APPENDIX A STATE OF THE SYSTEM

December 2023





CONTENTS

Introduction	3
The State of Transit Today	9
The Market for Transit	25
How People are Traveling	45
How Does Metro Bus Compare to Peers	52

METRO BUS

mobility training center





STUDY GOALS

Like all transit agencies, Metro Bus must periodically review its transit services and make service adjustments that reflect current passenger needs, recent demographic shifts and changes in how people travel throughout the region. Branded as **Metro Bus Forward**, this project is an opportunity to address the following goals for the project:





Build transit ridership.

Over the years ridership has been declining, even before the pandemic. Across cities in the US and here at Metro Bus, we have seen how and why people's travel has changed. The COVID-19 Pandemic further impacted ridership decline on public transit services. A primary focus of this project is to develop transit strategies to maintain and grow ridership among existing riders, as well as attract new riders.



Deliver transit to the community efficiently.

Most transit providers across the country are struggling to meet existing service commitments due to a variety of factors such as available funding, lack of transit operators, or supply chain challenges and maintaining transit vehicles. While Metro Bus has fared better than many other regions in some of these areas, an important outcome of this study is to develop strategies for improving the efficiency of delivering transit in the service area.



Support local equity goals.

Metro Bus already provides service throughout St. Cloud, Sauk Rapids, Sartell and Waite Park. This project will need to develop recommendations that align with - and continue to advance - local equity and inclusion goals. Having regular conversations with stakeholders and collecting information from riders and non-riders will help to ensure that we can provide a service that supports the community.

WHY IS METRO BUS IMPORTANT?

Cities and regions support public transportation services for a variety of reasons, including that transit provides travel choices beyond the private automobile, creating a diversified, accessible and equitable transportation network. A successful transit system creates opportunities to support a variety of community interests.



ACCESS, PARTICIPATION AND INDEPENDENCE

Metro Bus's service is especially important for households that do not have access to a vehicle and individuals who have limited abilities. Metro Bus's service provides community members the ability to participate in daily activities and to travel throughout St Cloud, Sartell, Sauk Rapids and Waite Park. It also provides access to places of work, recreation, education and health care.



SAFETY AND ENVIRONMENT

Transit service is among the safest ways to travel. Bus riders help reduce the number of vehicles on the road and reduce air pollution and greenhouse gas emissions.



AFFORDABILITY

Well-functioning transit services can reduce household expenses for individuals and families. On average, residents in Central Minnesota spend about 21% of their incomes on transportation costs (H+T Index). Just the average costs of owning and operating a car, including gas, insurance and maintenance, are estimated at \$11,480 a year. By comparison, one year of monthly Metro Bus transit passes costs a fraction of this: \$564.



ECONOMIC DEVELOPMENT

Transit has a demonstrated ability to attract economic investment along corridors as well as in specific commercial areas. Transit is also critical for low-income households by providing access to jobs and economic opportunity.

BUILDING SUPPORT FOR BETTER TRANSIT

Several plans in the Metro Bus service area reference transit, discussing opportunities for future system improvement areas and goals. The plans express similar ideas and the community has expressed support for better transit.

APO METROPOLITAN TRANSPORTATION PLAN (2019)

The 2045 St. Cloud Area Planning Organization (APO) Metropolitan Transportation Plan highlights future possibilities for transit, drawing particular attention to technology enhancements such as smartphone applications, NextBus technology for customer-facing vehicle tracking, enhanced ticketing and farebox technology and connected and automated vehicles.

Additional discussion revolves around potential enhancements to the current service area. App-based demand response service is mentioned as a potential method of increasing access to transit. The hub-and-spoke model is also identified as being catered more toward St. Cloud than the region as a whole and there is indication that pairing a more gridded route network with demand response service could improve the system's coverage.

METRO BUS LONG RANGE TRANSIT PLAN (2016)

The previous Metro Bus LRTP draws attention to the growing Central Minnesota region, citing the importance of adequately serving the increasingly urbanized areas outside of St. Cloud. The plan discusses the growing presence of employers and major trip generators outside of St. Cloud proper, with areas of growth identified in and around Sartell, Sauk Rapids and Waite Park. As the region continues to become more socioeconomically diverse as the broader region densifies, Metro Bus will accordingly expand service as necessary, both geographically and temporally.

ST. CLOUD COMPREHENSIVE PLAN (2015)

The 2015 St. Cloud Comprehensive Plan's discussion of transit is anchored by the goal of coordinating and integrating public transportation across agencies, including Amtrak, the Northstar Commuter Rail Line and Metro Bus. This goal is mentioned in the context of a broader multimodal effort to support a highly-connected transportation network that facilitates safe access and mobility for all transportation modes, especially bicyclists and pedestrians.

The plan also touts additional public transit benefits, such as a stimulated local economy, increased mobility for seniors and students and improved safety. Specifically, there is a desire to increase transit access within walking distance of residential areas, especially for seniors. Growing demand for senior housing is an opportunity for proactive transit network development.

DOWNTOWN SUBAREA PLAN (2015)

The Downtown Subarea Plan, published as a chapter of the St. Cloud Comprehensive Plan, goes into greater detail about the future vision of Downtown St. Cloud as it pertains to transit. Initial comments from downtown stakeholders indicated broad support for regional connections, specifically the extension of the Northstar Commuter Rail to St. Cloud.

Additionally, the plan discusses the links between transit and land use, identifying the St. Cloud Amtrak Station and its surroundings as an opportunity for transit-oriented development (TOD). TOD in this instance is desired as a means of increasing walkability, the diversity of land uses, property values and the strength of the local economy.

The plan identifies barriers for pedestrians and cyclists as a primary concern in the strengthening of connectivity, both within Downtown and to outside areas.

STATE OF THE SYSTEM

The **State of the System** report provides a detailed evaluation of existing Metro Bus services and an understanding of transit markets, demand and service needs in the Metro Bus service area (St. Cloud, Sauk Rapids, Sartell and Waite Park). To understand the strengths and opportunities associated with the existing system, this document provides an overview of:

- Existing services, route network and operating characteristics
- Existing ridership trends and performance
- Transit markets defined by population, employment and socioeconomic characteristics, as well as activity centers and travel patterns
- How well existing services are matched with demand and community needs

TRANSIT DEMAND IS STRONGLY DRIVEN BY:



Population density and demand



Socioeconomic characteristics



Employment density and demand



Development patterns



Activity centers



Travel patterns



Visitors, tourism and special events

WHAT COMES NEXT

This **State of the System** report is the first step in evaluating Metro Bus services. The following elements will also be critical as part of Metro Bus Forward and necessary for making future service improvement recommendations:

- Survey of Community Values. This includes an onboard passenger survey (conducted in September 2023), an online community survey (conducted between September and November 2023) and an interactive workshop that will help the project team identify opportunities for improvement as well as how those improvements should be prioritized. Each of these initial community engagement activities will be documented in a separate report released in late 2023.
- **Detailed Route and Stop Analysis.** Metro Bus is in the process of acquiring automatic passenger counters (APCs) that will provide them, for the first time, with detailed route and stop level passenger activity. This valuable information will allow the project team to develop detailed route profiles that identify strengths and weaknesses of each route. This information will be compiled into a separate report or an online dashboard in Spring 2024.

Once the detailed ridership data has been compiled and evaluated, and community values have been documented, the project team will summarize key findings, identify improvement opportunities and develop several alternatives for how Metro Bus could be provided in the future. Through several more rounds of community and stakeholder engagement, a **Future Service Plan** will be developed in Spring and Summer 2024. The earliest any service changes could go into effect would be Fall 2024.

Fall 2023 **Survey of** Community Fall 2023 Values **Detailed Route** The State of and Stop the System **Analysis Future Service** Plan Design & **Engagement** Spring 2024

Introduction



THE TRANSIT SERVICES OF METRO BUS

Metro Bus is the primary public transit provider for the cities of St. Cloud, Sartell, Waite Park and Sauk Rapids. The Fixed Route network operates largely as a "hub-and-spoke" model with most bus routes beginning or ending in downtown St. Cloud. The existing network is supported by several routes that provide "crosstown" service and that connect to other major destinations outside of downtown St. Cloud, such as Crossroads Mall, St. Cloud Technical and Community Technical College (SCTCC) and St. Cloud State University (SCSU).

Metro Bus operates several service types including:

- 16 weekday, 15 Saturday and 14 Sunday local Fixed Routes.
- The **Northstar Link** route that provides connections to the Northstar Commuter Rail in Big Lake on weekdays.
- **Dial-a-Ride** which offers demand response paratransit service to people with disabilities anywhere within three-quarters of a mile of the fixed route network.

Metro Bus Fixed Route Services

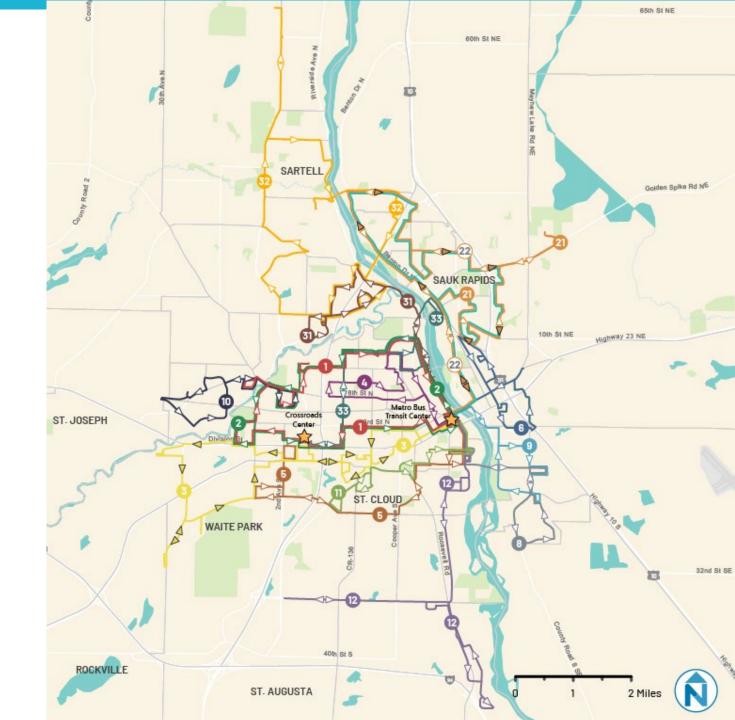
Route	Route Description	Communities Served	Major Destinations Served
Route 1	St. Cloud Loop CW	St. Cloud, Waite Park	DTC, downtown St. Cloud, CC, SCTCC, Apollo HS
Route 2	St. Cloud Loop CCW	St. Cloud, Waite Park	DTC, CC, SCTCC, Apollo HS
Route 3	St. Cloud/Waite Park	St. Cloud, Waite Park	DTC, CC
Route 4	St. Cloud NW Loop	St. Cloud	DTC
Route 5	SCSU/Crossroads	St. Cloud, Waite Park	DTC, SCSU, Wacosa, CC
Route 6	E St. Cloud	St. Cloud, Sauk Rapids	DTC, Cash Wise
Route 8	SE St. Cloud	St. Cloud	DTC, SCSU
Route 9	SE St. Cloud	St. Cloud	DTC
Route 10	NW St. Cloud	St. Cloud, Waite Park	Industrial Park East and West
Route 11	SW St. Cloud	St. Cloud	DTC, SCSU
Route 12	S St. Cloud	St. Cloud	DTC, SCSU, Technical HS
Route 21	Sauk Rapids Loop CCW	St. Cloud, Sauk Rapids, Sartell	DTC, downtown Sauk Rapids, Sauk Rapids Rice HS
Route 22	Sauk Rapids Loop CW	St. Cloud, Sauk Rapids, Sartell	DTC, downtown Sauk Rapids
Route 31	St. Cloud/SCTCC/Sartell	St. Cloud, Sartell	DTC, SCTCC, Sartell Walmart
Route 32	Sartell/Sartell HS	Sartell	Sartell Walmart, Sartell HS
Route 33	Crossroads/Sauk Rapids Crosstown	St. Cloud, Waite Park, Sauk Rapids	CC, SCTCC, downtown Sauk Rapids
Northstar Link	Northstar Link	St. Cloud, Becker, Big Lake	DTC, Big Lake Northstar Commuter Line Station

Legend: DTC=Downtown Transit Center, CC=Crossroads Center, SCTCC=St. Cloud Technical and Community College, SCSU=St. Cloud State University

FIXED ROUTE SERVICES

The existing local Fixed Route network is shown on the map to the right. Weekday, Saturday and Sunday service levels by route are summarized on the following pages.

