Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

GRAND FORKS – EAST GRAND FORKS

Transit Development Plan

Appendix 1:Existing Conditions Report

July 2022

EXISTING CONDITIONS REPORT

Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

OVERVIEW

The **Grand Forks-East Grand Forks Transit Development Plan (TDP)** is a 10-year plan that provides a vision for transit in the community. Grand Forks – East Grand Forks' previous transit development plan was completed in 2017.

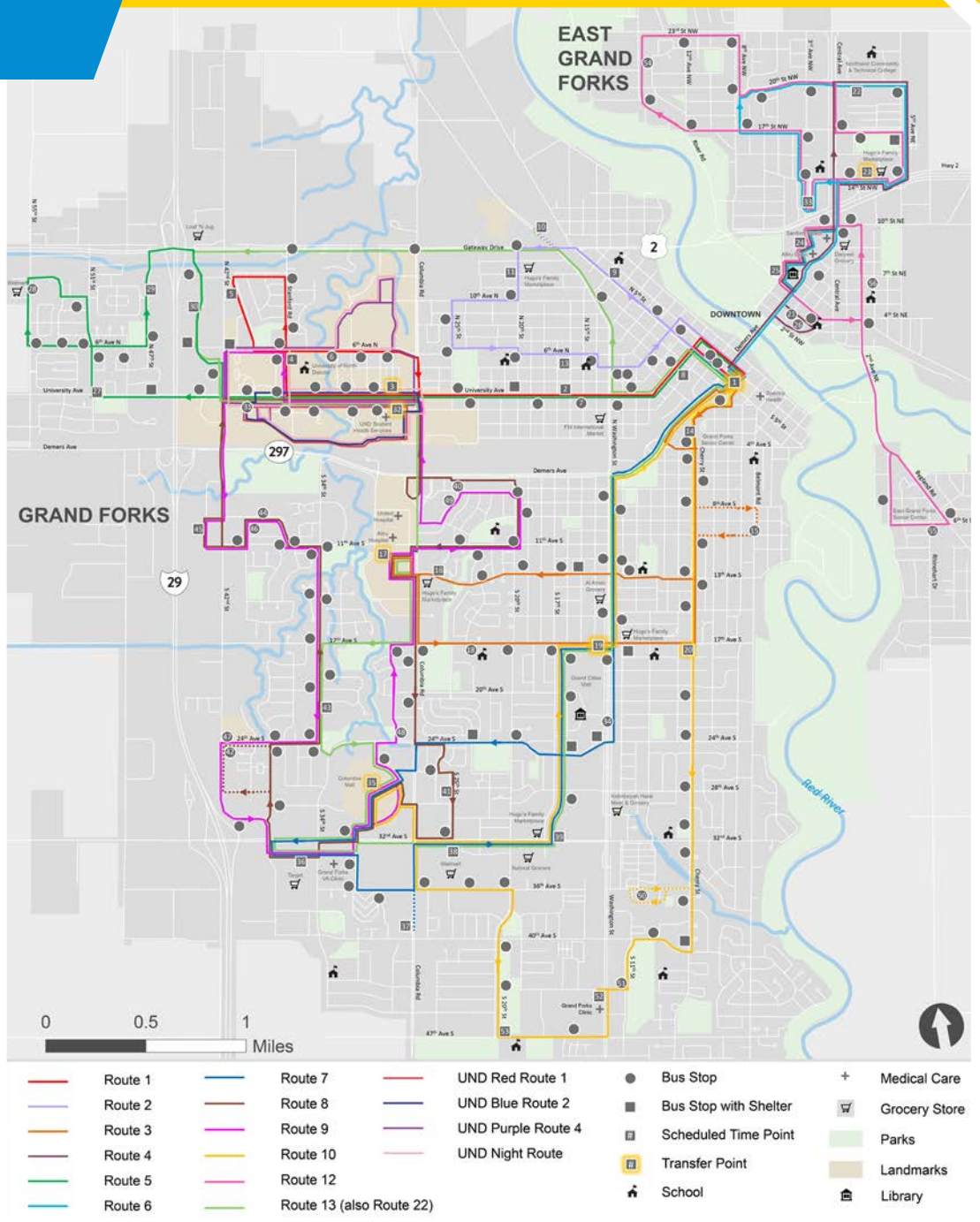
To better understand the needs and priorities, we created an existing conditions report which summarizes the current CAT system, provides information about how the system is performing, and areas for improvement.

Cat Provides Two Types Of Service:

CAT operates buses on **16 fixed routes** (including 4 University of North Dakota routes!).

CAT provides **curb-to-curb demand response service** to seniors (62+) and qualifying people with disabilities.

CAT System Map



CAPITAL OVERVIEW

14 Fixed Route Busses

12 Dial-A-Ride/ Senior Rider Shuttles

49 Bus Shelters and many more bus stops

SYSTEM PERFORMANCE

Route Performance

- CAT routes provided 226,000 rides in 2019.
- CAT ridership since the COVID-19 pandemic declined 37% (between 2019 and 2020) which is a smaller decline than the national average of 55% for the same time period.
- **RANKED #1-** Route 7 is the most popular route with the highest ridership before and since the pandemic.
- **RANKED #2-** Route 5 is a very popular route, consistently ranking 2nd or 3rd in ridership over time.
- **RANKED #3-** Route 3 provides service twice an hour and is ranked number one for efficiency, and number two for total boardings.

Demand Response Performance

- CAT's curb to curb (demand response) service provided 65,182 rides in 2019.
- Before the COVID-19 pandemic there was a 24% increase between 2013 and 2019 in rides, compared to less than 9 percent nationally.

Fares

- CAT 31 Day passes are growing in popularity.
- CAT 31 Day passes are more affordable than 4 out of 7 peers compared.

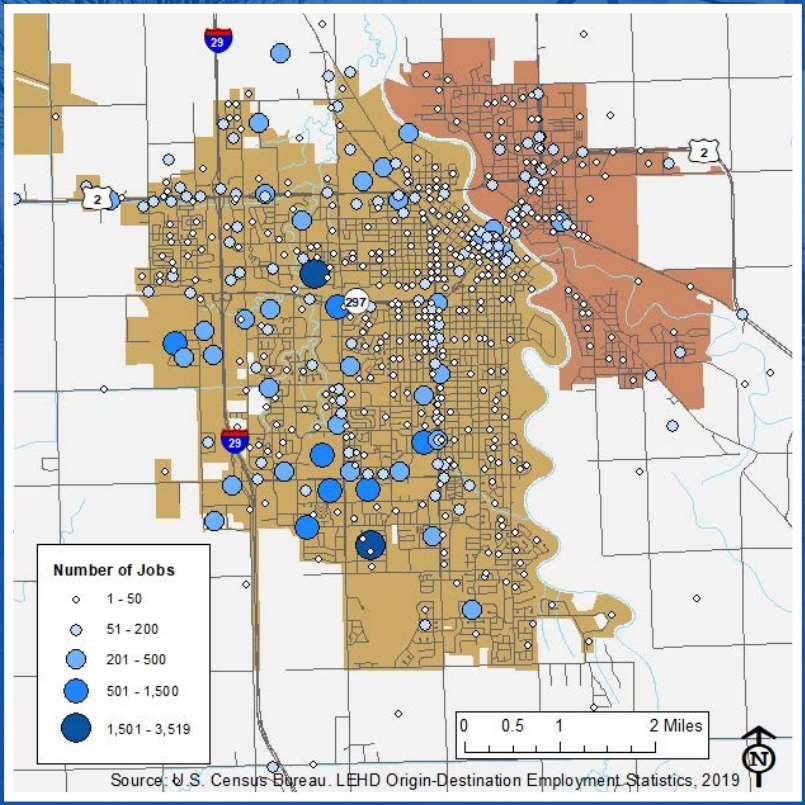
System Reliability & Safety

- Compared to national statistics, both services operate very safely, with only minor injuries and motor vehicle issues on the fixed route service and no safety events for the demand response service.
- The system's vehicles have become more reliable over time. For the fixed route service there were over 350,000 miles between mechanical failures and in 2020 the demand-response vehicles had no mechanical failures at all.

Peer Comparison

- Similar to peer cities nationally, CAT has experienced increasing costs and lower ridership in recent years.
- CAT has consistently provided a similar level of service compared to peers, despite overall population growth of the region.

COMMUNITY FACTS



▲ *Job Density in the Grand Forks-East Grand Forks area*

- **The Grand Forks/East Grand Forks Area has 104,362 people.**
- **About 30% of households in East Grand Forks have at least one person with a disability**
- **The highest population density is near University of North Dakota–Most areas of the Grand Forks/East Grand Forks area are relatively low density with between 0 and six people per acre.**
- **The highest job densities in the region are in Grand Forks near University of North Dakota and along 32nd avenue with up to 3,500 jobs in one area.**

FINANCIALS

- In addition to fares from riders, CAT is funded through a combination of cities (Grand Forks & East Grand Forks), state (MN & ND), and federal funding.
- Currently the system is doing a good job balancing expenses and costs with revenue coming in from the system.
- The fixed route system costs $2.5 Million to run while the Demand Response (Dial-A-Ride/Senior Rider) costs just over $450,000 to operate.
- The recent signing of the Infrastructure Investment and Jobs Act may mean more funding in the future.

NEXT STEPS

- This analysis will be used along with community input to develop ideas for capital and service improvements.

LEARN MORE:

Visit **CatTransitPlan.com** to learn more and get involved!

EXISTING CONDITIONS REPORT

Contents

Figures

Tables

Introduction

Project Overview

The Grand Forks-East Grand Forks Transit Development Plan (TDP) is a 10-year plan that provides a vision for transit in the community. Grand Forks – East Grand Forks' previous transit development plan was completed in 2017. The 2022 plan update will evaluate recent system improvements and has the following areas of focus:

- Integration of University of North Dakota (UND) campus bus routes
- New or improved fixed route, paratransit, and Senior Rider services
- Maintenance and growth of CAT ridership
- Fare, pass, or transfer policy changes to increase ridership or funding
- Transit fleet and technology recommendations
- Investments in capital improvements like buses, bus stop enhancements, and support equipment
- Support for existing and future CAT operations at transit facilities such as Midtown Transit Center and Metro Transit Center

Purpose of this Document

The purpose of this document is to provide background information on the existing conditions of Cities Area Transit (CAT) services including safety performance measures, transit assets, route system performance, fares, existing area plans, area demographics and transit propensity, and financial performance and funding opportunities. These areas provide a baseline to understand the strengths and challenges of the system. This information will provide insight for the development of recommendations for the TDP.

CAT System Overview and Performance

This section includes an overview of the fixed route and demand response services, including performance indicators and detailed route information. It is intended to provide a detailed look at how efficiently the system is running and possible areas for improvements.

System Overview

CAT offers three primary services: fixed route service and demand-response service, which is the paratransit dial-a-ride service and a senior rider service, offered for individuals 62 years of age and older.

Fixed Route Service Overview

CAT has 16 fixed routes within the system. These include three routes that travel to East Grand Forks, while the majority travel only in Grand Forks (Figure 1). Three routes offer evening service: Route 3, Route 6, and Route 13 (also known as Route 22). The routes that serve the University of North Dakota (UND) campus were recently integrated into the system.

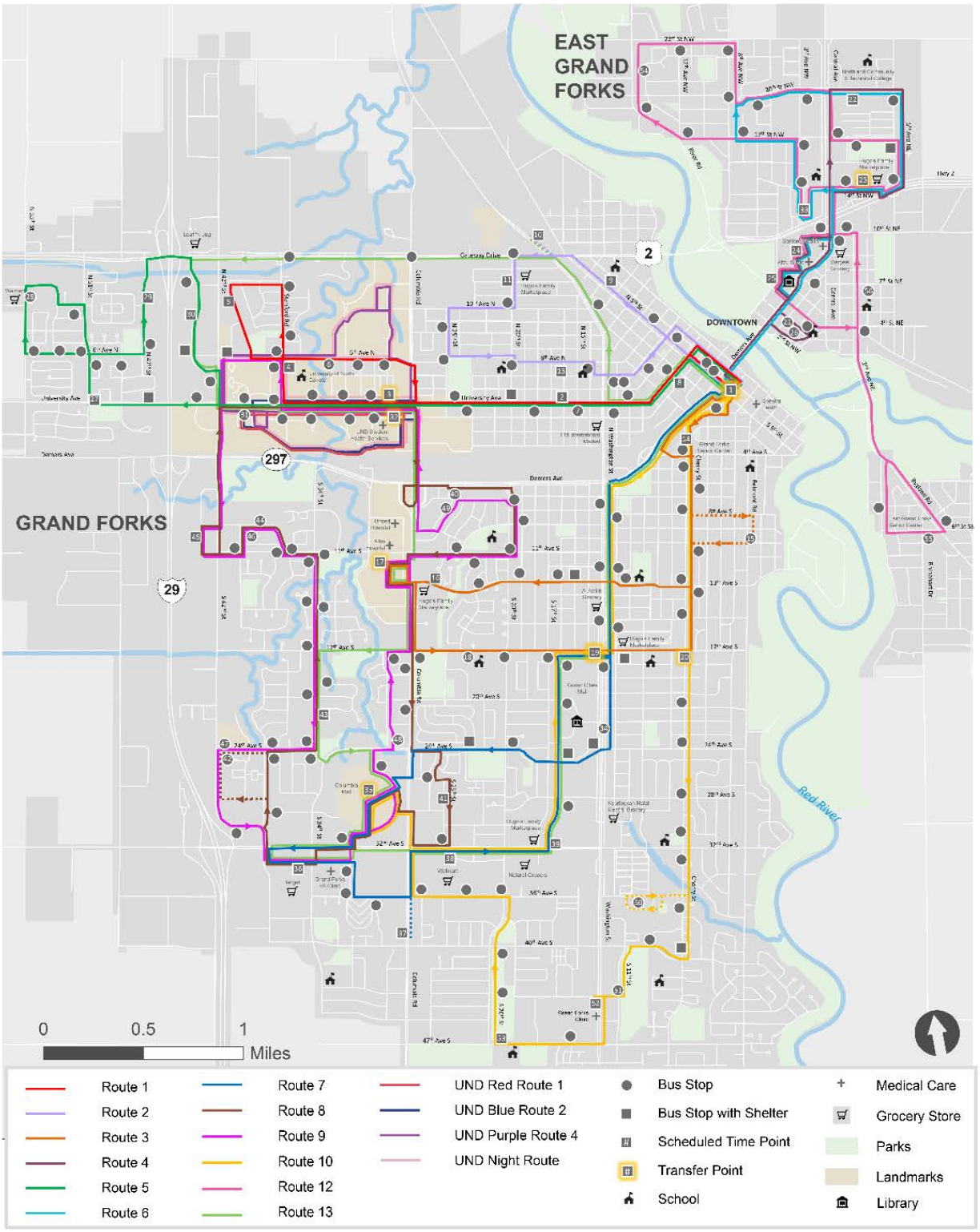


Figure 1: CAT System Map

Fixed Route Span and Frequency

While most CAT routes offer weekend service on Saturdays, UND service is weekday only, with the UND Red, Purple and Blue (Routes 14, 15 and 16) offering service during weekdays (Monday through Friday) and the UND Night (Route 25) offering service only in the evenings and only Monday through Thursday. UND Service only operates during the fall and spring semesters when classes are in session, while all other routes are year-round. Most CAT routes offer service once an hour throughout their span. Route 3 offers service twice an hour (and is interlined with Routes 4 and 6). UND routes are also offered more frequently, every 15 minutes (UND Red and Blue), every 20 minutes (UND Purple) and every 30 minutes (UND Night). The span (times when a bus operates) and frequency (how often a bus comes) for each route are listed in Table 1.

Table 1: Fixed Route Service Span and Frequency

Route	Days of Service	Weekday Hours	Weekend Hours	Frequency
1	Monday - Saturday	7:00 AM – 5:30 PM	8:00 AM – 5:30 PM	60 minutes
2	Monday - Saturday	6:30 AM – 6:00 PM	8:30 AM – 6:00 PM	60 minutes
3	Monday - Saturday	6:30 AM – 9:30 PM	8:00 AM – 9:30 PM	30 minutes before 6:00 PM, 60 minutes after 6:00 PM
4	Monday - Saturday	6:00 AM – 5:30 PM	8:00 AM – 5:30 PM	60 minutes
5	Monday - Saturday	6:00 AM – 6:00 PM	8:00 AM – 6:00 PM	60 minutes
6	Monday - Saturday	6:30 AM – 10:00 PM	8:30 AM – 10:00 PM	60 minutes
7	Monday - Saturday	6:30 AM – 6:00 PM	8:00 AM – 6:00 PM	60 minutes
8	Monday - Saturday	6:00 AM – 6:00 PM	8:00 AM – 6:00 PM	60 minutes
9	Monday - Saturday	6:30 AM – 6:00 PM	8:00 AM – 6:00 PM	60 minutes
10	Monday - Saturday	6:00 AM – 6:00 PM	8:00 AM – 6:00 PM	60 minutes
12*	Formerly Monday - Friday	Formerly 7:00 AM – 6:00 PM	-	60 minutes
13 (also known as 22)	Monday - Saturday	6:00 PM – 10:00 PM	6:00 PM – 10:00 PM	60 minutes
UND Red Route #1	Monday - Friday	7:30 AM – 4:30 PM	-	15 minutes
UND Purple Route #4	Monday - Friday	7:30 AM – 4:30 PM	-	20 minutes
UND Blue Route #2	Monday - Friday	7:30 AM – 4:30 PM	-	15 minutes

Route	Days of Service	Weekday Hours	Weekend Hours	Frequency
Night Route UND Night	Monday - Thursday	5:00 PM – 10:00 PM	-	30 minutes

**Route 12 transitioned to a demand-response service beginning in 2020 due to low ridership. Service was ended on this route due to low ridership and the need to reallocate operators to service to K-12 schools.*

Demand-Response Service Overview

CAT offers two demand-response services: Dial-a-Ride and Senior Rider. These services operate Monday through Friday from 6:00 AM to10:00 PM and on Saturday from 8:00 AM to 10:00 PM, excluding major holidays, similar to the fixed route schedule.

- Dial-A-Ride is an origin-to-destination ADA complementary paratransit for persons who are not able to use the fixed route bus system due to disability.
- Senior Rider is an origin-to-destination service for passengers age 62 and older.

To use this service riders, riders call to schedule the destination and return trips at least one day in advance. Cancellation is required at least two hours in advance of the planned trip.

For the purposes of performance analysis, these services are grouped together in demand response figures.

Key Takeaways

Riders who use most fixed routes have the opportunity to take the bus once an hour, which offers limited flexibility. Most routes stop at the Downtown Grand Forks transit center for transfers. This can make a trip across town lengthy for riders. Riders have three fixed route options for evening service.

The demand response services offer similar service hours to the fixed route service but a more personalized service that does not require transfers. This service is called demand response, because it is available when the rider wants it and where the rider wants it, however, it does require some planning and coordination with CAT (a day in advance) as opposed to a fixed route, which will visit a stop regardless of the rider's schedule.

Performance Indicators

To understand the performance of the existing CAT service, the study team examined eight performance indicators. The eight performance indicators include:

- Ridership
- Revenue Miles per Capita
- Passengers per Revenue Mile
- Cost per Revenue Mile
- Cost per Trip
- Farebox Recovery
- Safety Performance
- Reliability

Data used to determine each of the performance indicators is based on data that CAT reports to the National Transit Database (NTD) and data provided by CAT for individual routes. NTD data is based on a calendar year and is standardized across agencies, making peer comparison more accurate and insightful. For data related to population, the

U.S. Census Bureau's American Community Survey data for 2013-2019 and the Decennial Census data for 2020 were used. More information on performance management, including CAT and the Metropolitan Planning Organization (MPO) goals, objectives, performance measures, and performance targets can be found in the Performance Management section of the plan.

Ridership

Annual Ridership

Annual ridership represents the number of trips that are taken on transit services during a given year. The study team examined ridership for the two main types of service provided by CAT, demand response and fixed route bus service, as well as for the full system. The project team analyzed ridership data from 2013 to 2020, which reflects the years for which NTD data is available for CAT. To highlight the ridership impacts of the COVID-19 pandemic, 2020-2021 data is provided on a monthly basis using data provided by CAT. The ridership data for 2021 is only available for January through June. Recent trends in ridership are heavily influenced by the impacts of the COVID-19 pandemic. To a lesser degree, these trends are also influenced by the addition of UND shuttle service to CAT's operations. In August 2020, CAT began operating the campus shuttle service for UND for the university's fall semester. This UND fall semester ridership (August-December 2020) accounted for approximately five percent of the total annual CAT ridership in 2020. In January to June 2021, the UND shuttle routes accounted for nearly 13 percent of the total fixed route ridership.

Systemwide Ridership

Systemwide, CAT ridership declined between 2013 and 2020. From 2013 to 2019, ridership decreased by 30 percent. In 2019, CAT had a total ridership of approximately 290,000 rides across all services. Due to the COVID-19 pandemic, ridership decreased by 38 percent from 2019 to 2020 to a total of 179,456, as shown in Figure 2.

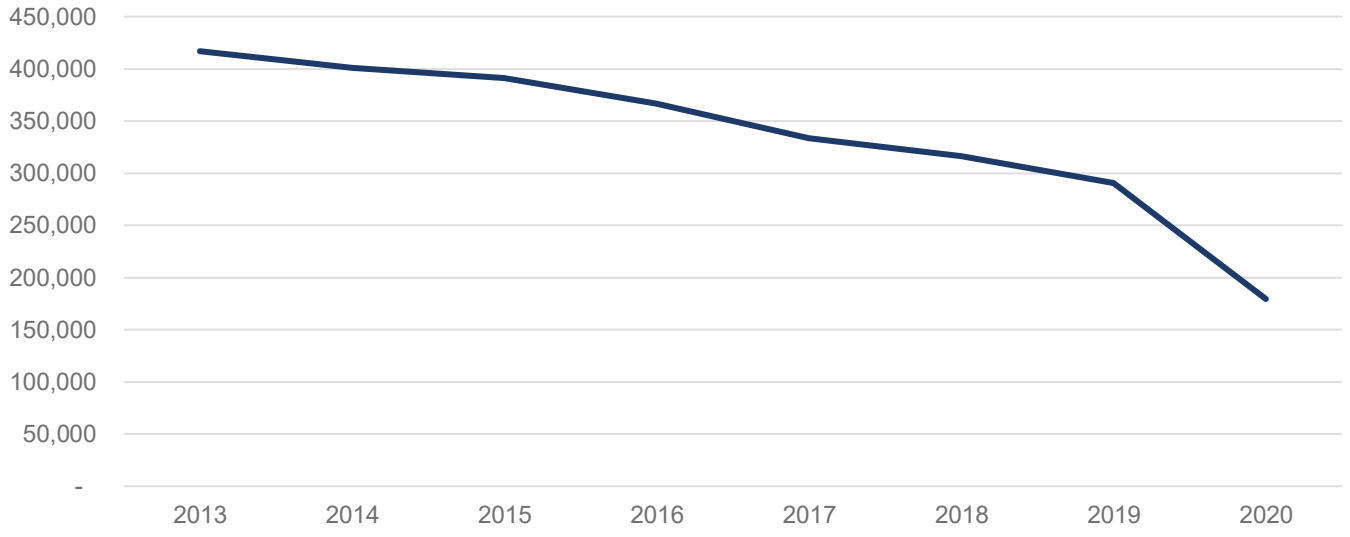


Figure 2: Total Annual CAT Ridership (2013-2020, NTD)

CAT Ridership Trend, 2013-2019
Decrease of **30%**

CAT Ridership Trend, 2019-2020
Decrease of **38%**

In 2020 and 2021, the COVID-19 pandemic impacted ridership nationally, including in the Grand Forks – East Grand Forks area. Monthly CAT ridership dropped significantly starting in March 2020, with an extreme low in April 2020. Since April 2020, ridership has trended up but is still lower than the pre-COVID-19 level in February 2020 (Figure 3).

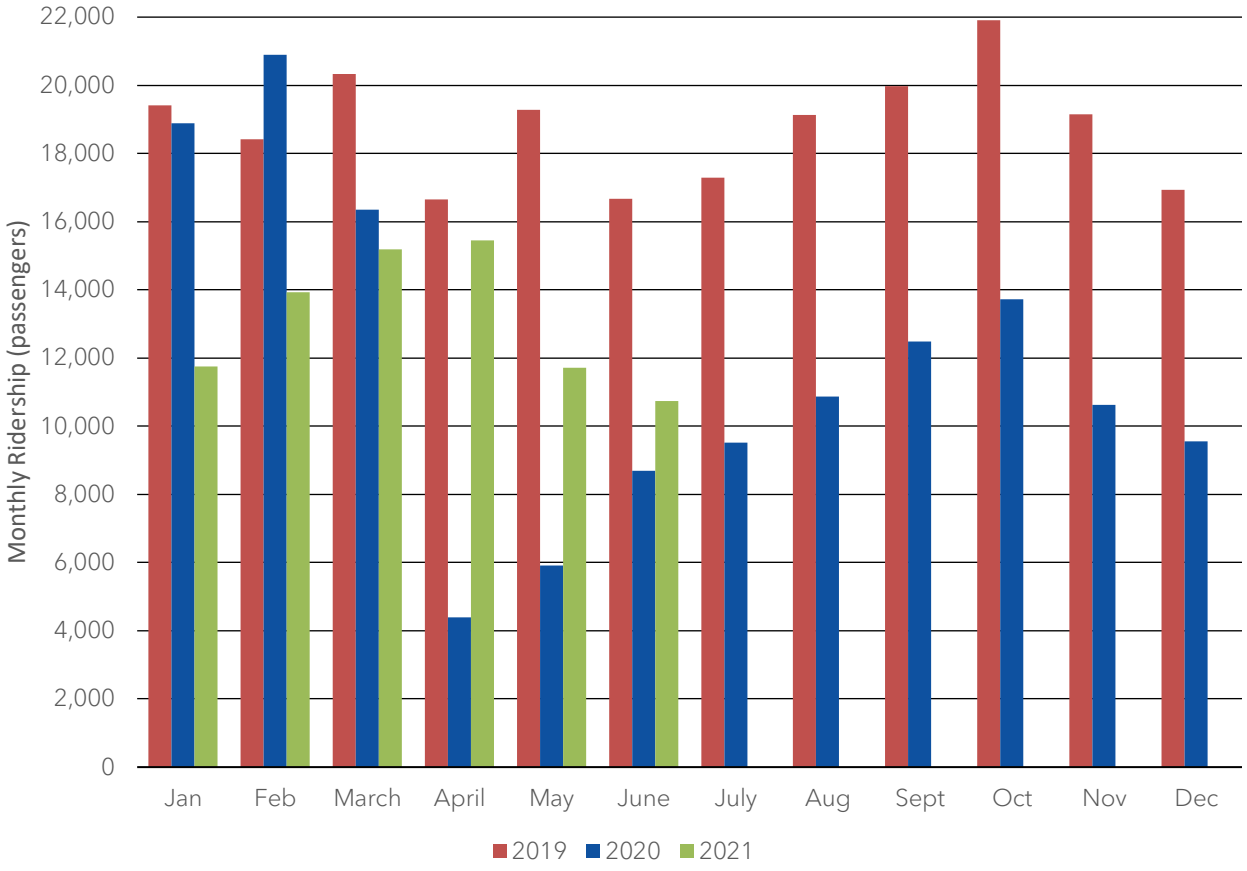


Figure 3: Total System Monthly Ridership (January 2019 to June 2021)

Fixed Route Ridership

Total ridership on the fixed route services in 2019 was approximately 226,000 trips, representing a decrease of 38 percent from 2013. According to NTD data compiled by the American Public Transportation Association[1], agencies serving similar sized populations have seen a decrease in ridership of approximately 10 percent over the same period from 2013 to 2019. This trend follows the national trend for fixed route bus service, which saw an 18.2 percent decrease in ridership from 2010 to 2019. As a result of the COVID-19 pandemic, CAT experienced a decrease of 37 percent from 2019 to 2020. Nationally, fixed route service for agencies serving similar sized populations as CAT decreased by 55 percent from 2019 to 2020. CAT's decrease in ridership was less than the national average for agencies serving similar a population size. Figure 4 shows the annual ridership trend for CAT's fixed route services from 2013 to 2020 based on calendar year NTD data.

[1] https://www.apta.com/wp-content/uploads/2019-Q4-Ridership-APTA.pdf; https://www.apta.com/wp-content/uploads/Resources/resources/statistics/Documents/Ridership/2013-q4-ridership-APTA.pdf; https://www.apta.com/wp-content/uploads/2020-Q4-Ridership-APTA.pdf

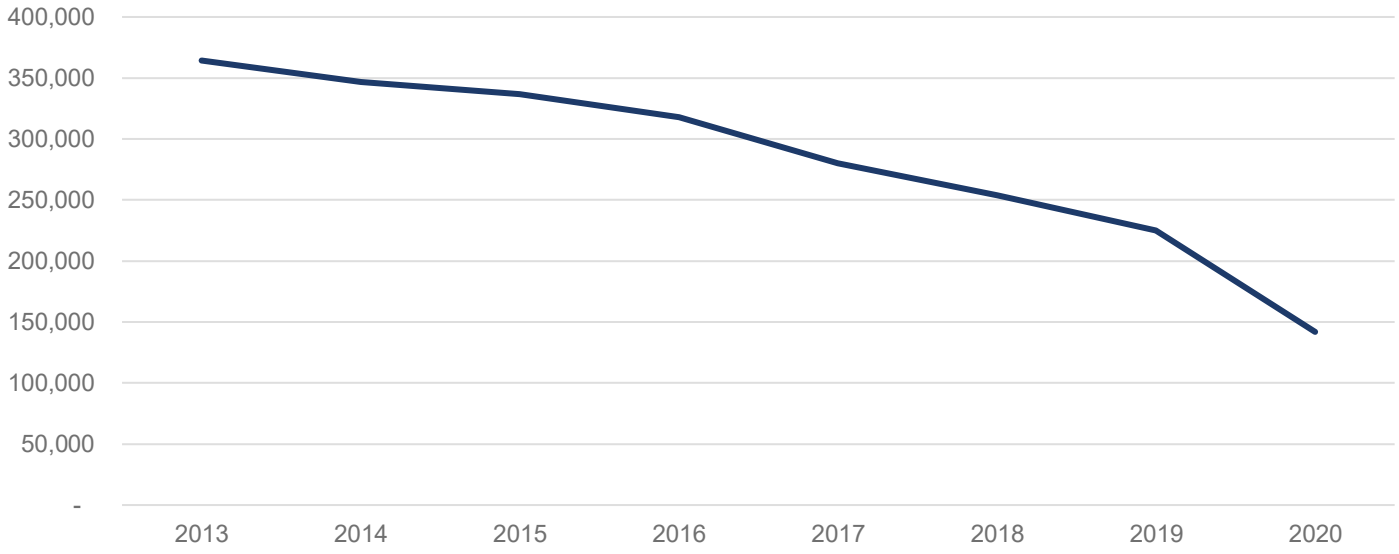


Figure 4: Annual Fixed Route Bus Ridership (2013-2020, NTD)

CAT Fixed Route Ridership Trend, 2013-2019
Decrease of **38%**

CAT 1-Year Fixed Route Ridership Trend, 2019-2020
Decrease of **37%**

The monthly average for ridership on the fixed route service is currently lower than before the onset of the COVID-19 pandemic (Figure 5). The COVID-19 ridership is represented in the months of March 2020 to June 2021. While the increases in ridership follow the same trends by month as they did before the pandemic, the ridership is consistently half to two thirds of what it was before the pandemic. Ridership in June and July is also lower due to the UND school schedule since that service is only offered during the fall and spring semesters.

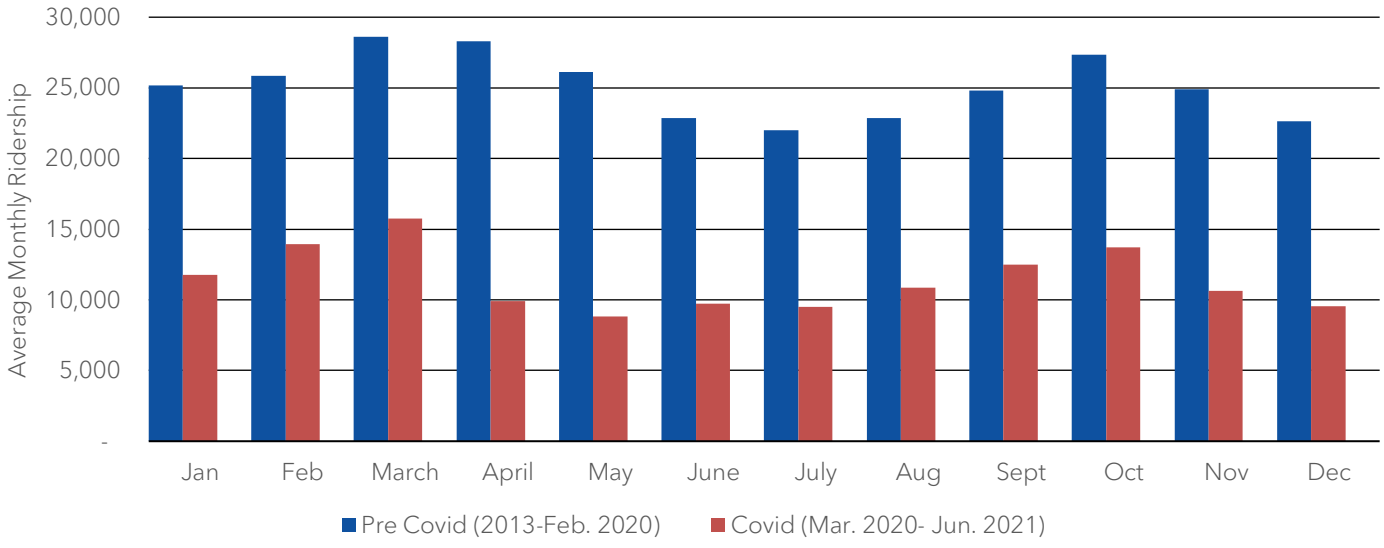


Figure 5: Fixed Route Service Monthly Average Ridership, Pre-COVID-19 vs. COVID-19 (2013-2020, NTD, CAT)

Demand Response Ridership

Demand response ridership had been increasing prior to the beginning of the COVID-19 pandemic. In 2019, the demand response service provided nearly 65,182 trips, representing a 24 percent increase from 2013. This trend increase exceeds that of the national trend, where demand-response service ridership increased by nine percent from 2010 to 2019. Figure 6 shows the annual ridership trend for CAT's demand response service from 2013 to 2020 based on calendar year NTD data.

