



# Network**NOW**

## Chapter 2: Network Performance and Opportunities

DRAFT - SEPTEMBER 2023



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# INTRODUCTION

[Network Now](#) establishes Metro Transit’s priorities over the next four years. This plan will recognize the changes to the region’s transit network that have occurred since 2019, build on the success of regional transitways and BRT networks advanced in [Network Next](#), and guide how Metro Transit will invest in service from 2024 to 2027.

The Network Now project is divided into three main phases. The first phase took place during spring and summer 2023 and included a review of regional policy guidance, assessment of recent transit network performance, and extensive public outreach to understand customers’ priorities for transit. Results are documented in the Establishing the Foundation Report and its component chapters as follows:

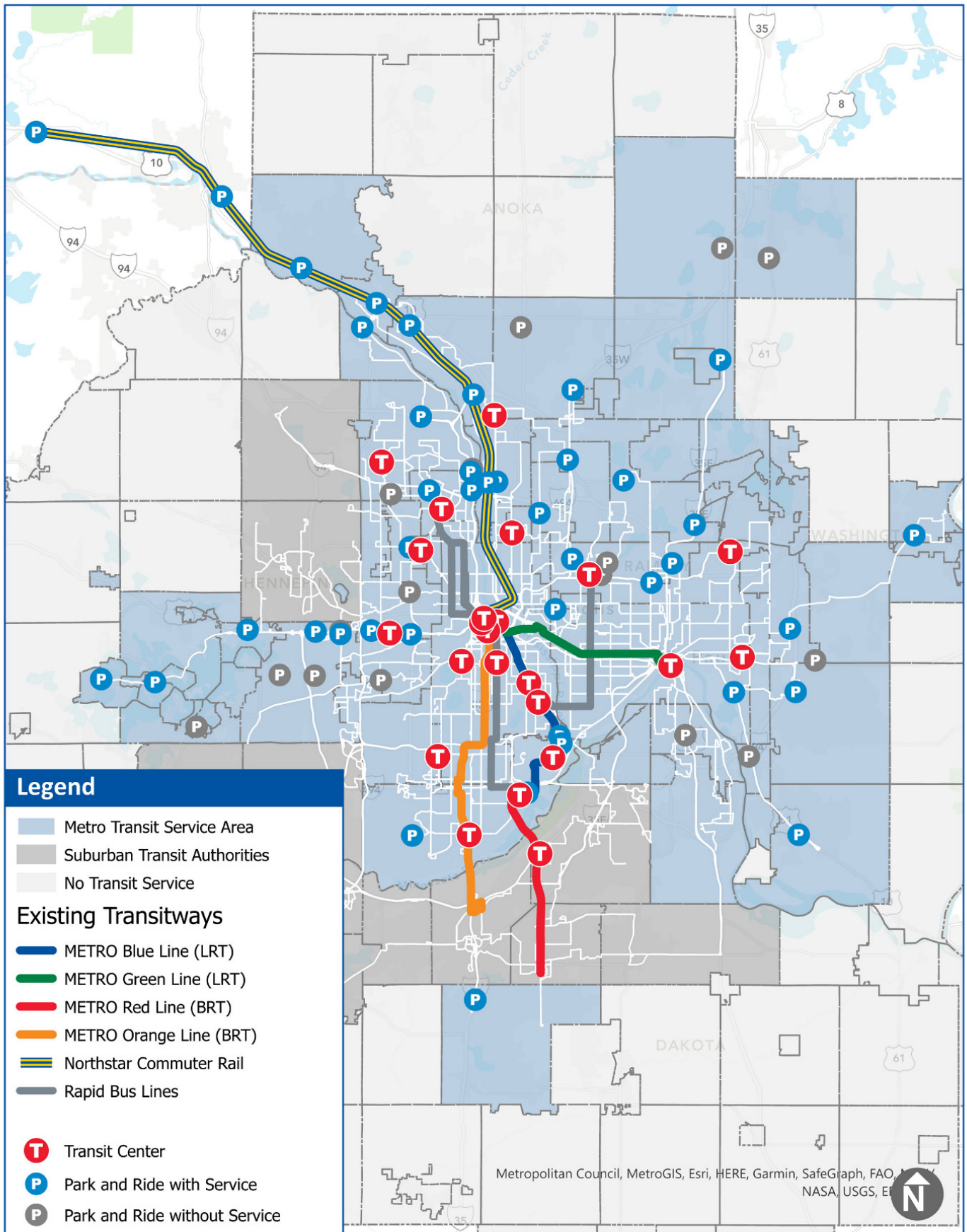
- Establishing the Foundation Report
  - Chapter 1: Regional Policy Guidance
  - Chapter 2: Network Performance and Opportunities
  - Chapter 3: Engagement and Customer Feedback

This document, Chapter 2: Network Performance and Opportunities, summarizes the performance of Metro Transit’s system between 2019 and 2023, as well as opportunities for future improvement. The assessment of recent performance will inform Network Now’s development of principles, evaluation criteria, and future service recommendations.

## METRO TRANSIT NETWORK OVERVIEW

Metro Transit is the largest transit agency in the Twin Cities, planning and operating transit service on 159 total routes, which includes 34 routes operated by private providers under contract to the Metropolitan Council. The remaining 125 routes include local and express bus routes, five bus rapid transit lines, two light rail lines, and one commuter rail line. Metro Transit’s service area includes 85 cities of the 186 in the region and five of the seven counties within the metro area.

Figure 1. Transit service areas in the Twin Cities region



*Metro Transit Service Area, Transit Centers, & Park and Rides*

# Metro Transit operates transit services that meet a variety of travel needs

Transit service exists to get people where they want to go as efficiently and conveniently as possible. Within that context, Metro Transit plans and operates transit services that meet different needs within the overall network. These include regional transitways, local bus routes, and commuter and express bus routes. Metro Transit's non-transitway bus routes are the focus of Network Now.

## Regional Transitways

Regional transitways include METRO light rail transit (LRT) and bus rapid transit (BRT) services, as well as Northstar Commuter Rail, shown in Figure 2. Transitways are major capital projects developed in collaboration with regional partners, including counties, cities, and roadway agencies. Each type of transitway serves regional travel needs.

Figure 2. Regional Transitways





## Light Rail Transit

Metro Transit operates two LRT routes: the METRO Blue Line and METRO Green Line. The Blue Line operates between downtown Minneapolis and the Mall of America via the Minneapolis-Saint Paul International Airport, while the Green Line connects downtown Minneapolis and downtown Saint Paul. Both the Blue Line and Green Line operate frequent service seven days per week.

## Arterial Bus Rapid Transit

Arterial BRT routes are designed to provide fast, frequent, and reliable service along high-ridership bus corridors in the Metro Transit network. They serve stations with high-quality amenities and feature speed and reliability enhancements, including transit signal priority (TSP), off-board fare collection, and bus priority treatments. Existing arterial BRT routes include the METRO A Line, C Line, and D Line. Additional routes are in various stages of planning, design, and construction.

## Highway Bus Rapid Transit

Highway BRT routes provide fast, frequent service along major highway corridors, with stations located further apart than arterial BRT service. Stations are designed to enable streamlined bus access to and from limited-access highway corridors and may feature enhancements beyond those typical of arterial BRT. When feasible, highway BRT routes use transit advantages such as MnPASS or bus-only lanes. Existing Highway BRT routes include the METRO Red Line and Orange Line.

## Northstar Commuter Rail

Northstar Commuter Rail operates between Big Lake and Target Field Station in downtown Minneapolis. It primarily serves Rush Hour commute transportation needs and has historically provided additional service to major downtown events.

## Local Bus Routes

Most bus routes planned and operated by Metro Transit are classified as local routes. Local routes typically run on local streets and make regular stops to pick up and drop off passengers along the entire length of the route. They typically run for most of the day with buses arriving at stops in regular intervals ranging from every 7-10 minutes on the busiest routes to every 60 minutes or less frequently on routes serving areas with lower demand for transit.

The Metropolitan Council 2040 Transportation Policy Plan identifies three types of local bus routes based on their location and role within the overall network: Core Local, Supporting Local, and Suburban Local. These networks are shown in Figure 3.

### Core Local Routes

These routes generally serve urban areas along dense corridors. They comprise the basic framework of the all-day bus network, providing people with essential connections to downtowns, major activity centers, and transitways. They typically operate with the most frequent trips and longest hours of service throughout the day.

### Supporting Local Routes

These routes serve urban areas on crosstown corridors that typically do not connect to a major regional center, such as one of the downtowns. They are designed to complete the grid of urban bus routes and facilitate connections to core local routes and transitways. They





typically run with moderately frequent trips and span of service.

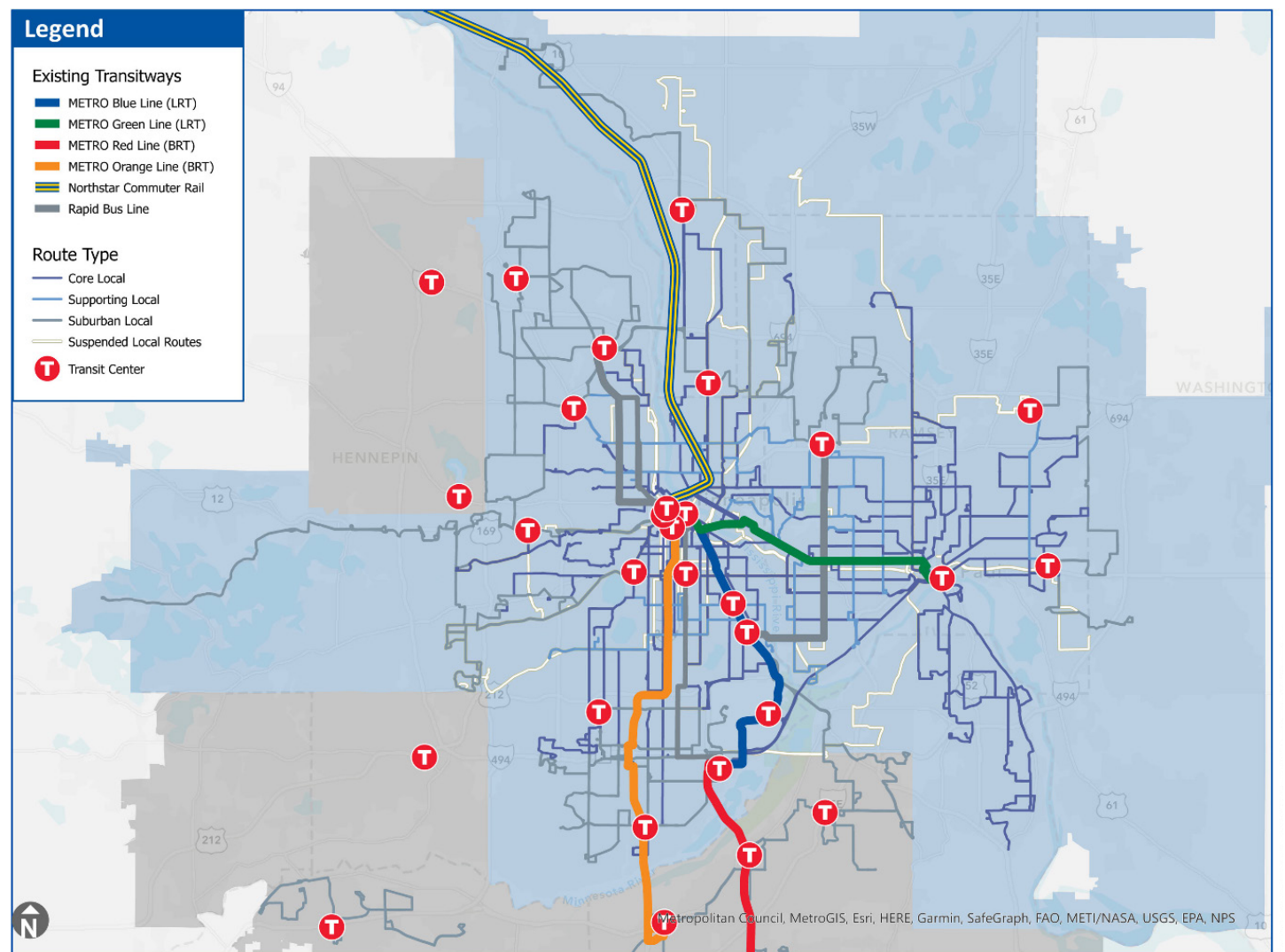
### Suburban Local Routes

These routes provide access to the transit network across large portions of the lower-density portions of the transit service area. These routes tend to operate with less frequent trips and fewer hours of service. Additional suburban local routes are operated by Minnesota Valley Transit Authority (MVTA).

### Commuter and Express Bus Routes

Commuter and express bus routes primarily operate during Rush Hour periods to serve riders commuting from suburban areas to major employment centers. These routes typically serve park-and-ride facilities and/or residential areas before operating non-stop to their final destination, such as downtown Minneapolis, downtown Saint Paul, or the University of Minnesota. Some may also offer reverse-commute service from downtowns or urban residential areas to suburban employment centers. Commuter and express bus routes are also operated by suburban providers, including MVTA, SouthWest Transit, Plymouth Metrolink and Maple Grove Transit. The region's commuter and express routes are shown in Figure 4.

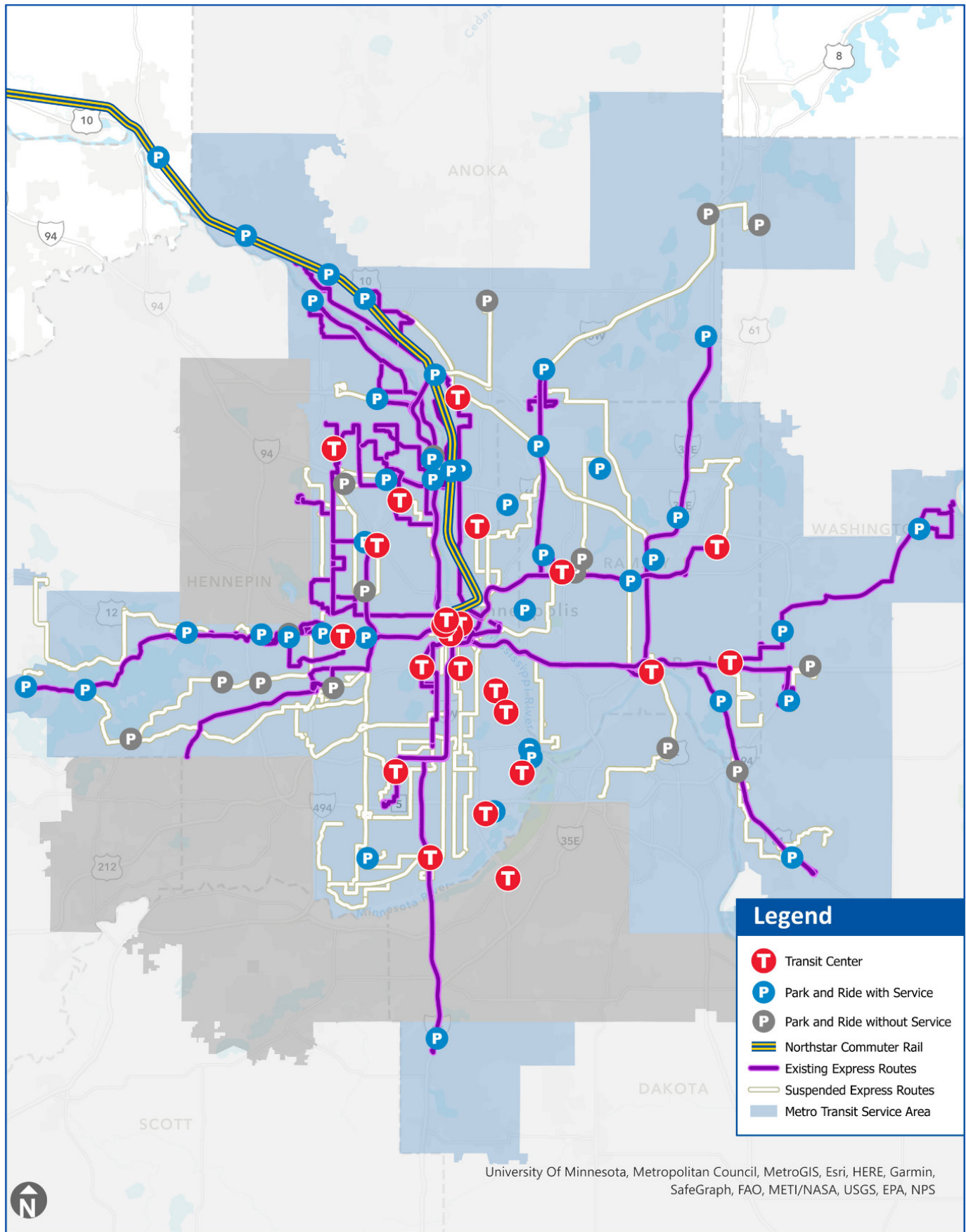
Figure 3. Metro Transit local bus routes, 2023



**Core, Supporting, Suburban, and Suspended Local Routes**

Date: 9/20/2023

Figure 4. Commuter and express bus routes, 2023



# SUMMARY OF RECENT SERVICE CHANGES

## Metro Transit reduced service by nearly 30% between March 2020 and March 2023

The COVID-19 pandemic and subsequent workforce shortage resulted in multiple service changes, primarily reductions, between March 2020 and March 2023. Most of the service changes between March 2020 and July 2021 were due to the pandemic, while those between August 2021 and March 2023 were caused by unprecedented workforce shortages. Details on service changes on individual routes are available on the Network Now webpage at <https://www.metrotransit.org/network-now-planning>.

### 2020 Service and Policy Changes

In 2020, Metro Transit responded to the sudden pandemic by adjusting to state, federal, and industry guidance. Service and policy changes included the following:

- **Essential trips only:** In March 2020, a Stay-at-Home order was issued that required people to stay in their place of residence except to engage in critical work and activities needed to maintain well-being and basic services. Metro Transit asked people not to ride transit unless it was an essential trip.
- **Service reductions:** Bus and rail service was reduced by 40%. 62 bus routes were fully suspended; most of these were commuter routes affected by reduced demand from downtown office workers. LRT service was reduced to every 20 minutes, and overnight service was discontinued. Most local routes operated a Saturday level of service on weekdays.
- **Hiring freeze:** All hiring was suspended due to low service levels.
- **Capacity limits:** The number of people allowed on a bus was limited to 25% of seated capacity to allow for social distancing. Larger vehicles were used when possible, and additional buses were needed on routes serving critical destinations such as medical facilities and grocery stores, especially in areas where people rely on transit the most.
- **Rear-door boarding:** Riders were asked to enter and exit vehicles through the rear door. No fares were collected on-board.
- **Service restoration:** By fall 2020, pandemic-related travel restrictions began to ease, with the federal mask mandate and Stay Safe Minnesota order establishing guidelines for safe reopening of facilities and a return to more normal transit operations. Metro Transit resumed front door boarding and restored LRT service to every ten minutes. Many core local routes returned to 90% to 100% of pre-COVID weekday service levels, but ridership on traditional 9-to-5 weekday commuter express bus trips fell by more than 95 percent from pre-pandemic levels.

Figure 5 and Figure 6 show the weekday service availability by stop in September 2019 and September 2020, respectively.