It is worth noting that service levels as of October 2023 have been reduced compared to what was provided prior to the COVID-19 pandemic. As such, the project team also reviewed the route network and service levels from 2019 to better understand how the reduced service might be impacting overall transit performance today.



Source: St. Cloud APO and Metro Bus October 2023

FIXED ROUTE WEEKDAY CHARACTERISTICS

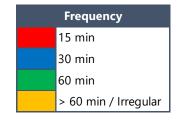
On weekdays, Metro Bus service typically starts between 5:00 and 6:00 AM. Route 22 is a major exception, with service not beginning until 5:45 PM. In the evening, most routes complete their last trip between 9:00 and 11:00 PM, except Route 10 that ends at 7:38 PM and Route 21 that ends at 6:12 PM. Northstar Link completes three round-trips in the morning and three in the evening.



FIXED ROUTE SATURDAY CHARACTERISTICS

On Saturdays, Metro Bus service typically starts between 7:45 and 9:00 AM with a few minor exceptions. In the evening, most routes complete their last trip between 6:00 and 7:15 PM, except Route 32 that ends around 4:53 p.m. Route 21 and the Northstar Link do not operate on Saturdays.

Saturday Service	4AM	5	6	7	8	9	10	11	12PM	1	2	3	4	5	6	7	8	9	10	11
1 - St. Cloud Loop CW																				
2 - St. Cloud Loop CCW																				
3 - St. Cloud/Waite Park																				
4 - St. Cloud NW Loop																				
5 - SCSU/Crossroads																				
6 - Sauk Rapids																				
8 - SCSU/SE St. Cloud																				
9 - SE St. Cloud																				
10 - NW St. Cloud																				
11 - SCSU/SW St. Cloud																				
12 - SCSU/S St. Cloud																				
21 - Sauk Rapids Loop CCW																				
22 - Sauk Rapids Loop CW																				
31 - N St. Cloud/Sartell																				
32 - Sartell/Sartell HS																				
33 - St. Cloud/Waite Park/Sauk Rapids Crosstown																				
887 - Northstar Link																				



FIXED ROUTE SUNDAY CHARACTERISTICS

On Sundays, Metro Bus service typically starts between 8:45 and 9:15 AM, except Route 31 that begins operating at 10:15 AM. In the evening, most routes complete their last trip between 5:45 and 6:15 p.m. except Route 32 that ends at 4:53 p.m. Routes 10, 21 and the Northstar Link do not operate on Sundays.

Sunday Service	4AM	5	6	7	8	9	10	11	12PM	1	2	3	4	5	6	7	8	9	10	11
1 - St. Cloud Loop CW																				
2 - St. Cloud Loop CCW																				
3 - St. Cloud/Waite Park																				
4 - St. Cloud NW Loop																				
5 - SCSU/Crossroads																				
6 - Sauk Rapids																				
8 - SCSU/SE St. Cloud																				
9 - SE St. Cloud																				
10 - NW St. Cloud																				
11 - SCSU/SW St. Cloud																				
12 - SCSU/S St. Cloud																				
21 - Sauk Rapids Loop CCW																				
22 - Sauk Rapids Loop CW																				
31 - N St. Cloud/Sartell																				
32 - Sartell/Sartell HS																				
33 - St. Cloud/Waite Park/Sauk Rapids Crosstown																				
887 - Northstar Link																				

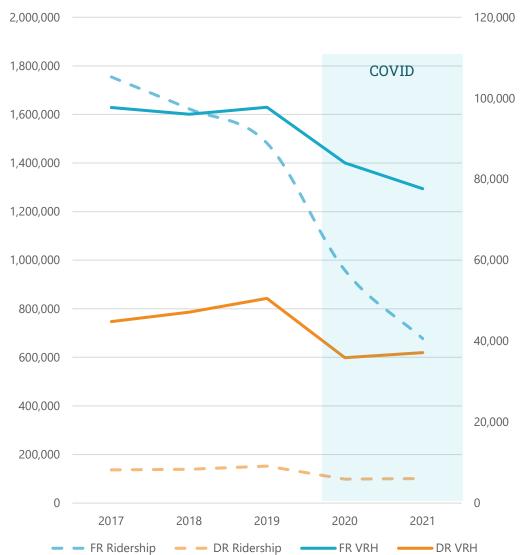
HOW DO WE STUDY PRODUCTIVITY?

Revenue Hours and Ridership

One of the ways we study the productivity of a transit system is through a review of the number of transit riders compared to the number of revenue service hours provided, or revenue hours. The further apart the ridership and revenue hours are on the graph the less value you are getting for that money. However, there's only so much you can do to impact productivity, depending on the type of service provided. For example, you can't achieve fixed route level productivity numbers with a Dial-a-Ride service model.

Fixed Route ridership at Metro Bus has been declining in the past five years (since 2017), even prior to the reduction in revenue hours in 2020 and again in 2021. Dial-a-Ride ridership has remained steady.

Typically, routes are more productive when the level of service provided matches the level of demand for transit. If a route continually shows low productivity, that may be a sign that the route should be evaluated for improvements, such as making a route more direct or addressing any issues if the service is not arriving/departing on time. If a route is highly productive, it might warrant a higher frequency to continue to meet demand.



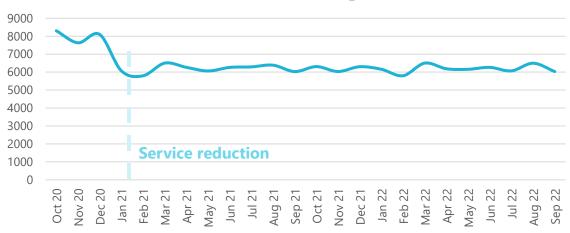
FIXED ROUTE RIDERSHIP

Ridership by route varies across the system, ranging from nearly 8,000 passengers a month on Route 1, to about 1,000 monthly passengers on Route 22 and Northstar Link.

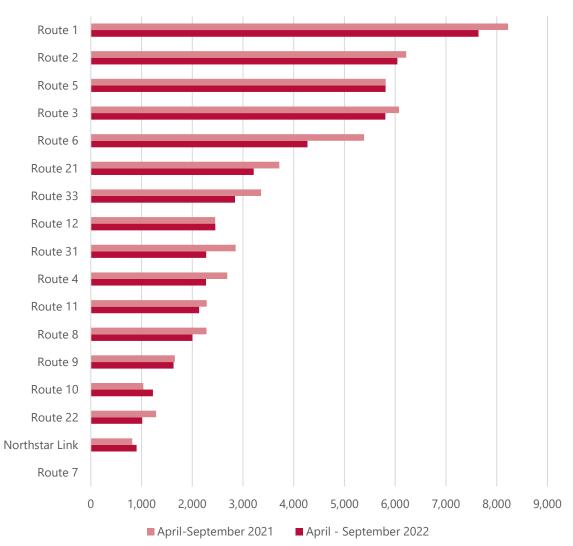
Comparing trends from October 2020 to September 2022 reveals that ridership is down about 9% overall. The routes with the greatest ridership declines include Routes 6, 22 and 31. Several routes, however, have maintained ridership over the past few years (Routes 2, 5, 9 and 12) and two routes (Route 10 and Northstar Link) have gained ridership.

It is important to note that Metro Bus reduced service in 2020 during the COVID-19 pandemic and again in January 2021. Fixed Route service levels in FY 2022 are down about 25% compared to FY 2019.

Vehicle Revenue Hours per Month



Average Monthly Ridership



FIXED ROUTE RIDERSHIP

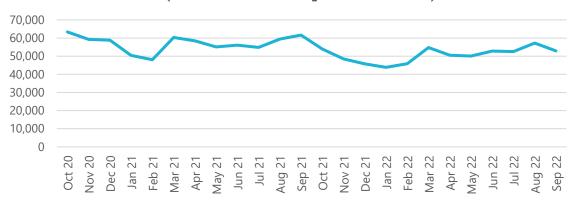
Another way to evaluate ridership is to compare ridership by month for each route. This reveals not only how the routes compare to each other over the past two years, but also how ridership varies throughout the years.

Overall, ridership is down between October 2020 and September 2022, but has been relatively stable between January 2021 (when service reductions were introduced) and September 2022.

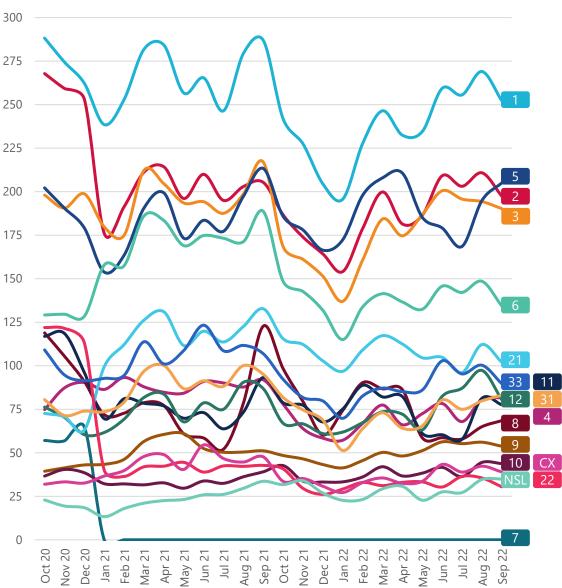
Nearly every route experiences strong seasonal variation – especially Routes 1, 2, 3, 5, 6 and 8. While some seasonal variation is typical of most transit providers, this is especially true for routes that serve local schools and colleges. Fall, spring and summer ridership is also typically higher than winter – partially due to the U-Go Free Summer Youth Program – but also due to extreme weather and holidays.

Fixed Route Ridership

(October 2020-September 2022)



Average Daily Ridership



FIXED ROUTE PRODUCTIVITY

Productivity (PPH)

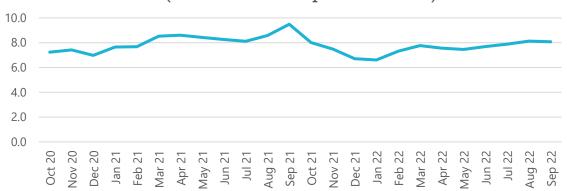
Another way to evaluate the performance of the Fixed Route system is to divide the number of passengers by a unit of service – typically a vehicle revenue hour (VRH) or vehicle revenue mile (VRM). This allows comparison between routes that may have more, or less, service. This analysis uses passengers per vehicle revenue hour (PPH), also referred to as "productivity."

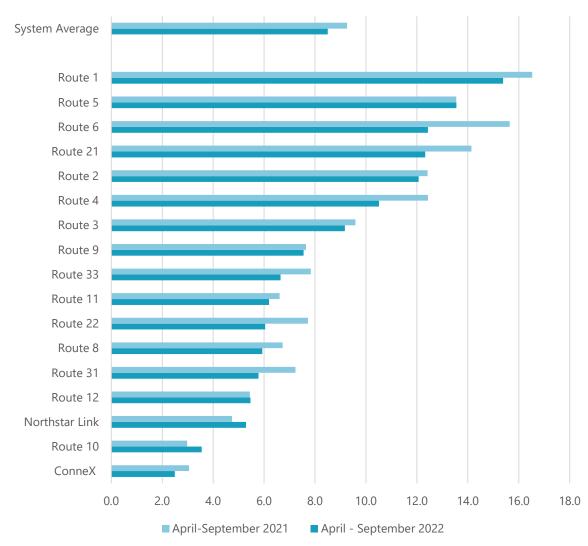
While productivity of the Fixed Route system has declined slightly over the past few years, it peaked at 9.5 in September 2021 and declined to 6.6 in January 2022, which is related to the seasonal variation noted on previous pages.

The most productive routes in the system include Routes 1, 5, 6, 21, 2 and 4, while the least productive routes are Routes 10, 12 and Northstar Link. While the ConneX service – a general-public demand response service that operated in Sartell – is no longer operating, it is shown here for context and to compare to the Fixed Route services.