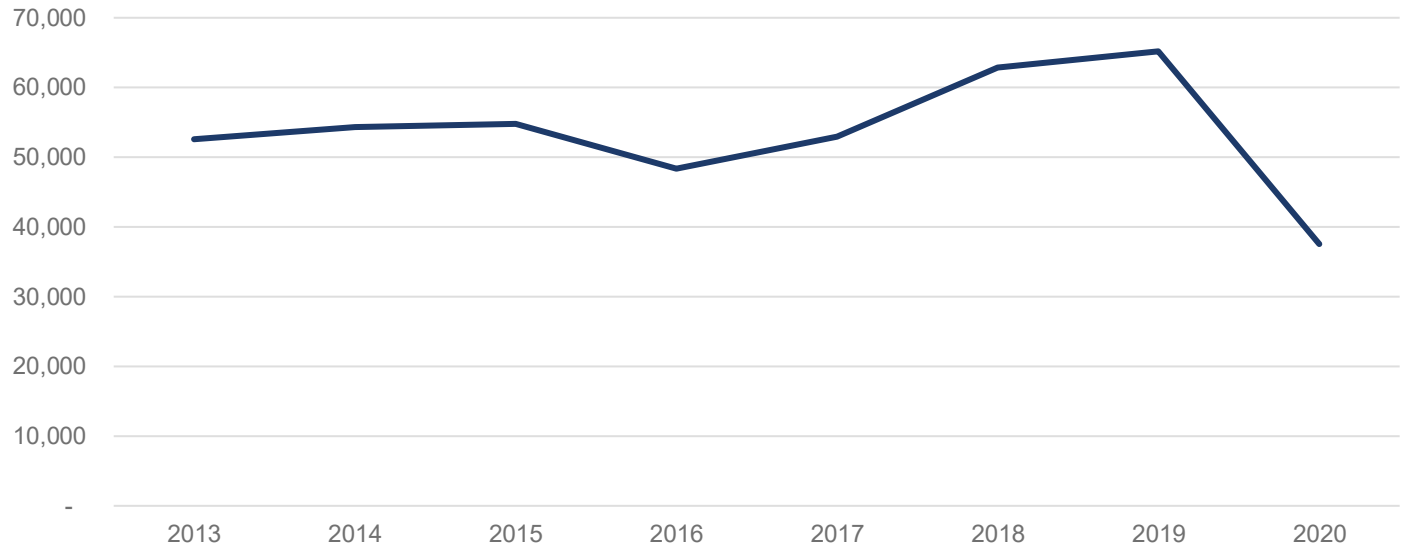


Figure 6: Annual Demand Response Service Ridership (2013-2020, NTD)

Ridership on the senior rider program is lower than paratransit ridership. Both groups experienced a slight dip in ridership in 2016 but otherwise showed growth in use between 2013 and 2019 (Figure 7).

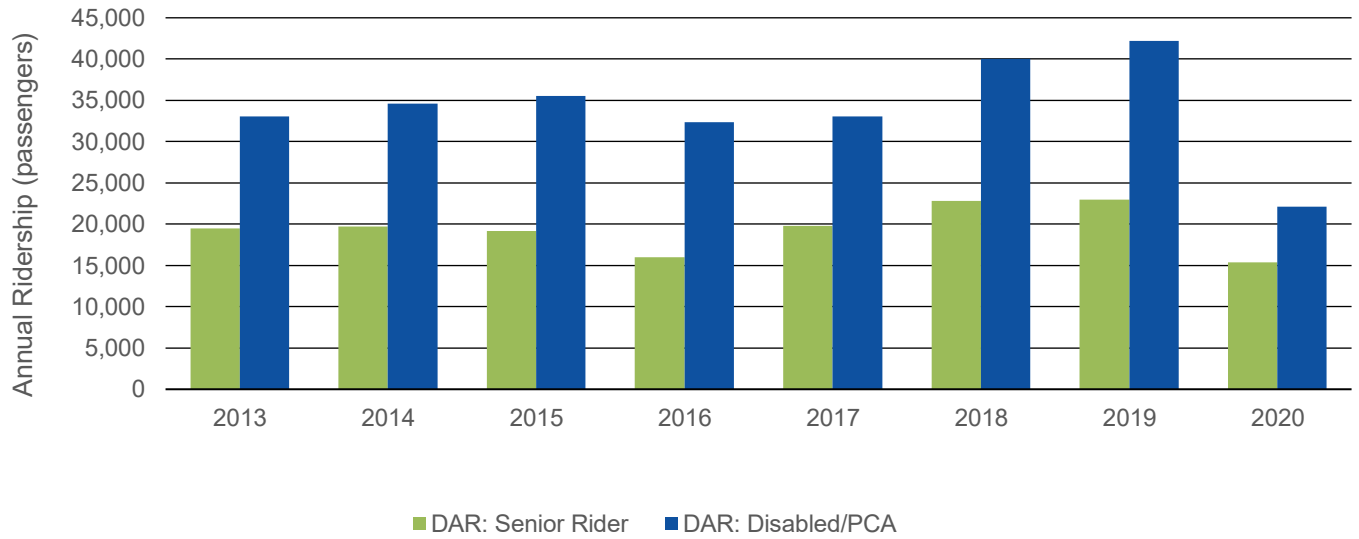


Figure 7: Demand Response Service (Senior & Disabled) Annual Ridership (2013-2020, CAT)

The slight dip in 2016 could be attributed to the improved adherence to the policies of the program and application process. 2017 shows a leveling out and slight increase from 2016. Seniors using the service have said they prefer it over fixed route service because it is more convenient. Since it offers origin-to-destination rides, it also limits any first-mile/last-mile inconvenience that is experienced with fixed route service only traveling to bus stops. Ridership decreased after the onset of the COVID-19 pandemic. Between 2019 and 2020, demand response ridership decreased 42 percent. This decrease was slightly lower than the national trend, in which demand response ridership 45 percent according to NTD data compiled by APTA. Similar to fixed route service, the lowest month for ridership was in April 2020. Since then, ridership has been increasing, while still below the March 2020 levels (Figure 8).

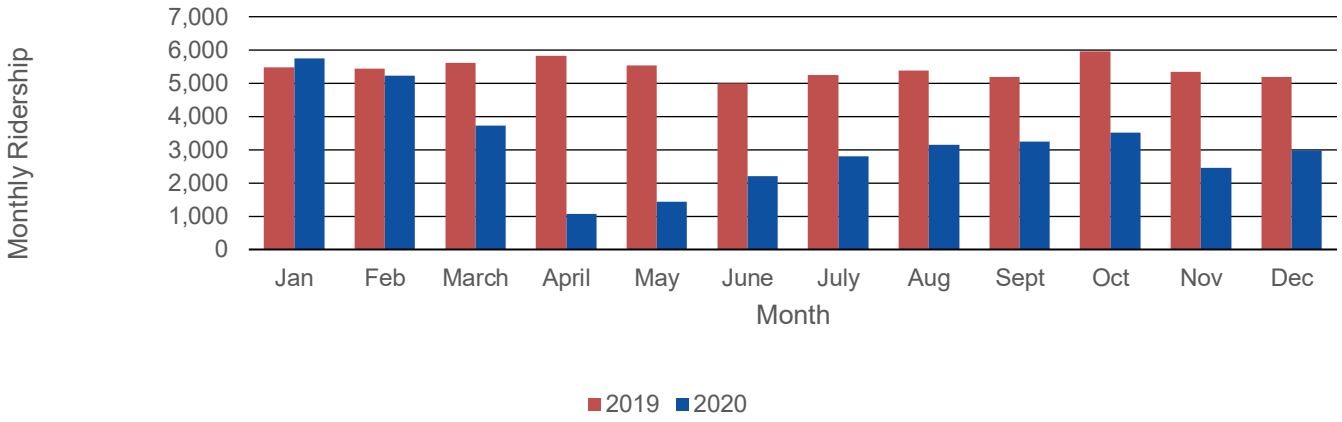


Figure 8: Demand Response Service (Total System) Monthly Ridership (2020, NTD)

Ridership declined less in the East Grand Forks area than in Grand Forks during the pandemic, although the Grand Forks ridership represents significantly more of the total ridership (Figure 9).

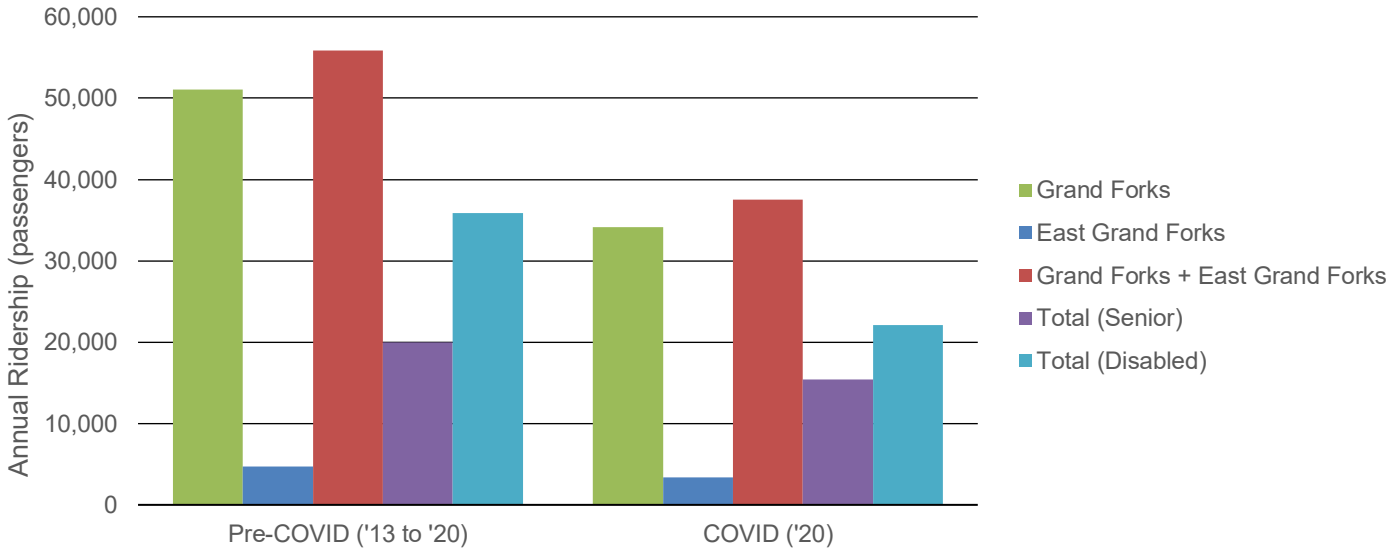


Figure 9: Demand Response Service Monthly Average Ridership by Location (Pre-COVID-19vs During COVID) (2013-2020, NTD)

Key Takeaways

Fixed route ridership was lower in 2019 compared to 2013, and the decline in fixed route ridership occurred at a rate of over three times that of the national average. Improvements to the existing service and marketing campaigns to attract riders after the COVID-19 pandemic could potentially help the fixed route system to regain riders in the years to come.

The steady growth of CAT demand response ridership also indicates an increasing demand for service, particularly as the population continues to age. Demand response service provides critical transportation to those in the community who may not otherwise be able to access jobs, services, or other community resources.

Revenue Miles per Capita

Revenue miles per capita indicates how much service is delivered based on the population of the service area. In 2013, the Grand Forks-East Grand Forks Metropolitan Statistical Area (MSA)'s population was 98,879. That year, CAT provided just under 383,000 miles of fixed route service and just under 191,000 miles of demand response service. In 2019, CAT provided just over 363,000 miles of fixed route service, a decrease from 2013 levels, and just over 251,000 miles of demand response service, an increase from 2013 levels. The population of the MSA was around 101,800 people in 2019. While population grew by three percent during this time, the revenue miles for the full system increased by 7.2 percent. In 2020, as a result of the COVID-19 pandemic's impact on service, the revenue miles decreased by 13 percent from 2019 to 2020. Figure 10 shows the historical change in revenue miles per capita for CAT service.

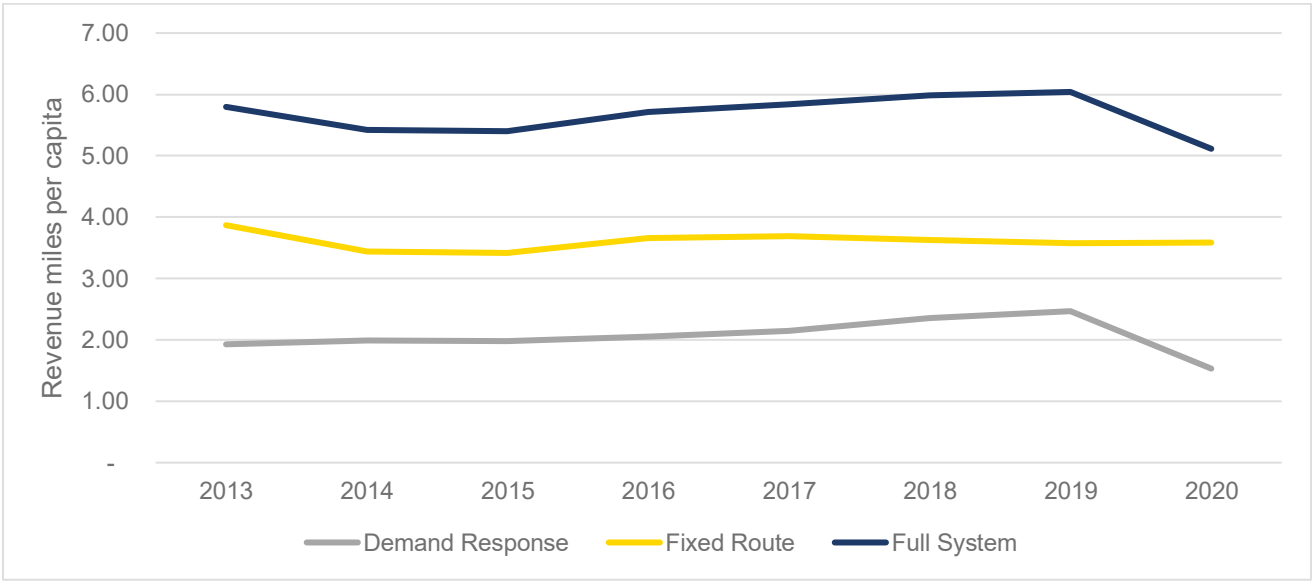


Figure 10: Revenue Miles per Capita by Mode (2013-2020, NTD & U.S. Census Bureau)

In 2019, CAT provided 2.47 revenue miles of demand response service per capita and 3.57 revenue miles of fixed route service per capita. Systemwide in 2019, CAT provided 6.04 revenue miles per capita. As seen in Table 3, these statistics all represent a slight decrease in revenue miles per capita since 2013. This overall trend is driven by a substantial increase in revenue miles per capita in the demand response service, while the revenue miles per capita for fixed route service has decreased.

Table 2: Revenue Miles per Capita (2013 – 2020, NTD)

	2019 Revenue Miles per Capita	Percent Change (2013 to 2019)
Demand Response	2.47	+27.9%
Fixed Route	3.57	-7.7%
All Service Combined	6.04	+4.2%

Key Takeaways

Increasing service relative to increases in population is important to maintaining the quality of existing service and ensure that growing needs of the community are being met. Prior to the pandemic, the modest revenue miles per capita growth showed that CAT was doing a good job of keeping up services based on population growth. The decline during 2020 shows how services were adjusted to the needs of the community as ridership on some routes decreased (Route 12 service was ended). This could show there is an opportunity to increase revenue miles per capita in different services, especially given relative growth of demand response revenue miles per capita.

Passengers per Revenue Mile

Passengers per revenue mile is a comparison of the total passengers carried on a route to the total number of revenue miles operated by the route. Revenue miles measure the number of miles that transit is in service picking up and dropping off passengers. The passengers per revenue mile metric helps to indicate how productive service is over the course of an average mile. As shown in Figure 11, the fixed route system carried an average of almost 0.62 person per mile of service, whereas the demand response service carried 0.26 passengers per revenue mile in 2019. The full system carried 0.47 passengers per revenue mile in 2019. Since 2013, the passengers per revenue mile stayed relative constant for demand response service, even in 2020 after the COVID-19 pandemic began. During this period, the passengers per revenue mile for fixed route service decreased consistently from 2013 to 2019 and decreased more significantly from 2019 to 2020. This may be attributed in part to the introduction of peak service routes in August 2018 through July 2019, which yielded limited improvements in ridership, while increasing revenue miles in fixed route service. Additional changes that occurred during this time was the inclusion of the UND service.

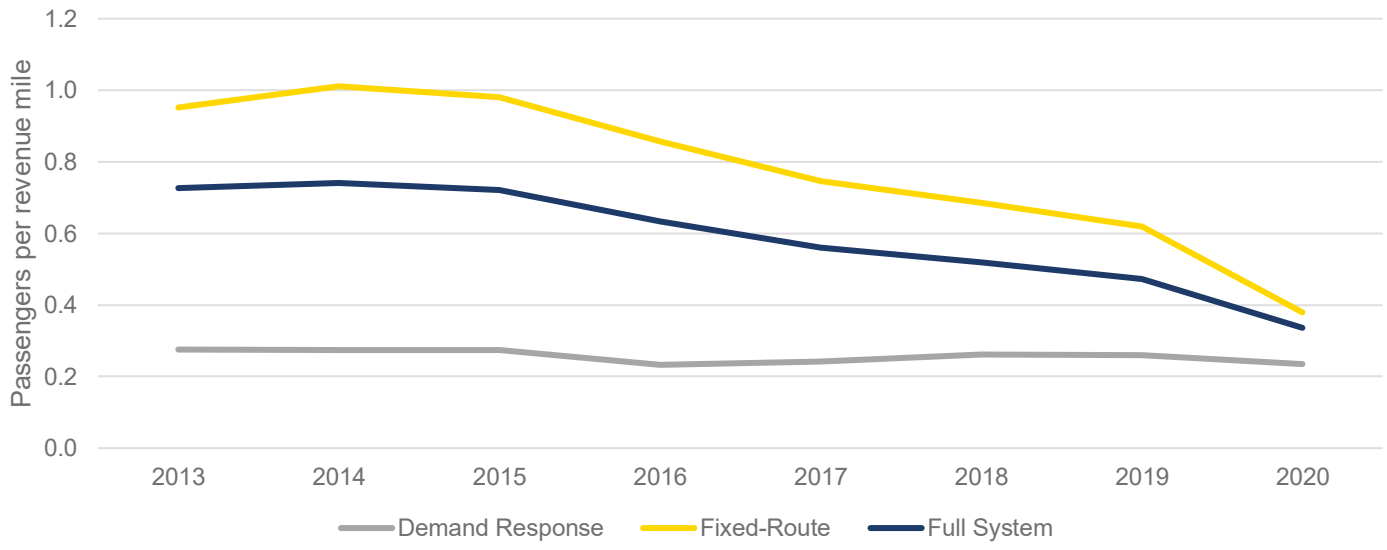


Figure 11: Passengers per Revenue Mile (2013-2020, NTD)

Key Takeaways

Similar to other key metrics, passengers per revenue mile has decreased since 2013 and decreased precipitously systemwide in 2020 with the beginning of the COVID-19 pandemic. While UND service has the potential to create a more efficient system, that can improve services for the students and community, the performance was greatly impacted by the pandemic. Like systems nationwide, services that are less productive in terms of attracting ridership should be reviewed as part of the next steps and recommendations part of this study. While it is unclear if the pandemic will continue to affect ridership, the overall downward trend for the fixed route service warrants review. Since demand response has maintained passengers per revenue mile, a review of the success of this model should also be considered.

Cost per Revenue Mile

The cost per revenue mile metric examines the operating cost of service against the number of miles of service provided. It is a valuable metric, because it enables the cost of service to be evaluated over time even if service levels have changed. Figure 12 shows the change in operating cost per revenue mile from 2013 to 2020 for demand response service, fixed route service, and all service combined. While this trend shows a recent increase in costs, beginning in 2020 the costs to run the demand response service actually decreased as the service was shifted from contracted service to an in-house operation using CAT drivers. However, as this transition occurred so did a change in which expenses would be attributed to operating expenses so that could be in-part the reason for this increase. With this change some of the costs previously associated with only the fixed route were reallocated to the demand response service.

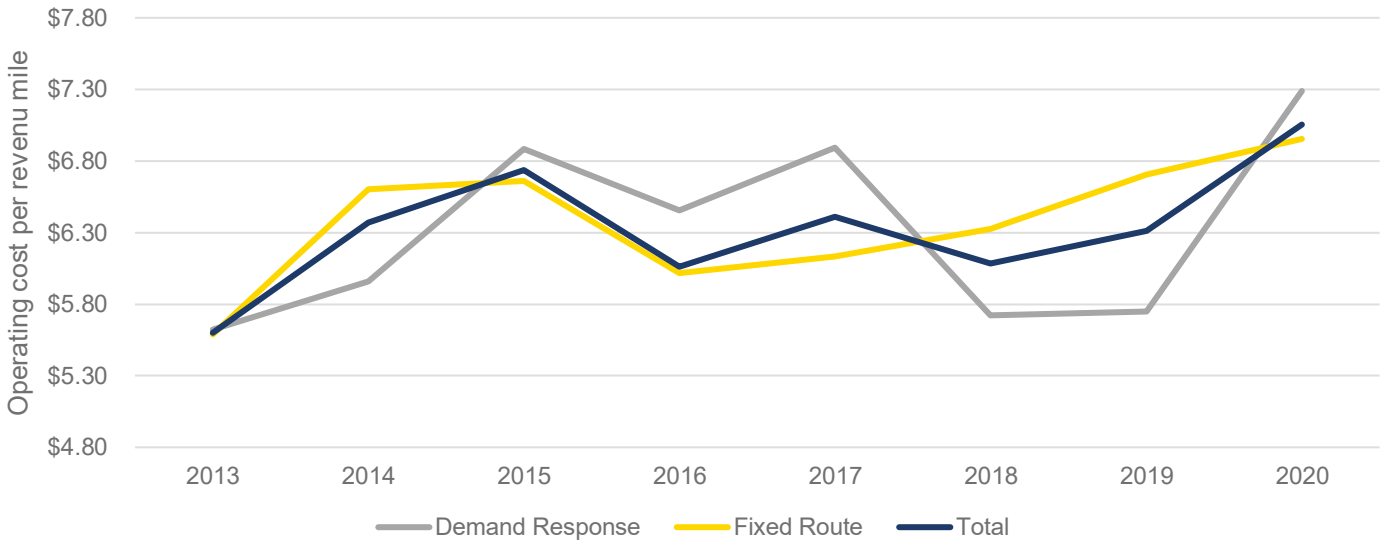


Figure 12: Operating Cost per Revenue Mile by mode, adjusted to 2020 USD (2013-2020, NTD)

Key Takeaways

Cost per revenue mile increased from 2013 to 2015 before it decreased from 2015 to 2016 at a similar rate for both demand response and fixed route service. For the demand response service, costs then increased from 2016 to 2017 before falling steeply through 2018. Costs then stabilized from 2018 to 2019. For the fixed route service, after the initial decline in cost per revenue mile, costs increased nearly 55 percent from 2016 to 2019. Overall, since 2013, systemwide cost per revenue mile has increased. As stated above this could be in part attributed to the reallocation of operating expenses, during the change to in-house drivers in 2020.

Cost per Trip

Cost per trip examines the operating cost of service against the number of trips provided. In combination with cost per revenue mile, cost per trip helps to indicate how cost-effectively a system can deliver service. The cost per trip for demand response service tends to be significantly higher than the cost per trip for fixed route service because demand response service is unable to carry as many passengers as fixed route service within the same amount of time. The cost per demand response trip is around twice as great as that of a fixed route service trip. This ratio has decreased in recent years from around four times greater in 2013 to two times greater in 2019. Like other performance indicators, the cost per trip for all modes increased markedly from 2019 to 2020. Table 3 shows the cost per trip for each service type and the percent change from 2013 to 2019 and 2019 to 2020. This could be attributed to a few causes. Changes to service between 2018 and 2019 included increasing peak hour service for some routes and incorporating UND service. This could have increased the costs associated with operations as the transition occurred. Normally this could potentially level off, but 2020 presented a year with new challenges and changes. In 2020, the demand response service transitioned in-house operators and buses from contracted (outsourced) service. While the hourly costs for that service decreased with the transition, other costs were reallocated to the demand response service. Furthermore, as ridership fell for demand response, each trip might have been more costly since fewer riders were on each van and efficiencies could not be made as the rides were dispatched. The addition of the UND service during a period of low ridership could also have negatively impacted this metric.

Table 3: Cost per Trip, adjusted to 2020 USD (2013 – 2020, NTD)

	2013 Cost per Trip	2019 Cost per Trip	2020 Cost per Trip	Percent Change (2013 to 2019)	Percent Change (2019-2020)
Demand Response	$20.40	$22.14	$31.03	+9%	+40%
Fixed Route	$5.87	$10.82	$18.32	+84%	+69%
All Service Combined	$7.70	$13.36	$20.98	+74%	+57%

Key Takeaways

The cost per trip for CAT service has increased since 2013. While the cost per trip for demand response service was consistently much higher than the cost per trip for fixed route service, between 2013 and 2019 and 2019 and 2020, the percentage increases for costs per trip for fixed route were much larger.

Safety Performance

The categories for system safety monitored by the NTD include the following:

- Events (collisions)
- Fatalities
- Injuries

Table 4 documents the years in which these events occurred. Within the CAT system, for all other event categories as reported by NTD (collisions, injuries, fatalities, etc.), five events occurred between 2013 and 2021 for fixed route service. No events of any sort occurred within the demand response service between 2013 and 2021, so the fixed route events represent the total for the CAT system.

Table 4 System Safety Summary (2013-2021) - Fixed Route Service

Events	2013	2014	2015	2016	2017	2018	2019	2020	2021
Collision: With Motor Vehicle	0	0	1	0	0	0	0	1	0
Injury: Passenger	0	0	1	0	0	0	0	1	0
Other: Other Vehicle Occupant	0	0	1	0	0	0	0	0	0
Fatalities	0	0	0	0	0	0	0	0	0

Note: The table above shows only fixed route services because the **demand response services** had no events so the totals for all years for these categories is zero.

Key Takeaways

CAT has had very limited safety performance issues and no major issues. Demand response service has operated exceedingly well, with zero safety issues to report. More information about this area will be provided in the Performance Management section of this plan.

System Reliability

System reliability is expressed by the average distance between major mechanical failures. Mechanical failure is defined by the NTD as a failure "that prevents the vehicle from completing a scheduled revenue trip or from starting the next scheduled revenue trip" because movement is limited, or there are safety concerns. This is calculated by determining how many failures occur per vehicle revenue mile. Performing this analysis for CAT shows that system reliability is increasing over time. For the fixed route service, the number of miles between a mechanical failure was less than around 125,000 on average between 2013 and 2020, despite a small decrease in reliability in 2020. Between 2013 and 2019, the average number of miles between mechanical failures for demand response vehicles increased from around 95,000 to 251,000. In 2020, there were no major mechanical failures for the demand response service (Figure 13).

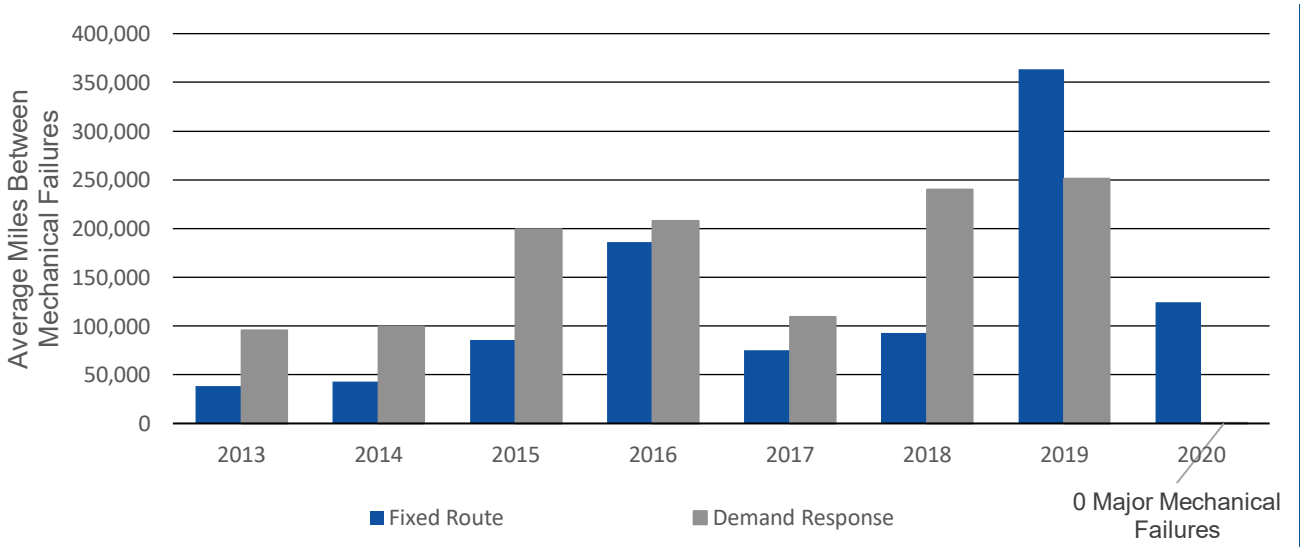


Figure 13: System Reliability Measure (2015-2019, NTD)

Key Takeaways

Overall, the vehicles operating the CAT system are reliable and have improved over time. This metric will continue to be examined in the Performance Management section of this plan.

Ridership by Fare Type

CAT fares vary depending on the characteristics of the rider, with a typical adult rider paying $1.50 a ride. There are reduced fares for students K-12, and further reduced fares for seniors, Medicare card holders, and people with disabilities. There are a variety of passes that can be purchased, which provide a further discount to riders who are frequently using the system. Fare cards can be purchased at the Metro Transit Center, and a rechargeable card comes at an additional cost of $5.00 (Table 5). The demand response service for seniors and paratransit users is $3.00 a trip and covers origin-to-destination service for one direction.

Table 5: Fixed Route Fare Structure

	One-Way Fare*	10-Ride Card
Full Fare	$1.50	$13.00
K-12 Student	$0.75	$6.50
Reduced Fare**	$0.60	$5.25
	Passes	
31-Day Pass		$35.00
14-Day Pass		$18.00
1-Day Pass		$5.00
Rechargeable Fare Media		$5.00

Transfers are free and may be used on the next connecting bus

Passes may be purchased at the Metro Transit Center, 450 Kittson Ave

* Exact fare required; no change given

**Seniors age 62+, Medicare card holder, and persons with disabilities

In coordination with system ridership patterns, fare collection has declined since 2015, with the lowest number being around 140,000 fares collected in 2020. While fares have declined across the system, some types of fares have decreased more than others during the pandemic including child, youth, and transfers. UND ridership shows a minimal decline, but this could be related to the incorporation of UND service into the system in 2019 (Figure 14). Faculty and staff at UND are also included in the contract for service. Interline also shows a minimal decline before 2020, which is interline transfers between Route 3, 4 and 6. Another nuance to the data below is that the adult fares include all 31-day cards, which could include cards purchased by seniors. Since more seniors are purchasing these cards, that could account for the decline in senior fare purchases.

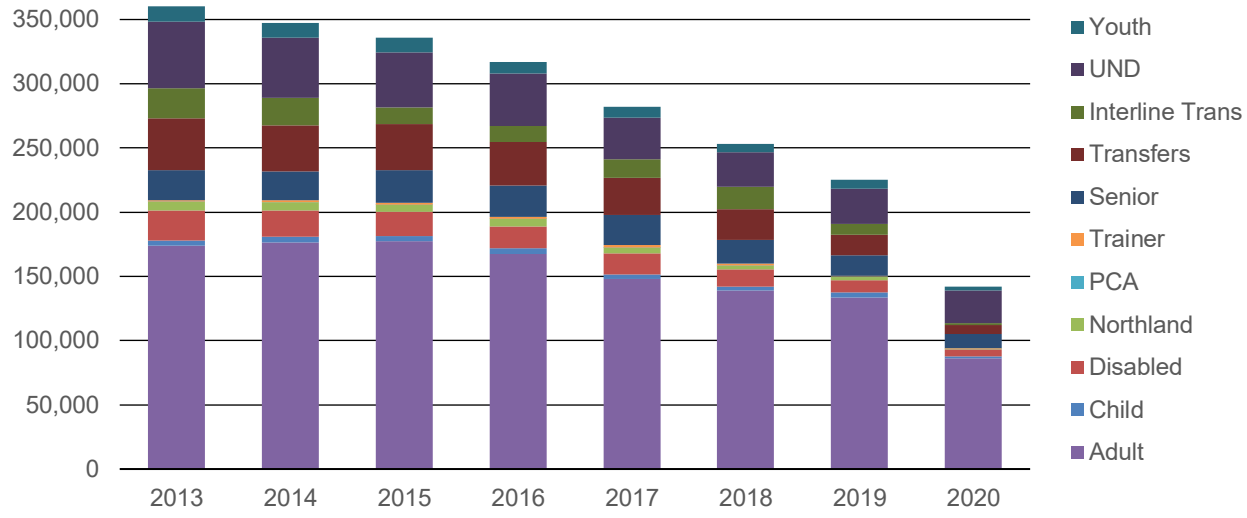


Figure 14: Total System Ridership by Fare Type (2013-2020, Source: CAT)

Key Takeaways

Compared to other fare types, adult fares remained relatively constant over the years. Since this could be attributed to the growing popularity of the 31-day passes, there could be potential in pursuing and promoting this fare type with more groups. 2021 may impact the number of youth fares as changes have been made to the k-12 school bussing system. Disabled fares also saw a significant decreased during this time and more information is needed to determine if this is due to the increased popularity of demand response services for that community.

Farebox Recovery Ratio

The farebox recovery ratio is the amount of revenue generated through fare collection compared to the total operating costs of the system. The farebox recovery ratio between 2013 and 2020 decreased from 14 percent to six percent. Table 6 shows the farebox recovery ratio for CAT service between 2013 and 2020. CAT had a 13 to 14 percent farebox recovery ratio from 2013-2016, which decreased in the following years and fell to six percent in 2020.