Figure 5. Weekday trips by bus stop and rail station – September 2019

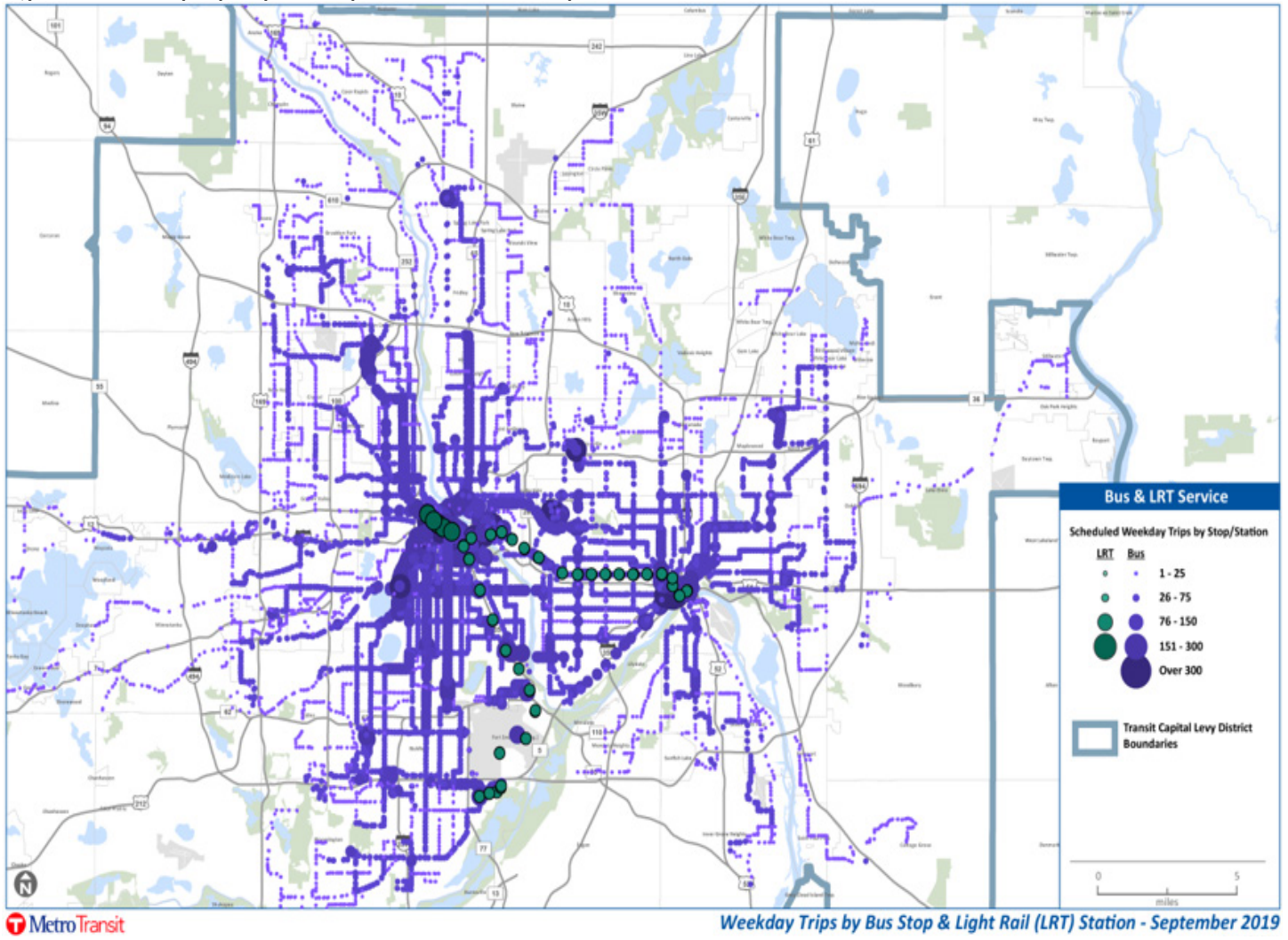
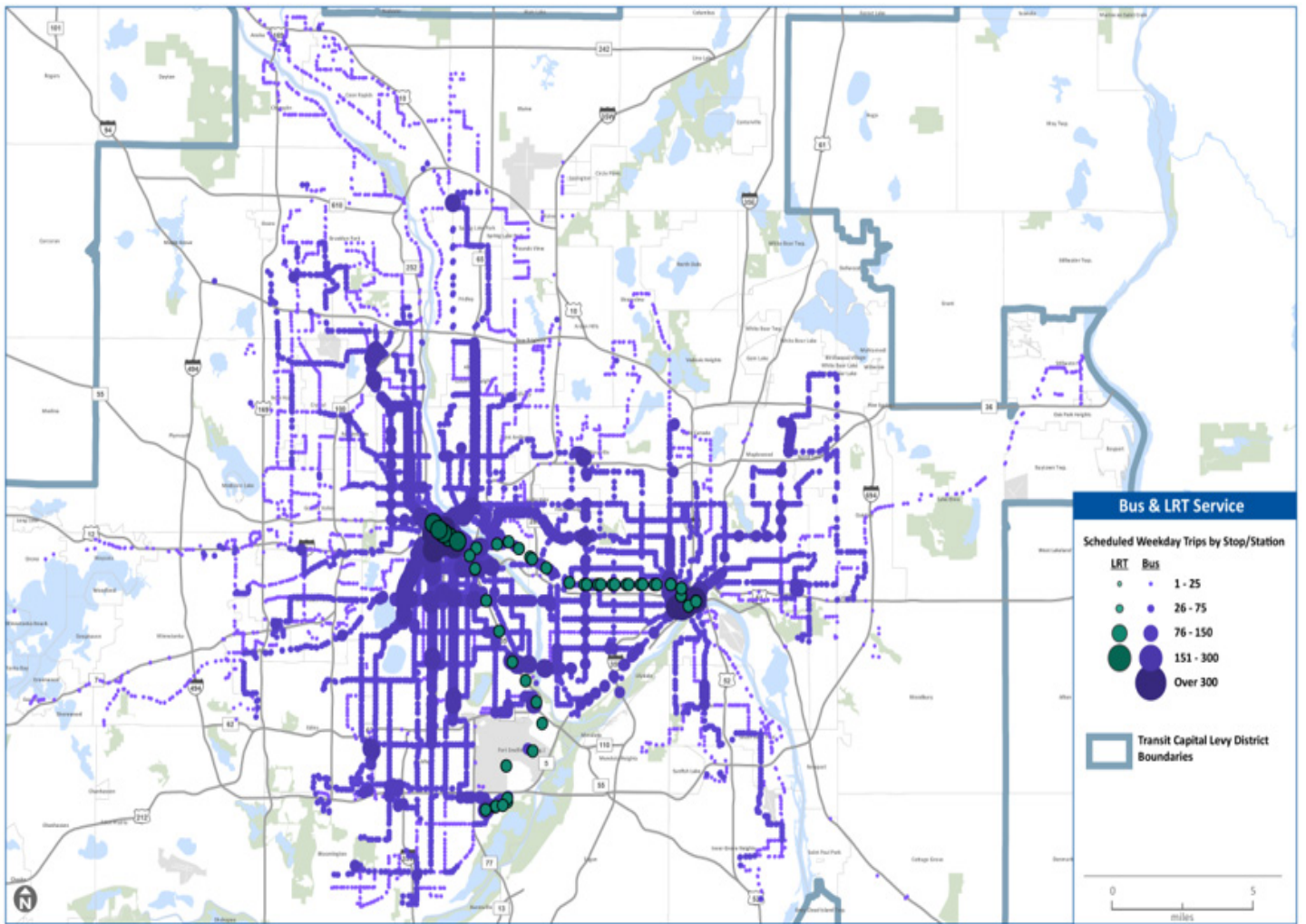


Figure 6. Weekday trips by bus stop and rail station – September 2020



Weekday Trips by Bus Stop & Light Rail (LRT) Station - September 2020

Date: 2/18/2022



## 2021 Service Changes

In the first half of 2021, service levels were mostly steady, although the span of high frequency service was slightly reduced on LRT and core local routes. Metro Transit resumed hiring operators, COVID vaccines became widely available, and many schools returned to at least some in-person learning. With these positive developments, Metro Transit increased service in mid-2021. These service changes included the following:

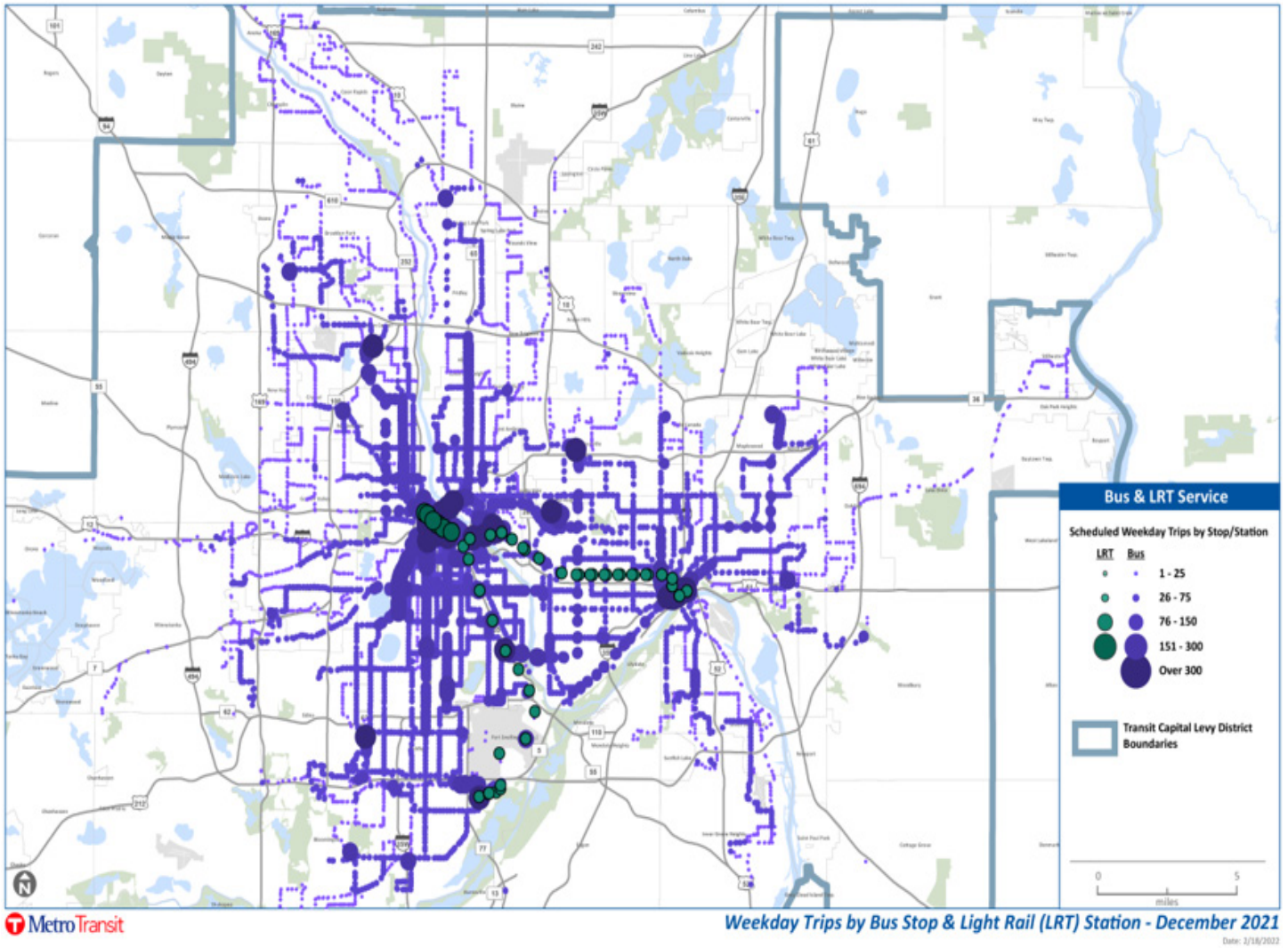
- LRT service was improved in the AM Rush Hour to every 10 minutes.
- The core local routes were restructured to enhance frequency on core segments.
- Two suburban local routes were reinstated.
- Metro Transit replaced yellow school bus service for many high school students attending St. Paul Public Schools.
- Limited service was restored on five University of Minnesota commuter routes, as well as express service from Woodbury and Minnetonka.
- Frequency was improved to every 15 minutes in the Rush Hour on commuter and express routes that operate in key freeway corridors. Express improvements were prioritized on routes that serve major Park & Ride facilities, including in Blaine, Coon Rapids, Brooklyn Park, and Maplewood.

However, it soon became clear that the number of operators was not increasing as fast as service levels, resulting in the last-minute cancellation of a significant number of scheduled trips and reducing the reliability of the service. Hiring efforts were not able to keep up, some operators were leaving due to vaccine or weekly testing requirements, and operator interest in working overtime had dropped. To better match service levels and operator availability, service was reduced by five percent systemwide in December 2021.

- 15 routes were fully suspended.
- Many of the August 2021 improvements were reversed.
- Service on the A Line, C Line, and Red Line, and many high frequency routes was reduced.
- LRT service was reduced to every 12 minutes.
- Sunday schedules were applied to some routes on Saturdays.
- The Orange Line opened on schedule in December 2021 but at lower levels of service than planned. It was funded and already under construction prior to the pandemic and was part of the MnDOT's Downtown to Crosstown project, which reconstructed I-35W between downtown Minneapolis and Highway 62. Connecting routes also received service changes.

Figure 7 shows the weekday service availability by stop in December 2021.

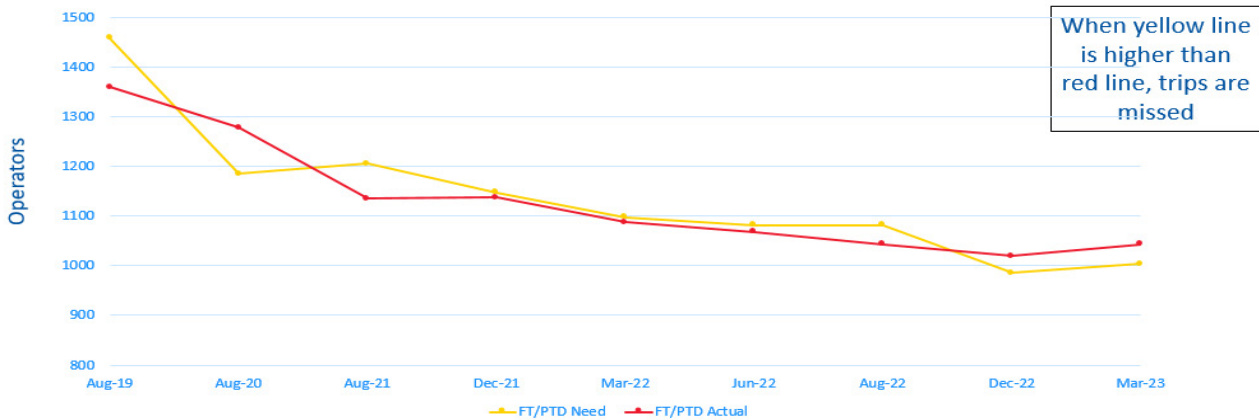
Figure 7. Weekday trips by bus stop and rail station – December 2021



## 2022 Service Changes

In 2022, the workforce shortage did not improve, despite Metro Transit’s efforts to increase wages and recruit more drivers. Figure 8 shows Metro Transit’s actual staffing levels in relation to the number of full-time and part-time operators needed to operate scheduled service between 2019 and 2023. Staffing levels remained below required levels until December 2022.

Figure 8. Metro Transit staffing levels (needed vs. actual), 2019-2023



In March 2022, service was reduced throughout the region by another four percent.

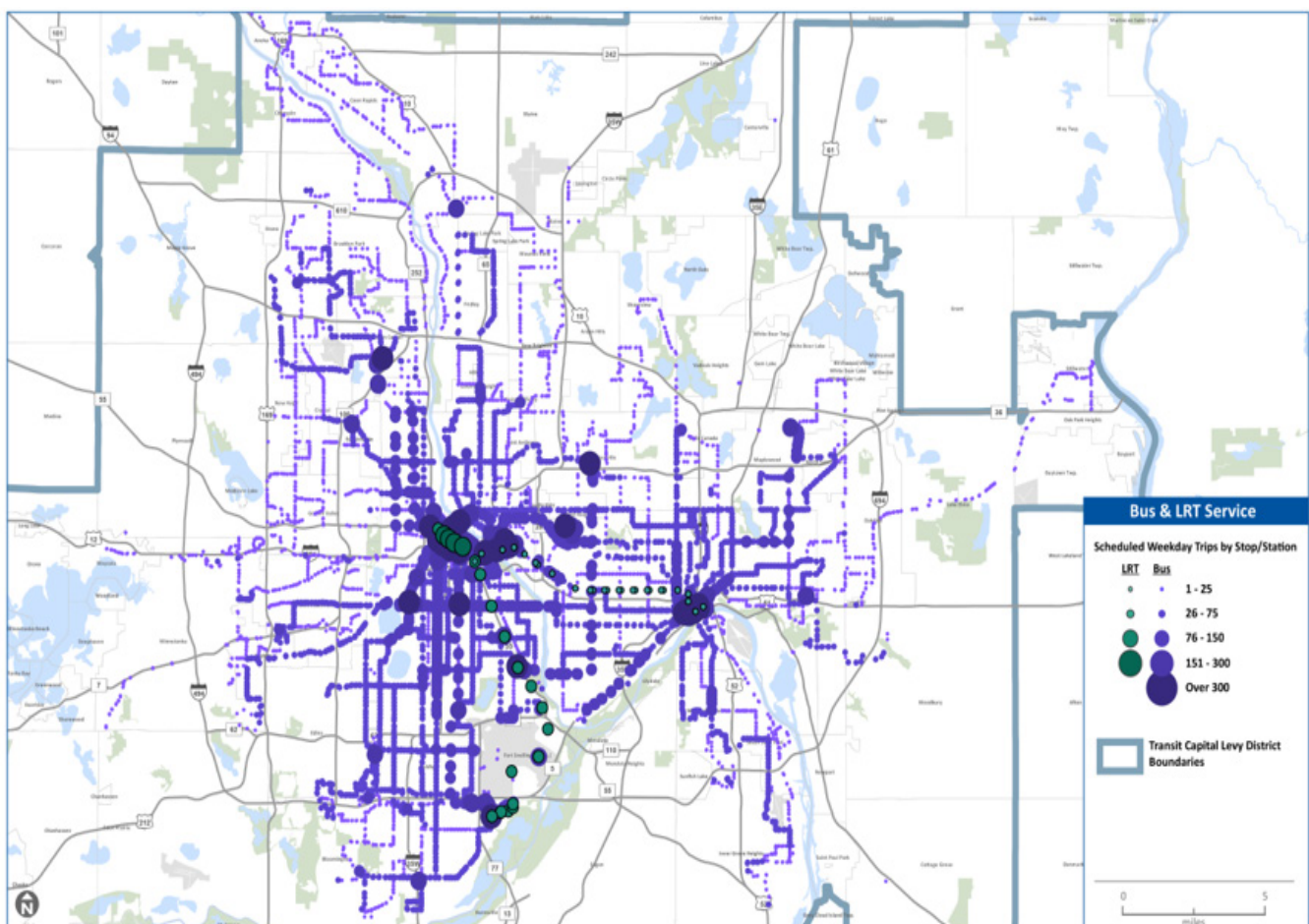
- Low ridership branches on some routes were suspended.
- Frequency dropped on the busiest bus routes, usually from 10 minutes to 15 minutes, 15 minutes to 20 minutes and 20 minutes to 30 minutes.
- Service for high schools and the University of Minnesota was reduced to meet demand.

In the second half of 2022, the workforce shortage continued, resulting in minor reductions in the summer and fall. Unfortunately, the reliability of service continued to decline, with additional reductions in October and December 2022 resulting in the lowest level of service operated since the pandemic began.

- In August, LRT service was reduced to every 15 minutes.
- In October, two routes were suspended, service on five routes was reduced to every two hours.
- In December, there was an eight percent reduction in service around the region.
  - Two new routes were suspended on weekdays, and two more on weekends
  - Service was restructured/suspended on eight routes
  - Frequency was reduced on 37 routes, including 11 commuter routes
  - The D Line opened, mostly replacing service on other local routes in the Emerson/Fremont and Chicago Avenue corridors

Figure 9 shows the weekday service availability by stop in December 2022.

Figure 9. Weekday trips by bus stop and rail station – December 2022



## 2023 and 2024 Service Changes

This report includes data that reflect service changes implemented between March 2020 and March 2023, as well as the impacts of those changes. The final Network Now plan will describe service changes that could be implemented between the approval of the plan in mid-2024 and the end of 2027. In the meantime, Metro Transit needs to continue to move ahead with quarterly service changes in 2023 and 2024, even before the Network Now plan is complete.

The workforce situation started to improve in 2023, and modest service improvements were made in June and August using new operators. As the future hiring situation is still uncertain, Metro Transit has been mindful to focus on changes that are compatible with Network Now principles. As a result, most suspended routes have not been restored pending the full evaluation of changes in travel patterns and transit needs since early 2020.

Metro Transit is using the following working guidelines for service planning decisions between 2023 and mid-2024:

- Maintain service reliability so that all scheduled trips operate
- Build on success by improving frequency on the routes with the highest ridership or where ridership is growing quickly. For example, ridership on many U of M routes has increased significantly due to the Universal Transit Pass automatically provided to all students
- Prioritize access for those who rely on transit the most, including lower-income groups and communities of color
- Prepare for transitways under construction or planning to open by 2025
- Consider customer input
- Prioritize routes where riders have no or few alternatives
- Balance network frequency and coverage improvements

Changes made since March 2023 have mostly focused on reversing the 2022 changes that resulted in some service operating less than every 60 minutes and responding to increasing ridership on BRT and some high-frequency local routes. In June frequency improvements were made to 17 routes, including the Orange Line, seven suburban local routes, three core local routes and three express routes. Branches were restored on four routes.

In August 2023 the Route 17 Better Bus Route project was implemented, which improved speed and reliability, consolidated stops at the most heavily used locations, and improved frequency on higher-demand segments in northeast Minneapolis and on Minnetonka Boulevard. Span and frequency improvements were made to 20 routes. No improvements have been made to LRT service since Metro Transit still does not have enough rail operators to allow for increased service levels.

Looking ahead to late 2023 and into 2024, possible changes could include improving service on routes slated to be converted to future BRT Lines, such as Route 21 (future METRO B Line), Route 6 (future METRO E Line), and in advance of future METRO Gold Line. If workforce allows, improving LRT frequency on all days and making more weekend bus service improvements are also under consideration. Service will also need to be adjusted to respond to significant construction projects and crowding concerns.



# Service reductions have affected the availability of transit across the Twin Cities region

As a result of pandemic- and workforce-related service reductions from 2020 to 2022, Metro Transit is operating 70% of the service hours that were provided in Fall 2019. This represents an amount of service that is lower than what was provided during the most severe impacts of the COVID-19 pandemic from March to June 2020. Table 1 shows the number of service hours operated by Metro Transit for service changes between June 2020 to March 2023. Results are reported as a percentage of March 2020 (pre-COVID) levels.

Table 1. Metro Transit service hours as a percentage of March 2020 levels

Month	Service hours as a percentage of March 2020 (pre-COVID)
June 2020	74%
September 2020	82%
December 2020	83%
March 2021	83%
June 2021	82%
August 2021	84%
December 2021	80%
March 2022	76%
June 2022	76%
August 2022	75%
December 2022	69%
March 2023	70%

Service reductions were made across the Twin Cities region, with service decreasing most in the suburbs. Initially there were significant reductions in core areas of Minneapolis and Saint Paul as well, but by early 2023 much of the core local service reductions had been reversed and there was actually a slight increase due to the opening of two new BRT lines. These service changes were consistent with the patterns of regional transit ridership, which decreased primarily in suburban areas, where many residents previously used commuter and express service but often have access to a personal vehicle. Both ridership and service levels remained somewhat more stable in core areas. This map shows the change in service geographically between late 2019 and March 2023.