System Productivity

(October 2020-September 2022)



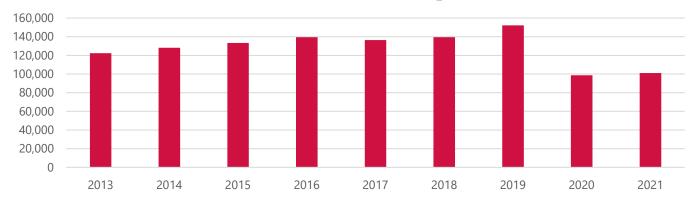


DIAL-A-RIDE SERVICE

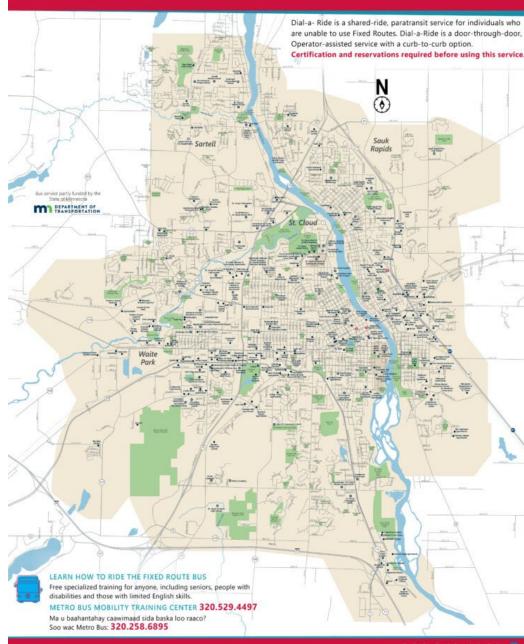
Dial-a-Ride is the complementary paratransit service offered to individuals who are unable to ride or access the Metro Bus Fixed Route service. Dial-a-Ride offers door-to-door service and certification to use the service is required. Paratransit service is available within ³/₄ of a mile of all Fixed Routes and operates the same service hours as Fixed Route service.

Ridership on Dial-a-Ride grew by about 25% between 2013 and 2019 but declined significantly in 2020 due to the COVID-19 pandemic. Ridership on Dial-a-Ride has somewhat recovered in 2021 but is still well below pre-pandemic levels.

Dial-a-Ride Ridership



Source: National Transit Database



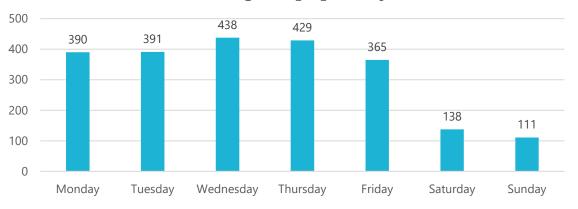
DIAL-A-RIDE RIDERSHIP

As with the Fixed Route service, ridership on Dial-a-Ride is higher on weekdays compared to weekend days. The average ridership on Dial-a-Ride peaks on Wednesday and Thursday, with decreased ridership on Monday, Tuesday and Friday. Ridership on weekends is about a quarter of peak weekday ridership. This can likely be attributed to fewer service hours on weekends, but also less demand for work and medical trips.

Ridership on Dial-a-Ride also varies significantly throughout the day. Based on a two-week period in May 2023, average ridership in 15-minute increments peaks 8 a.m. in the morning with an average of 12 trips during that period. A more drastic peak occurs at 2 p.m. when over 20 trips occur during that period. In the middle of the day (between 8 a.m. and 2 p.m.), between 8 and 10 trips are provided in each 15-minute period.

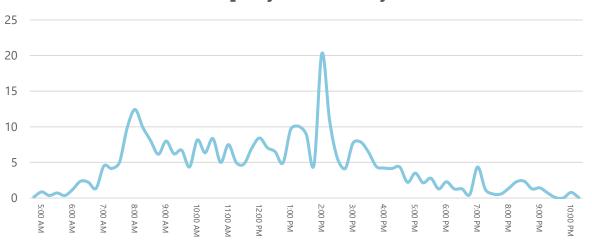
The peaks in ridership on Dial-a-Ride are likely work or volunteer related, especially since the top destination is WACOSA, which provides employment opportunities for adults with disabilities.

Average Trips per Day



Source: Metro Bus, May 14-May 27, 2023

Trips by Time of Day

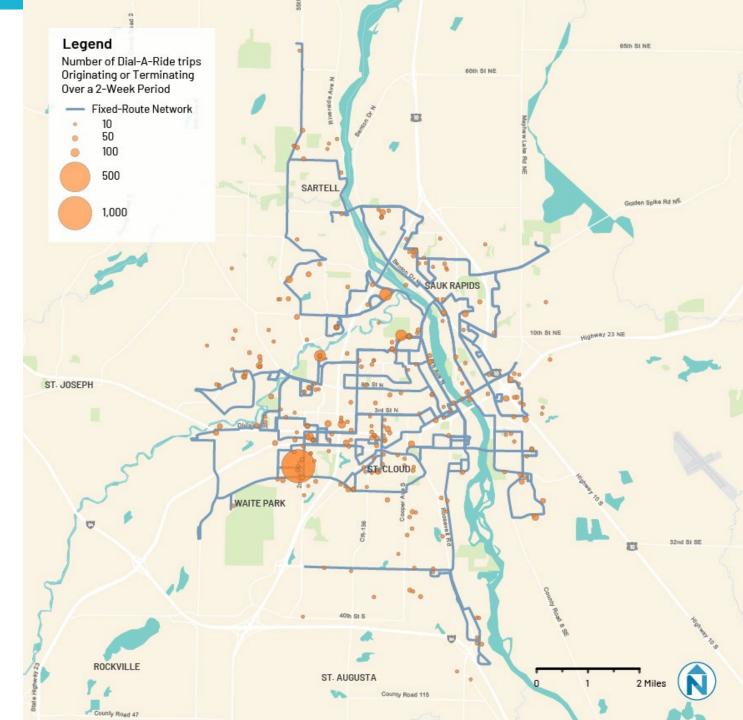


Transit Service Today Source: Metro Bus, May 14-May 27, 2023 20

DIAL-A-RIDE ORIGINS AND DESTINATIONS

Based on a two-week period in 2023, WACOSA in Waite Park is the top Dial-a-Ride trip generator in the Metro Bus service area, followed by the Walmart in Sartell and the VA Medical Center in St. Cloud. Other major trip generators include the YMCA, shopping centers (like Crossroads Center and Coborn's) and large residential complexes, like Country Manor in Sartell and Carefree Living in St. Cloud.

Top 15 Origins and Destinations	% of All Daily Trips
Wacosa – Waite Park	7.5%
Walmart – Sartell	2%
VA Medical Center – St. Cloud	2%
YMCA – St. Cloud	1.8%
Homewood Suites – St. Cloud	1.1%
Crossroads Center – St. Cloud	0.9%
Coborn's – Sartell and St. Cloud	0.9%
Culvers – St. Cloud	0.8%
Carefree Living – St. Cloud	0.8%
Wacosa-Whitney Senior Center – St. Cloud	0.8%
Country Manor – Sartell	0.8%
Centra Care Plaza (Woodlands) – St. Cloud	0.8%
Cash Wise – St. Cloud	0.8%
Walmart – St. Cloud	0.8%
Cash Wise – Waite Park	0.8%



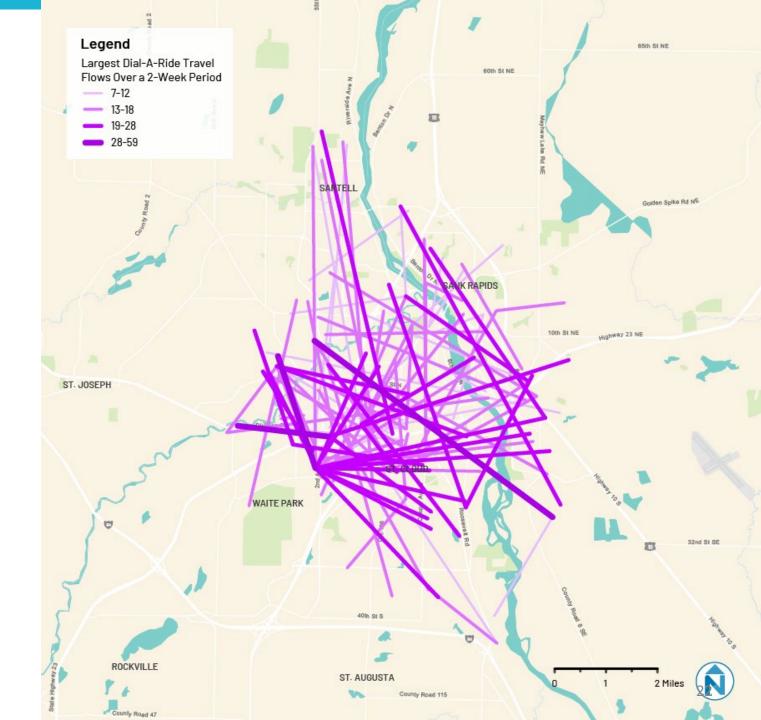
DIAL-A-RIDE TRAVEL FLOWS

In addition to understanding the top origins and destinations on Dial-a-Ride, it is also important to evaluate how trips are chained together to understand travel flows. The map to the right illustrates the top travel flows throughout the Dial-a-Ride service area, with higher travel flows highlighted in the darker color and with a thicker line.

Because the WACOSA facilities in Waite Park are the top origins or destinations, many of the travel flows throughout the region are to or from these facilities.

Other major travel flows on Dial-a-Ride include:

- Western St. Cloud and Waite Park to Sartell
- Southeast St. Cloud to Sauk Rapids



Source: Metro Bus May 2023

FLEET AND FACILITIES

METRO BUS FLEET

Vehicle Type	Service	Number Active in Fleet	Average Age	CNG Percentage
45' Bus	Commuter	5	5.6	0%
35′ Bus	Fixed Route	38	9.3	82%
ADA Cutaway	Dial-a-Ride	35	5.9	80%
Service Vehicle	Metro Bus	9	3.8	0%
Trolley	Events/Tours	1	18	0%
TOTAL	-	88	7.7	67%

Metro Bus's fleet consists of 88 total vehicles, 38 of which are 35' buses used for local Fixed Route services. Dial-a-Ride paratransit service is provided with a fleet of 35 ADA lift-equipped cutaway vehicles and commuter service on the Northstar Link is provided with five 45' over-the-road coaches. Metro Bus also owns nine service vehicles and one 30' trolley that is used for various events and tours.

Overall, Metro Bus's fleet is new relative to FTA useful life benchmarks. Of the Fixed Route vehicles, seven are diesel-powered and exceed the FTA useful life benchmark of 12 years. The remaining 31 Fixed Route vehicles were manufactured during or after 2014 and use CNG fuel. Seven of the Dial-a-Ride vehicles also exceed the FTA useful life of 7 years and are diesel-powered. The remaining 28 Dial-a-Ride vehicles were manufactured after 2016 and use CNG fuel.

As diesel-powered vehicles beyond their useful life are phased out, they will be replaced exclusively with CNG vehicles.

OPERATIONS CENTER

The Metro Bus Operations Center, located on Franklin Avenue Northeast, houses administrative offices, Dial-a-Ride call center, maintenance and vehicle storage. It was originally built in 1985 and has been expanded multiple times, most recently in 2017. Additional cold storage is adjacent to this site.

MOBILITY TRAINING CENTER

The Metro Bus Mobility Training Center is the first facility of its kind in Minnesota, located on West St. Germain Street in downtown St. Cloud. The facility offers new bus users the opportunity to learn how to ride the bus in a comfortable, controlled environment. The facility houses the Community Outreach and Travel Training program and serves as a location for determination of Dial-a-Ride eligibility.

TRANSIT CENTER

Located at the intersection of 1st Street and 5th Avenue in downtown St. Cloud, the Metro Bus Transit Center is a multimodal transfer hub built in 1992 and expanded most recently in 2012. Here, passengers can transfer between several local Metro Bus routes, Northstar Link and private carriers such as Jefferson Lines and Greyhound. Additional connections include private taxi companies and rural public transit systems.

PROPOSED WESTERN TRANSIT CENTER

In 2019, Metro Bus conducted a Transit Operations Feasibility Study, in part to evaluate sites for a potential transit center on the western part of the service area. The primary goal of new transit center would be to better link the Fixed Route system to growing residential and industrial areas, including Crossroads Center and surrounding commercial areas.

FLEET AND FACILITIES

- Metro Bus has 728 bus stops across its Fixed Route system.
- Of these, 72 or **8.7%** have shelters.
- Bus shelters are an important part of providing weather protection to riders.
- Other amenities include benches, lighting, a trash can and a posted schedule.



Source: St. Cloud APO



REASSESSING THE CURRENT AND FUTURE TRANSIT MARKET

To supplement the evaluation of existing Metro Bus transit services, the project team analyzed the underlying market and potential demand for transit service. This section uses the most relevant and current data available, where applicable:

- U.S. Census Bureau. (2020).
- U.S. Census Bureau. (2020) LEHD Origin-Destination Employment Statistics (LODES) Data
- U.S. Census Bureau. (2021). *American Community Survey 5-year estimates*.
- St. Cloud Area Metropolitan Organization 2020 to 2050 Travel Demand Model

Our approach involves assessing the current demand as well as expected future needs.