Table 6: Farebox Recovery Ratio (2015 – 2019, NTD)

	2013	2014	2015	2016	2017	2018	2019	2020
Farebox Recovery Ratio	13.8%	12.8%	12.4%	14.1%	10.3%	10.8%	9.4%	5.6%

Key Takeaways

The farebox recovery ratio for CAT service declined between 2013 and 2020, which is not surprising considering the rising costs in operations and lower ridership and fares collected. Maintaining a healthy farebox recovery ratio will be an important consideration moving forward. Fares should be balanced to maintain a healthy financial footing without putting an unnecessary burden on riders that could ultimately drive riders from the system.

Performance Indicator Key Takeaways

Similar to national trends, CAT fixed route ridership has been impacted significantly by the pandemic. This has an impact on all performance measures. The decline in fixed route ridership began before the pandemic and was on a steady decline 2015-2019. Like national trends, demand response ridership increased between 2015 and 2019. This ridership was also impacted greatly by the pandemic. Costs per trip decreased for demand response services between 2015 and 2019, which may be due to an increase in ridership and more efficiency in service as a result. Overall system cost per trip increased, which was due to the increases in fixed route costs per trip. While trends for system performance have been impacted significantly by the pandemic, the overall trend prior to the pandemic was that of increasing costs and lower ridership.

Peer Comparison

Comparing performance measures against peer systems' performance over time is a way to establish whether trends in CAT's performance are unique to the system or like those experienced by peer systems. CAT performance was compared to seven peer systems relative that were selected based upon similar populations, budgets, types of service operated, and amounts of service operated. The seven peer systems include:

- Great Falls, Montana
- Casper, Wyoming
- Bismarck, North Dakota
- Dubuque, Iowa
- La Crosse, Wisconsin
- Oshkosh, Wisconsin
- Sioux Falls, South Dakota

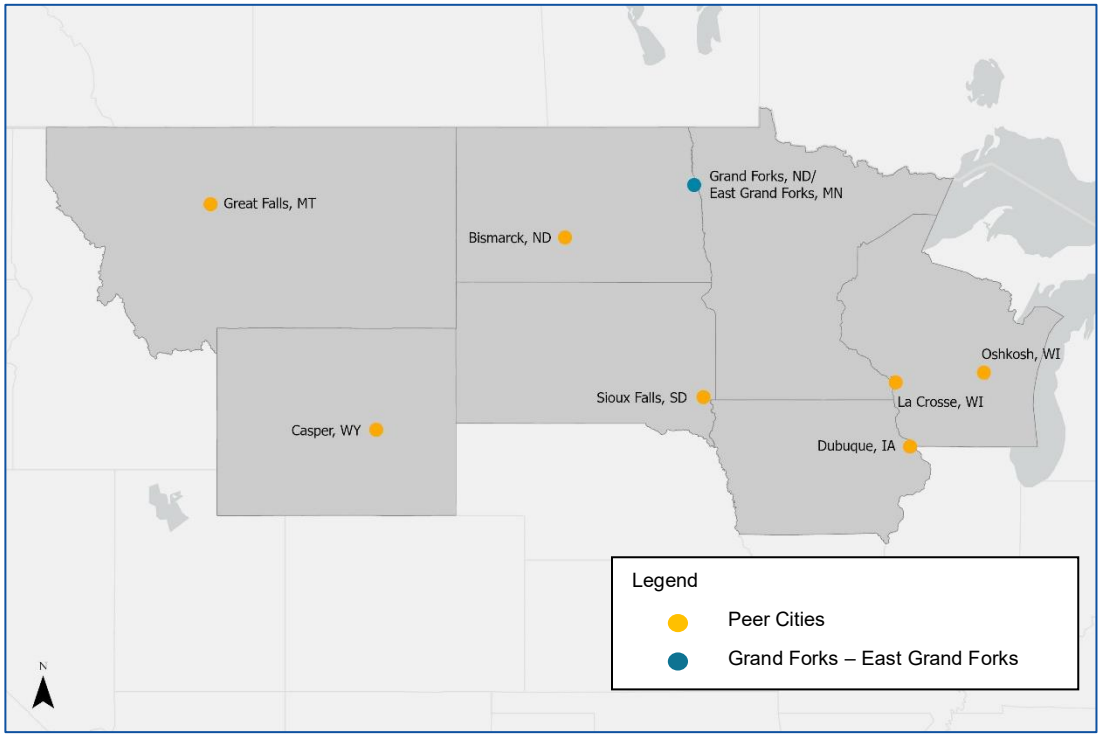


Figure 15: Peer Cities

The 2020 Reports from the National Transit Database (NTD) were used as the basis of the peer analysis. The measures that were used in this peer analysis are the following:

- **Ridership:** the total of annual unlinked trips
- **Revenue Miles Per Capita:** the miles of transit service operated per total metropolitan area population
- **Passengers Per Revenue Mile:** the number of passengers per miles of service operated (the higher this number, the more effective the system)
- **Cost Per Revenue Mile:** the cost per mile of service operated (the lower this number, the more cost effective the system)
- **Cost Per Trip:** the cost per unlinked trip (the lower this number, the more cost effective the system)
- **Farebox Recovery Ratio:** the percentage of total of operating costs covered by fares (the higher the percentage, the more cost effective the system)

Fixed Route Peer Analysis

Within the peer systems analyzed, the Grand Forks-East Grand Forks metropolitan area is the fourth densest metropolitan area, with 30 people per square mile, with five other peer cities having more than 100 people per square mile. Fixed route characteristics of the peer systems analyzed are shown in Table 7.

Table 7: Fixed Route Peer Characteristics (2020 NTD)

Metropolitan Statistical Area (MSA)	2020 Population (for MSA)[2]	2020 Population Density (for MSA)[3]	Operating Expenses	Revenue Hours	Revenue Miles
Oshkosh, WI	171,631	296.9	$3,638,283	36,959	539,128
Dubuque, IA	97,590	158.4	$2,498,884	31,920	435,651
La Crosse, WI	137,134	130.9	$5,301,401	59,275	826,151
Sioux Falls, SD	273,566	105.8	$5,299,572	54,264	656,713
Grand Forks-East Grand Forks, ND-MN	104,362	30.4[4]	$2,600,354	36,211	373,934
Great Falls, MT	81,346	30.0	$2,451,358	26,608	338,452
Bismarck, ND	129,641	29.8	$1,420,374	18,400	307,701

[2] United States Census Bureau, 2020
[3] People per square mile
[4] Note this number reflects the greater Metropolitan Statistical Area (MSA) for comparative purposes to other cities' MSA; the population density for the city boundaries of Grand Forks and East Grand Forks combined are 3,680 people per square mile.

Casper, WY	80,815	15.0	$894,162	21,361	235,615
Peer System Average	138,818	109.6	$3,072,005	35,541	477,059

The fixed route performance of the peer systems is shown in Table 8. Figures 16-21 show the performance measures from 2013 to 2020 comparing CAT's performance with the peer systems, including a peer system average.

In 2020, CAT's fixed route system:

- Recovered about 4.22 percent of operating costs through farebox revenue, which was slightly lower than the peer system average (6.81 percent)
- Cost $6.95 per revenue mile, which was slightly higher than the peer system average ($6.09)
- Cost $18.12 per trip, which is 66.8 percent higher than the peer system average. Sioux Falls and Great Falls were the only cities to cost more than CAT
- Had 0.4 passengers per revenue mile, which is 42 percent lower than the peer system average (69 percent)
- Provided 3.6 revenue miles per capita, which is similar to the peer system average (3.7)

Table 8: Fixed Route Peer Performance (2020 NTD)

	Ridership	Revenue Miles Per Capita	Passengers Per Revenue Mile	Cost Per Revenue Mile	Cost Per Trip	Farebox Recover Ratio
Bismarck, ND	55,445	2.7	0.2	$4.62	$25.62	3.65%
Sioux Falls, SD	445,205	2.4	0.7	$8.07	$11.90	5.24%
Casper, WY	162,942	2.9	0.7	$3.80	$5.49	7.81%
Dubuque, IA	333,244	4.5	0.8	$5.74	$7.50	9.38%
Great Falls, MT	299,609	4.2	0.9	$7.24	$8.18	7.21%
La Crosse, WI	552,719	6.0	0.7	$6.42	$9.59	3.21%
Oshkosh, WI	424,372	3.1	0.8	$6.75	$8.57	11.19%
Peer System Average	324,791	3.7	0.69	$6.09	$10.98	6.81%
Grand Forks-East Grand Forks, ND-MN	141,914	3.6	0.4	$6.95	$18.32	4.22%

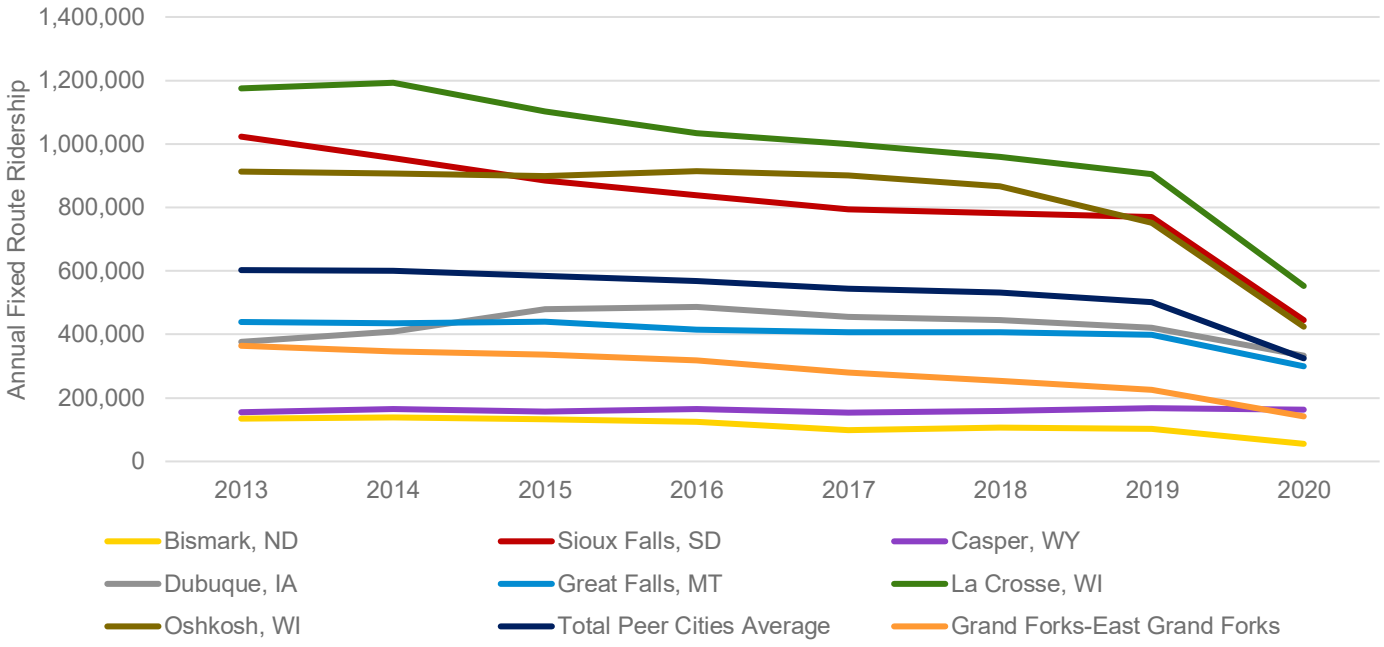


Figure 16: Annual Fixed Route Ridership

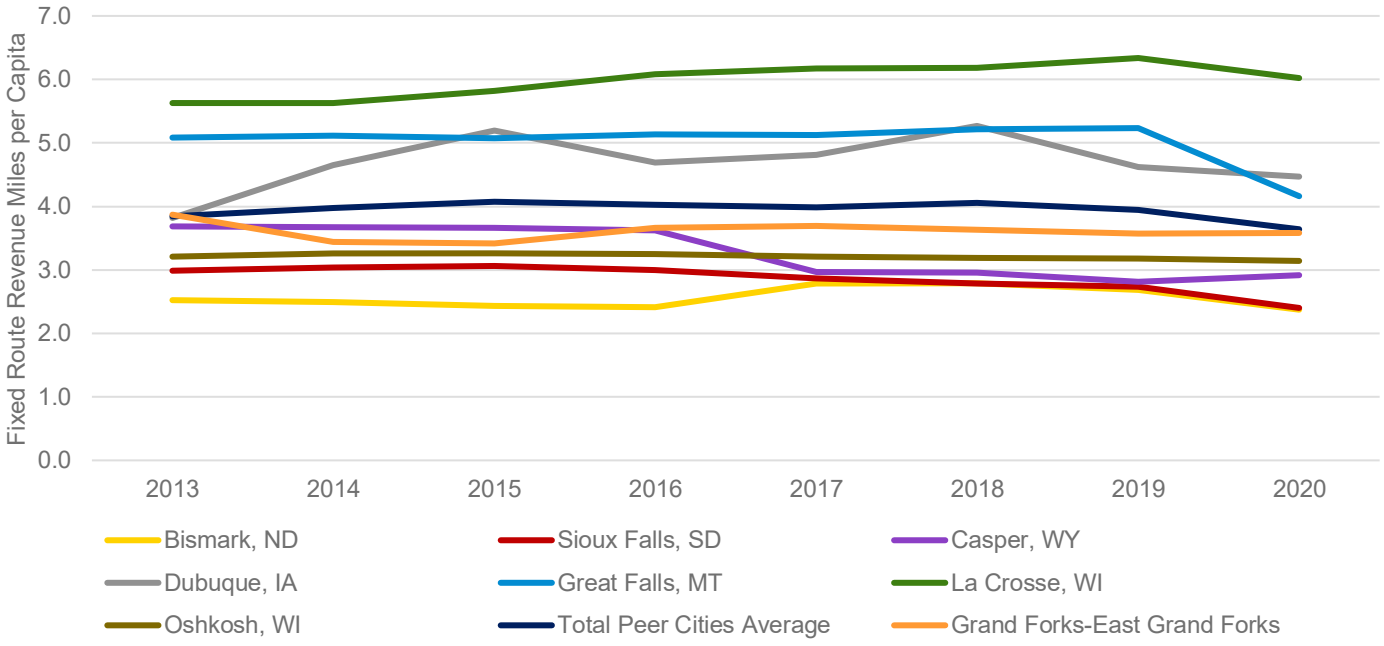


Figure 17: Fixed Route Revenue Miles per Capita

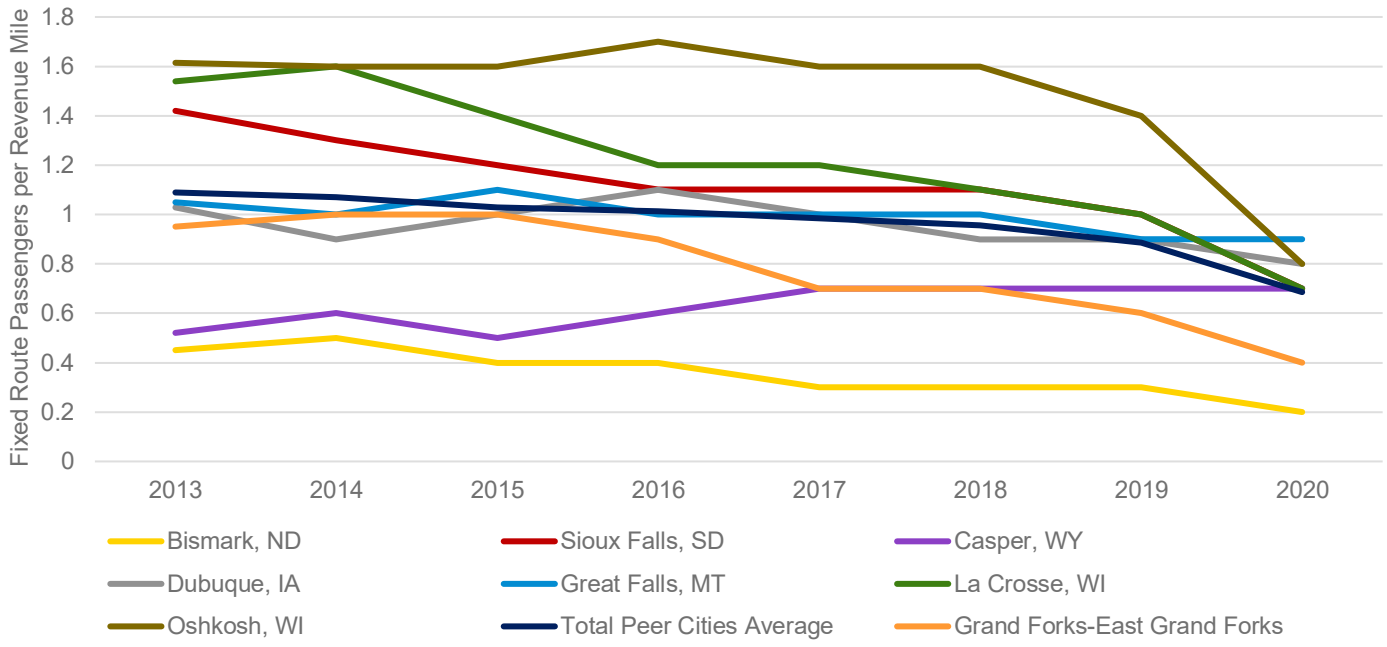


Figure 18: Fixed Route Passengers per Revenue Mile

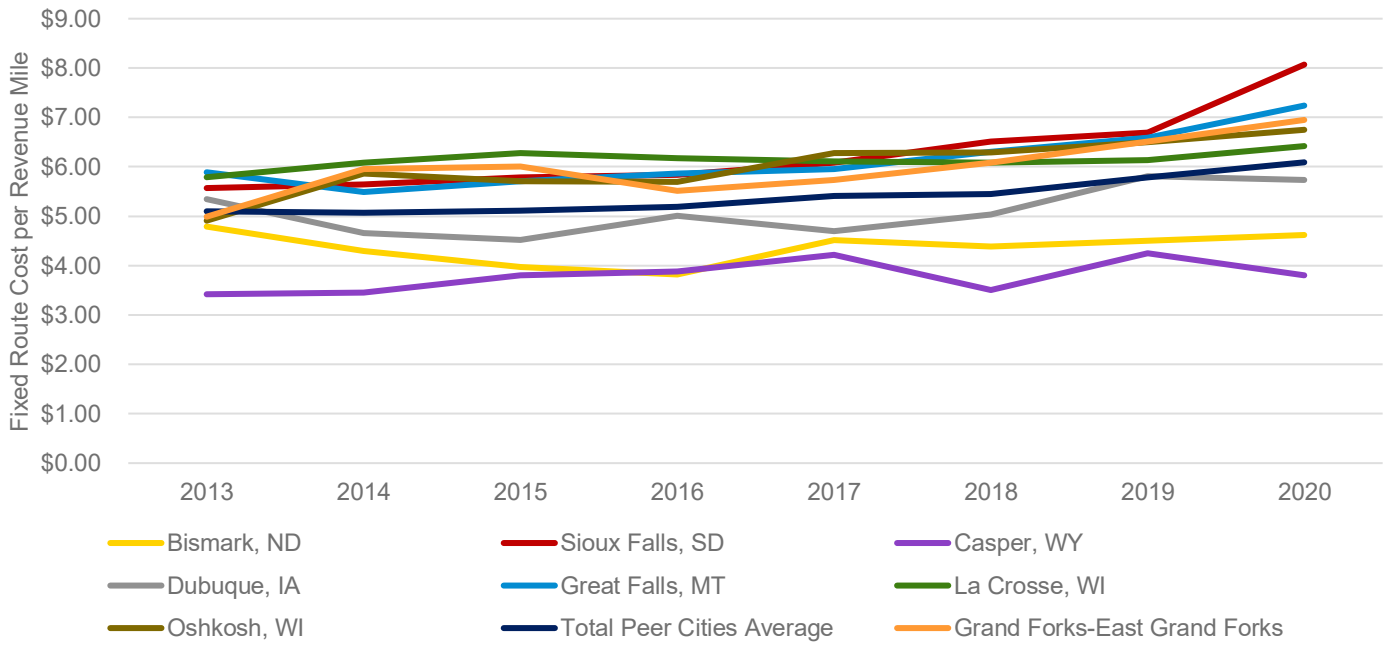


Figure 19: Fixed Route Cost per Revenue Mile

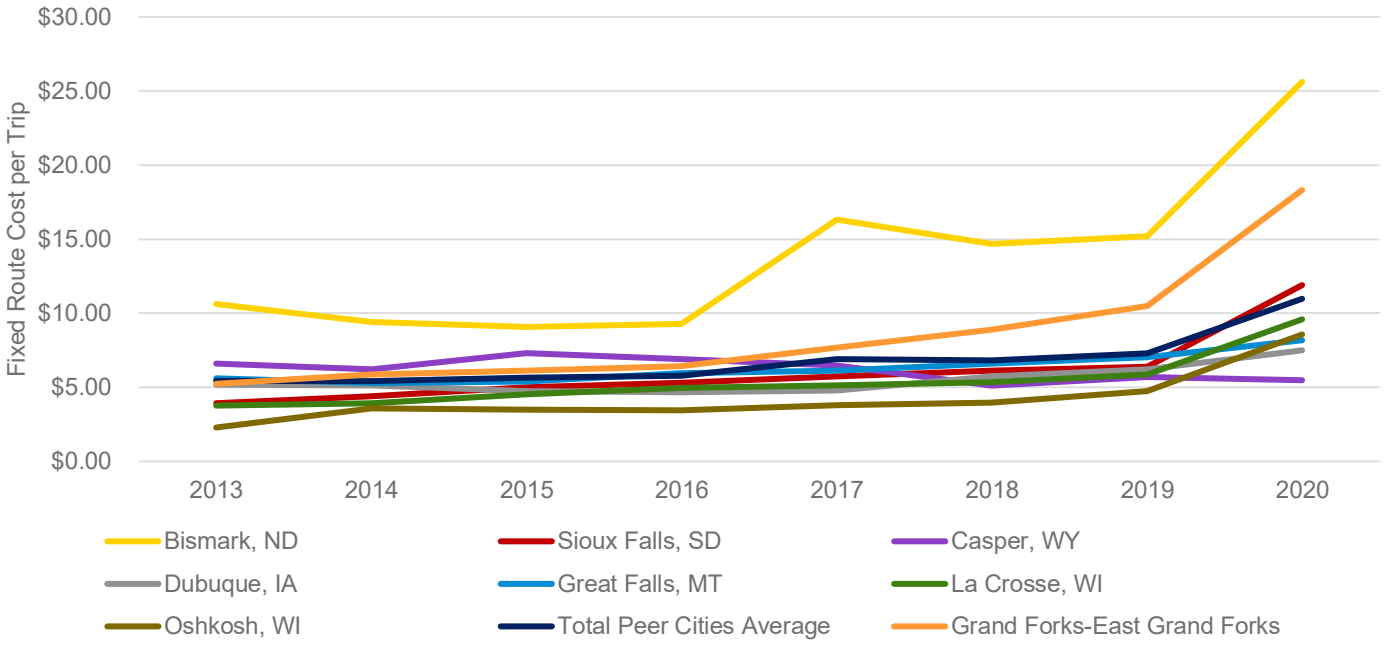


Figure 20: Fixed Route Cost per Trip

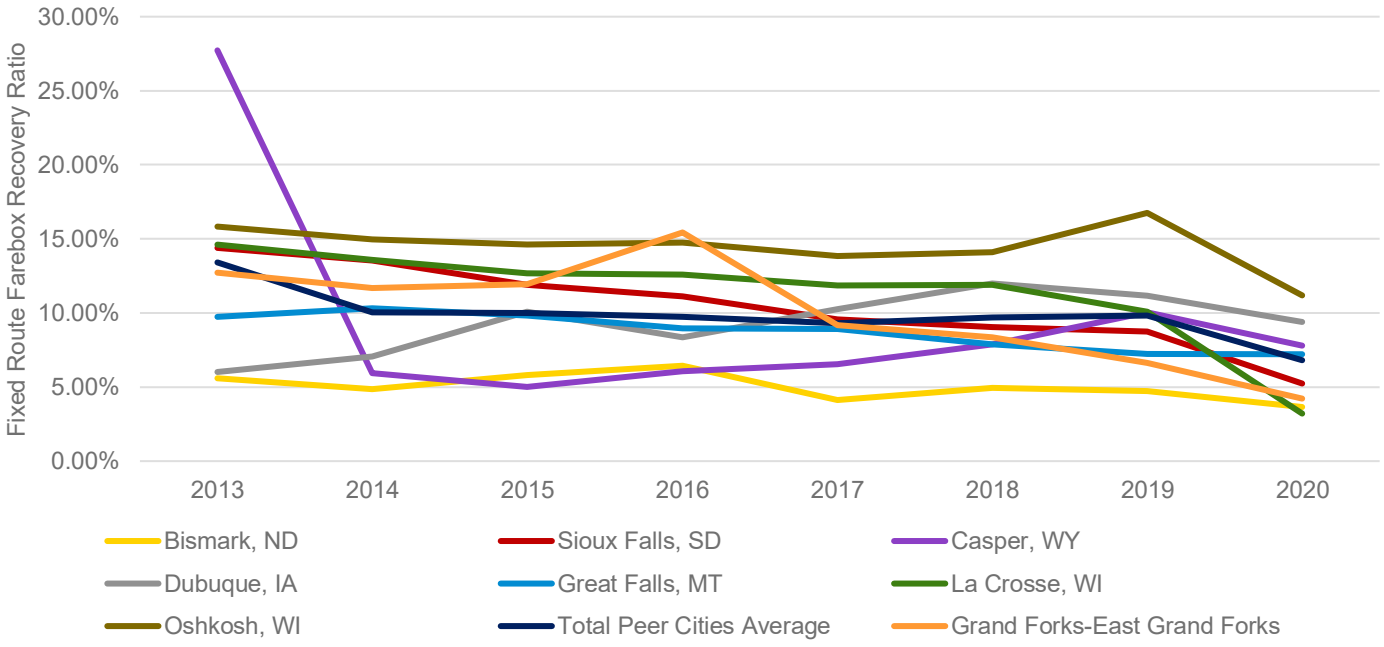


Figure 21: Fixed Route Farebox Recovery Ratio

Demand Response Peer Analysis

The peer system demand response characteristics is shown in Table 9.

Table 9: Peer System Demand Response Characteristics

	2020 Population	2020 Population Density	Operating Expenses	Revenue Hours	Revenue Miles
Bismarck, ND	129,641	29.8	$2,070,486	28,715	378,456
Sioux Falls, SD	273,566	105.8	$3,062,097	28,334	238,089
Casper, WY	80,815	15.0	$1,206,949	18,910	203,843
Dubuque, IA	97,590	158.4	$1,281,694	24,380	245,186
Great Falls, MT	81,346	30.0	$766,078	16,030	180,619
La Crosse, WI	137,134	130.9	$223,555	3,513	61,771
Oshkosh, WI	171,631	296.9	$613,359	9,757	198,978
Peer System Average	138,818	109.6	$1,317,745	18,520	215,277
Grand Forks-East Grand Forks, ND-MN	104,362	30.4	$1,164,805	19,514	159,813

The peer system demand response performance is shown in Table 10. Figures 22-27 show the performance measures from 2013 to 2020, including comparing CAT's performance with peer systems and a peer system average. In 2020, CAT's Demand Response system:

- Recovered about 8.61 percent of operating costs through farebox revenue, which is lower than the peer system average (22.36 percent)
- Cost $7.29 per revenue mile, which is 26.3 percent higher than the peer system average ($5.77)
- Cost $31.03 per trip, which is similar to the peer system average ($31.63)
- Had 0.2 passengers per revenue mile, which is equivalent to the peer system average
- Provided 1.5 revenue miles per capita, which is slightly lower than the peer system average (2.0)

Table 10: Demand Response Peer Performance

	Ridership	Revenue Miles Per Capita	Passengers Per Revenue Mile	Cost Per Revenue Mile	Cost Per Trip	Farebox Recover Ratio
Bismarck, ND	71,635	4.0	0.2	$5.47	$28.90	8.16%
Sioux Falls, SD	39,130	0.9	0.2	$12.86	$78.25	3.61%
Casper, WY	37,561	2.5	0.2	$5.92	$32.13	4.03%
Dubuque, IA	53,529	2.5	0.2	$5.23	$23.94	16.93%
Great Falls, MT	38,243	2.2	0.2	$4.24	$20.03	9.98%
La Crosse, WI	9,426	0.5	0.2	$3.62	$23.72	42.23%
Oshkosh, WI	42,469	1.2	0.2	$3.08	$14.44	71.62%
Total Peer Cities Average	41,713	2.0	0.2	$5.77	$31.63	22.36%
Grand Forks-East Grand Forks, ND-MN	37,542	1.5	0.2	$7.29	$31.03	8.61%

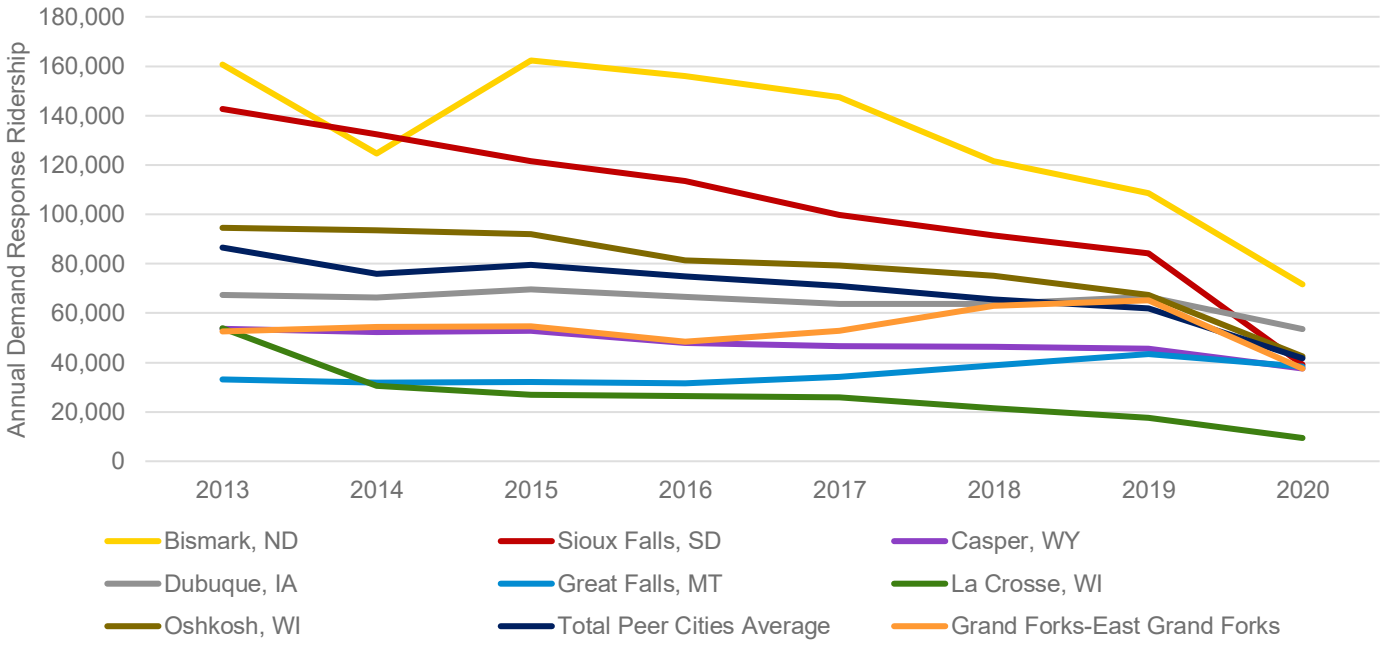


Figure 22: Annual Demand Response Ridership[5]

[5] In efforts to keep all data consistent, Bismarck (2014) calculations exclude Demand-Response Taxi data