Figure 10. Change in weekday scheduled trips by walkshed, 2019 to 2023

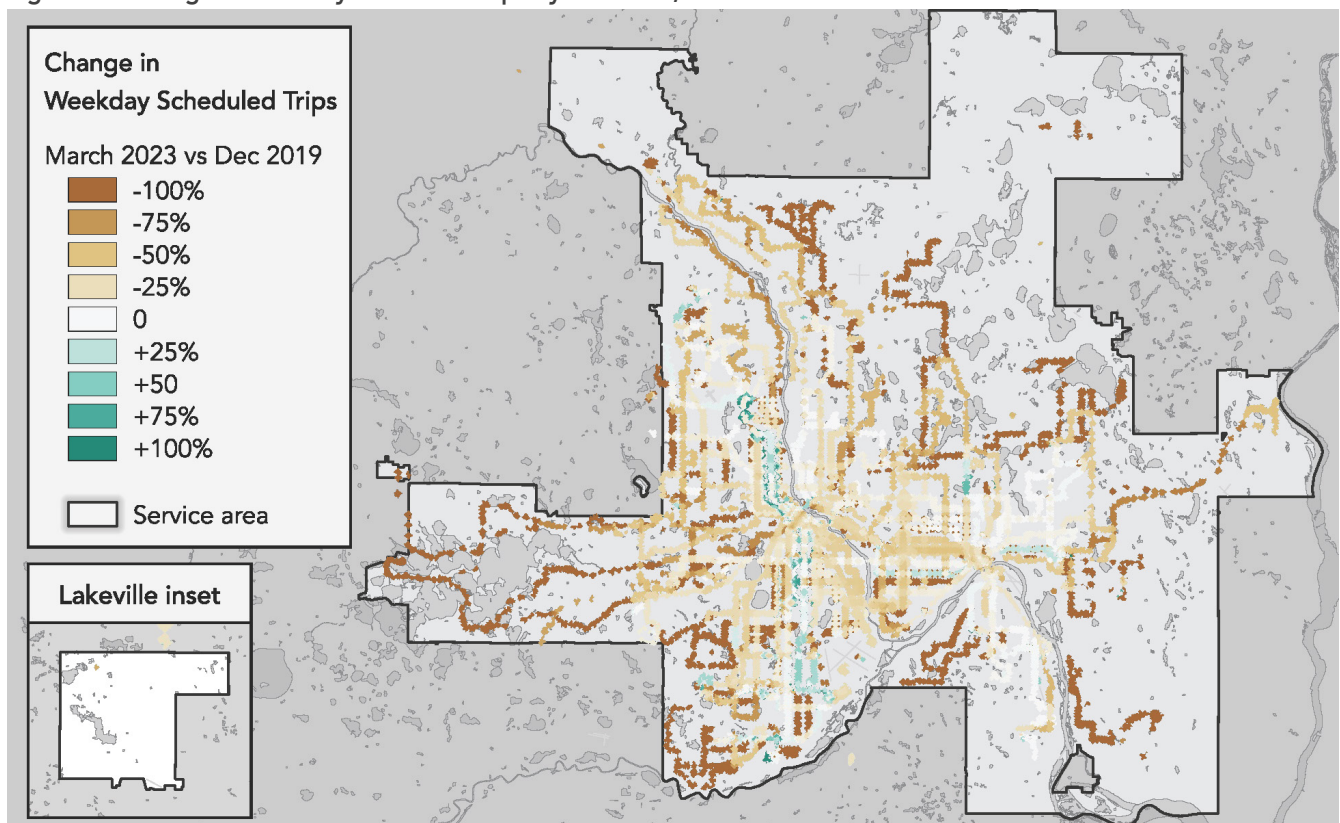




Figure 11. Change in weekday trips by route, 2019 to 2023

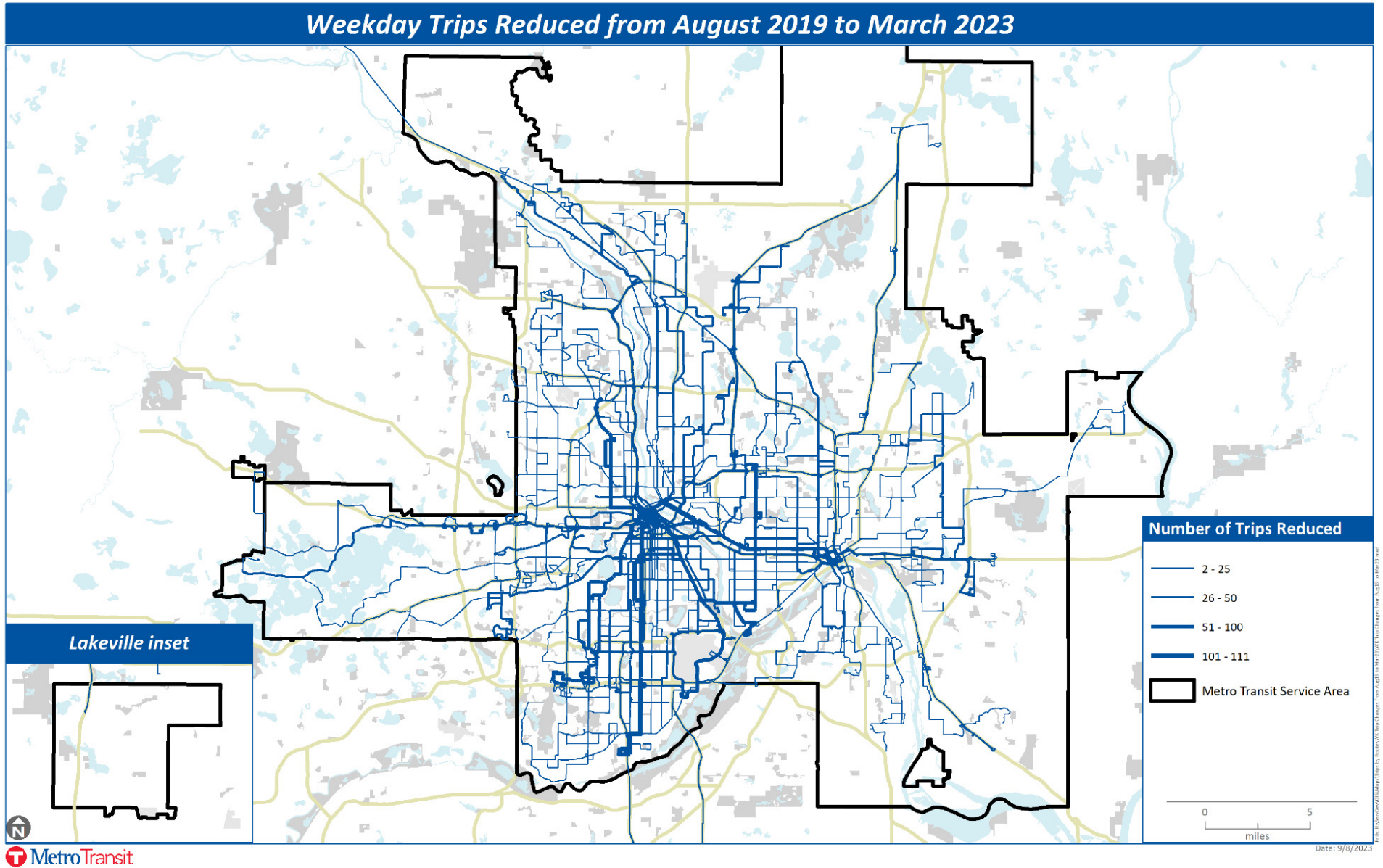


Figure 12. Percent change in weekday trips by route, 2019 to 2023

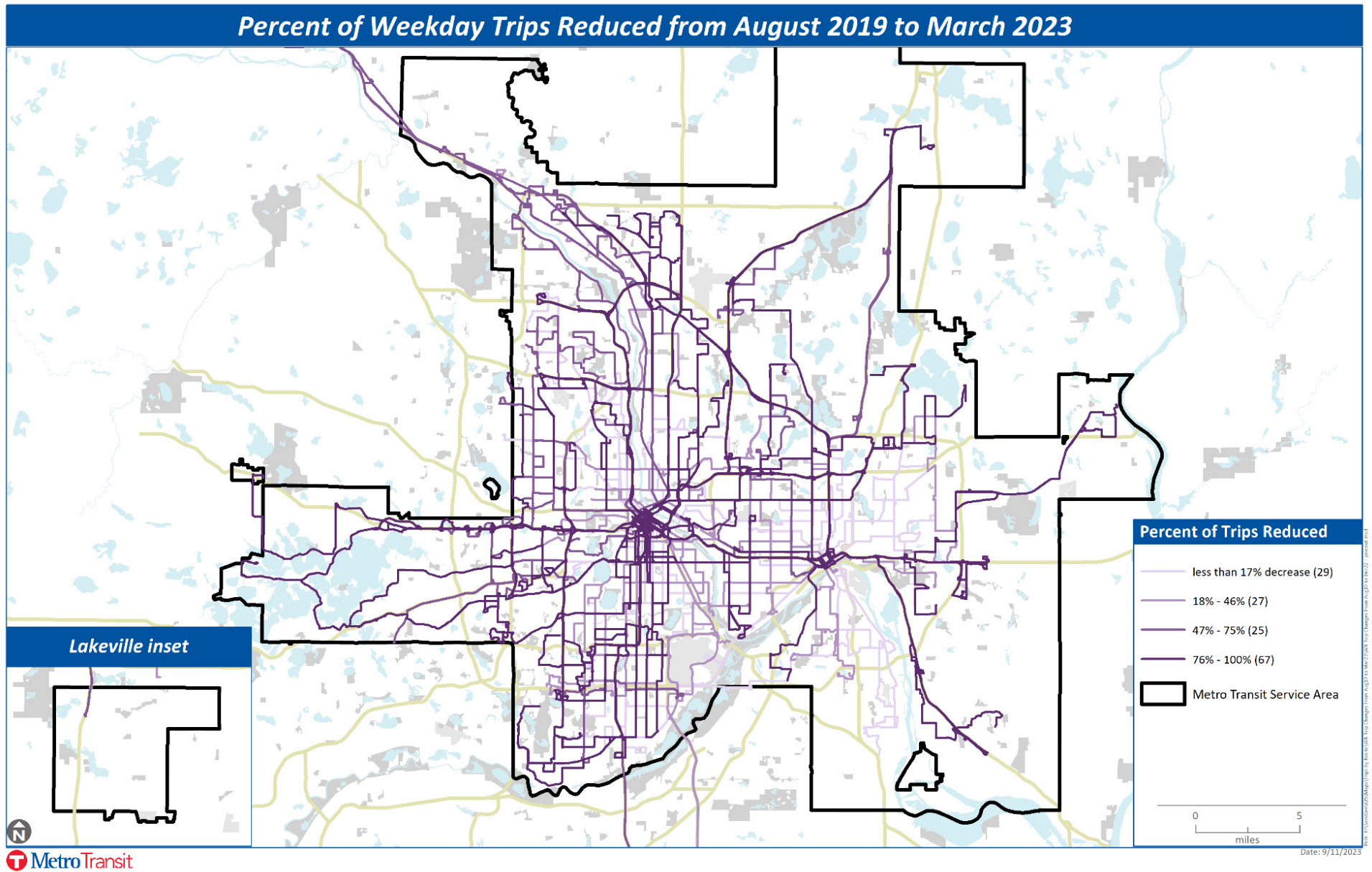
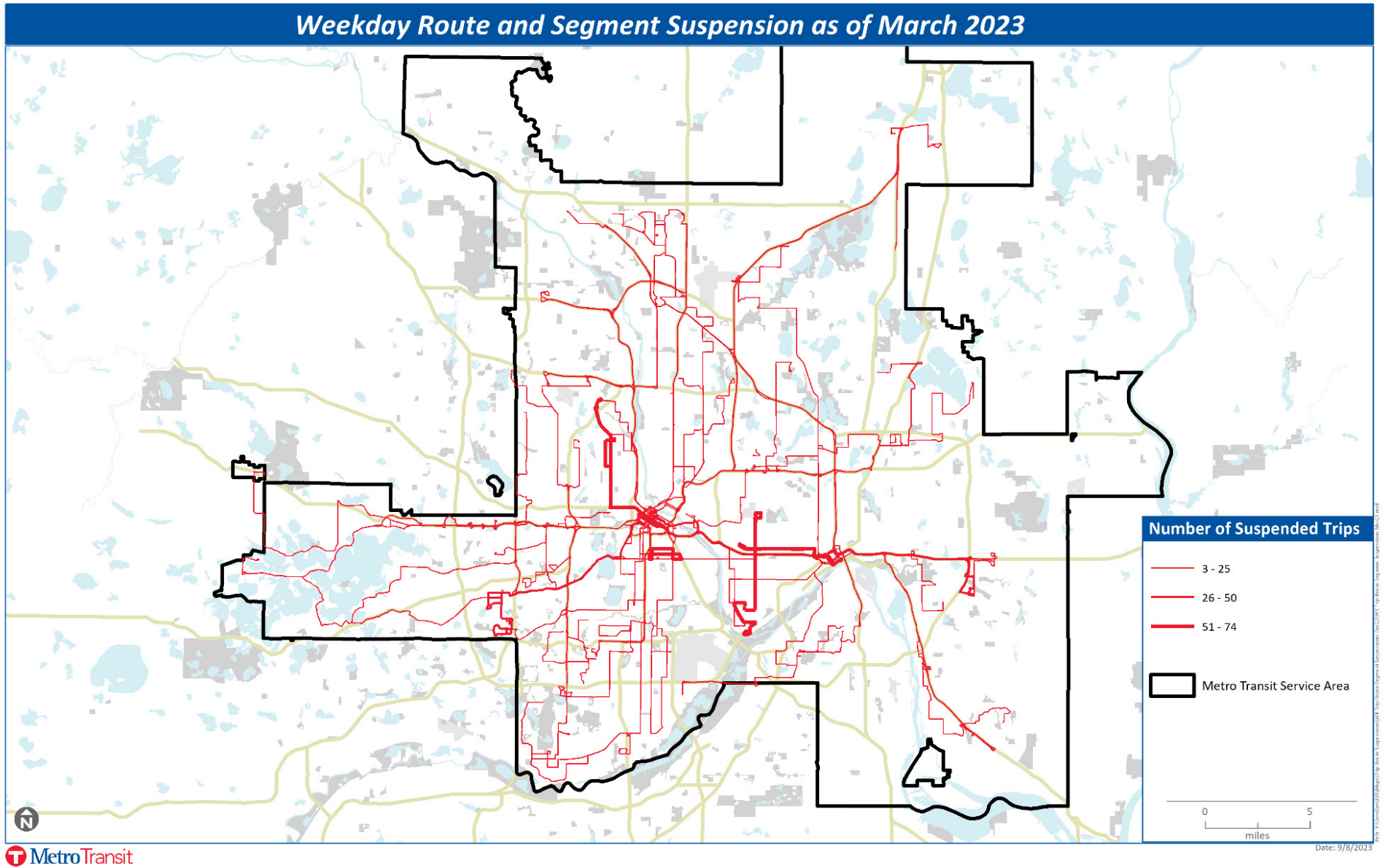




Figure 13. Weekday route and segment suspensions as of March 2023



In the first part of 2023, the number of trips cancelled because an operator was not available dropped significantly. Now that the hiring outlook has improved, Metro Transit has started to pivot toward slowly increasing service levels. This growth will be cautiously paced by workforce resources and in a manner that is consistent with the Network Now plan while also planning for several new transitway projects under construction and/or scheduled to open by 2027, all of which will require additional operators and supporting workforce.

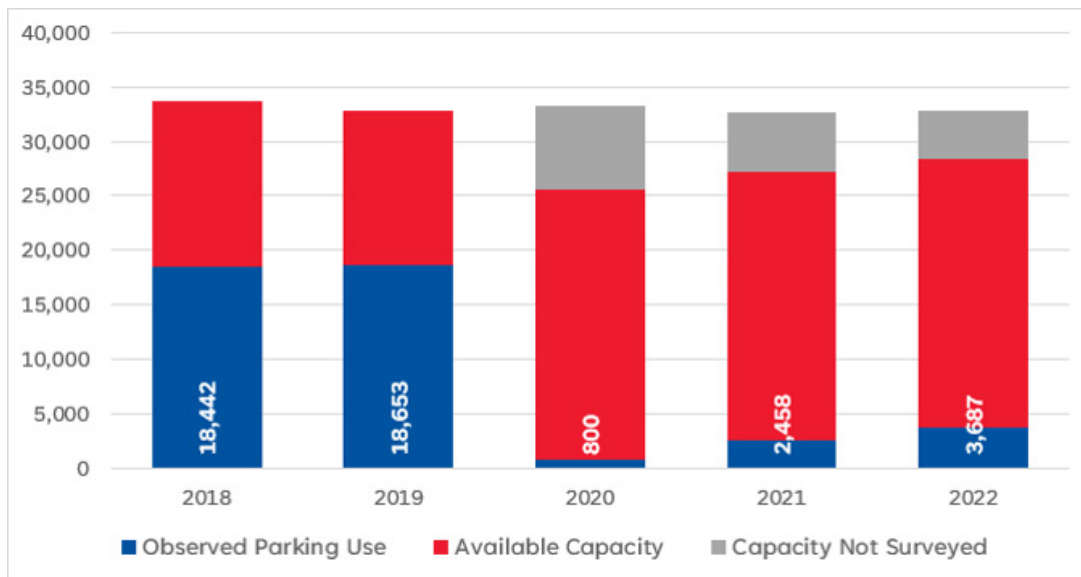
## Service reductions have affected facility usage

Service suspensions, reductions and changes have resulted in underutilized transit stops, park and rides, shelters, and transit centers.

The number of active bus stops has decreased from 11,500 in 2019 to approximately 10,000 as of March 2023. Bus stops that were previously served by routes that are currently suspended stops have signage that indicates the specific route is not operating, but the bus stop sign is still in place awaiting a more permanent decision. Metro Transit has maintained these stops in case service is restored, as reopening a stop is easier if bus stops have not reverted to other uses, such as on-street parking.

Park & ride use has declined since 2019 and has been slower to return to pre-pandemic levels than other types of transit stops. In the Fall 2022 parking survey, a total of 1,822 parked cars were observed at Metro Transit park & rides, which is 15% of the 11,809 parked cars observed in 2019. There is significant available parking capacity in the Metro Transit system. For example, only five Metro Transit facilities had more than 100 parked cars in the Fall 2022 parking count. Figure 14 shows the change in parking capacity and utilization from 2018 to 2022.

Figure 14. Metro Transit Park & Ride Capacity and Utilization, 2018-2022



The number of active park & ride locations has decreased from 75 in 2019 to 47 in 2023. 12 locations have permanently closed, and 16 locations have no active service and are considered "inactive," pending a permanent decision on closure. 11 locations are open but are currently only served by local bus routes; most of these locations had commuter express routes in 2019.

Table 2. Status of Park & Ride Facilities, 2023

Facility Status	Current Service	Number of Locations	Parking Capacity	2019 Use	2022 Use
Closed	no service	12	1,477	516	49
Inactive	no service	16	2,941	1,313	0
Open	local bus only	11	625	281	66
Open	light rail	2	2,564	1,645	250
Open	commuter rail	6	3,033	1,501	274
Open	express bus or BRT	28	10,968	6,553	1,183
<b>Total</b>		<b>75</b>	<b>21,608</b>	<b>11,809</b>	<b>1,822</b>

Underutilized parking facilities, in particular parking ramps, continue to pose an operational challenge. The climate-controlled elevator and stair towers in parking ramps have experienced increased damage associated with non-transit uses and public safety incidents since 2020. In response, Metro Transit has temporarily restricted access to the upper parking decks and elevator towers at several parking ramps, until park & ride use increases.

Throughout the pandemic and subsequent workforce-related service reductions, Metro Transit’s approach to the commuter express market has been to focus service at just a few key park & rides in each major highway corridor serving downtown Minneapolis. This allows for more frequent service to a smaller number of total locations, with the understanding that some customers may need to drive further to reach their destination.

The decisions made as part of Network Now will determine long-term actions, including whether to permanently discontinue routes, close facilities, and/or remove bus stops.

## COVID-19 has affected regional travel patterns

Metro Transit operates about 33% more bus trips during weekday morning and afternoon Rush Hour than in the middle of the day, and 38% more bus trips on weekdays than on Saturdays, as shown in Figure 15. This pattern corresponds to the typical 9-to-5 weekday commute schedule and is designed to accommodate higher demand for service during those times. Metro Transit’s ridership peaks have become less pronounced since the pandemic, with Non-Rush Hour service recovering ridership and growing at a faster rate than rush hour service. Single-purpose work trips usually covered with commuter express routes have been the least resilient during the pandemic, likely due to increased telecommuting, lower congestion levels, and lower downtown parking prices.

Figure 16 shows the distribution of platform hours across Rush Hour and Non-Rush Hour as well as Saturdays and Sundays, by route type. Platform hours represent the amount of time a bus is out of the garage either running on a route or on its way to or from the start or end of a route. Rush Hour service comprises a majority of total weekday platform hours on commuter and express bus routes and a significant portion of local bus platform hours. All service types offer more platform hours on weekdays than on weekends.



