation system.
- Enhance the aesthetic character and functional qualities of the transportation networks within the county.

The county has identified and supported several regional projects that would promote these goals. Those projects included the circumferential (or ring road) loop around the urban areas of Sartell, Sauk Rapids, and Saint Cloud in Benton County, the expansion of CSAH 3 in Sauk Rapids and the expansion of CSAH 33 in Sartell.

The county is also in support of increasing multimodal options for residents including the Northstar Commuter Rail.

"Benton County has many transportation needs that vary from urban to rural locations and also include recreational travel, each important in its own right. These needs are served by the county road system and by the state and local area systems. It is imperative that the future network continues to meet the needs and serves locations of growth."

SAINT CLOUD METROPOLITAN TRANSIT COMMISSION 2016 METRO BUS LONG RANGE TRANSIT PLAN UPDATE

"Metro Bus, operated by the Saint Cloud Metropolitan Transit Commission, provides transit service to the area, including the cities of Saint Cloud, Sartell, Sauk Rapids, and Waite Park. Service includes a fixed route system and a Dial-a-Ride program for persons with disabilities. Metro Bus also provides seasonal transit service to the Saint Cloud State University campus."

The 2016 Saint Cloud Metro Bus Long Range Transit Plan discusses the current conditions **the transit commission's service area along with individualized route diagnostics which** include a route-by-route analysis of performance metrics.

Through an analysis of current demographics, public outreach, and market analysis of future service areas, Saint Cloud Metro Bus has outlined its plan for a three phase route restructuring program to more efficiently and effectively provide transit options for those within its service area.

The first phase, completed in August 2016, integrated the Saint Cloud State University **specific "Campus Clipper" routes into the regular Metro Bus system. Several other routes** were also modified.

Phase two, which was slated to take place in 2017 would have added more elements to the modified route networking including an expansion of service to Saint Joseph. Phase three, which was slated for 2018, would include changes for service in Sauk Rapids and in the southwestern portions of the Metro Bus service area.

Metro Bus had anticipated a ridership increase of 425,915 during year five after implementation of the full plan.

Long-term, the plan outlines the possibility for Metro Bus to expand frequencies and spans of service on some of the more productive routes in addition to expanding service to new areas such as Opportunity Drive in Saint Cloud.

2011 SHERBURNE COUNTY COMPREHENSIVE LAND USE PLAN 2010-2030

Sherburne County has adopted the following goals as part of its comprehensive plan:

- **Protect and preserve the county's natural resources for the benefit of county residents and the natural ecology.**
- Encourage development in appropriate areas, while preserving agricultural and urban interests.
- **Support Sherburne County's efforts to retain, expand, and attract new businesses to the county.**
- The Sherburne County Planning and Zoning Department and Public Works **Department shall collaborate efforts to implement the county's long range transportation plan.**
- Provide passive recreational opportunities to Sherburne County residents through county parks and trail systems.

In terms of transportation, Sherburne County's Comprehensive Land Use Plan defaults to the 2007 long range transportation plan for further guidance.

2007 SHERBURNE COUNTY LONG RANGE TRANSPORTATION PLAN

The main purpose of the Sherburne County Long Range Transportation Plan is to help the county assess anticipated growth during a 20 year time frame.

"The plan will be used as a tool to guide major transportation investments and transportation policy decisions."

The plan outlines the following goals:

- Develop a long-range (2030) transportation plan to guide future transportation improvement decisions for the county.
- Obtain a better understanding of local needs, growth trends, and modal opportunities.
- Establish better coordination and cooperation among key stakeholders (cities, townships, adjoining counties, state, and regional agencies).
- Identify transportation system improvements and future corridor preservation actions that will accommodate growth.
- Develop a cooperative investment plan to implement projects in a timely manner.

The Sherburne County Long Range Transportation provided an analysis of future transportation needs including roadway improvements to several regionally significant projects such as:

- Big Lake bypass of US 10 around downtown Big Lake.
- US 10/I-94 Mississippi River crossing between Clearwater and Clear Lake.
- Roadway improvements to US 10 from Clear Lake to Saint Cloud and from CSAH 15 east of Big Lake to CR 50 west of Big Lake.
- Interchange additions on US 10 along old US 10 in Big Lake, CSAH 16, and CSAH3
- Interchange additions on MN 169 at CSAH 4 in Zimmerman.
- Overpass additions on CR 65 north of Clear Lake and 277th Avenue NW from CR 45 to east of MN 169.
- Connection of Sherburne County CSAH 33 and Anoka County CSAH 22.
- Extension of Fillmore Street NW south to US 10 (east of Elk River)

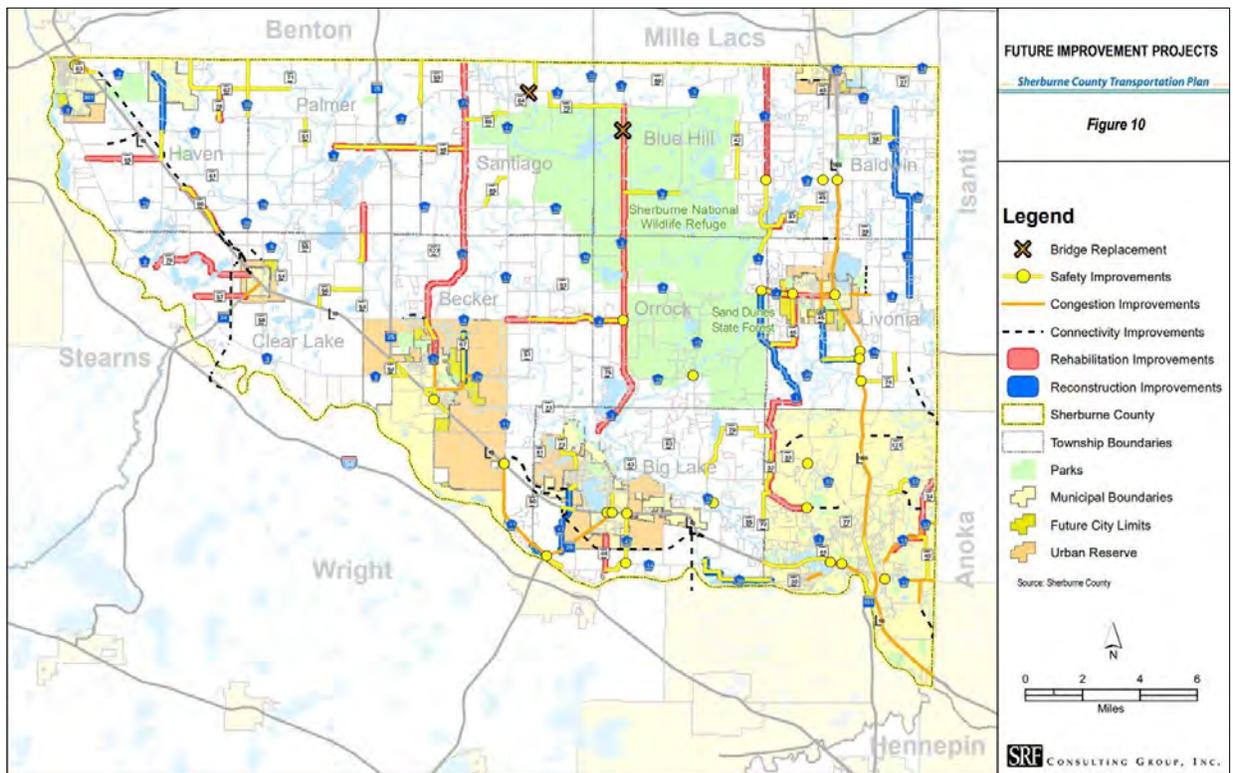


FIGURE 5.17 – SHERBURNE COUNTY FUTURE TRANSPORTATION PROJECTS

The county’s long range transportation plan outlined two bridges that were in need of rehabilitation and replacement throughout the duration of this plan.

These improvements, outlined by the Sherburne County Technical Advisory Committee, would help mitigate future congestion and improve future connectivity for the county.

The long range plan also discusses key multimodal transportation services including trucking, rail, airports, transit, and trails.

2015 SHERBURNE COUNTY COMMUNITY HEALTH IMPROVEMENT PLAN 2015-2019

The Sherburne County Community Health Improvement Plan (CHIP) is designed to provide guidance to the health department, its partners, and its stakeholders on how to improve health within the county.

“Government agencies, including those related to health, human services, and education, use the CHIP in collaboration with community partners to set overall health priorities and align resources towards specific goals, strategies, and actions.”

The mission of the CHIP is to “promote a healthy and safe community; prevent illness, disease, and injury; and protect and enhance the health of those who live, work, learn, and play in Sherburne County.”

The plan has identified three areas of importance for the county: community mental health, overweight/obesity, and substance use and abuse.

In terms of transportation, the plan identified the goal to promote opportunities for physical activity through the use of safe routes to school. This could be accomplished through the **encouragement of complete streets policies in the county’s cities and through the use of Geographic Information System (GIS) mapping.**

2015 STEARNS COUNTY 2040 TRANSPORTATION PLAN

Stearns County has **identified five goals to help create a “safe, efficient, and accessible transportation system that meets the preservation and mobility needs of the county.”**

Those goal statements are:

- Develop and maintain a transportation system that promotes the safety of all users.
- Develop a transportation system that increases the accessibility and mobility options of all users.
- Develop a transportation system that is sustainable (e.g., cost-feasible), maintains a state of good repair, and explores low-cost/high-benefit solutions to satisfy public transportation priorities.
- Maximize intergovernmental cooperation and coordination.
- Effectively and efficiently use available transportation funding.

This plan has identified three roadway segments in rural Stearns County that are facing or expected to be facing high levels of congestion. Those roadway segments are CSAH 2 from MN 23 to CSAH 50 in Cold Spring, MN 238 from CR 157 to CSAH 10 in Albany, and MN 71 from Fourth Street North to Eighth Street South in Sauk Centre.

The Stearns County 2040 Transportation Plan also identified three segments specifically **within the APO’s jurisdiction that are set to become congested by 2040.** Those roadways include three segments of CSAH 1 in Sartell and northern Saint Cloud, a segment of CR 136 in southern Saint Cloud, and a portion of CR 134 in Saint Cloud.

Future discussion on goals to develop more multimodal transportation options were also part of the document. Goals included a look at transit mode-share – how to promote ridesharing and upgrades to park-and-ride facilities – as well as future bike and pedestrian trail facilities.

2008 STEARNS COUNTY COMPREHENSIVE PLAN 2030

“The urban core and rural agricultural regions depend upon a system that will allow the efficient movement of products and raw materials to sustain economic vitality.”

The Stearns County Comprehensive Plan 2030 outlines nine goals specific to transportation.

- Balance mobility and access.
- Preserve the existing system.
- Maximize system safety.
- Maintain a transportation system that supports county development goals and objectives.
- Strive to meet the needs of the public for multiple modes of travel, including transit, bicycle and pedestrian movement.
- Consider the social, economic, and environmental impacts of road improvements.
- Maximize intergovernmental cooperation and coordination.
- Effectively and efficiently use available transportation funding.
- Maximize opportunities to leverage additional transportation funding.

The county has listed a set of policies to facilitate completion of those goals. Those policies include:

- County road system improvements.
- Access management improvements.
- Intersection improvements.
- Weight restriction upgrades.
- Transit improvements.
- Bicycle, pedestrian, and recreational improvements.
- Corridor protection.
- Airport zoning.

2014 STEARNS COUNTY COMMUNITY HEALTH IMPROVEMENT PLAN 2015-2019

The Stearns County Community Health Improvement Plan (CHIP) utilizes data and **community input to “establish the community agenda around top health priorities for future consideration.”**

Ten priorities were identified for the county:

- Lack of physical activity.
- Sexually transmitted infections.
- Poor parenting skills.
- Alcohol use.

- Financial stress.
- Integration of immigrants.
- Dental access.
- Poor nutrition.
- Mental health.
- Tobacco use by women.

Of the goals identified in the Stearns County CHIP, lack of physical activity had presented some suggested strategies related to transportation. Those strategies include working with communities to build environments such as complete streets and safe routes to school that would promote healthy lifestyles.

In addition, the plan also suggested incorporating pedestrian safety campaigns, education material and outreach, advocating for accessible and clearly marked crosswalks, and implementing and supporting policies to reduce distracted driving in the community.

2016 STEARNS COUNTY/CITY OF SAINT CLOUD EMERGENCY OPERATIONS PLAN

The 2016 Stearns County/City of Saint Cloud Emergency Operations Plan details “the operations and organizational arrangements for transportation of people, supplies, and materials during emergency situations and assigns responsibilities for various transportation tasks, as well as outline related administrative requirements.”

The plan details various scenarios law enforcement and other first responders could face in the Saint Cloud MPA including quarantine situations, hospital evacuations and infrastructure failures.

The plan prioritizes transportation access and lists how various transit organizations such as Tri-CAP, Saint Cloud Metro Bus, and Care Cab will be able to provide vehicles for emergency situations.

“All departments/agencies having transportation assets will provide current information on available transportation equipment to Stearns County Emergency Management on a regular basis. Public transportation companies will provide equipment and personnel to fulfill requirements for emergency transportation of passengers and cargo, to the extent possible, upon the request of the Transportation Unit Leader. Metro Bus and private school bus companies may be limited to a designated service area.”

2010 STEARNS COUNTY HIGHWAY SAFETY PLAN

The 2010 Stearns County Highway Safety Plan pairs countywide crash analytics with recommended projects to improve roadway safety throughout the county.

Roadways identified in the county as having multiple severe crashes were:

- 75th Avenue south of Saint Stephen.
- Knightwood Road west of Saint Joseph.

- Norway Road north of Saint Joseph.
- Pinecone Road in Sartell.
- Cooper Avenue in Saint Cloud.
- Waite Avenue South in Saint Cloud.
- 33rd Avenue North in Saint Cloud.
- 25th Avenue in Saint Cloud.

This plan looks into a variety of crash analytics including road departure density, road departure rate, critical radius curve density, edge risk assessment, traffic volumes, and the types of intersections where crashes have occurred.

“The need for low-cost projects that can be widely deployed across the county’s system of highways is based on the fact that Stearns County averages 30 severe crashes per year and these are spread across approximately 955 miles of county highways and hundreds of intersections.”

The Stearns County Highway Safety Plan recommends the following improvements:

- Improvements to the edge of rural highways and enhanced delineation of horizontal curves in rural areas.
- Upgrading the signs and pavement markings, installing street lights, and providing dynamic warning signs at rural stop controlled intersections.
- Installing technology at signalized intersections to support increased enforcement levels for red light running.
- Behavioral campaigns to increase seat belt compliance, reduce impaired driving, and decrease speeding.

The plan also highlighted state and regional plans for roadway safety.

CONCLUSION

To find the trends and commonalities in so many different plans, APO staff chose to develop a word cloud based on the keywords contained within summaries shown in this chapter. Word clouds search for and highlight words that appear most frequently within text – the larger the word appears in the word cloud, the more often it is repeated in the text. Word clouds can provide a fairly accurate visualization of common themes repeated in a body of text. **Common words, such as “the”, “and”, “a”, etc. were removed from the text, as were proper nouns like “Saint Cloud”, “Sauk Rapids”, and “MnDOT”. Ordinal numbers were also removed since a number like “2” or “5” do not really provide any meaningful insight.**



FIGURE 5.18 – COMMONALITIES AMONG JURISDICTIONAL PLANS REVIEWED FOR THIS DOCUMENT

“System”, “systems”, and “network” all feature prominently, which seem to indicate a preference for good overall transportation operations (as opposed to spot improvements). Words like “transit”, “trails”, “walking”, “bus”, and “bicycle” appear to indicate an emphasis on multimodal transportation options, while “road”, “roadway”, “routes”, “streets”, and “corridor” remind the reader of the importance of the most fundamental structure of transportation systems. “People”, “community”, “public”, and “service” appear to indicate a knowledge of and strong preference for transportation that serves the needs of the users of

the systems. **"Safety"**, of course, is a major consideration for all transportation networks. **"Development"** and **"land-use"** indicate an acknowledgement of the co-dependency of those aspects of the urban environment with transportation. **"Health"** shows an acknowledgement of the relationship between safety, active transportation modes, and public health. **"Rail"** and **"freight"** show an awareness of the economic development aspects of transportation systems. **"Future"**, **"improvements"**, **"vision"**, and **"goals"** indicate the forward-looking aspect of these plans. **And, finally, some key corridors come into focus, such as "US10", "TH23" (MN 23), and "I-94"**. Interestingly, the word **"congestion"** is almost impossible to find – it appears only eight times in the text. For comparison, the word **"system"** appears **81 times**, and the words **"people"** and **"development"** appear **24** times each. Unlike larger urban areas, roadway congestion does not appear to be a major issue for the Saint Cloud MPA.

Overall, these plans and their recommendations will be used to help inform and develop the goals and objectives of this MTP.

CHAPTER 6: TRAVEL DEMAND MODELING

BASIC MODELING INFORMATION

Federal regulations¹ require that MAPPING 2045 include “the projected transportation demand of persons and goods in the metropolitan planning area over the period of the transportation plan.” To accomplish this, the APO builds and maintains a regional Travel Demand Model (TDM), a mathematically complex, computer-based model built within CUBE software from Citilabs. The TDM provides an outlook on how the current system is operating as well as future conditions based on the socioeconomic forecasts prepared for the MTP.

The TDM is built in a number of steps, summarized below:

1. The urban area is subdivided into a set of Traffic Analysis Zones (TAZs) based on land-use zoning, **physical barriers, and a number of other considerations.** The APO’s TDM consists of 261 TAZs covering the entire MPA.
2. Within each TAZ, certain demographic characteristics are measured such as the number of single-family residential dwelling units, the number of multi-family dwelling units (i.e., apartments), the area of existing office space (in square feet), the area of retail space, the area of industrial space, the number of students enrolled in any school within the TAZ (if any), and other characteristics that are related to the generation or attraction of transportation trips. Detailed methodology for socioeconomic data can be found in Appendix D.
3. A model network of major roadways is constructed which includes a number of characteristics such as the number of through-lanes that are present for each roadway segment, speed limit, capacity, and length of roadway.
4. The software uses the TAZ data and some basic assumptions based on travel research to generate a number of trips originating from within each TAZ. In general trips are generated by households and are attracted to other land-use types such as commercial, office, industrial, and school properties. The model also assumes return trips back to the household. Detailed information can be found in Appendix E.
5. The software then estimates the number of trips attracted to each TAZ, connecting the trip generations to the trips attractions. To illustrate this, we will use the following hypothetical example: Of the 100 trips generated in TAZ 1, 10 trips will begin in TAZ 1 and end in TAZ 2; five trips will end in TAZ 3; seven trips will end in **TAZ 4; etc.** A “gravity model” is used to determine these attractions. Gravity models, like gravity in physics, works on the principle that a larger mass will have a stronger attractiveness and will attract trips from farther away. So a major shopping mall, for example, will attract many more trips and will attract trips from farther

¹ 23 CFR §450.322(f)(1)

away than a small corner convenience store. Detailed information can be found in Appendix F.

6. The software then assigns trips to the roadway network. In general, the model chooses the route that will minimize the travel time for each trip. This is a function of both the directness of the route and the posted speed limit on that route.
7. The estimated trips on each roadway segment are then compared to actual measured traffic volumes in order to test the reasonableness of how well the TDM is working. If necessary, adjustments are made to improve the reasonableness of the model output.
8. If the model appears to be reasonably estimating trips based on known data, we make the assumption that it will also reasonably estimate trips if we start to adjust the TAZ data and/or the network characteristics.

The current APO model is a simplified “four-step” model. A typical model includes five steps. That fifth step, mode choice, (which is not included in the APO’s model) is combined with the trip generation step to produce vehicle trips rather than separate estimates of person trips and transit market shares. The “four-step” model is a common simplification in small-to-midsize urban area models, where the transit market share is small and the resources available to develop transit models are limited.

Simplified, “four-step” travel models are comprised of: trip generation, trip destination, mode choice, and trip assignment shown more in detail in Figure 6.1. These four-step travel models originated in the 1950s in cities like Detroit and Chicago back when they were run on large mainframe computers. The underlying research into four-step TDMs is voluminous and improvements are routinely recommended.

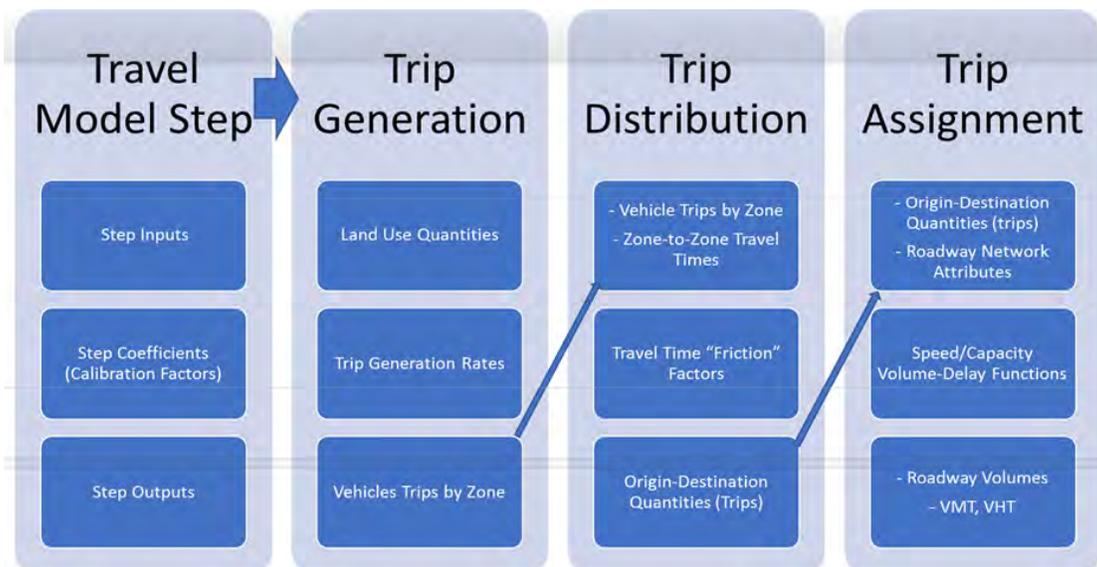


FIGURE 6.1 – SAINT CLOUD APO “SIMPLIFIED” TRAVEL DEMAND MODEL FLOW
Source: SRF Consulting Group, Inc.

2015 MODEL CALIBRATION

The TDM is first calibrated to a known set of data. In this case, the APO set the model base year as 2015.

2015 MODEL INPUTS

The primary model inputs developed by APO staff in cooperation with the member jurisdictions includes socio-demographic data for all 261 TAZs, as well as a major roadway network file. A spreadsheet showing the 2015 TAZ data can be found in Appendix G.

Some basic terms need to be established to explain the TDM as shown in Figure 6.2. A map showing the 2015 roadway network and the 2015 TAZs is exhibited in Figures 6.3 and 6.4, respectively.

Terms	Definition
Nodes	Nodes are points at physical changes of infrastructure characteristics such as junctions, changes in the number of lanes, and changes in posted speeds.
Links	Links are the physical network (i.e., County Road 136, Interstate 94, 25 th Avenue S). These links are connected to and by nodes.
Centroids	Centroids are un-modeled local roadways . In the APO's simplified Traffic Demand Model (TDM), all roadways are not on the functional classification system nor can be specifically modeled due to complexity and lack of reliable data for validation. They are instead modeled as fictitious, simplified roadways.
Centroid Connectors	Centroid connectors are connections between centroids and links.
Root Mean Squared Error (RMSE)	RMSE compares the average modeled volume to the average count volumes and does not allow an exceedingly high volume to be averaged and offset against an exceedingly low volume.

FIGURE 6.2 – DEFINITIONS FOR SOME TRAFFIC DEMAND MODELING TERMS



FIGURE 6.3 – SAINT CLOUD APO TRAVEL DEMAND MODEL ROADWAY NETWORK
Source: SRF Consulting Group, Inc.

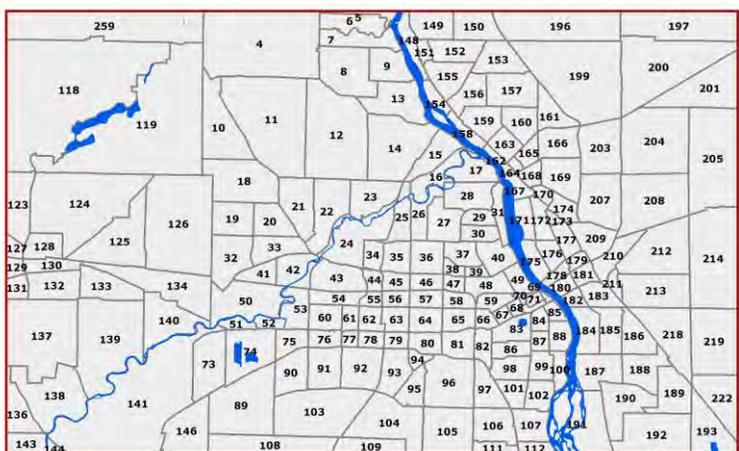
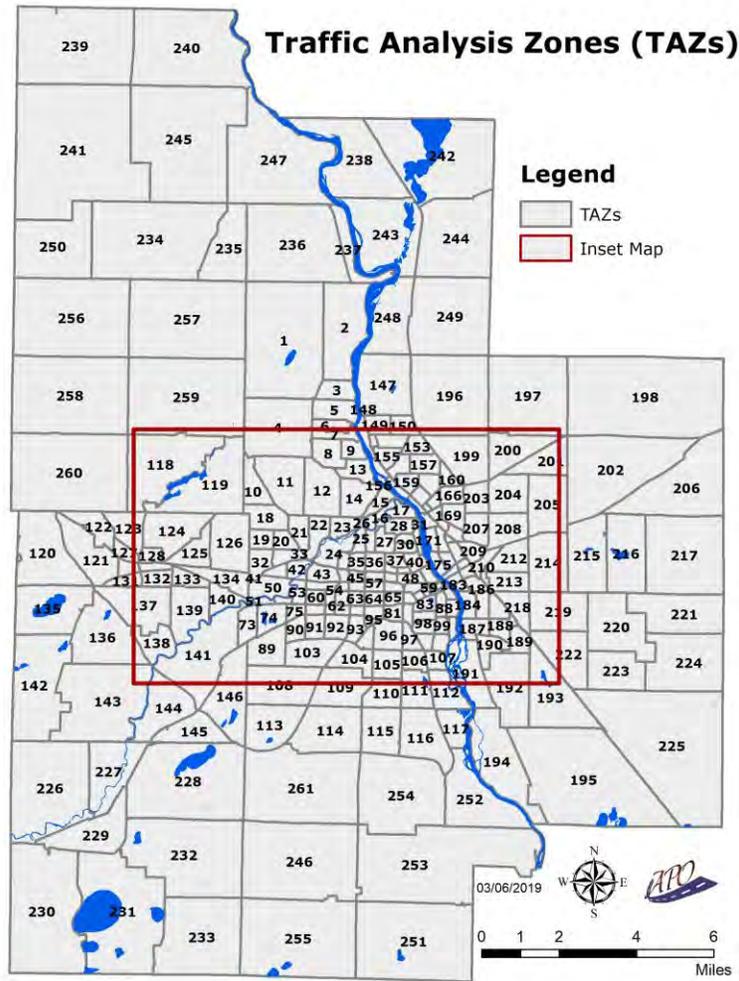


FIGURE 6.4 – SAINT CLOUD APO TRAVEL DEMAND MODEL TRANSPORTATION ANALYSIS ZONES (TAZ)
Source: APO Shapefiles

2015 MODEL CALIBRATION RESULTS

Achieving an acceptable level of calibration to the base year data provides some confidence that the model is generating and assigning trips reasonably. The calibration of the TDM to base year 2015 traffic count data was accomplished by SRF Consulting Group, Inc., working in cooperation with APO staff. A summary of the results of the calibration are shown in the Figure 6.5 below:

Traffic Volume Cohort (AADT)	# of Links in Cohort	Sum of Modeled Volume	Sum of Actual Volume	Total Deviation from Actual Volume	RMSE	Maximum Desirable RMSE
0 – 2,499	244	415,344	304,105	40%	129.6%	>100%
2,500 – 4,999	89	421,853	326,536	32%	77.7%	45%-100%
5,000 – 9,999	125	1,090,001	924,100	18%	43.7%	35%-45%
10,000 – 19,999	113	1,733,375	1,620,000	7%	25.4%	25%-30%
20,000 – 29,999	54	1,293,862	1,257,200	3%	16.7%	15%-20%
30,000 – 40,000	24	707,368	786,000	-10%	19.2%	15%-20%
40,000 +	1	52,620	45,500	16%	16%	15%-20%
Total	650	5,714,423	5,263,441	9%	37%	

FIGURE 6.5 – LINK DEVIATION BY VOLUME GROUP

Source: SRF Consulting Group, Inc.

VALIDATION RESULTS

Model validation is defined as the degree to which the TDM replicates known ground counts. Based on Federal Highway Administration (FHWA) guidance, analysts frequently use a restrictive error measure called Root Mean Squared Error (RMSE) to gauge this degree of validation. RMSE compares the average modeled volume to the average count volumes and does not allow an exceedingly high volume to be averaged and offset against an exceedingly low volume. Furthermore, error on higher volume facilities is weighted more heavily compared to lower volume facilities.

For the Saint Cloud TDM, a RMSE of 37 percent was achieved with an average count volume of 8,100 vehicles per day. As shown in Figure 6.6, this RMSE value is reasonable given the standard tolerates higher percentage errors with low numeric differences (a result of typical count deviations on low volume roads and the low impact of those deviations on forecast lane requirements). Model performance for low volume roads is affected by the resources available to refine the geographic size of model zones, the roadway geometrics, and traffic control parameters in the model.

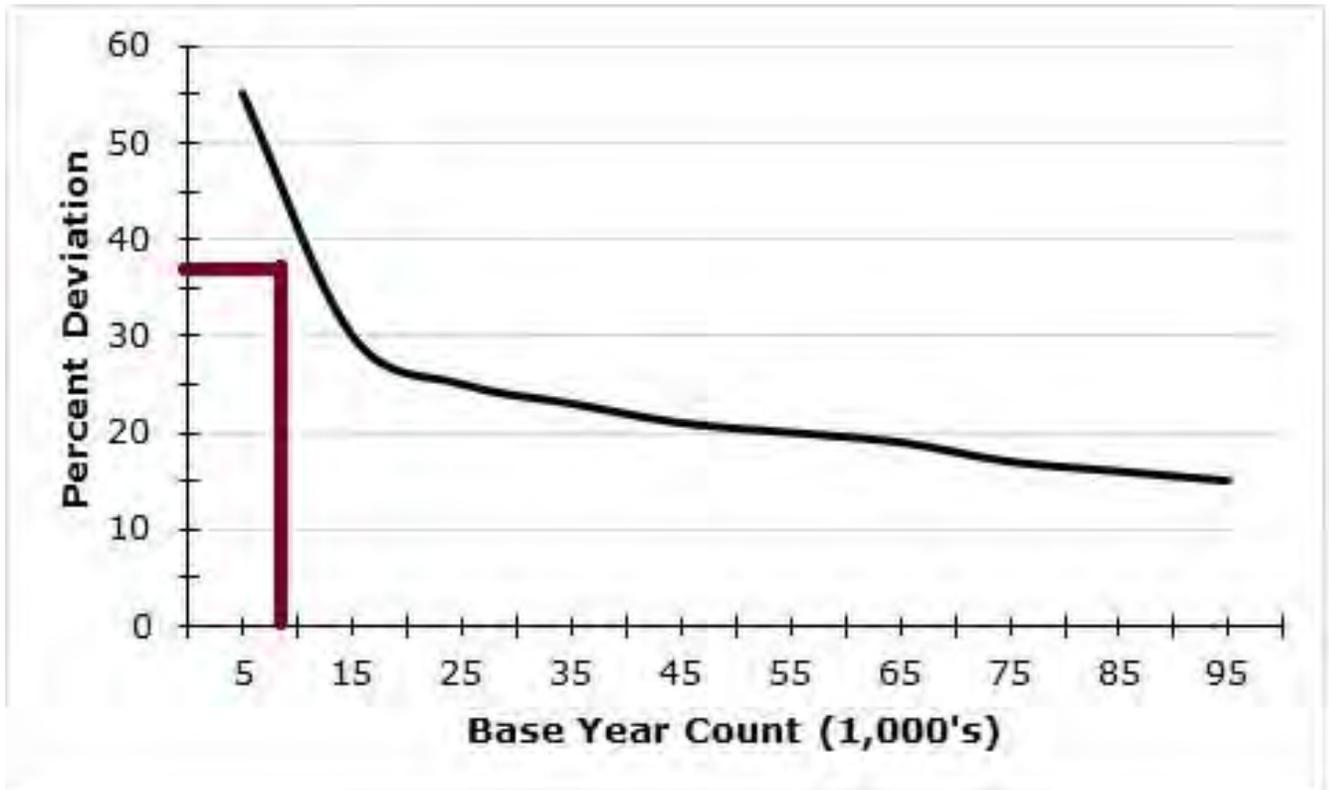


FIGURE 6.6 – SAINT CLOUD TDM OVERALL RMSE REALTIVE TO MAXIMUM DESIRABLE ERROR FOR LINK VOLUMES

Source: Model Validation and Reasonability Checking Manual Second Edition (FHWA, 2010)

LINK DEVIATION FROM COUNT

Differences between modeled volumes and ground counts are expected in a model. The significance of any difference depends on whether the difference affects roadway requirements (such as the number of lanes) and accounts for variance in traffic counts. For this analysis, the model attained a 37 percent RMSE, which will necessitate applying an industry-standard post-model adjustment process. As shown in Figure 6.7, high volume roadways had the best fit; some roadways, particularly low volume roadways, exceeded the desirable deviation. Note that low volume/high deviation links are most common in areas where not all of the local roadways are represented in the roadway network, which concentrates traffic onto the roadways that are included in the roadway network.

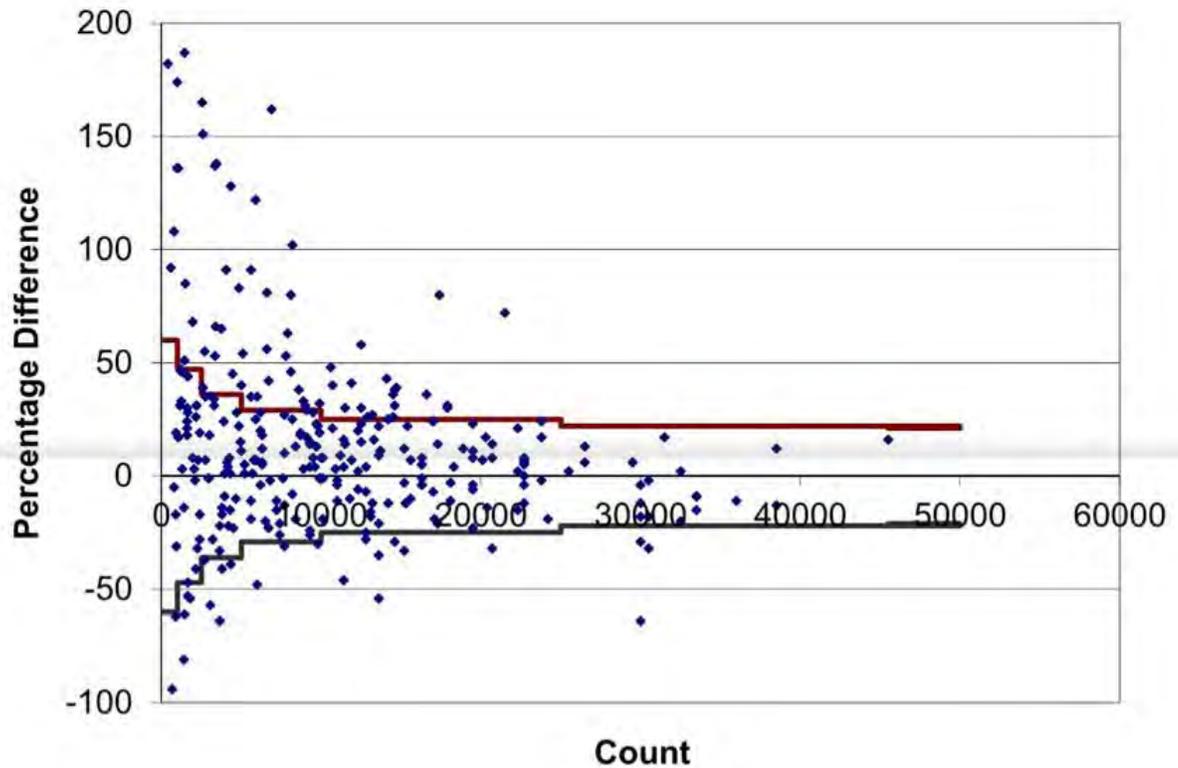


FIGURE 6.7 – MODEL PERFORMANCE FOR SEGMENTS WITH COUNTS
 Source: SRF Consulting Group, Inc.

In addition to calculating the link deviation by volume group, screenlines were also used to evaluate model validation. Model performance across the screenlines is shown in Figure 6.8 and a screenlines map is shown Figure 6.9. Three screenlines exceed desirable deviation as defined in Figure 6.6. Screenline 1 (measuring Mississippi River crossings) is slightly higher than the desired maximum (projected), but the nearby Screenline 6 paralleling US 10 and Lincoln Avenue shows a high deviation of 39 percent and appears to be affected by zone sizes and centroid connections. A large portion of the deviation in Screenline 8 is the result

of the existing model’s treatment of the heavily access-controlled MN 15 relative to its classification.

Screenline	Sum of Model Volume	Sum of Existing Volume	Total Deviation	RMSE
1	121,326	104,300	16.0%	25.5%
2	132,501	132,150	0.3%	29.1%
3	78,464	84,800	-7.0%	17.1%
4	46,394	49,350	-6.0%	43.9%
5	37,373	33,300	12.0%	39.9%
6	60,872	43,900	39.0%	51.5%
7	29,621	28,400	4.0%	36.2%
8	80,164	54,700	47.0%	69.5%

FIGURE 6.8 – SCREENLINE VALIDATION
Source: SRF Consulting Group, Inc.

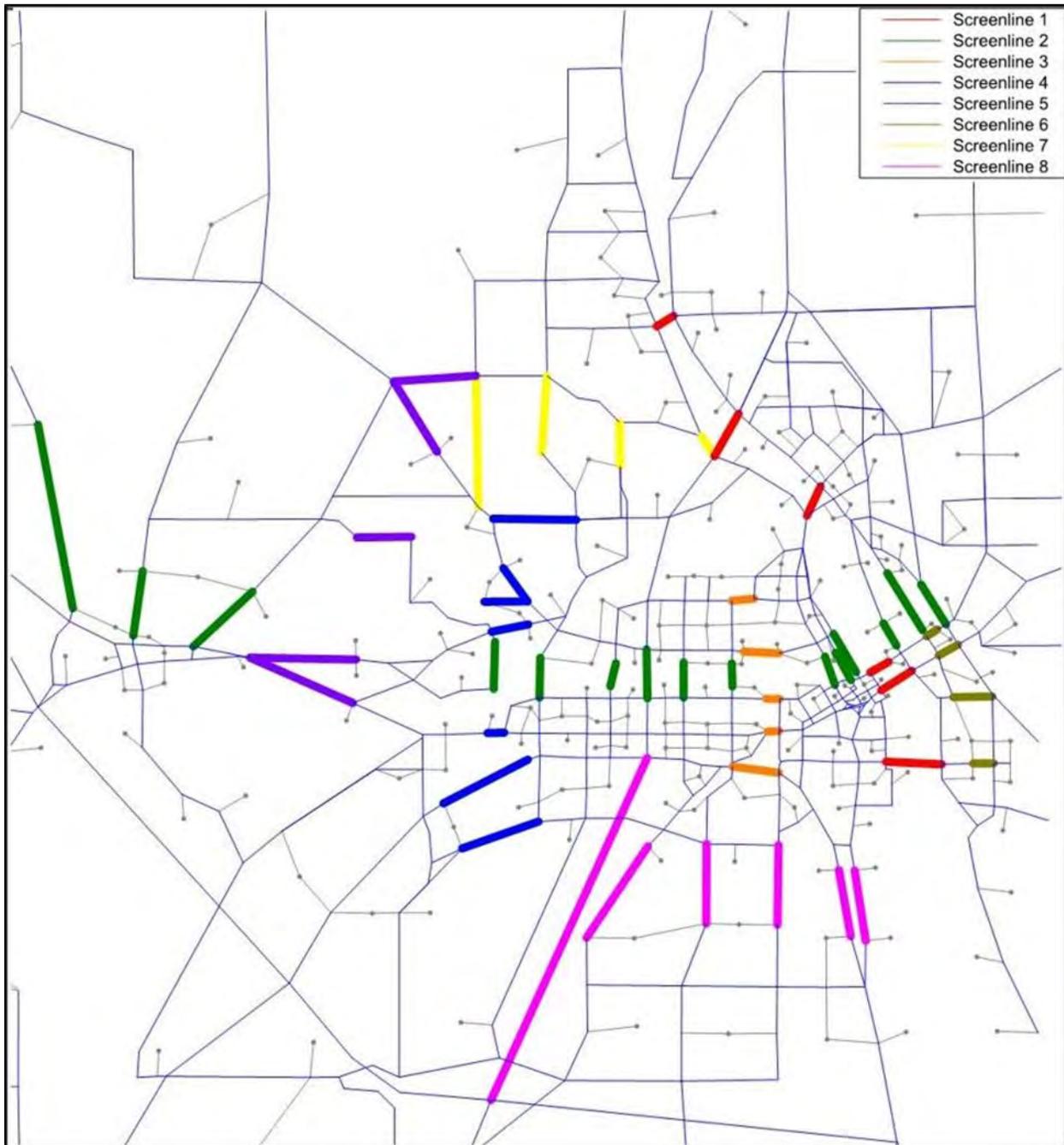


FIGURE 6.9 – APO MODEL SCREENLINES/CUTLINES
Source: SRF Consulting Group, Inc.

The V/G ratio check (model volume divided by ground count) is used to diagnose specific locational problems in the model that might be missed using system wide statistics. The closer the value is to 1, the closer the model volume is to the confirmed ground counts. As

the value increases, the higher model volume is compared to the ground counts and vice-versa, as shown in Figure 6.10.

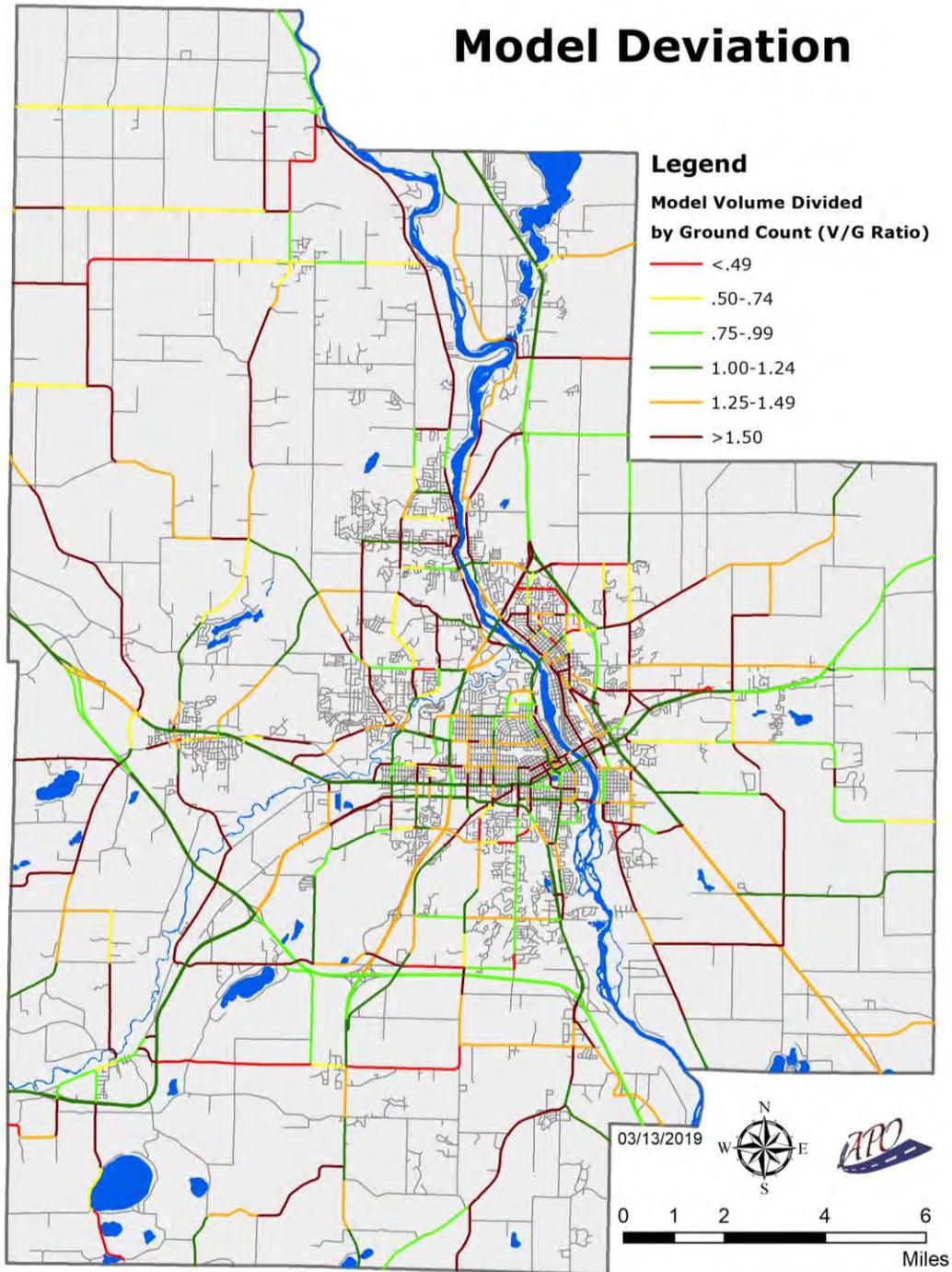


FIGURE 6.10 – MODEL DEVIATION FROM GROUND COUNTS IN 2015
Source: APO TDM

In order to identify existing and future capacity issues within the MPA, daily capacities (vehicles per day) are determined for each link, based on their facility type. Figure 6.11 displays each facility type and their respective daily capacities based on recommendations from SRF Consulting Group, Inc. Figure 6.12 visually displays the daily capacities for each facility type.

Facility Type	Daily Capacity (vehicles/day)
Two-lane gravel road	1,000
Two-lane collector/local	10,000
Two-lane arterial	12,000
Three-lane (two-way left-turn lane) collector/arterial	18,000
Four-lane collector	20,000
Four-lane undivided arterial	27,000
Five-lane collector	28,000
Five-lane arterial	34,000
Four-lane divided (expressway)	36,000
Six-lane divided (expressway)	54,000
Four-lane unmetered freeway	74,000
Four-lane metered freeway	85,000
Six-lane unmetered freeway	111,000
Six-lane metered freeway	127,000
Eight-lane unmetered freeway	150,000
Eight-lane metered freeway	184,000

FIGURE 6.11 – ROADWAY AVERAGE DAILY CAPACITIES

Daily Capacity

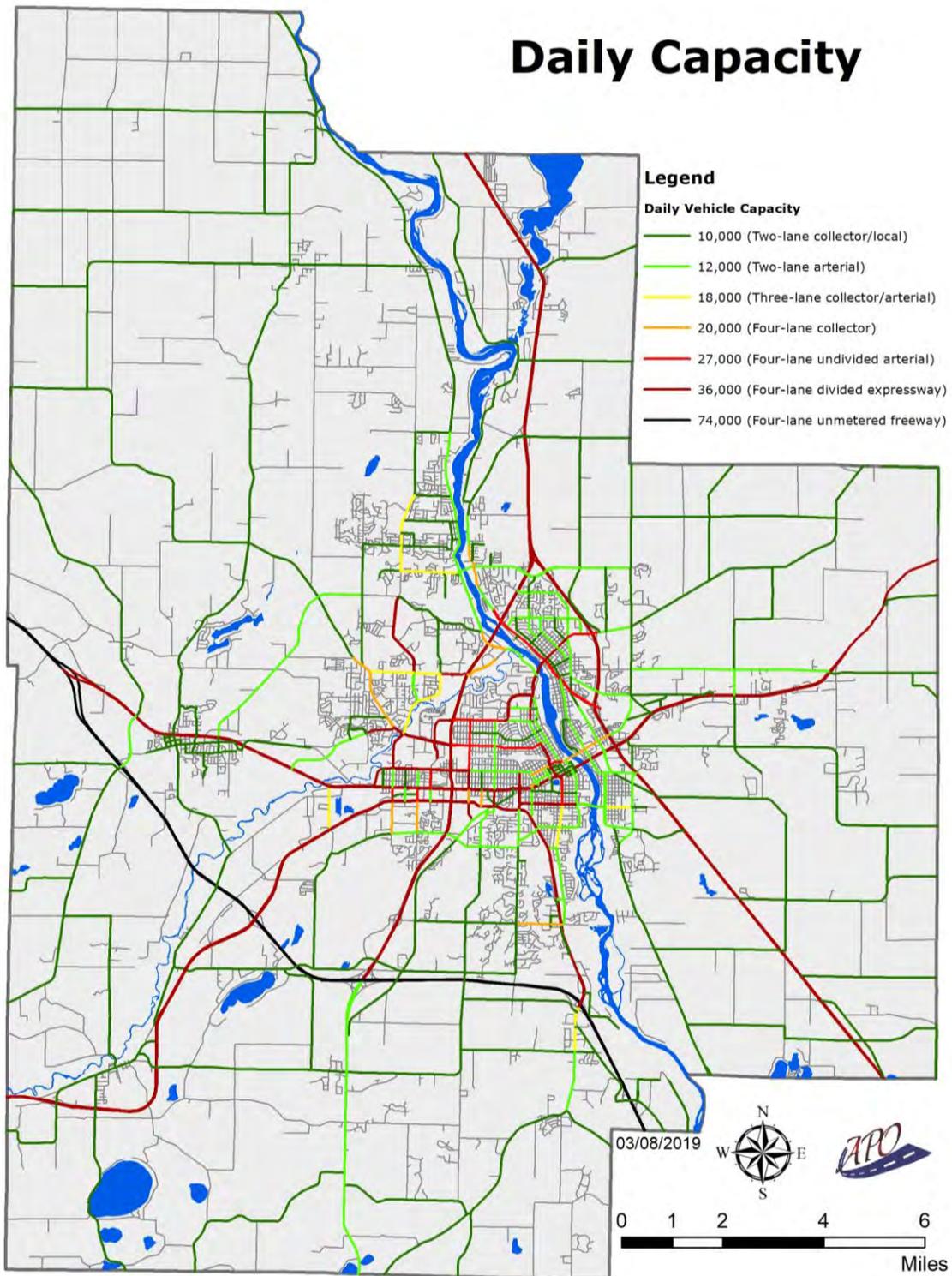


FIGURE 6.12 – ROADWAYS DISPLAYED BY DAILY CAPACITY
Source: APO TDM

Once capacity is determined for each link, the volume to capacity (V/C) ratio is calculated. The volume of a link is determined by AADT (Average Annual Daily Traffic). The volume is then divided by the capacity producing a ratio which is used to generate level of service (LOS). LOS is a term used to qualitatively describe roadway operations and levels of congestion shown in Figure 6.13. LOS A represents the best quality of traffic where the driver has the freedom to drive with free flow speed and level F represents the worst quality of traffic.

LOS and V/C Ratio	Description
LOS A = $\leq .70$ V/C Ratio	Free flowing travel, individual drivers are virtually unaffected by the presence of other traffic.
LOS B = $.71 - .90$ V/C Ratio	In the range of stable flow, but the presence of others in the traffic stream begins to be noticeable.
LOS C = $.91 - 1.09$ V/C Ratio	In the range of stable flow, but marks the beginning of the range of flow where the operations of drivers become significantly affected by the interactions of other traffic.
LOS D = $1.10 - 1.29$ V/C Ratio	Represents high density, but stable flow. Speed and freedom to maneuver are severely restricted and the driver experiences a poor level of comfort and convenience.
LOS E = $1.30 - 1.49$ V/C Ratio	Represents conditions at or near capacity level. Comfort and convenience levels are extremely poor and flow becomes irregular and speed varies rapidly, but rarely reaches the posted limit.
LOS F = ≥ 1.50 V/C Ratio	Forced traffic flow in which the amount of traffic approaching a point exceeds the amount that can be served. LOS F is characterized by stop-and-go waves, poor travel times, low comfort and convenience, and increased accident exposure.

FIGURE 6.13 – RELATIONSHIP OF ROADWAY LOS TO V/C RATIOS

The results of the TDM’s 2015 network LOS outcomes are displayed in Figure 6.14. As shown, 98.7 percent of the MPA’s functionally classified lane miles are within a desirable LOS A through D. There are eight corridors the model reports having an undesirable LOS E or F in 2015, as shown in Figure 6.15.

LOS	Lane Miles	Percent of Lane Miles
A	970.5	80.3%
B	156.9	13.0%
C	40.9	3.4%
D	24.5	2.0%
E	13.2	1.1%
F	2.0	0.2%

FIGURE 6.14 – MODEL-ESTIMATED MILES OF ROADWAY BY LOS WITHIN THE MPA IN 2015

LOS	V/C Ratio	Capacity	Model ADT Results	Location	From Street X	To Street Y	City
E	1.34	12,000	16,079	Riverside Avenue S	Heritage Drive	Michaels Court	Sartell
E	1.35	12,000	16,198	West Saint Germain Street	10th Avenue S	12th Avenue N	Saint Cloud
E	1.39	12,000	16,688	Riverside Avenue N	First Street N	Fourth Street N	Sartell
E	1.44	12,000	17,256	Riverside Avenue S	County Road 78	Sartell Street W	Sartell
F	1.53	12,000	18,418	County Road 1/Riverside Avenue N	Sartell Street W	First Street N	Sartell
F	1.58	12,000	19,017	West Saint Germain Street	County Road 137/22nd Street S	33rd Avenue N	Saint Cloud
F	1.99	10,000	19,864	29th Avenue N	Third Street N	MN 23/Division Street	Saint Cloud
F	2.09	12,000	25,022	University Drive S	Fifth Avenue S	Kilian Boulevard SE	Saint Cloud

FIGURE 6.15 – ROADWAY CORRIDORS WITH LOS E OR F IN 2015

Level of Service TDM Results

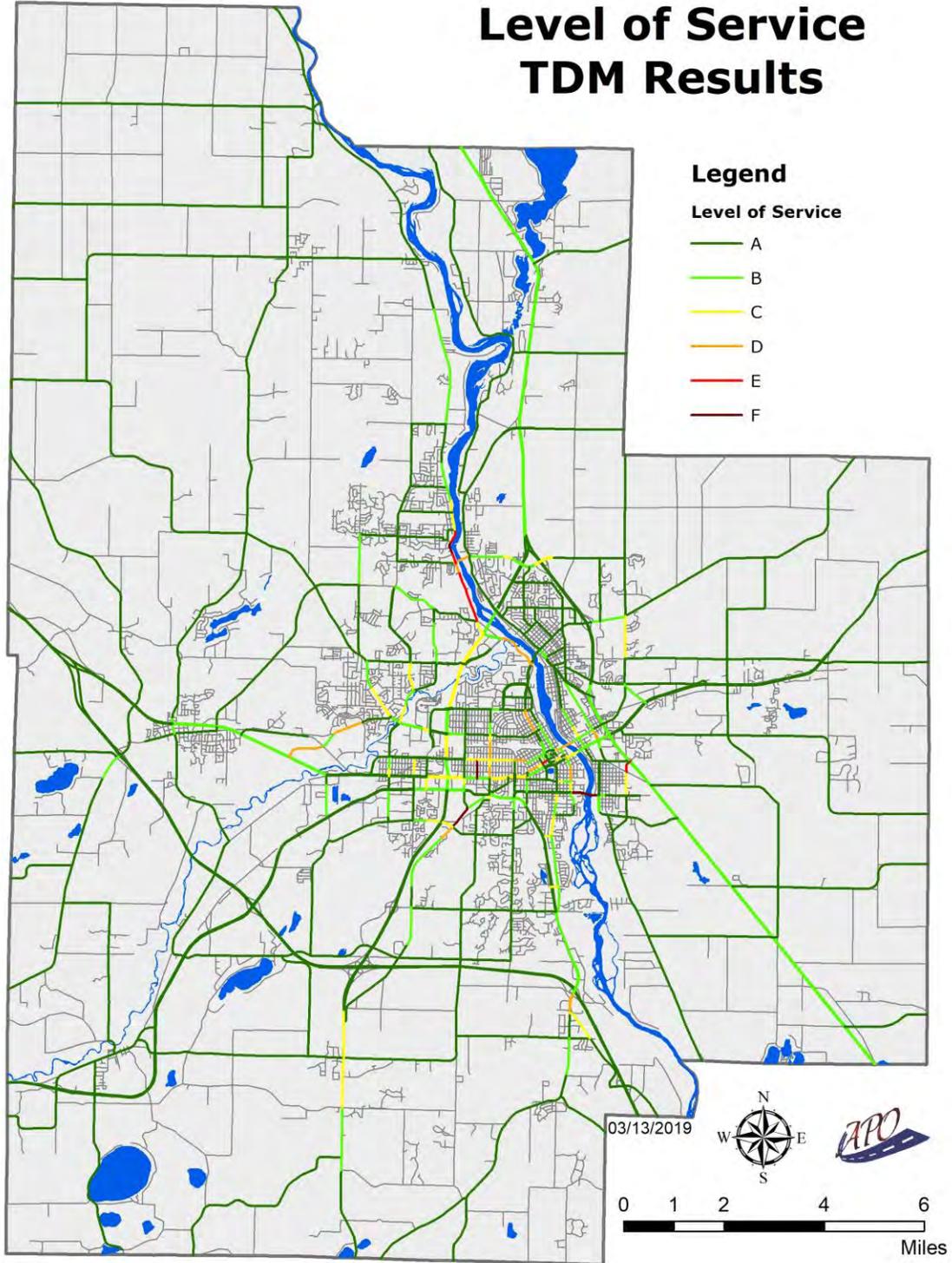
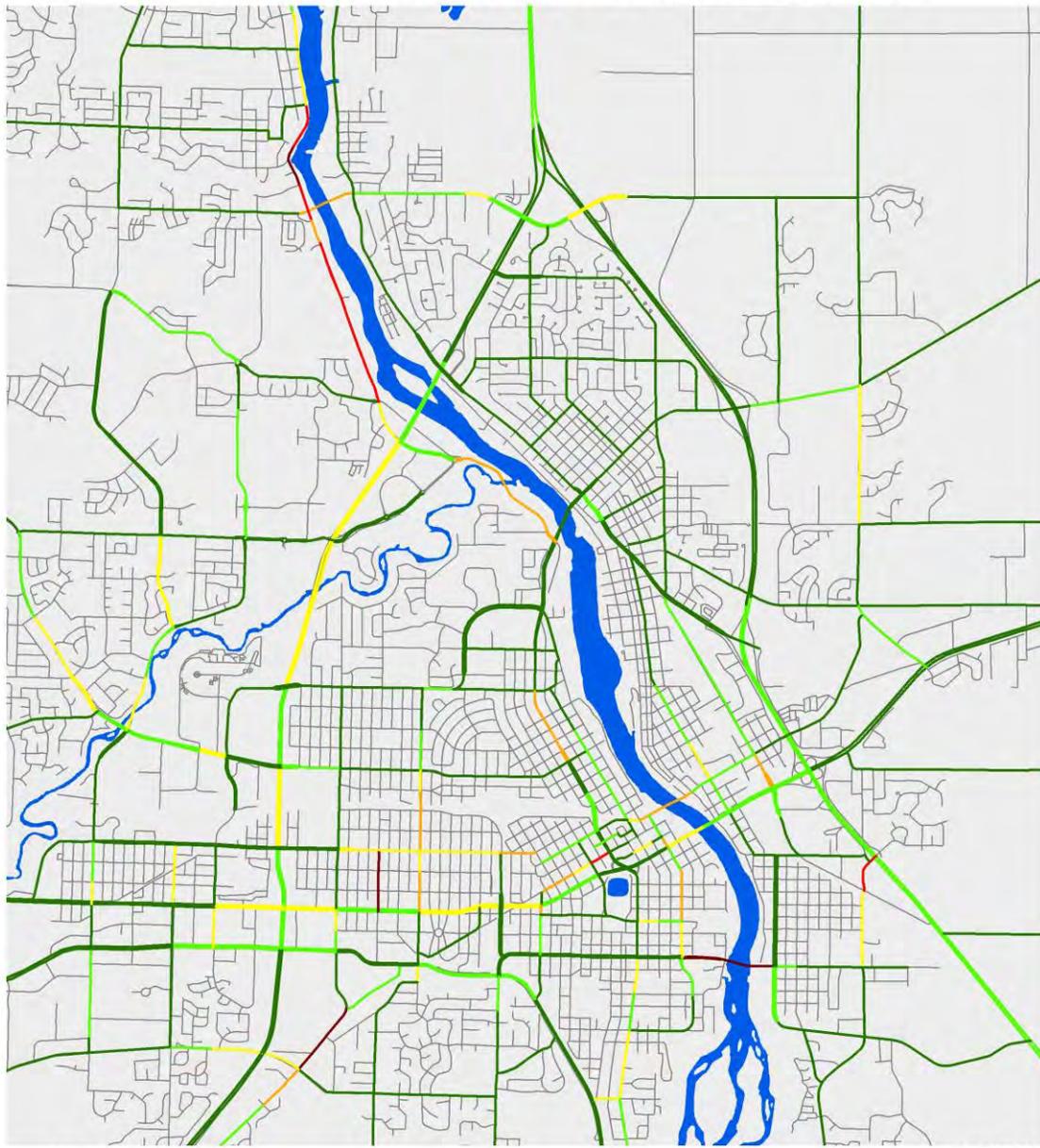


FIGURE 6.16 – ROADWAYS BY MODEL-ESTIMATED LOS IN 2015

Level of Service TDM Results



09/20/2019

Legend

Level of Service

- A (dark green)
- B (light green)
- C (yellow)
- D (orange)
- E (red)
- F (brown)

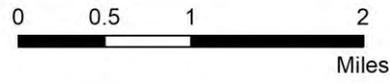


FIGURE 6.17 – A ZOOMED IN LOOK AT LOS E AND F ROADWAYS BY MODEL-ESTIMATED LOS IN 2015

While LOS is qualitative, the V/C ratio is a quantitative way used to describe operating capacity. Figures 6.18 and 6.20 are **the results of the TDM’s 2015 V/C ratio**. A ratio of 1.0 or above indicates the roadway is at or above functional capacity. A ratio of 0.85-0.99, indicates the roadway is nearing capacity and anything under a 0.84 is considered to be within operational capacity. A little over 90 percent of functionally classified lane miles are below capacity while 10 percent are nearing or above operational capacity.

V/C Ratio	Lane Miles	Percent of Lane Miles
Under Capacity	1,088	90.1%
Approaching Capacity	65	5.4%
Over Capacity	55	4.6%

FIGURE 6.18 – MODEL-ESTIMATED V/C RATIOS FOR ROADWAYS IN 2015



FIGURE 6.19 – A TYPICAL TWO-LANE ARTERIAL CAN HANDLE ABOUT 12,000 VEHICLES PER DAY

Volume to Capacity Ratio TDM Results

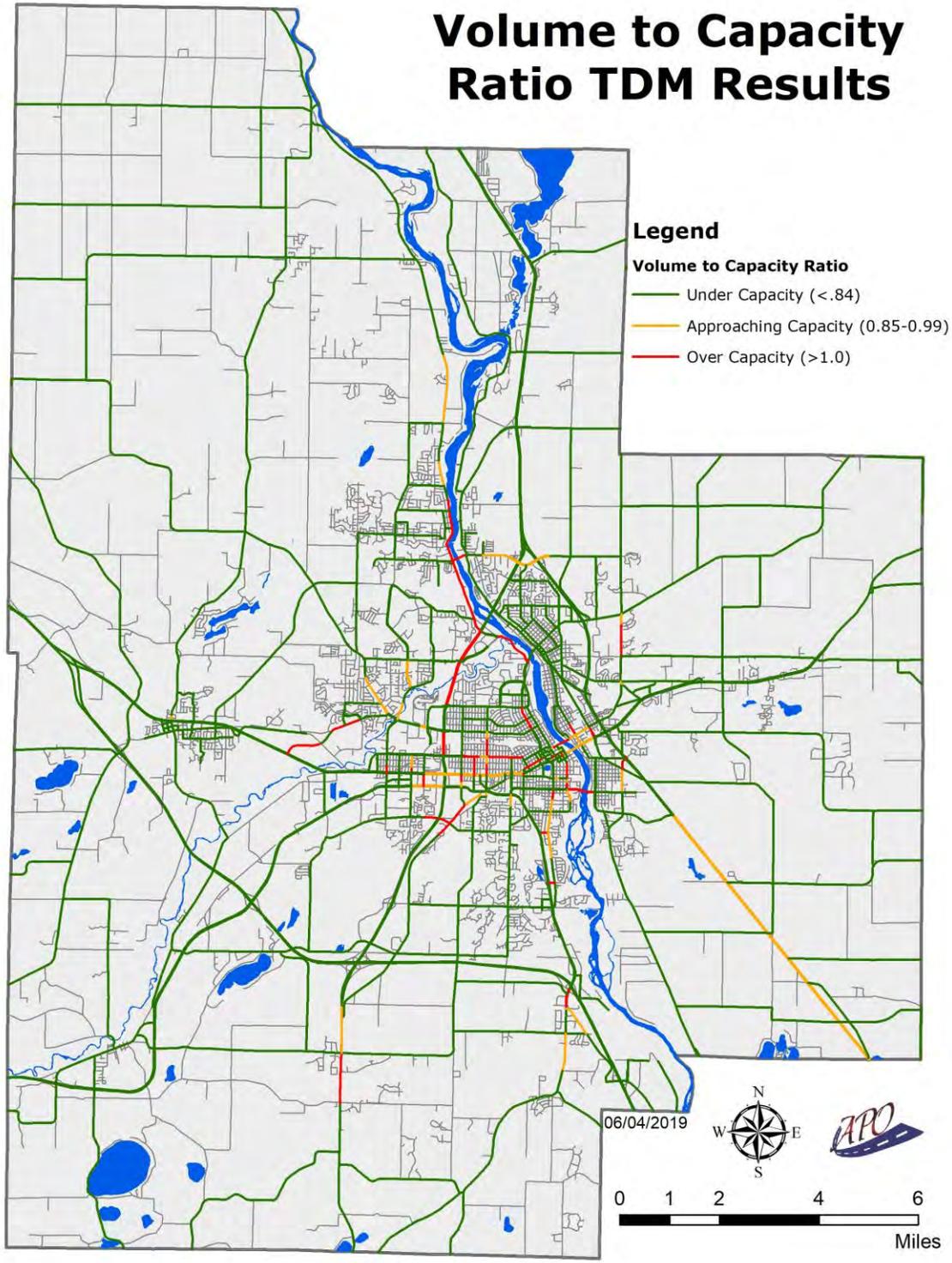


FIGURE 6.20 – ROADWAYS ESTIMATED TO EXCEED V/C RATIOS IN 2015

2045 NO-BUILD MODEL

Once a calibrated TDM is achieved, we can have some confidence in the model if adjusted to account for future population growth or future capacity changes to the roadway network, the model will again provide reasonable output in the form of future traffic projections. Using these projections can help technical staff identify upcoming problem areas and capacity constraints that may need to be addressed.

2045 LAND USES, TAZ DATA, AND THE “NO-BUILD” NETWORK

SRF Consulting Group, Inc., working in cooperation with APO staff and member jurisdictions, developed a set of population growth estimates for each respective jurisdiction. Then, using comprehensive plans and interviews with technical staff from the member jurisdictions focused on development pressure, the population growth was assigned to individual TAZs. The changes made to the 2015 TAZ data to account for 2045 growth are shown in Appendix G.

The No-Build Network accounted for any capacity changing projects that have been completed between 2015 and 2018, as well as any capacity changing projects that are programmed in the Transportation Improvement Program (TIP). It can be thought of as a network with existing roadway capacities, plus any capacity changing projects for which funding has been committed. The 2019-2023 TIP was used to identify capacity changing projects programmed for construction in the near future. The development of the No-Build Network started with the 2015 network with added changes to the roadway characteristics based upon projects completed since 2015 and those programmed for completion in the near future. Essentially, it represents a 2023 network. The 2015 No-Build Network map is shown in Figure 6.3 (on page 6-4).

2045 “NO-BUILD” MODEL RESULTS

The next model run performed is a 2045 “No-Build” model run. It uses the 2045 TAZ data and the 2015 No-Build roadway network. The model run represented an estimate of roadway congestion in 2045 if no capacity changing investments were made in the roadway network beyond 2023. Analysis of this model run suggests which segments of roadway should be targeted for capacity changing investment beyond 2023.

As expected growth and redevelopment in the MPA will take place in the coming decades. The 2045 model results show trips increasing by 54 percent within the MPA. The escalation in trips can be attributed to the 18 percent residential development growth in the region **from 2015 to 2045. The “outer” region of the metro (Sauk Rapids, LeSauk Township, Saint Joseph, southern Saint Cloud, and southern Waite Park) will see the largest increase in household growth. With the added development in the “outer” region, traffic patterns are expected to change. Specifically, there will be a need for many travelers to cross one of the**

six current bridges spanning the Mississippi River. Trips are expected to increase by 60 percent on these river crossing from current conditions.

Residential growth will be a catalyst for commercial growth in new areas. Commercial development is projected to increase by 68 percent between 2015 and 2045. This growth is exceeding residential levels and will result in trip patterns shifting away from existing markets due to the high growth in other areas. Downtown Saint Cloud is expected to experience employment redevelopment as population demographics diversify. There will be a decline in industrial, office, and low-density retail uses, that will be replaced by a growth in highest and best use industries such as light industrial, medium-density retail, and high-density retail uses.

Based on the 2045 No-Build model results, 91.9 percent of functionally classified roadway lane miles in the Saint Cloud MPA will fall into an acceptable LOS category (LOS A through D). This is a decrease of almost 10 percent lane miles compared to current conditions as evident in Figure 6.21. The V/C ratio under operational capacity is above 60 percent. This is a decrease of almost 30 percent of lane miles as shown in Figure 6.22.

LOS	Lane Miles	Percent of Lane Miles
A	642.8	52.8%
B	167.7	13.8%
C	178.8	14.7%
D	129.6	10.6%
E	62.8	5.2%
F	35.5	2.9%

FIGURE 6.21 – ESTIMATED LOS IN 2045 NO-BUILD MODEL SCENARIO

Volume to Capacity Ratio	Lane Miles	Percent of Lane Miles
Under Capacity	775	63.6%
Approaching Capacity	124	10.2%
Over Capacity	319	26.8%

FIGURE 6.22 – ESTIMATED V/C RATIOS IN 2045 NO-BUILD MODEL SCENARIO

LOS	V/C Ratio	Capacity	Model ADT Results	Location	From Street X	To Street Y	Jurisdiction
F	2.64	12,000	31,687	First Street NE	Riverside Avenue S	First Avenue NE/Benton Drive	Sartell
F	2.28	12,000	27,334	15th Avenue SE	US 10	Lincoln Avenue SE	Saint Cloud
F	2.15	12,000	25,022	University Drive SE	Fifth Avenue S	Kilian Boulevard SE	Saint Cloud
F	2.03	36,000	73,114	MN 23/Division Street	Fifth Avenue S	Lincoln Avenue SE	Saint Cloud
F	1.98	20,000	39,521	First Street N/East Saint Germain Street	Fifth Avenue S	Riverside Drive SE/Second Avenue NE	Saint Cloud
F	1.94	36,000	69,981	MN 15	Stearns County Road 1/Riverside Avenue S	North Benton Drive	Sartell/Sauk Rapids
F	1.79	36,000	64,285	MN 15	Stearns County Road 120	12th Street N	Saint Cloud
F	1.73	12,000	20,746	Benton County Road 29/35th Street NE	MN 15	US 10	Sauk Rapids
F	1.72	36,000	23,124	MN 23	US 10	Benton County Road 1/Mayhew Lake Road	Saint Cloud/Minden Township
F	1.70	18,000	30,572	Stearns County Road 134	Stearns County Road 4/Veterans Drive	Pinecone Road S	Saint Cloud

FIGURE 6.23 – TOP 10 OVER-CAPACITATED ROADWAYS IN 2045 NO-BUILD MODEL SCENARIO

Level of Service 2045 No Build TDM Results

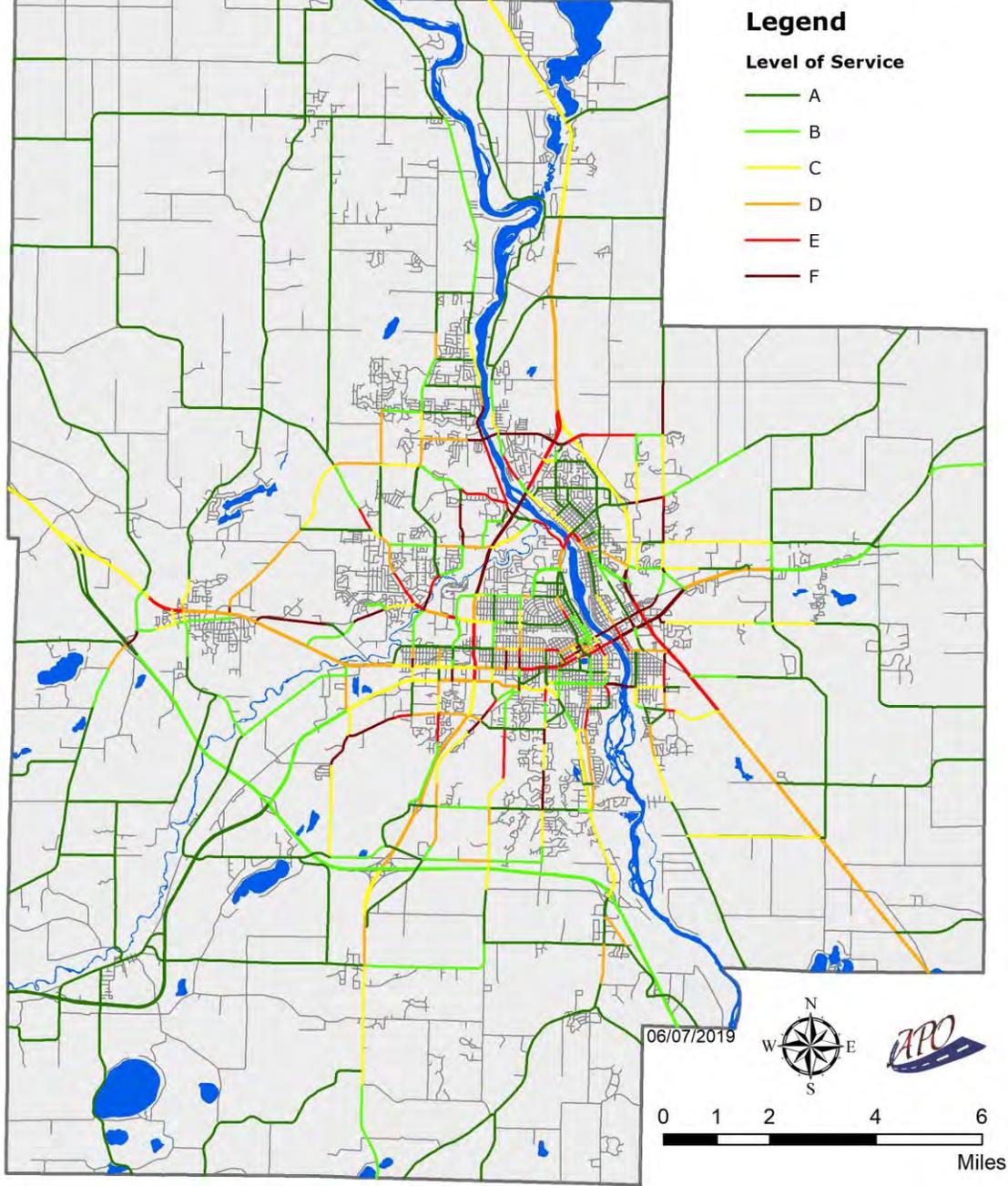


FIGURE 6.24 – ESTIMATED LOS IN 2045 NO-BUILD MODEL SCENARIO

Volume to Capacity Ratio 2045 No Build TDM Results

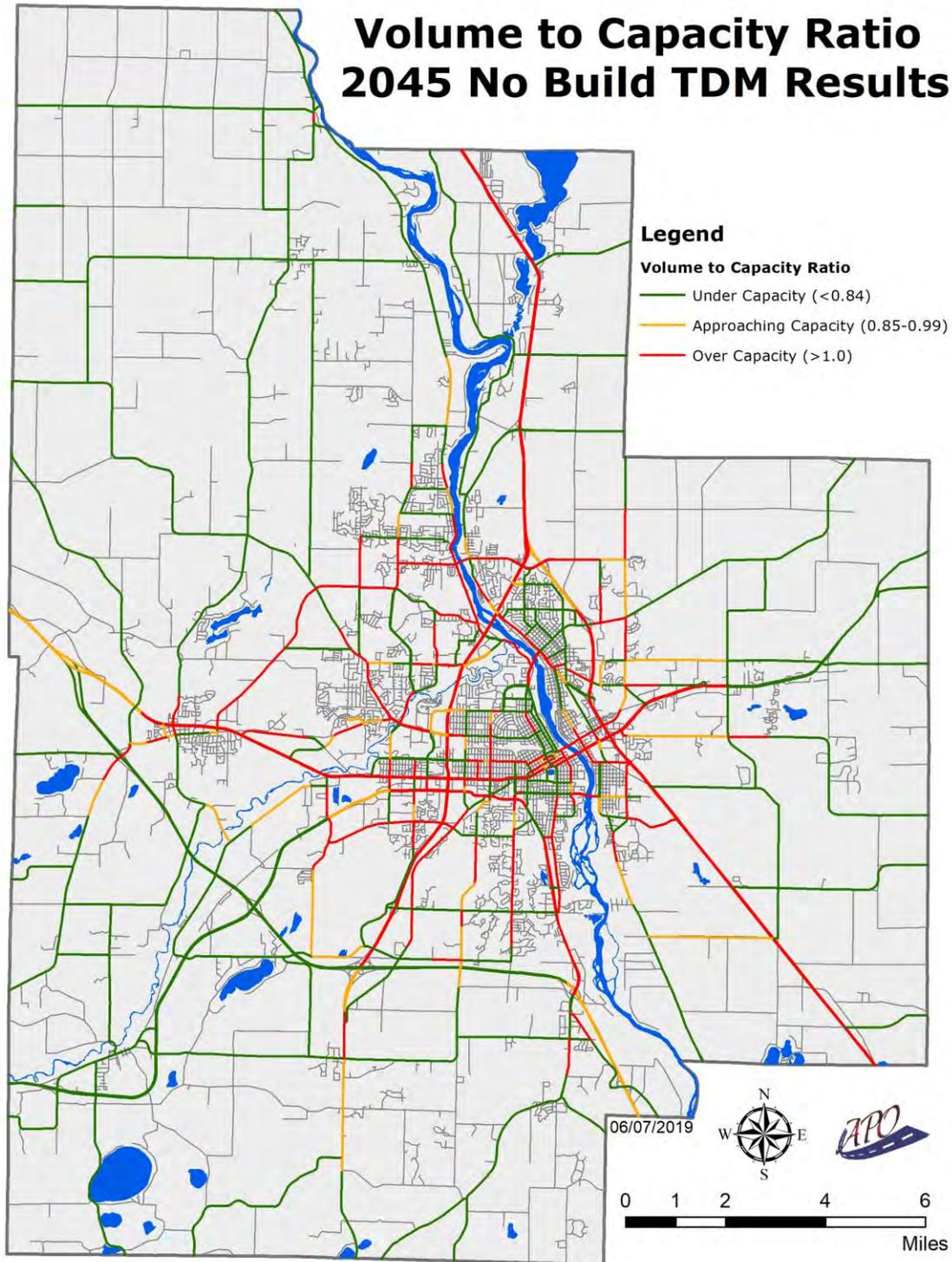


FIGURE 6.25 – ESTIMATED V/C RATIOS IN 2045 NO-BUILD MODEL SCENARIO

Percent Change in Volume

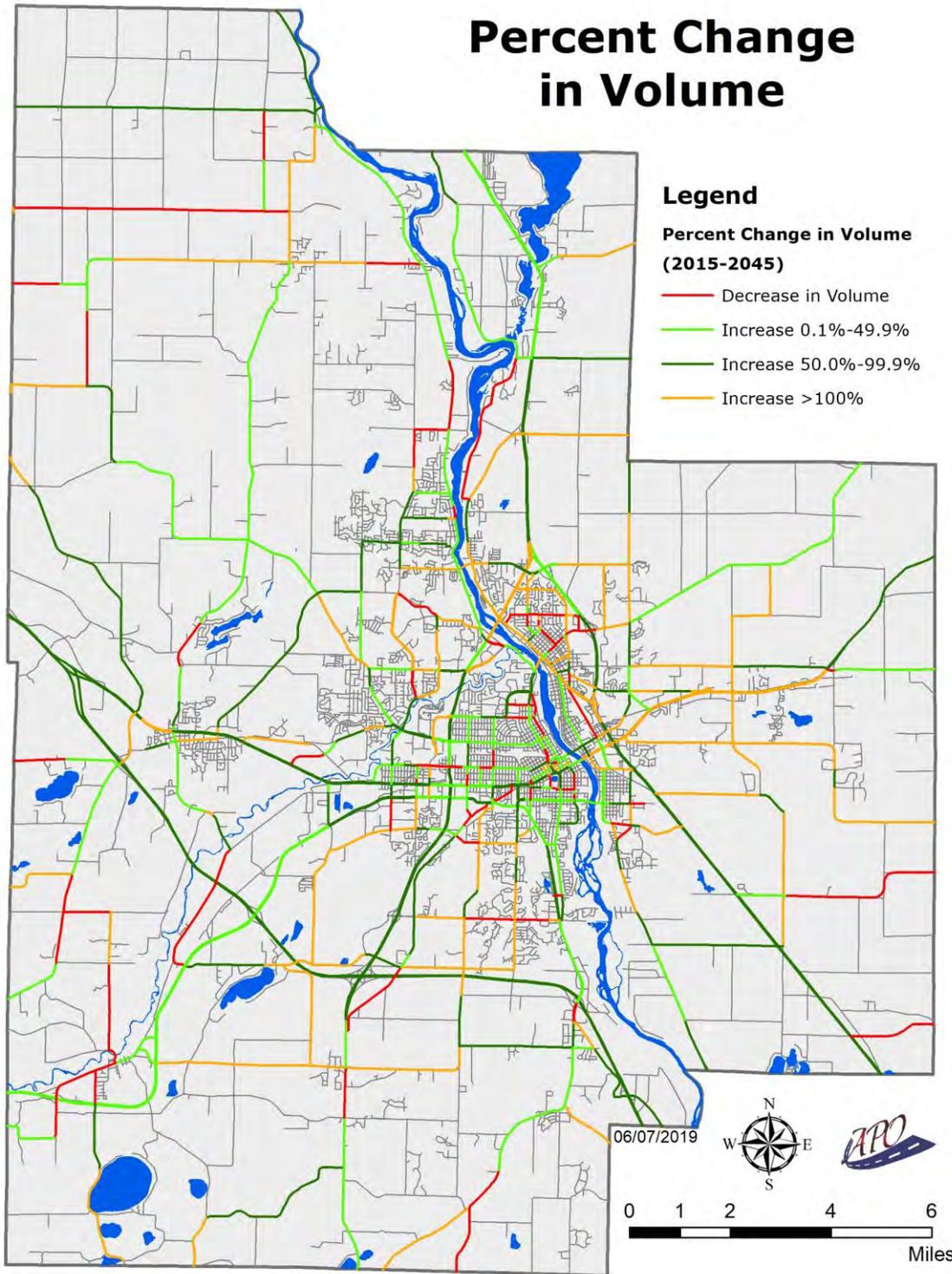


FIGURE 6.26 – ESTIMATE CHANGE IN DAILY TRAFFIC FROM 2015 TO 2045 NO-BUILD SCENARIOS

CHAPTER 7: GOALS, OBJECTIVES, STRATEGIES, AND PERFORMANCE MEASURES

INTRODUCTION

The goals, objectives, and performance measures established by the APO are designed to provide direction and guidance for MAPPING 2045. The goals were developed based on the analysis of the existing conditions, performance data, and public input detailed in the previous chapters. For each goal, specific measurable actions (i.e., objectives) were identified to help the region reach the desired goal. In some cases, important methods and capabilities to achieve objectives (i.e., strategies) are also identified. Performance measures were developed as ways to measure the level of attainment of the goals and objectives.



FIGURE 7.1 – RELATIONSHIP OF GOALS, OBJECTIVES, STRATEGIES, AND TACTICS
Source: Federal Highway Administration Office of Operations

Federal regulation¹ establishes the following national surface transportation goals:

1. **Safety** – To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
2. **Infrastructure Condition** – To maintain the highway infrastructure asset system in a state of good repair.

¹ 23 USC 150(b)

3. **Congestion Reduction** – To achieve a significant reduction in congestion on the National Highway System.
4. **System Reliability** – To improve the efficiency of the surface transportation system.
5. **Freight Movement and Economic Vitality** – To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
6. **Reduced Project Delivery Delays** – To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

In addition, FAST Act §134(h)(2) requires that goals and objectives set forth by the APO “shall provide for the establishment and use of a performance-based approach to transportation decision making.” Therefore, for each goal below, a series of performance measures and/or performance indicators has been identified to help inform transportation investment decision-making. The APO will regularly report on the performance measures and indicators.

As a local and regional transportation plan, MAPPING 2045 must reflect the national transportation goals, but may also supplement them in ways that make sense for the local and regional networks.

REGIONAL GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

The APO has identified five overall goals for MAPPING 2045:

1. Maintain and Enhance Transportation Safety;
2. Increase System Accessibility, Mobility, and Connectivity;
3. Efficiently Manage Operations and Cost-Effectively Preserve the System;
4. Support Metropolitan Vitality and Economic Development; and
5. Promote Energy and Environmental Conservation.

In the sections that follow, each of these goals will be further addressed through identification of objectives and strategies to be implemented by the APO to achieve those goals. In order to monitor the effectiveness of the objectives and strategies used to achieve the above goals, data-driven performance measures and performance indicators have also been included.

Goal 1: Maintain and Enhance Transportation Safety

Goal Statement: Develop and maintain a transportation system that is safe for all users.

- 1) **Objective:** Build and maintain roadways that include appropriate safety infrastructure to help prevent crashes.
 - a) **Strategy:** The APO shall encourage and support the installation of roundabouts, where appropriate, to help reduce right-angle crashes.

- b) **Strategy:** The APO shall encourage and support the installation of shoulder and centerline rumble and mumble strips and stripes, where appropriate, to warn drivers they are leaving their travel lane.
- c) **Strategy:** The APO shall encourage and support the installation of median barrier systems, crash cushions, and guiderail end treatments, where appropriate, to reduce the severity of lane departure crashes.
- 2) **Objective:** Identify and prioritize high-crash locations for investment and/or mitigation activities, as warranted.
 - a) **Strategy:** APO staff will continue to monitor crash rates on **the MPA's** roadway system to help identify high-crash locations.
- 3) **Objective:** Reduce the regional rates of bicycle and pedestrian fatalities and serious injuries.
 - a) **Strategy:** APO staff will collect and evaluate bicycle and pedestrian crash data to help determine the most common causes of serious injuries and fatalities and to identify action steps for the mitigation of crashes.
 - b) **Strategy:** APO staff will continue to work with organizations and government agencies on multimodal transportation projects and programs that enhance access to schools through the use of Safe Routes to Schools funding.
 - c) **Strategy:** APO staff will encourage member jurisdictions to integrate pedestrian and bicycle safety into their transportation planning documents.
- 4) **Objective:** Support, to the extent practical, efforts by outside agencies and stakeholders to reduce bad driving behavior such as driving under the influence and distracted driving.
 - a) **Strategy:** APO staff will continue their participation in the 'Toward Zero Deaths' Stearns-Benton coalition.
 - b) **Strategy:** The APO will study crash data to potentially uncover commonalities or predictive characteristics that could be used to help reduce occurrences of bad driving behavior.
- 5) **Objective:** Support, to the extent practical, a safe transit system.
 - a) **Strategy:** APO staff, in cooperation with Saint Cloud Metro Bus staff, will monitor and report on transit safety performance.
- 6) **Objective:** Define and support transportation security
 - a) **Strategy:** The APO staff, in cooperation with member jurisdictions, will develop a regional transportation security framework and appropriate performance measure(s).

SAFETY PERFORMANCE MEASURES & INDICATORS

ROADWAY SAFETY PERFORMANCE MEASURES	METHOD OF CALCULATION
Number of Crashes – Annual	Total number of crashes that occurred on roadways within the MPA.
Rate of Crashes – Annual	The number of crashes that occurred on roadways within the MPA per 100 million vehicle-miles traveled (VMT).
Number of Fatalities – Annual	Number of fatalities for each of the most recent five consecutive years ending in the year for which the targets are established.
Number of Fatalities – Five Year Average	Number of fatalities for each of the most recent five consecutive years ending in the year for which the targets are established, dividing by 5, and rounding to the tenth decimal place.
Rate of Fatalities – Five Year Average	Calculation of the number of fatalities per 100 million VMT (100M VMT) for each of the most recent five consecutive years ending in the year for which the targets are established, adding the results, dividing by 5, and rounding to the thousandth decimal place.
Number of Serious Injuries – Annual	Number of serious injuries for each of the most recent five consecutive years ending in the year for which the targets are established.
Number of Serious Injuries – Five Year Average	Number of serious injuries for each of the most recent five consecutive years ending in the year for which the targets are established, dividing by 5, and rounding to the tenth decimal place.
Rate of Serious Injuries – Five Year Average	Calculation of the number of serious injuries per 100 million VMT (100M VMT) for each of the most recent five consecutive years ending in the year for which the targets are established, adding the results, dividing by 5, and rounding to the thousandth decimal place.
Number of Non-Motorized Fatalities and Serious Injuries – Annual	Addition of the number of non-motorized fatalities to the number of non-motorized serious injuries for each of the most recent five consecutive years ending in the year for which the targets are established.

ROADWAY SAFETY PERFORMANCE MEASURES	METHOD OF CALCULATION
Number of Non-Motorized Fatalities and Serious Injuries – Five Year Average	Addition of the number of non-motorized fatalities to the number of non-motorized serious injuries for each of the most recent five consecutive years ending in the year for which the targets are established, dividing by 5, and rounding to the tenth decimal place.
Number and Percent of Crashes, Fatalities, and Serious Injuries that Involved Chemical Impairment – Annual	Addition of the number of crashes of all types wherein the driver had been drinking or taking drugs; this value will also be expressed as a percentage of all crashes, percent of all fatal crashes, and percent of all crashes resulting in a serious injury.
Number and Percent of Crashes, Fatalities, and Serious Injuries that Involved Distracted Driving – Annual	Addition of the number of crashes of all types involving distracted driving; this value will also be expressed as a percentage of all crashes, percent of all fatal crashes, and percent of all crashes resulting in a serious injury.
Commercial Vehicle Crashes and/or Severity – Annual	Addition of the number of crashes of commercial vehicles; this value will also be expressed as a percentage of all crashes, percent of all fatal crashes, and percent of all crashes resulting in a serious injury.
Transportation Security Performance Measure(s)	To be determined.

To the extent possible, roadway crashes will be assigned locations and maps will be produced to help identify “hot spot” locations, if any.

TRANSIT SAFETY PERFORMANCE MEASURES	METHOD OF CALCULATION
Number and Rate of Fatalities – Annual	Fatalities are measured by the total number of reportable fatalities and rate per total vehicle revenue miles by mode.
Number and Rate of Injuries – Annual	Injuries are measured by the total number of reportable injuries and rate per total vehicle revenue miles by mode.
Number and Rate of Safety Events – Annual	Safety events are measured by the total number of reportable events and rate per total vehicle revenue miles by mode. The safety events measure captures all reported safety events that occur during transit operations and the performance of regular supervisory or maintenance activities.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

Goal Statement: Increase the accessibility and mobility options for people and freight across and between all modes for all users.

- 1) **Objective:** Increase accessibility of people and freight.
 - a. **Strategy:** APO staff will build relationships with public and private providers of transportation to help ensure coordination of services, optimal use of resources, and filling of service gaps.
 - b. **Strategy:** The APO will encourage and support transportation facilities that are compliant with the Americans with Disabilities Act (ADA) and meet Title VI and Environmental Justice (EJ) requirements.
- 2) **Objective:** Increase mobility of people and freight.
 - a. **Strategy:** The APO will preserve and enhance long-distance commuter connections to the Twin Cities, including, but not limited to, the extension of the Northstar Commuter Rail to the Saint Cloud metro.
 - b. **Strategy:** The APO will identify, preserve, and enhance important long-distance commuter corridors for workers who commute into the greater Saint Cloud metropolitan area.
 - c. **Strategy:** The APO will encourage and support, to the extent possible, the regular evaluation of public transit routes and service to help ensure efficient operations and optimal ridership.
 - d. **Strategy:** APO staff will continue to collect and analyze data related to travel time reliability, level of service, and vehicle miles travel to identify areas for congestion mitigation measures.
 - e. **Strategy:** The APO will encourage and support, to the extent possible, appropriate densities and mixing of appropriate land uses to help reduce commute distances, encourage non-motorized options, and maximize the efficient delivery of public services to residents.
 - f. **Strategy:** In cooperation with local partners, the APO will study the costs and benefits of various potential operational improvements to arterials roadways. MN 15 will be the first arterial roadway reviewed.
 - g. **Strategy:** APO staff will work with member jurisdictions to explore the feasibility, costs, and potential benefits of a bypass ring road corridor for longer distance and through movements around the MPA.
 - h. **Strategy:** APO staff will identify and support the efficient operations of important local first- and last-mile freight corridors.
 - i. **Strategy:** APO staff will continue to monitor the development and likely impacts of driverless vehicles.
 - j. **Strategy:** The APO will support, to the extent possible, the expansion of interconnected traffic signals and the active management of them.
- 3) **Objective:** Identify and maintain viable non-motorized transportation options.

- a. **Strategy:** APO staff will identify, map, and monitor the use of bicycle and pedestrian routes and facilities to determine gaps in the network and opportunities for improvements.
 - b. **Strategy:** Working cooperatively with jurisdictional partners, APO staff will develop, maintain, and champion the implementation of a Regional Active Transportation Plan.
 - c. **Strategy:** APO staff shall establish a regular meeting schedule for the Active Transportation Advisory Committee (ATAC), which shall assist and advise APO staff on the development of the Regional Active Transportation Plan and the mapping and monitoring of bicycle and pedestrian facilities.
 - d. **Strategy:** The APO shall complete a feasibility study for a potential local bike-share program.
 - e. **Strategy:** APO staff will continue to coordinate with MnDOT regarding where regional and statewide bike trails enter the Saint Cloud metro area, and where they intersect with other local and regional bike trails.
- 4) **Objective:** Enhance connectivity across and between modes of transportation.
- a. **Strategy:** APO staff will monitor and regularly report on the connectivity of roadways and bike trails.
 - b. **Strategy:** The APO shall encourage and support, to the extent possible, the regular evaluation of bus stops, bus shelter locations, condition, and auxiliary amenities to help ensure the needs of the traveling public are being met. Such an evaluation shall also include an evaluation of ADA-compliant pedestrian access to the bus stop location.
 - c. **Strategy:** The APO will complete a study aimed at better understanding how ridesharing services in the Saint Cloud metro area augment, supplement, or replace other transportation options for residents.

ACCESSIBILITY, MOBILITY, AND CONNECTIVITY PERFORMANCE MEASURES & INDICATORS

ROADWAY ACCESSIBILITY, MOBILITY, AND CONNECTIVITY PERFORMANCE MEASURES	METHOD OF CALCULATION
<p>Annual Percent of Person-Miles Traveled on the Interstate that are Reliable.</p>	<p>Level of Travel Time Reliability (LOTTR) is defined as the ratio of the 80th percentile travel time of a reporting segment to a "normal" travel time (50th percentile), using data from FHWA's free National Performance Management Research Data Set (NPMRDS) or equivalent. Data is collected in 15 minute segments during all time periods other than 8 p.m.-6 a.m. local time. The measures are the percent of person-miles traveled on the relevant Interstate that are reliable.</p>

Annual Percent of Person-Miles Traveled on the Non-Interstate NHS that are Reliable.	Level of Travel Time Reliability (LOTTR) is defined as the ratio of the 80th percentile travel time of a reporting segment to a "normal" travel time (50th percentile), using data from FHWA's free National Performance Management Research Data Set (NPMRDS) or equivalent. Data is collected in 15-minute segments during all time periods other than 8 p.m.-6 a.m. local time. The measures are the percent of person-miles traveled on the relevant Non-Interstate NHS that are reliable.
Annual Vehicle Miles Traveled.	The number of vehicle miles traveled for the most recent year for which the target is being established, rounded to the tenth decimal place.
Average Work Trip Travel Time	Average travel time it takes an employee to travel between their residence and place of employment for the most recent year for which the target is being established.
Bicycle Network Gaps	Maintain and update on an annual basis a network map of regional bike and multi-use routes. Conduct a visual assessment of connectivity for existing and/or future planned routes.
Transit Shed of Routes Connecting to Freight Clusters	Percent of freight clusters served by a transit stop within one-half mile.
Roadway Connectivity	One divided by the quotient of the average block length of an area over the link-node ratio of that same area, all multiplied by 1000.
Percent of Non-SOV Travel	Non-SOV travel is defined as any travel mode other than driving alone in a motorized vehicle, such as single occupancy vehicle or SOV travel, including travel avoided by telecommuting.

TRANSIT ACCESSIBILITY, MOBILITY, AND CONNECTIVITY PERFORMANCE MEASURES	METHOD OF CALCULATION
Passengers Per Revenue Mile	The number of passengers divided by the number of miles traveled by commuter bus, demand response, and fixed route.
Passengers Per Revenue Hour	The number of passengers divided by the number of hours traveled by commuter bus, demand response, and fixed route.
Number of Annual Transit Riders	Annual number of transit riders by commuter bus, demand response, and fixed route.

TRANSIT ACCESSIBILITY, MOBILITY, AND CONNECTIVITY PERFORMANCE MEASURES	METHOD OF CALCULATION
Total Revenue Hours and Revenue Miles	Annual number of revenue hours and miles served by commuter bus, demand response, and fixed route.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

Goal statement: Develop a transportation system that is cost-feasible, maintains a state of good repair, and satisfies public transportation priorities.

- 1) **Objective:** Prioritize the maintenance and preservation of the existing transportation network.
 - a. **Strategy:** The APO shall maintain and regularly update its pavement condition database to help identify areas in need of repair.
 - b. **Strategy:** The APO shall develop and maintain a planning and programming process that prioritizes funding for bridges with a 'poor' condition rating and roadways with 'poor' International Roughness Index (IRI) ratings more highly than other bridges or roadways.
 - c. **Strategy:** APO staff will work with public transit to ensure achievement and maintenance of a state of good repair for public transit assets.
 - d. **Strategy:** APO staff shall develop a process for monitoring and evaluating the condition of bike paths and multi-use paths and shall report their findings to the member jurisdictions.
- 2) **Objective:** Invest in cost-effective transportation solutions.
 - a. **Strategy:** The APO shall develop one or more performance measures to capture transportation asset utilization and return on investment (ROI) for transportation assets and will regularly report on such performance measure(s).
 - b. **Strategy:** The APO shall use and shall encourage its member jurisdictions to use life-cycle cost estimates when evaluating changes to the transportation system.
 - c. **Strategy:** APO staff will work to identify and explore the feasibility of local funds dedicated to transportation upgrades and maintenance including the possibility of public-private partnerships.
 - d. **Strategy:** Identify funding to upgrade traffic signal controllers to Cobalt or newer for greater efficiency, and to upgrade the existing Opticon system.
- 3) **Objective:** Efficiently manage the transportation system.
 - a. **Strategy:** The APO will develop and regularly report on performance measures aimed at evaluating how efficiently and effectively the transportation systems are being operated/managed.

MANAGEMENT AND PRESERVATION PERFORMANCE MEASURES & INDICATORS

ROADWAY MANAGEMENT AND PRESERVATION PERFORMANCE MEASURES	METHODS OF CALCULATION
Interstate System Pavement Conditions	Interstate pavement condition is based on the percent of total lane miles that are rated in good, fair and poor condition calculated using the international roughness index, cracking percent, rutting, and faulting as measurements. International Roughness Index (IRI) is a statistic used to estimate the amount of roughness in a measured longitudinal profile. The IRI is computed from a single longitudinal profile using a quarter-car simulation. If an IRI value of a pavement section is less than 95, the IRI rating is good; between 95 and 170 the IRI rating is fair; and greater than 170 the IRI rating is poor.
Non-Interstate Federal-Aid Roadway and Tier 3 Freight Network Pavement Conditions	Non-Interstate Federal-Aid pavement condition is based on the percent of total lane miles that are rated in good, fair and poor condition calculated using the IRI, cracking percent, rutting, and faulting as measurements. Data for the Tier 3 Freight Network shall also be collected, regardless of the functional classification of the roadway.
Pavement Maintenance	Measure of the number of years since last preservation treatment on a segment of roadway within the Federal-aid system.
Bridge Conditions and Weight Restrictions	Percent of bridges by deck area classified in good, fair and poor condition using the NBI ratings for, deck, superstructure, substructure, and culvert.
Transportation Improvement Program (TIP) Investment in Existing vs. New Roads	As identified in the TIP, the percent of annual investment in maintenance and improvement activities for existing roadways compared to the percent of investment in the construction of new roadways.
Condition of Bike Paths and Multi-Use Paths	To be determined, but may include measurement of the number of years since last preservation treatment on a segment of bike/multi-use paths within the region, and/or visual observations of surface conditions.
Transportation Asset Return on Investment Performance Measure(s)	To be determined.
Operational Efficiency Performance Measure(s)	To be determined.

TRANSIT MANAGEMENT AND PRESERVATION PERFORMANCE MEASURES	METHODS OF CALCULATION
State of Good Repair for Equipment, Facilities, and Rolling Stock	Revenue vehicles (rolling stock) and service vehicles (equipment), are measured by calculating the percentage of vehicles that have met or exceeded the useful life benchmark. Facilities are measured on the Transit Economic Requirements Model (TERM) scale that are rated less than 3.0.
Total Number and Rate of Reportable Events Per Total Vehicle Revenue Miles by Mode	System reliability is measured by the mean distance between major mechanical failures by mode. The system reliability measure expresses the relationship between safety and asset condition. The rate of vehicle failures in service, defined as mean distance between major mechanical failures, is measured as revenue miles operated divided by the number of major mechanical failures. This is a measure of how well a fleet of transit vehicles is maintained and operated.

Goal 4: Support Metropolitan Vitality and Economic Development

Goal Statement: Support the economic vitality of the APO MPA by enabling global competitiveness, productivity, and efficiency while enhancing travel and tourism.

- 1) **Objective:** Promote the efficient movement of people.
 - a. **Strategy:** The APO will complete one or more planning documents to evaluate the feasibility of various options for providing or supporting low-cost transportation options for financially stressed households.
 - b. **Strategy:** The APO will support, as appropriate, commercial passenger service at Saint Cloud Regional Airport.
 - c. **Strategy:** The APO will evaluate and support, as appropriate, the connection of public transit and the bicycle and pedestrian network with inter-regional services such as Jefferson Lines, Amtrak, Tri-CAP, Northstar Commuter Rail, the airport, Executive Express, etc.
 - d. **Strategy:** The APO staff will encourage and assist, as appropriate, long-distance-commute workers moving into the metropolitan area to assist in shortening commute trips.
- 2) **Objective:** Promote the efficient movement of goods and freight.
 - a. **Strategy:** APO staff shall develop and maintain relationships with major freight shippers in the region to better understand their operations, needs, and any problems they may face regarding the efficient movement of goods on the regional freight system.
 - b. **Strategy:** The APO staff shall keep abreast of economic development patterns and will promote consistency between economic development plans and transportation plans.

- c. **Strategy:** The APO staff, in coordination with member jurisdictions, will continue to explore and implement, as prudent, freight movement performance data collection and analysis for all freight network tiers.

METROPOLITAN VITALITY AND ECONOMIC DEVELOPMENT PERFORMANCE MEASURES & INDICATORS

ROADWAY METROPOLITAN VITALITY AND ECONOMIC DEVELOPMENT PERFORMANCE MEASURES	METHODS OF CALCULATION
Truck Travel Time Reliability Index for Tier 1 Freight Network	Freight movement will be assessed by a Truck Travel Time Reliability (TTTR) Index. Reporting is divided into five periods: morning peak (6-10 a.m.), midday (10 a.m.-4 p.m.) and afternoon peak (4-8 p.m.) Mondays through Fridays; weekends (6 a.m.-8 p.m.); and overnights for all days (8 p.m.-6 a.m.). The TTTR ratio will be generated by dividing the 95th percentile time by the normal time (50th percentile) for each segment. Then, the TTTR Index will be generated by multiplying each segment's largest ratio of the five periods by its length, then dividing the sum of all length-weighted segments by the total length of Interstate.
Air Passengers at STC, Routes, and Frequencies	Annual number of customers served at the Saint Cloud Regional Airport.
Rail Passengers via Amtrak and Frequency	Annual boardings and alightings at Saint Cloud Amtrak station.
Northstar Link Passengers & Big Lake Station Rail Passengers and Frequency	Annual Northstar Link passengers and Big Lake Station rail boardings and alightings.
Jefferson Lines Passengers, Routes, and Frequency	Annual boardings and alightings from Saint Cloud stations.
Work Trip Commute Time and Distance for Jobs Located in the MPA	Comparing the average change in travel time versus the average change in travel distance.
Percent of Monthly Household Budgets Spent on Transportation	Average monthly costs of transportation is calculated as part of the Cost of Living data gathered by the Minnesota Department of Employment and Economic Development. The data is broken down by county, economic development region (EDR), Planning Region (PR), and the state.

ROADWAY METROPOLITAN VITALITY AND ECONOMIC DEVELOPMENT PERFORMANCE MEASURES	METHODS OF CALCULATION
Transportation’s Impact on Economic Development Performance Measure(s)	To be determined.

Goal 5: Promote Energy and Environmental Conservation

Goal Statement: Support transportation improvements that promote energy conservation and improve public health and quality of life, while sustaining and improving the resiliency and reliability of the transportation system.

- 1) **Objective:** Protect the environment through the promotion of energy conservation
 - a. **Strategy:** APO staff will monitor air and water quality to help ensure compliance with national and state quality standards.
 - b. **Strategy:** APO staff will work cooperatively with local jurisdictions to support and promote transportation options with the smallest net environmental impact.
 - c. **Strategy:** The APO shall encourage and support the use of low-wattage street lights (e.g., LED lights) that are Dark Skies compliant.
- 2) **Objective:** Prevent and/or minimize disproportionate adverse impacts to communities containing a high concentration of low-income and minority populations.
 - a. **Strategy:** APO staff will monitor and regularly report on transportation impacts to neighborhoods with higher percentages of low-income and/or minority populations.

ENERGY AND ENVIRONMENTAL CONSERVATION PERFORMANCE MEASURES & INDICATORS

ROADWAY ENERGY AND ENVIRONMENTAL CONSERVATION PERFORMANCE MEASURES	METHODS OF CALCULATION
Annual Air Quality	Annual count of days in each Air Quality Index (AQI) category; good, moderate, unhealthy for sensitive groups and unhealthy.
Annual Water Quality	Number of water quality monitoring stations that have not met water quality standards.
Number and Percent of Public Transit Vehicles Using Alternative Fuels	Number and percent of public transit vehicles using alternative fuel.

ROADWAY ENERGY AND ENVIRONMENTAL CONSERVATION PERFORMANCE MEASURES	METHODS OF CALCULATION
Number and Percent of Registered Vehicles Using Alternative Fuels	Annual number of vehicles registered within Minnesota and Minnesota 6 th Congressional District by powertrain and using alternative fuel.
Number and Percent of Vehicles Sold Using Alternative Fuels	Annual number of vehicles sold within Minnesota and Minnesota 6 th Congressional District by powertrain and using alternative fuel.
Annual Percentage of Transportation Investments in Environmental Justice Census Blocks	Ratio of transportation investments in environmental justice census blocks expressed in relation to the percent of census blocks that are environmental justice census blocks.

CHAPTER 8 : DEVELOPMENT OF FINANCIAL PLANS

INTRODUCTION

Per Federal regulations, metropolitan transportation plans, like MAPPING 2045, are required to demonstrate how, if adopted, the document **can be implemented**. “For purposes of transportation system operations and maintenance, the financial plan shall contain system-level estimates of costs and revenue sources that are reasonably expected to be available to adequately operate and maintain Federal-aid highways and public transportation.”¹

The purpose of this section, then, is to provide an overview of transportation funds that will be available for the jurisdictions of the Saint Cloud MPA over the time horizon of the plan – through 2045. It also explains the key elements of the financial plan, the data collected, and the assumptions made about future revenue and expenditures.

The total estimated cost of the transportation improvement projects in the plan cannot **exceed the region’s anticipated funding**. It is not uncommon, however, for a region to identify transportation needs and projects that surpass its expected revenue. As this occurs, the projects are prioritized and those that are expected to receive funding are listed in the plan. Those that cannot be funded are placed on an Illustrative List. If additional funding becomes available at a later date, projects on the Illustrative List would be the first projects considered to receive that funding. See Appendix H for the Illustrative List.

FINANCIAL OVERVIEW

Funding for transportation projects comes from federal, state, and local sources. Many transportation projects are funded by a combination of the three. Most federal-aid projects, those projects that receive federal transportation funds, require some form of local match. The amount of required match is dependent on the federal funding source.

FEDERAL TRANSPORTATION FUNDING

The current Federal surface transportation authorization titled *Fixing America’s Surface Transportation (FAST) Act*, was signed into law on Dec. 4, 2015. The FAST Act authorizes \$305 billion over fiscal years 2016 through 2020 for highway, safety, public transportation, active transportation, rail, research, technology, and statistics programs. Revenue for the FAST Act is primarily generated through the Federal gasoline tax. However, transfers from the general fund do occasionally occur because transportation expenditures tend to exceed revenue. The Federal gas tax has not increased since 1993, and the average fuel efficiency of America’s vehicle fleet continues to increase, which suppresses the amount of revenue collected.

Federal transportation funds are subdivided into programs to address specific needs.

¹ 23 USC §450.322(10)(i)

CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT (CMAQ)

CMAQ funds may be used for a transportation project or program that appears likely to contribute to the attainment or maintenance of a national ambient air quality standards with a high level of effectiveness in reducing air pollution. The Saint Cloud MPA currently meets all air quality standards and so does not qualify for CMAQ funds.

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)

HSIP funds are **used for safety projects that are consistent with the State's strategic** highway safety plan (SHSP) and that correct or improve a hazardous road location or feature or address a highway safety problem.

The FAST Act also specifically identifies the following activities on its list of eligible activities:

- Installation of vehicle-to-infrastructure communication equipment.
- Pedestrian hybrid beacons.
- Roadway improvements that provide separation between pedestrians and motor vehicles, including medians and pedestrian crossing islands.
- Other physical infrastructure projects not specifically enumerated in the list of eligible projects.
- Safety-related workforce development, training, and education activities remain an eligible use of HSIP funds

The FAST Act continues the prohibition on the use of HSIP funds for the purchase, operation, or maintenance of an automated traffic enforcement system (except in a school zone).

RAILWAY-HIGHWAY CROSSINGS (SECTION 130/RRS)

The Railway-Highway Crossings (Section 130) Program provides funds for the elimination of hazards at railway-highway crossings. The Section 130 Program has been correlated with a significant decrease in fatalities at railway-highway grade crossings.

The 2015 FAST Act continues the annual set-aside for railway-highway crossing improvements. The funds are set-aside from the HSIP apportionment.

Section 130 program funds are eligible for projects at all public crossings including **roadways, bike trails, and pedestrian paths. Fifty percent of a state's apportionment is** dedicated for the installation of protective devices at crossings. The remainder of the funds can be used for any hazard elimination project, including protective devices. The FAST Act extends eligibility to include projects at grade crossings to eliminate hazards posed by blocked crossing due to idling trains.

NATIONAL HIGHWAY PERFORMANCE PROGRAM (NHPP)

NHPP funds provide support for the condition and performance of the National Highway System (NHS), for the construction of new facilities on the NHS, and to ensure that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets **established in a state's asset management plan** for the NHS.

SURFACE TRANSPORTATION BLOCK GRANT PROGRAM (STBGP)

STBGP provides flexible funding that may be used by states and localities for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals. States and localities are responsible for a minimum 20 percent share of project costs funded through this program.

TRANSPORTATION ALTERNATIVES (TA)

TA funds are a set-aside of STBGP funding for transportation alternatives such as active transportation infrastructure. Eligible projects include, but are not limited to, the creation of facilities for pedestrians and bicycles; environmental mitigation or habitat protection as related to highway construction or operations; as well as infrastructure and non-infrastructure related Safe Routes to School (SRTS) activities. States and localities are responsible for a minimum 20 percent of TA funds applied to projects. States may also transfer up to 50 percent of TA funds to NHPP, STBGP, HSIP, CMAQ, and/or metropolitan planning.

FEDERAL TRANSIT ADMINISTRATION

Transit funding authorized by the FAST Act is managed in several ways. The largest amount is distributed to the states by formula; other program funds are discretionary. FTA transit allocations may be administered by the state or be granted directly to the transit agency. Projects identified as FTA-funded are generally funded by one of several subcategories that represent different programs administered by the FTA to provide either capital or operating assistance to public transit providers.

URBANIZED AREA FORMULA PROGRAM (SECTION 5307)

The Urbanized Area Funding Program allocates federal funding to urbanized areas (i.e. areas with a population of 50,000 or more) for transit capital and operating assistance. Projects eligible for this funding include planning, engineering, design and evaluation of transit projects and other technical transportation-related studies; capital investments in bus and bus-related activities such as replacement, overhaul, and rebuilding of buses, crime prevention and security equipment and construction of maintenance and passenger facilities; and capital investments in new and existing fixed guideway systems including

rolling stock, overhaul and rebuilding of vehicles, track, signals, communications, and computer hardware and software. In addition, associated transit improvements and certain expenses associated with mobility management programs are eligible under the program. All preventive maintenance and some Americans with Disabilities Act (ADA) complementary paratransit service costs are considered capital costs. For urbanized areas with populations less than 200,000 like the Saint Cloud MPA, operating assistance is an eligible expense.

Within the Saint Cloud MPA, Saint Cloud Metro Bus would be eligible for Section 5307 funding.

ENHANCED MOBILITY OF SENIORS AND INDIVIDUALS WITH DISABILITIES (SECTION 5310)

The Enhanced Mobility of Seniors and Individuals with Disabilities Program allocates funding to provide increased transportation options to seniors and those with disabilities who are transit-dependent. This service surpasses the standard public transportation services and the complementary paratransit services outlined in ADA. Projects eligible for this funding include public transportation projects that meet the needs of seniors or individuals with disabilities; exceed the requirements of ADA; or improve access to fixed-route service and reduce dependence of individuals with disabilities on complementary paratransit service.

Within the Saint Cloud MPA, WACOSA has historically been the primary agency applying for Section 5310 funding.

FORMULA GRANTS FOR RURAL AREAS (SECTION 5311)

The Formula Grants for Rural Areas program provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations of less than 50,000 where many residents often rely on public transportation to reach their destinations.

Within the Saint Cloud MPA, Tri-CAP Transit Connection would be eligible for Section 5311 funding.

STATE TRANSPORTATION FUNDING

Transportation funding for the State of Minnesota comes from three primary sources: Motor Fuel Excise Tax, Motor Vehicle Registration Tax, and Motor Vehicle Sales Tax (MVST). Taken together, these three pots of money comprise the majority of the Highway User Tax Distribution Fund (HUTD).

The Motor Fuel Excise Tax – more commonly referred to as the gas tax – is a tax that is levied on gasoline, diesel fuel, compressed natural gas (CNG), and a variety of other special fuels.

The Motor Vehicle Registration Tax – or tab fees – is a tax on motor vehicles using public streets and highways. As of the drafting of this plan, the current passenger motor vehicle

registration tax policy was instituted in 2008, wherein vehicles are taxed based on \$10 plus **1.25 percent of the vehicle's value, depreciated over** time through year 10 of registration, after which the additional tax is \$25 (\$35 total). The tax for commercial vehicles is based on vehicle weight and age.

Finally, MVST is a 6.5 percent tax on the sale of new and used motor vehicles. However, this revenue is allocated further to the following transportation purposes:

- Not more than 60 percent must be deposited in the HUTD Fund.
- Not less than 40 percent must be deposited in a fund dedicated solely to public transit (the Transit Assistance Fund or TAF).

In addition to these three major players, transportation funding comes from Motor Vehicle Lease Sales Tax (MVLST), sales tax on auto parts, and the vehicle rental sales tax. A separate State Airports Fund (SAF) specifically aids in funding aviation functions.

Of these total revenue sources to the HUTD Fund, and after the distribution to the Minnesota Department of Natural Resources, 95 percent of the funding is allocated to the following based upon a formula specified in the Minnesota Constitution:

- Trunk Highway (TH) Fund: 62 percent.
- County State Aid Highway (CSAH) Fund: 29 percent.
- Municipal State Aid Street (MSAS) Fund: 9 percent.

The remaining 5 percent is of the HUTD Fund – referred to as the 5 percent set-aside – is allocated to the CSAH Fund. This funding is further allocated to township roads, township bridges, and the Flexible Highway Account.

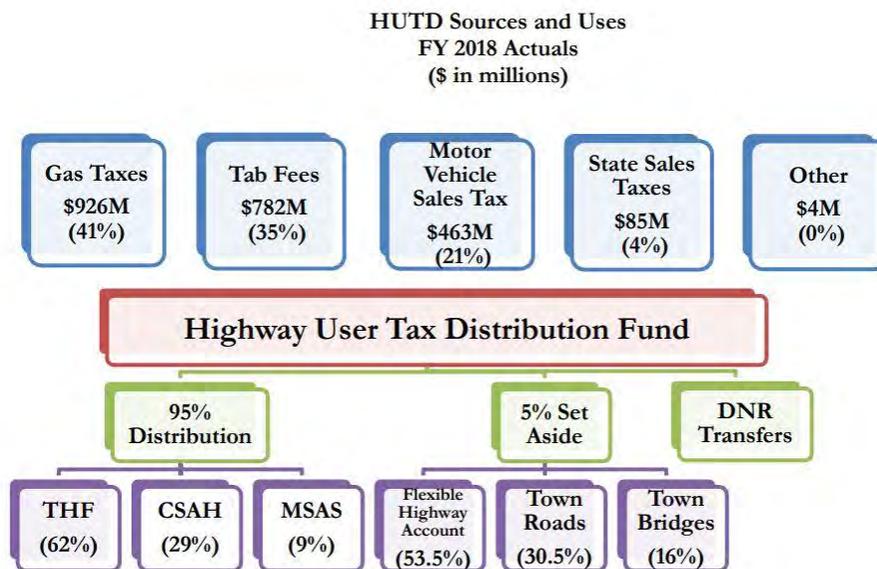


FIGURE 8.1 – A BREAKDOWN OF THE HIGHWAY USER TAX DISTRIBUTION FUND ALLOCATIONS IN FY 2018.

Graphic courtesy of Minnesota Department of Transportation.

LOCAL FUNDING

Local funding comes from various sources of taxing and bonding abilities afforded to each jurisdiction. These can include property and sales taxes, special tax levies, special assessments for transportation, general funds, bonds, or other sources unique to local jurisdictions. These funds finance local transportation improvements, as well as providing local match for federal transportation funds.

ADDITIONAL FUNDING POSSIBILITIES

Aside from the traditional, somewhat predictable funding sources available to jurisdictions, U.S. DOT and the State of Minnesota do provide some competitive grant programs for qualifying projects.

However, given the competitive nature of these funding opportunities coupled with the inconsistencies of continued and guaranteed funding for these programs, the funding sources listed below cannot be reasonably anticipated to be available to support transportation projects identified within MAPPING 2045. Yet, it is important to notate the existence of these other funding sources in the event transportation projects – identified in the plan or incorporated onto the illustrative list – apply for and/or receive funding from these sources.

Please note, the following section is not meant to be comprehensive. The grants opportunities listed below are some of the more commonly known grant programs available at the drafting of MAPPING 2045.

FEDERAL FUNDING SOURCES

BUILD GRANTS

The Better Utilizing Investments to Leverage Development (BUILD) Transportation Discretionary Grant is a U.S. DOT nationally competitive program designed to provide funding for road, rail, transit, and port projects that have a significant local or regional impact.

This program, formerly known as the Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grants, has provided a combined \$7.1 billion in funding (as of the drafting of this plan) to 554 projects in all 50 states, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands since it began in 2009.

Projects typically considered for BUILD grants are multimodal, multi-jurisdictional projects that are generally more difficult to support through traditional funding provided by departments of transportation.

In Minnesota, 11 projects have received funding under the BUILD grant from 2009 through 2018. None of these projects have occurred within the MPA.

STATE FUNDING SOURCES

CORRIDORS OF COMMERCE

The Minnesota Corridors of Commerce program was created in 2013 by the Minnesota Legislature as a way to:

1. Provide additional highway capacity on segments where there are currently bottlenecks in the system.
2. Improve the movement of freight and reduce barriers to commerce.

Projects eligible for funding must comply with the following requirements:

- Projects must be consistent with the statewide multimodal transportation plan.
- Projects must be able to begin within four years of award of funding.
- Projects must be on the Interregional Corridor Network in Greater Minnesota or any state highway in the eight-county MnDOT Metropolitan District.
- Projects must either develop additional system capacity or demonstrate improvement for freight movement.
- The amount of corridors of commerce funding needed to construct the project (including construction costs, right-of-way, and engineering) cannot exceed the amount of funding available.
- **A proposed project that has an identical project already listed in MnDOT's State Transportation Improvement Program (STIP) is not eligible.**

Available funding from the legislature is split roughly in half between the Twin Cities metro and Greater Minnesota.

STATE AID FOR LOCAL TRANSPORTATION (SALT)

SALT grants provide technical assistance in highway and bridge design, construction and maintenance, authorize grants for bridge construction, coordinate local federally funded projects, and provide overall management of the state aid system.

SAFE ROUTES TO SCHOOLS

Safe Routes to School (SRTS) is an initiative that works to make it safe, convenient, and fun for students to walk and bike to and from school. More information on the SRTS program can be found in Chapter 4.

Federal funding for SRTS projects is available under the Transportation Alternative (TA) program referenced in a previous section of this chapter. State STRS grant dollars, while primarily used for non-infrastructure related projects (such as planning assistance) the

Minnesota Legislature has in years past, allocated some funding for SRTS infrastructure improvements.

REVENUE FORECASTING METHODOLOGY

To develop revenue projections for MAPPING 2045, APO staff worked closely with its member agencies and jurisdictions to develop assumptions to project future budgets over the life of the plan.

To start the process, APO staff met with each agency and jurisdiction individually – with planners, engineers, and finance directors – to discuss how each of them budget for transportation. APO, agency, and jurisdiction staff looked at wide variety of data including historical budgets and forecasted budgets found within Capital Improvement Plans (CIPs).

In order to develop a reasonable budget estimate, APO staff gathered data from 2008 through 2017. The data, with the exception of Saint Cloud Metro Bus, was categorized into two sections: Capacity Expansion and System Preservation.

Capacity expansion, or expansion, as defined by the APO and used throughout MAPPING 2045, pertains to any roadway project that either adds capacity to the existing roadway – through the addition of lanes – or the construction of a new roadway that was not previously there.

System preservation, on the other hand, pertains to any and all activities used to preserve and maintain an existing roadway. These include items as minor as pothole filling and snow removal to more major construction such as mill-and-overlays and reconstructions. For the purposes of projects listed in this document, the APO has opted to consider only reconstruction projects as those projects are typically the most complex and most likely to be, in part, federally funded.

Taken together, the historical look at these two pots of funding over the decade of 2008 through 2017 would provide APO staff a reasonable estimate as to what funding each agency and jurisdiction could reasonable expect to receive over the duration of the plan.

In the case of Saint Cloud Metro Bus, APO staff utilized fares/other local funds data, state funds data, and tax-levied local funds data to develop the estimated budget projections for the transit agency.

To extrapolate the data and extend it out to 2045, APO staff averaged out the provided data and applied a year-over-year growth rate of 3.1 percent to reflect regional growth and development and generally rising revenues. Some agencies and jurisdictions developed their own methodology and strictly provided APO staff with vetted and acceptable data to be used for this MTP.

The data set was then separated into time bands: Short-Term (2020-2023); Mid-Range (2024-2029); and Long-Range (2030-2045).

REVENUE FORECAST BY AGENCY/JURISDICTION

BENTON COUNTY

Approximately 12 percent of Benton County’s roadway network falls within the APO’s planning area. Therefore, for purposes of this analysis, it was assumed that approximately 12 percent of the budgeted revenue would be allocated to the MPA.

However, for major system preservation or expansion projects needing more than the assumed allocation of 12 percent, Benton County has the ability to redistribute resources from its overall transportation budget to maintain, operate, and expand its roadway network within the MPA.

OVERALL HISTORICAL FINANCIAL CONDITION

The transportation budget for Benton County is broken down into two categories: System Preservation and Expansion. The analysis below details the historical financial condition of Benton County from 2008 through 2017.

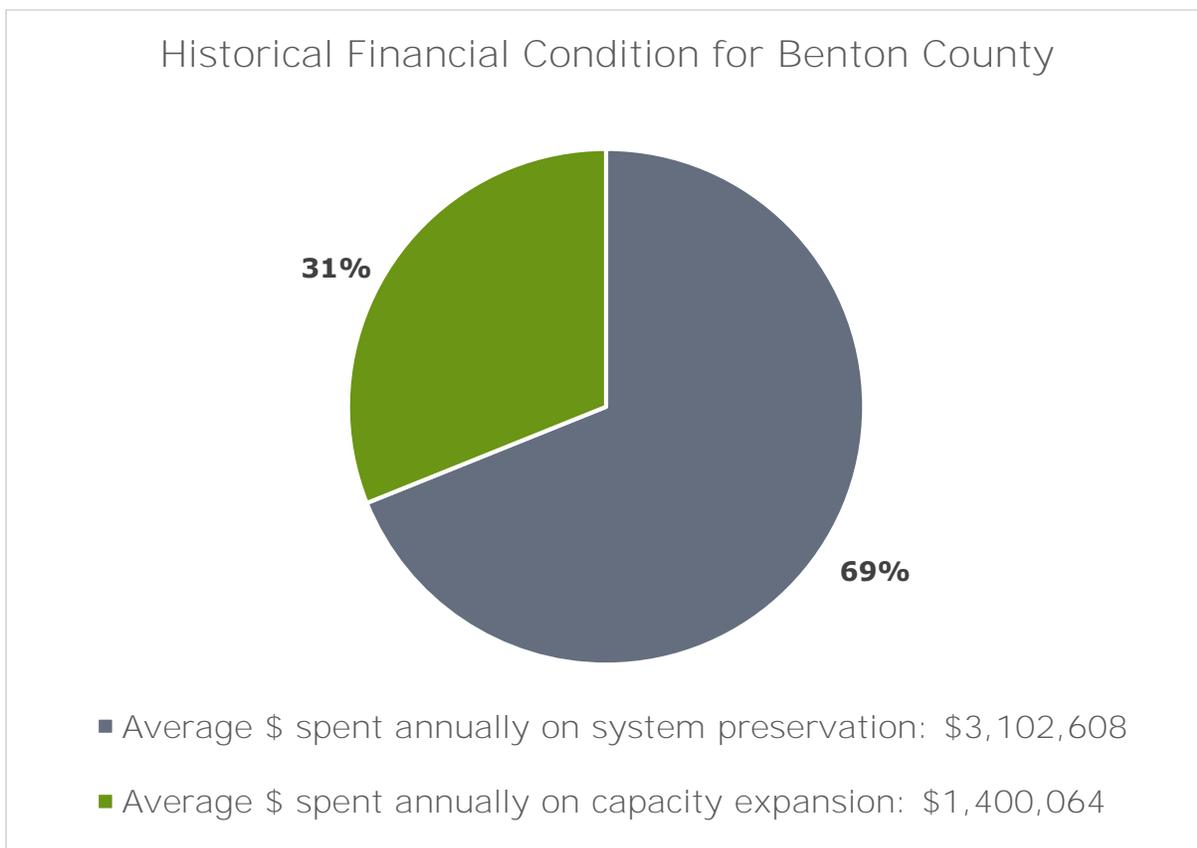


FIGURE 8.2 – LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN BENTON COUNTY FROM 2008 THROUGH 2017.
 Data courtesy of Benton County Highway Department.