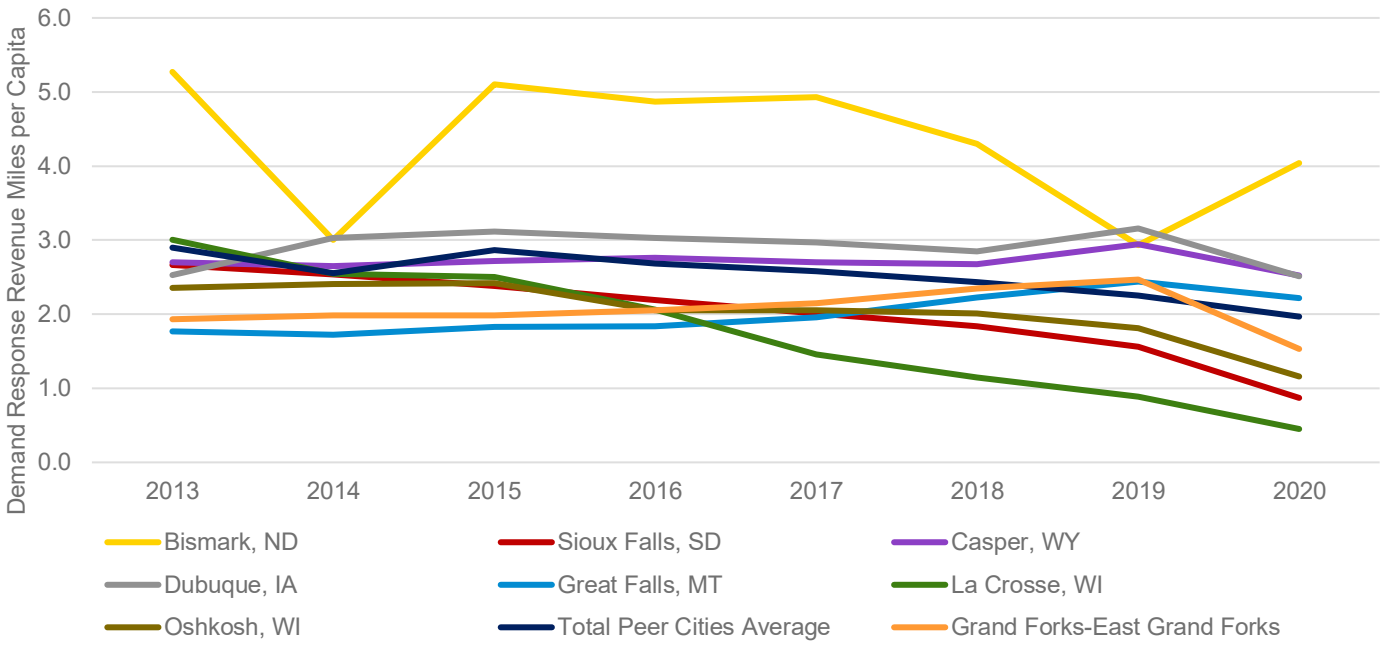


Figure 23: Demand Response Revenue Miles per Capita

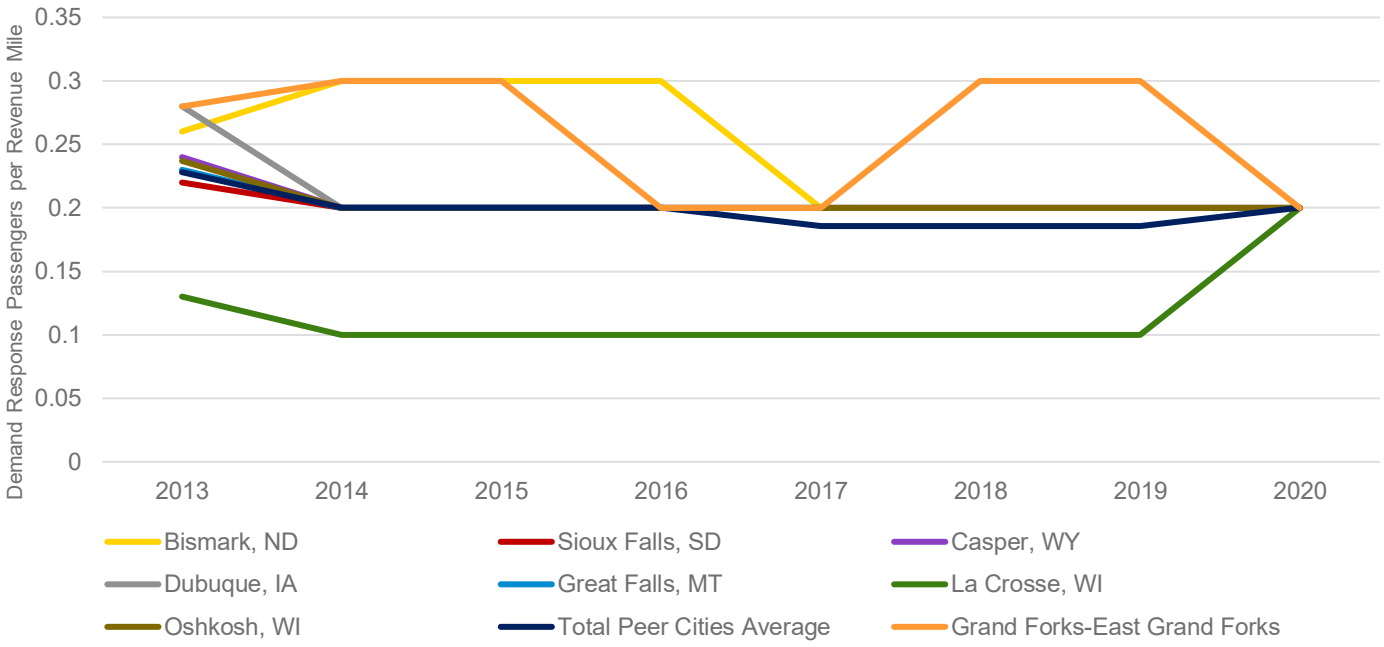


Figure 24: Demand Response Passengers per Revenue Mile

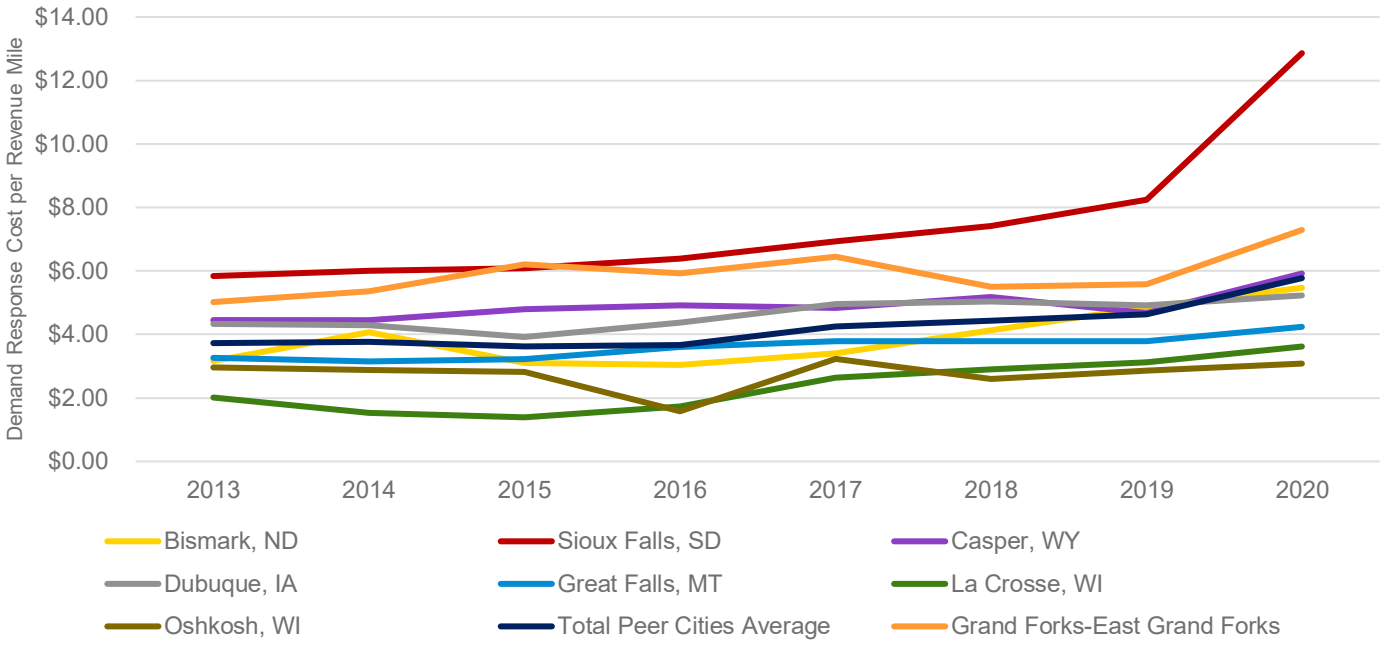


Figure 25: Demand Response Cost per Revenue Mile

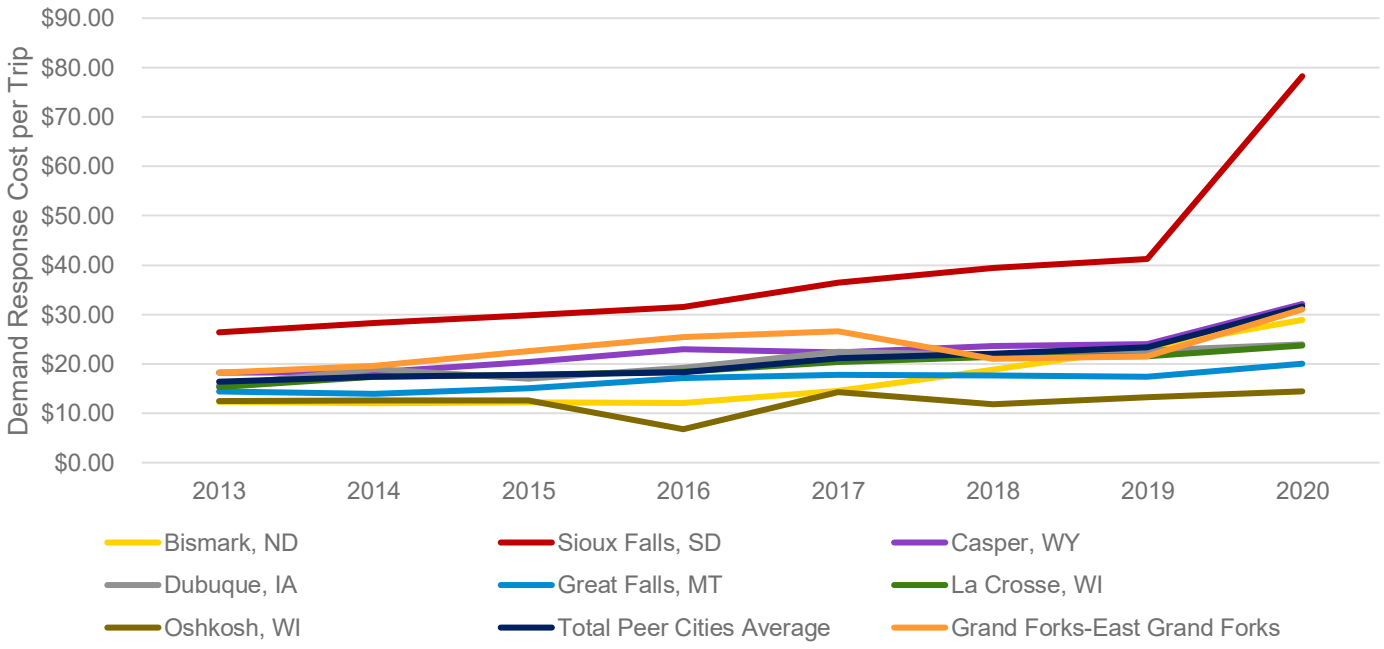


Figure 26: Demand Response Cost per Trip

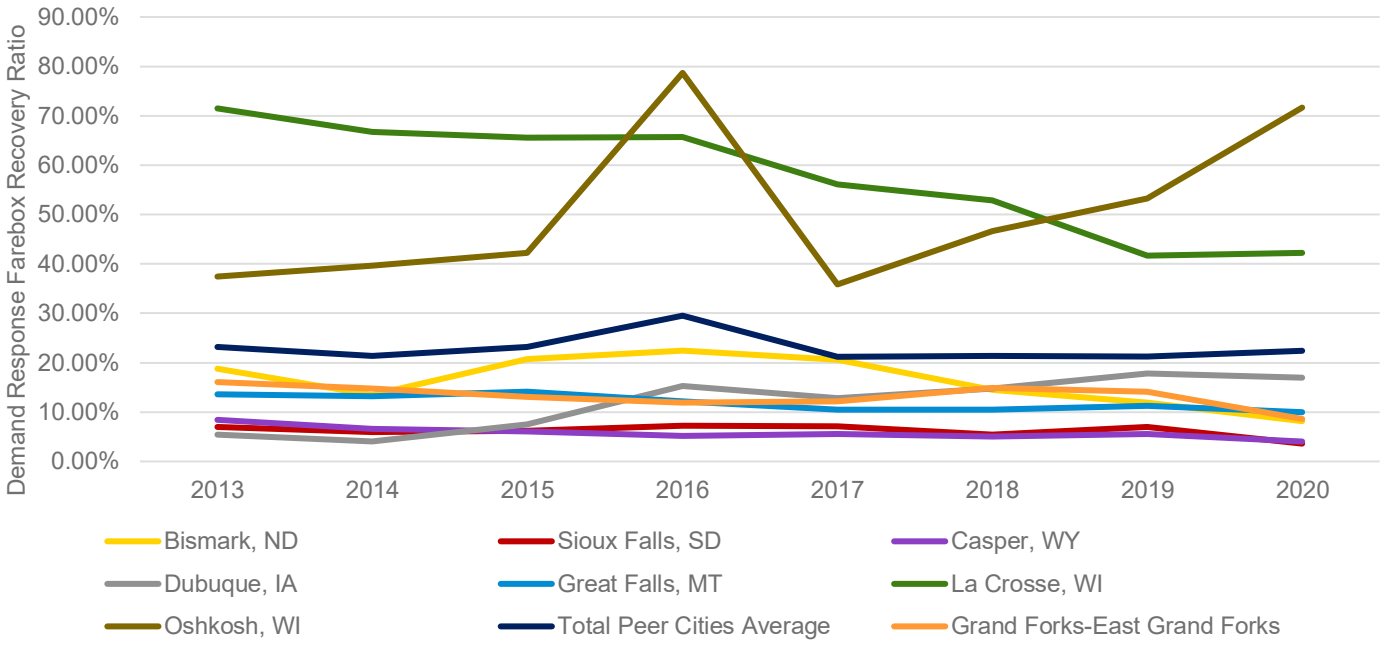


Figure 27: Demand Response Farebox Recovery Ratio

Fare Analysis

Peer systems offer a variety of full and reduced fare options, as shown in Table 7. Three of these systems have only two tiers for their fares, a full fare and a reduced fare. Five of the peer systems have a full fare that is at the same rate as CAT ($1.50). Overall, the reduced fares offered are simpler than that of CAT, commonly with a single reduced fare rate and free fare for others. As for passes, CAT is the only system that provides 14-day passes, and the 31-day pass ($35) is cheaper than two out of the seven peer systems that provide similar options.

Table 11: Peer System Fares

	Full Fare	Reduced Fare	Available Passes and Fares	Mobile Ticketing
Dubuque, IA	$1.50	$0.75	11 Ride Pass: > Full fare: $15 > Half fare*: $7.50 Monthly Unlimited Ride Pass: > Full fare: $45 > Half fare: $22.50 Annual Student Pass (grades K-12): Free (application required) *Half fare eligible groups: Age 65 or older and disabled residents	MyJule Smartphone App: > View routes and schedules > Plan a trip > Purchase bus pass from the app

	Full Fare	Reduced Fare	Available Passes and Fares	Mobile Ticketing
Oshkosh, WI	$1.50	$0.75	Monthly Pass (unlimited rides): $35 3-Month Passes Bundled: $90	Token Transit App > Available on multiple apps (Google Pay, Token Transit, Get Moovit) > Purchase passes > Send a pass
La Crosse, WI	$1.50	$1.25: youth $0.75: seniors, disabled Free: children, university	Adult Fare (18+): $35 (unlimited one-way trips for the month shown) Youth Fare: > $23 (unlimited one-way trips for month shown) > $30 (Summer Freedom Pass: June through August) > $45 (Max Pass) Children 3 and under: Free Senior Citizen 65 and over: $25 Disabled Persons: $25 UWL, Western, & Viterbo students: Free (U-Pass)	N/A
Bismarck, ND	$1.50	$0.75	30-Day Pass: > Regular Fare: $36 > Reduced Fare*: $24 > Children 5 and under, individuals 65 years and over, and paratransit passengers: Free *Reduced Fare applies to students K-12 and higher education, Medicare card holders, and Veterans	Token Transit App > Available on multiple apps (Google Pay, Token Transit, Get Moovit) > Purchase passes > Send a pass
Casper, Wyoming	$1.00	$0.50: seniors, Disabled, Medicare Recipients $0.75: students $0.50: children under 5 years	Monthly Pass: > General Public/Youth: $30 > Seniors, Disabled, Medicare: $15 > Students: $25 > Children 5 and under: Free	N/A

	Full Fare	Reduced Fare	Available Passes and Fares	Mobile Ticketing
Sioux Falls, SD	$1.50	$0.75: persons over 65 years old $0.75: persons with disabilities $0.75: Medicare cardholders $0.75: children 6 to 10 years old Free: children 5 years and under	30-Day Pass: > Adult: $30 > Elderly (65+) and persons with a disability: $15 10-Ride Pass: $10.50 7-Day Pass: $12.50 > Elderly (65+) and persons with a disability: $6.25 Freedom Pass (for all school students during school vacation): Free	SAM on Demand > Saturday bus service > Available on Android, Apple, and Online > Book rides at specific times and stops
Great Falls, MT	$1.00	$0.75: student $0.50: senior citizens $0.50: persons with disabilities Free: children 5 years and under; paratransit service clients; transfers	Monthly Pass: > Regular: $30 > Student: $25 > Seniors and People with Disabilities: $21	N/A

Route Analysis

The following section includes an analysis of the individual fixed routes. This analysis includes:

- Key destinations
- Annual average statistics by route
  - Revenue hours
  - Revenue miles
  - Operating cost estimates
  - Ridership
- Average daily statistics by route
  - Total boardings
  - Passengers per hour
  - Passengers per mile
  - Passengers per trip
- Route maps
- Route analysis summary

The routes were also ranked for comparison to each other. Ranks are ordered from highest to lowest for each metric. For total boardings, passengers per hour, passengers per mile, and passengers per trip, higher numbers and lower rankings indicate better performance. For revenue hours, revenue miles and operating costs, rankings are also ranked high too low for continuity, however, a lower ranking in these cases indicate a more costly, service-intensive route. CAT non-UND routes are ranked separately from UND routes in order to provide a better comparison for CAT's non-UND routes before

and after the COVID-19 pandemic. This analysis will provide a foundation for route improvement recommendations. Summaries of route characteristics can in Table 12 and Table 13.

Table 12: Pre-COVID Route Characteristics Summary Table

Route Number	Average Annual Ridership[6]	Average Daily Passengers	Average Daily Passengers Per Hour	Average Passengers Per Mile	Average Passengers Per Trip	Estimated Operating Expenses
1	10,582	33.8	6.7	0.5	3.3	$145,857
2	9,173	29.3	5.4	0.6	2.7	$157,585
3	30,532	97.5	7.7	0.5	3.8	$366,977
4	9,806	31.3	5.7	0.6	2.9	$157,585
5	46,557	148.7	13.5	1.4	13.5	$317,561
6	13,405	42.8	6.0	0.5	3.0	$207,001
7	50,484	161.3	14.6	1.5	14.6	$317,561
8	9,576	30.6	2.8	0.3	2.8	$317,561
9	10,783	34.5	3.1	0.3	3.1	$317,561
10	17,342	55.4	5.0	0.5	5.0	$317,561
12	2,778	10.6	1.0	0.1	1.0	$258,004
13 (Also known as 22)	6,157	19.7	5.0	0.4	5.0	$112,951
14 (UND Red)	82,785	459.9	54.1	6.6	13.5	$140,729
15 (UND Purple)	52,578	292.1	34.4	2.5	8.6	$140,729
16 (UND Blue)	64,785	359.9	42.3	6.7	14.1	$140,729
25 (UND Night)	13,267	92.1	19.5	1.9	9.8	$62,546

[6] Estimated through monthly estimates provided for July 2018-February 2020 by CAT and UND.

Table 13: COVID-19 Route Characteristics Summary Table

Route Number	Average Annual Ridership[7]	Average Daily Passengers	Average Daily Passengers Per Hour	Average Passengers Per Mile	Average Passengers Per Trip	Estimated Operating Expenses
1	3,774	12.1	2.4	0.2	1.2	$145,857
2	7,384	23.6	4.3	0.5	2.2	$157,585
3	20,429	65.3	5.1	0.3	2.6	$366,977
4	5,781	18.5	3.4	0.3	1.7	$157,585
5	19,886	63.5	5.8	0.6	5.8	$317,561
6	7,076	22.6	3.1	0.3	1.6	$207,001
7	27,889	89.1	8.1	0.8	8.1	$317,561
8	6,005	19.2	1.7	0.2	1.7	$317,561
9	5,590	17.9	1.6	0.2	1.6	$317,561
10	15,975	51.0	4.6	0.4	4.6	$317,561
12	720	2.7	0.3	0.0	0.3	$258,004
13 (Also known as 22)	2,729	8.7	2.2	0.2	2.2	$112,951
14 (UND Red)	8,451	46.9	5.5	0.7	1.4	$140,729
15 (UND Purple)	8,917	49.5	5.8	0.4	1.5	$140,729
16 (UND Blue)	7,398	41.1	4.8	0.8	1.6	$140,729
25 (UND Night)	1,763	12.2	2.6	0.3	1.3	$62,546

[7] Estimated through monthly estimates provided for July 2018-February 2020 by CAT and UND.

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 1

Key Destinations: Downtown, Salvation Army, Hamline & University, UND - Stanford Center, N 39th St Shelter, Princeton & 6th Ave N, 15th & University, YMCA

	WEEKDAY	WEEKEND
SPAN	7:00AM – 5:30PM	8:00AM - 5:30PM
FREQUENCY	60 minutes	60 minutes

AVERAGE ANNUAL STATISTICS

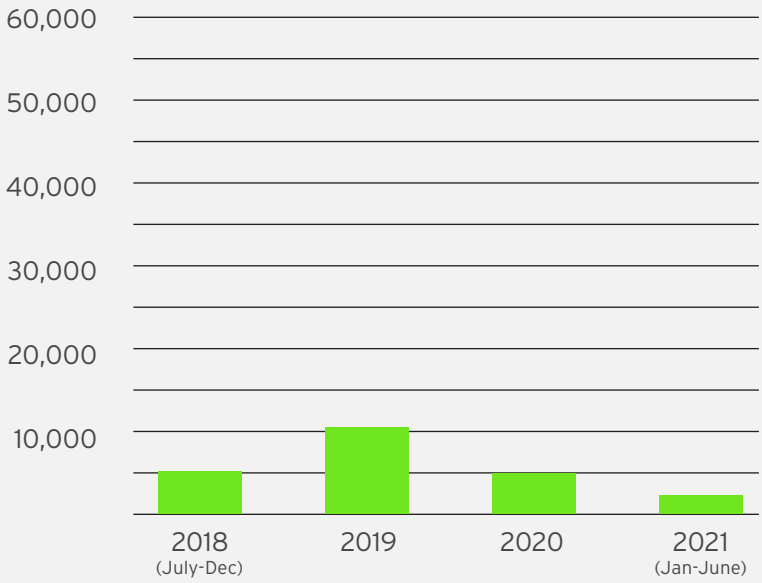
REVENUE HOURS	1,586	RANK 11/12
REVENUE MILES	21,603	RANK 9/12
OPERATING COSTS	$145,857	RANK 11/12

RIDERSHIP	PRE-COVID	COVID
	10,528	3,774

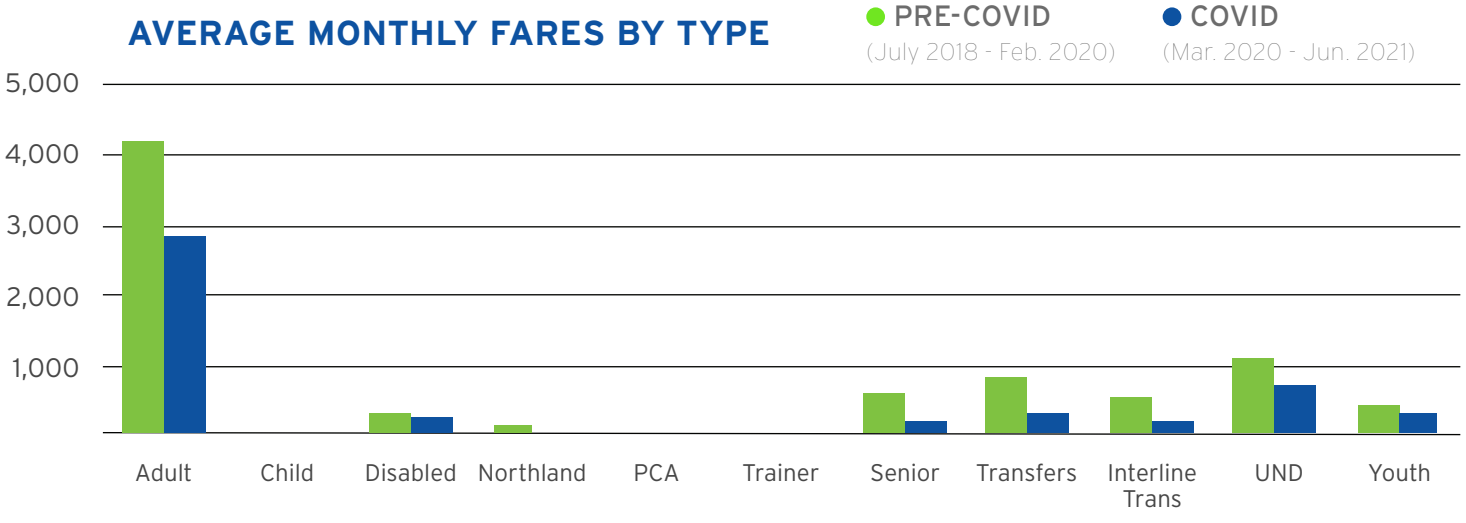
AVERAGE DAILY STATISTICS

	PRE-COVID	COVID
TOTAL BOARDINGS	33.8 RANK 7/12	12.1 RANK 10/12
PASSENGERS PER HOUR	6.7 RANK 4/12	2.4 RANK 8/12
PASSENGERS PER MILE	0.5 RANK 7/12	0.2 RANK 8/12
PASSENGERS PER TRIP	3.3 RANK 6/12	1.2 RANK 11/12

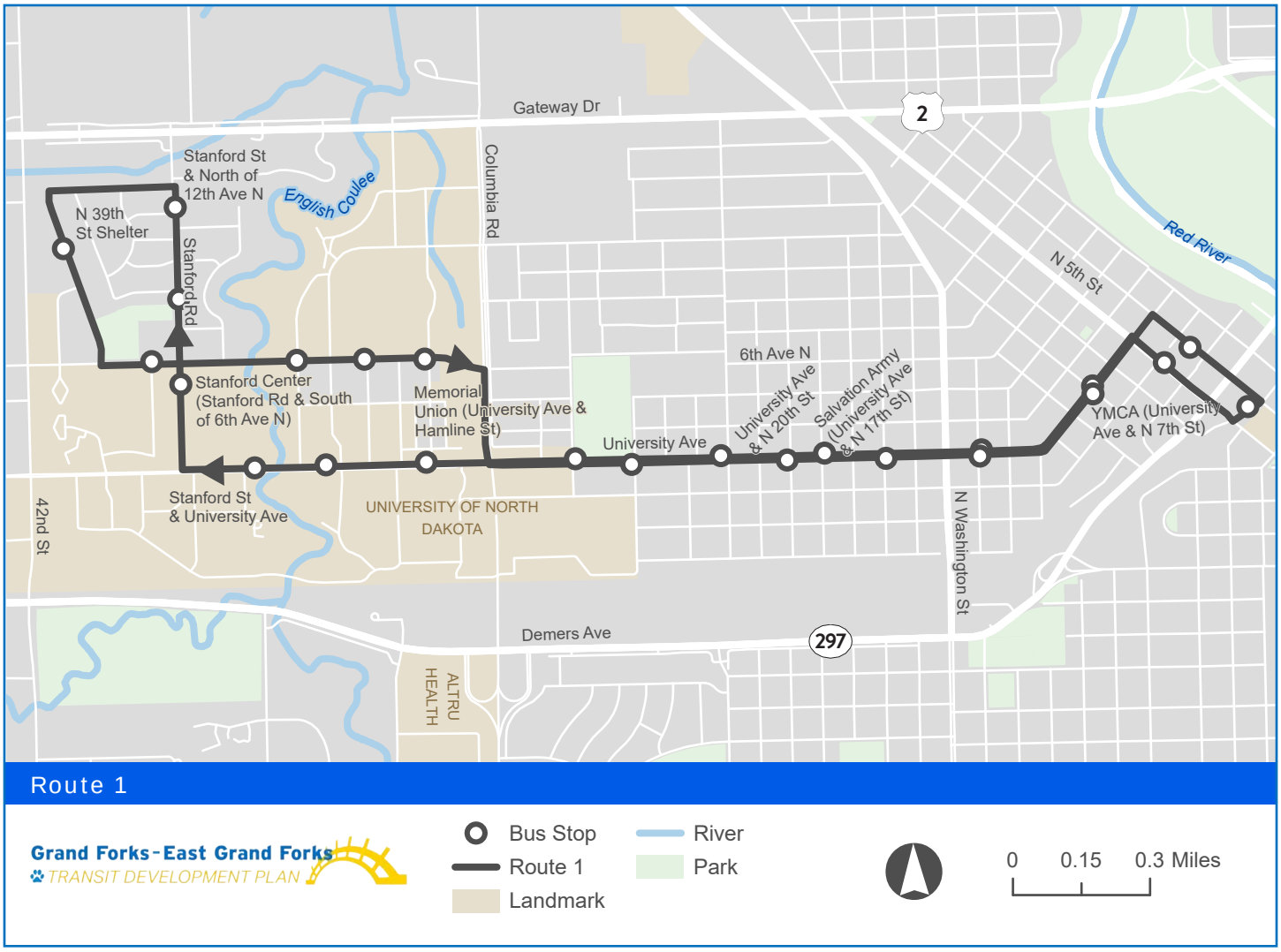
ANNUAL RIDERSHIP TREND



AVERAGE MONTHLY FARES BY TYPE



ROUTE MAP



ROUTE ANALYSIS

STRENGTHS

- Provides circulation within UND and connects UND to downtown
- Relatively direct route
- Provides connections to many north-south routes

WEAKNESSES

- Route duplication with Route 5 and the UND shuttles
- Low ridership

OPPORTUNITIES

- Continue to serve this area with other existing routes and reinvest this route's resources into other routes

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 2

Key Destinations: Downtown, N 5th St & 10th Ave, Home of Economy, Hugo's, Valley Middle School, St. Anne's

	WEEKDAY
SPAN	6:30AM – 6:00PM
FREQUENCY	60 minutes

	WEEKEND
SPAN	8:30AM - 6:00PM
FREQUENCY	60 minutes

AVERAGE ANNUAL STATISTICS

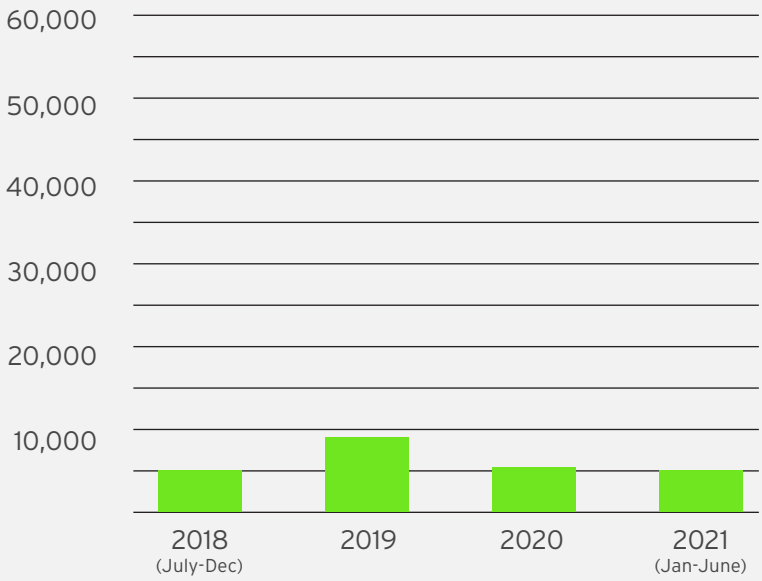
		RANK
REVENUE HOURS	1,713	9/12
REVENUE MILES	14,709	12/12
OPERATING COSTS	$157,585	9/12

RIDERSHIP	PRE-COVID	COVID
	9,173	7,384

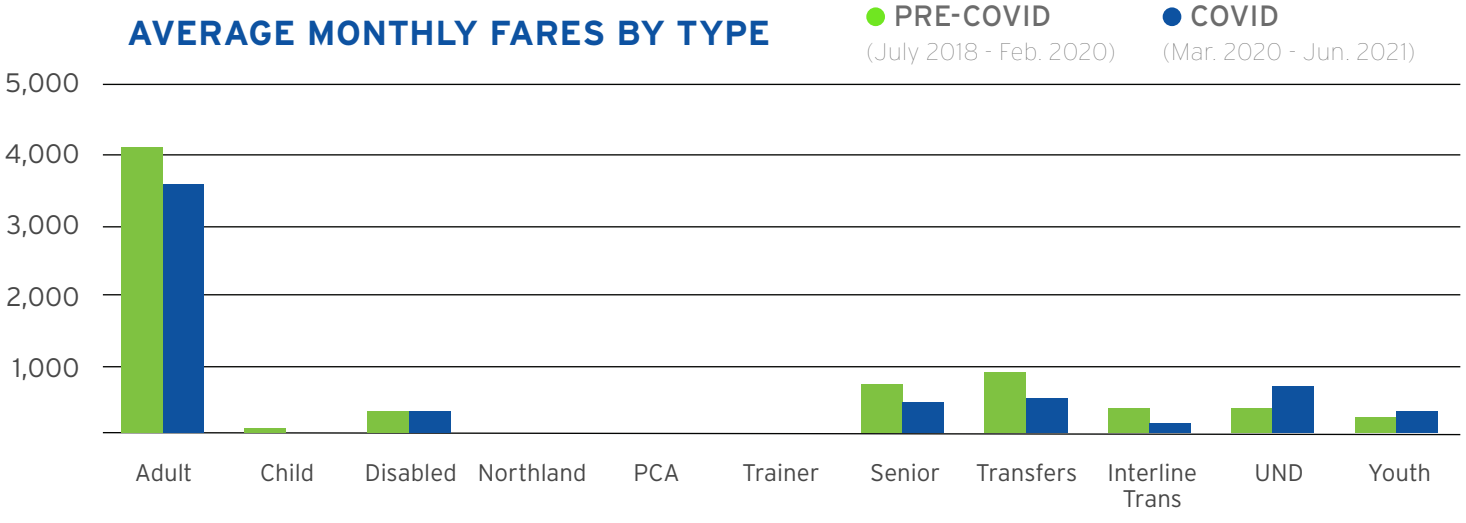
AVERAGE DAILY STATISTICS

	PRE-COVID	RANK	COVID	RANK
TOTAL BOARDINGS	29.3	10/12	23.6	5/12
PASSENGERS PER HOUR	5.4	7/12	4.3	5/12
PASSENGERS PER MILE	0.6	3/12	0.5	3/12
PASSENGERS PER TRIP	2.7	11/12	2.2	6/12

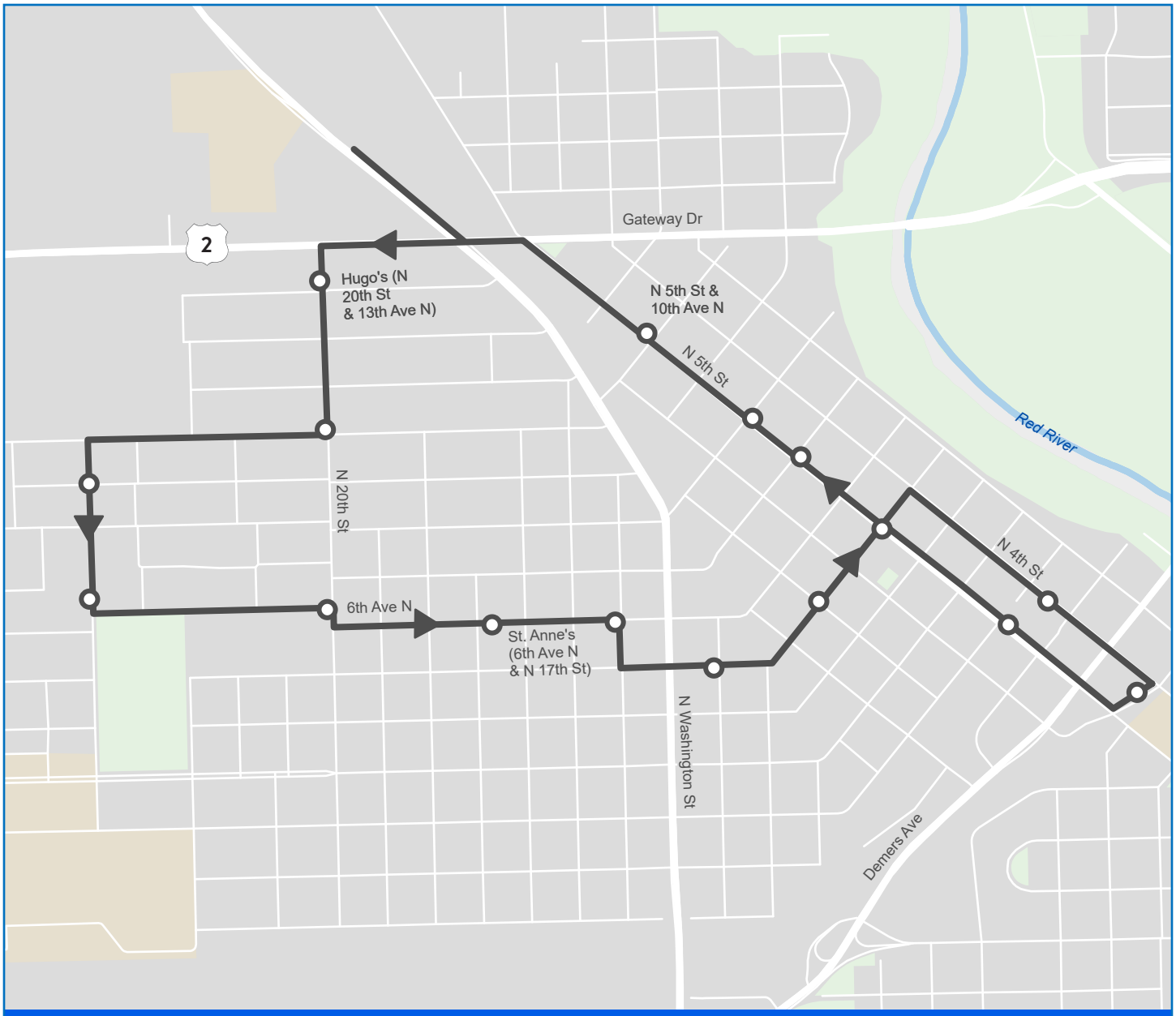
ANNUAL RIDERSHIP TREND



AVERAGE MONTHLY FARES BY TYPE



ROUTE MAP



ROUTE ANALYSIS

STRENGTHS

- Daily performance rankings improved during COVID relative to other routes
- Serves Hugo's and several schools

WEAKNESSES

- Operates in a one-way loop
- Low ridership

OPPORTUNITIES

- Connect to a stronger destination at the northwester part of the route

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 3 Day & Evening Service Route

Key Destinations: Downtown, the Link, 10th & Belmont, Hugo's, Altru - Columbia Rd, Red River High, Midtown, 17th Ave & Cherry

	WEEKDAY
SPAN	6:30AM – 9:30PM
FREQUENCY	30 min. to 6PM, then 60 min.