Figure 15. Comparison of weekday scheduled trips operating throughout the day

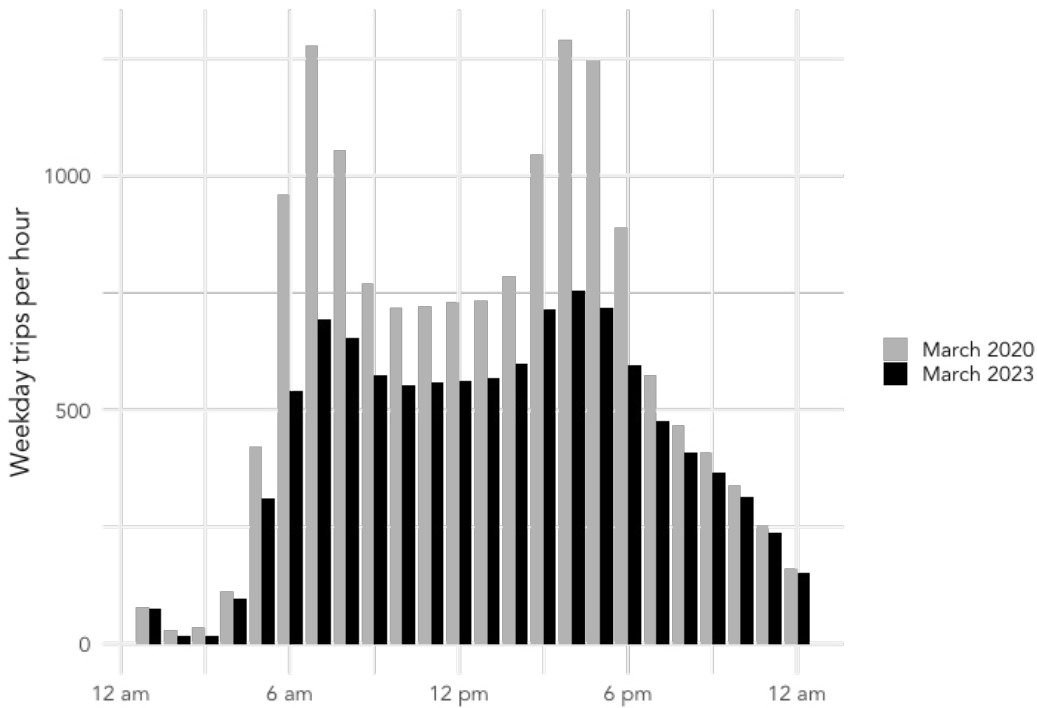
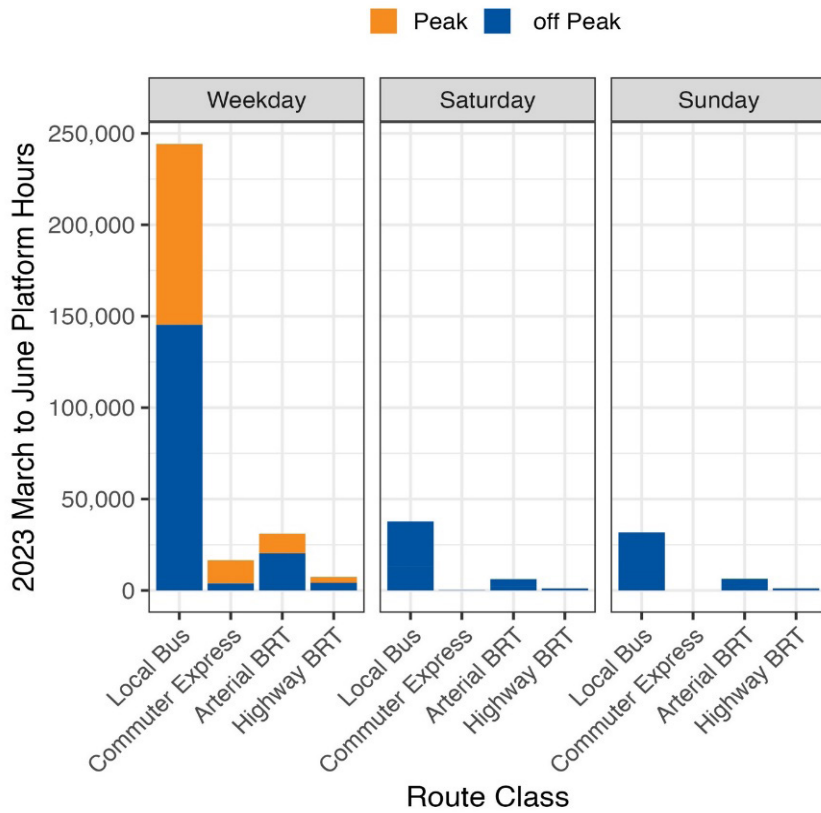


Figure 16. Platform hours distribution (Rush Hour vs. Non-Rush Hour) by route type



# CUSTOMER DEMOGRAPHICS

Metro Transit customers represent a diverse group of people and backgrounds, and transit plays varied roles in their lives. Understanding who rides Metro Transit service is critical to understanding its value and the impact transit has in the region.

## Metro Transit riders are more likely to be people of color

Metro Transit customers include a higher share of people of color when compared to the overall population of Metro Transit's service area. Based on the 2022 Travel Behavior Inventory (TBI) on-board survey, under half of Metro Transit riders identify as white, compared to two-thirds of the service area population. People identifying as Black or African American make up 31% of transit riders compared to 12% of the population of Metro Transit's service area. Other race and ethnicity groups are similarly represented among transit customers and the overall population.

Table 3. Race and ethnicity of Metro Transit customers relative to service area

Race/Ethnicity	Metro Transit Customers*	Metro Transit Service Area^
White	45%	67%
Black/African American	31%	12%
Asian	8%	9%
Two or more selected	5%	4%
Hispanic/Latino	7%	7%
American Indian/ Alaskan Native	2%	Less than 1%
Native Hawaiian/Pacific Islander	Less than 1%	Less than 1%

\* Source: 2022 TBI On-Board Survey (Preliminary Results)

^ Source: ACS 2017-2021 5-Year Estimates

## Metro Transit riders are younger than the regional average

Metro Transit customers are more likely than the overall population to be between the ages of 18 and 34; they are less likely to be 55 or over. About 52% of Metro Transit customers are between the ages of 18 and 34, compared to about 25% of the population of Metro Transit's service area. Metro Transit customers are much less likely to be under the age of 18.

Table 4. Age of Metro Transit customers relative to service area

Age Group	Metro Transit Customers*	Metro Transit Service Area^
Under 18	4%	23%
18-24	29%	9%
25-34	23%	16%
35-44	17%	14%
45-54	13%	12%
55-64	10%	13%
65-74	5%	9%
75 or above	1%	6%

\* Source: 2022 TBI On-Board Survey (Preliminary Results)

^ Source: ACS 2017-2021 5-Year Estimates

## Metro Transit riders often have lower household incomes

Metro Transit customers tend to have lower household incomes than the overall population of the service area. 43% of riders have annual household incomes below \$35,000, compared with 20% of service area households. Conversely, eight percent of riders have a household income above \$100,000, compared to 39% of service area households.

Table 5. Income of Metro Transit customers relative to service area

Household Income	Metro Transit Customers*	Metro Transit Service Area^
Less than \$15K	21%	7%
\$15-25K	12%	6%
\$25-35K	10%	7%
\$35-60K	12%	17%
\$60-100K	12%	23%
\$100-150K	4%	18%
\$150K-200K	2%	10%
More than \$200K	2%	11%

\* Source: 2022 TBI On-Board Survey (Preliminary Results)

^ Source: ACS 2017-2021 5-Year Estimates

## BUS SERVICE PERFORMANCE ANALYSIS

The following sections describe the performance of Metro Transit's bus network in relation to policy goals, operational metrics, and customer priorities, including access to transit and access to opportunities via transit. The performance analysis is considered within the context of the Metropolitan Council's established Transit Market Areas, which guide the amount and type of transit service for different community contexts based on their potential transit demand.

### Transit Market Areas

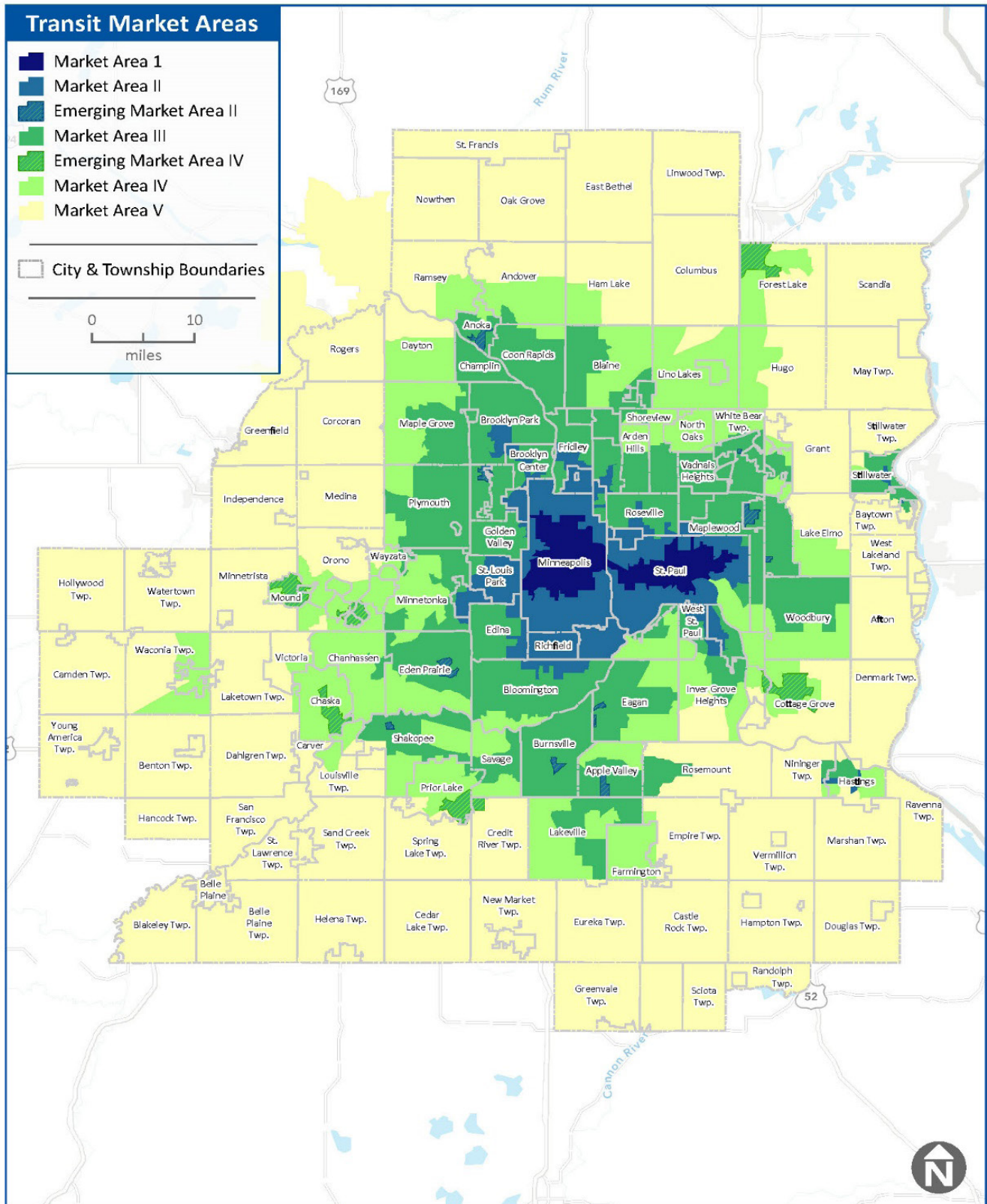
Variation in transit demand across the region is driven by several factors, such as differences in population density, employment density, automobile availability, and intersection density, among other differences in demographics and urban form. To account for differences in potential transit demand in the planning and evaluation of transit service, the region is divided into five distinct Transit Market Areas, shown in Error! Reference source not found.. Transit Market Areas are defined in the Metropolitan Council's 2040 Transportation Policy Plan, which is further discussed in the Policy Guidance chapter.

Transit demand tends to be highest in dense urban core neighborhoods, characterized as Market Areas I and II:

- **Transit Market Area I** has the highest density of population, employment, walkability, and lowest automobile availability. These areas have a more traditional urban form with a street network laid out in grid form. Market Area I has the potential transit ridership necessary to support the most intensive fixed-route transit service, with higher frequencies, longer hours, and more options available outside of peak periods.
- **Transit Market Area II** has high to moderately high population and employment densities and typically has a traditional street grid comparable to Market Area I. Much of Market Area II is also categorized as an Urban Center and it can support many of the same types of fixed-route transit as Market Area I, although usually at lower frequencies or shorter service spans.

Transit Market Areas III, IV, and V tend to have characteristics that can limit the effectiveness of transit, resulting in significantly less ridership. This trend is shown in more detail in the Ridership section that follows.

Figure 17. Transit Market Areas defined in the Transportation Policy Plan



**Metro Transit Market Areas**

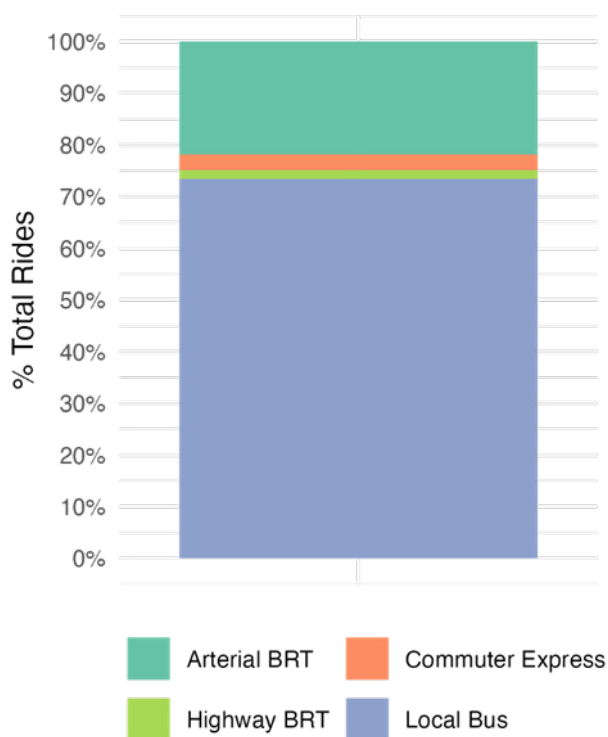
## Ridership

Ridership is one of the most important measures of transit system performance. It measures transit's contribution to regional mobility and serves as an indicator of how well the existing service meets the needs of the residents in Metro Transit's service area. Ridership information demonstrates basic ways the service is used: how ridership is concentrated on certain routes or in certain locations; how boardings are distributed around the network; and how usage changes by time of day and throughout the week. By examining these trends, Metro Transit can build on successes and make improvements in areas of weakness to best serve the mobility needs of the region.

The following section evaluates the performance of Metro Transit's bus system, which provides over two-thirds of the agency's total ridership and is the focus of the Network Now project.

Figure 18 shows ridership for each bus route class (arterial BRT, highway BRT, commuter express, and local bus) as a percentage of total bus ridership. Arterial BRT and local bus routes contribute over 90% of total bus ridership, with a much smaller share of trips provided by highway-based services.

Figure 18. Ridership distribution by route class

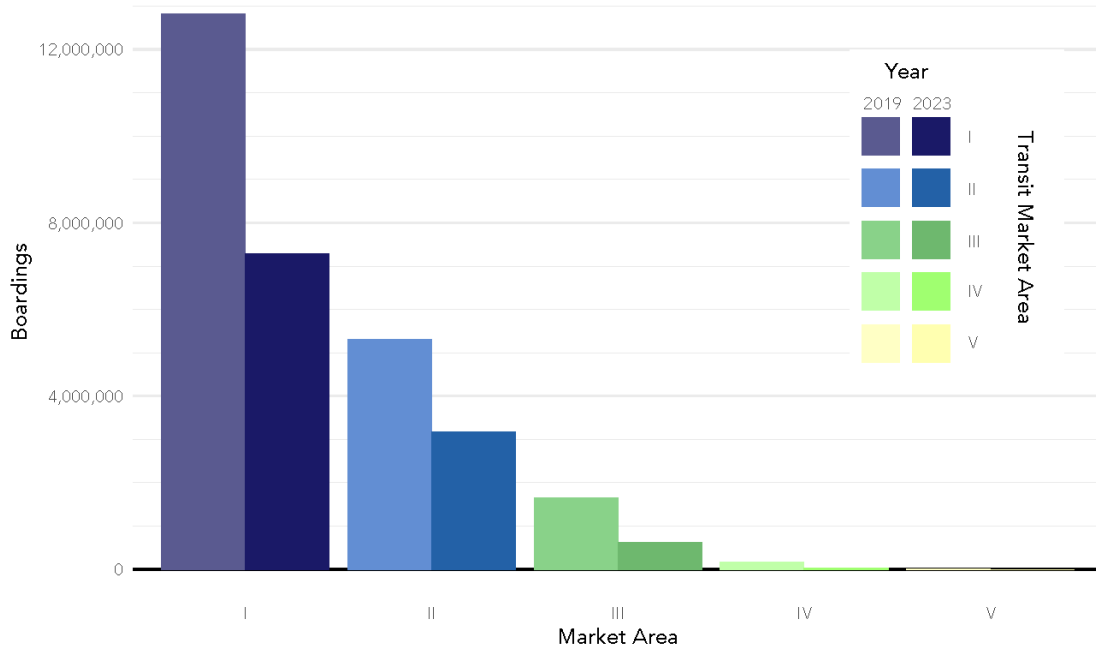


### Most bus ridership is concentrated in dense, walkable urban areas

Ridership on Metro Transit's bus network is highly concentrated in the denser, walkable, urban areas that make up Market Area I and, to a lesser extent, Market Area II. Rides beginning in Market Area I make up about 66% of Metro Transit's total average weekday rides, and rides beginning in Market Area II make up an additional 27%.



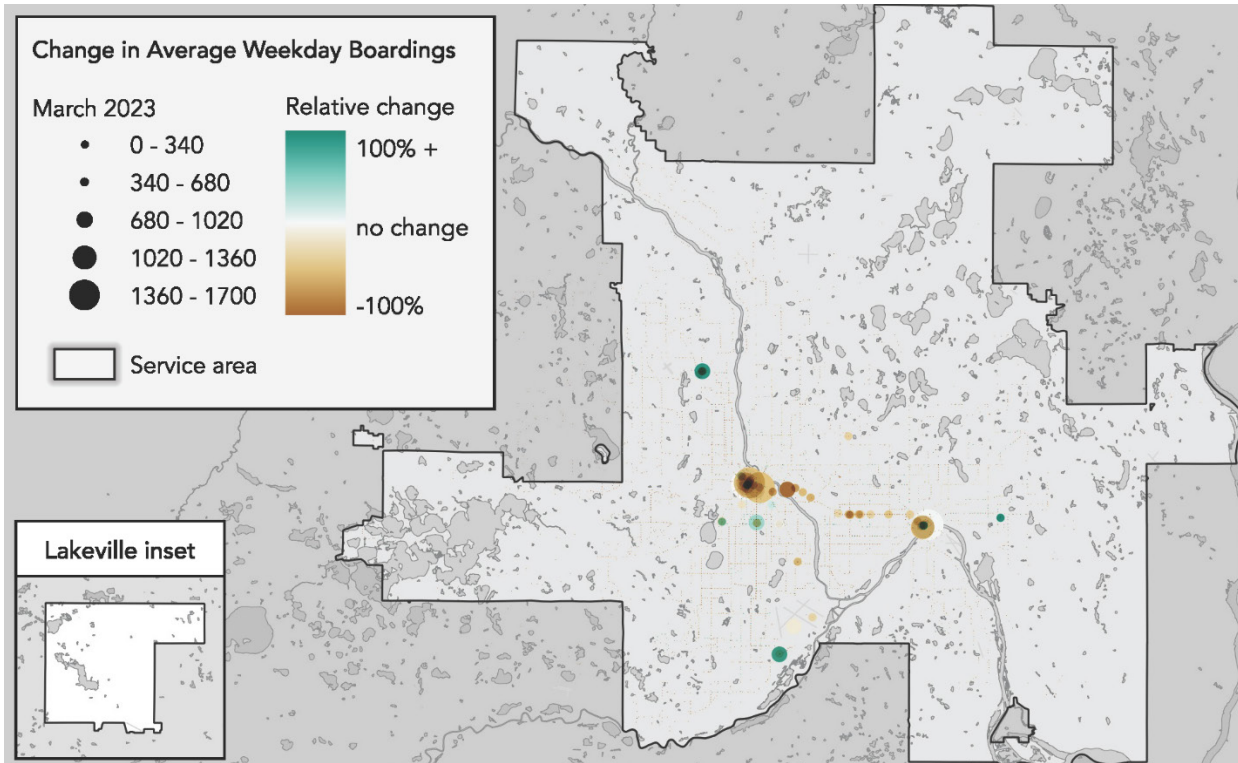
Figure 19. Transit ridership by market area, 2023



## Ridership changes have largely affected downtown markets

Travel patterns since the COVID-19 pandemic have shown declining transit ridership in downtown areas. In the Twin Cities region, transit stops with the greatest ridership losses from 2019 to 2023 are primarily located in downtown Minneapolis and downtown Saint Paul. These losses are partially offset by growth elsewhere, primarily along transitways and at major transfer points outside downtown areas. These include the Brooklyn Center Transit Center (BCTC), which is served by the C Line and D Line, and Mall of America Transit Station, which is served by the D Line.