Year	System Preservation Expenditures	Expansion Expenditures	Total County Investment
2008	\$3,628,527	\$10,297	\$3,638,824
2009	\$4,177,474	\$355,768	\$4,533,242
2010	\$3,145,990	\$23,873	\$3,169,863
2011	\$3,282,985	\$136,292	\$3,419,277
2012	\$3,786,495	\$17,296	\$3,803,791
2013	\$2,522,292,	\$1,550,646	\$4,072,938
2014	\$4,422,130	\$6,133,846	\$10,555,976
2015	\$3,136,796	\$952,114	\$4,088,910
2016	\$930,787	\$3,878,344	\$4,809,131
2017	\$1,992,607	\$942,160	\$2,934,767
Total	\$31,026,083	\$14,000,636	\$45,026,719
Average	\$3,102,608	\$1,400,064	\$4,502,672
Percentage of Total County Expense	69%	31%	100%

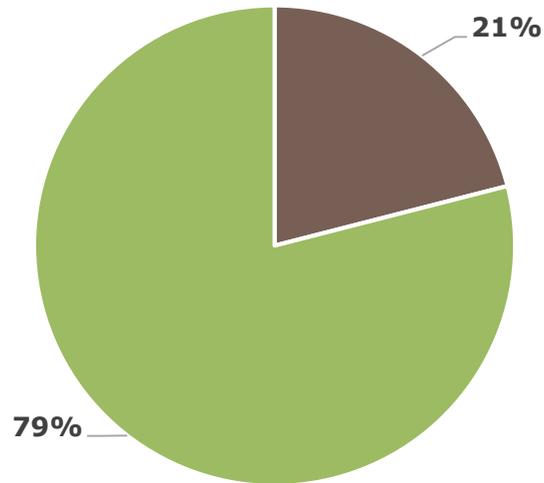
FIGURE 8.3 – LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN BENTON COUNTY FROM 2008 THROUGH 2017.

Data courtesy of Benton County Highway Department.

HISTORICAL FINANCIAL CONDITION WITHIN APO'S MPA

As stated previously, about 12 percent of **Benton County's roadways fall within the APO's MPA**. In order to approximate the revenue expended within the APO planning area, Benton County has estimated about 12 percent of funding for system preservation allocations. Of note, all of the capacity expansion projects within the county during these 10 years have occurred within the portion of the county within the MPA, thus skewing the system preservation to expansion ratio within the MPA.

Historical Financial Condition for Benton County within APO's MPA



- Average of county money spent annually on system preservation: \$372,313
- Average of county money spent annually on capacity expansion: \$1,400,064

FIGURE 8.4: LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN THE PORTION OF BENTON COUNTY WITHIN THE APO'S MPA.

Data courtesy of Benton County Highway Department.

Year	System Preservation Expenditures	Expansion Expenditures	Total County Investment
2008	\$435,423	\$10,297	\$445,720
2009	\$501,297	\$355,768	\$857,065
2010	\$377,519	\$23,873	\$401,392
2011	\$393,958	\$136,292	\$530,250
2012	\$454,379	\$17,296	\$471,675
2013	\$302,675	\$1,550,646	\$1,853,321
2014	\$530,656	\$6,133,846	\$6,664,502
2015	\$376,416	\$952,114	\$1,328,530
2016	\$111,694	\$3,878,344	\$3,990,083
2017	\$239,113	\$942,160	\$1,181,273
Total	\$3,723,130	\$14,000,636	\$17,723,766
Average	\$372,313	\$1,400,064	\$1,772,377
Percentage of Total County Expense	21%	79%	100%

FIGURE 8.5 – LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN THE PORTION OF BENTON COUNTY WITHIN THE APO’S MPA.

Data courtesy of Benton County Highway Department.

OVERALL FUTURE FINANCIAL CONDITION

As stated at the beginning of the chapter, local funding such as that for counties comes from a variety of different sources. It is assumed that with these sources, Benton County can reasonably estimate its future financial condition. Based upon the expenditure of funds between 2008 and 2017, the following table details the revenues that Benton County can reasonably expect to be available for overall system preservation and capacity expansion.

Funding Allocations	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$14,246,358	\$24,912,976	\$93,743,621	\$132,902,955
Expansion Budget	\$6,428,725	\$11,242,078	\$42,302,176	\$59,972,979
Total Budget	\$20,675,082	\$36,155,054	\$136,045,797	\$192,875,934

FIGURE 8.6 - PROJECTED COUNTY TRANSPORTATION REVENUE AMOUNTS FOR BENTON COUNTY ALLOCATED BY SYSTEM PRESERVATION AND EXPANSION.

Data courtesy of Benton County Highway Department.

FUTURE FINANCIAL CONDITION WITHIN APO MPA

Using a similar approach to determining historical financial budgets for the portion of Benton County within the APO’s MPA, it can be reasonably assumed that approximately 12 percent of the entire county’s system preservation budget will be expended within the MPA.

However, based on historical trends, capacity expansion budgets for the portion of the county within the MPA have to be adjusted. Per Benton County engineering staff, historically, all roadway capacity expanding projects have occurred solely within the MPA.

Funding Allocations	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$1,709,563	\$2,989,557	\$11,249,236	\$15,948,356
Expansion Budget	\$6,428,725	\$11,242,078	\$42,302,176	\$59,972,979
Total Budget	\$8,138,288	\$14,231,635	\$53,551,412	\$75,921,335

FIGURE 8.7 – PROJECTED COUNTY TRANSPORTATION REVENUE AMOUNTS FOR BENTON COUNTY WITHIN THE MPA ALLOCATED BY SYSTEM PRESERVATION AND EXPANSION.

Data courtesy of Benton County Highway Department.

SHERBURNE COUNTY

Approximately 9 percent of Sherburne County’s roadway network falls within the APO’s planning area. Therefore, for purposes of this analysis, it was assumed that approximately 9 percent of the budgeted revenue would be allocated to the MPA.

However, for major system preservation or expansion projects needing more than the assumed allocation of 9 percent, Sherburne County has the ability to redistribute resources from its overall transportation budget to maintain, operate, and expand its roadway network within the MPA.

OVERALL HISTORICAL FINANCIAL CONDITION

The transportation budget for Sherburne County is broken down into two categories: System Preservation and Expansion. The analysis below details the historical financial condition of Sherburne County from 2008 through 2017.

Of note, per Sherburne County engineers, the county has not spent any of its transportation dollars on capacity expanding projects within this time frame.

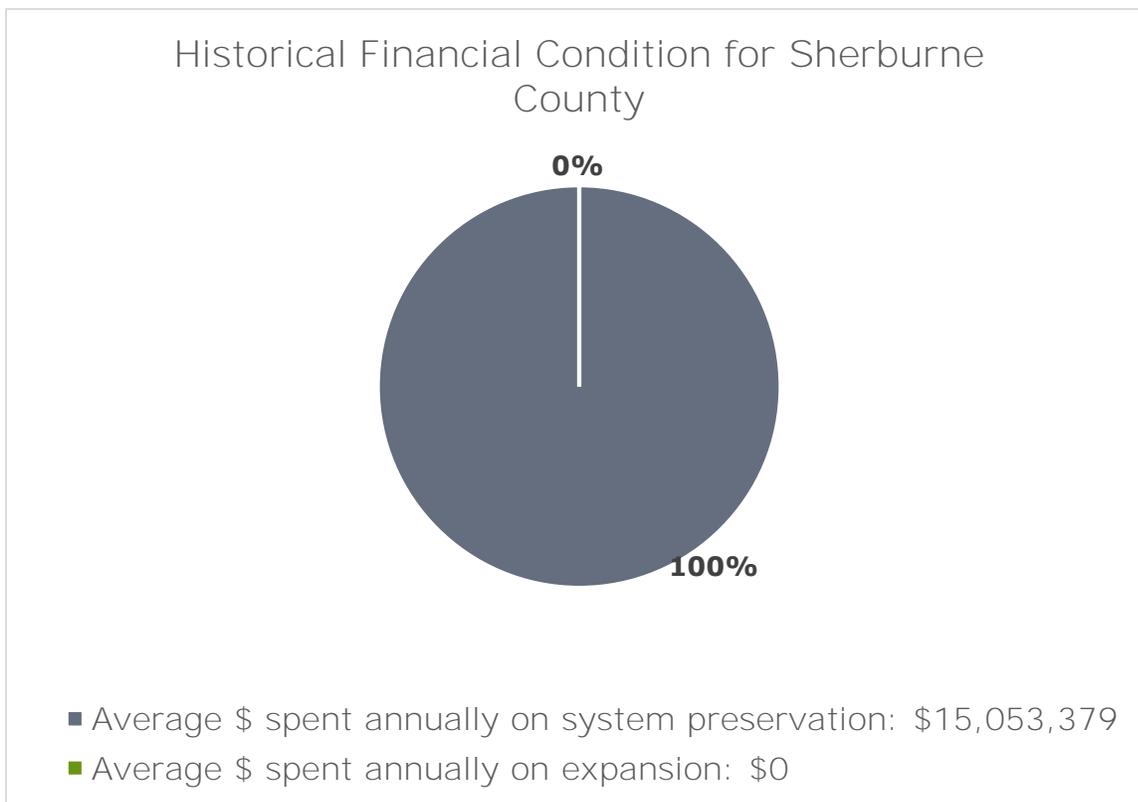


FIGURE 8.8 – LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN SHERBURNE COUNTY FROM 2008 THROUGH 2017.

Data courtesy of Sherburne County Highway Department.

Year	System Preservation Expenditures	Expansion Expenditures	Total County Investment
2008	\$12,158,138	\$0	\$12,158,138
2009	\$13,053,816	\$0	\$13,053,816
2010	\$10,416,412	\$0	\$10,416,412
2011	\$14,875,533	\$0	\$14,875,533
2012	\$16,951,863	\$0	\$16,951,863
2013	\$15,330,074	\$0	\$15,330,074
2014	\$20,358,007	\$0	\$20,358,007
2015	\$18,414,656	\$0	\$18,414,656
2016	\$11,745,584	\$0	\$11,745,584
2017	\$17,229,707	\$0	\$17,229,707
Total	\$150,533,790	\$0	\$150,533,790
Average	\$15,053,379	\$0	\$15,053,379
Percentage of Total County Expense	100%	0%	100%

FIGURE 8.9 – LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN SHERBURNE COUNTY FROM 2008 THROUGH 2017.

Data courtesy of Sherburne County Highway Department.

HISTORICAL FINANCIAL CONDITION WITHIN APO’S MPA

As stated previously, about 9 percent of Sherburne County’s roadways fall within the APO’s MPA. In order to approximate the budget expended within the APO’s planning area, Sherburne County has estimated about 9 percent of funding for system preservation allocations.

Again, it should be noted that Sherburne County has not had any capacity expanding projects within this time frame.

Historical Financial Condition for Sherburne County within APO's MPA

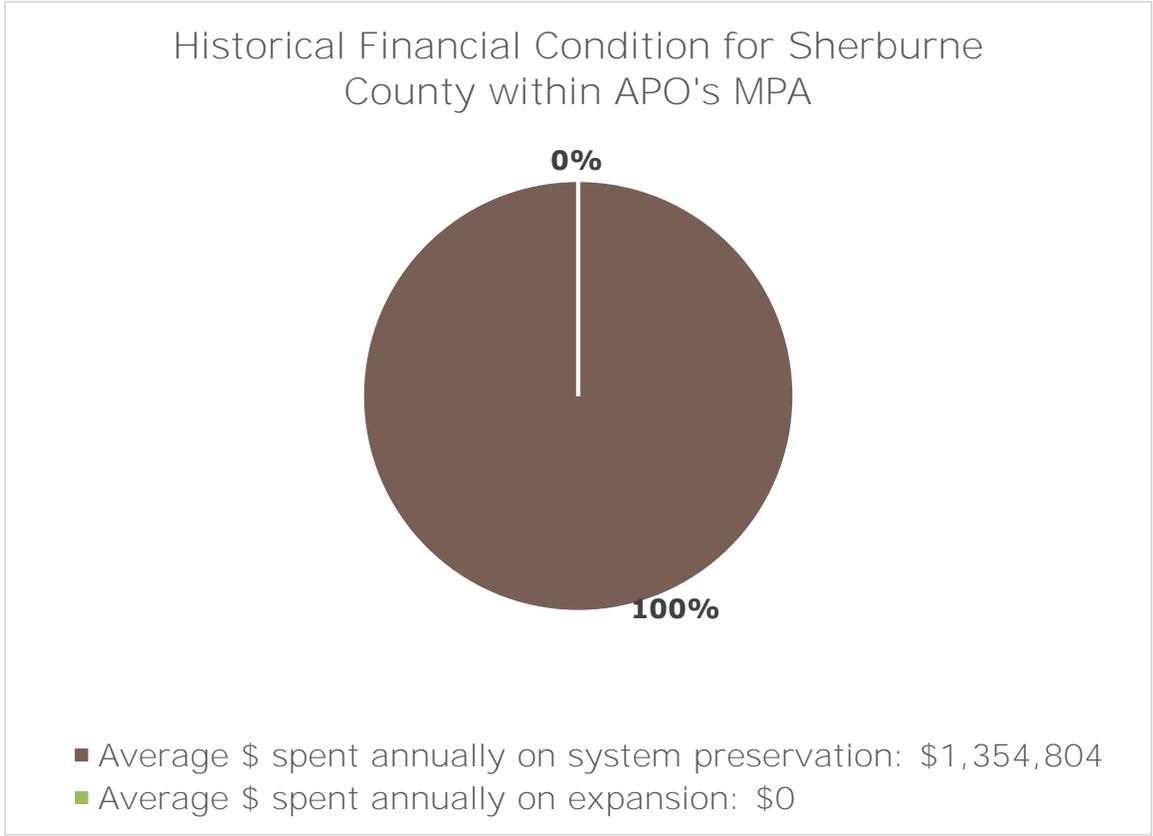


FIGURE 8.10 – LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN THE PORTION OF SHERBURNE COUNTY WITHIN THE APO'S MPA.
Data courtesy of Sherburne County Highway Department.

Year	System Preservation Expenditures	Expansion Expenditures	Total County Investment
2008	\$1,094,232	\$0	\$1,094,232
2009	\$1,174,843	\$0	\$1,174,843
2010	\$937,477	\$0	\$937,477
2011	\$1,338,798	\$0	\$1,338,798
2012	\$1,525,668	\$0	\$1,525,668
2013	\$1,379,707	\$0	\$1,379,707
2014	\$1,832,221	\$0	\$1,832,221
2015	\$1,657,319	\$0	\$1,657,319
2016	\$1,057,103	\$0	\$1,057,103
2017	\$1,550,674	\$0	\$1,550,674
Total	\$13,548,041	\$0	\$13,548,041
Average	\$1,354,804	\$0	\$1,354,804
Percentage of Total County Expense	100%	0%	100%

FIGURE 8.11: LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN THE PORTION OF SHERBURNE COUNTY WITHIN THE APO'S MPA.
 Data courtesy of Sherburne County Highway Department.

OVERALL FUTURE FINANCIAL CONDITION

As stated at the beginning of the chapter, local funding such as that for counties comes from a variety of different sources. It is assumed that with these sources, Sherburne County can reasonably estimate its future financial condition.

Historically speaking, Sherburne County has not expended any of its funding toward capacity expansion projects. However, it is assumed that this status could potentially change over the duration of this plan. Therefore, APO staff have split the anticipated revenues to account for the potential addition of a capacity expansion project. This split is reflected as 80 percent of the anticipated revenues being allocated to system preservation; the remaining 20 percent being allocated to expansion.

Thus, the following table details the revenues that Sherburne County can reasonably expect to be available for overall split into the two categories accordingly.

Funding Allocations	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$55,296,916	\$96,699,154	\$363,863,753	\$515,859,823
Expansion Budget	\$13,824,230	\$24,174,791	\$90,965,946	\$128,964,967
Total Budget	\$69,121,146	\$120,873,945	\$454,829,699	\$644,824,790

FIGURE 8.12 – PROJECTED COUNTY TRANSPORTATION REVENUE AMOUNTS FOR SHERBURNE COUNTY ALLOCATED BY SYSTEM PRESERVATION AND EXPANSION.

Data courtesy of Sherburne County Highway Department.

FUTURE FINANCIAL CONDITION WITHIN APO MPA

Using a similar approach to determining historical financial revenues for the portion of Sherburne County within the APO’s MPA, it can be reasonably assumed that approximately 9 percent of the entire county’s system preservation budget will be expended within the MPA.

As for the expansion revenue allocations, a similar 80/20 split has been done to reasonably anticipate future potential capacity expansion projects.

Funding Allocations	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$4,976,721	\$8,702,922	\$32,747,730	\$46,427,373
Expansion Budget	\$1,244,181	\$2,175,732	\$8,186,940	\$11,606,853
Total Budget	\$6,220,903	\$10,878,654	\$40,934,670	\$58,034,226

FIGURE 8.13 – PROJECTED COUNTY TRANSPORTATION REVENUE AMOUNTS FOR SHERBURNE COUNTY WITHIN THE MPA ALLOCATED BY SYSTEM PRESERVATION AND EXPANSION.

Data courtesy of Sherburne County Highway Department.

STEARNS COUNTY

Approximately 18 percent of Stearns County’s roadway network falls within the APO’s planning area. Therefore, for purposes of this analysis, it was assumed that approximately 18 percent of the budgeted revenue would be allocated to the MPA.

However, for major system preservation or expansion projects needing more than the assumed allocation of 18 percent, Stearns County has the ability to redistribute resources from its overall transportation budget to maintain, operate, and expand its roadway network within the MPA.

OVERALL HISTORICAL FINANCIAL CONDITION

The transportation budget for Stearns County is broken down into two categories: System Preservation and Expansion. The analysis below details the historical financial condition of Stearns County from 2008 through 2017.

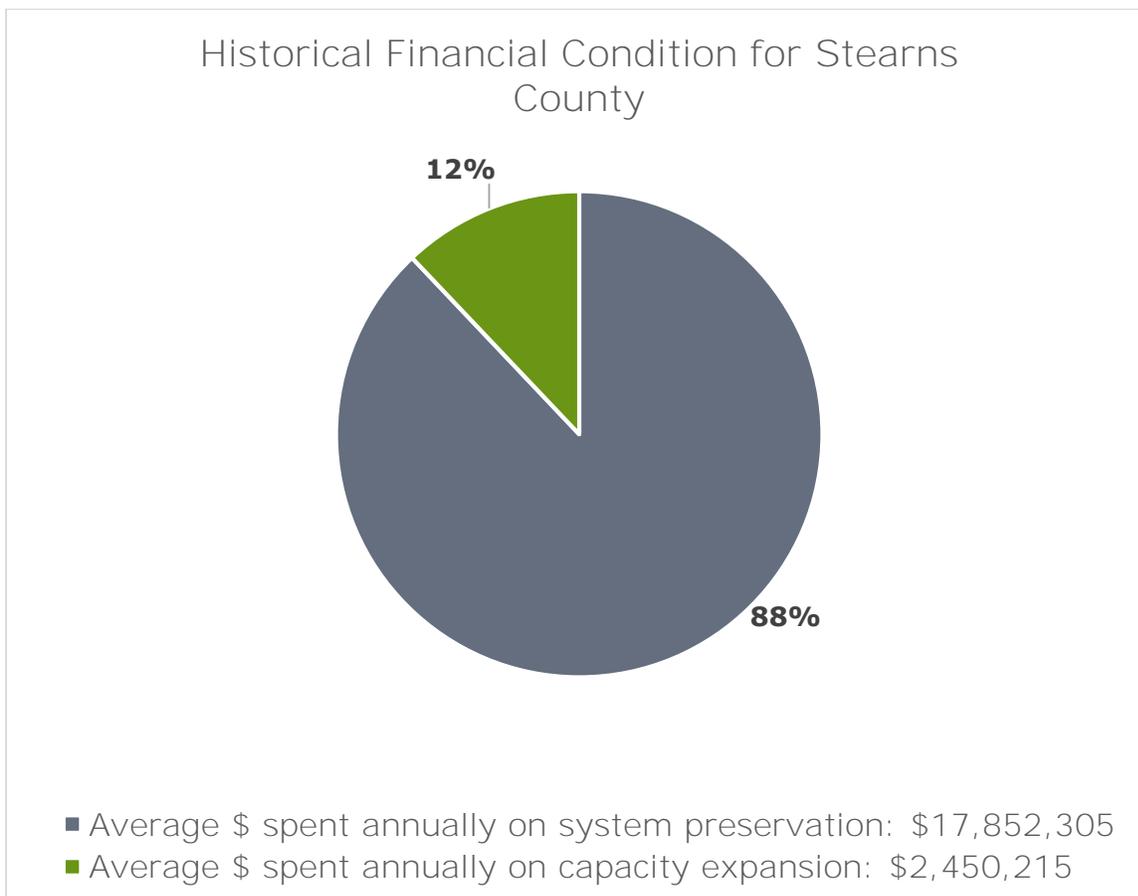


FIGURE 8.14 – LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN STEARNS COUNTY FROM 2008 THROUGH 2017.

Data courtesy of Stearns County Highway Department.

Year	System Preservation Expenditures	Expansion Expenditures	Total County Investment
2008	\$12,840,000	\$600,000	\$13,440,000
2009	\$11,571,000	\$4,000,000	\$15,571,000
2010	\$14,810,000	\$0	\$14,810,000
2011	\$15,779,480	\$13,000,000	\$28,779,480
2012	\$19,235,253	\$3,232,149	\$22,467,402
2013	\$21,553,328	\$2,450,000	\$24,003,328
2014	\$25,337,708	\$0	\$25,337,708
2015	\$22,305,722	\$0	\$22,305,722
2016	\$17,754,405	\$1,220,000	\$18,974,405
2017	\$17,336,156	\$0	\$17,336,156
Total	\$178,523,052	\$24,502,149	\$203,025,201
Average	\$17,852,305	\$2,450,215	\$20,302,520
Percentage of Total County Expense	88%	12%	100%

FIGURE 8.15 – LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN STEARNS COUNTY FROM 2008 THROUGH 2017.

Data courtesy of Stearns County Highway Department.

HISTORICAL FINANCIAL CONDITION WITHIN APO'S MPA

As stated previously, about 18 percent of Stearns County's roadways fall within the APO's MPA. In order to approximate the budget expended within the APO's planning area, Stearns County has estimated about 18 percent of funding for system preservation allocations. Of note, all of the capacity expansion projects within the county during these 10 years have occurred within the portion of the county within the MPA, thus skewing the system preservation to expansion ratio within the MPA.

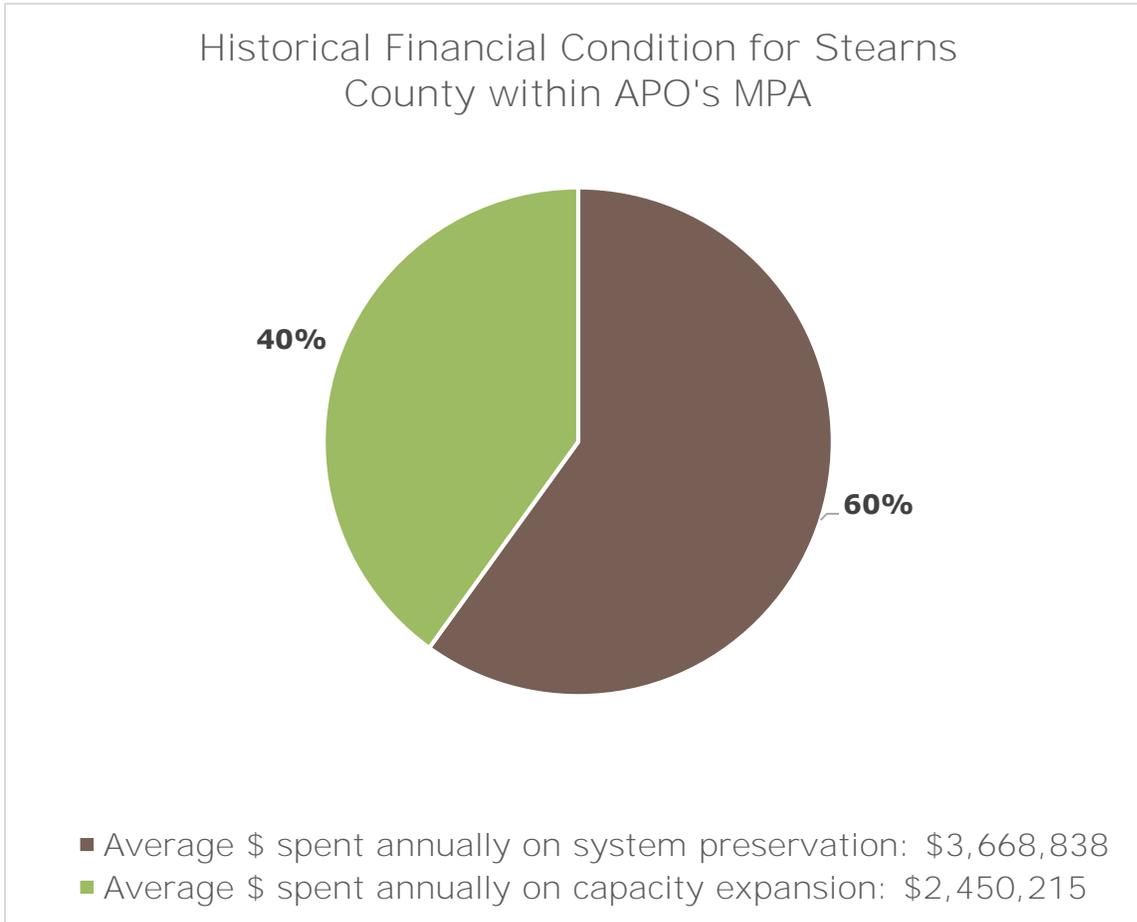


FIGURE 8.16 – LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN THE PORTION OF STEARNS COUNTY WITHIN THE APO'S MPA.

Data courtesy of Stearns County Highway Department.

Year	System Preservation Expenditures	Expansion Expenditures	Total County Investment
2008	\$1,884,000	\$600,000	\$2,484,000
2009	\$3,244,000	\$4,000,000	\$7,244,000
2010	\$2,474,000	\$0	\$2,474,000
2011	\$2,318,390	\$13,000,000	\$15,318,390
2012	\$7,647,846	\$3,232,149	\$10,879,995
2013	\$6,313,225	\$2,450,000	\$8,763,225
2014	\$3,288,670	\$0	\$3,288,670
2015	\$6,173,953	\$0	\$6,173,953
2016	\$1,421,185	\$1,220,000	\$2,641,185
2017	\$1,923,110	\$0	\$1,923,110
Total	\$36,688,379	\$24,502,149	\$61,190,528
Average	\$3,668,838	\$2,450,215	\$6,119,053
Percentage of Total County Expense	60%	40%	100%

FIGURE 8.17 – LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN THE PORTION OF STEARNS COUNTY WITHIN THE APO’S MPA.

Data courtesy of Stearns County Highway Department.

OVERALL FUTURE FINANCIAL CONDITION

As stated at the beginning of the chapter, local funding such as that for counties comes from a variety of different sources. It is assumed that with these sources, Stearns County can reasonably estimate its future financial condition. Based upon the expenditure of funds between 2008 and 2017, the following table details the revenues that Stearns County can reasonably expect to be available for overall system preservation and capacity expansion.

Funding Allocations	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$81,973,077	\$143,348,449	\$539,397,733	\$764,719,259
Expansion Budget	\$11,250,741	\$19,674,463	\$74,031,920	\$104,957,124
Total Budget	\$93,223,818	\$163,022,912	\$613,429,653	\$869,676,383

FIGURE 8.18 – PROJECTED COUNTY TRANSPORTATION REVENUE AMOUNTS FOR STEARNS COUNTY ALLOCATED BY SYSTEM PRESERVATION AND EXPANSION.

Data courtesy of Stearns County Highway Department.

FUTURE FINANCIAL CONDITION WITHIN APO MPA

Using a similar approach to determining historical financial budgets for the portion of Stearns County within the APO’s MPA, it can be reasonably assumed that approximately 18 percent of the entire county’s system preservation budget will be expended within the MPA.

However, based on historical trends, capacity expansion budgets for the portion of the county within the MPA have to be adjusted. Per Stearns County engineering staff, historically, all roadway capacity expanding projects have occurred solely within the MPA.

Funding Allocations	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$16,846,337	\$29,459,626	\$110,851,954	\$157,157,917
Expansion Budget	\$11,250,741	\$19,674,463	\$74,031,920	\$104,957,124
Total Budget	\$28,097,078	\$49,134,089	\$184,883,874	\$262,115,041

FIGURE 8.19 – PROJECTED COUNTY TRANSPORTATION REVENUE AMOUNTS FOR STEARNS COUNTY WITHIN THE MPA ALLOCATED BY SYSTEM PRESERVATION AND EXPANSION.

Data courtesy of Stearns County Highway Department.

CITY OF SAINT CLOUD

HISTORICAL FINANCIAL CONDITION

The transportation budget for the City of Saint Cloud is broken down into two categories: System Preservation and Expansion. The analysis below details the historical financial condition of the city from 2008 through 2017.

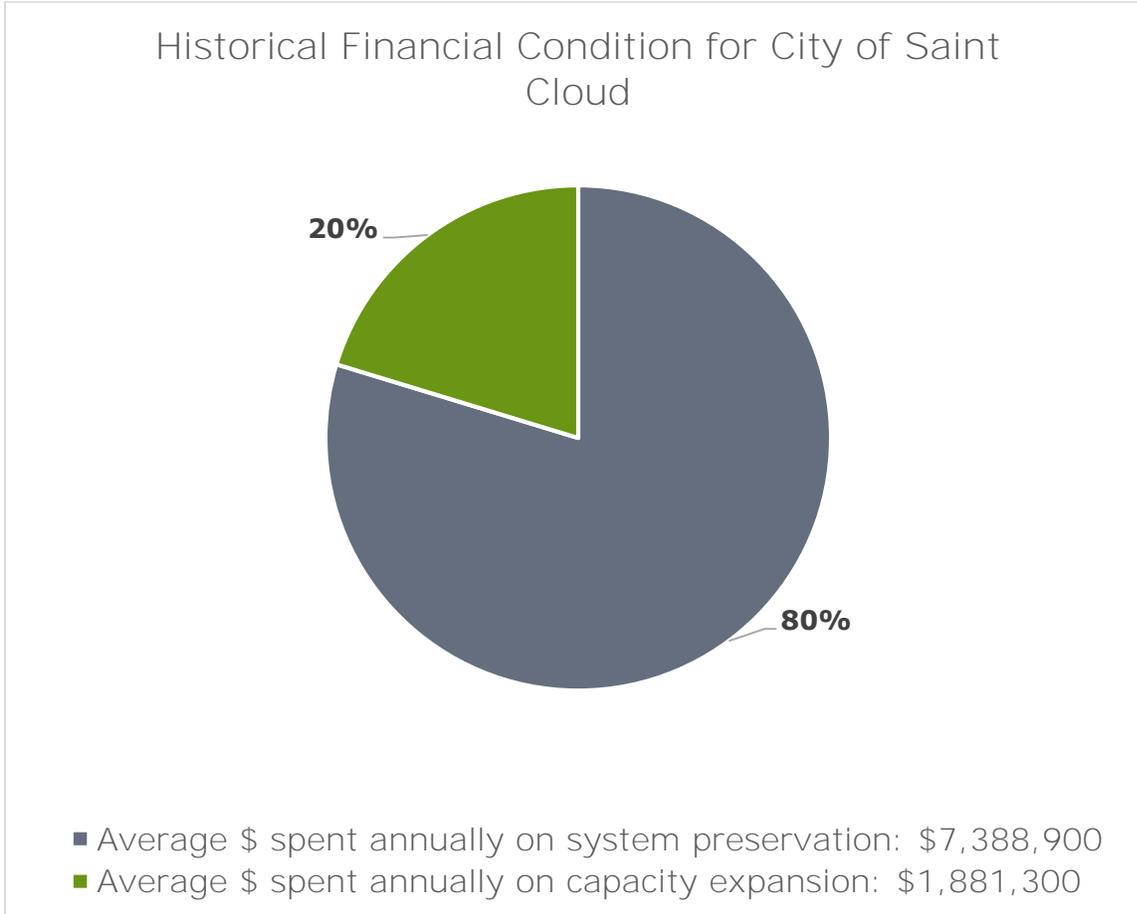


FIGURE 8.20 – LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN THE CITY OF SAINT CLOUD FROM 2008 THROUGH 2017

Data courtesy of City of Saint Cloud

Year	System Preservation Expenditures	Expansion Expenditures	Total City Investment
2008	\$10,032,000	\$0	\$10,032,000
2009	\$9,646,000	\$0	\$9,646,000
2010	\$4,478,000	\$2,050,000	\$6,528,000
2011	\$3,582,500	\$2,780,000	\$6,362,500
2012	\$2,150,000	\$4,250,000	\$6,400,000
2013	\$3,600,000	\$4,443,000	\$8,043,000
2014	\$11,530,000	\$1,600,000	\$13,130,000
2015	\$9,840,000	\$1,440,000	\$11,280,000
2016	\$8,480,500	\$2,250,000	\$10,730,500
2017	\$10,550,000	\$0	\$10,550,000
Total	\$73,889,000	\$18,813,000	\$92,702,000
Average	\$7,388,900	\$1,881,300	\$9,270,200
Percentage of Total City Expense	80%	20%	100%

FIGURE 8.21 – LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN THE CITY OF SAINT CLOUD

Data courtesy of City of Saint Cloud

FUTURE FINANCIAL CONDITION

As stated at the beginning of the chapter, local funding such as that for cities comes from a variety of different sources. It is assumed that with these sources, the City of Saint Cloud can reasonably estimate its future financial condition. Based upon the expenditure of funds between 2008 and 2017, the following table details the revenues that the City of Saint Cloud can reasonably expect to be available for system preservation and capacity expansion.

Funding Allocations	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$33,927,880	\$59,330,566	\$223,251,614	\$316,510,060
Expansion Budget	\$8,638,433	\$15,106,253	\$56,842,461	\$80,587,147
Total Budget	\$42,566,314	\$74,436,819	\$280,094,076	\$397,097,208

FIGURE 8.22 – PROJECTED CITY TRANSPORTATION REVENUE AMOUNTS FOR SAINT CLOUD ALLOCATED BY SYSTEM PRESERVATION AND EXPANSION.

Data courtesy of City of Saint Cloud.

CITY OF SAINT JOSEPH

HISTORICAL FINANCIAL CONDITION

The transportation budget for the City of Saint Joseph is broken down into two categories: System Preservation and Expansion. The analysis below details the historical financial condition of the city from 2008 through 2017.

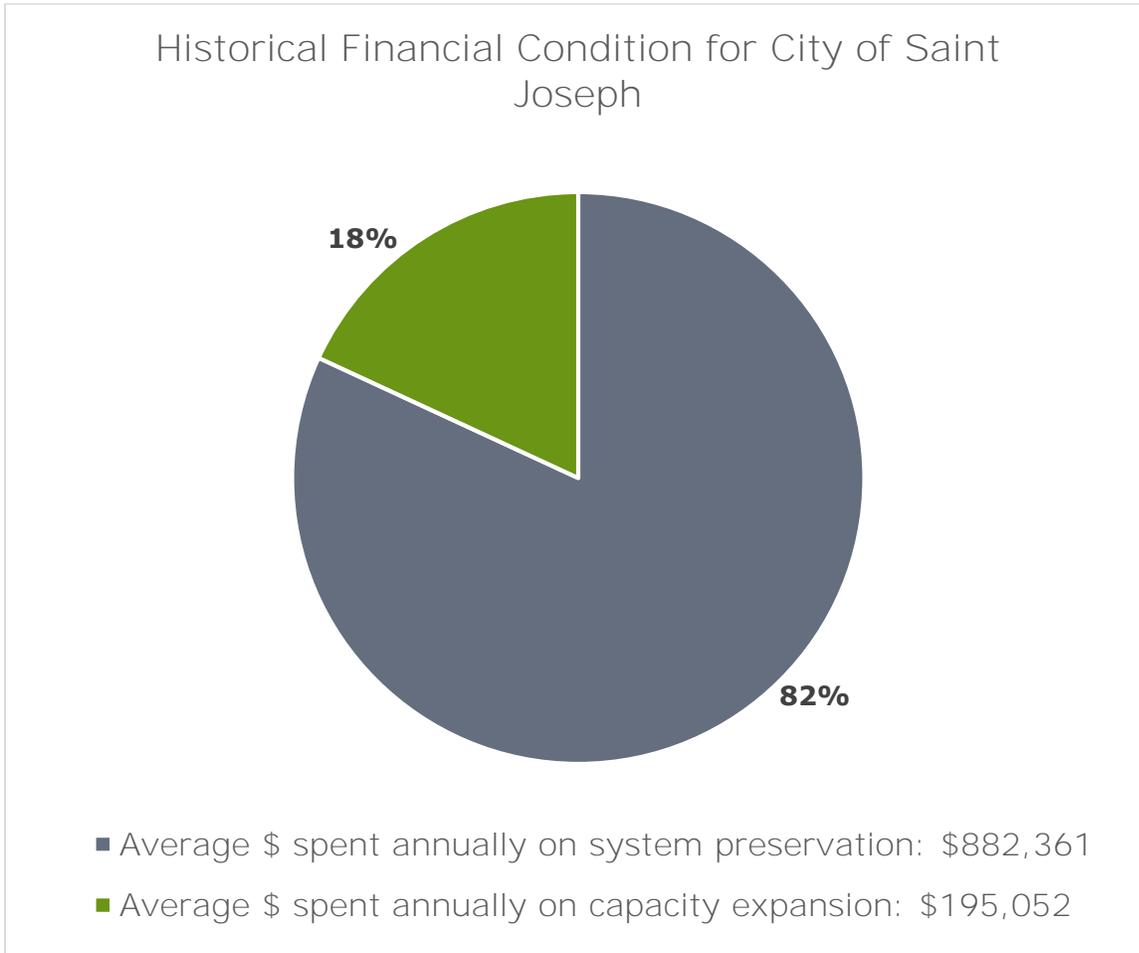


FIGURE 8.23 – LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN THE CITY OF SAINT JOSEPH FROM 2008 THROUGH 2017

Data courtesy of City of Saint Joseph

Year	System Preservation Expenditures	Expansion Expenditures	Total City Investment
2008	\$1,104,977	\$0	\$1,104,977
2009	\$463,279	\$0	\$463,279
2010	\$1,081,416	\$0	\$1,081,416
2011	\$607,102	\$0	\$607,102
2012	\$375,254	\$0	\$375,254
2013	\$776,613	\$0	\$776,613
2014	\$1,908,827	\$0	\$1,908,827
2015	\$1,200,636	\$0	\$1,200,636
2016	\$604,680	\$916,594	\$1,521,274
2017	\$700,822	\$1,033,923	\$1,734,745
Total	\$8,823,606	\$1,950,517	\$10,774,123
Average	\$882,361	\$195,052	\$1,077,412
Percentage of Total City Expense	82%	18%	100%

FIGURE 8.24 – LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN THE CITY OF SAINT JOSEPH

Data courtesy of City of Saint Joseph

FUTURE FINANCIAL CONDITION

As stated at the beginning of the chapter, local funding such as that for cities comes from a variety of different sources. It is assumed that with these sources, the City of Saint Joseph can reasonably estimate its future financial condition. Based upon the expenditure of funds between 2008 and 2017, the following table details the revenues that the City of Saint Joseph can reasonably expect to be available for system preservation and capacity expansion.

Funding Allocations	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$4,051,569	\$7,085,084	\$26,660,060	\$37,796,713
Expansion Budget	\$895,627	\$1,566,207	\$5,893,391	\$8,355,225
Total Budget	\$4,947,196	\$8,651,291	\$32,533,451	\$46,151,938

FIGURE 8.25 – PROJECTED CITY TRANSPORTATION REVENUE AMOUNTS FOR SAINT JOSEPH ALLOCATED BY SYSTEM PRESERVATION AND EXPANSION

Data courtesy of City of Saint Joseph

CITY OF SARTELL

HISTORICAL FINANCIAL CONDITION

The transportation budget for the City of Sartell is broken down into two categories: System Preservation and Expansion. The analysis below details the historical financial condition of the city from 2008 through 2017.

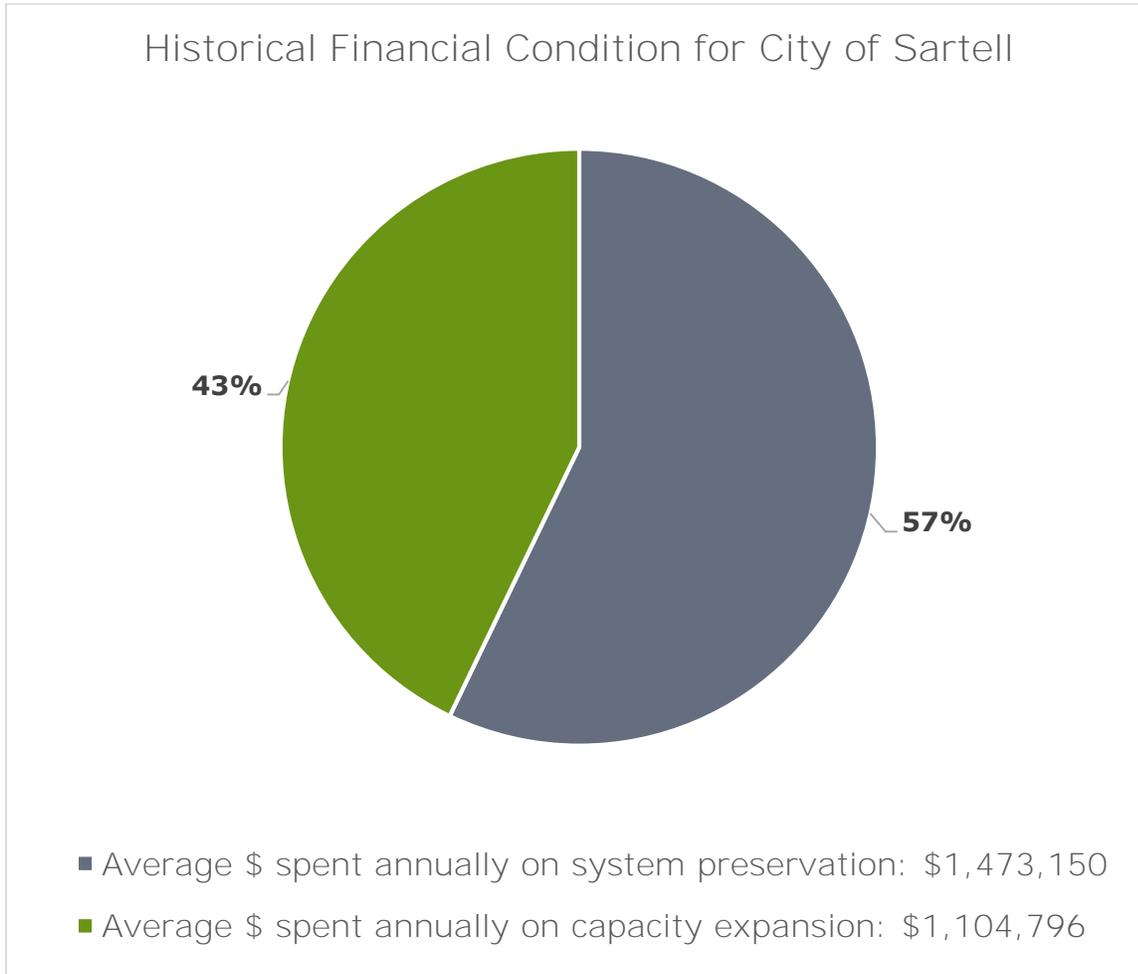


FIGURE 8.26 – LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN THE CITY OF SARTELL FROM 2008 THROUGH 2017
 Data courtesy of City of Sartell

Year	System Preservation Expenditures	Expansion Expenditures	Total City Investment
2008	\$1,454,616	\$170,411	\$1,625,027
2009	\$881,517	\$1,485,860	\$2,367,377
2010	\$1,114,984	\$1,554,745	\$2,669,729
2011	\$1,319,947	\$0	\$1,319,947
2012	\$947,253	\$809,885	\$1,757,138
2013	\$1,197,314	\$0	\$1,197,314
2014	\$2,028,068	\$0	\$2,028,068
2015	\$1,693,048	\$4,956,596	\$6,649,644
2016	\$1,875,414	\$0	\$1,875,414
2017	\$2,219,341	\$2,070,460	\$4,289,801
Total	\$14,731,502	\$11,047,957	\$25,779,459
Average	\$1,473,150	\$1,104,796	\$2,577,946
Percentage of Total City Expense	57%	43%	100%

FIGURE 8.27 – LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN THE CITY OF SARTELL

Data courtesy of City of Sartell

FUTURE FINANCIAL CONDITION

As stated at the beginning of the chapter, local funding such as that for cities comes from a variety of different sources. It is assumed that with these sources, the City of Sartell can reasonably estimate its future financial condition. Based upon the expenditure of funds between 2008 and 2017, the following table details the revenues that the City of Sartell can reasonably expect to be available for system preservation and capacity expansion.

Funding Allocations	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$7,590,240	\$12,213,724	\$46,671,091	\$66,475,056
Expansion Budget	\$5,072,930	\$8,871,165	\$33,380,804	\$47,324,899
Total Budget	\$12,663,170	\$21,084,890	\$80,051,895	\$113,799,955

FIGURE 8.28 – PROEJECTED CITY TRANSPORTATION REVENUE AMOUNTS FOR SARTELL ALLOCATED BY SYSTEM PRESERVATION AND EXPANSION

Data courtesy of City of Sartell

CITY OF SAUK RAPIDS

HISTORICAL FINANCIAL CONDITION

The transportation budget for the City of Sauk Rapids is broken down into two categories: System Preservation and Expansion. The analysis below details the historical financial condition of the city from 2008 through 2017.

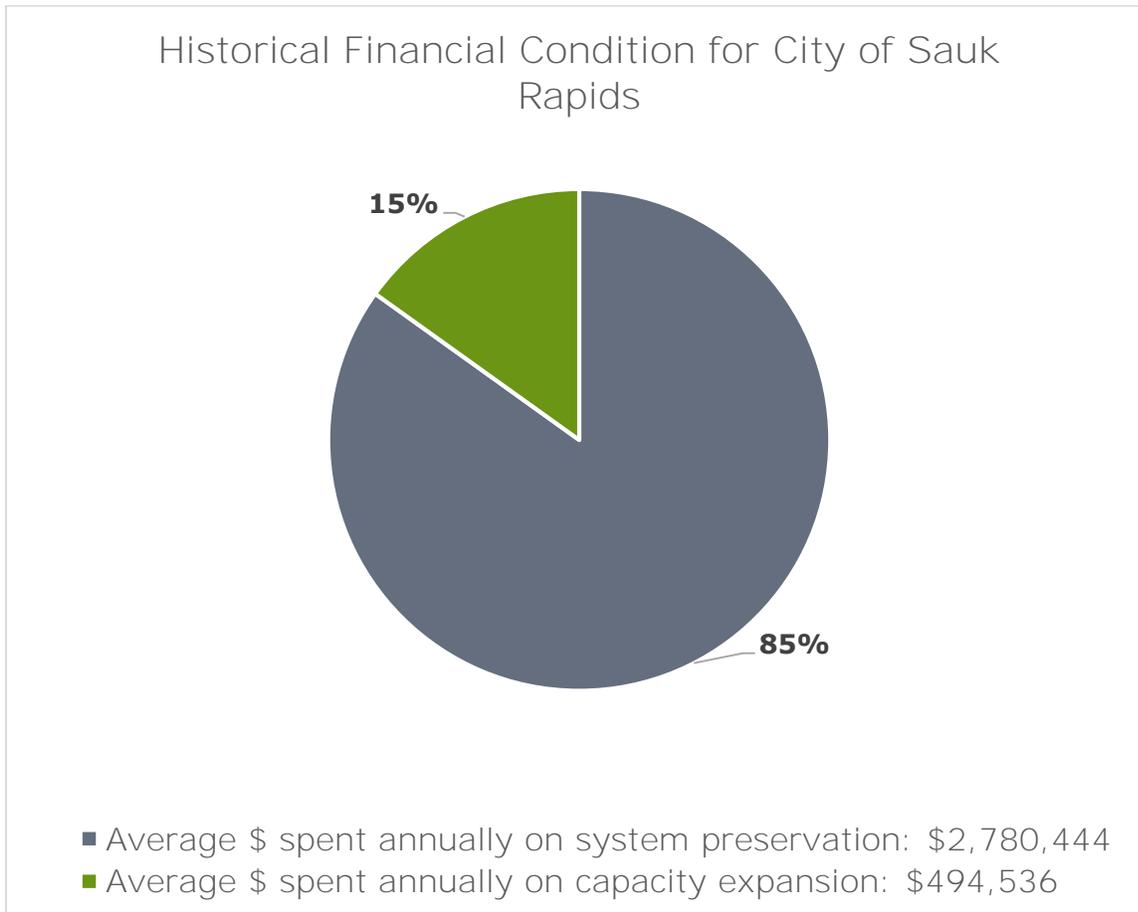


FIGURE 8.29 – LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN THE CITY OF SAUK RAPIDS FROM 2008 THROUGH 2017

Data courtesy of City of Sauk Rapids

Year	System Preservation Expenditures	Expansion Expenditures	Total City Investment
2008	\$2,497,114	\$0	\$2,497,114
2009	\$2,507,557	\$0	\$2,507,557
2010	\$2,590,457	\$210,976	\$2,801,433
2011	\$2,586,389	\$186,019	\$2,772,408
2012	\$2,798,178	\$161,063	\$2,959,241
2013	\$1,849,922	\$0	\$1,849,922
2014	\$2,038,671	\$2,957,841	\$4,996,512
2015	\$4,432,645	\$642,806	\$5,075,451
2016	\$2,465,817	\$781,827	\$3,247,644
2017	\$4,037,690	\$4,826	\$4,042,516
Total	\$27,804,440	\$4,945,358	\$32,749,798
Average	\$2,780,444	\$494,536	\$3,274,980
Percentage of Total City Expense	85%	15%	100%

FIGURE 8.30 – LOCAL INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN THE CITY OF SAUK RAPIDS

Data courtesy of City of Sauk Rapids

FUTURE FINANCIAL CONDITION

As stated at the beginning of the chapter, local funding such as that for cities comes from a variety of different sources. It is assumed that with these sources, the City of Sauk Rapids can reasonably estimate its future financial condition. Based upon the expenditure of funds between 2008 and 2017, the following table details the revenues that the City of Sauk Rapids can reasonably expect to be available for system preservation and capacity expansion.

Funding Allocations	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$19,517,091	\$25,506,425	\$90,979,577	\$136,003,093
Expansion Budget	\$0	\$400,000	\$0	\$400,000
Total Budget	\$19,517,091	\$25,906,425	\$90,979,577	\$136,403,093

FIGURE 8.31 – PROJECTED CITY TRANSPORTATION REVENUE AMOUNTS FOR SAUK RAPIDS ALLOCATED BY SYSTEM PRESERVATION AND EXPANSION

Data courtesy of City of Sauk Rapids

CITY OF WAITE PARK

FINANCIAL CONDITION

In discussions with staff at the City of Waite Park, it was determined that basing future financial conditions on past data would not garner an accurate picture of possible transportation revenue for the city. According to Public Works Director Bill Schluez, the city had reconfigured the way it had allocated funds for transportation, therefore, basing our assumptions on the past would not be an accurate representation.

Schluez has therefore provided APO staff with a future financial condition for anticipated revenues based off of the three primary funding sources the city anticipates receiving over the duration of MAPPING 2045: the general fund, sales tax, and state aid.

These funds were lumped together under system preservation. However, to account for the potential for roadway capacity expansion, APO and city staff determined that splitting this funding under an 80/20 ratio – 80 percent would be allocated to system preservation, 20 percent for capacity expansion – would provide the city with a buffer in the event a capacity expansion project was identified.

The following table is a reflection of the future financial condition for the City of Waite Park with all of the above items mentioned taken into account.

Funding Allocations	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$5,856,000	\$10,033,970	\$29,016,337	\$44,906,307
Expansion Budget	\$1,464,000	\$2,508,492	\$7,254,084	\$11,226,576
Total Budget	\$7,320,000	\$12,542,462	\$36,270,421	\$56,132,883

FIGURE 8.32 – PROJECTED CITY TRANSPORTATION REVENUE AMOUNTS FOR WAITE PARK ALLOCATED BY SYSTEM PRESERVATION AND EXPANSION

Data courtesy of City of Waite Park

MINNESOTA DEPARTMENT OF TRANSPORTATION

MnDOT D3 encompasses a 13 county area comprised of the counties of Aitkin, Benton, Cass, Crow Wing, Isanti, Kanabec, Mille Lacs, Morrison, Sherburne, Stearns, Todd, Wright, and Wadena. In total, MnDOT D3 supports among other items, 1,607 centerline miles of state, U.S., and interstate highways along with 423 bridges and eight transit systems.

The APO's MPA is part of MnDOT D3. Approximately 308 lane miles – a split between roughly 289 lane miles of rural roadway and just over 18 lane miles of urban roadway – within the APO's planning area fall under the jurisdiction of MnDOT D3 as of the drafting of this plan. This is equal to roughly 7.7 percent of the district.

Similar to the counties – as described in the sections above – **MnDOT D3's budget** and expenditure must be considered in two ways.

The first is what would reasonably be expected to be budgeted and expended within the **APO's MPA. The MPA only accounts for 7.7 percent of the district. Therefore, for purposes of this analysis, it was assumed that approximately 7.7 of the budgeted revenue would be allocated to the MPA.**

However, for major system preservation or expansion projects needing more than the assumed allocation of 7.7 percent, MnDOT has the ability to redistribute resources from its overall transportation budget to maintain, operate, and expand its roadway network within the MPA.

OVERALL HISTORICAL FINANCIAL CONDITION

The transportation budget for MnDOT D3 is broken down into two categories: System Preservation and Expansion. The analysis below details the historical financial condition of MnDOT D3 from 2008 through 2017.

Historical Financial Condition for MnDOT D3

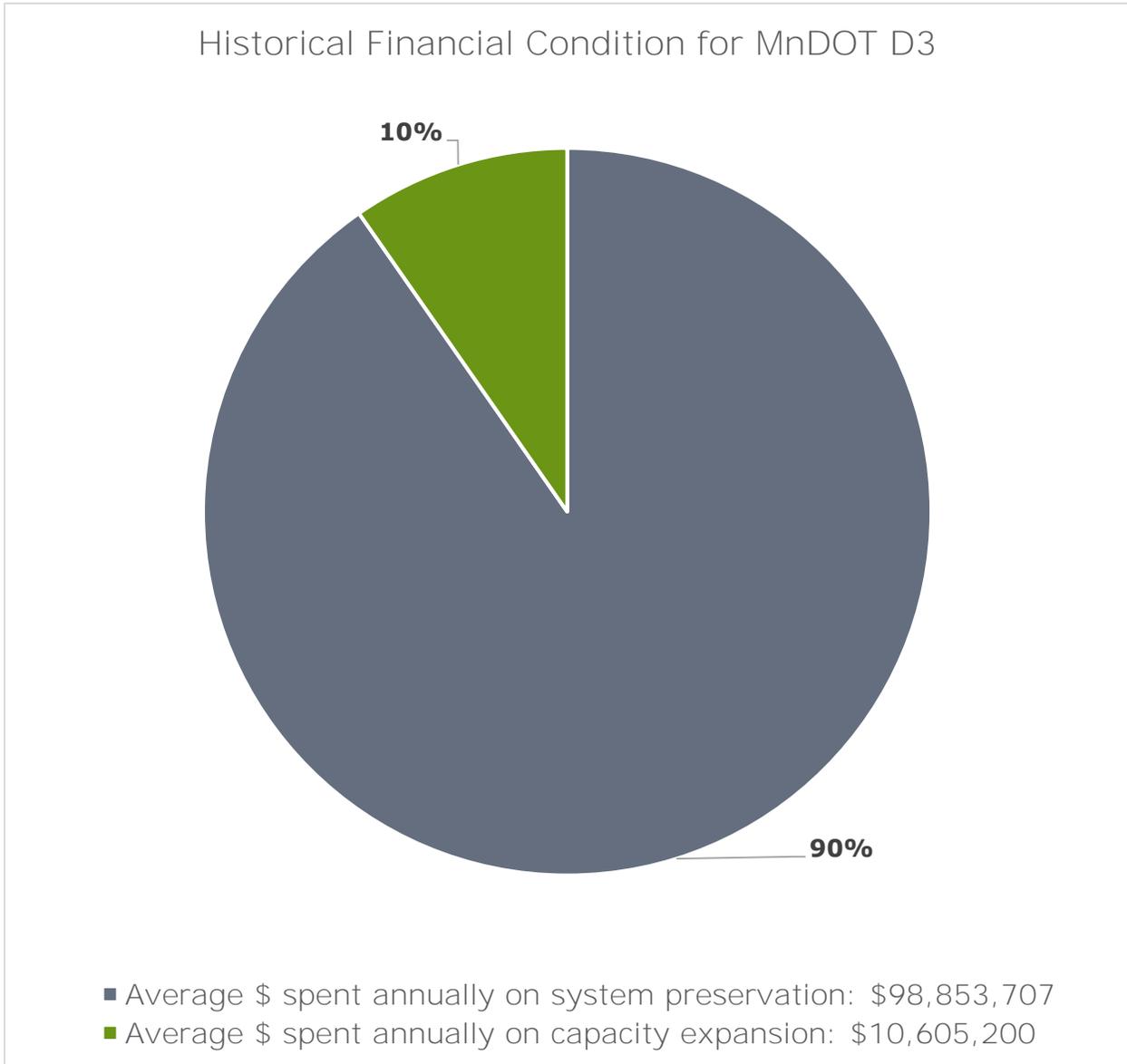


FIGURE 8.33 – STATE INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN MNDOT D3 OVERALL

Data courtesy of MnDOT D3

Year	System Preservation Expenditures	Expansion Expenditures	Total State Investment
2008	\$93,071,353	\$9,406,322	\$102,477,675
2009	\$119,588,111	\$11,000,000	\$130,588,111
2010	\$107,965,172	\$0	\$107,965,172
2011	\$87,570,556	\$0	\$87,570,556
2012	\$85,448,774	\$30,959,481	\$116,408,255
2013	\$95,408,924	\$4,827,778	\$100,236,702
2014	\$84,586,402	\$0	\$84,586,402
2015	\$104,075,557	\$0	\$104,075,557
2016	\$114,865,331	\$49,858,419	\$164,723,750
2017	\$95,956,886	\$0	\$95,956,886
Total	\$988,537,066	\$106,052,000	\$1,094,589,066
Average	\$98,853,707	\$10,605,200	\$109,458,907
Percentage of Total State Expense	90%	10%	100%

FIGURE 8.34 – STATE INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN MNDOT D3 OVERALL
 Data courtesy of MnDOT D3

HISTORIC FINANCIAL CONDITION WITHIN APO MPA

As stated previously, about 7.7 percent of MnDOT D3 roadways fall within the APO’s MPA. In order to approximate the budget expended within the APO planning area, MnDOT has estimated about 7.7 percent of funding for system preservation allocations. Of note, the costs reflected under the preservation projects column below are the actual dollar amounts allocated for non-capacity expanding roadway projects occurring within the APO’s MPA.

Year	Maintenance Operations (7.7% of Total)	Districtwide Set Asides (7.7% of Total)	Preservation Projects	System Preservation Total Within APO MPA
2008	\$1,948,000	\$1,367,905	\$0	\$3,315,905
2009	\$1,948,000	\$1,097,650	\$21,053,350	\$24,081,000
2010	\$2,008,000	\$1,275,689	\$20,505,312	\$23,789,001
2011	\$2,008,000	\$1,026,665	\$871,507	\$3,906,172
2012	\$2,070,000	\$1,231,151	\$1,657,133	\$4,958,284
2013	\$2,070,000	\$1,395,492	\$3,889,389	\$7,354,881
2014	\$2,134,000	\$1,194,784	\$1,612,837	\$4,941,621
2015	\$2,134,000	\$1,640,401	\$24,939,140	\$28,713,541
2016	\$2,200,000	\$1,397,151	\$15,730,970	\$19,328,121
2017	\$2,200,000	\$1,823,163	\$813,155	\$4,836,318
Total	\$20,720,000	\$13,450,050	\$91,054,793	\$125,224,843

FIGURE 8.35 – A BREAKDOWN SUMMARY OF FUNDING SOURCES THAT CONTRIBUTE INTO THE HISTORICAL LOOK AT SYSTEM PRESERVATION IN MNDOT D3 WITHIN THE SAINT CLOUD MPA
Data courtesy of MnDOT D3

The above totals are combined with capacity expansion numbers – which, similar to preservation projects are the actual dollar amounts allocated for projects occurring within the APO’s MPA – to paint the historical financial condition for MnDOT D3 within the MPA.

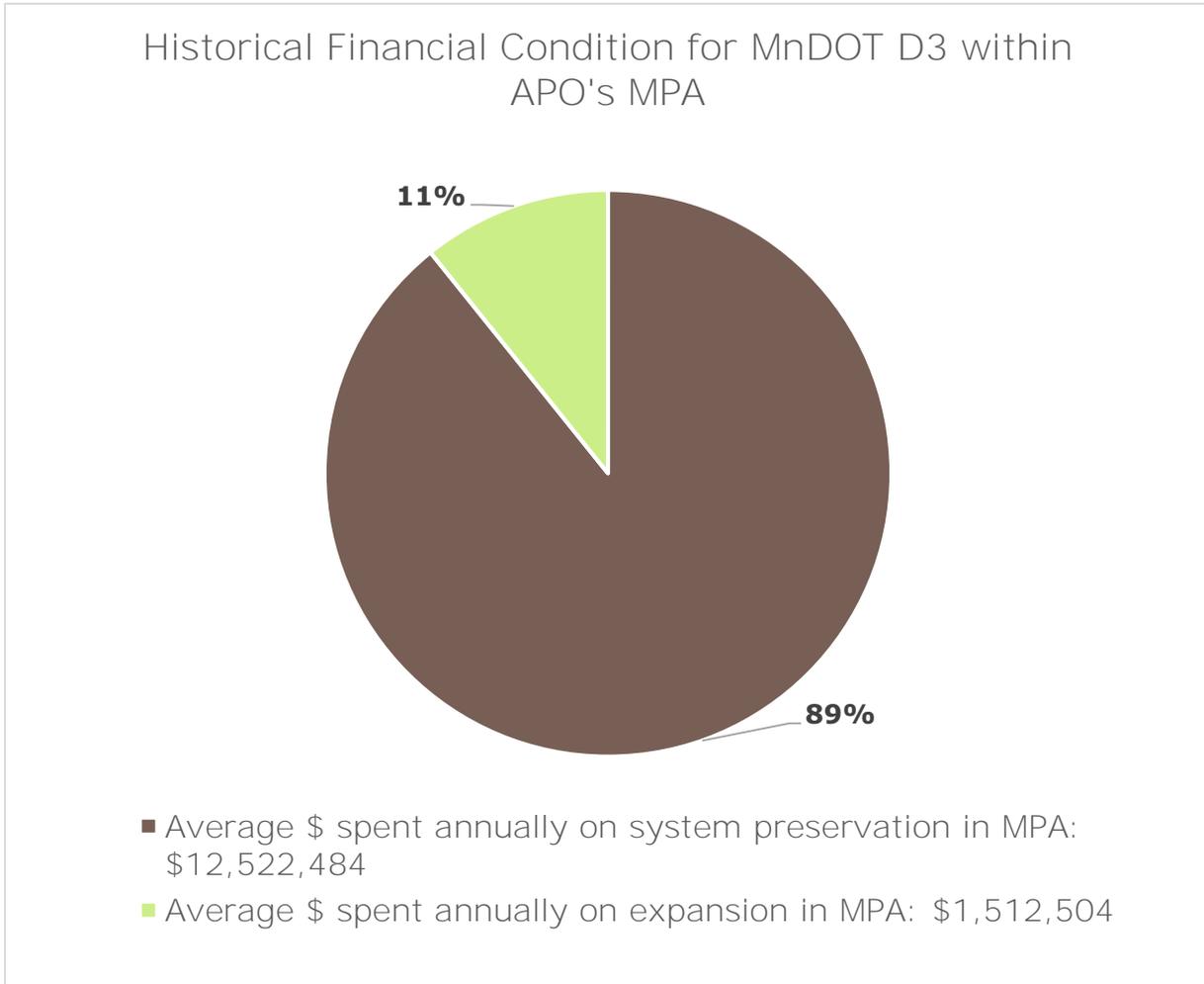


FIGURE 8.36 – STATE INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN THE PORTION OF MNDOT D3 WITHIN THE MPA
Data courtesy of MnDOT D3

Year	System Preservation Expenditures	Expansion Expenditures	Total State Investment
2008	\$3,315,905	\$0	\$3,315,905
2009	\$24,081,000	\$0	\$24,081,000
2010	\$23,789,001	\$0	\$23,789,001
2011	\$3,906,172	\$0	\$3,906,172
2012	\$4,958,284	\$14,159,481	\$19,117,765
2013	\$7,354,881	\$965,556	\$8,320,437
2014	\$4,941,621	\$0	\$4,941,621
2015	\$28,713,541	\$0	\$28,713,541
2016	\$19,328,121	\$0	\$19,328,121
2017	\$4,836,318	\$0	\$4,836,318
Total	\$125,224,843	\$15,125,037	\$140,349,880
Average	\$12,522,484	\$1,512,504	\$14,034,988
Percentage of Total State Expense	89%	11%	100%

FIGURE 8.31 – STATE INVESTMENT ON SYSTEM PRESERVATION AND EXPANSION WITHIN THE PORTION OF MNDOT D3 WITHIN THE MPA
 Data courtesy of MnDOT D3

OVERALL FUTURE FINANCIAL CONDITION

As stated at the beginning of the chapter, state dollars – primarily utilized by MnDOT – come from a variety of different sources. It is assumed that with these sources, MnDOT D3 can reasonably estimate its future financial condition. The following tables details what MnDOT D3 is budgeting for in terms of: 1) System Preservation and 2) Overall.

Funding Allocations	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total by Time Band
Maintenance Operations	\$113,737,000	\$183,723,000	\$577,576,000	\$875,036,000
Districtwide Set Asides	\$86,558,075	\$157,263,200	\$489,973,000	\$733,794,275
Preservation Construction Program	\$358,072,738	\$663,438,120	\$2,034,636,000	\$3,056,146,858
System Preservation Total Budget	\$558,367,813	\$1,004,424,320	\$3,102,185,000	\$4,664,977,133

FIGURE 8.38 – A BREAKDOWN SUMMARY OF FUNDING SOURCES THAT WILL CONTRIBUTE INTO THE FUTURE REVENUE STREAMS FOR SYSTEM PRESERVATION FOR MNDOT D3

Data courtesy of MnDOT D3

Funding Allocations	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$558,367,813	\$1,004,424,320	\$3,102,185,000	\$4,664,977,133
Expansion Budget	\$217,000,000	\$0	\$0	\$217,000,000
Total Budget	\$775,367,813	\$1,004,424,320	\$3,102,185,000	\$4,881,977,133

FIGURE 8.39 – PROJECTED TRANSPORTATION REVENUE AMOUNTS FOR MNDOT D3 ALLOCATED BY SYSTEM PRESERVATION AND EXPANSION

Data courtesy of MnDOT D3

FUTURE FINANCIAL CONDITION WITHIN APO MPA

Just like the tables above, MnDOT D3 has budgeted for both system preservation and overall budget for the portion of the district within the APO’s MPA.

Funding Allocations	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
Maintenance Operations	\$8,757,749	\$14,146,671	\$44,473,352	\$67,377,772
Districtwide Set Asides	\$6,664,972	\$12,109,266	\$37,727,921	\$56,502,159
Preservation Construction Program	\$42,174,000	\$23,363,000	\$124,841,000	\$190,378,000
System Preservation Total Budget	\$57,596,721	\$49,618,937	\$207,042,273	\$314,257,931

FIGURE 8.40 – A BREAKDOWN SUMMARY OF FUNDING SOURCES THAT WILL CONTRIBUTE INTO THE FUTURE REVENUE STREAMS FOR SYSTEM PRESERVATION FOR MNDOT D3 WITHIN THE APO’S MPA
Data courtesy of MnDOT D3

Funding Allocations	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$57,596,721	\$49,618,937	\$207,042,273	\$314,257,931
Expansion Budget	\$0	\$0	\$0	\$0
Total	\$57,596,721	\$49,618,937	\$207,042,273	\$314,257,931

FIGURE 8.41 – PROJECTED TRANSPORTATION REVENUE AMOUNTS FOR MNDOT D3 WITHIN THE APO’S MPA ALLOCATED BY SYSTEM PRESERVATION AND EXPANSION
Data courtesy of MnDOT D3

SAINT CLOUD METRO BUS

FINANCIAL CONDITION

Over a 10 year period – 2008 through 2017 – Saint Cloud Metropolitan Transit Commission (Saint Cloud Metro Bus) has historically obtained funding for transit related projects from fares/other local funds, state funds, and tax-levied local funds. Of note, these totals include both capital and operating funds.

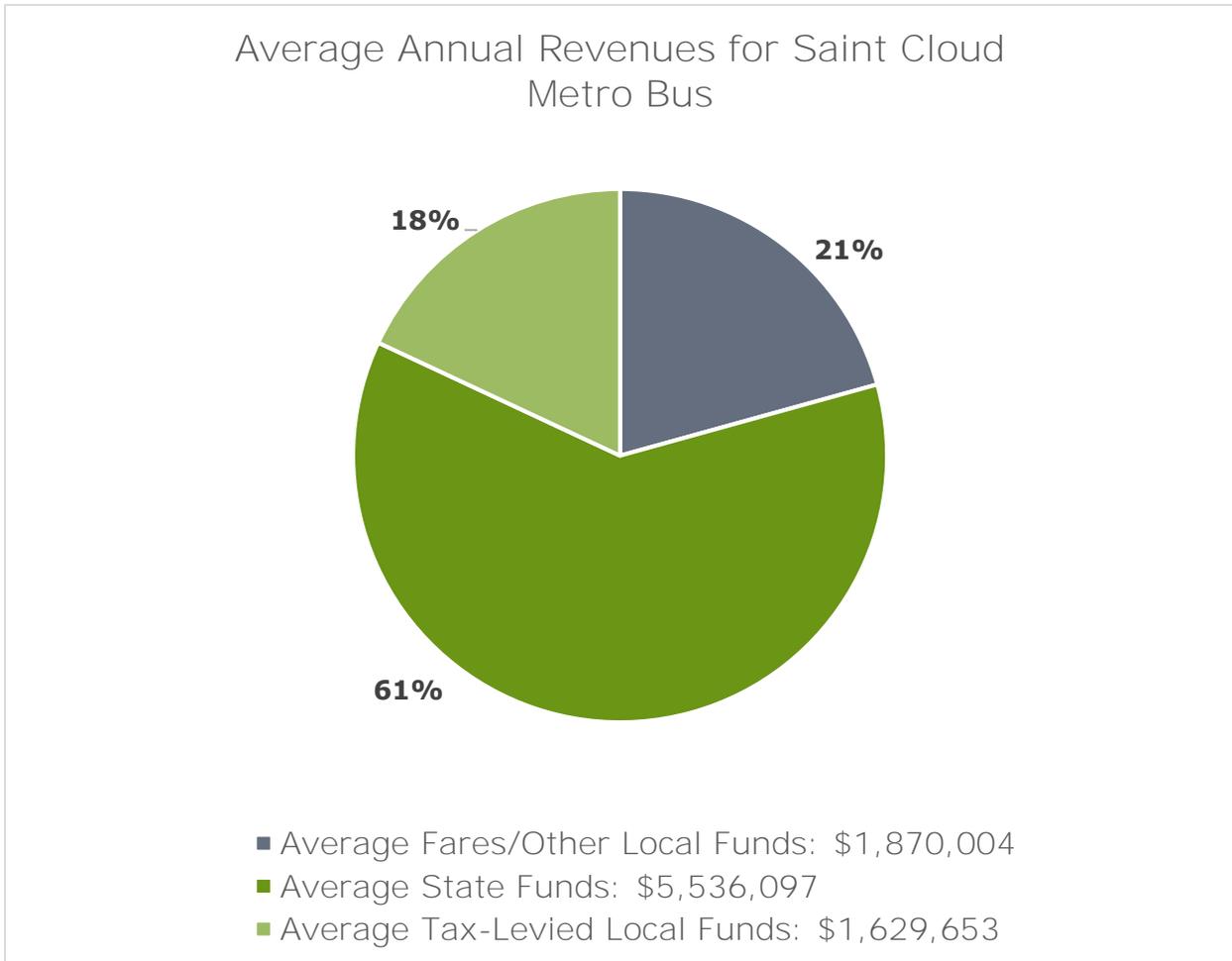


FIGURE 8.42 – HISTORIC SPLIT OF LOCAL AND STATE REVENUES FOR SAINT CLOUD METRO BUS FROM 2008 THROUGH 2017

Data courtesy of Saint Cloud Metro Bus

Year	Fares/Other Local Funds	State Funds	Tax-Levied Local Funds	Total Local Funds
2008	\$1,510,966	\$3,506,840	\$1,323,863	\$6,341,670
2009	\$1,630,649	\$1,352,392	\$1,308,286	\$4,291,327
2010	\$1,680,491	\$3,093,707	\$1,556,838	\$6,331,036
2011	\$1,814,684	\$1,895,624	\$1,499,701	\$5,210,009
2012	\$1,863,927	\$2,409,037	\$1,069,528	\$5,342,493
2013	\$1,937,840	\$1,739,493	\$1,056,722	\$4,734,055
2014	\$2,176,080	\$13,275,907	\$1,068,621	\$16,520,607
2015	\$2,092,306	\$7,174,978	\$2,467,058	\$11,734,341
2016	\$2,160,173	\$8,565,188	\$2,467,387	\$13,192,748
2017	\$1,832,920	\$12,347,804	\$2,478,528	\$16,659,252
Total	\$18,700,036	\$55,360,970	\$16,296,532	\$90,357,538
Average	\$1,870,004	\$5,536,097	\$1,629,653	\$9,035,754
Percentage of Total Local Funds	21%	61%	18%	100%

FIGURE 8.43 – HISTORIC SPLIT OF LOCAL AND STATE REVENUES FOR SAINT CLOUD METRO BUS FROM 2008 THROUGH 2017

Data courtesy of Saint Cloud Metro Bus

Based upon the historical information provided by Saint Cloud Metro Bus, it can reasonably be assumed that these same funding sources would be available to the transit commission over the duration of this plan. However, it is anticipated that the growth rates for these revenue sources will be less than the historical average of 3.1 percent year-over-year. Per recommendations by Metro Bus, it can safely be assumed growth rates for these funding sources would be closer to 1.5 percent year-over-year. The historic average annual revenue numbers were projected out to the year 2045, and summed into the time bands shown below.

Transit Funding Source	Short-Term Projected Funds (2020-2023)	Mid-Range Projected Funds (2024-2029)	Long-Range Projected Funds (2030-2045)	Total Projected Funds
Fares/Other Local Funds	\$7,999,446	\$12,928,900	\$40,126,923	\$61,055,269
State Funds	\$23,682,145	\$38,275,663	\$120,475,830	\$182,433,639
Tax-Levied Local Funds	\$6,971,279	\$11,267,153	\$35,464,299	\$53,702,731
Total Projected Local Funds	\$38,652,870	\$62,471,716	\$196,067,052	\$297,191,638

FIGURE 8.44 – PROJECTED LOCAL FUNDING SOURCES FOR SAINT CLOUD METRO BUS
 Data courtesy of Saint Cloud Metro Bus and Saint Cloud APO

PROVING FISCAL CONSTRAINT

In order to demonstrate fiscal constraint, we must look at both system preservation and capacity expansion when comparing budgeted revenue and project costs.

SYSTEM PRESERVATION FISCAL CONSTRAINT

As stated above, system preservation encompasses a wide variety of work that is designed to preserve and maintain the existing roadway. However, it is impractical to forecast all of the various construction work that will take place on any given roadway within the MPA over the duration of this long-range plan. Therefore, APO staff have narrowed the project selection for system preservation noted in the plan to major reconstructions on the functional class system. These projects are often times more expensive, involve a lot more work, and are more likely to receive some sort of federal financial aid.

Major reconstruction projects to be undertaken through 2045 were identified by each jurisdiction and MnDOT. Cost estimates were received for these projects based off the scope and level of work needed to be completed. Those estimates were provided to the APO in 2019 dollars.

Based off the October 2018 Cost Estimate Inflation Conversion Factor provided by MnDOT (See Appendix I), APO staff were able to inflate the cost of each project to the time bands and/or year desired by the agency/jurisdiction.

Projects listed within a specific year in the Short-Term (2020-2023) that are currently receiving federal funding have already been included in the [APO's FY 2020-2023 Transportation Improvement Program](#) (<https://bit.ly/2LFKUjF>). These projects have already been inflated to year of expenditure dollars and have been proven to be fiscally constrained.

For projects identified in the Short-Term, Mid- or Long-Range (those lacking a specific year), cost estimates were inflated to a base of 2021, 2027, and 2038 respectively.

Fiscal constraint was then determined by comparing the projected system preservation budget for the time band with the projects identified to be completed during that same period. If there was sufficient funding to complete the project, that project has been determined to be fiscally constrained.

If a project cannot be completed in the desired time band, the project is then pushed back to the next time band. If the project is still unable to be fiscally constrained, the project is incorporated into the Illustrative List. If additional funding becomes available in the future, projects on the Illustrative List are first in line to receive that funding.

CAPACITY EXPANSION FISCAL CONSTRAINT

Similar to system preservation, capacity expansion projects were identified by each jurisdiction and MnDOT. Those entities, along with APO staff, worked to prioritize each of these projects to identify realistic and necessary capacity expanding projects that can be both undertaken and financed throughout the duration of MAPPING 2045.

Refined cost estimates were developed by SRF Consulting Group, Inc. and were provided to APO staff in 2017 dollar amounts. Based off the October 2018 Cost Estimate Inflation Conversion Factor provided by MnDOT (again, see Appendix I), APO staff were able to inflate the cost of each project to the time bands and/or year desired by the agency/jurisdiction.

Projects listed within a specific year in the Short-Term (2020-2023) that are currently receiving federal funding have already been included in the [APO's FY 2020-2023 Transportation Improvement Program](https://bit.ly/2LFKUjF) (<https://bit.ly/2LFKUjF>). These projects have already been inflated to year of expenditure dollars and have been proven to be fiscally constrained.

For projects identified in the Short-Term, Mid- or Long-Range (those lacking a specific year), cost estimates were inflated to a base of 2021, 2027, and 2038 respectively.

Fiscal constraint was then determined by comparing the projected expansion budget for the time band with the list of prioritized projects. If there was sufficient funding to complete the project, that project has been determined to be fiscally constrained.

If a project cannot be completed in the desired time band, the project is then pushed back to the next time band. If the project is still unable to be fiscally constrained, the project is incorporated into the Illustrative List. If additional funding becomes available in the future, projects on the Illustrative List are first in line to receive that funding.

FISCAL CONSTRAINT FOR COUNTIES/MNDOT

It is important to note that calculating fiscal constraint for the three counties and MnDOT D3 **varies from the individual jurisdictions. This is because only a portion of the county's or**

MnDOT's roadway network falls within the APO's MPA. Financial information for these jurisdictions is based upon the percentage of the roadway network that falls within the **APO's MPA. For contextual information, the APO has also asked the counties and MnDOT D3** to provide both historical and future financial condition for their entire respective planning areas. Because these entities have larger pools of money to pull from, fiscal constraint may **or may not be met within the APO's MPA but will be maintained on a countywide or districtwide level.**

METRO BUS FISCAL CONSTRAINT

Similar to system preservation among the municipalities, counties, and MnDOT D3, it is hard to reasonable predict all of the system preservation and maintenance activities needed in order to continue operations at Saint Cloud Metro Bus.

However, one factor that has some predictability is the replacement of rolling revenue stock. In order to maintain a State of Good Repair (SGR), Metro Bus has a fleet replacement schedule for each of the buses within its fleet. Depending upon the bus type – Class 400 (typically Dial-a-Ride), Commuter Buses (Northstar Link), or Class 700 (Fixed Route) – a Useful Life Benchmark (ULB) is maintained by year. These replacement cycles dictate when Metro Bus should replace a vehicle in order to stay within SGR.

While it is yet unclear if Metro Bus is planning on expanding its current fleet, we can safely assume that all of the buses within its current fleet will be replaced to maintain the level of service provided.

Therefore, for Metro Bus, fiscal constraint is determined solely off of the fleet replacement schedule.

Fiscal constraint by agency and/or jurisdiction is demonstrated in Chapter 9.

CHAPTER 9: 2045 MTP PROJECTS AND FISCAL CONSTRAINT

To identify potential projects for inclusion in this MTP and to finalize the project list, these steps were followed:

1. Review existing conditions, including public comments.
2. Review other planning documents, especially the needs identified and any recommended projects.
 - a. APO staff worked with member jurisdictions to remove any projects that had already been completed, or which were no longer priorities for the jurisdiction.
3. Review the TDM results for 2015 and the 2045 No-Build Scenario and develop potential projects to address any identified deficiencies.
4. Develop, revalidate, or update cost estimates for any projects that are being considered for future programming.
5. Compare the project cost estimates with forecasted revenues to ensure fiscal constraint is maintained.
 - a. In any case where fiscal constraint was not achieved, APO staff worked with the individual jurisdiction to refine their list of potential projects to achieve fiscal constraint.
6. Make changes to the 2045 No-Build TDM network by incorporating any capacity changing projects from the potential project list, thus creating an initial 2045 network.
7. Complete an initial 2045 MTP model run using the 2045 TAZ data and the initial 2045 network; analyze and review for reasonableness and to ensure the problem was adequately addressed by the project(s).
8. Make any final adjustments to achieve the best possible results given fiscal constraint.

DEVELOPING THE PROJECT LIST

EXISTING CONDITIONS & PUBLIC COMMENTS

The Existing Conditions chapter of this document (Chapter 2) is rich with data and information regarding how the current transportation networks are functioning and current trends in growth that provide clues as to potential future problem areas. For example, we know that over 19,000 workers who live in the MPA leave the MPA for work, and another 36,500 workers who live outside the MPA travel into the MPA for work. Considering there are about 82,000 jobs within the MPA, these worker flows represent a sizable portion of the local workforce. Therefore, efficient and safe transportation connections between the MPA and the surrounding regions are an important consideration for continued economic growth. We know where pavement quality needs to be improved, and where bridges have become functionally obsolete. We know a sizable and growing portion of workers are struggling to

pay for the costs of transportation even while fixed route transit ridership is falling. And we know which intersections have a Critical Crash Index that is concerning. All of this information, including comments from the public regarding the transportation issues they see and experience, helps **the APO's member agencies and jurisdictions** to decide where to invest transportation funds.

2015 MODEL CALIBRATION AND 2045 NO-BUILD MODEL SCENARIOS

If the 2015 model network appears to be reasonably estimating trips based on known data, we make the assumption that it will also reasonably estimate trips if we start to adjust the TAZ data and/or the network characteristics. More information about model validation and results can be found in Chapter 6. The APO brought the 2015 results to city and county planners and engineers to establish a base understanding and discuss capacity issues that currently exist.

The next model run performed was **a 2045 "No-Build" model** run. It used the 2045 TAZ data and the 2015 No-Build roadway network. The model run represents an estimate of roadway congestion in 2045 if no capacity changing investments were made in the roadway network beyond 2023. Analysis of this model run suggests which segments of roadway should be targeted for capacity changing investment beyond 2023.

PROJECTS IDENTIFIED IN OTHER PLANNING DOCUMENTS

The APO tends to review and evaluate the entire MPA region. But when individual jurisdictions review their transportation performance and needs, additional challenges can come to light. By reviewing the comprehensive plans, growth plans, safety plans, and other planning products of the APO jurisdictions (more information can be found in Chapter 5), additional insight can be gained as to projects which may be considered for inclusion in this MTP.

2045 BUILD MODEL SCENARIOS

Once the projects were selected, they were incorporated into the TDM to create the 2045 Build scenario. This scenario uses the 2045 TAZ data and the expansion projects identified by the city and county planners and engineers with the goal being to eliminate as many overcapacity roadways as possible with the resources available.

In addition, the APO explored the possibility of including an urban minor arterial with at-grade intersections that would create a ring or bypass around the metropolitan area. This roadway concept – known as the ring road – is discussed near the conclusion of this chapter.

PUBLIC COMMENTS ON THE DRAFT PROJECT LIST

After the project selection and modeling phase was completed, APO staff brought these projects, along with the entirety of the MAPPING 2045 document, for public review. Comments were solicited on the specific projects identified in the various sections below.

In addition, environmental stakeholders (as identified in Chapter 3) were given the opportunity to provide project specific feedback on roadway capacity expansion project. Those comments are reflected on the environmental project pages that were developed for only capacity expansion projects.

During this initial stage of public comment (between Aug. 12 and Sept. 20, 2019) significant changes were made to the original project list presented. Those changes – all of which are fiscally constrained – are reflected in the tables below.

Benton County:

Action	ID	Project Type	Location	Termini	Estimated Project Cost
Delete	BEN-3	Widen to 4-lanes	CSAH 8 (35 th Avenue N)	Benton County Line to Second Street SE	\$14,374,500 <i>(2038 dollars)</i>
Add	BEN-5	Construct new roadway	CSAH 29	Mayhew Lake Road to 35 th Avenue NE	\$9,690,240 <i>(2027 dollars)</i>

FIGURE 9.1 – CHANGES TO BENTON COUNTY PROJECTS TO BE INCORPORATED INTO MAPPING 2045.

Sherburne County:

Action	ID	Project Type	Location	Termini	Estimated Project Cost
Add	SBC-1	Reconstruct Roadway	CR 62 (17 th Street SE)	Tee-to-Green Street to CSAH 20 (75 th Avenue SE)	\$1,700,000 <i>(2021 dollars)</i>
Add	SBC-2	Reconstruct Roadway	CSAH 20 (75 th Avenue SE)	Seventh Street SE to CSAH 16 (57 th Street SE)	\$4,200,000 <i>(2021 dollars)</i>
Add	SBC-3	Reconstruct Roadway	CR 65 (42 nd Street SE)	CSAH 8 to US 10	\$2,300,000 <i>(2021 dollars)</i>

FIGURE 9.2 – PROJECTS FOR SHERBURNE COUNTY TO BE INCORPORATED INTO MAPPING 2045.

Stearns County:

Action	ID	Project Type	Location	Termini	Estimated Project Cost
Delete	STR-4	Construct new interchange	CSAH 136 (Oak Grove Road)	New Interchange at I-94	\$38,850,000 (2038 dollars)
Add	STR-13	Widen to 4-lanes	CSAH 1 (Riverside Avenue)	Heritage Drive to CSAH 78	\$18,031,580 (2038 dollars)
Add	STR-14	Widen to 4-lanes	CR 134	Sauk River Bridge to Pinecone Road	\$7,334,880 (2027 dollars)
Add	STR-15	Widen to 6-lanes	CSAH 4 (Eighth Street N)	Anderson Avenue to MN-15)	\$15,281,000 (2038 dollars)

FIGURE 9.3 – CHANGES TO STEARNS COUNTY PROJECTS TO BE INCORPORATED INTO MAPPING 2045.

City of Saint Joseph:

Action	ID	Project Type	Location	Termini	Estimated Project Cost
Add	STJ-1	New Alignment	Westwood Parkway	21 st Avenue NE to 0.68 miles east	\$8,277,640 (2038 dollars)

FIGURE 9.4 – PROJECTS FOR THE CITY OF SAINT JOSEPH TO BE INCORPORATED INTO MAPPING 2045.

It was decided by the APO’s Policy Board to resubmit the MAPPING 2045 document once again for public review with the aforementioned changes for another 30 days (Sept. 23 through Oct. 23, 2019).

All comments pertaining to these new projects and the projects previously proposed are reflected under the respective agency’s and/or jurisdiction’s sections.

PROJECT TYPES AND TIME BANDS

The projects identified in this chapter are listed by the respective agency or jurisdiction responsible, and can be grouped into one of the three categories listed below.

- **Expansion:** Projects resulting in new infrastructure, such as the building of new facilities or additional lane capacity along existing roadways.
- **Reconstruction:** Projects that rebuild facilities without adding more capacity or changing roadway alignment.
- **Vehicle Replacement:** The purchase of new transit vehicles to replace older vehicles for the purpose of maintain service quality and managing ongoing maintenance costs.

The projects are fiscally constrained and are broken into three time bands based on prioritization.

- **Short-Term Projects (2020-2023)**
- **Mid-Range Projects (2024-2029)**
- **Long-Range Projects (2030-2045)**

Of note, several jurisdictions have identified more projects to be undertaken, however, financial constraints have prohibited the inclusion of these projects into the fiscally constrained expansion and reconstruction project lists. As such, these unconstrained projects have been placed on a separate, Illustrative List. This list can be found in Appendix H.

Expansion Projects

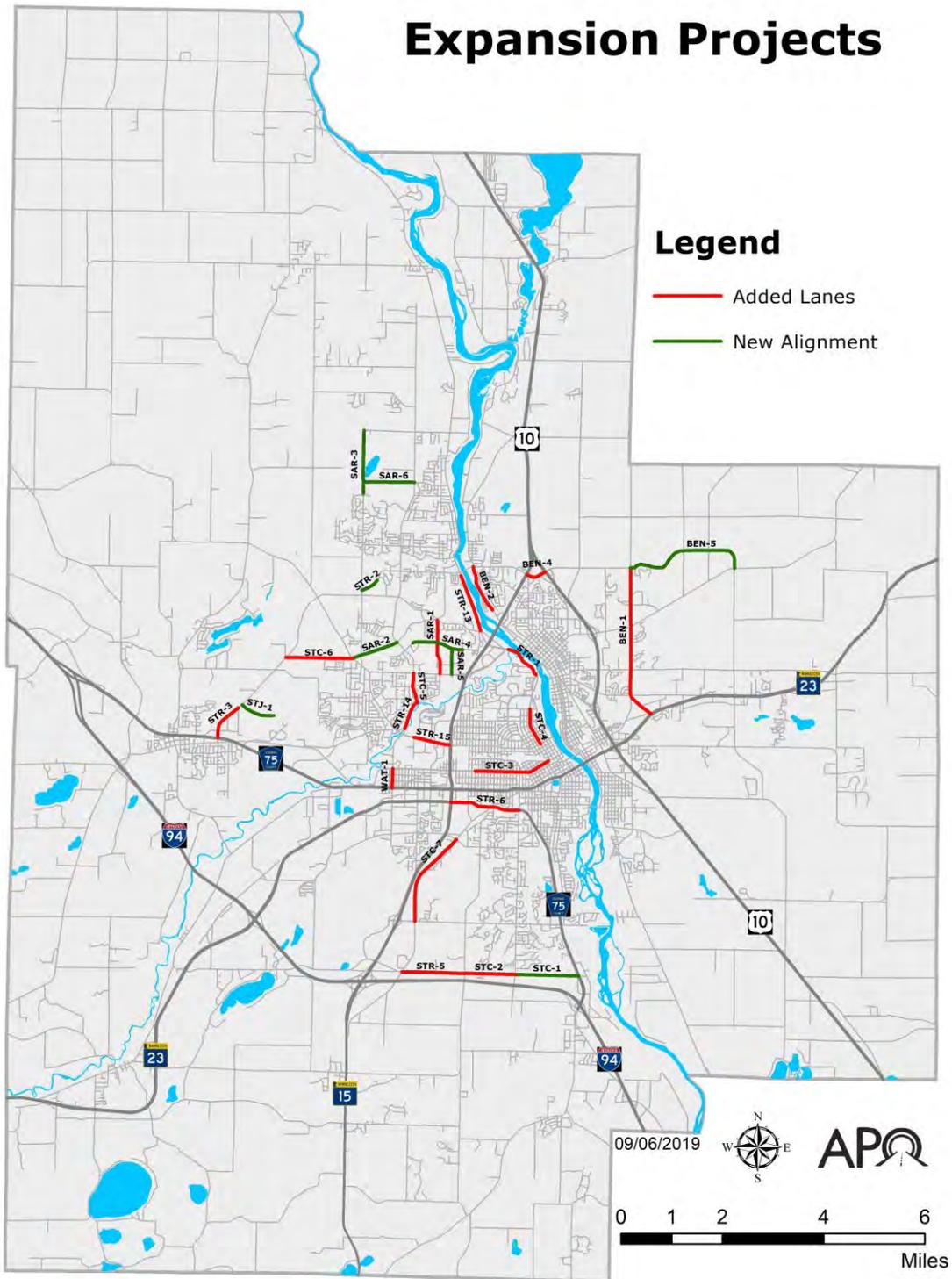


FIGURE 9.5 – MAPPING 2045 ROADWAY EXPANSION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type
BEN-1	CSAH 1 (Mayhew Lake Road NE) in Sauk Rapids	CSAH 29 (35 th Street NE) to MN 23	Four-Lane Undivided Arterial
BEN-2	CSAH 33 (Benton Drive) in Sauk Rapids	CSAH 29 (First Street NE) to 18 th Street NW	Four-Lane Undivided Arterial
BEN-4	CSAH 29 (35 th Street NE) in Sauk Rapids	MN-15 to US-10	Four-Lane Divided Arterial
BEN-5	CSAH 29 in Sauk Rapids	CSAH 1 (Mayhew Lake Road) to 35 th Avenue NE	Two-Lane Divided Arterial
STR-1	CSAH 1 (River Avenue N) in Sartell	MSAS 145 (Ninth Avenue N) to County Road 120	Four-Lane Undivided Arterial
STR-2	CSAH 133 (Second Street S) in Sartell	Theisen Road to CSAH 133 (Sixth Street S/19th Avenue N)	Four-Lane Undivided Arterial
STR-3	CSAH 133 in Saint Joseph	CSAH 75 to 19th Avenue NE	Four-Lane Undivided Arterial
STR-5	County Road 122 (40th Street S) in Saint Cloud	CSAH 74 to CSAH 136 (Oak Grove Road SW)	Four-Lane Undivided Collector
STR-6	CSAH 75 (Second Street S) in Saint Cloud	MN-15 to MSAS 141 (Cooper Avenue S)	Six-Lane Divided Arterial
STR-13	CSAH 1 (Riverside Avenue S) in Sartell	MSAS 118 (Heritage Drive) to CSAH 78	Four-Lane Undivided Arterial
STR-14	County Road 134 in Saint Cloud	Sauk River Bridge to Pinecone Road	Four-Lane Divided Arterial
STR-15	CSAH 4 (Eighth Street North) in Saint Cloud	Anderson Avenue to MN-15	Six-Lane Divided Arterial
STC-1	MSAS 156 (40 th Street S) in Saint Cloud	MSAS 141 (Cooper Avenue) to CSAH 75 (Roosevelt Road)	Four-Lane Undivided Collector
STC-2	MSAS 156 (40 th Street S) in Saint Cloud	CSAH 136 (Oak Grove Road SW) to MSAS 141 (Cooper Avenue)	Four-Lane Undivided Collector
STC-3	MSAS 114 (Third Street N) in Saint Cloud	31 st Avenue N to MSAS 145 (Ninth Avenue N)	Four-Lane Divided Arterial
STC-4	MSAS 145 (Ninth Avenue N) in Saint Cloud	MSAS 148 (15 th Street N) to Stearns CSAH 4 (Eighth Street N/Veterans Drive)	Four-Lane Divided Arterial
STC-5	Pinecone Road S in Saint Cloud	Stearns County Road 134 to Stearns CSAH 120	Four-Lane Divided Arterial
STC-6	322 nd Street in Saint Cloud	Stearns CSAH 133 to Stearns CSAH 4	Three-Lane Undivided Collector
STC-7	CSAH 74 (West Saint Germain Street) in Saint Cloud	Stearns County Road 137 (Seventh Street S/22 nd Street S) to 33 rd Street S	Three-Lane Undivided Arterial
STJ-1	Westwood Parkway in Saint Joseph	21 st Avenue NE to 0.68 miles East	Four-Lane Divided Arterial
SAR-1	MSAS 117 (Leander Avenue) in Sartell	Stearns CSAH 120 to MSAS 118 (Heritage Drive)	Three-Lane Undivided Collector
SAR-2	Roberts Road in Sartell	MSAS 103 (Pinecone Road S) to Stearns CSAH 4 (322 nd Street)	Three-Lane Undivided Collector

SAR-3	19 th Avenue N in Sartell	11 th Street N to 27 th Street N	Two-Lane Undivided Local
SAR-4	Scout Drive in Sartell	Scout Drive to Connecticut Avenue S	Two-Lane Undivided Local
SAR-5	Then Avenue in Sartell	Proposed Scout Drive alignment to CSAH 120	Two-Lane Undivided Local
SAR-6	15 th Street N in Sartell	MSAS 103 (Pinecone Road N) to 19 th Avenue N	Four-Lane Undivided Collector
WAT-1	MSAS 103 (10 th Avenue N) in Waite Park	Stearns CSAH 81 (Third Street N) to CSAH 75 (Division Street)	Four-Lane Divided Arterial

FIGURE 9.6 – TABLE OF MAPPING 2045 ROADWAY EXPANSION PROJECTS

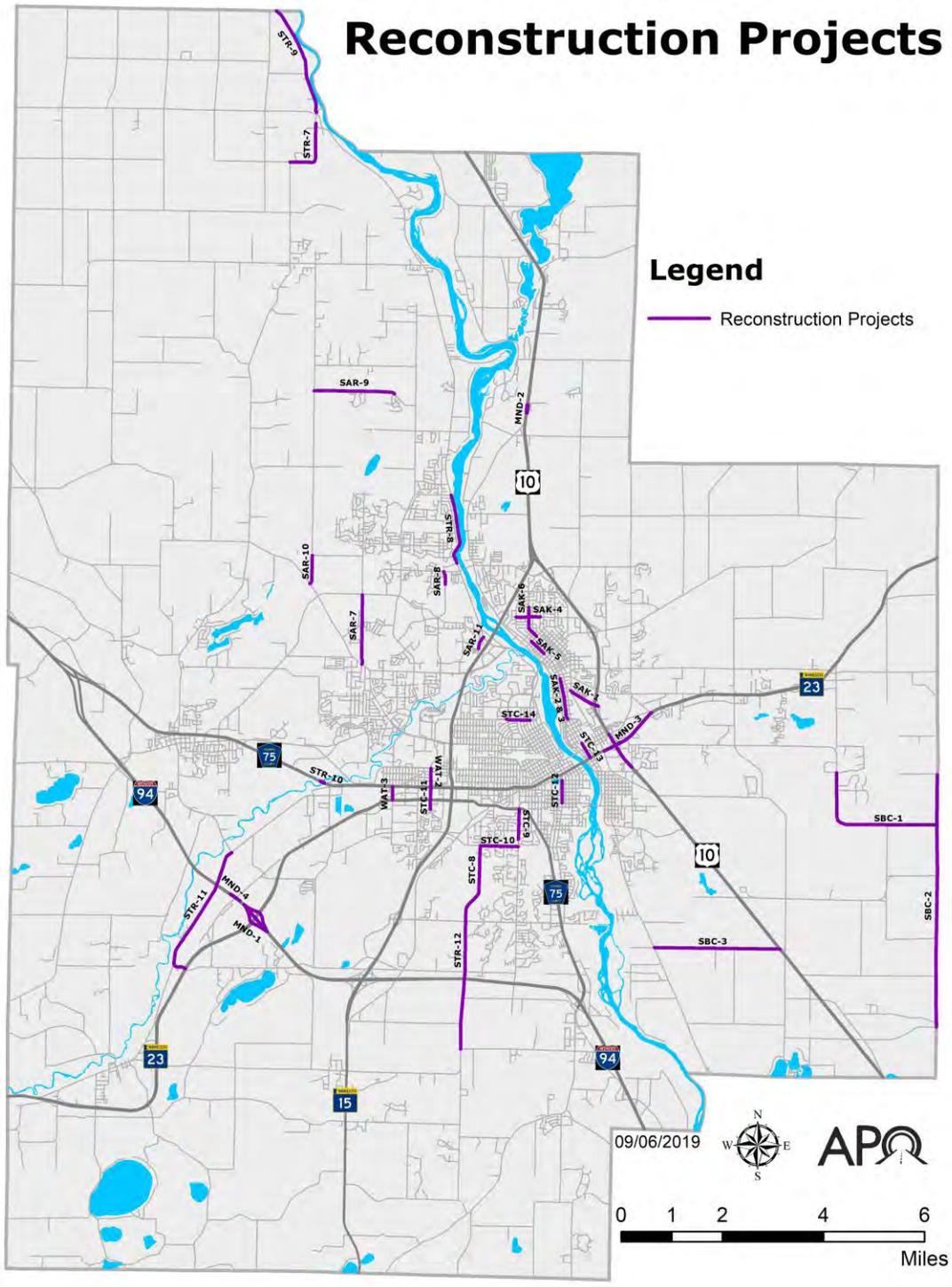


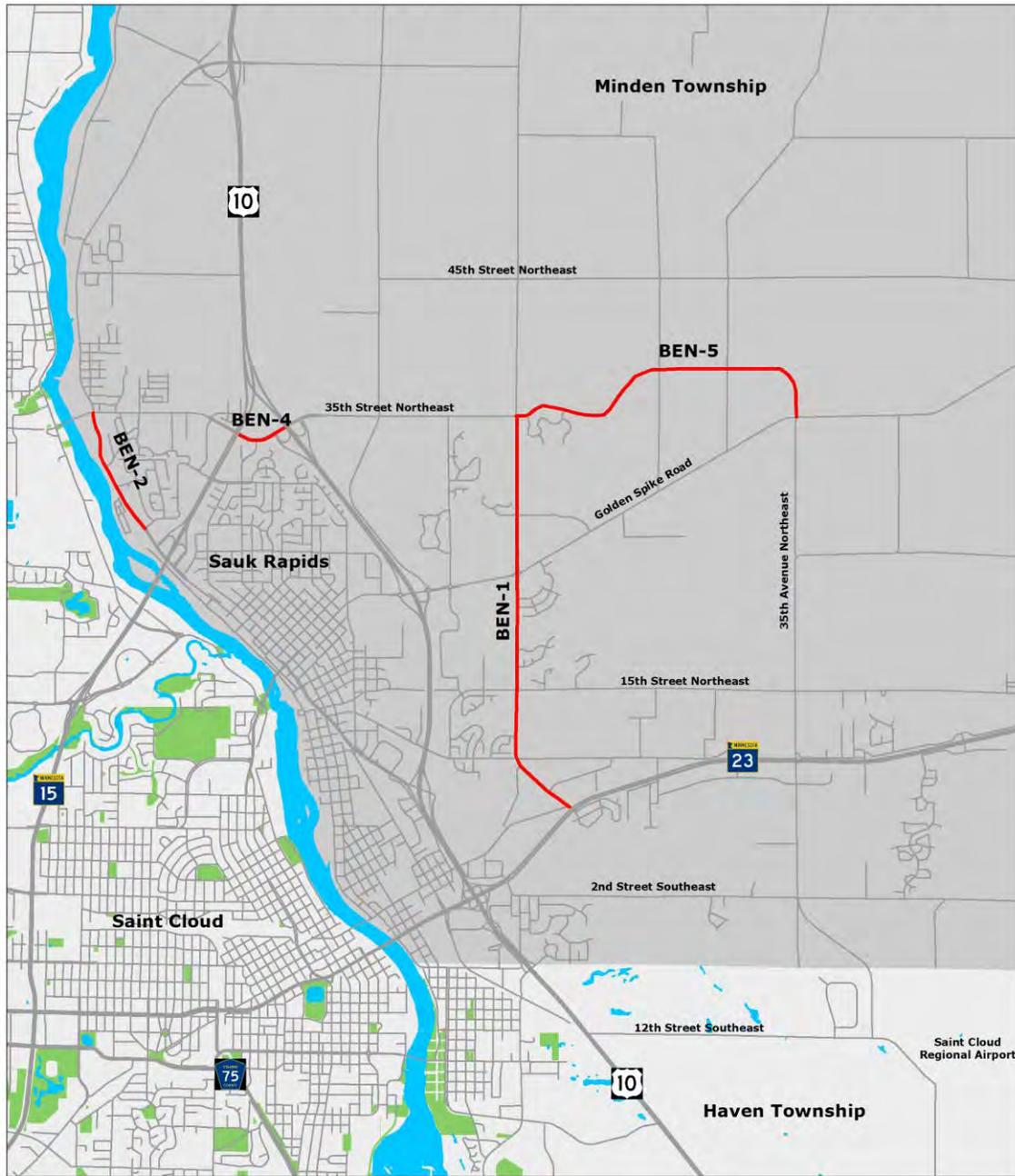
FIGURE 9.7 – MAPPING 2045 ROADWAY RECONSTRUCTION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type
STR-7	CSAH 2 (Central Avenue N) in Brockway Township	421 st Street to CSAH 1	Two-Lane Arterial Reconstruction
STR-8	CSAH 1 (Riverside Avenue N) in Sartell	Sartell Street W to MSAS 104 (12 th Street N)	Two-Lane Arterial Reconstruction
STR-9	CSAH 1 in Brockway Township	CSAH 17 to North Stearns County Line	Two-Lane Arterial Reconstruction
STR-10	CSAH 75 in Waite Park	Bridge Number 6819 over the Sauk River	Principal Arterial Bridge Replacement
STR-11	CSAH 138 in Waite Park and Saint Joseph Township	MN 23 to County Road 121	Minor Collector Reconstruction
STR-12	CSAH 136 (Oak Grove Road SW) in Saint Cloud and Saint Augusta	County Road 115 to 33 rd Street S	Major Collector Reconstruction
STC-8	MSAS 175 (County Road 136/Oak Grove Road SW) in Saint Cloud	MSAS 153 (22 nd Street S) to MSAS 151 (33 rd Street S)	Two-Lane Collector Reconstruction
STC-9	MSAS 141 (Cooper Avenue S) in Saint Cloud	MSAS 146 (Traverse Road) to CSAH 75 (Roosevelt Road)	Two-Lane Arterial Reconstruction
STC-10	MSAS 153 (22 nd Street S) in Saint Cloud	MSAS 175 (Oak Grove Road SW) to MSAS 141 (Cooper Avenue S)	Two-Lane Minor Arterial Reconstruction
STC-11	MSAS 102 (Waite Avenue S) in Saint Cloud	First Street N to 125' South of Wellington Circle	Four-Lane Arterial/Two-Lane Local Reconstruction
STC-12	MSAS 145 (Ninth Avenue S) in Saint Cloud	Fourth Street S to MSAS 101 (University Drive)	Four-Lane Arterial Reconstruction
STC-13	MSAS 106 (Wilson Avenue NE) in Saint Cloud	MN 23 to First Street NE	Two-Lane Collector Reconstruction
STC-14	MSAS 125 (13 th Street N) in Saint Cloud	MSAS 135 (Northway Drive) to MSAS 145 (Ninth Avenue N)	Two-Lane Collector Reconstruction
SAR-7	19 th Avenue S in Sartell	Stearns CSAH 4 to Stearns CSAH 133 (Sixth Street S)	Two-Lane Collector Reconstruction
SAR-8	Fourth Avenue S in Sartell	Stearns CSAH 133 (Second Street S) to Fourth Street S	Two-Lane Collector Reconstruction
SAR-9	35 th Street N in Sartell	75 th Avenue (Townline Road) to 12 th Avenue N	Two-Lane Local Reconstruction
SAR-10	75 th Avenue (Townline Road) in Sartell	Stearns CSAH 4 to First Street N	Two-lane Collector Reconstruction

SAR-11	MSAS 131 (LeSauk Drive) in Sartell	Stearns CSAH 1 (Riverside Avenue S) to Dehler Drive	Two-Lane Local Reconstruction
SAK-1	MSAS 109 (Benton Drive S) in Sauk Rapids	MSAS 103 (Summit Avenue S) to US 10	Four-Lane Arterial Reconstruction
SAK-2	MSAS 104 (Second Avenue S) in Sauk Rapids	MSAS 109 (Benton Drive S) to 10 th Street S	Two-Lane Collector Reconstruction
SAK-3	MSAS 104 (Second Avenue S) in Sauk Rapids	10 th Street S to Searle Street	Two-Lane Collector Reconstruction
SAK-4	MSAS 101 (11 th Street N) in Sauk Rapids	MSAS 104 (Second Avenue N) to MSAS 101 (Sixth Avenue N)	Two-Lane Collector Reconstruction
SAK-5	MSAS 104 (Second Avenue N) in Sauk Rapids	Third Street N to MSAS 108 (Eighth Street N)	Two-Lane Local Reconstruction
SAK-6	MSAS 111 (Fourth Avenue N) in Sauk Rapids	MSAS 108 (Eighth Street N) to 13 th Street N	Two-Lane Collector Reconstruction
WAT-2	MSAS 101 (Waite Avenue) in Waite Park	Stearns CSAH 81 (Third Street N) to MN 23 (Second Street S)	Four-Lane Arterial Reconstruction
WAT-3	MSAS 103 (10 th Avenue S) in Waite Park	Stearns CSAH 75 (Division Street) to MN 23 (Second Street S)	Four-Lane Arterial Reconstruction
SBC-1	CR 62 (17 th Street SE) in Haven Township	Tee-To-Green Street to CSAH 20 (75 th Avenue SE)	Two-Lane Collector Reconstruction
SBC-2	CSAH 20 (75 th Avenue SE) in Haven Township	Seventh Street SE to CSAH 16 (57 th Street SE)	Two-Lane Collector Reconstruction
SBC-3	CR 65 (42 nd Street SE) in Haven Township	CAH 8 to US 10	Two-Lane Local Reconstruction
MND-1	I-94 in Saint Joseph Township	I-94 at MN 23	Interchange Reconstruction
MND-2	US 10 in Watab Township	Bridge Number 3666	Bridge Replacement
MND-3	MN 23 in Saint Cloud	MN 23 (from Lincoln Avenue to Benton CSAH 1) to US 10 (from East Saint Germain Street to 15 th Avenue SE)	Interchange Reconstruction
MND-4	I-94 in Saint Joseph Township	Bridge Numbers 73875 and 73876	Bridge Replacement

FIGURE 9.8 – TABLE OF MAPPING 2045 ROADWAY RECONSTRUCTION PROJECTS

Benton County MAPPING 2045 Projects



Legend

— Expansion Projects



0 0.5 1 2 Miles



FIGURE 9.9 – MAPPING 2045 PROJECTS IN BENTON COUNTY

BENTON COUNTY

Benton County has identified a total of four fiscally constrained projects over the duration of this MTP. All four are capacity **expanding projects**. The following section details those projects, the county’s financial plan and fiscal constraint, and provides comments from environmental experts and the general public on the proposed transportation projects.

BENTON COUNTY: EXPANSION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
BEN-1	CSAH 1 (Mayhew Lake Road NE) in Sauk Rapids	CSAH 29 (35 th Street NE) to MN 23	Four-Lane Undivided Arterial	Long-Range (2030-2045)	\$31,598,000
BEN-2	CSAH 33 (Benton Drive) in Sauk Rapids	CSAH 29 (First Street NE) to 18 th Street NW	Four-Lane Undivided Arterial	Mid-Range (2024-2029)	\$6,451,200
BEN-4	CSAH 29 (35 th Street NE) in Sauk Rapids	MN 15 to US 10	Four-Lane Divided Arterial	Long-Range (2030-2045)	\$7,858,060
BEN-5	CSAH 29 (35 th Street NE) in Sauk Rapids	CSAH 1 (Mayhew Lake Road) to 35 th Avenue NE	Two-Lane Divided Arterial	Mid-Range (2024-2029)	\$9,690,240

BENTON COUNTY: RECONSTRUCTION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
N/A	N/A	N/A	N/A	N/A	N/A

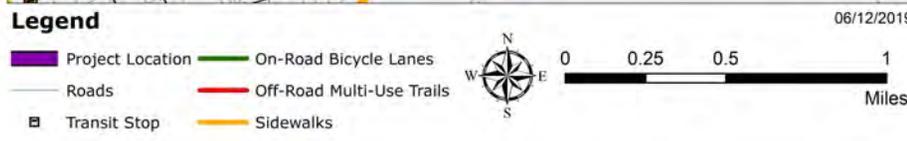
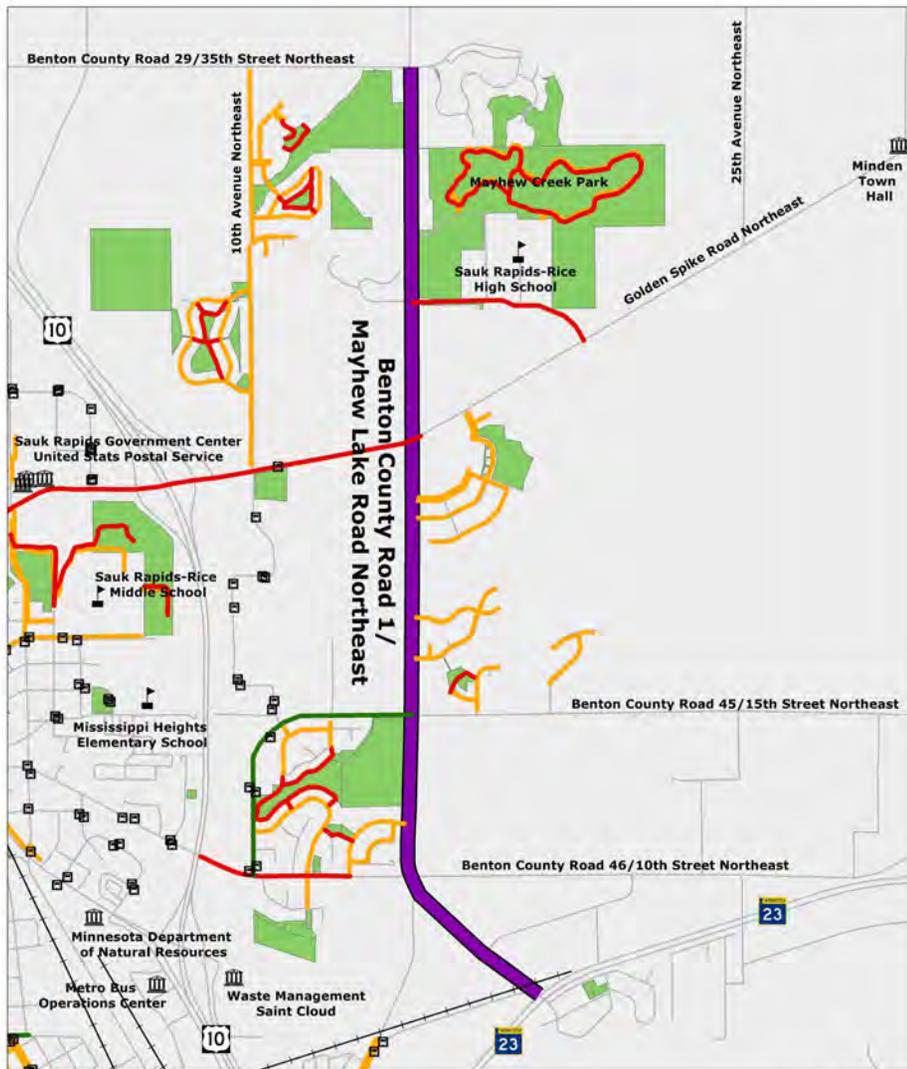
Jurisdiction: Benton County

**Project Location: Benton County Road 1
(Mayhew Lake Road NE)**

Estimated Construction Time Band: 2030-2045

Project Scope

Widen Benton County Road 1 (Mayhew Lake Road NE) to four lanes from Benton County Road 29 (35th Street NE) to Minnesota Highway 23 in the City of Sauk Rapids.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for safety enhancements at the intersections of 10th Street NE, 15th Street NE, and Golden Spike Road NE which all have a critical crash index score above average.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.
- ◆ Based on the TDM 2045 no-build scenario, this corridor will be overcapacity from Golden Spike Road NE to 15th Street NE with a V/C ratio of 2.00 and a LOS F. The northern and southern sections will both be approaching capacity.
- ◆ Based on the TDM 2045 build scenario, this corridor will be under capacity from CSAH 29 to Golden Spike Road NE with a V/C ratio of 0.4, and be approaching capacity from Golden Spike Road NE to MN 23 with a V/C ratio ranging from 0.87 to 1.09.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Based on MnDOT's 2015 pavement condition data, this section of pavement is rated in good condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ This project is located in a low-income and high minority area.

Financial Information

MTP Project Number

BEN-1

Estimated Project Cost

\$31,598,000 (2038 Dollars)

Jurisdiction: Benton County

**Project Location: Benton County Road 1/
Mayhew Lake Road NE**

Estimated Construction Time Band: 2030 - 2045

Project Scope

Widen Benton County Road 1/Mayhew Lake Road NE to four lanes from Benton County Road 29/35th Street NE to Minnesota Highway 23 in the City of Sauk Rapids.

Potential Environmental Factor Considerations

Regionally Significant Ecological Areas (DNR)

Yes

Wetlands:

Shallow Marsh, Deep Marsh, Shrub Wetland, Hardwood Wetland, and Seasonally Flooded Basin

Monitored Sites (MPCA):

Leyks Service: Above and Underground Tanks, Petroleum Remediation and Leak Site
Otto's Woodworking: Hazardous Waste
QG LLC: Air Quality, Hazardous Waste, and Stormwater

MCBS Sites of Significant Biodiversity (DNR):

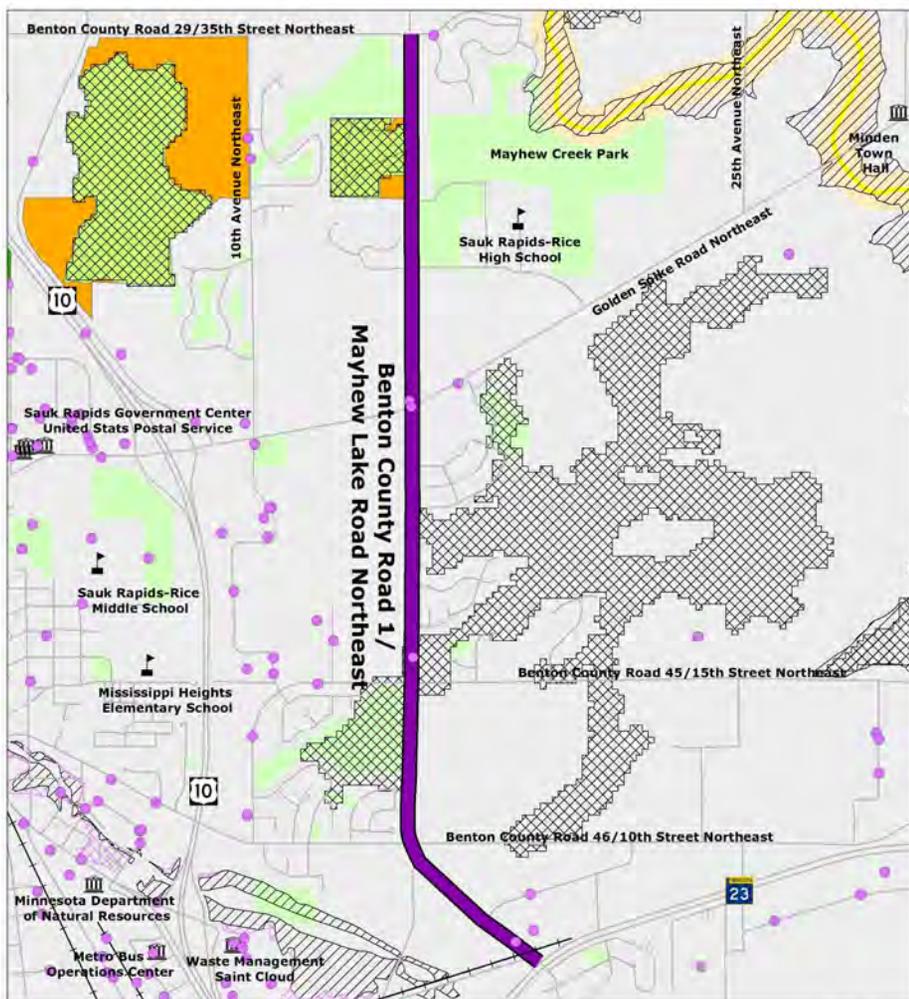
Pattison Prairie: Moderate

Native Plants:

Sedge Meadow, and Red Oak—White Oak—(Sugar Maple) Forest

Rare, Threatened, and Endangered Species (DNR):

Possible



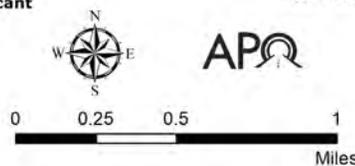
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Legend

- Project Location
- Monitored Sites (MPCA)
- Native Plants (DNR)

- Parks
- Regionally Significant Ecological Areas (DNR)

- ### MCBS Sites of Significant Biodiversity (DNR)
- Below
 - Moderate
 - High
 - Outstanding



Financial Information

MTP Project Number

BEN-1

Estimated Project Cost

\$31,598,000 (2038 Dollars)

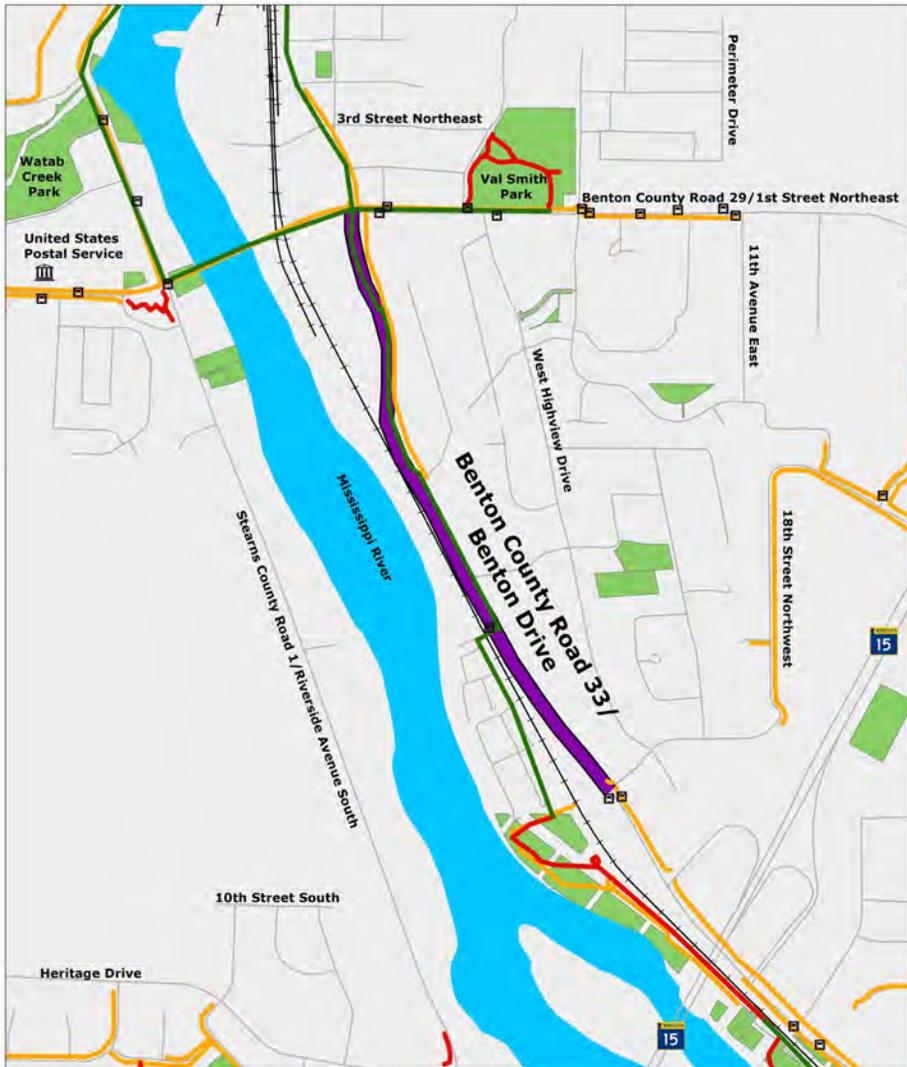
Jurisdiction: Benton County

**Project Location: Benton County Road 33
(Benton Drive)**

Estimated Construction Time Band: 2020-2023

Project Scope

Widen Benton County Road 33/Benton Drive to four lanes from Benton County Road 29/First Street NE to 18th Street NW in the City of Sauk Rapids.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features and enhancements to existing Metro Bus transit stops on Routes 21 and 22.
- ◆ Based on the TDM 2045 no-build scenario, this corridor will be overcapacity from 18th Street NW to Ridge Road with a V/C ratio of 1.37 and a LOS E. It will be under capacity from Ridge Road to Benton County Road 29 with a V/C ratio of 0.80 and a LOS B.
- ◆ Based on the TDM 2045 build scenario, this corridor will under capacity with a V/C ratio of 0.81 and a LOS B.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Based on MnDOT's 2015 pavement condition data, this section of pavement is rated in good condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ This project is located in a low-income area.

Financial Information

MTP Project Number

BEN-2

Estimated Project Cost

\$5,107,200 (2021 Dollars)

Jurisdiction: Benton County

**Project Location: Benton County Road 33/
Benton Drive**

Estimated Construction Time Band: 2020-2023

Project Scope

Widen Benton County Road 33/Benton Drive to four lanes from Benton County Road 29/First Street NE to 18th Street NW in the City of Sauk Rapids.

Potential Environmental Factor Considerations

Impaired Water:

Mississippi River: HG-F

Floodplain:

Project near 100-year and 500-year floodplains

Shoreland (300 feet)

Near 300 foot shoreland

Rare, Threatened, and Endangered Species (DNR):

Possible

Monitored Sites (MPCA):

Qwik Stop: Underground Tanks



Financial Information

MTP Project Number

BEN-2

Estimated Project Cost

\$5,107,200 (2021 Dollars)

Jurisdiction: Benton County

**Project Location: Benton County Road 29
(35th Street NE)**

Estimated Construction Time Band: 2030-2045

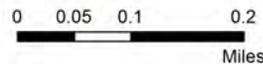
Project Scope

Widen Benton County Road 29 (35th Street NE) to a four lane road from Minnesota Highway 15 to US Highway 10 in Sauk Rapids.



Legend

- █ Project Location
- █ On-Road Bicycle Lanes
- █ Off-Road Multi-Use Trails
- █ Sidewalks
- Roads
- Transit Stop



07/16/2019

Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for safety enhancements at the intersection of Minnesota Highway 15 which has a critical crash index score above average.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.
- ◆ Based on the TDM 2045 build scenario, this corridor will be under capacity with a V/C ratio of 0.77 and a LOS B.
- ◆ This corridor is identified as a section of the ring road plan.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This project will expand the network to assist in preserving the current roadway infrastructure.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number

BEN-4

Estimated Project Cost

\$7,858,060 (2038 Dollars)

Jurisdiction: Benton County

**Project Location: Benton County Road 29/
35th Street NE**

Estimated Construction Time Band: 2030-2045

Project Scope

Widen Benton County Road 29/35th Street NE to a four lane road from Minnesota Highway 15 to US Highway 10 in Sauk Rapids.

Potential Environmental Factor Considerations

Wetlands:

Near Seasonally Flooded Basin and Shallow Marsh

Drinking Water Vulnerability:

Low

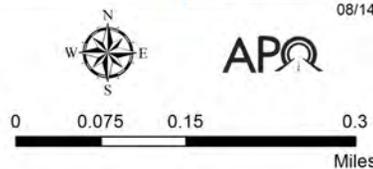
Rare, Threatened, and Endangered Species (DNR):

Possible



Legend

- Project Location
- Roads
- Monitored Sites (MPCA)
- Water Features
- Wetlands
- Parks



Financial Information

MTP Project Number

BEN-4

Estimated Project Cost

\$7,858,060 (2038 Dollars)

Jurisdiction: Benton County

**Project Location: Benton County Road 29
(35th Street NE)**

Estimated Construction Time Band: 2024-2029

Project Scope

Construct new Benton County Road 29 (35th Street NE) two lane alignment from Benton County Road 1 (Mayhew Lake Road NE) to Golden Spike Road NE in Minden Township.

Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.
- ◆ Based on the TDM 2045 build scenario, this corridor will be under capacity with a V/C ratio of 0.20 and a LOS A.
- ◆ This corridor is identified as a section of the ring road plan.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This project will expand the network to assist in preserving the current roadway infrastructure.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

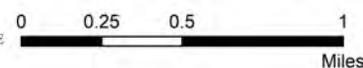
Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.



Legend

- Project Location
- Roads
- Transit Stop
- On-Road Bicycle Lanes
- Off-Road Multi-Use Trails
- Sidewalks



08/30/2019

Financial Information

MTP Project Number

BEN-5

Estimated Project Cost

\$9,690,240 (2027 Dollars)

Jurisdiction: Benton County

**Project Location: Benton County Road 29
(35th Street NE)**

Estimated Construction Time Band: 2024-2029

Project Scope

Construct new Benton County Road 29 (35th Street NE) two lane alignment from Benton County Road 1 (Mayhew Lake Road NE) to Golden Spike Road NE in Minden Township.