FACTORS RELATED TO TRANSIT DEMAND

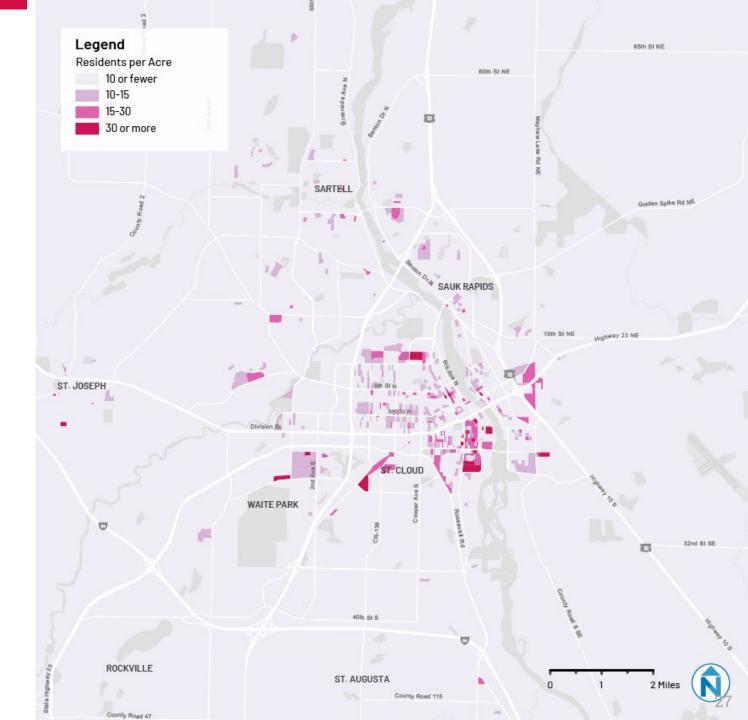
Transit demand is strongly related to six factors that are the focus of the market analysis:

- 1. Population and Population Density Transit relies on people, so higher population density makes it more feasible to provide higher levels of service.
- 2. Employment and Employment Density Travelling to and from work are the most frequent and predictable trips for most people. Places with a high density of jobs can reliably support transit services. Trips to schools, especially to colleges and universities that also major employers, are important markets for transit.
- 3. Socioeconomic Characteristics Different people are more likely to use transit than others, so our analysis looks at characteristics and who is more likely to ride transit, like lower-income and zero-vehicle households.
- 4. Development Patterns There is a strong correlation between development patterns and transit ridership. Transit is easier to use and more convenient in areas with denser development and a good pedestrian environment.
- Major Activity Centers Larger employers, colleges, tourism destinations and town centers can attract large volumes of people and generate many transit trips.
- 6. Travel Patterns or Flows Travel flows provide information on where people start and end their trips. This can help us understand which locations and corridors have the highest travel demand. Inter-county travel flows are also important to assess regional transit priorities.

POPULATION DENSITY (2020)

Where people live within the service area, especially where people are concentrated, tells us where transit service can be best supported, or where potential riders might live. As of 2020, around 112,900 people live in the four cities that are part of the Metro Bus service area.

There are many pockets of population density within the service area that provide the densities where Fixed Route transit can be more successful. Areas that are the densest include near St. Cloud State University and along the St. Germain Street corridor.



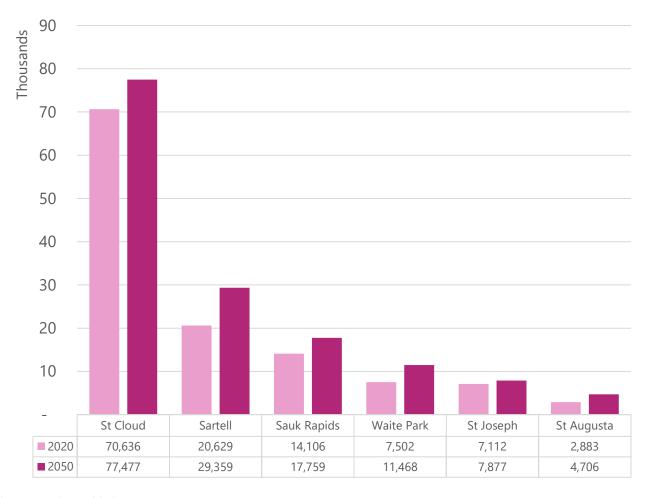
Source: US Census (2020) Block Level

FUTURE POPULATION

It's projected that around 23,200 more people will reside in St. Cloud, Sartell, Sauk Rapids and Waite Park by 2050. In terms of an annual average growth rate this means:

- St. Cloud's population grows 0.4% each year
- Sartell's population grows 1.4% each year
- Sauk Rapids' population grows 0.9% each year
- Waite Park's population grows 1.8% each year

Projected Population Change by City



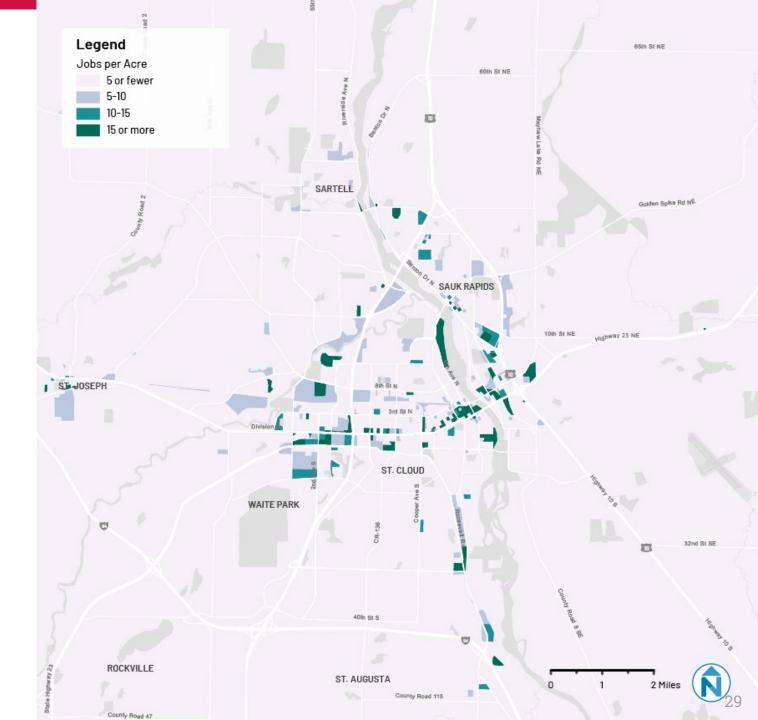
Source: APO TAZ 2050

Source: APO TAZ 2020 and 2050

EMPLOYMENT DENSITY (2020)

Where people work within the service area, especially where jobs are concentrated, tells us where transit riders might be traveling, specifically for work trips. It's also important because locations of jobs show where people also travel for services and shopping in the community.

As of 2020, there are around 60,300 jobs in the service area. Some of the densest areas are along the east to west corridor through town, US Highway-23/1st Street/Division Street.

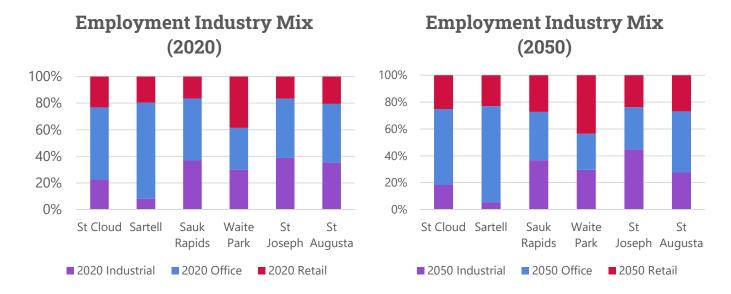


Source: US Census (2020) LEHD (LODES) Block Level

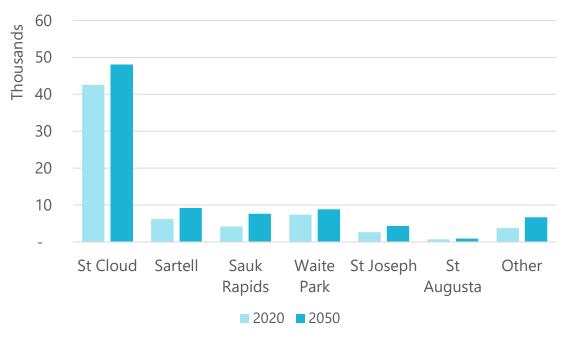
INDUSTRY TYPES AND FUTURE EMPLOYMENT

As of 2020, there are around 60,300 jobs in the service area with as many as 13,400 additional jobs projected by 2050. Sauk Rapids has the highest average annual growth rate for jobs at 2.8%, most of which is a growth in retail jobs. Sartell also has a high average annual growth rate of 1.6%.

Overall, there are a mix of industries of employment represented in each city, but most of the jobs in the region are office jobs. However, most of the growth is projected to be jobs in retail, although industrial and office jobs are also increasing, just at a slower rate.



Projected Employment Change by City



Source: APO TAZ 2020 and 2050

WHAT LEVELS OF TRANSIT ARE SUPPORTED BY DENSITY?

Highest



>47 people and jobs per acre



15-minute service or better







Med-High



31-47 people and jobs per acre



15- to 30- minute service







Med-Low



12-30 people and jobs per acre



30- to 60- minute service







Lowest



<12 people and jobs per acre



60-minute service and microtransit







COMPOSITE TRANSIT DEMAND (2020)

Where people and jobs are concentrated is one of the strongest indicators for where Fixed Route transit can be most successful. The graphic on the previous page and this map shows us where different levels of transit frequency might be supported based on the density of people and jobs.

This is an input into the service planning process that helps provide a baseline for where the land uses can support Fixed Route service and the demand for transit in the service area and greater Central Minnesota.

There are stronger corridors of demand along Division Street in St. Cloud and out to Waite Park, along Benton Drive in Sauk Rapids, near St. Cloud State University, along Roosevelt Road and other pockets in the community. Legend Level of Transit Service Supported by Composite Population and Employment 60 mins or greater 30 mins - 60 mins 15 mins - 30 mins 5 mins or better Golden Solke Rd NE WAITE PARK

Source: US Census (2020) Block Level & LEHD (LODES) Block Level

KEY DESTINATIONS

Another key element to understanding the market for transit is understanding where key destinations including grocery stores, healthcare facilities and multifamily housing or apartments are in proximity to transit. We found that:

- Most destinations are well served by existing transit
- Grocery stores are clustered on the southern edge of the urbanized area of St. Cloud, with a handful west of the Mississippi and in Sauk Rapids and Sartell
- Healthcare facilities are mostly located along St. Cloud's northern edge
- Multifamily housing is distributed around the edges of the Metro Bus network, with few apartments located in central St. Cloud

WAITE PARK

SARTELI

60th St NE

Golden Spike Rd NE

Legend

TAZ Boundaries

Healthcare Multifamily Housing

Key DestinationsGrocery

Source: Nelson\Nygaard collected in Google Maps

DEMOGRAPHICS-BASED TRANSIT PROPENSITY

In addition to where people live and work, socioeconomic characteristics influence people's propensities toward using transit. Many population groups use transit more often than the overall population, generally groups that are more disadvantaged in society.

RACE AND ETHNICITY

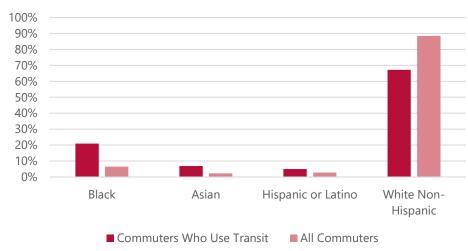
Race and ethnicity are often indicators of transit propensity. Within Metro Bus's current service area, Asian residents are 2.6 times as likely to use transit to get to work as the average resident. Black residents are somewhat more likely to use transit; they use transit at 1.9 times the rate of average residents. Hispanic or Latino residents are only slightly less likely to use transit, whereas White Non-Hispanic residents are about 0.8 times less likely to use transit than the average resident.

FOREIGN-BORN

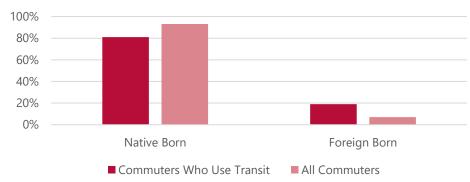
Residents born outside of the United States are about 2.1 times as likely to use transit as average residents.