Figure 20. Change in average weekday boardings by stop or station, 2019-2023

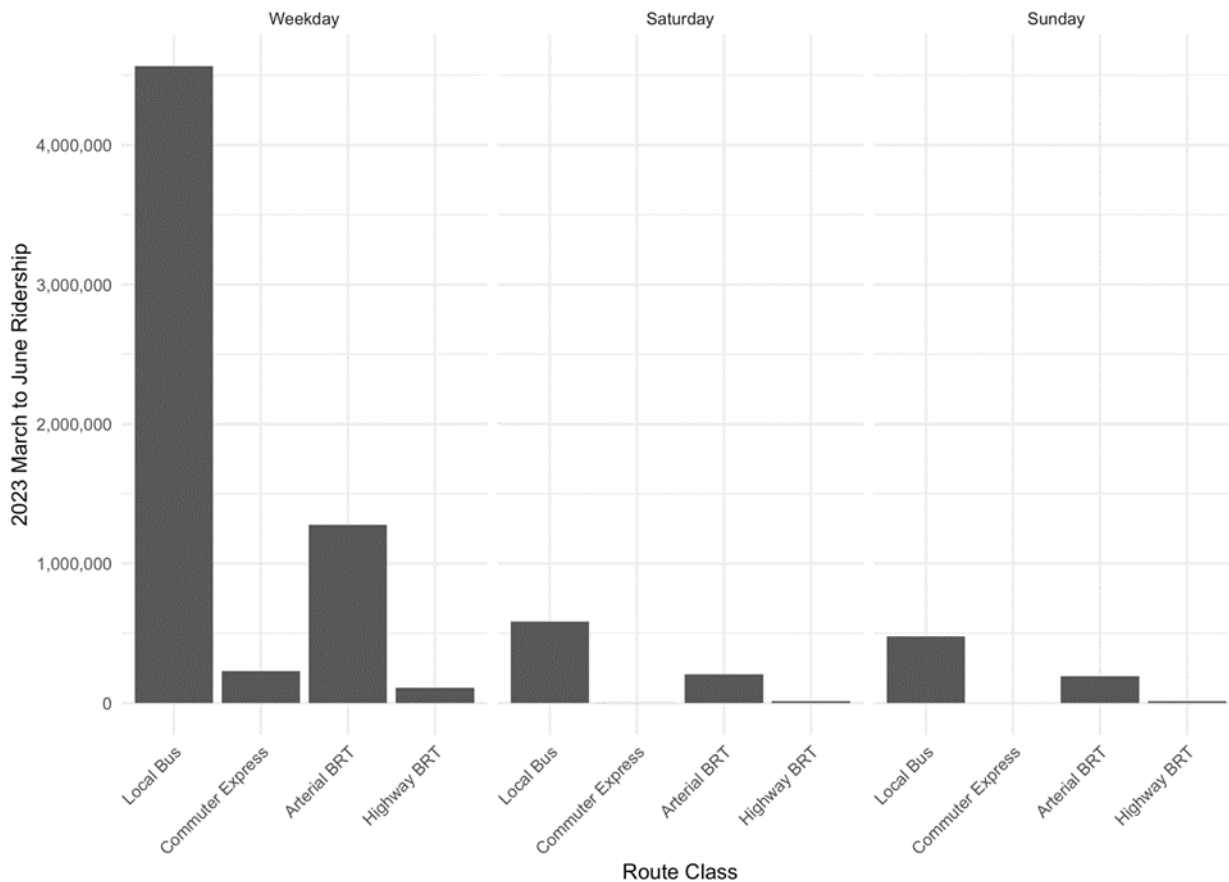


## Bus ridership is concentrated in the weekday rush hour and on core local routes

Ridership on Metro Transit’s bus network is concentrated primarily on core local routes and on weekdays. On weekdays, ridership on core local routes represents 74% of total bus ridership, compared to four percent of ridership on commuter and express routes. Rides on supporting and suburban local service together make up the remaining 21% of total weekday ridership, as shown in Figure 21.

Average daily ridership on Saturdays and Sundays is lower than weekdays, though the decrease is smaller for arterial BRT services than for local bus routes. The difference is most pronounced for Commuter Express and Highway BRT services, which rely most heavily on traditional commute markets.

Figure 21. Ridership by route class and service day, March 18 – June 16, 2023



Metro Transit’s Rush Hours from 6 AM to 9 AM and 3 PM to 6:30 PM represent distinct peaks in weekday ridership, corresponding to the typical 9-to-5 work commute, as well as school arrival and dismissal times. Ridership in these hours represents 45% of total ridership on a typical weekday, down from approximately 50% in 2019. Students using Metro Transit to get to and from Minneapolis and Saint Paul high schools impact when ridership is the highest, as school dismissal times are usually around 3 PM, before the end of the traditional workday.

Ridership on weekends follows a pattern of a gradual rise throughout the day, with peak ridership hours occurring around 3 PM, before steadily declining into the evening, as shown in Figure 22. In addition, there is proportionally more evening ridership on Saturdays than weekdays, suggesting the importance of later spans of service for non-traditional commutes and non-commute trip types.

Figure 22. Ridership distribution by time of day (Weekday / Saturday / Sunday)

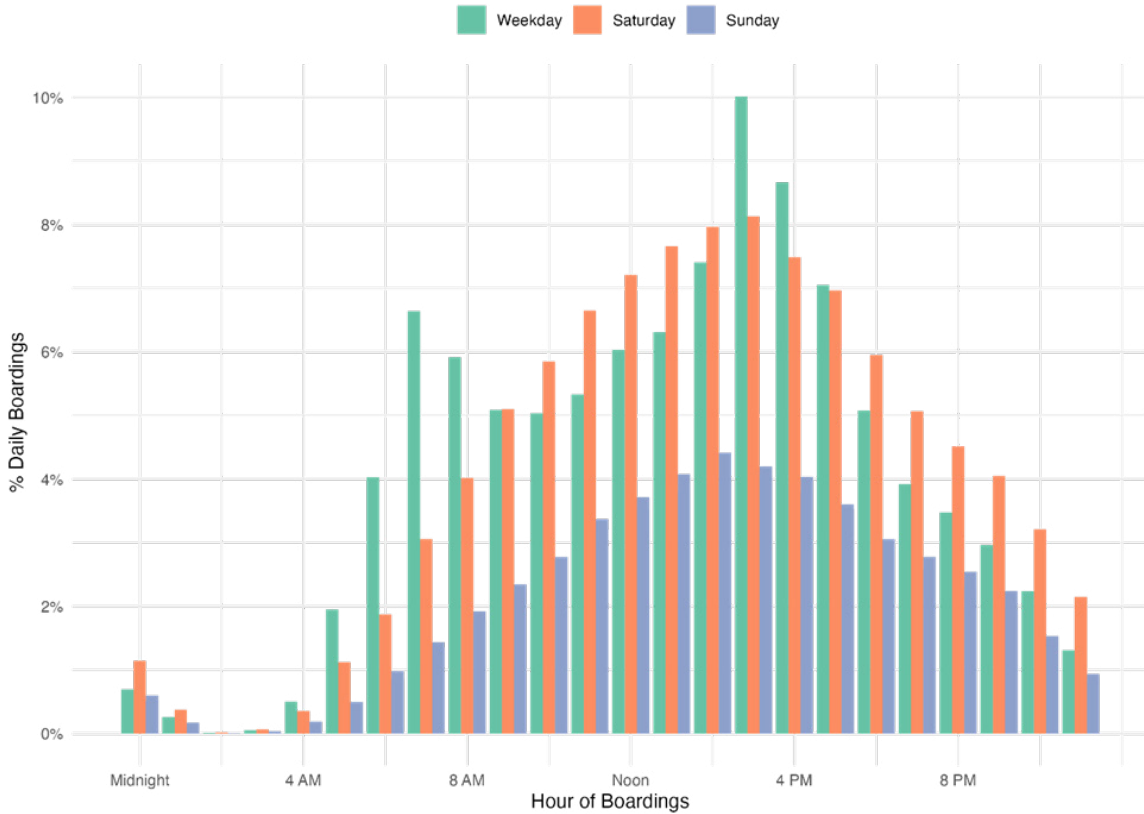
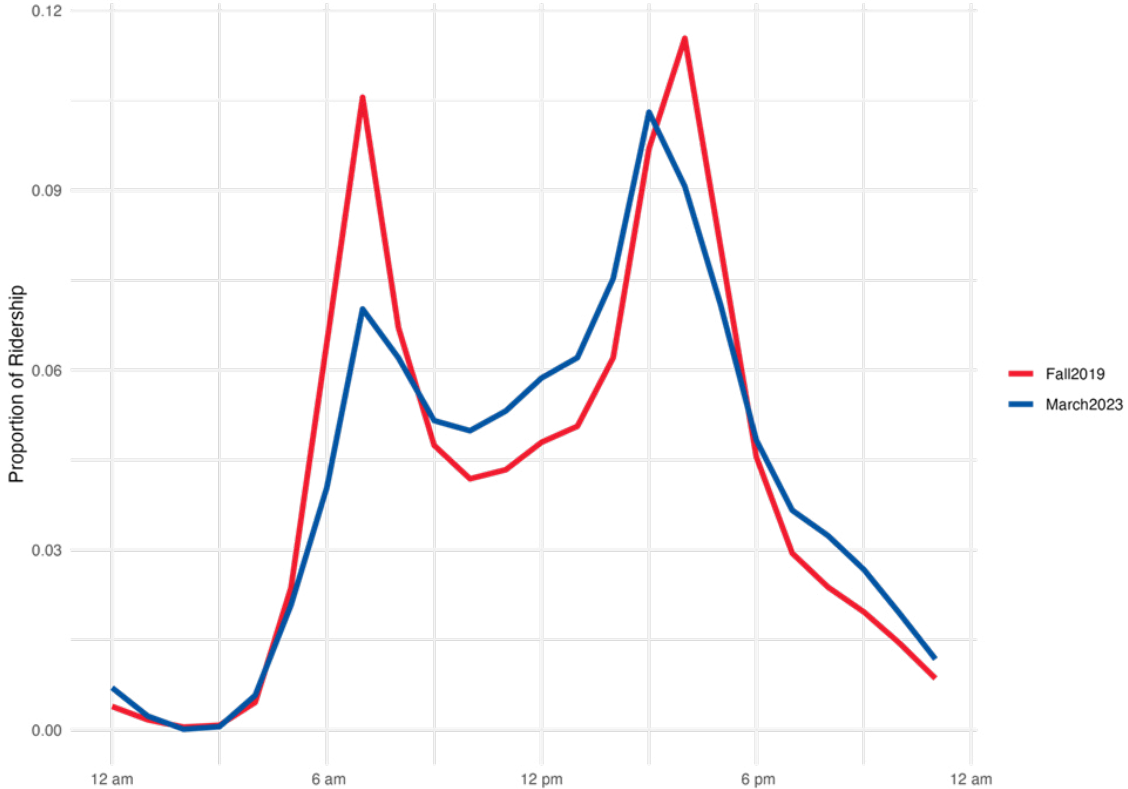


Figure 23 shows weekday ridership by time of day in 2019 and 2023. Compared to pre-pandemic patterns, ridership is now less Rush Hour-oriented. Ridership in the AM Rush Hour period has decreased most noticeably, and midday and evening ridership now represent a larger proportion of the daily total.

Figure 23. Weekly ridership by time of day (2019 vs. 2023)



Transit travel patterns may sometimes differ from trips made on other modes. Data from a recent TBI household survey indicates that the weekend, rather than the weekday, transit ridership patterns may be more reflective of overall travel demand in the region across all modes. The sample of 100,000 trips depicted in Figure 24 shows a pattern with a sharp peak corresponding to high travel demand in the 3 PM to 6 PM hours, but without a corresponding morning Rush Hour as seen in the weekday bus ridership pattern. Instead, demand increases sharply at 7 AM and remains at a roughly constant level the rest of the day before the afternoon rush. Based on time of travel alone, this suggests there may be an opportunity to increase transit ridership during the midday and evenings outside of the weekday rush hours to attract trips occurring on other modes during these times.

Figure 24. Travel demand by time of day (all modes) from the 2021 TBI household survey

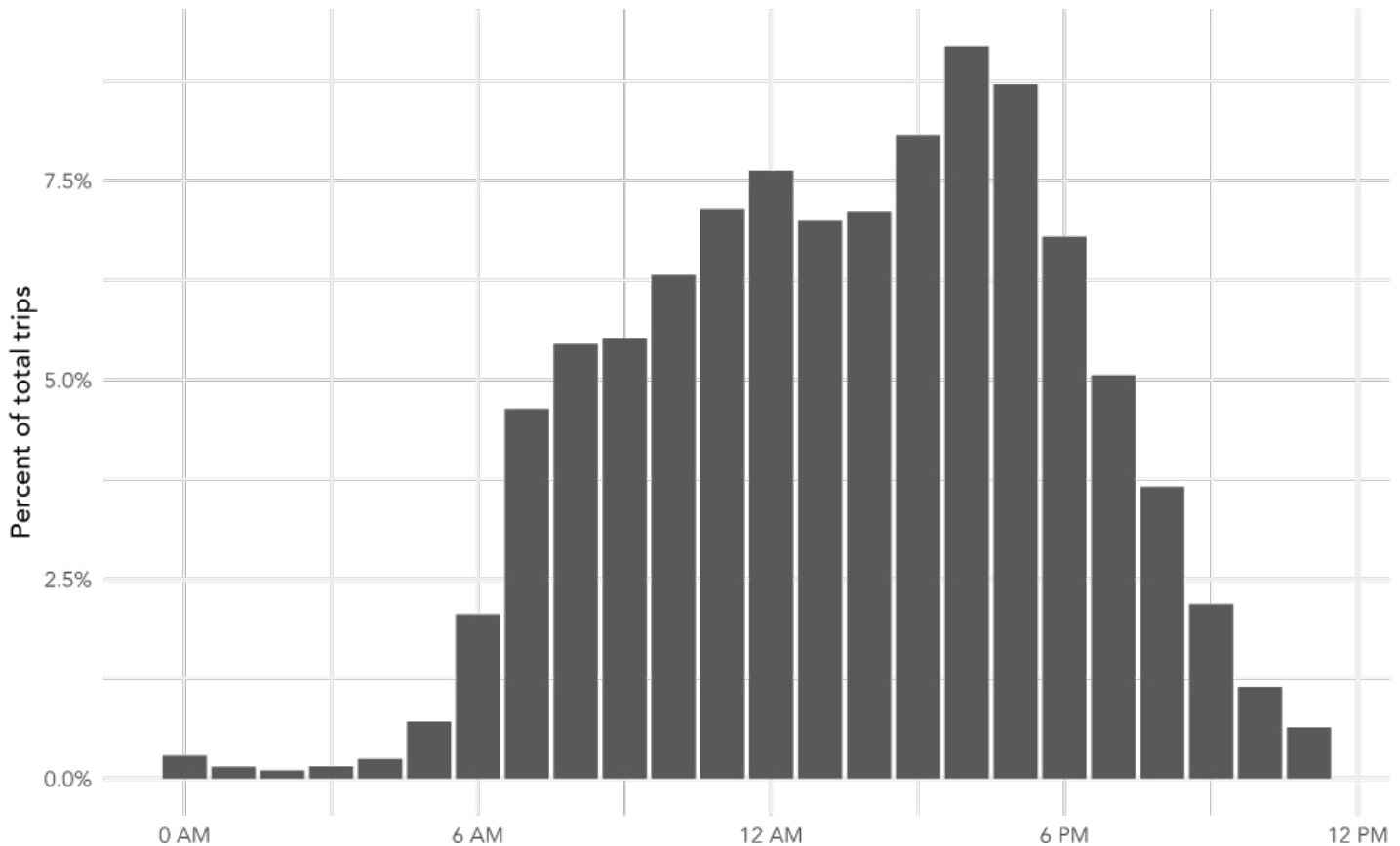
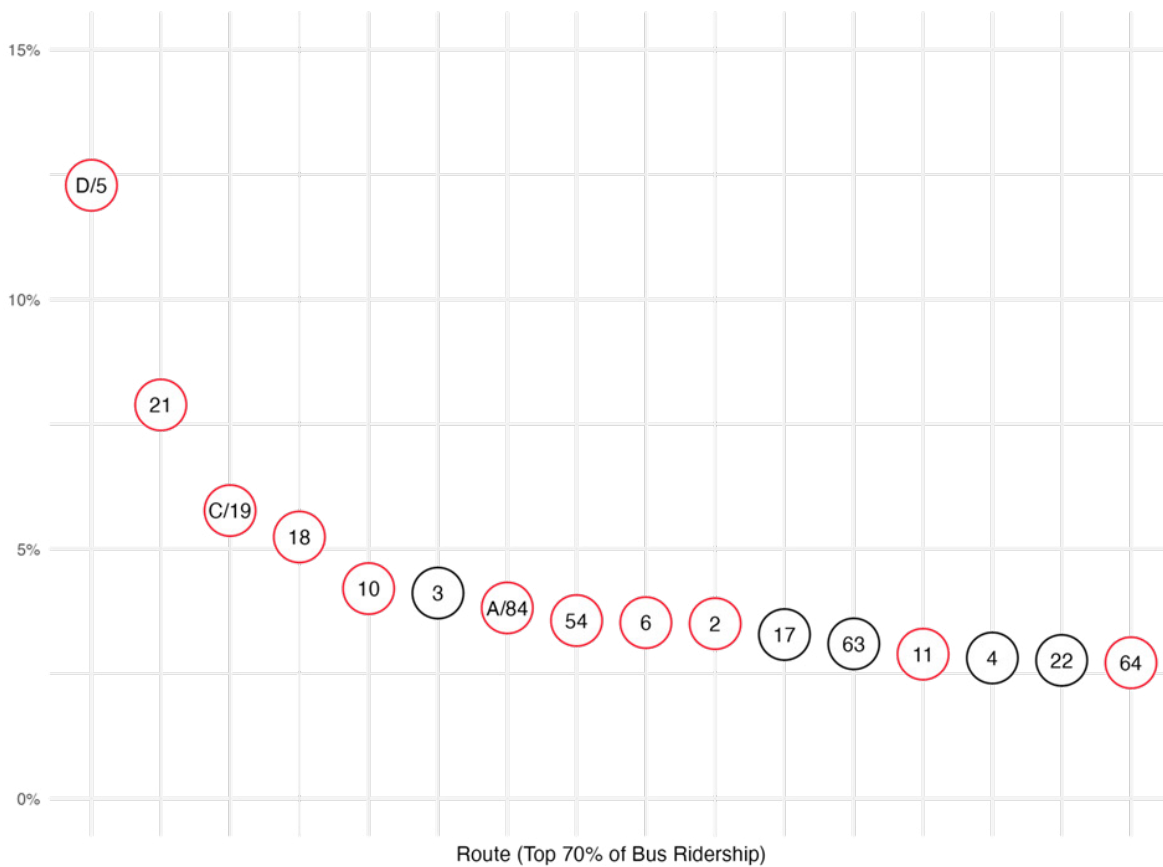






Figure 26. Percent of ridership by bus route (top 70%)



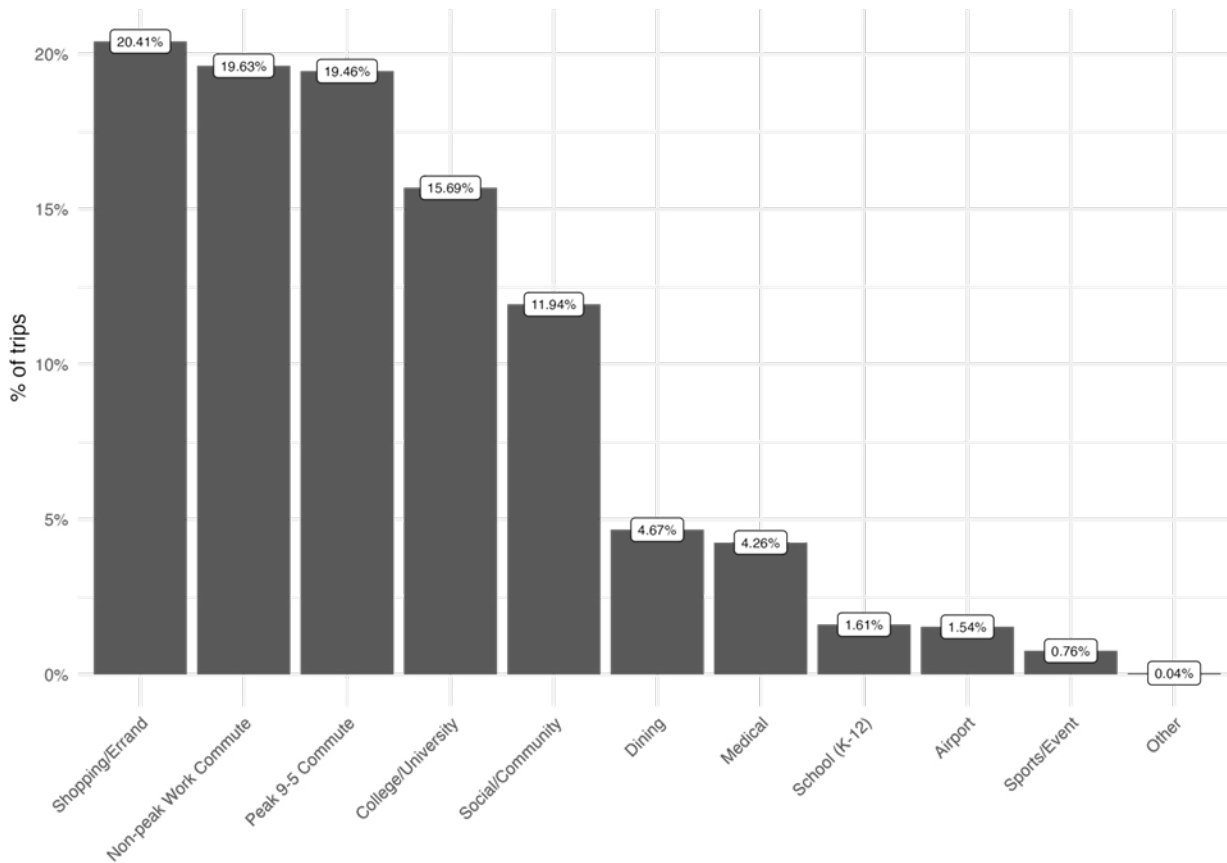
Note: Routes that are part of Metro Transit's High-Frequency Network are shown in red.