Potential Environmental Factor Considerations

Wetlands:

Seasonally Flooded Basin and Shallow Marsh

Impaired Water:

Mayhew Creek: E.coli

Floodplains (FEMA):

Approximately 400 centerline feet within 100 year floodplain

Shoreland (300 Feet)

Approximately 600 centerline feet within shoreland

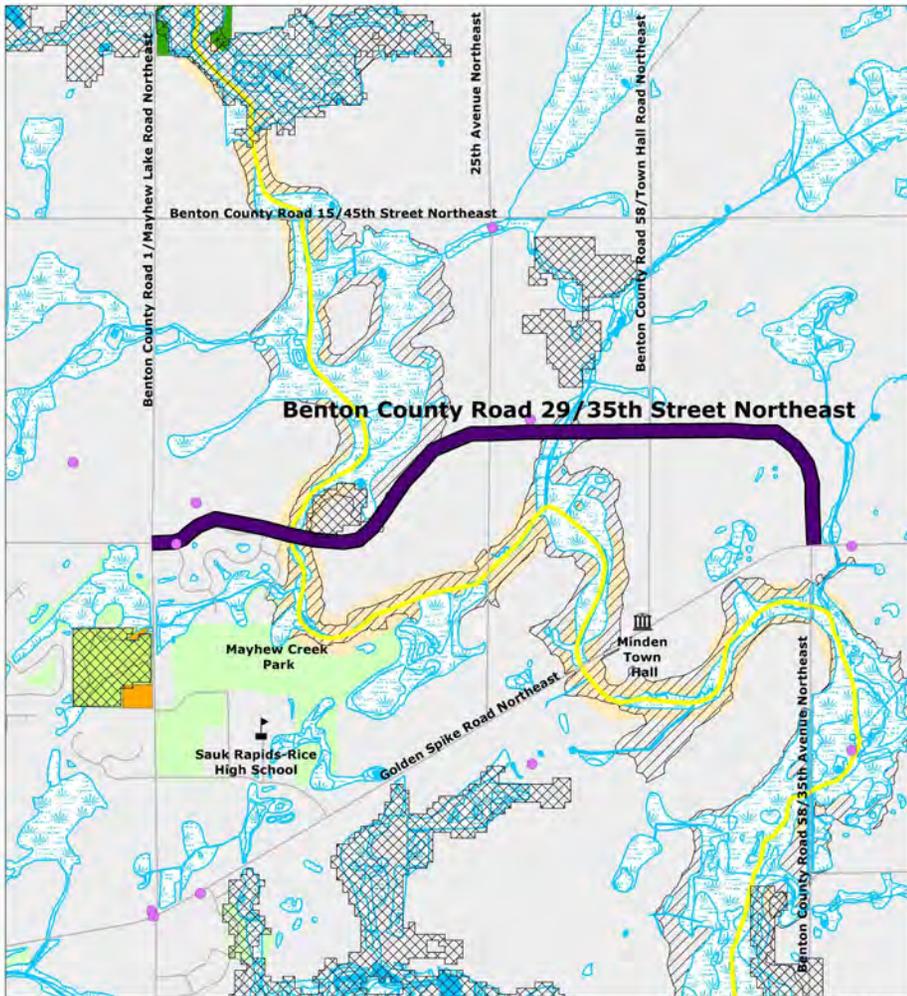
Regionally Significant Ecological Areas (DNR):

Yes

Monitored Sites (MPCA)

Villages of Greyside Apartments: Construction Stormwater

Dale Molitor Farm: Feedlots



08/30/2019

Financial Information

MTP Project Number

BEN-5

Estimated Project Cost

\$9,690,240 (2027 Dollars)

BENTON COUNTY FISCAL CONSTRAINT

In terms of expansion, Benton County has identified four projects for construction.

MTP Identifier	Type of Project	Project Location	Estimated Construction Cost	Time Frame for Completion
BEN-1	Expansion	CSAH 1 (Mayhew Lake Road NE)	\$31,598,000	Long-Range (2030-2045)
BEN-2	Expansion	CSAH 33 (Benton Drive)	\$6,451,200	Mid-Range (2024-2029)
BEN-4	Expansion	CSAH 29 (35 th Street NE)	\$7,858,060	Long-Range (2030-2045)
BEN-5	Expansion	CSAH 29 (35 th Street NE)	\$9,690,240	Mid-Range (2030-2045)
Total			\$55,597,500	

FIGURE 9.10 – AN ABBREVIATED LIST OF THE CAPACITY EXPANSION PROJECTS IDENTIFIED BY BENTON COUNTY TO BE COMPLETED WITHIN THE APO’S MPA OVER THE DURATION OF THIS PLAN.

With the total cost of these projects being estimated at \$55,597,500, Benton County will have to tap into the overall expansion revenues for the entire county. Based upon historical information, APO staff feel this would be a safe assumption for the county considering prior expansion has solely occurred within the portion of the county within the MPA. That said, Benton County has an overall expansion budget of \$59,972,979 and is thereby fiscally constrained.

Benton County	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
Expansion Budget	\$6,428,725	\$11,242,078	\$42,302,176	\$59,972,979
Expansion Carry Over from Previous Time Band	\$0	\$6,428,725	\$1,529,363	N/A
Expansion Project Costs	\$0	\$16,141,440	\$39,456,060	\$55,597,500
Expansion Balance	\$6,428,725	\$1,529,363	\$4,375,479	N/A

FIGURE 9.11 – A TOTAL OF PROJECTED AVAILABLE REVENUE FOR CAPACITY EXPANSION FOR BENTON COUNTY.

Based upon the criteria outlined in MAPPING 2045 for system preservation projects, Benton County does not have any projects within the MPA. Therefore, the county is also fiscally constrained for system preservation projects.

Benton County (within the MPA)	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$1,709,563	\$2,989,557	\$11,249,236	\$15,948,356
System Preservation Project Costs	\$0	\$0	\$0	\$0
System Preservation Balance	\$1,709,563	\$2,989,557	\$11,249,236	\$15,948,356

FIGURE 9.12 – A TOTAL OF PROJECTED AVAILABLE REVENUE FOR SYSTEM PRESERVATION FOR THE PORTION OF BENTON COUNTY WITHIN THE APO’S MPA.

WHAT WE HEARD FIRST PUBLIC COMMENT PERIOD (AUG. 12 – SEPT. 20, 2019)

- “I like the BEN-4 project.”

When asked for ideas for additional projects:

- “County Road 4 from the Mille Lacs county line.”
- “Benton County/city streets are horrible! City won’t do anything but fill potholes.”

WHAT WE HEARD SECOND PUBLIC COMMENT PERIOD (SEPT. 23 – OCT. 23, 2019)

As noted earlier in this chapter, there was a significant change to the Benton County project list presented during the first round of public comment. Those changes are listed in the table below.

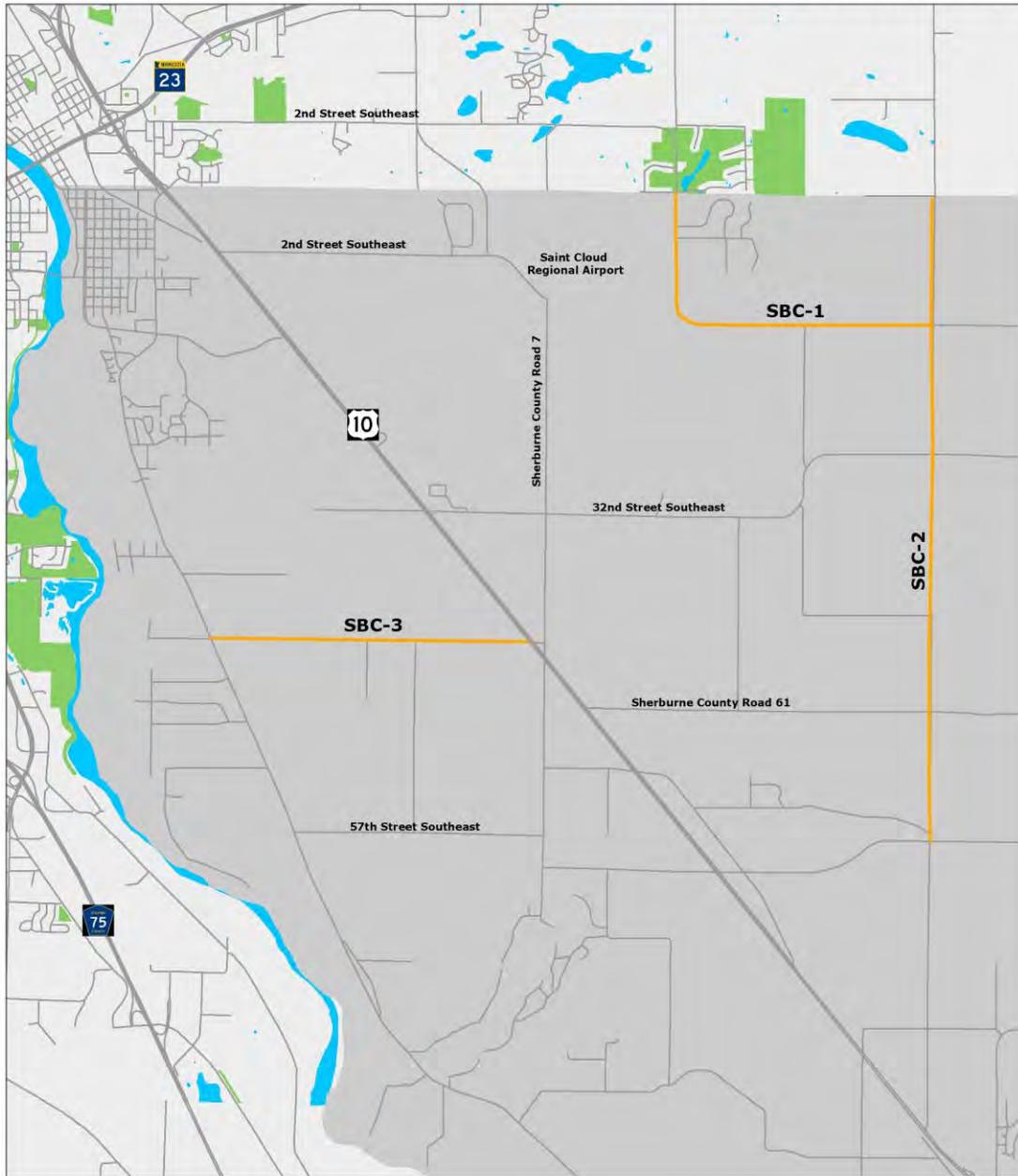
Action	ID	Project Type	Location	Termini	Estimated Project Cost
Delete	BEN-3	Widen to 4-lanes	CSAH 8 (35 th Avenue N)	Benton County Line to Second Street SE	\$14,374,500 <i>(2038 dollars)</i>
Add	BEN-5	Construct new roadway	CSAH 29	Mayhew Lake Road to 35 th Avenue NE	\$9,690,240 <i>(2027 dollars)</i>

FIGURE 9.13 – CHANGES TO BENTON COUNTY PROJECTS TO BE INCORPORATED INTO MAPPING 2045.

Comments received during this round of input were directed toward these changes.

- “This section of roadway would divert all traffic from the City of Sauk Rapids for city development and possible business expansions. This project is not needed now, maybe in the future but until then, this is senseless spending!”

Sherburne County MAPPING 2045 Projects



Legend

— Reconstruction Projects

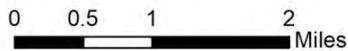


FIGURE 9.14 – MAPPING 2045 PROJECT IN SHERBURNE COUNTY

SHERBURNE COUNTY

Sherburne County has identified a total of three fiscally constrained projects over the duration of this MTP. All three are system preservation projects. The following section details those projects, the county’s financial plan and fiscal constraint, and provides comments from environmental experts and the general public on the proposed transportation projects.

SHERBURNE COUNTY: EXPANSION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
N/A	N/A	N/A	N/A	N/A	N/A

SHERBURNE COUNTY: RECONSTRUCTION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
SBC-1	County Road 62 (17 th Street SE)	Tee-to-Green Street to CSAH 20 (75 th Avenue SE)	Major Collector Reconstruction	Short-Term (2020-2023)	\$1,700,000
SBC-2	CSAH 20 (75 th Avenue SE)	Seventh Street SE to CSAH 16 (57 th Street SE)	Major Collector Reconstruction	Short-Term (2020-2023)	\$4,200,000
SBC-3	County Road 65 (42 nd Street SE)	CSAH 8 to US 10	Local Reconstruction	Short-Term (2020-2023)	\$2,300,000

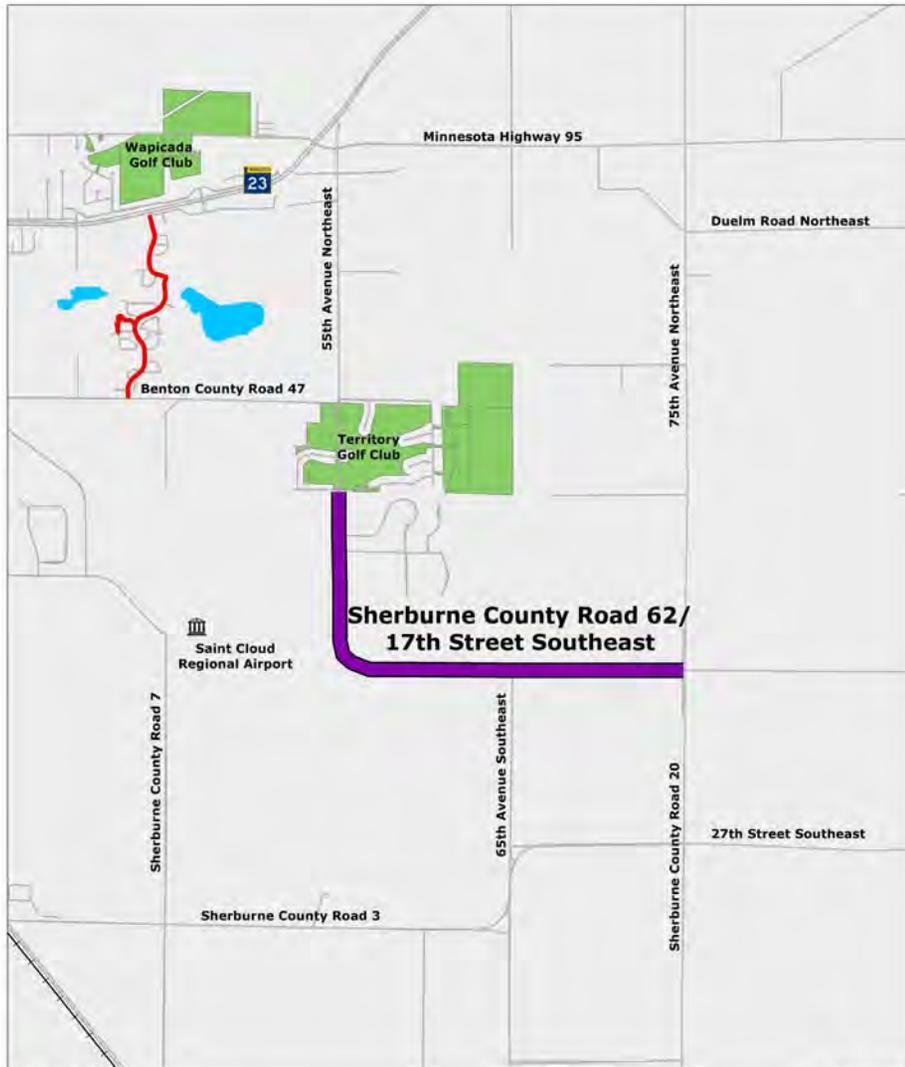
Jurisdiction: Sherburne County

**Project Location: Sherburne County Road 62
(17th Street SE)**

Estimated Construction Year: 2022

Project Scope

Reconstruct Sherburne County Road 62 from Tee-To-Green Street to Sherburne County Road 20 in Haven Township.



Goal 1: *Maintain and Enhance Transportation Safety*

- ◆ Opportunity for installation of safety features.

Goal 2: *Increase System Accessibility, Mobility, and Connectivity*

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.

Goal 3: *Efficiently Manage Operations and Cost-Effectively Preserve the System*

- ◆ Based on MnDOT's 2018 pavement condition data, this section of pavement is rated in fair condition.

Goal 4: *Support Metropolitan Vitality and Economic Development*

- ◆ This project supports the movement of people and goods.

Goal 5: *Promote Energy and Environmental Conservation*

- ◆ Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number

SBC-1

Estimated Project Cost

\$1,700,000 (2022 Dollars)

Jurisdiction: Sherburne County

**Project Location: Sherburne County Road 20
(75th Avenue SE)**

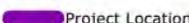
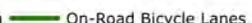
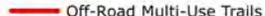
Estimated Construction Year: 2022

Project Scope

Reconstruct Sherburne County Road 20 from Seventh Street Southeast to Sherburne County Road 16 in Haven Township.



Legend

-  Project Location
-  On-Road Bicycle Lanes
-  Roads
-  Off-Road Multi-Use Trails
-  Transit Stop
-  Sidewalks



09/11/2019

Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Based on MnDOT's 2018 pavement condition data, this section of pavement is rated in fair condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number

SBC-2

Estimated Project Cost

\$4,200,000 (2022 Dollars)

Jurisdiction: Sherburne County

**Project Location: Sherburne County Road 65
(42nd Street SE)**

Estimated Construction Year: 2022

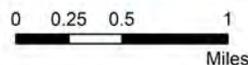
Project Scope

Reconstruct Sherburne County Road 65 from Sherburne County Road 8 to US 10 in Haven Township.



Legend

- Project Location
- On-Road Bicycle Lanes
- Roads
- Off-Road Multi-Use Trails
- Transit Stop
- Sidewalks



09/11/2019

Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Based on MnDOT's 2018 pavement condition data, this section of pavement is rated in fair condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ This project is located in a low-income and high minority area.

Financial Information

MTP Project Number

SBC-3

Estimated Project Cost

\$2,300,000 (2022 Dollars)

SHERBURNE COUNTY FISCAL CONSTRAINT

Sherburne County has not identified any capacity expanding projects that will occur within the APO’s MPA.

Sherburne County (within the MPA)	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
Expansion Budget	\$1,244,181	\$2,175,732	\$8,186,940	\$11,606,853
Expansion Carry Over from Previous Time Band	\$0	\$1,244,181	\$3,419,913	N/A
Expansion Project Costs	\$0	\$0	\$0	\$0
Expansion Balance	\$1,244,181	\$3,419,914	\$11,606,853	N/A

FIGURE 9.15 – A TOTAL OF PROJECTED AVAILABLE REVENUE FOR CAPACITY EXPANSION FOR SHERBURNE COUNTY.

In looking strictly at Sherburne County within the APO’s MPA, the county has budgeted for approximately \$46,427,373 for system preservation over the duration of MAPPING 2045.

Based upon the criteria outlined in MAPPING 2045 for system preservation projects, Sherburne County has identified three projects for construction.

MTP Identifier	Type of Project	Project Location	Estimated Construction Cost	Time Frame for Completion
SBC-1	Reconstruction	CR 62 (17 th Street SE)	\$1,700,000	2022
SBC-2	Reconstruction	CSAH 20 (75 th Avenue SE)	\$4,200,000	2022
SBC-3	Reconstruction	CR 65 (42 nd Street SE)	\$2,300,000	2022
Total			\$8,200,000	

FIGURE 9.16 – A LIST OF SYSTEM PRESERVATION (RECONSTRUCTION) PROJECTS FOR SHERBURNE COUNTY WITHIN THE MPA OVER THE DURATION OF MAPPING 2045.

With the total of these projects being estimated at \$8,200,000 in 2022 dollars, Sherburne County will have to tap into the overall system preservation revenues for the entire county. That said, Sherburne County has an overall system preservation budget of \$55,296,916 in the short-term (2020-2023) and is thereby fiscally constrained.

Sherburne County	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$55,296,916	\$96,699,154	\$363,863,753	\$515,859,823
System Preservation Project Costs	\$8,200,000	\$0	\$0	\$8,200,000
System Preservation Balance	\$47,096,916	\$96,699,154	\$363,863,753	\$507,659,823

FIGURE 9.17 – A TOTAL OF PROJECTED AVAILABLE REVENUE FOR SYSTEM PRESERVATION FOR SHERBURNE COUNTY.

WHAT WE HEARD FIRST PUBLIC COMMENT PERIOD (AUG. 12 – SEPT. 20, 2019)

No public comments were received.

WHAT WE HEARD SECOND PUBLIC COMMENT PERIOD (SEPT. 23 – OCT. 23, 2019)

As noted earlier in this chapter, there was a significant change to the Sherburne County project list presented during the first round of public comment. Previously, Sherburne County did not have any projects programmed over the duration of MAPPING 2045. Now, the county has included three system preservation projects as listed in the table below.

Action	ID	Project Type	Location	Termini	Estimated Project Cost
Add	SBC-1	Reconstruct Roadway	CR 62 (17 th Street SE)	Tee-to-Green Street to CSAH 20 (75 th Avenue SE)	\$1,700,000 (2021 dollars)
Add	SBC-2	Reconstruct Roadway	CSAH 20 (75 th Avenue SE)	Seventh Street SE to CSAH 16 (57 th Street SE)	\$4,200,000 (2021 dollars)
Add	SBC-3	Reconstruct Roadway	CR 65 (42 nd Street SE)	CSAH 8 to US 10	\$2,300,000 (2021 dollars)

FIGURE 9.18 – PROJECTS FOR SHERBURNE COUNTY TO BE INCORPORATED INTO MAPPING 2045.

Comments received during this round of input were directed toward these changes.

- “Some of these should be widened.”

Stearns County MAPPING 2045 Projects

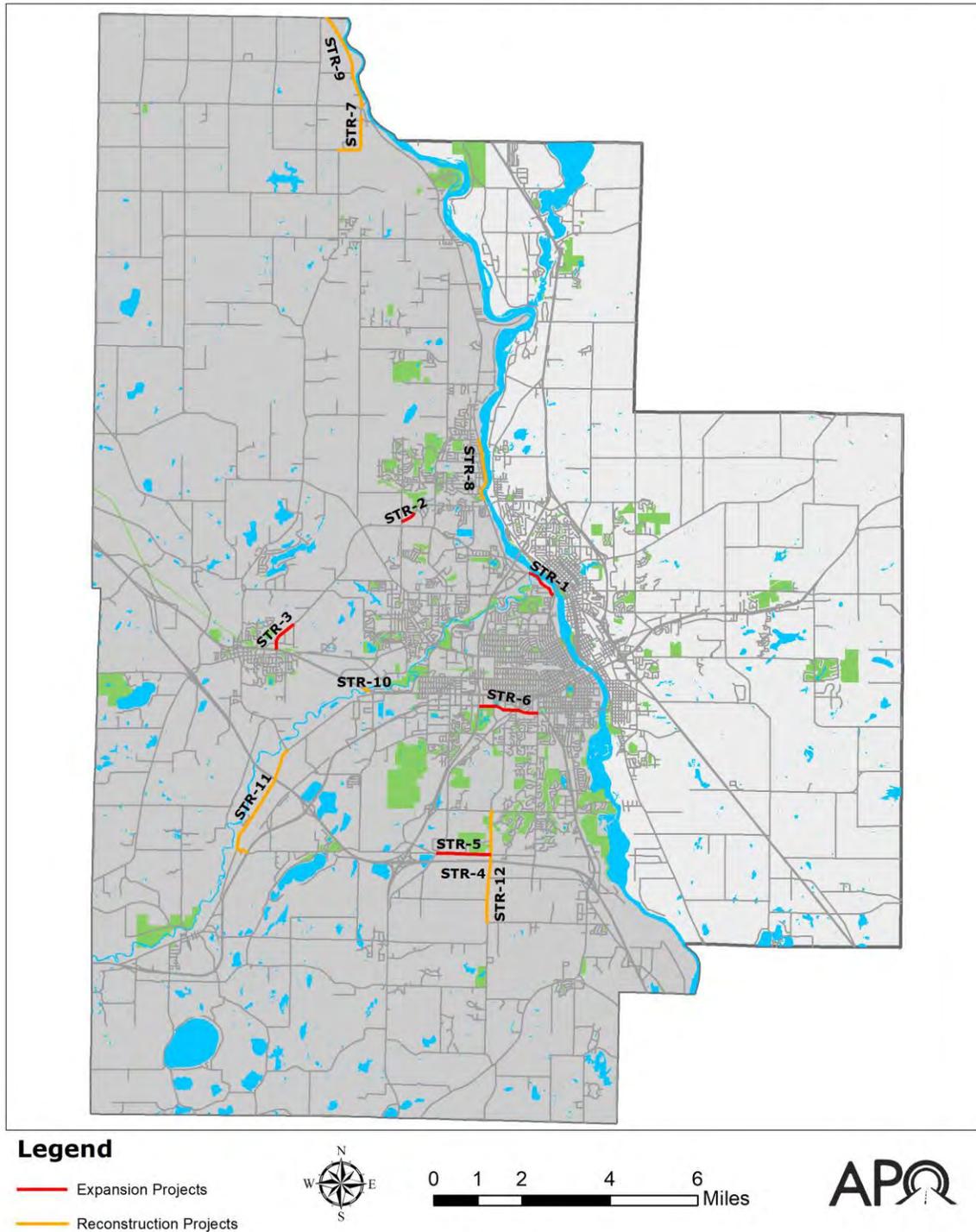


FIGURE 9.19 – MAPPING 2045 PROJECTS IN STEARNS COUNTY

STEARNS COUNTY

Stearns County has identified a total of 14 fiscally constrained projects over the duration of this MTP; eight are capacity expansion and six are system preservation. The following section details **those projects, the county’s financial plan and fiscal constraint**, and provides comments from environmental experts and the general public on the proposed transportation projects.

STEARNS COUNTY: EXPANSION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
STR-1	CSAH 1 (River Avenue N) in Sartell	MSAS 145 (Ninth Avenue N) to County Road 120	Four-Lane Undivided Arterial	Short-Term (2020-2023)	\$6,042,190
STR-2	CSAH 133 (Second Street S) in Sartell	Theisen Road to CSAH 133 (Sixth Street S/19 th Avenue N)	Four-Lane Undivided Arterial	Short-Term (2020-2023)	\$2,667,980
STR-3	CSAH 133 in Saint Joseph	CSAH 75 to 19 th Avenue NE	Four-Lane Undivided Arterial	Mid-Range (2024-2029)	\$7,659,120
STR-5	County Road 122 (40 th Street S) in Saint Cloud	CSAH 74 to CSAH 136 (Oak Grove Road SW)	Four-Lane Collector	Long-Range (2030-2045)	\$12,846,400
STR-6	CSAH 75 (Second Street S) in Saint Cloud	MN 15 to MSAS 141 (Cooper Avenue S)	Six-Lane Divided Arterial	Long-Range (2030-2045)	\$31,579,870
STR-13	CSAH 1 (Riverside Avenue S) in Sartell	MSAS 118 (Heritage Drive/River Oaks Lane) to CSAH 78	Four-Lane Undivided Arterial	Long-Range (2030-2045)	\$18,031,580
STR-14	County Road 134 (50 th Avenue N) in Saint Cloud	Sauk River Bridge to Pinecone Road S	Four-Lane Divided Arterial	Mid-Range (2024-2029)	\$7,334,880

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
STR-15	CSAH 4 (Eighth Street N/Veterans Drive) in Saint Cloud	Anderson Avenue to MN 15	Six-Lane Divided Arterial	Long-Range (2030-2045)	\$15,281,000

Jurisdiction: Stearns County

**Project Location: Stearns County Road 1
(River Avenue N)**

Estimated Construction Time Band: 2020-2023

Project Scope

Widen Stearns County Road 1 (River Avenue N) to four lanes from Stearns County Road 120 to Ninth Avenue N in the City of Sartell.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity to bridge gap between existing multi-use trails equipped with ADA compliant features and enhancements to existing Metro Bus transit stops along Route 31.
- ◆ Based on the TDM 2045 no-build scenario, this corridor will be overcapacity with a V/C ratio of 1.44 and a LOS E.
- ◆ Based on the TDM 2045 build scenario, this corridor will still be overcapacity with a V/C ratio of 1.20 and a LOS D.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Based on MnDOT's 2018 pavement condition data, this section of pavement is rated in good condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ This project is located in a low-income and high minority area.

Financial Information

MTP Project Number

STR-1

Estimated Project Cost

\$6,042,190 (2021 Dollars)

Jurisdiction: Stearns County

**Project Location: Stearns County Road 1/
River Avenue N**

Estimated Construction Time Band: 2020-2023

Project Scope

Widen Stearns County Road 1/River Avenue N to four lanes from Stearns County Road 120 to Ninth Avenue N in the City of Sartell.

Potential Environmental Factor Considerations

Impaired Water:

*Mississippi River: Hg-F
Sauk River: Nutrients, PCB-F, HG-F*

Wetlands:

Hardwood Wetland, and Non-Vegetated Aquatic Community

100-Year and 500 Year Floodplain:

Approximately 0.13 centerline miles within floodplain

Shoreland (300 feet):

Approximately 0.40 centerline miles within the shoreland

Protected Building (NHR):

Arnold/Heim/Wixom Home

Historic Properties:

Heims Mill

Monitored Sites (MPCA):

*Heim Milling Co: Hazardous Waste and Industrial Stormwater
LeSauk Township: Stormwater*

MCBS Sites of Significant Biodiversity (DNR):

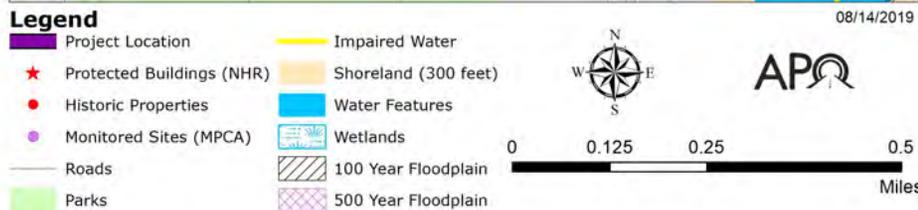
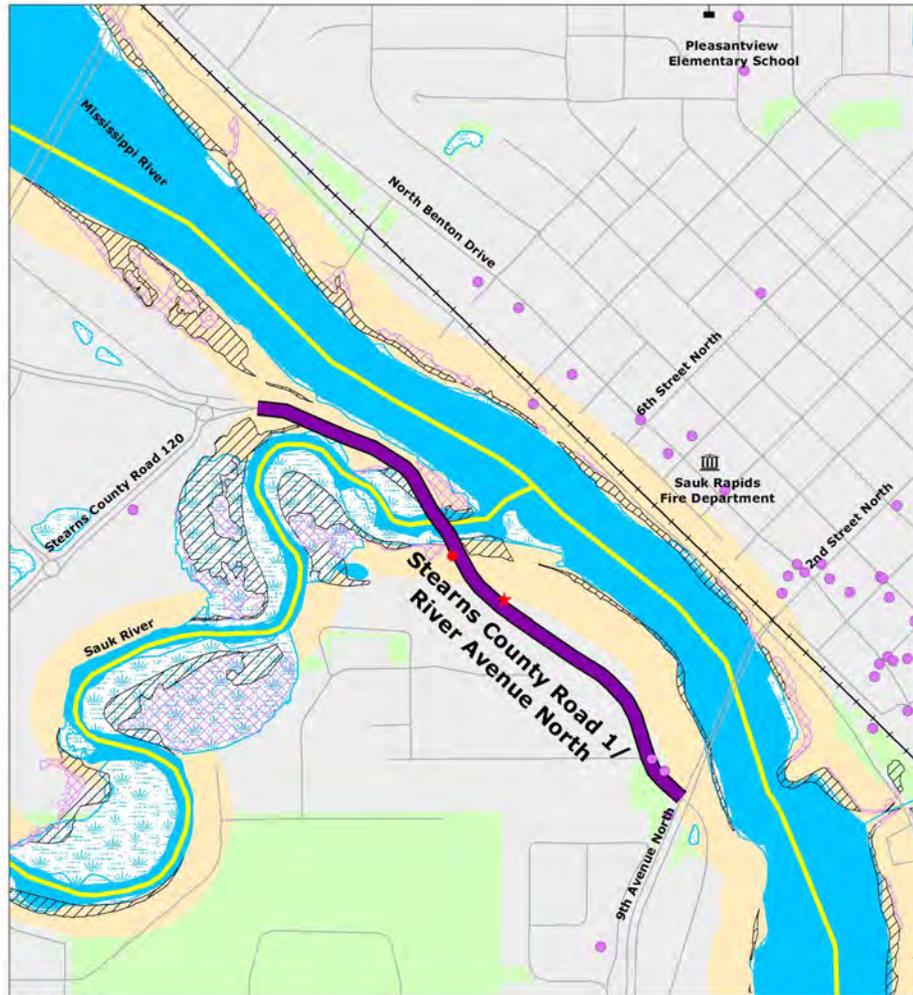
Below

Rare, Threatened, and Endangered Species (DNR):

Possible

Environmental Public Comments:

- *"Will the section fall under the complete streets policy where trails to be included? Maybe some wetland on both sides of the river. Erosion control practices and their timing will be key if project allowed to move forward. This project is immediately above the surface water intake of the City of St. Cloud."*



Financial Information

MTP Project Number

STR-1

Estimated Project Cost

\$6,042,190 (2021 Dollars)

Jurisdiction: Stearns County

**Project Location: Stearns County Road 133
(Second Street S)**

Estimated Construction Time Band: 2020-2023

Project Scope

Construct Stearns County Road 133 (Second Street S) new alignment of four lanes from 19th Avenue N to existing Second Street S in the City of Sartell.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity to bridge gap between existing multi-use trails/sidewalks equipped with ADA compliant features.
- ◆ Based on the TDM 2045 build scenario, this corridor will be under capacity with a V/C ratio of 0.65 and a LOS A.
- ◆ This corridor is identified as a section of the ring road plan.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This project will expand the network to assist in preserving the current roadway infrastructure.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ This project is located in a high minority area.

Financial Information

MTP Project Number

STR-2

Estimated Project Cost

\$2,667,980 (2021 Dollars)

Jurisdiction: Stearns County

**Project Location: Stearns County Road 133/
Second Street S**

Estimated Construction Time Band: 2020-2023

Project Scope

Construct Stearns County Road 133/Second Street S new alignment of four lanes from 19th Avenue N to existing Second Street S in the City of Sartell.

Potential Environmental Factor Considerations

Wetlands:

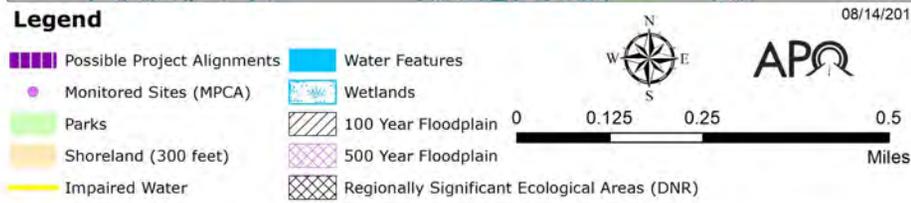
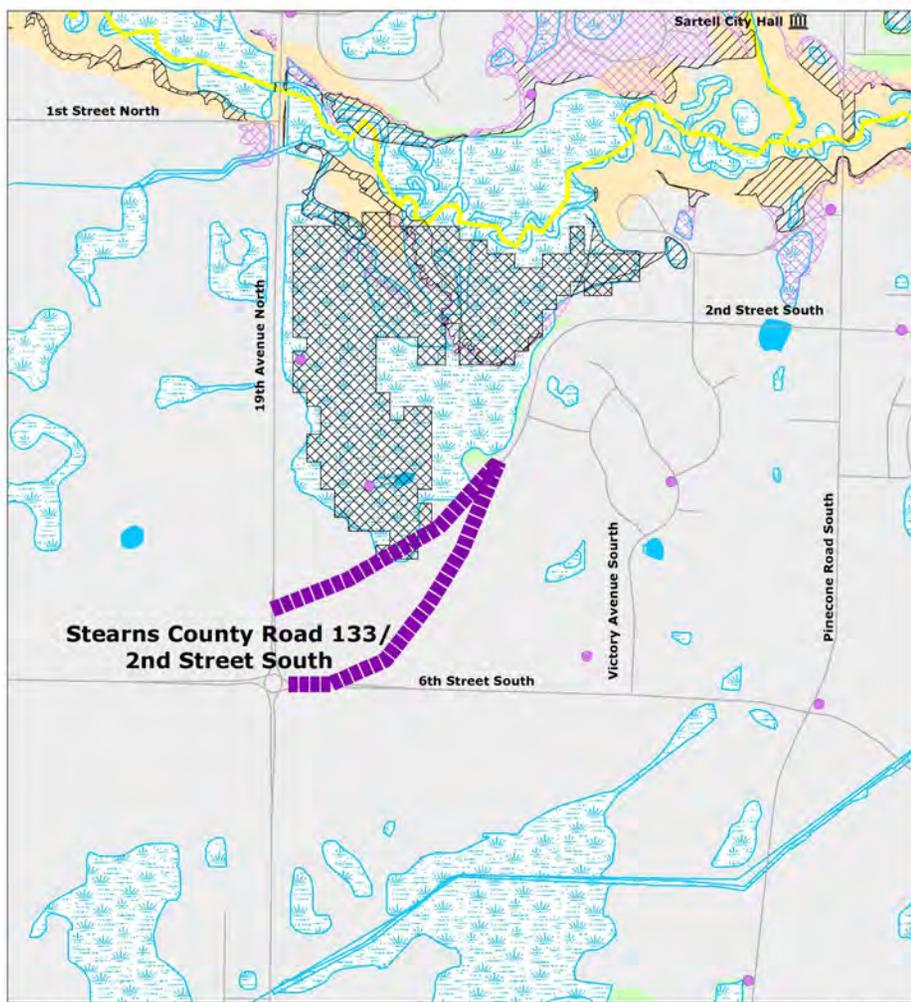
Hardwood Wetlands, and Shrub Wetland

Regionally Significant Ecological Areas (DNR):

Yes

Environmental Public Comments:

- "This alignment could be pushed away from the wetland and designed with less wetland impacts. It should be clarified if the complete streets policy applies to County Road projects."
- "The new alignment can be constructed adjacent and south and east of the wetland and woods."



Financial Information

MTP Project Number

STR-2

Estimated Project Cost

\$2,667,980 (2021 Dollars)

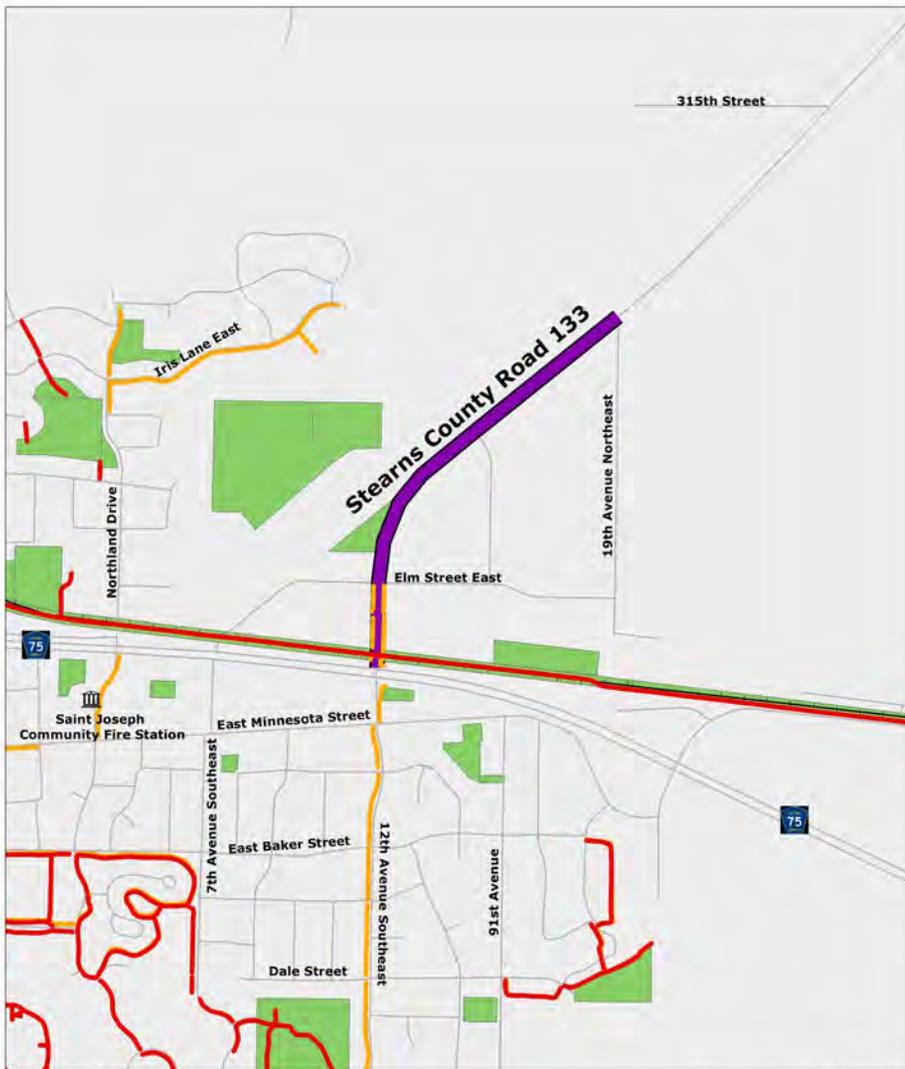
Jurisdiction: Stearns County

Project Location: Stearns County Road 133

Estimated Construction Time Band: 2024-2029

Project Scope

Widen Stearns County Road 133 to four lanes from Stearns County Road 75 to 19th Avenue NE in the City of Saint Joseph.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.
- ◆ Based on the TDM 2045 no-build scenario, this corridor will be overcapacity from Stearns County Road 75 to Elm Street E with a V/C ratio of 1.51 and a LOS F. It will also be overcapacity from Elm Street E to 19th Avenue NE with a V/C ratio of 1.12 and a LOS D.
- ◆ Based on the TDM 2045 build scenario, this corridor will be overcapacity from Stearns County Road 75 to 19th Avenue NE with a V/C ratio of 0.75 and a LOS B.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Based on MnDOT's 2018 pavement condition data, this section of pavement is rated in good condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ This project is located in a high minority area.

Financial Information

MTP Project Number

STR-3

Estimated Project Cost

\$7,659,120 (2027 Dollars)

Jurisdiction: Stearns County

Project Location: Stearns County Road 133

Estimated Construction Time Band: 2024 - 2029

Project Scope

Widen Stearns County Road 133 to four lanes from Stearns County Road 75 to 19th Avenue NE in the City of Saint Joseph.

Potential Environmental Factor Considerations

Wetlands:

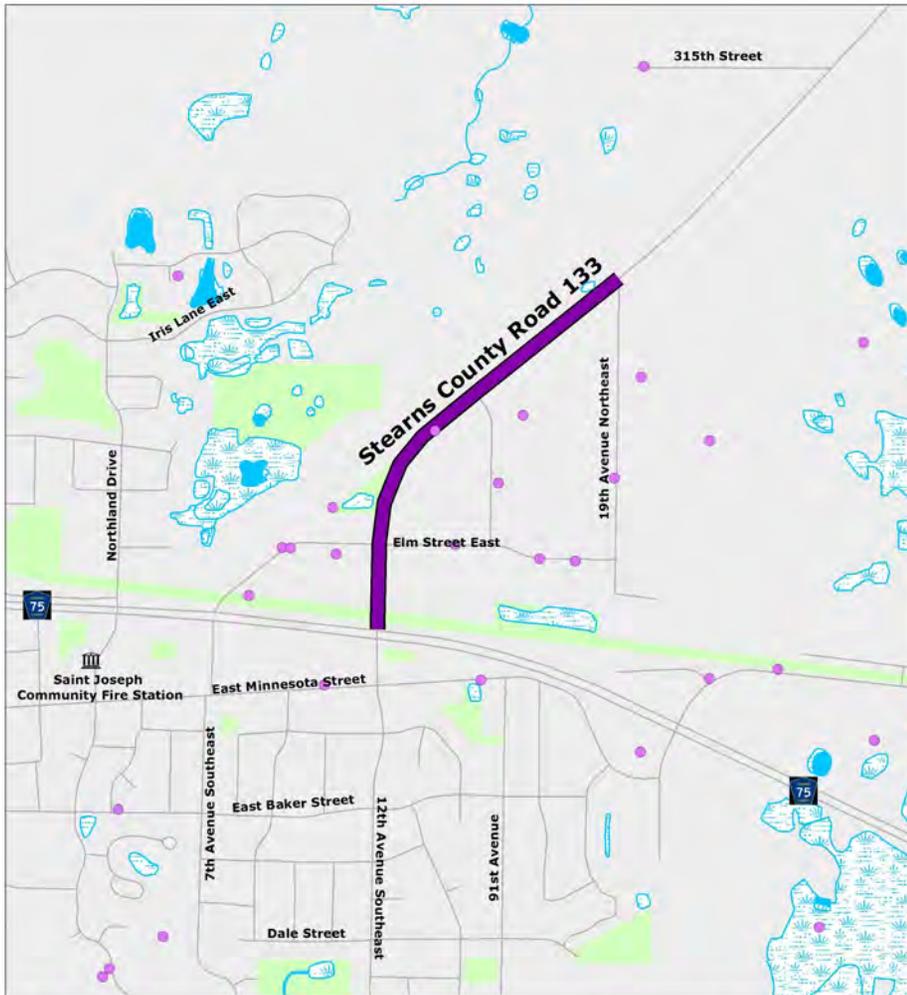
Near Shallow Open Water Community

Monitored Sites (MPCA):

US Army AMSA 101G: Aboveground Tanks and Hazardous Waste

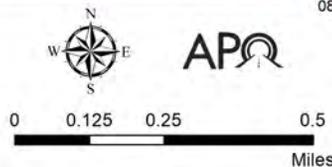
Environmental Public Comments:

- "Map should be updated to show that the RR Track is now a regional trail."



Legend

- Project Location
- Monitored Sites (MPCA)
- Roads
- Water Features
- Wetlands
- Parks



Financial Information

MTP Project Number

STR-3

Estimated Project Cost

\$7,659,120 (2027 Dollars)

Jurisdiction: Stearns County

**Project Location: Stearns County Road 122
(40th Street S)**

Estimated Construction Time Band: 2024-2029

Project Scope

Widen Stearns County Road 122 (40th Street S) to four lanes from Stearns County Road 74 to Stearns County Road 136 (Oak Grove Road SW) in the City of Saint Cloud.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for safety enhancements at the intersection of Stearns County Road 122 (40th Street S) which has a critical crash index score above average.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.
- ◆ Based on the TDM 2045 no-build scenario, this corridor from Stearns County Road 136 to 43rd Avenue S will be overcapacity with a V/C ratio of 1.17 and a LOS D. It will be under capacity from 43rd Avenue S to Stearns County Road 74 with a V/C ratio of 0.78 and a LOS B.
- ◆ Based on the TDM 2045 build scenario, this corridor from Stearns County Road 136 to 43rd Avenue S will be under capacity with a V/C ratio of 0.65 and a LOS A. It will be under capacity from 43rd Avenue S to Stearns County Road 74 with a V/C ratio of 0.55 and a LOS A.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Based on MnDOT's 2018 pavement condition data, this section of pavement is rated in good condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number

STR-5

Estimated Project Cost

\$8,332,800 (2027 Dollars)

Jurisdiction: Stearns County

**Project Location: Stearns County Road 122/
40th Street S**

Estimated Construction Time Band: 2024-2029

Project Scope

Widen Stearns County Road 122/40th Street S to four lanes from Stearns County Road 74 to Stearns County Road 136/ Oak Grove Road SW in the City of Saint Cloud.

Potential Environmental Factor Considerations

Impaired Water:

Robinson Hill Creek: E.coli

Wetlands:

Shrub Wetland, and Seasonally Flooded Basin

Shoreland (300 Feet):

Approximately 0.12 miles are within Robinson Hill Creek shoreland

Rare, Threatened, and Endangered Species (DNR):

Possible

Regionally Significant Ecological Areas (DNR):

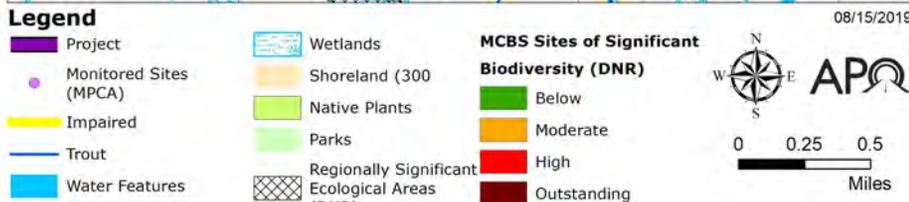
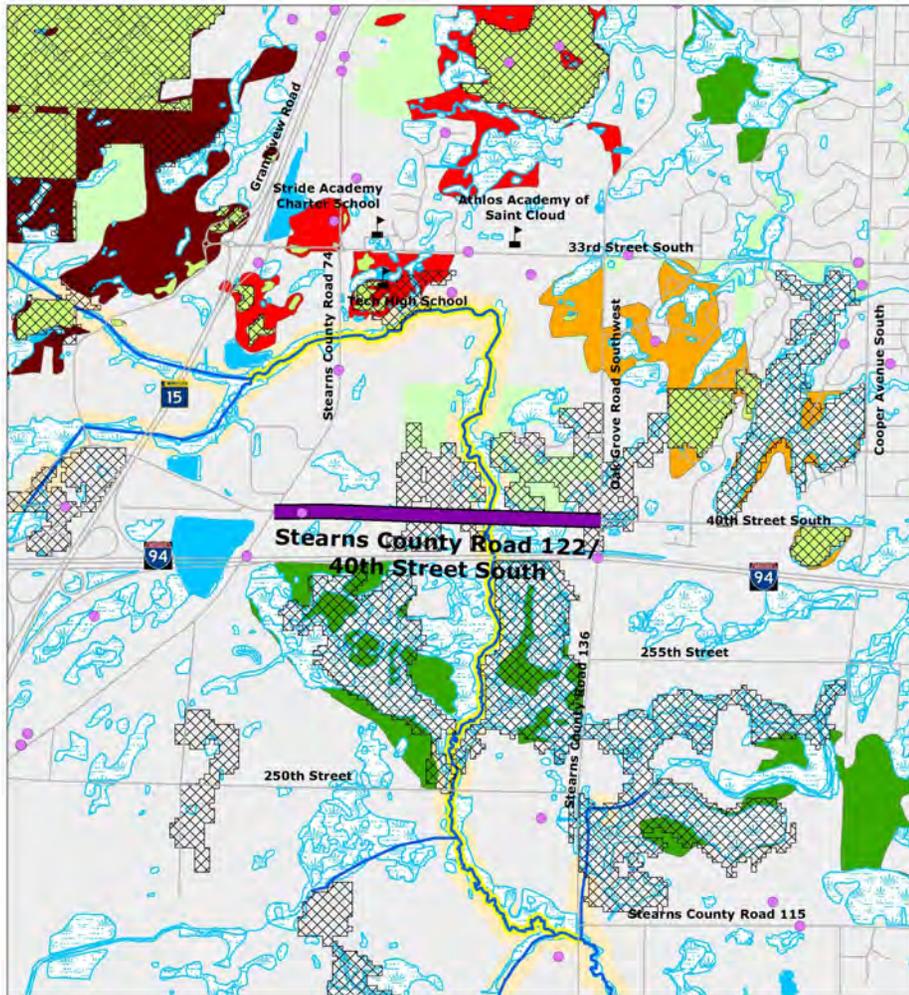
Yes

Monitored Sites (MPCA):

Ben's Auto Body Shop: Hazardous Waste

Environmental Public Comments:

- "Complete Streets Policy? Design in a way to avoid/minimize impacts to Trout Stream and wetlands associated with the Trout Stream. Need to include Blanding's Turtle and tubercled rein orchid as well?"



Financial Information

MTP Project Number

STR-5

Estimated Project Cost

\$8,332,800 (2027 Dollars)

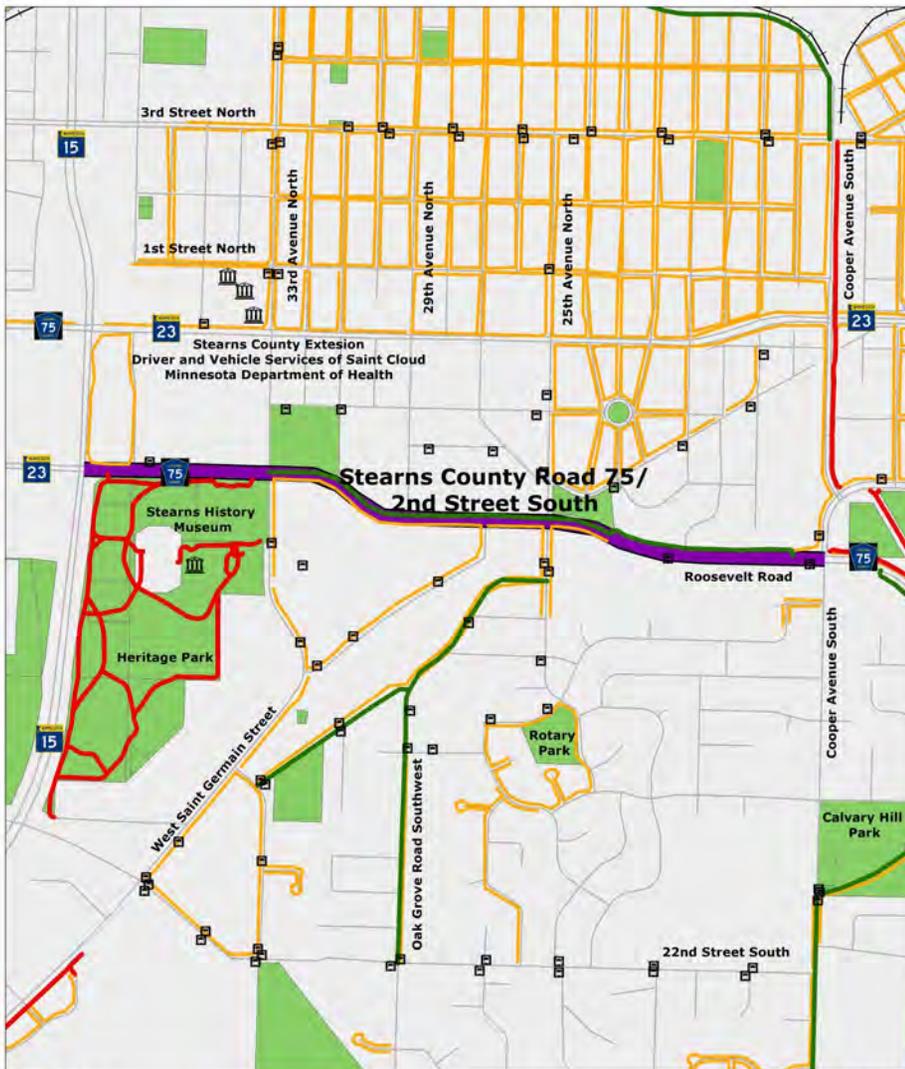
Jurisdiction: Stearns County

**Project Location: Stearns County Road 75
(Second Street S)**

Estimated Construction Time Band: 2030-2045

Project Scope

Widen Stearns County Road 75 (Second Street S) to six lanes from Minnesota Highway 15 to Cooper Avenue S in the City of Saint Cloud.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features and enhancements to existing Metro Bus transit stops along Routes 3 and 11.
- ◆ Based on the TDM 2045 no-build scenario, this corridor will be overcapacity from Minnesota Highway 15 to 25th Avenue S with a V/C ratio of 1.17 and a LOS D. This corridor will also be over capacity from 25th Avenue S to Cooper Avenue S with a V/C ratio of 1.09 and a LOS C.
- ◆ Based on the TDM 2045 build scenario, this corridor will be under capacity from Minnesota Highway 15 to 25th Avenue S with a V/C ratio of 1.00 and a LOS C. This corridor will also be under capacity from 25th Avenue S to Cooper Avenue S with a V/C ratio of 0.78 and a LOS B.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Based on MnDOT's 2018 pavement condition data, this section of pavement is rated in good condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ Stearns County Road 75 is classified as a Tier Two Minnesota principal freight network and recognized as an important corridor for the movement of goods and freight.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ This project is located in a low-income and high minority area.

Financial Information

MTP Project Number

STR-6

Estimated Project Cost

\$31,579,870 (2038 Dollars)

Jurisdiction: Stearns County

**Project Location: Stearns County Road 75/
Second Street S**

Estimated Construction Time Band: 2030 - 2045

Project Scope

Widen Stearns County Road 75/Second Street S to six lanes from Minnesota Highway 15 to Cooper Avenue S in the City of Saint Cloud.

Potential Environmental Factor Considerations

Rare, Threatened, and Endangered Species (DNR):

Possible

Monitored Sites (MPCA):

Walmart Supercenter 3088: Hazardous Waste (Very Small Quantity Generator)

City of Saint Cloud: Stormwater

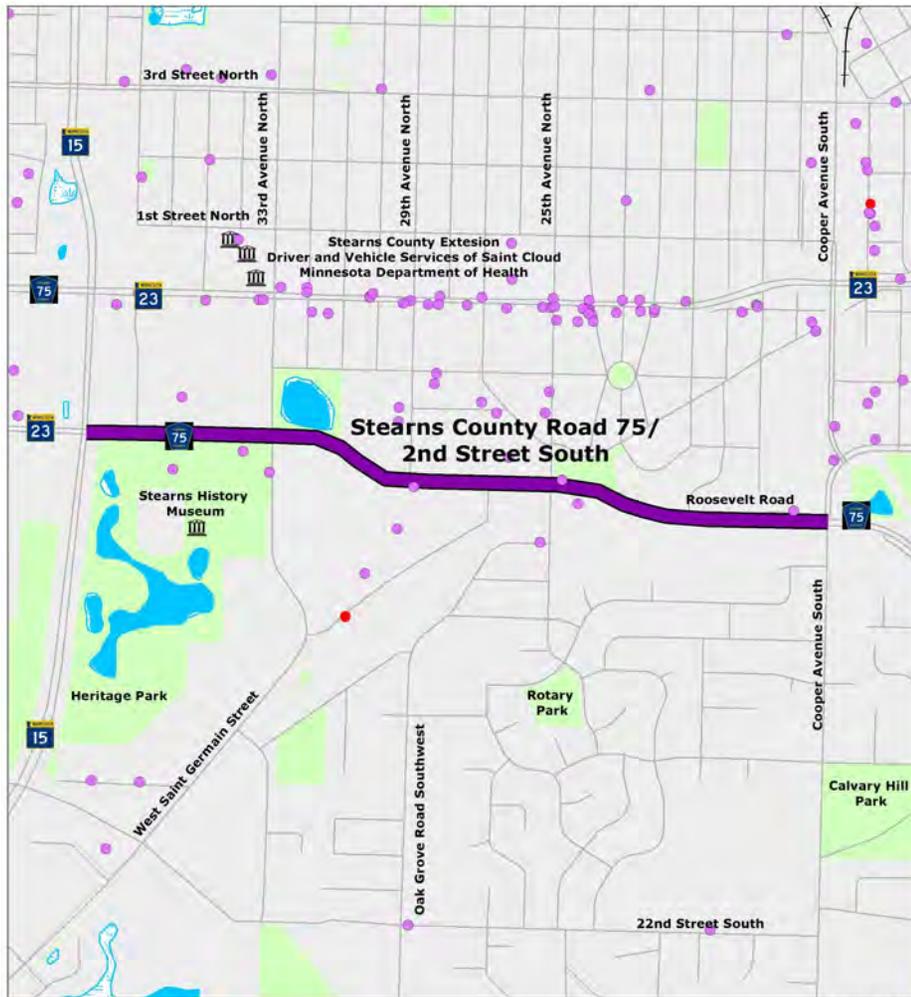
Payless Cashways 0257: Underground Tanks

Tenvoorde Ford INC: Hazardous Waste (Small Quantity Generator)

Lumber One: Above Ground Tanks

Environmental Public Comments:

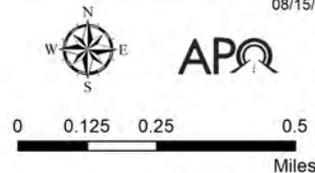
- "Add St. Cloud Sensitive Areas to Map. Complete Streets Policy?"



08/15/2019

Legend

- Project Location
- Monitored Sites (MPCA)
- Parks
- Water Features
- Protected Buildings (NHR)
- Historic Properties



Financial Information

MTP Project Number

STR-6

Estimated Project Cost

\$31,579,870 (2038 Dollars)

Jurisdiction: Stearns County

**Project Location: Stearns County Road 1
(Riverside Avenue)**

Estimated Construction Time Band: 2030-2045

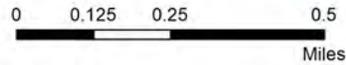
Project Scope

Widen Stearns County Road 1 (Riverside Avenue) to four lanes from Heritage Drive to Stearns County Road 78 in the City of Sartell.



Legend

- Project Location
- Roads
- Transit Stop
- On-Road Bicycle Lanes
- Off-Road Multi-Use Trails
- Sidewalks



08/15/2019

Goal 1: Maintain and Enhance Transportation Safety

- Opportunity for safety enhancements at the intersection of Heritage Drive which has a critical crash index score above average.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- Opportunity for multimodal improvements equipped with ADA compliant features.
- Based on the TDM 2045 no-build scenario, this corridor will be overcapacity with a V/C ratio of 1.41 and a LOS E.
- Based on the TDM 2045 build scenario, this corridor will be under capacity with a V/C ratio of 0.61 and a LOS A.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- Based on MnDOT's 2018 pavement condition data, this section of pavement is rated in good condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number	STR-13
Estimated Project Cost	\$18,031,580 (2038 Dollars)

Jurisdiction: Stearns County

**Project Location: Stearns County Road 1
(Riverside Avenue S)**

Estimated Construction Time Band: 2030 - 2045

Project Scope

Widen Stearns County Road 1 (Riverside Avenue S) to four lanes from Heritage Drive to Stearns County Road 78 in the City of Sartell.

Potential Environmental Factor Considerations

Impaired Water:

Mississippi River: Hg-F

Shoreland (300 feet):

Approximately 0.40 centerline miles within the shoreland

Monitored Sites (MPCA):

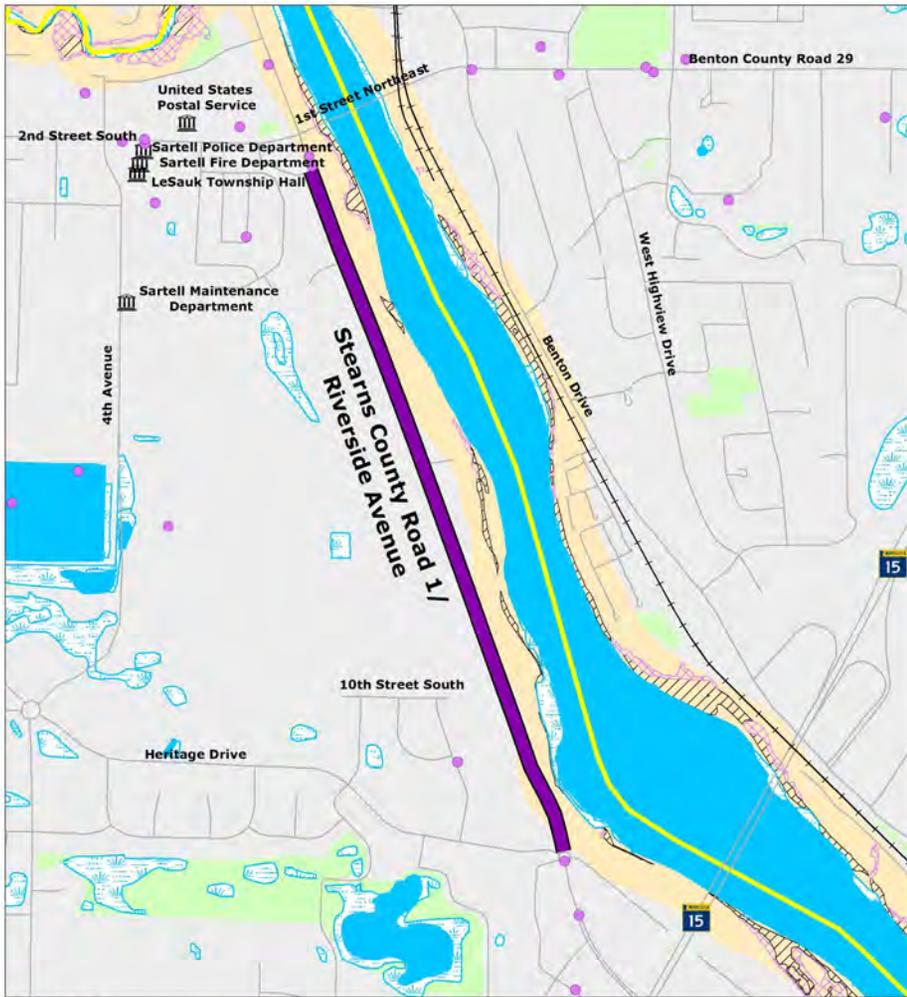
O'Reilly Auto Parts: Hazardous Waste

Family Dollar Store 6444: Hazardous Waste

Holiday Stationstore #4075: Underground Tanks

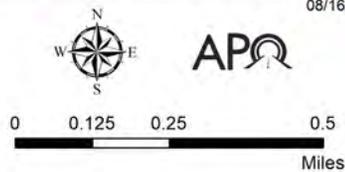
Rare, Threatened, and Endangered Species (DNR):

Possible



Legend

- Project Location
- Monitored Sites (MPCA)
- Impaired Water
- Water Features
- Wetlands
- Shoreland (300 feet)
- 100 Year Floodplain
- 500 Year Floodplain
- Roads
- Parks



Financial Information

MTP Project Number

STR-13

Estimated Project Cost

\$18,031580 (2038 Dollars)

Jurisdiction: Stearns County

Project Location: Stearns County Road 134

Estimated Construction Time Band: 2024-2029

Project Scope

Widen Stearns County Road 134 to four lanes from Sauk River Bridge to Pinecone Road S in the City of Saint Cloud.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.
- ◆ Based on the TDM 2045 no-build scenario, this corridor will be overcapacity with a V/C ratio of 1.70 and a LOS F.
- ◆ Based on the TDM 2045 build scenario, this corridor will be approaching capacity with a V/C ratio of 0.94 and a LOS D.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Based on MnDOT's 2018 pavement condition data, this section of pavement is rated in fair condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number

STR-14

Estimated Project Cost

\$7,334,880 (2027 Dollars)

Jurisdiction: Stearns County

Project Location: Stearns County Road 134

Estimated Construction Time Band: 2024-2029

Project Scope

Expand Stearns County Road 134 to four lanes from Sauk River Bridge to Pinecone Road S in the City of Saint Cloud.

Potential Environmental Factor Considerations

Impaired Water:

Sauk River: Hg-F

Shoreland (300 feet):

Approximately 1,840 linear feet within the shoreland

500 Year Floodplain

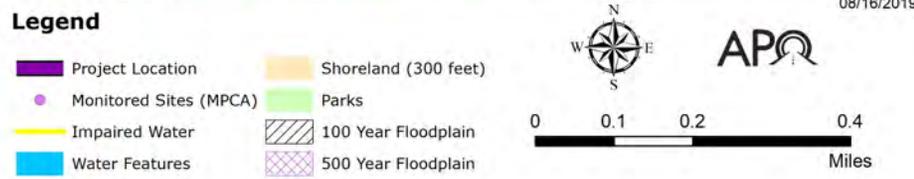
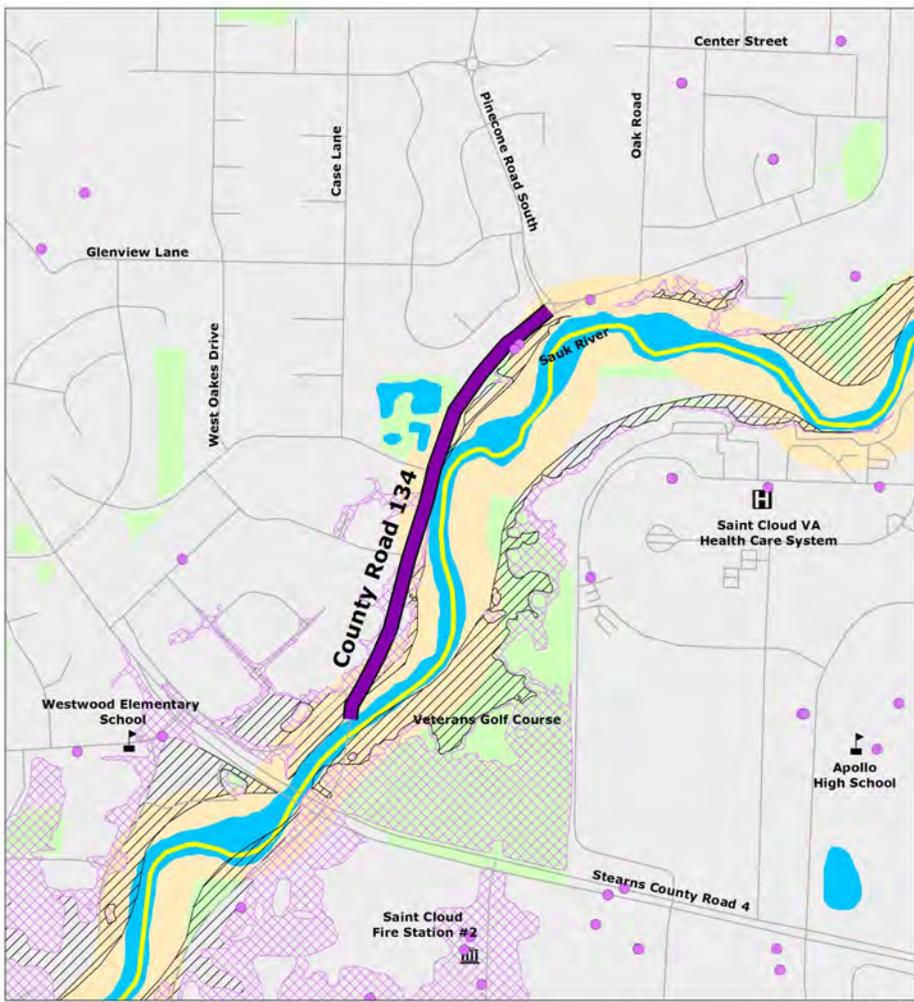
Approximately 900 linear feet within the 500 year floodplain

Monitored Sites (MPCA):

Recovery Plus Adolescent Services: Hazardous Waste

Rare, Threatened, and Endangered Species (DNR):

Possible



Financial Information

MTP Project Number	STR-14
Estimated Project Cost	\$7,334,880 (2027 Dollars)

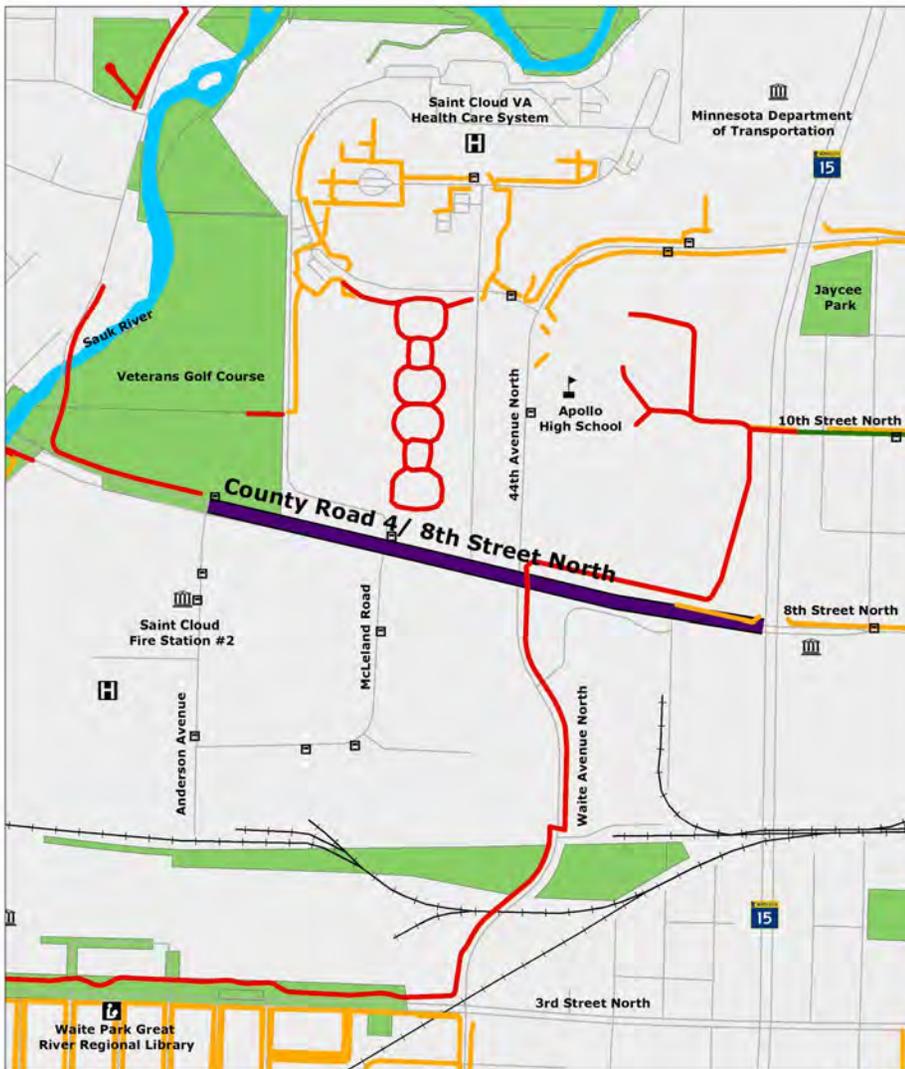
Jurisdiction: Stearns County

**Project Location: Stearns County Road 4
(Eighth Street N)**

Estimated Construction Time Band: 2030-2045

Project Scope

Widen Stearns County Road 4 (Eighth Street N) to six lanes from Anderson Avenue to Minnesota Highway 15 in the City of Saint Cloud.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for safety enhancements at the intersection of Minnesota Highway 15 which has a critical crash index score above average.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features and enhancements to existing Metro Bus transit stops on Routes 1, 2 and 10.
- ◆ Based on the TDM 2045 no-build scenario, this corridor will be overcapacity with a V/C ratio of 1.41 and a LOS E.
- ◆ Based on the TDM 2045 build scenario, this corridor will be under capacity with a V/C ratio of 0.49 and a LOS A.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Based on MnDOT's 2018 pavement condition data, this section of pavement is rated in good condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ Stearns County Road 4 is classified as a Tier Three regional freight network and recognized as an important corridor for the movement of goods and freight.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ This project is located in a high minority area.

Financial Information

MTP Project Number

STR-15

Estimated Project Cost

\$15,281,000 (2038 Dollars)

Jurisdiction: Stearns County

**Project Location: Stearns County Road 4
(Eighth Street N)**

Estimated Construction Time Band: 2030-2045

Project Scope

Widen Stearns County Road 4 (Eighth Street N) to six lanes from Anderson Avenue to Minnesota Highway 15 in the City of Saint Cloud.

Potential Environmental Factor Considerations

500 Year Floodplain

Near

Wetland

Seasonally Flooded Basin

Drinking Water Vulnerability:

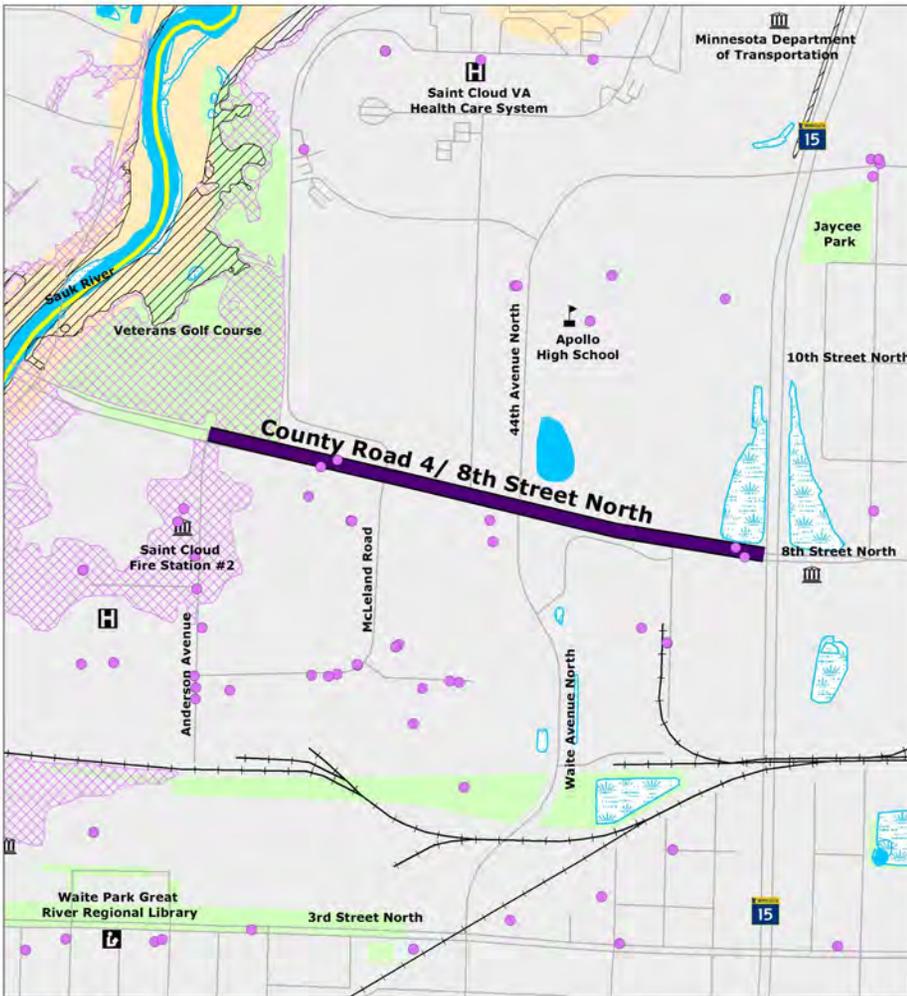
Moderate

Monitored Sites (MPCA):

Centrasota Dental: Hazardous Waste

Rare, Threatened, and Endangered Species (DNR):

Possible



Legend

- Project Location
- Monitored Sites (MPCA)
- Impaired Water
- Water Features
- Wetlands
- Shoreland (300 feet)
- Parks
- 100 Year Floodplain
- 500 Year Floodplain
- Roads

Financial Information

MTP Project Number

STR-15

Estimated Project Cost

\$15,281,000 (2038 Dollars)

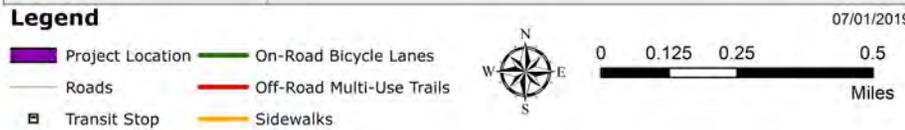
STEARNS COUNTY: RECONSTRUCTION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
STR-7	CSAH 2 (Central Avenue N) in Brockway Township	421 st Street to CSAH 1	Two-Lane Arterial Reconstruction	Mid-Range (2024-2029)	\$1,537,500
STR-8	CSAH 1 (Riverside Avenue N) in Sartell	Sartell Street W to MSAS 104 (12 th Street N)	Two-Lane Arterial Reconstruction	Short-Term (2020-2023)	\$1,417,000
STR-9	CSAH 1 in Brockway Township	CSAH 17 to North Stearns County Line	Two-Lane Arterial Reconstruction	Long-Range (2030-2045)	\$3,816,000
STR-10	CSAH 75 in Waite Park	Bridge Number 6819 over the Sauk River	Principal Arterial Bridge Replacement	Mid-Range (2024-2029)	\$4,140,000
STR-11	CSAH 138 in Waite Park and Saint Joseph Township	MN 23 to County Road 121	Minor Collector Reconstruction	Long-Range (2030-2045)	\$6,360,000
STR-12	CSAH 136 (Oak Grove Road SW) in Saint Cloud and Saint Augusta	County Road 115 to 33 rd Street S	Major Collector Reconstruction	Long-Range (2030-2045)	\$10,600,000

Jurisdiction: Stearns County
Project Location: Stearns County Road 2 (Central Avenue N)
Estimated Construction Year: 2024

Project Scope

Reconstruct Stearns County Road 2 (Central Avenue N) from 421st Street to Stearns County Road 1 in Brockway Township.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Based on MnDOT's 2018 pavement condition data, this section of pavement is rated in fair condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number	STR-7
Estimated Project Cost	\$1,537,500 (2024 Dollars)

Jurisdiction: Stearns County

**Project Location: Stearns County Road 1
(Riverside Avenue)**

Estimated Construction Year: 2021

Project Scope

**Reconstruct Stearns County Road 1 (Riverside Avenue) from
12th Street N to Sartell Street W in the City of Sartell.**



Goal 1: *Maintain and Enhance Transportation Safety*

- ◆ Opportunity for installation of safety features.

Goal 2: *Increase System Accessibility, Mobility, and Connectivity*

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features and enhancements to existing Metro Bus transit stops.

Goal 3: *Efficiently Manage Operations and Cost-Effectively Preserve the System*

- ◆ Based on MnDOT's 2018 pavement condition data, this section of pavement is rated in fair condition.

Goal 4: *Support Metropolitan Vitality and Economic Development*

- ◆ This project supports the movement of people and goods.

Goal 5: *Promote Energy and Environmental Conservation*

- ◆ Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number

STR-8

Estimated Project Cost

\$1,417,000 (2021 Dollars)

Jurisdiction: Stearns County

Project Location: Stearns County Road 1

Estimated Construction Time Band: 2030-2045

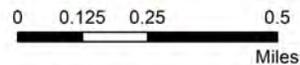
Project Scope

Reconstruct Stearns County Road 1 from Stearns County Road 17 to North Stearns County Line in Brockway Township.



Legend

- █ Project Location
- █ On-Road Bicycle Lanes
- █ Off-Road Multi-Use Trails
- █ Sidewalks
- Roads
- Transit Stop



07/01/2019

Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for safety enhancements at the intersection of Stearns County Road 1 and 125th Street NW which has a critical crash index score above average.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Based on MnDOT's 2018 pavement condition data, this section of pavement is rated in good condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number

STR-9

Estimated Project Cost

\$3,816,000 (2038 Dollars)

Jurisdiction: Stearns County

Project Location: Stearns County Road 75

Estimated Construction Time Band: 2024-2029

Project Scope

Replace Stearns County Road 75 bridge number 6819 over Sauk River in the City of Waite Park.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Bridge was built in 1954 and due to the high amount of daily traffic is in need of replacement which will increase safety.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Stearns County Road 75 is an important long-distance commuter connection.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ In 2018, MnDOT rated bridge 6819 in fair condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ Stearns County Road 75 is classified as a Tier Two Minnesota principal freight network and recognized as an important corridor for the movement of goods and freight.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ This project is located in a low-income and high minority area.

Financial Information

MTP Project Number

STR-10

Estimated Project Cost

\$4,140,000 (2027 Dollars)

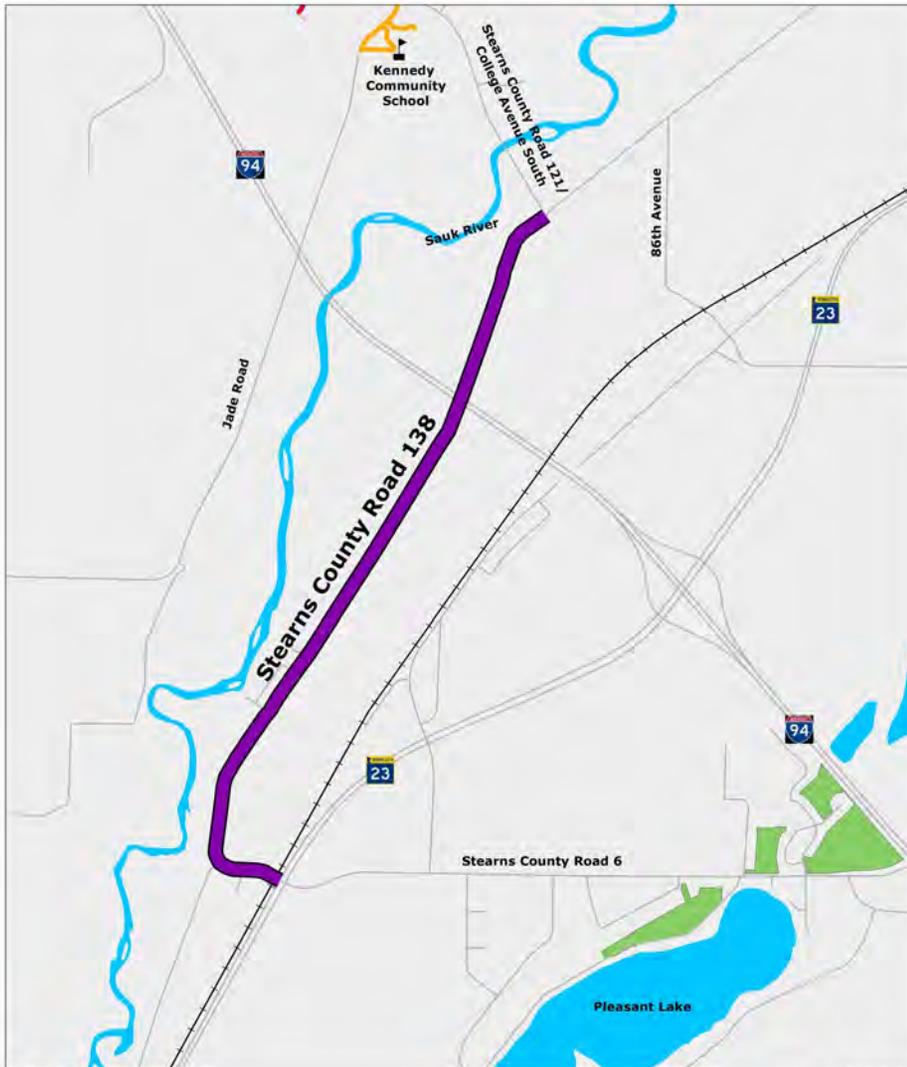
Jurisdiction: Stearns County

Project Location: Stearns County Road 138

Estimated Construction Year: 2035-2040

Project Scope

Reconstruct Stearns County Road 138 from Minnesota Highway 23 to Stearns County Road 121 in the City of Waite Park/Saint Joseph Township.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Based on MnDOT's 2018 pavement condition data, this section of pavement is rated in good condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ This project is located in a low-income and high minority area.

Financial Information

MTP Project Number

STR-11

Estimated Project Cost

\$6,360,000 (2038 Dollars)

Jurisdiction: Stearns County

**Project Location: Stearns County Road 136
(Oak Grove Road SW)**

Estimated Construction Time Band: 2030-2045

Project Scope

**Reconstruct Stearns County Road 136 (Oak Grove Road SW)
from Stearns County Road 115 to 33rd Street S in the City of
Saint Cloud/Saint Augusta.**



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for safety enhancements at the intersection of Stearns County Road 122 (40th Street S) which has a critical crash index score above average.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Based on MnDOT's 2018 pavement condition data, this section of pavement is rated in good condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number	STR-12
Estimated Project Cost	\$10,600,000 (2038 Dollars)

STEARNS COUNTY FISCAL CONSTRAINT

In terms of expansion, Stearns County has identified eight projects for construction.

MTP Identifier	Type of Project	Project Location	Estimated Construction Cost	Time Frame for Completion
STR-1	Expansion	CSAH 1 (River Avenue N)	\$6,042,190	Short-Term (2020-2023)
STR-2	New Alignment	CSAH 133 (Second Street S)	\$2,667,980	Short-Term (2020-2023)
STR-3	Expansion	CSAH 133	\$7,659,120	Mid-Range (2024-2029)
STR-5	Expansion	County Road 122 (40 th Street S)	\$12,846,400	Long-Range (2030-2045)
STR-6	Expansion	CSAH 75 (Second Street S)	\$31,579,870	Long-Range (2030-2045)
STR-13	Expansion	CSAH 1 (Riverside Avenue S)	\$18,031,580	Long-Range (2030-2045)
STR-14	Expansion	County Road 134	\$7,334,880	Mid-Range (2024-2029)
STR-15	Expansion	CSAH 4 (Eighth Street N)	\$15,281,000	Long-Range (2030-2045)
Total			\$101,443,020	

FIGURE 9.20 – A LIST OF CAPACITY EXPANDING PROJECTS FOR STEARNS COUNTY WITHIN THE MPA OVER THE DURATION OF MAPPING 2045.

With the total of these projects being estimated at \$101,443,020, Stearns County will have to tap into the overall expansion revenues for the entire county. Based upon historical information, APO staff feel this would be a safe assumption for the county considering prior expansion has solely occurred within the portion of the county within the MPA. That said, Stearns County has an overall expansion budget of \$104,957,124 and is thereby fiscally constrained.

Stearns County	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
Expansion Budget	\$11,250,741	\$19,674,463	\$74,031,920	\$104,957,124
Expansion Carry Over from Previous Time Band	\$0	\$2,540,571	\$7,221,034	N/A
Expansion Project Costs	\$8,710,170	\$14,994,000	\$77,738,850	\$101,443,020
Expansion Balance	\$2,540,571	\$7,221,034	\$3,514,104	N/A

FIGURE 9.21 – A TOTAL OF PROJECTED AVAILABLE REVENUE FOR EXPANSION PROJECTS FOR THE PORTION OF STEARNS COUNTY WITHIN THE APO’S MPA

In looking strictly at Stearns County within the APO’s MPA, the county has budgeted for approximately \$157,157,917 for system preservation over the duration of MAPPING 2045.

Based upon the criteria outlined in MAPPING 2045 for system preservation projects, Stearns County has identified six projects for construction.

MTP Identifier	Type of Project	Project Location	Estimated Construction Cost	Time Frame for Completion
STR-7	Reconstruction	CSAH 2 (Central Avenue N)	\$1,537,500	2024
STR-8	Reconstruction	CSAH 1 (Riverside Avenue N)	\$1,417,000	2021
STR-9	Reconstruction	CSAH 1	\$3,816,000	Long-Range (2030-2045)
STR-10	Bridge Replacement	CSAH 75	\$4,140,000	Mid-Range (2024-2029)
STR-11	Reconstruction	CSAH 138	\$6,360,000	Long-Range (2030-2045)
STR-12	Reconstruction	CSAH 136 (Oak Grove Road SW)	\$10,600,000	Long-Range (2030-2045)
Total			\$27,870,500	

FIGURE 9.22 – A LIST OF SYSTEM PRESERVATION (RECONSTRUCTION) PROJECTS FOR STEARNS COUNTY WITHIN THE MPA OVER THE DURATION OF MAPPING 2045.

The total cost for the system preservation projects identified by Stearns County for construction within the MPA total \$27,870,500 in year – or time band -- of expenditure dollars. Based upon this information, the county is fiscally constrained for these system preservation projects.

Stearns County (within the MPA)	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$16,846,337	\$29,459,626	\$110,851,954	\$157,157,917
System Preservation Project Costs	\$1,417,000	\$5,677,500	\$20,776,000	\$27,870,500
System Preservation Balance	\$15,429,337	\$23,782,126	\$90,075,954	\$129,287,417

FIGURE 9.23 – A TOTAL OF PROJECTED AVAILABLE REVENUE FOR SYSTEM PRESERVATION FOR THE PORTION OF STEARNS COUNTY WITHIN THE APO’S MPA.

WHAT WE HEARD FIRST PUBLIC COMMENT PERIOD (AUG. 12 – SEPT. 20, 2019)

- STR-3: “I’m happy STR-3 is potentially expanding to four lanes. And I’m glad I didn’t buy a house along there. Noise pollution is a pet peeve of mine.”
- STR-4: “Interstate-94 is a limited access through road adding another interchange is counter to the purpose of a limited access Interstate highway.”
- STR-4: “STR-4 is needed, really good interchange.”
- STR-4: “Like the thought of STR-4.”
- STR-12: “STR-12 has already been rebuilt by Stearns County in 2018. There should be no reason to touch this road for the next 20 years, unless MnDOT decides to add an interchange with I-94 and CR 136.”
- STR-12: “I would look at extending STR-12 all the way to Highway 15 and improve the junction at Highway 15, before the adjacent properties are developed. Looking at STR-12 it goes south. The street being improved in the proposal (just past the proposal) then makes a turn to the west. The turn and the westward road is not part of the proposal. I think this westerly road goes all the way west to join Highway 15 just north of Luxemburg.”
- “There needs to be a safe way for people to cross 75. There was talk about an underpass, but that has not happened.”

- STR-13: "Why not just add walking paths or sidewalks to Riverside? Far more dangerous to pedestrians. It's only busy here twice a day for an hour."
- STR-13: "Keep Riverside Avenue two lanes."
- STR-13/STR-14/STR-15: "Widening those roads are a great idea."

When asked for ideas for additional projects:

- "QUIT WASTING TAXPAYER DOLLARS ON SOMETHING NO ONE USES."
- "Make the four different Elm Street Easts in Saint Joe connect and also connect it to CSAH 134."
- "Redo intersection of CSAH 133 and 320th Street to add roundabout."
- "Safe pedestrian/bike crossing over Cty 75."
- "County Road 133 should be a divided four lane road."
- "Rebuild old townline between SAR 9 and SAR 10 on the map."
- "Need to extend walking path on County Road 137 to Bel Clair."

WHAT WE HEARD SECOND PUBLIC COMMENT PERIOD (SEPT. 23 – OCT. 23, 2019)

As noted earlier in this chapter, there was a significant change to the Stearns County project list presented during the first round of public comment. Those changes are listed in the table below.

Action	ID	Project Type	Location	Termini	Estimated Project Cost
Delete	STR-4	Construct new interchange	CSAH 136 (Oak Grove Road)	New Interchange at I-94	\$38,850,000 <i>(2038 dollars)</i>
Add	STR-13	Widen to 4-lanes	CSAH 1 (Riverside Avenue)	Heritage Drive to CSAH 78	\$18,031,580 <i>(2038 dollars)</i>
Add	STR-14	Widen to 4-lanes	CR 134	Sauk River Bridge to Pinecone Road	\$7,334,880 <i>(2027 dollars)</i>
Add	STR-15	Widen to 6-lanes	CSAH 4 (Eighth Street N)	Anderson Avenue to MN-15)	\$15,281,000 <i>(2038 dollars)</i>

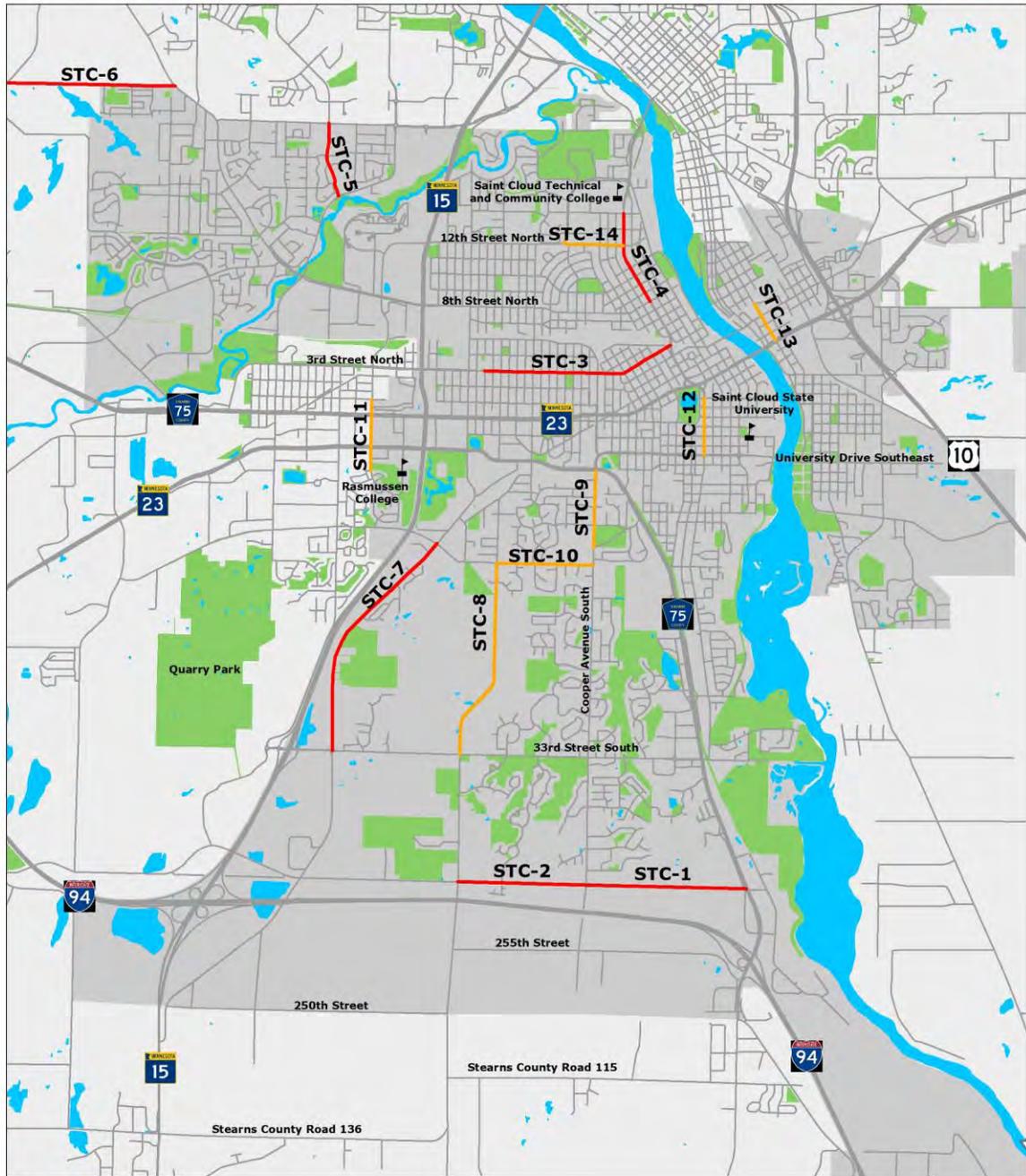
FIGURE 9.24 – CHANGES TO STEARNS COUNTY PROJECTS TO BE INCORPORATED INTO MAPPING 2045.

Comments received during this round of input were directed toward these changes.

- "Why not just add walking paths or sidewalks to Riverside? Far more dangerous to pedestrians. It's only busy here twice a day for an hour."
- "Keep Riverside Avenue two lanes."
- "Widening those roads are a great idea."

- “Seems like a complete waste of money to widen roads at these locations for just morning and evening rush hour. If they are widened, will it not just cause a bottleneck and slow down traffic when the road narrows? I drove the roads mentioned to be widened at rush hour times. It is NOT needed.”
- “Wonder why you stop at Anderson Avenue? Why not go further?”
- “They Highway 15 access from 33rd South makes the 136 access totally unnecessary.”

City of Saint Cloud MAPPING 2045 Projects



Legend

- Expansion Projects
- Reconstruction Projects

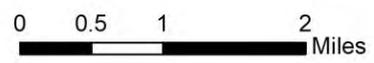


FIGURE 9.25 – MAPPING 2045 PROJECTS IN SAINT CLOUD

CITY OF SAINT CLOUD

The City of Saint Cloud has identified a total of 14 fiscally constrained projects over the duration of this MTP; seven are capacity expansion and seven are system preservation. The following section details those projects, the city’s financial plan and fiscal constraint, and provides comments from environmental experts and the general public on the proposed transportation projects.

CITY OF SAINT CLOUD: EXPANSION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
STC-1	MSAS 156 (40 th Street S)	MSAS 141 (Cooper Avenue) to CSAH 75 (Roosevelt Road)	Four-Lane Collector	Short-Term (2020-2023)	\$6,650,000
STC-2	MSAS 156 (40 th Street S)	CSAH 136 (Oak Grove Road SW) to MSAS 141 (Cooper Avenue)	Four-Lane Collector	Mid-Range (2024-2029)	\$6,720,000
STC-3	MSAS 114 (Third Street N)	31 st Avenue N to MSAS 145 (Ninth Avenue N)	Four-Lane Divided Arterial	Long-Range (2030-2045)	\$23,310,000
STC-4	MSAS 145 (Ninth Avenue N)	MSAS 148 (15 th Street N) to Stearns CSAH 4 (Eighth Street N/Veterans Drive)	Four-Lane Divided Arterial	Mid-Range (2024-2029)	\$8,400,000
STC-5	Pinecone Road S	Stearns County Road 134 to Stearns CSAH 120	Four-Lane Divided Arterial	Long-Range (2030-2045)	\$7,770,000
STC-6	322 nd Street	Stearns CSAH 133 to Stearns CSAH 4	Three-Lane Collector	Long-Range (2030-2045)	\$10,360,000
STC-7	CSAH 74 (West Saint Germain Street)	Stearns County Road 137 (Seventh Street S/22 nd Street S) to 33 rd Street S	Three-Lane Minor Arterial	Long-Range (2030-2045)	\$16,960,000

Jurisdiction: Saint Cloud

Project Location: 40th Street S

Estimated Construction Time Band: 2020-2023

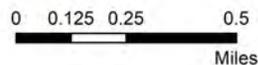
Project Scope

Construct new 40th Street S four lane alignment from Cooper Avenue S to Stearns County Road 75 (Roosevelt Road) in the City of Saint Cloud.



Legend

- Project Location
- Roads
- Transit Stop
- On-Road Bicycle Lanes
- Off-Road Multi-Use Trails
- Sidewalks



06/13/2019

Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.
- ◆ Based on the TDM 2045 build scenario, this corridor will be under capacity with a V/C ratio of 0.13 and a LOS A.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This project will expand the network to assist in preserving the current roadway infrastructure.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number

STC-1

Estimated Project Cost

\$6,650,000 (2021 Dollars)

Jurisdiction: Saint Cloud

Project Location: 40th Street S

Estimated Construction Time Band: 2020 - 2023

Project Scope

Construct new 40th Street S four lane alignment from Cooper Avenue S to Stearns County Road 75/Roosevelt Road in the City of Saint Cloud.

Potential Environmental Factor Considerations

Wetlands:

Deep Marsh, Shallow Marsh, and Seasonally Flooded Basin

Wildlife Action Network (DNR):

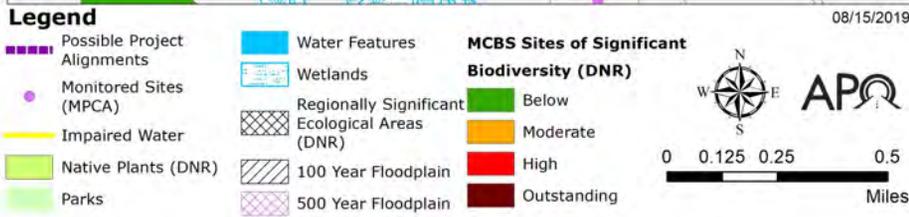
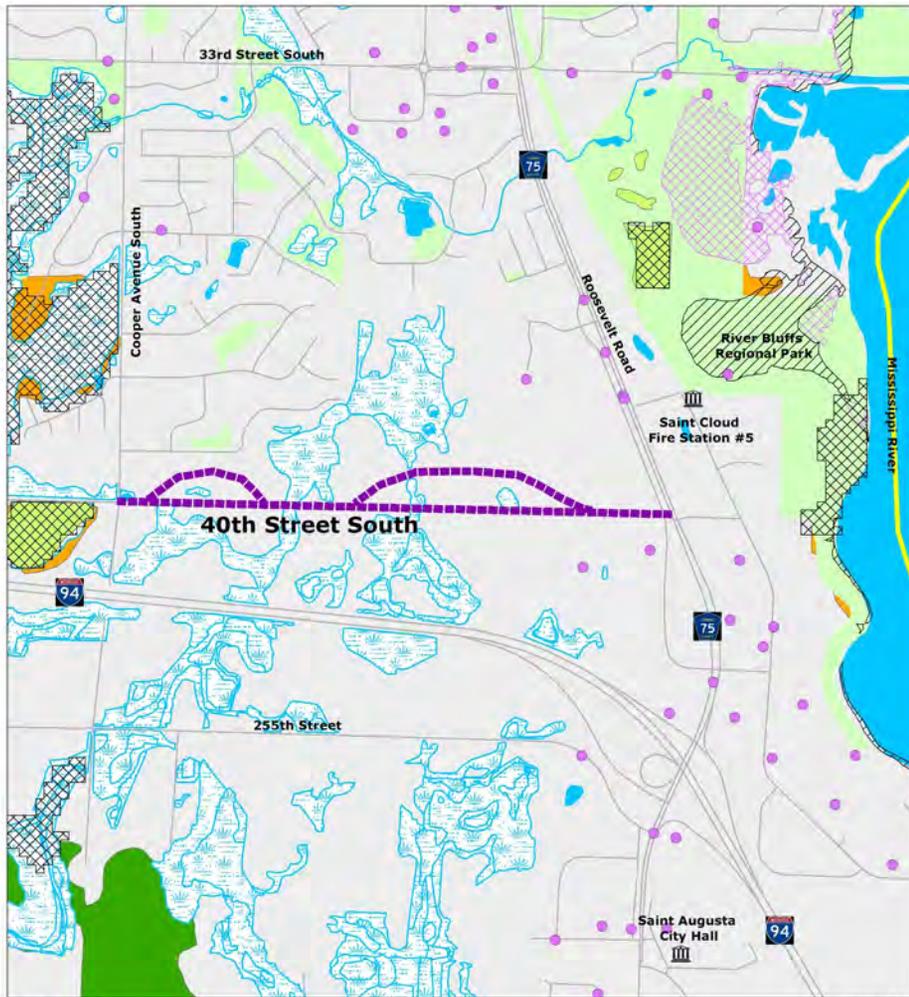
Medium

Rare, Threatened, and Endangered Species (DNR):

Possible

Environmental Public Comments:

- "Add St. Cloud Sensitive Areas to Map. Complete Streets Policy? Need to include Blanding's Turtle and tubercled rein orchid as well? Modify map colors so road does not match outstanding for biodiversity. Large amount of potential wetland impact. Location could be altered to minimize wetland impact. Habitat fragmentation."
- "The proposed new 40th ST S will travel through 4,000-linear feet of a large wetland complex."



Financial Information

MTP Project Number

STC-1

Estimated Project Cost

\$6,650,000 (2021 Dollars)

Jurisdiction: Saint Cloud

Project Location: 40th Street S

Estimated Construction Time Band: 2024-2029

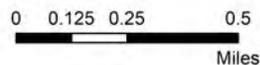
Project Scope

Widen 40th Street S to four lanes from Stearns County Road 136 (Oak Grove Road SW) to Cooper Avenue S in the City of Saint Cloud.



Legend

- Project Location
- Roads
- Transit Stop
- On-Road Bicycle Lanes
- Off-Road Multi-Use Trails
- Sidewalks



06/13/2019

Goal 1: Maintain and Enhance Transportation Safety

- Opportunity for safety enhancements at the intersection of Stearns County Road 136 (Oak Grove Road SW) which has a critical crash index score above average.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- Opportunity for multimodal improvements equipped with ADA compliant features.
- Based on the TDM 2045 no-build scenario, this corridor will be under capacity with a V/C ratio of 0.83 and a LOS B.
- Based on the TDM 2045 build scenario, this corridor will still be under capacity with a V/C ratio of 0.40 and a LOS A.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- This corridor's pavement was rated in fair condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number

STC-2

Estimated Project Cost

\$6,720,000 (2027 Dollars)

Jurisdiction: Saint Cloud

Project Location: 40th Street S

Estimated Construction Time Band: 2024-2029

Project Scope

Widen 40th Street S to four lanes from Stearns County Road 136/Oak Grove Road SW to Cooper Avenue S in the City of Saint Cloud.

Potential Environmental Factor Considerations

Wetlands:

Seasonally Flooded Basin, Deep Marsh, Shallow Marsh, and Hardwood Wetland

Wildlife Action Network (DNR):

Low-Medium and Medium

Rare, Threatened, and Endangered Species (DNR):

Possible

Regionally Significant Ecological Areas (DNR):

Yes

Native Plants (DNR):

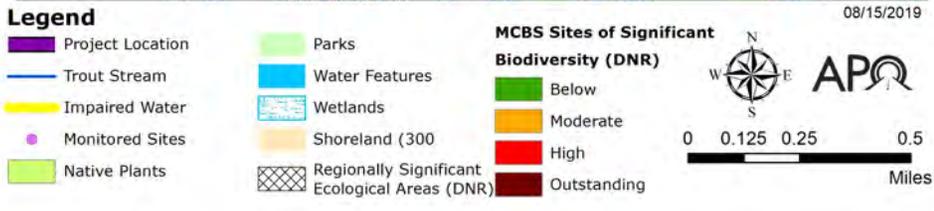
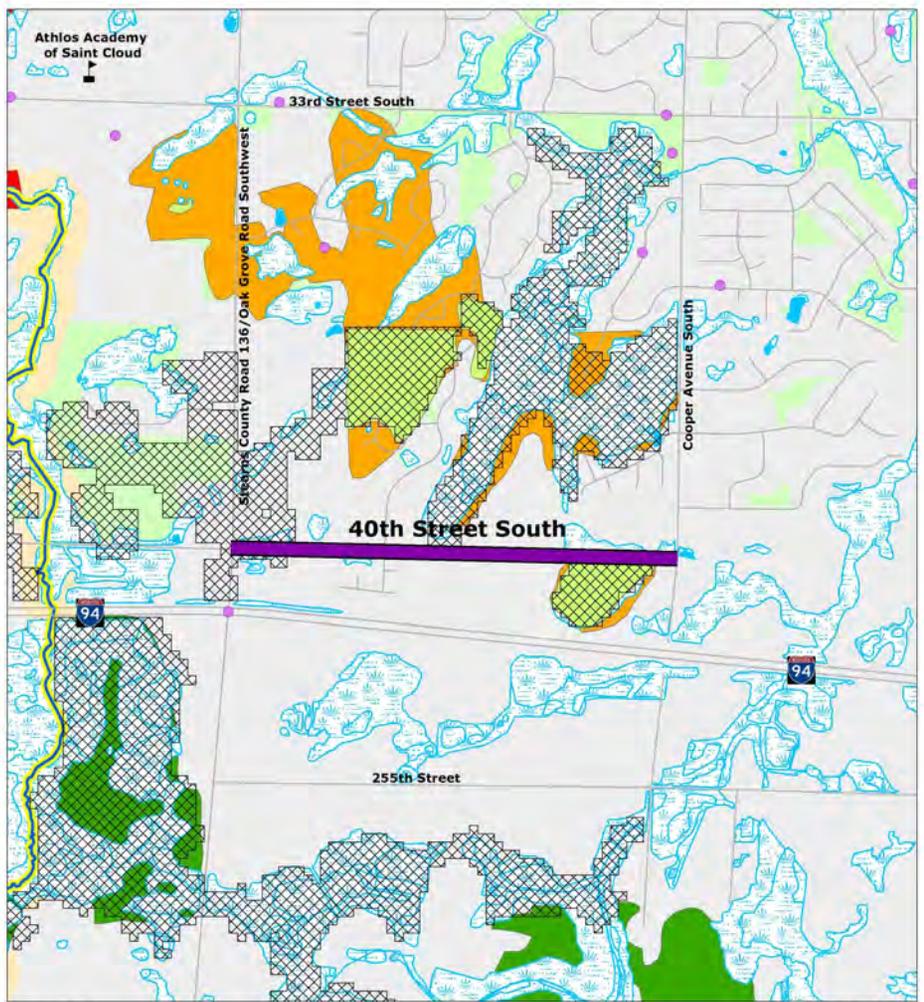
Tamarack Swamp

MCBS Sites of Significant Biodiversity (DNR):

Moderate

Environmental Public Comments:

- "Add St. Cloud Sensitive Areas to Map. Complete Streets Policy? Need to include Blanding's Turtle and tubercled rein orchid as well? Modify map colors so road does not match outstanding for biodiversity. Large amount of potential wetland impact."
- "The proposed expansion of 40th ST S will travel through 2,100-linear feet of wetland in three different wetland complexes."



Financial Information

MTP Project Number

STC-2

Estimated Project Cost

\$6,720,000 (2027 Dollars)

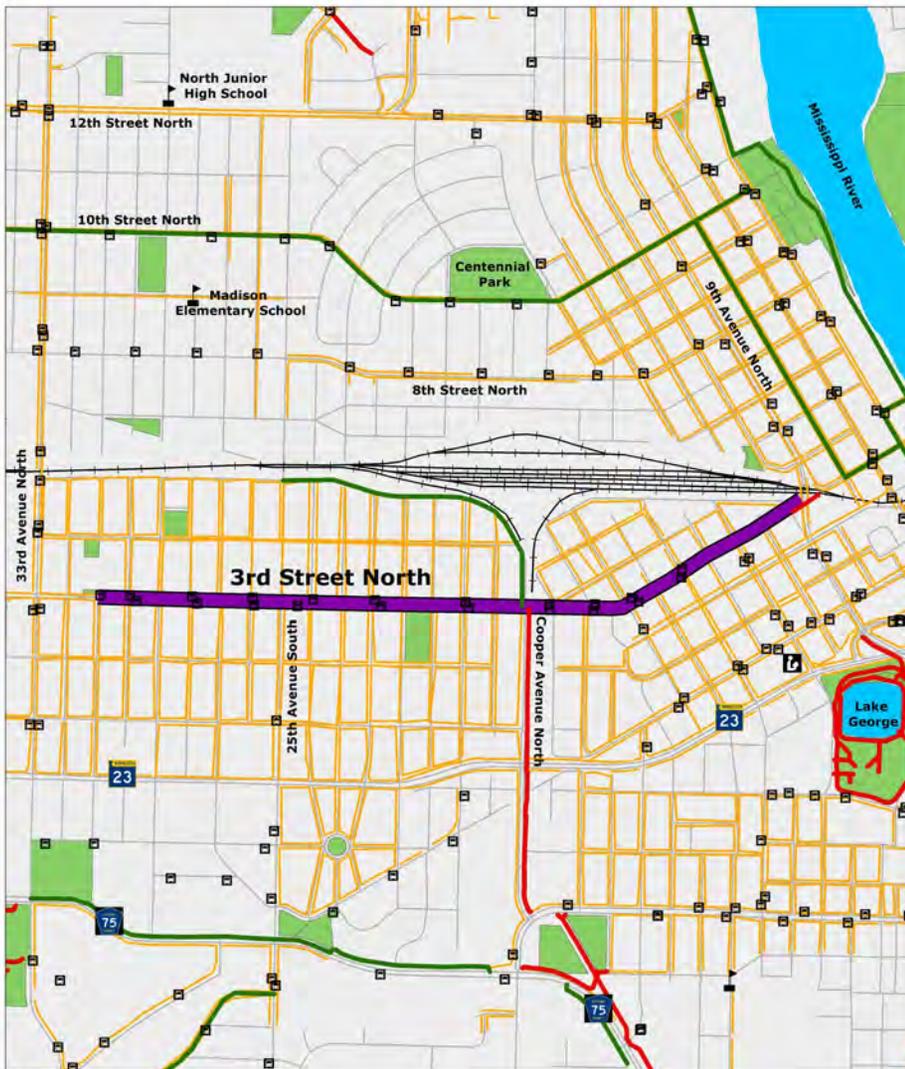
Jurisdiction: Saint Cloud

Project Location: Third Street N

Estimated Construction Time Band: 2030-2045

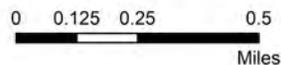
Project Scope

Widen Third Street N to four lanes from 31st Avenue N to Ninth Avenue N in the City of Saint Cloud.



Legend

- Project Location
- On-Road Bicycle Lanes
- Roads
- Off-Road Multi-Use Trails
- Transit Stop
- Sidewalks



06/13/2019

Goal 1: Maintain and Enhance Transportation Safety

- Opportunity for safety enhancements at the intersection of 25th Avenue S which has a critical crash index score above average.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- Opportunity for multimodal improvements equipped with ADA compliant features and enhancements to existing Metro Bus transit stops along Routes 1, 2, and 3.
- Based on the TDM 2045 no-build scenario, this corridor will be approaching capacity/overcapacity with a V/C ratio ranging throughout the corridor from 0.91 to 1.39 and a LOS C to E.
- Based on the TDM 2045 build scenario, this corridor will be under capacity with a V/C ratio ranging throughout the corridor from 0.36 to 0.62 and a LOS A.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- This corridor's pavement was rated in fair condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- Opportunity to install street lighting that is Dark Skies compliant.
- Project is located in a low-income and high minority area.

Financial Information

MTP Project Number

STC-3

Estimated Project Cost

\$23,310,000 (2038 Dollars)

Jurisdiction: Saint Cloud

Project Location: Third Street N

Estimated Construction Time Band: 2030-2045

Project Scope

Widen Third Street N to four lanes from 31st Avenue N to Ninth Avenue N in the City of Saint Cloud.

Potential Environmental Factor Considerations

Rare, Threatened, and Endangered Species (DNR):

Possible

Regionally Significant Ecological Areas (DNR):

Yes

Historic Properties:

West End Provision Company

Saint John Cantius Church

Janochosky Grocery

Kotowski House

Monitored Sites (MPCA)

Roosevelt Education Center: Construction Stormwater

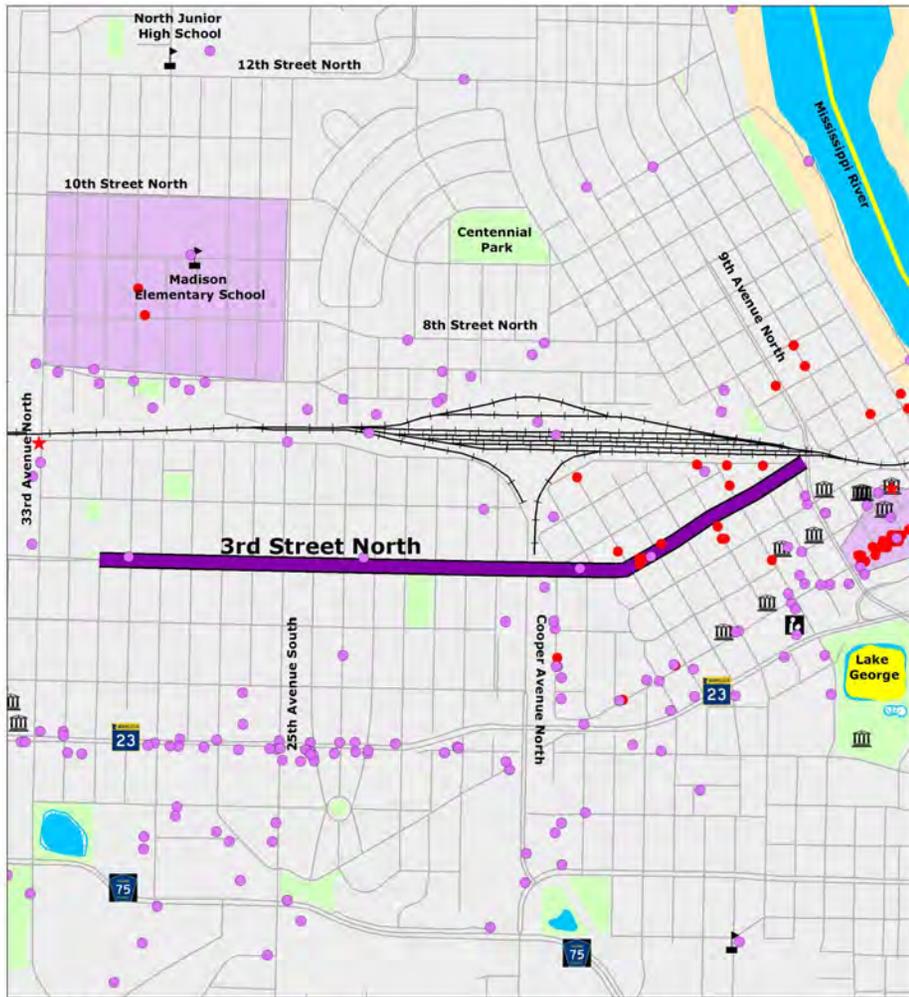
Al's West Side Service: Hazardous Waste (Minimal Quantity Generator) and Underground Tanks

Appliance Repair Center: Hazardous Waste (Minimal Quantity Generator)

Schmidtys Superette: Underground Tanks

Environmental Public Comments:

- "Retrofit Stormwater Practices where appropriate. Project should include complete Streets Policy."



Financial Information

MTP Project Number

STC-3

Estimated Project Cost

\$23,310,000 (2038 Dollars)

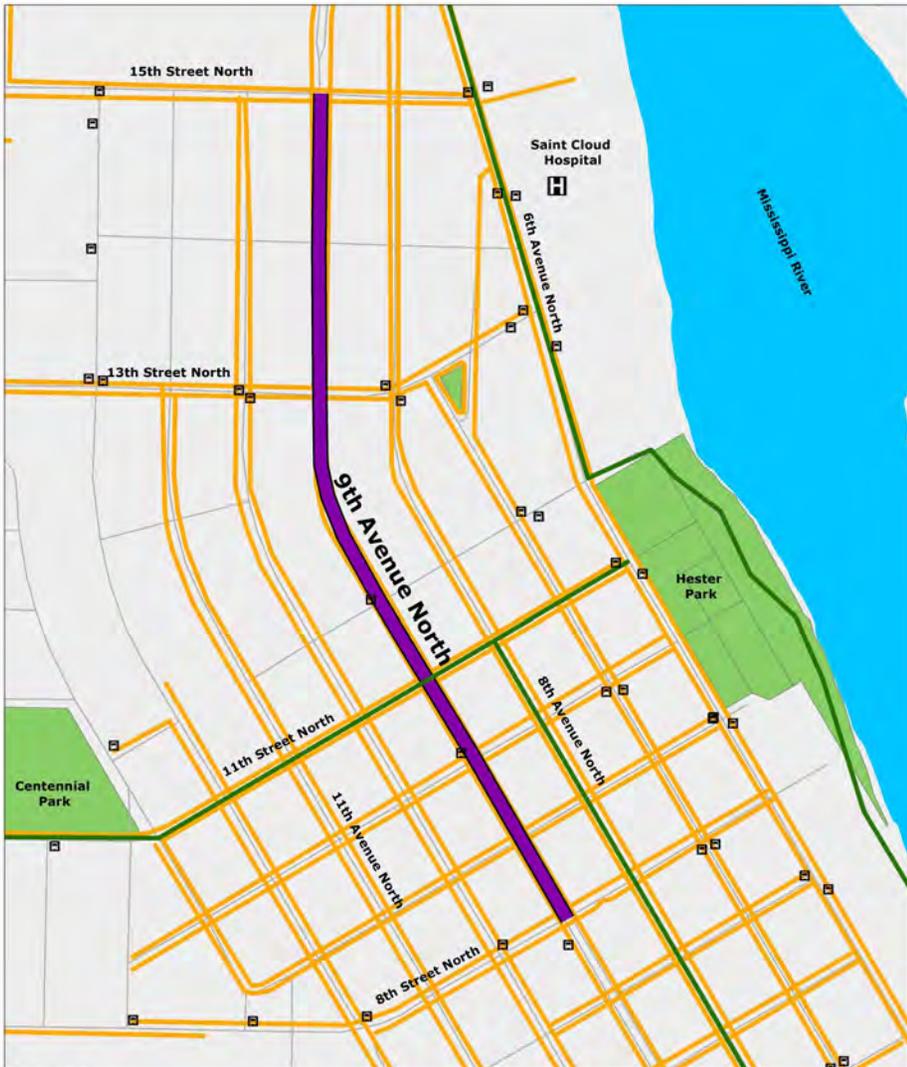
Jurisdiction: Saint Cloud

Project Location: Ninth Avenue N

Estimated Construction Time Band: 2024-2029

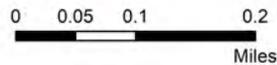
Project Scope

Widen Ninth Avenue N to four lanes from 15th Street N to Eighth Street N in the City of Saint Cloud.



Legend

- █ Project Location
- █ On-Road Bicycle Lanes
- █ Roads
- █ Off-Road Multi-Use Trails
- █ Sidewalks
- Transit Stop



06/13/2019

Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features and enhancements to existing Metro Bus transit stops along Route 4.
- ◆ Based on the TDM 2045 no-build scenario, this corridor will be overcapacity with a V/C ratio ranging throughout the corridor from 1.15 to 1.30 and a LOS D to E.
- ◆ Based on the TDM 2045 build scenario, this corridor will be under capacity with a V/C ratio ranging throughout the corridor from 0.45 to 0.53 and a LOS A.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This corridor's pavement was rated in good condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ Project is located in a low-income and high minority area.

Financial Information

MTP Project Number

STC-4

Estimated Project Cost

\$8,400,000 (2027 Dollars)

Jurisdiction: Saint Cloud

Project Location: Ninth Avenue N

Estimated Construction Time Band: 2024 - 2029

Project Scope

Widen Ninth Avenue N to four lanes from 15th Street N to Eighth Street N in the City of Saint Cloud.

Potential Environmental Factor Considerations

Rare, Threatened, and Endangered Species (DNR):

Possible

Monitored Sites (MPCA)

ISD 742 Area Learning Center: Hazardous Waste

Environmental Public Comments:

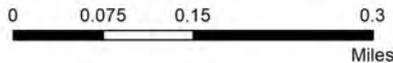
- "Retrofit Stormwater Practices where appropriate. Project should include complete Streets Policy. Check Project Scope because it may not be worded correctly."



08/15/2019

Legend

- Project Location
- Monitored Sites (MPCA)
- Impaired Water
- Parks
- Water Features
- Shoreland (300 feet)
- 100 Year Floodplain
- 500 Year Floodplain



Financial Information

MTP Project Number

STC-4

Estimated Project Cost

\$8,400,000 (2027 Dollars)

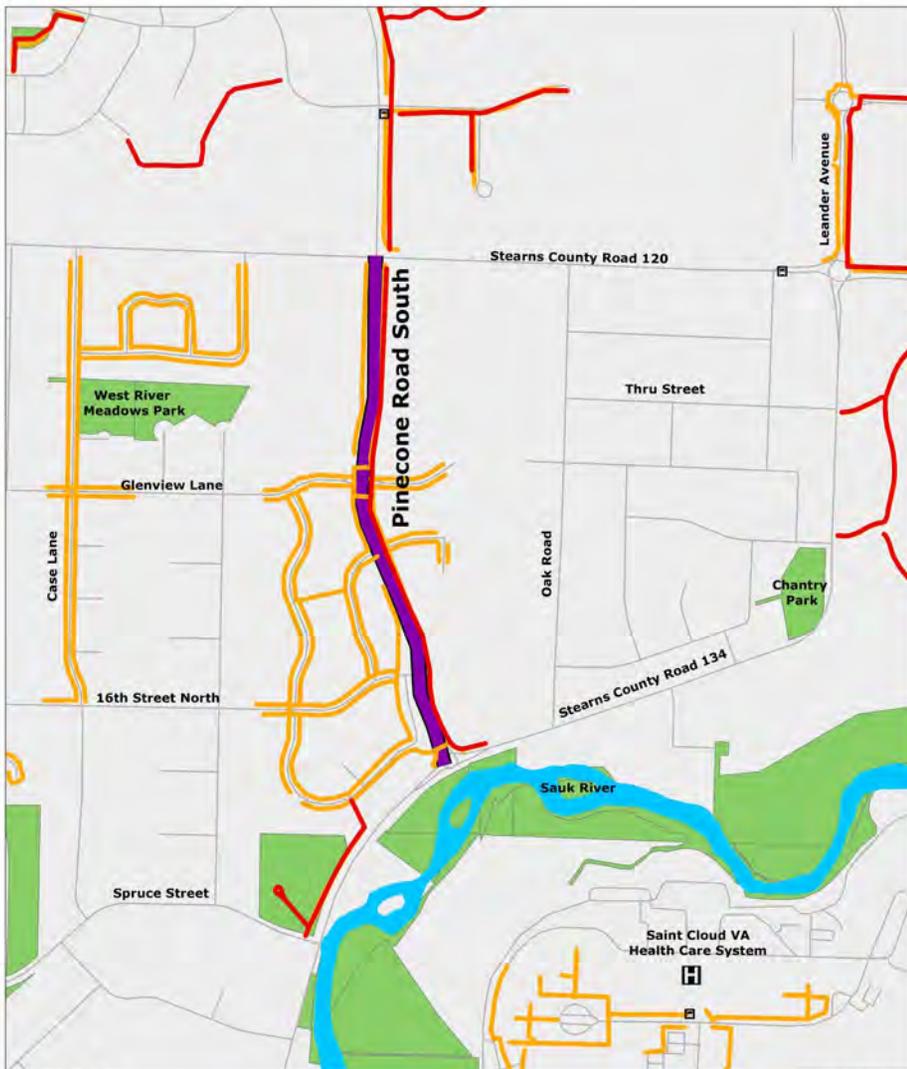
Jurisdiction: Saint Cloud

Project Location: Pinecone Road S

Estimated Construction Time Band: 2030-2045

Project Scope

Widen Pinecone Road S to four lanes from Stearns County Road 120 to Stearns County Road 134 in the City of Saint Cloud.



Legend

- Project Location
- Roads
- Transit Stop
- On-Road Bicycle Lanes
- Off-Road Multi-Use Trails
- Sidewalks



06/13/2019

Goal 1: Maintain and Enhance Transportation Safety

- Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- Opportunity for multimodal improvements equipped with ADA compliant features.
- Based on the TDM 2045 no-build scenario, this corridor will be under capacity with a V/C ratio of 0.12 and a LOS A.
- Based on the TDM 2045 build scenario, this corridor will still be under capacity with a V/C ratio of 0.66 and a LOS A.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- This corridor's pavement was rated in good condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number

STC-5

Estimated Project Cost

\$7,770,000 (2038 Dollars)

Jurisdiction: Saint Cloud

Project Location: Pinecone Road S

Estimated Construction Time Band: 2030-2045

Project Scope

Widen Pinecone Road S to four lanes from Stearns County Road 120 to Stearns County Road 134 in the City of Saint Cloud.