	WEEKEND
SPAN	8:00AM - 9:30PM
FREQUENCY	30 min. to 6PM, then 60 min.

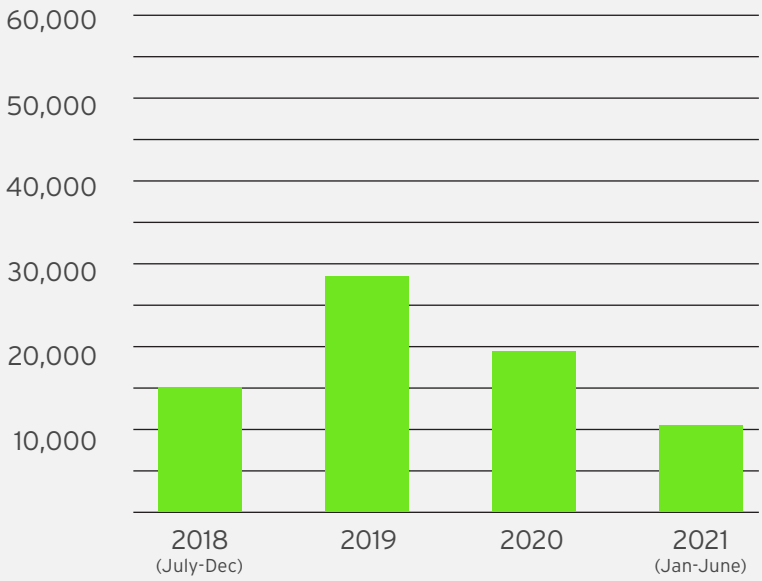
AVERAGE ANNUAL STATISTICS

REVENUE HOURS	3,990	RANK	1/12	
REVENUE MILES	58,893	RANK	1/12	
OPERATING COSTS	$366,977	RANK	1/12	
	PRE-COVID		COVID	
RIDERSHIP	30,532		20,429	

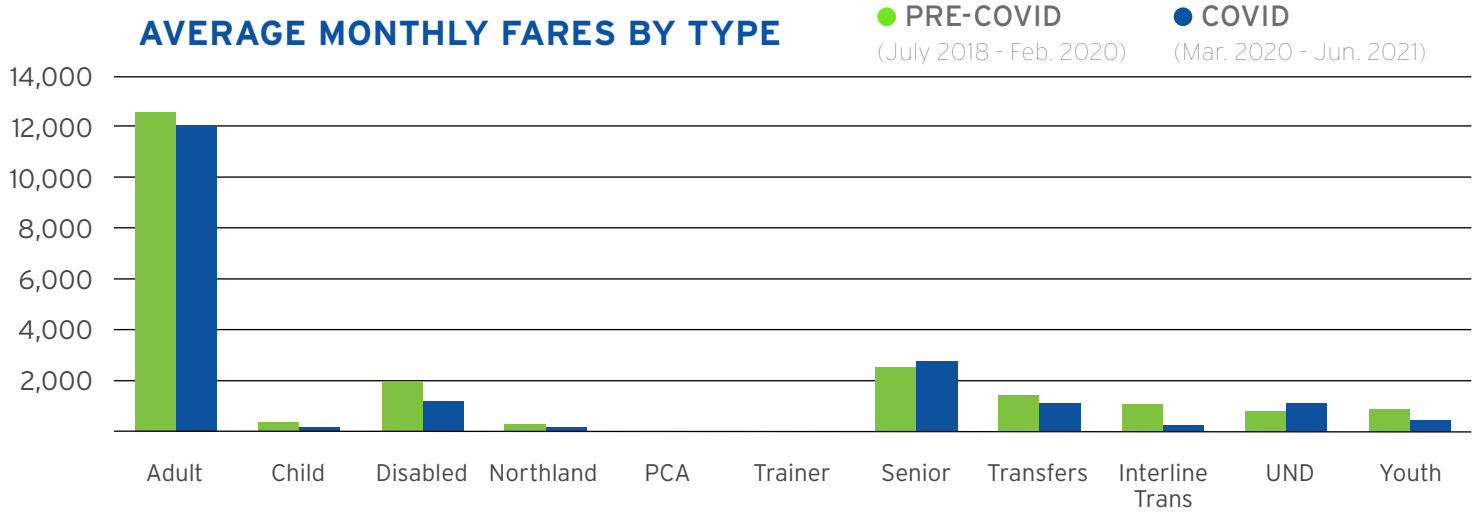
AVERAGE DAILY STATISTICS

	PRE-COVID		COVID	
TOTAL BOARDINGS	97.5	RANK 3/12	65.3	RANK 2/12
PASSENGERS PER HOUR	7.7	RANK 3/12	5.1	RANK 3/12
PASSENGERS PER MILE	0.5	RANK 6/12	0.3	RANK 5/12
PASSENGERS PER TRIP	3.8	RANK 5/12	2.6	RANK 4/12

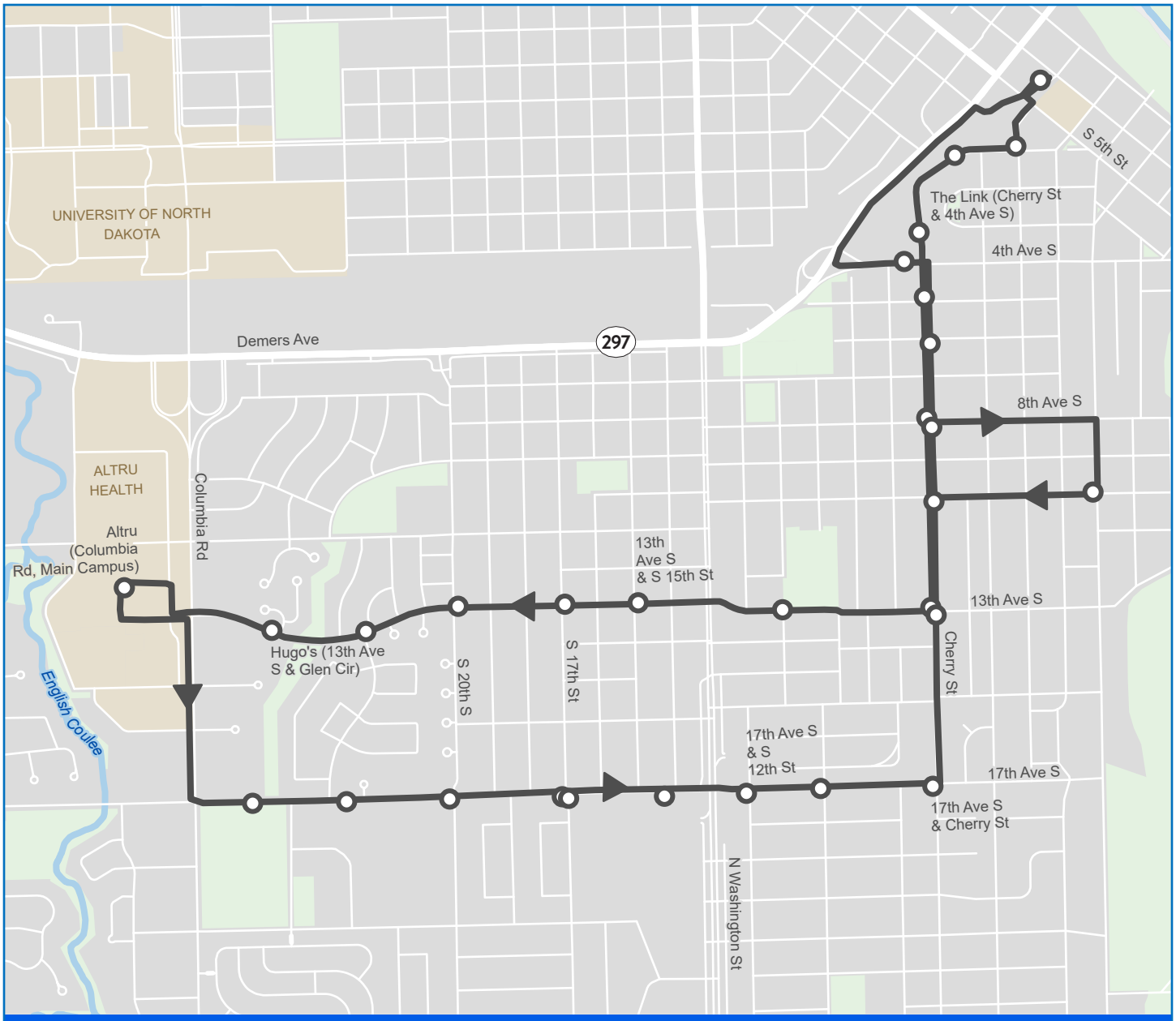
ANNUAL RIDERSHIP TREND



AVERAGE MONTHLY FARES BY TYPE



ROUTE MAP



ROUTE ANALYSIS

STRENGTHS

- High ridership
- Serves important destinations including Altru

WEAKNESSES

- Southern half of the route operates a one-way loop

OPPORTUNITIES

- Consider altering the southern half of the route to provide more direct service

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 4 East Grand Forks Route

Key Destinations: Downtown, Cabela's, Northland College, Hugo's, Sunshine Terrace, Campbell Library, Town Square Apartments

	WEEKDAY	WEEKEND
SPAN	6:00AM – 5:30PM	8:00AM - 5:30PM
FREQUENCY	60 minutes	60 minutes

AVERAGE ANNUAL STATISTICS

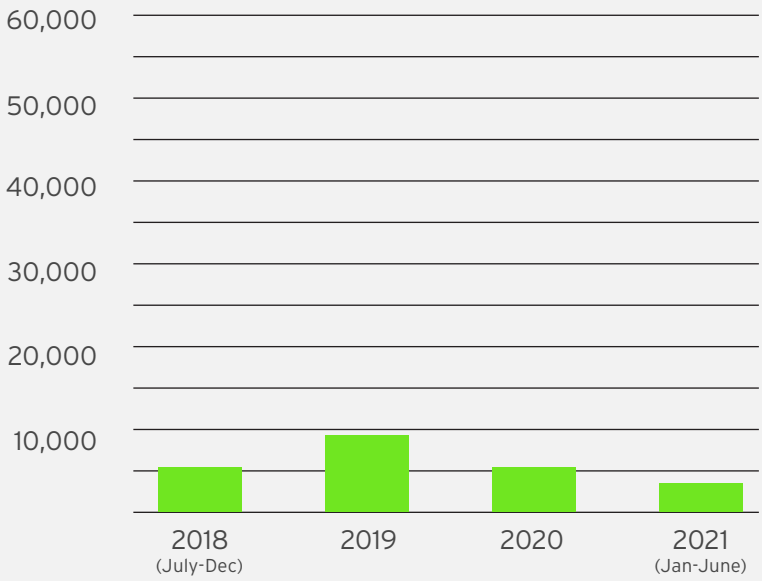
		RANK
REVENUE HOURS	1,713	9/12
REVENUE MILES	17,239	11/12
OPERATING COSTS	$157,585	9/12

RIDERSHIP	PRE-COVID	COVID
	9,806	5,781

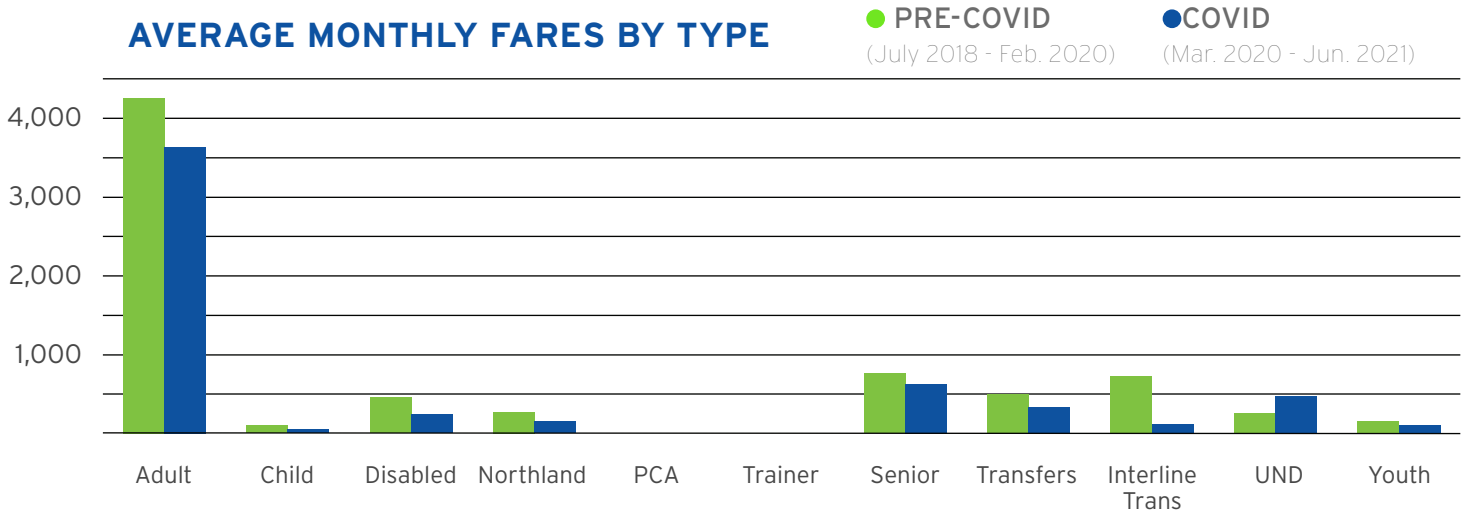
AVERAGE DAILY STATISTICS

	PRE-COVID	RANK	COVID	RANK
TOTAL BOARDINGS	31.3	8/12	18.5	8/12
PASSENGERS PER HOUR	5.7	6/12	3.4	6/12
PASSENGERS PER MILE	0.6	4/12	0.3	6/12
PASSENGERS PER TRIP	2.9	9/12	1.7	8/12

ANNUAL RIDERSHIP TREND



AVERAGE MONTHLY FARES BY TYPE



ROUTE MAP

ROUTE ANALYSIS

STRENGTHS

- Serves important East Grand Forks destinations like Northland, Hugo's and the library

WEAKNESSES

- 3 one-way loops in route

OPPORTUNITIES

- Consider making the route more direct by minimizing one-way loops

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 5

Key Destinations: Downtown, Salvation Army, Hamline & University, N 51st St Shelter Walmart West, Gateway Terrace, N 43rd St Shelter, UND - Odegard Hall, UND - Memorial Union, 15th & University, YMCA

	WEEKDAY
SPAN	6:00AM – 6:00PM
FREQUENCY	60 minutes

	WEEKEND
SPAN	8:00AM - 6:00PM
FREQUENCY	60 minutes

AVERAGE ANNUAL STATISTICS

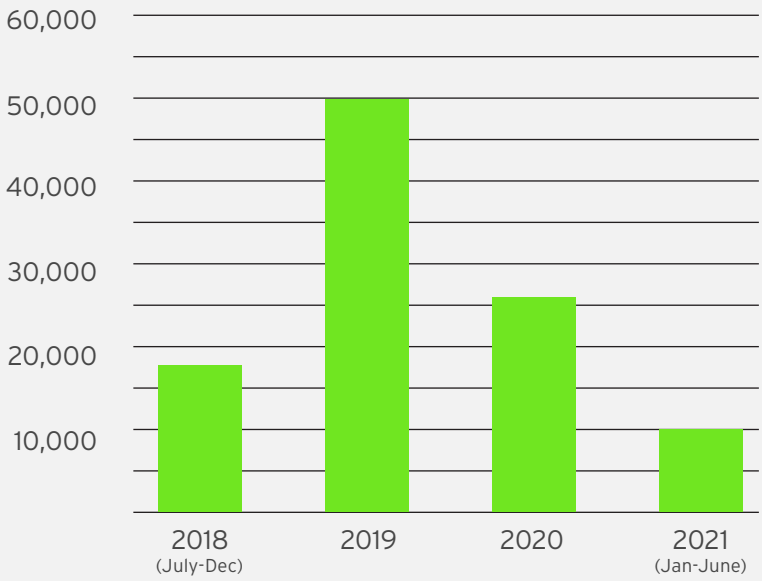
REVENUE HOURS	3,453	RANK 2/12
REVENUE MILES	34,256	RANK 6/12
OPERATING COSTS	$317,561	RANK 2/12

RIDERSHIP	PRE-COVID	COVID
	46,557	19,886

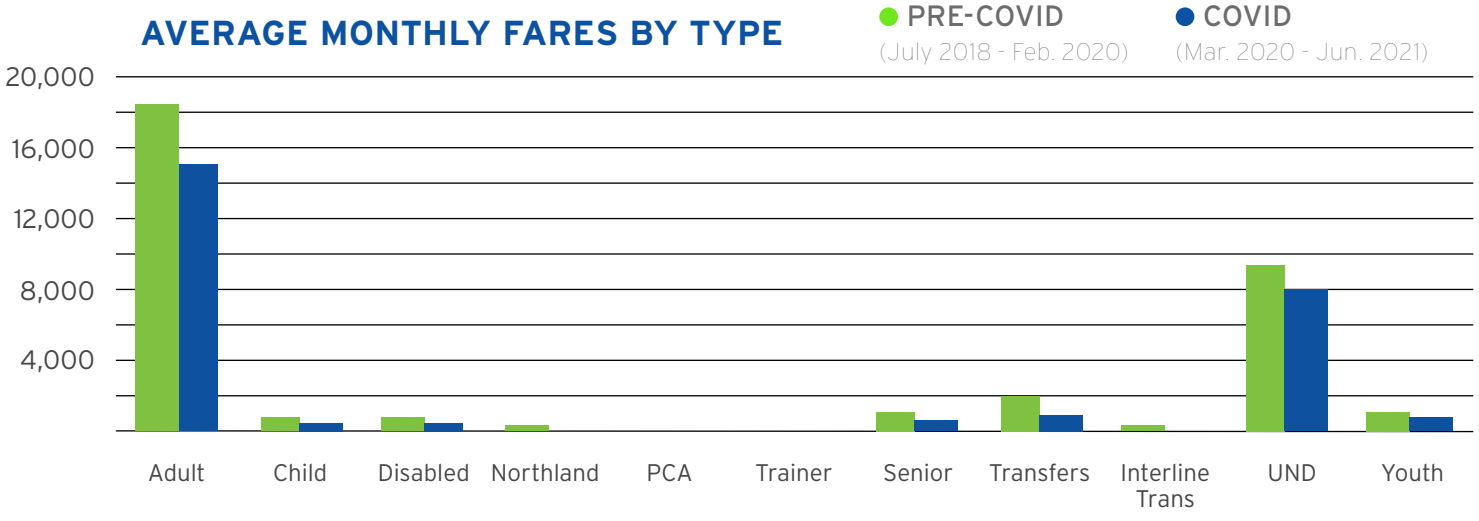
AVERAGE DAILY STATISTICS

	PRE-COVID	COVID
TOTAL BOARDINGS	148.7 RANK 2/12	63.5 RANK 3/12
PASSENGERS PER HOUR	13.5 RANK 2/12	5.8 RANK 2/12
PASSENGERS PER MILE	1.4 RANK 2/12	0.6 RANK 2/12
PASSENGERS PER TRIP	13.5 RANK 2/12	5.8 RANK 2/12

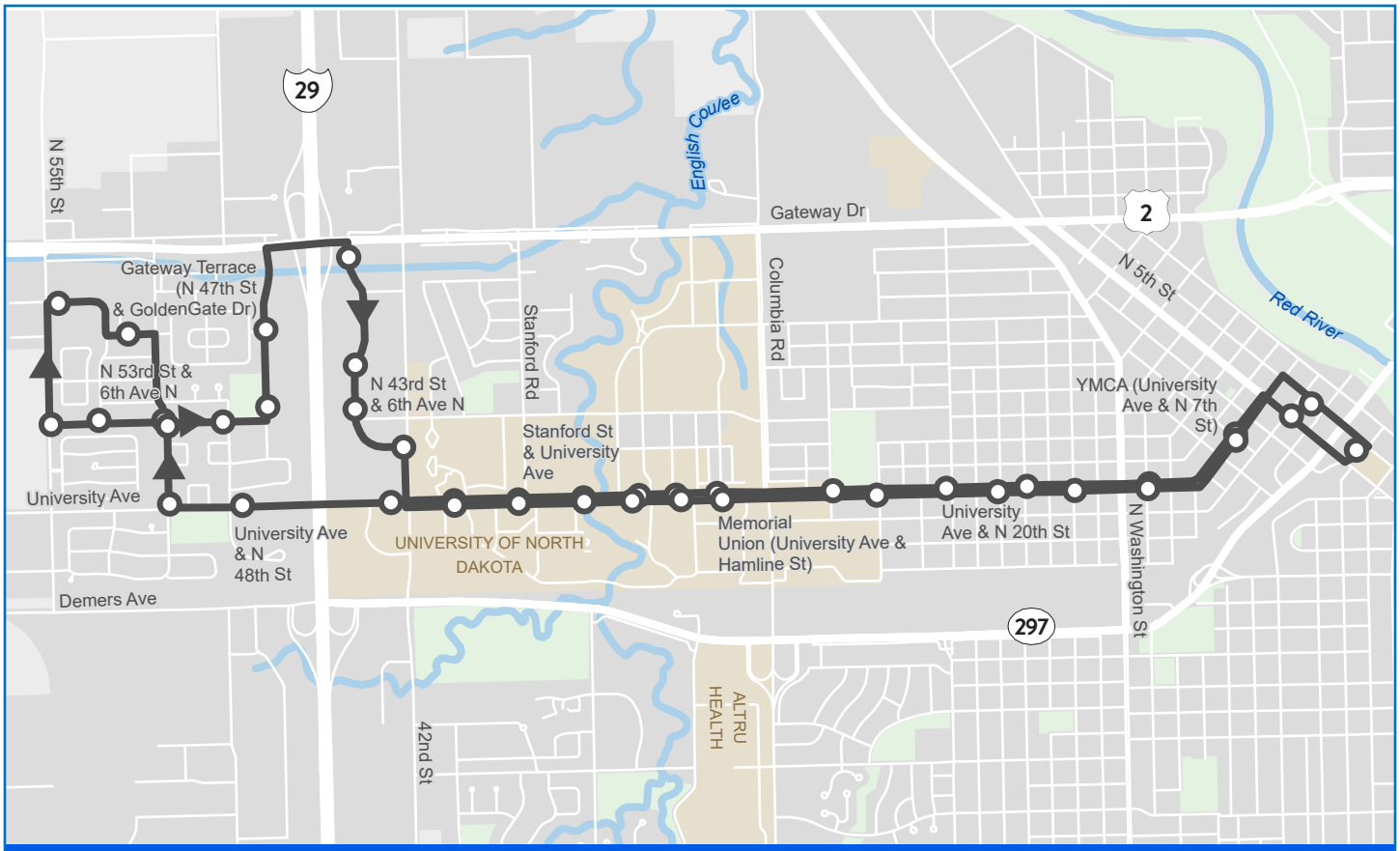
ANNUAL RIDERSHIP TREND



AVERAGE MONTHLY FARES BY TYPE



ROUTE MAP



ROUTE ANALYSIS

STRENGTHS

- High ridership
- Has strong destinations anchoring both ends of the route
- Serves UND
- Provides connections to many north-south routes

WEAKNESSES

- Duplicates Route 1 along University Avenue

OPPORTUNITIES

- Maintained high ridership per trip compared to other routes during COVID
- Consider consolidating route with Route 1

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 6 East Grand Forks - Day & Evening Service Route

Key Destinations: Downtown, Cabela's, 17th St NW & 8th Ave, Northland College, Hugo's, Sunshine Terrace, Campbell Library

	WEEKDAY
SPAN	6:30AM – 10:00PM
FREQUENCY	60 minutes

	WEEKEND
SPAN	8:30AM - 10:00PM
FREQUENCY	60 minutes

AVERAGE ANNUAL STATISTICS

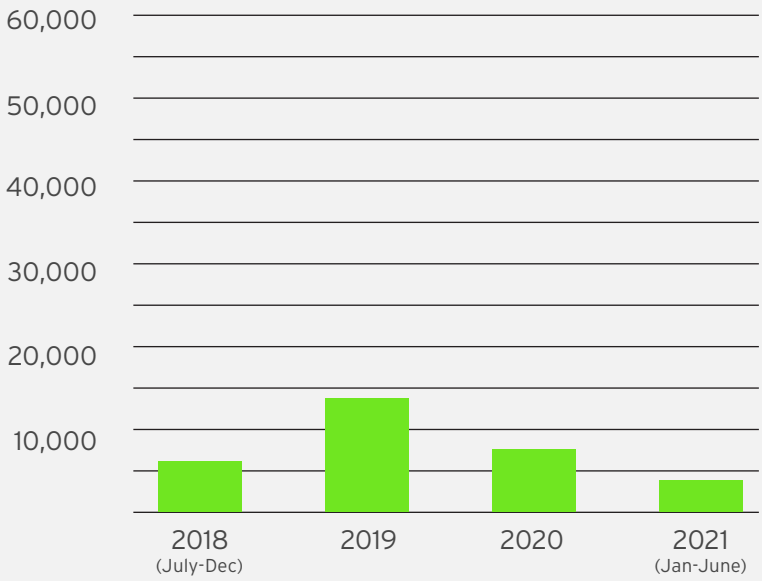
		RANK
REVENUE HOURS	2,251	8/12
REVENUE MILES	25,409	8/12
OPERATING COSTS	$207,001	8/12

RIDERSHIP	PRE-COVID	COVID
	13,405	7,076

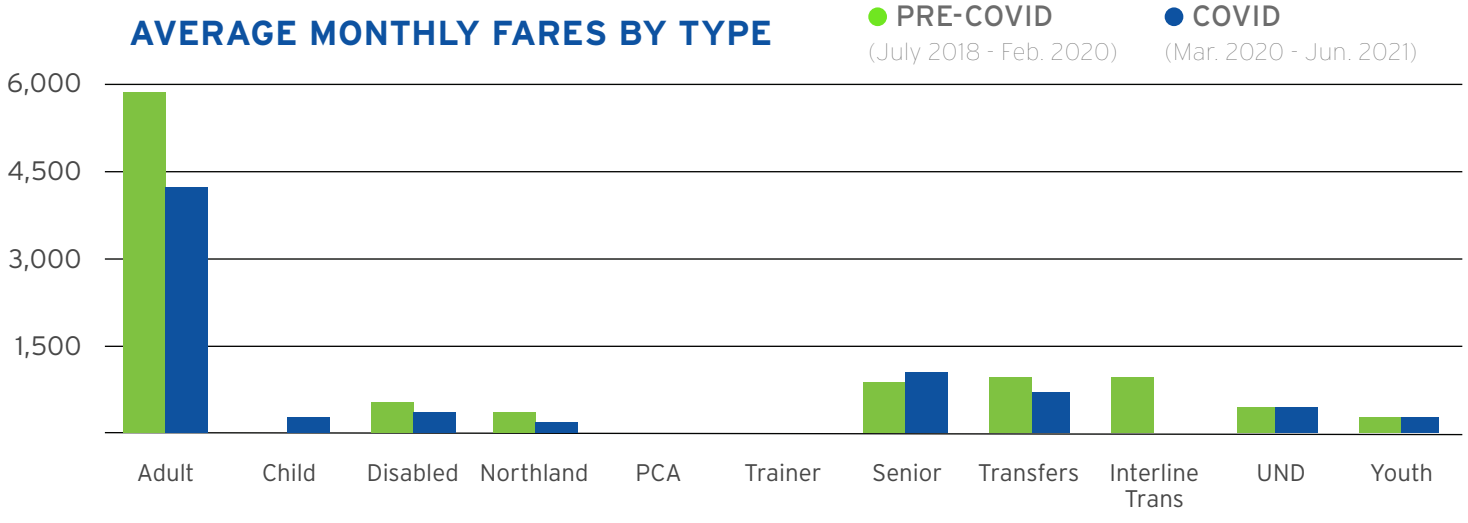
AVERAGE DAILY STATISTICS

	PRE-COVID	RANK	COVID	RANK
TOTAL BOARDINGS	42.8	5/12	22.6	6/12
PASSENGERS PER HOUR	6.0	5/12	3.1	7/12
PASSENGERS PER MILE	0.5	5/12	0.3	7/12
PASSENGERS PER TRIP	3.0	8/12	1.6	10/12

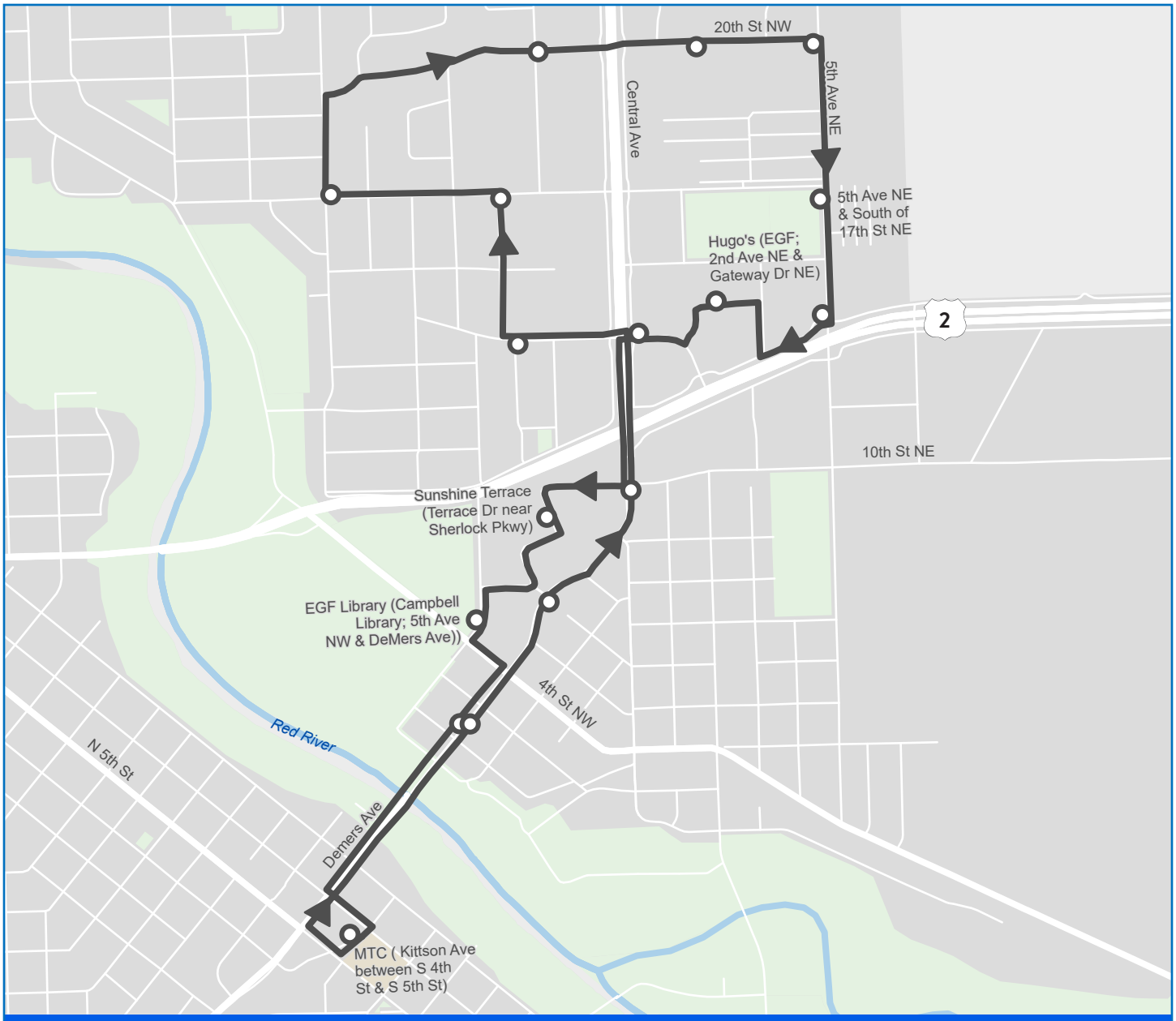
ANNUAL RIDERSHIP TREND



AVERAGE MONTHLY FARES BY TYPE



ROUTE MAP



ROUTE ANALYSIS

STRENGTHS

- Provides service to important destinations
- Serves neighborhoods that are more likely to ride transit