Source: US Census (2021) American Community Survey 5YR Estimates

Race and Ethnicity by Commuter Type (2021)



Foreign- and Native-Born by Commuter Type (2021)



Market Analysis 34

DEMOGRAPHICS-BASED TRANSIT PROPENSITY

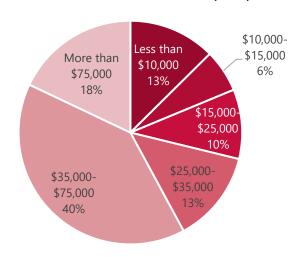
INCOME LEVEL

Household income is a strong indicator of transit propensity. Households who live below the federal poverty level are much more likely to have difficulty paying for basic needs – especially transportation costs – and are thus much more likely to use transit.

CAR AVAILABILITY

Similar to household income, households without a vehicle are far likelier to use transit than households with at least one vehicle. Over 66% of households in the Metro Bus service area who commute via transit have one vehicle available to their household or no vehicle.

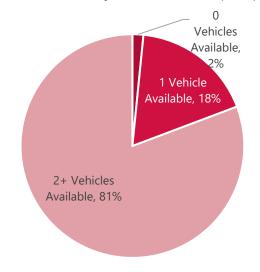
Income Levels All Commuters (2021)



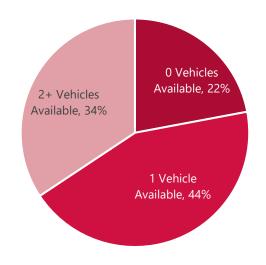
Income Levels Transit Commuters (2021)



Car Availability All Commuters (2021)



Car Availability Transit Commuters (2021)



Source: US Census (2021) American Community Survey 5YR Estimates

Market Analysis

TRANSIT PROPENSITY SCORE

When a significant number of people from the demographic groups described earlier live in clustered areas, the underlying demand for transit in these areas may be higher than is captured by just looking at population density.

Conversely, in areas where populations who are likely to take transit have lower representation, the transit demand may be lower than what is captured purely by population density. To account for these factors, the project team calculated a measure called the Transit Propensity Score, which measures the relative demand for transit in different areas of the service area based on demographic characteristics. The table to the right shows the relative transit propensity among different groups. A factor greater than 1 means that the group is more likely to use transit than the average population.

Demographic Group	Transit Propensity
Race/Ethnicity	
Black	1.91
Asian	2.57
White (Non-Hispanic)	0.79
Hispanic	0.97
Foreign-Born	
Native	0.86
Foreign-Born	2.07
Income Level (annually)	
Less than \$10,000	1.52
\$10,000-\$15,000	2.90
\$15,000-\$25,000	0.94
\$25,000-\$35,000	1.14
\$35,000-\$50,000	0.35
\$50,000-\$65,000	0.78
\$65,000-\$75,000	0.53
More than \$75,000	0.33
Vehicle Availability	
No Vehicles	5.51
1 Vehicle	1.40
2 or More Vehicles	0.41

TRANSIT PROPENSITY

This map shows the transit propensity score for the service area. To get a full picture of the locations most suited to support transit, this analysis shows locations in St. Cloud, Sartell, Sauk Rapids and Waite Park that have a proportion of populations who are more likely to take transit. Some of the key areas with high likelihood to ride transit include:

- In St. Cloud downtown on both sides of the Mississippi river
- Near St. Cloud State University
- Near St. Germain Street in central St. Cloud
- In Southeast St. Cloud adjacent to US-10
- In Waite Park in the area near ALDI
- In northwest Sauk Rapids adjacent to MN-15

Legend Transit Propensity Score 60th St NE Less than 0.75 0.75-0.90 0.90-1.10 .10-1.25 Greater than 1.25 Cardon Snike Rd No ST. JOSEPH WAITE PARK

Source: US Census (2021) ACS 5YR Block Group Level

WHERE ARE EACH OF THESE POPULATIONS LOCATED?

It is also helpful to understand in detail where specific populations live in the service area. When we look to make transit improvements and to advance local equity goals through the provision of public transit service, we want to understand who Metro Bus is serving and how we can provide a better service to each population.

We mapped the following groups:

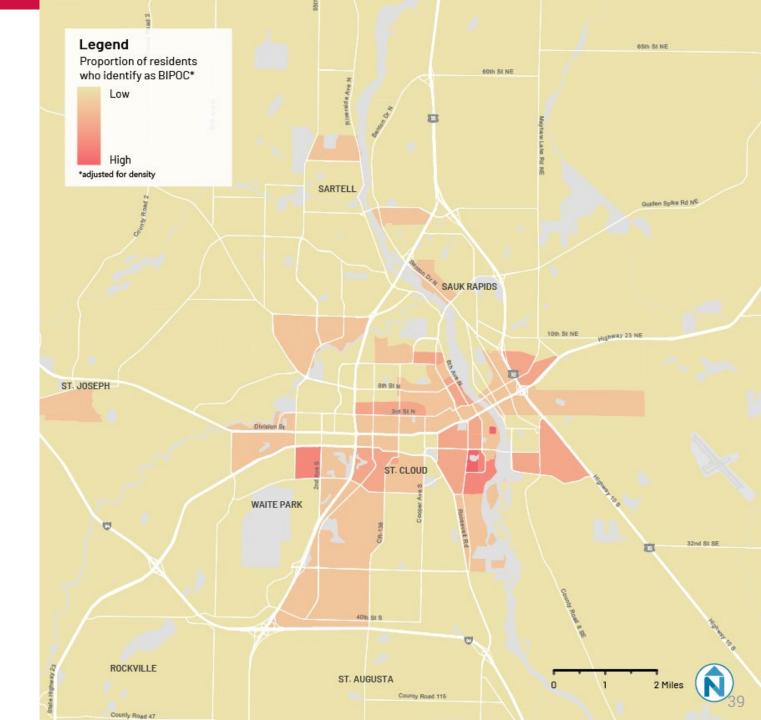
- Residents who identify as black, indigenous or a person of color (BIPOC)
- Residents with limited English proficiency
- Residents due to their age who are more likely to use transit (Youth under 18 and Seniors)
- Households with low incomes
- Households without access to a car



Market Analysis

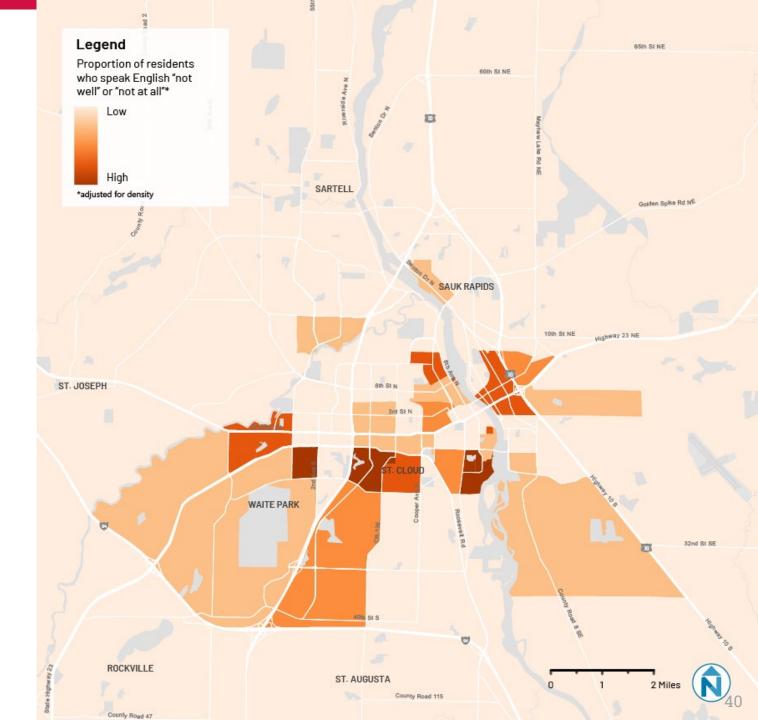
RESIDENTS WHO IDENTIFY AS BLACK, INDIGENOUS, OR PEOPLE OF COLOR

- The largest concentrations of BIPOC residents are in Waite Park, East and Southeast St. Cloud
- There is a moderate concentration of BIPOC residents in Central St. Cloud



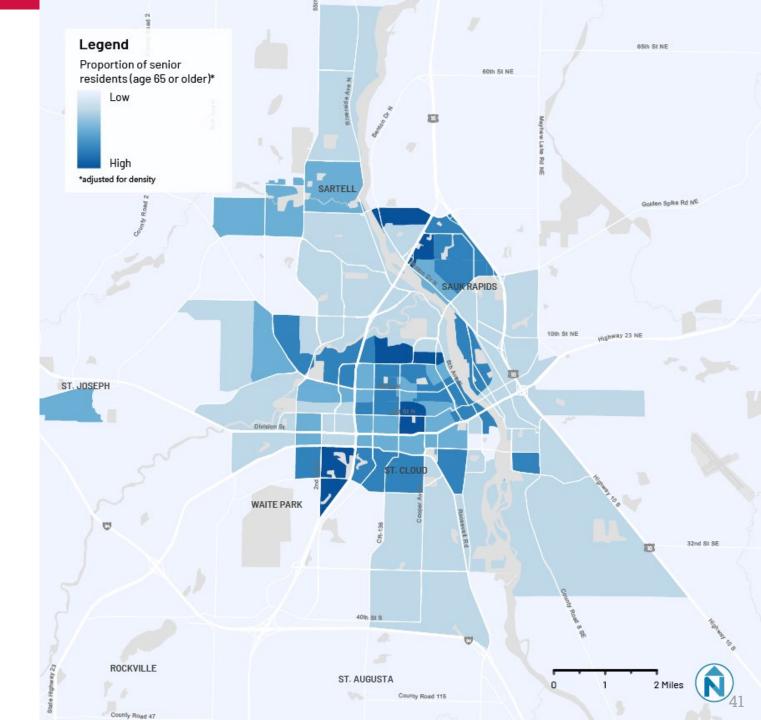
RESIDENTS WITH LIMITED ENGLISH PROFICIENCY

- The highest concentrations of residents with Limited English Proficiency are in Waite Park, followed by East and Southeast St. Cloud
- Moderate concentration in Central St. Cloud
- There are very few residents with Limited English Proficiency in Sauk Rapids and Sartell



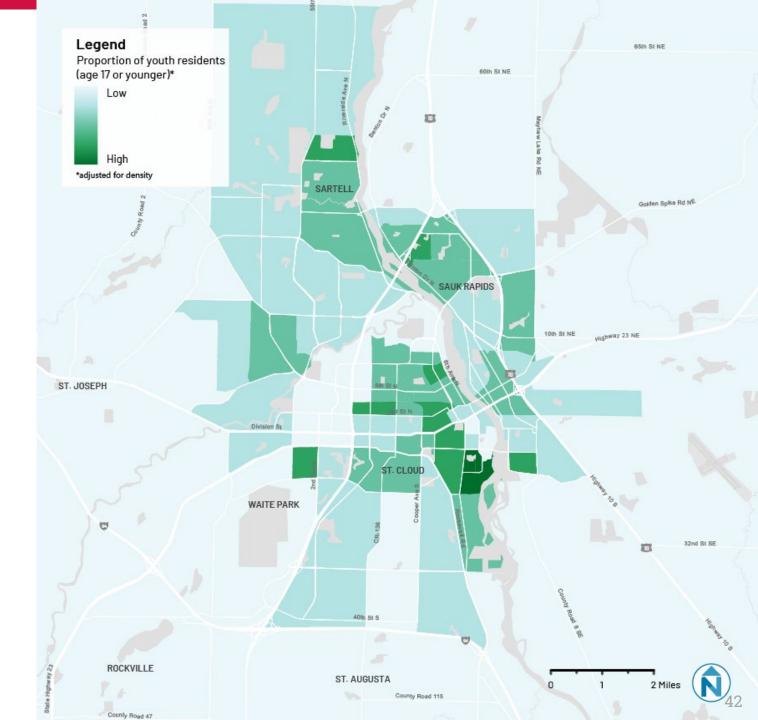
SENIOR RESIDENTS

- Senior resident populations are somewhat more evenly distributed
- Distribution follows a concentric ring pattern:
 - Higher concentrations with the cities
 - Much lower concentrations in the areas encircling the main cities
 - Moderate concentrations in southern cities and more rural areas up north