Potential Environmental Factor Considerations

Wetlands:

Near Seasonally Flooded Basin

Rare, Threatened, and Endangered Species (DNR):

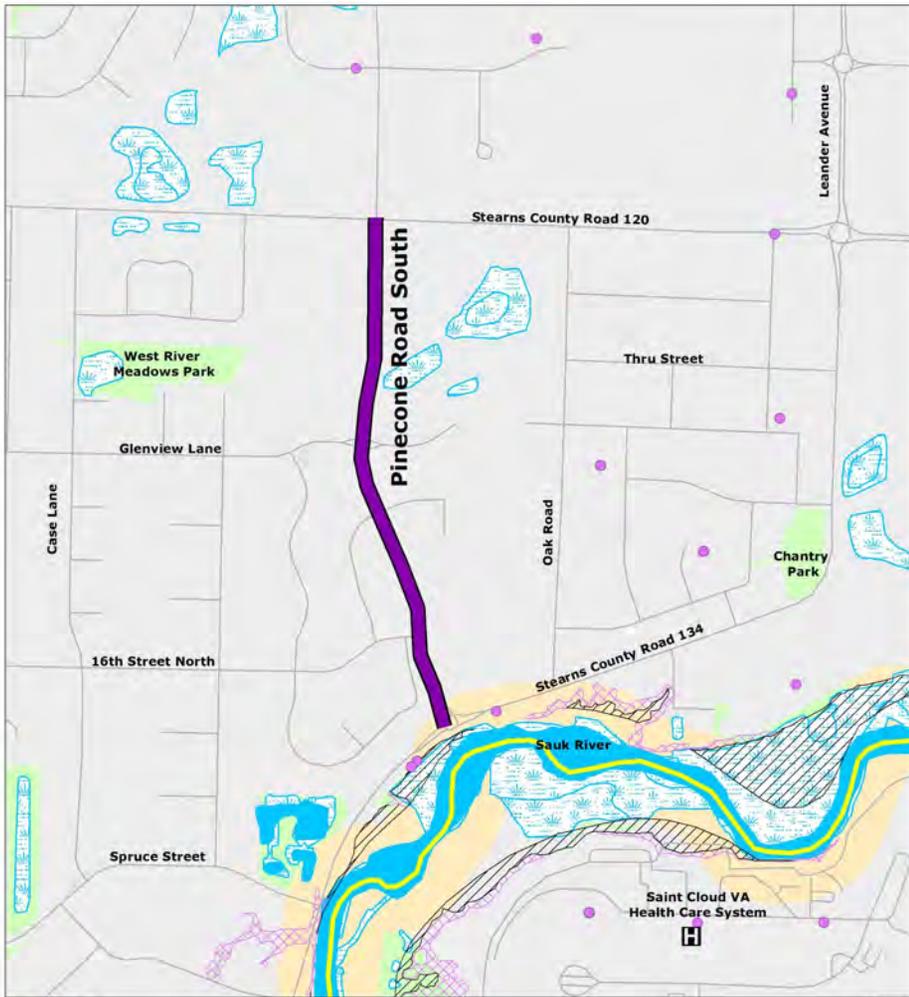
Possible

Shoreland (300 feet):

Southern termini touches shoreland

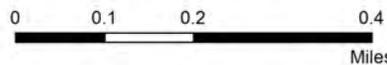
Environmental Public Comments:

- *"Retrofit Stormwater Practices where appropriate. Project should include complete Streets Policy."*



Legend

- Project Location
- Monitored Sites (MPCA)
- Impaired Water
- Roads
- Water Features
- Wetlands
- Shoreland (300 feet)
- Parks
- 100 Year Floodplain
- 500 Year Floodplain



Financial Information

MTP Project Number

STC-5

Estimated Project Cost

\$7,770,000 (2038 Dollars)

Jurisdiction: Saint Cloud

Project Location: 322nd Street

Estimated Construction Time Band: 2030-2045

Project Scope

Widen 322nd Street to three lanes from Stearns County Road 133 to Stearns County Road 4 in the City of Saint Cloud.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.
- ◆ Based on the TDM 2045 no-build scenario, this corridor will be under capacity with a V/C ratio of 0.13 and a LOS A.
- ◆ Based on the TDM 2045 build scenario, this corridor will still be under capacity with a V/C ratio of 0.81 and a LOS B.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This project will expand the network to assist in preserving the current roadway infrastructure.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number

STC-6

Estimated Project Cost

\$10,360,000 (2038 Dollars)

Jurisdiction: Saint Cloud

Project Location: 322nd Street

Estimated Construction Time Band: 2030 - 2045

Project Scope

Widen 322nd Street to three lanes from Stearns County Road 133 to Stearns County Road 4 in the City of Saint Cloud.

Potential Environmental Factor Considerations

Wetlands:

Seasonally Flooded Basin

Rare, Threatened, and Endangered Species (DNR):

Possible

Regionally Significant Ecological Areas (DNR):

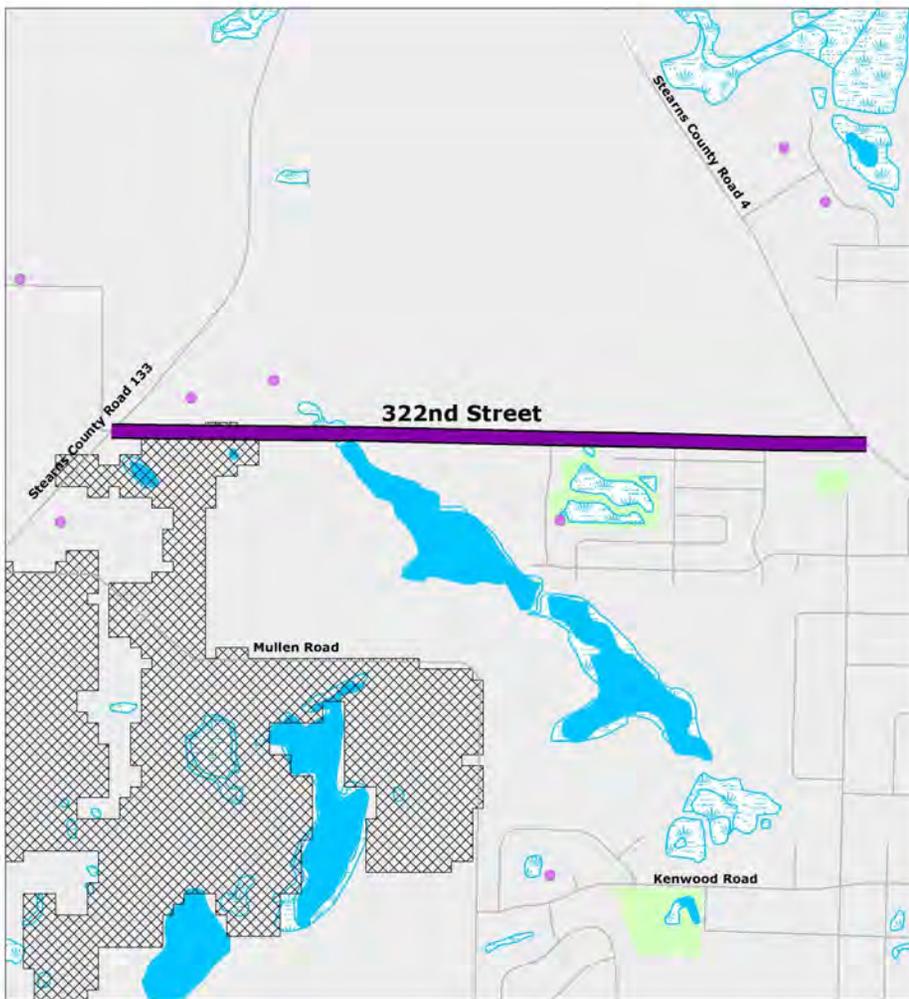
Yes

Monitored Sites (MPCA):

Geralyn Stock Farm: Feedlots

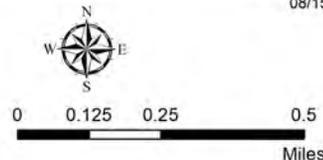
Environmental Public Comments:

- *"Retrofit Stormwater Practices where appropriate. Minimize wetland impacts."*



Legend

- Project Location
- Monitored Sites (MPCA)
- Parks
- Water Features
- Wetlands
- Regionally Significant Ecological Areas (DNR)



Financial Information

MTP Project Number

STC-6

Estimated Project Cost

\$10,360,000 (2038 Dollars)

Jurisdiction: Saint Cloud
Project Location: County Road 74
(W Saint Germain Street)

Estimated Construction Time Band: 2030-2045

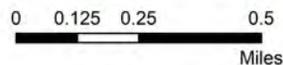
Project Scope

Widen County Road 74 to three lanes from 33rd Street S to Stearns County Road 137 (22nd Street S and 7th Street S) in the City of Saint Cloud.



Legend

- █ Project Location
- █ On-Road Bicycle Lanes
- Roads
- █ Off-Road Multi-Use Trails
- Transit Stop
- █ Sidewalks



07/18/2019

Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.
- ◆ Based on the TDM 2045 no-build scenario, this corridor will be overcapacity from 33rd Street S to 41st Avenue S with a V/C ratio of 1.09 and a LOS C. This corridor will also be over capacity from 41st Avenue S to 22nd Street S with a V/C ratio of 1.76 and a LOS F.
- ◆ Based on the TDM 2045 build scenario, this corridor will be under capacity from 33rd Street S to 41st Avenue S with a V/C ratio of 0.70 and a LOS A. This corridor will also be over capacity from 41st Avenue S to 22nd Street S with a V/C ratio of 1.07 and a LOS C.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Based on MnDOT's 2018 pavement condition data, this section of pavement is rated in good condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number

STC-7

Estimated Project Cost

\$16,960,000 (2038 Dollars)

Jurisdiction: Saint Cloud

**Project Location: County Road 74/
W Saint Germain Street**

Estimated Construction Time Band: 2030-2045

Project Scope

Widen County Road 74 to three lanes from 33rd Street S to 22nd Street S/Stearns County Road 137/7th Street S in the City of Saint Cloud.

Potential Environmental Factor Considerations

Wetlands:

Shallow Open Water Community

Rare, Threatened, and Endangered Species (DNR):

Possible

Monitored Sites (MPCA):

Northern Tier Retail: Underground Tanks

Miller Auto and Marine: Hazardous Waste (Very Small Quantity Generator) and Air Quality

Finski Properties: Aboveground Tanks and Hazardous Waste (Very Small Quantity Generator)

Native Plants:

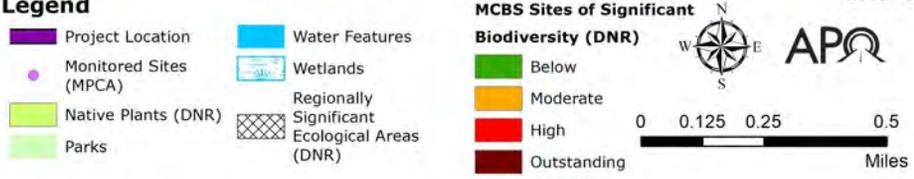
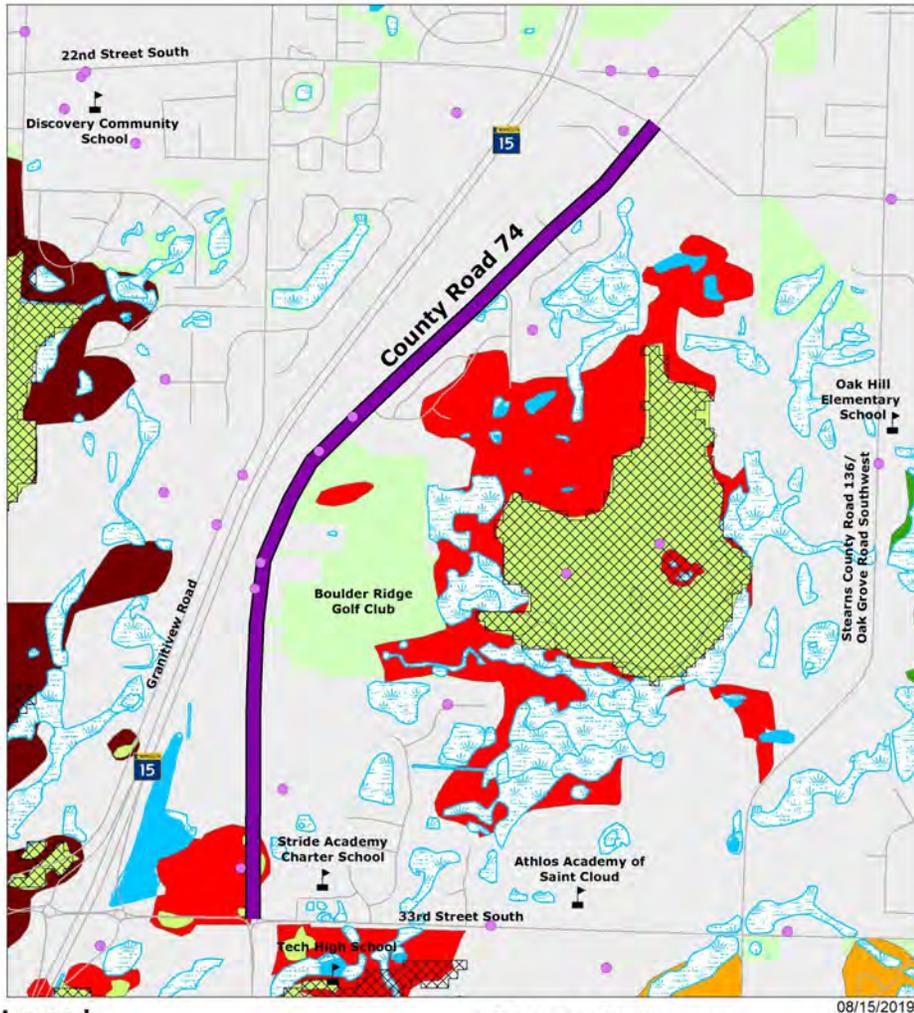
Crystalline Bedrock Outcrop

MCBS Sites of Significant Biodiversity (DNR):

High

Environmental Public Comments:

- "Retrofit Stormwater Practices where appropriate. Project should include complete Streets Policy."



Financial Information

MTP Project Number	STC-7
Estimated Project Cost	\$16,960,000 (2038 Dollars)

CITY OF SAINT CLOUD: RECONSTRUCTION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
STC-8	MSAS 175 (County Road 136/Oak Grove Road SW)	MSAS 153 (22 nd Street S) to MSAS 151 (33 rd Street S)	Two-Lane Collector Reconstruction	Short-Term (2020-2023)	\$1,400,000
STC-9	MSAS 141 (Cooper Avenue S)	MSAS 146 (Traverse Road) to CSAH 75 (Roosevelt Road)	Two-Lane Arterial Reconstruction	Short-Term (2020-2023)	\$2,500,000
STC-10	MSAS 153 (22 nd Street S)	MSAS 175 (Oak Grove Road SW) to MSAS 141 (Cooper Avenue S)	Two-Lane Minor Arterial Reconstruction	Short-Term (2020-2023)	\$3,068,000
STC-11	MSAS 102 (Waite Avenue S)	First Street N to 125' South of Wellington Circle	Four-Lane Arterial/Two-Lane Local Reconstruction	Short-Term (2020-2023)	\$944,000
STC-12	MSAS 145 (Ninth Avenue S)	Fourth Street S to MSAS 101 (University Drive)	Four-Lane Arterial Reconstruction	Mid-Range (2024-2029)	\$6,900,000
STC-13	MSAS 106 (Wilson Avenue NE)	MN 23 to First Street NE	Two-Lane Collector Reconstruction	Short-Term (2020-2023)	\$3,534,000
STC-14	MSAS 125 (13 th Street N)	MSAS 135 (Northway Drive) to MSAS 145 (Ninth Avenue N)	Two-Lane Collector Reconstruction	Mid-Range (2024-2029)	\$2,152,500

Jurisdiction: Saint Cloud

**Project Location: Stearns County Road 136
(Oak Grove Road SW)**

Estimated Construction Year: 2021

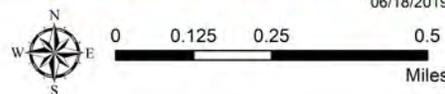
Project Scope

Reconstruct Stearns County Road 136 (Oak Grove Road SW) from 22nd Street S to Oak Hill Elementary School to an urban section of roadway including curb and gutter, sidewalks, bicycle lanes and drainage improvements. Mill and bituminous overlay from Oak Hill School to 33rd Street S in the City of Saint Cloud.



Legend

- Project Location
- Roads
- Transit Stop
- On-Road Bicycle Lanes
- Off-Road Multi-Use Trails
- Sidewalks



Goal 1: Maintain and Enhance Transportation Safety

- Added bicycle lanes and sidewalks will increase pedestrian safety.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- Added bicycle lanes and sidewalks will connect to existing active transportation network.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- This corridor's pavement was rated in fair condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- N/A

Goal 5: Promote Energy and Environmental Conservation

- Bicycle lanes and sidewalks can enhance quality of life and improve public health by providing an active transportation lifestyle.
- This project is located in a low-income and high minority area.

Financial Information

MTP Project Number	STC-8
Estimated Project Cost	\$1,400,000

Jurisdiction: Saint Cloud

Project Location: Cooper Avenue S

Estimated Construction Year: 2022

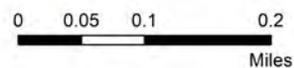
Project Scope

Reconstruct Copper Avenue S from Traverse Road to Stearns County Road 75 with bicycle lanes and sidewalk in the City of Saint Cloud.



Legend

- Project Location
- Roads
- Transit Stop
- On-Road Bicycle Lanes
- Off-Road Multi-Use Trails
- Sidewalks



06/18/2019

Goal 1: Maintain and Enhance Transportation Safety

- Added bicycle lanes and sidewalks will increase active transportation safety.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- Added bicycle lanes and sidewalks will connect to existing active transportation network.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- This corridor's pavement was rated in fair condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- Bicycle lanes and sidewalks can enhance quality of life and improve public health by providing an active transportation lifestyle.
- This project is located in a low-income and high minority area.

Financial Information

MTP Project Number

STC-9

Estimated Project Cost

\$2,500,000

Jurisdiction: Saint Cloud

Project Location: 22nd Street S

Estimated Construction Year: 2023

Project Scope

Reconstruct 22nd Street South from Oak Grove Road SW to Cooper Avenue S in the City of Saint Cloud.



Goal 1: *Maintain and Enhance Transportation Safety*

- ◆ Opportunity for installation of safety features.

Goal 2: *Increase System Accessibility, Mobility, and Connectivity*

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features and enhancements existing Metro Bus transit stops along Route 5.

Goal 3: *Efficiently Manage Operations and Cost-Effectively Preserve the System*

- ◆ This corridor's pavement was rated in poor/fair condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: *Support Metropolitan Vitality and Economic Development*

- ◆ This project supports the movement of people and goods.

Goal 5: *Promote Energy and Environmental Conservation*

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ This project is located in a low-income and high minority area.

Financial Information

MTP Project Number

STC-10

Estimated Project Cost

\$3,068,000 (2023 Dollars)

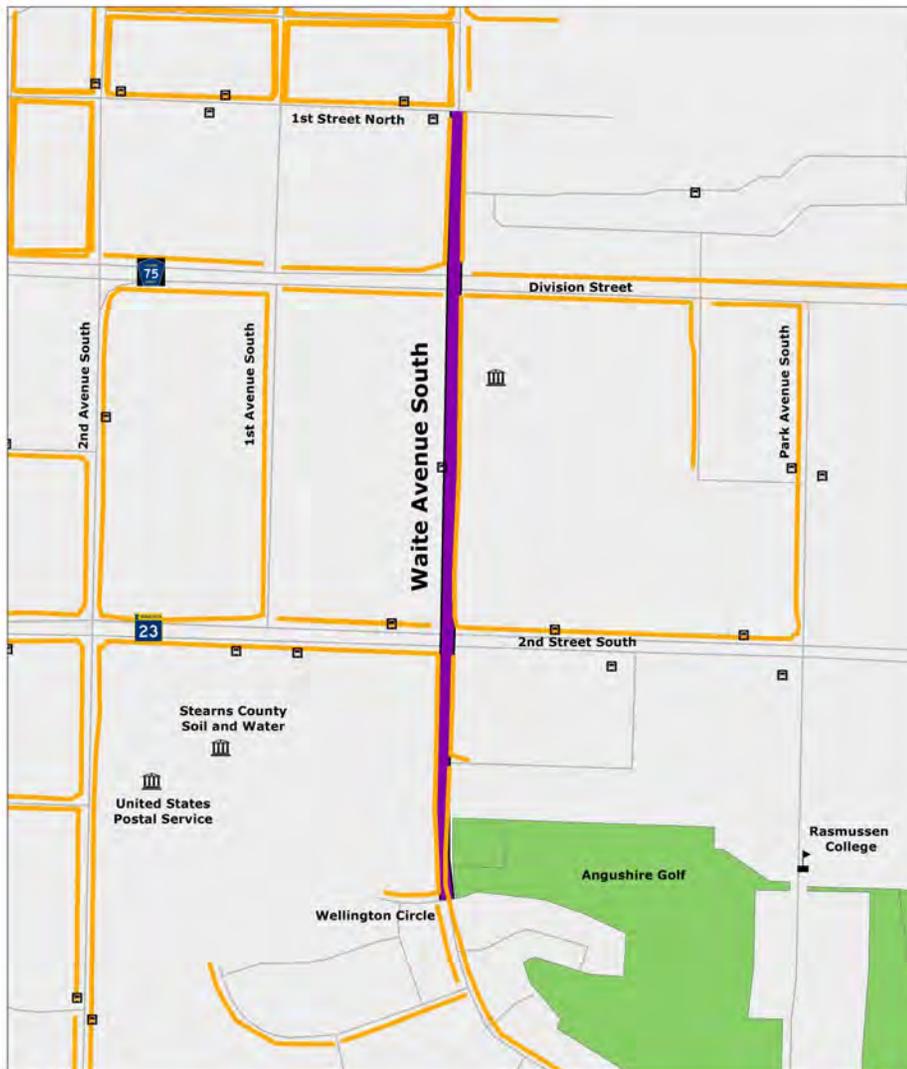
Jurisdiction: Saint Cloud

Project Location: Waite Avenue S

Estimated Construction Year: 2023

Project Scope

Reconstruct Waite Avenue S from First Street N to Wellington Circle in the City of Saint Cloud.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for safety enhancements at the intersection of Stearns County Road 75 (Division Street) and Minnesota Highway 23 (Second Street S) which both have a critical crash index score above average.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features and enhancements to existing Metro Bus transit stops along Routes 3 and 5.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This corridor's pavement was rated in fair condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ This project is located in a low-income and high minority area.

Financial Information

MTP Project Number

STC-11

Estimated Project Cost

\$944,000 (2023 Dollars)

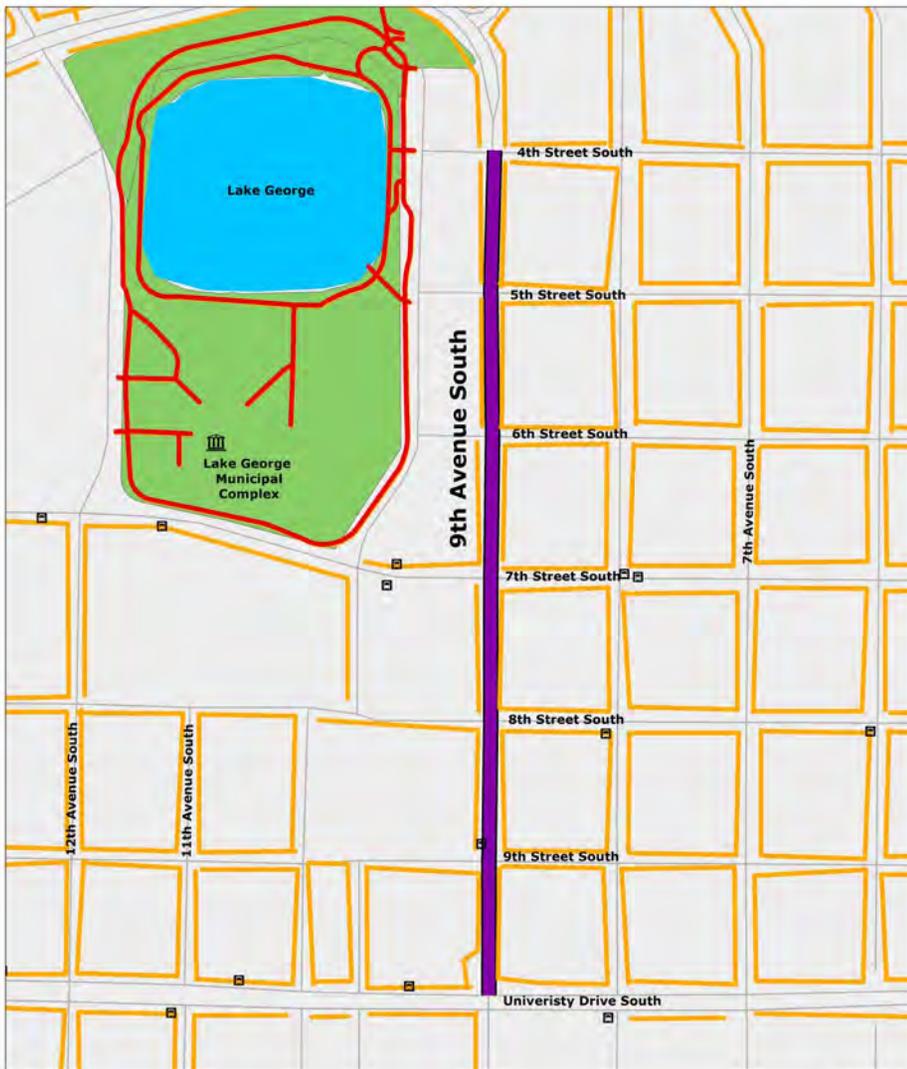
Jurisdiction: Saint Cloud

Project Location: Ninth Avenue S

Estimated Construction Time Band: 2024-2027

Project Scope

Reconstruct Ninth Avenue S from Fourth Street S to University Drive S in the City of Saint Cloud.



Goal 1: *Maintain and Enhance Transportation Safety*

- ◆ Opportunity for installation of safety features.

Goal 2: *Increase System Accessibility, Mobility, and Connectivity*

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features and enhancements to existing Metro Bus transit stops along Route 5.

Goal 3: *Efficiently Manage Operations and Cost-Effectively Preserve the System*

- ◆ This corridor's pavement was rated in fair condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: *Support Metropolitan Vitality and Economic Development*

- ◆ This project supports the movement of people and goods.

Goal 5: *Promote Energy and Environmental Conservation*

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ This project is located in a low-income and high minority area.

Financial Information

MTP Project Number

STC-12

Estimated Project Cost

\$6,900,000 (2027 Dollars)

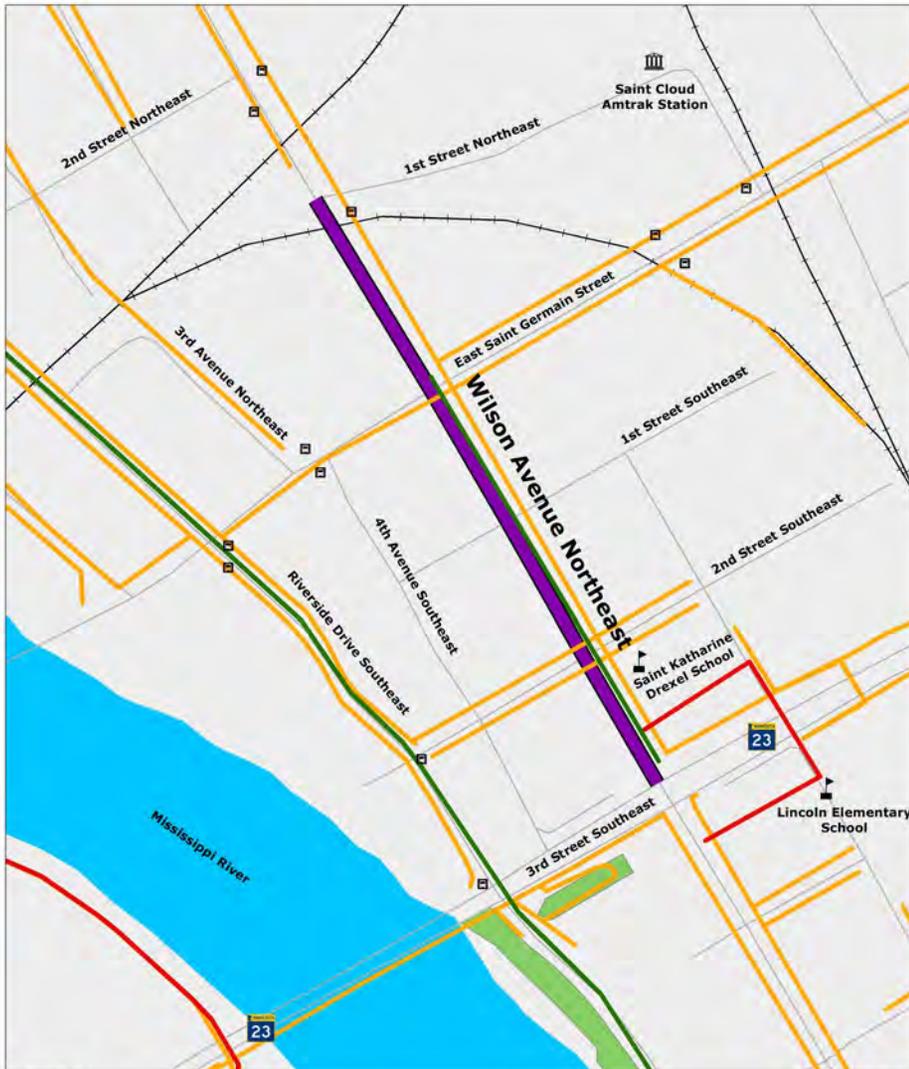
Jurisdiction: Saint Cloud

Project Location: Wilson Avenue NE

Estimated Construction Year: 2022

Project Scope

Reconstruct Wilson Avenue Northeast from Minnesota Highway 23 to First Street Northeast in the City of Saint Cloud.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for the installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features and enhancements to existing Metro Bus transit stops along Routes 21 and 22.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This corridor's pavement was rated in good condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ This project is located in a low-income and high minority area.

Financial Information

MTP Project Number

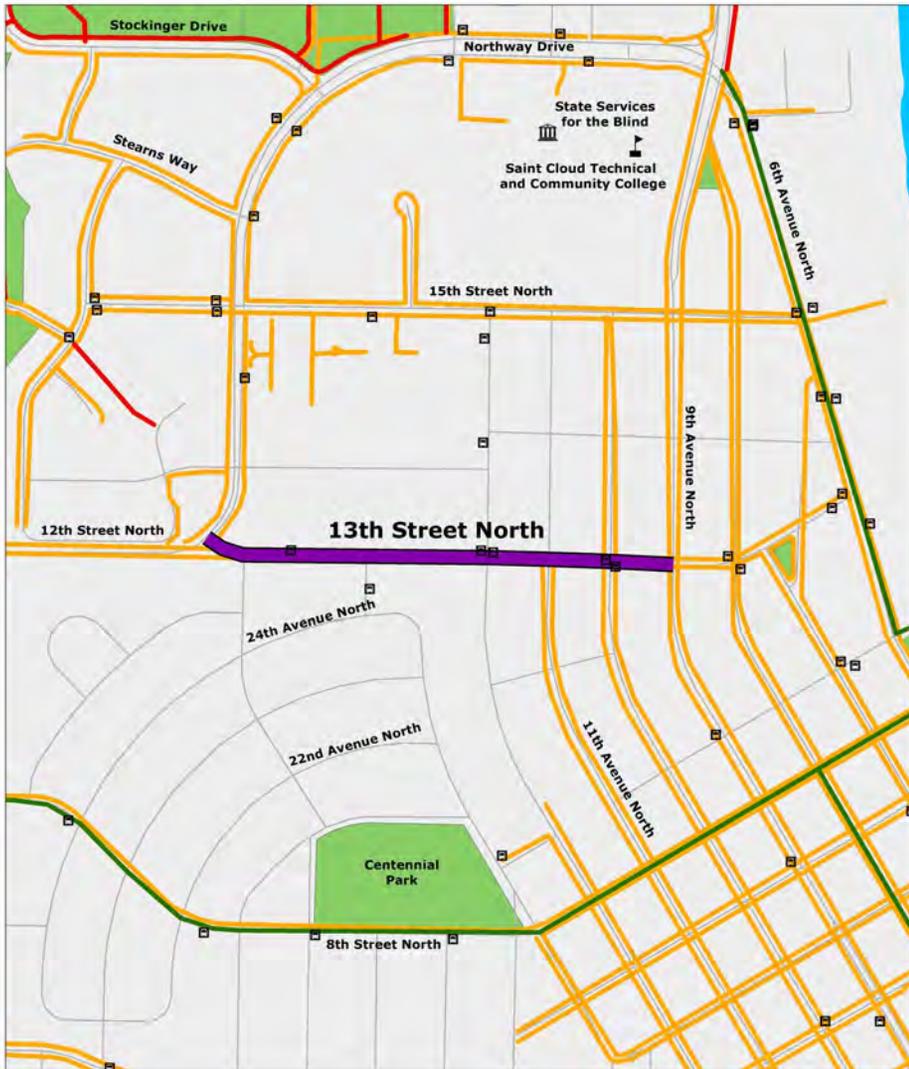
STC-13

Estimated Project Cost

\$3,534,000 (2022 Dollars)

Jurisdiction: Saint Cloud
Project Location: 13th Street N
Estimated Construction Year: 2024

Project Scope
Reconstruct 13th Street N from Northway Drive to Ninth Avenue N in the City of Saint Cloud.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features and enhancements to existing Metro Bus transit stops along Routes 4 and 33.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This corridor's pavement was rated in fair condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ This project is located in a low-income and high minority area.

Financial Information

MTP Project Number

STC-14

Estimated Project Cost

\$2,152,500 (2024 Dollars)

CITY OF SAINT CLOUD FISCAL CONSTRAINT

In terms of expansion, the City of Saint Cloud has identified seven projects for construction.

MTP Identifier	Type of Project	Project Location	Estimated Construction Cost	Time Frame for Completion
STC-1	New Alignment	MSAS 156 (40 th Street S)	\$6,650,000	Short-Term (2020-2023)
STC-2	Expansion	MSAS 156 (40 th Street S)	\$6,720,000	Mid-Range (2024-2029)
STC-3	Expansion	MSAS 114 (Third Street N)	\$23,310,000	Long-Range (2030-2045)
STC-4	Expansion	MSAS 145 (Ninth Avenue N)	\$8,400,000	Mid-Range (2024-2029)
STC-5	Expansion	Pinecone Road	\$7,770,000	Long-Range (2030-2045)
STC-6	Expansion	322 nd Street	\$10,360,000	Long-Range (2030-2045)
STC-7	Expansion	CSAH 74	\$16,960,000	Long-Range (2030-2045)
Total			\$80,170,000	

FIGURE 9.26 – A LIST OF CAPACITY EXPANDING PROJECTS FOR THE CITY OF SAINT CLOUD OVER THE DURATION OF MAPPING 2045

The total cost in year (or time band) of expenditure for these seven projects is \$80,170,000. Over the duration of this plan, the City of Saint Cloud has approximately \$80,587,147 to expend on capacity expansion projects. Based upon this information, the city is fiscally constrained for these projects.

City of Saint Cloud	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
Expansion Budget	\$8,638,433	\$15,106,253	\$56,842,461	\$80,587,147
Expansion Carry Over from Previous Time Band	\$0	\$1,988,433	\$1,974,686	N/A
Expansion Project Costs	\$6,650,000	\$15,120,000	\$58,400,000	\$80,170,000
Expansion Balance	\$1,988,433	\$1,974,686	\$417,147	N/A

FIGURE 9.27 – A TOTAL OF PROJECTED AVAILABLE REVENUE FOR CAPACITY EXPANDING PROJECTS FOR THE CITY OF SAINT CLOUD

The City of Saint Cloud has budgeted for approximately \$316,510,060 for system preservation over the duration of MAPPING 2045.

Based upon the criteria outlined in MAPPING 2045 for system preservation projects, the city has identified seven projects for construction.

MTP Identifier	Type of Project	Project Location	Estimated Construction Cost	Time Frame for Completion
STC-8	Reconstruction	MSAS 175 (County Road 136/Oak Grove Road SW)	\$1,400,000	2021
STC-9	Reconstruction	MSAS 141 (Cooper Avenue S)	\$2,500,000	2022
STC-10	Reconstruction	MSAS 153 (22 nd Street S)	\$3,068,000	2023
STC-11	Reconstruction	MSAS 102 (Waite Avenue)	\$944,000	2023
STC-12	Reconstruction	MSAS 145 (Ninth Avenue S)	\$6,900,000	Mid-Range (2024-2029)
STC-13	Reconstruction	MSAS 106 (Wilson Avenue)	\$3,534,000	2022
STC-14	Reconstruction	MSAS 125 (13 th Street N)	\$2,152,500	2024
Total			\$20,498,500	

FIGURE 9.28 – A LIST OF SYSTEM PRESERVATION (RECONSTRUCTION) PROJECTS FOR THE CITY OF SAINT CLOUD OVER THE DURATION OF MAPPING 2045

The total cost for the system preservation projects identified by the City of Saint Cloud total \$20,498,500 in year – or time band -- of expenditure dollars. Based upon this information, the city is fiscally constrained for these system preservation projects.

City of Saint Cloud	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$33,927,880	\$59,330,566	\$223,251,614	\$316,510,060
System Preservation Project Costs	\$11,446,000	\$9,052,500	\$0	\$20,498,500
System Preservation Balance	\$22,481,880	\$50,278,066	\$223,251,614	\$296,011,560

FIGURE 9.29 – A TOTAL OF PROJECTED AVAILABLE REVENUE FOR SYSTEM PRESERVATION FOR THE CITY OF SAINT CLOUD

WHAT WE HEARD FIRST PUBLIC COMMENT PERIOD (AUG. 12 – SEPT. 20, 2019)

- STC-1: "Like the thought of STC-1."
- STC-2: "Like the thought of STC-2."
- STC-13: "Why are you redoing the road outside of Wilson? It is brand new."
- "The bridge on Saint Germain is effecting east bound traffic."
- "University Drive to Highway 10, did they block it off?"
- "The left arrows in Saint Cloud don't work, I just want the flashing yellow lights."
- "25th over the tracks, one straight through without having to go over Highway 15."
- "University Drive (merge to one lane) it needs better signage or repainting to indicate the two to one lane change."
- "Walking down Division Street, even with the crosswalks and sidewalks I almost get hit on a daily basis."
- "Division lights need to be fixed and Saint Cloud in general."
- "East Saint Germain is horrible, way too many holes."
- "What's with all the intersections in town that don't line up? In front of Byerlys on 25th Avenue, new Costco intersection, 22nd Street coming down the hill on old Hwy 15. All designed by drunk people?"
- "The non-existent sidewalk across University Bridge ... it looks like a sidewalk but just gets thinner and the person is in the traffic lane before they know it."
- "Roundabout issues on Fifth Avenue. No one knows how to use it. We need better driver education."

- "Saint Cloud did a really nice job redoing the alleyways."
- "Saint Cloud is doing really well with their repairing jobs on the roads. They are quick at fixing issues."
- "No distance is too great to get to on a bike. I avoid 8th and 9th Avenues. I take the side roads instead."
- "Bridge construction on First Street is making it a lot harder to commute around."
- Commenter owns property at corner of 33rd Street S and CR 74; was interested in the pace of growth along 33rd Street – trying to time when to sell their property.
- "At roundabouts, the pedestrian crossings are too close to the roundabout. Thirty feet further down the street would be ideal. For example, at the roundabout on University and Fifth Avenue – when you are that close to the roundabout, your eyes are not looking for pedestrians, they are watching for traffic."
- "Roundabouts do not cause a problem for fire trucks." Commenter was Saint Cloud Deputy Fire Marshall.
- "Downtown Saint Cloud is closed. There isn't one single street without a detour cone on it!"
- "(Expletive) Saint Cloud. The only good thing about your city is the easy access to illegal marijuana."
- "Potholes on 1st St. N and between 29th and 30th."
- "33rd St. S connection."

When asked for additional project:

- "Expansion of Cooper Street from Second Street South to Traverse Road."
- "Rebuild 22nd Street S from CR75 to Clearwater Road."
- "Additional way to cross railroad tracks in north Saint Cloud."
- "Right turn lanes on University Drive, right turn lanes on Washington Memorial Drive."
- "Fix 25th Avenue N from Third Street to 13th Street."
- "Both First Street N and First S west of about 25th. There is no reason for the current condition of those busy streets. A good example is First N between 19th and 33rd. The street is patches over patches."
- "Fire whoever is in charge of stop light timing and get/hire someone who knows what they are doing."
- Nothing
- "Widen and sidewalks on 22nd from Cooper to Oak Grove and along Oak Grove to Oak Hill school. This is a safety issue for students walking and biking to school."
- "A river crossing south of the golf course."
- "We need a safe bike lane for Cooper in south Saint Cloud."
- STC-8
- "There isn't sufficient funding so why ask? Spend money wisely!!"
- "More bike lanes."

- Widen Kilian Boulevard.”
- “Reconstruct the grading of the curved area of the eastern portion of Northwood Lane immediately after exiting Veteran’s Drive. This location is continually under water after periods of high rain/snow melt.”
- “An exit ramp off MN 15 and 22nd Street S or roundabout at 22nd Street S and Cooper Avenue or add sidewalk on east side of Cooper from Allendale to Traverse to enable pedestrians safe passage to the bus stop especially in winter without having to cross to west side through a snow bank and back to east side again. OR reconfigure the bike trail access/crossing at Traverse and Roosevelt Road for safety and ease of use.”
- “Rebuild Allendale Drive.”
- “Bridge 33rd Street S over Mississippi.”
- “Fix pavement on 35th Ave. N, 10th and 11th St. N.”
- “Bikeway around Westwood to connect to the Lake Wobegon Trail. No real safe way to access this with young kids currently.”
- “Extend right turn lane on 12th to northbound 15 and on Veterans Drive to move more traffic.”

WHAT WE HEARD SECOND PUBLIC COMMENT PERIOD (SEPT. 23 – OCT. 23, 2019)

As noted earlier in this chapter, four jurisdictions made significant changes to the original project list presented. The City of Saint Cloud was not one of them. However, while opening up this document to public comment for a second time, more community input was received for projects identified by the City of Saint Cloud.

- When/if the 33rd Street South bridge would be built (Approximately 5 similar comments)
- **“Nobody wants the bridge at 33rd Street South. It’s controversial.”** (Commenter lives in the area where the bridge would be built.)
- Commenter owns property at corner of 33rd Street S and CR 74; was interested in the pace of growth along 33rd Street – trying to time when to sell their property.
- **“Should look at doing something with 322nd Street in between Cty 133 and Cty 4 in Stearns County. It is a heavily traveled road that is very narrow and in crumbling shape.”**

Saint Joseph MAPPING 2045 Projects



Legend

— Expansion Project

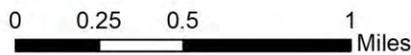


FIGURE 9.30 – MAPPING 2045 PROJECTS IN SAINT JOSEPH

CITY OF SAINT JOSEPH

The City of Saint Joseph has identified one fiscally constrained projects over the duration of this MTP. This project is a capacity expansion project. The following section details this project, the **city’s financial plan and fiscal constraint, and provides** comments from environmental experts and the general public on the proposed transportation project.

CITY OF SAINT JOSEPH: EXPANSION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
STJ-1	Westwood Parkway	21 st Avenue NE to 0.68 Miles East	Four-Lane Divided Arterial	Long-Range (2030-2045)	\$8,277,640

CITY OF SAINT JOSEPH: RECONSTRUCTION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band of Expenditure Cost
N/A	N/A	N/A	N/A	N/A	N/A

Jurisdiction: Saint Joseph

Project Location: Westwood Parkway

Estimated Construction Time Band: 2030-2045

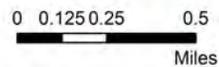
Project Scope

Construct new divided four-lane Westwood Parkway from 21st Avenue NE to 0.68 miles east in the City of Saint Joseph.



Legend

- Possible Project Location
- On-Road Bicycle Lanes
- Roads
- Off-Road Multi-Use Trails
- Transit Stop
- Sidewalks



09/10/2019

Goal 1: Maintain and Enhance Transportation Safety

- Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- Opportunity for multimodal improvements equipped with ADA compliant features.
- Based on the TDM 2045 build scenario, this corridor will be under capacity with a V/C ratio of 0.01 and a LOS A.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- This project will expand the network to assist in preserving the current roadway infrastructure.

Goal 4: Support Metropolitan Vitality and Economic Development

- This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number

STJ-1

Estimated Project Cost

\$8,277,640(2038 Dollars)

Jurisdiction: Saint Joseph
Project Location: Westwood Parkway
Estimated Construction Time Band: 2030 - 2045

Project Scope

Construct new divided four-lane Westwood Parkway from 21st Avenue NE to 0.68 miles east in the City of Saint Joseph.

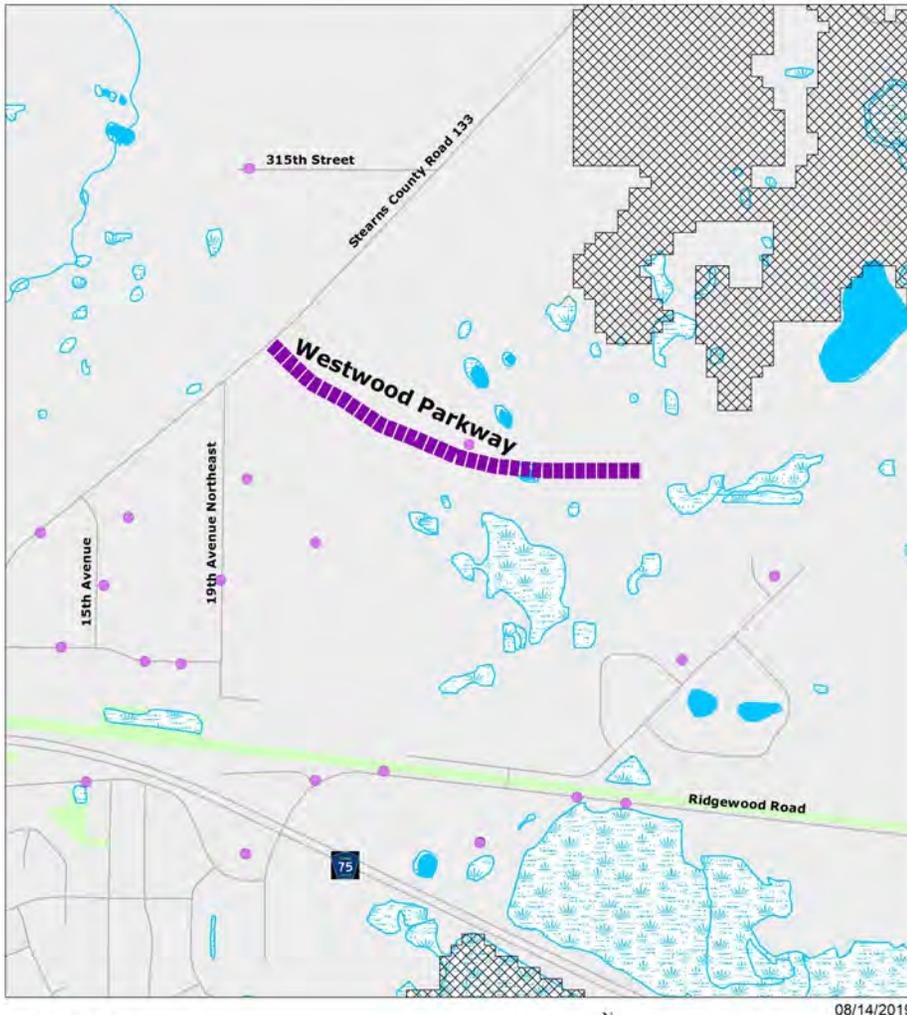
Potential Environmental Factor Considerations

Wetlands:

Freshwater Pond

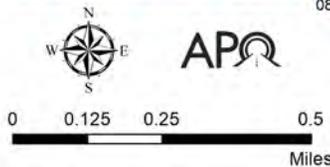
Monitored Sites (MPCA):

Dave Feld Farm: Feedlots



Legend

- Possible Project Alignment
- Monitored Sites (MPCA)
- Parks
- Wetlands
- Regionally Significant Ecological Areas (DNR)



08/14/2019

Financial Information

MTP Project Number

STJ-1

Estimated Project Cost

\$8,277,640(2038 Dollars)

CITY OF SAINT JOSEPH FISCAL CONSTRAINT

In terms of expansion, the City of Saint Joseph has identified one project for construction.

MTP Identifier	Type of Project	Project Location	Estimated Construction Cost	Time Frame for Completion
STJ-1	New Alignment	Westwood Parkway	\$8,277,640	Long-Range (2030-2045)
Total			\$8,277,640	

FIGURE 9.31 – A LIST OF CAPACITY EXPANDING PROJECTS FOR THE CITY OF SAINT JOSEPH OVER THE DURATION OF MAPPING 2045

The total cost in year (or time band) of expenditure for this project is \$8,277,640. Over the duration of this plan, the City of Saint Joseph has approximately \$8,355,225 to expend on capacity expansion projects. Based upon this information, the city is fiscally constrained for this project.

City of Saint Joseph	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
Expansion Budget	\$895,627	\$1,566,207	\$5,893,391	\$8,355,225
Expansion Carry Over from Previous Time Band	\$0	\$895,627	\$2,461,834	N/A
Expansion Project Costs	\$0	\$0	\$8,277,640	\$8,277,640
Expansion Balance	\$895,627	\$2,461,834	\$77,585	N/A

FIGURE 9.32– A TOTAL OF PROJECTED AVAILABLE REVENUE FOR EXPANSION FOR THE CITY OF SAINT JOSEPH

The City of Saint Joseph has budgeted for approximately \$37,796,713 for system preservation over the duration of MAPPING 2045.

Based upon the criteria outlined in MAPPING 2045 for system preservation projects, the city does not have any construction projects. Therefore, the City of Saint Joseph is fiscally constrained for system preservation.

City of Saint Joseph	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$4,051,569	\$7,085,084	\$26,660,060	\$37,796,713
System Preservation Project Costs	\$0	\$0	\$0	\$0
System Preservation Balance	\$4,051,569	\$7,085,084	\$26,660,060	\$37,796,713

FIGURE 9.33– A TOTAL OF PROJECTED AVAILABLE REVENUE FOR SYSTEM PRESERVATION FOR THE CITY OF SAINT JOSEPH

WHAT WE HEARD FIRST PUBLIC COMMENT PERIOD (AUG. 12 – SEPT. 20, 2019)

- “Areas in Saint Joseph are not really walkable. For example, areas around the industrial park. If a person does not have a car and works around that area, it is not very safe to walk there.”
- “There needs to be a safe way for people to cross 75. There was talk about an underpass, but that has not happened.”
- “The city has a thriving main street, make it accessible. There are huge sections in the city that are lacking sidewalks. We live in an area that doesn’t have sidewalks and by our house we have traffic that goes up to 40 mph. It is not safe for us to walk.”
- “There needs to be some type of affordable public busing for residents in Saint Joseph, particularly the college students. We want people to shop locally, but they need to have a way to get there from the college that’s affordable to do so. They can pay to us Tri-CAP, but it can get really expensive. If they are low income and have a job in Saint Cloud it’s not easy to be able to get there.”
- “When will the road going around Saint Joseph be completed? The intersection of Minnesota Street and CSAH 2 in Saint Joe needs to be replaced and have the roundabout it was suppose to have. Roundabouts should be considered for any four way intersection going forth. No one knows how to four way stop or merge. Roundabouts have proven to be safe and effective keeping traffic flowing! What a wonderful plan.”

When asked for ideas for additional projects:

- “Safe pedestrian/bike crossing over Cty 75.”
- “There is not sufficient funding. We don’t need it.”
- None
- “Saint Joseph does not need, nor can afford any additional transportation.”
- “QUIT WASTING TAXPAYER DOLLARS ON SOMETHING NO ONE USES.”
- “Make the four different Elm Street Easts in Saint Joe connect and also connect it to CSAH 134.”
- “Redo intersection of CSAH 133 and 320th Street to add roundabout.”
- None

WHAT WE HEARD SECOND PUBLIC COMMENT PERIOD (SEPT. 23 – OCT. 23, 2019)

As noted earlier in this chapter, there was a significant change to the City of Saint Joseph project list presented during the first round of public comment. Previously, Saint Joseph did not have any projects programmed over the duration of MAPPING 2045. Now, the city has included one capacity expanding project as listed in the table below.

Action	ID	Project Type	Location	Termini	Estimated Project Cost
Add	STJ-1	New Alignment	Westwood Parkway	21 st Avenue NE to 0.68 miles east	\$8,277,640 <i>(2038 dollars)</i>

FIGURE 9.34 – PROJECTS FOR THE CITY OF SAINT JOSEPH TO BE INCORPORATED INTO MAPPING 2045.

Comments received during this round of input were directed toward this change.

- “Need to know why this would be beneficial.”
- “When will the road going around Saint Joe be completed? The intersection of Minnesota Street and CSAH 2 in Saint Joe needs to be replaced and have the roundabout it was supposed to have. Roundabouts should be considered for any four-way interaction going forth. No one knows how to four-way stop or merge. Roundabouts have proven to be safe and effective keeping traffic flowing! What a wonderful plan.”

City of Sartell MAPPING 2045 Projects

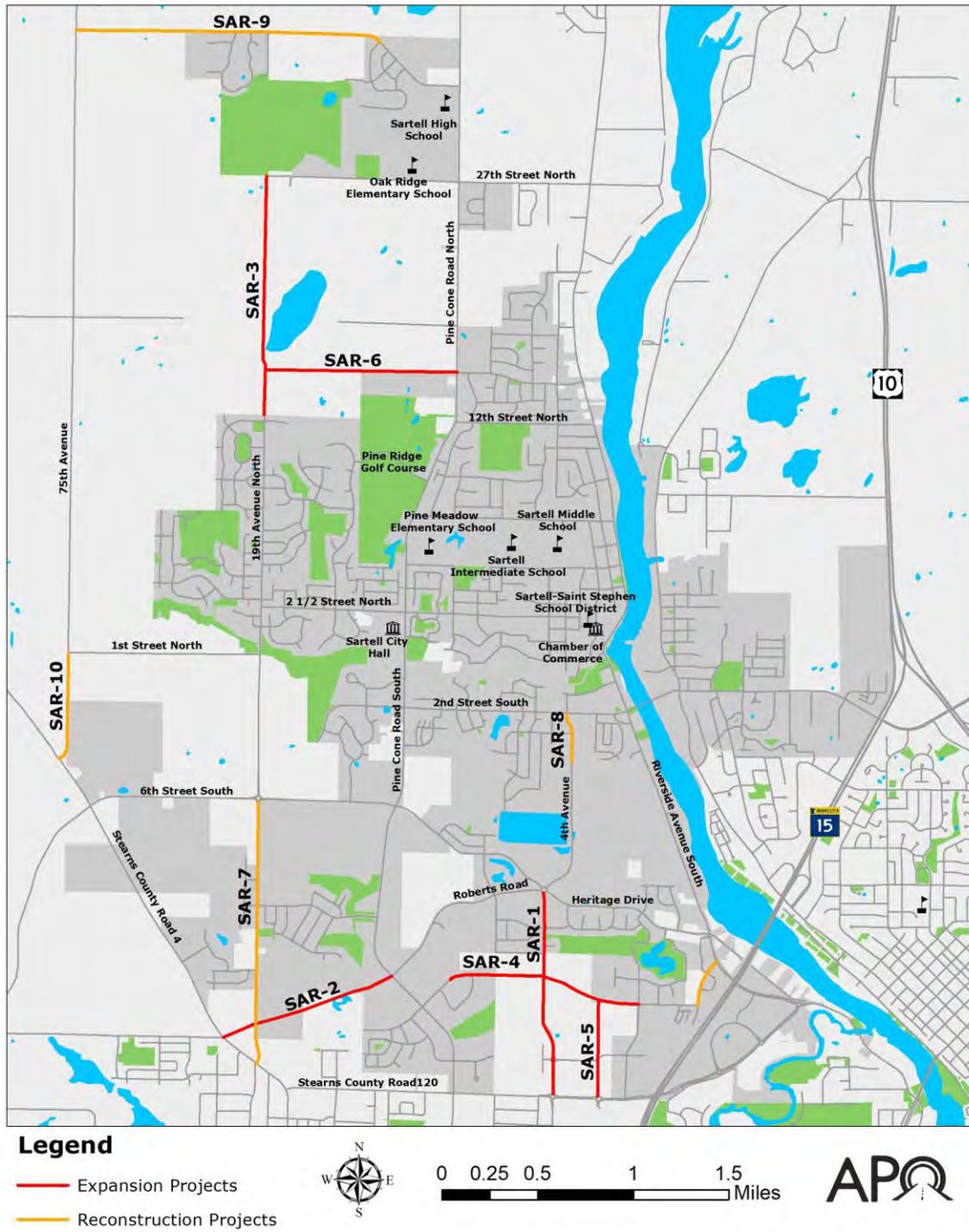


FIGURE 9.35 – MAPPING 2045 PROJECTS IN SARTELL

CITY OF SARTELL

The City of Saint Cloud has identified a total of 11 fiscally constrained projects over the duration of this MTP; six are capacity expansion and five are system preservation. The following section details those projects, the city’s financial plan and fiscal constraint, and provides comments from environmental experts and the general public on the proposed transportation projects.

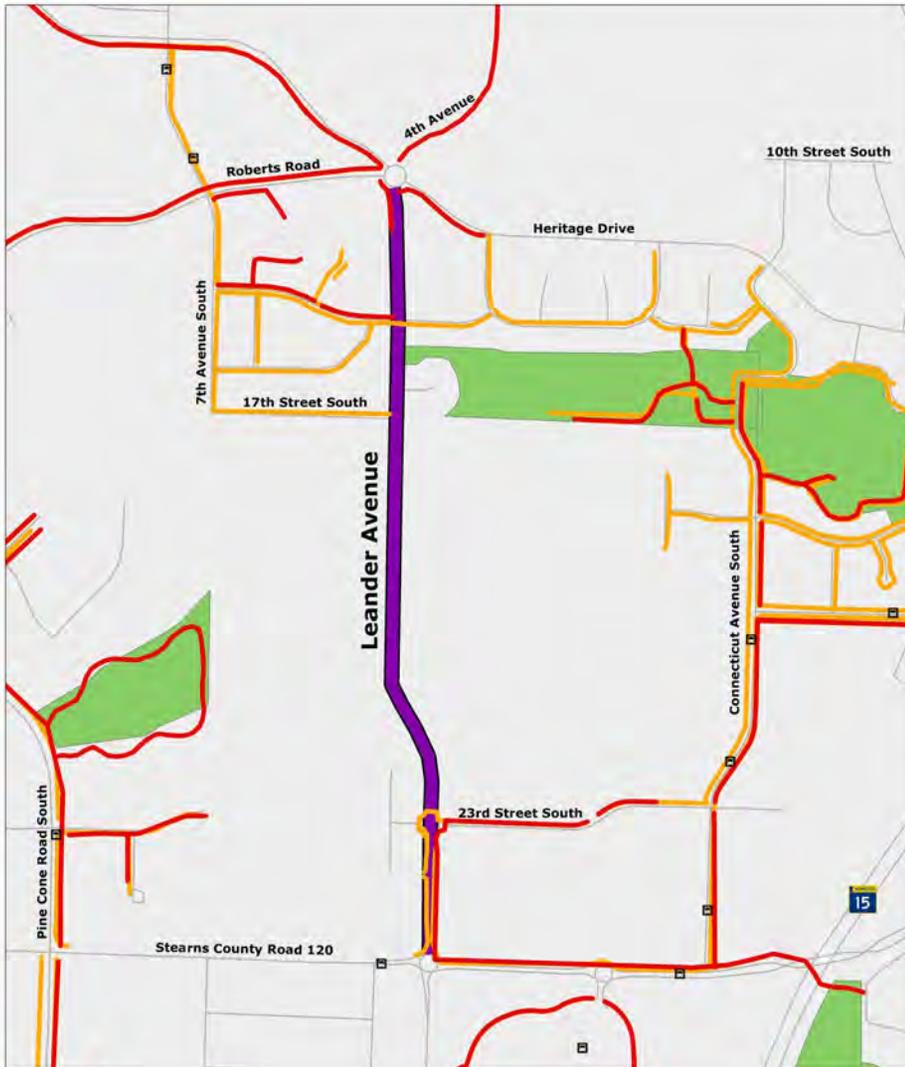
CITY OF SARTELL: EXPANSION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
SAR-1	MSAS 117 (Leander Avenue)	Stearns CSAH 120 to MSAS 118 (Heritage Drive)	Three-Lane Collector	Mid-Range (2024-2029)	\$9,616,320
SAR-2	Roberts Road	MSAS 103 (Pinecone Road S) to Stearns CSAH 4 (322 nd Street)	Three-Lane Collector	Long-Range (2030-2045)	\$8,521,100
SAR-3	19 th Avenue N	11 th Street N to 27 th Street N	Two-Lane Local	Long-Range (2030-2045)	\$8,919,960
SAR-4	Scout Drive	Scout Drive to Connecticut Avenue S	Two-Lane Local	Short-Term (2020-2023)	\$3,724,000
SAR-5	Then Avenue	Proposed Scout Drive alignment to CSAH 120	Two-Lane Local	Long-Range (2030-2045)	\$6,076,140
SAR-6	15 th Street N	MSAS 103 (Pinecone Road N) to 19 th Avenue N	Four-Lane Collector	Long-Range (2030-2045)	\$10,360,000

Jurisdiction: Sartell
Project Location: Leander Avenue
Estimated Construction Time Band: 2024-2029

Project Scope

Widen Leander Avenue to three lanes from Stearns County Road 120 to Heritage Drive in the City of Sartell.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity to bridge gap between existing multi-use trails/sidewalks equipped with ADA compliant features.
- ◆ Based on the TDM 2045 no-build scenario, this corridor will be over capacity from Stearns County Road 120 to Kendall Court with a V/C ratio of 1.69 and a LOS F. From Kendall Court to Heritage Drive will be under capacity with a V/C ratio of 0.59 and a LOS A.
- ◆ Based on the TDM 2045 build scenario, this corridor will be over capacity from Stearns County Road 120 to Kendall Court with a V/C ratio of 1.07 and a LOS C. From Kendall Court to Heritage Drive will be under capacity with a V/C ratio of 0.48 and a LOS A.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This corridor's pavement was rated in fair condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ Project is located in high minority area.

Financial Information

MTP Project Number

SAR-1

Estimated Project Cost

\$9,616,320 (2027 Dollars)

Jurisdiction: Sartell

Project Location: Leander Avenue

Estimated Construction Time Band: 2024 -2029

Project Scope

Widen Leander Avenue to three lanes from Stearns County Road 120 to Heritage Drive in the City of Sartell.

Potential Environmental Factor Considerations

Wetlands:

Shallow Open Water Community, Deep Marsh, Seasonally Flooded Basin, and Shallow Marsh

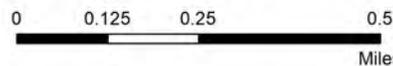
Environmental Public Comments:

- *"Some wetland along corridor. Widening based on today's standards may be eligible for mitigation through Road Bank. Retrofit Stormwater Practices where appropriate."*
- *"The proposed expansion will pass through approximately 1,000-linear feet of wetland."*



Legend

- Project Location
- Parks
- Wetlands
- Monitored Sites (MPCA)
- Water Features



Financial Information

MTP Project Number

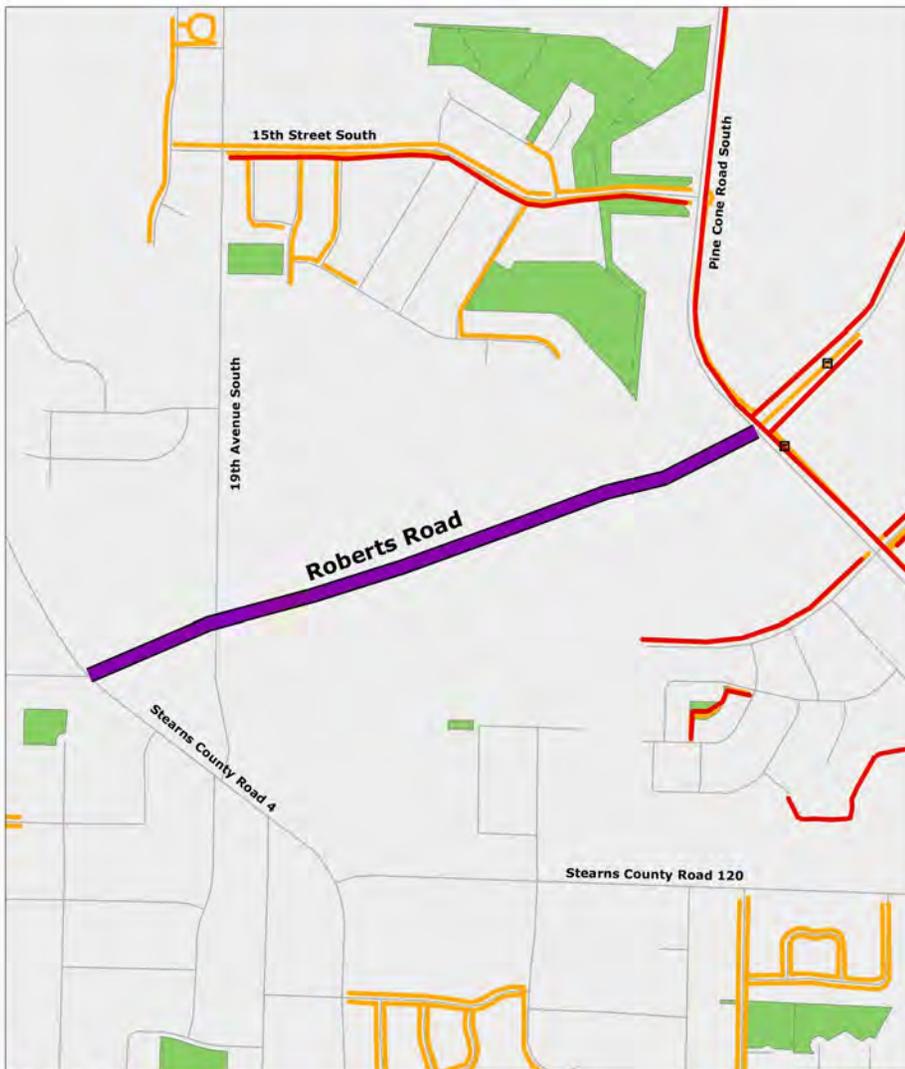
SAR-1

Estimated Project Cost

\$9,616,320 (2027 Dollars)

Jurisdiction: Sartell
Project Location: Roberts Road
Estimated Construction Time Band: 2030-2045

Project Scope
Construct new three lane Roberts Road from Pinecone Road S to Stearns County Road 4 in the City of Sartell.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.
- ◆ Based on the TDM 2045 build scenario, this corridor will still be under capacity with a V/C ratio of 0.23 and a LOS A.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This project will expand the network to assist in preserving the current roadway infrastructure.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ Project is located in high minority area.

Financial Information

MTP Project Number

SAR-2

Estimated Project Cost

\$8,521,100 (2038 Dollars)

Jurisdiction: Sartell

Project Location: Roberts Road

Estimated Construction Time Band: 2030 - 2045

Project Scope

Construct new three lane Roberts Road from Pinecone Road S to Stearns County Road 4 in the City of Sartell.

Potential Environmental Factor Considerations

Wetlands:

Seasonally Flooded Basin, Shallow Marsh, Shallow Open Water Community, and Deep Marsh

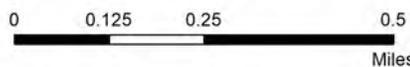
Environmental Public Comments:

- "Major wetland area. Road could be easily routed in a way to not have any/minimize wetland impact. There is a gravel trail roughly connecting. The proposed alignment could utilize gravel trail to minimize environmental impacts. If built, we lose soil of statewide importance for farm land. Show a potential route that misses the wetlands."
- "The proposed new road can curve North of the wetland complex, and avoid most of the wetland impact. Please see the attached SAR-2 sketch."



Legend

- █ Possible Project Alignments
- Monitored Sites (MPCA)
- Roads
- Wetlands
- Water Features
- Parks



Financial Information

MTP Project Number

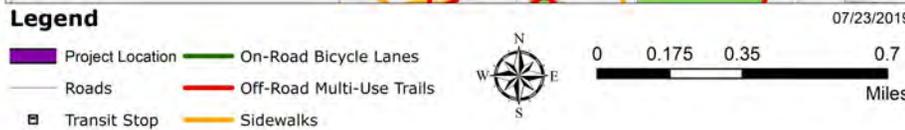
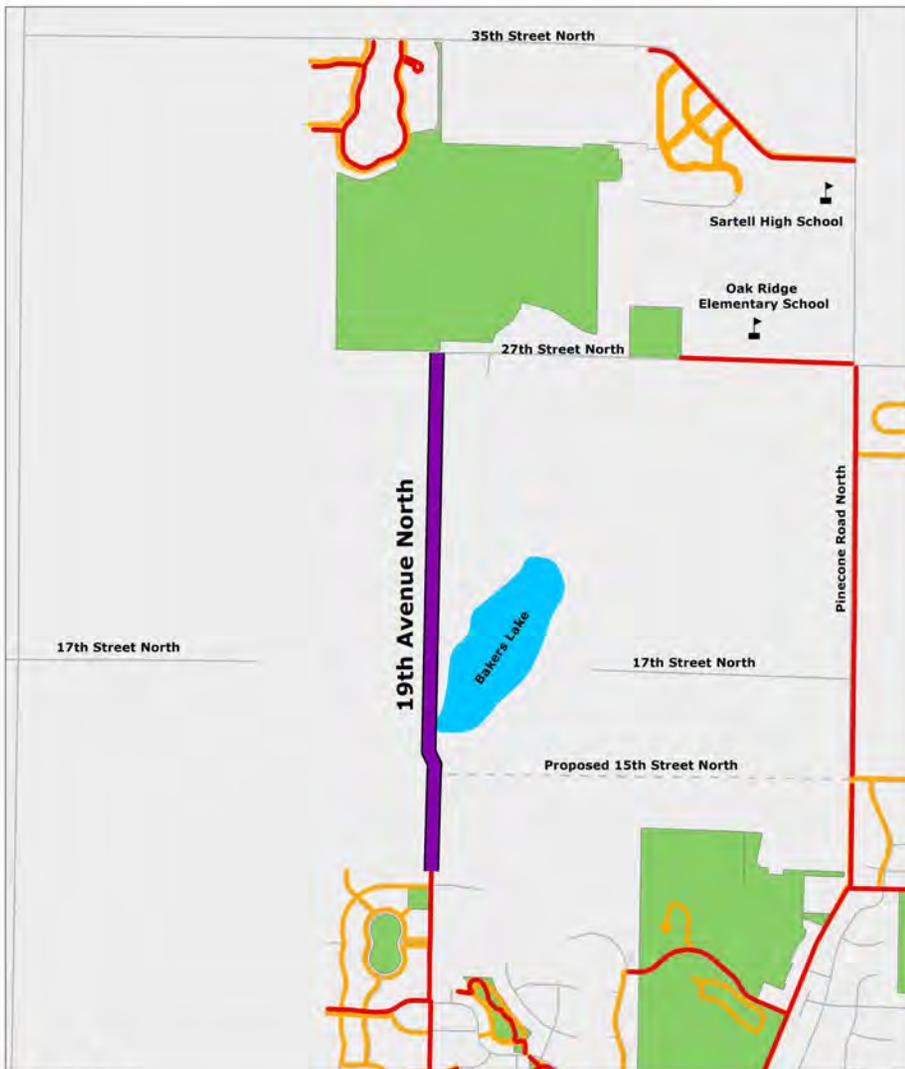
SAR-2

Estimated Project Cost

\$8,521,100 (2038 Dollars)

Jurisdiction: Sartell
Project Location: 19th Avenue N
Estimated Construction Time Band: 2030-2045

Project Scope
Construct new two lane 19th Avenue N from 11th Street N to 27th Street N in the City of Sartell.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.
- ◆ Based on the TDM 2045 build scenario, this corridor will still be under capacity with a V/C ratio of 0.40 and a LOS A.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This project will expand the network to assist in preserving the current roadway infrastructure.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number

SAR-3

Estimated Project Cost

\$8,919,960 (2038 Dollars)

Jurisdiction: Sartell

Project Location: 19th Avenue N

Estimated Construction Time Band: 2030 - 2045

Project Scope

Construct new two lane 19th Avenue N from 11th Street N to 27th Street N in the City of Sartell.

Potential Environmental Factor Considerations

Wetlands:

Seasonally Flooded Basin and Shallow Marsh

Shoreland (300 Feet):

Approximately 800 feet within shoreland

Drinking Water Vulnerability:

High

Regionally Significant Ecological Area (DNR):

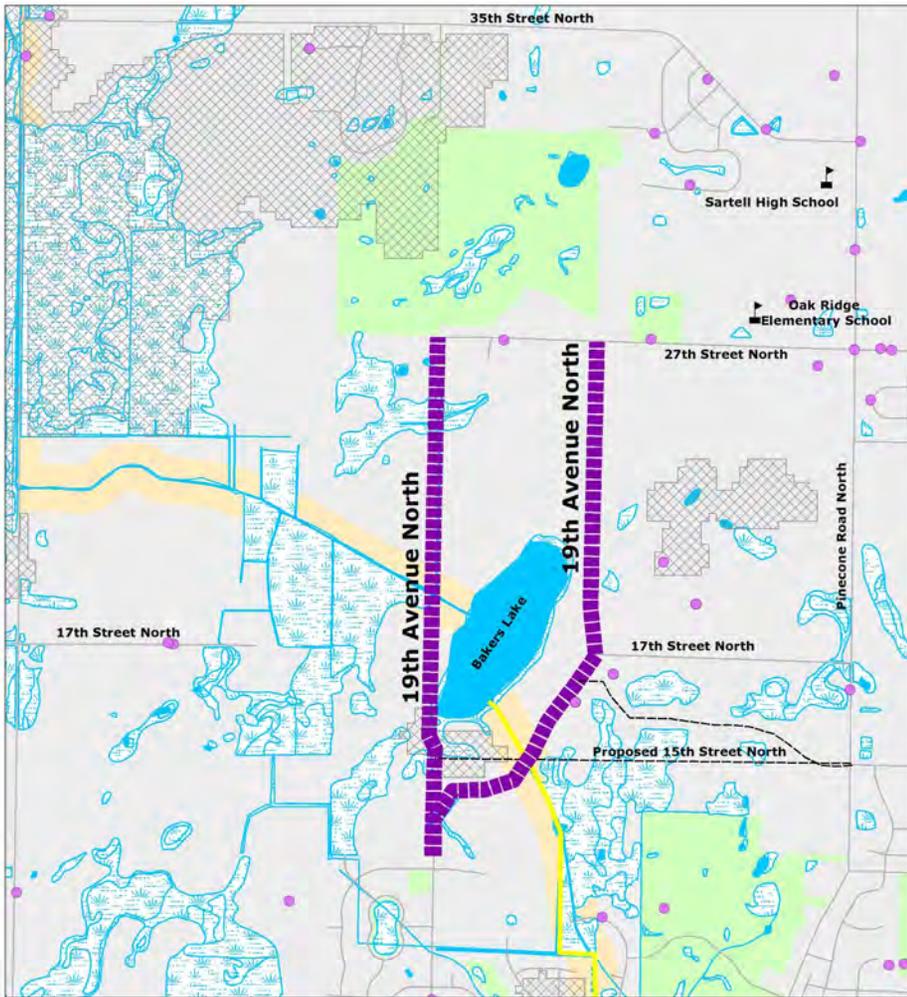
Yes

Monitored Sites (MPCA):

James and Amber Montag Property: Solid Waste

Environmental Public Comments:

- "Appears large amounts of wetland/hydric soil/ high ground water table to contend with. It would be beneficial to have Sartell Environmentally Sensitive Areas identified on the map as well. Large area of potential wetland impact may make this project not feasible."
- "The proposed new 19th Avenue North road will travel through 2,600-linear feet of a wetland complex adjacent to and South of Bakers Lake (Most of the South wetland is within Shoreland - 1,000-feet of Bakers Lake.), and another 1,000-feet of a wetland North of Bakers Lake. The proposed new 19th Avenue North will cross a DNR Intermittent Stream. Also 27th ST N will need to be extended through an existing farmstead to match this proposed new 19th Avenue North alignment."



Financial Information

MTP Project Number

SAR-3

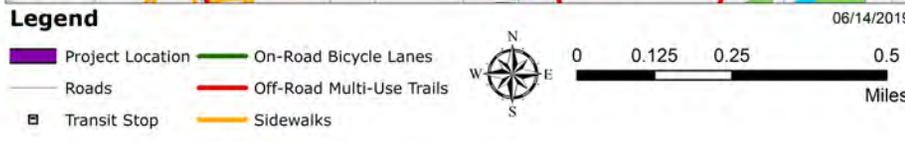
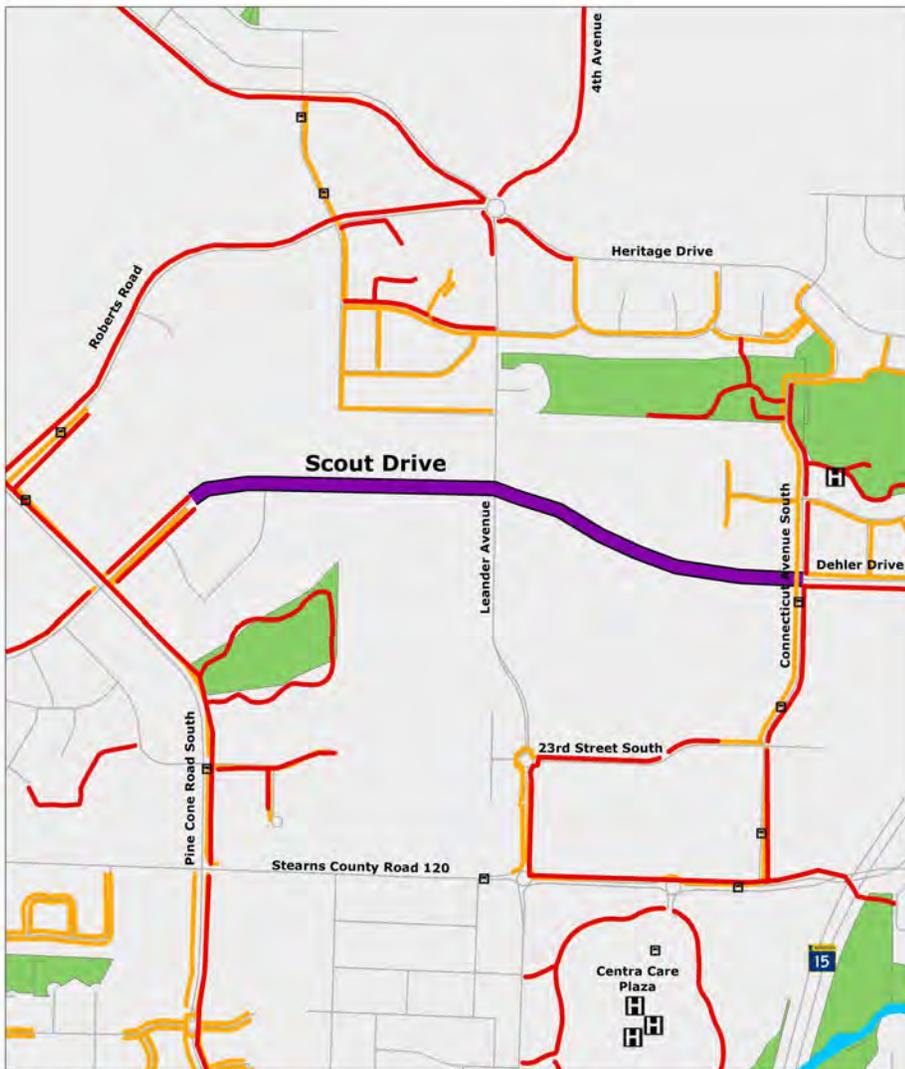
Estimated Project Cost

\$8,919,960 (2038 Dollars)

Jurisdiction: Sartell
Project Location: Scout Drive
Estimated Construction Time Band: 2020-2023

Project Scope

Construct new two lane Scout Drive from existing Scout Drive to Connecticut Avenue S in the City of Sartell.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.
- ◆ Based on the TDM 2045 build scenario, this corridor will be under capacity with a V/C ratio of 0.33 and LOS of A.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This project will expand the network to assist in preserving the current roadway infrastructure.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ Project is located in high minority area.

Financial Information

MTP Project Number

SAR-4

Estimated Project Cost

\$3,724,000 (2021 Dollars)

Jurisdiction: Sartell

Project Location: Scout Drive

Estimated Construction Time Band: 2020 - 2023

Project Scope

Construct new two lane Scout Drive from existing Scout Drive to Connecticut Avenue S in the City of Sartell.

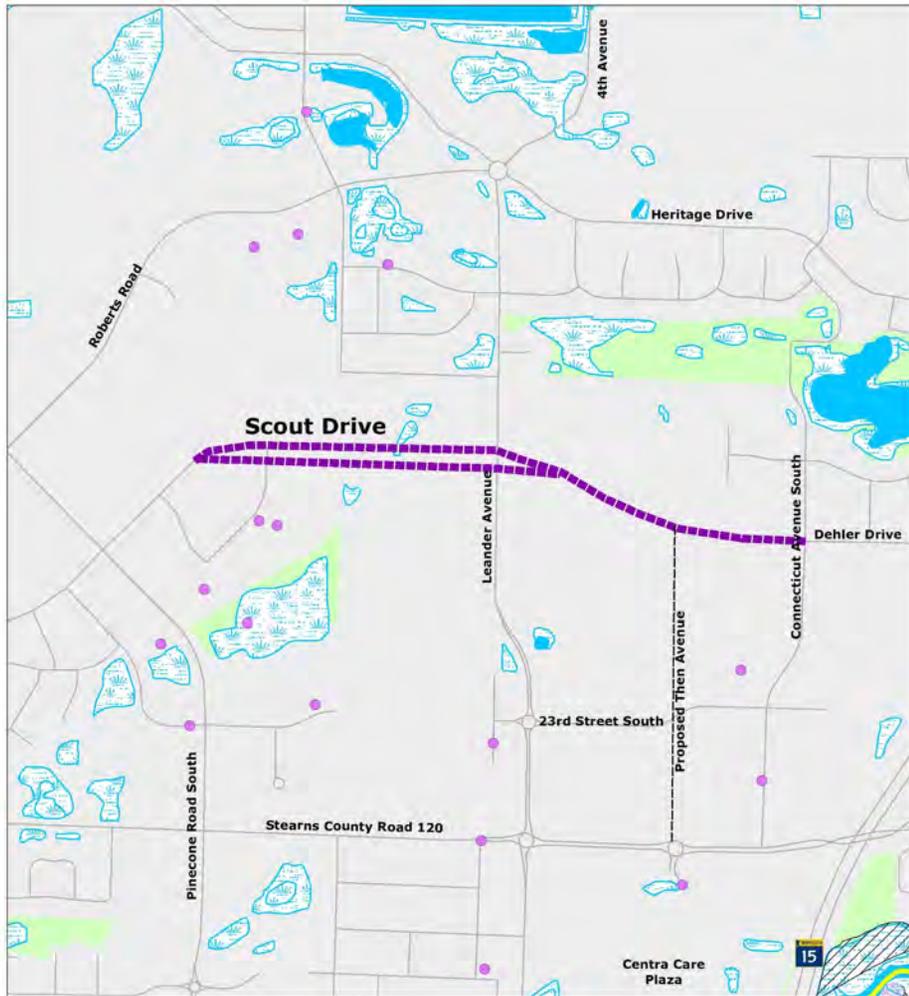
Potential Environmental Factor Considerations

Wetlands:

Shallow Marsh

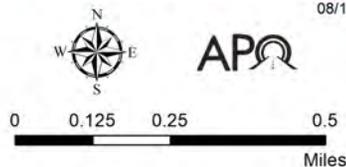
Environmental Public Comments:

- "Potentially some wetland. Appears corridor could be designed in a way to avoid most/all wetland."
- "The proposed new Scout Drive will go through approximately 1,000-linear feet of wetland."



Legend

- Possible Project Alignments
- Parks
- Roads
- Water Features
- Monitored Sites (MPCA)
- Wetlands



Financial Information

MTP Project Number

SAR-4

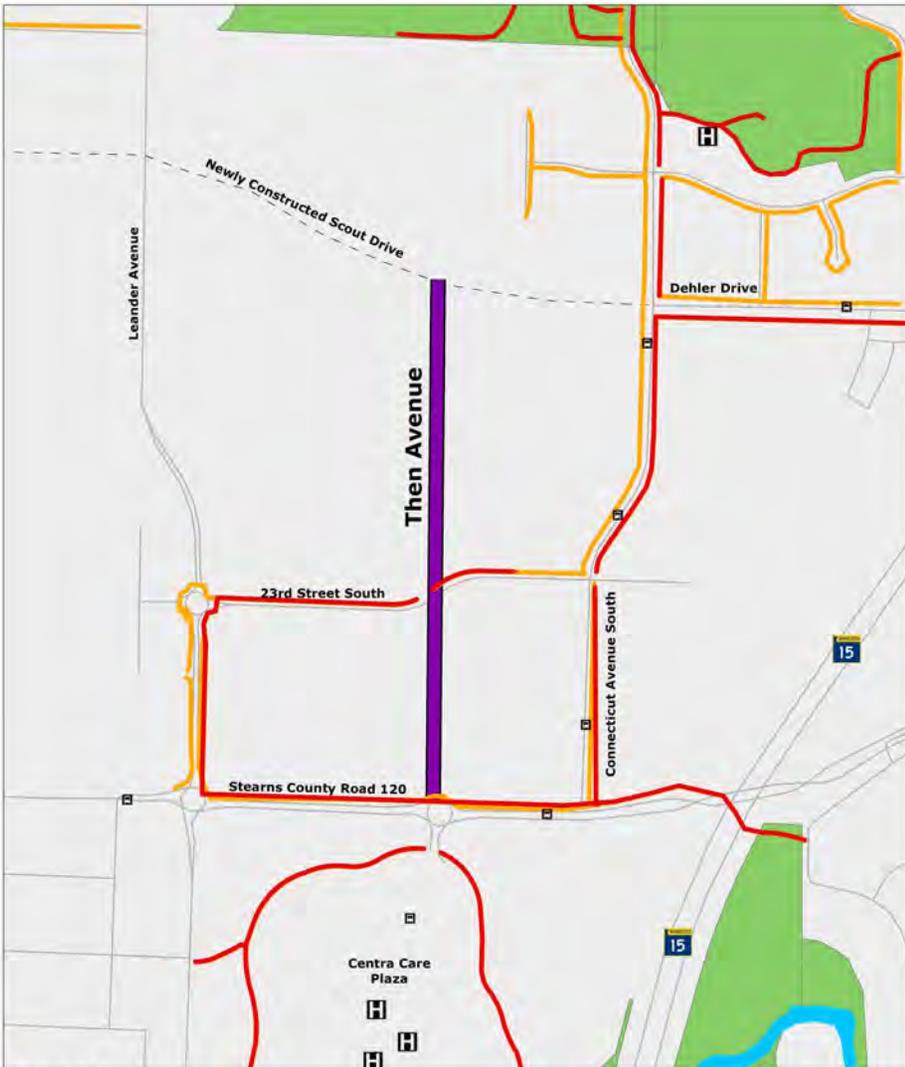
Estimated Project Cost

\$3,724,000 (2021 Dollars)

Jurisdiction: Sartell
Project Location: Then Avenue
Estimated Construction Time Band: 2030-2045

Project Scope

Construct new two lane Then Avenue from proposed new Scout Drive alignment to Stearns County Road 120 in the City of Sartell.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.
- ◆ Based on the TDM 2045 build scenario, this corridor will still be under capacity with a V/C ratio of 0.01 and a LOS A.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This project will expand the network to assist in preserving the current roadway infrastructure.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ Project is located in high minority area.

Financial Information

MTP Project Number

SAR-5

Estimated Project Cost

\$6,076,140 (2038 Dollars)

Jurisdiction: Sartell

Project Location: Then Avenue

Estimated Construction Time Band: 2030-2045

Project Scope

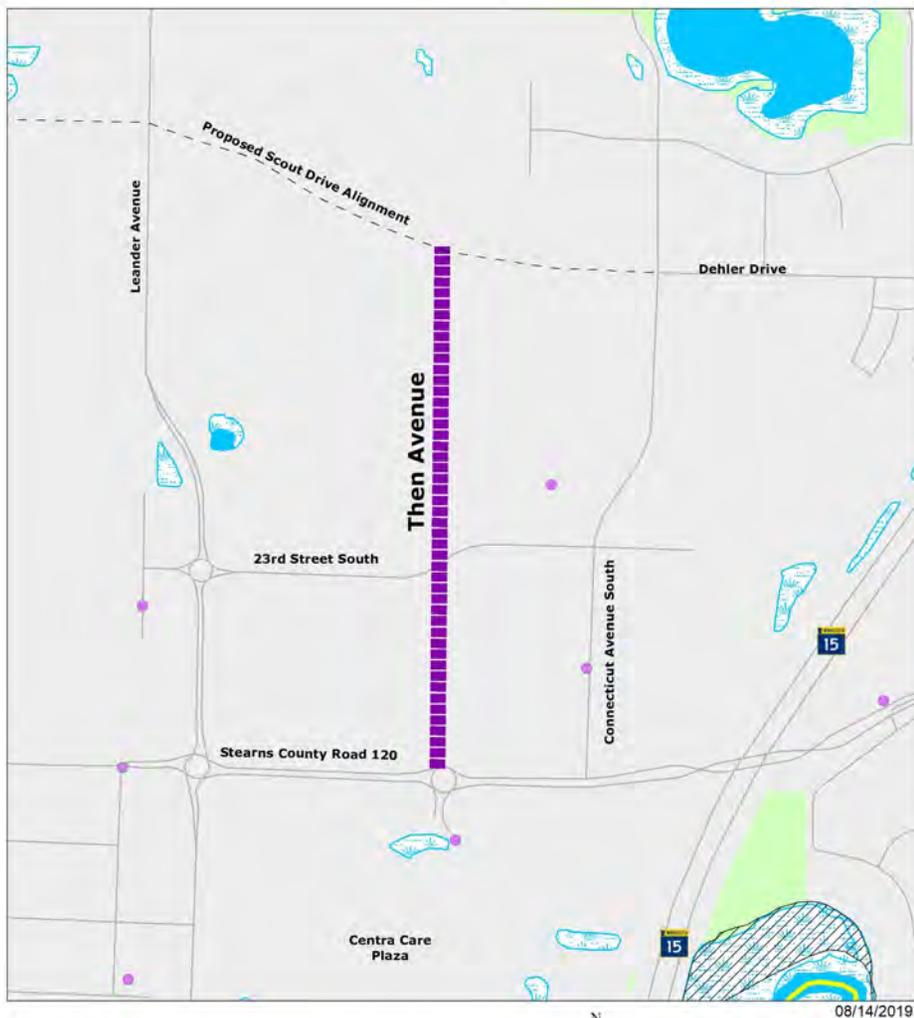
Construct new two lane Then Avenue from proposed new Scout Drive alignment to Stearns County Road 120 in the City of Sartell.

Potential Environmental Factor Considerations

No known environmental factor considerations

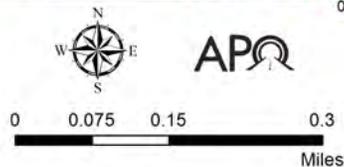
Environmental Public Comments:

- "Potentially some wetland. Appears corridor could be designed in a way to avoid most/all wetland."
- "The proposed new Then Lane will go through an existing old farmstead."



Legend

- █ Possible Project Alignment
- Monitored Sites (MPCA)
- Roads
- Water Features
- Wetlands
- Parks



Financial Information

MTP Project Number

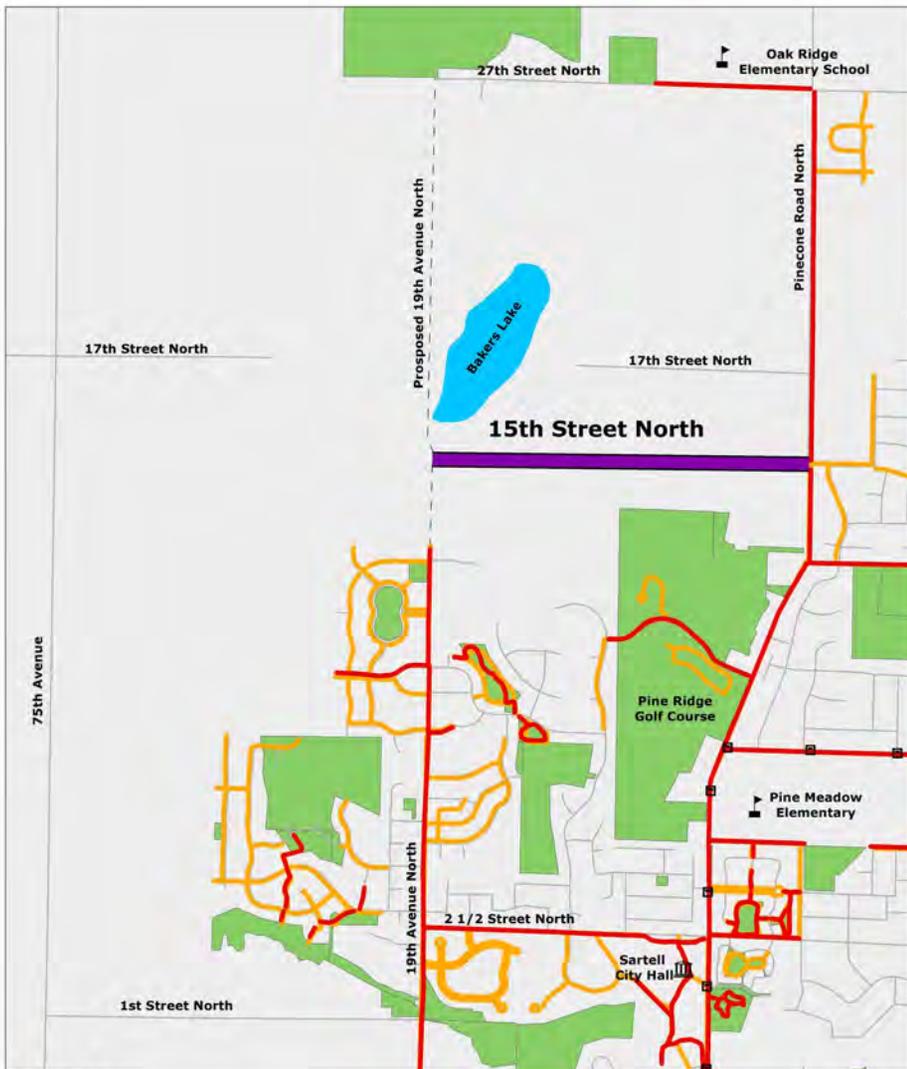
SAR-5

Estimated Project Cost

\$6,076,140 (2038 Dollars)

Jurisdiction: Sartell
Project Location: 15th Street N
Estimated Construction Time Band: 2030-2045

Project Scope
Construct new four lane 15th Street N from 19th Avenue N to Pinecone Road N in the City of Sartell.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.
- ◆ Based on the TDM 2045 build scenario, this corridor will still be under capacity with a V/C ratio of 0.18 and a LOS A.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This project will expand the network to assist in preserving the current roadway infrastructure.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number	SAR-6
Estimated Project Cost	\$10,360,000 (2038 Dollars)

Jurisdiction: Sartell

Project Location: 15th Street N

Estimated Construction Time Band: 2030-2045

Project Scope

Construct new four lane 15th Street N from 19th Avenue N to Pinecone Road S in the City of Sartell.

Potential Environmental Factor Considerations

Impaired Water:

County Ditch 13: E.coli

Wetlands:

Seasonally Flooded Basin, Hardwood Wetland, and Shrub Wetland

Shoreland (300 Feet):

Approximately 750 feet within shoreland

Drinking Water Vulnerability:

High

Rare, Threatened, and Endangered Species (DNR):

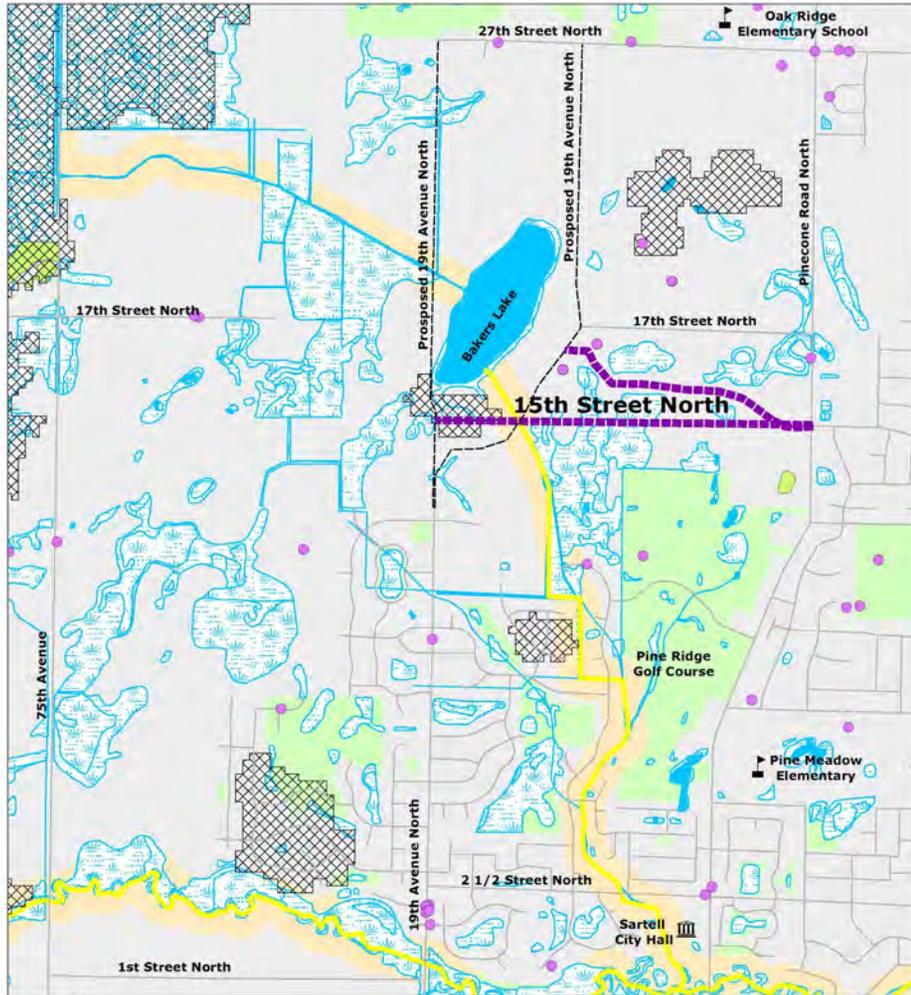
Possible

Regionally Significant Ecological Area (DNR):

Yes

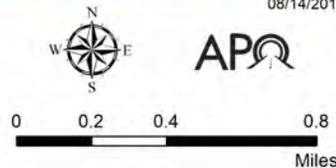
Environmental Public Comments:

- "Appears large amounts of wetland/hydric soil/ high ground water table to contend with. It would be beneficial to have Sartell Environmentally Sensitive Areas identified on the map as well. Large area of potential wetland impact may make this project not feasible. ESA Map would be beneficial to have in this area."
- "The proposed new 15th ST North road will travel through 1,350-linear feet of a wetland complex adjacent to and South of Bakers Lake (Most of this wetland is within Shoreland-1,000-feet of Bakers Lake.), and another 2,000-linear feet of a wetland complex East of Bakers Lake. The proposed new 15th ST N will cross a DNR Intermittent Stream."



Legend

- Possible Project Alignments
- Monitored Sites
- Parks
- Shoreland (300)
- Impaired
- Water Features
- Wetlands
- Regionally Significant Ecological Areas (DNR)



Financial Information

MTP Project Number

SAR-6

Estimated Project Cost

\$10,360,000 (2038 Dollars)

CITY OF SARTELL: RECONSTRUCTION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
SAR-7	19 th Avenue S	Stearns CSAH 4 to Stearns CSAH 133 (Sixth Street S)	Two-Lane Collector Reconstruction	Short-Term (2020-2023)	\$4,799,920
SAR-8	Fourth Avenue S	Stearns CSAH 133 (Second Street S) to Fourth Street S	Two-Lane Collector Reconstruction	Mid-Range (2024-2029)	\$3,450,000
SAR-9	35 th Street N	75th Avenue (Townline Road) to 12 th Avenue N	Two-Lane Local Reconstruction	Long-Range (2030-2045)	\$14,204,000
SAR-10	75th Avenue (Townline Road)	Stearns CSAH 4 to First Street N	Two-lane Collector Reconstruction	Long-Range (2030-2045)	\$1,060,000
SAR-11	MSAS 131 (LeSauk Drive)	Stearns CSAH 1 (Riverside Avenue S) to Dehler Drive	Two-Lane Local Reconstruction	Long-Range (2030-2045)	\$2,756,000

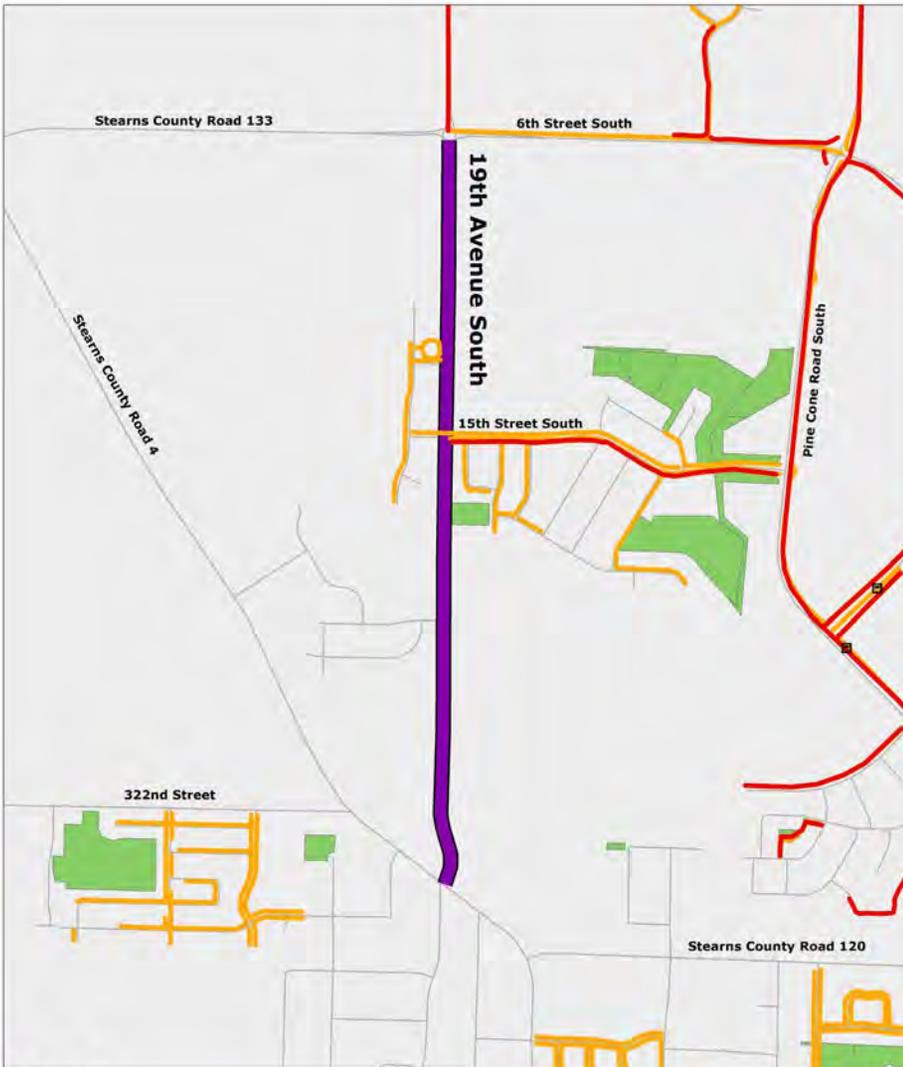
Jurisdiction: Sartell

Project Location: 19th Avenue S

Estimated Construction Year: 2022 (AC Payback 2023)

Project Scope

Reconstruct 19th Avenue S from Stearns County Road 4 to Stearns County Road 133 in the City of Sartell.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity to install ADA compliant features.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This corridor’s pavement was rated in poor condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ This project is located in a high minority area.

Financial Information

MTP Project Number	SAR-7
Estimated Project Cost	\$4,799,920

Jurisdiction: Sartell
Project Location: Fourth Avenue S
Estimated Construction Time Band: 2024-2029

Project Scope

Reconstruct Fourth Avenue S from Stearns County Road 133 (Second Street S) to Fourth Street S in the City of Sartell.

Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity to continue and connect existing sidewalk/multi-use trails equipped with ADA compliant features and upgrade existing transit stops.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Reconstruction project will help preserve the system.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.



Financial Information

MTP Project Number	SAR-8
Estimated Project Cost	\$3,450,000 (2027 Dollars)

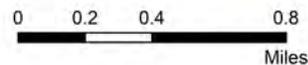
Jurisdiction: Sartell
Project Location: 35th Street N
Estimated Construction Time Band: 2030-2045

Project Scope
Reconstruct 35th Street N from 75th Avenue to 12th Avenue N in the City of Sartell.



Legend

- █ Project Location
- █ On-Road Bicycle Lanes
- █ Off-Road Multi-Use Trails
- █ Sidewalks
- Roads
- Transit Stop



06/25/2019

Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity to continue and connect existing sidewalk/multi-use trail equipped with ADA compliant features.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Reconstruction project will help preserve the system.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number

SAR-9

Estimated Project Cost

\$14,204,000 (2038 Dollars)

Jurisdiction: Sartell
Project Location: Seventh Avenue
Estimated Construction Time Band: 2030-2045

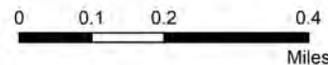
Project Scope

Reconstruct Seventh Avenue from Stearns County Road 4 to First Street N (342 Street) in the City of Sartell.



Legend

- Project Location
- On-Road Bicycle Lanes
- Roads
- Off-Road Multi-Use Trails
- Transit Stop
- Sidewalks



06/25/2019

Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This corridor's pavement was rated in fair condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies complaint.

Financial Information

MTP Project Number

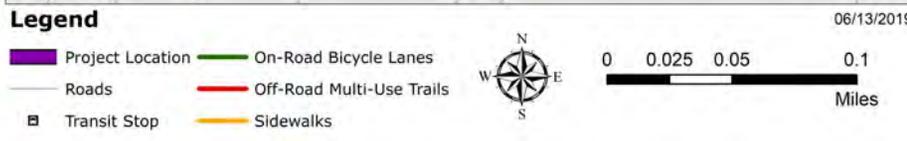
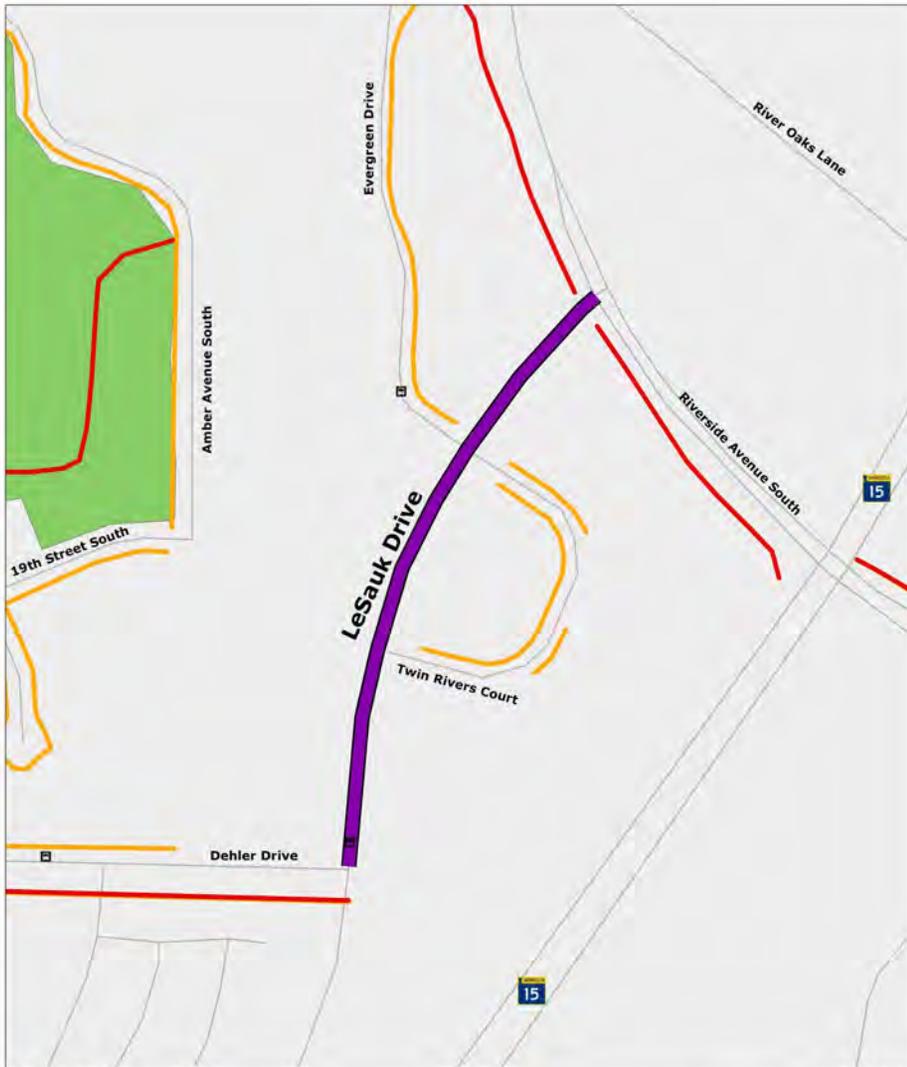
SAR-10

Estimated Project Cost

\$1,060,000 (2038 Dollars)

Jurisdiction: Sartell
Project Location: LeSauk Drive
Estimated Construction Time Band: 2030-2045

Project Scope
Reconstruct LeSauk Drive from Stearns County Road 1 (Riverside Avenue S) to Dehler Drive in the City of Sartell.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity to continue and connect existing sidewalk/multi-use trail equipped with ADA compliant features.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Reconstruction project will help preserve the system.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.

Financial Information

MTP Project Number

SAR-11

Estimated Project Cost

\$2,756,000 (2038 Dollars)

CITY OF SARTELL FISCAL CONSTRAINT

In terms of expansion, the City of Sartell has identified six projects for construction.

MTP Identifier	Type of Project	Project Location	Estimated Construction Cost	Time Frame for Completion
SAR-1	Expansion	MSAS 117 (Leander Avenue)	\$9,616,320	Mid-Range (2024-2029)
SAR-2	New Alignment	Roberts Road	\$8,521,100	Long-Range (2030-2045)
SAR-3	New Alignment	19 th Avenue N	\$8,919,960	Long-Range (2030-2045)
SAR-4	New Alignment	Scout Drive	\$3,724,000	Short-Term (2020-2023)
SAR-5	New Alignment	Then Avenue	\$6,076,140	Long-Range (2030-2045)
SAR-6	New Alignment	15 th Street N	\$10,360,000	Long-Range (2030-2045)
Total			\$47,217,520	

FIGURE 9.36 – A LIST OF CAPACITY EXPANDING PROJECTS FOR THE CITY OF SARTELL OVER THE DURATION OF MAPPING 2045

The total cost in year (or time band) of expenditure for these six projects is \$47,217,520. Over the duration of this plan, the City of Sartell has approximately \$47,324,899 to expend on capacity expansion projects. Based upon this information, the city is fiscally constrained for these projects.

City of Sartell	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
Expansion Budget	\$5,072,930	\$8,871,165	\$33,380,804	\$47,324,899
Expansion Carry Over from Previous Time Band	\$0	\$1,348,930	\$603,775	N/A
Expansion Project Costs	\$3,724,000	\$9,616,320	\$33,877,200	\$47,217,520
Expansion Balance	\$1,348,930	\$603,775	\$107,379	N/A

FIGURE 9.37 – A TOTAL OF PROJECTED AVAILABLE REVENUE FOR EXPANSION FOR THE CITY OF SARTELL

The City of Sartell has budgeted for approximately \$66,475,056 for system preservation over the duration of MAPPING 2045.

Based upon the criteria outlined in MAPPING 2045 for system preservation projects, the city has identified five projects for construction.

MTP Identifier	Type of Project	Project Location	Estimated Construction Cost	Time Frame for Completion
SAR-7	Reconstruction	19 th Avenue S	\$4,799,920	2022
SAR-8	Reconstruction	Fourth Avenue S	\$3,450,000	Mid-Range (2024-2029)
SAR-9	Reconstruction	35 th Street N	\$14,204,000	Long-Range (2030-2045)
SAR-10	Reconstruction	75 th Avenue (Townline Road)	\$1,060,000	Long-Range (2030-2045)
SAR-11	Reconstruction	MSAS 131 (LeSauk Drive)	\$2,756,000	Long-Range (2030-2045)
Total			\$26,269,920	

FIGURE 9.38 – A LIST OF SYSTEM PRESERVATION (RECONSTRUCTION) PROJECTS FOR THE CITY OF SARTELL OVER THE DURATION OF MAPPING 2045.

The total cost for the system preservation projects identified by the City of Sartell total \$66,475,056 in year – or time band -- of expenditure dollars. Based upon this information, the city is fiscally constrained for these system preservation projects.

City of Sartell	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$7,590,240	\$12,213,724	\$46,671,091	\$66,475,055
System Preservation Project Costs	\$4,799,920	\$3,450,000	\$18,020,000	\$26,269,920
System Preservation Balance	\$2,790,320	\$8,763,724	\$28,651,091	\$40,205,135

FIGURE 9.39 – A TOTAL OF PROJECTED AVAILABLE REVENUE FOR SYSTEM PRESERVATION FOR THE CITY OF SARTELL.

WHAT WE HEARD FIRST PUBLIC COMMENT PERIOD (AUG. 12 – SEPT. 20, 2019)

- SAR-3: **“SAR-3 is a great idea!”**
- SAR-9: **“SAR-9 is ESSENTIAL! This is a safety issues with the new high school.”**
- **“Widen 19th Avenue between County Road 133 and County Road 4.”**
- **“Add a bike path on 19th Avenue S from Co Rd (4?) to Co Rd 133.”**

When asked for ideas for additional projects:

- **“Rebuild Townline Road with wider shoulder.”**
- **“Please extend 19th in Sartell. Pinecone Road is over burdened with traffic now that the new high school is built.”**

WHAT WE HEARD SECOND PUBLIC COMMENT PERIOD (SEPT. 23 – OCT. 23, 2019)

As noted earlier in this chapter, four jurisdictions made significant changes to the original project list presented. The City of Sartell was not one of them. However, while opening up this document to public comment for a second time, more community input was received for projects identified by the City of Sartell.

- **“SAR-3 is a great idea!”**
- **“SAR-9 is ESSENTIAL! This is a safety issue with the new high school.”**
- **“Rebuild old Townline between SAR-9 and SAR-10 on the map.”**
- **“What happened with the pole barn put up where the fifth leg of the 19th Avenue roundabout was supposed to go in someday as part of the APO plan for a beltway around the Metro area?”**

City of Sauk Rapids MAPPING 2045 Projects

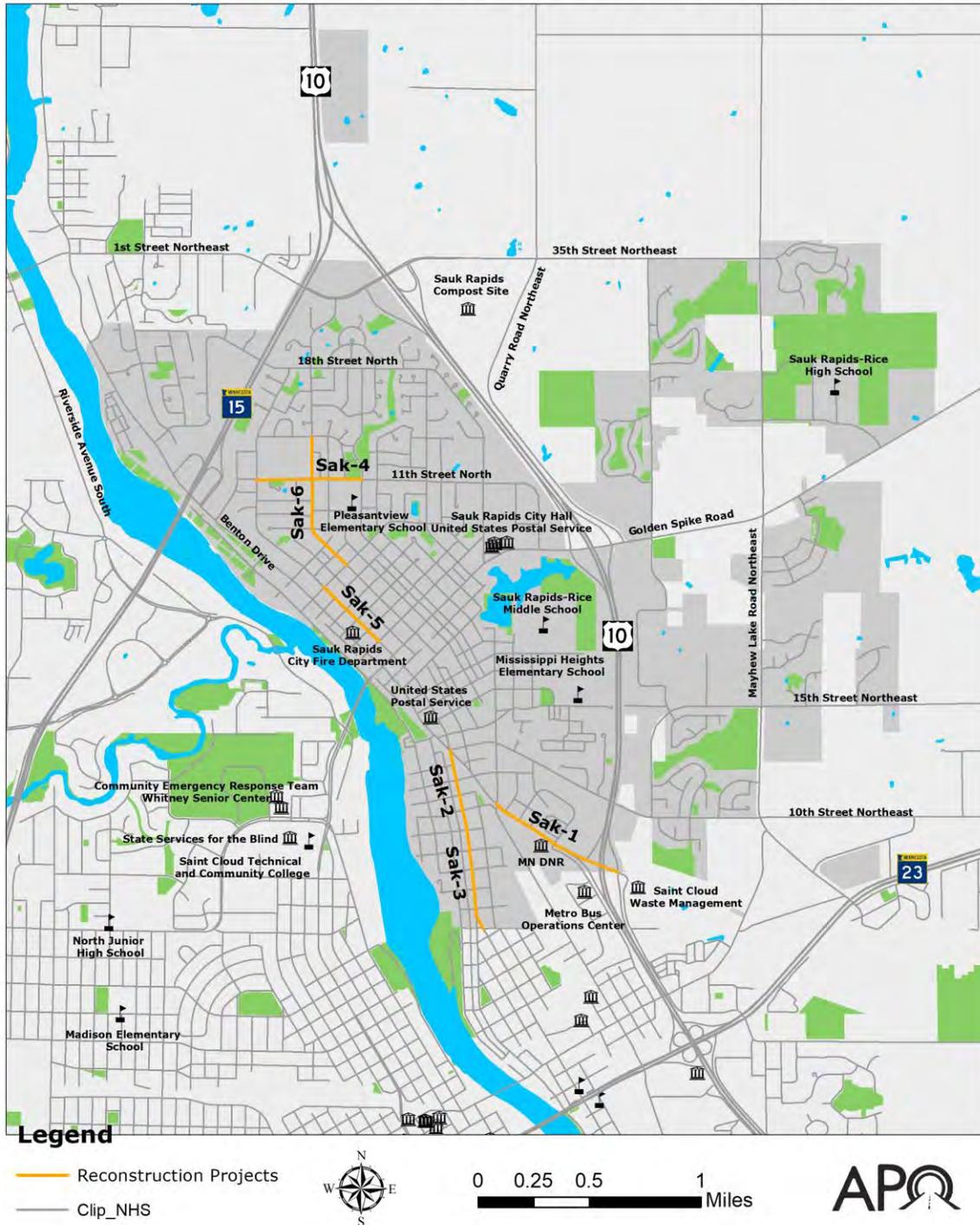


FIGURE 9.40 – MAPPING 2045 PROJECTS IN SAUK RAPIDS

CITY OF SAUK RAPIDS

The City of Sauk Rapids has identified a total of six fiscally constrained projects over the duration of this MTP. All six are system preservation projects. The following section details those projects, the city’s financial plan and fiscal constraint, and provides comments from environmental experts and the general public on the proposed transportation projects.

CITY OF SAUK RAPIDS: EXPANSION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
N/A	N/A	N/A	N/A	N/A	N/A

CITY OF SAUK RAPIDS: RECONSTRUCTION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
SAK-1	MSAS 109 (Benton Drive S)	MSAS 103 (Summit Avenue S) to US 10	Four-Lane Divided Arterial Reconstruction	Short-Term (2020-2023)	\$2,528,678
SAK-2	MSAS 104 (Second Avenue S)	MSAS 109 (Benton Drive S) to 10 th Street S	Two-Lane Collector Reconstruction	Mid-Range (2024-2029)	\$1,916,000
SAK-3	MSAS 104 (Second Avenue S)	10 th Street S to Searle Street	Two-Lane Collector Reconstruction	Mid-Range (2024-2029)	\$2,901,000
SAK-4	MSAS 101 (11 th Street N)	MSAS 104 (Second Avenue N) to MSAS 101 (Sixth Avenue N)	Two-Lane Collector Reconstruction	Long-Range (2030-2045)	\$3,377,000

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
SAK-5	MSAS 104 (Second Avenue N)	Third Street N to MSAS 108 (Eighth Street N)	Two-Lane Local Reconstruction	Short-Term (2020-2023)	\$2,178,000
SAK-6	MSAS 111 (Fourth Avenue N)	MSAS 108 (Eighth Street N) to 13 th Street N	Two-Lane Collector Reconstruction	Long-Range (2030-2045)	\$5,193,000

Jurisdiction: Sauk Rapids
Project Location: Benton Drive S
Estimated Construction Year: 2020

Project Scope

Reconstruct Benton Drive South including four lanes, sidewalk, drainage and lighting from Summit Avenue S to US 10 in the City of Sauk Rapids.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ This corridor will receive safety upgrades such as a sidewalk and lighting improvements.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ A new sidewalk will include ADA compliant accessibility features.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This corridor's pavement was rated in poor condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ A new sidewalk will enhance two Metro Bus transit stops on route numbers 21 and 22.
- ◆ This corridor is classified as a Tier Three regional freight network and recognized as an important corridor for the movement of goods and freight.

Goal 5: Promote Energy and Environmental Conservation

- ◆ New street lighting will be LED and Dark Skies compliant.
- ◆ This project is located in a low-income and high minority area.

Financial Information

MTP Project Number	SAK-1
Estimated Project Cost	\$2,528,678

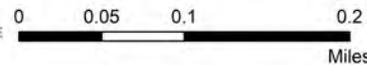
Jurisdiction: Sauk Rapids
Project Location: Second Avenue S
Estimated Construction Year: 2024

Project Scope
Reconstruct Second Avenue S from Benton Drive S to 10th Street S in the City of Sauk Rapids.



Legend

- Project Location
- On-Road Bicycle Lanes
- Roads
- Off-Road Multi-Use Trails
- Transit Stop
- Sidewalks



06/20/2019

Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity to install ADA compliant features to existing sidewalk and enhance existing Metro Bus transit stops along Routes 21 and 22.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This corridor's pavement was rated in poor condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to upgrade existing street lighting to Dark Skies compliant.

Financial Information

MTP Project Number

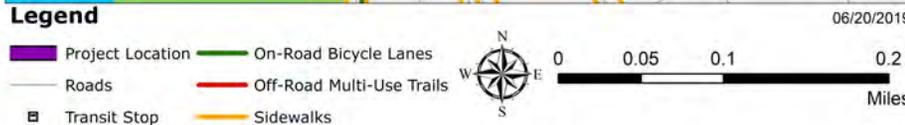
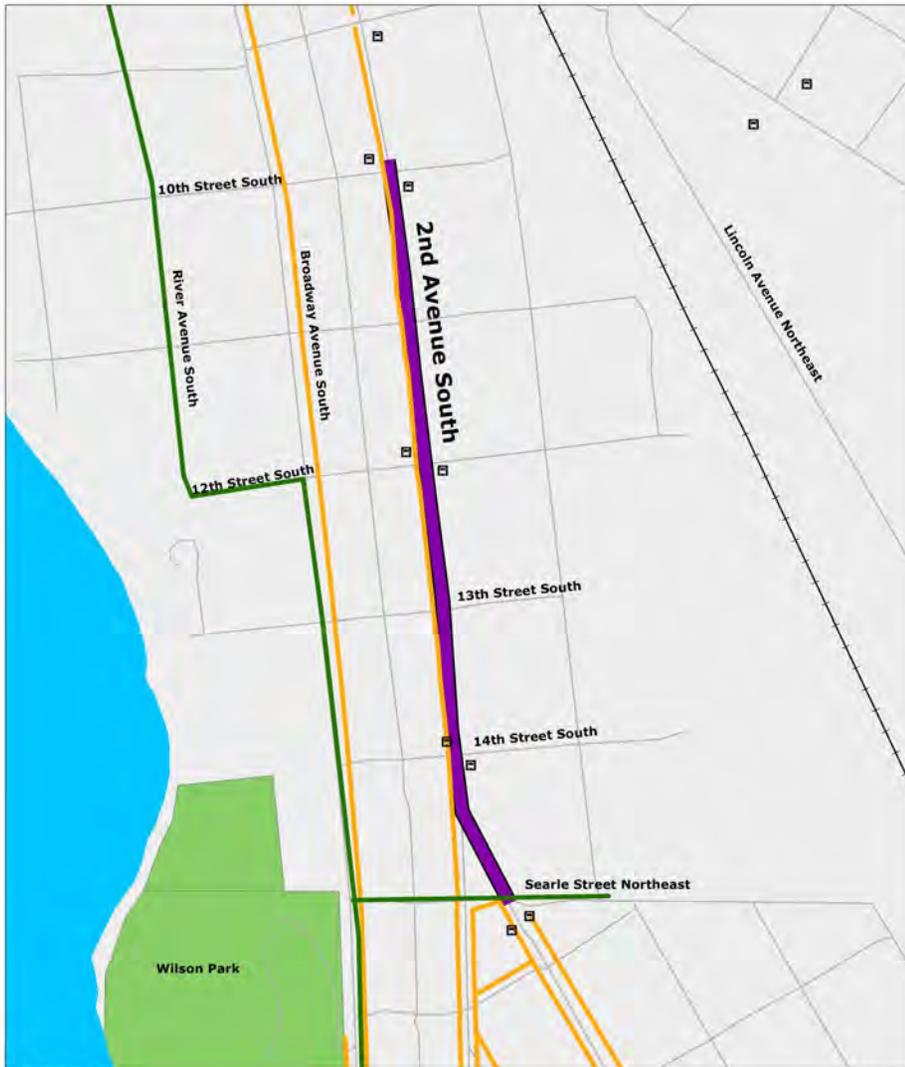
SAK-2

Estimated Project Cost

\$1,916,000 (2024 Dollars)

Jurisdiction: Sauk Rapids
Project Location: Second Avenue S
Estimated Construction Year: 2026

Project Scope
Reconstruct Second Avenue S from 10th Street S to Searle Street in the City of Sauk Rapids.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity to install ADA compliant features to existing sidewalk and enhance existing Metro Bus transit stops along Routes 21 and 22.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This corridor's pavement was rated in poor condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

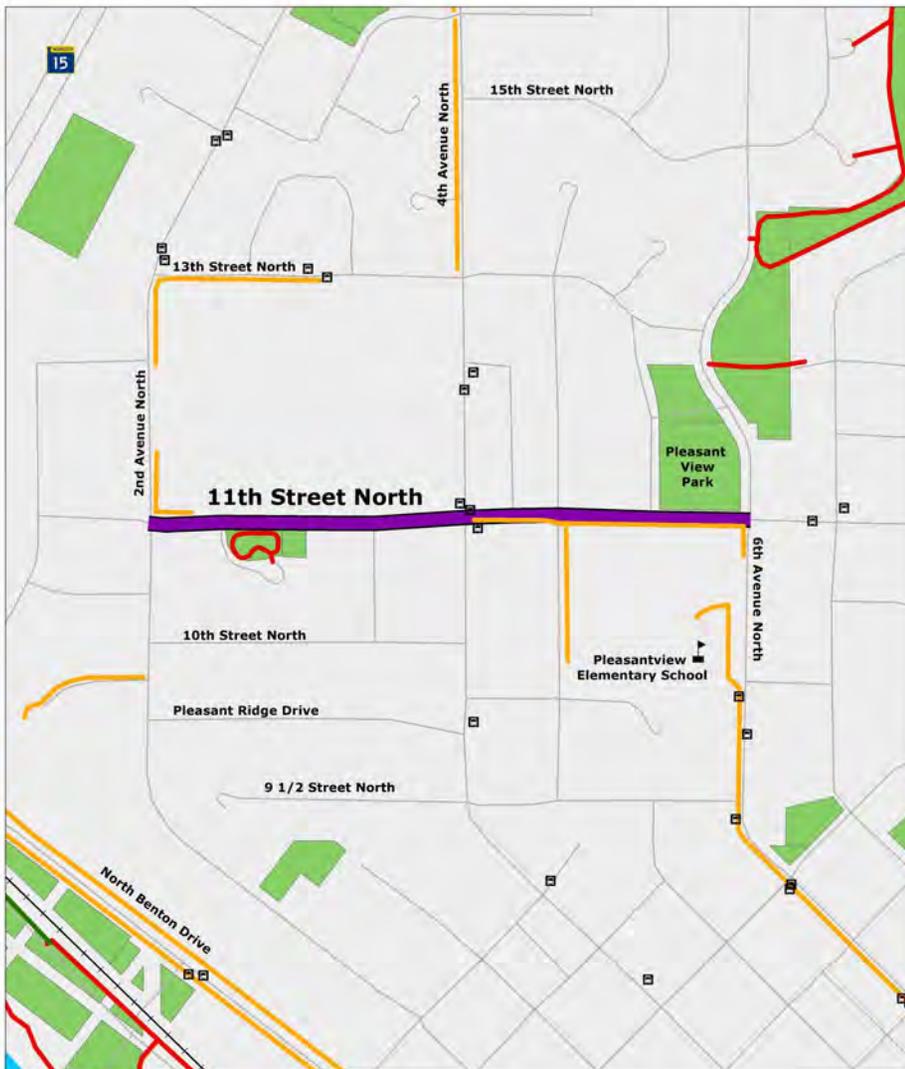
- ◆ Opportunity to upgrade existing street lighting to Dark Skies complaint.

Financial Information

MTP Project Number	SAK-3
Estimated Project Cost	\$2,901,000 (2026 Dollars)

Jurisdiction: Sauk Rapids
Project Location: 11th Street N
Estimated Construction Year: 2030

Project Scope
Reconstruct 11th Street N from Second Avenue N to Sixth Avenue N in the City of Sauk Rapids.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity to continue existing sidewalk west equipped with ADA compliant features and enhancements to existing Metro Bus transit stops along Routes 21 and 22.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This corridor's pavement was rated in poor condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to upgrade existing street lighting to Dark Skies complaint.
- ◆ Project is located in a low-income area.