WEAKNESSES

- Operates as a large one-way loop
- Duplicates much of Route 4

OPPORTUNITIES

- There might be an opportunity to consolidate with Route 4

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 7

Key Destinations: Downtown, Grand Forks Library, Columbia Mall, Target, Development Homes, Walmart, Hugo's, Midtown

	WEEKDAY	WEEKEND
SPAN	6:30AM – 6:00PM	8:30AM - 6:00PM
FREQUENCY	60 minutes	60 minutes

AVERAGE ANNUAL STATISTICS

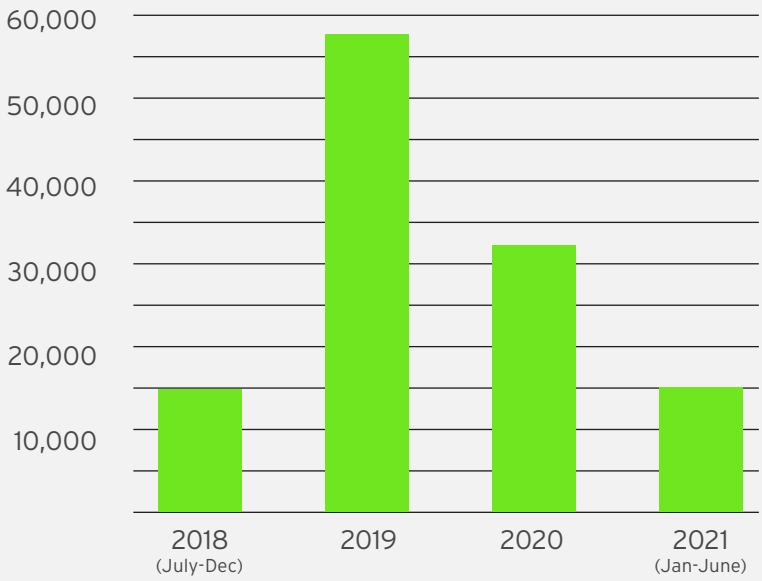
REVENUE HOURS	3,453	RANK 2/12 (TIE)
REVENUE MILES	34,387	RANK 5/12
OPERATING COSTS	$317,561	RANK 2/12 (TIE)

RIDERSHIP	PRE-COVID	COVID
	50,484	27,889

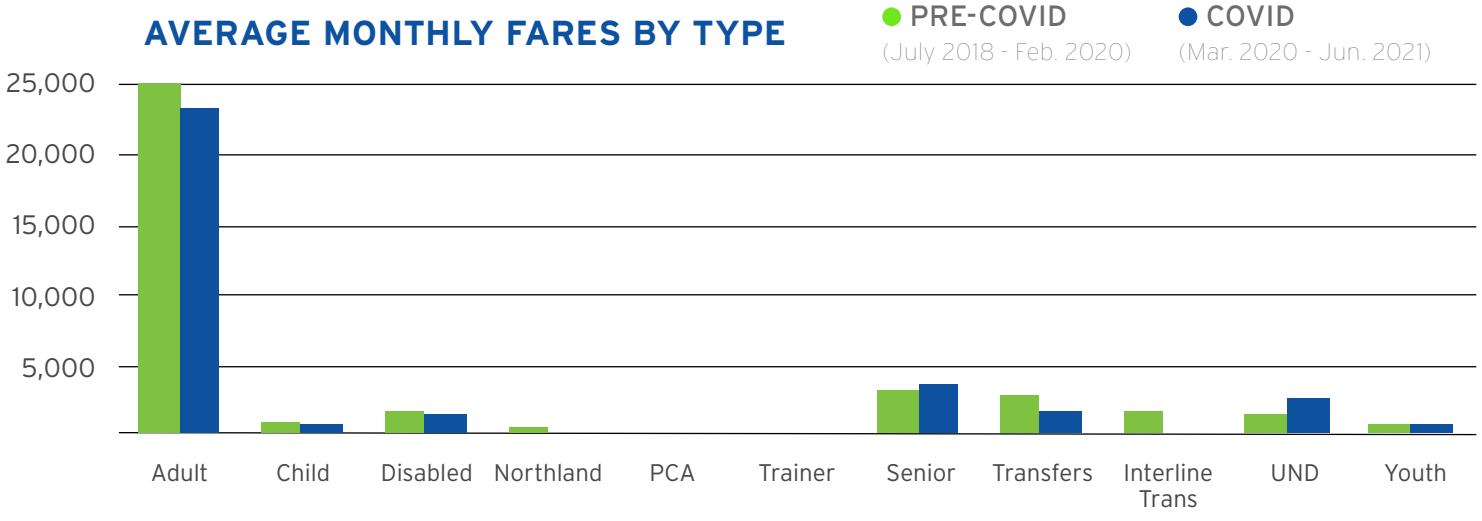
AVERAGE DAILY STATISTICS

	PRE-COVID	RANK	COVID	RANK
TOTAL BOARDINGS	161.3	1/12	89.1	1/12
PASSENGERS PER HOUR	14.6	1/12	8.1	1/12
PASSENGERS PER MILE	1.5	1/12	0.8	1/12
PASSENGERS PER TRIP	14.6	1/12	8.1	1/12

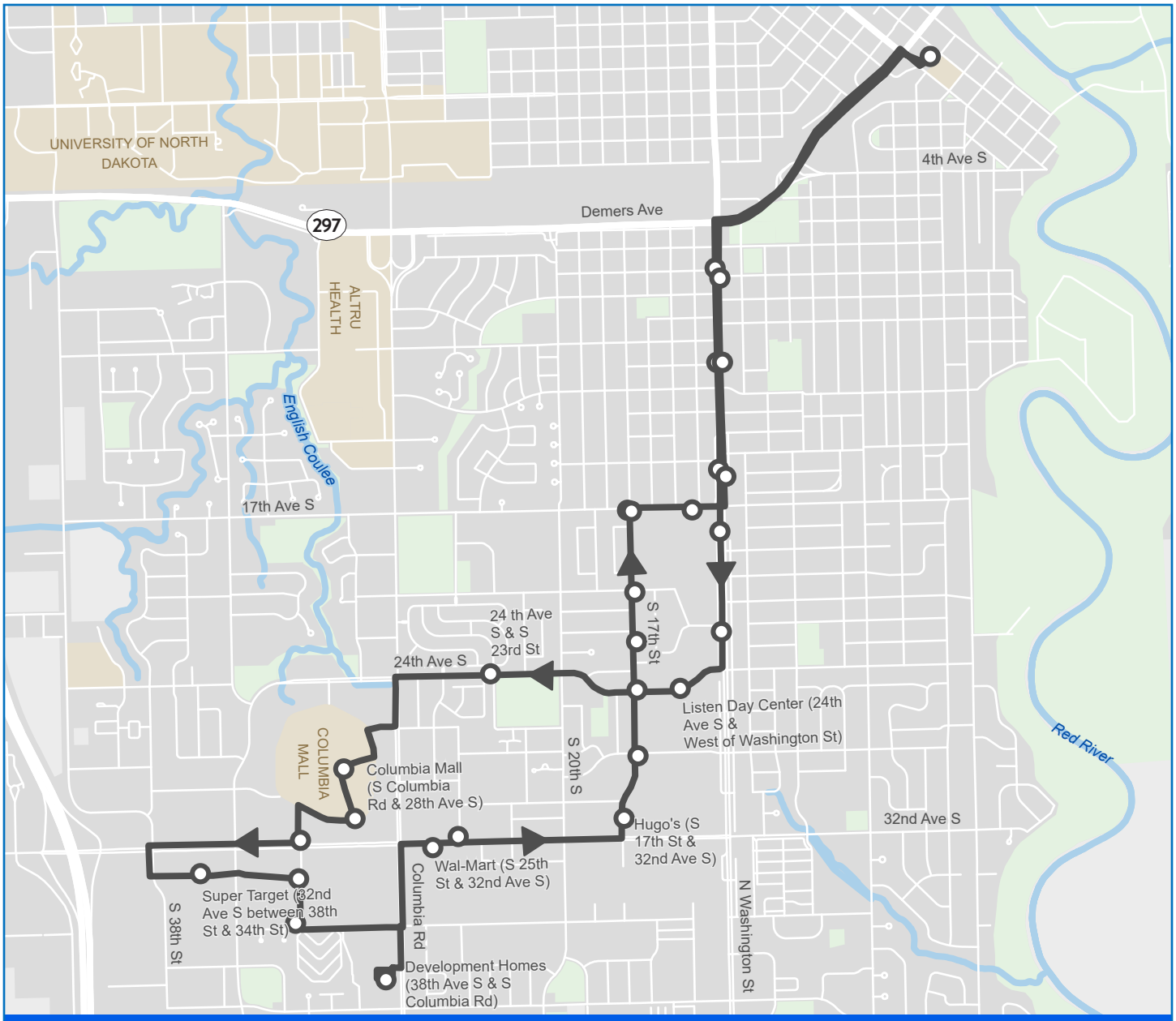
ANNUAL RIDERSHIP TREND



AVERAGE MONTHLY FARES BY TYPE



ROUTE MAP



ROUTE ANALYSIS

STRENGTHS

- Highest ridership in the system
- Serves important shopping destinations and areas with strong growth

WEAKNESSES

- Southern half of the route is circuitous including several one-way loops

OPPORTUNITIES

- Consider increase service span or frequency
- Consider options to make more direct and bi-directional

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 8

Key Destinations: UND - Memorial Union, Altru Business Center, Altru Columbia Rd, Post Office, Columbia Mall, Super Target, Linden Place, Primrose Ct, Garden View Dr, Alerus Center, UND Odegard Hall

	WEEKDAY
SPAN	6:00AM – 6:00PM
FREQUENCY	60 minutes

	WEEKEND
SPAN	8:00AM - 6:00PM
FREQUENCY	60 minutes

AVERAGE ANNUAL STATISTICS

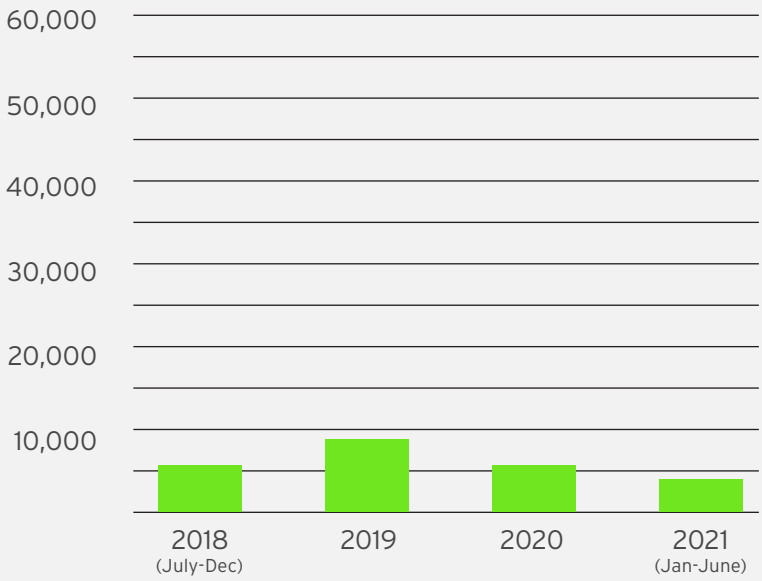
REVENUE HOURS	3,453	RANK 2/12 (TIE)
REVENUE MILES	37, 562	RANK 3/12
OPERATING COSTS	$317,561	RANK 2/12 (TIE)

	PRE-COVID	COVID
RIDERSHIP	9,576	6,005

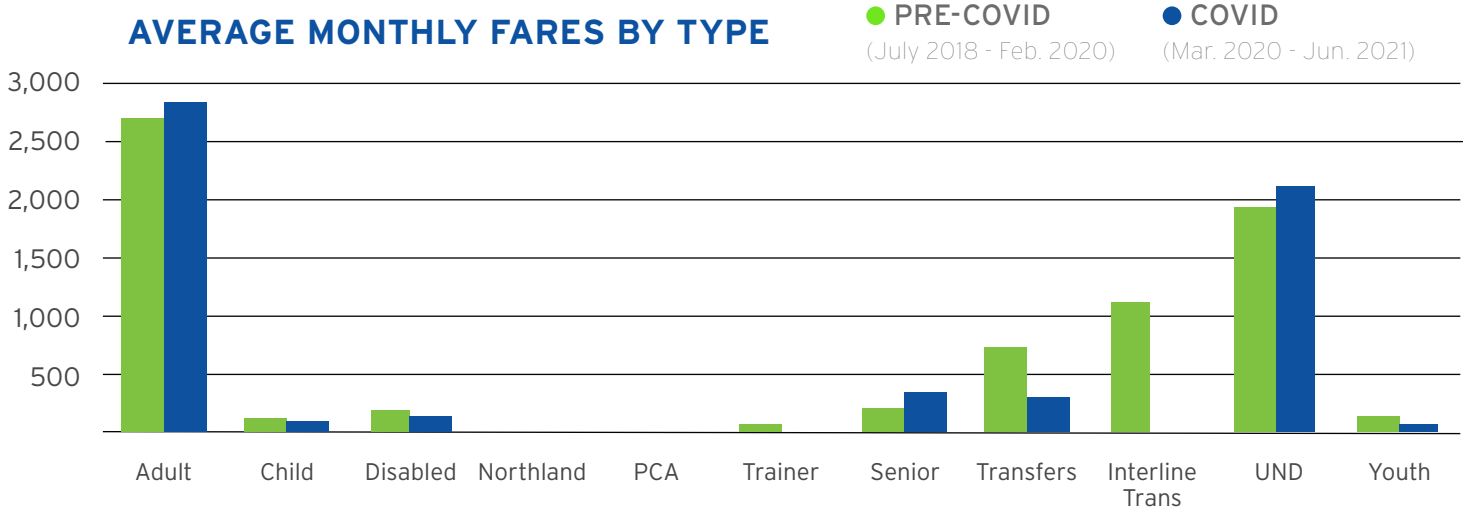
AVERAGE DAILY STATISTICS

	PRE-COVID		COVID	
TOTAL BOARDINGS	30.6	RANK 9/12	19.2	RANK 7/12
PASSENGERS PER HOUR	2.8	RANK 11/12	1.7	RANK 10/12
PASSENGERS PER MILE	0.3	RANK 11/12	0.2	RANK 9/12
PASSENGERS PER TRIP	2.8	RANK 10/12	1.7	RANK 7/12

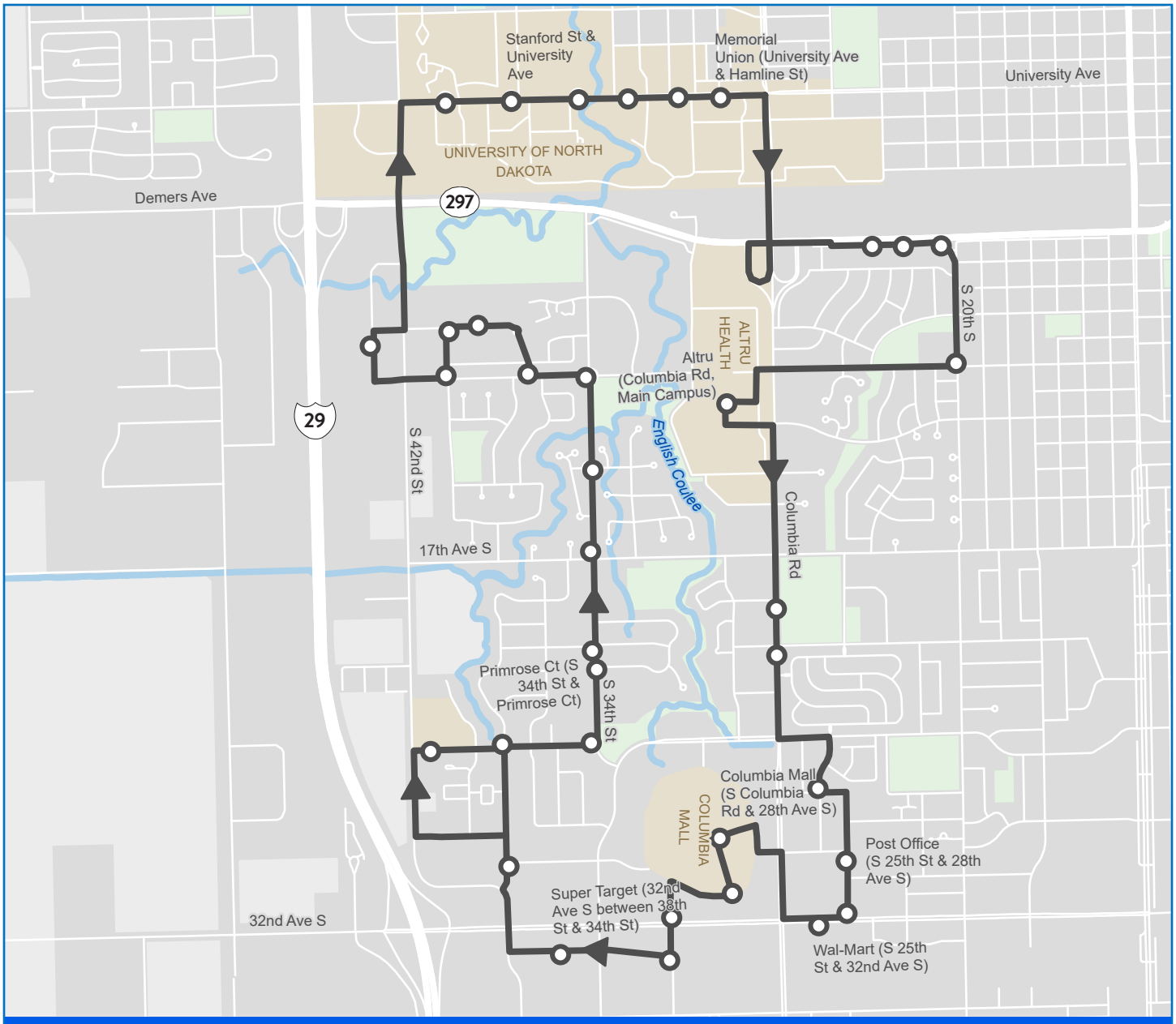
ANNUAL RIDERSHIP TREND



AVERAGE MONTHLY FARES BY TYPE



ROUTE MAP



ROUTE ANALYSIS

STRENGTHS

- Provides a north south connection to UND
- Serves important shopping and commercial destinations

WEAKNESSES

- Limited service span/ schedule for shopping destinations and retail employment

OPPORTUNITIES

- Opportunity to expand hours of operation and frequency

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 9

Key Destinations: Hamline & University, UND - Stanford Center, Alerus Center, Garden View Dr, Linden Place, Super Target, Columbia Mall, 24th Ave & S 29th St, Altru Columbia Rd, Amberwood Apartments

	WEEKDAY	WEEKEND
SPAN	6:30AM – 6:00PM	8:00AM - 6:00PM
FREQUENCY	60 minutes	60 minutes

AVERAGE ANNUAL STATISTICS

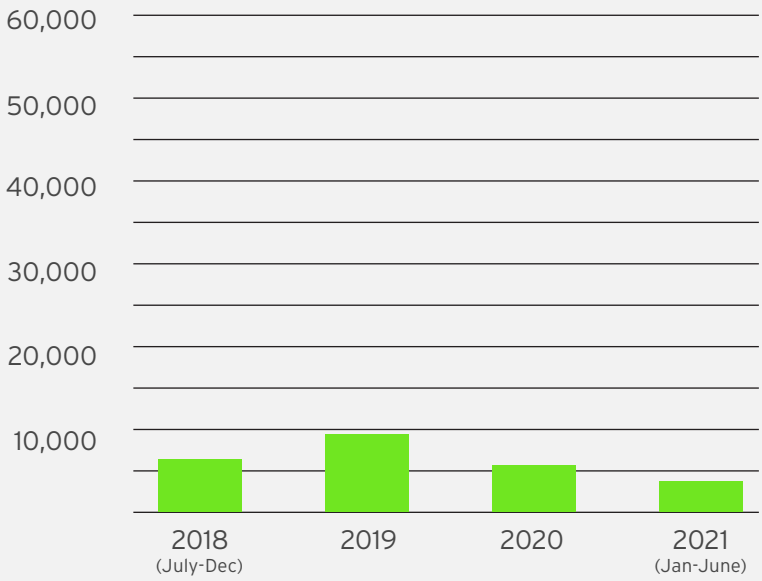
REVENUE HOURS	3,453	RANK 2/12 (TIE)
REVENUE MILES	35, 949	RANK 4/12
OPERATING COSTS	$317,561	RANK 2/12 (TIE)

RIDERSHIP	PRE-COVID	COVID
	10,783	5,590

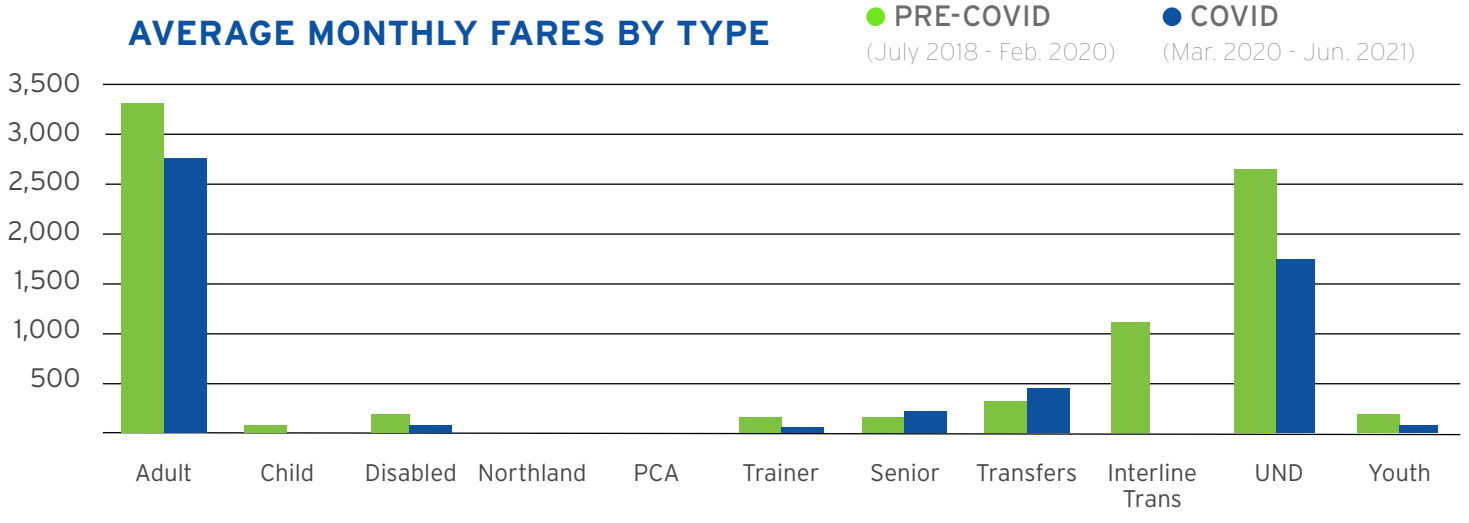
AVERAGE DAILY STATISTICS

	PRE-COVID		COVID	
TOTAL BOARDINGS	34.5	RANK 6/12	17.9	RANK 9/12
PASSENGERS PER HOUR	3.1	RANK 10/12	1.6	RANK 11/12
PASSENGERS PER MILE	0.3	RANK 10/12	0.2	RANK 10/12
PASSENGERS PER TRIP	3.1	RANK 7/12	1.6	RANK 9/12

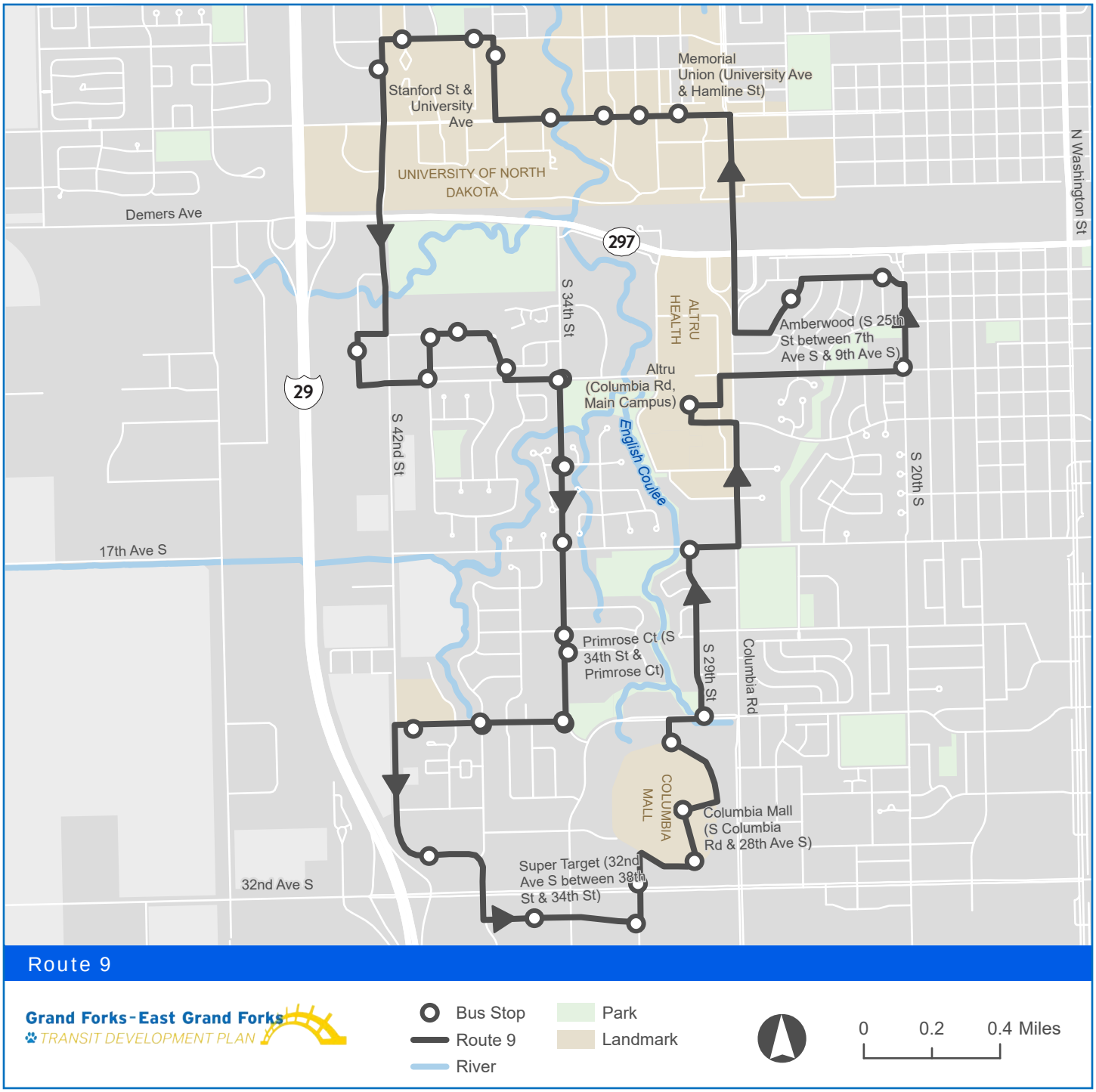
ANNUAL RIDERSHIP TREND



AVERAGE MONTHLY FARES BY TYPE



ROUTE MAP



ROUTE ANALYSIS

STRENGTHS

- Provides north-south connection to UND
- Serves important commercial and shopping destinations

WEAKNESSES

- Limited service span/ schedule for shopping destinations and retail employment

OPPORTUNITIES

- Opportunity to expand hours of operation and frequency

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 10

Key Destinations: Downtown, The Link, 17th Ave & Cherry, Goodwill, Choice Health & Fitness, Altru South, South Middle School, Columbia Mall, Walmart, Hugo's, Midtown

	WEEKDAY	WEEKEND
SPAN	6:00AM – 6:00PM	8:00AM - 6:00PM
FREQUENCY	60 minutes	60 minutes

AVERAGE ANNUAL STATISTICS

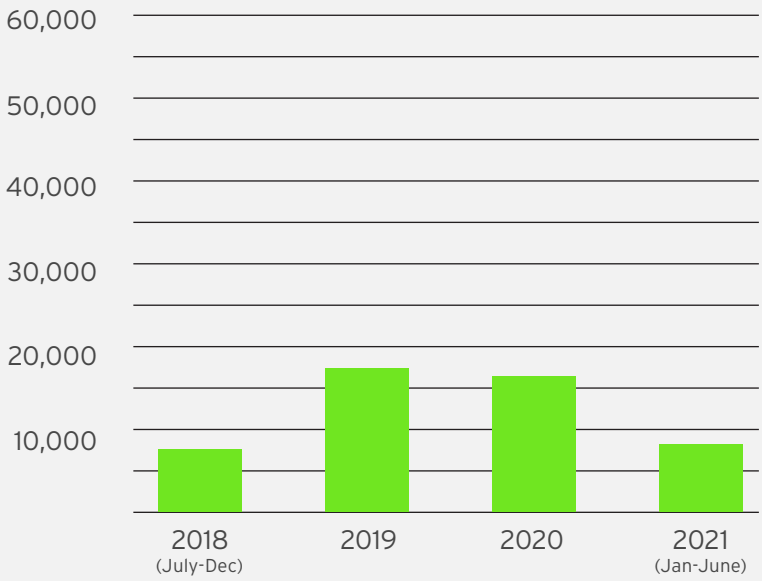
REVENUE HOURS	3,453	RANK 2/12 (TIE)
REVENUE MILES	38,396	RANK 2/12
OPERATING COSTS	$317,561	RANK 2/12 (TIE)

RIDERSHIP	PRE-COVID	COVID
	17,342	15,975

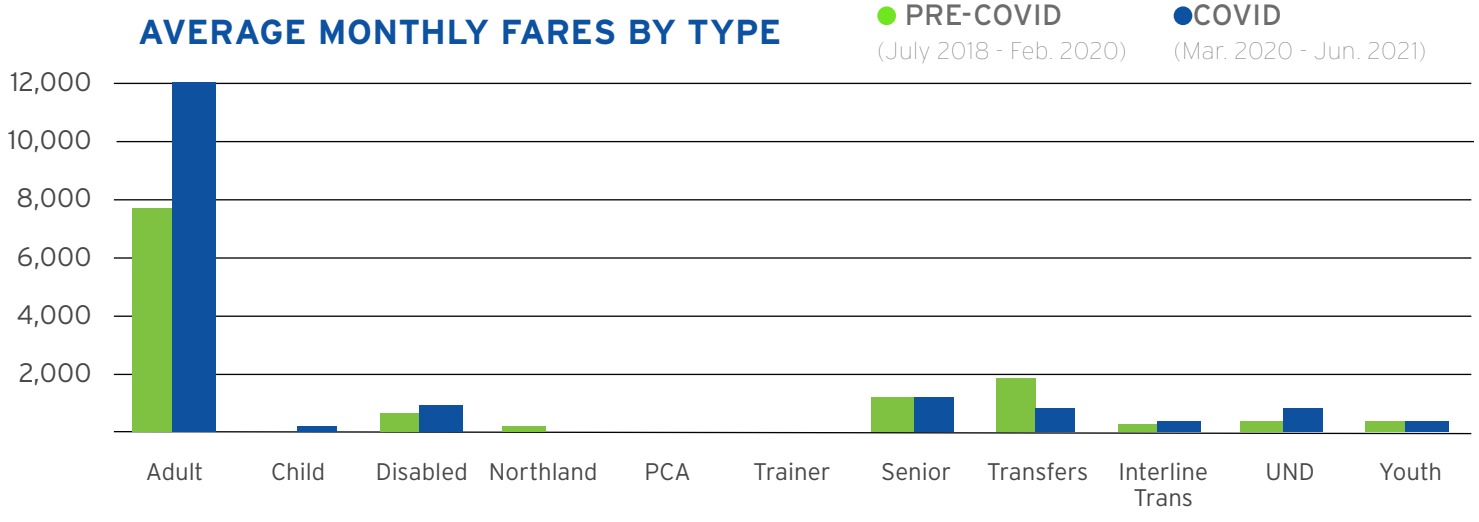
AVERAGE DAILY STATISTICS

	PRE-COVID		COVID	
TOTAL BOARDINGS	55.4	RANK 4/12	51.0	RANK 4/12
PASSENGERS PER HOUR	5.0	RANK 8/12	4.6	RANK 4/12
PASSENGERS PER MILE	0.5	RANK 8/12	0.4	RANK 4/12
PASSENGERS PER TRIP	5.0	RANK 3/12	4.6	RANK 3/12