## Most bus trips are now for purposes other than a 9-to-5 commute

Prior to 2020, the most common trip type on the Metro Transit bus network could be characterized as a traditional 9-to-5 commute: a trip that begins at home between 7 AM and 9 AM and ends at work; or a trip that begins at work between 4 PM and 6:30 PM and ends at home. These trips previously made up 34% of trips on the network.

In 2023, the most common purposes for bus trips are shopping and errands, Non-Rush Hour work commutes, and Rush Hour 9-to-5 work commutes. Each of these makes up about 20% of all trips, as shown in Figure 27. The decline in 9-to-5 work commutes means that on today's network, 80% of the trips being taken are not for traditional 9-to-5 work commutes. Just half of trips on the network could be defined as some form of commuting (to either work or school), while other trip purposes have grown significantly.

Figure 27. Bus trips by trip purpose (percent of regional total)



## Productivity

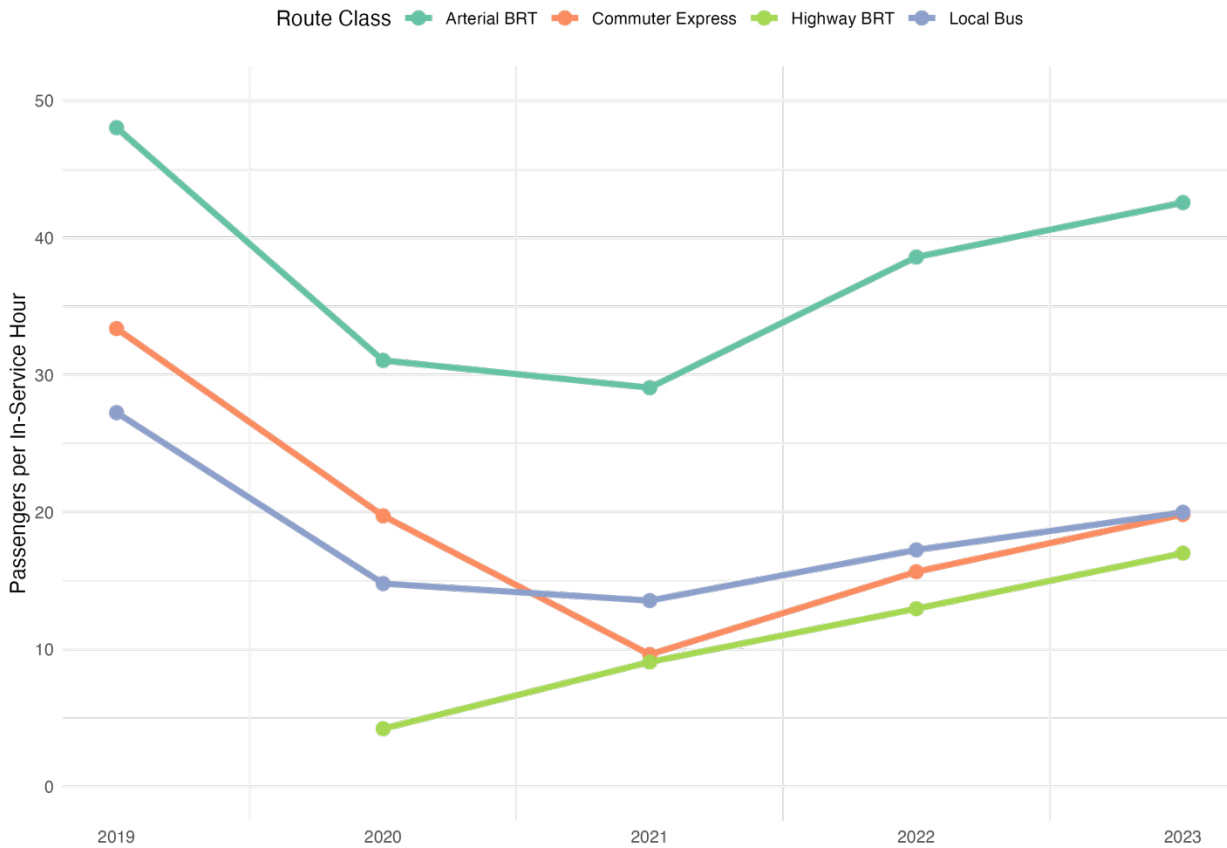
The 2040 Transportation Policy Plan identifies productivity as one of the primary regional performance metrics for the transit system. This measure (typically analyzed as passengers per in-service hour, or PPISH) ensures that transit service is allocated efficiently and effectively to serve as many trips as possible with limited resources. These measures are reported annually for all routes and service types.

### Productivity is recovering from pandemic-era lows

Productivity declined dramatically with the onset of the pandemic and recovery has varied significantly by route type. Since 2019, productivity on all local bus routes has declined from an average of 27 to 20 passengers per in-service hour. Productivity declined more and recovered less on Commuter and Express than local bus.

While down from pre-pandemic levels, productivity on arterial BRT lines has increased since the introduction of the onset of the pandemic, from about 30 to 42 passengers per in-service hour. The shift in riders from Route 5 (a core local route) to D Line when it opened in late 2022 is part of the reason for this change. Highway BRT productivity has increased since the onset of the pandemic and introduction of Orange Line in December 2021 from 5 to 17 passengers per in-service hour.

Figure 28. Passengers per in-service hour (PPISH) by route type



## Operational Performance

This section analyzes Metro Transit’s performance across key customer-facing metrics. Through customer comments, and conversations during engagement opportunities, Metro Transit customers consistently report that speed, reliability, and safety are very important to their satisfaction and continued use of transit. Performance challenges in these areas can lead to declining ridership, so improving performance is important to long-term growth.

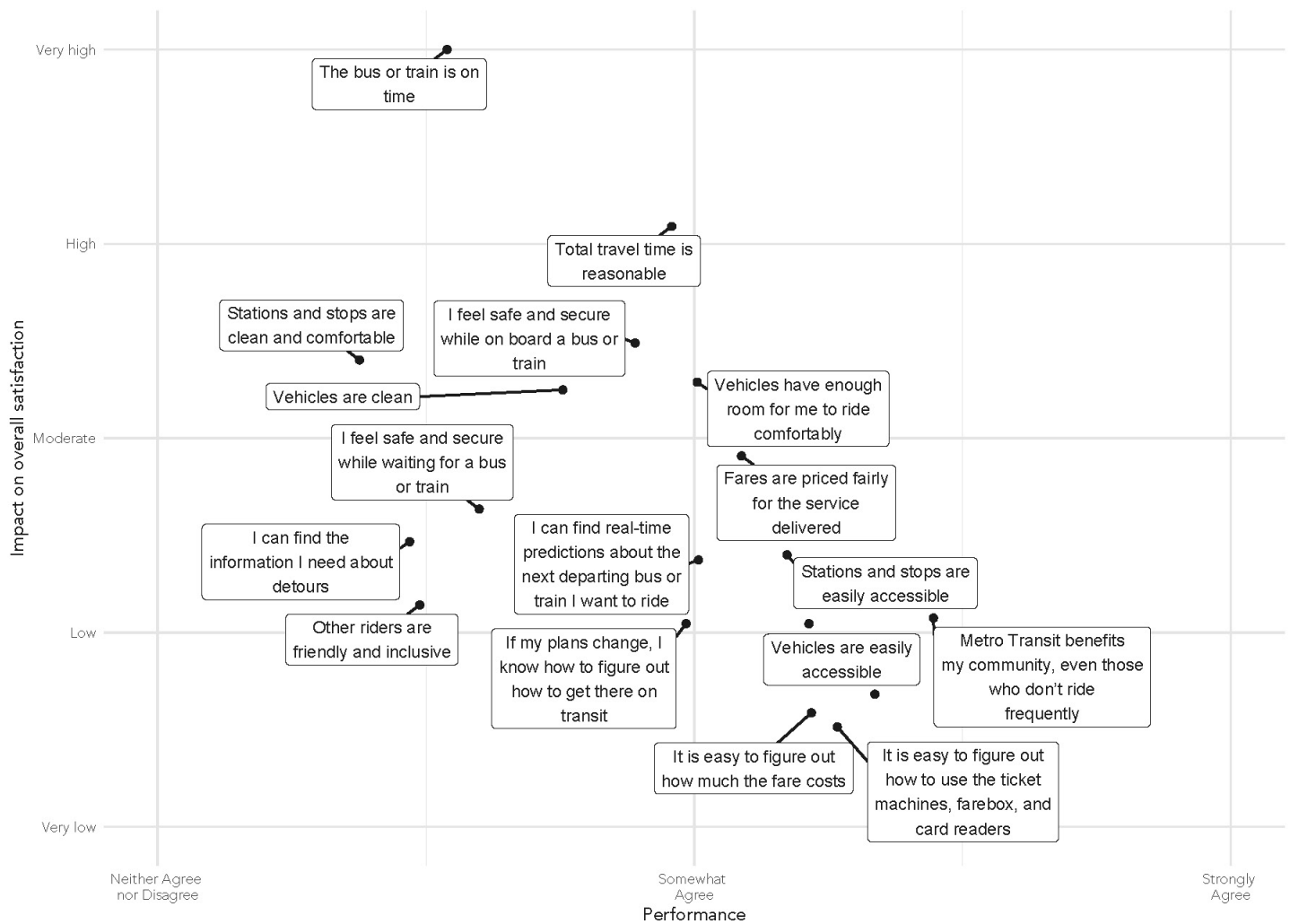
### Customers identify speed, reliability, and safety as key areas for improvement

Figure 29 shows the results of a Metro Transit Customer Satisfaction Survey completed in 2018. It compares the importance of several service factors to customers’ overall satisfaction with transit on the vertical axis with how customers rated Metro Transit’s performance on the horizontal axis.

Factors in the top left quadrant of the graph are important to overall customer satisfaction and Metro Transit service was rated relatively poorly. Reliability (“bus or train is on time”), speed of service (“total travel time is reasonable”), and safety and cleanliness (“I feel safe and secure while waiting/on board a bus or train”, “vehicles are clean”, and “stations and stops are clean and comfortable”) stand out as being both most important to customers and most in need of improvement.



Figure 29. Customer satisfaction by topic (weighted by importance)



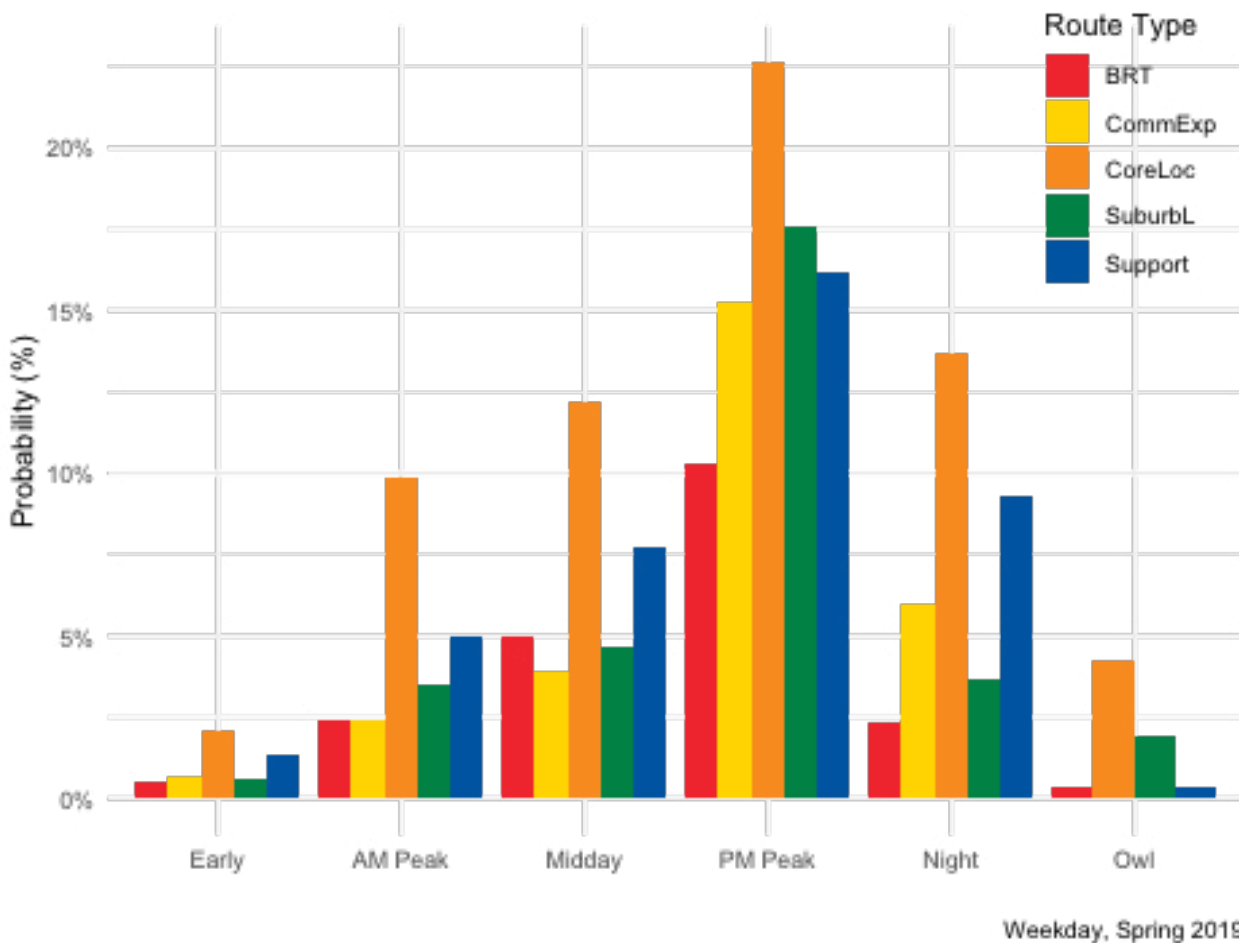
Metro Transit’s 2022 customer satisfaction survey further emphasizes the need to improve safety and security, with 39 percent of respondents indicating they feel safe and secure while waiting for a bus or train, and the same number indicating that transit stations and stops are clean and comfortable.

## Reliability has been declining, with core local routes experiencing the greatest impact

On-time performance is fundamental to the customer experience. Metro Transit measures on-time performance as the percentage of trips when a bus departs a timepoint less than one minute early and/or less than five minutes late. Using this standard, on-time performance for Metro Transit bus service has been declining, dropping from 88% in 2015 to 82% in 2023. Over this same period, Metro Transit has been accounting for slower and less reliable travel speeds by adding more recovery time at the end of runs and adjusting bus schedules. These adjustments make travel times more reliable but result in additional operating costs and slower average speeds.

Customers are significantly more likely to experience a late bus on a core local route than those regularly riding supporting and suburban local routes or express routes. On weekdays core local route riders are likely to experience a late bus three times in two weeks (15% of trips) compared to suburban local and express riders who can expect a late bus about three times a month (nine percent and eight percent of trips, respectively). The probability of passengers experiencing a late trip by route type and time of day is shown in Figure 30.

Figure 30. Probability of late trips by route type and time of day



Reliability challenges are most significant on some of Metro Transit’s highest-ridership routes. Customers who regularly ride Routes 4, 5, 6, 10, and 22 (all core local routes) are likely to experience a late bus at least twice a week, or on over 20% of trips. These routes make up about 21% of total annual bus ridership, indicating that about one in five bus rides on Metro Transit’s system occurs on a route where regular riders experience a late bus twice a week.

Network Now will incorporate analysis of potential strategies to improve on-time performance. Examples may include transit advantages or bus priority treatments that allow transit vehicles to bypass traffic. These elements may present opportunities to improve customer satisfaction with Metro Transit’s most heavily-used routes.

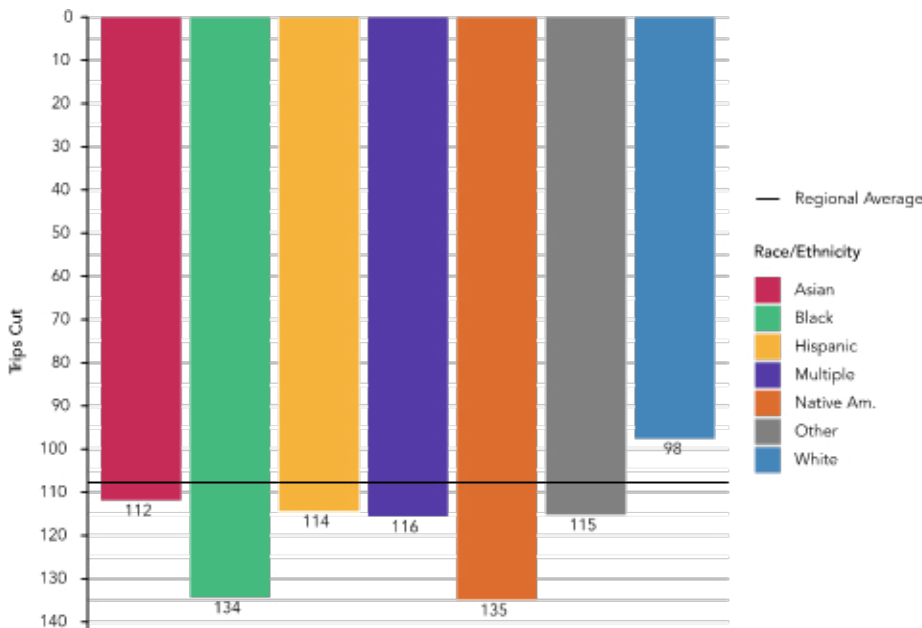
## The effect of trip cuts on communities of color

The most extreme customer experience of on-time performance is when the bus does not show up at all. “Cut trips” occur when a bus driver is not available to operate a trip as scheduled. Metro Transit’s ability to operate full-service schedules has been limited by pandemic-related disruptions and the subsequent driver shortage, with impacts on core local routes and all communities.

When faced with a shortage of drivers on a given day, Metro Transit dispatchers cancel specific trips. In an effort to minimize the impacts, dispatchers prioritize maintaining service where there are few alternatives for impacted riders, whether via alternative routes or alternative trips. In practice, this often results in reducing service on the highest frequency routes where more customer alternatives are scheduled, either on adjacent routes or adjacent trips on a route schedule. Service is preserved on routes with fewer trips and fewer alternative routes, such as low frequency local and express routes where cutting a trip would introduce a gap in service of an hour or more.

While well-intended, these guidelines result in most cuts occurring on high-frequency routes. Since high-frequency routes serve a higher proportion of BIPOC communities than other route types, cut trips disproportionately affect communities of color. For instance, a black or Native American resident in the Metro Transit service area would experience, on average, 36% more cut trips than a white resident. Other communities of color experience 14 to 18% more cut trips on average than white residents, as shown in Figure 31. These disparities illustrate how service reliability can become a critical equity concern; they also help underscore why Metro Transit has prioritized addressing the driver shortage and aligning schedules with the number of available operators. This data is from 2021—more recently the overall number of cut trips has declined but with similar patterns for Black and Native American riders.

Figure 31. Average number of trips cut in Fall 2021 by race and ethnicity



## Access to Transit

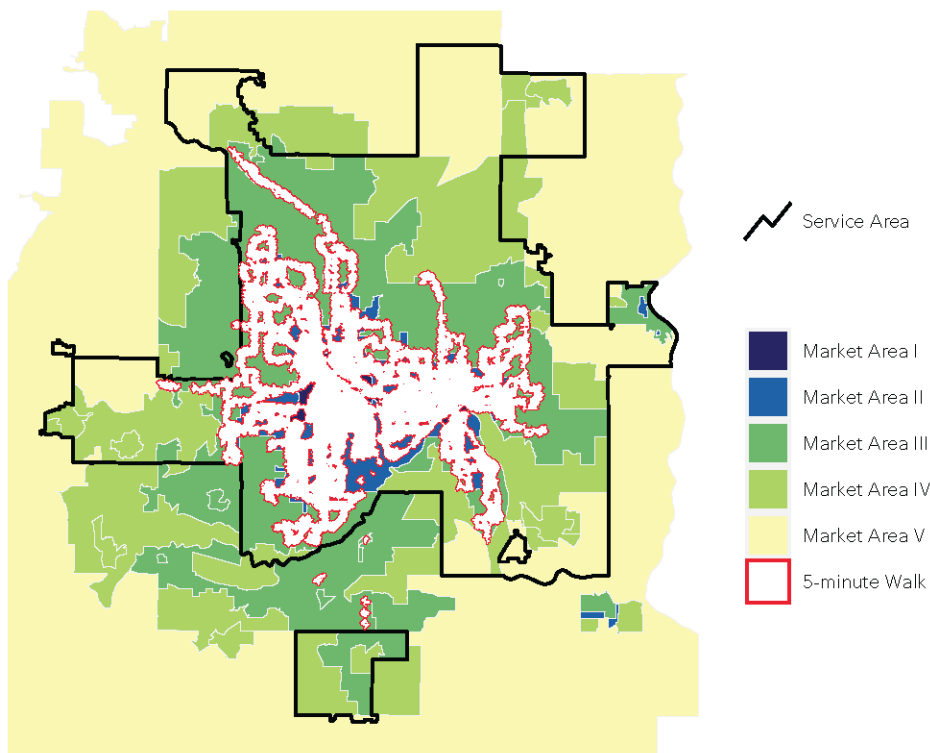
Access to transit measures the number of people who live near transit service. Metro Transit measures access to transit by examining the walksheds, or areas within walking or rolling distance, of transit stops or stations. For the purposes of Network Now, Metro Transit has examined the populations with access to bus service across various Transit Market Areas.