Financial Information

MTP Project Number

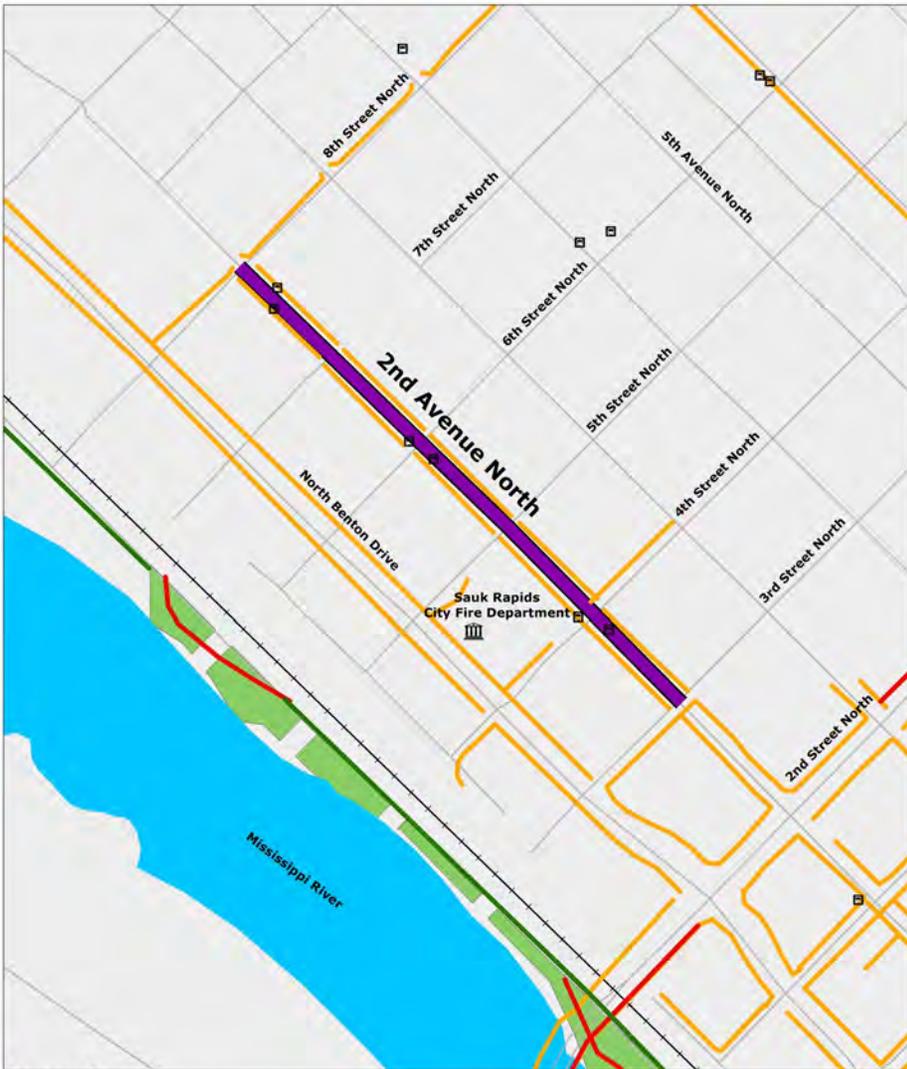
SAK-4

Estimated Project Cost

\$3,377,000 (2030 Dollars)

Jurisdiction: Sauk Rapids
Project Location: Second Avenue N
Estimated Construction Year: 2022

Project Scope
Reconstruct Second Avenue N from Third Street N to Eighth Street N in the City of Sauk Rapids.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity to install ADA compliant features to existing sidewalk and to enhance existing Metro Bus transit stops along Routes 21 and 22.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ Reconstruction project will help preserve the system.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ This project is located in a low-income area.

Financial Information

MTP Project Number

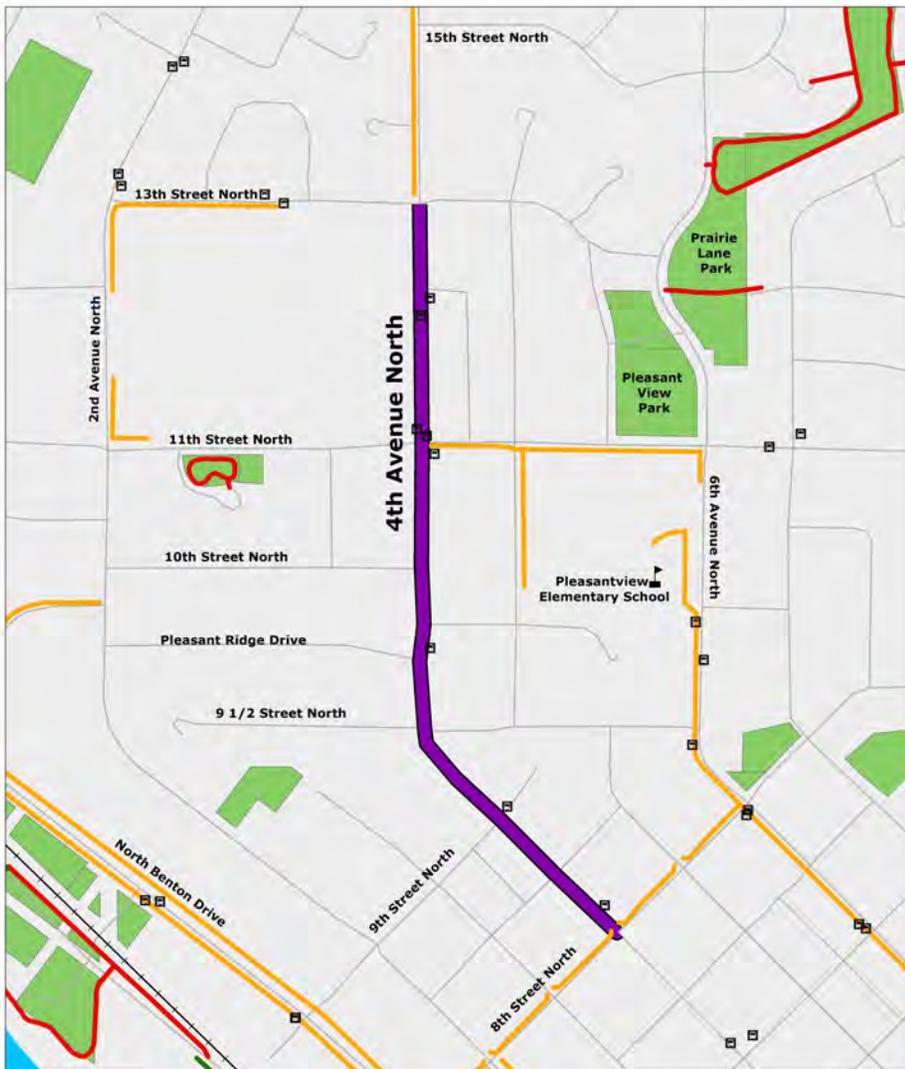
SAK-5

Estimated Project Cost

\$2,178,000 (2022 Dollars)

Jurisdiction: Sauk Rapids
Project Location: Fourth Avenue N
Estimated Construction Year: 2035

Project Scope
Reconstruct Fourth Avenue N from Eighth Street N to 13th Street N in the City of Sauk Rapids.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity to continue existing sidewalk equipped with ADA compliant features and to enhance existing Metro Bus transit stops along Routes 21 and 22.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This corridor's pavement was rated in poor condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to upgrade existing street lighting to Dark Skies compliant.
- ◆ This project is located in a low-income area.

Financial Information

MTP Project Number

SAK-6

Estimated Project Cost

\$5,193,000 (2035 Dollars)

CITY OF SAUK RAPIDS FISCAL CONSTRAINT

The City of Sauk Rapids does not have any capacity expanding projects planned for the duration of MAPPING 2045. Therefore, the City of Sauk Rapids is fiscally constrained for expansion.

City of Sauk Rapids	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
Expansion Budget	\$0	\$400,000	\$0	\$400,000
Expansion Carry Over from Previous Time Band	\$0	\$0	\$400,000	N/A
Expansion Project Costs	\$0	\$0	\$0	\$0
Expansion Balance	\$0	\$400,000	\$400,000	N/A

FIGURE 9.41 – A TOTAL OF PROJECTED AVAILABLE REVENUE FOR EXPANSION FOR THE CITY OF SAUK RAPIDS

The City of Sauk Rapids has budgeted for approximately \$136,003,093 for system preservation over the duration of MAPPING 2045.

Based upon the criteria outlined in MAPPING 2045 for system preservation projects, the city has identified six projects for construction.

MTP Identifier	Type of Project	Project Location	Estimated Construction Cost	Time Frame for Completion
SAK-1	Reconstruction	MSAS 109 (South Benton Drive)	\$2,528,678	2020
SAK-2	Reconstruction	MSAS 104 (Second Avenue S)	\$1,916,000	2024
SAK-3	Reconstruction	MSAS 104 (Second Avenue S)	\$2,901,000	2026
SAK-4	Reconstruction	MSAS 101 (11 th Street N)	\$3,377,000	2030
SAK-5	Reconstruction	MSAS 104 (Second Avenue N)	\$2,178,000	2022
SAK-6	Reconstruction	MSAS 111 (Fourth Avenue N)	\$5,193,000	2035
Total			\$18,093,678	

FIGURE 9.42 – A LIST OF SYSTEM PRESERVATION (RECONSTRUCTION) PROJECTS FOR THE CITY OF SAUK RAPIDS OVER THE DURATION OF MAPPING 2045

The total cost for the system preservation projects identified by the City of Sauk Rapids total \$136,003,093 in year – or time band -- of expenditure dollars. Based upon this information, the city is fiscally constrained for these system preservation projects.

City of Sauk Rapids	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$19,517,091	\$25,506,425	\$90,979,577	\$136,003,093
System Preservation Project Costs	\$4,706,678	\$4,817,000	\$8,570,000	\$18,093,678
System Preservation Balance	\$14,810,413	\$20,689,425	\$82,409,577	\$117,909,415

FIGURE 9.43– A TOTAL OF PROJECTED AVAILABLE REVENUE FOR SYSTEM PRESERVATION FOR THE CITY OF SAUK RAPIDS

WHAT WE HEARD FIRST PUBLIC COMMENT PERIOD (AUG. 12 – SEPT. 20, 2019)

- “I would simply paint some lines on the streets: Center line, fog line, bike lane, bike/vehicle sharrows...”
- “Develop a city bike/ped plan document.”
- “More sidewalks.”
- “Bridge in Sauk Rapids no right turn lane. Why not?”

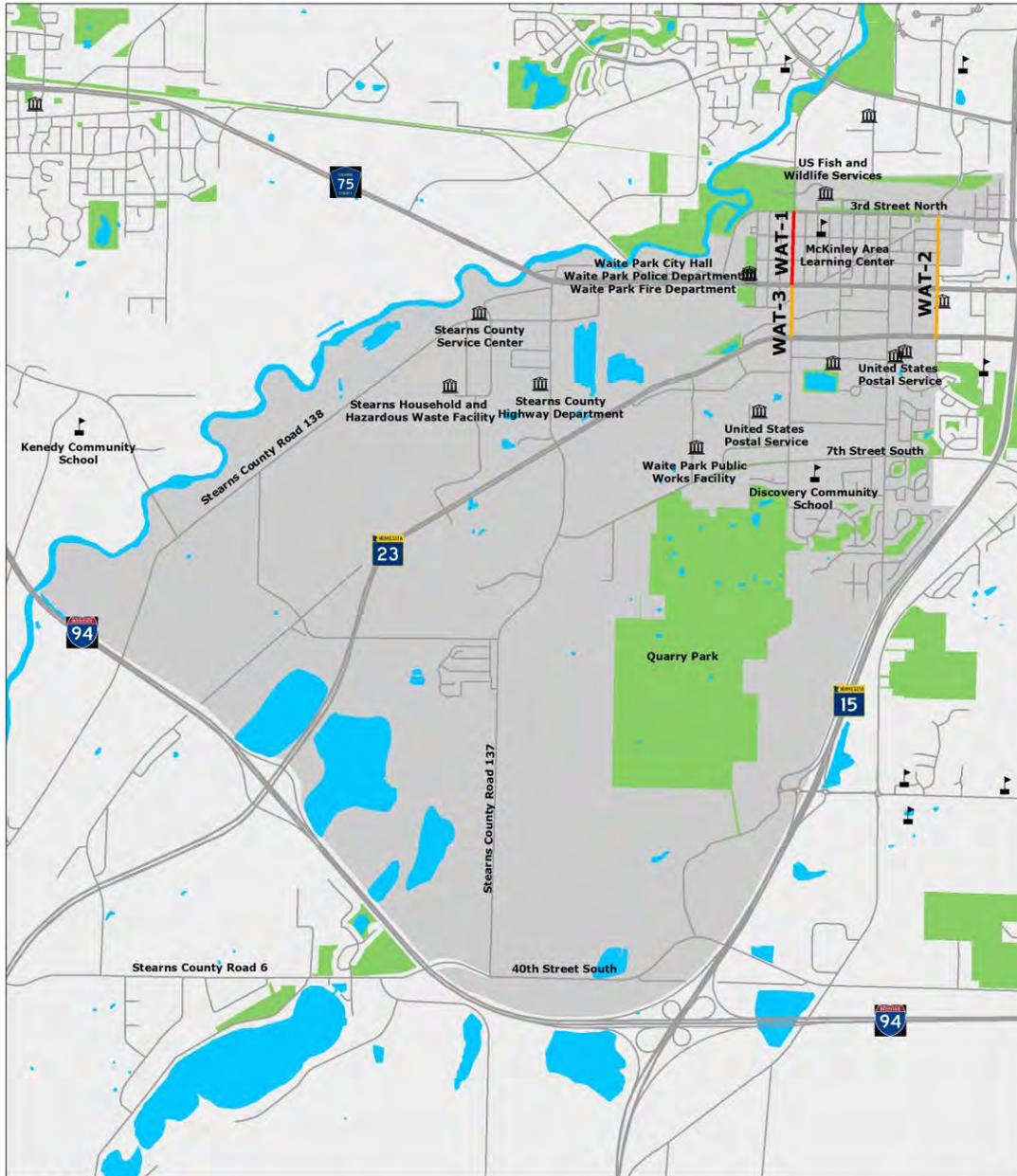
When asked for ideas for additional projects:

- “Benton County/city streets are horrible! City won’t do anything but fill potholes.”
- “Put in a sidewalk on the other side of Benton Drive going north towards Coborn’s.”
- “Get a sidewalk to go from Good Shephard to stores like Kwik Trip.”

WHAT WE HEARD SECOND PUBLIC COMMENT PERIOD (SEPT. 23 – OCT. 23, 2019)

As noted earlier in this chapter, four jurisdictions made significant changes to the original project list presented. The City of Sauk Rapids was not one of them. But because the entire document was made available, projects proposed for the City of Sauk Rapids were again made available for public comment. However, no public comments were received.

City of Waite Park MAPPING 2045 Projects



Legend

- Expansion Projects
- Reconstruction Projects



FIGURE 9.44 – MAPPING 2045 PROJECTS IN WAITE PARK

CITY OF WAITE PARK

The City of Waite Park has identified a total of three fiscally constrained projects over the duration of this MTP; one is capacity **expanding** and **two are system preservation**. The following section details those projects, the city’s financial plan and fiscal constraint, and provides comments from environmental experts and the general public on the proposed transportation projects.

CITY OF WAITE PARK: EXPANSION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
WAT-1	MSAS 103 (10 th Avenue N)	Stearns CSAH 81 (Third Street N) to CSAH 75 (Division Street)	Four-Lane Divided Arterial	Long-Range (2030-2045)	\$7,474,740

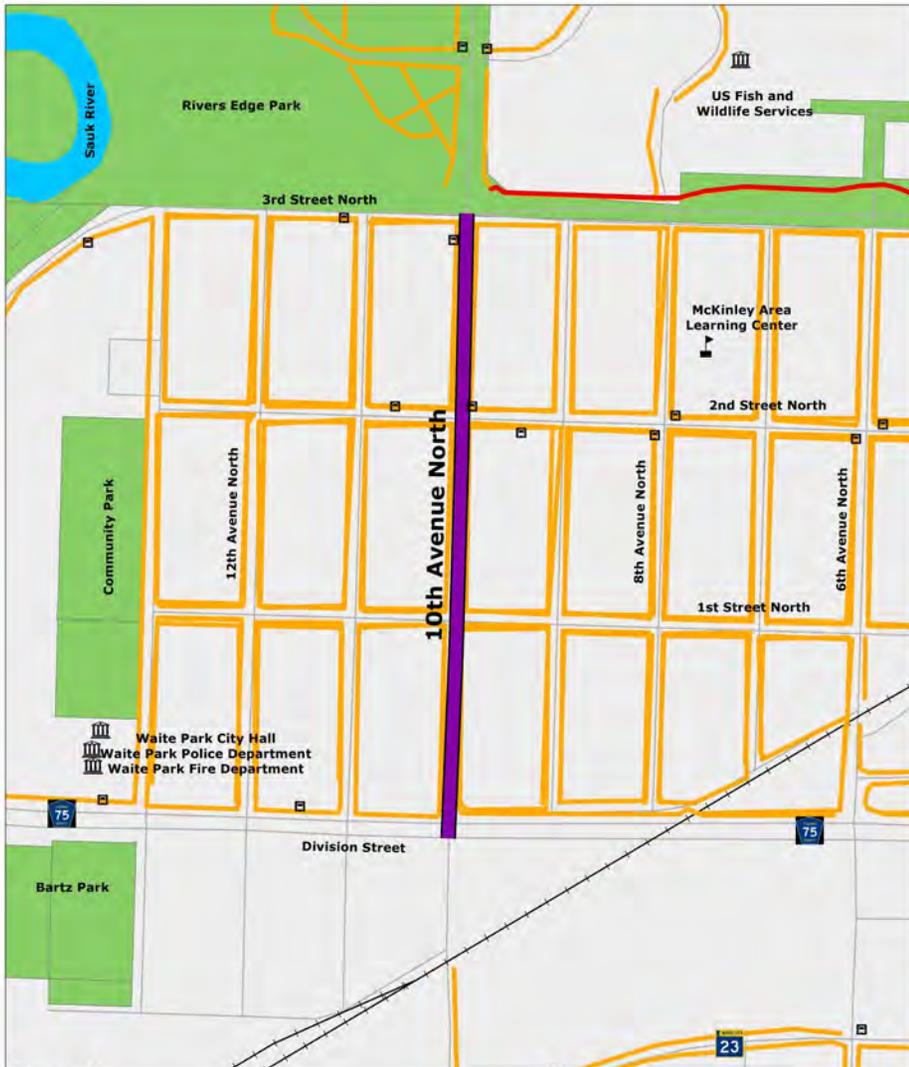
Jurisdiction: Waite Park

Project Location: 10th Avenue N

Estimated Construction Time Band: 2030-2045

Project Scope

Widen 10th Avenue N to four lanes from Stearns County Road 75 (Division Street) to Third Street N in the City of Waite Park.



Legend

- █ Project Location
- █ On-Road Bicycle Lanes
- Roads
- Off-Road Multi-Use Trails
- Transit Stop
- Sidewalks

06/14/2019

Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for installation of safety features.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity for multimodal improvements equipped with ADA compliant features and enhancements to existing Metro Bus transit stops along Routes 1 and 2.
- ◆ Based on the TDM 2045 no-build scenario, this corridor will be over capacity from Division Street to First Street N with a V/C ratio of 1.51 and a LOS F. It will also be over capacity from First Street N to Third Street N with a V/C ratio of 1.13 and a LOS D.
- ◆ Based on the TDM 2045 build scenario, this corridor will be approaching capacity from Division Street to First Street N with a V/C ratio of 0.88 and a LOS B. It will be under capacity from First Street N to Third Street N with a V/C ratio of 0.62 and a LOS A.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This corridor's pavement was rated in good condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to install street lighting that is Dark Skies compliant.
- ◆ Project is located in a low-income and high minority area.

Financial Information

MTP Project Number

WAT-1

Estimated Project Cost

\$7,474,740 (2038 Dollars)

Jurisdiction: Waite Park

Project Location: 10th Avenue N

Estimated Construction Time Band: 2030 - 2045

Project Scope

Widen 10th Avenue N to four lanes from Stearns County Road 75/Division Street to Third Street N in the City of Waite Park.

Potential Environmental Factor Considerations

Drinking Water Vulnerability:

High

Floodplain:

Project northern terminus in 500-year floodplain

Rare, Threatened, and Endangered Species (DNR):

Possible

Monitored Sites (MPCA):

Olsons House of Oldies: Hazardous Waste

Guadalajara Restaurant: Petroleum Remediation and Leak Site

Environmental Public Comments:

- *"Retrofit Stormwater Practices where appropriate. Project should include complete Streets Policy."*



Legend

- Project Location
- Monitored Sites (MPCA)
- Impaired Water
- Parks
- Water Features
- Wetlands
- 100 Year Floodplain
- 500 Year Floodplain



Financial Information

MTP Project Number

WAT-1

Estimated Project Cost

\$7,474,740 (2038 Dollars)

CITY OF WAITE PARK: RECONSTRUCTION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
WAT-2	MSAS 101 (Waite Avenue)	Stearns CSAH 81 (Third Street N) to MN 23 (Second Street S)	Four-Lane Arterial Reconstruction	Short-Term (2020-2023)	\$3,052,000
WAT-3	MSAS 103 (10 th Avenue S)	Stearns CSAH 75 (Division Street) to MN 23 (Second Street S)	Four-Lane Arterial Reconstruction	Long-Range (2030-2045)	\$10,600,000

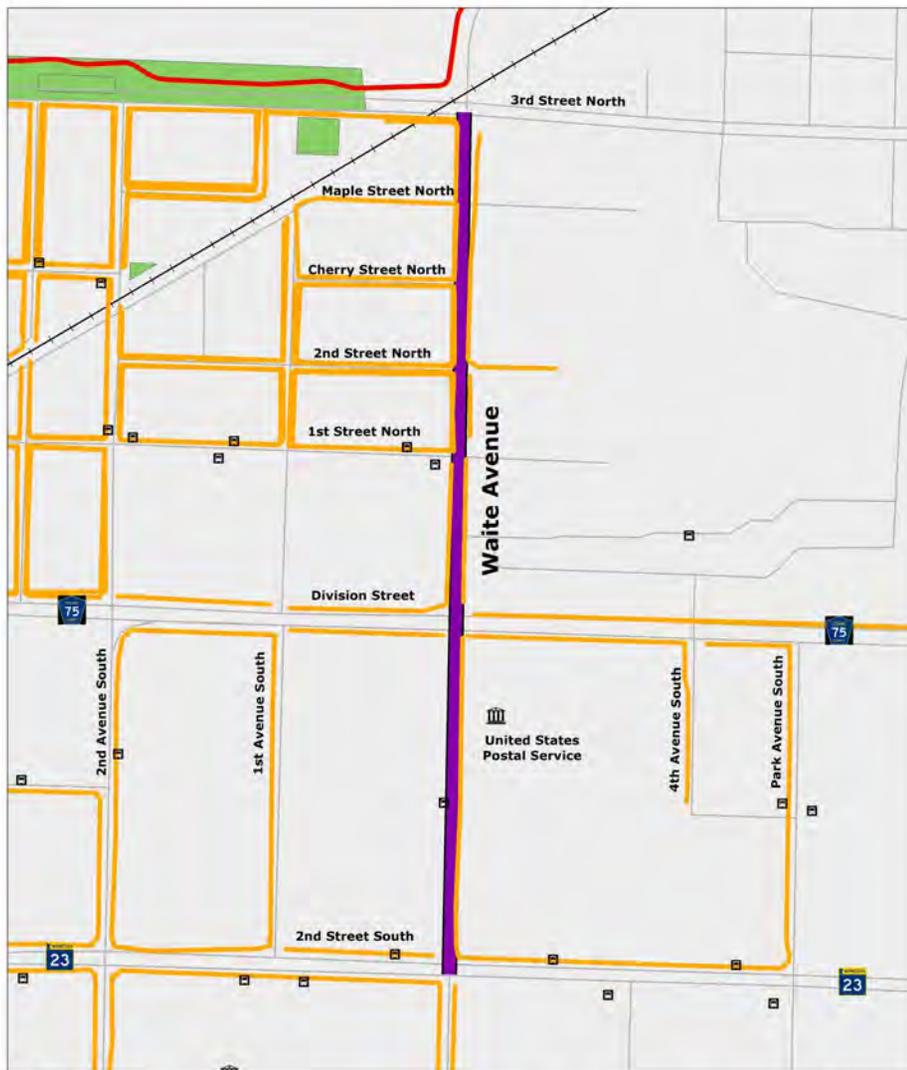
Jurisdiction: Waite Park

Project Location: Waite Avenue

Estimated Construction Time Band: 2020-2023

Project Scope

Reconstruct Waite Avenue from Third Street N to Minnesota Highway 23 in the City of Waite Park.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Opportunity for safety enhancements at the intersection of Stearns County Road 75 (Division Street) and Minnesota Highway 23 (Second Street S)which both have a critical crash index score above average.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Opportunity to install ADA compliant features to existing sidewalk and to enhance existing Metro Bus transit stops along Routes 1, 2, 3, and 5.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ This corridor’s pavement was rated in poor condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Opportunity to upgrade existing street lighting to Dark Skies compliant.
- ◆ This project is located in a low-income and high minority area.

Financial Information

MTP Project Number

WAT-2

Estimated Project Cost

\$3,052,000 (2021 Dollars)

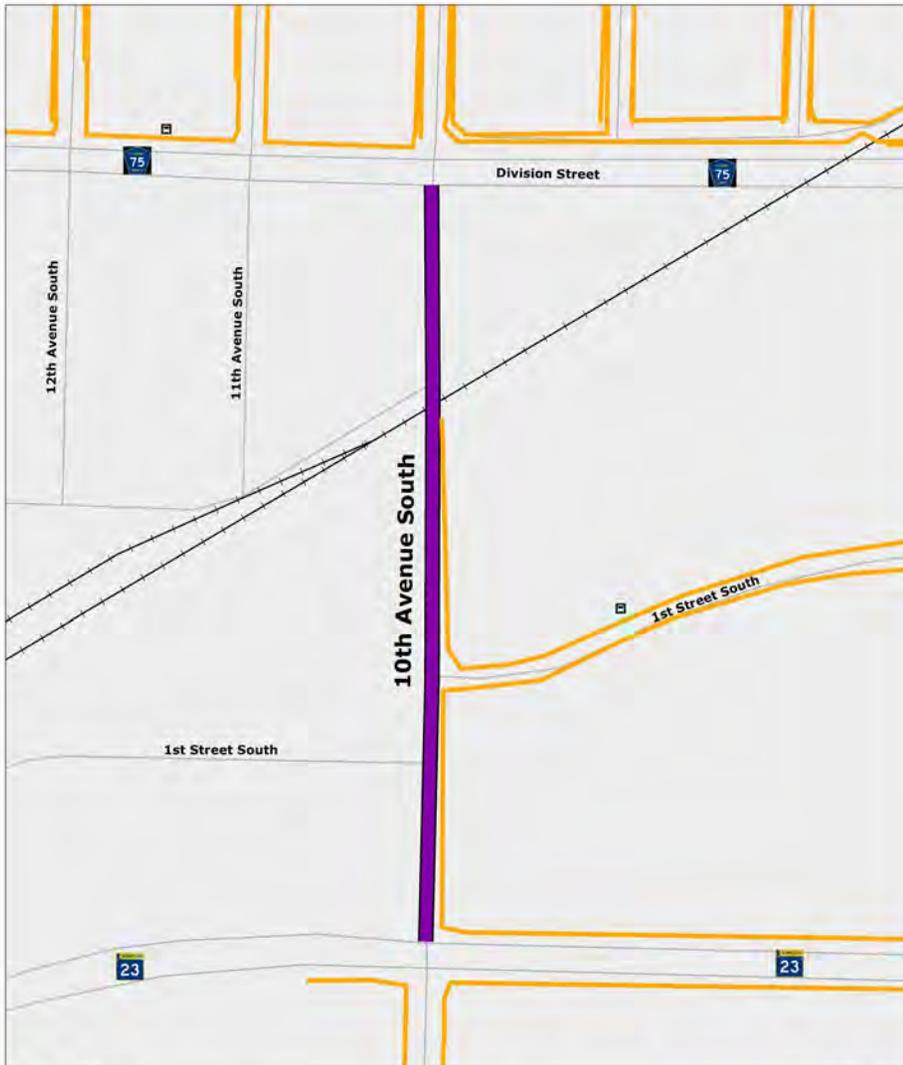
Jurisdiction: Waite Park

Project Location: 10th Avenue South

Estimated Construction Time Band: 2030-2045

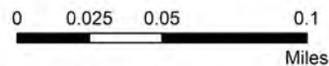
Project Scope

Reconstruct Stearns County Road 75 (Division Street) to Minnesota Highway 23 (Second Street S) in the City of Waite Park.



Legend

- Project Location
- Roads
- Transit Stop
- On-Road Bicycle Lanes
- Off-Road Multi-Use Trails
- Sidewalks



07/18/2019

Goal 1: Maintain and Enhance Transportation Safety

- Opportunity for safety enhancements at the intersection of Stearns County Road 75 (Division Street) and Minnesota Highway 23 (Second Street S) which both have a critical crash index score above average.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- Opportunity for multimodal improvements equipped with ADA compliant features.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- This corridor's pavement was rated in fair condition according to a pavement management study conducted in 2015 by Braun Intertec in coordination with SRF Consulting Group, Inc.

Goal 4: Support Metropolitan Vitality and Economic Development

- This project supports the movement of people and goods.

Goal 5: Promote Energy and Environmental Conservation

- Opportunity to upgrade existing street lighting to Dark Skies complaint.
- This project is located in a low-income and high minority area.

Financial Information

MTP Project Number

WAT-3

Estimated Project Cost

\$10,600,000 (2038 Dollars)

CITY OF WAITE PARK FISCAL CONSTRAINT

In terms of expansion, the City of Waite Park has identified one project for construction.

MTP Identifier	Type of Project	Project Location	Estimated Construction Cost	Time Frame for Completion
WAT-1	Expansion	MSAS 103 (10 th Avenue N)	\$7,474,740	Long-Range (2030-2045)
Total			\$7,474,740	

FIGURE 9.45 – A LIST OF CAPACITY EXPANDING PROJECTS FOR THE CITY OF WAITE PARK OVER THE DURATION OF MAPPING 2045

The total cost in time band of expenditure for this project is \$7,474,740. Over the duration of this plan, the City of Waite Park has approximately \$11,226,576 to expend on capacity expansion projects. Based upon this information, the city is fiscally constrained for this project.

City of Waite Park	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
Expansion Budget	\$1,464,000	\$2,508,492	\$7,254,084	\$11,226,576
Expansion Carry Over from Previous Time Band	\$0	\$1,464,000	\$3,972,492	N/A
Expansion Project Costs	\$0	\$0	\$7,474,740	\$7,474,740
Expansion Balance	\$1,464,000	\$3,972,492	\$3,751,836	N/A

FIGURE 9.46 – A TOTAL OF PROJECTED AVAILABLE REVENUE FOR EXPANSION FOR THE CITY OF WAITE PARK

The City of Waite Park has budgeted for approximately \$44,906,307 for system preservation over the duration of MAPPING 2045.

Based upon the criteria outlined in MAPPING 2045 for system preservation projects, the city has identified two projects for construction.

MTP Identifier	Type of Project	Project Location	Estimated Construction Cost	Time Frame for Completion
WAT-2	Reconstruction	MSAS 101 (Waite Avenue)	\$3,052,000	Short-Term (2020-2023)
WAT-3	Reconstruction	MSAS 103 (10 th Avenue N)	\$10,600,000	Long-Range (2030-2045)
Total			\$13,652,000	

FIGURE 9.47 – A LIST OF SYSTEM PRESERVATION (RECONSTRUCTION) PROJECTS FOR THE CITY OF WAITE PARK OVER THE DURATION OF MAPPING 2045

The total cost for the system preservation projects identified by the City of Waite Park total \$13,652,000 in time band of expenditure dollars. Based upon this information, the city is fiscally constrained for these system preservation projects.

City of Waite Park	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$5,856,000	\$10,033,970	\$29,016,337	\$44,906,307
System Preservation Project Costs	\$3,052,000	\$0	\$10,600,000	\$13,652,000
System Preservation Balance	\$2,804,000	\$10,033,970	\$18,416,337	\$31,254,307

FIGURE 9.48 – A TOTAL OF PROJECTED AVAILABLE REVENUE FOR SYSTEM PRESERVATION FOR THE CITY OF WAITE PARK

WHAT WE HEARD FIRST PUBLIC COMMENT PERIOD (AUG. 12 – SEPT. 20, 2019)

- “Intersection at Third Street N and 10th Avenue does not feel safe to cross as a cyclist. Commenter normally travels further north on CR 138 (10th Avenue) near McDonalds and crosses there mid-block because it feels safer.”
- “Needs to be better visualization on 3rd St. N and 10th Ave. N, better paint and a sign alerting vehicles that pedestrians are walking.”

When asked for ideas for additional projects:

- “Need to extend walking path on County Road 137 to Bel Clair.”

WHAT WE HEARD SECOND PUBLIC COMMENT PERIOD (SEPT. 23 – OCT. 23, 2019)

As noted earlier in this chapter, four jurisdictions made significant changes to the original project list presented. The City of Waite Park was not one of them. But because the entire document was made available, projects proposed for the City of Waite Park were again made available for public comment. However, no public comments were received.

MnDOT MAPPING 2045 Projects

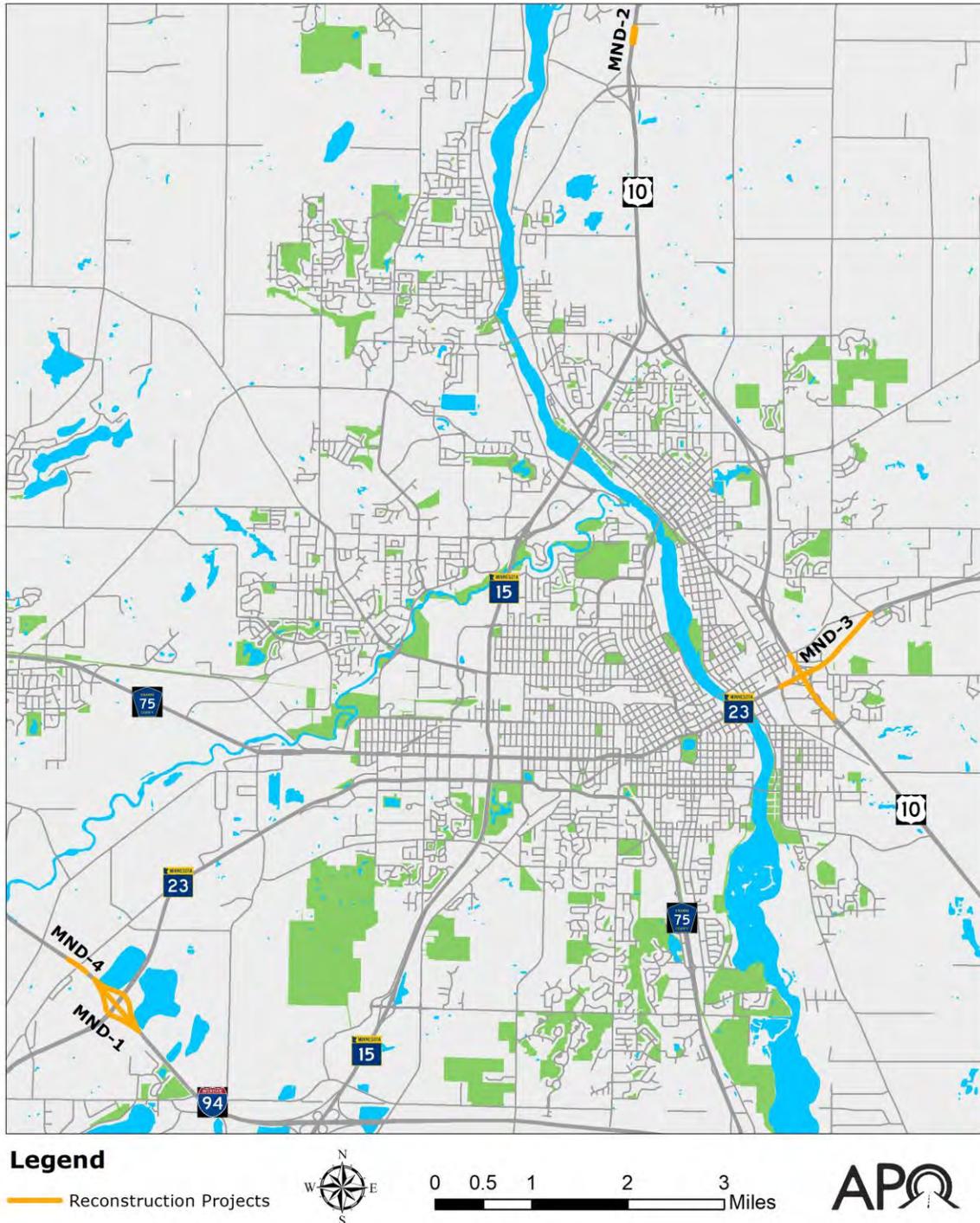


FIGURE 9.49 – MAPPING 2045 PROJECTS FOR MNDOT

MINNESOTA DEPARTMENT OF TRANSPORTATION

MnDOT District 3 has identified a total of four fiscally constrained projects over the duration of this MTP. All are system preservation projects. The following section details those projects, the district’s financial plan and fiscal constraint, and provides comments from environmental experts and the general public on the proposed transportation projects.

MINNESOTA DEPARTMENT OF TRANSPORTATION: EXPANSION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
N/A	N/A	N/A	N/A	N/A	N/A

MINNESOTA DEPARTMENT OF TRANSPORTATION: RECONSTRUCTION PROJECTS

Project ID	Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Time Band of Expenditure	Estimated Time Band Expenditure Cost
MND-1	I-94 in Saint Joseph Township	I-94 at MN 23	Interchange Reconstruction	Short-Term (2020-2023)	\$2,200,000
MND-2	US 10 in Watab Township	Bridge Number 3666	Bridge Replacement	Short-Term (2020-2023)	\$621,000
MND-3	MN 23 in Saint Cloud	MN 23 (from Lincoln Avenue to Benton CSAH 1) to US 10 (from East Saint Germain Street to 15 th Avenue SE)	Interchange Reconstruction	Short-Term (2020-2023)	\$30,300,000
MND-4	I-94 in Saint Joseph Township	Bridge Numbers 73875 and 73876	Bridge Replacement	Short-Term (2020-2023)	\$6,054,000

Agency: MnDOT

**Project Location: Interstate 94 at
Minnesota Highway 23 Interchange
Estimated Construction Year: 2020**

Project Scope

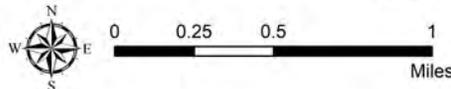
Construct exit loop ramps at Interstate 94 and Minnesota Highway 23 interchange in Saint Joseph Township to improve traffic flow and access.



Legend

- Project Location
- On-Road Bicycle Lanes
- Roads
- Off-Road Multi-Use Trails
- Transit Stop
- Sidewalks

06/17/2019



Goal 1: Maintain and Enhance Transportation Safety

- ◆ New exit loop ramps can improve safety and reduce crashes.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ The Interstate 94 and Minnesota Highway 23 interchange is an important arterial with significant daily traffic.
- ◆ Exit loop ramps will improve traffic flow and access for long-distance commuter connections.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ N/A

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ Interstate 94 is classified as a Tier One national highway freight network and Minnesota Highway 23 is classified as a tier two Minnesota principal freight network and recognized as an important corridor's for the movement of goods and freight.

Goal 5: Promote Energy and Environmental Conservation

- ◆ This project is located in a low-income and high minority area.

Financial Information

MTP Project Number	MND-1
Estimated Project Cost	\$2,200,000

Agency: MnDOT

Project Location: Highway 10 Bridge

Estimated Construction Year: 2022

Project Scope

Replace Bridge 3666 with box culvert in Watab Township.



Goal 1: *Maintain and Enhance Transportation Safety*

- ◆ Bridge was built in 1921 and in need of repair.

Goal 2: *Increase System Accessibility, Mobility, and Connectivity*

- ◆ US 10 is an important long-distance commuter connection.

Goal 3: *Efficiently Manage Operations and Cost-Effectively Preserve the System*

- ◆ In 2017, MnDOT rated bridge 3666 in fair condition.

Goal 4: *Support Metropolitan Vitality and Economic Development*

- ◆ US 10 is classified as a Tier Two Minnesota principal freight network and recognized as an important corridor for the movement of goods and freight.

Goal 5: *Promote Energy and Environmental Conservation*

- ◆ N/A

Financial Information

MTP Project Number

MND-2

Estimated Project Cost

\$621,000

Agency: MnDOT

**Project Location: Minnesota Highway 23
and US 10 Interchange**

Estimated Construction Year: 2023

Project Scope

Reconstruction of Minnesota Highway 23 from Lincoln Avenue to Benton County Road 1 (Mayhew Lake Road) and US 10 from East Saint Germain Street to 15th Avenue SE. Replacement of bridges 9021 and 9022 along with multimodal improvements in the City of Saint Cloud.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Replacement and redesign of interchange will incorporate safety and multimodal improvements.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ US 10 and Minnesota Highway 23 are important long-distance commuter connections.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ In 2017, MnDOT rated bridges 9021 and 9022 in fair condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ Minnesota Highway 23 and US 10 are classified as a Tier Two Minnesota principal freight network and recognized as an important corridor for the movement of goods and freight.

Goal 5: Promote Energy and Environmental Conservation

- ◆ Multimodal options can enhance quality of life and improve public health by providing an active transportation lifestyle.
- ◆ This project is located in a low-income and high minority area.

Financial Information

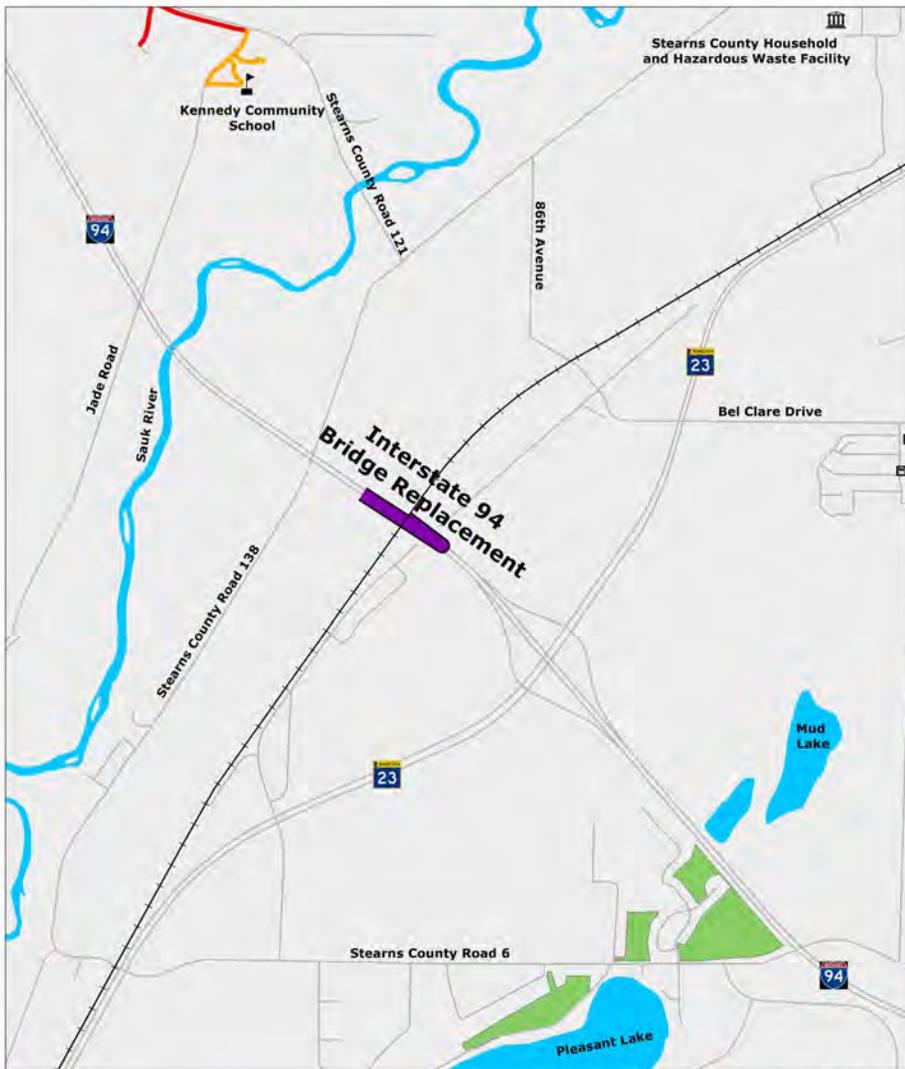
MTP Project Number	MND-3
Estimated Project Cost	\$30,300,000

Agency: MnDOT

Project Location: Interstate 94
Estimated Construction Year: 2023

Project Scope

Replace bridge numbers 73875 and 73876 over the BNSF railroad on Interstate 94 in Saint Joseph Township.



Goal 1: Maintain and Enhance Transportation Safety

- ◆ Bridges were both built in 1976 and due to the high amount of daily traffic are in need of replacement which will increase safety.

Goal 2: Increase System Accessibility, Mobility, and Connectivity

- ◆ Interstate 94 is an important long-distance commuter connection.

Goal 3: Efficiently Manage Operations and Cost-Effectively Preserve the System

- ◆ In 2018, MnDOT rated bridges 73875 and 73876 in fair condition.

Goal 4: Support Metropolitan Vitality and Economic Development

- ◆ Interstate 94 is classified as a Tier One national highway freight network and recognized as an important corridor for the movement of goods and freight.
- ◆ Interstate 94 is an important long-distance commuter connection.

Goal 5: Promote Energy and Environmental Conservation

- ◆ This project is located in a low-income and high minority area.

Financial Information

MTP Project Number	MND-4
Estimated Project Cost	\$6,054,000

MINNESOTA DEPARTMENT OF TRANSPORTATION FISCAL CONSTRAINT

MnDOT D3 develops its 10-Year Capital Highway Investment Plan (CHIP) on an annual basis. The CHIP communicates the next 10 years of planned projects within the district. As of the drafting of this plan, the most recent CHIP provided to APO staff from MnDOT D3 covers the time span of 2020 through 2029. MnDOT does not forecast projects out further than 10 years. With this in mind, APO staff in conjunction with MnDOT D3 staff have developed the project list for the district.

MnDOT D3 does not have any capacity expanding projects planned for the duration of **MAPPING 2045** within the APO's MPA. Therefore, MnDOT within the APO's MPA is fiscally constrained for expansion.

MnDOT D3 (within the MPA)	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
Expansion Budget	\$0	\$0	\$0	\$0
Expansion Carry Over from Previous Time Band	\$0	\$0	\$0	N/A
Expansion Project Costs	\$0	\$0	\$0	\$0
Expansion Balance	\$0	\$0	\$0	N/A

FIGURE 9.50– A TOTAL OF PROJECTED AVAILABLE REVENUE FOR EXPANSION FOR THE PORTION OF MNDOT D3 WITHIN THE APO'S MPA

In looking strictly at MnDOT D3 within the APO's MPA, the district has budgeted for approximately \$314,257,931 over the duration of MAPPING 2045. All of these funds are programmed for system preservation.

Based upon the criteria outlined in MAPPING 2045 for system preservation projects, MnDOT has identified four projects for construction.

MTP Identifier	Type of Project	Project Location	Estimated Construction Cost	Time Frame for Completion
MND-1	Interchange Improvement	I-94	\$2,200,000	2020
MND-2	Bridge Replacement	US 10	\$820,000	2022
MND-3	Interchange Reconstruction	MN 23	\$30,300,000	2023
MND-4	Bridge Replacement	I-94	\$6,054,000	2023
TOTAL			\$39,374,000	

FIGURE 9.51 – A LIST OF SYSTEM PRESERVATION (RECONSTRUCTION) PROJECTS FOR MNDOT D3 WITHIN THE APO’S MPA OVER THE DURATION OF MAPPING 2045

These four projects have been scheduled for completion in the short-term time band (2020-2023). MnDOT has budgeted \$57,596,721 for system preservation projects during this time frame. Based upon this information, MnDOT D3 within the APO is fiscally constrained.

MnDOT D3 (within the MPA)	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
System Preservation Budget	\$57,596,721	\$49,618,937	\$207,042,273	\$314,257,931
System Preservation Project Costs	\$39,374,000	\$0	\$0	\$39,374,000
System Preservation Balance	\$18,222,721	\$49,618,937	\$207,042,273	\$274,883,931

FIGURE 9.52 – A TOTAL OF PROJECTED AVAILABLE REVENUE FOR SYSTEM PRESERVATION FOR MNDOT D3 WITHIN THE APO’S MPA

WHAT WE HEARD FIRST PUBLIC COMMENT PERIOD (AUG. 12 – SEPT. 20, 2019)

- “Bring Hwy 15 above ground and eliminate awful traffic and its accident prone.”
- “Love the diversion diamond interchange which eliminated many traffic problems. NOW – work on Hwy 15. It’s created slow traffic problems at every intersection to include dangerous driving.”
- “Hwy 15 bypass over Saint Cloud.”

- “Some method of helping the flow of traffic through the city ... overpasses on Highway 15? ... A new road on the west side to allow through traffic to bypass the city?”
- “I-94 should be four lanes wide in each direction from the Twin Cities all the way to Alexandria.”
- “MN-15 is too small (i.e., narrow – not enough lanes).”
- “MN-23 is too small (i.e., narrow – not enough lanes).”
- “University Drive to Highway 10, did they block it off?”
- “Division lights need to be fixed, and Saint Cloud in general.”
- “Walking down Division Street, even with the crosswalks and sidewalks I almost get hit on a daily basis.”

When asked for ideas for additional projects:

- “An exit ramp off Highway 15 at 22nd Street S.”
- “Put Hwy 10 like in Rice over from Saint Germain and create an access between 94 and 10.”
- “Extend right turn lane on 12th to northbound 15 and on Veterans Drive to move more traffic.”

WHAT WE HEARD SECOND PUBLIC COMMENT PERIOD (SEPT. 23 – OCT. 23, 2019)

As noted earlier in this chapter, four jurisdictions made significant changes to the original project list presented. MnDOT was not one of them. But because the entire document was made available, projects proposed for the MnDOT were again made available for public comment. However, no public comments were received.

SAINT CLOUD METRO BUS

The following section details Metro Bus’s fleet replacement schedule, the commission’s financial plan and fiscal constraint, and provides comments the general public.

SAINT CLOUD METRO BUS: CLASS 400 FLEET REPLACEMENT SCHEDULE

Unit	In Service Year	Make	Organization Cost*	First Replacement	Second Replacement	Third Replacement	Fourth Replacement
110	2010	Arboc	\$143,960	2019	2026	2033	2040
111	2010	Arboc	\$143,960	2019	2026	2033	2040
112	2010	Arboc	\$143,960	2019	2026	2033	2040
113	2010	Arboc	\$143,960	2019	2026	2033	2040
114	2010	Arboc	\$143,960	2019	2026	2033	2040
115	2010	Arboc	\$143,960	2019	2026	2033	2040
116	2010	Arboc	\$143,960	2019	2026	2033	2040
117	2010	Arboc	\$143,960	2019	2026	2033	2040
118	2011	Arboc	\$153,661	2020	2027	2034	2041
119	2011	Arboc	\$153,661	2020	2027	2034	2041
120	2011	Arboc	\$153,661	2020	2027	2034	2041
121	2011	Arboc	\$153,661	2021	2028	2035	2042
122	2011	Arboc	\$153,661	2021	2028	2035	2042
123	2012	Arboc	\$157,559	2021	2028	2035	2042
124	2016	Champion	\$218,720	2023	2030	2037	2044
125	2016	Champion	\$218,720	2023	2030	2037	2044
126	2016	Champion	\$218,720	2023	2030	2037	2044

Unit	In Service Year	Make	Organization Cost*	First Replacement	Second Replacement	Third Replacement	Fourth Replacement
127	2016	Champion	\$218,720	2023	2030	2037	2044
128	2016	Champion	\$218,720	2023	2030	2037	2044
129	2016	Champion	\$197,909	2023	2030	2037	2044
130	2017	Champion	\$197,909	2024	2031	2038	2045
131	2017	Champion	\$197,909	2024	2031	2038	2045
132	2018	Champion	\$192,315	2025	2032	2039	-
133	2018	Champion	\$192,315	2025	2032	2039	-
134	2018	Champion	\$192,315	2025	2032	2039	-
135	2018	Champion	\$192,315	2025	2032	2039	-
136	2018	Champion	\$192,315	2025	2032	2039	-
137	2019	Arboc	\$231,000	2026	2033	2040	-
138	2019	Arboc	\$231,000	2026	2033	2040	-
139	2019	Arboc	\$231,000	2026	2033	2040	-
140	2019	Arboc	\$231,000	2026	2033	2040	-
141	2019	Arboc	\$231,000	2026	2033	2040	-
204	2011	Arboc	\$163,410	2019	2026	2033	2040
205	2011	Arboc	\$163,410	2020	2027	2034	2041
206	2011	Arboc	\$163,410	2020	2027	2034	2041
207	2019	Champion	\$197,909	2026	2033	2040	-

**Per Saint Cloud Metro Bus Chief Finance and Administration Officer the cost reflected here is 10 percent more than the purchase price of the vehicle. This is due to the cost for additional for items such as fareboxes, cameras, and annunciators added to vehicles post-production and prior to placing vehicles in service.*

SAINT CLOUD METRO BUS: COMMUTER BUS FLEET REPLACEMENT SCHEDULE

Unit	In Service Year	Make	Organization Cost*	First Replacement	Second Replacement
810	2018	MCI	\$654,925	2030	2042
811	2018	MCI	\$654,925	2030	2042
812	2018	MCI	\$654,925	2030	2042
813	2019	MCI	\$668,064	2031	2043
814	2019	MCI	\$668,064	2031	2043

**Per Saint Cloud Metro Bus Chief Finance and Administration Officer the cost reflected here is 10 percent more than the purchase price of the vehicle. This is due to the cost for additional for items such as fareboxes, cameras, and annunciators added to vehicles post-production and prior to placing vehicles in service.*

SAINT CLOUD METRO BUS: CLASS 700 FLEET REPLACEMENT SCHEDULE

Unit	In Service Year	Make	Organization Cost*	First Replacement	Second Replacement	Third Replacement
704	2006	New Flyer	\$323,614	2020	2032	2044
705	2006	New Flyer	\$323,614	2020	2032	2044
706	2006	New Flyer	\$323,614	2020	2032	2044
707	2010	New Flyer	\$411,191	2022	2034	-
708	2010	New Flyer	\$411,191	2022	2034	-
709	2010	New Flyer	\$411,191	2022	2034	-
710	2010	New Flyer	\$411,191	2022	2034	-
711	2014	New Flyer	\$478,036	2026	2038	-
712	2014	New Flyer	\$478,036	2026	2038	-
713	2014	New Flyer	\$478,036	2026	2038	-
714	2014	New Flyer	\$478,036	2026	2038	-
715	2014	New Flyer	\$478,036	2026	2038	-
716	2014	New Flyer	\$478,036	2026	2038	-
717	2014	New Flyer	\$478,036	2026	2038	-
718	2014	New Flyer	\$478,036	2026	2038	-
719	2014	New Flyer	\$478,036	2026	2038	-
720	2014	New Flyer	\$478,036	2026	2038	-
721	2014	New Flyer	\$478,036	2026	2038	-
722	2014	New Flyer	\$478,036	2026	2038	-
723	2014	New Flyer	\$478,036	2026	2038	-

Unit	In Service Year	Make	Organization Cost*	First Replacement	Second Replacement	Third Replacement
724	2014	New Flyer	\$478,036	2026	2038	-
725	2014	New Flyer	\$478,036	2026	2038	-
726	2014	New Flyer	\$478,036	2026	2038	-
727	2014	New Flyer	\$478,036	2026	2038	-
728	2014	New Flyer	\$478,036	2026	2038	-
729	2014	New Flyer	\$478,036	2026	2038	-
730	2014	New Flyer	\$478,036	2026	2038	-
731	2014	New Flyer	\$478,036	2026	2038	-
732	2014	New Flyer	\$478,036	2026	2038	-
733	2014	New Flyer	\$478,036	2026	2038	-
734	2014	New Flyer	\$478,036	2026	2038	-
735	2018	New Flyer	\$542,001	2030	2042	-
736	2018	New Flyer	\$542,001	2030	2042	-
737	2018	New Flyer	\$542,001	2030	2042	-
738	2018	New Flyer	\$542,001	2030	2042	-
739	2019	New Flyer	\$567,275	2031	2043	-
740	2019	New Flyer	\$567,275	2031	2043	-
741	2019	New Flyer	\$567,275	2031	2043	-

**Per Saint Cloud Metro Bus Chief Finance and Administration Officer the cost reflected here is 10 percent more than the purchase price of the vehicle. This is due to the cost for additional for items such as fareboxes, cameras, and annunciators added to vehicles post-production and prior to placing vehicles in service.*

METRO BUS FISCAL CONSTRAINT

A significant portion of the total projected local funds for Metro Bus needs to be reserved **strictly for the organization’s operations (salaries, maintenance, fuel, etc.)**. What is left can be allocated toward various capital improvements such as the replacement of rolling revenue stock within the Metro Bus fleet.

Capital improvements are, in large part, funded through Federal and/or state grants. Those **grants include, but are not limited to, FTA’s Section 5307 grants and MnDOT’s STBGP** set aside. These grants account for, on average, 80 percent of the cost of capital expenses. The remaining 20 percent is the responsibility of Metro Bus. Capital improvements are very rarely completed without the assistance of Federal grants.

It is based upon this assumption that Metro Bus’s existing fleet of rolling revenue stock will be replaced utilizing an 80/20 split among grant and local dollars.

To maintain its existing rolling revenue stock based upon the fleet replacement schedule, Metro Bus would need approximately \$23,737,894 in year of expenditure dollars to replace its current (2019) rolling revenue stock.

Based upon the total projected local funds available over the course of this plan, Metro Bus would have sufficient funding to make these capital improvements and would have approximately 92 percent of its available projected local funds available for operations or other capital improvement expenses during this time frame.

Saint Cloud Metro Bus	Short-Term (2020-2023)	Mid-Range (2024-2029)	Long-Range (2030-2045)	Total
Total Projected Local Funds	\$38,652,870	\$62,471,716	\$196,067,052	\$297,191,638
Local Match Required for Fleet Replacement (20% of Vehicle Replacement Cost)	\$1,429,479	\$4,680,405	\$17,628,010	\$23,737,894
Projected Local Funds Available for Other Expenses	\$37,223,391	\$57,791,311	\$178,439,042	\$273,453,744

FIGURE 9.53 – A TOTAL OF AVAILABLE REVENUE FOR ROLLING REVENUE STOCK FLEET REPLACEMENT FOR SAINT CLOUD METRO BUS

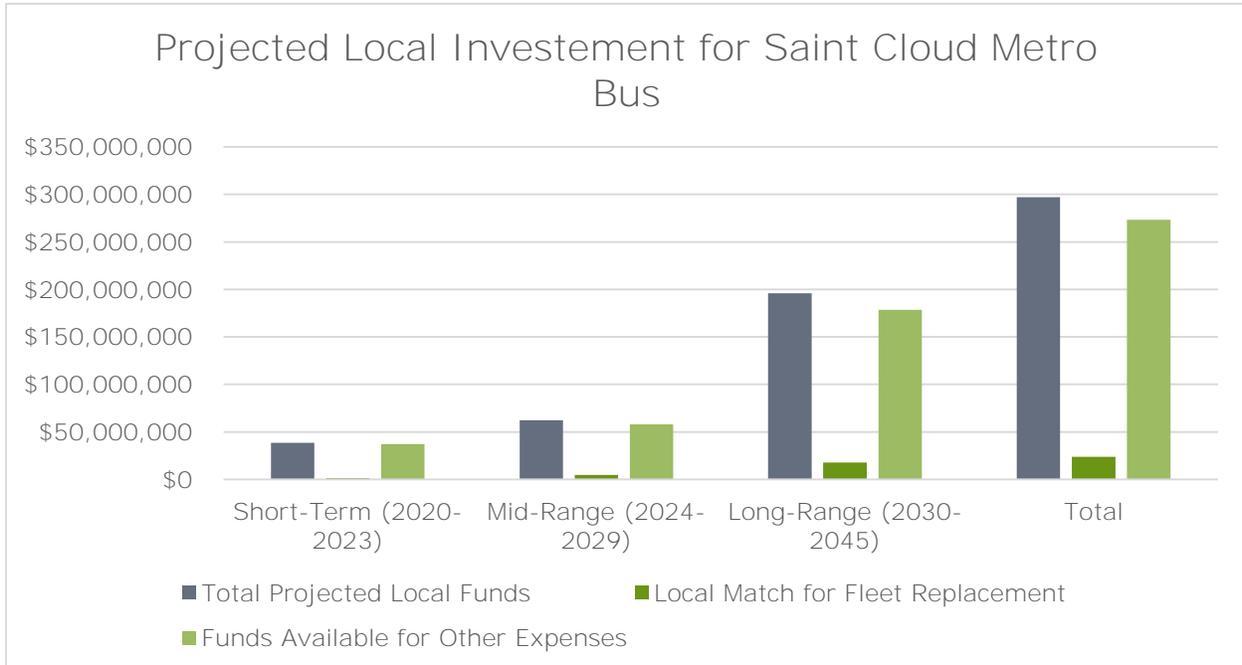


FIGURE 9.54 – FISCAL CONSTRAINT FOR SAINT CLOUD METRO BUS

WHAT WE HEARD FIRST PUBLIC COMMENT PERIOD (AUG. 12 – SEPT. 20, 2019)

- “There needs to be some type of affordable public busing for residents in Saint Joseph, particularly the college students. We want people to shop locally, but they need to have a way to get there from the college that’s affordable to do so. They can pay to us Tri-CAP, but it can get really expensive. If they are low income and have a job in Saint Cloud it’s not easy to be able to get there.”
- “I want bus service more than once per hour, but otherwise Metro Bus does a pretty good job.”
- “Bus should be quicker on time.” Commenter seemed to be advocating for shorter headways.
- “I like the bus so far.” Commenter has just moved to Saint Cloud.
- “We need more public transit, but I have a few safety concerns.”
- “ConneX bus is working and should stay permanently.”
- “I take the bus everyday.”
- “Bus routes 1 and 2 should be more convenient.”
- “Fix route 12, make it go to Harvest Bank in Saint Augusta.”
- “24 hour bus service would be nice, or at least run the buses until 10 p.m. Also, holidays should run on Sunday times for people to still get to work.”
- “Analyze increased need for metro transit (Metro Bus) to the developing areas west of Saint Cloud and Sartell.”
- “Although not specifically addressed in this draft plan, serious consideration needs to be given to adding metro transit (Metro Bus) service to the expanding residential

area in west Saint Cloud. Specifically west of the intersection with 19th Avenue South and County Road 4.”

- “Buses should run later than 8-9 p.m. Some people work second shift jobs. Route 21/22 should run later. People at Journey home can’t get to jobs because of it. More public transportation needs to be readily available to Saint Cloud.”
- “Trolley or something like dial-a-ride is needed for students to get across University safely.
- “Metro Bus does a really awesome job! But I’ve seen people not pay for their ride ... and they need to. It’s a service.”
- “Bus stops at 5:45 p.m. on the weekends and that is unacceptable. What if someone is having an emergency?”
- “Would like bus routes on Cooper Ave and somewhere between 33rd and 40th.”

WHAT WE HEARD SECOND PUBLIC COMMENT PERIOD (SEPT. 23 – OCT. 23, 2019)

As noted earlier in this chapter, four jurisdictions made significant changes to the original project list presented. Metro Bus was not one of them. But because the entire document was made available, projects proposed for Metro Bus were again made available for public comment. However, no public comments were received.

2045 MTP NETWORK MODEL RESULTS

The 2045 MTP network model run used the 2045 TAZ data and added expansion projects to the network. Expansion projects are defined as new infrastructure, such as the building of new facilities or additional lane capacity along existing roadways. These projects were identified by planners and engineers from the agencies and jurisdictions within the MPA through a process of analyzing existing conditions and evaluating model outputs from the 2045 “No-Build” scenario.

Even with the additional 56 new lane miles of roadway added to the network as a result of the identified expansion projects, several roadways within the MPA are still projected to operate over capacity. Because the slate of projects must be fiscally constrained – the revenue necessary to complete the projects must be reasonably anticipated to be available – additional capacity expanding projects cannot be included in the plan. Said more simply, while the identified projects would have an effect on reducing congested lane miles compared to doing nothing, there is not sufficient funding to hold the line on congestion.

As the region grows and continues to develop, congestion is projected to get worse. The number of congested lane miles operating over capacity is forecasted to jump from the current (2015 network) 55 lane miles to 279 lane miles in 2045 *even with the addition of over \$288 million in capacity-expanding roadway projects.*

Network	Lane Miles Under Capacity	Lane Miles Approaching Capacity	Lane Miles Over Capacity	Total Lane Miles
Existing	1,088	65	55	1,208
Year 2045 No-Build	775	124	319	1,218
Year 2045 MTP	860	136	279	1,274
Change from No-Build	+85	+12	-40	+56

FIGURE 9.55 – LANE MILE CAPACITY COMPARISON

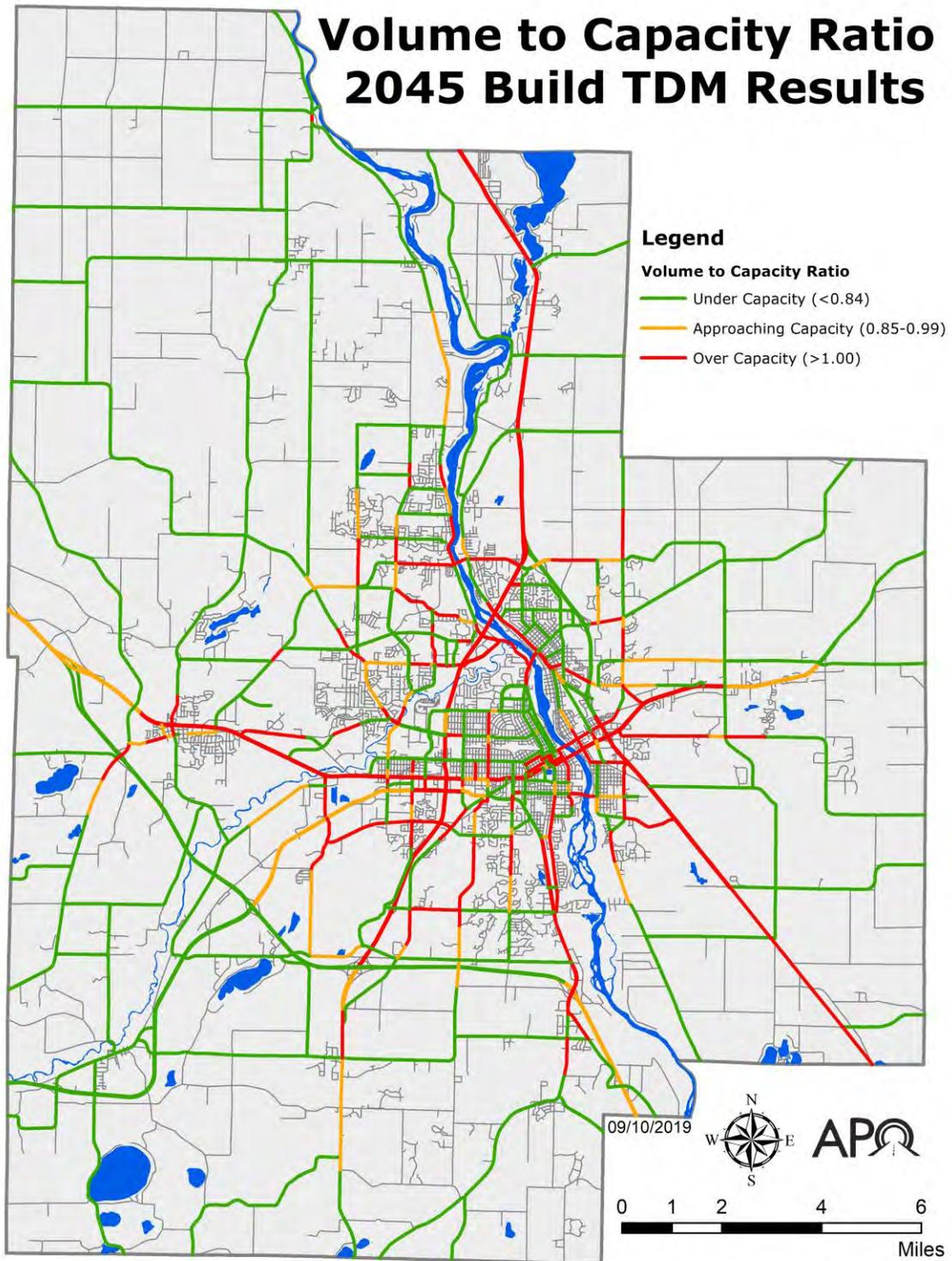


FIGURE 9.56 – ESTIMATED V/C RATIOS IN 2045 BUILD MODEL SCENARIO

Volume to Capacity Ratio	Lane Miles	Percent of Lane Miles
Under Capacity	860	67.5%
Approaching Capacity	136	10.7%
Over Capacity	279	21.9%

FIGURE 9.57 – V/C RATIO FOR YEAR 2045 MTP BUILD MODEL

The APO also developed a model scenario that included a complete arterial belt line encircling the urban core. Completing the belt line road would add an additional 77 lane miles of roadway on top of the MTP network projects at a cost of upwards of \$300 million in 2017 dollars. Model results indicate that congestion would still increase, from 55 lane miles today (2015 network) to 161 lane miles in 2045. Once again, the network investments are having an impact on congestion compared to doing nothing, but congestion is still projected to grow. More details on the ring road scenario are found later in this chapter.

These results seem to indicate a need to:

- 1.) Find more funding for transportation investments so that the region can at least maintain its competitiveness with other similar-sized regions.
- 2.) Be more strategic in where and how transportation investments are made in order to maximize the effectiveness of those investments.
- 3.) Accept that increasing congestion appears to be inevitable.
- 4.) Discuss and develop a regional consensus as to what the transportation goals should be.

Approximately 93 percent of functionally classified roadway lane miles in the Saint Cloud MPA will fall into an acceptable LOS category (LOS A through D). LOS improved by a little more than 3 percent in comparison to the No Build scenario. Though the projects slightly improved LOS from the No Build scenario, comparing the 2015 network to the 2045 build scenario, acceptable LOS worsened by 5.3 percent.

LOS	Year 2045 No Build Lane Miles	Year 2045 No Build Lane Miles	Year 2045 Build Lane Miles	Percent of Year 2045 Build Lane Miles	Change from No Build
A	642.8	52.8%	713.5	56.0%	3.2%
B	167.7	13.8%	190.0	14.9%	1.1%
C	178.8	14.7%	187.0	14.7%	0.0%
D	129.6	10.6%	99.6	7.8%	-2.8%
E	62.8	5.2%	51.0	4.0%	-1.2%
F	35.5	2.9%	33.0	2.6%	-0.3%

FIGURE 9.58 – COMPARISON OF ESTIMATED LOS BETWEEN 2045 NO BUILD MODEL SCENARIO AND 2045 BUILD SCENARIO.

Level of Service 2045 Build TDM Results

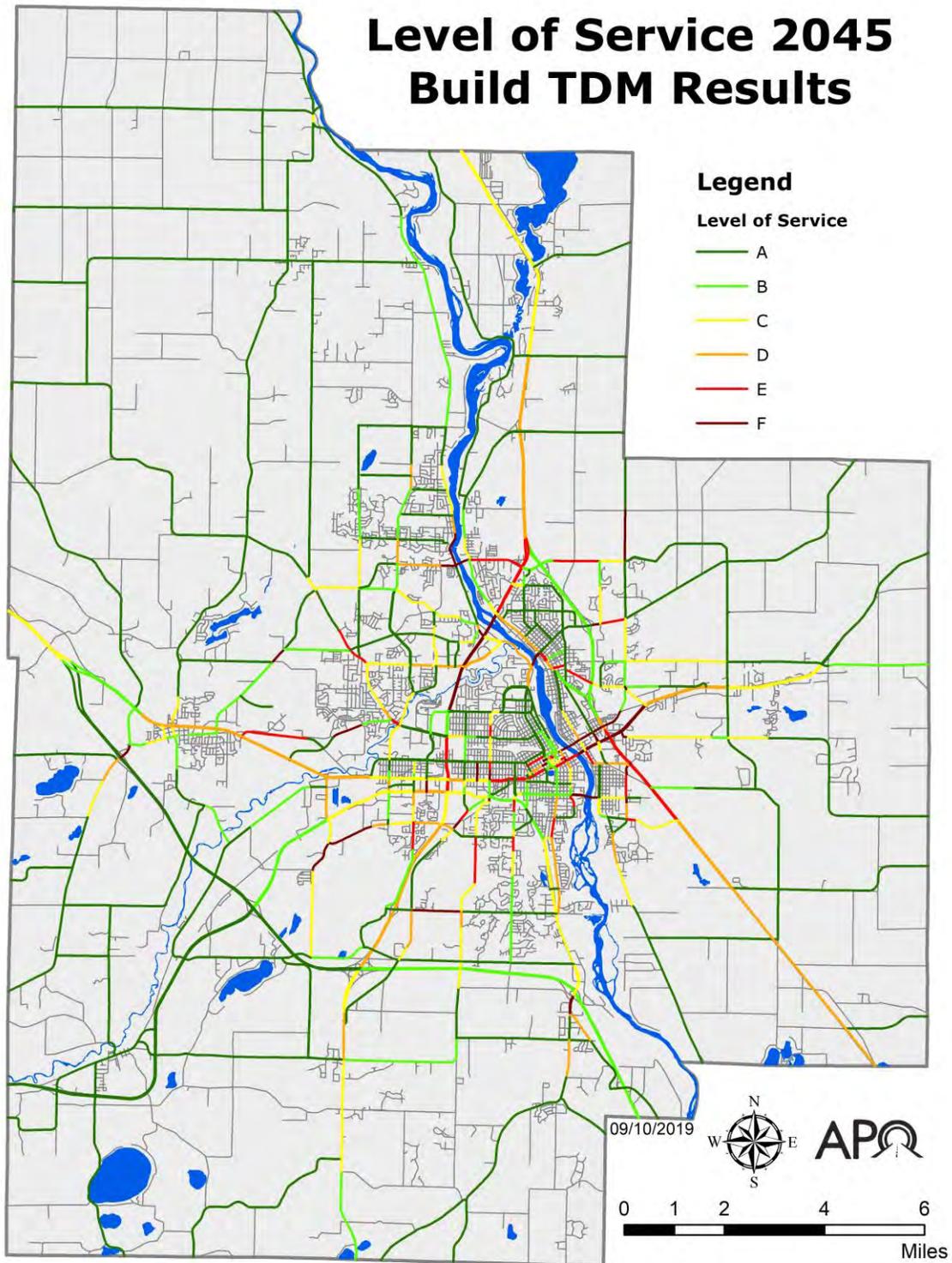


FIGURE 9.59– LEVEL-OF-SERVICE WITH 2045 MTP BUILD NETWORK

The rationale behind adding capacity projects is to reduce congestion. As shown in Figure 9.60, the purple represents the MTP expansion projects. The legend depicts red as a decrease in traffic volume and green as an increase. The changes from -9 percent to 9 percent were not shown because those percentages are not large enough to see a sizable change on traffic volume.

Motorists makes decisions on the best route to their destinations based on travel time. They will often drive more miles if it shortens the commute time. The optimal or shortest distance route for the motorist may not be taken due to congestion. As lanes or new alignments are constructed, changes in traffic patterns occur. Once additional lanes or a new route is added it will take less time to move through the corridor and the route will be more attractive. The motorist will then, more than likely, change their route if it takes less time than their previous route.

Roadways nearby or parallel to a capacity project will often result in changes to traffic volume as well. For example, if the nearby roadway connects to a newly constructed project a potential increase in traffic along that roadway can occur. And if the nearby roadway was used as an alternative to the capacity project due to the amount of congestion on that roadway prior to construction, the expansion of the project roadway can lead to a decrease in traffic on the other nearby roadways.

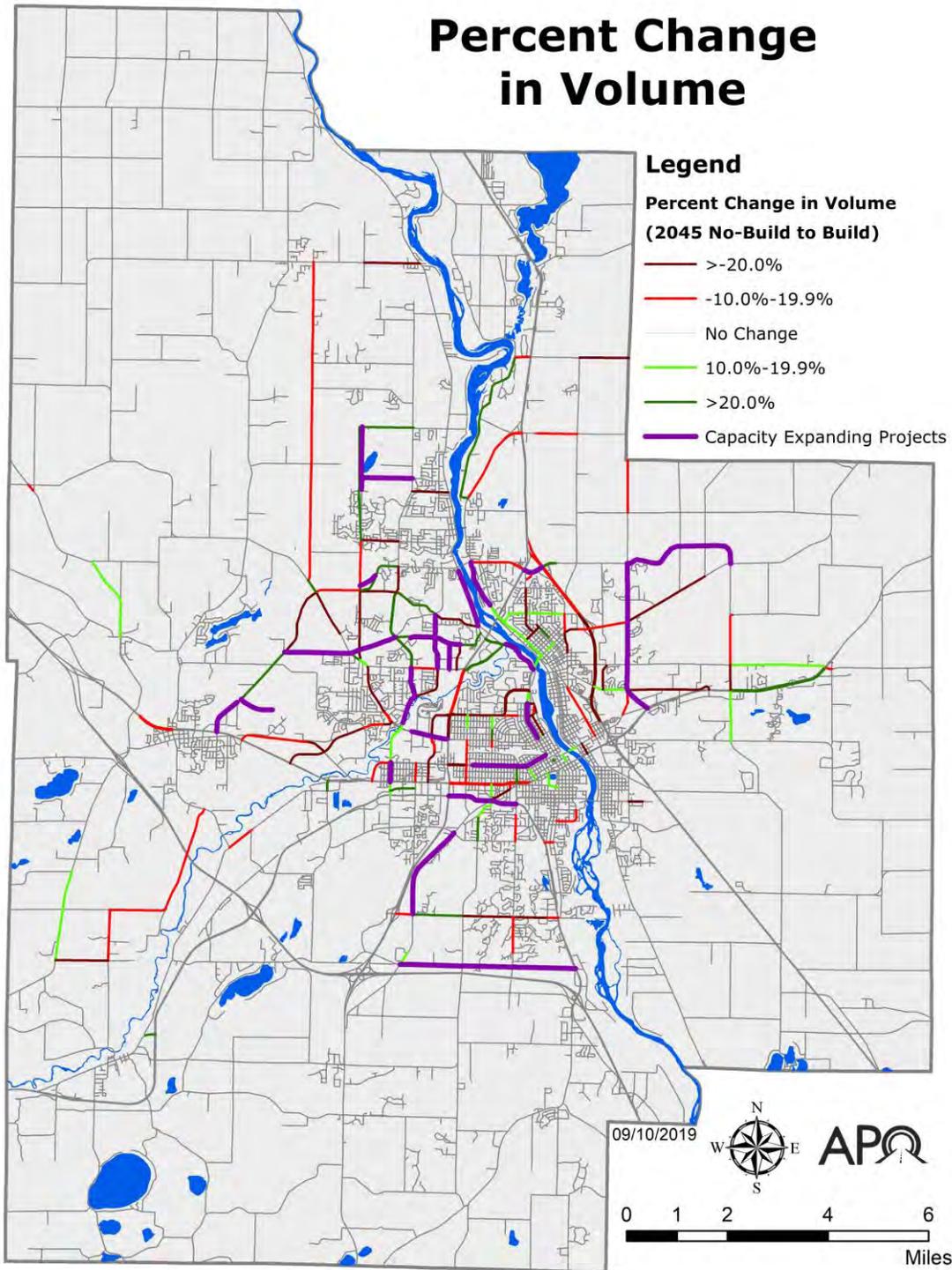


FIGURE 9.60 – CHANGE IN ROADWAY LINK TRAFFIC VOLUMES 2045 NO-BUILD NETWORK VS. MTP NETWORK

URBAN CORE BELT LINE CORRIDOR

The idea of constructing an arterial belt line corridor around the urban core has been around for some time – at least two decades. Some intensive planning was done in the 2005 – 2007 time frame, but then the recession hit. Budgets got tight and almost all available resources were needed just for system preservation projects.

More recently, the goal of constructing an urban arterial belt line road has resurfaced and the communities that are a part of the APO have begun discussing its completion once again. To help in assessing both the costs and benefits of such an arterial belt line, a modeling scenario was completed for all belt line segments.

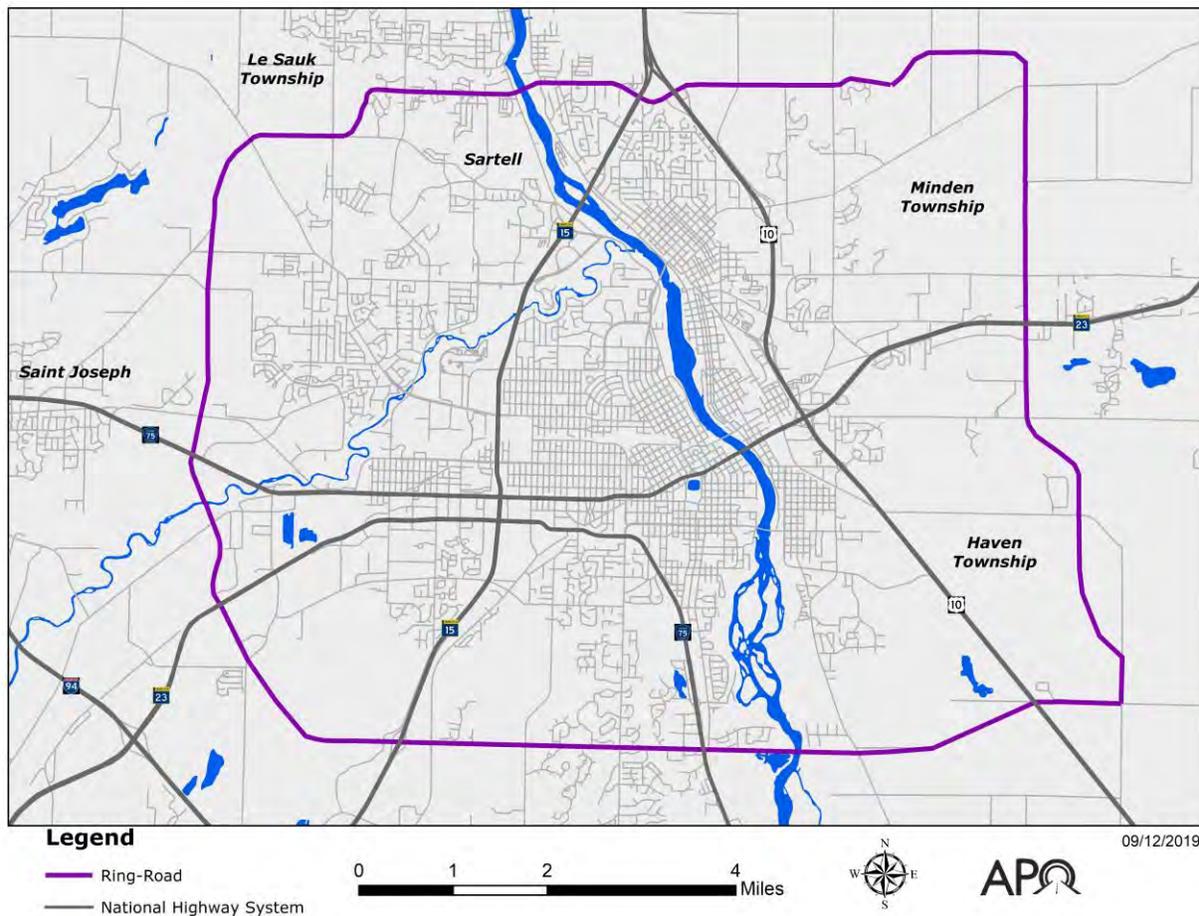


FIGURE 9.61 – URBAN ARTERIAL BELT LINE CORRIDOR (CONCEPTUAL ALIGNMENT)

It is worth noting that the belt line as initially conceived would not be an interstate or freeway-type facility. Rather, it would be designed as a divided urban arterial, with at-grade intersections and a posted speed limit of about 45 mph.

It does appear, based on the TDM results that constructing the belt line road would result in further reduction to the number of congested lane miles as compared to the 2045 MTP network scenario as evident in Figures 9.62 and 9.63. But, even with both the MTP projects and the belt line segments in place, there is still a 192 percent increase in the number of congested lane miles when compared to existing congestion. Figure 9.64 highlights the advantage the belt line would have in the central area of the MPA. There is considerable congestion relief in this area as motorists choose to use the belt line and “bypass” the central core.

Network	Lane Miles Under Capacity	Lane Miles Approaching Capacity	Lane Miles Over Capacity	Total Lane Miles
Existing	1,088	65	55	1,208
Year 2045 No-Build	775	124	319	1,218
Year 2045 MTP	860	136	279	1,274
Year 2045 Belt Line Corridor	1075	115	161	1,351
Change from Year 2045 MTP	+215	-21	-118	+77

FIGURE 9.62 – LANE MILE CAPACITY COMPARISON BETWEEN ALL NETWORKS

Volume to Capacity Ratio	Lane Miles	Percent of Lane Miles
Under Capacity	1082	79.6%
Approaching Capacity	115	8.5%
Over Capacity	161	11.9%

FIGURE 9.63– V/C RATIO FOR 2045 BELT LINE CORRIDOR MODEL SCENARIO

Only a few of the belt line segments could be included in this fiscally constrained plan. Many of the belt line segments, especially the Mississippi River bridge at 33rd Street S in Saint Cloud, are unable to be fiscally constrained due to the estimated costs to complete versus reasonably anticipated projected revenues. Where reasonable cost estimates were available, belt line segments are included in this document as Illustrative Projects in Appendix I.

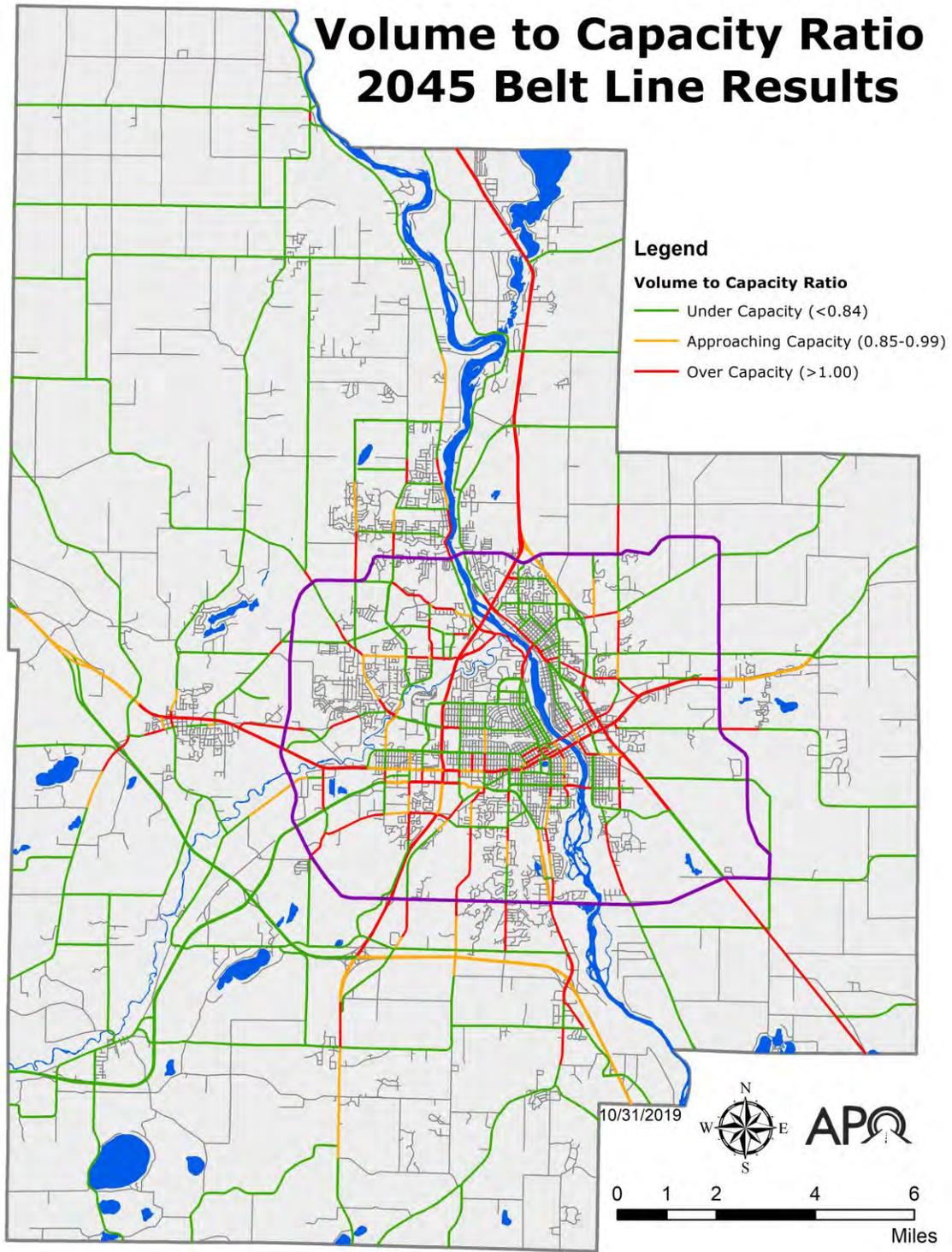


FIGURE 9.64 – ESTIMATED V/C RATIOS IN BELT LINE MODEL SCENARIO

Percent Change in Volume

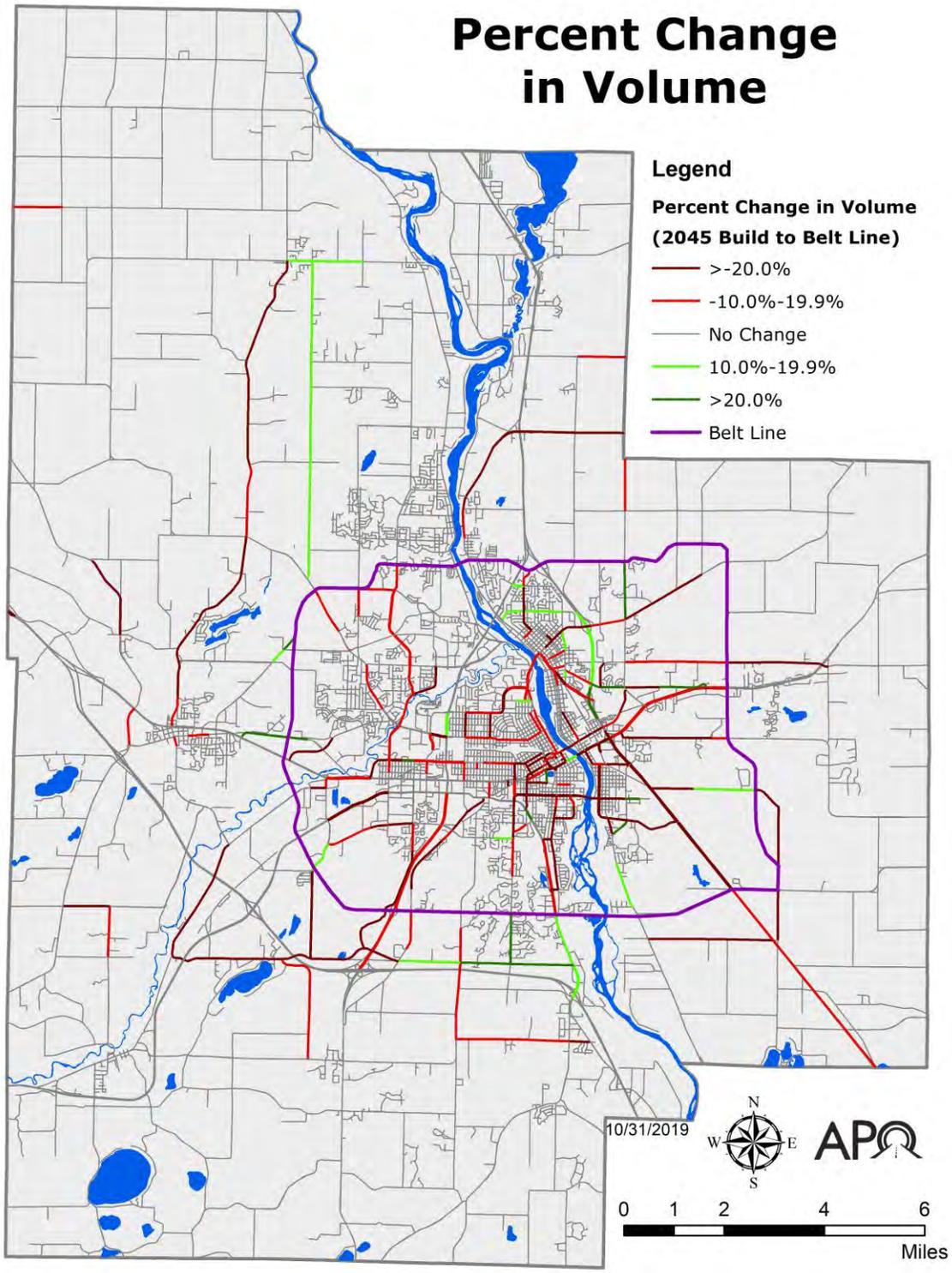


FIGURE 9.65 – CHANGE IN ROADWAY LINK VOLUMES 2045 MTP NETWORK VS. BELT LINE NETWORK

WHAT WE HEARD FIRST PUBLIC COMMENT PERIOD (AUG. 12 – SEPT. 20, 2019)

- **“Highest priority** should be making it faster to get across or around Saint Cloud. I don’t go to the East side because it takes 30 minutes to get there from the west side.”
- **“Some method of helping the flow of traffic through the city ... overpasses on Highway 15? ... A new road on the west side to allow through traffic to bypass the city?”**

When asked for ideas for additional projects:

- **“A river crossing south of the golf course.”**
- **“Bridge 33rd Street S over Mississippi.”**
- **“Access between 94 and 10.”**
- **“Need big loop to connect 94, 10, and 75.”**

WHAT WE HEARD SECOND PUBLIC COMMENT PERIOD (SEPT. 23 – OCT. 23, 2019)

As noted earlier in this chapter, four jurisdictions made significant changes to the original project list presented. Because the entire document was made available, comments were also accepted on the proposed urban belt line corridor.

- When/if the 33rd Street South bridge would be built. (5 similar comments)
- **“When is a ‘circle’ going to be made around the entire area? Why hasn’t one been made already? The area is way behind times being progressive with our road systems.”**
- **“Nobody wants the bridge at 33rd Street S.” It’s controversial. (Commenter lives in the area where the bridge would be built.)**

NON-PROJECT SPECIFIC COMMENTS

In addition to comments received about specific projects and/or targeting specific agencies or jurisdictions, APO staff received more generalized comments that can be applied on a more regional basis. These non-project specific comments are found here.

“There should be a caveat in the report that the proposed alignments are considered concept. It is realized there may be other alignments/options that would reach the goal with less environmental and cultural impacts than what is being proposed.”

WHAT WE HEARD FIRST PUBLIC COMMENT PERIOD (AUG. 12 – SEPT. 20, 2019)

ENVIRONMENTAL COMMENTS

The following comments were received from the individuals associated with the various environmental resource agencies who consulted with APO staff.

- “The cities and county should be focusing on further developing areas which is more sustainable and not on urban sprawl. Up not out.”
- “This planning process should also be looking at the soil resources and not paving over soils that will be critical for local food production in the future.”
- “Clarify if complete streets policy will be applied to each of the projects or not.”
- “Point to consider is that currently wetland fill associated with public road projects can be mitigated through the state wetland road bank for safety issues only and not capacity issues.”
- “When these projects create one acre or more of new impervious surfaces than there has to be permanent stormwater treatment practices such as an infiltration/filtration basin or stormwater pond, etc. Those potential impacts are not and should be considered as part of the planning process because they will impact resources outside of the alignment. They may also require the LGU to purchase additional land in the process.”
- “Depending on the MS4 jurisdiction, the stormwater requirements may apply even if less than one acre of impervious surfaces are distributed/redeveloped/created if project location drains to an impaired water.”
- “On all the widening projects it would be beneficial if all the existing impervious surfaces would be retrofitted with stormwater BMPs since they were constructed before any water quality requirements were in place.”
- “Any potential water crossings should be designed using the new Minnesota Culvert Design Manual or similar requirements.”
- All these projects are either in the City of Saint Cloud and/or Minneapolis/Saint Paul surface water management areas.”
- “The more rural road projects should be designed and managed for wildlife habitat and constructed per ([Field Guide for Maintaining Rural Roadside Ditches](http://www.seagrant.umn.edu/downloads/SH14.pdf)) (<http://www.seagrant.umn.edu/downloads/SH14.pdf>) and the MN Stormwater Manual.”
- “When acquiring land for projects also include additional land/ROW to be able to locate Stormwater BMPs on also. The potential impact of the BMPs should also be discussed in the planning phase for each of the projects.”
- “As a reminder, in addition to NEPA, the state of Minnesota has its own Environmental Review Rules, and the need for state level Environmental Assessment Worksheets or Environmental Impact Statements will need to be considered by the Responsible Governmental Unit for any of these future projects (see Minnesota Rules 4410.4300 – 4410.4400).”
- “We recommend that government agencies acquire an NHIS license, and/or submit for an NHIS review to be conducted by DNR staff to determine potential project impacts (see MNDNR NHIS website) to rare natural resources, including state-listed species. An NHIS review would be required for any projects going through formal environmental review, such as an Environmental Assessment Worksheet. A review

conducted by DNR staff would identify potential for impacts, any survey **requirements if needed, and mitigation/avoidance recommendations.**"

- "Should any projects require the need for right-of-way easements on state lands, this will need to be obtained through the Division of Lands and Minerals. Likewise, any impacts to DNR public waters that impact the course, current, or cross section will require a permit from the DNR. Projects may also require water appropriations permits should they need to dewater in volumes that exceed 10,000 gallons per day, or 1 million gallons per year (see MNDNR Permitting and Reporting System website)."
- "The Saint Cloud area has known Blanding's turtle populations (state-listed threatened species) and there's a good chance that projects may occur near records of this rare turtle. For planning considerations, we recommend that proposers review the DNR Blanding's Turtles factsheet and flyer which are available online."
- "For projects that are under the jurisdiction of MnDOT, there is a MnDOT/DNR project liaison who conducts project review and would identify potential impacts and mitigation measures as well as identify any DNR staff with whom coordination is required (see MnDOT Environmental Stewardship website). However, if the project is under city or county jurisdiction, the county will need to coordinate review. A good start for identifying potential impacts would be to submit for an NHIS review by DNR staff (as noted above) and/or by contacting the area Regional Environmental Assessment Ecologist (see DNR Environmental Program Regional Contacts website) **for assistance on project review and coordination.**"
- "Should wetland native plant communities be impacted, these plant communities may be protected under the Wetland Conservation Act (see 8420.0515 Special Considerations). Impacts to plant communities could include direct impacts such as filling of a wetland, but could also be caused by indirect impacts such as changes in hydrology and introduction of invasive species. These types of impacts should be **considered in the planning stages for avoidance.**"
- "As a reminder, in addition to NEPA, the state of Minnesota has its own Environmental Review Rules, and the need for state level Environmental Assessment Worksheets or Environmental Impact Statements will need to be considered by the Responsible Governmental Unit for any of these future projects (see Minnesota Rules 4410.4300 – 4410.4400)."
- "The DNR recommends that impacts to natural resources be avoided and minimized to the extent possible."
- "The St. Cloud area has known Blanding's turtle populations (state-listed threatened species) and there's a good chance that projects may occur near records of this rare turtle. For planning considerations, we recommend that proposers review the DNR Blanding's Turtles factsheet and flyer which are available online."
- "Reduce noise pollution from trains and automobiles/trucks; reduce light pollution not only dark skies compliant (note many some goal 5 say dark sky complaint) but

also consider that homeowners would prefer a dark yard, not one extremely bright from a new LED street light - nearly bright as daylight when trying to sleep."

PUBLIC COMMENTS

- "Once you show a positive ROI on rail, then start thinking about Northstar. We will be in the driverless era."
- "Finishing the Northstar train (having it come to Saint Cloud) is very important. Doing this would be very beneficial for economic development, especially on the east side of Saint Cloud."
- "I used to hate roundabouts, but now they are actually very useful; especially in Sartell."
- "I'm waiting for the Northstar train to come." (2 similar comments)
- "Northstar train should be completed to Saint Cloud." Commenter lives in Saint Cloud but works in Twin Cities and takes the train every day, but says it costs him 40 extra minutes to take the link and transfer to the train in Big Lake.
- "Fix the streets – bad pavement beats up the buses."
- "Reallocate tax revenue to fix more roads."
- "I don't think there should be as much construction."
- "It would be nice to have regional intercity light rail to supplement Metro Bus. Rail doesn't detour because of road construction."
- "More bikes."
- "We need an east-west bike facility connecting Rivers Edge Park with the hospital."
- Commenter likes seeing bicycle traffic picking up.
- "As a bicyclist, it feels nice being separated from cars and trucks (as with cycle tracks and off-road bike paths)."
- Commenter wants development of a grid of trails – perhaps a mile or two miles between parallel routes.
- "Northstar rail is needed in Saint Cloud."
- "Add a park and ride right by the prison."
- "The population is growing, and all kids need bikes."
- "More sidewalks and trails to be able to get to parks."
- "We need more bike trails around the area to help the cyclist population."
- "Sidewalks in the winter are very icy and dangerous."
- "Bike parking at the Stearns County Sheriff's Office, closer to the entrance."
- "Encourage bikes and walkers. Enforce moving violations. Speed kills."
- "Fix potholes."
- "Light rail extension. Shouldn't have to drive to Twin Cities if I can just take the train (Northstar)."
- "I love the Hands Free law. I wish it would be stricter though."
- "Construction is always going to be needed! How to prioritize?"
- "Car insurance needs to go down. Gas is too expensive."

- **“Reduce noise pollution from trains and automobiles/trucks; reduce light pollution not only dark skies compliant (note many some goal 5 say dark sky compliant) but also consider that homeowners would prefer a dark yard, not one extremely bright from a new LED street light – nearly bright as daylight when trying to sleep.”**
- **“Public opinion and input to public art and aesthetics in transportation projects and reducing noise pollution impacts on public opinion of quality of life.”**
- **“We are grateful for your comprehensive work on this – looks good – wish there was more funding to accelerate your progress.”**
- **“TH 23 Corridor of Commerce designation at Federal level supports building the community for the younger generation.”**
- **“Bicycle and Pedestrian – Public concern. Like the idea of connecting things that already exist and filling the gaps.”**
- **“Half-cent sales tax, part of that agreed to connect trails. How is that going?”**
- **“The state recently did pavement quality tracking with state trails, can we?”**

WHAT WE HEARD SECOND PUBLIC COMMENT PERIOD (SEPT. 23 – OCT. 23, 2019)

As noted earlier in this chapter, four jurisdictions made significant changes to the original project list presented. Because the entire document was made available, more generalized transportation comments were also accepted during this time period.

- **“Roundabouts are great. They keep traffic moving. You don’t want to be on them when they first open. It takes people time to get used to them.”**
- **“At roundabouts, the pedestrian crossings are too close to the roundabout. Thirty feet further down the street would be ideal. For example, at the roundabout on University and Fifth Avenue – when you are that close to the roundabout, your eyes are not looking for pedestrians, they are watching for traffic.”**
- **“Roundabouts do not cause a problem for fire trucks.” (Commenter was Saint Cloud Deputy Fire Marshal)**
- **“What benefits do these projects actually provide? Are they truly needed? The roads in the area are not in the best condition. Seems pointless to add miles of infrastructure to a system that does not have the funds to keep them maintained.”**
- Commenter did not want to add any general comments.

CHAPTER 10 : THE FUTURE

FUTURE OF CONNECTED AND AUTONOMOUS VEHICLES

WHAT ARE CAVS?

Connected and Autonomous Vehicles (CAVs) are motorized vehicles that use technology to assist human drivers or drive themselves without human input. Connected Vehicles (CV) are vehicles that can talk to other vehicles (V2V) and infrastructure based sensor systems (V2I) to better understand driving conditions or assist in driving more densely on the road. CVs can be human or computer driven. Autonomous Vehicles (AV) are vehicles who are controlled completely by the onboard computer. Most CAVs are being developed as electric vehicles (EVs).

There are five different levels of CAV technology. Levels one (1) and two (2) involve technology assisting human drivers. Levels three (3), four (4) and five (5) involve the vehicle itself being the primary driver, rather than a human.

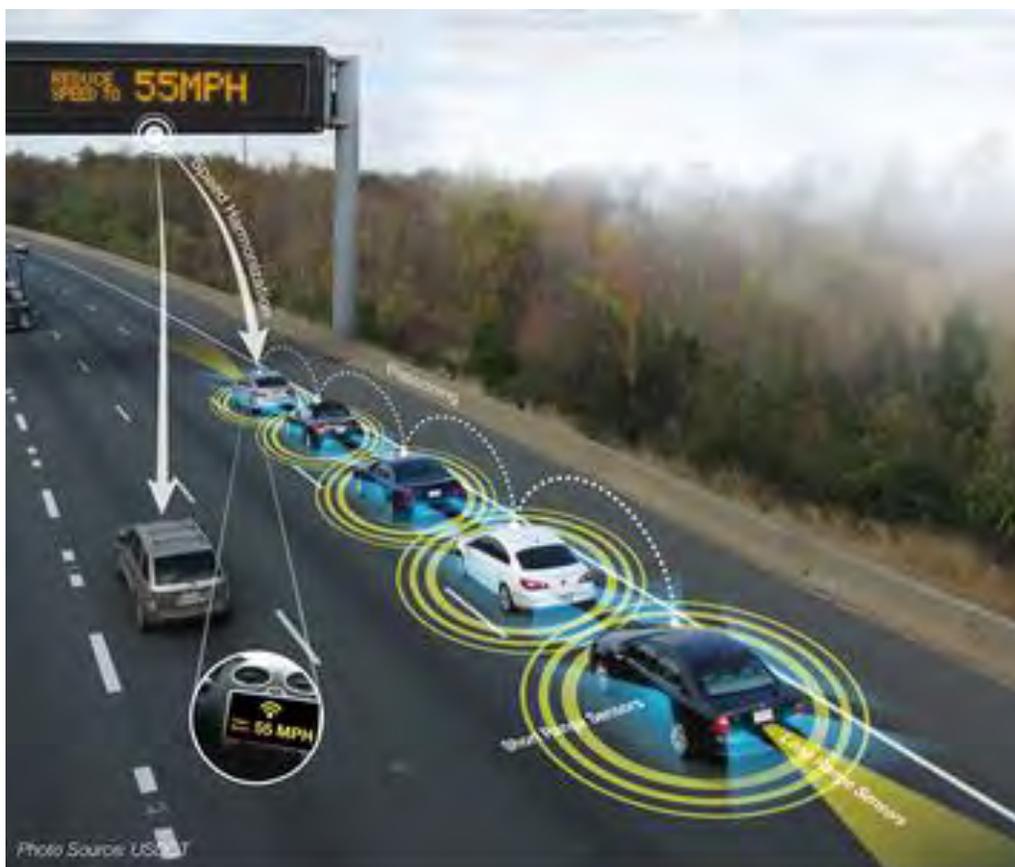


FIGURE 10.1 – REPRESENTATION OF V2V AND V2I COMMUNICATIONS
Source: University of Minnesota Humphrey School of Public Affairs, USDOT

SAE level	Name	Narrative Definition	Execution of Steering and Acceleration/Deceleration	Monitoring of Driving Environment	Fallback Performance of Dynamic Driving Task	System Capability (Driving Modes)
Human driver monitors the driving environment						
0	No Automation	the full-time performance by the <i>human driver</i> of all aspects of the <i>dynamic driving task</i> , even when enhanced by warning or intervention systems	Human driver	Human driver	Human driver	n/a
1	Driver Assistance	the <i>driving mode</i> -specific execution by a driver assistance system of either steering or acceleration/deceleration using information about the driving environment and with the expectation that the <i>human driver</i> perform all remaining aspects of the <i>dynamic driving task</i>	Human driver and system	Human driver	Human driver	Some driving modes
2	Partial Automation	the <i>driving mode</i> -specific execution by one or more driver assistance systems of both steering and acceleration/deceleration using information about the driving environment and with the expectation that the <i>human driver</i> perform all remaining aspects of the <i>dynamic driving task</i>	System	Human driver	Human driver	Some driving modes
Automated driving system (“system”) monitors the driving environment						
3	Conditional Automation	the <i>driving mode</i> -specific performance by an <i>automated driving system</i> of all aspects of the <i>dynamic driving task</i> with the expectation that the <i>human driver</i> will respond appropriately to a <i>request to intervene</i>	System	System	Human driver	Some driving modes
4	High Automation	the <i>driving mode</i> -specific performance by an automated driving system of all aspects of the <i>dynamic driving task</i> , even if a <i>human driver</i> does not respond appropriately to a <i>request to intervene</i>	System	System	System	Some driving modes
5	Full Automation	the full-time performance by an <i>automated driving system</i> of all aspects of the <i>dynamic driving task</i> under all roadway and environmental conditions that can be managed by a <i>human driver</i>	System	System	System	All driving modes

FIGURE 10.2 – LEVELS OF CAV AUTOMATION
Source: MnDOT Office of CAV-X, SAE International

ELECTRIC VEHICLES

Electric Vehicles (EV) are being developed in synch with CAV technology. Most CAV vehicles are being designed to also be EVs. There are two (2) kinds of EVs: Plug-in Hybrid Electric Vehicles (PHEV) which use a gas engine to charge an electric battery, or drive when the electric battery is drained, and Battery Electric Vehicles (BEV) which are completely battery based and have no gasoline motor. Currently, most EVs have a range of over 200 miles. As technology improves, the range increases and becomes closer to parity with gasoline powered vehicles which have a typical range of 300-400 miles per tank. As with most new technologies, it is expected that continuing improvements in the technology and economies of scale will bring down the prices of batteries. Eventually, the purchase price of EV vehicles may equal the price of new gasoline-based vehicles within the next decade.

There are multiple benefits to owning an electric vehicle. EVs generate zero emissions from the tailpipe, improving air quality and public health. The motors have hundreds of fewer parts than a combustion engine, and are simpler and less expensive to maintain.

Finally, EVs cost less to ‘fuel’. On average, charging an EV at home costs about ten cents per kilowatt hour (kWh). A 100-mile charge costs about \$3, compared to about \$10 or more for gasoline.

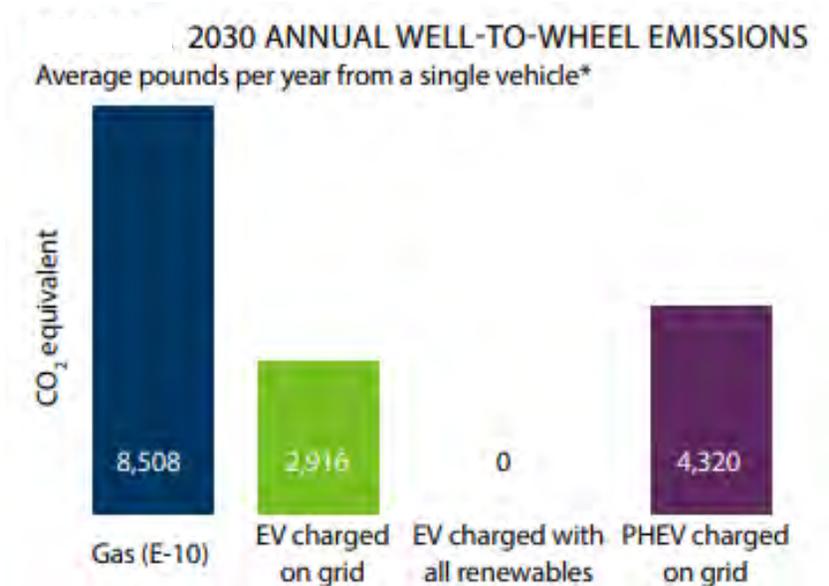


FIGURE 10.3 – AVERAGE CO2 EMISSIONS (POUNDS PER YEAR PER VEHICLE)
 *Source: MnDOT Office of CAV-X

EVs are also three (3) to four (4) times more energy efficient than gasoline powered vehicles. By installing a home charging station, drivers can charge their vehicles and even set their charging system to only charge their vehicle at night when electricity demand is low and the price per kWh is low. There are three kinds of charging stations. Level 1 (120 volts AC), Level 2 (240 volts AC) and Level 3 – Fast Charging (50-350 kW DC). Over 2,200 fast chargers exist in the US, and about 25 are in Minnesota. Most Fast Chargers are 50 kw which provides 100-mile charge in 35 minutes. 150 kw charges 100 miles in 12 minutes, 350 kw charges 100 miles in 5-7 minutes. On average it takes about 6 minutes to fill a gasoline tank for 100 miles’ range.

The Minnesota Department of Transportation (MnDOT) is working in cooperation with the Minnesota Pollution Control Agency (MPCA) to promote EV adoption within the state. The goal is to have 20% of the vehicles registered in Minnesota (200,000 EVs) be electric vehicles by 2030. Currently, there are about 7,000 EVs registered in Minnesota, with about 600 charging stations. MnDOT and the MPCA are working to accelerate EV sales and use through education and other methods, while helping build out and expand the EV charging infrastructure and prioritizing renewable energy sources for charging electric vehicles.

Currently, I-94 from Moorhead MN to Port Huron Michigan is federally designated the Great Lakes Zero Emission Corridor (Fast charging network). While no Federal money is allocated for the corridor, the designation is to raise awareness and promote development of an

interstate-charging-network for electric vehicles. The MPCA is also using funds received as part of the Volkswagen-diesel-emissions-cheating-scandal to purchase public charging stations to help promote the growth of the EV network. Anyone with an EV is welcome to utilize such charging station for a small cost that is less than it would cost to fill a tank of gasoline at a traditional service station. MnDOT is working with the MPCA and Minnesota Legislature to look at alternative sources of road maintenance and expansion funding, as projected gasoline fuel sales tax revenues are expected to plateau in the coming years, and then eventually fall as EVs become more and more dominant. As EVs become more dominant, the price per unit is expected to continue to fall with economies of scale and they should become more affordable.

Type of Station	Speed of Charge (miles per minute)	Est. Per Installed Station Cost (USD)	Minutes of Charge to Drive 100 miles
Level 1 120 Volt (AC)	0.1	\$500 - \$1,000	1080 (18 hours)
Level 2 240 Volt (AC)	0.4	\$2,000 - \$5,000	240 (4 hours)
50 kW (DC)	2.9	\$60,000 to \$100,000	35
150 kW (DC)	8.7	\$100,000 to \$150,000	12
350 kW (DC)	20.4*	\$150,000 and up	5

FIGURE 10.4 – ELECTRIC VEHICLE CHARGING STATION SPEED COMPARISON
 *Source: MnDOT Office of CAV-X

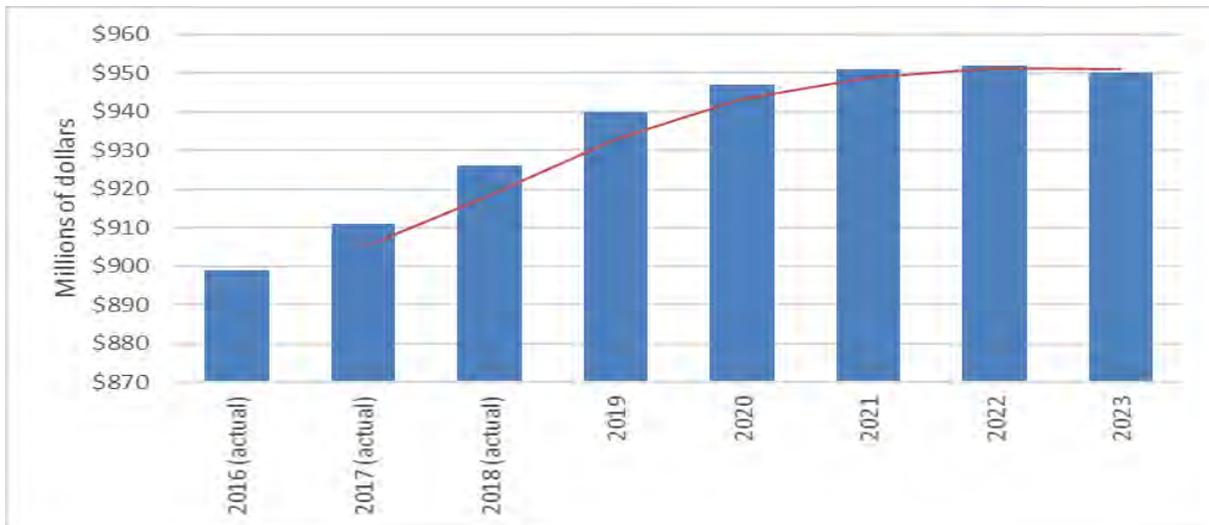


FIGURE 10.5 – MINNESOTA GAS TAX REVENUE FORECAST (MILLIONS OF DOLLARS)
 *Source: MnDOT Office of CAV-X

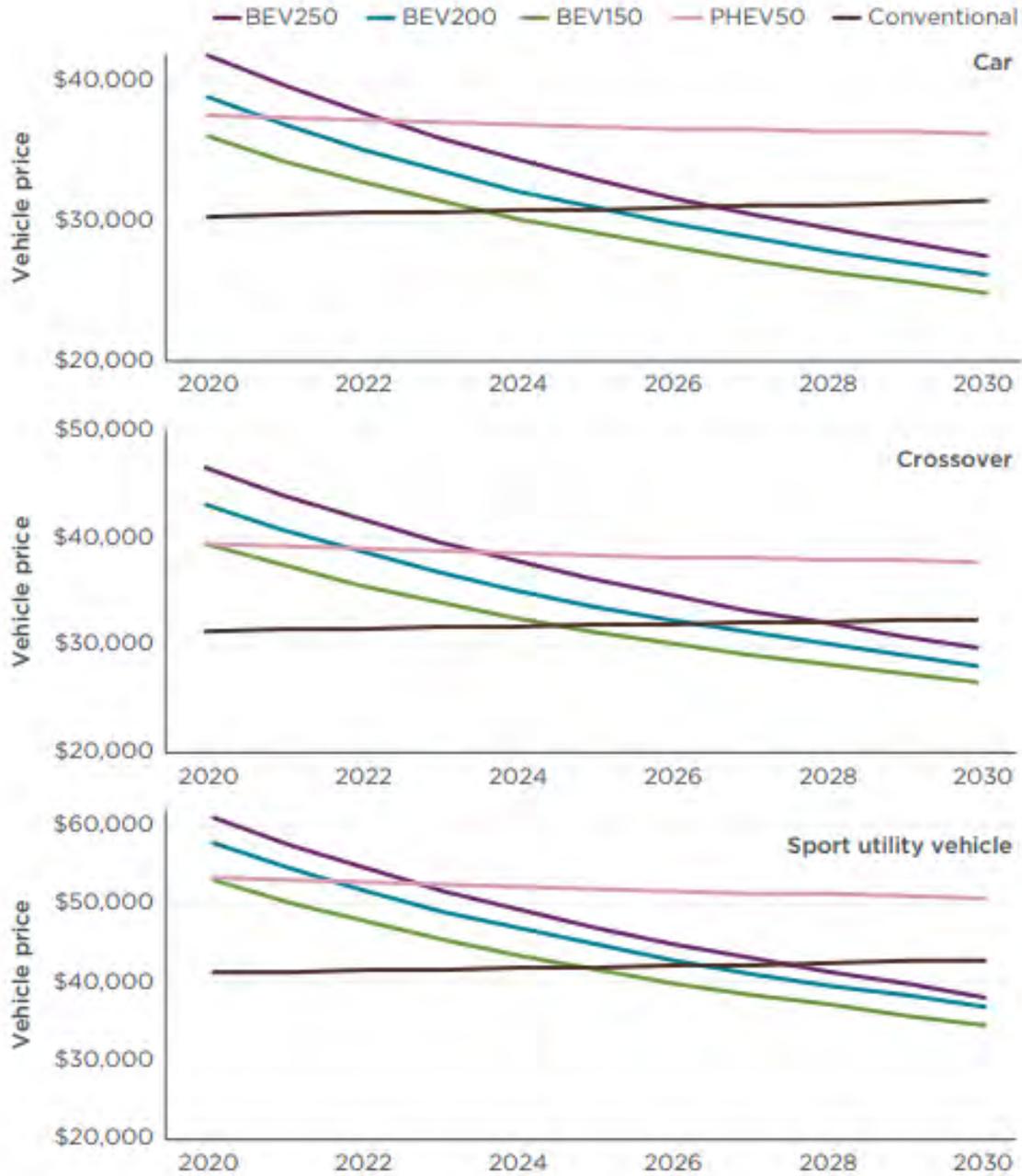


FIGURE 10.6 – FORECASTED INITIAL PURCHASE PRICE OF VEHICLES OVER TIME
 PHEV = Plug-In Hybrid Electric Vehicle; BEV = Battery-Electric Vehicle; the number represents the range (in miles) of the vehicle on a single charge.
 *Source: International Council on Clean Transportation Working Paper, 2019-06

However, until that time, MnDOT and the MPCA are expected to continue working together to face the challenges that are hindering more immediate and widespread adoption of EVs, such as **consumers’ perceived high cost of purchase and maintenance, an incomplete charging network, and lack of financial tax incentives to ownership.** Currently, electric vehicles are considered to be still in the ‘early-adoption’ phase, and have yet to see widespread use or ownership.

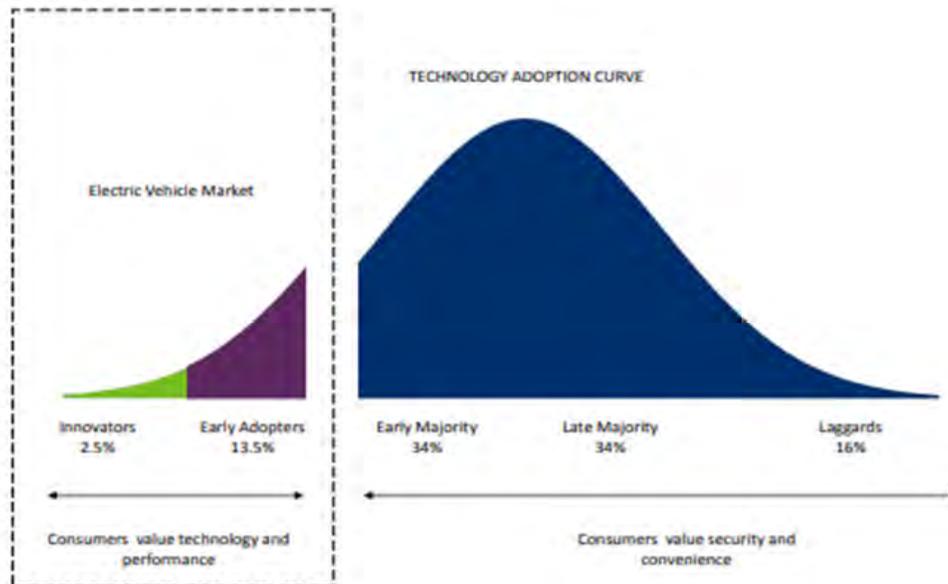


FIGURE 10.7 – EV TECHNOLOGY ADOPTION CURVE
***Source: MnDOT Office of CAV-X**

CURRENT CAV STATUS

Automation technologies are already commercially available and implemented in vehicles on the road today. Examples include radar-based adaptive cruise control, self-parking features, lane keeping assistance, Mercedes-Benz “Drive Pilot”, Audi and BMW’s “V2I” signal systems, General Motors “Super Cruise” and Tesla’s “Autopilot”. These technologies generally fall between the level one (1) ‘Drive Assistance’ and level two (2) ‘Partial Automation’ category. No mass production vehicles have met the level three (3) or better automation abilities yet. Multiple universities and private companies (including Uber, Google-Alphabet, Apple, Tesla and Ford) are conducting research and on-road tests of advanced autonomous vehicles. Given the current pace of research and development, the MnDOT CAV-X Office expects the first fully autonomous vehicles (fully computer driven with humans only along for the ride) within the next decade.

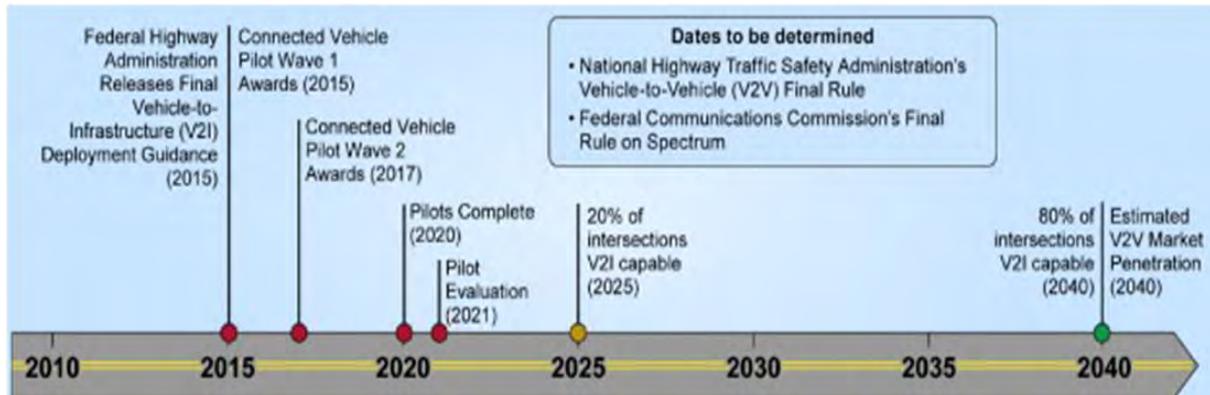


FIGURE 10.8 – EXPECTED TIMELINE FOR V2V AND V2I MARKET PENETRATIONS
 *Source: CarGroup, GAO (2015)

MnDOT partnered with Easy Mile and the University of Minnesota to test a full level five (5) CAV mini-bus at the MnDOT MnROAD facility during the winter to see how the autonomous technology would handle in cold, snow and ice conditions. The mini-bus was extremely accurate in testing, even in light to moderate snow. After multiple laps, its path around the test track varied, at the most, by 1 cm.



FIGURE 10.9 – EASY MILE MINI-BUS AT THE MNDOT TESTING FACILITY
 *Source: "MnDOT Tests New Autonomous Shuttle for Super Bowl".
 Minnesota Public Radio News. December 12, 2017. (<https://bit.ly/2AiseNz>)

WHAT DOES THIS MEAN FOR THE SAINT CLOUD APO REGION?

For a time, human-driven vehicles and automated vehicles will need to co-exist on the **nation's roadways**. Historians have pointed out that soon after motor vehicles were introduced to **America's roadways, horses** – once the primary source of transportation – were soon banned from urban roadways because horses and motor-powered vehicles could not co-exist very well. Some have suggested that a similar dynamic may occur when automated and human-driven vehicles both attempt to **co-exist on America's roadways** because mixing both vehicle types may prevent the full realization of safety benefits and travel efficiencies offered by vehicle automation.

CHANGES FOR TRANSPORTATION PLANNING

With the reduction in difficulty and effort for driving, as well as the increase in travel speeds thanks to computerized control, people may be more relaxed while traveling and may become more willing to travel for longer periods of time. This may have the side-effect of encouraging urban sprawl and expanding low-density expansion land use. Streetscapes will likely need to be redesigned to favor loading and unloading passengers or freight, rather than on street parking. With a multitude of sensor data, planners and civil engineers will **better time traffic control devices and also monitor the transportation networks' capacity** and maintenance conditions.

Financing transportation infrastructure may change both in terms of need (with less pavement width needed, or tire-trails only, rather than full lanes) and funding sources. Currently, fuel taxes are collected and used for funding road, highway and bridge improvements as per the Minnesota Constitution. With the conversion from liquid fossil fuel to EVs, this would result in a major shakeup of how infrastructure is funded. New taxations, fees or other funding streams will need to be created in order to maintain and expand transportation infrastructure. Similarly, the Federal Highway Trust Fund will need to adapt to changes in technology and fuel types. Possibilities include mileage charges, tolling, or a tax on electricity from charging units.

CHANGES FOR THE GENERAL PUBLIC

CAVs are expected to bring about many changes in society, including an increase in safety and a reduction in the frequency and severity of crashes. On limited access roadways (such as highways) vehicles will be able to go faster, as human reaction time is no longer determinative of safe maximum speeds. Having safer roads will result in a reduction in non-recurring congestion and ultimately fewer resources spent on emergency services and responses. Traveling will require much less effort, both physically and mentally, as the vehicle takes over driving. This will greatly expand the ability to safely travel for everyone, but especially youth, elderly or handicapped populations. People will be able to eat meals, nap, watch movies, read, play games, conduct business or even exercise while in transit. While many vehicles will have passengers, some vehicles may appear empty, as they are

moving freight cargo or simply orbiting an area in place of parking. The cost of freight shipping is also expected to fall since the cost of paying a human driver current makes up 40% - 45% of freight shipping costs.¹



FIGURE 10.10 – CAV CONCEPT CAR

As vehicles will be able to communicate with each other and the surrounding roads and infrastructure, their onboard computers can react much faster than human drivers. They will be able to safely drive at a much closer following distance and at greater speeds, accelerating and breaking to match the vehicles in front of them. This can result in fitting more vehicles on existing road infrastructure than is currently possible with human drivers. There will be less road capacity required per vehicle. Furthermore, the very design of roads may be able to change, using far less resources (such as asphalt or concrete) than are required for current road designs. Future roads may need only narrow strips of concrete for the tires alone, as the computerized sensors can maintain an exact path, and not drift within a lane. Future roads may look like railroads of today, with two narrow tracks that the wheels maintain their path upon. Green space could be greatly expanded. The University of Minnesota College of Design developed some possible examples of how future roads may look to match the need of future CAV developments. The top picture in Figure 10.10 shows a typical intersection as it would be built today. The below pictures shows an example of how intersections could be re-built within existing rights-of-way if all vehicles were Level 5 CAVs. However, it should be noted that it may be some time before 100% of all vehicles in the US vehicle fleet are Level 5 CAVs.