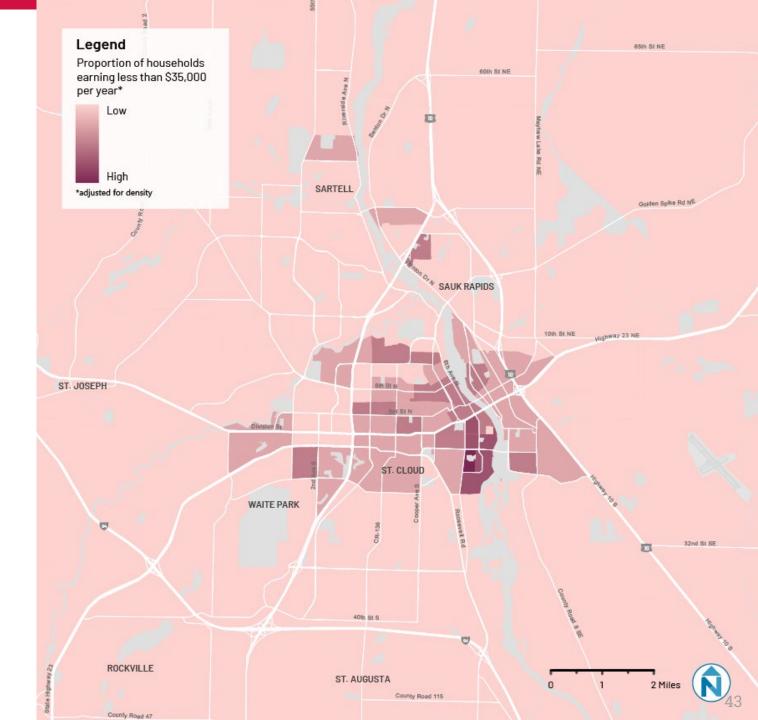
YOUTH RESIDENTS

- Concentrations of residents under 18 also follow a concentric ring pattern
 - There is a moderate concentration of youth within Central St. Cloud, with very low concentrations on the outer edges of the central city
 - Some concentrations in South St. Cloud and Waite Park
 - There are much higher concentrations of youth in Sartell and Sauk Rapids



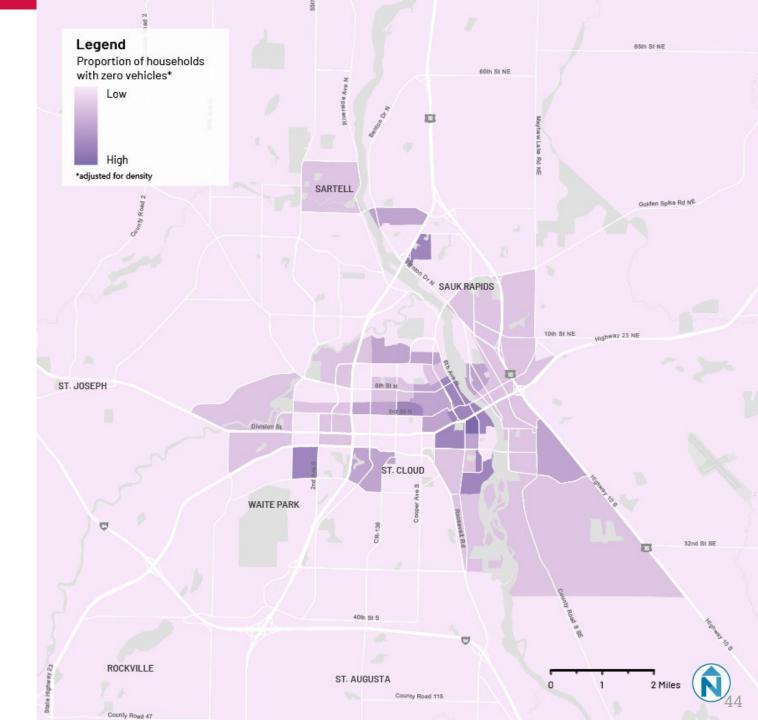
LOW-INCOME HOUSEHOLDS

- Low-income households are most concentrated towards the center of the urbanized area, with the highest concentrations on the western and eastern edges of St. Cloud
- Most of the outlying areas have very low to moderate concentrations of low-income households



ZERO-VEHICLE HOUSEHOLDS

- Zero-vehicle household concentrations are highly correlated to low-income household concentrations
- Highest concentrations include western and eastern/southeastern St. Cloud
- Moderate concentrations in Sauk Rapids and Sartell





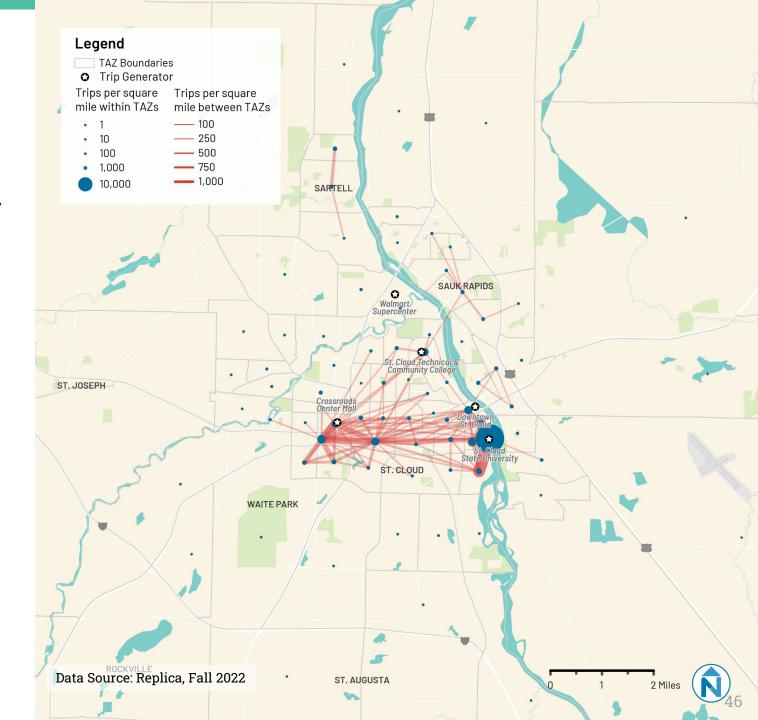
ORIGINS AND DESTINATIONS ANALYSIS

To understand how people travel to, from and within the communities in the Metro Bus service area, a travel flow – or Origin-Destination (OD) – analysis was conducted. The OD analysis uses Fall 2022 data from Replica, which utilizes a variety of data sources including de-identified mobile location data and Census data. All data are aggregated to travel analysis zones (TAZs) rather than specific locations and all trips are represented, including transit and walking trips. The data are mapped to show trips within a TAZ (blue bubbles), as well as trips between TAZs (red lines). The size of the bubbles and thickness of the lines represent more trips within or between zones. Because there are thousands of trip pairs between zones, for clarity, only the top 100 pairs between zones are mapped.

Key findings from the analysis include:

- SCSU has the highest internal travel, followed by downtown St. Cloud, various locations in Waite Park and SCTCC.
- The strongest OD connections are between SCSU and downtown, and between SCSU and various locations in Waite Park
- Some internal travel can be seen within Sauk Rapids as well as in Sartell
- Crosstown connections are also present between Crosstown Center and SCTCC and Sauk Rapids (which happens to mimic the alignment of Route 33).

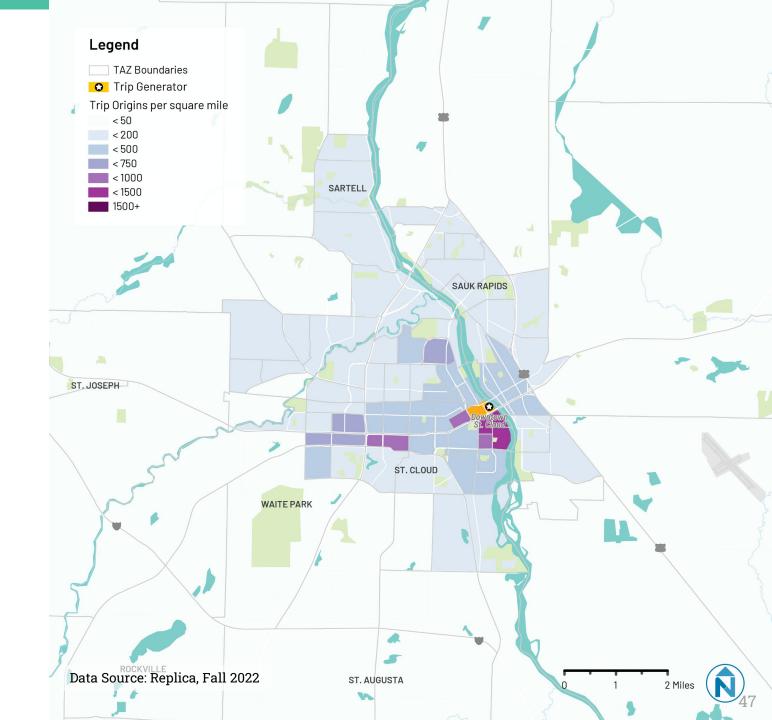
In addition to the regional analysis of travel flows, an analysis of travel flows to/from major destinations was also conducted. A summary of this analysis is presented on the following pages. It is important to note that the scale of trips shown on these maps are consistent, which allows for easy comparison between maps.



DOWNTOWN ST. CLOUD

Key findings from the detailed analysis of downtown St. Cloud include:

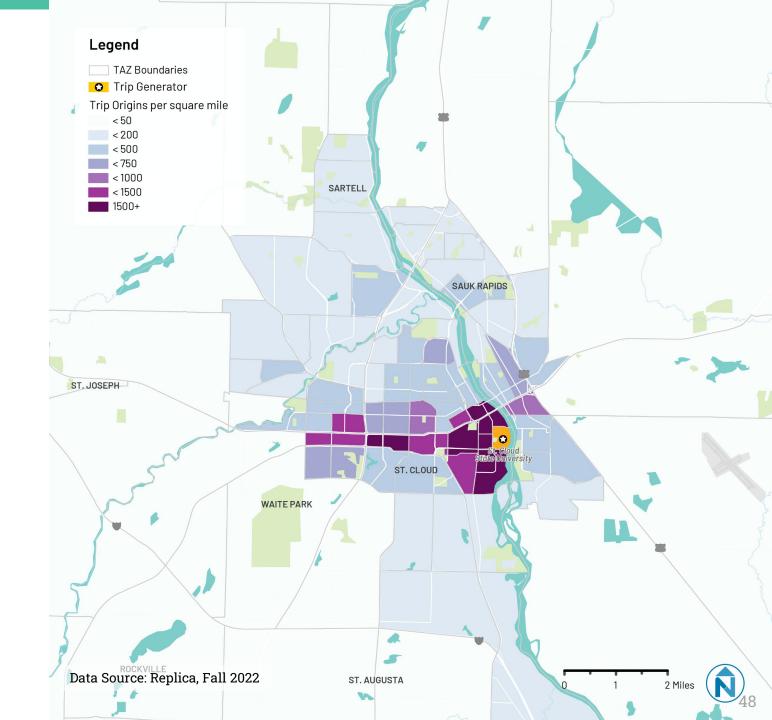
- Overall travel flows into and out of this area are not as high as for other regional destinations. While still a major regional destination, downtown St. Cloud is not the primary destination in the region it was historically.
- The connection to SCSU and surrounding neighborhoods south of 2nd Street S and downtown St. Cloud is the strongest, likely due to proximity. Parking constraints and costs in these two areas could indicate a strong demand for transit.
- Connections are relatively strong between downtown St. Cloud and the Division Street corridor, including Crossroads Center, primarily because it's the major travel corridor in the region.
- The demand in urban neighborhoods adjacent to downtown St. Cloud (on both sides of the river) is moderately strong, with a slightly higher level of demand to SCTCC.