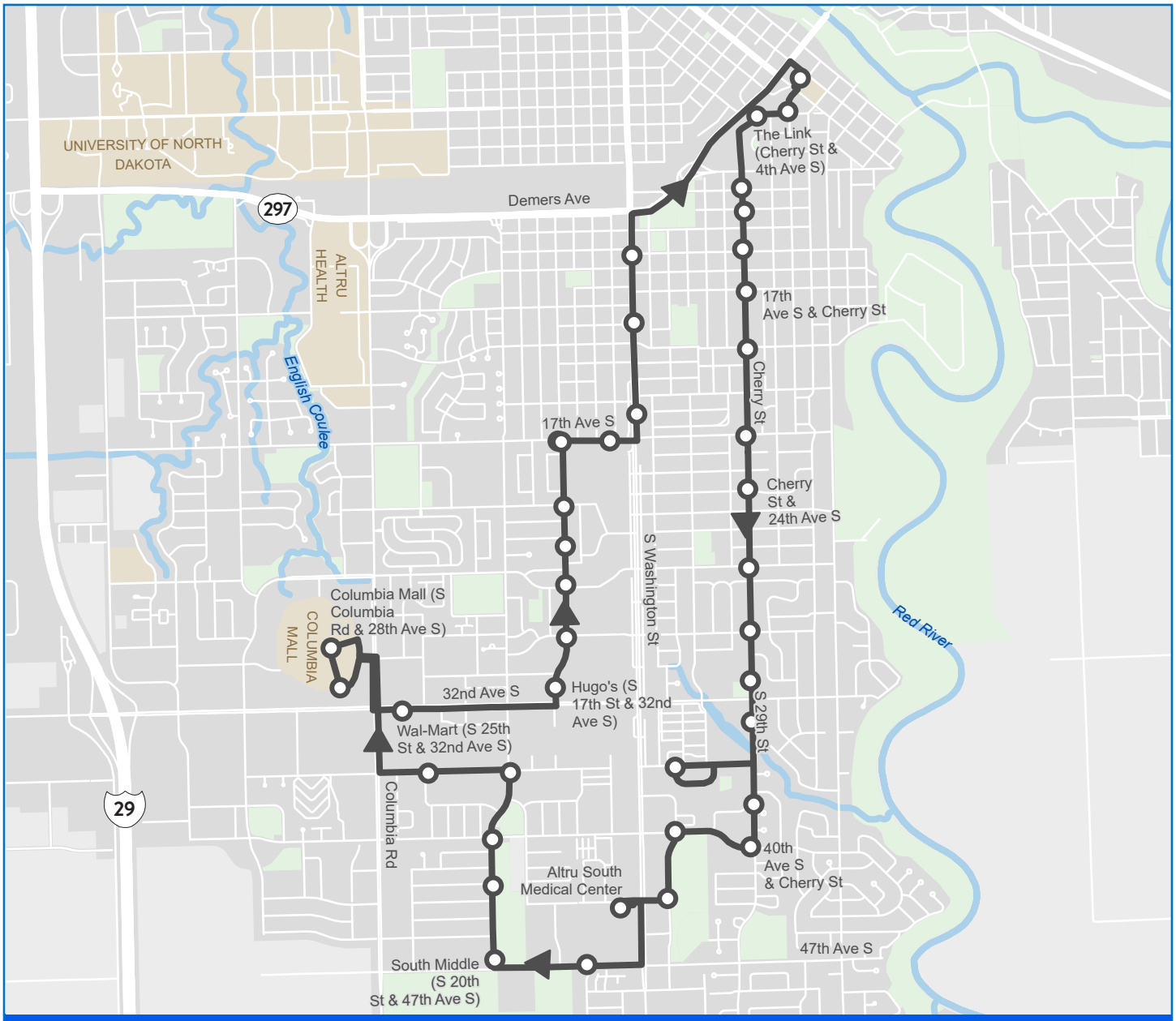
ANNUAL RIDERSHIP TREND



AVERAGE MONTHLY FARES BY TYPE



ROUTE MAP



ROUTE ANALYSIS

STRENGTHS

- Maintained high ridership during COVID
- Serves Downtown and Columbia Mall

WEAKNESSES

- Duplicates service on Cherry Street with Route 3
- Largely operates as a one-way loop

OPPORTUNITIES

- Consider consolidating with other routes and provide bi-directional service

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 12 East Grand Forks Route

Key Destinations: Evergreen Estates, Good Samaritan, Hugo's, Sunshine Terrace, Campbell Library, Town Square Apartments, Senior Center, Riverside School

	WEEKDAY	WEEKEND
SPAN	7:00AM – 6:00PM	-
FREQUENCY	60 minutes	-

AVERAGE ANNUAL STATISTICS

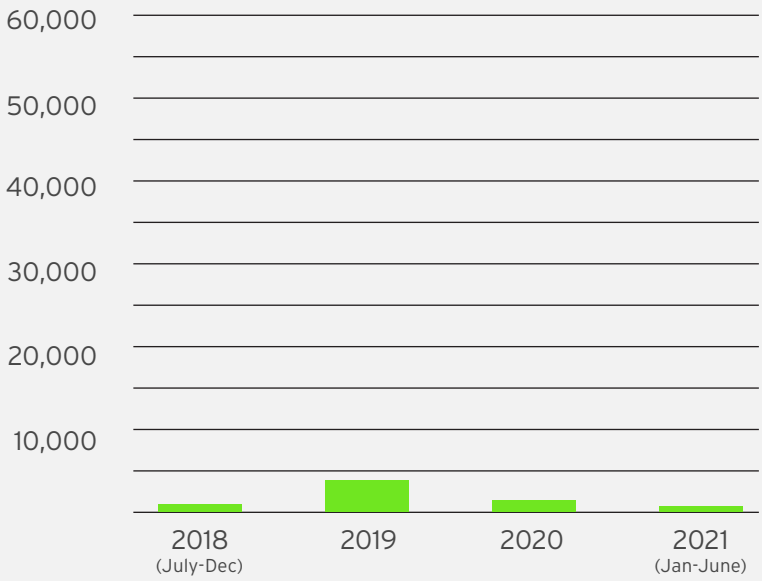
REVENUE HOURS	2,805	RANK 7/12
REVENUE MILES	28,160	RANK 7/12
OPERATING COSTS	$258,004	RANK 7/12

RIDERSHIP	PRE-COVID	COVID
	2,778	720

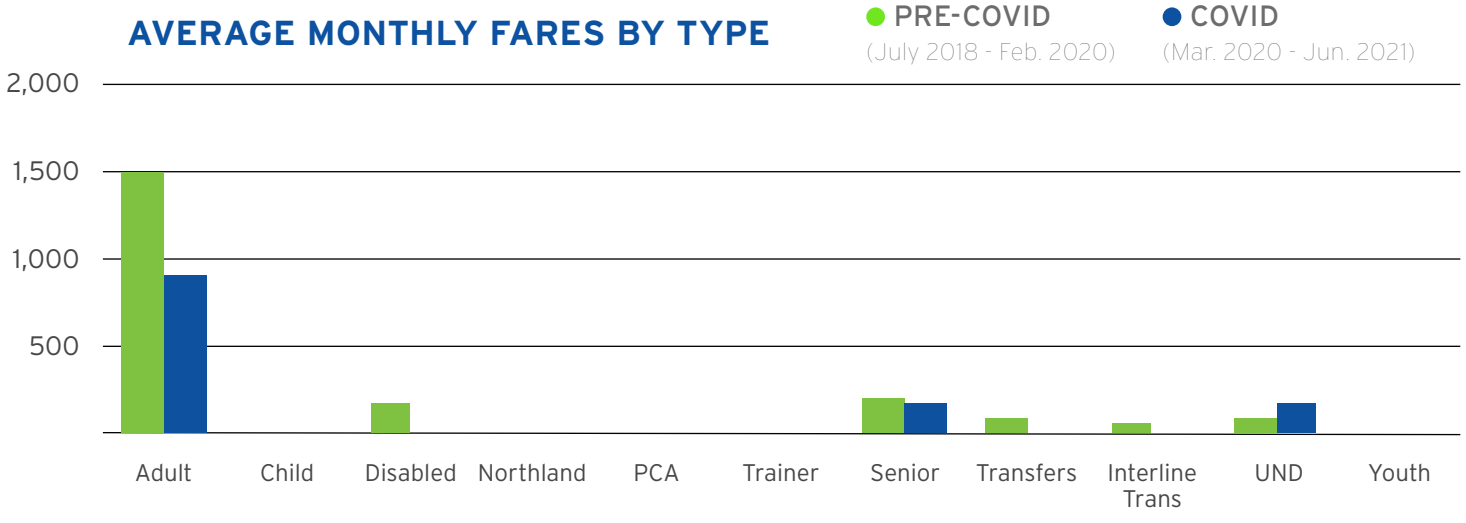
AVERAGE DAILY STATISTICS

	PRE-COVID	RANK	COVID	RANK
TOTAL BOARDINGS	10.6	12/12	2.7	12/12
PASSENGERS PER HOUR	1.0	12/12	0.3	12/12
PASSENGERS PER MILE	0.1	12/12	0.0	12/12
PASSENGERS PER TRIP	1.0	12/12	0.3	12/12

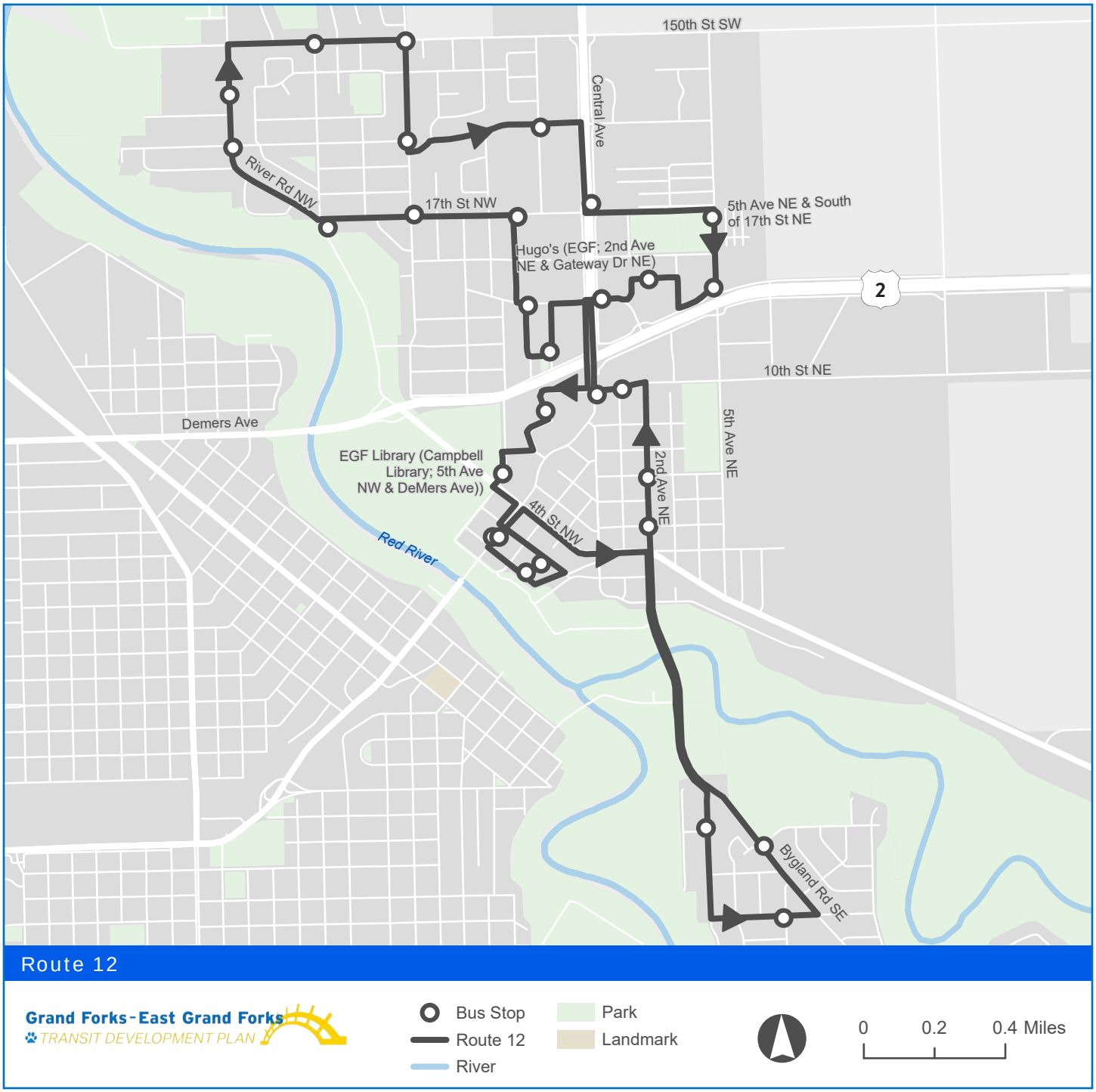
ANNUAL RIDERSHIP TREND



AVERAGE MONTHLY FARES BY TYPE



ROUTE MAP



ROUTE ANALYSIS

STRENGTHS

- Serves neighborhoods that are more likely to ride transit

WEAKNESSES

- Overall poor ridership performance

OPPORTUNITIES

- Consider reallocating resources to other routes and services

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 13

Evening Service Only Route

Key Destinations: Dowtown, Home of Economy, N 43rd St Shelter, UND - Memorial Union, Altru Columbia Rd, Columbia Mall, Walmart, Midtown

	WEEKDAY
SPAN	6:00AM – 10:00PM
FREQUENCY	60 minutes

	WEEKEND
SPAN	6:00AM – 10:00PM
FREQUENCY	60 minutes

AVERAGE ANNUAL STATISTICS

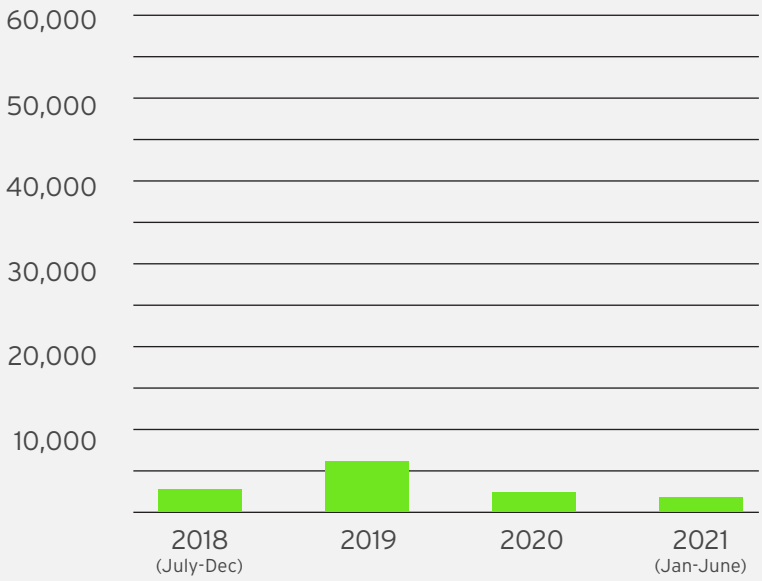
REVENUE HOURS	1,228	RANK 12/12
REVENUE MILES	17,582	RANK 10/12
OPERATING COSTS	$112,951	RANK 12/12

RIDERSHIP	PRE-COVID	COVID
	6,157	2,729

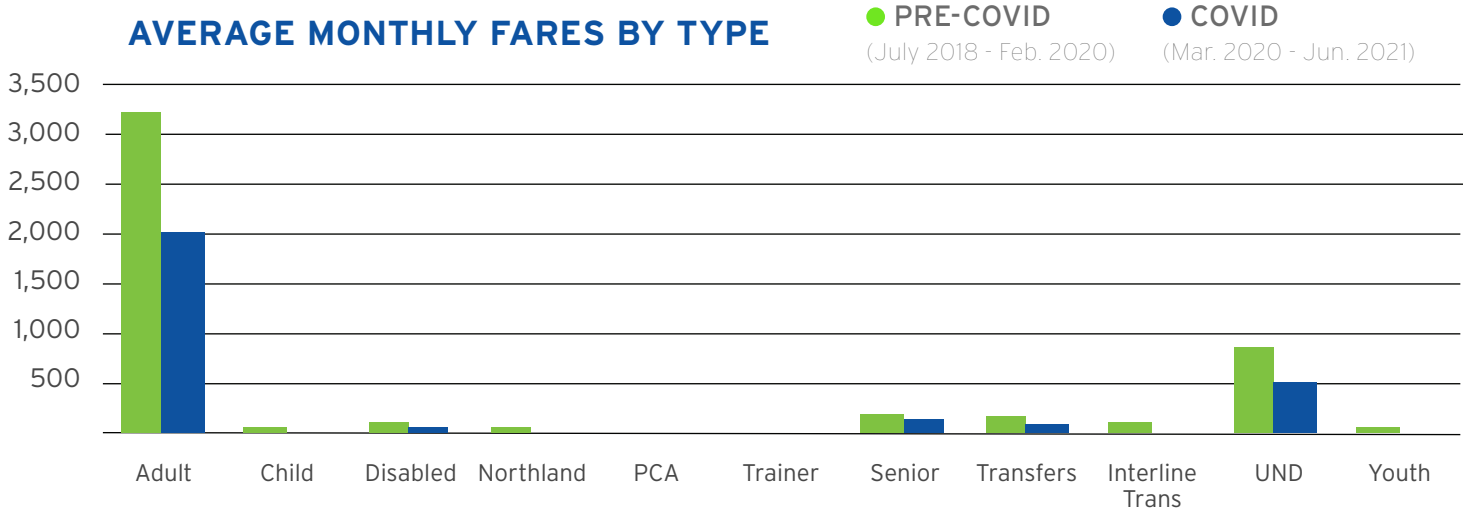
AVERAGE DAILY STATISTICS

	PRE-COVID		COVID	
TOTAL BOARDINGS	19.7	RANK 11/12	8.7	RANK 11/12
PASSENGERS PER HOUR	5.0	RANK 9/12	2.2	RANK 9/12
PASSENGERS PER MILE	0.4	RANK 9/12	0.2	RANK 11/12
PASSENGERS PER TRIP	5.0	RANK 4/12	2.2	RANK 5/12

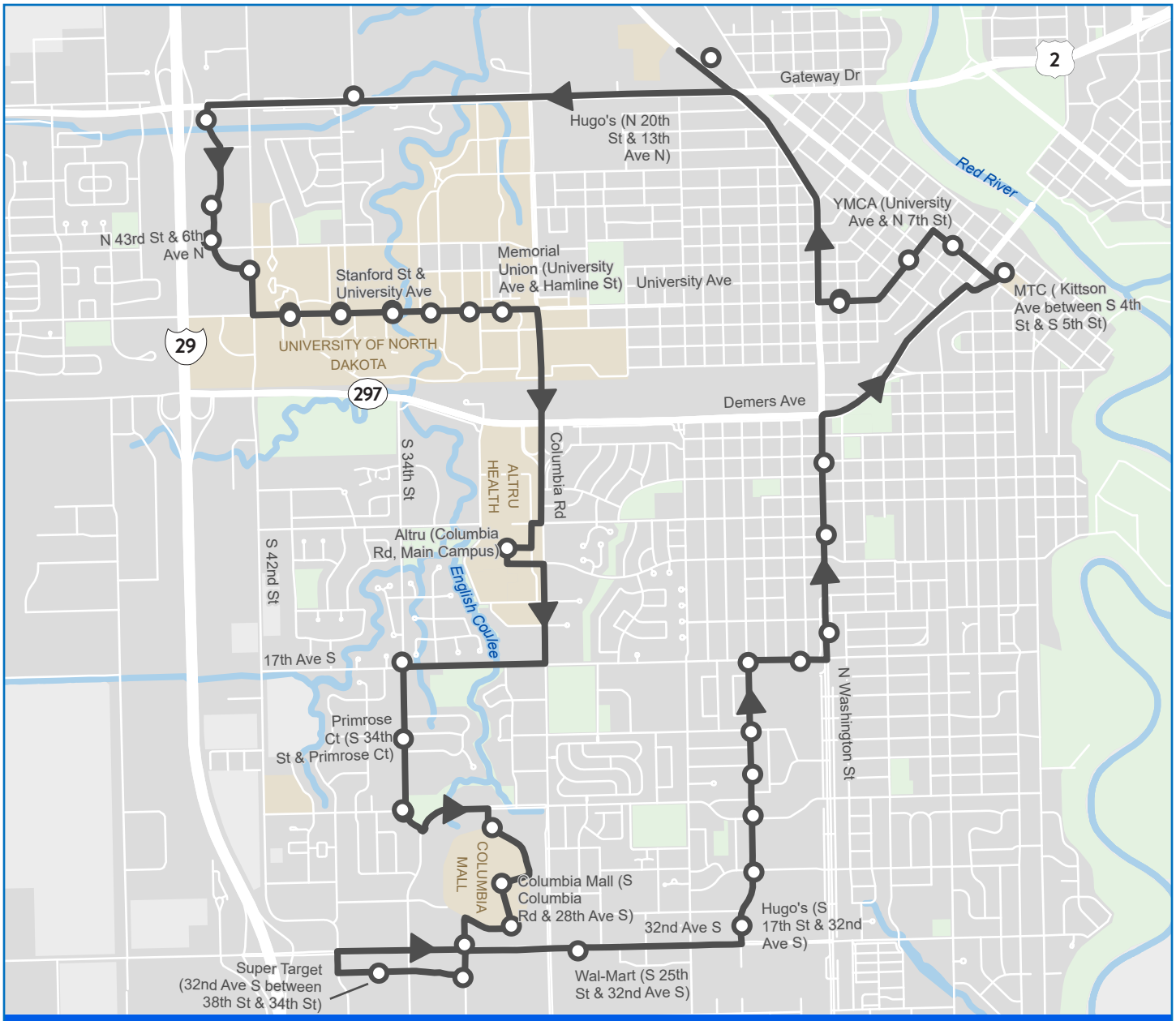
ANNUAL RIDERSHIP TREND



AVERAGE MONTHLY FARES BY TYPE



ROUTE MAP



Route 13 (also Route 22)

Grand Forks-East Grand Forks TRANSIT DEVELOPMENT PLAN

Bus Stop
Route 13 (also 22)
River
Park
Landmark

0 0.25 0.5 Miles

ROUTE ANALYSIS

STRENGTHS

- Serves important destinations including several shopping destinations, Downtown and UND

WEAKNESSES

- Low ridership

OPPORTUNITIES

- Opportunity to consolidate with other routes to improve efficiency of system or operate as on-demand

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 14

UND Red Route- Runs only Fall and Spring Semesters

Key Destinations: Odegard Hall, University Place, Chester Fritz Auditorium, Johnstone/Gamble, Chester Fritz Library, Memorial Union, East Parking Lot, Witmer, Upson I, Hughes Fine Arts, Central Receiving

	WEEKDAY	WEEKEND
SPAN	7:30AM – 4:30PM	-
FREQUENCY	15 minutes	-

AVERAGE ANNUAL STATISTICS

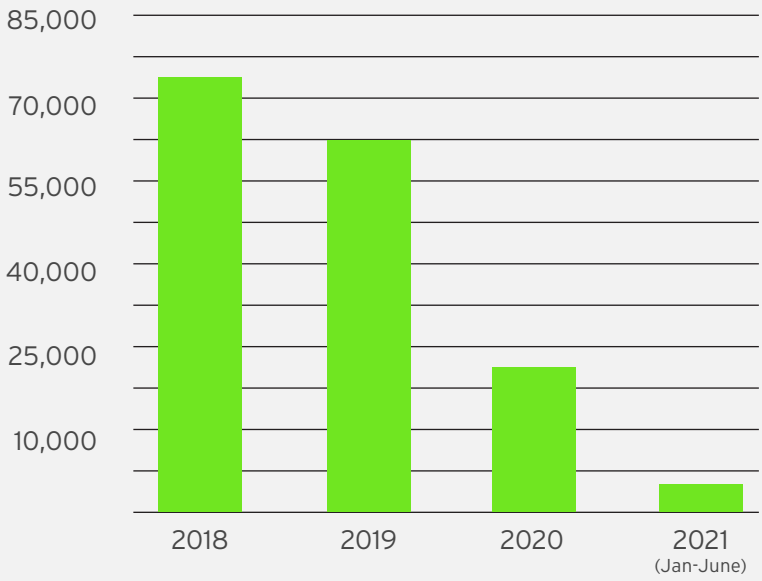
	COVID (AVG. FEB. 2020-JUN. 2021)	
REVENUE HOURS	1,530	RANK 1/4 (TIE)
REVENUE MILES	12,629	RANK 2/4
OPERATING COSTS	$140,729	RANK 1/4 (TIE)

	PRE-COVID	COVID
RIDERSHIP	82,785	8,451

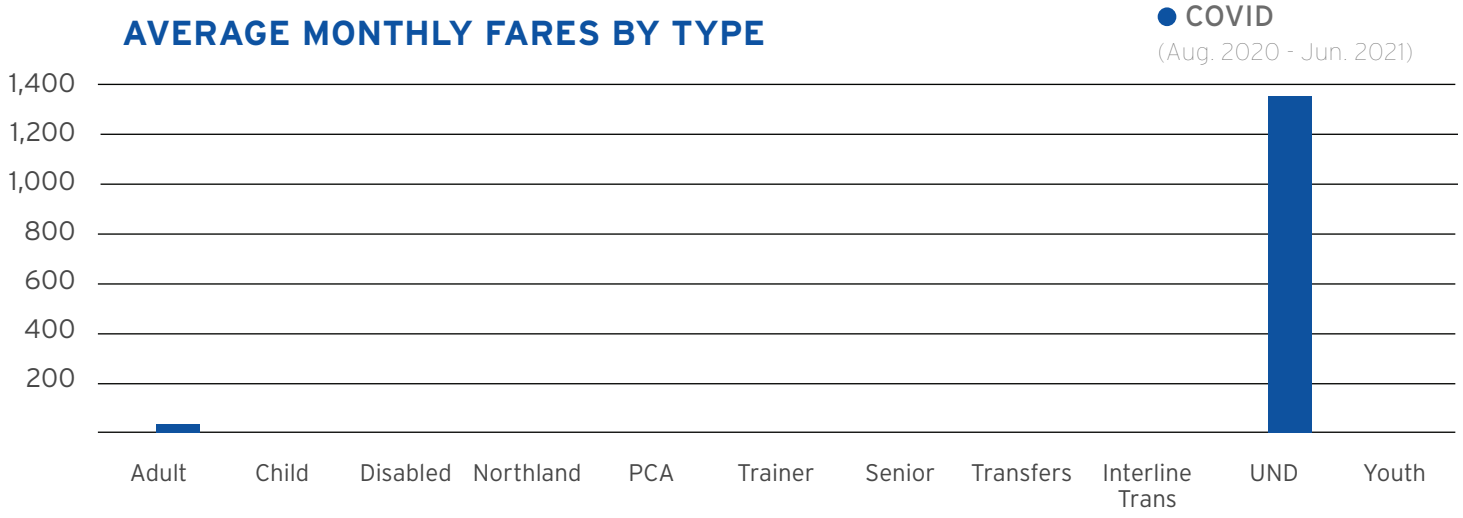
AVERAGE DAILY STATISTICS

	PRE-COVID		COVID	
TOTAL BOARDINGS	459.9	RANK 1/4	46.9	RANK 2/4
PASSENGERS PER HOUR	54.1	RANK 1/4	5.5	RANK 2/4
PASSENGERS PER MILE	6.6	RANK 2/4	0.7	RANK 2/4
PASSENGERS PER TRIP	13.5	RANK 2/4	1.4	RANK 3/4

ANNUAL RIDERSHIP TREND

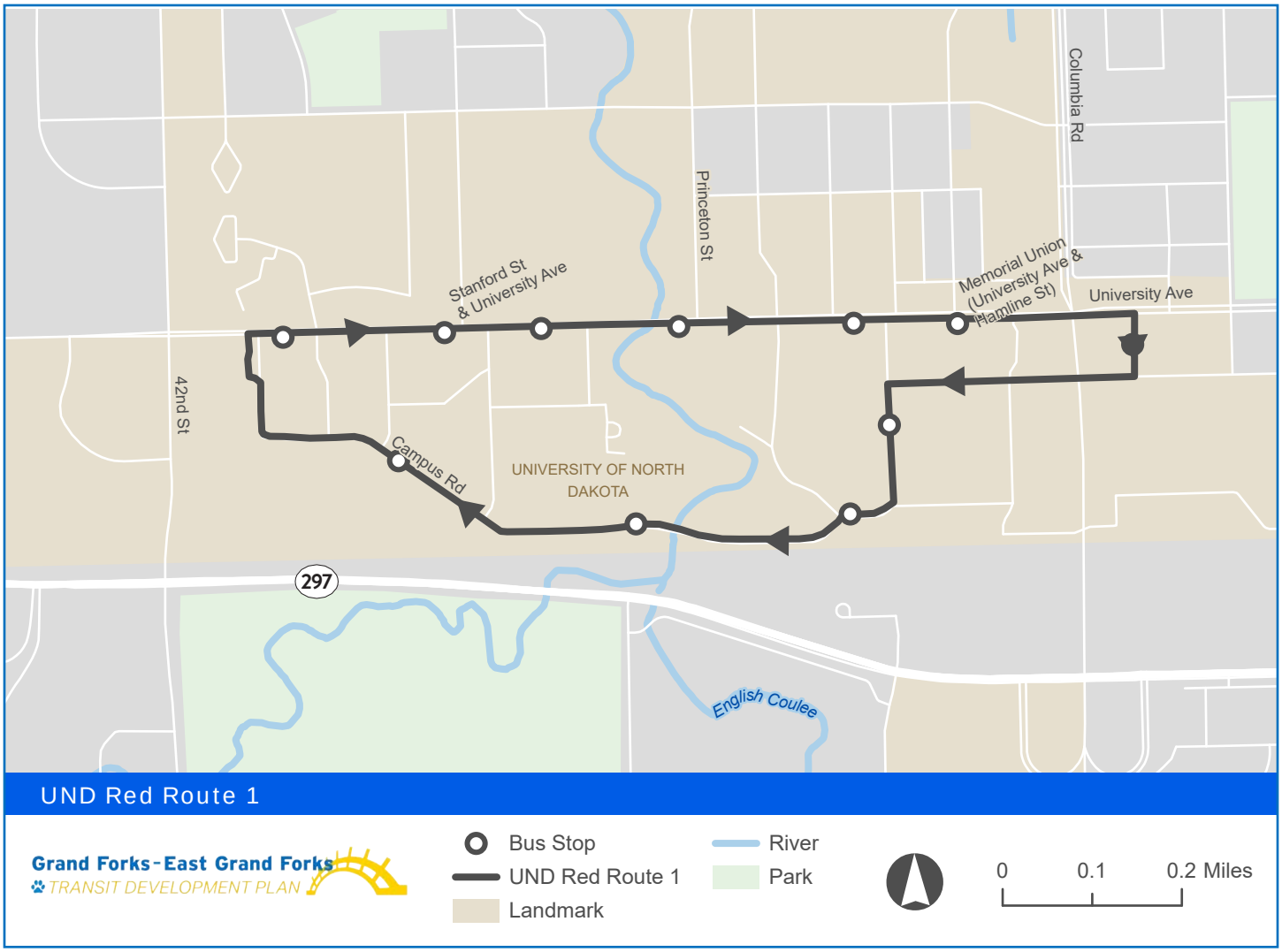


AVERAGE MONTHLY FARES BY TYPE



* UND routes operate on regular scheduled class days during Spring and Fall semesters; no existing pre-COVID data on monthly fares by type

ROUTE MAP



ROUTE ANALYSIS

STRENGTHS

- Ranked 2nd in UND routes for passengers per mile, per revenue hour, and total daily boardings

WEAKNESSES

- Ridership rank decreased among UND routes during COVID

OPPORTUNITIES

- Increased ridership between 2020 and 2021

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 15 UND Purple Route - Runs only Fall and Spring

Key Destinations: Odegard Hall, Gallery Apartments, Stanford Rd, Wellness Center, Medical School, Bookstore, Memorial Union, Christus Rex, Hancock/Bek, Wilkerson, State St/University Ave

	WEEKDAY
SPAN	7:30AM – 4:30PM
FREQUENCY	20 minutes

	WEEKEND
SPAN	-
FREQUENCY	-

AVERAGE ANNUAL STATISTICS

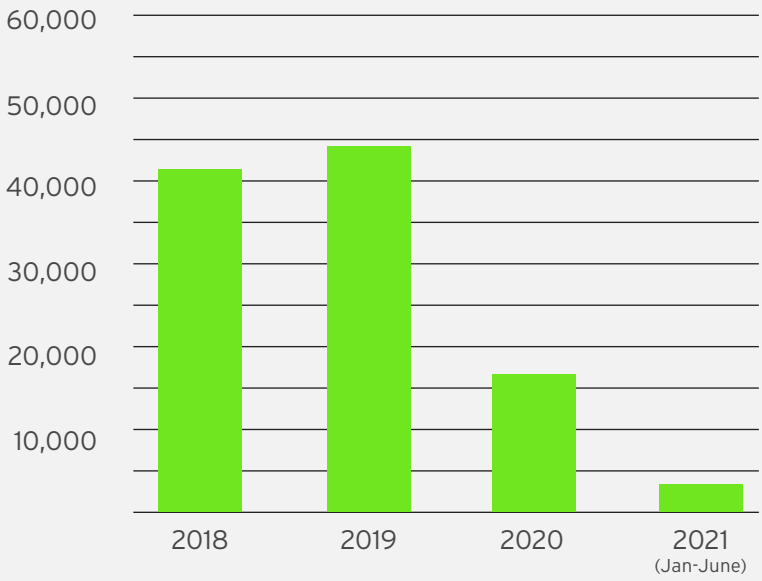
	COVID (AVG. FEB. 2020-JUN. 2021)	RANK
REVENUE HOURS	1,530	1/4 (TIE)
REVENUE MILES	21,191	1/4
OPERATING COSTS	$140,729	1/4 (TIE)