¹ <http://www.cbre.us/real-estate-services/real-estate-industries/industrial-and-logistics/industrial-and-logistics-research/automated-trucking>

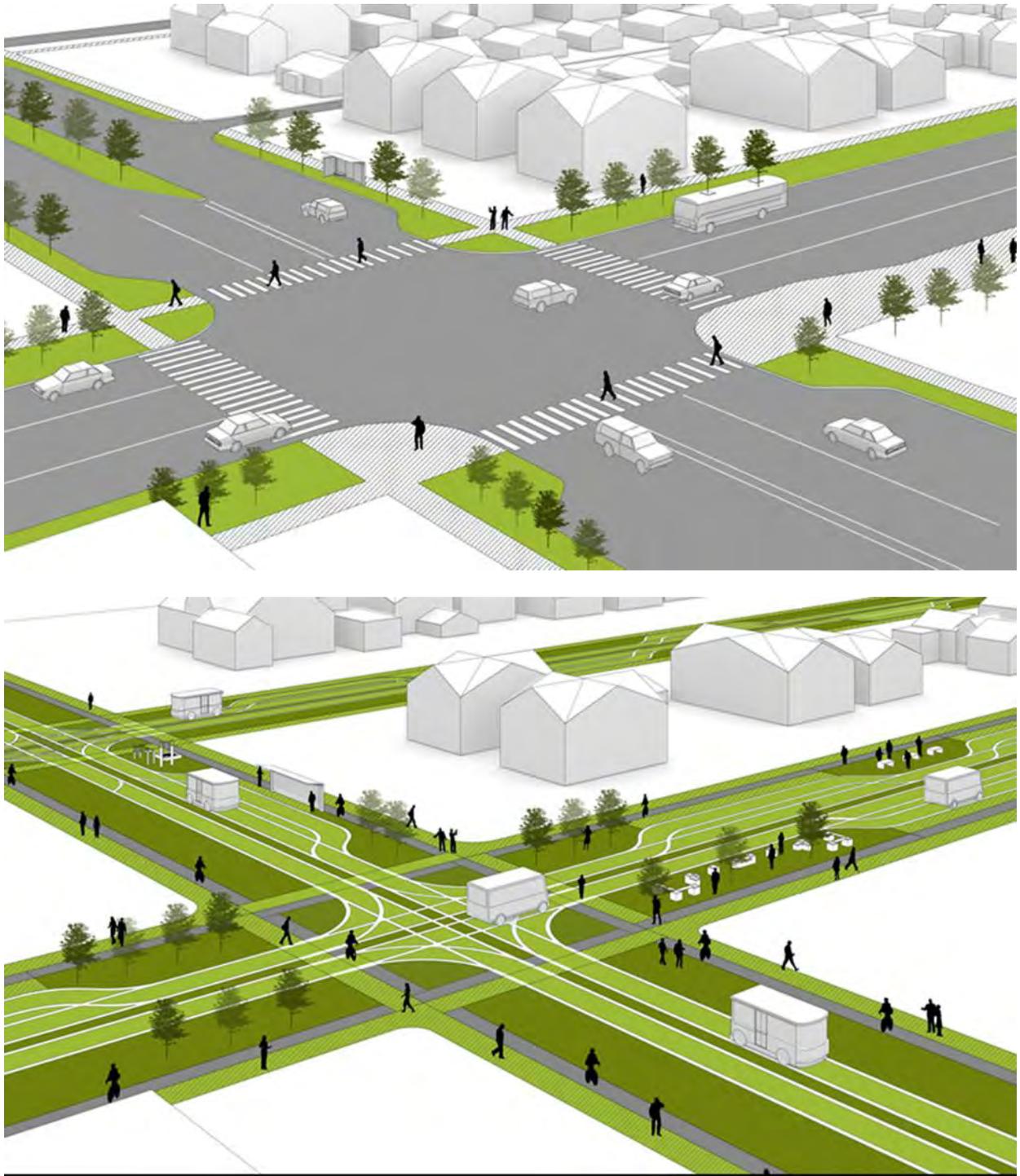


FIGURE 10.11 – CONCEPT DRAWINGS OF POSSIBLE FUTURE ROADWAYS
*Source: University of Minnesota College of Design

The presence of CAVs may also change the very nature of vehicle ownership. Instead of individual people or families owning a vehicle for personal mobility needs, companies may own large autonomous vehicle fleets that are constantly driving and orbiting. When somebody needs a ride, they would use a smartphone based app to summon a nearby empty vehicle to take them to their destination, similar to how Uber and Lyft operate today. **This is referred to as “Mobility as a Service” (Maas). Much like the development of** broadband internet service, market penetration for MaaS is likely to occur first in major metropolitan areas, like the Twin Cities, where profit margins for mobility service providers will be higher. Mid-sized metropolitan areas like the Saint Cloud MPA are more likely to be a second-tier market. It will likely take much longer for small towns and rural areas to see MaaS, and, like broadband, government incentives may be necessary to prompt private investment.

If people do choose to own a personal vehicle, they will be able to send the vehicle on its own to run errands and deliveries while the human stays comfortably at home, or is busy at work. Furthermore, with self-driving vehicles, the need for parking spots will be greatly reduced. Instead of needing to park a vehicle, the vehicle can be told to go drive in an orbit of the area, or park itself in a far-away location. Then once the person is ready to leave, they summon their vehicle and it drives itself to a pickup location where it meets the human. This means that cities may be able to repurpose existing parking lots and ramps for higher value uses, such as developing surface parking lots into new buildings, or converting existing parking ramps into offices, housing or even small parks. One other way CAVs may change the nature of vehicle ownership is the elimination of both driver’s licenses and personal car insurance. Vehicles will be driving themselves, and will be doing so with such computerized precision that the vast majority of vehicle collisions can be eliminated, as 90% of current crashes are caused by human driver error². Similarly, the cost of vehicle repairs from accidents will also drop precipitously, followed by a drop in the number of businesses that provide collision repair services.

² Frank Douma, University of Minnesota Humphrey School of Public Affairs, MPO Summer Conference Presentation, August 2018.

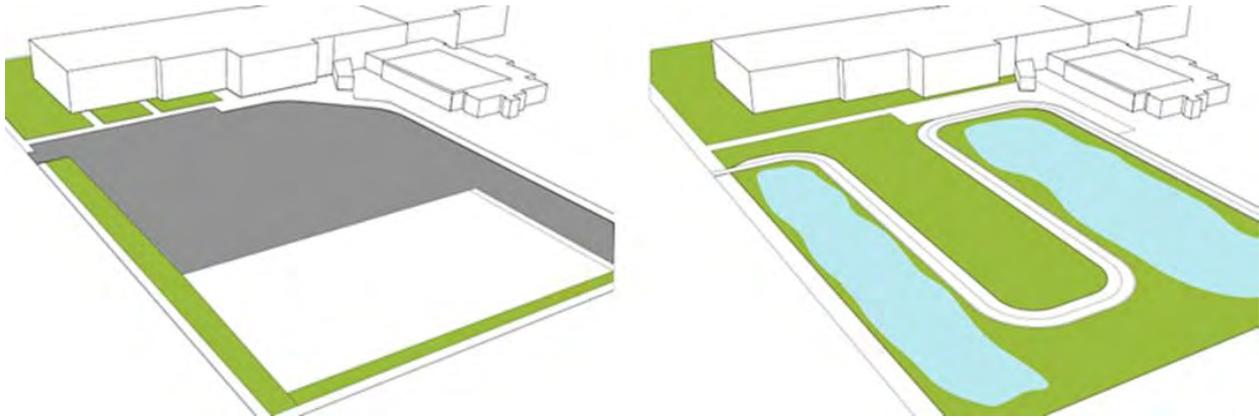


FIGURE 10.12 – CONCEPT DRAWING FOR POSSIBLE RE-USE OF PARKING LOT



FIGURE 10.13 – CONCEPT GRAPHIC FOR POSSIBLE RE-USE OF PARKING GARAGE

*Source: Frank Douma - University of Minnesota College of Design, Amy Korte - Arrowstreet

FUTURE POSSIBILITIES FOR TRANSIT

The National Transit Database (NTD) (<https://www.transit.dot.gov/ntd>) reports that as of October 2018 nationwide transit ridership (which under NTD definition includes among other items buses, ferryboats, trains, and vanpools) has seen a 20 percent increase from the previous decade.

However, when looking specifically at fixed route bus ridership on the national scale, ridership has decreased by 12.14 percent during the same time frame. Paratransit (such as Dial-a-Ride services) saw an increase – up 6.46 percent during the last decade.³

“Declines in transit ridership across the nation have triggered a discussion on the factors influencing and causing those declines. While some transit agencies have struggled to regain ridership since service cuts following the Great Recession (2008-2009), most saw a rebound with modern record ridership in 2014. Today, ridership declines have spread even to the country’s most transit-intensive cities.”⁴

With these trends spilling over on the local level, Saint Cloud Metro Bus executives are seeking out innovative ways to boost ridership while adapting to the ever-changing future of transportation within the MPA.

In a conversation with key Metro Bus executives in March 2019, the transit commission has identified two main focus areas – technology and service enhancements – that potentially could be implemented as a way to boost ridership and improve the overall rider experience.

Of note, the following sections are strictly aspirational. These sections represent areas that Saint Cloud Metro Bus will be investigating over the next several years. The ideas expressed here have not yet been vetted and should not be construed as expectations of Metro Bus.

TECHNOLOGY

In the immediate future, Metro Bus executives have identified technology enhancements as one of the major focus points for the transit agency.

Chief Executive Officer Ryan Daniel stated Metro Bus’s need to keep pace with changing technology as a way to enhance the ridership experience.

To do this, Metro Bus is exploring several options to upgrade the agency’s existing technology infrastructure. Those upgrades potentially will include smartphone apps, NextBus technology, on-board fare purchasing, and kiosks.

³ American Public Transportation Association. Ridership Report Archives. (<https://bit.ly/2JD6bqH>).

⁴ American Public Transportation Association. “Understanding Recent Ridership Changes: Trends and Adaptations.” April 2018. (<https://bit.ly/2XxCqk8>).

All of these technology improvements are aspirational. Any technology changes implemented by Metro Bus will have to be budgeted and fiscally constrained prior to implementation.

SMARTPHONE APPLICATIONS

Metro Bus Chief Finance and Administration Officer Paula Mastey said Metro Bus is considering developing a smartphone app for the system. This app, according to Daniel, will tie together several of the technology improvements Metro Bus hopes to accomplish within the next several years.

“System wide, we are looking at the technology piece and how we can leverage the technology,” Daniel said.

Specifics on the type of app or a model that would be used to inspire this phone app were not discussed. However, Daniel and Mastey said the app would be instrumental for rolling out other technology advancements – as described below – to enhance the Metro Bus ridership experience.

NEXTBUS

Since 1996, NextBus has been providing transit management solutions for several transit systems, municipalities, universities, and airports throughout the [US, Canada, and Australia](https://bit.ly/2xeOZSA) (<https://bit.ly/2xeOZSA>). The company focuses on providing [real-time passenger information on transit vehicles](https://bit.ly/2WXWyre) (<https://bit.ly/2WXWyre>) through the use of GPS to minimize passenger wait times by more accurately predicting transit vehicle arrival times.

According to the company, **“By taking into account the actual position of vehicles, their intended stops, and typical traffic patterns, NextBus can estimate vehicle arrivals with a high degree of accuracy. This estimate is refreshed constantly to provide riders with up-to-the-minute information.”**

As of 2019, the University of Minnesota is the only provider utilizing NextBus technology in the State of Minnesota.

Similar to NextBus, Metro Transit in the Twin Cities utilizes [NexTrip](https://www.metrotransit.org/about-nextrip) (<https://www.metrotransit.org/about-nextrip>), a similar GPS-reliant technology. According to Metro Transit, **“Every bus has an onboard computer that tracks its GPS location. As a bus travels along a route, NexTrip tracks its location in relation to specific timepoints. It updates automatically every few seconds.”**

This type of technology has also permeated into Greater Minnesota as well. Rochester Public Transit utilizes Doublemap to provide its riders real-time bus-tracking capabilities.

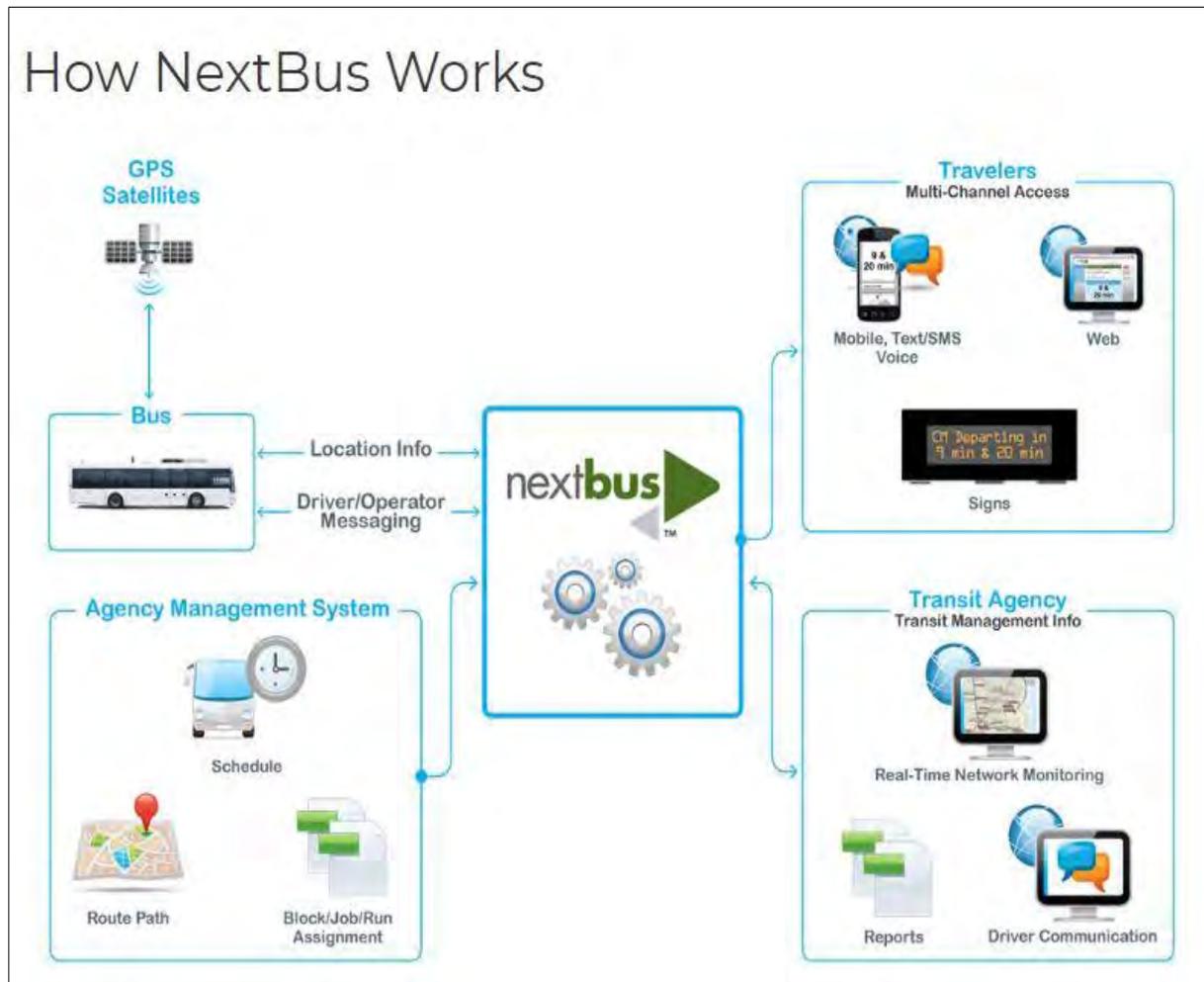


FIGURE 10.14 – AN INFOGRAPHIC ON HOW NEXTBUS TECHNOLOGY FUNCTIONS. PHOTO COURTESY OF NEXTBUS.

Daniel said one of his main priorities for Metro Bus is to implement a similar system in the Saint Cloud MPA. This system would complement the mobile technology upgrades and allow Metro Bus riders to access real-time information on the location of their bus.

The app, according to Mastey, could take the rider’s current location – by entering in the specific bus stop number – geo-locate the bus that will be arriving at the stop, and calculate an approximate arrival time for that vehicle.

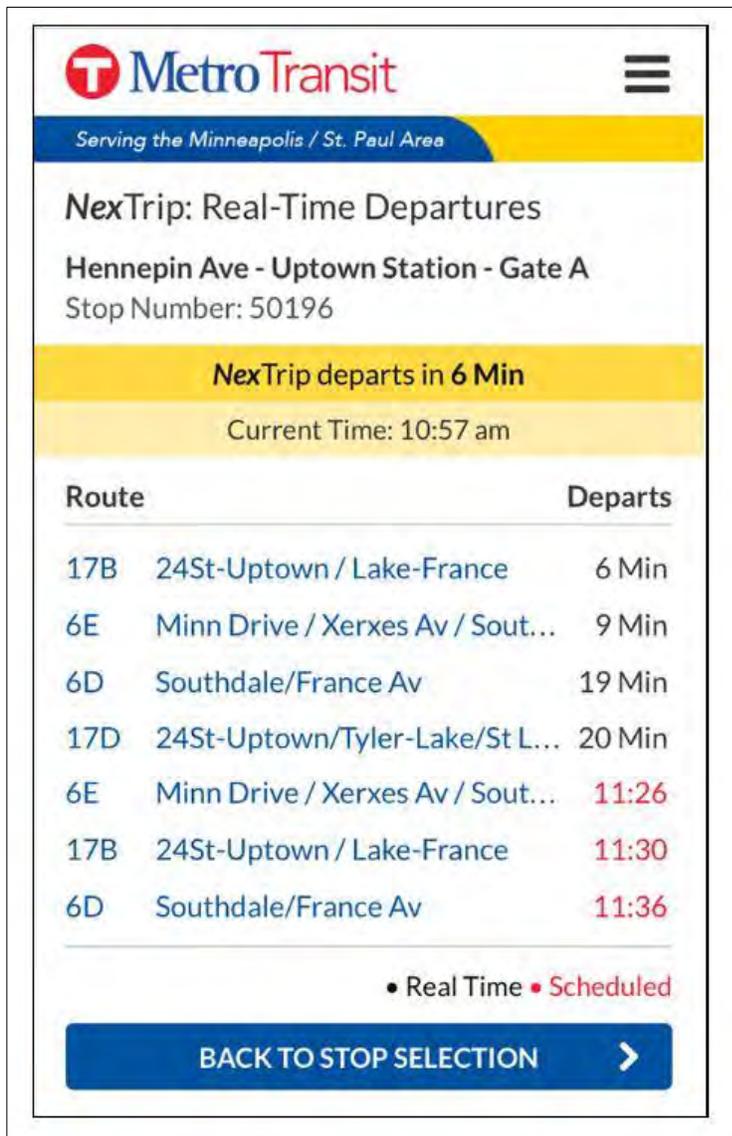


FIGURE 10.15 – A SIMULATED SCREEN OF HOW NEXTRIP SOFTWARE WOULD PROVIDE RIDERS WITH REAL-TIME ESTIMATED ARRIVAL TIMES FOR BUSES FREQUENTING A SPECIFIC BUS STOP.
Photo courtesy of Metro Transit.

TICKETING AND FAREBOX TECHNOLOGY

As of summer 2019, Metro Bus riders have two main options for paying for a ride. The first option is using cash to pay the bus fare. Both fixed route and Dial-a-Ride buses are equipped with fareboxes that allow for cash (coins and bills up to \$20) to be used as payment. Exact change is not needed. Riders are issued credit in the form of a debit change card that can be redeemed for future fares.

The second option allows for riders to purchase bus passes or tokens. The passes range from one day to 31 days. Ten ride bus passes are also available. Passes can be purchased at the downtown Metro Bus Transit Center or at major grocery stores within the Metro Bus service area. Tokens – which are only eligible for fixed route riders – are sold in quantities of 10 and are only available for purchase at the downtown Metro Bus Transit Center.

While these ticketing systems seem to work sufficiently, Metro Bus executives are pursuing different avenues to streamline ticketing through technology improvements.

Daniel said Metro Bus is exploring options similar to the [Go-To Cards](https://www.metrotransit.org/go-to-card) (<https://www.metrotransit.org/go-to-card>) offered by Metro Transit for its customer base in the Twin Cities.



FIGURE 10.16 – A GO-TO CARD. PHOTO COURTESY OF METRO TRANSIT.

Go-To Cards are free cards that can be prepaid/preloaded with up to \$400 and two 31 day bus passes. Riders just tap the card on a machine near the farebox to automatically have the money and/or rides be deducted from the card.

“We have that piece (Go-To Cards) right now on the Northstar Link,” Daniel said. “That’s working well. Customers like that seamless fare where you can just tap that one card here in Saint Cloud and take that card all the way down to Minneapolis airport or to the Mall of America or just to board Metro Transit services.”

Daniel said it is important to develop a similar product to the Metro Transit Go-To Cards for the Metro Bus system within the MPA.

This type of service could potentially be linked to a future Metro Bus smartphone app to allow riders to ability to either pay with the app or check balances.

KIOSKS

Most of these technology improvements – such as the NextBus and fare collections – have the potential be to done with the assistance of strategically placed kiosks throughout the Saint Cloud MPA. These kiosks, Daniel said, would be able to provide a similar function (real-time bus locations and checking balances and/or reloading Go-To style cards) as the mobile applications.

CONNECTED AUTONOMOUS VEHICLES (CAVS)

Talks have begun among Metro Bus executives to account for the potential of connected **and/or autonomous buses being incorporated into the transit agency's fleet. In the immediate future Daniel said Metro Bus's priorities lie with improving other technological infrastructure within organization.**

Mastey said Metro Bus will continue to monitor other transit agencies that conduct pilots that utilize CAV technology in order to gain insight into best practices that could potentially be replicated in the mid-to long-range lifespan of this plan.

SERVICE ENHANCEMENTS

Saint Cloud Metro Bus executives are striving to refine the existing service that is currently being provided all while looking at innovative ways to optimize the future role the transit provider will play in the MPA.

Again, the following service enhancements are aspirational. None of the specific projects or strategies have been vetted, planned, or yet incorporated by Metro Bus.

REFINING THE CURRENT SYSTEM

As of summer 2019, Saint **Cloud Metro Bus's fixed route structure** – with exception of ConneX, which is detailed later in this chapter – operates in a circular hub-and-spoke pattern. This pattern, for Saint Cloud Metro Bus, involves buses starting and ending at the same location with buses traveling in a loop to complete the trip.

A majority of the fixed route buses are based or "hub" out of the downtown transit center. As of 2019, one fixed route bus "hubs" out of Crossroads Center and one fixed route bus "hubs" out of an industrial park on the western side of the City of Saint Cloud. Saint Cloud State University routes are separate, coincide with the academic year, and are therefore not included.

Daniel said he would like to eliminate the circular hub-and-spoke system within the Metro Bus service network. Metro Bus Planning Manager Doug Diedrichsen said a true hub-and-spoke route system (a direct route to and from a hub instead of starting, looping, and ending at the same hub) could have some benefits within the Metro Bus service area. This could be particularly beneficial, Diedrichsen said, outside the core Saint Cloud metro.

Diedrichsen and Daniel both said a grid-type system (direct line/point-to-point and no loops) could be an option for portions of the City of Saint Cloud’s service area.

CONNEX

On Jan. 2, 2019, Metro Bus debuted a new service model pilot in the City of Sartell to take the place of fixed route service for the majority of the municipality. ConneX – an on-demand ride service – provides riders within the city two options for service. The first option is point-to-point within the City of Sartell. The service within the city covers all roads within three-quarters of a mile of the original fixed route. The second option for those riders within the City of Sartell needing to access destinations outside of the city are two connection points – Walmart or Country Manor – that can allow those riders the ability to access the remaining Metro Bus fixed routes. ConneX is a curb-to-curb service meaning pick-ups and drop-offs occur at the curb.



FIGURE 10.17 – CONNEX BUS

To utilize the service, riders need to call to schedule a pick up. Callers will be placed in a queue with other ride requests. Wait times are varied based on demand for ConneX. Fares and transfers are handled the same as a regular fixed route bus. All ConneX passengers must have the ability to ride independently or they must schedule their trips with their own assistant. **The ConneX model was developed to replace one of Metro Bus’s lower performing routes.** As of summer 2019, Diedrichsen said ridership has continued to trend upward for this service model. As of the drafting of this plan, ConneX service is still in pilot mode after being given a six month extension. Mastey said Metro Bus executives are watching the ConneX pilot very closely. Diedrichsen said the success or failure of the ConneX pilot will

determine how Metro Bus handles future service enhancements. Mastey said ConneX service would be a great candidate project to incorporate into a smartphone app.

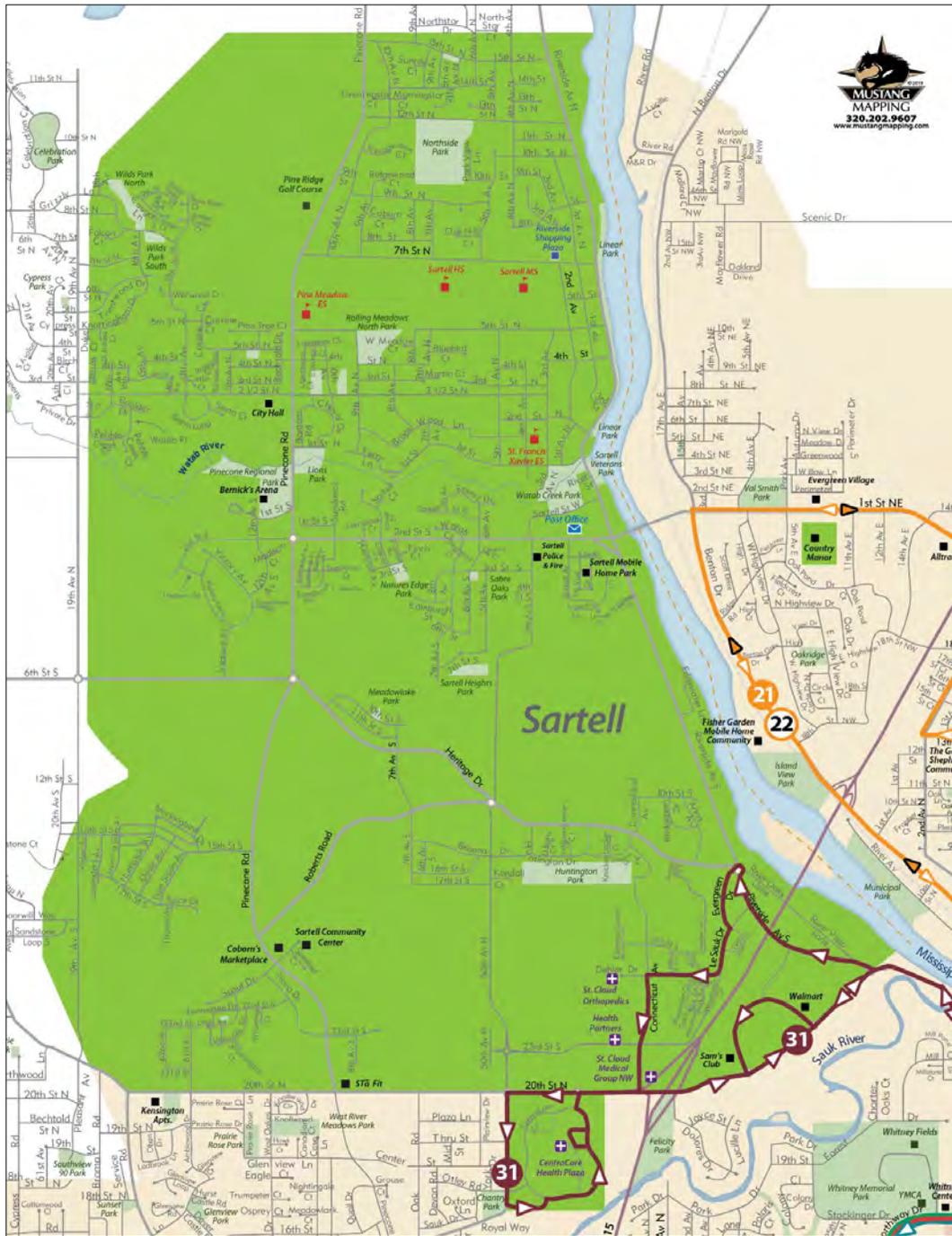


FIGURE 10.18 – THE CONNEX SERVICE AREA MAP.
Map courtesy of Saint Cloud Metro Bus.

Daniel said the ConneX model could prove to be instrumental in connecting trips from **outside of the transit agency's core to the most heavily utilized routes** – Route 1 and Route 2 from the downtown transit center to Crossroads Center. A ConneX-type service could be utilized to also expand the current Metro Bus service area, particularly to Saint Joseph.

SERVICING SAINT JOSEPH

As of the drafting of this plan Metro Bus's current service area includes the cities of Saint Cloud, Sartell, Sauk Rapids, and Waite Park. For the past several years, conversations have been started with city staff and community members within the City of Saint Joseph for possible inclusion into the Metro Bus service area. However, no forward progress has been made on this action.

"The biggest thing with this would be the city would have to obviously be a part of our board," Mastey said. "But we really can't say at this point when that would be because the city would have to levy taxes (in order to pay for service to the city and become members of the commission)."

While agreements to develop fixed route and paratransit service options citywide have not come to fruition, Metro Bus has initiated conversations with the College of Saint Benedict to provide a connecting service between the campus and Metro Bus for students only.

Daniel said the College of Saint Benedict along with Saint John's University in Collegeville has a bus that runs between the two colleges during the week. On weekends, one bus travels from Saint Benedict's into the Saint Cloud metro.

"But they were looking at having more on the lines of a daily service that goes between, let's say, the Crossroads, which is a hub for us, essentially connecting the students that go to Saint Benedict's (with the Metro Bus service area)," Daniel said.

Daniel said the cost for this type of connection is proposed to be covered by the college.

OTHER ENHANCEMENTS TO THE CURRENT SERVICE AREA

In terms of expanding service hours or increasing frequency of service, Metro Bus executives have not ruled out the possibility of either.

According to Daniel, based on current ridership data extending service hours for the transit agency to run later during the week (service currently ends around 10:15 p.m.) or adjusting hours on the weekends (to start earlier or end later) is not feasible at the drafting of this plan.

"As much as I want for Metro Bus to have that 24-hour service, being fiscally conservative and looking at the numbers it doesn't make sense for the organization to go into that 24-hour service module," Daniel said. "Currently, right now our buses run to 9 or 10 p.m. and there is nobody on the bus."

According to Diedrichsen, Metro Bus ridership has a steep decline around 6 p.m. during the week.

In terms of frequency, Metro Bus is will evaluate potential solutions to increase frequency. Daniel alluded to the possibility of a service, similar to ConneX, assisting in increasing frequency. However, this potential avenue will wait to be explored until after the conclusion of the ConneX pilot at the end of 2019.

EXPLORING THE FUTURE

In addition to optimizing the existing service, Metro Bus executives are also seeking out innovative ways to approach transit throughout the Saint Cloud MPA.

PUBLIC-PRIVATE PARTNERSHIPS

One way leaders are looking at doing this is exploring a public-private partnership with CentraCare. Daniel said Metro Bus is in talks with executives at CentraCare and in particular at Saint Cloud Hospital to discuss a potential shuttle type service between the CentraCare Health Plaza located in Sartell and the main hospital.

“They have a parking challenge right now,” Daniel said. “They have more employees than parking spaces.”

Diedrichsen said this model would be based off of what is currently happening (as of the drafting of this plan) in Rochester, Minnesota, with Rochester Public Transit and Mayo Clinic.

Daniel said this sort of initiative was tried once before with a previous transportation provider but was unsuccessful. However, he is hopeful conversations with CentraCare leadership will help promote the use of transit as an option, especially for CentraCare support staff.

Mastey said other public-private partnership options are also being explored. Specific businesses aside from CentraCare Health were not named.

NORTHSTAR LINK

With the push to bring Northstar Commuter Rail service to Saint Cloud, Metro Bus executives have been grappling with how to be innovative when it comes to providing transit.

As of the drafting of this plan, Metro Bus provides commuter bus service via the Northstar Link Commuter Bus (a more detailed look at this service can be found in Chapter Two of this document) from three pick up locations within the Saint Cloud MPA to the Big Lake train station.

This service is owned by Metro Transit, the transportation provider for the Twin Cities metro, and operated by Metro Bus.

Daniel said if the train service were to come to Saint Cloud, Metro Bus’s reaction would be based heavily upon the location of the future station and the frequency of the trains.

If the future Northstar Commuter Rail station were to be located at the current Amtrak station, Daniel said that location could be a prime location for a new, [transit oriented development or TOD](http://www.tod.org) (www.tod.org). This sort of development could allow for a more active transportation-friendly environment and has the potential to increase economic vitality for the region with the introduction of mixed-use (housing, retail, commercial) development. With this possibility, Metro Bus executives believe the transit agency would play an instrumental role in potential development discussions.

Another avenue Metro Bus could take if the Northstar train were to come to Saint Cloud would be to serve as a commuter bus from outlying communities – bringing passengers in from outside the Saint Cloud MPA.

Mastey and Diedrichsen said Metro Bus’s Northstar Link buses could be used to provide transportation to Northstar Commuter Rail passengers who live in communities such as Cold Spring, Little Falls, Royalton, or Willmar.

However, future discussions would need to be had with current Northstar partners, the local cities and counties, and the business community.

SUMMARY

As of the drafting of this document, Saint Cloud Metro Bus has several options that are actively being pursued when it comes to the future of the organization and transit within the Saint Cloud metro area.

More information, discussion, and planning is needed in order to start some of the projects identified by top executives.

Within the next several years Metro Bus’s planning department hopes to initiate its process to update the 2016 Long Range Transit Plan which potentially will address some of the future possibilities outlined in this document.

Currently, we cannot make any assumptions to the growth of the existing Metro Bus fleet until some of these potential opportunities brought forth in this section are adequately addressed. It is, however, safe for the APO to assume Metro Bus will be actively replacing the rolling revenue stock that comprises its current fleet.

FUTURE POSSIBILITIES FOR ACTIVE TRANSPORTATION

Active Transportation is ever evolving into new ways to get around the community. Integrating physical activity into daily routines promotes healthier living for the future. Communities that plan, design, and invest for the future of active transportation create a more feasible, safe, and convenient place to move around.

BICYCLE FRIENDLY BUSINESS

Bicycle Friendly Business (BFB) (<http://bit.ly/2J8M3fL>) is a nationally recognized program created by *The League of American Bicyclists (LAB) (A Non-Profit)* (<http://bit.ly/2J8n1xu>). The four E's summarize the key components of a comprehensive and integrated approach in becoming a BFB; Encouragement, Engineering, Education, and Evaluation and Planning. As a designated business, according to LAB it is a way to become recognized leaders in wellness, sustainability, and corporate responsibility.



FIGURE 10.19 – THE FOUR E'S, AND EXAMPLES OF HOW TO HELP BUSINESSES ATTAIN BFB RECOGNITION

The jurisdictions within the Saint Cloud MPA have started applying to become BFB communities, with the belief that active transportation will benefit businesses, employees, and the community. In conjunction with the BFB, the *Bicycle Benefits* (<http://bit.ly/2J9AxAV>) program is another way for businesses to encourage active transportation in their community. Establishments of all sizes can participate in the program. The company joins as a member and begins by purchasing a startup kit, which includes helmet stickers, those helmet stickers are for purchase for around \$5 at the participating business. **When the sticker is shown on a customer's helmet, they would be able to receive that businesses promotion, whether it be a BOGO or a free item.**

In May of 2019 Stearns County SHIP purchased 20 start-up kits to encourage businesses within the Saint Cloud MPA to participate and encourage citizens to use active transportation to get to their business. Six businesses within the MPA are actively participating in the Bicycle Benefits program as of June 2019.

The more businesses that opt to participate in the Bicycle Benefits program the greater the chance of the jurisdictions within the MPA being recognized by the LAB. This in turn has the potential for active transportation and economic development to continue to grow within the community for the future.



FIGURES 10.20 & 10.21 – THE BICYCLE BENEFITS LOGO AND THE LEAGUE OF AMERICAN BICYCLISTS-BICYCLE FRIENDLY BUSINESS LOGO

INFRASTRUCTURE

PARKLETS

A parklet is an innovative way to add gathering space to public streets⁵. Parklets are usually installed in the space adjacent to the curb (often a parking or loading zone) and are designed as an extension of the sidewalk⁶.

The Saint Cloud MPA currently does not have any parklets within the community, however they are rapidly growing and being recognized within Minnesota and across the nation. Parklets are funded and maintained by the city, neighboring businesses, residents, or community organizations. Parklets are foremost intended as assets for the community, their presence has also been shown to increase foot traffic, and in some cases revenues for adjacent businesses.

For example, The Green Line Café in Philadelphia saw a 20 percent increase in revenue and the Mojo Café in San Francisco experienced a 30 percent increase in bicycle and pedestrian traffic after parklet installation. Parklets prioritize the pedestrian experience and aim to improve the overall neighborhood vibe, often with the addition of bicycle racks, public art, and seating. The Saint Cloud MPA could potentially install parklets along some of the jurisdictional downtown corridors to promote a more active lifestyle for community members.

⁵ Minnesota Department of Transportation, "[Minnesota Walks Parklets-What Is a Parklet.](https://www.bit.ly/31TuIwa)" ([bit.ly/31TuIwa](https://www.bit.ly/31TuIwa)).

⁶ Ink, Social. "[Parklets.](https://www.bit.ly/2ZV2VNT)" National Association of City Transportation Officials, 24 July 2015, ([bit.ly/2ZV2VNT](https://www.bit.ly/2ZV2VNT)).



FIGURE 10.22 – AN EXAMPLE OF A PARKLET WITH PEDESTRIAN SEATING AND BICYCLE PARKING
 Photo courtesy of Cyclehoop

SHARED STREETS

Ben Hamilton-Ballie⁷ once said “The problem that many towns suffer is that, in trying to accommodate traffic, they have allowed streets to become so heavily dominated by vehicles, that those streets have lost their primary purpose, which is as places that attract people, that attract investment, that attract spending.”

While shared space may seem radical, the concept itself is not new. In medieval European cities various remnants of streets acting as places or public spaces that have the capacity for more than just traffic. A shared street, also referred to as a “woonerf,” is a street where cars, pedestrians, and cyclists travel together without modern infrastructure like traffic lights, curbs, and painted lines⁸. They are designed to be pedestrian friendly and encourage

⁷ *Ben Hamilton-Ballie* (<http://bit.ly/2XvLrdv0>) (July 4th 1955-March 3rd 2019) was a well-known architect and urban designer from the United Kingdom, one of his most noteworthy accomplishments was when he completed the first phase of the UK's National Cycle Network and started to develop transportation initiatives such as Safe Routes to School and Homes Zones.

⁸ Jaffe, Eric, et al. “6 Places Where Cars, Bikes, and Pedestrians All Share the Road As Equals.” *CityLab*, 24 Mar. 2015, (bit.ly/2Jci06N).

vehicles to slow down and be alert for others in the shared space⁹. Shared streets allow people to travel, but feel like a plaza. They have been proven to reduce crashes at intersections, primarily because they reduce travel speed of vehicles¹⁰. In the 2016 document, *Downtown Streetscape & Urban Design Plan Update* (<http://bit.ly/2XiD0TD>), written by the City of Saint Cloud, the idea of shared streets is discussed as a possible option for the downtown area. This simple concept could potentially be applied to all downtown areas or other populous spots within the Saint Cloud MPA.



FIGURE 10.23 – A SHARED STREET IN BRIGHTON, UK
 Photo courtesy of Project For Public Spaces (PPS)

THE SHARING ECONOMY

BICYCLE SHARE

The first bike sharing program began in the 1960s in Europe, but the concept did not take off worldwide until the mid-2000s. Bike shares began as an option for the first and/or last mile transit connections, and many are advocating for bike share to be considered as a mass transit option¹¹. The typical bike share program has several defining characteristics and features, such as station based bikes and payment systems, membership and pass fees, and per-hour usage fees. Programs are simply designed, with the intention that

⁹ Glaesman, Matt. "*Downtown Streetscape & Urban Design Plan Update Design 2016.*" St. Cloud, MN - Official Website | Official Website, Dec. 2016, (bit.ly/2XiD0TD).

¹⁰ Welle, Ben. "*CITIES SAFER BY DESIGN Guidance and Examples to Promote Traffic Safety through Urban and Street Design.*" WRICities.org, World Resources Institute, 2013, (bit.ly/2Jq63Lb).

¹¹ Pedestrian & Bicycle Information Center, "*Bike Share.*"2019. (bit.ly/2JaCDk0).

anyone can use and enjoy it. Bikes provided are typically for standard adults and colors often in brighter hues for visibility. Stations are high-tech bike racks with an adjacent payment kiosk. Each station has a number of docks ranging anywhere from 10 to 100 bikes or more depending on local traffic volumes. Some cities are moving toward dockless bike share, which is widely regarded as more user-friendly, but docked stations remain the default in the United States.

In the Saint Cloud MPA there is currently only one bike share program, [Johnnie Bennie "Bikes-Bike. Share. Enjoy the Ride"](http://bit.ly/2FBumoj) (<http://bit.ly/2FBumoj>). The program is used by the **students, staff, and faculty of the College of Saint Benedict's and Saint John's University** as a way to promote active transportation. This bike share program could be a future endeavor taken on by other colleges and universities in the area like Saint Cloud State University, and the Saint Cloud Technical and Community College. At the draft of this document the cities of Saint Joseph and Waite Park are working together to get a bike share program up and running along the Lake Wobegon Trail, in hope to see it expand throughout the Saint Cloud MPA.

[Nice Ride Minnesota](http://bit.ly/2Ja389g) (<http://bit.ly/2Ja389g>) is a non-profit that pioneered the modern bike sharing program in Minnesota in 2010. Nice Ride has over 3,000 bikes available and 400 docking stations to be able to rent out a bike in the Twin Cities. They use a mobile app and have a system map showing where bike availability is within the metropolitan area.



FIGURE 10.24 – CITIZENS USING THE NICE RIDE MINNESOTA BICYCLES
 Photo courtesy of Vimeo-STREETFILMS founded in 2006.

E-BIKES/ E-SCOOTERS

Hearing about electric bicycles, most people imagine a motorized scooter or electric motorcycle, but they actually look just like a regular bicycle. The E-Bike has several electrical components added onto it like a motor, battery, and a controller all integrated into one seamless design. The most common type of E-Bike is one with a hub motor. E-Bikes are still a fairly new innovative concept to the United States, however E-Bikes have been appearing on the market in cities across the nation, including within the MPA.



FIGURE 10.25 - A GEARED HUB MOTORIZED E-BIKE
Photo courtesy of Court Administrator for Electric Bike Review (EBR).

The E-Scooter, like the E-Bike, has been growing as a way to get around the community. Similar to bicycle share programs, E-Scooter users have to rent to use. E-scooters are a rent-by-the-minute electric scooters that can reach up to 15 miles per hour. Companies such as Bird, Lime, Spin, and Bolt rent for a \$1.15 per minute after¹². Unlike bike sharing programs most E-Scooters have dock less stations. This service style has caused some controversy over the perceived way users can leave scooters wherever without returning to

¹² Tillman, Maggie. ["E-Scooter Invasion: Everything You Need to Know about the Electric Scooters from Bird, Lime, and Spin - Pocket-Lint."](https://www.pocket-lint.com/news/e-scooter-invasion-everything-you-need-to-know-about-the-electric-scooters-from-bird-lime-and-spin/) E-Scooter Invasion: Everything You Need to Know about the Electric Scooters from Bird, Lime, and Spin, 21 May 2019, (bit.ly/2RD69mg).

a central location. Companies offer on-demand fleets of them that you can rent through an app-like how Uber and Lyft operate their fleets. There are limitations for use however, in order to rent an E-Scooter **you must have a valid driver's license and be over the age of 18.** The more innovative our country continues to get with active transportation the more likely the Saint Cloud MPA will be seeing these E-Scooters and E-Bikes around for generations to come.



FIGURE 10.26 SPIN AND LIME E-SCOOTERS IN DOWNTOWN SAINT PAUL, MN
Photo courtesy of Mark Reilly for the Minneapolis/St. Paul Business Journal

CHANGE IS A CHOICE

All ideas in this section are aspirational for the MPA. The ability to effectively evaluate the successful implementation for all of the active measures above is very important. Establishing performance measures will help track the effectiveness of active transportation investments within the MPA. Documenting the positive and negative outcomes of the programs/investments will help justify future investments in active transportation, and whether or not the community is moving in the direction of active transportation. Working to support active transportation is not about creating a perfect balance between transportation modes or goal areas, but instead should be a process to help the MPA find its right balance to make up a complete multimodal system for the future.

CHAPTER 11 : ACHIEVING THE GOALS

As previously noted, the goals for regional transportation are:

- I. Maintain and Enhance Transportation Safety;
- II. Increase System Accessibility, Mobility, and Connectivity;
- III. Efficiently Manage Operations and Cost-Effectively Preserve the System;
- IV. Support Metropolitan Vitality and Economic Development; and
- V. Promote Energy and Environmental Conservation.

It will take more than constructing or reconstructing roadways to achieve these goals. This chapter documents – in no particular order – the non-roadway-project actions, strategies, initiatives, and other efforts that will be integral to successful implementation of this plan. Many of these efforts will be undertaken by the APO, and thus will be programmed into the annual Unified Planning Work Program (UPWP). Many of the efforts will need to be implemented by entities other than the APO. For those efforts, APO staff will encourage and support the effort to the maximum extent possible.

1. CONDUCT A REGIONAL TRAVEL SURVEY

A regional household travel survey reveals where, why, and how residents travel. The survey will be used to improve the regional travel demand model, but will also offer travel-behavior insights that can be used more generally in transportation planning. The last regional travel survey was completed more than 20 years ago. In the next five years, the APO will endeavor to program planning funds to complete a new regional travel survey.

2. DEVELOP A PLAN FOR MORE AFFORDABLE TRANSPORTATION

During the public input phases of the development of this document, APO staff heard that mobility is becoming increasingly difficult to afford and public transit does not **always meet every person's needs**. Data was collected showing that real incomes have fallen for area households over the last 10 years, **lending support to the public's** statements. In the next five years, the APO will endeavor to program planning funds to investigate the needs and potential steps for making transportation more affordable and accessible for all residents, to improve mobility, and to support economic development by lowering the transportation barriers to work. It is possible that some data for this effort could be collected as part of the Regional Travel Survey (above). Included in this effort will be coordination with the Regional Transportation Coordinating Council.

3. MEASURE THE IMPACT OF RIDE-HAILING SERVICES

Preliminary indications are that ride-hailing services such as Uber and Lyft are impacting transportation measures such as vehicle-miles-traveled, trip generation rates, transit passenger rides, and others. To date, most attempts to study the impacts have focused

on large cities such as New York¹ and Chicago.² But the impacts and potential impacts of ride-hailing services on mid-sized urban areas like the Saint Cloud MPA are just as important, and the findings from large cities may not translate well to mid-sized urban areas. In the next five years, the APO will endeavor to program planning funds to study the impacts of ride-hailing services within the MPA to better inform its regional transportation planning efforts going forward. Some data for this effort could be gathered via the Regional Travel Survey described above.

4. UNDERSTAND THE TRANSPORTATION NEEDS OF IMMIGRANTS AND REFUGEES

According to the U.S. Census data, about 10 percent of the urban area population is foreign-born. The transportation needs and solutions for this segment of the population may differ significantly from those of other residents. Achieving a better understanding of the transportation challenges and opportunities facing these residents will help the APO make better overall transportation investment decisions. Over the next five years, APO staff will make a concerted effort to reach out to and communicate with members of the immigrant and refugee populations, and those agencies, organizations, and businesses that work closely with them. The goal is to identify any unique challenges or transportation barriers which they face (if any), and identify solutions to help overcome them. Some data for this effort may be gathered as part of the Regional Travel Survey identified above.

5. MONITOR AND UNDERSTAND THE TRANSPORTATION NEEDS OF OLDER RESIDENTS

Like all regions in the U.S., the population of the MPA is skewing older as baby-boomers age. Just as with immigrants and refugees, the transportation needs, challenges, and opportunities for older residents may be somewhat different than for the rest of the population. Over the next five years, APO staff will attempt to develop clear understandings of the transportation needs and challenges for older residents. This may include consultant tasks or studies, and will likely include a review of literature developed at other MPOs and State DOTs regarding aging populations, and validation of those findings here in the Saint Cloud MPA.

6. UNDERSTAND THE TRANSPORTATION NEEDS OF STUDENTS

It is well established in research that students do not, in general, behave like working adults in terms of trip generation, mode choices, destinations, etc. The goal of this effort is to better understand the unique transportation needs and challenges for students in the Saint Cloud metropolitan area. Some data for this effort may be gathered as part of the Regional Travel Survey identified above.

¹ <https://www.sciencedaily.com/releases/2019/07/190708131141.htm>

² <https://www.npr.org/2018/08/01/634506179/ride-hailing-services-add-to-traffic-congestion-study-says>

7. STUDY CRITICAL CRASH RATE INTERSECTIONS

Critical Crash Rates are statistical calculations. The total crash rate is defined as the number of crashes per million entering vehicles. The critical rate is calculated by weighting the average crash rate for similar intersections or segments across Minnesota by the existing traffic volume. The implication is that an intersection which is experiencing very high crash rates relative to other similar intersections may have a design or maintenance issue that is contributing to those crash rates. For this plan, we measured crash rates for intersections involving two Federal-aid roadways. To be more complete, a more detailed examination could be done that also includes a follow-up investigation as to what may be causing the high crash rates and recommended mitigation actions. The APO will endeavor to program planning funds in the next five years to complete this investigation.

8. EXPLORE WAYS TO BETTER UNDERSTAND ACTIVE TRANSPORTATION BEHAVIOR

From regular measurements of pavement quality to counting and analyzing traffic on roadway segments, the APO currently expends significant resources gathering and tracking transportation data for roadways. But that cannot be said for active transportation methods like bicycling, walking, and other non-motorized means. While about 88 percent of work-trips occur in a personal automobile, about 4.5 percent occur by non-motorized means. Given the regional goals of energy conservation, maintaining viable non-motorized transportation options, enhancing connectivity between modes of transportation, promoting efficient movement of people, and improving public health, APO staff feels they lack a clear understanding of active transportation activities, challenges, and opportunities. This effort, which will include both actions on the part of APO staff as well as the possibility of specific consultant actions, will endeavor to identify cost-effective methods for routinely measuring, tracking, and analyzing active transportation within the MPA. The effort will also specifically include an attempt to develop a pavement condition monitoring method for off-road multi-use paths. It will also include an analysis of crash data to identify high-crash locations and develop crash mitigation measures for those locations. The potential demand for a bike-share program may also be examined.

9. IDENTIFY AND PRIORITIZE GAPS IN THE ACTIVE TRANSPORTATION NETWORK

Since the 1990's when Federal funding for active transportation infrastructure was first made available, multi-use paths have been developed in a somewhat piecemeal fashion with cities taking advantage of opportunities as they presented themselves. Now, those pieces of infrastructure are on the verge of being tied together into a comprehensive network. In the next five years, the APO will make an effort to identify and prioritize gaps in the active transportation network and develop plans to fill in those gaps.

10. BETTER UNDERSTAND THE INTERACTIONS BETWEEN THE NATURAL ENVIRONMENT AND TRANSPORTATION IN THE REGION

Vehicles emit air pollution. Storm water runs off roadways, carrying road salts, oil, gasoline and other pollutants into local waterways. Roadway construction can impact habitats critical to endangered and threatened species. Conversely, transportation systems are susceptible to damage and destruction from the natural environment in the form of storms, floods, UV radiation (which ages bitumen), high temperatures (which soften pavement leading to rutting and cracking), and other impacts. Conserving the natural environment entails understanding how incremental changes to the transportation system can impact that environment, and maintaining a reliable, cost-effective transportation system entails understanding how the natural environment is impacting the transportation system. This effort will endeavor to better understand and describe how multiple project-level transportation decisions can have a cumulative impact on the natural environment, which in turn can impact the sustainability and cost-effectiveness of the transportation system. Rather than gathering generalized information, the effort will focus specifically on the characteristics of this specific geographic region. One goal within this effort is to understand the impact of lighting and the relative importance of maintaining dark skies. Again, it is anticipated that this understanding can help lead to better decision-making regarding transportation investments.

11. ENHANCE AND FULLY-IMPLEMENT FREIGHT PERFORMANCE MEASURES

Some of the freight performance measures adopted by the APO require additional data gathering or analysis in order to fully implement the performance measure. For example, data used to calculate the Truck Travel Time Reliability Index is available for interstate highways (Tier 1), but not for the Minnesota Principal Freight Network (Tier 2) or the Regional Freight Network (Tier 3). This effort will entail investigating options for collecting the data necessary to apply the APO's adopted freight performance measures to all three tiers of the freight network.

12. BETTER DEFINE AND UNDERSTAND THE RELATIONSHIP BETWEEN TRANSPORTATION AND ECONOMIC DEVELOPMENT

There is undeniably a relationship between the economic competitiveness of a region and the efficiency of its transportation networks. It is also undeniably difficult to parse and measure the impacts of transportation on regional economic competitiveness separately from all of the other factors that also impact economic competitiveness. Over the next five years, APO staff will attempt to gain a better understanding of the relationship between transportation and economic development in both general terms, and within the APO region. They will also seek to identify, collect, and analyze salient economic development data at the metropolitan level. This effort may include elements and tasks to be completed by consultants. It will also include building and maintaining

relationships with major freight shippers and attractors of freight shipments, as well as the continued development, refinement, and validation of a Return-on-Investment performance measure for transportation projects.

13. DEFINE “TRANSPORTATION SECURITY” LOCALLY

Transportation Security as a goal was elevated in importance following the attacks on 9/11. But, as described in Chapter 4 of this document, the meaning of that phrase for a mid-sized urban area like the APO has never been clear. APO staff will work with members of the Technical Advisory Committee to develop a working definition of “Transportation Security” for the MPA, determine what role (if any) the APO should play in achieving secure transportation, and develop one or more performance measures to track the attainment of the goal.

14. EVALUATE POTENTIAL FOR APO PROGRAMS TO SUPPORT ATTAINMENT OF SPECIFIC GOALS

Reducing or eliminating transportation-related fatalities is an important goal in the MPA. But how can and how should the APO support the attainment of that goal? One example might be that the APO Board could dedicate a minimum amount of funding to address safety issues within the MPA. Another might be that safety is weighted more heavily when the evaluating projects that are seeking Federal funds. A number of strategies identified in Chapter 5 note that the APO will “encourage and support” the attainment of a specific goal, but what exactly does that mean? What specific steps should the APO take to support the attainment of the goal? Answering that question will require a regional discussion among the jurisdictions and APO staff to develop consensus regarding one or more specific steps that the APO will take in support of the goals.

15. IMPROVE CONNECTIONS BETWEEN THE APO REGION AND THE TWIN CITIES METRO

There is an existing and growing connection between the Twin Cities metropolitan area and the Saint Cloud MPA. The workforce connection is detailed in Chapter 2, but there are also trips that flow back and forth between the two regions for leisure, recreation, cultural and educational opportunities, as well as commercial ties. Increasingly, the fate of the two regions is intertwined. Therefore, the APO will endeavor, over the next five years, to identify ways to improve efficient multimodal transportation connections between the two regions. Component of this effort will be include the Northstar rail corridor as well as I-94, U.S. 10, and multi-use path and trail connections.

16. EXPLORE OPPORTUNITIES TO IMPROVE THE WORST PERFORMING REGIONAL ROADWAY CORRIDORS

With the advent of performance-based planning and programming, it has become easier to objectively identify the best and worst performing roadways. Over the next five years, the APO will focus its planning resources on addressing the worst performing regional roadways in an attempt to improve overall regional transportation efficiency and safety.

This effort will undoubtedly include an emphasis on identification and implementation of low-cost/high-impact strategies to improve traffic operations.

17. CONTINUE MONITORING AND ADJUSTING TO THE DEVELOPMENT OF CAVS

The development of Connected and Autonomous Vehicles (CAVs) will be a game-changer for transportation planners. From typical trip-generation rates, to average trip lengths, to roadway design and land-use choices, CAVs will change many of the long-standing assumptions and the planning environment in which planners have worked for decades. It will also be important to adjust to the needs of CAVs in order to keep the region economically competitive. Over the next five years, APO staff will continue monitoring the development and deployment of CAVs and adjusting their planning practices accordingly.

18. ESTIMATE THE TRANSPORTATION IMPACTS OF LONG-DISTANCE COMMUTERS & UNDERSTANDING THE ECONOMICS OF THEIR CHOICE

There are more jobs in the Saint Cloud metropolitan area than there are workers to fill those jobs. Many local businesses actively recruit workers from nearby communities, which puts more cars onto area roads, but the workers pay property taxes in other communities. **Why don't they choose to live here? Is it better to provide transportation capacity for those workers, or would it be more cost effective to entice them to move into the Saint Cloud metropolitan area? What are the challenges and opportunities?**

19. ESTIMATE THE NET ENVIRONMENTAL IMPACTS OF TRANSPORTATION OPTIONS

More roadway capacity may improve traffic flow and reduce air pollution, but more impermeable surfaces may negatively impact water quality. Increasing land-use densities and mixing compatible uses may shorten trip lengths and fuel use, but may also increase congestion and travel times which increases fuel use. This study would seek to better understand such trade-offs and seek insight on the options or combination of options that minimizes the overall net environmental impact of transportation assets.

20. COORDINATE DEVELOPMENT OF THE URBAN AREA RING-ROAD

The jurisdictions within the urban area have agreed on the development of an arterial roadway encircling the urban core. However, the technical and monetary challenges of developing a complete ring-road will be considerable. APO staff will continue working with the member jurisdictions to develop planning documents for each segment of the ring-road, and will support (to the extent possible) the identification of funding for the construction of each segment.

	Support Economic Vitality	Increase Safety	Increase Security	Increase Accessibility and Mobility	Protect the environment; promote energy conservation; improve quality of life	Enhance the integration and connectivity of the system	Promote efficient system management and operation	Emphasize system preservation
Regional Travel Survey	●			●		●	●	
Plan for More Affordable Transportation	●			●		●		
Measure Impacts of Ride-Hailing Services	●			●		●	●	
Understand Transportation Needs of Immigrants and Refugees	●			●		●		
Understand Transportation Needs of Older Residents	●			●		●		
Understand Transportation Needs of Students	●			●		●		
Study Critical Crash Rate Intersections		●						●
Better Understand Active Transportation Behavior		●		●	●	●		
Identify and Prioritize Gaps in the Active Transportation Network	●	●		●	●	●	●	
Understand Interactions Between Natural Environment and Transportation					●			
Fully-Implement Freight Performance Measures	●	●		●			●	
Understand Relationship Between Transportation and Economic Development	●			●	●	●	●	
Define "Transportation Security" Locally			●					
Evaluate Potential for APO Programs to Support Attainment of Goals	●	●	●	●	●	●	●	●
Improve Connections Between MPA and Twin Cities	●			●	●	●	●	
Improve Worst Performing Regional Corridors	●	●		●	●	●	●	●
Monitor and Adjust to CAV Development	●	●	●	●	●	●	●	●
Understand Economics of Long-Distance Commuters	●						●	●
Estimate Net Environmental Impacts of Transportation Options					●			
Coordinate Development of MPA Ring-Road	●	●		●	●	●	●	

FIGURE 11.1 – ALIGNMENT OF FEDERAL PLANNING FACTORS WITH NON-ROADWAY-PROJECT ACTIONS AND INITIATIVES

APPENDIX A – PUBLIC PARTICIPATION

The success of a public participation program is largely determined by how thoroughly and thoughtfully it is planned. Successful meetings and events are determined by the degree to which an agency effectively commits to and prepares for the entire process, especially creating and providing the information needed by stakeholders and building effective relationships with key stakeholders.

Public participation allows all stakeholders – including other interested agencies, governments, organizations, and interested citizens – to play a role in the planning and decision-making process.

APO staff conducted two major public input solicitations during the development of MAPPING 2045. The first public outreach occurred in spring 2017, prior to the development of the draft document. The second effort occurred in late summer and early fall 2019 after the draft document was created. During both solicitation periods APO staff relied upon the goals, objectives, and strategies for public input developed in the 2012 Public Participation Plan for the spring 2017 outreach and the [2018 Stakeholder Engagement Plan \(SEP\)](https://bit.ly/2TGYZ3H) (<https://bit.ly/2TGYZ3H>) for the later outreach efforts.

It should also be noted that while public comments were specifically requested during this time period, community members were able to provide public comment throughout the **development of this document through social media, the APO's website**, and various APO led public meetings.

2017 PUBLIC ENGAGEMENT EFFORTS

APO staff began early public input for the Metropolitan Transportation Plan in February 2017. This active campaign ran through the end of April 2017.

During this time frame, APO staff utilized surveys (both paper and online), flyers and in-person engagement events to reach out to members of the community.

SURVEYS

APO staff created a survey via SurveyMonkey in February 2017. Along with the online survey, a simplified paper version was also created and used during the in-person engagement events.



Metropolitan Transportation Plan Public Comment Form

Please help us write the best plan that we can by answering the following questions:

If I was in charge of transportation, the first changes I would make would be:

Please rank any or all of the issues below in priority order, with 1 being the most important priority:

Redesigning transportation networks to better serve the elderly	Improving vehicle-to-vehicle & vehicle-to-infrastructure communications; connected vehicles
Reducing traffic congestion and travel times	Taking better care of the infrastructure we have
Encouraging or incentivizing work from home	Improving public transit services and options
Improving safety/reducing crashes & injuries	Improving existing infrastructure so it can better withstand the impacts of climate change
Improving freight movements/reducing transportation costs for goods	Connecting the Saint Cloud region to the Twin Cities by passenger rail
Improving non-motorized transportation options	Adding lanes to I-94 between the Saint Cloud region and the Twin Cities
Reducing green-house gas emissions/addressing climate change	Increasing funding for transportation/finding additional funding sources for transportation
Planning for driverless cars	Encouraging private investment in transportation infrastructure and charge tolls to pay off the investors
Improving real-time travel information	Encourage/support land use development that is denser, more walkable, better served by public transit, and allows for mixed-uses that make sense



Saint Cloud Area Planning Organization

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E-mail: admin@stcloudapo.org

Survey Continues on Back>>>

FIGURE A.1 – FIRST PAGE OF THE 2017 APO PUBLIC COMMENT SURVEY.

In the space below, please describe any aspect of transportation you think works well or should not be messed with too much:

Is there any other important information you want us to know:

Part of the APO's mission is to reach out to all members of our community, especially those that are traditionally underserved. The following questions are **OPTIONAL**, but answering them will help us know if we are reaching all of the community:

Gender: Female Male Non-binary/Other

Age: <16 16 – 25 26 – 62 63+

How Many People Live in Your Household:

1 2 3 4 5 6 7+

Household Income:

\$0 – \$10,000 \$10,001 – \$25,000

\$25,001 – \$50,000

\$50,001 – \$75,000 \$75,001+

Ethnicity: White Hispanic or Latino

Black or African Native American

Asian or Pacific Islander Other

Do You Have a Physical Disability: Yes No

Where Were You Born:

In the United States Outside the United States

What Is the Primary Language Spoken In Your Home:

English Something Other Than English

Any comments, input, or feedback provided by **April 30, 2017** will be included in the next stage of the development of the Metropolitan Transportation Plan.

We thank you for your time and thoughtfulness. If you wish to receive email notification of future public input opportunities for this project, please provide your email address below:

FIGURE A.2 – SECOND PAGE OF THE 2017 APO PUBLIC COMMENT SURVEY.

APO staff kept the online survey active from Feb. 14, 2017 through April 28, 2017. During this time frame 101 people participated. Eleven participants to this online survey requested to be included on an email listserv to stay informed about the development of this plan.

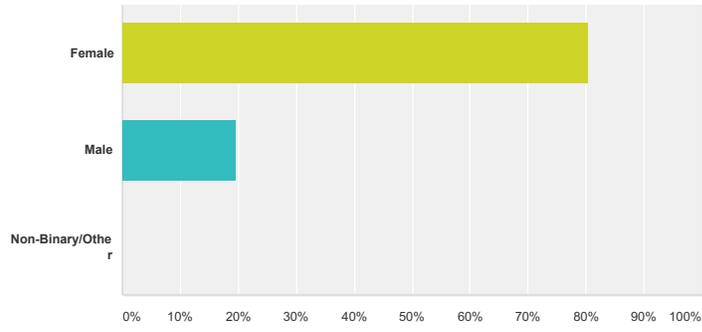
As part of this survey, a series of demographic questions were asked. During this round of public input, a majority of respondents taking the online survey were white, English-speaking, U.S. born females between the ages of 26 and 62, living with one other person in their household, earning over \$75,000 a year, and not having any sort of physical disability.

The following pages are the full demographic results from the 2017 SurveyMonkey survey.

St. Cloud Area Planning Organization - 2045 Long Range Transportation Plan

Q5 Gender:

Answered: 71 Skipped: 30

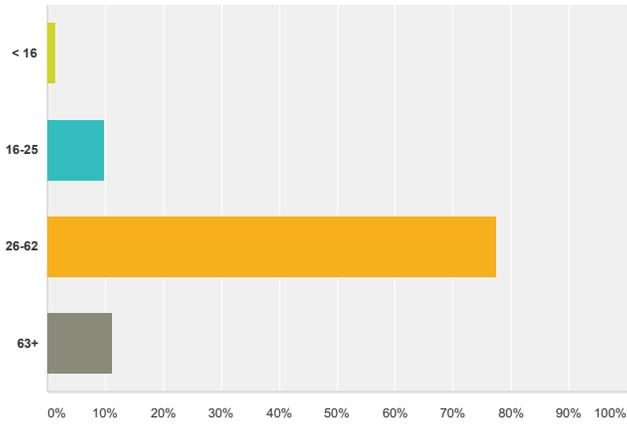


Answer Choices	Responses	
Female	80.28%	57
Male	19.72%	14
Non-Binary/Other	0.00%	0
Total		71

St. Cloud Area Planning Organization - 2045 Long Range Transportation Plan

Q6 Age:

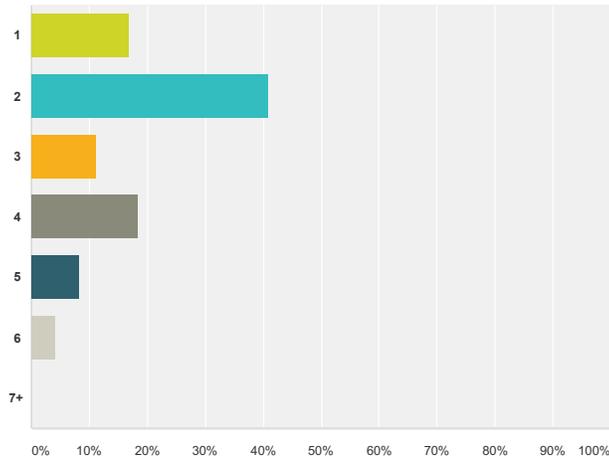
Answered: 71 Skipped: 30



Answer Choices	Responses
< 16	1.41% 1
16-25	9.86% 7
26-62	77.46% 55
63+	11.27% 8
Total	71

Q7 How many people live in your household:

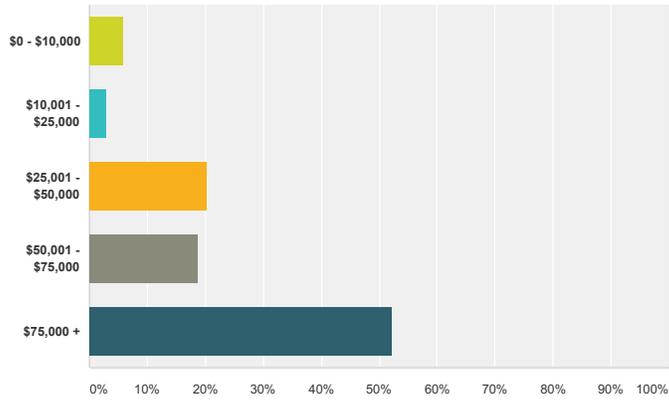
Answered: 71 Skipped: 30



Answer Choices	Responses	
1	16.90%	12
2	40.85%	29
3	11.27%	8
4	18.31%	13
5	8.45%	6
6	4.23%	3
7+	0.00%	0
Total		71

Q8 Household Income:

Answered: 69 Skipped: 32

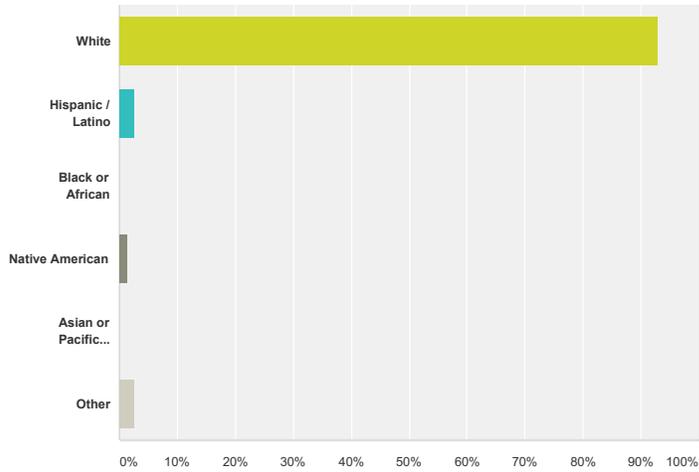


Answer Choices	Responses	
\$0 - \$10,000	5.80%	4
\$10,001 - \$25,000	2.90%	2
\$25,001 - \$50,000	20.29%	14
\$50,001 - \$75,000	18.84%	13
\$75,000 +	52.17%	36
Total		69

St. Cloud Area Planning Organization - 2045 Long Range Transportation Plan

Q9 Ethnicity:

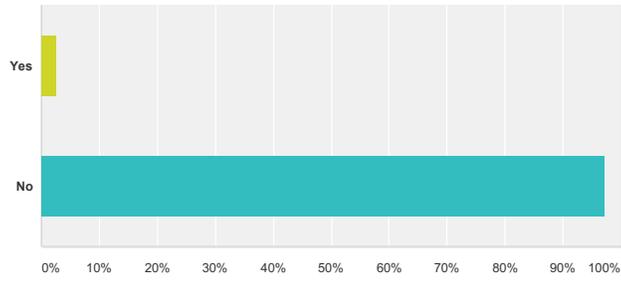
Answered: 71 Skipped: 30



Answer Choices	Responses	
White	92.96%	66
Hispanic / Latino	2.82%	2
Black or African	0.00%	0
Native American	1.41%	1
Asian or Pacific Islander	0.00%	0
Other	2.82%	2
Total Respondents: 71		

Q10 Do you have a physical disability?

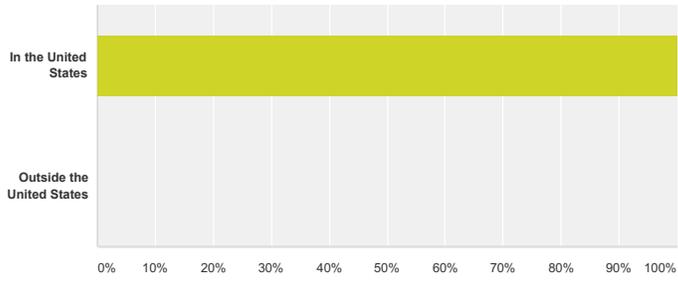
Answered: 71 Skipped: 30



Answer Choices	Responses	
Yes	2.82%	2
No	97.18%	69
Total		71

Q11 Where were you born:

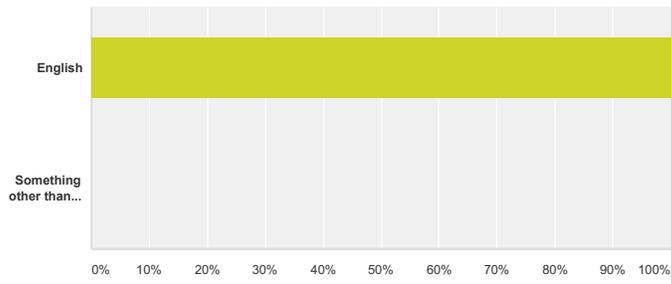
Answered: 71 Skipped: 30



Answer Choices	Responses	
In the United States	100.00%	71
Outside the United States	0.00%	0
Total		71

Q12 What is the primary language spoken in your home?

Answered: 71 Skipped: 30



Answer Choices	Responses	
English	100.00%	71
Something other than English	0.00%	0
Total		71

FLYERS AND ADVERTISEMENTS

APO staff posted advertisements of its public input events and online input opportunities to the APO website. In addition, resources like the newspaper of record – St. Cloud Times – were also used to publish information about ways the community could become involved.

Flyers, like the one developed in Figure A.3 were also placed around the community to inform people about the planning effort.



FIGURE A.3 – A COPY OF THE 2017 FLYER DEVELOPED FOR THE INITIAL ROUND OF PUBLIC INPUT

IN-PERSON EVENTS

APO staff also conducted four in-person public engagement events around the metropolitan planning area (MPA) between mid-March and mid-April 2017. Two events were hosted in the City of Saint Cloud, one event was in the City of Sartell, and another event was in the City of Saint Joseph.

By far, the most successful of these in-person, pop-up style events was at the downtown Saint Cloud Metro Bus transit station. During this event – hosted from noon to 7 p.m. on Wednesday, April 19 – between 75 and 100 people talked with APO staff about their transportation concerns.

The full list of public input events can be found in Figure A.4.

Date	Location	Address	Time	Participants
03/16/2017	Saint Cloud Great River Regional Library	1300 W St. Germain Street, Saint Cloud	10:30 a.m. – 7:30 p.m.	3
03/29/2017	Saint Joseph Government Center	10 Baker Street, Saint Joseph	3-7 p.m.	1
04/01/2017	Sartell Indoor Farmers Market	125 Pinecone Road N, Sartell	10 a.m. – 1 p.m.	9
04/17/2019	Downtown Saint Cloud Metro Bus Transit Station	510 First Street S, Saint Cloud	Noon – 7 p.m.	75-100

FIGURE A.4 – IN-PERSON PUBLIC ENGAGEMENT EVENTS DURING SPRING 2017

Below are the early public engagement comments, collected either by event, survey, or social media. All comments received during this initial round of public input were recorded and can be found in Chapter 2 of this document.

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Metro Bus	Online survey	"Continuing the shadowing of Metro Bus NEW riders!!"	3/8/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	Online survey	The downtown hub for Metro Bus	3/8/2017	No action taken.
1	Metro Bus	Online survey	Ability to put bikes in front-bike racks on buses	3/8/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	Online survey	MTC	3/8/2017	No action taken.
1	Metro Bus	Online survey	Love the summertime trolley	3/13/2017	APO staff appreciates the comment.
1	Metro Bus	Online survey	Northstar Link works well	5/10/2017	APO staff appreciates the comment.
1	Metro Bus	Online survey	The schedule during the week	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
3	Metro Bus	In-person event	Metro Bus does a great job	5/10/2017	APO staff appreciates the comment and agrees.
1	Metro Bus	In-person event	Metro Bus employee helped commenter read bus schedule which helped	5/10/2017	APO staff appreciates the comment.
2	Metro Bus	In-person event	Likes Metro Bus drivers, feel they should be paid more for long hours/duties they do	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Fares are a good prices."	5/10/2017	APO staff appreciates the comment.
1	Metro Bus	In-person event	"Good: buses quiet/organized."	5/10/2017	APO staff appreciates the comment.
1	Metro Bus	In-person event	"Bus frequency in Waite Park is good (every 10-15 minutes)."	5/10/2017	APO staff appreciates the comment.
38	Northstar Rail	Facebook	"Finish the rail train" (Connect Saint Cloud to Twin Cities via Northstar Commuter Rail)	3/6/2017	Strategy a, Goal 2, Objective 2 states, "The APO will preserve and enhance long-distance commuter connections to the Twin Cities, including, but not limited to, the extension of the Northstar Commuter Rail to the Saint Cloud metro."

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Northstar Rail	Online survey	"Commuter rail -- need to increase availability of ride times during the weekends."	3/8/2017	Strategy a, Goal 2, Objective 2 states, "The APO will preserve and enhance long-distance commuter connections to the Twin Cities, including, but not limited to, the extension of the Northstar Commuter Rail to the Saint Cloud metro."
2	Northstar Rail	Online survey	Add more train departures and arrivals, not just for commuting, but to get connected with the metro.	3/10/2017	Strategy a, Goal 2, Objective 2 states, "The APO will preserve and enhance long-distance commuter connections to the Twin Cities, including, but not limited to, the extension of the Northstar Commuter Rail to the Saint Cloud metro."
1	Northstar Rail	Facebook	"Build the train station at the site of Champion. Plenty of room."	4/10/2017	APO staff appreciates the comment.
10	Northstar Rail	In-person event	"Bring Northstar to Saint Cloud."	5/10/2017	Strategy a, Goal 2, Objective 2 states, "The APO will preserve and enhance long-distance commuter connections to the Twin Cities, including, but not limited to, the extension of the Northstar Commuter Rail to the Saint Cloud metro."
1	Northstar Rail	In-person event	When is the Northstar coming to Saint Cloud?	5/10/2017	Strategy a, Goal 2, Objective 2 states, "The APO will preserve and enhance long-distance commuter connections to the Twin Cities, including, but not limited to, the extension of the Northstar Commuter Rail to the Saint Cloud metro."
1	Northstar Rail	In-person event	"The Northstar should run trains later in the evening."	5/10/2017	Strategy a, Goal 2, Objective 2 states, "The APO will preserve and enhance long-distance commuter connections to the Twin Cities, including, but not limited to, the extension of the Northstar Commuter Rail to the Saint Cloud metro."
1	Northstar Rail	In-person event	"When they do the Northstar demonstration project, make sure that veterans get counted." Commenter was worried that as a veteran he need only show his VA card to ride and so doesn't get counted as a rider because he doesn't buy a ticket.	5/10/2017	Funding for the demonstration project was not approved by the legislature.
1	Northstar Rail	In-person event	"Extending Northstar train to Saint Cloud could be a gateway for crime."	5/10/2017	APO staff appreciates the comment. No specific action was taken.
1	Northstar Rail	Online survey	Northstar from Big Lake to Minneapolis works well	5/10/2017	APO staff appreciates the comment.
1	Public Health	Online survey	Make sure to consider the health impacts and equity impacts of decisions that serve the entire community and individual's health	3/6/2017	Goal 5 of the MTP states, "Support transportation improvements that promote energy conservation and improve public health and quality of life, while sustaining and improving the resiliency and reliability of the transportation system."
1	Road Condition	Facebook	Fill more pot holes around the Saint Cloud and Waite Park areas	3/6/2017	Objective 1, Goal 3 was created, stating "Prioritize the maintenance and preservation of the existing transportation network."

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Road Condition	Online survey	"Redo 30th Avenue."	3/7/2017	30th Avenue North in Saint Cloud is a local roadway and is therefore ineligible for Federal funding. However, APO staff passed this comment along to Saint Cloud City staff for their information.
2	Safety	Facebook	Monitor bad drivers more	3/6/2017	Goal 1, Objective 4 states, "Support, to the extent practical, efforts by outside agencies and stakeholders to reduce bad driving behavior such as driving under the influence and distracted driving."
1	Safety	Online survey	"Remember victims are fleeing abuse and sometimes the only option is getting on a bus and going to a safe place."	3/6/2017	APO staff appreciates the comment and agrees.
1	Safety	Online survey	"To teach the immigrant population how to drive more proficiently."	3/7/2017	Chapter 11 includes a commitment to study the specific transportation needs and challenges of immigrants and refugees.
2	Safety	Online survey	"Somehow, 'fix' distracted drivers ..."	3/10/2017	Goal 1, Objective 4 states, "Support, to the extent practical, efforts by outside agencies and stakeholders to reduce bad driving behavior such as driving under the influence and distracted driving."
1	Metro Bus	In-person event	Commenter felt that those riders with disabilities should get discounted rides on Metro Bus during rush hours -- currently they get discounted rides only during non-rush hour times.	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Metro Bus needs to go out to Foley at least every 90 minutes."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Easier access to vehicles by increasing the number of bus stop locations."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Get more bus[es]. Hire more people with communication is a must."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Expand to other cities."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Bus should run all the time. 24/7/365. It's public transp[ortation]."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Metro Bus	In-person event	"If a person is 10 yards away running for the bus the driver are not waiting. This is public not self service."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Route 10 needs to connect to Crossroads Mall or Downtown Saint Cloud."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Can't get to SCSU-Miller Center in the evenings. Otherwise doing well. #5 is great! :)"	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Facilities for students. More vehicles should be added to limit wait time."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Better synch [sic] #12 for better transfer ability."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Could use a bigger bus station with hot food stand or patio."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Restore bus from Mall to CentraCare-Urgent Care."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Improve bus service in Sartell."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Connect busses [sic] to Albany, Foley, etc. ..."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Letting new user know that there is bus trainers to help them on info on the routes."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
13	Metro Bus	Online survey	Metro Bus	3/8/2017	No action taken.

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Metro Bus	Online survey	Better east side routes	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	Online survey	"The bus system works well, just need to finish the long term plan on routes so it all ties together and makes a great system."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	Online survey	"For people like me that do not drive, the public transportation system provided by the bus company is all that we have with a reasonable rate of payment for the service."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
3	Metro Bus	In-person event	"Metro Bus to Saint Joseph industrial park/college."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
2	Metro Bus	In-person event	"More frequent routes on weekends. Otherwise all good."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"There should be a bus route that goes down Third Street in Waite Park in front of Famous Dave's and the library."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	When the commenter tries to go to Mass on the weekends, the buses either do not start early enough (Sunday mornings) or do not run late enough (Saturday evenings) for her to take the bus both ways.	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
2	Metro Bus	In-person event	"On weekdays, buses should start a little earlier and run a little later to better accommodate work schedules."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Buses should start earlier on Saturdays."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
2	Metro Bus	In-person event	"Buses should run later on Saturdays."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Buses should run a little longer on Sundays."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	Commenter requested more/better service for grocery shopping. Currently limited to carrying no more than three bags.	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"The corner of E St. Germain and 12th Avenue needs a bus shelter."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"E St. Germain (commenter did not know the cross street) needs a bus shelter."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Route 12 does not run frequently enough (every hour)."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"The Transit Center bathrooms need to be cleaned more frequently; they are smelly and gross."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Route 7 stops running at 5:45 p.m., but needs to run longer."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
2	Metro Bus	In-person event	"Routes need to run more often and later at night."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Roads around Talahi School, especially student housing areas, are in bad shape (i.e., poor surface quality) and when kids park on both sides of the street, it becomes difficult to navigate a bus down the road."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Metro Bus	In-person event	"The Sartell bus route(s) should run longer than 7:30 p.m."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	"Over the past few months, tie-down straps for wheelchair[s] have come off." Commenter suggested Metro Bus staff may need refresher training on proper tie-down techniques for wheelchairs."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
3	Metro Bus	In-person event	"There's no reason for Route 6 and 7 to be 45 minutes long; the routes don't pulse with any buses at the Transit Center resulting in extended periods of waiting."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	In-person event	Buses are running too tight of a schedule. If a bus is late to the transit center, connections get missed and it keeps happening to the commenter. He stated "the buses are not dependable."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
3	General	Online survey	"Not much" / "Nothing"	5/10/2017	No action taken.
7	General	In-person event	Everything is good	5/10/2017	APO staff appreciates the comment. No action taken.
1	General	In-person event	"Service is great as of now."	5/10/2017	APO staff appreciates the comment. No action taken.
1	General	In-person event	"Excited for new changes."	5/10/2017	APO staff is excited too. No specific action taken.
11	Metro Bus	Facebook	"More busing" / More buses at peak hours/ More drivers / More frequent service than once an hour	3/6/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	Online survey	Increase opportunities for mass transit	3/6/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Metro Bus	Online survey	"There should be exceptions made during the winter months and if a rider had groceries."	3/6/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
16	Metro Bus	Online survey	Longer running schedules to accommodate later and earlier times/weekend run times and shift workers	3/6/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	Online survey	More connections to cut down on the amount of time it takes to go to destinations	3/6/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
4	Metro Bus	Online survey	Buses and taxis more reasonably priced / "Make it free"	3/6/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
2	Metro Bus	Online survey	Extend routes to other regional cities, even if only a few times per day (e.g. Albany, St. Joseph, Collegeville)	3/6/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	Online survey	"Provide transportation for everyone anywhere."	3/6/2017	APO staff appreciates the comment. No specific action was taken within the MTP. However, the APO stands ready to support and assist a Regional Transportation Coordinating Council if one is established in the area.
9	Metro Bus	Online survey	"Routes" / Expand bus routes (such as in Sartell and Sauk Rapids)	3/6/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	Online survey	Install bus stop outside the Salvation Army Emergency Shelter	3/6/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	Online survey	"Free for college students"	3/6/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so. In Chapter 11, APO staff does commit to gaining a better understanding of the transportation needs and challenges facing students.
2	Metro Bus	Online survey	"More Shelters"	3/6/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Metro Bus	Online survey	More stops in high traffic areas	3/7/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	Online survey	"Improve public transportation. There is no reason it should take over an hour to go from Sauk Rapids to South Saint Cloud."	3/13/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	Online survey	"Have outdoor security always present at the downtown bus station. People that work downtown and have to walk through there are often hassled or made to feel uncomfortable by the patrons of the bus station. You shouldn't have to feel nervous to walk past there."	3/13/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
3	Metro Bus	Online survey	New website. "The new site on the internet you can't click the time frame doesn't work and if you want to see a schedule you have to put in your destination and arrival time then y[ou] get the schedule they should have a spot where u can look at the schedule."	5/10/2017	APO staff passed this comment along to Metro Bus staff.
1	Metro Bus	Online survey	"Have a bus to go Summerland and Wapicada Golf Course."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
2	Metro Bus	Online survey	"Have weekends run same hours as week days."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	Online survey	More heated bus shelters	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	Metro Bus	Online survey	Make a route that extend out by Opportunity Drive to the industrial park.	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Metro Bus	Online survey	"Start bus service earlier each day and run longer each night, especially weekend days and evenings. If I want to go to church across town, I can't because the bus service is limited. I also tried to get Dial-a-Ride but I did not qualify. Bus service is so limited that I think people don't use it."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
3	Environment	Online survey	Promote programs that help our environment and reduce climate change	3/6/2017	Goal 5 of the plan is to "support transportation improvements that promote energy conservation and improve public health and quality of life, while sustaining and improving the resiliency and reliability of the transportation system." Objective 1 under that Goal states, "Protect the environment through the promotion of energy conservation." In addition, in Chapter 11, APO staff commits to seeking better understanding of the environmental/transportation trade-offs and seeking insight on the options or combination of options that minimizes the overall net environmental impact of transportation assets.
1	Environment	Online survey	"Commit to roadway lighting that is dark-skies friendly; significantly reduce light pollution."	3/10/2017	Strategy c, Goal 5, Objective 1 states, "The APO shall encourage and support the use of low-wattage street lights (e.g., LED lights) that are Dark Skies compliant."
1	Funding	Online survey	Any federal funding for township roads?	3/6/2017	APO staff believes that Federal BUILD grants can be used on township roads.
3	Funding	Online survey	"Create a plan for affordable vehicle ownership. Public transportation can't meet everyone's needs." / Used vehicle purchase assistance, low income vehicle repair programs	3/6/2017	Strategy a, Goal 4, Objective 1 states, "The APO will complete one or more planning documents to evaluate the feasibility of various options for providing or supporting low-cost transportation options for financially stressed households." In Chapter 11, APO staff commits to developing a plan for more affordable transportation.
1	Funding	Online survey	"Money towards roads and bridges -- not choo choo trains."	3/7/2017	APO staff agrees that transportation in general is underfunded and that priorities need to be set. However, all of the APOs public input indicates that completing the Northstar rail line to Minneapolis remains a high priority for area residents.
2	Funding	Facebook	Concern about funding cuts to buses/light rail/road-bridge-maintenance	4/10/2017	APO staff agrees that, in general, transportation is underfunded.
1	General	Online survey	Focus on collaboration within the community to share transportation resources	3/6/2017	APO staff agrees that sharing resources can create efficiencies. The purpose of the APO is to facilitate interjurisdictional cooperation to solve transportation issues.
1	General	Online survey	"More access for children and families."	3/6/2017	The specific concern raised by the commenter is unclear. No action taken.

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	General	Online survey	"I think transportation is fine right now."	3/7/2017	APO staff appreciates the comment.
1	General	Online survey	Takes too long to get a taxi	3/7/2017	No action taken.
1	General	Online survey	"Don't let elected officials get away with mile wide support that's only an inch deep."	3/8/2017	No action taken, but APO staff does encourage all residents to communicate their priorities to their elected officials.
1	General	Online survey	Examine a future with fewer cars	3/8/2017	Several goals and strategies (see Chapter 5) support further development of public transit and active transportation facilities. APO staff did not have time to develop alternative scenarios for this MTP, but intends to do so for the next MTP.
1	General	Online survey	"Everything needs some improvement."	3/8/2017	Goal 3, Objective 1 of the MTP states, "Prioritize the maintenance and preservation of the existing transportation network."
2	General	Online survey	"We need to have multiple options for people. This is not a one size fits all issue."	3/8/2017	The MTP is a multi-modal plan that includes data, analysis, goals, objectives, and projects for all modes of surface transportation.
1	General	Online survey	"Do NOT implement toll roads! Everywhere I have used them, they are incredibly inefficient in regards to traffic, create more pollution with cars idling AND the roads are still in a state of disrepair. Florida near Orlando last June is a prime example. And, do not add more lanes to 94, they are obsolete as soon as they are completed. A train/rail/subway system would be awesome to see here. Toulouse, France is about the same size as greater Saint Cloud and they have a subway system!! Mass transit options need to be provided which will bring young professionals and entrepreneurs to the area ... growing new businesses that Saint Cloud lacks."	3/10/2017	APO staff appreciates the comments. No specific action was taken, however, given comments from the White House, a subsection of Chapter 4 does discuss public-private partnerships.
1	General	In-person event	"Connect Saint Cloud to Twin Cities."	5/10/2017	Strategy a, Goal 2, Objective 2 was created and states, "The APO will preserve and enhance long-distance commuter connections to the Twin Cities, including, but not limited to, the extension of the Northstar Commuter Rail to the Saint Cloud metro."

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	General	In-person event	"More people using public trans[portation]."	5/10/2017	The MTP is a multi-modal plan that includes data, analysis, goals, objectives, and projects for all modes of surface transportation.
1	General	In-person event	"Should be more concerned to make things easier for students too."	5/10/2017	Chapter 11 includes a commitment to study the specific needs and challenges of students.
1	General	Online survey	The solar lights on stop-signs are great -- keep them coming	3/8/2017	APO staff appreciates the comment.
1	General	Online survey	Complete Streets are great	3/8/2017	APO staff appreciates the comment and agrees.
1	General	Online survey	"I think people make it work. I think that more options need to be available."	3/8/2017	The MTP is a multi-modal plan that includes data, analysis, goals, objectives, and projects for all modes of surface transportation.
1	General	Online survey	We have good transportation companies in the area	3/8/2017	APO appreciates the comment.
10	General	Online survey	Not sure	3/8/2017	No action taken.
1	General	Online survey	"I don't feel I am qualified to answer."	3/8/2017	No action taken.
1	General	Online survey	"Car."	3/8/2017	No action taken.
1	General	Online survey	"Studies in transportation economics found that 1. "working from home" does not decrease use of roads. Such workers went to coffee shops to work rather than to their employers. Still on the road. 2. Promoting passenger rails generally result in empty trains. Commuters love the idea hoping everyone else takes the passenger train freeing more space on the highway for them. 3. Toll roads sound good, but lower income folks than crowd roads without tolls. 4. More walkable land use development sounds good to young people without mobility issues - yet. Elderly who struggle with mobility don't like the idea of walking very much, or stepping up very high to get on to a bus."	3/10/2017	APO staff appreciates all of the comments. 1. No specific action was taken; 2. There continues to be significant public and political support for connecting the Northstar rail line directly to the Saint Cloud region, and that is reflected in the plan; 3. No specific action taken, but a section of Chapter 4 does discuss public-private partnerships for transportation projects; 4. No specific action taken.

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	General	Online survey	"There just isn't a 'wow' factor to report regarding Saint Cloud transportation. The diverging diamond on Highway 15 seems to work well though that is simply an intersection and not a transportation vision."	3/10/2017	APO staff agrees that the diverging diamond interchange at MN 15 and CSAH 120 does work well.
1	General	Online survey	"Increase the opportunities for non-motorized transportation users including: safety enhancements, infrastructure upgrades, and encouraging education of the benefits of non-motorized transportation (cut emissions, create more money for local businesses, etc.) Transportation is directly related to land use. Suburbs like Maple Grove would never have grown like they did if it was not for the automobile and the Interstate highway system. Encourage smart growth. Like Portland they have an Urban Growth boundary. I understand the limitations to this especially in regards to housing but there is always a better and smarter way to do things. Work with the local communities who are experiencing growth and encourage them to utilize smart growth within their subdivision or zoning ordinances. Keep ahead of the curve for innovative technology and new emerging concepts like solar panel streets, driverless car technology, and other advancements. If we stay ahead of the curve and encourage these new ideas we will all prosper as a region."	3/10/2017	Strategy e, Goal 2, Objective 2 was created, stating, "The APO will encourage and support, to the extent possible, appropriate densities and mixing of appropriate land uses to help reduce commute distances, encourage non-motorized options, and maximize the efficient delivery of public services to residents."
2	General	Online survey	Timely snow plowing	3/10/2017	Goal 3, Objective 1 of the MTP states, "Prioritize the maintenance and preservation of the existing transportation network."
1	General	Online survey	College campus[es] are laid out well for community biking/walking	5/10/2017	APO staff appreciates the comment

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Amtrak	In-person event	Move the Amtrak station to either the Northstar Park-and-Ride lot or the old paper mill	5/10/2017	No action taken.
1	Aviation	Online survey	"Bring back direct flights to Chicago."	5/10/2017	No action taken.
1	Beaver Island Trail	Facebook	Repave the Beaver Island Trail south of SCSU campus to the new section of trail starting at 33rd St. S	3/6/2017	Strategy d, Goal 2, Objective 1 was created, stating that "APO staff shall develop a process for monitoring and evaluating the condition of bike paths and multi-use paths and shall report their findings to the member jurisdictions."
4	Bike/Ped	Online survey	More walkable cities	3/6/2017	Objective 2, Goal 2 was created, stating "Identify and maintain viable non-motorized transportation options."
7	Bike/Ped	Online survey	More space and opportunities for bike & ped, and create a culture that encourages safe walking & biking	3/6/2017	Objective 3, Goal 2 was created, stating "Identify and maintain viable non-motorized transportation options." In addition, the APO has committed to completing a regional Active Transportation Plan to identify challenges and barriers to bike and ped
1	Bike/Ped	Online survey	"Add sidewalks to at least one side of streets."	3/6/2017	Objective 3, Goal 2 was created, stating "Identify and maintain viable non-motorized transportation options."
7	Bike/Ped	Online survey	"Better bike lanes" / More bike lanes	3/6/2017	Objective 3, Goal 2 was created, stating "Identify and maintain viable non-motorized transportation options."
4	Bike/Ped	Online survey	Safer bike routes for commuters	3/6/2017	Objective 3, Goal 1 was created, stating "Reduce the regional rates of bicycle and pedestrian fatalities and serious injuries." Additionally, the first strategy under this objective states, "APO staff will collect and evaluate bicycle and pedestrian crash data to help determine the most common causes of serious injuries and fatalities and to identify action steps for the mitigation of crashes."
3	Bike/Ped	Online survey	More bike trails	3/7/2017	Objective 3, Goal 2 was created, stating "Identify and maintain viable non-motorized transportation options."
2	Bike/Ped	Online survey	"Bike lanes along County Road 1/Great River Road north of Sartell and across 27th to the new high school."	3/8/2017	Great River Road between 12th Street North and 27th Street North does have 8' wide paved shoulders which can be used by bicyclists. 27th Street North does not have paved shoulders and at this time the APO is not aware of any plans to add paved shoulders or a bike lane to that corridor.
3	Bike/Ped	Online survey	"Start putting the pedestrian and non-motorized user first in reconstruction projects and new road projects."	3/10/2017	Objective 3, Goal 2 was created, stating "Identify and maintain viable non-motorized transportation options."
1	Bike/Ped	Online survey	Bike share program	3/13/2017	APO staff has committed to doing a bike share feasibility study
1	Bike/Ped	Online survey	"Better crosswalks on 5th Avenue S."	3/13/2017	Objective 1, Goal 3 was created, stating "Prioritize the maintenance and preservation of the existing transportation network."

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Bike/Ped	Online survey	"Bicycles are green!"	3/13/2017	APO staff agrees that bicycles are an Earth-friendly mode of transportation.
1	Bike/Ped	Online survey	"I am over 60 and bike to work about half the year. It can be done. If you bike you can eat more ice cream."	5/10/2017	APO staff agrees that bicycling to work is a legitimate option for many people, and also agrees that being able to eat more ice cream should be everyone's goal.
1	Bike/Ped	Online survey	"Connecting the bike paths that already exist should be a priority."	5/10/2017	APO staff has committed to completing a regional Active Transportation Plan to identify challenges and barriers for active transportation, including making connections between existing bike paths.
2	Bike/Ped	Online survey	Bike routes	3/8/2017	No action taken.
1	Bike/Ped	Online survey	"Bike lanes are great in Sartell"	3/8/2017	APO staff agrees and appreciates the comment.
1	Bike/Ped	Online survey	"Some state politician was talking about regulating bicycles. That is a dumb idea."	3/8/2017	APO staff does not know specifically to what statement the commenter is referring, but agrees that any regulation of bicycles should be reasonable and should be done with the intent to result in the greatest good for the most people.
3	Demographics	Online survey	Increasing elder-population; is the region ready?	3/6/2017	APO staff believes that the commenter is asking a good question. In Chapter 11 of the plan, the APO commits to developing a better understanding of the transportation needs and challenges of older residents.
1	Demographics	Online survey	Have more conversations with the immigrant/refugee communities to determine their transportation needs	3/6/2017	In Chapter 11, APO staff commits to developing a better understanding of the transportation needs and challenges of immigrants and refugees in the community.
1	Demographics	Online survey	"We are aging; what can be done for aging drivers who may live in the country? Facilitate the purchase of driverless cars?"	3/10/2017	APO staff believes that the commenter is asking good questions. In Chapter 11, APO staff commits to continue monitoring the development connected and automated vehicles.
1	Economic Development	In-person event	"Create opportunities (jobs) for everyone. Don't waste money on expansion and making everything 'look pretty.' Take care of the homeless." Commenter made additional comments about the Northstar train and seemed to be suggesting that extending the train service to Saint Cloud would help create additional opportunities by helping people get jobs outside of the Saint Cloud area.	5/10/2017	Chapter 4 of the plan includes a discussion of the relationship between economic development and transportation. In Chapter 11, APO staff commits to continuing to improve its understanding of that important relationship. Also, strategy 2(2)(a) states, "The APO will preserve and enhance long-distance commuter connections to the Twin Cities, including, but not limited to, the extension of the Northstar Commuter Rail to the Saint Cloud metro."

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	System	In-person event	"Fix I-94 rough pavement."	5/10/2017	Objective 1, Goal 3 was created, stating "Prioritize the maintenance and preservation of the existing transportation network." Additionally, the APO monitors pavement quality in order to help prioritize the expenditure of maintenance resources.
1	System	Online survey	"No big digs but well planned incremental adjustments."	3/13/2017	APO staff appreciates the comment.
1	System	Online survey	New Highway 15 interchange	3/13/2017	The location to which the commenter is referring is not clear. However, there are no new MN 15 interchanges planned in this MTP.
1	System	Online survey	"I appreciate the area's two-lane roads for busier areas, especially in Saint Cloud. I also like the roundabouts WHEN they are practical and work well. Some roundabouts seem like they are useless."	5/10/2017	APO staff appreciates the comment. No specific action taken.
1	System	Online survey	"Left and right turn lanes are really helpful and well placed."	5/10/2017	APO staff appreciates the comment. No specific action taken.
1	System	In-person event	"I like the two lanes between Saint Cloud and Rogers. Not very congested."	5/10/2017	APO staff appreciates the comment. No specific action taken.
1	System	In-person event	"Excellent use of left hand turn lanes."	5/10/2017	APO staff appreciates the comment. No specific action taken.
1	System	In-person event	"Generally good levels of traffic."	5/10/2017	APO staff appreciates the comment. No specific action taken.
1	System	In-person event	Roundabouts	5/10/2017	No action taken.
1	Traffic Flow	Online survey	Commute time within Saint Cloud has doubled in the last two decades	3/6/2017	APO staff appreciates the comment. We cannot confirm or refute the exact statement made by the commenter, but we do understand the commenter is frustrated by their travel time to work. Our analysis indicates that fully implementing the MTP will help make travel times less bad, but will not keep pace with the anticipated growth in traffic, which is largely a function of available funding for transportation and the costs of accommodating traffic growth.
7	Traffic Flow	Online survey	Synchronize all traffic lights so that traffic flow is maximized (Especially on Divison)	3/6/2017	The MTP does include a brief discussion of traffic management and signal synchronization in Chapter 2.

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
3	Traffic Flow	Online survey	Increase opportunities for safe passage for less traffic congestion	3/6/2017	APO staff believes that fully implementing the MTP will help improve safety. However, the outlook for decreasing traffic congestion is not good. Available resources for improving transportation infrastructure are not expected to keep pace with traffic growth.
1	Traffic Flow	Online survey	Roundabouts have not necessarily improved traffic flow at high times, especially along Pine Cone Road (Sartell)	3/6/2017	Roundabout are first and foremost a safety feature, and they have been shown to improve traffic flow when compared to a signalized intersection.
1	Traffic Flow	Online survey	"Reduce access on TH 15 and improve mobility."	3/6/2017	Strategy f, Goal 2, Objective 2 states, "In cooperation with local partners, the APO will study the costs and benefits of various potential operational improvements to arterials roadways. MN 15 will be the first arterial roadway reviewed."
4	Traffic Flow	Online survey	"It's taking way to[o] long to get from Hwy 23 south through Waite Park/Saint Cloud, to Hwy 23 north. May want to start looking at bypasses around Waite Park/Saint Cloud" / Consider a ring highway around Saint Cloud	3/7/2017	The MTP includes a traffic model scenario for a ring-road. However, the cost of some sections of the proposed ring-road did not meet fiscal constraint requirements and so those sections are included in a non-constrained project list in the Appendices.
2	Traffic Flow	Online survey	More roundabouts	3/8/2017	Strategy a, Goal 1, Objective 1 states, "The APO shall encourage and support the installation of roundabouts, where appropriate, to help reduce right-angle crashes."
1	Traffic Flow	Online survey	Bridge on 33rd Avenue S in Saint Cloud over the river, especially with Tech HS, congestion will worsen	3/10/2017	The MTP includes a traffic model scenario for a ring-road, which includes a Mississippi River bridge at 33rd Avenue South in Saint Cloud. However, the cost of the bridge did not meet fiscal constraint requirements and so it is included in a non-constrained project list in the Appendices.
1	Traffic Flow	Online survey	Sartell-St. Cloud connections could be improved	3/10/2017	APO staff appreciates the comment and the sentiment.
1	Traffic Flow	Online survey	"Widen the roundabouts. If you pass through the Princeton roundabout, it is smooth as can be. Any roundabouts in St. Cloud make you dizzy to go through"	3/13/2017	No specific action taken.
1	Traffic Flow	Online survey	"I am only in St. Cloud due to drive time to MSP and Brainerd being convenient. Traffic is one reason I might decide to just move to the cities!"	3/13/2017	No specific action taken.
2	Traffic Flow	Online survey	No good way to turn left on Division	5/10/2017	No specific action taken.

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Traffic Flow	Online survey	"Make Hwy 15 access [the] way it is at Co Rd 120. All bridges over the highway."	5/10/2017	Strategy f, Goal 2, Objective 2 states, "In cooperation with local partners, the APO will study the costs and benefits of various potential operational improvements to arterials roadways. MN 15 will be the first arterial roadway reviewed."
1	Traffic Flow	Online survey	"Fewer stoplights, especially stop lights across a highway. The infrastructure is designed for a St. Cloud population of 20 years ago."	5/10/2017	No specific action taken.
1	Traffic Flow	Online survey	"Nothing in St. Cloud [works]. It is always congested, the signals do not work in conjunction with the next light you come to. Hwy 15 is the only corridor that works. I can get on it at 18th St NW in Sauk Rapids and if I time it right can get all the way down to Holiday Inn at 2nd St S before I hit a red light."	5/10/2017	No specific action taken.
1	Traffic Flow	In-person event	"Traffic congestion getting worse in area."	5/10/2017	APO staff appreciates the comment. Our analysis indicates that fully implementing the MTP will help make travel times less bad, but will not keep pace with the anticipated growth in traffic, which is largely a function of available funding for transportation and the costs of accommodating traffic growth.
1	Traffic Flow	In-person event	"I hate roundabouts. Don't add any more."	5/10/2017	No specific action taken.
13	Traffic Flow	Online survey	Roundabouts are great - keep them coming! ("...but don't go nuts!)	3/8/2017	Strategy a, Goal 1, Objective 1 states, "The APO shall encourage and support the installation of roundabouts, where appropriate, to help reduce right-angle crashes."
1	Traffic Flow	Online survey	"Timing of traffic lights off hours"	3/8/2017	The MTP does include a brief discussion of traffic management and signal synchronization in Chapter 2.
4	Traffic Flow	Online survey	Diverging diamond on Highway 15 works well	3/10/2017	APO staff appreciates the comment and agrees.
2	Safety	Online survey	"Lots of people walk and bike in this town but do not want to wait all the time for the lights and so they cross traffic when there seems to be enough time, especially on Divison. If there was somehow a way for them to get across Division like a walkway ramp, it would at least be a safer option."	5/10/2017	No specific action taken.

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Safety	Online survey	"Saint Cloud also has issues with proper pedestrian laws. Not only do cars not stop, but pedestrians are jaywalking, which creates a cycle where drivers refuse to stop. (Especially around the college)."	5/10/2017	No specific action taken, although in Chapter 11 APO staff does commit to better understand the transportation needs and challenges of students.
1	Safety	Online survey	More reflectors on traffic signs are great	3/8/2017	APO staff appreciates the comment.
1	Safety	Online survey	Emergency opticon system for first-responders works well	3/8/2017	APO staff appreciates the comment and agrees.
1	Safety	Online survey	Lighted crosswalks, rapid flash beacons and other safety upgrades are important	3/10/2017	No specific action taken. But, the APO staff does commit to analyze crash data to better understand the cause of crashes at high-crash locations. If the measures suggested by the commenter are appropriate for mitigating those crashes, we will recommend them.
2	System	Online survey	Redesign transportation networks to better serve families, especially those with young children	3/6/2017	No specific action taken. APO staff is not entirely clear what the issue is or how it should be addressed.
1	System	Online survey	Better access to places like fresh markets, community resources (such as Salvation Army-Highway 10 issue)	3/6/2017	No specific action taken in the MTP although APO staff does participate and will continue to participate in the local Access to Food committee.
2	System	Online survey	"Build roads above city with exits into the city like Duluth."	3/7/2017	No specific action taken.
1	System	Online survey	"Open 16th Avenue South to County Road 75."	3/7/2017	No specific action taken.
1	System	Online survey	"Better freeways and highways."	3/7/2017	APO staff agrees with the goal and believes implementing the MTP will result in better freeways and highways.
1	System	Online survey	Widen freeway from Twin Cities	3/10/2017	Strategy a, Goal 2, Objective 2 states, "The APO will preserve and enhance long-distance commuter connections to the Twin Cities, including, but not limited to, the extension of the Northstar Commuter Rail to the Saint Cloud metro." In the time since this comment was received, the State has committed to widening I-94 between Monticello and Clearwater.
1	System	Online survey	"Extend a light rail system to reach much further into greater Minnesota, beginning with the Saint Cloud area."	3/10/2017	Strategy a, Goal 2, Objective 2 states, "The APO will preserve and enhance long-distance commuter connections to the Twin Cities, including, but not limited to, the extension of the Northstar Commuter Rail to the Saint Cloud metro."

Early Stage Public Engagement Comments for MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	System	Online survey	Make all of Highway 15 a grade separated highway from 94 to Highway 10. Complete an expressway around town.	3/13/2017	Strategy f, Goal 2, Objective 2 states, "In cooperation with local partners, the APO will study the costs and benefits of various potential operational improvements to arterials roadways. MN 15 will be the first arterial roadway reviewed."
1	System	Online survey	"Replace Highway 10 / Highway 23 bridge."	3/13/2017	Project MND-3 is the complete reconstruction of the US 10 and TH 23 interchange, including the TH 23 bridge structures over US 10.
1	System	Facebook	High speed railway connecting Saint Cloud, Mankato and the Twin Cities. Forget the BNSF and Amtrak (create new separate rail line).	4/10/2017	No specific action taken.
1	System	Online survey	"Making it easier and quicker to drive across Saint Cloud. Similar cities have much stronger inter-city routes (i.e. Mankato)."	5/10/2017	APO staff believes that implementing the MTP will help travel times.
1	System	Online survey	"Better access."	5/10/2017	No specific action taken.
1	System	Online survey	"A more multi-modal system. More bicycling and walking, smaller city buses."	5/10/2017	The MTP is a multi-modal plan that includes data, analysis, goals, objectives, and projects for all modes of surface transportation.
1	System	Online survey	"Adjust almost every light in the area to flash yellow arrows for left turns instead of having the red turn arrow."	5/10/2017	No specific action taken, but APO staff did pass the comment along to traffic operations staff.
1	System	Online survey	"Roundabouts do not work for all the elderly using medical facilities. Should never have put them all around CentraCare."	5/10/2017	No action taken.
1	System	In-person event	"Future I-94 interchange at Jade Road in Saint Joseph."	5/10/2017	An interstate interchange at Jade Road was considered, but it could not be included in the MTP because the project could not meet fiscal constraint requirements.
1	System	In-person event	"More tram type routes."	5/10/2017	No specific action taken. Planning for Metro Bus operations is the purview of the Metropolitan Transit Commission, but APO staff is prepared to support their planning efforts when called upon to do so.
1	System	In-person event	"Better public transit to Twin Cities and Brainerd."	5/10/2017	Strategy a, Goal 2, Objective 2 was created and states, "The APO will preserve and enhance long-distance commuter connections to the Twin Cities, including, but not limited to, the extension of the Northstar Commuter Rail to the Saint Cloud metro." No specific action was taken regarding better connections to Brainerd. However, it is the understanding of APO staff that if the Northstar

Early Stage Public Engagement Comments for MTP					
Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
					rail line can be connected to the Saint Cloud region, then the Northstar Link buses would be redeveloped to bring commuters from other cities into Saint Cloud to catch the train. One possible route would be to Brainerd.
1	System	In-person event	"Trains to Brainerd and Fargo."	5/10/2017	No action taken.
1	System	In-person event	"Fix potholes."	5/10/2017	Objective 1, Goal 3 was created, stating "Prioritize the maintenance and preservation of the existing transportation network." Additionally, the APO monitors pavement quality in order to help prioritize the expenditure of maintenance resources.

FIGURE A.5 – 2017 PUBLIC ENGAGEMENT COMMENTS

2019 PUBLIC ENGAGEMENT EFFORTS

APO staff began public input for the draft Metropolitan Transportation Plan in August 2019. This active campaign ran through the late October 2019.

Of note, there were two separate public outreach events during this time frame. The first public outreach ran from Aug. 12 through Sept. 20, 2019. During this period of time while the draft document was out for public review, significant changes to the proposed projects were made. As a result, APO staff had to immediately begin another round of public input running from Sept. 23 through Oct. 23, 2019 in order to all community members the opportunity to react and provide feedback to these proposed changes.

In this 2019 public engagement outreach, APO staff utilized surveys (both paper and online), flyers, social media, and in-person engagement events to reach out to members of the community.

SURVEYS

FIRST ROUND ONLINE SURVEY

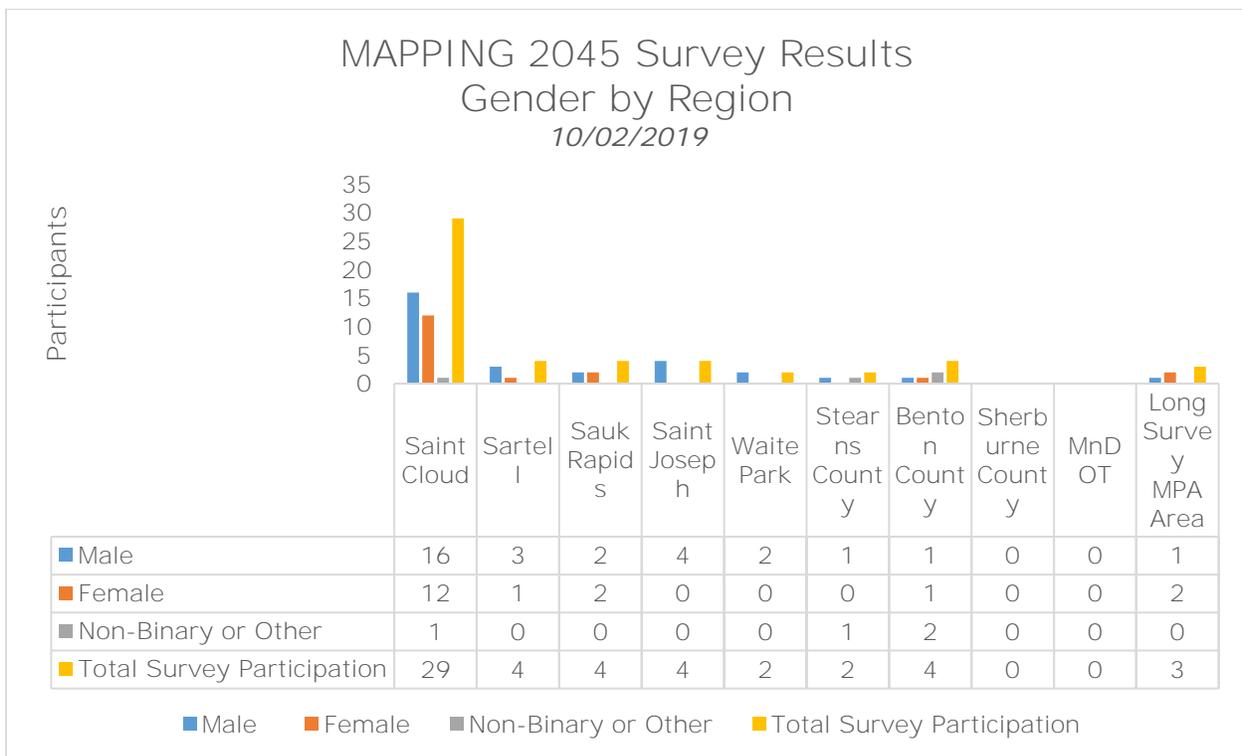
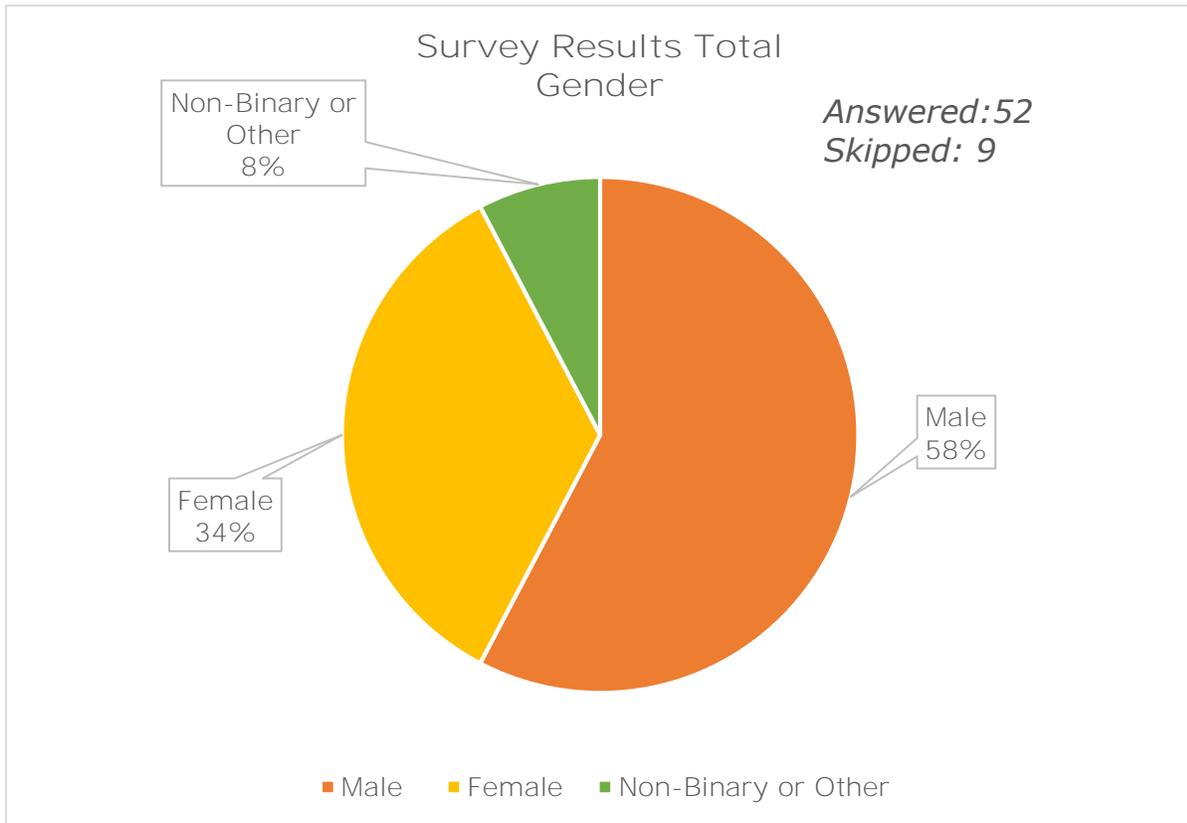
Due to the nature of this particular public engagement process – providing feedback and input on specific proposed projects – APO staff felt it was appropriate to develop one large online survey covering every proposed project in the MPA and smaller online surveys for each of the jurisdictions within the MPA. These smaller surveys contained information only on projects sponsored by the respective jurisdictions. For example, a smaller survey for the City of Saint Cloud would only have projects that were proposed for and financially affordable for the City of Saint Cloud. Even if other jurisdictions such as Stearns County had projects within the city, the survey was designed to allow residents the opportunity to comment on projects that could have the potentially of financially impacting them.

Participants could take as many surveys as they wanted.

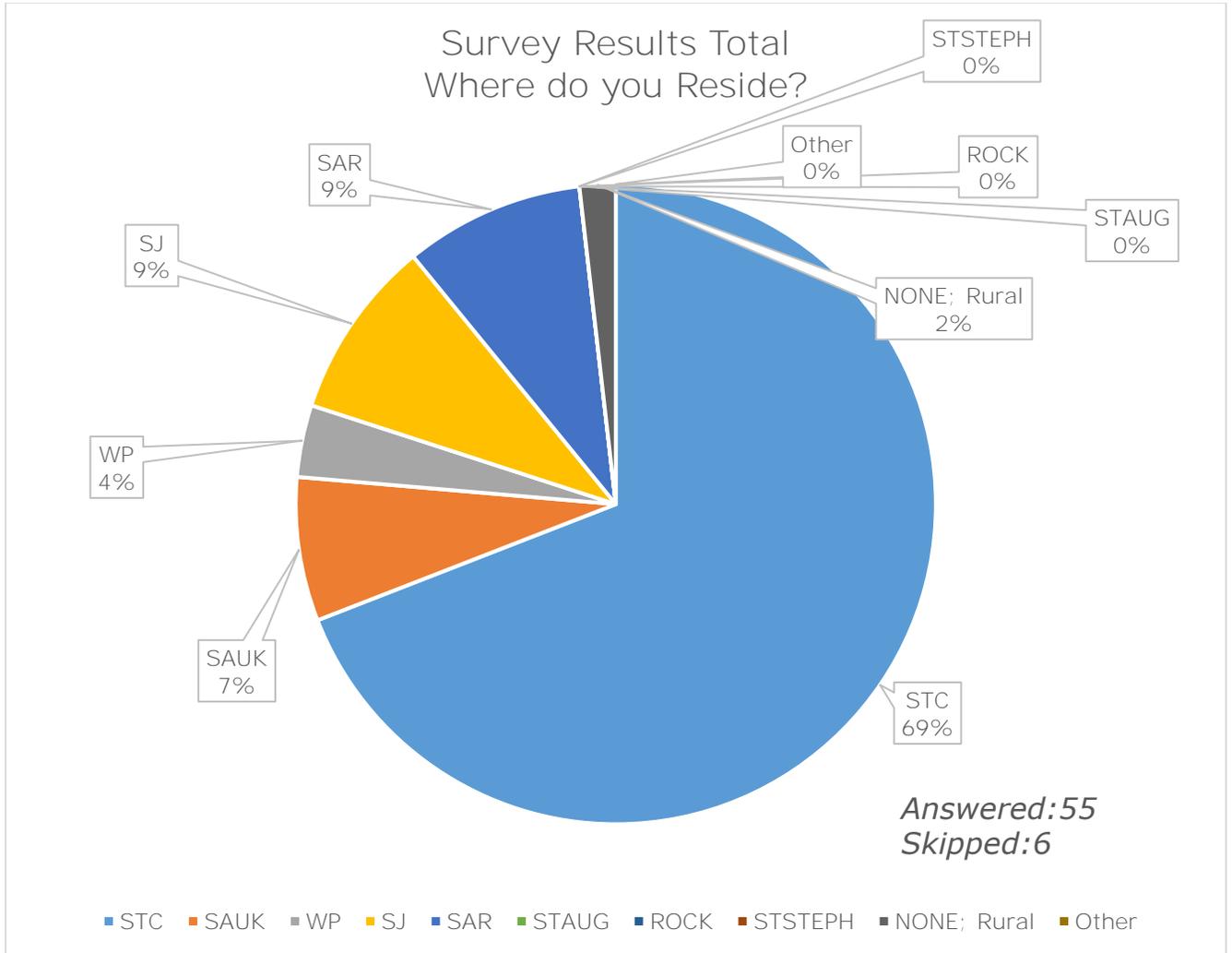
From Aug. 12 through Sept. 23, 2019, 61 people participated in the online survey. Of those, 31 participants provided their email and requested to be kept informed about APO planning activities.

Because of the number of surveys created for this round of public input, APO staff combined all demographic information across all surveys. The pages that follow are the demographic results from 2019 SurveyMonkey surveys for the first round of public input.