### Many people live within a 5-minute walk or roll of all-day transit service

35% of people living in Metro Transit's service area live within a five-minute walk or roll (about ¼ mile) of a bus stop that is served by all-day transit service operating hourly or better. This excludes routes that operate only in Rush Hour periods or at very low frequencies.

Access to transit varies by Transit Market Area, as shown in Figure 32. Most residents in the dense, walkable, and transit-supportive Market Area I (75%) and Market Area II (55%) live within a five-minute walk or roll of all-day transit service. Consistent with the policy guidance in the Transportation Policy Plan, a lower share of the population of Market Areas III (11%) and IV (0%) are within a five-minute walk or roll of all-day service.

Figure 32. Areas within a 5-minute walk of all-day service



### Fewer people live within walking or rolling distance of frequent or very frequent transit service

While many people have access to transit, fewer people live near frequent transit service, generally considered to operate trips every 15 minutes or better. When provided with frequent service, many customers are willing to walk further to access a bus stop (up to ½ mile, or a 10-minute walk or roll). The following section analyzes access to Metro Transit's High Frequency Network (every 15 minutes or better), as well as specific segments and routes operating even more frequently (every 10 minutes or better).

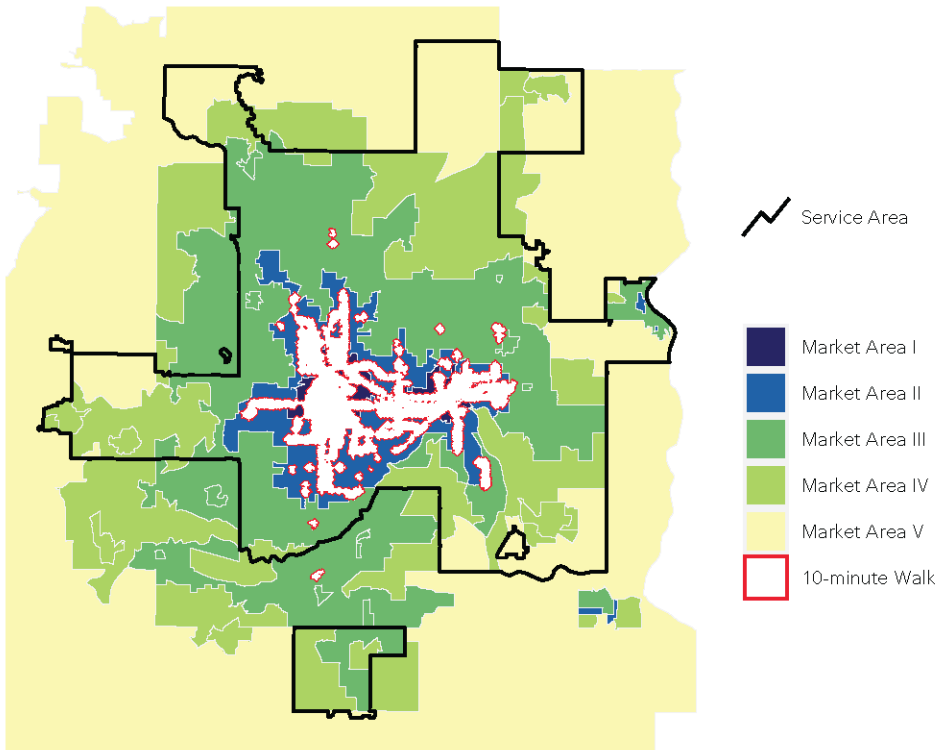


### Access to the High Frequency Network (every 15 minutes or better)

Metro Transit's High Frequency Network includes routes and route segments that operate at a minimum of every 15 minutes all day, including the Blue and Green Lines, arterial BRT services, and select local routes. 31% of people living in Metro Transit's service area are within a 10-minute walk or roll to a bus stop with High-Frequency Network.

These include 90% of the residents living in Market Area I, 48% of residents living in Market Area II, one percent in Market Area III and no one within Market Area IV, as shown in Figure 33.

Figure 33. Areas within a 10-minute walk of the High-Frequency Network

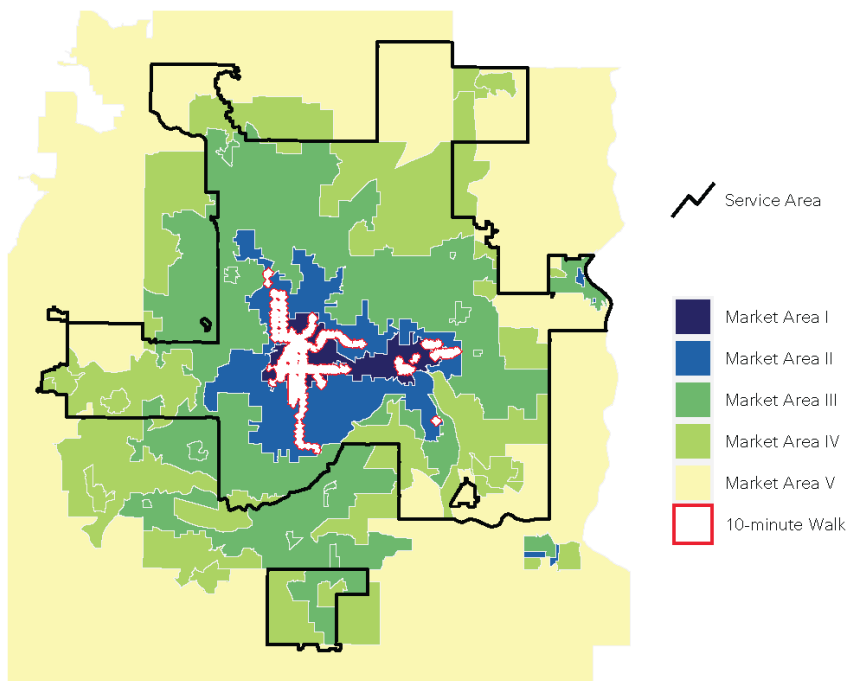


### Access to very frequent service (every 10 minutes or better)

In addition Approximately 14% of people living in Metro Transit's service area are within a 10-minute walk or roll to a bus stop with service at least every 10 minutes.

A similar pattern across Transit Market Areas occurs with access to frequent service, as shown in Figure 34. Reflecting both population density and regional transit policy, 54% of the residents living in Market Area I are within a 10-minute walk or roll of frequent service, compared to 15% in Market Area II and no one within Market Areas III or IV.

Figure 34. Areas within a 10-minute walk of 10 minute or better service



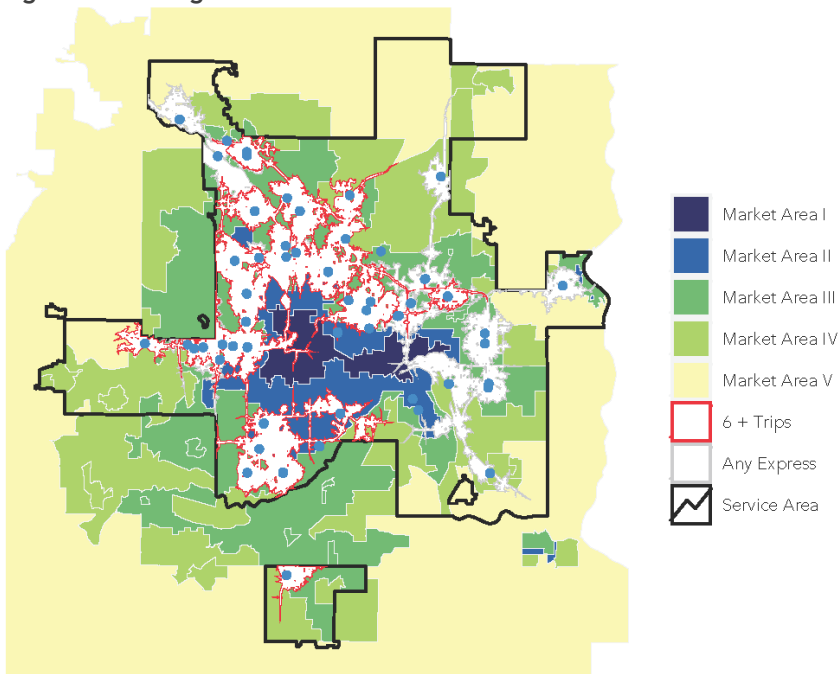
## Much of the region is within a 10-minute drive of park-and-ride commuter express service

For commuter and express service, which operates primarily to and from park-and-ride lots, access to transit is measured by examining the area within a 10-minute drive of each park-and-ride location.

Per regional policy, commuter express bus service is appropriate for Market Areas III and IV, while Market Area V does not warrant fixed-route bus service. 47% of residents in Market Areas III, IV, and V are within a 10-minute drive of a park-and-ride, as shown in Figure 35.

As with frequent bus service, fewer regional residents have access to park-and-rides served by routes with a greater number of trips. 29% of residents in Metro Transit service area in Market Areas III, IV, and V are within a 10-minute drive of a park-and-ride which with 6 or more trips provided per direction.

Figure 35. Driving access to Park & Ride locations



## Access to Jobs and Opportunities via Transit

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People use transit to get to destinations. This simple idea is important to understanding how useful transit is to riders, which ultimately helps determine how many people will make their trips via transit.

### Access can determine when and where riders use transit

One of the ways to represent the usefulness of the transit network is by measuring the number of opportunities (typically jobs) that can be accessed via transit within a certain travel time from a given location. For example, this analysis can measure the number of jobs accessible by transit within 45 minutes from a Census block or other destination. Repeating this analysis for every block in the region can highlight the relative usefulness of transit across the region.

It is important to note that transit access to jobs depends both on the transit service available in an area and the number of jobs nearby. Any area with high levels of transit service but with few jobs will tend to have low levels of access, while an area with low transit service but with many jobs could have relatively high levels of transit access to jobs.

### Access to jobs has decreased with reductions in service, but can improve with investments in frequency

The average resident of the Metro Transit service area saw access to jobs decrease by about seven percent since the onset of COVID-19. These changes are driven primarily by lower frequencies on high-frequency bus routes and the Blue Line and Green Line LRT, as well as fewer midday express trips. The opening of the D Line and Orange Line has improved access to jobs within their respective service areas, including along Emerson and Fremont Avenues in North Minneapolis, Chicago Avenue in South Minneapolis, and I-35W between downtown Minneapolis and Burnsville, as shown in Figure 36.

The largest proportional changes in transit access to jobs were seen in suburban areas, where many routes received significant service reductions due to changes in commuting patterns, and where many routes were suspended entirely. These proportional changes are shown in Figure 37.

Figure 36. Absolute change in access to jobs via transit, March 2023 vs pre-pandemic

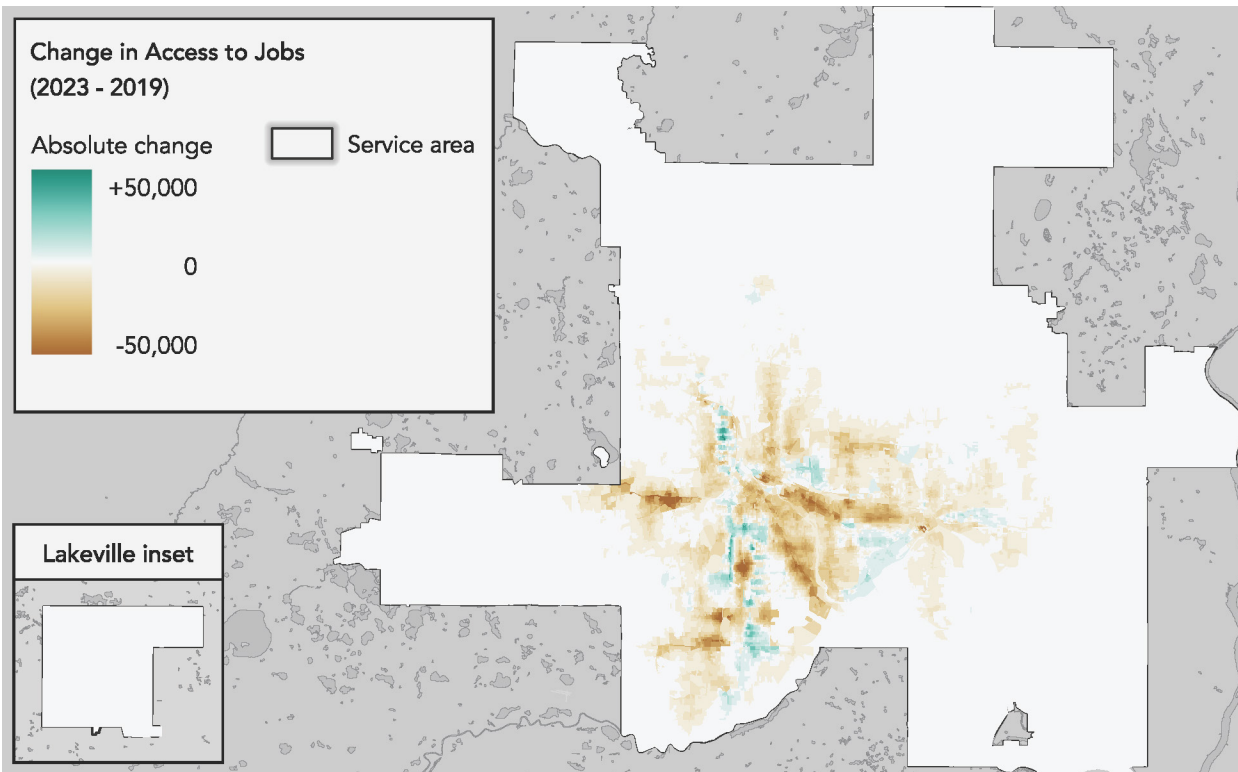
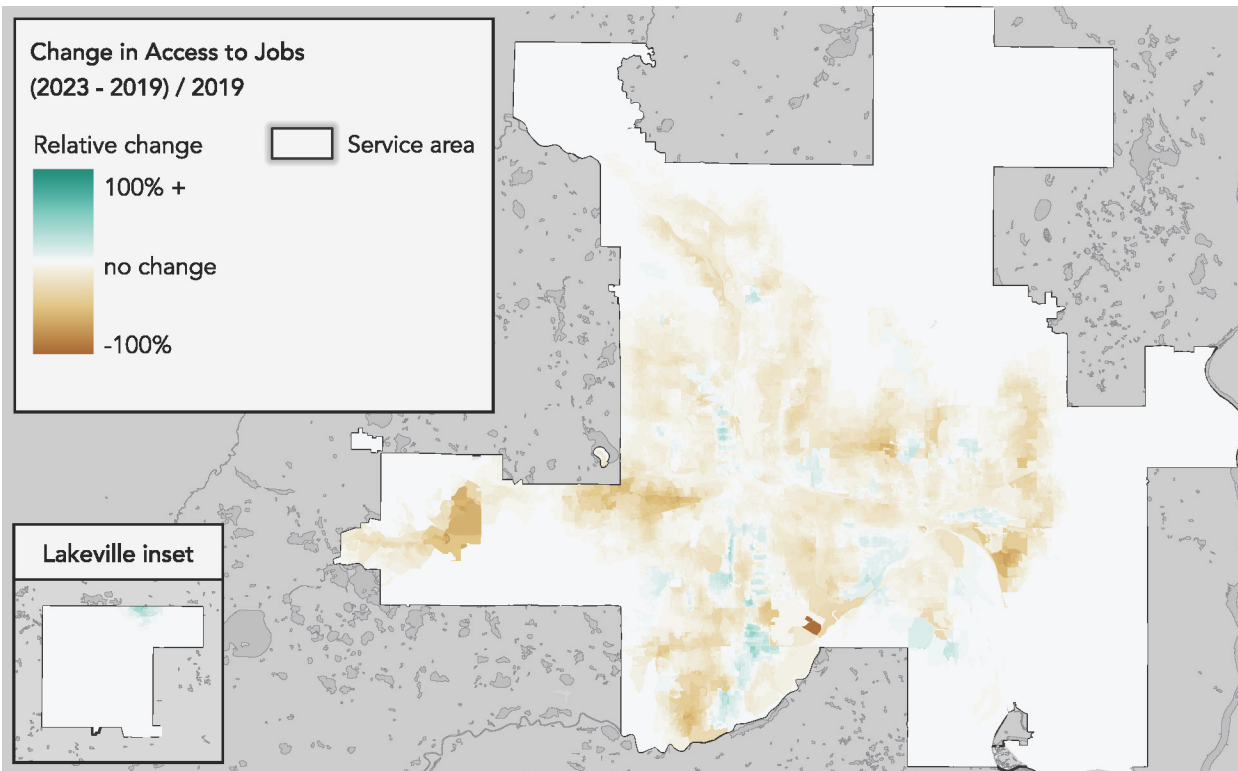


Figure 37. Percent change in access to jobs via transit, March 2023 vs. pre-pandemic





# MARKET ANALYSIS AND OPPORTUNITIES

The following section analyzes the ways that Metro Transit can invest in transit to improve ridership and productivity (passengers per in-service hour). Ridership and productivity are not the only measures of success for a transit network. However, a ridership-based market analysis can help Metro Transit identify the contexts and types of service that can best support sustainable investment through Network Now.

To understand where transit can be successful, it helps to understand the market (or purpose) for transit. In the Twin Cities region, most everyday trips are taken in private cars, often with the driver as the only occupant. As many studies and plans have noted, “the car is the competition”<sup>1</sup> for transit trips. Transit services gain ridership where they successfully compete with private car trips.

This section considers four main factors that influence transit’s ability to compete with private automobile trips: frequency, travel time, time of day, and location. Other factors, such as cost or the availability of parking, can also be influential but are not included in this analysis. The final section of this report summarizes the greatest opportunities for ridership and productivity improvements.

## Investing in Frequency

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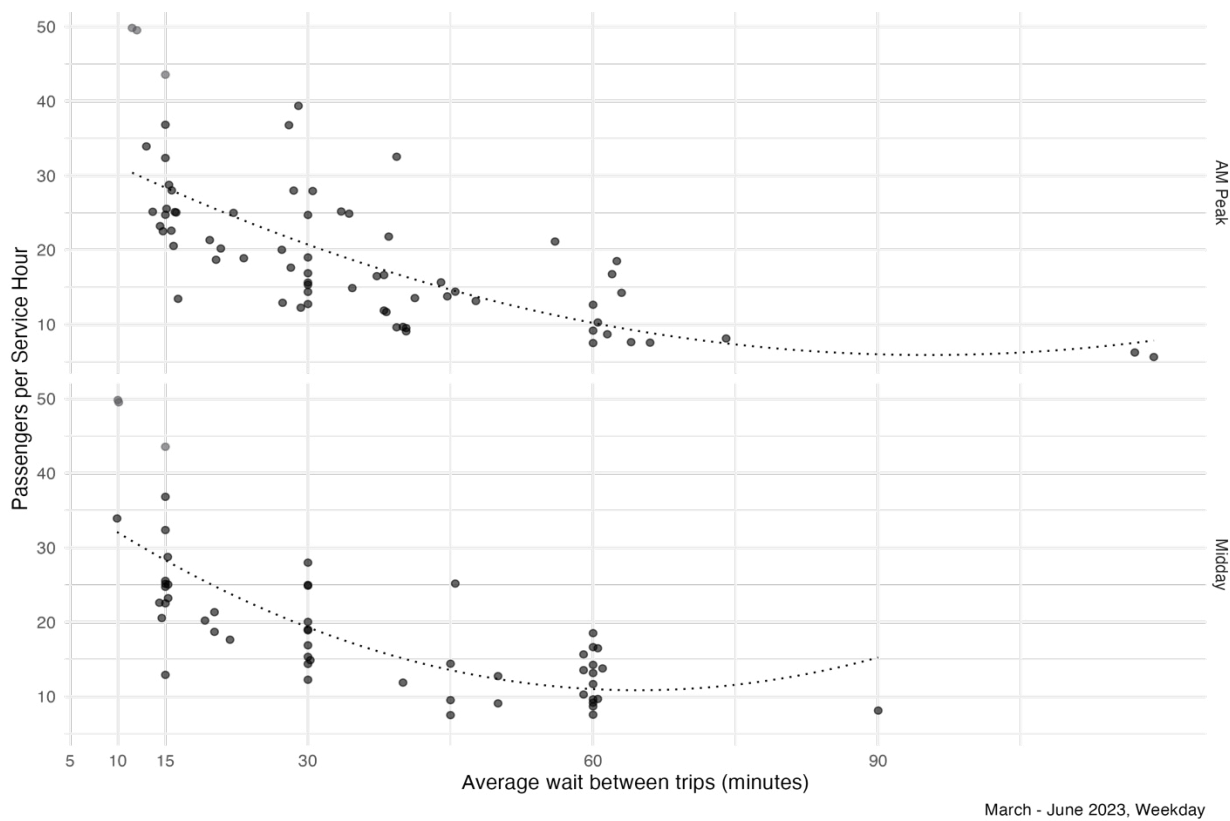
Efficient, productive transit service (in terms of high ridership per unit of investment) is the expected result of matching transit supply to transit demand. However, supply and demand in public transit are not independent: increasing supply of transit in certain areas or times can increase demand. This phenomenon is known as “induced demand.” In some contexts (for example, highway planning), induced demand can lead to deterioration of quality, if the supply or capacity of a system is fixed.