ST. CLOUD STATE UNIVERSITY

Key findings from the detailed analysis of St. Cloud State University (SCSU) include:

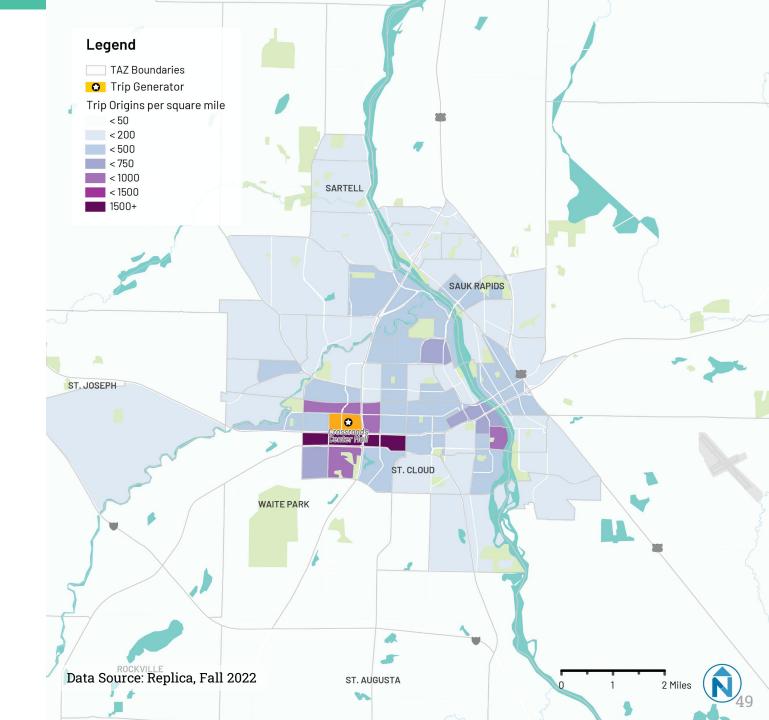
- The area within and surrounding SCSU generates some of the highest travel flows in the region.
- The connection to downtown St. Cloud as well as the neighborhoods surrounding SCSU is very high, likely due to housing and activity centers nearby. Parking constraints and the cost of parking on the SCSU campus – as well as in downtown St. Cloud – could indicate a strong demand for transit.
- Connections are also very strong between downtown SCSU and the Division Street corridor and Waite Park. This includes the retail destinations (including Crossroads Center) as well as apartments and housing in these areas.
- There is a somewhat strong connection between SCSU and neighborhoods in east St. Cloud, especially the area south of 2nd Street S and west of Highway 10.



CROSSROADS

Key findings from the detailed analysis of St. Cloud Crossroads Center Mall include:

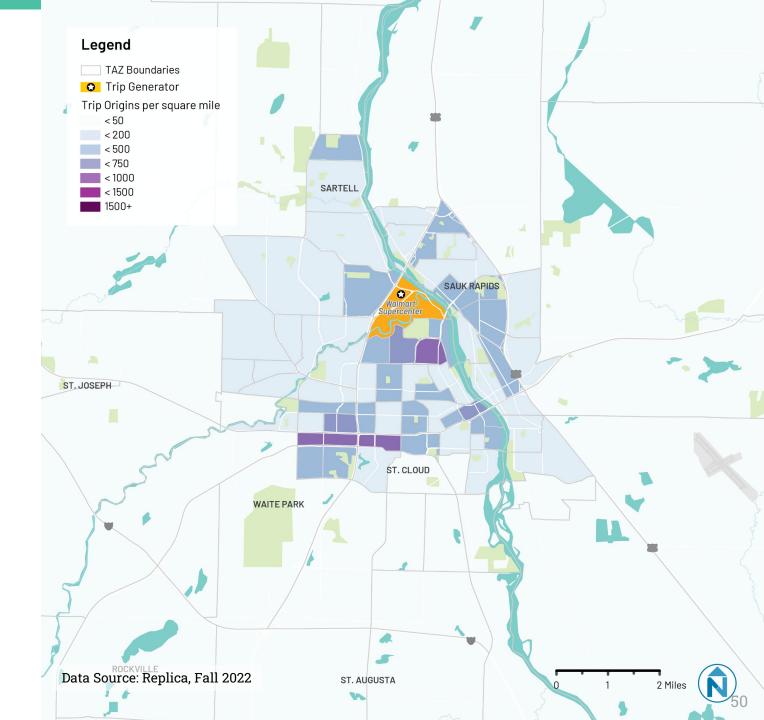
- Crossroads Center generates a large amount of travel particularly from neighboring areas, directly adjacent to the shopping, but also throughout the service area.
- There's also a strong connection and demand from SCSU to get to the shopping and services near Crossroads.
- Somewhat less strong, but there is also some demand coming from SCTCC and Downtown St. Cloud.



SARTELL WALMART

Key findings from the detailed analysis of Walmart Supercenter and area surrounding it in Sartell include:

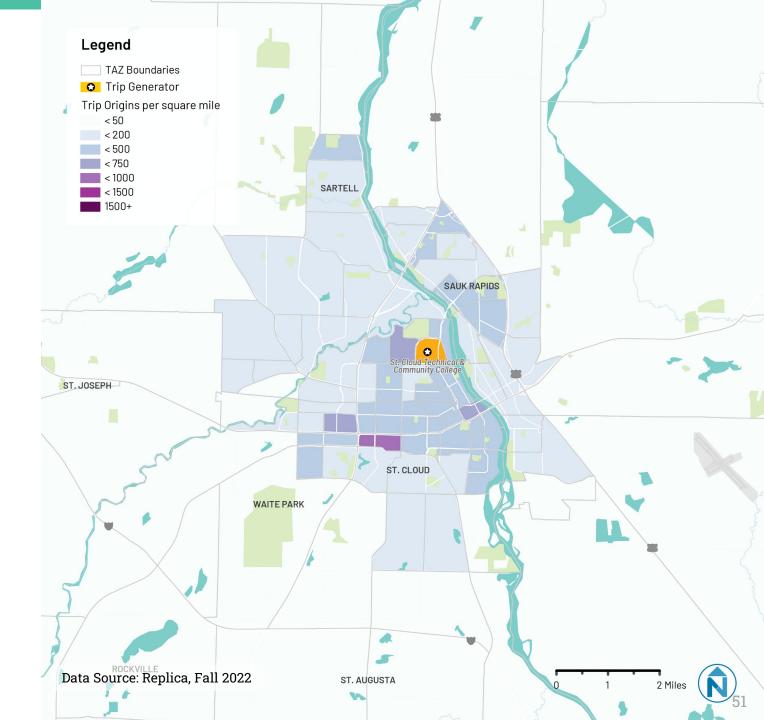
- Travel to Walmart in Sartell has stronger travel flows from the neighborhoods along Division St near Crossroads Center than from Downtown St. Cloud or SCSU.
- There are also strong travel flows from adjacent neighborhoods and around SCTCC.



ST. CLOUD TECHNICAL AND COMMUNITY COLLEGE

Key findings from the detailed analysis of St. Cloud Technical and Community College include:

- There are less overall travel flows and demand to and from SCTCC.
- The strongest connection is to Division Street near Crossroads and to Downtown St. Cloud.





SELECTING PEER REGIONS

This chapter provides a high-level analysis that compares Metro Bus to other "peer" regions and offers strengths, weaknesses and opportunities for improvement based on transit services operating in those regions.

Recognizing that no two regions are the same, the first step was to identify communities that had *similar characteristics* to St. Cloud, Sartell, Sauk Rapids and Waite Park. Most of the peer regions that were identified are in the upper Midwest, primarily due to similar urban form, geography and climate. Based on an initial review, a total of 10 potential peer regions were identified, as shown on the map to the right.

Next, three evaluation factors were used to narrow down this list and identify those regions that are *most* comparable to Metro Bus:

- Total regional population was used to identify areas that have about the same number of residents and are experiencing the same level of economic activity – and thus have a similar potential market for transit.
- Urban form and growth was used to identify communities that have approximately the same mix of geographic and land use characteristics, recognizing that geography and land use impact how people travel.
- **Presence of a mid-size university** was used since communities with a university of similar size to St. Cloud State University would likely exhibit a similar level of transit demand.

Based on the 10 potential peer cities/regions, five peers were selected for this evaluation: Duluth (MN), Grand Forks and Fargo (ND), Greeley (CO) and Eau Claire (WI).



MORE ABOUT THE PEERS

The five selected peer communities are shown in the table to the right along with total city population, population density and four transit performance statistics for the entire system (fixed route and demand response) from the 2021 National Transit Database (NTD):

- Annual Passenger Trips (Boardings)
- Annual Vehicle Revenue Hours
- Annual Total Operating Costs
- Maximum Vehicles in Operation

Utilizing the performance data listed above, as well as other NTD data organized by mode (demand response and fixed route) for the past three available years (2019, 2020 and 2021), nearly a dozen performance metrics were calculated and evaluated. Based on this evaluation, the following metrics that are most used in the transit industry have been evaluated further to compare Metro Bus with the peer communities.

- Boardings per Revenue Hour
- Boardings per Capita
- Revenue Hours per Capita
- Operating Cost per Revenue Hour
- Operating Expenditures per Capita
- Operating Cost per Boarding
- Farebox Recovery Ratio

Agency	Primary City	Service Area Population	Population Density (per sq. mile)	Total Annual Passenger Trips	Total Annual Vehicle Revenue Hours	Total Annual Operating Cost	Max. Vehicles in Operation
Metro Bus	St. Cloud, Sartell, Waite Park, Sauk Rapids	110.5k	4k	787k	117k	\$13.6M	52
Duluth Transit Authority (DTA)	Duluth, MN	102k	1.5k	1,484.5k	170k	\$18.9M	64
Eau Claire Transit (ECT)	Eau Claire, WI	77k	3k	459k	64k	\$5M	42
Fargo Moorhead Metro Area Transit (MATBUS)	Fargo, ND	155.5k	3.5k	835k	109k	\$12M	39
Cities Area Transit (CAT)	Grand Forks, ND	61k	2.5k	226k	63k	\$4.1M	22
Greeley Evans Transit (GET)	Greeley, CO	131k	4k	416k	53.5k	\$5.8M	24

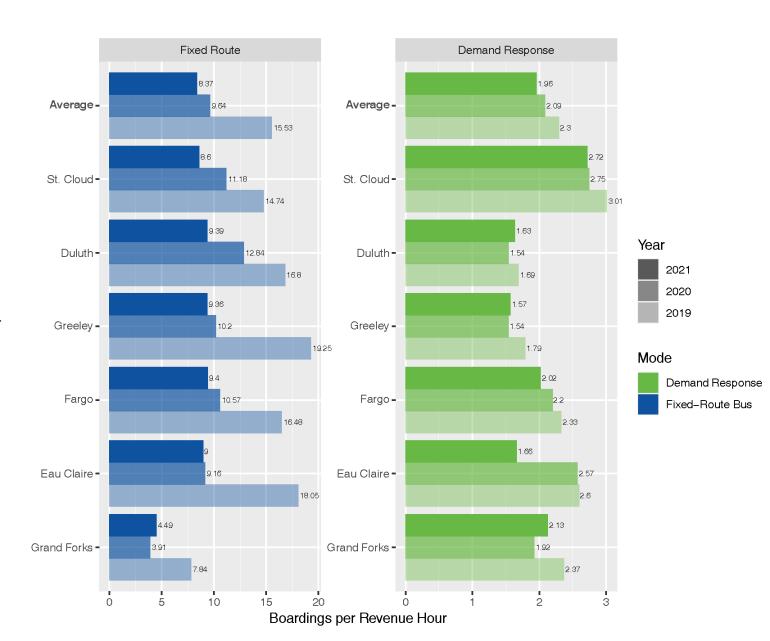
54

Peer Review

BOARDINGS PER REVENUE HOUR

This performance metric (also referred to as "productivity") measures how well the service is being used in relation to the amount of service available. Higher boardings per revenue hour indicates a service that is more effective at attracting passengers to the services that are offered.

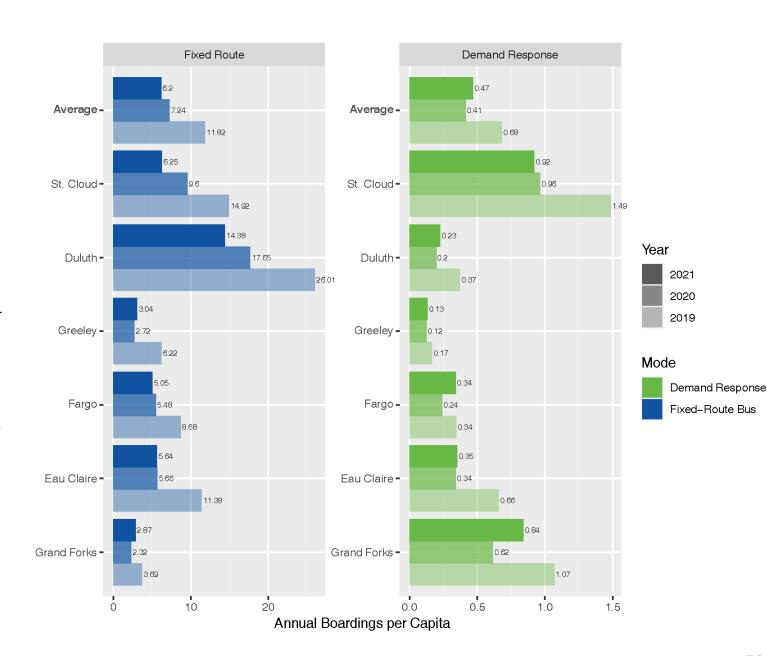
- Productivity for all peer systems has declined over the past three years, particularly on fixed route services, largely due to lower ridership during the pandemic while maintaining service levels. The average productivity expressed as boardings per revenue hour is just under 9.0 in 2021.
- Metro Bus maintained slightly higher number of boardings per revenue hour than the peer average (fixed route) in 2020 and 2021 and higher productivity for demand response services over the three-year period.
- Metro Bus and DTA were the only peers where productivity on fixed route services continued to decline between 2020 and 2021 at almost the same rates as those in the previous period. In contrast, demand response service productivity declined between 2019 and 2020 (as expected due to the pandemic) but remained stable between 2020 and 2021, similar to peers.
- These findings indicate that Metro Bus, like all peers, struggled to attract passengers back to fixed route transit while being stable at serving riders on demand response services.