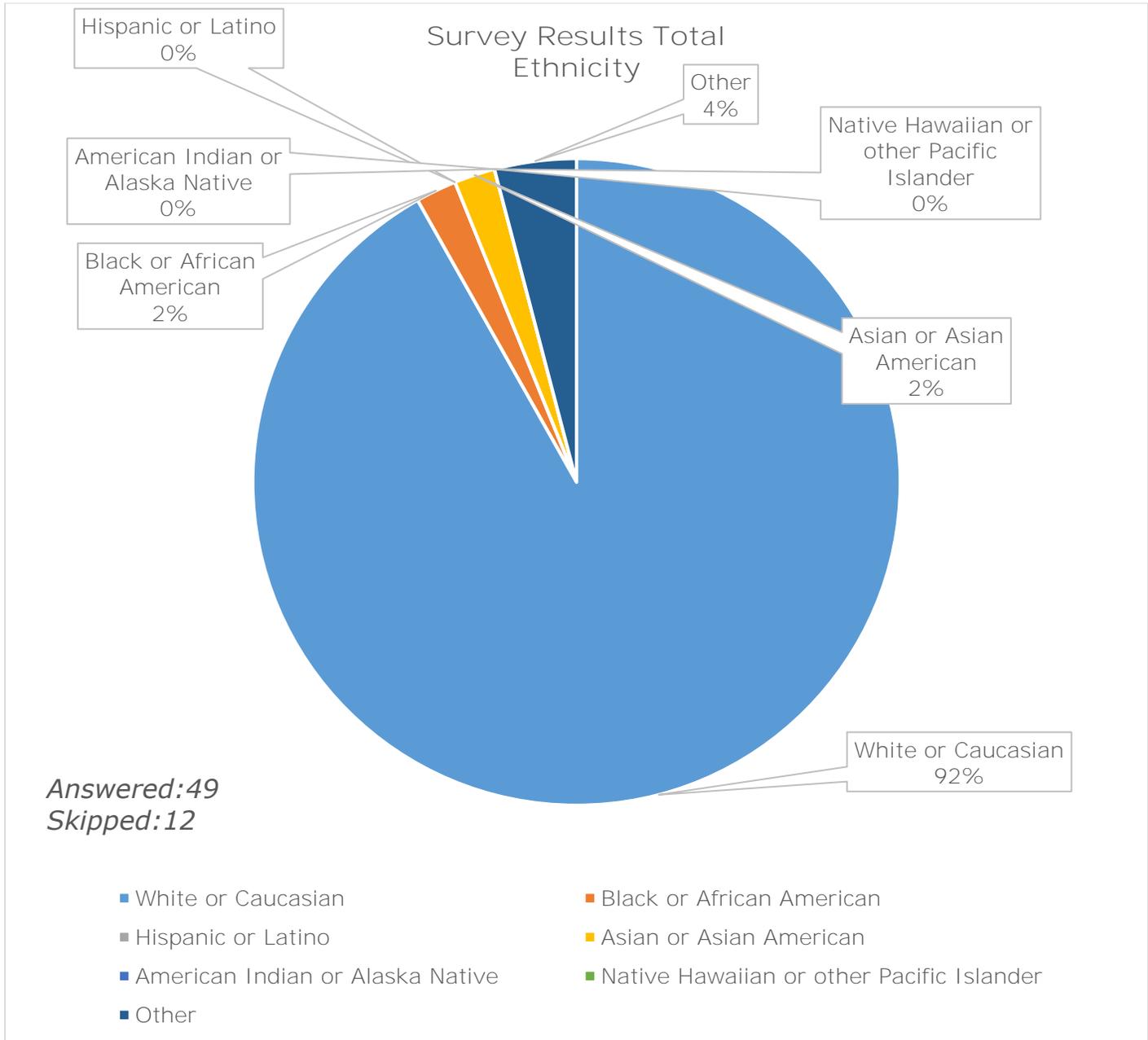
Question 6



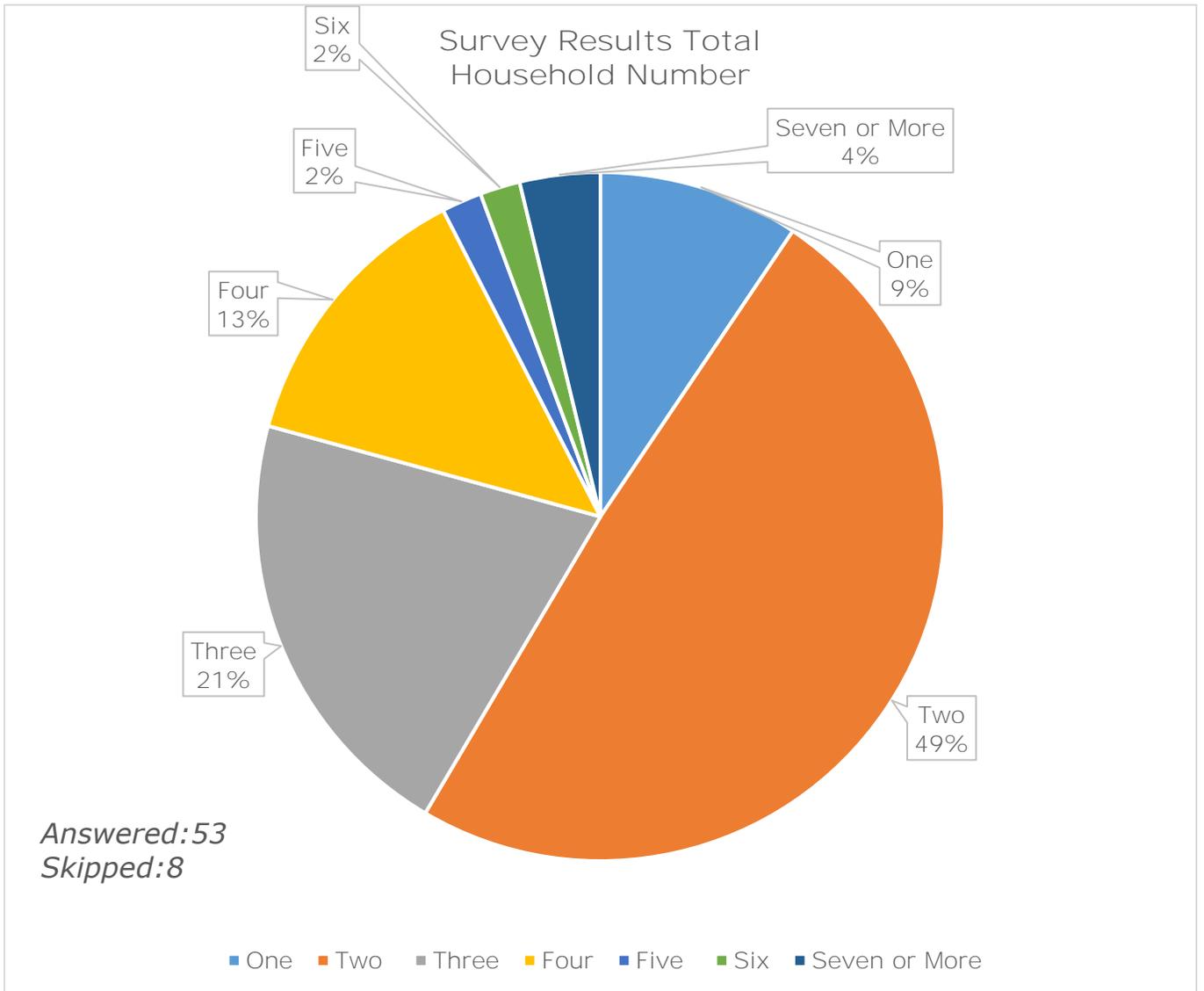
Question 7



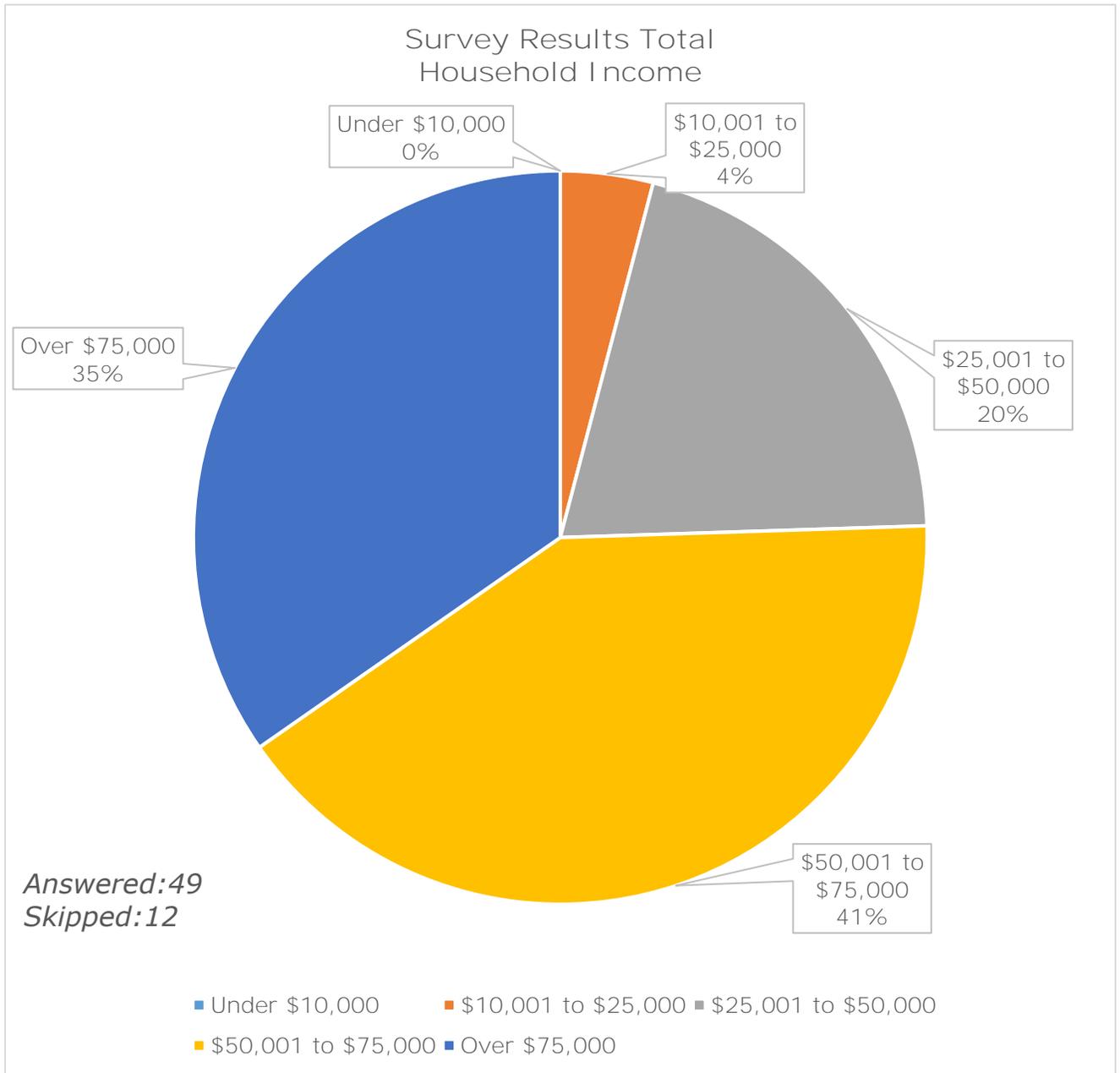
Question 8



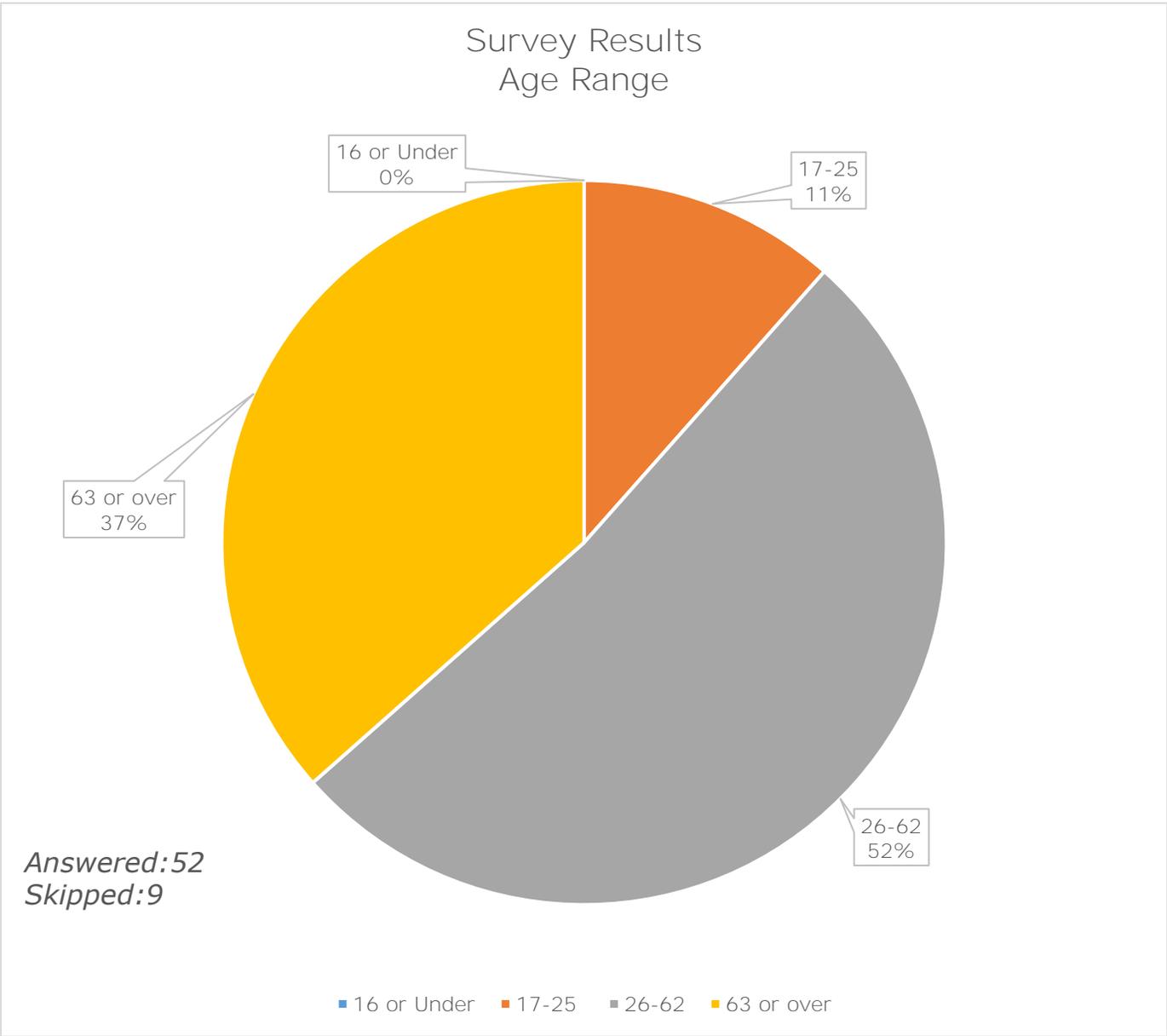
Question 9



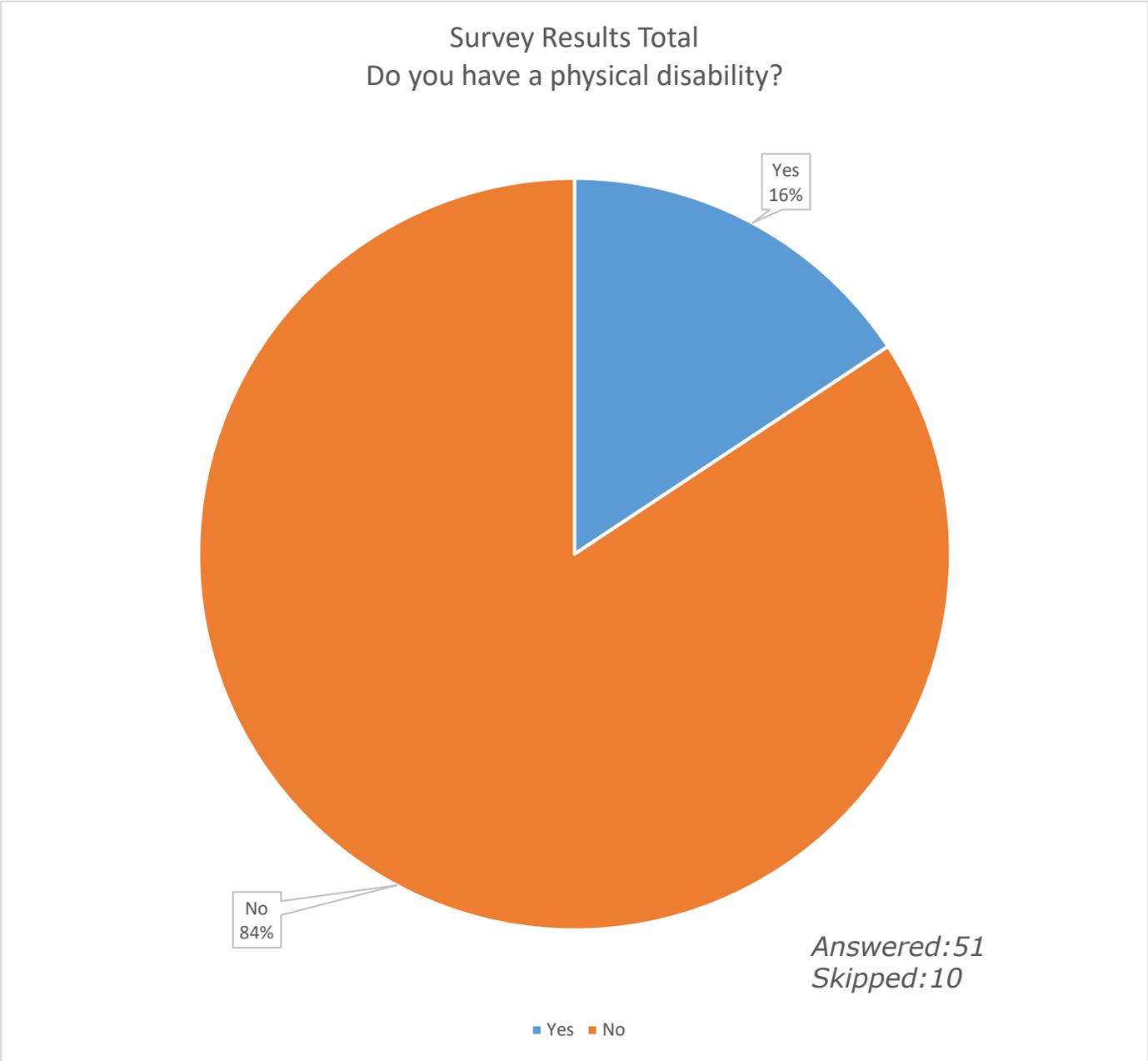
Question 10



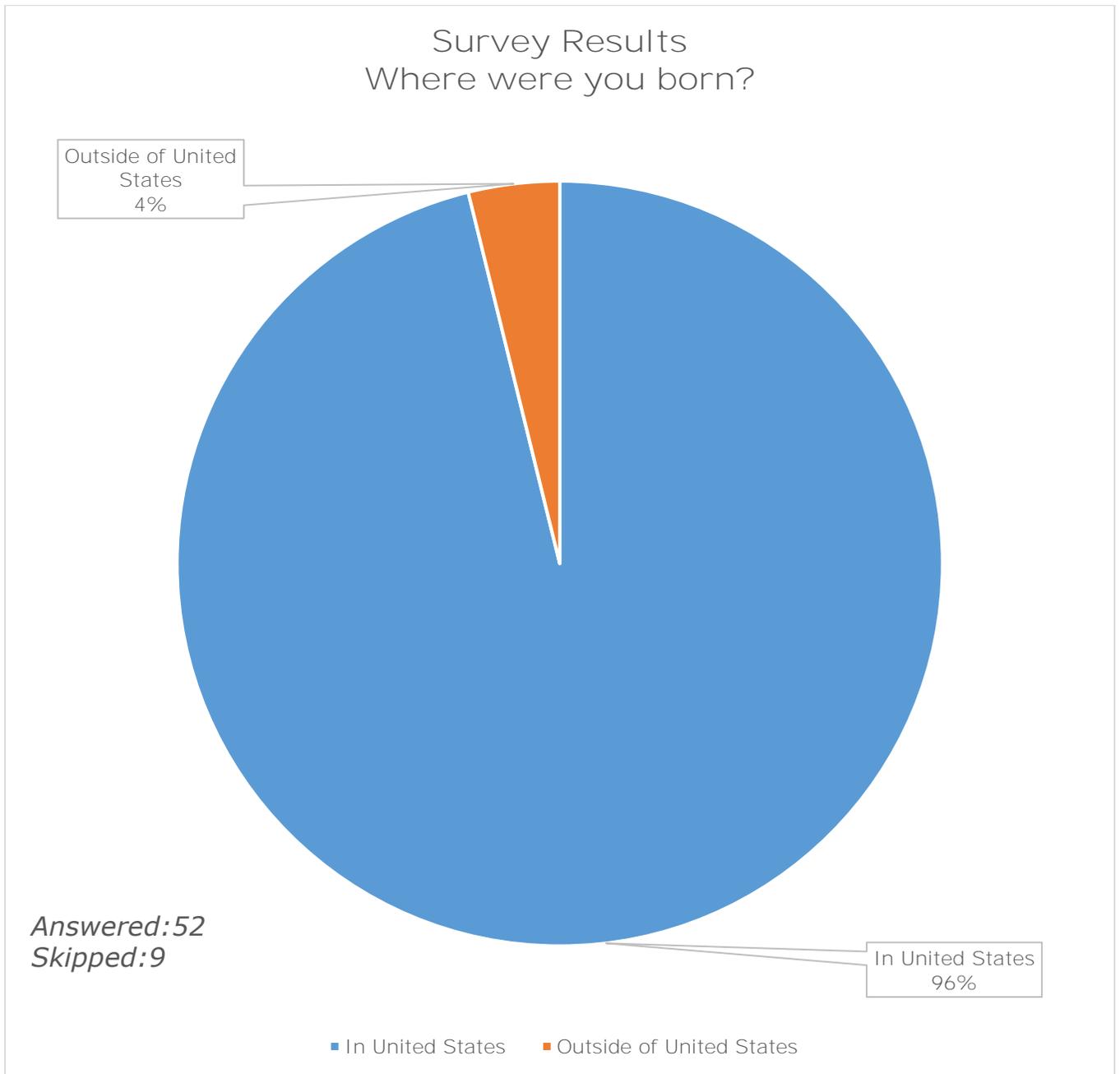
Question 11



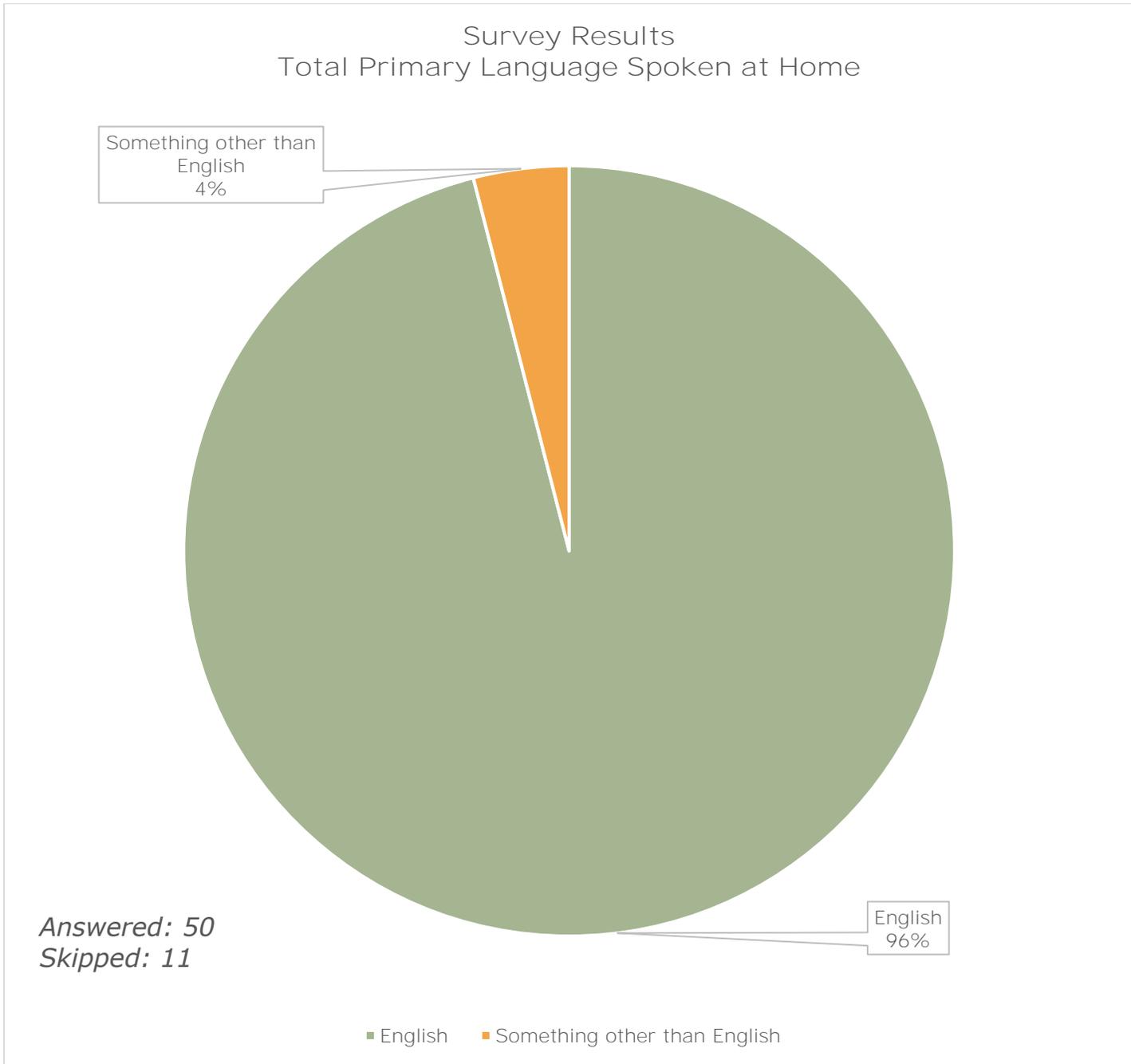
Question 12



Question 13



Question 14



SECOND ROUND ONLINE SURVEY

Due to the significant changes proposed to the original project list, APO staff initiated another round of public input from Sept. 23 through Oct. 23, 2019. This included the creation of a new survey distributed on SurveyMonkey.

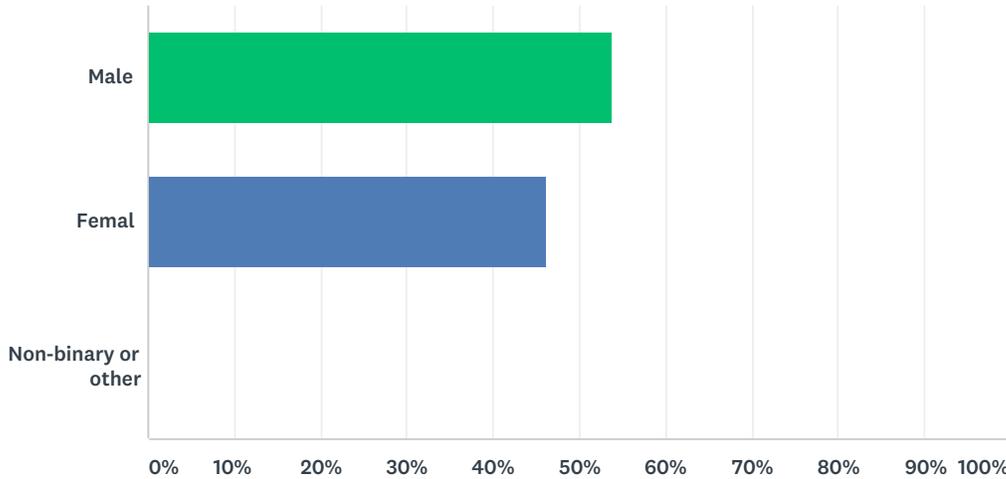
For this round, only one survey was developed. This was done to highlight the proposed changes to the original draft. A total of 45 participants completed this survey. Of those, 10 provided their email and requested to be kept informed about APO planning activities.

As part of this survey, a series of demographic questions were asked. During this round of public input, a majority of respondents taking the online survey were white, English-speaking, U.S. born males between the ages of 26 and 62, living in Sartell with three other people in their household, earning over \$75,000 a year, and not having any sort of physical disability.

The following pages are the full demographic results from the 2019 SurveyMonkey survey for the second round of public input.

Q6 The following questions are OPTIONAL, but completing them will help us understand if we are reaching all segments of the population. What is your gender?

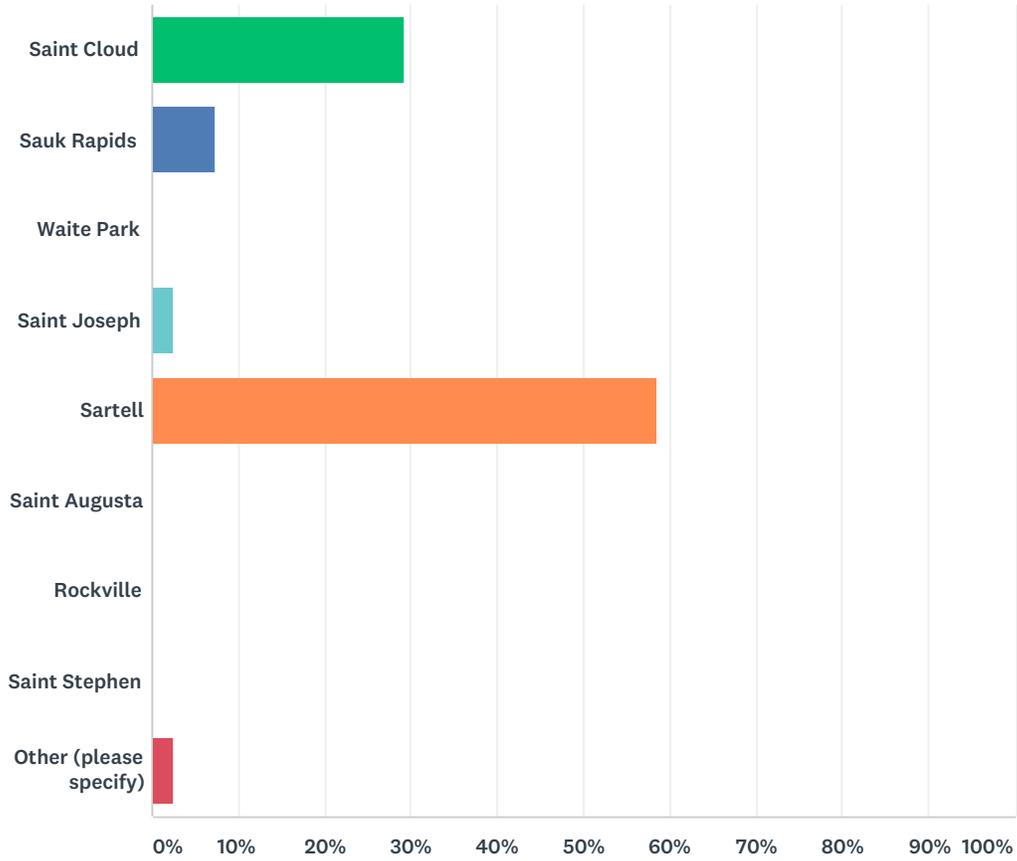
Answered: 39 Skipped: 6



ANSWER CHOICES	RESPONSES	
Male	53.85%	21
Femal	46.15%	18
Non-binary or other	0.00%	0
TOTAL		39

Q7 In what city do you reside?

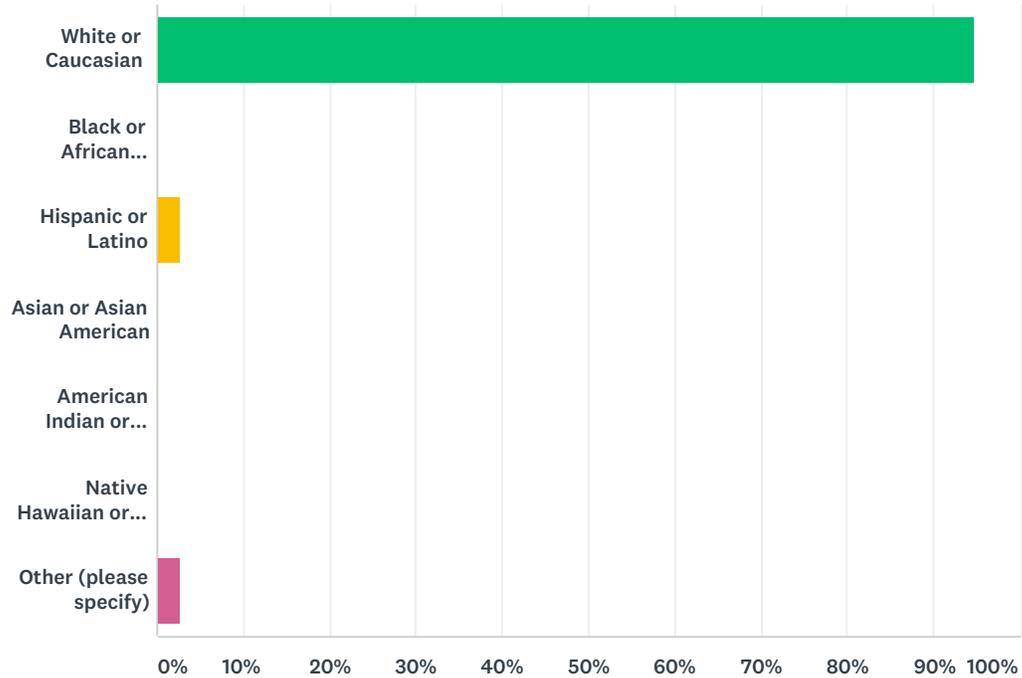
Answered: 41 Skipped: 4



ANSWER CHOICES	RESPONSES	
Saint Cloud	29.27%	12
Sauk Rapids	7.32%	3
Waite Park	0.00%	0
Saint Joseph	2.44%	1
Sartell	58.54%	24
Saint Augusta	0.00%	0
Rockville	0.00%	0
Saint Stephen	0.00%	0
Other (please specify)	2.44%	1
TOTAL		41

Q8 With what ethnicity do you most identify?

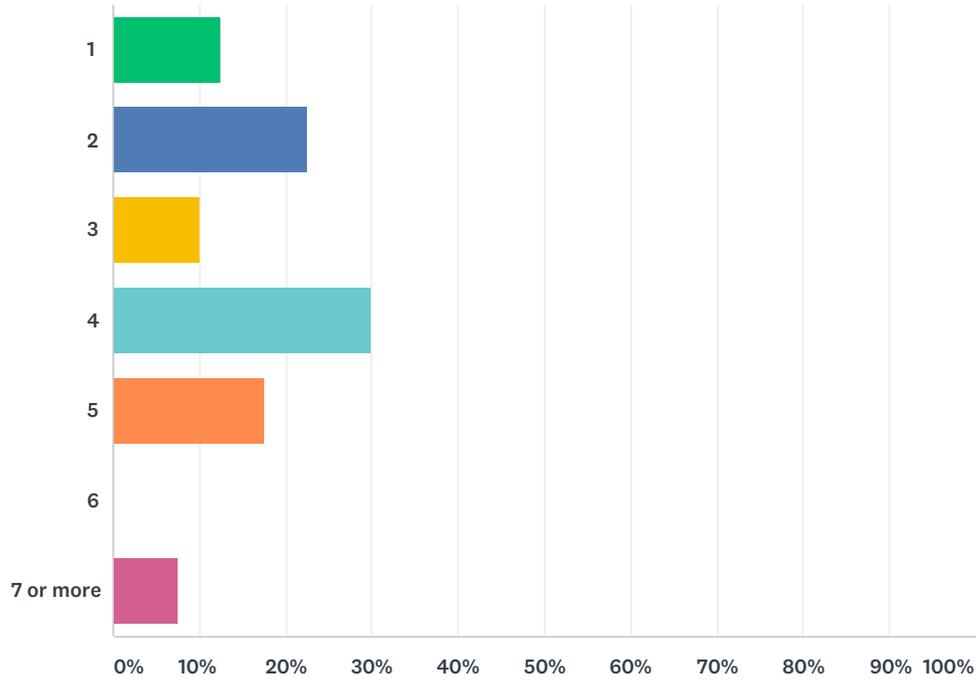
Answered: 38 Skipped: 7



ANSWER CHOICES	RESPONSES	
White or Caucasian	94.74%	36
Black or African American	0.00%	0
Hispanic or Latino	2.63%	1
Asian or Asian American	0.00%	0
American Indian or Alaska Native	0.00%	0
Native Hawaiian or other Pacific Islander	0.00%	0
Other (please specify)	2.63%	1
TOTAL		38

Q9 How many people live in your household?

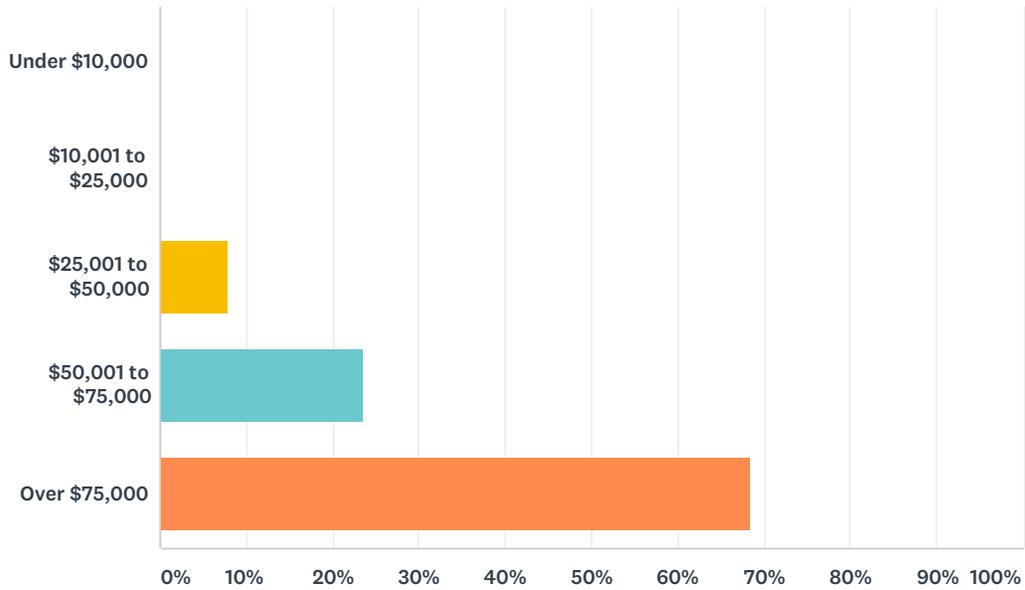
Answered: 40 Skipped: 5



ANSWER CHOICES	RESPONSES	
1	12.50%	5
2	22.50%	9
3	10.00%	4
4	30.00%	12
5	17.50%	7
6	0.00%	0
7 or more	7.50%	3
TOTAL		40

Q10 Last year, what was your total household income?

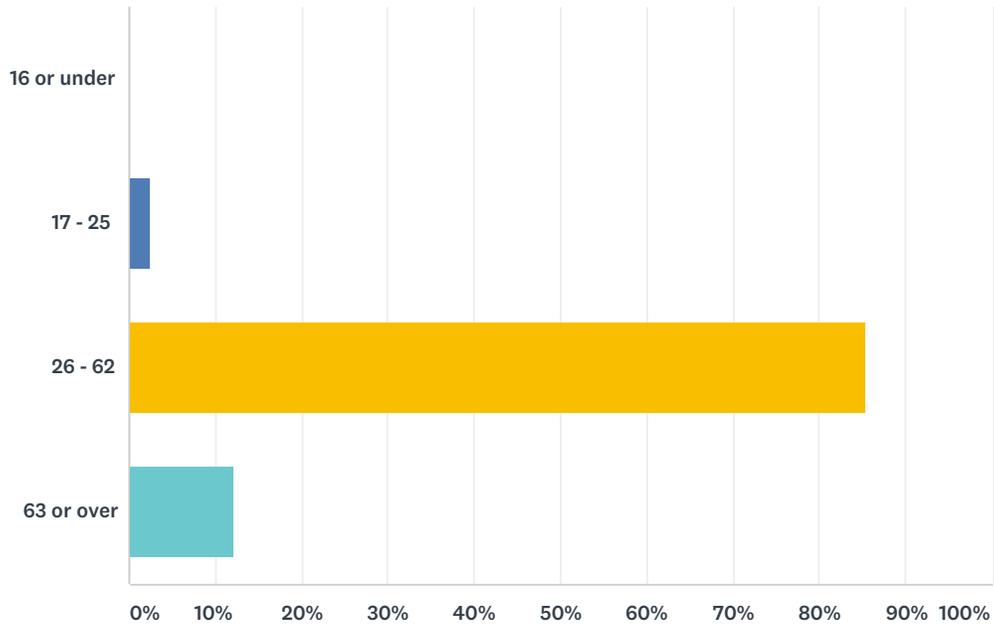
Answered: 38 Skipped: 7



ANSWER CHOICES	RESPONSES
Under \$10,000	0.00% 0
\$10,001 to \$25,000	0.00% 0
\$25,001 to \$50,000	7.89% 3
\$50,001 to \$75,000	23.68% 9
Over \$75,000	68.42% 26
TOTAL	38

Q11 What is your age?

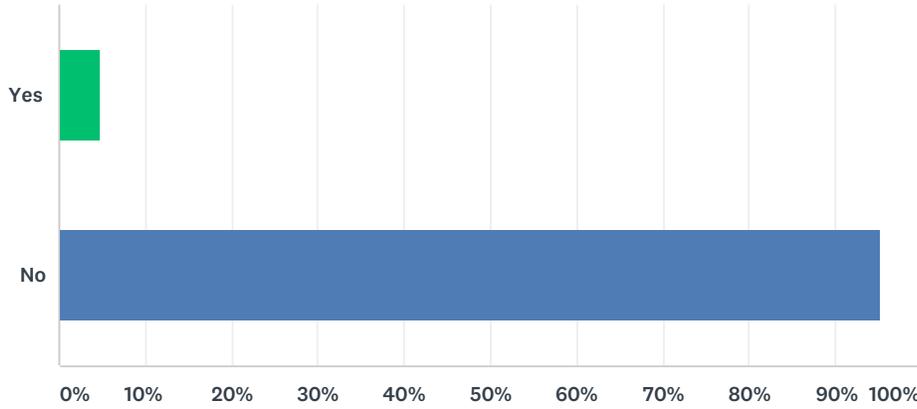
Answered: 41 Skipped: 4



ANSWER CHOICES	RESPONSES
16 or under	0.00% 0
17 - 25	2.44% 1
26 - 62	85.37% 35
63 or over	12.20% 5
TOTAL	41

Q12 Do you have a physical disability?

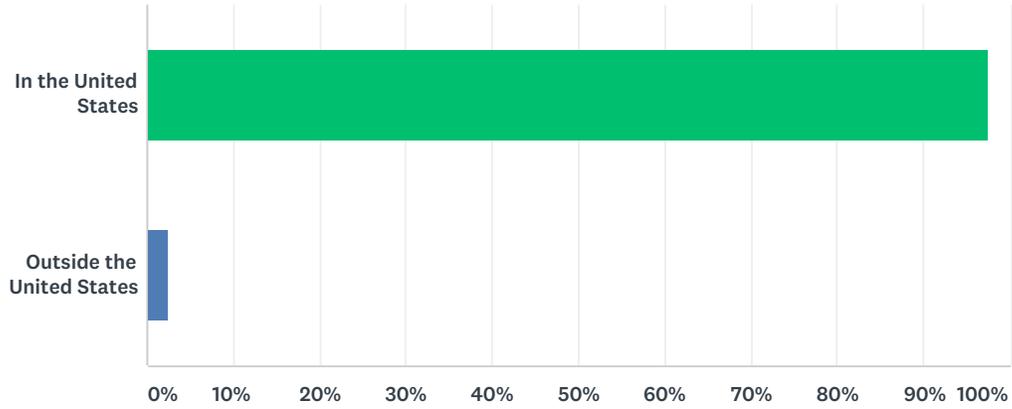
Answered: 41 Skipped: 4



ANSWER CHOICES	RESPONSES	
Yes	4.88%	2
No	95.12%	39
TOTAL		41

Q13 Where were you born?

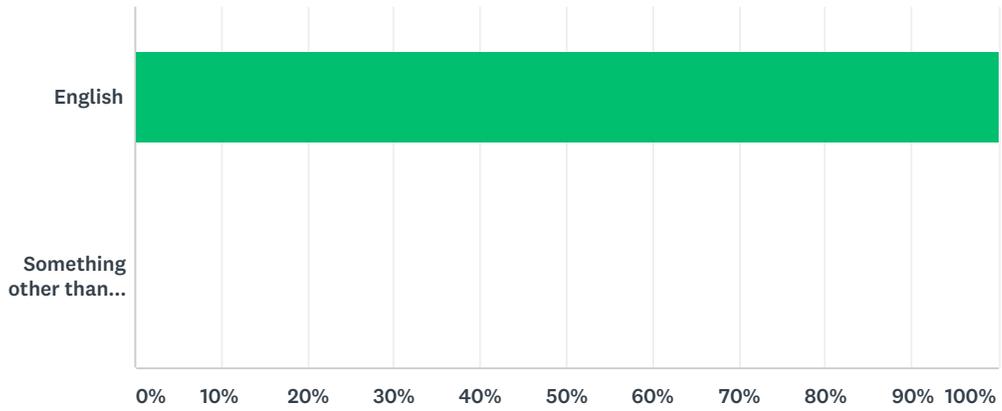
Answered: 40 Skipped: 5



ANSWER CHOICES	RESPONSES	
In the United States	97.50%	39
Outside the United States	2.50%	1
TOTAL		40

Q14 What is the primary language spoken in your home?

Answered: 40 Skipped: 5



ANSWER CHOICES	RESPONSES	
English	100.00%	40
Something other than English	0.00%	0
TOTAL		40

PAPER SURVEY

In addition, an in-person survey was created asking very broadly if the projects proposed were in line with the transportation vision the public had in mind. These surveys were used strictly at in-person events in conjunction with the maps provided on easels. Most of these surveys were used to record verbal comments community members provided.

FLYERS AND ADVERTISEMENTS

In order to draw attention from the community about the draft document, APO staff created fliers to distribute around the MPA. These fliers were distributed to 76 locations across the MPA with a focus on grocery stores, places of worship, and community gathering spaces. In addition, fliers were placed on all Saint Cloud Metro Bus fixed route and Dial-a-Ride buses along with several shelters from Sept. 3 through Sept. 20, 2019. A special effort was made to reach out to diverse members of the community. This effort included outreach to senior centers and ethnic grocery stores and shopping centers. Flyers were translated into Spanish, Laotian, Hmong, and Somali.



**Planning for the future starts
NOW!**

The Saint Cloud APO's long-range plan, MAPPING 2045, is out. Visit stcloudapo.org/2045-mtp to review the document and provide your feedback.



It's **OUR** future. Let's build it **TOGETHER!**

FIGURE A.6 – COPY OF THE 2019 PUBLIC ENGAGEMENT FLYER

La planificación para el futuro comienza
AHORA

El plan de largo alcance de la APO de Saint Cloud, MAPEO 2045, ya está disponible. Visite stcloudapo.org/2045-mtp para revisar el documento y hacer comentarios.

Es **NUESTRO** futuro. Construyámoslo **JUNTOS**.

MAPPING 2045
APO
SAINT CLOUD | AREA PLANNING ORGANIZATION

U qorsheynta mustaqbalka
HADDA ayay bilaabataa!

Qorshaha dheer ee APO Saint Cloud, KHARIIDADAYNTA 2045, wuu soo baxay. Booqo stcloudapo.org/2045-mtp si aad dib-u-eegis ugu sameyso dokumentiga oo aadna u bixiso jawaab-celintaada.

Waa **MUSTAQBALKEENNA**. Aannu **SI WADAJIR AHU** dhisno!

MAPPING 2045
APO
SAINT CLOUD | AREA PLANNING ORGANIZATION

ວາງແຜນເພື່ອອະນາຄົດລົ້ມເລີຍ
ດຽວນີ້!

ແຜນການໄລຍະຍາວ ຂອງ APO ດຊິນອາຄາວ, ແຜນທີ່ສູ່ປີ 2045, ອອກແລ້ວ ເຂົ້າເບິ່ງໄດ້ທີ່ stcloudapo.org/2045-mtp ເພື່ອກວດເບິ່ງເອກະສານນີ້ ແລະ ປະກອບຄໍາຄິດເຫັນຂອງທ່ານ.

ມັນແມ່ນ **ອະນາຄົດ** ຂອງພວກເຮົາ. ສ້າງມັນ **ຮ່ວມກັນ!**

MAPPING 2045
APO
SAINT CLOUD | AREA PLANNING ORGANIZATION

Kev npaj rau yav tom ntej,
yuav tau npaj tam sim no!

Daim ntawm npaj ncuas ntev ntawm APO Saint Cloud, daim ntawv qhias 2045, tag lawm. Mus saib stcloudapo.org/2045-mtp thiab saib cov ntaub ntawv thiab muab koj lis kev xav rov qab rau peb.

Nws yog **Peb lis** yav tom ntej. Peb sawv daws **Uas mus uas kes!**

MAPPING 2045
APO
SAINT CLOUD | AREA PLANNING ORGANIZATION

FIGURE A.7 – COPIES OF THE 2019 PUBLIC ENGAGEMENT FLYERS TRANSLATED IN SPANISH, SOMALI, LAOTIAN, AND HMONG.

Flyers were distributed and/or hung at the following locations. Locations with an asterisk (*) denote a flyer was distributed in a language other than English.

City of Rockville

- Rockville City Hall.
- Mary of the Immaculate Conception Catholic Church.
- Granite Edge Café.

City of Saint Augusta

- Saint Augusta City Hall.
- **Saint Mary's Help of Christians Church.**

City of Saint Cloud

- **Coborn's on Cooper Avenue.**
- Mogadishu.*
- First Presbyterian Church.
- Saint Cloud City Hall.
- Saint Augustine Church.
- Somali Grocery and Restaurant.*
- Salem Lutheran Church.
- Go For It Gas.*
- Good Earth Food Co-op.
- **Coborn's on Veterans Drive.**
- Church of the Holy Spirit.
- Calvary Community Church.
- **Saint John's Episcopal Church.**
- Life Assembly of God.
- Holy Cross Lutheran Church.
- Grace Church United.
- Methodist Church.
- Granite City Baptist Church.
- Cashwise East.
- Whitney Senior Center.
- Whitney Rec Center.
- YMCA.
- **Saint Paul's Catholic Church.**
- **Saint Peter's Catholic Church.**
- **Bo Diddley's Saint Cloud.**
- Saint Cloud Library.
- Saint John Cantius Church.
- Redeemer Lutheran Church.
- Traditional Catholic Church of Immaculate Conception.
- **Saint Michael's Catholic Church.**
- Saint Robert Bellarmine Church.
- Atonement Lutheran Church.
- Tao Market.*
- Saint Cloud Hospital.
- Catholic Charities Emergency Food Shelf.
- 33rd Meat Market.*

City of Joseph

- **Coborn's.**
- CentraCare Clinic.
- Resurrection Lutheran Church.
- **Saint Joseph's Catholic Church.**
- Minnesota Market.

City of Saint Stephen

- Saint Stephen Catholic Church.

City of Sartell

- Chateau Waters Senior Living Center.
- Sartell Community Center.
- **Coborn's on Pinecone Road.**
- **Coborn's on Seventh Street N and First Avenue N.**
- Morning Star Church (Celebration) on Pinecone Road.
- Grace Baptist Fellowship on Pinecone Road.
- Bernicks Arena.
- First United Methodist.
- Love of Christ Church.
- Abounding Joy Lutheran Church.

City of Sauk Rapids

- Harvest Connection Church.
- Petra Lutheran Church.
- Good Shepard Community Church.
- Sauk Rapids City Hall.
- Sacred Heart Catholic Church.
- Trinity Lutheran Church.
- **Coborn's.**

City of Waite Park

- La Perla Market.*
- Cashwise Waite Park.
- Viet-Tien Market.*
- Star Market.*
- **Saint Joseph's Catholic Church.**
- Waite Park City Hall/Senior Center.
- Stearns County Highway Center.
- Stearns County Public Works Department.
- Tri-CAP.
- El-Torito (Mexican Market).*
- Banadir Mall.*

APO staff also developed a press release to distribute to local media. The list of media outlets included:

- AM 1240 WJON.
- 88.1 FM KVSC.
- AM 1450 KNSI.
- St. Joseph/Sartell Newsleaders.
- Sauk Rapids Herald.
- St. Cloud Times.

SOCIAL MEDIA

APO staff posted three general posts pertaining to MAPPING 2045 between Aug. 12 and Oct. 23, 2019, to the organization's Facebook account. The first post, from Aug. 12, was the only post that was "boosted." APO staff expended approximately \$100 to expand the reach of this initial post.

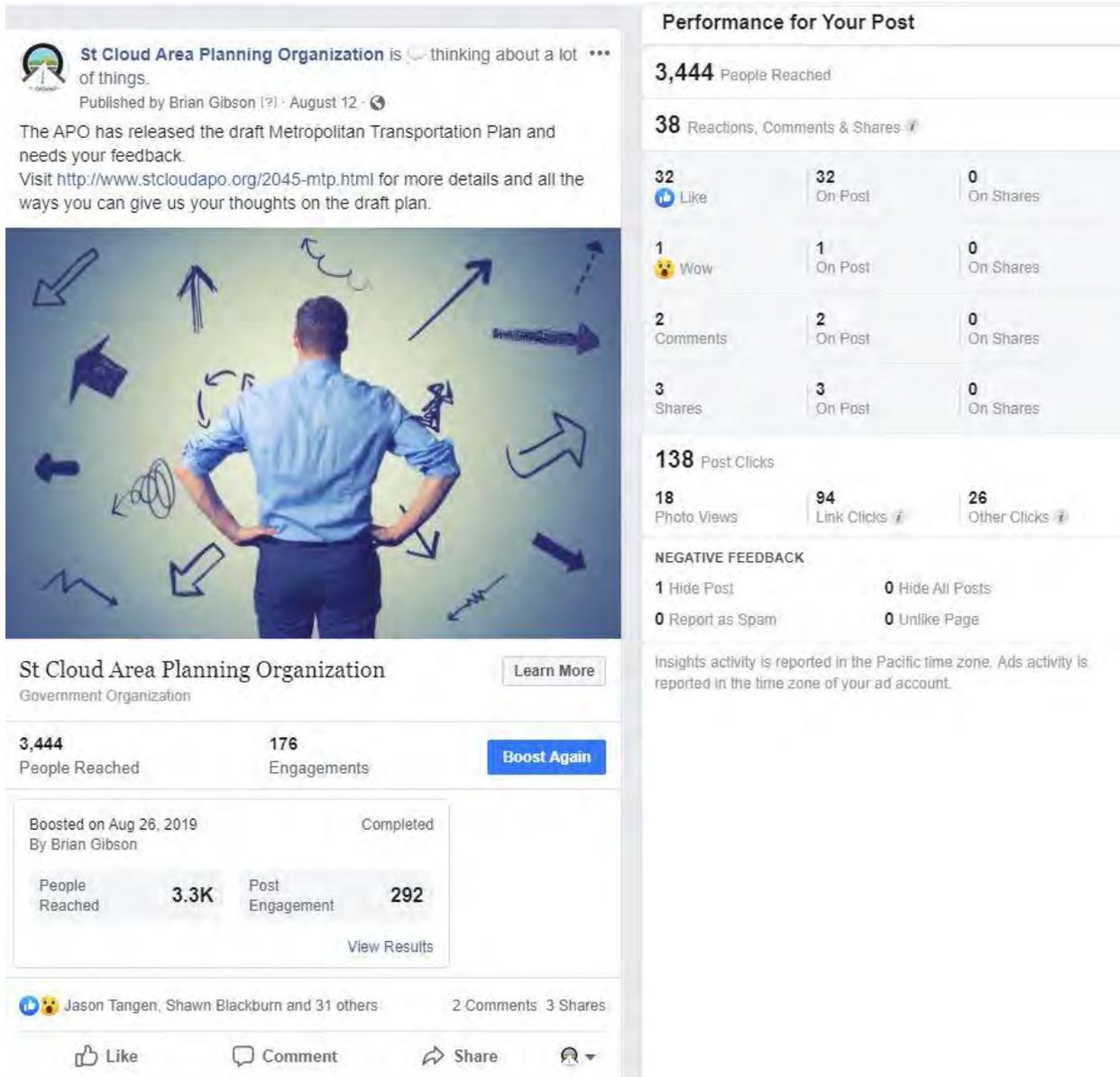


FIGURE A.8 – INITIAL FACEBOOK POST FOR THE APO'S DRAFT MTP POSTED AUG. 12, 2019.

At the conclusion of both public comment periods, this Facebook post reached a total of 3,444 people with 292 post engagements which included a mix of reactions, comments, shares, and link clicks.

St Cloud Area Planning Organization
 Published by Brian Gibson [?] · September 24 ·

Some significant changes to the draft Metropolitan Transportation Plan have been proposed, so we are providing the public an additional 30 days to review the proposed changes and provide their thoughts. Click on the link below to learn more and complete our survey on the proposed changes.

<https://www.surveymonkey.com/r/8PMPWM3>

MAPPING 2045 Projects

Get More Likes, Comments and Shares
 Boost this post for \$20 to reach up to 4,300 people.

1,974 People Reached	705 Engagements
--------------------------------	---------------------------

[Boost Post](#)

1 Comment 7 Shares

Like Comment Share ⋮

Performance for Your Post

1,974 People Reached

27 Likes, Comments & Shares

9 Likes	0 On Post	9 On Shares
11 Comments	2 On Post	9 On Shares
7 Shares	7 On Post	0 On Shares

678 Post Clicks

249 Photo Views	61 Link Clicks	368 Other Clicks
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NEGATIVE FEEDBACK

0 Hide Post	0 Hide All Posts
0 Report as Spam	0 Unlike Page

Reported stats may be delayed from what appears on posts

FIGURE A.9 – SIGNIFICANT CHANGES FACEBOOK POST FROM SEPT. 24, 2019.

A day after the second round of public input for the draft MAPPING 2045 document began, APO staff posted another generalized post about soliciting public input as evident in Figure A.9.

This post organically (not boosted) reached 1,974 people and had 705 engagements which included 678 post clicks and 27 likes, comments, and shares.

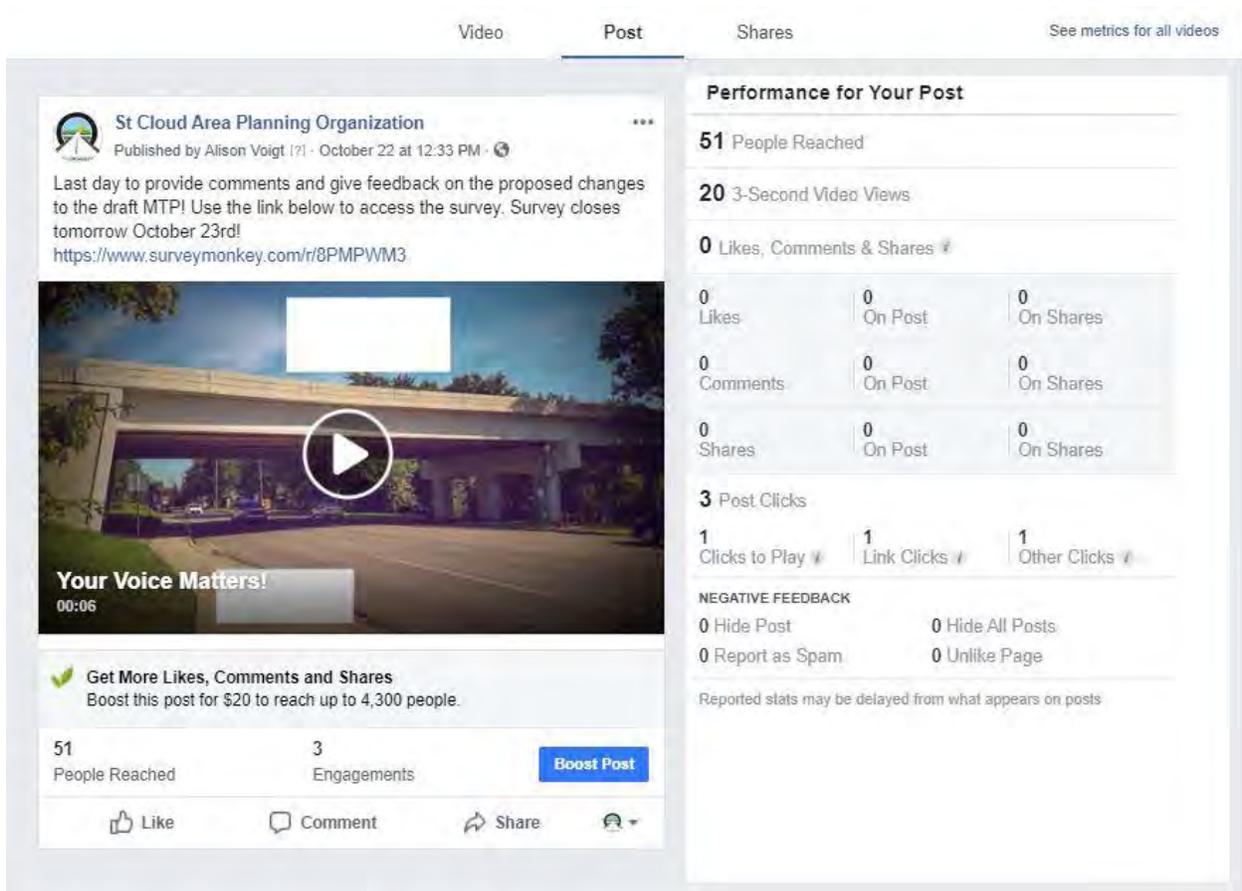


FIGURE A.10 – FINAL PUSH FOR PUBLIC COMMENTS FACEBOOK POST FROM OCT. 22, 2019.

The last general post APO staff did on the MTP was on Oct. 22. This post was done to remind people that the public comment period on the draft document was closing. This video post reached 51 people with three people engaging this the post. About 20 people watched three seconds of this five second clip.

Social media was also used during several of the in-person events. Those specific posts will be discussed under in-person events.

IN-PERSON EVENTS

FIRST ROUND

APO staff kicked off a robust schedule of in-person engagement events for the public input solicitation from Aug. 12 through Sept. 20, 2019. During this time frame APO staff did 11 in-person events across the MPA.

APO staff set up a table with paper surveys; brochures that provided more information on the APO and the MTP; individual jurisdictional maps of all identified capacity expansion and

reconstruction projects; a planning area-wide map of all identified capacity expansion and reconstruction projects; a signup form for those interested in learning more about APO planning activities; two easels – one with a project map and the other with a graphic similar to the APO’s flyers; and candy and water.



FIGURE A.11 – APO BOOTH AND EASELS ON DISPLAY AT A PUBLIC ENGAGEMENT EVENT.

APO staff kicked off in-person public engagement events for this first round of public engagement from 4 to 6:30 p.m. on Saturday, Aug. 17 at the Lake Wobegon Trailhead in Saint Joseph. APO staff talked with five people at this event. In addition, staff posted a Facebook Live video about the event.

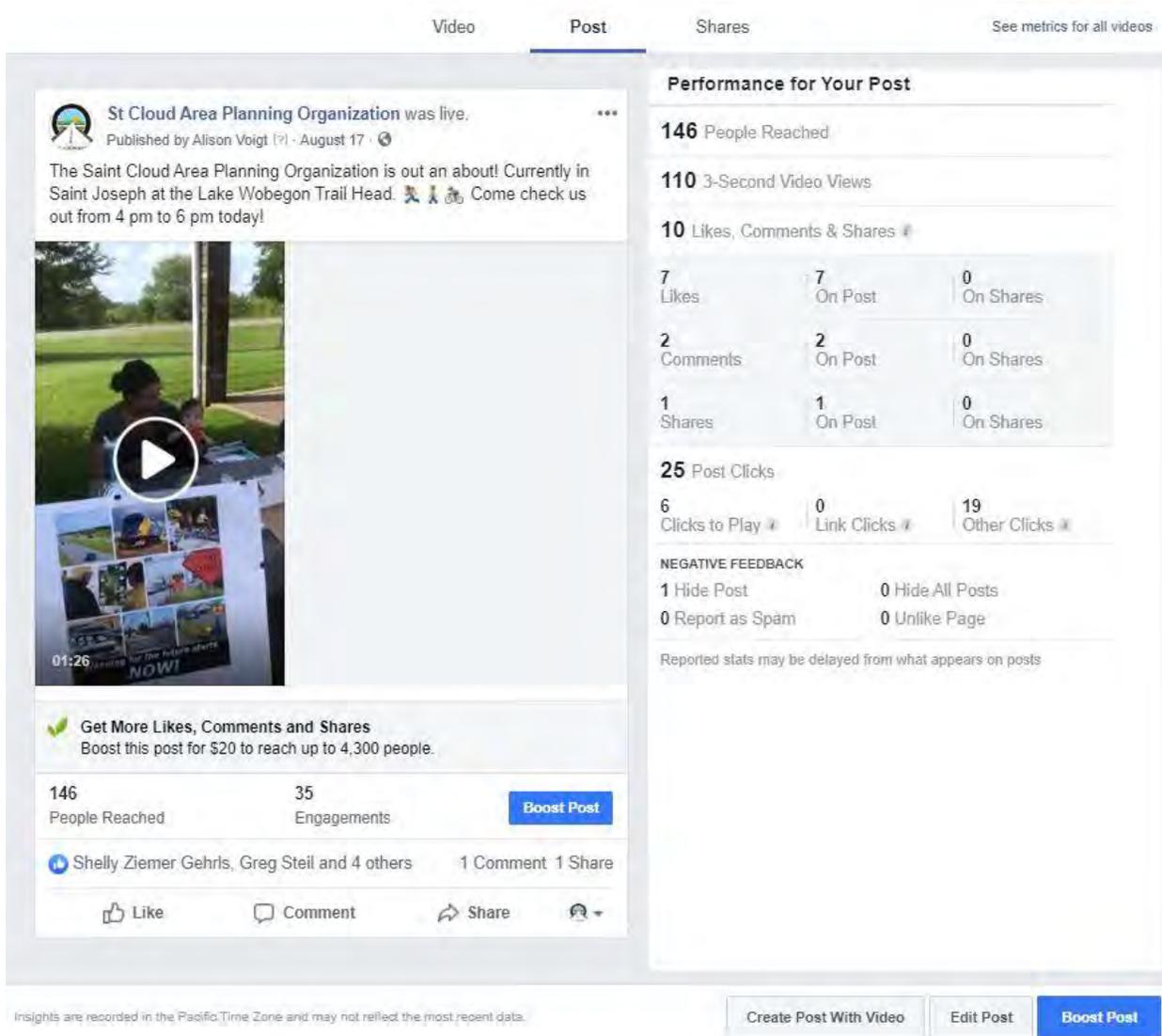


FIGURE A.12 – FACEBOOK LIVE METRICS FROM LAKE WOBEGON TRAILHEAD ENAGEMENT EVENT.

A total of 146 people were reached with this post along with 35 engagements including post clicks, likes, comments, and shares.

APO staff were outside of the Saint Cloud Metro Bus Mobility Training Center from 11 a.m. to 1 p.m. on Thursday, Aug. 22. APO staff talked with nine people at this event. APO staff also observed 61 people passing by the booth. Staff also created a Facebook Live posting for this event. Sixty-four people were reached with this post, 14 people engaged with the video. Thirty-seven people watched at least three seconds of this video.

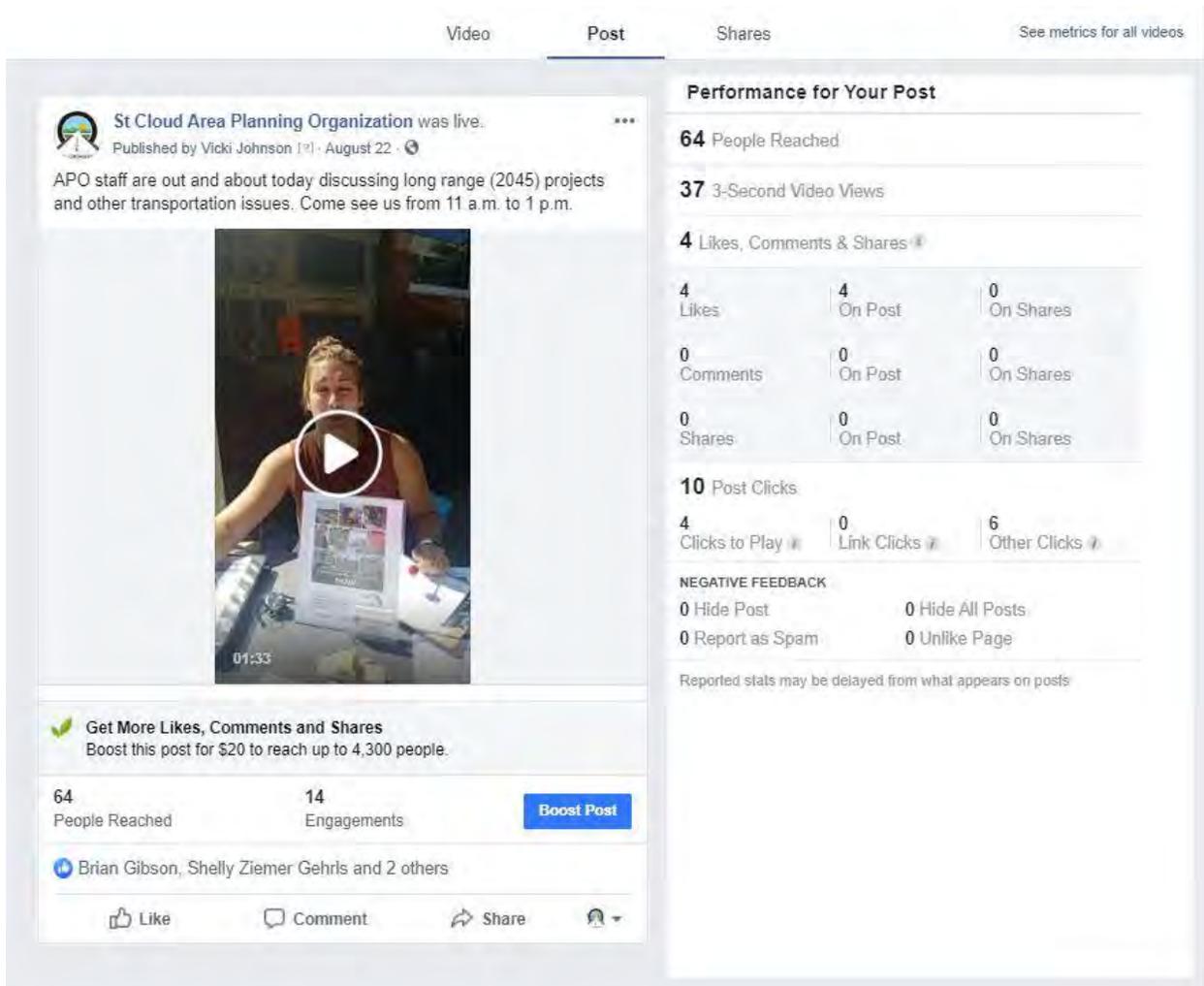


FIGURE A.13 – FACEBOOK LIVE METRICS FROM MOBILITY TRAINING CENTER ENAGEMENT EVENT.

The third event was hosted at the downtown Saint Cloud Metro Bus transit station from 5-7 p.m. on Monday, Aug. 26. Staff talked with 22 people and had observed 33 people passing by the booth. Staff also did a Facebook Live video from this location reaching 86 people and engaging 16. Forty-five people watched at least three seconds of the video.

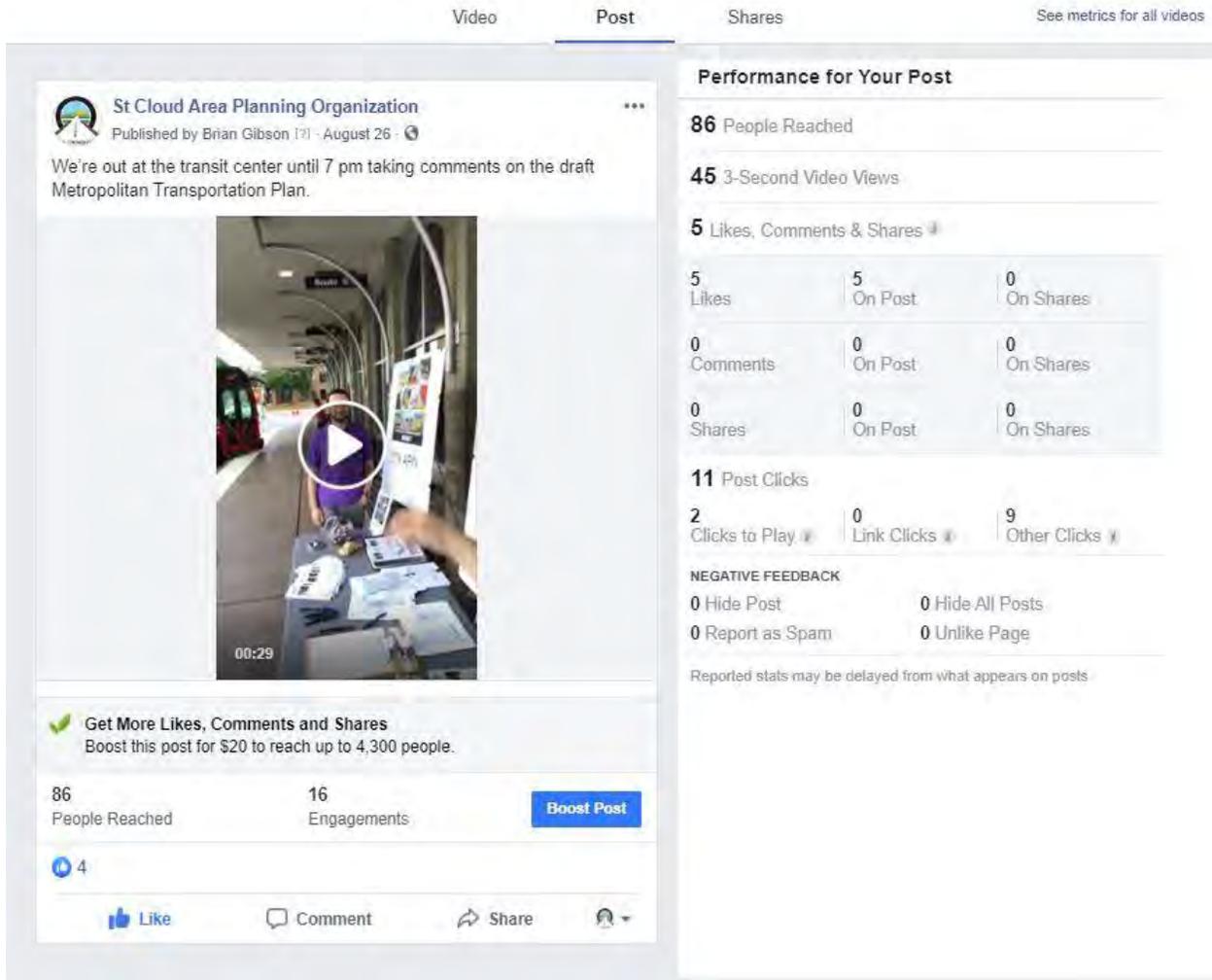


FIGURE A.14 – FACEBOOK LIVE METRICS FROM DOWNTOWN TRANSIT CENTER ENAGEMENT EVENT.

APO staff were at Rivers Edge Park in Waite Park from 5-7 p.m. on Friday, Aug. 30. Staff talked with three people and observed 11 people walk past the booth. Another Facebook Live post was done at this event reaching 141 people. Twenty-one people engaged with this post and 92 people watched at least three seconds of this video.

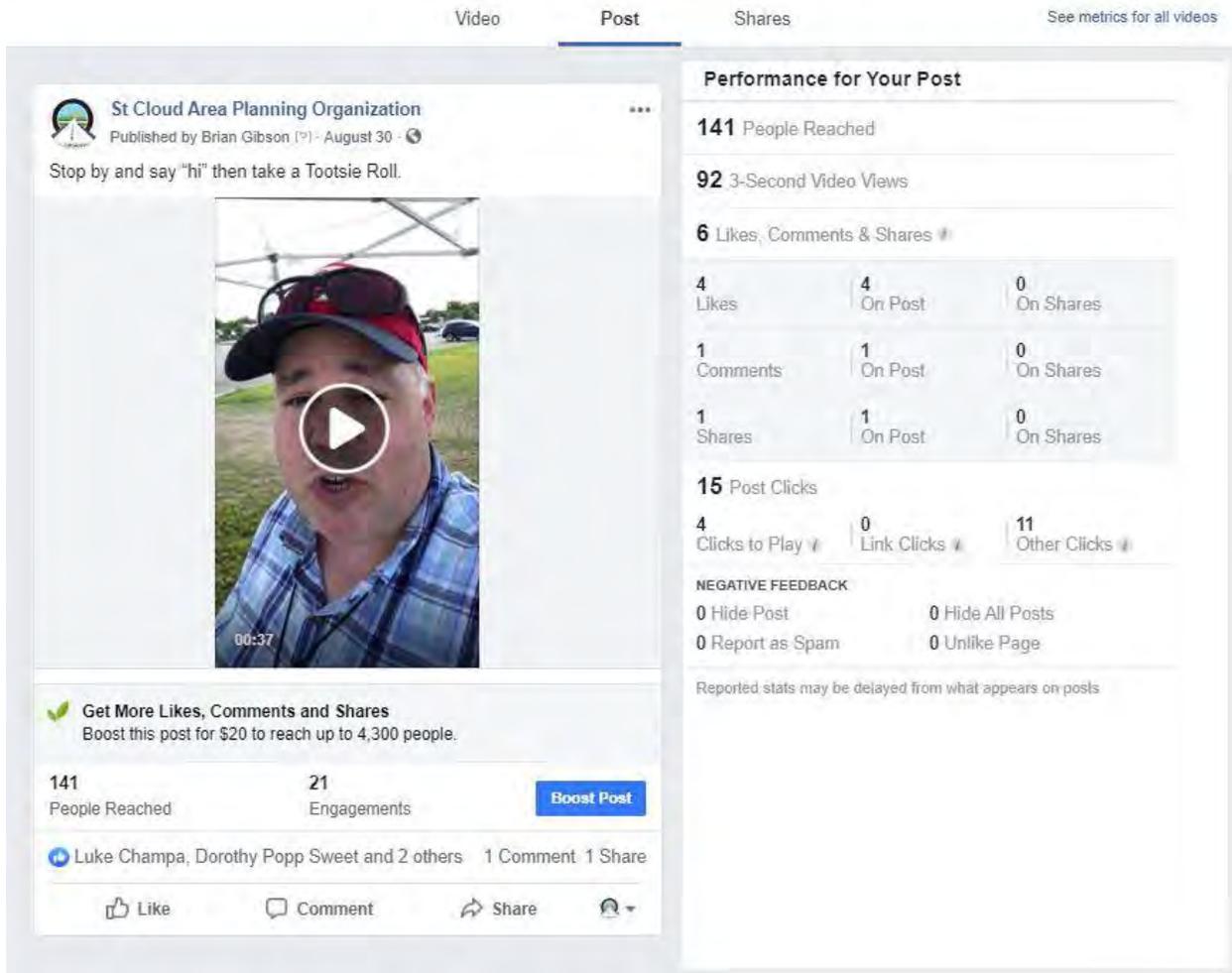


FIGURE A.15 – FACEBOOK LIVE METRICS FROM RIVERS EDGE PARK ENAGEMENT EVENT.

APO staff did one open house at the APO Office. This event ran from 3-7 p.m. on Wednesday, Sept. 4. Three people attended the event. Staff also did a Facebook Live which reached 66 people and engaged 13.

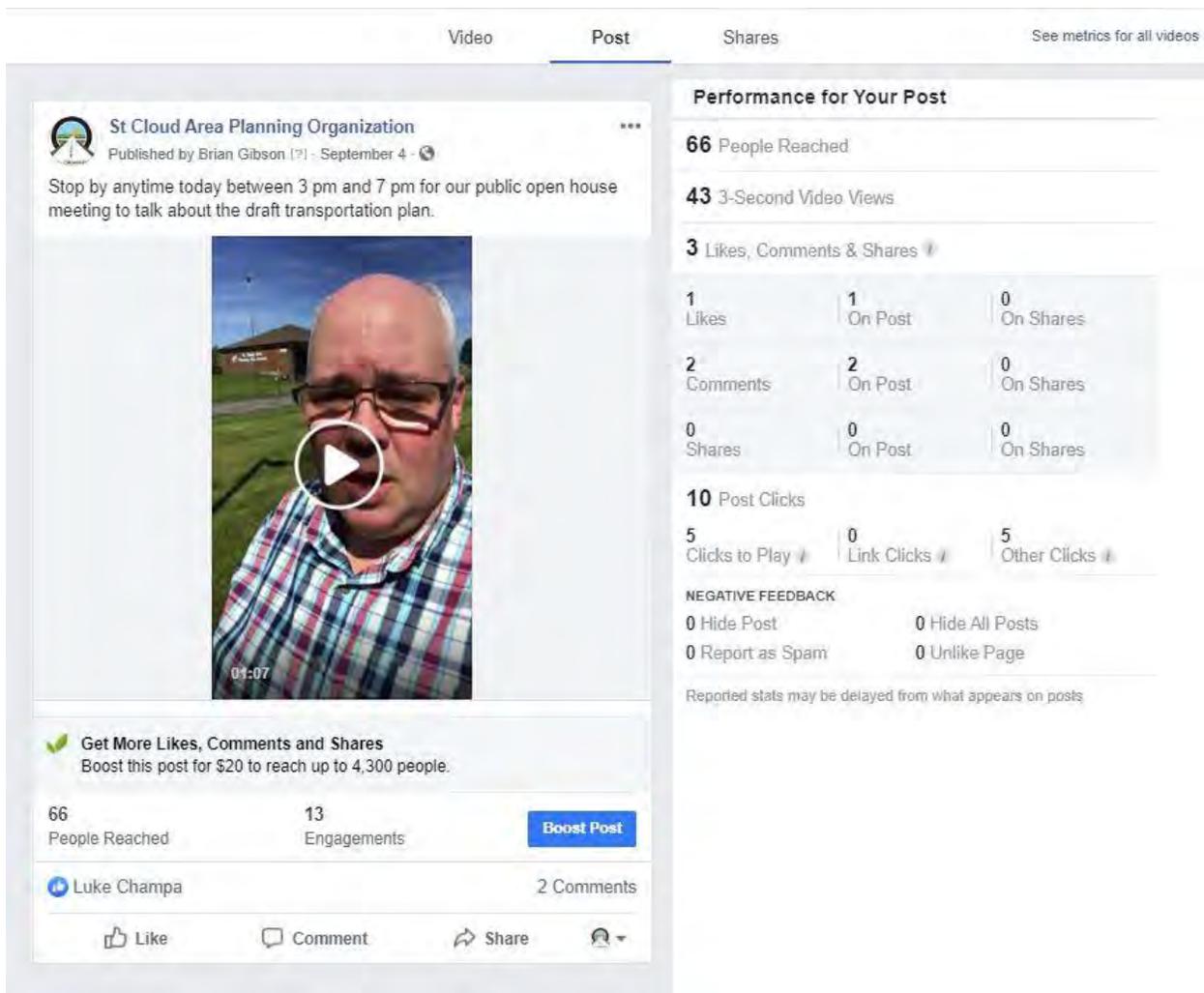


FIGURE A. 16 – FACEBOOK LIVE METRICS FROM APO OFFICE OPEN HOUSE EVENT.

On Sept. 11, 2019, APO staff did public engagement at Catholic Charities Emergency Services Food Shelf. APO staff tabled from 9:30-11:30 a.m. Staff interacted with three participants with a minimum of 44 people walking past **the APO’s booth**. **Given the nature of the location, APO staff did not do a Facebook Live from this event.** Staff did however leave several flyers and brochures behind for interested parties.

APO staff tabled at Lake George in Saint Cloud from 4-6 p.m. on Friday, Sept. 13. APO staff interacted with two **people and observed 21 people walking past the APO’s table.** A Facebook Live was created for this event that reached 124 people and engaged 18 people. Seventy-seven people watched a minimum of three seconds of this video.

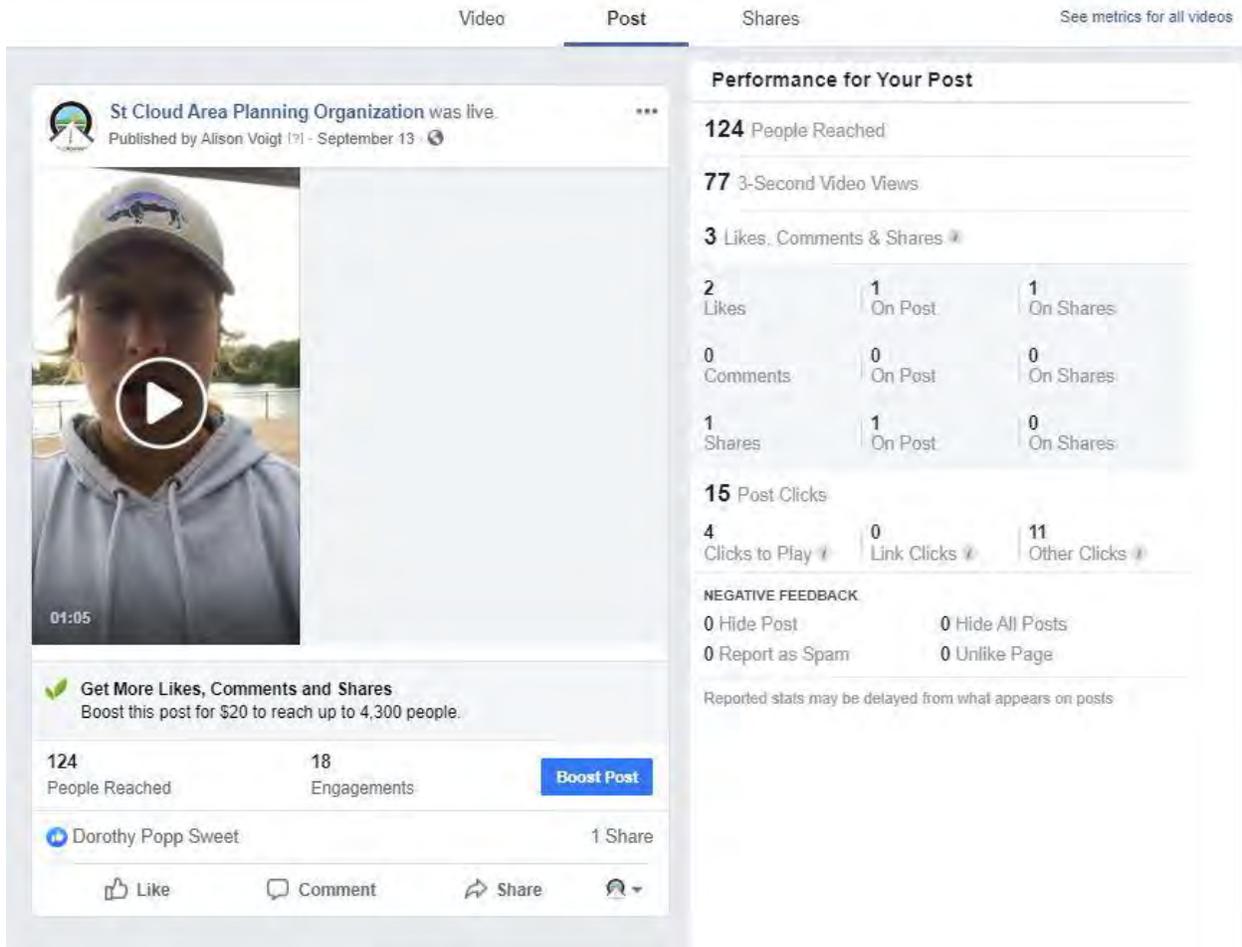


FIGURE A.17 – FACEBOOK LIVE METRICS FROM LAKE GEORGE ENAGEMENT EVENT.

APO staff tabled at Saint Cloud City Hall from 2:30 to 4:30 p.m. on Monday, Sept. 16. APO staff talked with six people and observed 28 people walking past the table. No Facebook Live was done at this event.

On Thursday, Sept. 19, APO staff set up their table at the Waite Park Senior Center in the basement of Waite Park City Hall. Senior center staff allowed APO staffers to do a short presentation prior to the planned activity. APO staff were able to address all 37 participants and were able to solicit comments from them afterward. No Facebook Live was done at this event.

APO staff concluded first round public input at Coborn’s on Pinecone Road in Sartell on Friday, Sept. 20, from 4-6 p.m. No one attended this event.

A complete listing of events and number of participants can be found in Figure A.18.

Date	Location	Address	Time	Participants Interacted With	Participants Who Observed APO Table
08/17/2019	Lake Wobegon Trailhead	Saint Joseph	4-6:30 p.m.	5	5
08/22/2019	Saint Cloud Metro Bus Mobility Training Center	700 West Saint Germain Street, Saint Cloud	11 a.m. – 1 p.m.	9	61
08/26/2019	Downtown Saint Cloud Metro Bus Transit Station	510 First Street S, Saint Cloud	5-7 p.m.	22	33
08/30/2019	Rivers Edge Park	1300 Great Oak Drive, Waite Park	5-7 p.m.	3	11
09/04/2019	Saint Cloud Area Planning Organization	1040 County Road 4, Saint Cloud	3-7 p.m.	3	3
09/11/2019	Catholic Charities Emergency Food Shelf	157 Roosevelt Road, Saint Cloud	9:30 – 11:30 a.m.	3	44
09/13/2019	Lake George	Saint Cloud	4-6 p.m.	2	21
09/16/2019	Saint Cloud City Hall	400 Second Street S, Saint Cloud	2:30-4:30 p.m.	6	28
09/19/2019	Waite Park Senior Center	19-13 th Avenue N, Waite Park	Noon-3 p.m.	37	37
09/20/2019	Coborn's	1725 Pinecone Road S, Sartell	4-6 p.m.	0	0

FIGURE A.18 – IN-PERSON PUBLIC ENGAGEMENT EVENTS BETWEEN AUG. 12 AND SEPT. 20, 2019.

In addition to these scheduled in-person events, APO staff provided information about MAPPING 2045 to members of the public at various meetings. A list of those meetings and the number of participants in attendance can be found in the figure below.

Date	Meeting	Number of People in Attendance
08/06/2019	Saint Cloud Rotary Weekly Luncheon	50
08/20/2019	Saint Cloud Metro Bus Rider Advisory Committee	8
08/21/2019	Stearns Benton Toward Zero Deaths Coalition	9
08/21/2019	United Way Access to Food Committee	13

FIGURE A.19 – MEETINGS APO STAFF ATTENDED WHERE MAPPING 2045 DOCUMENT WAS MENTIONED.

SECOND ROUND

Due to significant changes being proposed from the first draft available to the public, APO staff underwent a second round of public input solicitation from Sept. 23 through Oct. 23, 2019. During this time frame, staff hosted two in-person events.

The first event was from 4-6 p.m. on Wednesday, Oct. 9 at the Saint Cloud branch of the Great River Regional Library. No one attended this event. APO staff did post a Facebook Live from this event which reached 83 people and engaged 13 individuals. Forty-eight people watched at least three seconds of this video.

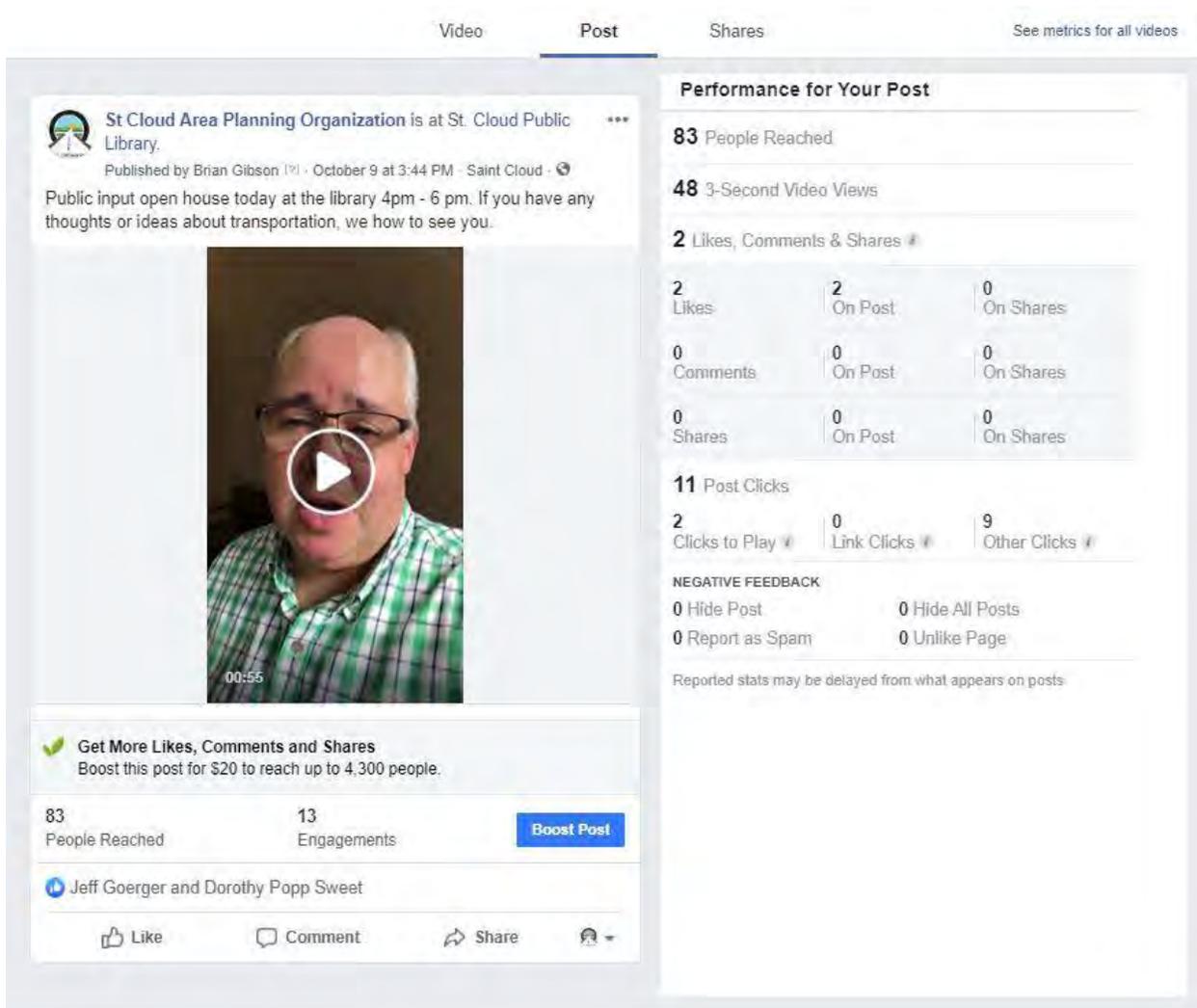


FIGURE A.20 – FACEBOOK LIVE METRICS FROM SAINT CLOUD LIBRARY EVENT.

APO staff also hosted a public engagement event at the Saint Joseph Government Center from 2-4 p.m. on Tuesday, Oct. 15. No one attended. A Facebook Live event was not done for this event.

Date	Location	Address	Time	Participants Interacted With	Participants Who Observed APO Table
10/09/2019	Saint Cloud Great River Regional Library	1300 W St. Germain Street, Saint Cloud	4-6 p.m.	0	0
10/15/2019	Saint Joseph Government Center	10 Baker Street, Saint Joseph	2-4 p.m.	0	0

FIGURE A.21 – IN-PERSON PUBLIC ENGAGEMENT EVENTS BETWEEN SEPT. 23 AND OCT. 23, 2019.

In addition to these scheduled in-person events, APO staff provided information about MAPPING 2045 to members of the public at various meetings. A list of those meetings and the number of participants in attendance can be found in the figure below.

Date	Meeting	Number of People in Attendance/Interacted With
09/28/2019	Saint Cloud 301 Event	6 people interacted with
10/11/2019	Saint Cloud Area Chamber of Commerce Government Affairs Committee	21 people attended

FIGURE A.22 – MEETINGS APO STAFF ATTENDED WHERE MAPPING 2045 DOCUMENT WAS MENTIONED.

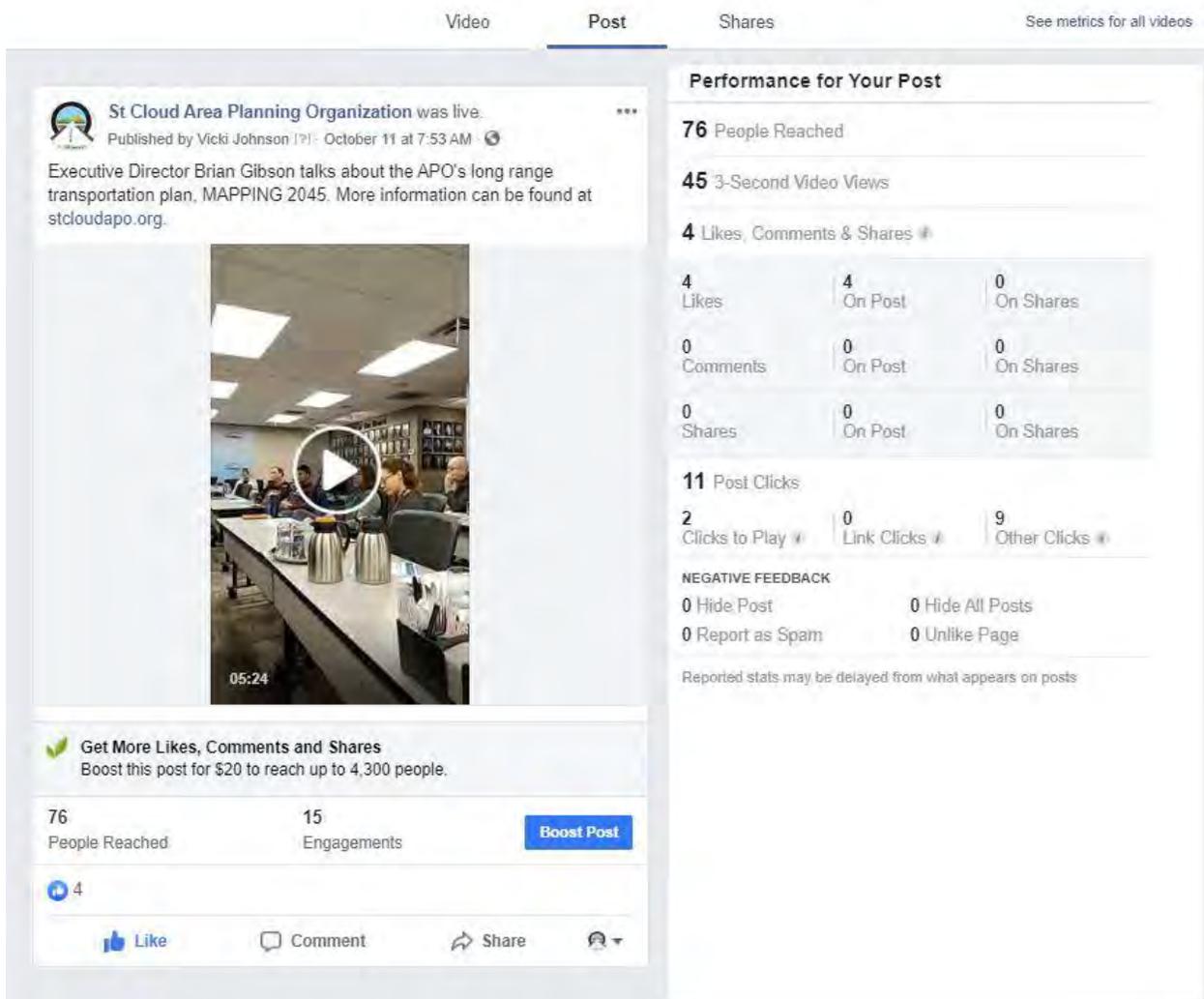


FIGURE A.23 – FACEBOOK LIVE METRICS FROM THE SAINT CLOUD AREA CHAMBER OF COMMERCE GOVERNMENT AFFAIRS MEETING.

Below are the late summer to early fall 2019 public engagement comments, collected either by event, survey, or social media. All comments received during this round of public input were recorded and can be found in Chapter 9 of this document.

Comments on the Draft 2045 MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Environment	Email	SAR-1 (Widen Leander Ave from CR 120 to Heritage Drive): "Some wetland along corridor. Widening based on today's standards may be eligible for mitigation through Road Bank. Retrofit Stormwater Practices where appropriate."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction.
1	Environment	Email	SAR-2 (Construct Roberts Road from Pinecone Road to CR 4): "Major wetland area. Road could be easily routed in a way to not have any/minimize wetland impact. There is a gravel trail roughly connecting. The proposed alignment could utilize gravel trail to minimize environmental impacts. If built, we lose soil of statewide importance for farm land. Show a potential route that misses the wetlands."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. Project map was changed to show a dashed line for the corridor to indicate that a final location has not yet been determined.
1	Environment	Email	SAR-3 (Construct 19th Ave North from 11th St N to 27th St N): "Appears large amounts of wetland/hydric soil/ high ground water table to contend with. It would be beneficial to have Sartell Environmentally Sensitive Areas identified on the map as well. Large area of potential wetland impact may make this project not feasible."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. Project map was changed to show a dashed line for the corridor to indicate that a final location has not yet been determined. APO staff's research indicated that Sartell's Environmentally Sensitive Areas (ESAs) mirror the Department of Natural Resources and other resource agency sensitive areas. Therefore, we believe the Sartell ESAs are essentially shown by proxy.
1	Environment	Email	SAR-4 (Construct Scout Drive to Connecticut Ave): "Potentially some wetland. Appears corridor could be designed in a way to avoid most/all wetland."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. Project map was changed to show a dashed line for the corridor to indicate that a final location has not yet been determined.
1	Environment	Email	SAR-5 (Construct Then Drive from CR 120 to Scout Drive): "Potentially some wetland. Appears corridor could be designed in a way to avoid most/all wetland."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. Project map was changed to show a dashed line for the corridor to indicate that a final location has not yet been determined.

Comments on the Draft 2045 MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Environment	Email	SAR-6 (Construct 15th street North from Pinecone Road to 19th Ave N): "Appears large amounts of wetland/hydric soil/ high ground water table to contend with. It would be beneficial to have Sartell Environmentally Sensitive Areas identified on the map as well. Large area of potential wetland impact may make this project not feasible. ESA Map would be beneficial to have in this area."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. Project map was changed to show a dashed line for the corridor to indicate that a final location has not yet been determined. APO staff's research indicated that Sartell's Environmentally Sensitive Areas (ESAs) mirror the Department of Natural Resources and other resource agency sensitive areas. Therefore, we believe the Sartell ESAs are essentially shown by proxy.
1	Environment	Email	STR-1 (Widen CR 1 from CR 120 to 9th Ave N): "Will the section fall under the complete streets policy where trails to be included? Maybe some wetland on both sides of the river. Erosion control practices and their timing will be key if project allowed to move forward. This project is immediately above the surface water intake of the City of St. Cloud."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. City Complete Streets policies do not apply to County projects, however, the City and County will cooperate to determine the best design for this project.
1	Environment	Email	STR-2 (Construct CSAH 133 in Sartell from Theisen Road to 19th Ave N): "This alignment could be pushed away from the wetland and designed with less wetland impacts. It should be clarified if the complete streets policy applies to County Road projects."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. The City's Complete Streets policy does not apply to the County, however, the policy does state that "The City may work collaboratively with joint partners such as Stearns and Benton County...to encourage Complete Streets Policy measures are being incorporated for projects under their jurisdiction."
1	Environment	Email	STR-3 (Widen CR 133 in St. Joseph from CSAH 75 to 19th Ave N): "Map should be updated to show that the RR Track is now a regional trail."	8/7/2019	Map was updated as suggested.
1	Environment	Email	STR-4 (Construct I-94 Interchange at CR 136): "Depending on length of off ramp needed, impacts to Trout Stream may occur. Design in a way to avoid impacts to Trout Stream and wetlands associated with the Trout Stream. Need to include Blanding's Turtle and tubercled rein orchid as well? MNDOT would be LGU for wetland impacts."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction.

Comments on the Draft 2045 MTP					
Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Environment	Email	STR-5 (Widen CR 122 from Oak Grove Road to CR 74): "Complete Streets Policy? Design in a way to avoid/minimize impacts to Trout Stream and wetlands associated with the Trout Stream. Need to include Blanding's Turtle and tubercled rein orchid as well?"	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. City Complete Streets policies do not apply to County projects, however, the City and County will cooperate to determine the best design for this project.
1	Environment	Email	STR-6 (Widen CR 75 from MN-15 to Cooper Ave): "Add St. Cloud Sensitive Areas to Map. Complete Streets Policy?"	8/7/2019	Saint Cloud sensitive areas? What are those? City Complete Streets policies do not apply to County projects, however, the City and County will cooperate to determine the best design for this project.
1	Environment	Email	WAT-1 (Widen 10th Ave North from 3rd St N to Division St): "Retrofit Stormwater Practices where appropriate. Project should include complete Streets Policy."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. The City of Waite Park does not have a formal Complete Streets policy.
1	Environment	Email	STC-1 (Construct 40th St S from Cooper Ave to CR 75): "Add St. Cloud Sensitive Areas to Map. Complete Streets Policy? Need to include Blanding's Turtle and tubercled rein orchid as well? Modify map colors so road does not match outstanding for biodiversity. Large amount of potential wetland impact. Location could be altered to minimize wetland impact. Habitat fragmentation."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. APO staff's research indicated that Saint Cloud's Environmentally Sensitive Areas (ESAs) mirror the Department of Natural Resources and other resource agency sensitive areas. Therefore, we believe the Saint Cloud ESAs are essentially shown by proxy.
1	Environment	Email	STC-2 (Widen 40th St S from Oak Grove Rd to Cooper Ave): "Add St. Cloud Sensitive Areas to Map. Complete Streets Policy? Need to include Blanding's Turtle and tubercled rein orchid as well? Modify map colors so road does not match outstanding for biodiversity. Large amount of potential wetland impact."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. APO staff's research indicated that Saint Cloud's Environmentally Sensitive Areas (ESAs) mirror the Department of Natural Resources and other resource agency sensitive areas. Therefore, we believe the Saint Cloud ESAs are essentially shown by proxy.
1	Environment	Email	STC-3 (Widen 3rd St N from 9th Ave to 31st Ave): "Retrofit Stormwater Practices where appropriate. Project should include complete Streets Policy."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. The City of Saint Cloud does have a Complete Streets policy that would apply to this project.

Comments on the Draft 2045 MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Environment	Email	STC-4 (Widen 9th Ave N from 8th St to 15th St): "Retrofit Stormwater Practices where appropriate. Project should include complete Streets Policy. Check Project Scope because it may not be worded correctly."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. The City of Saint Cloud does have a Complete Streets policy that would apply to this project. The error in the project scope was corrected.
1	Environment	Email	STC-5 (Widen Pine Cone Road from CR 134 to CR 120): "Retrofit Stormwater Practices where appropriate. Project should include complete Streets Policy."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. The City of Saint Cloud does have a Complete Streets policy that would apply to this project.
1	Environment	Email	STC-6 (Widen 322nd St from CR 133 to CR 4): "Retrofit Stormwater Practices where appropriate. Minimize wetland impacts."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction.
1	Environment	Email	STC-7 (Widen CR 74 from 33rd St S to 22nd St): "Retrofit Stormwater Practices where appropriate. Project should include complete Streets Policy."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. The City of Saint Cloud does have a Complete Streets policy that would apply to this project.
1	Environment	Email	"There should be a caveat in the report that the proposed alignments are considered concept. It is realized there may be other alignments/options that would reach the goal with less environmental and cultural impacts than what is being proposed."	8/7/2019	For roadways where final location has not been determined, APO staff changed the graphic to show a dashed-line, and text was added noting that a dashed-line meant that a final roadway location had not yet been determined.
1	Environment	Email	"The cities and County should be focusing on further developing within the already developed areas which is more sustainable and not on urban sprawl. Up not out."	8/7/2019	Comment was passed along to the APO member jurisdictions. The APO intends to complete a visioning process in the next several years to develop a consensus regrading future growth patterns.
1	Environment	Email	"Both the City of Sartell and St. Cloud Environmentally Sensitive Areas should be shown on the maps."	8/7/2019	APO staff's research indicated that the cities' Environmentally Sensitive Areas (ESAs) mirror the Department of Natural Resources and other resource agency sensitive areas. Therefore, we believe the ESAs are essentially shown by proxy.
1	Environment	Email	"This planning process should also be looking at the soil resources and not paving over soils that will be critical for local food production in the future."	8/7/2019	An analysis of soil types was added to Chapter 9.

Comments on the Draft 2045 MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Environment	Email	"Clarify if complete streets policy will be applied to each of the projects or not."	8/7/2019	Project pages were updated to denote when a Complete Streets policy was in effect.
1	Environment	Email	"Point to consider is that currently wetland fill associated with public road projects can be mitigated through the state wetland road bank for safety issues only and not capacity issues."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction.
1	Environment	Email	"When these projects create 1 acre or more of new impervious surfaces then there has to be permanent stormwater treatment practices such as an infiltration/filtration basin or stormwater pond, etc.. Those potential impacts are not and should be considered as part of the planning process because they will impact resources outside of the alignment. They may also require the LGU to purchase additional land in the process."	8/7/2019	Comment was added to the general environmental comments in Chapter 9 for reference by the implementing jurisdiction. Impacts such as those noted by the commenter are typically documented in a corridor study. At this regional scale, and without the benefit of knowing precise alignments, cross-sections, and other details, it would be very difficult to accurately account for the amount of impervious surface, etc.
1	Environment	Email	"Depending on the MS4 jurisdiction, the stormwater requirements may apply even if less than 1 acre of impervious surfaces are disturbed/re-developed/created if project location drains to an impaired water."	8/7/2019	Comment was added to the general environmental comments in Chapter 9 for reference by the implementing jurisdiction.
1	Environment	Email	"On all the widening projects it would be beneficial if all the existing impervious surfaces would be retrofitted with stormwater BMP's since they were constructed before any water quality requirements were in place."	8/7/2019	Comment was added to the general environmental comments in Chapter 9 for reference by the implementing jurisdiction.
1	Environment	Email	"There is a push currently in central Minnesota to create pollinator habitat corridors. https://www.greatrivergreening.org/pollinator-recovery/ "	8/7/2019	Comment was added to the general environmental comments in Chapter 9 for reference by the implementing jurisdiction.
1	Environment	Email	"In the highly urban areas street trees should be required to provide habitat and reduce heat island effect."	8/7/2019	Comment was added to the general environmental comments in Chapter 9 for reference by the implementing jurisdiction.
1	Environment	Email	"Any potential water crossings should be designed using the new MN Culvert Design Manual or similar requirements."	8/7/2019	Comment was added to the general environmental comments in Chapter 9 for reference by the implementing jurisdiction.

Comments on the Draft 2045 MTP					
Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Environment	Email	"All these projects are either in the City of St. Cloud and/or Minneapolis/St. Paul Surface Water Management Areas."	8/7/2019	Comment was added to the general environmental comments in Chapter 9 for reference by the implementing jurisdiction.
1	Environment	Email	"The more rural road projects should be designed and managed for wildlife habitat and constructed per http://www.seagrant.umn.edu/downloads/SH14.pdf and the MN Stormwater Manual."	8/7/2019	Comment was added to the general environmental comments in Chapter 9 for reference by the implementing jurisdiction.
1	Environment	Email	"When acquiring land for projects also include additional land/ROW to be able to locate Stormwater BMP's on also. The potential impact of the BMP's should also be discussed in the planning phase for each of the projects."	8/7/2019	Comment was added to the general environmental comments in Chapter 9 for reference by the implementing jurisdiction.
1	Environment	Email	"SAR-1 Expand Leander Avenue to three lanes from Stearns County Road 120 to Heritage Drive in the City of Sartell. "The proposed expansion will pass through approximately 1,000-linear feet of wetland."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction.
1	Environment	Email	"SAR-2 Construct new three lane Roberts Road from Pinecone Road South to Stearns County Road 4 in the City of Sartell. The proposed new road can curve North of the wetland complex, and avoid most of the wetland impact. Please see the attached SAR-2 sketch."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. Project map was changed to show a dashed line for the corridor to indicate that a final location has not yet been determined.

Comments on the Draft 2045 MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Environment	Email	"SAR-3 Construct new two lane 19th Avenue North from 11th ST N to 27th ST N in the City of Sartell. The proposed new 19th Avenue North road will travel through 2,600-linear feet of a wetland complex adjacent to and South of Bakers Lake (Most of the South wetland is within Shoreland-1,000-feet of Bakers Lake.), and another 1,000-feet of a wetland North of Bakers Lake. The proposed new 19th Avenue North will cross a DNR Intermittent Stream. Also 27th ST N will need to be extended through an existing farmstead to match this proposed new 19th Avenue North alignment."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. Project map was changed to show a dashed line for the corridor to indicate that a final location has not yet been determined.
1	Environment	Email	"SAR-4 Construct new two lane Scout Drive from existing Scout Drive to Connecticut Avenue South in the City of Sartell. The proposed new Scout Drive will go through approximately 1,000-linear feet of wetland."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. Project map was changed to show a dashed line for the corridor to indicate that a final location has not yet been determined.
1	Environment	Email	"SAR-5 Construct new two lane Then Avenue from proposed new Scout Drive alignment to SCAH 120 in the City of Sartell. The proposed new Then Lane will go through an existing old farmstead."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. Project map was changed to show a dashed line for the corridor to indicate that a final location has not yet been determined.
1	Environment	Email	"SAR-6 Construct new four lane 15th St N from Pinecone RD to proposed 19th AVE N alignment. The proposed new 15th ST North road will travel through 1,350-linear feet of a wetland complex adjacent to and South of Bakers Lake (Most of this wetland is within Shoreland-1,000-feet of Bakers Lake.), and another 2,000-linear feet of a wetland complex East of Bakers Lake. The proposed new 15th ST N will cross a DNR Intermittent Stream."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. Project map was changed to show a dashed line for the corridor to indicate that a final location has not yet been determined.

Comments on the Draft 2045 MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Environment	Email	"STC-1 Construct new 40th ST S four lane alignment from Cooper Ave S to CSAH 75/Roosevelt RD in the City of ST Cloud. The proposed new 40th ST S will travel through 4,000-linear feet of a large wetland complex."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction. Project map was changed to show a dashed line for the corridor to indicate that a final location has not yet been determined.
1	Environment	Email	"STC-2 Widen 40th St S to four lanes from CSAH 136/Oak Grove RD SW to Cooper Ave S in the City of St Cloud. The proposed expansion of 40th St S will travel through 2,100-linear feet of wetland in three different wetland complexes."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction.
1	Environment	Email	"STR-2 Construct Stearns County Road 133/Second Street S new alignment of four lanes from 19th Ave N to existing Second ST S in the City of Sartell. The new alignment can be constructed adjacent and south and east of the wetland and woods."	8/7/2019	Comment was added to the project description page in Chapter 9 for reference by the implementing jurisdiction.
1	Environment	Email	"STR-4 Construct New Interchange at Interstate - 94 from existing CSAH 136 overpass in Saint Cloud. Interstate -94 is a limited access through road adding another interchange is counter to the purpose of a limited access Interstate Highway."	8/7/2019	MnDOT is aware of the project and had indicated a willingness to work with the County and the City on the development of the project.
1	System	Online Survey	"Bring Hwy 15 above ground and eliminate awful traffic and its accident prone."	8/14/2019	Comment was passed along to MnDOT for their consideration. In 2020 the APO will be coordinating a corridor study of MN-15 between 2 nd St. S and Veteran's Drive.
1	System	Online Survey	When asked for ideas for additional projects: "Bring Hwy 15 above ground. TOO many accidents and too many traffic issues. This should have been done 20 years ago."	8/14/2019	In 2020 the APO will be coordinating a corridor study of MN-15 between 2nd St S and Veteran's Drive
1	System	Online Survey	When asked for ideas for additional projects: "Expansion of Cooper Street from 2nd Street South to Traverse Road."	8/13/2019	Comment was passed along to the City of Saint Cloud for their consideration.

Comments on the Draft 2045 MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	System	Online Survey	"Love the diversion diamond interchange which eliminated many traffic problems. NOW - work on Hwy 15. It's created slow traffic problems at every intersection to include dangerous driving."	8/14/2019	In 2020 the APO will be coordinating a corridor study of MN-15 between 2nd St S and Veteran's Drive
1	Bike/Ped	Online Survey	When asked for ideas for additional projects: "safe pedestrian / bike crossing over cty 75"	8/14/2019	A planning study for a pedestrian underpass of CR 75 was completed. To date, funding for construction has not been identified.
1	Funding	Online Survey	When asked for ideas for additional projects: "There is not sufficient funding. We don't need it."	8/14/2019	Comment was provided to the appropriate jurisdiction for their consideration.
1	Projects	Online Survey	When asked for ideas for additional projects: "None"	8/14/2019	Comment was provided to the appropriate jurisdiction for their consideration.
1	Funding	Online Survey	When asked for ideas for additional projects: "St Joseph does not need, nor can afford any additional transportation"	8/14/2019	Comment was provided to the appropriate jurisdiction for their consideration.
1	System	Online Survey	When asked for ideas for additional projects: "Fix hyw 15. Put in it the air from 2nd st to co rd 1."	8/13/2019	In 2020 the APO will be coordinating a corridor study of MN-15 between 2nd St S and Veteran's Drive
3	Funding	Online Survey	When asked for ideas for additional projects: "QUIT WASTING TAXPAYER DOLLARS ON SOMETHING NO ONE USES."	8/14/2019	Comment was provided to the appropriate jurisdiction for their consideration.
3	Funding	Online Survey	When asked for ideas for additional projects: "QUIT WASTING TAXPAYER DOLLARS ON SOMETHING NO ONE USES."	8/14/2019	Comment was provided to the appropriate jurisdiction for their consideration.
1	System	Online Survey	When asked for ideas for additional projects: "Make the 4 different Elm St. Easts in St. Joe connect and also connect it to CSAH 134"	8/14/2019	Comment was provided to the appropriate jurisdiction for their consideration.
1	System	Online Survey	When asked for ideas for additional projects: "Redo intersection of CSAH133 and 320th St to add roundabout"	8/14/2019	Comment was provided to the appropriate jurisdiction for their consideration.

Comments on the Draft 2045 MTP					
Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	System	Online Survey	When asked for ideas for additional projects: "County rd 133 should be a divided four lane rd,"	8/14/2019	The MTP includes a project to reconstruct a portion of Stearns CR 133 to a four-lane section in Saint Joseph. There is also a project to construct a new segment of CR 133 between 19th Ave N and Theisen Rd in Sartell. This comment was provided to the appropriate jurisdiction for their further consideration regarding those segment of CR 133 not included in the MTP.
1	System	Online Survey	When asked for ideas for additional projects: "Highest priority should be making it faster to get across or around St. Cloud. I don't go to the East side because it takes 30 minutes to get there from the west side."	8/14/2019	The plan includes a modeling scenario for an urban arterial "ring-road" parts of which have already been constructed and parts of which are expected to be constructed as part of this plan. However, there are many segments of the ring-road for which the implementing jurisdiction(s) have not identified sufficient funding to construct.
1	System	Online Survey	When asked for ideas for additional projects: "Rebuild 22nd St S from CR75 to Cleawater Rd"	8/14/2019	Comment was provided to the appropriate jurisdiction for their consideration.
1	System	Online Survey	When asked for ideas for additional projects: "County Road 4 from the Mille Lacs county line."	8/17/2019	The majority of Benton CR 4 lies outside the APO's planning area, however, the comment was provided to the appropriate jurisdiction for their consideration.
1	System	Online Survey	"Hwy 15 bypass over st cloud"	8/16/2019	The APO has scheduled an operations study for MN-15 in 2020.
1	System	Online Survey	When asked for ideas for additional projects: "Benton County/ city streets are horrible! City won't do anything but fill potholes. "	8/17/2019	Comment was provided to the appropriate jurisdiction for their consideration.
1	System	Online Survey	When asked for ideas for additional projects: "Add'l way to cross railroad tracks in N St. Cloud"	8/17/2019	Comment was provided to the appropriate jurisdiction for their consideration.
1	System	Online Survey	When asked for ideas for additional projects: "Right turn lanes on university drive- right turn lanes on Washington memorial Drive."	8/17/2019	Comment was provided to the appropriate jurisdiction for their consideration.
1	System	Online Survey	When asked for ideas for additional projects: "Some method of helping the flow of traffic through the city...Overpasses on Highway 15?..A new road on the west side to allow through traffic to bypass the city?"	8/18/2019	The APO has scheduled an operations study for MN-15 in 2020. The MTP includes a modeling scenario for an urban arterial "ring-road" parts of which have already been constructed and parts of which are expected to be constructed as part of this plan. However, there are many segments of the ring-road for which the implementing jurisdiction(s) have not identified sufficient funding to construct.
1	System	Online Survey	When asked for ideas for additional projects: "Fix 25th Ave N from 3rd Street to 13 street Dr see"	8/18/2019	Comment was provided to the appropriate jurisdiction for their consideration.

Comments on the Draft 2045 MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	System	Online Survey	When asked for ideas for additional projects: "Both 1st St. N and 1st So. west of about 25th. There is no reason for the current condition of these busy streets. A good example is 1st North between 19th and 33rd. The street is patches over patches."	8/18/2019	Comment was provided to the appropriate jurisdiction for their consideration.
1	System	Online Survey	When asked for ideas for additional projects: "fire whoever is in charge of stop light timing and get hire someone who knows what they are doing."	8/17/2019	The MTP notes that traffic signal timing adjustments can be made remotely based on traffic conditions for some traffic signals at major intersections in the MPA (see Chapter 4). However, monitoring is only done on a part-time basis by a single staff member. For other traffic signals, the timing must be set in the roadside cabinet and the intersection cannot be monitored remotely. We will pass this comment along to the appropriate jurisdiction(s) for their further consideration.
1	System	Online Survey	When asked for ideas for additional projects: "Nothing"	8/16/2019	Comment was provided to the appropriate jurisdiction for their consideration.
1	System	Online Survey	When asked for ideas for additional projects: "Widen and sidewalks on 22nd from Cooper to Oak Grove and along oak grove to Oak Hill school. This is a safety issue for students walking and biking to school."	8/16/2019	Comment was provided to the appropriate jurisdiction for their consideration.
1	System	Online Survey	When asked for ideas for additional projects: "A river crossing south of the golf coarse."	8/17/2019	The plan includes a modeling scenario for an urban arterial "ring-road", including a new Mississippi River crossing at 33rd St South. However, a project of that magnitude is expected to cost in the range of \$60 to \$100 million (2017 dollars). By comparison, Federal formula funds for surface transportation amount to about \$2 to \$2.5 million each year for the entire MPA.

Comments on the Draft 2045 MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	System	Online Survey	When asked for ideas for additional projects: "STR12 has already been rebuilt by Stearns County in 2018. There should be no reason to touch this road for the next 20 years, unless MNDOT decides to add an interchange with I-94 and CR 136."	8/16/2019	APO staff will pass this comment along to Stearns County.
1	System	Online Survey	When asked for ideas for additional projects: "I would look at extending STR-12 all the way to Highway 15 and improve the junction at Highway 15, before the adjacent properties are all developed. Looking at STR-12, it goes south. The street being improved in the proposal (just past the proposal) then makes a turn to the west. The turn and the west ward road is not part of the proposal. I think this westerly road goes all the way west to join Highway 15 just north of Lumeburg (technically St. Augusta). It only makes sense to me to plan for completion of the route I am mentioning. It would also seem to me to be more cost effective to do it all at the same time that the partial improvement is taking place, than finishing it at a later time. This could also include much better and more efficient intersection improvement at the junction with Highway 15 than the current stoplight."	8/18/2019	APO staff passed this comment along to Stearns County. By extending the project as the commenter proposes, the County would be outside of fiscal constraint. Another project would need to be deleted from the MTP in order to complete the project as the commenter is suggesting.
1	Rail	Online Survey	When asked for ideas for additional projects: "Once you show a positive ROI on rail, then start thinking about NorthStar, was we will be in the driver-less era."	8/17/2019	The MTP includes a strategy to preserve and enhance long-distance commuter connections to the Twin Cities, including the extension of the Northstar Commuter Rail to Saint Cloud.
1	Rail	In-Person	Finishing the Northstar train (having it come to Saint Cloud) is very important. Doing this would be very beneficial for economic development, especially on the east side of Saint Cloud.	8/17/2019	Goal 2, Strategy 2, Objective 3 of the MTP states: "The APO will preserve and enhance long-distance commuter connections to the Twin Cities, including, but not limited to, the extension of the Northstar Commuter Rail to the Saint Cloud metro."

Comments on the Draft 2045 MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Bike/Ped	In-Person	Areas in Saint Joseph are not really walkable. For example, areas around the industrial park. If a person does not have a car and works around that area, it is not very safe to walk there. There needs to be a safe way for people to cross 75. There was talk about an underpass, but that has not happened. The city has a thriving main street, make it accessible. There are huge sections in the city that are lacking sidewalks. We live in an area that doesn't have sidewalks and by our house we have traffic that goes up to 40 mph. It is not safe for us to walk.	8/17/2019	The comment was passed along to the the City of Saint Joseph. In 2020, the APO expects to complete an Active Transportation Plan for the region that includes identifying and prioritizing needs in the bicycle and pedestrian networks.
1	Transit	In-Person	Public busing: There needs to be some type of affordable public busing for residents in Saint Joseph, particularly the college students. We want people to shop locally, but they need to have a way to get from the college, that's affordable, to do so. They can pay to use Tri-CAP, but it can get really expensive. If they are low income and have a job in Saint Cloud it's not easy to be able to get there.	8/17/2019	APO staff passed this comment to the City of Saint Joseph and Metro Bus. Metro Bus is currently re-examining its system to determine how and when to grow. They have been in talks with the City of Saint Joseph about the possibility of extending service to the City.
1	System	In-Person	"I'm happy STR-3 is potentially expanding to four lanes, and glad I didn't buy a house along there. Noise pollution is a pet peeve of mine."	8/17/2019	No action taken, but APO staff appreciate the comment.
1	System	In-Person	"The bridge on Saint Germain is effecting east bound traffic...also I used to hate roundabouts, but now they are actually very useful; especially in Sartell."	8/17/2019	No action taken, but APO staff appreciate the comment.
2	Transit	In-Person	"I'm waiting for the Northstar train to come"	8/26/2019	Goal 2, Strategy 2, Objective 3 of the MTP states: "The APO will preserve and enhance long-distance commuter connections to the Twin Cities, including, but not limited to, the extension of the Northstar Commuter Rail to the Saint Cloud metro."

Comments on the Draft 2045 MTP					
Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Transit	In-Person	"I want bus service more than once per hour, but otherwise Metro Bus does a pretty good job"	8/26/2019	APO staff passed this comment along to Metro Bus for their further consideration.
1	System	In-Person	"I-94 should be four lanes wide in each direction from the Twin Cities all the way to Alexandria"	8/26/2019	Such a project would be extremely costly, and current traffic counts do not support the need for 8-lanes.
1	System	In-Person	"MN-15 is too small (i.e., narrow – not enough lanes)"	8/26/2019	The Travel Time Reliability Index does indicate high travel times along the corridor. The APO has scheduled a corridor study for MN-15 from 2nd St S to Veteran's Drive in 2020 to examine existing conditions and make recommendations for improvements.
1	System	In-Person	"MN-23 is too small (i.e., narrow – not enough lanes)"	8/26/2019	The Travel Time Reliability Index does indicate high travel times along the corridor. The APO will work with MnDOT to look for ways to improve (i.e., lower) travel times. But it should be noted that any recommendations for improvement should be fiscally attainable, which limits any potential recommendations.
1	Transit	In-Person	"Northstar train should be completed to Saint Cloud" Commenter lives in Saint Cloud but works in Twin Cities and takes the train every day, but says it costs him 40 extra minutes to take the link and transfer to the train in Big Lake	8/26/2019	Goal 2, Strategy 2, Objective 3 of the MTP states: "The APO will preserve and enhance long-distance commuter connections to the Twin Cities, including, but not limited to, the extension of the Northstar Commuter Rail to the Saint Cloud metro."
1	System	In-Person	"Fix the streets – bad pavement beats up the buses"	8/26/2019	The only system preservation projects identified in this plan are total reconstructs. It is unlikely that jurisdictions would be inclined to Federalize maintenance projects below that level. APO staff will pass this comment along to all jurisdictions.
1	Funding	In-Person	"Reallocate tax revenue to fix more roads"	8/26/2019	The APO will pass this comment along to all jurisdictions.
1	Projects	In-Person	"I like the BEN-4 project"	8/26/2019	No action taken, but APO staff appreciate the comment.
1	Transit	In-Person	"Bus should be quicker on time" (commenter seemed to be advocating for shorter headways)	8/26/2019	APO staff will pass this comment along to Metro Bus.

Comments on the Draft 2045 MTP					
Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	System	In-Person	"I don't think there should be as much construction"	8/26/2019	While APO staff appreciates how frustrating road construction can be, it is a necessary part of keeping roadways in good working order. However, we will explore options for better coordination of construction in an attempt to avoid too many roadways in one neighborhood being under construction at the same time, or the same roadway being under construction in multiple years.
1	Transit	In-Person	"It would be nice to have regional intercity light rail to supplement Metro Bus. Rail doesn't detour because of road construction."	8/26/2019	Given the expenses associated with building, maintaining, and operating a rail system, they tend to provide the most benefits in high density and high population urban centers. The Saint Cloud MPA does not have sufficient population or density to make a regional rail system cost-effective. Connecting the MPA to the Twin Cities via rail will likely be more cost effective given the distance and the concentration of jobs in the Twin Cities.
1	Transit	In-Person	"I like the bus so far (commenter has just moved to Saint Cloud)"	8/26/2019	APO staff will pass this comment along to Metro Bus.
1	Bike/Ped	In-Person	"More bikes"	8/30/2019	Active transportation, including bicycling, is discussed throughout the document. The MTP does not make any recommendations about bicycling infrastructure at specific locations, but the APO anticipates such recommendations from the Active Transportation Plan which should be completed in 2020.
1	Bike/Ped	In-Person	"We need an east-west bike facility connecting Rivers Edge Park with the Hospital"	8/30/2019	The MTP does not make any recommendations about bicycling infrastructure at specific locations, but the APO anticipates such recommendations from the Active Transportation Plan which should be completed in 2020. The APO will more fully consider this comment as part of that planning effort.
1	Bike/Ped	In-Person	Commenter likes seeing bicycle traffic picking up	8/30/2019	APO staff agrees. No action taken.
1	Bike/Ped	In-Person	"We need a safe bike lane for Cooper in south Saint Cloud"	8/30/2019	The MTP does not make any recommendations about bicycling infrastructure at specific locations, but the APO anticipates such recommendations from the Active Transportation Plan which should be completed in 2020. The APO will more fully consider this comment during that planning process.

Comments on the Draft 2045 MTP					
Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Bike/Ped	In-Person	"As a bicyclist, it feels nice being separated from cars and trucks" (as with cycle tracks and off-road bike paths; commenter also noted even a normal curb makes him feel safer)	8/30/2019	APO staff forwarded this comment to the jurisdictions for their consideration when designing bicycle facilities. We will also take this into consideration during the development of the Active Transportation Plan.
1	Bike/Ped	In-Person	"Intersection at 3rd Street North and 10th Ave does not feel safe to cross as a cyclist." Commenter normally travels further north on CR 138 (10th Ave) near McDonalds and crosses there mid-block because it feels safer.	8/30/2019	APO staff provided this comment to Stearns County and the City of Waite Park for their consideration.
1	Bike/Ped	In-Person	Commenter wants development of a grid of trails – perhaps a mile or two miles between parallel routes	8/30/2019	APO staff will more fully consider and explore this comment as part of the Active Transportation Plan which will be completed in 2020.
4	Transit	In-Person	"Northstar rail is needed in Saint Cloud"	8/22/2019	Goal 2, Strategy 2, Objective 3 of the MTP states: "The APO will preserve and enhance long-distance commuter connections to the Twin Cities, including, but not limited to, the extension of the Northstar Commuter Rail to the Saint Cloud metro."
1	System	In-Person	"University Drive to Highway 10, did they block it off?"	8/22/2019	City of Saint Cloud staff report that the city is no longer seeking to connect University Drive to US 10.
1	System	In-Person	"The left arrows in Saint Cloud don't work, I just want the flashing yellow lights"	8/22/2019	APO staff provided this comment to the jurisdictions for their further consideration.
1	System	In-Person	"25th over the tracks, one straight through without having to go over Highway 15"	8/22/2019	APO staff provided this comment to the City of Saint Cloud for their further consideration.
1	System	In-Person	"University Drive (merge to one lane) it needs better signage or repainting to indicate the two to one lane change"	8/22/2019	APO staff provided this comment to the City of Saint Cloud for their further consideration.
1	Transit	In-Person	"We need more public transit, but I have a few safety concerns"	8/22/2019	APO staff provided this comment to Metro Bus for their further consideration.
1	Bike/Ped	In-Person	"Walking down Division Street, even with the crosswalks and sidewalks I almost get hit on a daily basis"	8/22/2019	APO staff provided this comment to MnDOT and the City of Saint Cloud for their further consideration.
1	Transit	In-Person	"Connex Bus is working and should stay permanently"	8/22/2019	APO staff provided this comment to Metro Bus for their further consideration.

Comments on the Draft 2045 MTP					
Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Transit	In-Person	"I take the bus everyday"	8/22/2019	No action taken, but APO staff appreciates the comment.
1	System	In-Person	"Division lights need to be fixed, and Saint Cloud in general"	8/22/2019	APO staff provided this comment to the City of Saint Cloud.
1	Transit	In-Person	"Bus Routes 1 and 2 should be more convenient"	8/22/2019	APO staff provided this comment to Metro Bus for their further consideration.
1	Transit	In-Person	"Add a park and ride right by the prison"	8/22/2019	APO staff provided this comment to Metro Bus and the City of Saint Cloud for their further consideration.
1	Bike/Ped	In-Person	"The population is growing, and all kids need bikes"	8/22/2019	No action taken, but APO staff appreciates the comment.
1	Bike/Ped	In-Person	"More sidewalks and trails to be able to get to parks"	8/22/2019	APO staff will more fully consider and explore this comment as part of the Active Transportation Plan which will be completed in 2020.
1	Transit	In-Person	"Fix route 12, make it go to Harvest Bank in Saint Augusta"	8/22/2019	APO staff provided this comment to Metro Bus for their further consideration.
1	Bike/Ped	In-Person	"We need more bike trails around the area to help the cyclist population"	8/22/2019	APO staff will more fully consider and explore this comment as part of the Active Transportation Plan which will be completed in 2020.
1	Bike/Ped	In-Person	"Sidewalks in the winter and very icy and dangerous"	8/22/2019	APO staff provided this comment to the jurisdictions for their further consideration.
1	Bike/Ped	In-Person	"Bike parking at the Stearns County Sheriffs office, closer to the entrance"	8/22/2019	APO staff provided the comment to Stearns County for their further consideration.
1	System	In-Person	"Why are you redoing the road outside of Wilson? It is brand new."	8/22/2019	STC-4 is a widening project for 9th Ave North in Saint Cloud. While the pavement may be in good condition today, at some point in the next 20 years, the City intends to widen the roadway.
1	System	In-Person	"East Saint Germain is horrible, way too many holes"	8/22/2019	The MTP only considers specific maintenance projects that are major reconstructions. Other more minor maintenance work is expected to occur as needed and will be directed by the jurisdiction responsible for the roadway. This comment was passed to the City of Saint Cloud for their further consideration.
1	Transit	In-Person	"24 hour bus service would be nice, or at least run the buses until 10pm...also Holidays should run on Sunday times for people to still get to work"	8/22/2019	APO staff provided this comment to Metro Bus for their further consideration.