In transit, increasing service can lead to a virtuous circle where the increased availability of trips on transit makes it more useful for more people, more often. The resulting ridership benefits enable transit agencies to invest in further improvements to service frequency. Figure 38 shows an example of this non-linear relationship using Metro Transit’s Spring 2023 service performance data. For both AM Rush Hour and midday service, as the average frequency on a route increases, productivity increases. This means that in the right market, providing more bus trips may not only mean more riders overall, but more riders per trip.

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1 “Who’s On Board 2019” by TransitCenter. <https://transitcenter.org/publication/whos-on-board-2019/>

Figure 38. Bus productivity vs. frequency, 2023



## Achieving Competitive Travel Times

When choosing how to make a trip, most transit riders have options. Many of these options involve using a car, whether it means carpooling, using a personal vehicle, or using a taxi or rideshare service. For each of these options (as well as for walking, biking, or rolling), a customer’s transportation mode depends in part on travel time, which includes the time spent on each component of a customer’s trip, including time spent walking, waiting, or parking, for example.

To better understand travel time and the competition for trip opportunities, Metro Transit analyzes a large data sample of car trips to and from destinations throughout the region<sup>2</sup>. Using trips observed from each census block group to each other census block group in the Metro Transit service area, it is possible to find the average travel time for trips across different times of day and days of the year.

The median weekday travel time for car trips across within the Metro Transit service area is 33 minutes, which does not include parking time or egress time. Very few trips take less than 15 minutes or more than an hour. For the average transit trip to compete with the average car trip, it cannot take much longer than 33 minutes.

To quantify the importance of relative speed, Metro Transit matched the large sample of car trip times to a large sample of observed trips taken on transit<sup>3</sup>. Most transit trips times are within a few minutes of car trip times; however, considering that access and boarding wait times are excluded from these calculations, transit is likely somewhat slower than car travel in practice. At the same time, there is a rapid decline in the number of trips that are taken as the relative transit time grows. Though they exist, relatively few transit trips are made when travel times are twice or three times as slow as traveling by car.

<sup>2</sup> Data were obtained from Streetlight, an aggregator of anonymous mobile phone location data.

<sup>3</sup> Streetlight data were compared to on-board survey results to match the observed transit travel time to the median car travel times for each origin-destination pair.

For planning purposes, Metro Transit considers a competitive transit trip to be one that is no more than 1.5 times as long as the equivalent car travel time. Applying the rule of thumb to median car travel time (33 minutes) would mean that the typical competitive transit trip should be no more than 50 minutes. In short, the closer a transit trip is to equaling car travel time, the more competitive transit will be.

## Supporting All-Day, All-Purpose Trips

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Car trips are not directly limited by time of day. To be competitive, trip opportunities on transit must be available when people want to travel. Based on time of travel alone, this suggests trip opportunities provided during the midday and evenings, outside of the weekday rush hours, could be competitive.

Since the start of the pandemic, service has shifted away from commuter and express routes towards all-day local routes. For example, 64% of weekday D Line rides occur outside of Rush Hour, with nearly one third in the midday and a quarter after 6 pm. With nearly two-thirds of rides occurring outside of Rush Hour on D Line and other high-frequency long-span routes, Metro Transit is beginning to fulfill some of the demand for Non-Rush Hour, non-commute travel.

## Prioritizing High-Density Locations

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Places with high densities of jobs and people generate a lot of trips. From a pure market perspective, when and where there are more trips overall being made, there are more trip opportunities that transit could provide in a competitive manner—in other words, the more people are making a particular trip, the more likely some of these trips will be made using transit. There are other aspects of transit trip opportunities that make them more likely to be taken, including proximity to other destinations, car availability and parking, and how comfortable walking is at the trip origins and destinations.

# CUSTOMER DEMOGRAPHICS

Metro Transit customers represent a diverse group of people and backgrounds, and transit plays varied roles in their lives. Understanding who rides Metro Transit service is critical to understanding its value and the impact transit has in the region.

## Metro Transit riders are more likely to be people of color

Metro Transit customers include a higher share of people of color when compared to the overall population of Metro Transit's service area. Based on the 2022 Travel Behavior Inventory (TBI) on-board survey, under half of Metro Transit riders identify as white, compared to two-thirds of the service area population. People identifying as Black or African American make up 31% of transit riders compared to 12% of the population of Metro Transit's service area. Other race and ethnicity groups are similarly represented among transit customers and the overall population.

Table 3. Race and ethnicity of Metro Transit customers relative to service area

Race/Ethnicity	Metro Transit Customers*	Metro Transit Service Area^
White	45%	67%
Black/African American	31%	12%
Asian	8%	9%
Two or more selected	5%	4%
Hispanic/Latino	7%	7%
American Indian/ Alaskan Native	2%	Less than 1%
Native Hawaiian/Pacific Islander	Less than 1%	Less than 1%

\* Source: 2022 TBI On-Board Survey (Preliminary Results)

^ Source: ACS 2017-2021 5-Year Estimates

## Metro Transit riders are younger than the regional average

Metro Transit customers are more likely than the overall population to be between the ages of 18 and 34; they are less likely to be 55 or over. About 52% of Metro Transit customers are between the ages of 18 and 34, compared to about 25% of the population of Metro Transit's service area. Metro Transit customers are much less likely to be under the age of 18.

Table 4. Age of Metro Transit customers relative to service area

Age Group	Metro Transit Customers*	Metro Transit Service Area^
Under 18	4%	23%
18-24	29%	9%
25-34	23%	16%
35-44	17%	14%
45-54	13%	12%
55-64	10%	13%
65-74	5%	9%
75 or above	1%	6%

\* Source: 2022 TBI On-Board Survey (Preliminary Results)

^ Source: ACS 2017-2021 5-Year Estimates

## Metro Transit riders often have lower household incomes

Metro Transit customers tend to have lower household incomes than the overall population of the service area. 43% of riders have annual household incomes below \$35,000, compared with 20% of service area households. Conversely, eight percent of riders have a household income above \$100,000, compared to 39% of service area households.

Table 5. Income of Metro Transit customers relative to service area

Household Income	Metro Transit Customers*	Metro Transit Service Area^
Less than \$15K	21%	7%
\$15-25K	12%	6%
\$25-35K	10%	7%
\$35-60K	12%	17%
\$60-100K	12%	23%
\$100-150K	4%	18%
\$150K-200K	2%	10%
More than \$200K	2%	11%

\* Source: 2022 TBI On-Board Survey (Preliminary Results)

^ Source: ACS 2017-2021 5-Year Estimates

With population growth, shifts in development, and changes in land use policy, the factors predicting more competitive areas for transit can change over time. Changes in population density, job density, and land use should be regularly monitored for opportunities to revise transit routes to meet emerging needs.

## Planning for Productivity

Under realistic resource constraints, transit agencies must consider which competitive trip opportunities can be provided efficiently; that is, where transit can carry the most riders per vehicle and in-service hour.

There are four key characteristics of high-productivity transit.<sup>4</sup>

- Density – transit operates in areas with high population and employment density, as well as areas with transit-reliant populations
- Walkability – transit operates in areas with good pedestrian and bicycle infrastructure
- Directness – transit routes are designed for straight-line operation, maximizing speed
- Distance – transit routes serve locations in close proximity

The first two characteristics capture details about trip origins and destinations, whereas the second two characterize the trips that connect them. Direct trips between nearby destinations are more likely to be competitive with car trips, while trips that meander or travel longer distances are less likely to offer attractive travel times. However, in certain cases, long-distance transit trips can be competitive, particularly during congested hours where transit advantages are present.

Using these characteristics of these potentially productive transit trips, Metro Transit has produced working maps of the service area. Planners can use these maps, alone or in combination, to highlight places in which transit service is likely to be efficient and productive.

<sup>4</sup> These concepts build on the “ridership recipe” advocated by Jarrett Walker.



Figure 39. Population density map of the Metro Transit service area, 2021

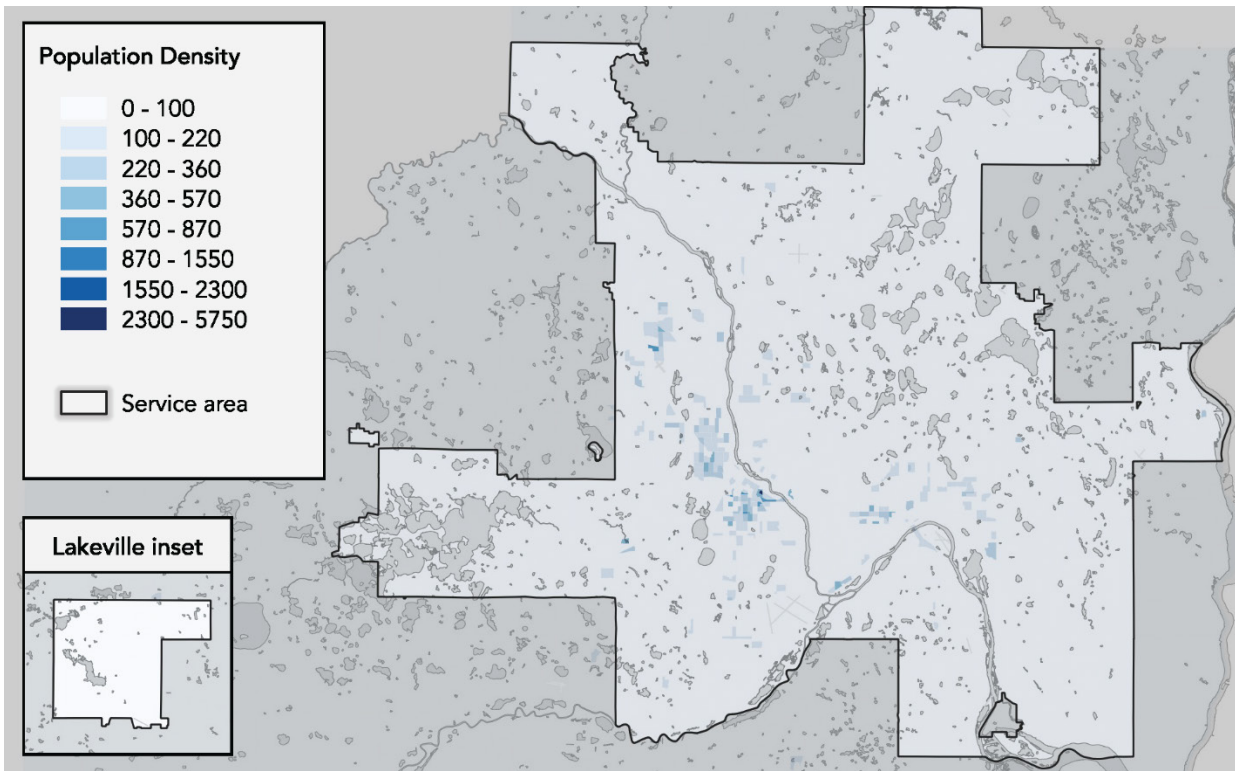


Figure 40. Job density map of the Metro Transit service area, 2020

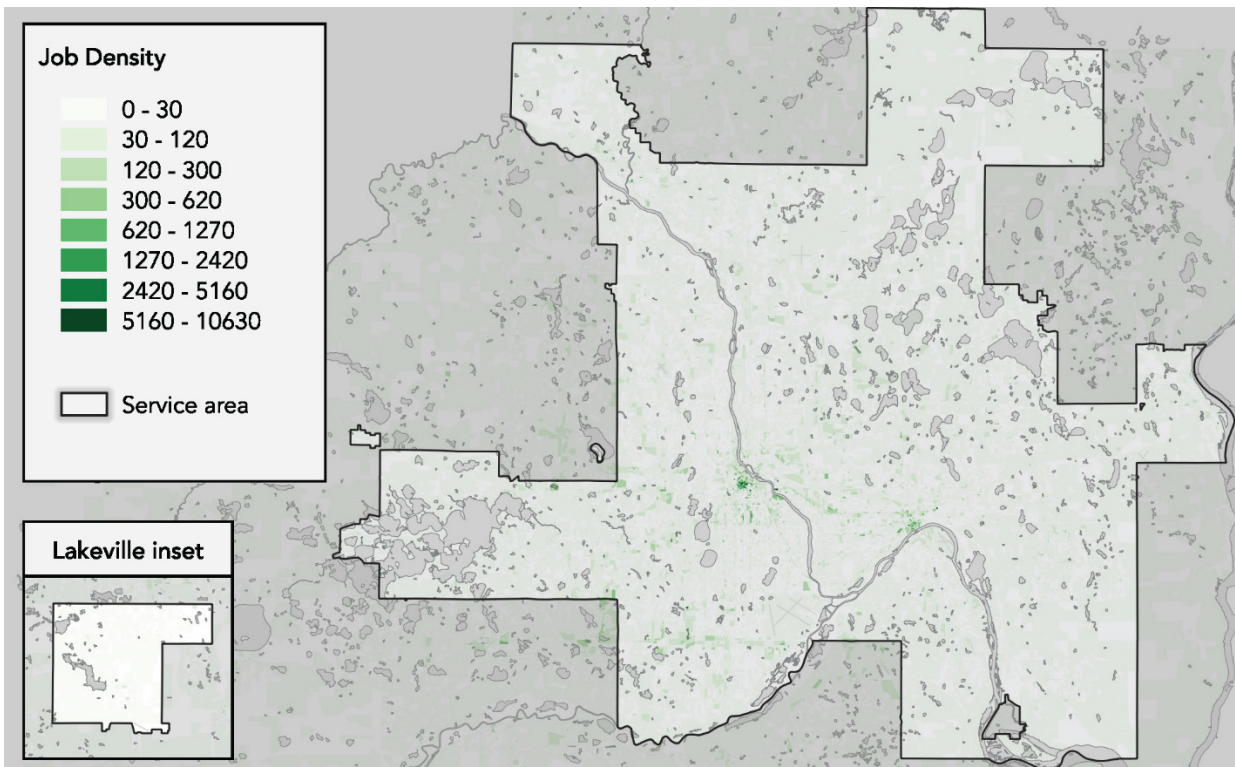


Figure 41. BIPOC population density map of the Metro Transit service area, 2021

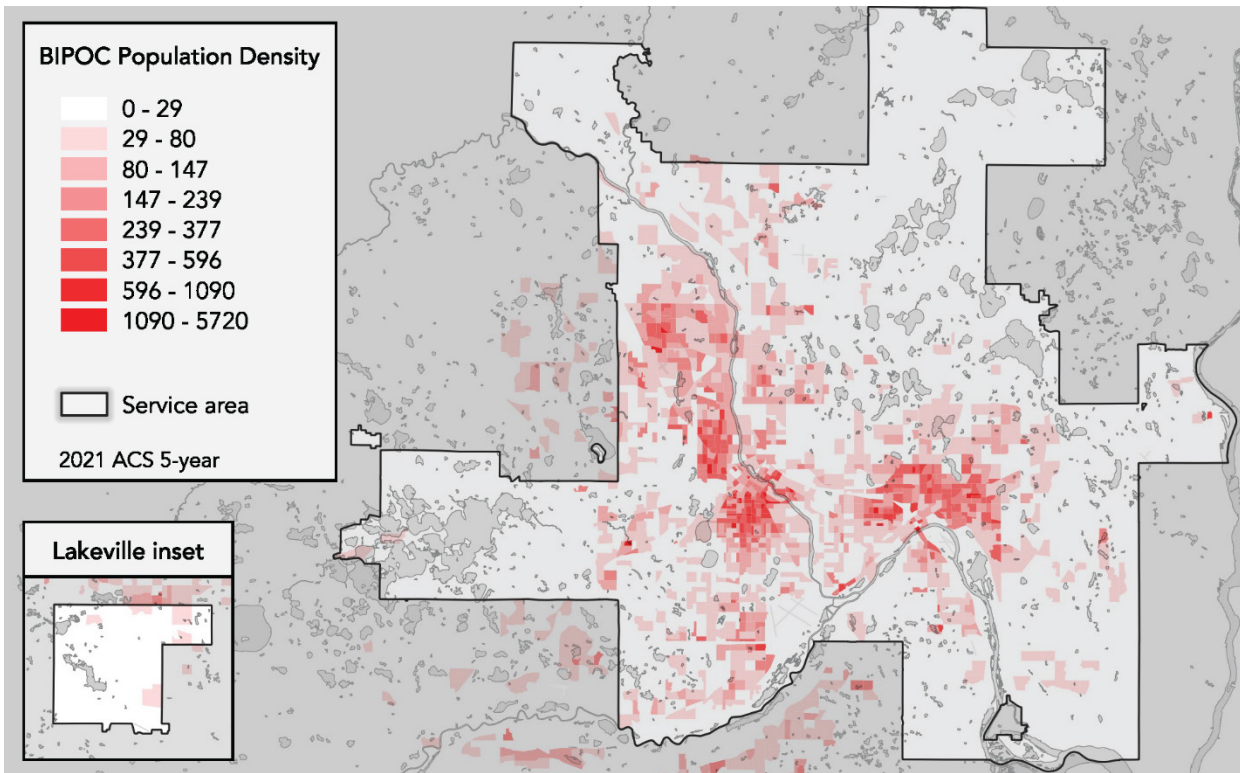
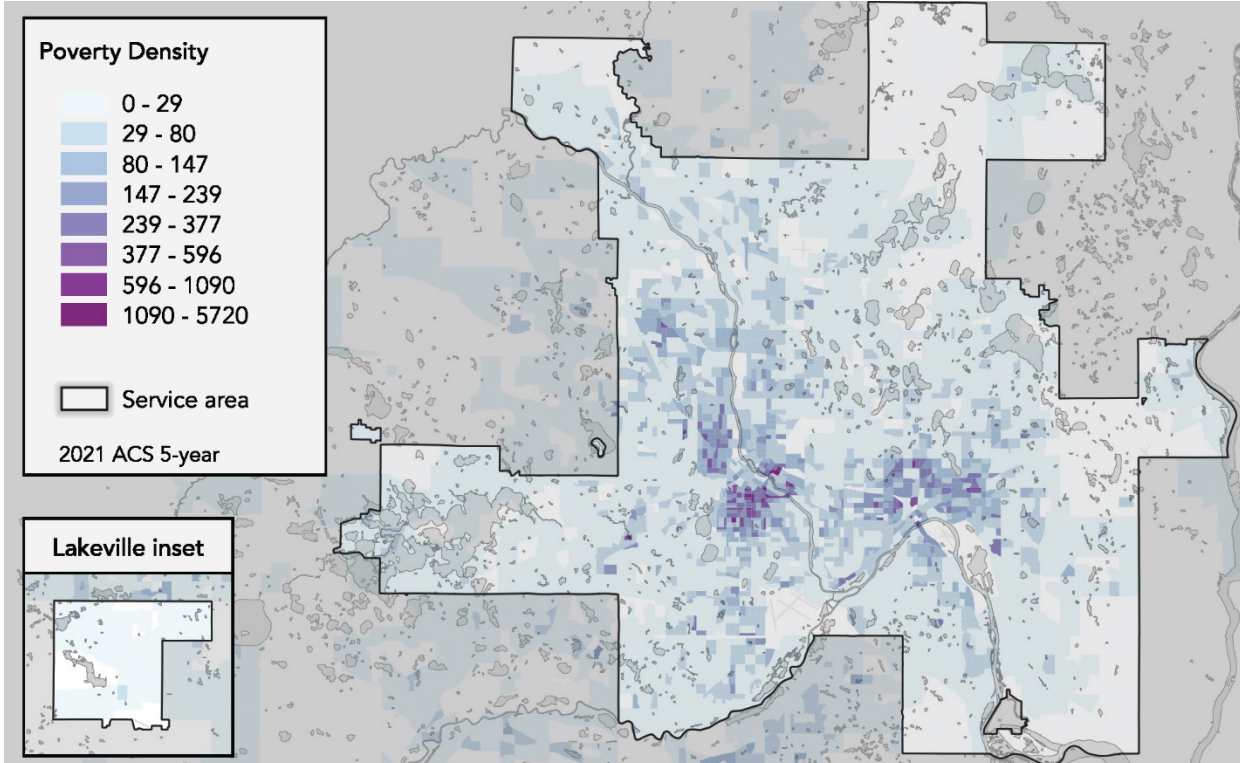


Figure 42. Low-income population density map of the Metro Transit service area, 2021



## KEY TAKEAWAYS

This section summarizes the findings of the Network Performance and Opportunities chapter, including the major changes in service and performance since 2019, as well as opportunities for future improvements. These findings will inform subsequent phases of Network Now.

- Metro Transit has reduced service hours by nearly 30% since March 2020 due to the impacts of the pandemic and workforce shortage. Local service and arterial BRT service hours are close to or exceeding 2019 levels.
- Ridership has declined nearly 50% between 2019 and 2022, although it is slowly returning in 2023.
- Travel patterns and transit demand have changed significantly, especially in the commuter express market due to an increase in telecommuting. The difference in ridership between rush hour and midday, evening and weekends is not nearly as “peaked” now compared to 2019.
- The traditional “9-to-5” commute is no longer the main purpose for the majority of transit trips. Routes with all-day service designed to serve a variety of trip purposes are the most useful.
- Reliability has declined since 2019, both in terms of on-time performance and unscheduled trip cuts due to a workforce shortage.
- Opportunities to improve ridership and productivity include increasing frequency, improving average speed to be more competitive with driving, and having service available all day to places where many people want to go.

The next phase of Network Now will integrate performance measures and opportunities into evaluation criteria that also reflect regional policy and stakeholder priorities summarized in this step. These will form the basis for assessing potential service recommendations and ultimately developing the future transit network.