BOARDINGS PER CAPITA

The number of boardings per capita measures the utilization of the provider's transit services compared to service area population. This measure normalizes the utilization of Metro Bus transit services compared to peer agencies and is an indicator of transit's market share in the region. A higher number of boardings per capita indicates a higher utilization of transit services.

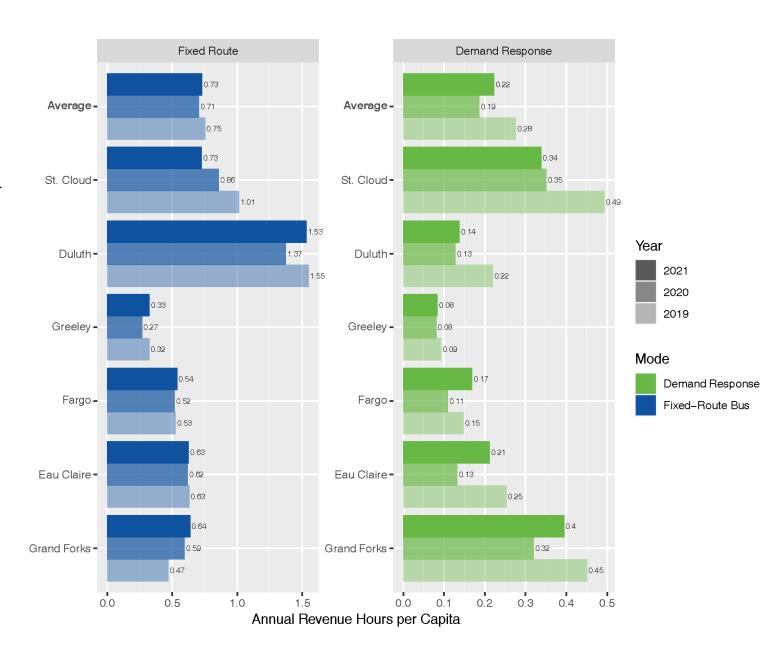
- As total boardings have declined for all peers over the threeyear period, the number of boardings per capita for all peers has also declined. The average number of fixed route annual boardings per resident for all peers in 2021 is 6.2 (and 0.47 for demand response).
- For fixed route services, boardings per capita on Metro Bus declined steadily to the peer average by 2021. DTA is the only peer with higher boardings per capita than Metro Bus.
- For demand response services, Metro Bus is twice the average for all peers with about 0.92 boardings per resident in 2021. However, Metro Bus was the only peer that saw a decrease in boardings per capita between 2020 and 2021.
- This metric indicates that Central Minnesota residents utilize transit relatively more frequently on average – especially demand response services.



REVENUE HOURS PER CAPITA

Revenue hours per capita is an indicator of the overall investment in transit within each peer community. A higher number in this measure indicates a higher transit investment.

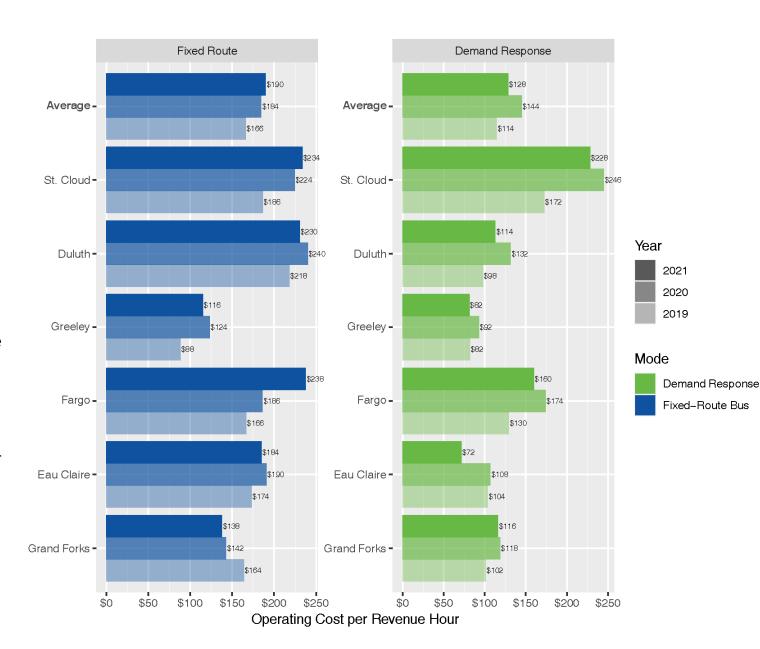
- Whereas other peers maintained steady in the average number of annual revenue hours per capita over the three-year period, Metro Bus saw a steady decrease while still staying at peer average or above. While boardings declined, other peers were able to maintain service levels during the pandemic.
- For fixed route services, Metro Bus averages 0.85 annual revenue hours per resident, which is the second-highest when compared to other peers (only DTA has higher revenue hours per capita than Metro Bus). This measure aligns the strong support transit providers receive from the State of Minnesota.
- For demand response services, Metro Bus is the only peer that saw a decrease between 2020 and 2021, but it remained more than 50% higher than the peer average, between 0.34 and 0.49, over the past three years.
- As with boardings per capita, this metric indicates that Central Minnesota residents have more access to both fixed route and demand response transit services than most peer cities (except Duluth and Grand Forks, respectively).
- On the other hand, Central Minnesota residents experienced an overall decrease in service levels between 2019 and 2021.



OPERATING COST PER REVENUE HOUR

Operating cost per revenue hour measures how efficiently resources are provided by the transit provider. It reflects a combination of some factors outside of agency control, such as prevailing wage rates, as well as considerations within a provider's influence, like staffing practices and assignments and resources not used in revenue service (i.e., deadhead hours). A lower operating cost per revenue hour is generally preferable.

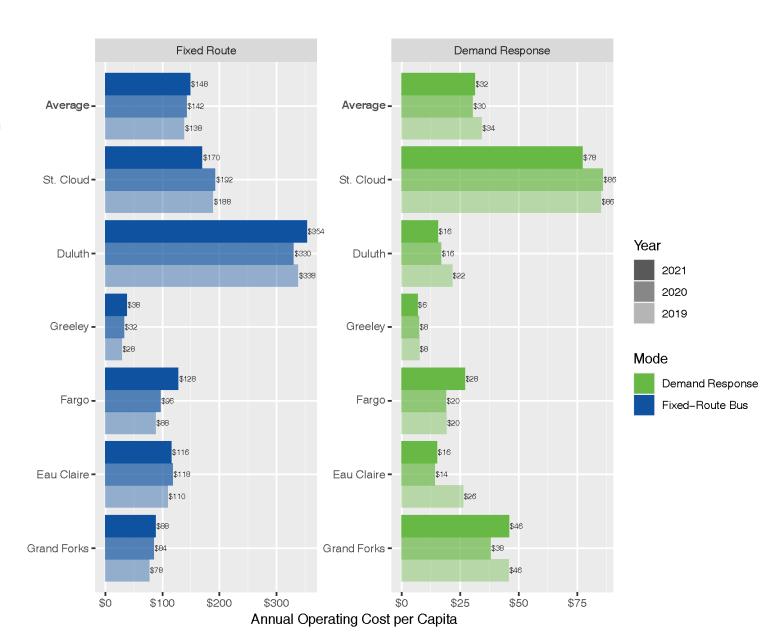
- The average operating cost per revenue hour for all peers increased from \$166 to \$190 for fixed route services but fluctuated between 2019 and 2021 for demand response services (with a high of \$144 in 2020).
- For fixed route services, Metro Bus operating costs per revenue hour are slightly higher than for the peer cities but are on par with MTA (Duluth) and MATBUS (Fargo). Only Greeley Evans Transit (Greeley) had substantially lower operating costs per revenue hour than the other peers.
- For demand response, the operating cost per revenue hour is also the highest compared to the peers but has fluctuated over the three-year period.
- Overall, this metric indicates that Metro Bus is equally efficient than its peers on the fixed route side, but the demand response services are slightly less efficient.



OPERATING COST PER CAPITA

Operating cost per capita is another measure of the investment in transit service, but this time compared to the population rather than per hour of service provided. A higher operating cost per capita indicates a higher investment in transit.

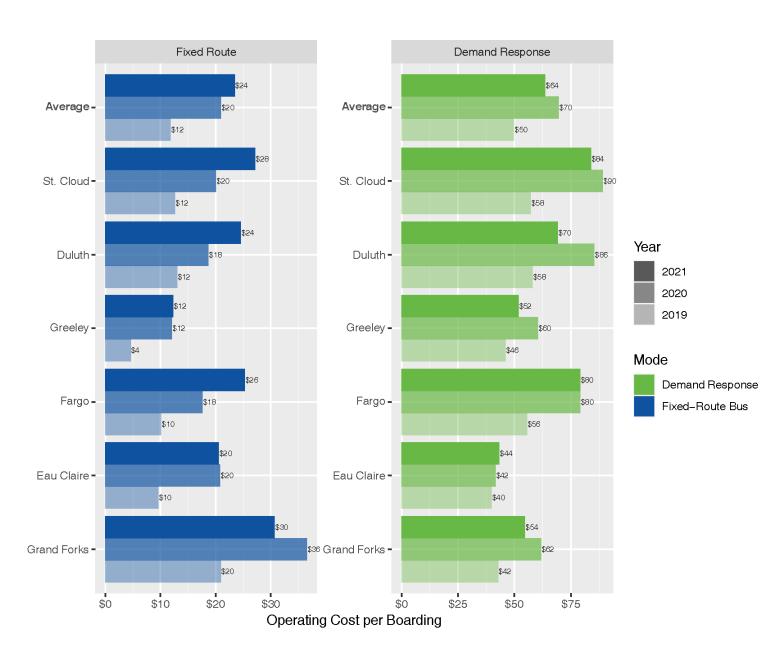
- For all peers, the average operating cost per capita for fixed route services ranged from \$138 to \$148 over the three-year period.
- The operating cost per capita for demand response services for all peers was less than a quarter of that for fixed route, ranging from \$30-34 over the three-year period.
- As with revenue hours per capita, Metro Bus has a higher operating cost per capita for fixed route services when compared to peer cities (except DTA).
- For demand response services, the operating cost per capita on Metro Bus is about 2.5 times higher than the peer average during the three-year period. On the other hand, Metro Bus is the only peer that saw an almost 10% decrease in the operating cost per capita on demand response services between 2020 and 2021.
- Overall, this metric indicates that Metro Bus provides more dollars for transit per resident than most of its peer cities, showing similar trends to revenue hours per capita.



OPERATING COST PER BOARDING

Operating cost per passenger is a provider's total operating cost divided by the total number of passengers carried per year and is a basic measure of cost effectiveness.

- The average cost per boarding for both fixed route and demand response services has been increasing over the past three years – which is likely a result of the pandemic during which time operating costs were increasing faster than boardings, which generally declined for most peers (and nationwide).
- For fixed route, St. Cloud is equivalent to the average for all peers, although it is on the higher end in 2021. Some peers (Greely, Eau Claire and Grand Forks) saw an increase between 2019 and 2020 but maintained the cost in the following year since their fixed route ridership remained steady between 2020 and 2021.
- Operating cost per boarding for demand response services in St. Cloud is higher than all other peers despite St. Cloud's high ridership on demand response services.



FAREBOX RECOVERY RATIO

Farebox recovery is measured to understand how much of a provider's total operating costs are "recovered" by fare revenue. This is also another way to measure cost effectiveness.

- Over the three-year period, the farebox recovery ratio for all peers declined, both on fixed route and demand response. This decline is largely due to suspension of fares during the pandemic for several peers, but also a decline in ridership on those systems that continued to collect fares.
- Metro Bus is the only peer that experienced the decline of farebox recovery ratio to almost 0% while all other peers saw increase in the ratio albeit lower than the 2019 baseline.
- It should be noted that Metro Bus fares were suspended in April 2020 and resumed collection in October 2021.