Comments on the Draft 2045 MTP					
Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	System	Online Survey	When asked for ideas for additional projects: "I would simply paint some lines on the streets: Center line, fog line, bike lane, bike/vehicle sharrows..."	9/3/2019	APO staff provided this comment to the jurisdictions for their further consideration.
1	Bike/Ped	Online Survey	When asked for ideas for additional projects: "Develop a City Bike-Ped Plan document."	9/3/2019	The APO will be developing the Active Transportation Plan which will be completed in 2020.
1	Bike/Ped	Online Survey	"Encourage bikes and walkers. Enforce moving violations. Speed kills."	9/3/2019	APO staff provided this comment to the jurisdictions for their further consideration.
1	Projects	Online Survey	When asked for ideas for additional projects: "STC-8"	8/28/2019	STC-8 is in the MTP
1	Funding	Online Survey	When asked for ideas for additional projects: "There isn't sufficient funding so why ask? Spend money wisely!!"	8/30/2019	No action taken, but APO staff appreciates the comment.
1	Bike/Ped	Online Survey	When asked for ideas for additional projects: "More Bike Lanes"	8/30/2019	APO staff will more fully consider and explore this comment as part of the Active Transportation Plan which will be completed in 2020.
1	System	Online Survey	When asked for ideas for additional projects: "Widen Killian Blvd"	8/30/2019	APO staff provided this comment to the City of Saint Cloud for their further consideration. However, traffic counts indicate that, on average, Killian carries about 6,500 vehicles on the segment north of University, and about 3,500 vehicles on the segment south of University - both of which are well under the roadway's carrying capacity.
1	System	Online Survey	"Whats with all the intersections in town that don't line up, in front of Byerlys on 25th ave, new Costco intersection, 22nd st coming down the hill on old hyw 15, all designed by drunk people?"	8/28/2019	APO staff is confused by the commenter's references to 25th Ave at Division and 33rd Ave at 2nd St S - both intersections appear to line up. APO does appreciate the comment about 22nd St at West St. Germain - the intersection is offset, but we do not know why it was designed that way. APO staff will pass this comment to the City of Saint Cloud for further consideration.
1	System	Online Survey	"Widen 19th. Avenue between County Road 133 and County Road 4."	9/10/2019	19th Ave between CR 133 and CR 4 is scheduled to be reconstructed in 2022. The new cross-section will include curb and gutter, and turning lanes at major intersections.

Comments on the Draft 2045 MTP					
Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	System	Online Survey	"Reconstruct the grading of the curved area of the eastern portion of Northwood Lane immediately after exiting Veteran's Drive. This location is continually under water after periods of high rain/snow melt."	9/10/2019	APO staff passed this comment to the City of Saint Cloud and Stearns County.
1	Transit	Online Survey	"Analyze increased need for metro transit to the developing areas west of St. Cloud and Sartell."	9/10/2019	APO staff anticipates that Metro Bus will soon be updating its Transit Development Plan. We passed this comment to Metro Bus for their further consideration.
1	Transit	Online Survey	"Although not specifically addressed in this draft plan, serious consideration needs to be given to adding metro transit service to the expanding residential area in west St. Cloud. Specifically west of the intersection with 19th. Avenue South and County Road 4."	9/10/2019	APO staff anticipates that Metro Bus will soon be updating its Transit Development Plan. We passed this comment to Metro Bus for their further consideration.
1	Rail	In-Person	Light Rail-extension 'The Northstar,' shouldn't have to drive to Twin Cities if I can just take the train.	9/11/2019	Goal 2, Strategy 2, Objective 3 of the MTP states: "The APO will preserve and enhance long-distance commuter connections to the Twin Cities, including, but not limited to, the extension of the Northstar Commuter Rail to the Saint Cloud metro."
1	Transit	In-Person	Buses should run later than 8-9pm, some people work second shift jobs. Route 21/22 should run later, the journey home is too long and people can't get jobs because of it. More public transportation needs to be readily available to Saint Cloud.	9/11/2019	APO staff provided this comment to Metro Bus for their further consideration.
1	System	In-Person	"Fix potholes"	9/11/2019	The MTP prioritizes the use of Federal transportation funds in the region. Funding for filling potholes is almost always from local, not Federal, sources and so this plan does not specifically address potholes. But APO staff appreciates the comment and will pass it along to the jurisdictions for their further consideration.

Comments on the Draft 2045 MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Bike/Ped	In-Person	The non-existent sidewalk across University Bridge...it looks like a sidewalk but just gets thinner and the person is in the traffic lane before they know it	9/11/2019	There is a raised sidewalk all the way across the University Ave bridge. It appears the commenter is referring to the sidewalk adjacent to University Drive between the river and 5th Ave South. The sidewalk on the north side of the roadway does narrow. APO staff passed this comment to City of Saint Cloud for their further consideration.
1	Transit	In-Person	Trolley or something like dial-a-ride is needed for students to get across University safely	9/11/2019	APO staff passed this comment along to Metro Bus for their further consideration.
1	System	In-Person	Round-a-bout issues on 5th Ave, no one knows how to use it. We need better driver education.	9/11/2019	APO staff forwarded this comment to the jurisdictions for their further consideration.
1	System	In-Person	Saint Cloud did a really nice job redoing the alleyways	9/11/2019	No action taken.
1	Transit	In-Person	MetroBus does a really awesome job! But I've seen people not pay for their ride...and they need to it is a service.	9/11/2019	APO staff passed this comment along to Metro Bus for their further consideration.
1	System	In-Person	Saint Cloud is doing really well with their repairing jobs on the roads, they are quick at fixing issues. Construction is always going to be needed! How to prioritize?	9/11/2019	The purpose of performance-based planning is to help prioritize the various needs and guide decision-making.
1	General	In-Person	Car Insurance need to go down and gas it too expensive	9/11/2019	While the price of car insurance and gas is beyond the scope of this document, one of the non-project strategies identified in the plan is to develop a plan for more affordable transportation.
1	Transit	In-Person	Bus stops at 5:45 pm on the weekends and that is unacceptable. What if someone is having an emergency?	9/11/2019	APO staff passed this comment along to Metro Bus for their further consideration.
1	Bike/Ped	In-Person	No distance is too great to get to on a bike. I avoid 8th and 9th aves, I take the side roads instead.	9/11/2019	No action taken, but APO staff appreciates the comment.
1	General	In-Person	I love the Hands-free law, I wish it would be stricter though.	9/11/2019	No action taken, but APO staff appreciates the comment.
1	Projects	Email	Comment received on Chapter 1, page 5 about the Appendix A matrix: "Good."	9/12/2019	No action taken, but APO staff appreciates the comment.

Comments on the Draft 2045 MTP					
Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	General	Email	Commenter referring to the number of full time staff in Chapter 1, page 6: "Isn't it 4?"	9/12/2019	The APO has five full-time staff positions that have been approved by the Board, but one position is vacant. We updated the text to make this more clear.
1	General	Email	Commenter referring to an incomplete sentence and adding a suggestion in Chapter 1, page 9: "Something's missing - not a full sentence." Also suggest amending to past tense such as "APO member jurisdictions and agencies formed the center..." or "...interested citizens also had an opportunity..."	9/12/2019	APO staff have reviewed the sentence in question. It is a full sentence. Amendments to the text to change the tense have been completed.
1	Performance	Email	Commenter suggestion in Chapter 2, page1: "Good that APO produces an annual report, but for clarity in future MTP updates, would be helpful to identify which annual report serves as the baseline. This can be a simple statement - the 20xx annual performance report serves as the baseline report or provides the baseline data or something that to effect."	9/12/2019	APO staff have added the year 2018 to the annual performance reports.
1	Stats	Email	Commenter suggestion in Chapter 2, page 7: "Recommend a consistent end year. Sometimes it's 2015 - sometimes 2016 - sometimes 2017."	9/12/2019	APO staff utilized the most recent data available to them at the drafting of this plan. As such, some of the data available was from dates such as 2015, 2016, 2017, etc. APO staff have notated these inconsistencies within the text of Chapter 2.
1	Map	Email	Commenter has a question on the People in Poverty Map in Chapter 2, page 11: "What area is being reviewed? Census block groups? Tracts?"	9/12/2019	The map shows Census tracts. The figure description was updated to make this clear.
1	Map	Email	Commenter has a question on the People-of-Color Map in Chapter 2, page 12: "What area is being reviewed? Census block groups? Tracts?"	9/12/2019	The map shows Census tracts. The figure description was updated to make this clear.
1	Stats	Email	Commenter asks about addition to People-of-Color in Chapter 2, page 13: "Where are Hispanic individuals? This population group is specifically identified in environmental justice orders."	9/12/2019	Individuals of Hispanic descent are part of environmental justice orders. However, due to the way the 2000 U.S. Census collected data regarding people of Hispanic origin APO staff could not accurately determine the growth rate of the MPA's Hispanic population from 2000 to 2015. This information is included within the MTP.
1	General	Email	Commenter suggests a correction in Chapter 2, page 18: "Coborn's?"	9/12/2019	APO staff corrected the spelling error.

Comments on the Draft 2045 MTP					
Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Stats	Email	Commenter makes a suggestion in Chapter 2, page 24: "Again, recommend a consistent year. The previous graphic on AADT ended with 2015 - this graphic is 2016."	9/12/2019	APO staff utilized the most recent data available to them at the drafting of this plan. As such, some of the data available was from dates such as 2015, 2016, 2017, etc. APO staff have notated these inconsistencies within the text of Chapter 2.
1	General	Email	Spelling correction in Chapter 2, page 39: "green"	9/12/2019	APO staff corrected the spelling error.
1	General	Email	Commenter suggestion in Chapter 2, page 41 referring to the Roads within the APO Jurisdiction (2015) graphic...: "This graphic is hard to read/blurry - particularly the red slice."	9/12/2019	APO staff have remade the graphic to make it easier to read.
1	Map	Email	Commenter suggestion in Chapter 2, page 42: "Add data year."	9/12/2019	APO staff have updated the figure description to indicate the figure utilized 2015 data.
1	Map	Email	Commenter suggestion in Chapter 2, page 43: "Add data year."	9/12/2019	APO staff have updated the figure description to indicate the figure utilized data from 2015 through 2017.
1	Data	Email	Commenter is asking about the Structural Condition of all Bridges graphic in Chapter 2, page 44: "Is this an average of 3-year data or does the data vary by bridge?"	9/12/2019	Bridges within the APO's MPA are not inspected annually. The data provided in map and the chart reflect the last time each bridge was inspected. All bridges within the MPA were inspected at least once during this timeframe 2015-2017. This clarifying language was added in the MTP.
1	Map	Email	Commenter suggestion in Chapter 2, page 60: "Could this be mapped? i.e., areas with high concentrations of poverty and fixed route service?"	9/12/2019	APO staff have mapped the requested information and have incorporated it into the MTP.
1	General	Email	Commenter correction in Chapter 2, page 79: "Delete "has""	9/12/2019	APO staff have deleted the word "has" where referenced.
1	General	Email	Commenter correction in Chapter 2, page 80: "Delete "has""	9/12/2019	APO staff have deleted the word "has" where referenced.
1	General	Email	Commenter suggests correction in Chapter 2, Page 84: "Should this be MPA?"	9/12/2019	APO staff have changed the text to reflect this correction.
1	Data	Email	Commenter questions data in chapter 2, page 95: "Why is the focus FY16 when the graphic below includes 2018?"	9/12/2019	APO staff have rewritten the text to reflect the most recent data provided. APO staff have also adjusted the endpoint on-time performance rate to the most recent data available (fiscal year 2018).

Comments on the Draft 2045 MTP					
Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Data	Email	Commenter questions data in chapter 2, page 95: "Graphic shows data through 2018."	9/12/2019	APO staff have corrected this typo.
1	Aviation	Email	Commenter suggests addition in Chapter 3, page 16: "The State Aviation System Plan should be part of the bulleted list. The plan is currently being updated, but a previous version was completed as part of the family of plans."	9/12/2019	APO staff have moved the State Aviation System Plan to be incorporated as part of the bulleted list. It is noted that this plan is currently being updated. This plan was not reviewed as part of the development of the MTP.
1	General	Email	Commenter suggests correction in Chapter 3, page 18: "Investment"	9/12/2019	APO staff have corrected this typo.
1	Bike/Ped	Email	Commenter suggests update in Chapter 3, page 27: "Statewide Pedestrian System Plan is underway"	9/12/2019	APO staff have added a small section addressing the statewide pedestrian system plan. This section includes the goals for the development of this plan. This is found immediately after the Minnesota Walks 2016 section.
1	MnDOT	Email	Commenter suggests update in Chapter 3, page 31: "MnDOT Statewide Regional ITS Architecture Version 2018"	9/12/2019	Due to the length of this document and the lack of time to review and accurately summarize this most recent plan during the public comment period, APO staff have opted to notate the 2018 ITS plan has been completed and have provided a link to the document.
1	MnDOT	Email	Commenter suggests update in Chapter 3, page 31 referring to the MnDOT Statewide ITS Plan 2015: "Update to reflect 2018 plan."	9/12/2019	Due to the length of this document and the lack of time to review and accurately summarize this most recent plan during the public comment period, APO staff have opted to notate the 2018 ITS plan has been completed and have provided a link to the document.
1	Bike/Ped	Email	Commenter suggests additions in Chapter 3, page 32: "What about the district CHIP or the district bicycle plan?"	9/12/2019	Due to time constraints surrounding the development of the APO's MTP, APO staff acknowledge not all plans developed by its member jurisdictions were reviewed. Links to those these specific plans have been listed within the MTP for reference.
1	MnDOT	Email	Commenter suggests addition in Chapter 3, page 32: "Could note the SHSP is being updated."	9/12/2019	A notation of the SHSP's update has been listed within the MTP.

Comments on the Draft 2045 MTP					
Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Freight	Email	Commenter suggesting a correction in chapter 4, page 2: "Minnesota Statewide Freight System and Investment Plan?"	9/12/2019	This correction to the name of the Minnesota Statewide Freight System and Investment Plan has been made to the text.
1	Freight	Email	Commenter suggests update in chapter 4, page 3: "Good! But update to Minnesota Statewide Freight System and Investment Plan as the title. Goal text can remain unchanged."	9/12/2019	This correction to the name of the Minnesota Statewide Freight System and Investment Plan has been made to the text.
1	Freight	Email	Commenter recommendation in chapter 4, page 9: "Recommend deleting "enhanced." Only referred to as the NHS."	9/12/2019	The word "enhanced" has been deleted.
1	General	Email	Commenter has a question in chapter 4, page 9: "Will the final plan remove "as proposed"?"	9/12/2019	Yes. This has been removed from the text.
1	System	Email	Commenter suggests to define in chapter 4, page 17: "Define "it." Assume it's connectivity."	9/12/2019	The word "it" in this context refers to connectivity. Connectivity has been added to clarify.
1	System	Email	Commenter has a question regarding a study in chapter 4, page 19: "Is this the same study as the 2003 Planning for Street Connectivity Report?"	9/12/2019	Yes. Clarifying language connecting this study to the report has been included in the text.
1	System	Email	Commenter suggests addition in Chapter 4, page 21: "Narrower travel lanes also offer the potential for additional right-of-way to be used for active transportation facilities."	9/12/2019	The APO understands the potential behind this relationship between narrow travel lanes and for providing the potential for additional right-of-way to be used for active transportation. This point, however, was not specifically addressed with the 2003 Planning for Street Connectivity report which was the basis of citation for this section.
1	Bike/Ped	Email	"Recommend using person-centered language "people biking" or people walking." For more info on why the distinction is important, see https://www.qut.edu.au/news?id=141968 "	9/12/2019	APO staff have modified the text in this section to reflect person-centered language for people who bike. APO staff have opted to stick with the term "pedestrian" given the way the APO has defined the term pedestrian as any person who walks and/or rolls.
1	Bike/Ped	Email	"Why is this slice broken out?"	9/12/2019	APO staff have reconfigured this graphic. Instead of a large graphic with a broken out section, APO staff have utilized the percentages corresponding to the attitude toward cycling and have accurately reflected the pie chart to indicate these percentages. In addition, APO staff have added a definition table, defining the terms used within the pie chart.

Comments on the Draft 2045 MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Bike/Ped	Email	"Recommend shifting the pie slices to better reflect the percentage of people who fall into each category. Strong and Fearless: 4-7% Enthused and Confident: 5-9% Interested but Concerned: 51-56% No Way, No How: 28-40% (See 2019 MnDOT Bicycle Facility Design Manual)"	9/12/2019	APO staff have reconfigured this graphic. Instead of a large graphic with a broken out section, APO staff have utilized the percentages corresponding to the attitude toward cycling and have accurately reflected the pie chart to indicate these percentages. In addition, APO staff have added a definition table, defining the terms used within the pie chart.
1	Data	Email	"What year? Should cite this reference."	9/12/2019	The data year in question was 2011-2015 ACS 5-year estimates data. This has been cited within the text.
1	General	Email	Commenter word addition in chapter 4, page 48: "within"	9/12/2019	APO staff have corrected this typo.
1	Bike/Ped	Email	"MnDOT also has a complete streets policy."	9/12/2019	APO staff have added a reference to MnDOT's complete streets policy in the text. A copy of MnDOT's complete streets policy has also been included in the appropriate appendices.
1	General	Email	Commenter word addition in chapter 4, page 49: "had"	9/12/2019	APO staff have corrected this typo.
1	Data	Email	Commenter suggests update in chapter 4, page 52: "Any data from 2018 or 2019?"	9/12/2019	The data provided was the most recent data publically available.
1	General	Email	Commenter word addition in chapter 4, page 65: add "be"	9/12/2019	APO staff have corrected this typo.
1	Performance	Email	Commenter asks about Objective 2 strategy a in chapter 5, page 3: "Only federal aid or all roads? The safety performance targets apply to all roads."	9/12/2019	APO staff have changed the language from federal aid roadways to "... MPA's roadway system...."
1	Performance	Email	Commenter asks about the Safety Performance Measures and Indicators in chapter 5, page 4. "Should this state "addition of the number..." or could the "additional of the" be removed from the other measures? And Same comment as number of annual fatalities."	9/12/2019	APO staff have altered the text to be consistent.

Comments on the Draft 2045 MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Bike/Ped	Email	Suggestion in chapter 5, page 11: "Consider calling Active Transportation out in this recommendation as a low-cost transportation option."	9/12/2019	Because of the variety of low-cost transportation solutions out there, APO staff have decided to not list active transportation specifically. This goal is meant to encompass more than one type of solution. APO staff felt that by specifically calling attention to one low-cost transportation solution the focus would be on that one solution and not the wide variety of possibilities out there.
1	Bike/Ped	Email	Suggestion in chapter 5, page 13: "Consider including active transportation improvements as a way for future transportation projects to promote energy/environmental conservation."	9/12/2019	Because of the variety of ways to promote energy conservation APO staff have decided to not list active transportation specifically. This goal is meant to encompass more than one type of solution. APO staff felt that by specifically calling attention to active transportation the focus would be on that one solution and not the wide variety of possibilities out there.
1	Map	Email	Suggestion in chapter 6, page 16: "Recommend adding a map that zooms into the central area to better see the LOS E and F locations - something similar to figure 6.4."	9/12/2019	A zoomed in map of the LOS E and F locations within the MPA was developed and incorporated into the text.
1	Projects	Email	Comment on Page 284 of the Plan: "Check all the project summaries. Several appear to be missing text such as the bullets under goals 1 and 3 for this project. Also, recommend avoiding NA for the goals. In reviewing the objectives, it seems as if the goals would apply to every project. For the Benton County Road 1 - goal 4 - the project supports movement of people and goods."	9/12/2019	APO staff have reviewed all of the project summary pages to ensure that all the text has been included. In addition, APO staff have removed "N/A" from most of the goals and have indicated how each project will support the goals and objectives outlined within the MTP.
1	Funding	Email	Comment in chapter 8, page 2: "Good! This chapter does a great job of tying the funding sources back to APO such as noted APO does not qualify for CMAQ funds or noting WACOSA receives 5310 funds."	9/12/2019	No action taken, but APO staff appreciates the comment.

Comments on the Draft 2045 MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Funding	Email	Comment in chapter 8, page 7: "Isn't short-term covered by the previous paragraph? Shouldn't this just read mid and long-range and remove the reference to 2021?"	9/12/2019	Not necessarily. Projects that have a specific year identified between 2020 and 2023 and are currently receiving federal funding have been incorporated into the APO's TIP. However, there are some projects that have been identified as being financially able to be completed within the short-term time band. Those projects do not have specific years associated with them since they have not been programmed by the respective agency. As such, they have been given a base year of 2021 and project costs were inflated to that year.
1	Funding	Email	Comment in chapter 8, page 8: "Same comment as on page 8-7."	9/12/2019	Not necessarily. Projects that have a specific year identified between 2020 and 2023 and are currently receiving federal funding have been incorporated into the APO's TIP. However, there are some projects that have been identified as being financially able to be completed within the short-term time band. Those projects do not have specific years associated with them since they have not been programmed by the respective agency. As such, they have been given a base year of 2021 and project costs were inflated to that year.
1	General	Email	Comment in chapter 8, page 9: "Recommend deleting "as of the drafting of this plan.""	9/12/2019	APO staff have deleted the "as of the drafting of this plan" from the text.
1	Environment	Email	Comment in chapter 9, page 50: "Add examples of agencies with whom you consulted. Also recommend noting consultation requirements, i.e., include something similar to opening line of Chapter 8."	9/12/2019	At the end of the environmental chapter APO staff have added the list of environmental resource agencies staff had consulted with about the MTP. In addition, APO staff at the beginning of this chapter, outlined the federal requirements surrounding consultation with environmental agencies concerning the development of the transportation plan.

Comments on the Draft 2045 MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	CAV	Email	Comment in Chapter 10, page 8: "This forecast statement is incorrect. I checked with the CAV-X office. If you have questions, contact Keith Mensah at keith.mensah@state.mn.us."	9/12/2019	This comment has been removed from the document.
1	Transit	Email	Comment in chapter 10, page 14: "Rochester Public Transit uses DoubleMap."	9/12/2019	A reference to Rochester Public Transit's use of DoubleMap has been included in the text of this document.
1	General	Email	Commenter suggest correction in chapter 10, page 16: "rider's"	9/12/2019	APO staff have corrected this typo.
1	General	Email	Commenter suggest correction in chapter 10, page 17: "pursuing"	9/12/2019	APO staff have corrected this typo.
1	General	Email	Commenter suggest correction in chapter 10, page 30: "Could this be written \$1.15?"	9/12/2019	APO staff have corrected the text.
1	General	Email	Commenter suggestion in chapter 11, page 1: "Since these are numbered, you may want to clarify whether the number signify priority or if the efforts are listed in no particular order."	9/12/2019	APO staff have added clarifying language to indicate these strategies are listed in no particular order.
1	Environment	Email	"As a reminder, in addition to NEPA, the state of Minnesota has its own Environmental Review Rules, and the need for state level Environmental Assessment Worksheets or Environmental Impact Statements will need to be considered by the Responsible Governmental Unit for any of these future projects (see Minnesota Rules 4410.4300 – 4410.4400)."	9/13/2019	Comment was added to the general environmental comments in Chapter 9
1	Environment	Email	"The DNR recommends that impacts to natural resources be avoided and minimized to the extent possible."	9/13/2019	Comment was added to the general environmental comments in Chapter 9

Comments on the Draft 2045 MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Environment	Email	<p>"Should wetland native plant communities be impacted, these plant communities may be protected under the Wetland Conservation Act (see 8420. 0515 Special Considerations). Impacts to plant communities could include direct impacts such as filling of a wetland, but could also be caused by indirect impacts such as changes in hydrology and introduction of invasive species. These types of impacts should be considered in the planning stages for avoidance."</p>	9/13/2019	Comment was added to the general environmental comments in Chapter 9
1	Environment	Email	<p>"We recommend that government agencies acquire an NHIS license, and or submit for an NHIS review do be conducted by DNR staff to determine potential project impacts (see MN DNR NHIS website) to rare natural resources, including state-listed species. An NHIS review would be required for any projects going through formal environmental review, such as an Environmental Assessment Worksheet. A review conducted by DNR staff would identify potential for impacts, any survey requirements if needed, and mitigation/avoidance recommendations."</p>	9/13/2019	Comment was added to the general environmental comments in Chapter 9

Comments on the Draft 2045 MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Environment	Email	"Should any projects require the need for right-of-way easements on state lands, this will need to be obtained through the Division of Lands and Minerals. Likewise any impacts to DNR public waters that impact the course, current, or cross section will require a permit from the DNR. Projects may also require water appropriations permits should they need to dewater in volumes that exceed 10,000 gallons per day, or 1 million gallons per year (see MN DNR Permitting and Reporting System website)."	9/13/2019	Comment was added to the general environmental comments in Chapter 9
1	Environment	Email	"The St. Cloud area has known Blanding's turtle populations (state-listed threatened species) and there's a good chance that projects may occur near records of this rare turtle. For planning considerations, we recommend that proposers review the DNR blanding' turtles factsheet and flyer which are available online."	9/13/2019	Comment was added to the general environmental comments in Chapter 9
1	Environment	Email	"For projects that are under the jurisdiction of MnDOT, there is a MnDOT/DNR project liaison who conducts project review and would identify potential impacts and mitigation measures as well as identify any DNR staff with whom coordination is required (see MnDOT Environmental Stewardship website). However, if the project is under city or county jurisdiction, the county will need to coordinate review. A good start for identifying potential impacts would be to submit for an NHIS review by DNR staff (as noted above) and/or by contacting the area Regional Environmental Assessment Ecologist (see DNR Environmental Program Regional Contacts website) for assistance on project review and coordination."	9/13/2019	Comment was added to the general environmental comments in Chapter 9
1	System	In-Person	"Bridge Construction on 1st Street, is making it a lot harder to commute around"	9/13/2019	No action taken, but APO appreciates the comment.
1	Environment	Online Survey	"reduce noise pollution from trains and automobiles/trucks; reduce light pollution not only dark skies compliant (note many some goal 5 say dark sky complaint) but also consider that homeowners would prefer a dark yard, not one extremely bright from a new LED street light - nearly bright as daylight when trying to sleep."	9/15/2019	Comment was added to the general environmental comments in Chapter 9

Comments on the Draft 2045 MTP

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	System and Bike/Ped	Online Survey	"an exit ramp off Hwy 15 at 22nd St S or roundabout at 22nd st s and Cooper Ave or add sidewalk on east side of Cooper from Allendale to Traverse to enable pedestrians safe passage to the bus stop especially in winter without having to cross to west side through a snow bank and back to east side again. OR reconfigure the bike trail access/crossing at Traverse and Roosevelt Rd for safety and ease of use."	9/15/2019	APO staff passed the comment along to the appropriate jurisdiction(s).
1	System	Online Survey	"rebuild Allendale Drive"	9/15/2019	APO staff passed the comment along to the appropriate jurisdiction(s).
1	General	Online Survey	In response to a question soliciting suggestions for additional studies if there were sufficient funding: "public opinion and input to public art and aesthetics in transportation projects and reducing noise pollution impacts on public opinion of quality of life"	9/15/2019	APO staff will consider adding this to the list of future APO studies.
1	Funding	Online Survey	"We are grateful for your comprehensive work on this - looks good - wish there was more funding to accelerate your progress."	9/15/2019	No action taken, but APO staff appreciates the comment.
1	System	Online Survey	"Bridge 33rd St S over Mississippi"	9/15/2019	A 33rd Street South bridge over the Mississippi River is part of the ring-road concept that was evaluated within the plan. However, funding to pay for the bridge could not be identified within this plan, so it appears only on the "Illustrative" project list in the appendices.
1	Bike/Ped	Online Survey	"Put in a sidewalk on the other side of Benton Drive going north towards Coborns."	9/15/2019	APO staff passed the comment along to the appropriate jurisdiction(s).
1	Bike/Ped	Online Survey	"More sidewalks"	9/15/2019	APO staff passed the comment along to the appropriate jurisdiction(s).
1	Bike/Ped	Online Survey	"Add a bike path on 19th Ave s from co rd to co rd 133"	9/13/2019	Assuming commenter meant to add CR 4?
1	System	Online Survey	"Rebuild townline road with wider shoulder"	9/13/2019	APO staff passed the comment along to the appropriate jurisdiction(s). Townline Road is classified as a Minor Collector and so does not qualify for Federal transportation funds, and therefore does not appear in this plan.

Comments on the Draft 2045 MTP					
Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	General	Facebook	"Downtown St Cloud is closed. There isn't one single street without a detour cone on it !"	9/18/2019	In 2020, APO staff intends to expand and improve its project coordination process.
1	General	Facebook	"(Expletive) st.cloud. the only good thing about your city is the easy access to illegal marijuana"	8/27/2019	No action taken.
1	Bike/Ped	In-Person	"Get a sidewalk to go from Good Shepard to stores like Kwik Trip."	9/19/2019	APO staff will make this request an identified need in the Active Transportation Plan that will be done in 2020.
1	System	In-Person	"Fix pavement on 35th Ave N, and 10th and 11th St N."	9/19/2019	APO staff will pass this comment to the appropriate jurisdiction(s)
1	Bike/Ped	In-Person	"Need to extend walking path on County Road 137 to Bel Clair."	9/19/2019	APO staff will make this request an identified need in the Active Transportation Plan that will be done in 2020.
1	Bike/Ped	In-Person	"Needs to be better visualization on 3rd St N and 10th Ave N, better paint and a sign alerting vehicles that pedestrians are walking."	9/19/2019	APO staff will pass this comment to the appropriate jurisdiction(s)
1	System	In-Person	"Potholes on 1st St N and between 29th and 30th"	9/19/2019	APO staff will pass this comment to the appropriate jurisdiction(s)
1	System	In-Person	"TH23 Corridor of Commerce designation at Federal level supports building the community for the younger generation."	9/20/2019	No action taken. APO staff is confused by the comment.
1	Bike/Ped	In-Person	"Bikeway around Westwood to connect to the Lake Wobegon Trail and no real safe way to access this with young kids currently."	9/20/2019	APO staff will make this request an identified need in the Active Transportation Plan that will be done in 2020.
1	System	In-Person	"Put HWY 10 like in Rice over from St. Germain, and access to 94 from 10."	9/20/2019	A connection from US-10 to CSAH 75, which connects to I-94, is included in the Illustrative project list. Funding for the connection has not been identified.
1	Projects	In-Person	"STR-4 is needed, really good interchange"	9/20/2019	This project was moved to the Illustrative project list in favor of three other projects that Stearns County felt were more important.
1	System	In-Person	"Need big loop to connect 94, 10, and 75."	9/20/2019	A connection from US-10 to CSAH 75, which connects to I-94, is included in the Illustrative project list. Funding for the connection has not been identified.

Comments on the Draft 2045 MTP					
Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	System	In-Person	"Bridge in Sauk Rapids no right turn lane, why not?"	9/20/2019	No action taken. APO staff does not know what design choices were considered in the construction of the 2nd Ave N/9th Ave N bridge.
1	System	In-Person	"Extend right turn lane on 12th to North bound 15 and on Veterans Drive to move more traffic."	9/20/2019	The APO will be leading a planning effort to evaluate operations on MN-15 in 2020. We will take a look at the right-turn lanes from 12th and Veterans Drive at that time.
1	Bike/Ped	In-Person	"Bicycle and Pedestrian-Public concern. Like the idea of connecting things that already exist and filling in the gaps."	9/20/2019	The APO anticipates making specific bicycle infrastructure recommendations as part of the Active Transportation Plan which should be completed in 2020.
1	Bike/Ped	In-Person	"1/2 cent sales tax, part of that agreed to connect trails, how is that going?"	9/20/2019	No action taken.
1	Bike/Ped	In-Person	"The state recently did pavement quality tracking with state trails, can we?"	9/20/2019	Yes, APO staff is already in the process of developing a pavement quality tracking process for bicycle trails in the metro area.
1	System	In-Person	"33rd St S connection"	9/20/2019	No action taken. APO staff confused by comment.
1	Projects	In-Person	"Like the thought of STR-4, and STC 1 and 2."	9/20/2019	STR-4 was moved to the Illustrative project list in favor of three other projects that Stearns County felt were more important. STC-1 and STC-2 remain in the fiscally constrained plan. We appreciate the positive feedback.
1	Transit	In-Person	"Would like bus routes on Cooper Ave and somewhere between 33rd and 40th."	9/20/2019	APO staff will pass this comment to the appropriate jurisdiction(s).

FIGURE A.24 – 2019 PUBLIC ENGAGEMENT COMMENTS FROM FIRST ROUND OF PUBLIC INPUT (AUG. 12 – SEPT. 20, 2019)

Comments on the Draft 2045 MTP - Version 2

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	System	Saint Cloud 301 Event	"Nobody want the bridge at 33 rd Street South." It's controversial. (Commenter lives in the area where the bridge would be built.)	9/28/2019	The City of Saint Cloud will be continuing the planning effort for the bridge corridor in 2020. Traffic modeling indicates (see page 9-167) that the bridge would be heavily used and would provide some relief for other congested corridors.
1	System	Saint Cloud 301 Event	"Roundabouts are great. They keep traffic moving. You don't want to be on them when they first open. It takes people time to get used to them."	9/28/2019	Strategy 1(a) in the MTP is to encourage the installation of roundabouts at appropriate locations.
1	General	Saint Cloud 301 Event	Commenter owns property at corner of 33 rd Street South and CR 74; was interested in the pace of growth along 33 rd Street – trying to time when to sell their property.	9/28/2019	The area in question is a high-growth area for the City of Saint Cloud. The third phase of the 33rd St South widening project will be completed in 2020. But much of the pace of development will be driven by the private market.
4	System	Saint Cloud 301 Event	Multiple people asked when/if the 33 rd Street South bridge would be built	9/28/2019	The City of Saint Cloud will be continuing the planning effort for the bridge corridor in 2020. But given the expected cost of construction - \$60 - \$100 million - it may be some time before the bridge is built.
1	System	Saint Cloud 301 Event	At roundabouts, the pedestrian crossings are too close to the roundabout. Thirty feet further down the street would be ideal. For example, at the roundabout on University at 5 th Ave – when you are that close to the roundabout, your eyes are not looking for pedestrians, they are watching for traffic.	9/28/2019	APO staff will provide this comment to the traffic engineers for their consideration.
1	General	Saint Cloud 301 Event	Commenter was Saint Cloud Deputy Fire Marshall: roundabouts do not cause a problem for fire trucks.	9/28/2019	No action taken.
1	Bike/Ped	Proposed Change Survey: Question 1	"Why not just add walking paths or sidewalks to Riverside? Far more dangerous to pedestrians. It's only busy here twice a day for a hour"	9/25/2019	APO staff will provide the comment to Stearns County engineers for their consideration in project development.
1	System	Proposed Change Survey: Question 1	"Keep Riverside Ave 2 lanes"	9/24/2019	APO staff will provide the comment to Stearns County engineers for their consideration in project development.

Comments on the Draft 2045 MTP - Version 2

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	System	Proposed Change Survey: Question 1	"Widening those roads are a great idea."	9/24/2019	No action taken.
1	General	Proposed Change Survey: Question 5	Do you have any other general comments you would like to add? "No"	9/24/2019	No action taken.
1	System	Proposed Change Survey: Question 5	"When will the road going around st joe be completed? The intersection of Minnesota street and CSAH 2 in st joe needs to be replaced and have the roundabout it was supposed to have. Roundabouts should be considered for any 4 way interaction going forth. No one knows how to 4 way stop or merge. Roundabouts have proven to be safe and effective keeping traffic flowing! What a wonderful plan"	9/24/2019	APO staff appreciates the support for roundabouts. They are not ideal for every intersection, but they can be very effective where appropriate. We will provide the comment about the intersection of CSAH 2 and Minnesota Street to the appropriate jurisdictions for their consideration.
1	System/Projects	Proposed Change Survey: Question 5	"Rebuild old town line between SAR9 and SAR10 on the map."	9/24/2019	APO staff agrees that Town Line Road needs some love. Unfortunately, it does not qualify for Federal formula funds, so repairs must be funded locally or via competitive grants like the Local Road Improvement Program from MnDOT.
1	Projects	Proposed Change Survey: Question 5	"Why are there no descriptions or survey questions about the Sartell projects?"	9/24/2019	For this second round of public input, APO staff chose to concentrate on soliciting public comments on the changes from the previous version of the MTP rather than the MTP in general.
1	System	Proposed Change Survey: Question 5	"Please extend 19th in Sartell. Pine cone road is over burdened with traffic now that the new High School is built."	9/24/2019	SAR-3 extends 19th Ave in Sartell from 11th St N to 27th St N
1	Projects	Proposed Change Survey: Question 5	"SAR-9 is ESSENTIAL! This is a safety issue with the new high school. SAR-3 is a great idea!"	9/25/2019	No action taken.
1	General	Proposed Change Survey: Question 7	In what city do you reside? "Foley"	9/24/2019	No action taken.
1	General	Facebook	"What happened with the pole barn put up where the 5th leg of the 19th Ave roundabout was supposed to go in someday as part of the APO plan for a beltway around the Metro area?"	9/24/2019	We were all surprised when that pole barn went up, but we will be completing a planning study in 2020 to determine the alignment of that 5th leg. There are still options.

Comments on the Draft 2045 MTP - Version 2

Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	Projects	Proposed Change Survey: Question 1	"Seems like a complete waste of money to widen roads at these locations for just morning and evening rush hour. If they are widened, will it not just cause a bottle neck and slow down traffic when the road narrows? I drove the roads mentioned to be widened at rush hour times. It is NOT needed."	9/30/2019	APO agrees that widening roadways is not always appropriate and the history of road-widening projects as a congestion relief measure is mixed at best. But sometimes it is an appropriate investment in order to improve mobility and traffic flow. Given the cost of the projects, it often needs to be done incrementally.
1	Projects	Proposed Change Survey: Question 1	"Wonder why you stop at Anderson Avenue? Why not go further?"	10/1/2019	It's a balancing act. The plan must be fiscally constrained. Extending STR-15 would increase project costs, which would force the deletion of another project so that fiscal constraint could be maintained. The County felt that this set of projects was optimal.
1	Projects	Proposed Change Survey: Question 4	The City of Saint Joseph is proposing to add the following project to the MTP: constructing a new roadway (Westwood Parkway) from 21st Avenue NE to 0.68 miles east (STJ-1 on the map). How do you feel about this proposed change? "Need to know why this would be beneficial."	9/30/2019	The corridor will permit further development within Saint Joseph's industrial park. The long-range vision for the corridor is for it to link to Westwood Parkway in Saint Cloud, improving mobility between Saint Joseph and the rest of the metropolitan area.
1	System	Proposed Change Survey: Question 5	"What benefits do these projects actually provide? Are they truly needed? The roads in the area are not in the best condition. Seems pointless to add miles of infrastructure to a system that does not have the funds to keep them maintained. Should look at doing something with 322nd street inbetween cty 133 and cty 4 in Stearns cty. It is a heavily traveled road that is very narrow and in crumbling shape."	9/30/2019	Goal 3, Objective 1 of the plan is to "prioritize the maintenance and preservation of the existing transportation network." Project STC-6 will rebuild and widen 322nd Street North.
1	System	Proposed Change Survey: Question 5	"When is a "circle" going to be made around the entire area? Why hasn't one been made already? The area is way behind times being progressive with our road systems."	10/1/2019	The urban belt-line corridor is analyzed in the MTP as a possible future scenario. While progress is being made incrementally, it is an expensive effort and not all of the segments could be fitted within the plan's fiscal constraint requirement.
1	Demographic	Proposed Change Survey: Question 8	With what ethnicity do you most identify? "None of your business"	9/30/2019	No action taken.

Comments on the Draft 2045 MTP - Version 2					
Number of Respondents	Category	Source	Comment	Date Recorded by APO	Disposition
1	System	Proposed Change Survey: Question 1	"The highway 15 access from 33rd south makes the 136 access totally unnecessary ."	10/2/2019	STR-4 - a proposed interchange at CR-136 and I-94 - was deleted from the draft MTP.
1	Projects	Proposed Change Survey: Question 2	Benton County is proposing to delete the widening of CSAH 8 (35th Avenue NE) from the Benton County line to 2nd Street SE (BEN-3 on the map), and add the construction of a new roadway (CSAH 29) between Mayhew Lake Road and 35th Ave NE (BEN-5 on the map). In total, how do you feel about this proposed change? "This section of roadway would divert all traffic from the city of Sauk Rapids for city development and possible business expansions. This project is not needed now, maybe in the future but until then, this is since-less spending!"	10/14/2019	This project is one segment of the urban core belt-line corridor intended to improve mobility and traffic flow through the urban area.
1	Projects	Proposed Change Survey: Question 3	Sherburne County is proposing to add three reconstruction projects for: 1. CR 17 (17th Street SE) from Tee-to-Green Street to 75th Avenue SE (CSAH 20) (SBC-1 on the map), 2. CSAH 20 (75th Avenue SE) from 7th Street SE to 57th Street SE (CSAH 16) (SBC-2 on the map), and 3. CR 65 (42nd Street SE) from CSAH 8 to US 10 (SBC-3 on the map). None of these projects will widen the roadway, but will rebuild them with their existing profile. In total, how do you feel about this proposed change? "Some of these should be widened."	10/14/2019	APO staff will pass this comment along to the Sherburne County engineer for consideration as these projects develop.

FIGURE A.25 – 2019 PUBLIC ENGAGEMENT COMMENTS FROM SECOND ROUND OF PUBLIC INPUT (SEPT. 23 - OCT. 23, 2019)

Appendix B: Federal Planning Factors Project Check List

MTP ID	Jurisdiction	Expansion	Reconstruction	Project Location	Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.	Increase the safety of the transportation system for motorized and non-motorized users.	Increase the security of the transportation system for motorized and non-motorized users.	Increase accessibility and mobility of people and freight.	Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.	Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.	Promote efficient system management and operation.	Emphasize the preservation of the existing transportation system.
STR-1	Stearns	x		CSAH 1/River Avenue North	x			x		x		x
STR-2	Stearns	x		CSAH 133/2nd Street South	x	x		x		x		x
STR-3	Stearns	x		CSAH 133	x	x		x		x		x
STR-4	Stearns	x		US 41/CSAH 136	x			x		x		x
STR-5	Stearns	x		County Road 122/40th Street South	x			x		x		x
STR-6	Stearns	x		CSAH 7/2nd Street South	x	x		x		x		x
STR-7	Stearns		x	CSAH 2/Central Avenue North	x			x		x		x
STR-8	Stearns	x		CSAH 1/Riverside Avenue North	x	x		x		x		x
STR-9	Stearns		x	CSAH 1	x			x		x		x
STR-10	Stearns		x	CSAH 75	x		x		x			x
STR-11	Stearns		x	CSAH 138	x			x		x		x
STR-12	Stearns		x	CSAH 136/Oak Grove Road Southwest	x	x		x		x		x
MTP ID	Jurisdiction	Expansion	Reconstruction	Project Location	Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.	Increase the safety of the transportation system for motorized and non-motorized users.	Increase the security of the transportation system for motorized and non-motorized users.	Increase accessibility and mobility of people and freight.	Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.	Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.	Promote efficient system management and operation.	Emphasize the preservation of the existing transportation system.
BEN-1	Benton	x		CSAH 1/Mayhew Lake Road Northeast	x	x		x		x		x
BEN-2	Benton	x		CSAH 33/Benton Drive	x	x		x		x		x
BEN-3	Benton	x		CSAH 8/35th Avenue Northeast	x		x			x		x
BEN-4	Benton	x		CSAH 29/35th Street Northeast	x	x	x	x		x		x
MTP ID	Jurisdiction	Expansion	Reconstruction	Project Location	Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.	Increase the safety of the transportation system for motorized and non-motorized users.	Increase the security of the transportation system for motorized and non-motorized users.	Increase accessibility and mobility of people and freight.	Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.	Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.	Promote efficient system management and operation.	Emphasize the preservation of the existing transportation system.
SAK-1	Sauk Rapids		x	MSAS 109/South Benton Drive	x			x		x		x
SAK-2	Sauk Rapids		x	MSAS 104/Second Avenue South	x	x		x		x		x
SAK-3	Sauk Rapids	x		MSAS 104/Second Avenue South	x	x		x		x		x
SAK-4	Sauk Rapids	x		MSAS 101/11th Street North	x			x		x		x
SAK-5	Sauk Rapids		x	MSAS 104/Second Avenue North	x	x		x		x		x
SAK-6	Sauk Rapids		x	MSAS 111/Fourth Avenue North	x	x		x		x		x
MTP ID	Jurisdiction	Expansion	Reconstruction	Project Location	Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.	Increase the safety of the transportation system for motorized and non-motorized users.	Increase the security of the transportation system for motorized and non-motorized users.	Increase accessibility and mobility of people and freight.	Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.	Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.	Promote efficient system management and operation.	Emphasize the preservation of the existing transportation system.
WAT-1	Waite Park	x		MSAS 103/10th Avenue North	x	x	x	x		x		x
WAT-2	Waite Park		x	MSAS 101/Waite Avenue	x	x		x		x		x
WAT-3	Waite Park		x	MSAS 103/10th Avenue North	x	x		x		x		x
MTP ID	Jurisdiction	Expansion	Reconstruction	Project Location	Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.	Increase the safety of the transportation system for motorized and non-motorized users.	Increase the security of the transportation system for motorized and non-motorized users.	Increase accessibility and mobility of people and freight.	Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.	Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.	Promote efficient system management and operation.	Emphasize the preservation of the existing transportation system.
STC-1	Saint Cloud	x		MSAS 156/40th Street South	x	x		x		x		x
STC-2	Saint Cloud	x		MSAS 156/40th Street South	x	x		x		x		x
STC-3	Saint Cloud	x		MSAS 114/2nd Street North	x	x		x		x		x
STC-4	Saint Cloud	x		MSAS 145/9th Avenue North	x			x		x		x
STC-5	Saint Cloud	x		Pine Cone Road	x			x		x		x
STC-6	Saint Cloud		x	322 Street	x			x		x		x
STC-7	Saint Cloud	x		CSAH 74	x	x		x		x		x
STC-8	Saint Cloud		x	MSAS 175/County Road 136/Oak Grove Road Southwest	x	x		x		x		x
STC-9	Saint Cloud		x	MSAS 141/Cooper Avenue South	x	x		x		x		x
STC-10	Saint Cloud	x		MSAS 153/22nd Street South	x	x		x		x		x
STC-11	Saint Cloud	x		MSAS 102/Waite Avenue	x	x		x		x		x
STC-12	Saint Cloud	x		MSAS 145/9th Avenue South	x			x		x		x
STC-13	Saint Cloud	x		MSAS 106/Wilson Avenue	x	x		x		x		x
STC-14	Saint Cloud		x	MSAS 125/13th Street North	x	x		x		x		x
MTP ID	Jurisdiction	Expansion	Reconstruction	Project Location	Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.	Increase the safety of the transportation system for motorized and non-motorized users.	Increase the security of the transportation system for motorized and non-motorized users.	Increase accessibility and mobility of people and freight.	Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.	Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.	Promote efficient system management and operation.	Emphasize the preservation of the existing transportation system.
SAR-1	Sartell	x		MSAS 117/Leander Avenue	x	x		x		x		x
SAR-2	Sartell			Roberts Road	x			x		x		x
SAR-3	Sartell	x		19th Avenue North	x	x		x		x		x
SAR-4	Sartell	x		Scout Drive	x			x		x		x
SAR-5	Sartell	x		Thien Ave	x	x		x		x		x
SAR-6	Sartell	x		15th Street North	x			x		x		x
SAR-7	Sartell		x	19th Avenue South	x	x		x		x		x
SAR-8	Sartell	x		21th Avenue South	x			x		x		x
SAR-9	Sartell	x		25th Street North	x	x		x		x		x
SAR-10	Sartell			7th Avenue/Townline Road	x	x		x		x		x
SAR-11	Sartell		x	MSAS 131/LeSauk Drive	x	x		x		x		x
MTP ID	Jurisdiction	Expansion	Reconstruction	Project Location	Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.	Increase the safety of the transportation system for motorized and non-motorized users.	Increase the security of the transportation system for motorized and non-motorized users.	Increase accessibility and mobility of people and freight.	Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.	Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.	Promote efficient system management and operation.	Emphasize the preservation of the existing transportation system.
MND-1	MnDOT		x	Interstate 94 and Minnesota Highway 23	x			x		x		x
MND-2	MnDOT		x	US10	x			x		x		x
MND-3	MnDOT		x	Interstate 94 Bridge	x			x		x		x
MND-4	MnDOT		x	Minnesota Highway 23 and US 10 Interchange	x	x		x		x		x



POLICY STATEMENT

The Minnesota Department of Transportation (MnDOT) must follow a complete streets approach in all phases of planning, project development, operation, and maintenance activities.

REASON FOR POLICY

- Ensure compliance with [Minnesota Statutes §174.75](#) directing MnDOT to implement a complete streets policy.
- Support the goals of the transportation system in [Minnesota Statutes §174.01](#), specifically:
 - Minimize fatalities and injuries for transportation users throughout the state
 - Provide multimodal and intermodal transportation facilities and services to increase access for all persons and businesses
 - Increase use of transit as a percentage of all trips
 - Increase bicycling and walking as a percentage of all trips
- Ensure alignment with MnDOT's mission, the [Minnesota GO Vision](#), and the [Statewide Multimodal Transportation Plan](#).

WHO NEEDS TO KNOW THIS POLICY?

MnDOT staff, local agency representatives, consultants, and contractors responsible for:

- Planning, scoping, designing, constructing or maintaining projects along trunk highway right of way

DEFINITIONS

Complete Streets

The purpose of complete streets is to address the safety and accessibility needs of users of all ages and abilities. MnDOT assesses user needs at several stages of planning, project scoping and designing, construction, operation, and maintenance.

User Group

A category of transportation users or modes such as people walking, people bicycling, transit operators and transit riders, commercial trucks drivers, etc.

SENIOR OFFICER

Susan M. Mulvihill, P.E.
Deputy Commissioner/Chief Engineer

POLICY OWNERS

Mark Gieseke, P.E.
Director, Office of Transportation System Management

Thomas Styrbicki, P.E.
Director, Office of Project Management & Technical Support

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POLICY HISTORY

*2013-11-12, Established
2016-05-20, Revision 1*

[MnDOT Policy Website](#)

Vulnerable Users

Road users who are most at risk for serious injury or death when involved in a motor-vehicle related collision, including but not limited to people bicycling and pedestrians of all ages, types and abilities.

PROCEDURES

Evaluate and balance the needs of all users (pedestrians, bicyclists, freight, transit, motor vehicles, etc.) during planning, scoping, design, construction, operations and maintenance of the trunk highway network. The analysis must include the access and mobility needs of user groups moving both along trunk highways and crossing trunk highways. The objective is not all modes on all roads, but rather interconnected and integrated networks for all users.

Capital Program Priorities

Districts must evaluate opportunities to address the needs of all users both at the individual project level and when developing Area Transportation Improvement Programs and 10-Year Capital Investment Highway Investment Plans. Within the Minnesota 20-Year State Highway Investment Plan direction and annual fiscal constraints, districts should give higher priority to opportunities to address identified user needs on projects that meet the following criteria:

- Affected population includes a high proportion of individuals covered by [Title VI](#) of the Civil Rights Act and [Environmental Justice](#)
- Have a higher probability of increasing the number of people biking, walking or taking transit, consistent with [Minnesota Statutes §174.01](#)
- Addresses a significant safety issue for vulnerable users
- Addresses a gap or barrier created by prior transportation investments
- Are identified in a local or regional plan

Preservation Projects

All construction projects on the trunk highway network must follow a complete streets approach, but the purpose and need of a project may constrain the available options. While the primary purpose of preservation projects is maintaining and extending the useful life of existing infrastructure, they still offer opportunities to make low-cost improvements. Project managers and designers must consider and evaluate options to address identified user needs within the scope and available budget of preservation projects. In particular, designers will evaluate options to reallocate existing space to increase safety, usability, and accessibility for all user groups.

Design

Designers will use MnDOT-adopted design criteria and guidance as the design basis for projects and should consult:

- [A Policy on Geometric Design on Highways and Streets](#) *American Association of State Highway and Transportation Officials (AASHTO)*
- [Designing Walkable Urban Thoroughfares: A Context Sensitive Approach](#) *Institute of Transportation Engineers (ITE)*
- [Urban Street Design Guide](#) *National Association of City Transportation Officials (NACTO)*
- [Highway Safety Manual](#) (AASHTO)

The design process must include attention to speed outcomes, especially in urban, suburban and recreational environments where vulnerable users are common. Operating speed is a key factor in the severity of crashes involving both motorized and non-motorized traffic. Consider design speed a target speed rather than a maximum safe speed.

Project documentation

All transportation construction projects within trunk highway right of way must have a documented complete streets project report identifying considerations for all users. Project managers must complete the reports at the end of project scoping and revise them at 30 percent final design.

Construction projects that meet all of the following criteria must follow a complete streets approach, but are exempt from the project documentation requirements of this policy:

- The project is completely outside an incorporated community or tribal land.
- No industrial parks, business parks, major freight generators, schools, places of worship, shopping centers, parks or recreational areas are directly adjacent to the highway within the project area.

- No segment of the project is part of a designated current or future bikeway or trail.
- No trails, shared use paths or sidewalks intersect or run parallel to the highway within the project area.
- No rail lines intersect the highway within the project area.

Reason for non-provision (situations where a complete streets approach is used, but provisions for a user group may not be feasible or prudent)

In project development, design, construction, operations and maintenance, MnDOT may not be able to address the needs of a user group when one or more of the following apply:

- The user group is legally prohibited from using the highway according to [Minnesota Statutes §169.305](#).
- There is no evidence of a current need to provide for the user group, no plans identify the project corridor for future use, and land use trends suggest an absence of future need over the life of the project.
- All identified options require excessive expenditure of time, money, or resources due to a variety of challenges, such as design, permits or right of way acquisition.
- A local unit of government with jurisdiction refuses municipal consent.
- MnDOT and a local unit of government with jurisdiction or other transportation partner (i.e. transit agency, trail authority, etc.) cannot reach an agreement on operation and maintenance responsibilities.
- Expanding the scope of a preservation project would significantly reduce or compromise the preservation of existing trunk highway assets.

Policy Exemption

The following activities are exempt from this policy:

- Emergency, routine or localized maintenance and repair work (debris removal, sweeping, pothole patching, sidewalk patching, joint and crack repair, pond cleaning, bridge painting, etc.).
- Projects such as storm water tunnels, storm sewers, landscaping, and slope stabilization that do not directly affect transportation system users.
- Roadside infrastructure projects on freeways that do not involve entrance/exit ramps, loops or overpasses such as high-tension cable guardrail, sign replacements, and overhead sign structure replacements.

RESPONSIBILITIES

State Design Engineer

- Develop, implement, and maintain an oversight process that adheres to the policy.
- Review complete streets projects reports (“Reasons for Non-Provision”) to substantiate and justify findings.
- Develop and offer training and technical assistance to support local governments, Metropolitan Planning Organizations (MPOs), Regional Development Commissions (RDCs), and other agencies implementing complete streets.

Manager, Planning and Data Analysis

- Develop and track process indicators for implementation of complete streets.
- Track established performance indicators that contribute to complete streets goals and provide timely reports to the Senior Leadership Team.
- Provide Complete Streets Project Reports to the public, stakeholders, and advocates, as requested.

Senior Leadership Team

- Review performance measures and indicators for complete streets implementation annually.
- Modify process as needed based on implementation trends.

Modal Offices

- Identify system users, conditions, needs and priorities.
- Provide technical support to district staff.

Planners

- Solicit input from transportation stakeholders and the public to identify user group needs on the system.
- Record the current and future land use contexts and needs of transportation user groups in project documentation.
- Identify system conditions and needs in plans and corridor studies.

- Identify opportunities to address the needs of all user groups when developing 10-Year Highway Capital Investment Plans.

Assistant District Engineers

- Identify opportunities to address the needs of all transportation user groups when programming projects.
- Apply priorities identified in modal plans and this policy when developing 10-Year Highway Capital Investment Plans.
- Approve Complete Streets Project Reports at project scoping and reapprove at 30% final design.

Project Managers

- Solicit input from transportation stakeholders and the public to identify user group needs on the system.
- Assess the current and future needs of each user group in project scoping and design.
- Assess and quantify risks and opportunities related to complete streets when developing project budgets.
- Collaborate and consult with modal planning and technical staff.
- Submit Complete Streets Project Reports at project scoping and revise at 30% final design.
- When there is a question in determining a design threshold, consult the appropriate modal or technical office to inform decision-making.
- Where users are legally prohibited from using a roadway, look for opportunities to address or remove barriers to network connectivity and crossings.

Traffic Engineers and Designers

- Include all affected users in project safety reviews, road safety audits, traffic modeling, and intersection control evaluations.
- Address the safety needs and ease of use of vulnerable users, especially in lower-speed environments and at intersections.
- Include attention to speed outcomes, especially in urban, suburban, and recreational environments where vulnerable users are common. Consider design speed a target speed rather than a maximum safe speed.
- Look for low cost solutions on preservation projects to provide complete streets improvements.
- Where users are legally prohibited from using a roadway, look for opportunities to address or remove barriers to network connectivity and crossings.

Resident Construction Engineers and Project Engineers

- Provide alternative and accessible routes and detours to perpetuate previously existing modes of travel, including pedestrians and bicyclists, when closing roads, bridges, shared use paths or sidewalks for construction or maintenance work. Coordinate with the Office of Freight and Commercial Vehicle Operations to ensure oversize/overweight permitted loads are appropriately detoured.
- Clear any field changes having the potential of affecting modal functionality with the project manager and designer.

Maintenance Engineers and Maintenance Supervisors

- Provide alternative and accessible routes and detours to perpetuate previously existing modes of travel, including pedestrians and bicyclists, when closing roads, bridges or sidewalks for construction or maintenance work.
- Work with local jurisdictions and transit providers to identify responsibility for maintenance and snow removal on facilities such as sidewalks, shared use paths, crossings, bridges, underpasses, and transit stops and hubs.

FREQUENTLY ASKED QUESTIONS

Q: *What is a complete streets approach?*

- A: A complete street approach to road planning and design considers and balances the needs of all transportation users.
- ***It is about the basics***—improving the safety and functionality of the transportation system for all users. The main premise is nothing more than for people to get around safely and efficiently from point A to point B, using whatever mode of travel they choose.
 - There is ***no one prescription or template for complete streets***, which means that there are no easy answers to the question, “what is a complete street?”
 - ***It is context sensitive***. The design selected through a complete streets approach will look different in a rural setting from that selected for a main street running through a small community, which may look different from a design selected in a large metropolitan area.

Q: What are the core principles of a complete streets approach?

A: Generally speaking, a complete streets approach includes the following four principles:

- **Multi-modal perspective**
Address each mode of transportation within the context of the system and the connections that exist and necessary connections within that system.
- **Network considerations**
Transportation is about an interconnected system or network that goes beyond the project or corridor in question to the community and network as a whole.
- **Collaboration across disciplines**
Project planning is with multi-disciplinary teams of staff and stakeholders.
- **Across and along the corridor**
Document how transportation users cross a corridor, not just move along or through a corridor.

Q: Is complete streets a grant program?

A: There is no specific funding set aside for complete streets, and there is no mandate to redistribute existing funds. MnDOT's policy emphasizes planning and designing the transportation system for all user groups.

Q: Are local agencies required to adopt complete streets policies?

A: No, local agencies are not required to develop a complete streets policy. However, [Minnesota Statutes §174.75](#) states, "Local road authorities are encouraged, but not required, to create and adopt complete streets policies for their roads that reflect local context and goals." Complete streets policies help communities plan for a balanced and integrated transportation system.

Q: Is complete streets only for non-motorized transportation?

A: No, a complete streets approach addresses the needs of all users of the transportation system, including freight and commercial vehicles and balances those needs.

Q: Does complete streets mean all transportation modes on all roads?

A: No, a complete streets approach is not "all modes on all roads." It is about considering people who want to use the transportation system today and in the future, and providing transportation choices that address those needs. The complete streets approach emphasizes a network and system approach, ensuring that the transportation system as a whole provides mobility and accessibility for all users.

FORMS/INSTRUCTIONS

[Complete Streets Project Report](#)

RELATED INFORMATION

[MnDOT Complete Streets website](#)

[MnDOT Cost Participation for Cooperative Construction Projects and Maintenance Responsibilities Policy](#)

[MnDOT Minnesota Tribal Nations Government-to-Government Relationship with MnDOT Policy](#)

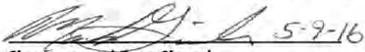
[Highway Project Development Process](#)

[MnDOT Statewide Plans](#)

POLICY OWNERSHIP AND AUTHORIZATION

Policy Owners

Mark Gieseke, P.E., Director, Office of Transportation System Management

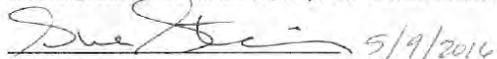

Signature and Date Signed 5-9-16

Thomas Styrbicki, P.E., Director, Office of Program Management & Technical Services


Signature and Date Signed 5/9/2016

Governance Council

Sue Stein, Assistant Commissioner, Corporate Services Division


Signature and Date Signed 5/9/2016

Responsible Senior Officer

Susan M. Mulvihill, P.E., Deputy Commissioner/Chief Engineer


Signature and Date Signed 5/20/2016

Resolution No. 2011-11-164

RESOLUTION ESTABLISHING A
COMPLETE STREETS POLICY FOR
ST. CLOUD, MINNESOTA

WHEREAS, the City of St. Cloud's 2003 Comprehensive Plan calls for the City to "promote alternative transportation such as bicycling, walking, transit and rail", to "Maintain adequate active and passive open space to meet the needs of the community", and to "Enhance community and neighborhood livability"; and

WHEREAS, Complete Streets are defined as those which provide safe, convenient, and context-sensitive facilities for all modes of travel, for users of all ages and all abilities; and

WHEREAS, the objective of Complete Streets is to design and build roadways that safely and comfortably accommodate all users of roadways, including motorists, cyclists, pedestrians and transit riders; and

WHEREAS, Complete Streets have public health benefits, such as encouraging physical activity and improving air quality, by providing the opportunity for more people to bike and walk safely; and

WHEREAS, Complete Streets improve access and safety for those who cannot or choose not to drive motor vehicles; and

WHEREAS, Complete Streets are a critical component to the success and vitality of adjoining private uses and neighborhoods; and

WHEREAS, the St. Cloud Metropolitan Area 2035 Transportation Plan calls for St. Cloud APO members to support multi modal transportation opportunities, including Complete Streets.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of St. Cloud does hereby establish a Complete Streets Policy as follows:

1. The City will seek to enhance the safety, access, convenience and comfort of all users of all ages and abilities, including pedestrians (including people requiring mobility aids), bicyclists, transit users, motorists and freight drivers, through the design, operation and maintenance of the transportation network so as to create a connected network of facilities accommodating each mode of travel that is consistent with and supportive of the local community, recognizing that all streets are different and that the needs of various users will need to be balanced in a flexible manner.
2. Transportation improvements will include facilities and amenities that are recognized as contributing to Complete Streets, which may include street and sidewalk lighting; sidewalks and pedestrian safety improvements such as median refuges or crosswalk improvements; improvements that provide ADA (Americans with Disabilities Act) compliant accessibility; transit accommodations including improved pedestrian access to transit stops and bus shelters; bicycle accommodations including bicycle storage, bicycle parking, bicycle routes, shared-use lanes, wide travel lanes or bike

lanes as appropriate; and street trees, boulevard landscaping, street furniture and adequate drainage facilities. However, Complete Streets will not look the same in all environments, neighborhoods, and developments, and will not necessarily include exclusive elements for all modes.

3. Early consideration of all modes for all users will be important to the success of this Policy. To this end, the Capital Improvements Program process will be utilized to identify potential complete street elements that may be considered for programmed projects. Staff responsible for planning and designing street projects will give due consideration to this earlier guidance regarding bicycle, pedestrian, and transit facilities from the very start of project design. This will apply to all roadway projects, including those involving new construction, reconstruction, or changes in the allocation of pavement space on an existing roadway (such as the reduction in the number of travel lanes or removal of on-street parking).
4. Bicycle, pedestrian, and transit facilities shall be included in street construction, reconstruction, repaving, and rehabilitation projects, except under one or more of the following conditions.
 - a. A project involves only ordinary maintenance activities designed to keep assets in serviceable condition, such as mowing, cleaning, sweeping, spot repair, concrete joint repair, or pothole filling, or when interim measures are implemented on temporary detour or haul routes;
 - b. There is insufficient space to safely accommodate new facilities, as determined by the City Engineer;
 - c. Where determined by the City Engineer to have relatively high safety risks;
 - d. Where the City Council exempts a project due to the excessive and disproportionate cost of establishing a bikeway, walkway or transit enhancement as part of a project;
 - e. Where jointly determined by the City Engineer and Planning Director that the construction is not practically feasible or cost effective because of significant or adverse environmental impacts to streams, flood plains, remnants of native vegetation, wetlands, steep slopes or other sensitive areas, or due to impacts on neighboring land uses, including impact from right-of-way acquisition.
5. It will be important to the success of the Complete Streets policy to ensure that the project development process includes early consideration of the land use and transportation context of the project, the identification of gaps or deficiencies in the network for various user groups that could be addressed by the project, and an assessment of the tradeoffs to balance the needs of all users. The context factors that should be given high priority include the following:
 - a. whether the corridor provides a primary access to a significant destination such as a community or regional park or recreational area, a school, a shopping/commercial area, or an employment center;
 - b. whether the corridor provides access across a natural or man-made barrier such as a river or freeway;

- c. whether the corridor is in an area where a relatively high number of users of non-motorized transportation modes can be anticipated;
 - d. whether a road corridor provides important continuity or connectivity links for an existing rail or path network; or,
 - e. whether nearby routes that provide a similar level of convenience and connectivity already exist.
6. The design of new or reconstructed facilities should anticipate likely future demand for bicycling, walking and transit facilities and should not preclude the provision of future improvements.
 7. The City will maintain a comprehensive inventory of the pedestrian and bicycling facility infrastructure and will carry out projects to eliminate gaps in the sidewalk and trail networks.
 8. Complete Streets may be achieved through single projects or incrementally through a series of smaller improvements or maintenance activities over time.
 9. The City will generally follow accepted or adopted design standards when implementing improvements intended to fulfill this Complete Streets policy but will consider innovative or non-traditional design options where a comparable level of safety for users is present.
 10. The City will develop implementation strategies that may include evaluating and revising manuals and practices, developing and adopting network plans, identifying goals and targets, and tracking measures such as safety and modal shifts to gauge success.

Adopted this 7th day of November, 2011

RESOLUTION 2018-58

CITY OF SARTELL – COMPLETE STREETS POLICY

WHEREAS, the City of Sartell's 2016 Comprehensive Plan Goal 2 – Strategy 5 in the Transportation chapter calls for the City to “Create Complete, And Context Sensitive Streets”; and

WHEREAS, the City of Sartell's 2016 Comprehensive Plan alludes to the importance of providing opportunities for all modes of transportation; and

WHEREAS, the City of Sartell finds the following to be instrumental in the adoption and implementation of this Complete Streets Policy:

VISION

1. The City of Sartell strives to establish equity for all of its residents regardless of age and ability. The City acknowledges that not every resident has a motor vehicle, as such, opportunities for all residents to safely travel to various destinations regardless of age and ability. As such, the City shall seek to ensure all streets within the City are planned, funded, designed, constructed, operated, and maintained to safely accommodate users of all ages and abilities; this includes balancing the needs for all users including but not limited to: pedestrians, bicyclists, transit users, motorists, agricultural vehicles, freight carriers, and emergency vehicles.

PURPOSE

1. Equity
 - A. Not all residents drive a vehicle; residents may instead rely on walking, biking, or public transportation, as such, all residents may be provided with safe and accessible transportation options, regardless of age or ability.
2. Affordable transportation options
 - a. Gas prices constantly fluctuate, and not all users in the community have access to the resources needed to own or operate a motor vehicle, as such, alternative modes of transportation may be supported.
3. Economic Development
 - a. Alternative modes of transportation such as walking and biking, offer additional access to businesses and encourage economic development.
4. Sustainability
 - a. As a member of the Greensteps program, the City of Sartell strives to reduce carbon emissions and greenhouse gases, complete streets support many alternative transportation options that can help lessen dependence on non-renewable energy sources such as oil, and promote cleaner air.
5. Public Health and Safety

- a. The City of Sartell encourages active living and physical exercise through changes to the built environment and aims to provide safety for all users regardless of transportation choice.
- 6. Cost Effectiveness and Capital Improvement Planning
 - a. Designing roads with all users in mind from the beginning saves costly reconstruction and retrofits.
- 7. Quality of life
 - a. Neighborhoods that are walkable, bicycle friendly, and have access to public transportation options help increase community interaction and create a sense of community pride.

GOALS

1. Incorporate the vision and purpose of this policy into all aspects of Sartell's project development process for transportation projects.
2. Create a balanced and connected street network, which accommodates all modes of transportation consistent with the City's Comprehensive Plan goals.
3. Enhance water quality by providing innovative stormwater management techniques for road projects, which result in decreases in rainwater runoff, and increases in water infiltration.

POLICY

1. The City of Sartell may seek to enhance the safety, access, convenience, and comfort of all users of all ages and abilities, including pedestrians, bicyclists, transit users, motorists, and freight drivers, through the design, operation and maintenance of the transportation network so as to create a connected network of facilities. This policy may also consider accommodating each mode of travel that is consistent with and supportive of the local community, recognize that all streets are different and that the needs of various users will need to be balanced in a flexible manner.
2. Transportation improvements may include facilities and amenities that are recognized as contributing to Complete Streets. These improvements may include: street and sidewalk lighting; sidewalks and pedestrian safety improvements such as median refuges or crosswalk improvements; improvements that provide ADA (Americans with Disabilities Act) compliant accessibility; transit accommodations including improved pedestrian access to transit stops and bus shelters; bicycle accommodations including bicycle storage, bicycle parking, bicycle routes, shared-use lanes, wide travel lanes or bike lanes as appropriate; and street trees, boulevard landscaping, street furniture and adequate drainage facilities. However, Complete Streets will not look the same in all environments, neighborhoods, and developments, and will not necessarily include elements for all modes.
3. Early consideration of all modes for all users will be important to the success of this Policy. To this end, the Capital Improvements Program process will be utilized to identify potential complete street elements that may be considered for programmed projects. Staff responsible for planning and designing municipal street projects will consider bicycle, pedestrian, and transit facilities from the start of project design. This may apply to all municipal roadway projects, including those involving new construction,

reconstruction, or changes in the allocation of pavement space on an existing roadway (such as the reduction in the number of travel lanes or removal of on-street parking).

4. Bicycle, pedestrian, and transit facilities may be included in street construction, reconstruction, repaving, and rehabilitation projects, except under one or more of the following conditions.

- a. A project involves only ordinary maintenance activities designed to keep assets in serviceable condition, such as mowing, cleaning, sweeping, spot repair, concrete joint repair, or pothole filling, or when interim measures are implemented on temporary detour or haul routes;
- b. There is insufficient space to safely accommodate new facilities, as determined by the City Engineer and City staff;
- c. Where determined by the City Engineer and City staff to have relatively high safety risks;
- d. Where the City Council exempts a project due to the excessive and disproportionate cost of establishing a bikeway, walkway or transit enhancement as part of a project;
- e. Where jointly determined by the City Engineer and City staff that the construction is not practically feasible or cost-effective because of significant or adverse environmental impacts to streams, floodplains, remnants of native vegetation, wetlands, steep slopes or other sensitive areas, or due to impacts on neighboring land uses, including impact from right-of-way acquisition.

5. It will be important to the success of the Complete Streets policy to ensure that the project development process includes early consideration of the land use and transportation context of the project, the identification of gaps or deficiencies in the network for various user groups that could be addressed by the project, and an assessment of the tradeoffs to balance the needs of all users. The context factors that shall be given high priority include one or more of the following:

- a. Whether the corridor provides primary access to a significant destination such as a community or regional park or recreational area, a school, a shopping/commercial area, or an employment center.
- b. Whether the corridor provides access across a natural or human-made barrier such as a river or freeway.
- c. Whether the corridor is in an area where a relatively high number of users of non-motorized transportation modes can be anticipated.
- d. Whether a road corridor provides important continuity or connectivity links for an existing rail or path network.
- e. Whether nearby routes that provide a similar level of convenience and connectivity already exist.

6. The design of new or reconstructed facilities shall anticipate likely future demand for bicycling, walking and transit facilities and the provision of future improvements should be discussed.

7. The City will work towards eliminating gaps in the sidewalk and trail networks.

8. Complete Streets may be achieved through single projects or incrementally through a series of smaller improvements or maintenance activities over time.

9. The City will generally follow accepted or adopted design standards when implementing improvements intended to fulfill this Complete Streets policy but may consider innovative or non-traditional design options where a comparable level of safety for users is present.

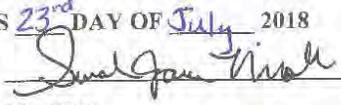
10. The City may develop implementation strategies that may include evaluating and revising manuals and practices, developing and adopting network plans, identifying goals and targets, and tracking measures such as safety and modal shifts to gauge success.

IMPLEMENTATION

The Complete Streets Policy will become effective upon approval of the City Council. Implementation will be achieved through the following practices:

1. Street construction and reconstruction projects along with resurfacing projects shall be reviewed by Public Works, Engineering, and Planning staff to determine the appropriate level of complete street implementation if any. Greater attention will be paid to those projects within the Town Square area and arterial roadways as defined in the City's Comprehensive Plan.
2. The City may work collaboratively with joint partners such as Stearns and Benton County, and the Minnesota Department of Transportation, to encourage Complete Streets Policy measures are being incorporated for projects under their jurisdictions.
3. City staff may continuously educate themselves, Council and Planning Commission members about best practices and cost-effective measures to design and construct Complete Streets.
4. City staff may measure the performance and success of the Complete Streets policy at least once every five years.

ADOPTED BY THE SARTELL CITY COUNCIL THIS 23rd DAY OF July, 2018


MAYOR


CITY ADMINISTRATOR

Appendix D

Introduction

SRF Consulting Group, Inc., updated the socio-economic data for the St. Cloud APO (Area Planning Organization) region to reflect the year of 2045. To understand local adjustments that would result from adopted comprehensive plans, SRF engaged all participating APO cities, including: St. Cloud, Sartell, Waite Park, Sauk Rapids, and St. Joseph.

Unincorporated areas within Stearns, Benton, and Sherburne counties which are not included in a municipal land use plan were assumed to be unchanged from 2040 to 2045. The majority of these areas are anticipated to remain consistent with the previous update or are already represented within a plan of the aforementioned cities.

Methodology Adjustments – 2015 Observed Data

Application and Initial Considerations

This section addresses how the observed data from 2015 was merged into the overall methodology and how it influenced the results. In the absence of an extensive parcel-by-parcel data collection effort for housing units and building footprints for all parcels within the APO, and using that as a starting base, the alternative approach engaged for this study was to apply the **APO's 2015 observed data for the TAZs via a quality control approach. Since the APO's existing data is at the TAZ level rather than at the parcel level, use of, and any corresponding changes resulting from, the data occurred following preliminary calculations. Projections for 2045, including population, housing units, and employment were used throughout the process as controls to ensure the total quantities remained reasonable. TAZs were primarily controlled by the 2015 observed data, acreage within the TAZ, future land use designations, approved assumptions, and the overall projections.**

The quality control for specific TAZs was enhanced by the 2015 data through careful comparisons and identification of necessary adjustments that needed to be made to assumptions previously applied. For example, the 2015 data provided valuable guidance about the floor area ratio (FAR) assumptions for areas within the study area. Based on the 2015 data, St. Cloud has experienced higher FARs than previously assumed, allowing us to adjust our assumptions and contain future non-residential growth within a smaller footprint than previously assumed. The 2015 data also helped verify which TAZs were likely near or far from their buildout capacity.

Prior to comparing 2045 data to the 2015 observed data and the 2040 study, recognition of the following considerations is critical:

- The base assumptions (such as FAR, PPH, Units per Acre, etc.) applied for the 2045 data may differ from those used to estimate the 2040 projections. Also, differences between such assumptions is expected, to some extent, to account for anticipated shifts in demographic trends over the next 30 years.
- This study focuses on the five participating municipalities of the APO. Any TAZs which did not include future land use designations from one of these municipalities was anticipated to remain the same for both future land use and the final quantities.
- Since the five participating cities collectively are comprised of 62 future land use designations, the classification of all these designations into the nine (9) established designations by the APO

makes any direct comparison rather challenging. For example, there is the strong possibility that a use originally designated in 2015 or 2040 as “low retail” may have been considered here as “medium retail”, based on the interpretations of the future land use plans, thus shifting the totals from one retail classification to the other.

- In a few cases, reductions in existing households or commercial/industrial square footage results, due to application of each jurisdiction’s future land use plan. In cases where the future land use plan showed changes to areas that area already developed, we assumed redevelopment would need to occur to carry out the future land use plan.

Abridged Comparisons

The following section is both an abbreviated and limited comparison of the 2015, 2040, and 2045 data. Please be cognizant of the considerations presented in the previous section as many of the visible differences may be attributable to those factors. Table 1 provides a breakdown of employment generating land uses by 1,000 square feet. For the target year of 2045, it is anticipated that an approximate total of 58,283,000 square feet will be required to meet the commercial/industrial employment demand of the APO. In addition to the critical factors previously presented, an additional consideration for the roughly 10,000,000 square feet difference between the 2040 and 2045 studies is the introduction of the future land use plans. Collectively, the participating municipalities are planning for a surplus of employment-generating land uses of about 80 percent (approximately 40 percent is optimal for a projection horizon of 30 years). Without significant development directing controls, application of future land use plans assumes that any land designated for a specific use has fair opportunity for development during the projection horizon. Consequently, this may lead to a more spread out distribution of employment throughout the region’s TAZs than was expected during the 2040 study. With that said, some controls are applied in the 2045 study such as gross area reductions (for right-of-way, open space, etc.) on undeveloped parcels and the manual adjustments which derived from 2015’s TAZ data.

Table 1. Employment Generating Land Uses (1,000 Sq. Ft.)

	2015	2040 Study	2045 Study
Industry	10,753	14,474	8,911
Low Industrial	6,179	8,983	15,873
Low Retail	8,621	11,853	1,970
Medium Retail	1,791	2,495	11,419
High Retail	925	1,354	10,352
Office	6,418	8,894	9,758
TOTAL	34,687	48,053	58,283

The considerations presented in the previous section may also be attributable to the quantitative differences found in housing units. Table 2 provides a breakdown of residential land uses by total dwelling units. For the target year of 2045, it is anticipated that an approximate total of 67,386 housing units will be required to meet the housing demand of the APO. In addition to the critical factors previously presented, there are additional considerations for the roughly 9,000-unit difference between the 2040 and 2045 studies. First, the 2040 study anticipated a

much faster growth rate resulting in population approximately 14,000 greater than the 2045's projection. Consequently, the projected number of housing units from the 2040 study is greater than the total offered in this study. The 2040 study anticipated an overall decline in persons per household over the projection horizon. However, assessments of current trends and discussions with each city's staff revealed that persons per household will likely be static, if not increase, during the projection horizon due to demographic shifts.

Finally, the introduction of each participating city's most updated future land use plan is likely a significant attributable factor for some of the change. Collectively, the participating municipalities are planning for a surplus of residential land uses of about 67 percent (approximately 40 percent is optimal for a projection horizon of 30 years). As mentioned earlier, application of future land use plans assumes that any land designated for a specific use has fair opportunity for development during the projection horizon. Consequently, this may lead to a more spread out distribution of units throughout the region's TAZs than was expected during the 2040 study. As before however, some controls are present in the 2045 study such as gross area reductions (for right-of-way, open space, etc.) on undeveloped parcels and the manual adjustments which derived from 2015's TAZ data. These controls may help alleviate some potential concerns of the data being too widespread.

Table 2. Residential Land Uses (Dwelling Units)

	2015	2040 Study	2045 Study
Single Family	34,357	47,322	40,528
Multiple Family	21,107	29,101	26,857
TOTAL	55,464	76,423	67,386
PERSONS PER HOUSEHOLD	~2.46	~2.37	~2.49

Record of Contact and Use of Educational Institution and Hospital Data

Note regarding 2045 school and college/university data: Several attempts have been made to contact the appropriate staff from all local school districts and institutions of higher education.

With the exception of ISD 748 (Sartell-Saint Stephens), all other districts and institutions have been unable to provide information on student projections by the year 2045. Further explanation of SRF's efforts to contacts these institutions is provided in a subsequent section.

Schools

ISD 748 (Sartell St Stephens)

Independent School District 748 provided projections for 2025. The projections were completed in 2015. Table 3 shows the projections for ISD 748.

Table 3. ISD 748 projections through 2025

Cohort	2015	2025	Percent Change
K-4	1,446	1,491	3.1%

5-8	1,200	1,284	7.0%
9-12	1,113	1,285	15.4%
Total	3,759	4,060	8.0%

From 2015 to 2025, the forecasted change for all grades is 8 percent. 2045 forecasts could be derived by extrapolating from these projections, or by applying the methodology provided by the District to **SRF’s own cohort projection model**.

Planned facilities

A new high school will be constructed on Pinecone Road between 27th Street and 25th Street, in TAZ 1. This school will be completed in Fall 2019. The City has planned substantial remodeling to existing buildings as well. The planned capacity for the new high school is 1,500 students.

ISD 742 (St Cloud)

Planned facilities

In 2019, a new technical high school will be built at 3500 County Road 74 in St. Cloud (TAZ 114). This facility will accommodate 1,600 students.

A new 70,000 square foot center for community education/early childhood education will be built in Waite Park, adjacent to the Discovery Community School (TAZ 103).

Hospitals

St Cloud VA Hospital System (Veterans)

County-by-county projections of the Veterans population were obtained from the US Department of Veterans Affairs, www.va.gov/vetdata/veteran_population.asp. This dataset contains projections out to 2045. Table 4 summarizes statistics for Benton, Stearns, and Sherburne Counties.

Table 4. Projections for Veteran Population

County Name	Veteran Population/Projection			Percent Change	
	2017	2040	2045	2017-2045	2040-2045
Benton	2,968	2,079	1,912	-35.6%	-8.8%
Sherburne	5,854	4,649	4,420	-24.5%	-5.2%
Stearns	10,021	5,776	5,240	-47.7%	-10.2%

Source: US Department of Veterans Affairs

The table indicates percent change from the existing veteran population (2017) to the forecasted veteran population for 2045, and the percent change from the base year (2040) of the previous travel demand model to 2045. It is expected that VA hospital staffing needs would decrease similarly. The number of VA hospital beds for 2045 was decreased by 10% for 2045 to correspond with the 2040- 2045 veteran population change in that time period.

St Cloud Hospital – CentraCare

CentraCare provided demographic forecasts out to 2022. They provided data for the current number of staff, and inpatient and outpatient visits. The number of inpatient and outpatient visits has been estimated for 2026; corresponding staffing needs could be estimated for these figures. CentraCare recommended applying their growth factors to our own demographic forecasts for 2045. The hospital noted that the current facility is landlocked and there is no land to expand on site. They have acquired St. Cloud Medical Group, Midsota the Sauk Crossing Building. Expansion would likely occur at one of these sites. The most extensive of these facilities, the St. Cloud Medical Group facilities located north of the existing hospital at Connecticut Ave S (TAZ 14), is mostly likely to bear the greatest extent of expansion given the size of the facilities and adjacent land area available for expansion compared to the other facilities.

In 2016, there were approximately 25,300 inpatient discharges. The forecasted change for 2026 ranges from -1% to 11%. The overall outpatient volume was approximately 7,080 in 2016. That number is forecasted to increase by 8-11% for 2026. The 11% increase through 2026 was extrapolated out to 2045 for purposes of the travel demand model. Then the number of beds to inpatient visits in 2016 was increased to be proportional to the projected inpatient visits for 2045. The additional/new beds (78) were applied to the current St. Cloud Medical Group campus immediately north of the hospital in TAZ 14, given available capacity there for future growth.

Appendix E

Trip Generation

The current land use-based trip generation program includes 13 land use categories plus an estimator for trips oriented to and from the APO region. Land uses are grouped and summed within model Transportation Analysis Zones (TAZ) provided by the APO. Within the St. Cloud TDM extent, there are 261 TAZs, with an additional 30 TAZs representing “external stations” at the edge of the region.

Standard travel demand modeling nomenclature considers trips to be “produced” at the household end (or trip origin if neither end is at the home) and attracted to the non-household end of the trip.

Home-based trips are forecast from the home locations to activities outside the home including work, school, shopping, recreation, social, or other activities. The nonwork related trips are often aggregated into one or more nonwork trip purposes. The model forecast trip productions and attractions, with each trip having one production end and one attraction end. Productions are related to the home end of the trip while attractions are related to the nonhome end. For example, on a daily basis, a single worker may generate two home-based work trip productions at home – a trip from home to work and a trip from work to home. At the work location, the same worker would generate two attractions for the same two trips. Trip productions and attractions focus on the locations generating the travel, not the directionality of travel. (Federal Highway Administration et al., 2010, p. 5-1)¹

Many of the trip generation rates were originally developed using Institute of Transportation Engineers (ITE) estimates that have since been updated by ITE. The model’s trip generation rates were reviewed, and it was determined that most of the rates fall within the typical ITE range. Three land uses (office, medium-density retail, and high-density retail) use trip generation rates consistent with ITEs. The trip generation rates for office and medium-density retail are logarithmic with an effective trip generation rate of 13.18 and 63.32 per 1,000 square feet, respectively. High-density trip generation is specific to the Crossroads shopping center, and has an effective rate of 33.95 trips per 1,000 square feet. Trip generation rates by land use category are depicted in Table 4.

Table 4: Trip Generation Rates by Land Use/Trip Purpose

	Production			Attractions		
	Home-based Work	Home-based Other	Non-home Based	Home-based Work	Home-based Other	Non-home Based
SFR	2.42	5.25	0.71	0.00	1.01	0.71
MHR	1.45	3.17	0.43	0.00	0.61	0.43
OFFICE	-	-	-	-	-	-
IND	0.00	0.00	1.68	2.80	0.84	1.68
LIND	0.00	0.00	0.96	1.60	0.48	0.96
LRET	0.00	0.00	14.25	3.33	15.68	14.25
MedRET	-	-	-	-	-	-
HighRET	-	-	-	-	-	-
HOT	0.00	0.00	2.61	0.61	2.87	2.61
SCH	0.00	0.00	3.10	0.07	0.34	0.31
PARK	0.00	0.00	3.00	0.70	3.30	3.00

¹ Travel Model Validation and Reasonability Checking Manual Second Edition, <https://connect.ncdot.gov/projects/planning/tpb%20training%20presentations/fhwa%20model%20validation%20handbook.pdf>

HOSP	0.00	0.00	2.35	1.77	5.30	2.35
COLL	0.00	0.00	0.47	0.24	1.19	0.47
ADT	0.30	0.40	0.10	0.06	0.07	0.06

Previously, the trip generation step of the TDM was done outside of the model catalog. SRF updated the TDM to include the trip generation program within the CUBE model catalog.

Appendix F

Trip Distribution

“The most common format for trip distribution in four-step models is the gravity model, an aggregate model structure that estimates a production-attraction trip table from zone-level estimates of trip productions and attractions and measures of separation between zones. Separate models are **developed for each trip purpose**” (Federal Highway Administration, 2010, p. 6-1).¹

To begin the trip distribution review, existing year (2015) zonal estimates were compared to the observed trip length frequency distribution (TLFD) curves. Data from the 2006-2010 U.S. Census Transportation Planning Package (CTPP) was used to develop home-based work (HBW) trip distribution patterns and TLFD curves. The CTPP 5-year data was used to calculate the average trip times between Saint Cloud zones and the TLFD was compared to the trip length frequency from the current model. The frequency distribution was then used as a friction factor input to the TDM to develop the origin-destination tables (calibrated using CTPP frequency distribution). “Friction factors define the measure of separation based on travel impedances between TAZs. Checks of travel impedance skims for travel time, travel distance, and travel cost. Those basic travel impedance skims are used for both trip **distribution and mode choice modeling**” (Federal Highway Administration, 2010, p. 6-2).¹

The 2015 trip distribution for all trip purposes is shown in Figure 5, and average trip length by purpose is shown in Table 5. Trip lengths apply only to the portion of trips within the APO model area.

Figure 5: 2015 Trip Distribution Average Trip Lengths

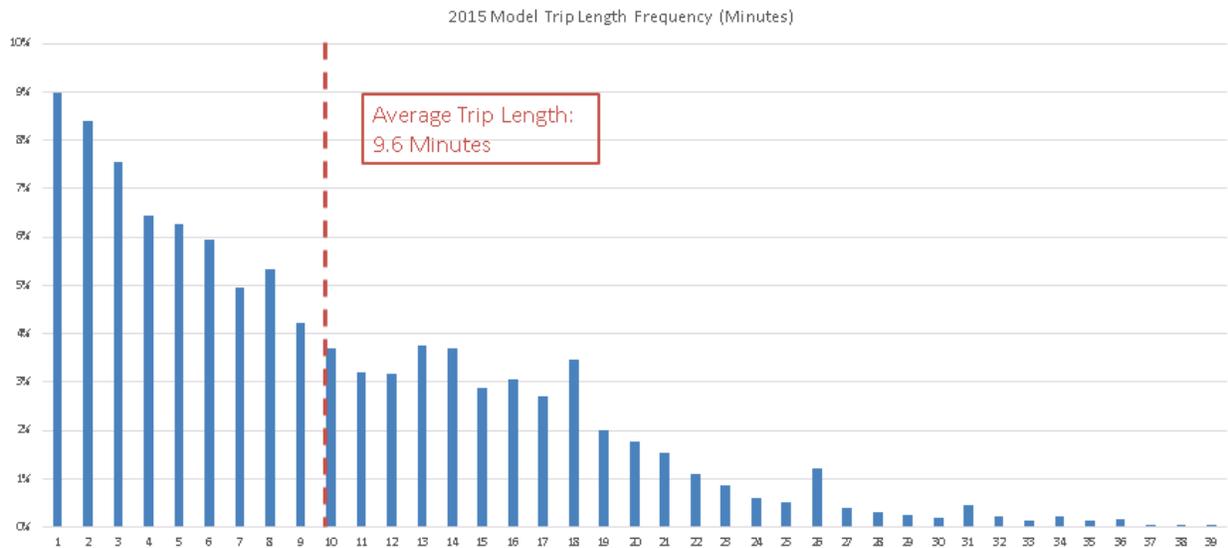


Table 5: Average Trip Length by Trip Purpose

Trip Purpose	Average Trip Length
Home-Based Work	24.6
Home-Based Other	17.3
Non Home-Based	10.9

Taz #	Industry (1,000 Sq. Ft.)			Low Industrial (1,000 Sq. Ft.)			Low Retail (1,000 Sq. Ft.)			Medium Retail (1,000 Sq. Ft.)			High Retail (1000 Sq. Ft.)			Office (1,000 Sq. Ft.)			Single Family (Units)			Multiple Family (Units)			Park (Acreage)				
	2015	2045	Difference	2015	2045	Difference	2015	2045	Difference	2015	2045	Difference	2015	2045	Difference	2015	2045	Difference	2015	2045	Difference	2015	2045	Difference	2015	2045	Difference		
1	16	0	-16	0	0	0	6	0	-6	0	11	11	0	0	0	0	6	6	0	432	1,132	700	0	2	2	336	336	0	
2	0	0	0	0	0	0	0	0	0	0	8	8	0	0	0	0	0	0	740	740	0	0	0	0	0	0	0		
3	0	0	0	0	0	0	66	0	-66	0	53	53	0	0	0	1	0	-1	437	437	0	272	272	0	13	37	24		
4	0	0	0	7	0	-7	52	0	-52	0	117	117	0	41	41	8	46	37	885	885	0	224	224	0	51	108	57		
5	349	330	-19	0	0	0	26	0	-26	0	58	58	0	0	0	12	0	-12	444	444	0	0	7	7	18	18	0		
6	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	243	243	0	49	49	0	7	10	3		
7	0	0	0	0	0	0	126	0	-126	0	77	77	0	44	44	16	0	-16	144	144	0	16	25	9	11	11	0		
8	0	0	0	0	0	0	19	0	-19	0	30	30	0	39	39	12	40	28	377	377	0	68	82	14	3	43	40		
9	7	0	-7	23	0	-23	56	0	-56	0	16	16	0	113	113	8	50	41	107	107	0	272	272	0	0	0	0		
10	0	0	0	0	0	0	0	0	0	0	75	75	0	51	51	0	0	0	3	106	103	0	101	101	0	0	0	0	
11	0	0	0	2	0	-2	0	0	0	0	0	0	0	0	0	0	0	0	258	320	62	82	320	238	5	5	0	0	
12	0	0	0	0	0	0	138	0	-138	0	615	615	0	1,290	1,290	152	0	-152	98	98	0	518	501	-17	1	1	0	0	
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	113	113	0	59	68	9	0	0	0	0	
14	0	0	0	6	0	-6	48	0	-48	0	40	40	0	131	131	395	467	72	143	143	0	221	221	0	39	38	0	0	
15	0	0	0	0	0	0	19	19	0	0	0	0	0	0	0	0	0	0	24	24	0	0	0	0	0	0	0	0	
16	0	0	0	0	0	0	0	0	0	0	94	94	0	383	383	0	0	0	58	58	0	0	34	34	0	44	44	44	
17	0	0	0	17	0	-17	0	0	0	0	0	0	0	0	2	0	-2	130	130	0	0	2	2	0	12	12	12		
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	473	446	-27	0	285	285	5	19	14	0	
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	189	189	0	0	0	0	10	10	0	0	
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	286	286	0	0	0	0	4	5	1	0	
21	0	0	0	0	0	0	0	9	9	0	0	0	0	0	0	4	43	39	289	289	0	212	212	0	1	15	14	0	
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	413	413	0	465	465	0	0	14	14	6	12	6	0	
23	219	0	-219	0	0	0	0	0	0	0	48	48	0	0	0	175	345	171	163	163	0	0	0	0	3	3	0	0	
24	0	0	0	0	0	0	0	0	0	314	0	-314	0	0	0	43	357	314	13	13	0	61	61	0	23	76	53	0	
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	19	0	210	210	0	73	89	16	0	13	12	0	0	
26	0	0	0	0	0	0	15	80	65	0	0	0	0	0	65	0	-65	241	241	0	284	284	0	2	8	5	0	0	
27	0	0	0	0	0	0	28	5	-23	0	0	0	0	0	102	117	15	217	217	0	495	504	9	5	11	6	0	0	
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	155	155	0	36	36	0	0	0	0	120	120	0	0	0	
29	0	0	0	0	0	0	30	0	-30	0	0	0	0	0	10	116	106	30	30	0	93	93	0	0	0	0	0	0	
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14	178	178	0	621	621	0	0	0	0	0	0	
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	48	45	45	0	0	0	0	0	0	0	0	0	
32	203	0	-203	0	203	203	0	0	0	0	0	0	0	0	0	0	0	0	254	254	0	317	317	0	5	76	71	0	0
33	0	0	0	0	0	0	10	10	0	0	0	0	0	0	3	0	-3	234	234	0	375	375	0	4	12	8	0	0	
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	132	132	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	364	364	0	0	0	0	0	5	5	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	21	496	496	0	22	22	0	4	4	0	0	0	
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	281	281	0	5	5	0	12	12	0	0	0	
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	116	116	0	34	34	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	116	116	0	21	21	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	8	6	391	391	0	41	41	0	15	15	0	0	0	0
41	1,186	1,186	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	17	123	123	0	487	487	0	15	33	18	0	0	
43	1,090	0	-1,090	773	1,918	1,145	0	0	0	0	0	0	0	0	118	63	-55	0	0	0	0	0	0	0	0	0	0	0	0
44	226	0	-226	14	165	151	14	0	-14	0	24	24	0	0	26	91	65	0	0	0	0	0	0	0	0	0	0	0	0
45	902	755	-147	0	0	0	0	0	0	0	0	0	0	0	22	170	147	0	0	0	0	0	0	0	0	0	0	0	0
46	74	0	-74	124	251	128	31	6	-25	0	0	0	0	0	29	0	-29	122	122	0	36	36	0	1	1	0	0	0	
47	9	0	-9	41	159	118	120	17	-103	0	0	0	0	0	6	0	-6	54	54	0	70	70	0	0	0	0	0	0	0
48	0	0	0	30	32	2	30	6	-24	0	0	0	0	0	0	23	23	103	103	0	160	160	0	1	1	0	0	0	0
49	0	0	0	0	0	0	47	0	-47	0	21	21	0	0	15	41	26	107	107	0	272	272	0	0	0	0	0	0	0
50	1,220	1,115	-105	0	0	0	10	0	-10	0	115	115	0	0	0	0	0	6	6	0	0	0	0	0	170	170	0	0	0
51	0	0	0	0	0	0	20	0	-20	0	0	0	0	20	20	0	0	0	30	30	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	47	0	-47	100	0	-100	0	159	159	12	0	-12	4	4	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	57	0	-57	0	0	0	0	75	75	30	12	-18	151	151	0	266	266	0	91	91	0	0	0
54	117	202	85	20	0	-20	11	0	-11	0	0	0	0	63	63	117	0	-117	0	0	0	0	0	6	8	3	0	0	0
55	0	0	0	10	0	-10	95	0	-95	0	0	0	0	115	115	10	0	-10	27	27	0	16	16	0	0	0	0	0	0
56	0	0	0	95	22	-72	35	0	-35	0	93	93	0	0	21	0	-21	26	26	0	198	198	0	0	5	5	0	0	0
57	0	0	0	25	10	-14	0	0	0	0	0	0	0	10	24	14	229	229	0	101	101	0	2	4	1	0	0	0	0
58	0	0	0	0	8	8	7	0	-7	0	0	0	0	0	8	6	-1	278	278	0	43	43	0	0	0	0	0	0	0
59	0	0	0	18	25	7	16	0	-16	0	9	9	0	20	20	0	187	187	0	138	138	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	68	0	-68	0	0	0	0	36	36	8	39	32	313	313	0	12	12	0	0	0	0	0	0
61	0	0	0	6	0	-6	92	0	-92	0	19	19	0	35	35	2	45	44	87	87	0	200	200	0	1	1	0	0	0
62	0	0	0	0	0	0	70	0	-70	0</																			

157	0	0	0	3	0	-3	0	13	13	0	0	0	0	0	0	0	0	0	553	553	0	22	22	0	5	16	11	
158	0	0	0	1	0	-1	2	0	-2	0	0	0	0	36	36	10	0	-10	30	30	0	37	37	0	8	15	8	
159	0	0	0	0	0	0	2	0	-2	0	0	0	0	0	0	0	8	8	316	316	0	52	52	0	2	2	0	
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	404	404	0	110	110	0	5	6	1	
161	205	284	79	136	0	-136	19	0	-19	0	0	0	0	57	57	12	6	-6	2	2	0	0	0	0	0	0	0	
162	0	0	0	4	0	-4	58	0	-58	0	50	50	0	30	30	17	0	-17	18	18	0	0	8	8	7	7	1	
163	0	0	0	0	0	0	51	0	-51	0	40	40	0	31	31	20	0	-20	224	224	0	16	16	0	0	0	0	
164	9	0	-9	0	0	0	64	0	-64	0	120	120	0	0	0	0	47	0	-47	12	12	0	6	7	1	0	0	
165	0	0	0	0	0	0	3	0	-3	0	1	1	0	0	0	5	7	2	172	172	0	77	77	0	10	10	0	
166	0	0	0	95	0	-95	4	0	-4	0	0	0	0	69	69	10	24	13	26	26	0	41	41	0	44	83	38	
167	0	0	0	0	0	0	6	0	-6	0	6	6	0	0	0	0	0	0	81	81	0	58	58	0	13	13	0	
168	0	0	0	0	0	0	82	0	-82	0	31	31	0	49	49	14	16	2	91	91	0	70	70	0	0	0	0	
169	0	0	0	6	0	-6	0	0	0	0	0	0	0	0	0	57	57	172	172	0	94	94	0	4	4	1	0	
170	86	182	97	0	0	0	56	0	-56	0	0	0	0	0	0	41	0	-41	72	72	0	11	11	0	0	0	0	
171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	219	219	0	11	11	0	28	28	0	
172	56	44	-12	23	0	-23	0	0	0	0	0	0	0	0	0	0	35	35	141	141	0	12	12	0	0	0	0	
173	19	101	82	88	5	-83	0	0	0	0	0	0	0	0	0	11	0	-11	0	0	0	0	0	0	0	0	0	
174	12	219	207	0	0	0	42	0	-42	0	0	0	0	0	0	8	0	-8	6	6	0	0	0	0	0	0	0	
175	0	0	0	0	0	0	3	0	-3	0	0	0	0	0	0	0	2	2	264	264	0	112	112	0	28	28	0	
176	0	0	0	15	21	6	0	0	0	0	13	13	0	0	0	24	5	-19	245	245	0	103	103	0	3	3	0	
177	283	0	-283	0	300	300	35	0	-35	0	0	0	0	0	0	11	29	18	2	2	0	0	0	0	0	0	0	
178	0	0	0	291	325	34	143	42	-101	0	146	146	0	0	0	80	0	-80	7	7	0	217	217	0	0	0	0	
179	0	0	0	119	89	-30	56	0	-56	0	127	127	0	0	0	37	1	-36	38	38	0	6	6	0	0	0	0	
180	0	0	0	189	128	-61	9	15	6	0	52	52	0	0	0	39	42	3	53	53	0	118	118	0	0	2	2	
181	171	171	0	81	81	0	381	381	0	0	0	0	0	0	0	38	38	0	43	43	0	10	10	0	0	0	0	
182	0	0	0	180	0	-180	0	0	0	0	0	0	0	0	0	180	180	99	99	99	0	20	20	0	2	2	0	
183	0	0	0	407	337	-69	143	11	-132	113	383	270	0	0	0	68	0	-68	0	0	0	94	94	0	0	0	0	
184	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	344	344	0	22	22	0	21	29	8	
185	11	0	-11	0	0	0	85	7	-78	0	39	39	0	0	0	39	39	205	205	0	217	217	0	0	13	13	0	
186	65	0	-65	0	0	0	93	4	-88	0	114	114	0	0	0	0	0	3	3	0	250	250	0	0	30	30	0	
187	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	268	268	0	323	323	0	80	80	0	
188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	118	118	6	6	6	0	320	320	0	0	59	59	
189	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	0	0	0	0	0	0	0	0	0	0	
190	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	36	33	136	136	0	229	229	0	8	30	22	
191	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	18	104	104	0	20	190	170	0	241	241	0	
192	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129	129	0	175	175	0	11	17	6	
193	30	83	53	0	131	131	15	0	-15	0	0	0	0	0	0	0	0	0	15	15	0	0	0	0	0	0	0	
194	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	200	257	57	0	0	0	0	237	237	
195	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	155	155	0	0	0	0	0	0	0	
196	0	323	323	21	0	-21	12	82	70	0	49	49	0	0	0	357	357	0	0	0	0	33	486	453	4	19	15	0
197	0	0	0	0	0	0	2	0	-2	0	14	14	0	0	0	0	0	0	54	531	477	0	6	6	0	0	0	
198	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	92	92	0	0	1	1	0	0	0	
199	0	0	0	0	0	0	0	102	102	0	74	74	0	190	190	0	47	47	271	276	5	0	106	106	0	49	49	
200	0	0	0	0	0	0	0	23	23	0	3	3	0	0	0	1	81	81	41	265	224	0	6	6	159	159	0	
201	0	0	0	0	0	0	0	0	0	0	15	15	0	0	0	0	0	0	17	246	229	0	6	6	0	0	0	
202	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	91	91	0	0	1	1	0	10	10	
203	635	669	34	0	0	0	0	0	0	0	0	0	0	380	380	0	8	8	8	8	0	190	190	0	0	0	0	
204	0	0	0	0	0	0	0	31	31	0	0	0	0	0	0	0	0	0	203	281	78	0	0	0	0	14	14	
205	0	633	633	22	0	-22	41	0	-41	0	0	0	0	178	178	0	0	0	42	339	297	0	0	0	0	0	0	
206	0	0	0	0	0	0	0	0	-16	0	0	0	0	94	94	0	0	0	77	77	0	0	0	0	0	72	72	
207	0	0	0	0	0	0	16	0	-16	0	0	0	0	56	56	0	2	2	314	314	0	297	297	0	15	29	14	
208	238	283	45	14	0	-14	6	0	-6	0	0	0	0	418	418	0	10	10	44	209	165	0	0	0	0	0	0	
209	0	0	0	166	202	36	36	0	-36	0	21	21	0	26	26	47	0	-47	12	12	0	108	108	0	0	35	35	
210	0	0	0	0	91	91	47	0	-47	0	42	42	0	0	0	84	1	-83	48	48	0	565	565	0	1	1	0	
211	0	0	0	0	0	0	20	0	-20	0	47	47	0	0	0	73	31	-42	2	2	0	220	220	0	0	0	0	
212	0	0	0	4	62	58	51	0	-51	0	0	0	0	0	0	15	0	-15	109	154	45	234	230	-4	0	2	2	
213	0	0	0	0	0	0	12	0	-12	0	25	25	0	0	0	2	0	-2	140	140	0	335	335	0	5	14	10	
214	106	10	-96	72	1,148	1,076	25	0	-25	0	0	0	0	492	492	25	0	-25	24	293	269	0	125	125	0	23	23	
215	74	0	-74	0	1,641	1,641	63	4	-58	0	0	0	0	316	316	124	0	-124	135	135	0	4	767	763	12	15	3	
216	0	0	0	14	0	-14	24	115	91	0	0	0	0	0	0	0	0	0	55	379	324	4	293	289	0	295	295	
217	0	0	0	1	0	-1	51	0	-50	0	0	0	0	0	0	373	373	78	78	0	0	112	112	0	165	165		
218	0	0	0	94	0	-94	3	0	-3	0	530	530	0	0	0	35	378	343	3	85	82	0	95	95	0	21	21	
219	20	0	-20	0	25	25	10	0	-10	0	0	0	0	0	0	0	133	133	28	414	386	0	0	0	0	277	277	
220	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	55	55	0	0	0	0	0	0	0	0	0	0	
221	0	31	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62	75	13	0	0	0	0	3	3	
222	50	61	11	183	442	259	39	0	-39	0	36	36	0	0	0	3	559	556	2	2	0	0	0					

237	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	110	0	0	0	0	0	0	0	
238	0	0	0	8	8	0	12	12	0	0	0	0	0	0	0	0	0	0	0	72	72	0	2	2	0	36	36	0	
239	9	9	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	62	62	0	0	0	0	0	0	0	
240	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85	85	0	4	4	0	0	0	0	
241	154	154	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	143	143	0	0	0	0	17	17	0	
242	0	0	0	0	0	0	12	12	0	0	0	0	0	0	0	0	0	0	0	414	414	0	0	0	0	16	16	0	
243	28	28	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	306	306	0	0	0	0	5	5	0	
244	0	0	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	151	151	0	0	0	0	144	144	0	
245	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	
246	19	19	0	111	111	0	11	11	0	0	0	0	0	0	0	0	0	7	7	0	321	321	0	12	12	0	73	73	0
247	5	5	0	62	62	0	16	16	0	0	0	0	0	0	0	0	0	0	0	322	322	0	0	0	0	224	224	0	
248	20	20	0	3	3	0	5	5	0	0	0	0	0	0	0	0	0	1	1	0	120	120	0	0	0	0	0	0	0
249	51	51	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	66	66	0	0	0	0	0	0	0	
250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	0	39	39	0	0	0	0	0	0	0
251	0	0	0	67	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	99	99	0	0	0	0	0	0	0	
252	392	0	-392	0	1,840	1,840	126	0	-126	0	97	97	0	0	0	0	95	363	268	227	227	0	185	185	0	5	65	61	
253	432	0	-432	40	2,615	2,575	0	0	0	0	81	81	0	0	0	0	251	0	-251	237	237	0	6	207	201	23	75	52	
254	100	0	-100	0	201	201	23	0	-23	0	57	57	0	0	0	0	1	491	490	210	210	0	2	555	553	0	0	0	
255	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	90	0	0	0	0	0	0	0	
256	0	0	0	0	0	0	12	12	0	0	0	0	0	0	0	0	0	0	0	68	68	0	0	0	0	0	0	0	
257	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	46	0	0	0	0	0	0	0	
258	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	76	76	0	0	0	0	0	0	0	
259	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	0	0	0	0	0	0	0	
260	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	114	114	0	0	0	0	0	0	0	
261	0	0	0	0	0	0	20	128	108	0	98	98	0	0	0	0	0	203	203	139	617	478	0	155	155	0	78	78	
Total	10,753	8,911	-1,842	6,179	15,873	9,694	8,621	1,970	-6,651	1,791	11,419	9,627	925	10,352	9,427	6,418	9,758	3,341	34,357	40,528	6,171	21,107	26,857	5,750	3682	8,425	4,743		

Cost Estimate Inflation Conversion Factor Table

Historical/ Current Baseline Fiscal Year ↓	Future Projection Fiscal Year																					
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030*	2031*	2032*	2033*	2034*	2035*	2036*	2037*	2038*	
YOY Δ%	15%	6%	4%	5%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	
2013	1.20	1.28	1.33	1.39	1.45	1.51	1.57	1.63	1.70	1.76	1.83	1.91										
2014	1.08	1.14	1.19	1.25	1.29	1.35	1.40	1.46	1.51	1.58	1.64	1.70										
2015	1.01	1.07	1.11	1.16	1.21.00	1.26	1.31	1.36	1.42	1.47	1.53	1.59										
2016	1.09	1.16	1.20	1.26	1.32	1.37	1.42	1.48	1.54	1.60	1.66	1.73										
2017	1.15	1.22	1.27	1.33	1.38	1.44	1.50	1.56	1.62	1.68	1.75	1.82	1.89	1.97	2.05	2.13	2.21	2.30	2.39	2.49	2.59	
2018	-	1.06	1.10	1.16	1.20	1.25	1.30	1.35	1.41	1.46	1.52	1.58										
2019	-	-	1.04	1.09	1.14	1.18	1.23	1.28	1.33	1.38	1.44	1.49	1.55	1.61	1.68	1.74	1.81	1.89	1.96	2.04	2.12	
																						10/18/2018
How to use this table: Each row allows an estimator to escalate a historical/current project to any future year. For instance, given a past project priced in the 2016 time frame, to approximate how much similar work would cost a decade later in 2026, just go down to the 2016 row and scan across to the 2026 column to get a multiplying factor of 1.54. The 2018 column is the only one based on actual CCIs; all the rest are forecasts.																						
*This table was originally configured only to the year 2029. Based off of past trends, APO staff forecasted the year-over-year percent change for 2030 through 2038.																						

APPENDIX I – DESIRED PROJECTS THAT DO NOT MEET FISCAL CONSTRAINT

Benton County: Unconstrained Expansion Projects

Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Estimated Cost (2017 Dollars)
Benton CSAH 29 (First Street NE) in Sartell	Benton CSAH 78 to Benton CSAH 33 (Benton Drive)	Four-Lane Undivided Arterial	\$12,903,250
<i>Benton CSAH 29 (35th Street NE) in Sauk Rapids and Sauk Rapids Township*</i>	<i>Highway 10 to Benton CSAH 1 (Mayhew Lake Road NE)</i>	<i>Four-Lane Divided Expressway</i>	<i>\$12,728,000</i>
Benton CSAH 29 (35 th Street NE) in Sauk Rapids and Minden Township*	Benton CSAH 1 (Mayhew Lake Road) to Benton County Road 58 (35 th Avenue NE)	Four-Lane Divided Expressway	\$15,244,000
<i>Benton County Road 58 (35th Avenue NE) in Minden Township*</i>	<i>Benton CSAH 3 (Golden Spike Road NE) to Minnesota Highway 23</i>	<i>Four-Lane Divided Expressway</i>	<i>\$18,500,000</i>
Benton CSAH 8 (35 th Avenue NE) in Minden Township*	Minnesota Highway 23 to Benton CSAH 7 (12 th Street SE)	Four-Lane Divided Expressway	\$12,580,000

**Belt Line Segment*

Stearns County: Unconstrained Expansion Projects

Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Estimated Cost (2017 Dollars)
Stearns CSAH 137 (Seventh Street S) in Saint Cloud	MSAS 102 (Second Avenue S) to Stearns CSAH 74 (W Saint Germain Street)	Four-Lane Undivided Arterial	\$4,779,000
<i>Stearns CSAH 137 (Seventh Street S) in Saint Cloud</i>	<i>28th Avenue South to MSAS 103 (10th Avenue South)</i>	<i>Four-Lane Undivided Arterial</i>	<i>\$7,552,000</i>
Stearns County Road 134 in Saint Cloud	Pinecone Road S to Stearns CSAH 120	Four-Lane Undivided Arterial	\$4,000,000
<i>Stearns CSAH 136 and I-94 in Saint Cloud</i>	<i>Stearns CSAH 136 (Oak Grove Road SW)</i>	<i>Interchange</i>	<i>\$15,000,000</i>
New Alignment in Saint Joseph Township and Saint Wendel Township*	Sauk River (Waite Park Municipal Boundaries) to Stearns CSAH 133	Four-Lane Divided Expressway	\$22,200,000
<i>Stearns CSAH 133 in Saint Wendel Township and LeSauk Township*</i>	<i>New Alignment to Stearns CSAH 4</i>	<i>Four-Lane Divided Expressway</i>	<i>\$7,844,000</i>
Stearns CSAH 133 (6 th Street S) in LeSauk Township and Sartell*	Stearns CSAH 4 to 19 th Avenue S	Four-Lane Divided Expressway	\$7,548,000

*Belt Line Segment

Sherburne County: Unconstrained Expansion Projects

Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Estimated Cost (2017 Dollars)
Sherburne County Road 90 (40 th Avenue SE) in Saint Cloud and Haven Township*	Sherburne CSAH 7 (12 th Street SE) to Sherburne CSAH 7 (45 th Avenue SE)	Four-Lane Divided Expressway	\$7,520,000
<i>Sherburne CSAH 7 (45th Avenue SE) in Haven Township*</i>	<i>New Sherburne County Road 90 (40th Avenue SE) alignment to Sherburne CSAH 3 (32nd Street SE)</i>	<i>Four-Lane Divided Expressway</i>	<i>\$3,700,000</i>
Sherburne CSAH 3 (32 nd Street SE) in Haven Township*	Sherburne CSAH 7 (45 th Avenue SE) to Highway 10	Four-Lane Divided Expressway	\$6,734,000
<i>Sherburne CSAH 3 (32nd Street SE) in Haven Township*</i>	<i>Highway 10 to Mississippi River</i>	<i>Four-Lane Divided Expressway</i>	<i>\$19,240,000</i>

*Belt Line Segment

City of Saint Cloud: Unconstrained Expansion Projects

Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Estimated Cost (2017 Dollars)
MSAS 141 (Cooper Avenue S) overpass in Saint Cloud	MSAS 156 (40 th Street S) to MSAS 166 (255 th Street)	Two-Lane Collector (Overpass)	\$14,000,000
<i>Heatherwood Road in Saint Cloud</i>	<i>MSAS 162 (Heatherwood Road) to 4th Avenue S</i>	<i>Two-Lane Local</i>	<i>\$3,444,000</i>
33 rd Street S (Mississippi River Crossing) in Saint Cloud*	Mississippi River to CSAH 7 (Clearwater Road)	Four-Lane Divided Expressway	\$90,848,000

**Belt Line Segment*

City of Waite Park: Unconstrained Expansion Projects

Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Estimated Cost (2017 Dollars)
MSAS 105 (First Street S) in Waite Park	Minnesota Highway 23 to MSAS 102 (2 nd Avenue S)	Three-Lane Collector	4,428,000
<i>33rd Street S in Waite Park*</i>	<i>Graniteview Road to Sauk River</i>	<i>Four-Lane Divided Expressway</i>	<i>\$26,936,000</i>

**Belt Line Segment*

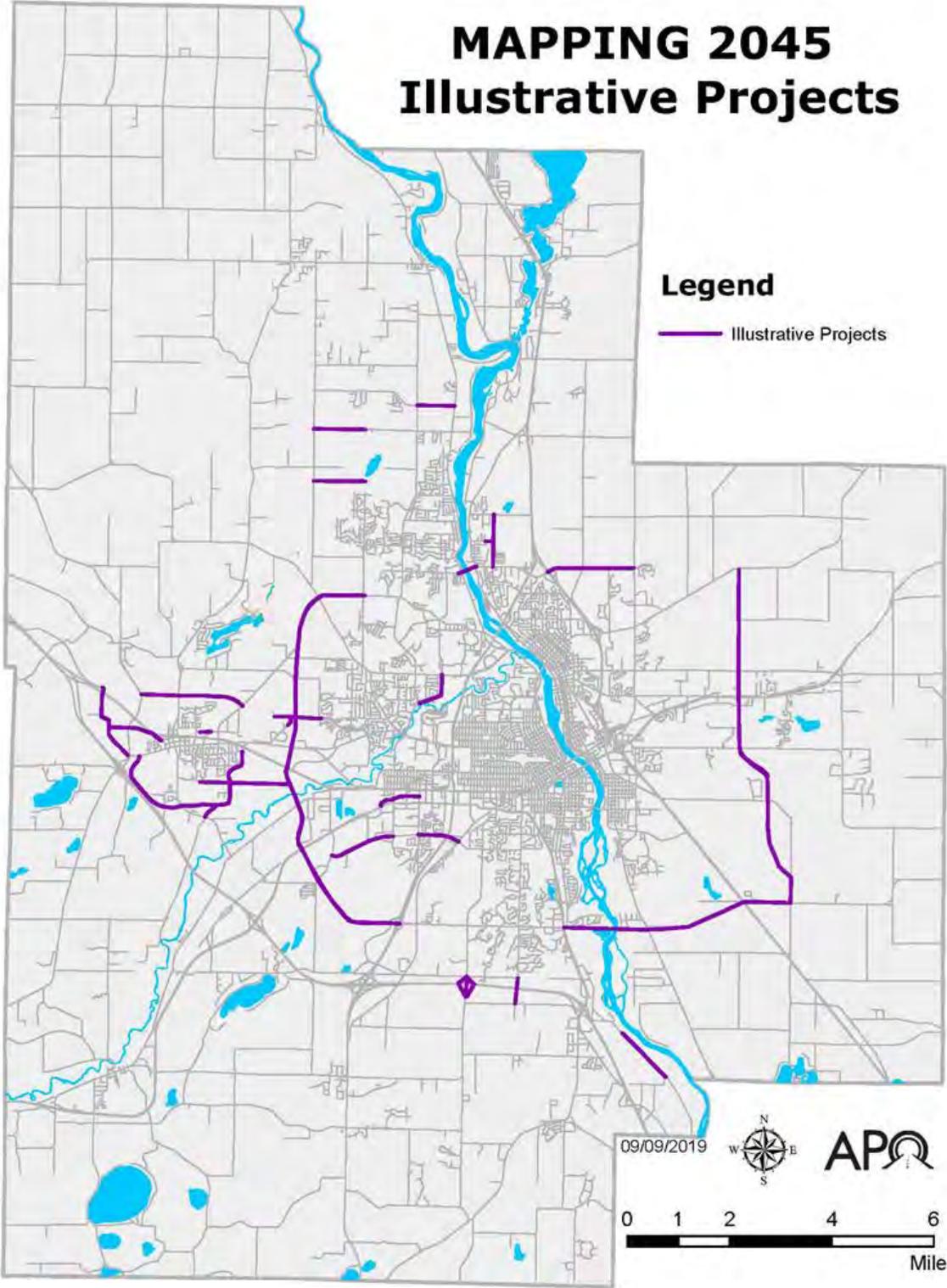
City of Sartell: Unconstrained Expansion Projects

Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Estimated Cost (2017 Dollars)
Park Avenue in Sartell	Benton CSAH 29 (First Street NE) to Scenic Drive NW	Two-Lane Local	\$2,884,000
<i>Ninth Street NE in Sartell</i>	<i>Ninth Street NE to Scenic Drive NW</i>	<i>Two-Lane Local</i>	<i>\$420,000</i>
15 th Street N in Sartell	19 th Avenue N to 75 th Avenue (Townline Road)	Four-Lane Collector	\$4,040,000
<i>35th Street N in Sartell</i>	<i>Pinecone Road N to Stearns CSAH 1 (River Avenue N)</i>	<i>Two-Lane Local</i>	<i>\$2,072,000</i>
27 th Street North in Sartell	7 th Avenue (Townline Road) to 27 th Street N	Two-Lane Local	\$3,192,000

City of Saint Joseph: Unconstrained Expansion Projects

Project Location	Beginning and Ending Termini	Post-Construction Facility Type	Estimated Cost (2017 Dollars)
Field Street Extension in Saint Joseph	95 th Ave to Proposed Belt Line	Two-Lane Divided Collector	\$8,096,000
<i>Westwood Extension in Saint Joseph</i>	<i>73rd Ave to expansion project STJ-1 and Stearns CSAH 133 to Stearns CSAH 3</i>	<i>Four-Lane Divided Arterial</i>	<i>\$21,756,000</i>
Unnamed Road in Saint Joseph	Stearns CSAH 2 to Collegeville Road	Four-Lane Divided Arterial	\$11,692,000
<i>Old Highway 52 in Saint Joseph</i>	<i>Unnamed Road to W Birch Street</i>	<i>Four-Lane Undivided Arterial</i>	<i>\$6,431,000</i>
Interstate 94 Frontage Road in Saint Joseph	MSAS 116 (W Minnesota St) to Jade Road Extension	Four-Lane Divided Collector	\$16,444,000
<i>Jade Road Extension in Saint Joseph</i>	<i>Stearns County Road 121 (College Ave S) to Minnesota Street E</i>	<i>Four-Lane Undivided Collector</i>	<i>\$10,384,000</i>
Elm Street in Saint Joseph	Existing Elm Street Cul-De-Sac to Existing Elm Street	Two-Lane Local	\$966,000
<i>Pearl Drive in Saint Joseph</i>	<i>Existing Pearl Drive to Westwood Extension</i>	<i>Two-Lane Local</i>	<i>\$828,000</i>

MAPPING 2045 Illustrative Projects



Legend

— Illustrative Projects

09/09/2019



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Miles

Water Quality

Contact

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Minnesota Department of Transportation
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(651) 366-3628

Website: [Air/Water Quality & Analysis](#) (Office of Environmental Stewardship)

Purpose

The purpose is to protect streams and lakes from degradation of water quality due to post-construction runoff. Special classes of surface waters requiring consideration include: calcareous fens, designated Outstanding Resource Value Waters, designated Trout Streams, and Trout Lakes (See [Erosion Control](#) for control of impacts during construction.)

Threshold Criteria

Water quality issues need to be addressed whenever a project will add new sources, or additional water to water resources in the project area. In addition, bridge construction and drainage modifications near sensitive water bodies will raise water quality issues. Generally, there are different concerns for rural and urban design projects.

Rural Design Projects -- For rural projects water quality impacts are usually not an issue. Grass ditches remove much of the pollutant load found in highway runoff, and rural roadways generate a relatively small load of pollutants. However, bridge replacements over water often require special attention and/or early coordination (DNR Fisheries). Bridge replacements over

Designated Trout Streams – These generally require special attention and early coordination. New construction or drainage modifications directing new or additional highway runoff to **lakes and streams** are also a concern. For any project, consult with OES if sensitive water bodies such as Designated Trout Streams, Trout Lakes, Calcareous Fens, or Outstanding Resource Value Waters will receive highway runoff; special attention and coordination is generally required.

Urban Design Projects - In addition to the above concerns (with bridge replacements over water, new construction, drainage modifications, and/or sensitive water bodies) **any** urban design project which **increases** impervious surface (added lanes, wider paved shoulders, etc.) will initiate water quality concerns that need to be examined. Ponding or other treatment of discharge water may be required. Consult with OES and Hydraulics.

Prepared Statement

Rural Design Projects: (except bridge replacements over water) - Rural drainage systems consist of vegetated ditches and open channels as opposed to the curb and gutter and storm sewer drainage systems characteristic of urban drainage designs. Rural drainage systems provide some water quality treatment, reducing the pollutant load conveyed by highway runoff. Curb and gutter drainage allows little infiltration of runoff into soils and tends to convey most of the pollutants to receiving waters. Conversely, rural drainage systems allow pollutants to settle or become absorbed by the soil and vegetation. Since this project is of rural drainage design and does not introduce highway runoff to new or sensitive water bodies, no significant impacts on water quality should result.

Urban Design Projects: (except bridge replacements over water) - This project will not increase the existing impervious surface area and associated highway runoff; and it will not change the existing drainage system. Therefore, no significant impacts on water quality should result.

Bridge Replacement Over Water, Rural or Urban: - This project will be designed so that bridge runoff is directed to the ends of the bridge if feasible; thereafter, drainage water will flow over vegetated areas before reaching surface waters. Therefore, bridge runoff will not significantly impact water quality."

(In certain cases where sensitive waters will receive drainage or where bridges cross major rivers, detention ponds may be appropriate - check with OES)

Relationship to the HPDP

Class I Actions (EIS Projects)

Scoping Documents (SD) & Scoping Decision Document (SDD)

Conduct early assessment of magnitude of potential impacts - assess need for further study.

Draft Environmental Impact Statement (DEIS)

Conduct inventory of potential impacts for project alternatives. Contact United States Corps of Engineers (COE), United States Fish and Wildlife Service (USFWS), Minnesota Pollution Control Agency (MPCA), and Minnesota Department and Natural Resources (DNR) to determine level of agency interest.

Public Hearing

Include information on potential impacts of various alternatives.

Final Environmental Impact Statement (FEIS)

Include specifics of mitigation measures. Include letter of coordination/concurrence from USFWS.

Class II Actions (Categorical Exclusions)

Project Memorandum and Project Path Report

The project environmental document(s) should assess water quality impacts and discuss mitigation measures if appropriate.

Class III Actions (EA/EAW Projects)

Environmental Assessment (EA)

Conduct inventory of potential impacts for project alternatives. Contact US COE, USFWS, MPCA and DNR to determine level of agency interest. Include letters of coordination/concurrence.

For Class I and III Actions, ensure that all mitigation commitments are incorporated into the PS&E package during detail design.

Agencies Involved

Agency(s)	When they are involved and why
Minnesota Pollution Control Agency (MPCA)	<p>The MPCA must provide a Section 401 Water Quality Certification on all Section 404 Individual Permits. Section 401 Water Quality Certification is not required for projects covered by Section 404 General Permits or Letters of Permission.</p> <p>The MPCA also permits permanent dewatering of construction projects via a National Pollution Discharge Elimination System (NPDES) permit for discharge to surface waters, or a State Disposal System Permit if the discharge is to an aquifer.</p> <p>The MPCA also reviews and comments on EIS, EA and EAW documents.</p>
United States Corps of Engineers (COE), United States Fish and Wildlife Service (USFWS), Minnesota Department and Natural Resources (DNR)	<p>These agencies have limited interest in water quality but become involved via review of other permits, especially individual 404 Permits.</p> <p>These agencies review and comment on EIS, EA and EAW documents. DNR is sent copies of Project Memorandums for information purposes.</p> <p>The DNR, Division of Waters issues an Appropriations Permit for permanent dewatering operations.</p>
United States Environmental Protection Agency (EPA)	EPA becomes involved in EA and EIS projects when they review and comment on the anticipated impacts and proposed mitigation for the proposed project.

Permits and Approvals

Permit/Approval	Agency with Oversight
Section 401 Water Quality Certification	Minnesota Pollution Control Agency (MPCA)
Section 404 Permit	U. S. Army Corps of Engineers
Watershed District Review	Local Watershed District or Watershed Management Organization
Public Waters Work Permit	Minnesota Department of Natural Resources
NPDES Permit (Construction Runoff)	Minnesota Pollution Control Agency

Legal Basis

Description	Code
Federal Water Pollution Control Act of 1972 as amended by the Clean Water Act of 1977 and 1987	33 USC 1251-1376
Safe Drinking Act of 1972	42 USC 300f and 300j-6
Rivers and Harbors Act of 1899	33 USC 401 et. seq. - protection of Navigable Waters of the US
Water Pollution Control Act	Minnesota Statutes 115.01-115.09 , 115.44
Pollution Control Agency	Minnesota Statutes 116.01-116.06

Guidelines/Regulations

Creator (Agency/Author)	Subject of guideline/regulation	Date
FHWA	FHWA Technical Advisory T6640.8A (pp. 20-21)	10/30/87
FHWA	FHWA Water Quality Manual	1977
FHWA	"Erosion and Sediment Control on Highway Construction Projects", Federal Aid Policy Guide, 23 CFR 650B	12/07/94
United States Army Corps of Engineers (COE)	Discharge of pollutants into waters of the United States; 33 CFR : 209 Administrative Procedure 320 General Regulatory Policy 321 Permits for dams and dikes in navigable waters of the United States 322 Permits for structures or work in or affecting navigable waters of the United States 323 Permits for discharges of dredged or fill material into waters of the United States 325 Processing of the Department of the Army permits 328 Definition of waters of the United States	listing from Code of Federal Regulations as of 8/12/2009

Creator (Agency/Author)	Subject of guideline/regulation	Date
United States Army Corps of Engineers (COE)	401 Certification - US COE Section 404 Permit Regulations, as amended regarding excavation in waters of the United States	9/17/93
United States Environmental Protection Agency (EPA)	401 Certification; 40 CFR: 230 Section 404(b)(1) guidelines for specification of disposal sites for dredged or fill material	2007
Minnesota Pollution Control Agency (MPCA)	Water Quality Standards -Minnesota. Rules Chapter 7050 - outstanding resource value waters are preceded by an asterisk in the Classification of Waters in Major Surface Water Drainage Basin, listed in 7050.0470 .	
United States Environmental Protection Agency (EPA)	Safe Drinking Water - 40 CFR: 144 Underground injection control program 149 Sole source aquifers	2007
Minnesota Department of Natural Resources (DNR)	Trout streams and trout lakes - Mn/DNR Commissioner's Order 2450 Part 6262.0400 - lists trout waters by township, range and section.	June, 1992
	Minn. Rules Ch. 6264	2007

Helpful Links

MPCA

- [General Permit – NPDES](#)
- [Stormwater Program for Construction Activity](#)
- [Special Waters List \(Excel file download\)](#)
- [Known Calcareous Fens List \(Excel file download\)](#)
- [Minnesota Impaired Waters and Total Maximum Daily Loads \(TMDLs\)](#)
- [Stormwater Program for Municipal Separate Storm Sewer Systems \(MS4\)](#)
- [Minnesota Rules Chapter 7050 - Waters of the State](#)
- [Stormwater Best Management Practices Manual](#)