	PRE-COVID	COVID
RIDERSHIP	52,578	8,917

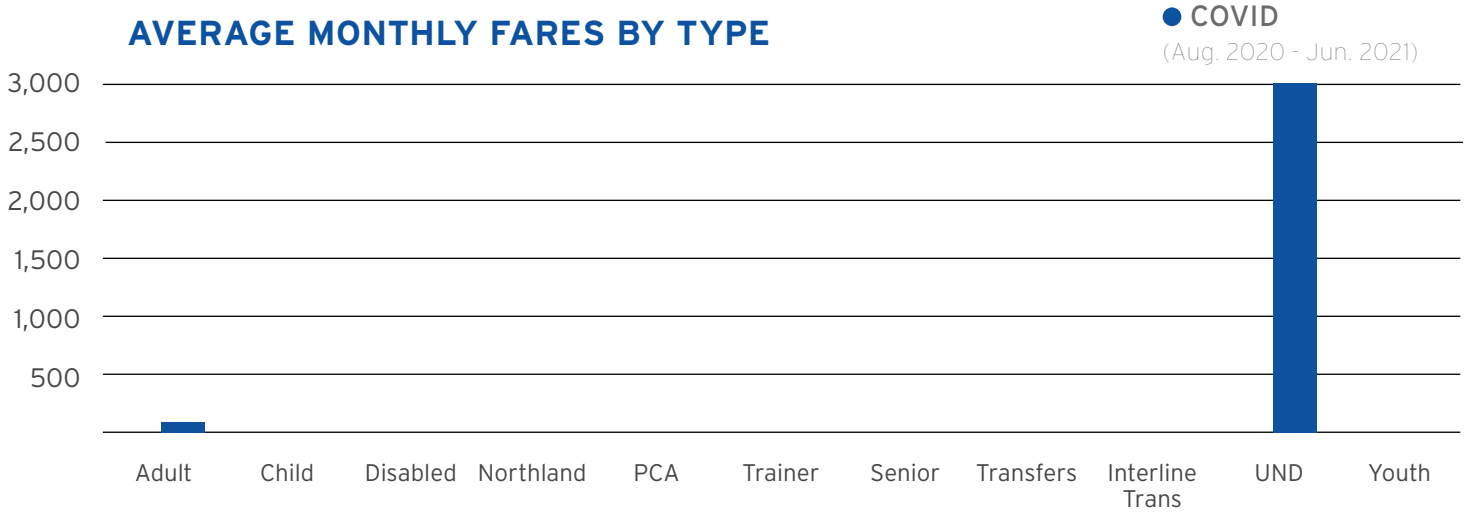
AVERAGE DAILY STATISTICS

	PRE-COVID	RANK	COVID	RANK
TOTAL BOARDINGS	292.1	3/4	49.5	1/4
PASSENGERS PER HOUR	34.4	3/4	5.8	1/4
PASSENGERS PER MILE	2.5	3/4	0.4	3/4
PASSENGERS PER TRIP	8.6	4/4	1.5	2/4

ANNUAL RIDERSHIP TREND

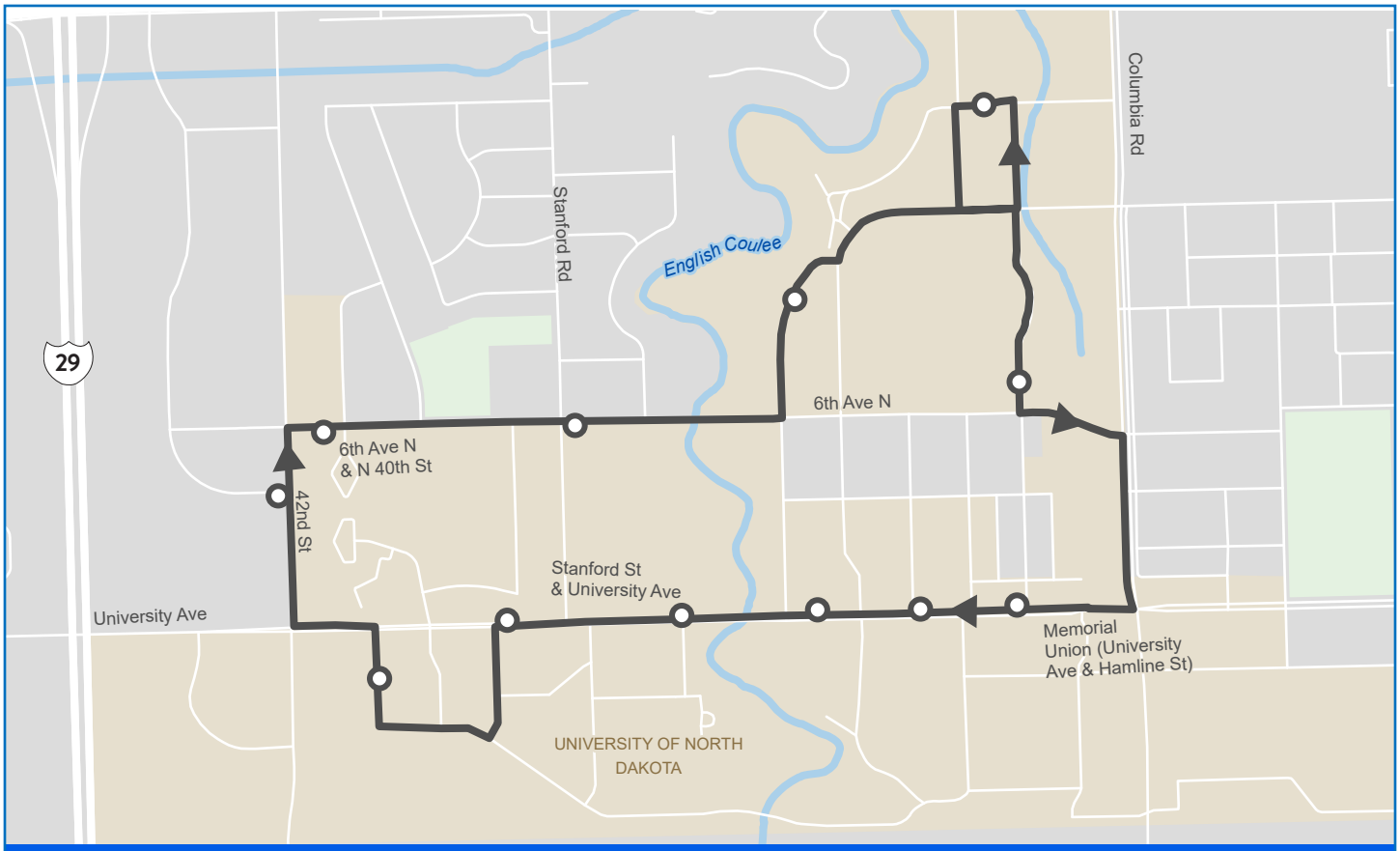


AVERAGE MONTHLY FARES BY TYPE



* UND routes operate on regular scheduled class days during Spring and Fall semesters; no existing pre-COVID data on monthly fares by type

ROUTE MAP



UND Purple Route 4

Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

Bus Stop
UND Purple Route 4
Landmark
River
Park

0 0.1 0.2 Miles

ROUTE ANALYSIS

STRENGTHS

- Since COVID, best ridership and daily performance among UND routes

WEAKNESSES

- Very dependent on UND students

OPPORTUNITIES

- High performing route that should maintain service

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 16 UND Blue Route - Runs only Fall and Spring

Key Destinations: Odegard Hall, Central Receiving, Hughes Fine Arts, Steam Plant, Upson I, Hyslop, Memorial Union, Christus Rex, Hancok/Bek, Wilkerson, State St/University Ave

	WEEKDAY*
SPAN	7:30AM – 4:30PM
FREQUENCY	15 minutes

	WEEKEND
SPAN	-
FREQUENCY	-

AVERAGE ANNUAL STATISTICS

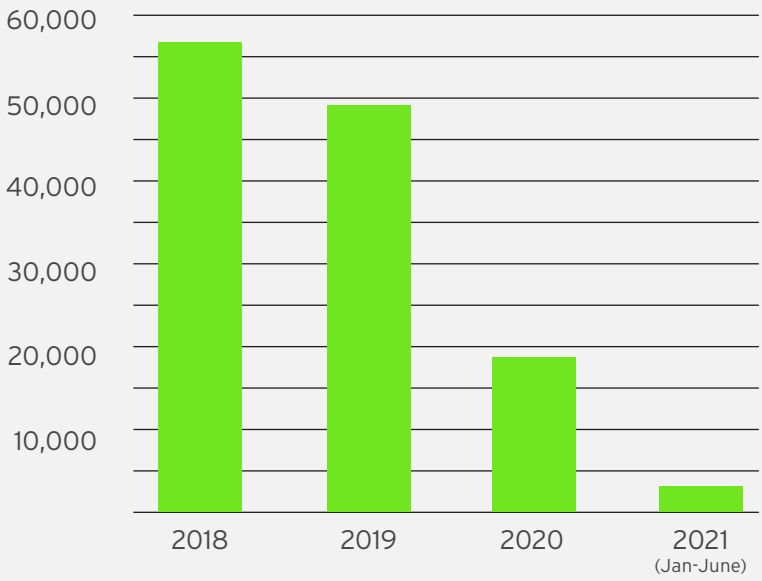
	COVID (AVG. FEB. 2020-JUN. 2021)	
REVENUE HOURS	1,530	RANK 1/4 (TIE)
REVENUE MILES	9,687	RANK 2/4
OPERATING COSTS	$140,729	RANK 1/4 (TIE)

	PRE-COVID	COVID
RIDERSHIP	64,785	7,398

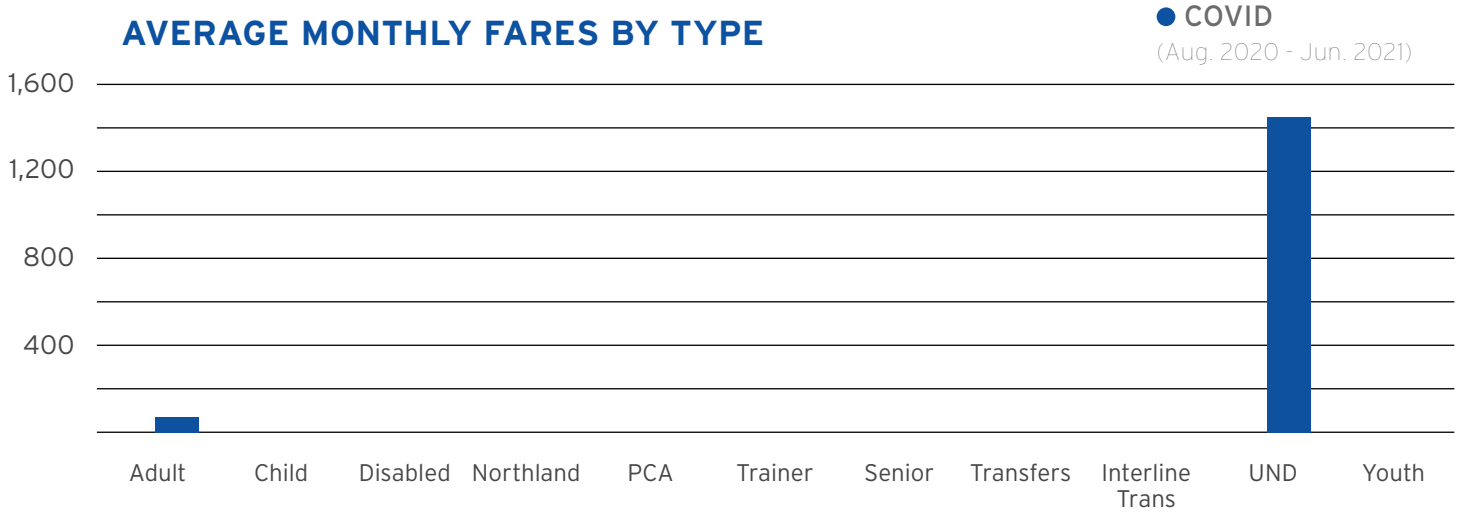
AVERAGE DAILY STATISTICS

	PRE-COVID	COVID
TOTAL BOARDINGS	359.9 RANK 2/4	41.1 RANK 3/4
PASSENGERS PER HOUR	42.3 RANK 2/4	4.8 RANK 3/4
PASSENGERS PER MILE	6.7 RANK 1/4	0.8 RANK 1/4
PASSENGERS PER TRIP	14.1 RANK 1/4	1.6 RANK 1/4

ANNUAL RIDERSHIP TREND



AVERAGE MONTHLY FARES BY TYPE



* UND routes operate on regular scheduled class days during Spring and Fall semesters; no existing pre-COVID data on monthly fares by type

ROUTE MAP

UND Blue Route 2

Grand Forks-East Grand Forks TRANSIT DEVELOPMENT PLAN

Bus Stop
UND Blue Route 2
River
Landmark
Park

0 0.1 0.2 Miles

ROUTE ANALYSIS

STRENGTHS

- High passengers per mile and trip compared to other UND routes

WEAKNESSES

- Low passengers per hour and total daily boardings compared to other UND routes

OPPORTUNITIES

- Could review route to see if any changes could lower revenue miles

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 25 UND Night Route - Runs only Fall and Spring

Key Destinations: Odegard Hall, Central Receiving, Hughes Fine Arts, Steam Plant, Upson I, Hyslop, Memorial Union, Christus Rex, Hancok/Bek, Wilkerson, State St/University Ave, State St/6th Ave, Medical School, Wellness Center, Stanford Rd, Gallery Apartments

	WEEKDAY
SPAN	5:00PM – 10:00PM
FREQUENCY	30 minutes

	WEEKEND
SPAN	-
FREQUENCY	-

AVERAGE ANNUAL STATISTICS

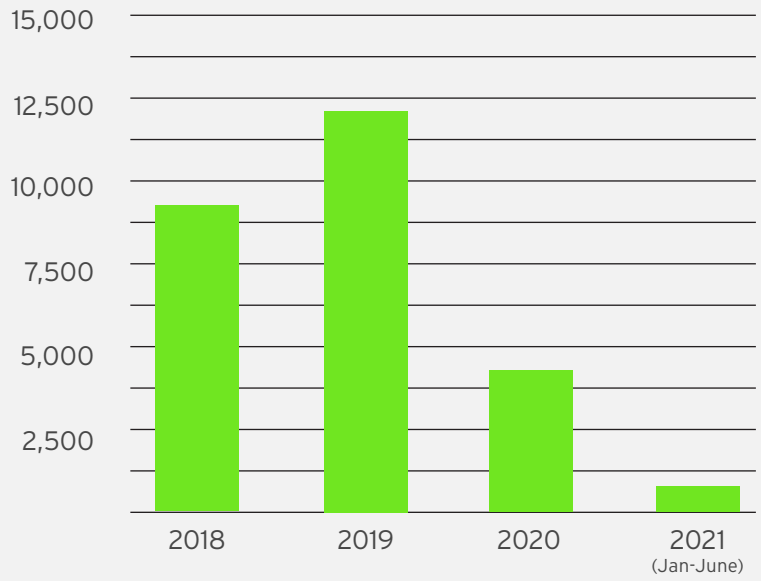
	COVID (AVG. FEB. 2020-JUN. 2021)	
REVENUE HOURS	680	RANK 4/4
REVENUE MILES	7,006	RANK 4/4
OPERATING COSTS	$62,546	RANK 4/4

	PRE-COVID	COVID
RIDERSHIP	13,266	1,763

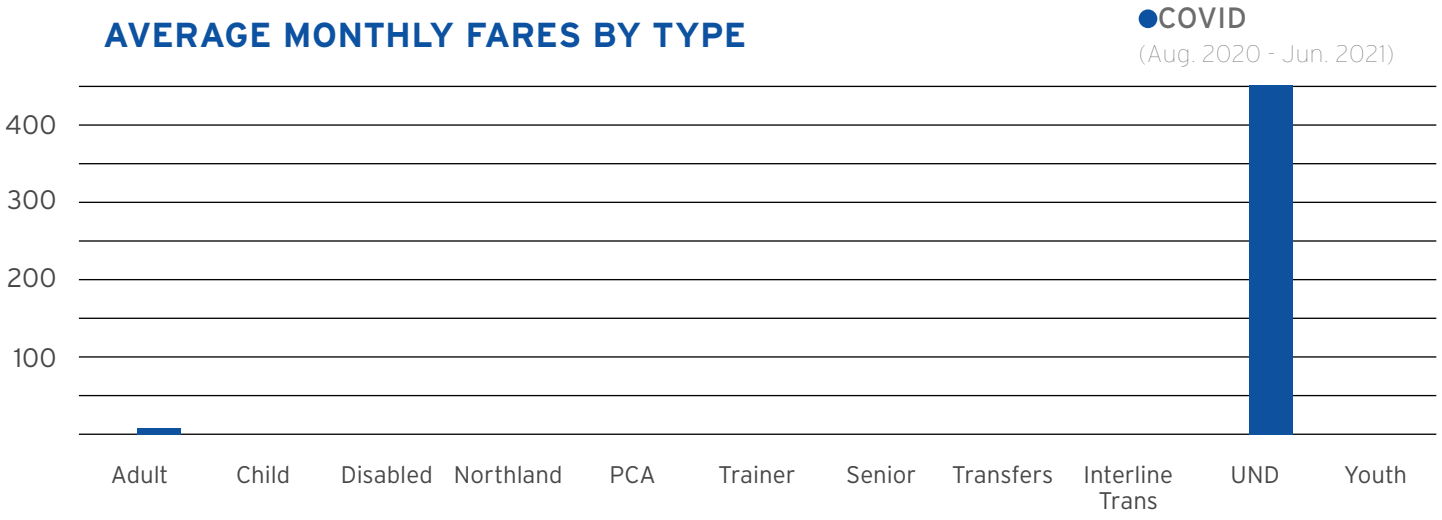
AVERAGE DAILY STATISTICS

	PRE-COVID		COVID	
TOTAL BOARDINGS	92.1	RANK 4/4	12.2	RANK 4/4
PASSENGERS PER HOUR	19.5	RANK 4/4	2.6	RANK 4/4
PASSENGERS PER MILE	1.9	RANK 4/4	0.3	RANK 4/4
PASSENGERS PER TRIP	9.8	RANK 3/4	1.3	RANK 4/4

ANNUAL RIDERSHIP TREND



AVERAGE MONTHLY FARES BY TYPE



* UND routes operate on regular scheduled class days during Spring and Fall semesters; no existing pre-COVID data on monthly fares by type

ROUTE MAP

UND Night Route

Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

Bus Stop
UND Night Route
Landmark
River
Park

0 0.1 0.2 Miles

ROUTE ANALYSIS

STRENGTHS

- Low revenue hours

WEAKNESSES

- Low ridership and lowest performing UND route

OPPORTUNITIES

- Evening service is valued and adding a connecting service to other CAT routes may help improve ridership and service for UND

Key Takeaways

Several key takeaways can be drawn from this analysis.

- Route 2 and Route 12 have very low ridership, which may indicate that these areas could be better served by an alternative transit service.
- Routes 3, 5, 7, and 10 maintained higher ridership compared to other routes, which indicates a continued high demand for service along these routes.
- Night service has very low ridership, particularly on UND night route and Route 6 ridership, which may indicate that this time of day could be better served by an alternative transit service.

Overall, the COVID-19 pandemic has impacted the performance of all routes, with some routes having been more impacted than others. Some routes, such as Routes 1 and 5 and Routes 4 and 6 operate in very similar areas and may provide opportunities for route consolidation. These routes will be studied further in the Recommendations section of this plan.

Transit Asset Management

CAT has a fleet of 26 vehicles, as shown in Table 14 and Table 15. The fleet is comprised of 14 fixed route vehicles and 12 demand response vehicles. All vehicles are accessible and feature bicycle racks. These vehicles are stored at the City Bus Garage and Administrative Office.

The fixed route fleet includes 12 heavy-duty buses and two light-duty cutaway buses. The average age of the fleet is 5.8 years. This is slightly newer on average than the national average fleet age for buses, which is 7.4 years.[8] The conditions of the vehicles range between “Good” and “Excellent.” Fixed route vehicles have a remaining service life ranging between 19 percent and 100 percent of the built service life.

The demand response fleet includes 11 light-duty minivans and one light-duty van. The average age of the fleet is 2.9 years, which is similar to the national average of 2.7 years.[9] The conditions of the vehicles range between “Good” and “Excellent.” Demand response vehicles have a remaining service life ranging between 19 percent and 100 percent of the built service life.

In addition to vehicles, CAT also several other capital assets, including heavy machinery, fare collection equipment, lighting, and cleaning tools necessary to maintain the CAT fleet in good condition and working order. Table 16 details the non-fleet assets. The condition of the equipment ranges from “Good” to “Excellent”, and the average cost of the assets is $40,372.42. Federal grants, most notably Section 5339 funds, were used to purchase the equipment.

CAT has 49 bus shelters at stops, which provide a glass enclosed structure with benches that protects riders from the weather elements. CAT has made several recent investments to improve facilities. In 2020, phase one of a two-part plan to improve the Cities Area Transit administrative, operations, and maintenance building was completed. More detail about the transit centers is provided in the Transit Hub Analysis, and additional information on transit asset management is found in the Transit Asset Management section of the plan.

[8] National Transit Database. National Transit Summaries and Trends 2019. Available online: https://www.transit.dot.gov/ntd
[9] Ibid.

Table 14: Fixed Route Fleet Inventory

Fleet ID	Vehicle Type	Make/Model	Vehicle Year	Current Mileage	Useful Life (Months)	Actual Service (Months)	Remaining Months	Useful Life (Mileage)	Remaining Life (Mileage)
105	Bus	New Flyer D35LFR	2010	376,053	168	144	24	500,000	25%
106	Bus	New Flyer D35LFR	2010	404,746	168	144	24	500,000	19%
103	Bus	New Flyer DE35LFR	2010	372,799	168	156	12	500,000	25%
104	Bus	New Flyer DE35LFR	2010	381,397	168	156	12	500,000	24%
192	Cutaway Bus	Dodge Promaster	2016	39,937	120	84	36	150,000	73%
191	Cutaway Bus	Dodge Promaster	2016	36,312	120	84	36	150,000	76%
183	Bus	New Flyer Xcelsior	2018	58,805	168	60	108	500,000	88%
185	Bus	Xcelsior	2018	43,503	168	60	108	500,000	91%
193	Bus	Alexander Dennis Enviro - 200	2019	23,797	168	48	120	500,000	95%
194	Bus	Alexander Dennis Enviro - 200	2019	19,713	168	48	120	500,000	96%
201	Bus	New Flyer XD35	2020	5,563	168	36	132	500,000	99%
202	Bus	New Flyer XD35	2020	5,261	168	36	132	500,000	99%
203	Bus	New Flyer XD35	2020	4,944	168	36	132	500,000	99%
215	Bus	Dodge Promaster	2021	79	168	108	60	150,000	100%
Average				126,636	161	86	75	425,000	72%

Table 15: Demand Response Fleet Inventory

Fleet ID	Vehicle Type	Make/Model	Vehicle Year	Current Mileage	Useful Life (Months)	Actual Service (Months)	Remaining Months	Useful Life (Mileage)	Remaining Life (Mileage)
172	Minivan	Dodge Grand Caravan	2017	76,622	96	96	0	100,000	23%
171	Minivan	Dodge Grand Caravan	2017	83,542	96	96	0	100,000	16%
196	Minivan	Braun Entervan	2019	12,290	96	60	36	100,000	88%
181	Minivan	Dodge Grand Caravan	2017	52,805	96	84	12	100,000	47%
182	Van	Ford Transit	2018	40,520	96	84	12	100,000	59%
198	Minivan	Braun Entervan	2019	19,845	96	60	36	100,000	80%

Fleet ID	Vehicle Type	Make/Model	Vehicle Year	Current Mileage	Useful Life (Months)	Actual Service (Months)	Remaining Months	Useful Life (Mileage)	Remaining Life (Mileage)
197	Minivan	Braun Entervan	2019	11,383	96	60	36	100,000	89%
195	Minivan	Braun Entervan	2019	14,087	96	60	36	100,000	86%
211	Minivan	Chrysler Voyageur	2021	1,435	96	48	48	100,000	99%
212	Minivan	Chrysler Voyageur	2021	2,890	96	48	48	100,000	97%
213	Minivan	Chrysler Voyageur	2021	20	96	48	48	100,000	100%
214	Minivan	Chrysler Voyageur	2021	14	96	48	48	100,000	100%
Average				26,288	96	66	30	100,000	74%

Table 16: Capital Equipment Inventory

DOT ID	Name	Equipment Type	Manufacturer	Production Year	Condition Rating	Funding Program	Total Cost	Federal Share	Local Share
101	2 - Man Scissors Lift	Shop Equipment	Skyjack	2019	Excellent	Section 5339 Urban	$12,912	80%	20%
102	Brake Mate Lifting Machine	Shop Equipment	Vehicle Inspection Systems, Inc	2019	Excellent	Section 5339	$13,459	80%	20%
103	Bus Wash	Bus Wash	Navigator	2017	N/A	Section 5339	$115,559	80%	20%
104	Fare Collection Equipment	Fareboxes	Genfare	2017	Good	Section 5339 Urban	$34,705	80%	20%
105	Fare Collection Project Costs	Fareboxes	RouteMatch	2016	Good	Section 5339 Urban	$36,350	80%	20%
106	Fare Collection System	Fareboxes	RouteMatch	2016	N/A	Section 5339 Urban	$86,840	80%	20%
107	Fare Collection System	Fareboxes	RouteMatch	2016	Good	Section 5339 Urban	$50,491	80%	20%
108	LED Shop Lights	Shop Equipment	RAB Lighting	2016	Good	Section 5339 Urban	$9,774	80%	20%
109	Tennant Floor Sweeper	Floor Sweeper	Tennant	2020	Excellent	Section 5339	$34,644	80%	20%
1010	Vane Air Compressor	Shop Equipment	Chaigo Pnuematic	2020	Excellent	Section 5339 Urban	$8,990	80%	20%
Average							$40,372		

Transit Hub Analysis

CAT currently operates a main downtown transit hub, the Metro Transit Center (MTC) and a less formal Midtown Transit Center. The MTC is located on the 400 block of South Kittson Avenue. The Midtown Transit Center is located at the north end of the Grand Cities Mall on 17th Avenue South.

To establish the baseline for developing a more detailed transit hub analysis, an existing facility inventory was developed for both the MTC and Midtown Transit Center. The following assessment is based on field visit and walk through conducted in October 2021.

Metro Transit Center

The MTC was constructed in 1999 and serves as the central transfer point of the overall CAT system (Figure 29). Routes 1, 2, 3, 4, 5, 7, and 12 transfer at the MTC. The facility is staffed from 6:30 AM to 5:30 PM Based on a walk through with CAT staff, the following issues were identified regarding the MTC:

- Loitering and other unsafe activities occur on this site; MTC is somewhat invisible within the downtown context due to a lack of “eyes” on the facility. Site lighting is inadequate and presents potential safety issues.
- The pavement/sidewalk adjacent to the building is unlevel and does not appear to be ADA accessible.
- Roof slope causes sliding, ice, and rain to dump on passenger areas creating hazardous conditions.
- The public address system does not work, rest areas are a maintenance nuisance and are not ADA accessible.
- The office area is undersized and doesn’t provide for a full view of the site, lacks an IT closet, the counter height varies inside the office and is not likely ADA accessible. Staff doesn’t like the ability of passengers to see inside of the office under current conditions.

Figure 28: Photos of the Metro Transit Center (MTC)

Midtown Transit Center – Grand Cities Mall Site

The Midtown Transit Center is currently served by Routes 3 and 7 during the day and Route 13 in the evening. There is currently just a shelter on the site which is adjacent to 17th Avenue (Figure 30).

The following assessment was provided based on an October 2021 walkthrough:

- The facility is not current staffed and lacks “eyes” on the facility given its general relationship to surrounding land uses.
- The current shelter is in poor condition, not well lit, and appears to accumulate liter.
- Pavement conditions adjacent to the shelter are in poor conditions.

- As currently designed, the site is not well suited for transit use given the relationship of adjacent roadway and mall parking.
- The site itself is not well marked as a transit stop/center.

Opportunities exist to improve and modify the current condition to allow for a more formal transit center at the Midtown Transit Center location. Future modifications to accommodate a more formal and enhanced transit center will require coordination with the mall ownership. Initial outreach was made to mall ownership as part of the facility site visit and feedback was positive regarding a range of possible coordination points to upgrade and expand this site into a more formal and staff transit center.

Figure 29: Location and Photos of the Midtown Transit Center—Grand Cities Mall Site

Existing Plan Integration

The Grand Forks and East Grand Forks Area has several local, regional, and statewide policies. The following is a summary of the plans and how they may inform the TDP.

North Dakota Long Range Transportation Plan, Transportation Connection (June 2021)

North Dakota Department of Transportation (NDDOT)

This plan covers a 25-year horizon of transportation needs in the state across all modes, including transit. The plan identifies opportunities for transit agencies to increase their transportation demand management (TDM) activities, such as partnering with large employers and universities to offer transit passes and to coordinate transit service with bike and carshare services. This plan also addresses the potential long-term impacts of the COVID-19 pandemic on transit agencies, noting that, as the pandemic ends, transit agencies may need to launch marketing campaigns and outreach efforts to identify customer expectations and travel demand.

Grand Forks Downtown Action Plan (December 2019)

City of Grand Forks

This plan focuses on street and urban design proposals for the downtown area. This plan includes a proposed wayfinding system for downtown Grand Forks that would include CAT “transit hubs” as a destination, but recommendations for bus stop design and amenities are not addressed in this plan.

North Dakota Moves Active & Public Transportation Plan (April 2019)

The North Dakota Department of Transportation (NDDOT)

The purpose of this plan is to identify existing and emerging needs for the future of biking, walking, and public transit in the state. The plan includes recommendations for how NDDOT and local communities can update their design guidelines, policies, and programming for these modes.

In this plan, NDDOT evaluated North Dakota’s existing public transit systems, including Cities Area Transit, focusing on three performance areas: service performance, ridership, and cost-effectiveness. Based on projected population changes by 2040, the plan identified network gaps in Cities Area Transit’s service for both revenue miles and hours per capita. This plan also addresses

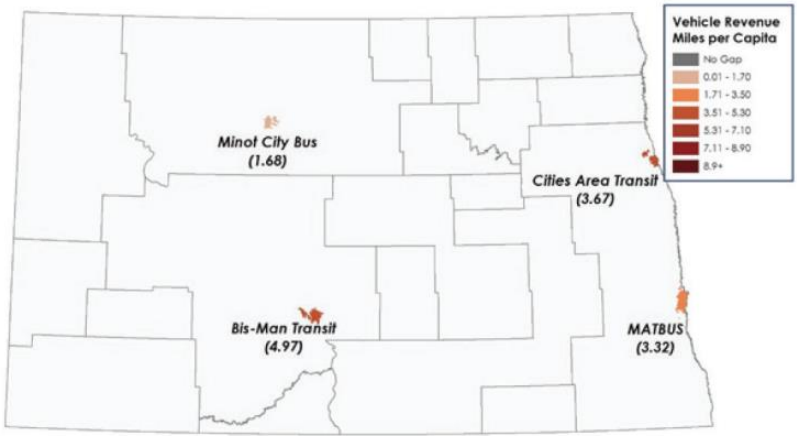


Figure 30: 2040 Transit Service Gaps by Urban Public Transit Service Area (Vehicle Revenue Miles per Capita) (NDDOT)

funding and backlog management scenarios to address public transit asset management needs across the state, recommends bus stop design and amenity guidelines, recommends winter maintenance guidelines, and highlights the importance of considering the relationship between transit and automated vehicles, shared mobility, and other emerging technologies.

2045 Metropolitan Transportation Plan (2019)

Grand Forks-East Grand Forks Metropolitan Planning Organization

The 2045 Metropolitan Transportation Plan is an assessment of and plan for the transportation network in the Grand Forks-East Grand Forks metropolitan area, including streets and highways, the transit network, and bicycle and pedestrian facilities.

Supporting and expanding transit service is part of plan goals related to economic competitiveness, accessibility and mobility, environment and quality of life, connectivity, and safety. Compliance with these goals will shape how the region's transit network develops. Selected transit-related plan objectives are listed below:

- Provide transit service within 1/4 mile of residential areas and to major activity and employment centers.
- Operate 40 percent of fixed routes at 30-minute headways.
- Encourage transit travel time to be competitive with auto, no more than three times auto travel.
- Maintain and improve regional air quality.
- Reduce travel time and improve access jobs and community destinations.
- Assure transportation disadvantaged communities are served and included in decision making.
- Improve access to transit via sidewalks, multi-use paths and dedicated bicycle facilities around transit stops.
- Expand transit service hours to better serve existing and future potential users.

Greater Minnesota Transit Investment Plan (2021)

Minnesota Department of Transportation

The Minnesota Department of Transportation (MnDOT) conducts a Greater Minnesota Transit Investment Plan that is updated every four years. The 2021 plan focuses on transit technology improvements. The process involves an assessment of transit needs in Greater Minnesota, community input regarding these needs, strategic direction, and performance measures for transit in Greater Minnesota, and a financial outlook with prioritized strategies. This plan pertains to East Grand Forks.

Some of the trends affecting transit in Greater Minnesota that are noted in the plan are that transit technology is rapidly evolving, smaller agencies operate with limited technology improvements, there is a lack of specifications and standards to support interoperability, there is a national need to develop fundamental support for DOTs and transit agencies, and there is not yet a common framework for discussing transit technology. The plan includes four long-term goals and six mid-term strategies for strategically improving transit technology in Greater Minnesota. They include:

- Long-term goals:
  - Transit services are valued by their communities
  - All riders get where they need to go, when they need to get there, for whatever reason
  - Transit systems are financially stable and sustainable
  - Transit systems equitably meet people's needs across communities
- Mid-term strategies:

- Build community mobility
- Improve rider experience
- Deliver safe, reliable, and predictable transit service
- Improve operational efficiency and accuracy
- Make data-driven decisions
- Make informed, rigorous system decisions

The plan then lists several focus areas for the transit technology plan, along with 10 detailed technology and management solutions.

Grand Forks 2045 and 2050 Land Use Plan (2016, 2022)

Grand Forks-East Grand Forks Metropolitan Planning Organization and the City of Grand Forks

Many of the goals, objectives, and policies in the 2045 and 2050 plans, highlight the relationship between land use and transportation. The 2045 plan included a multimodal transportation analysis to align future land uses and investments in the transportation network. This analysis identifies two major corridors, South Washington Street and South Columbia Road, on which CAT should realign fixed routes to provide more legible, direct service. That plan also provides specific service extension criteria for CAT, which account for the relationship between land use and transit service. For example, that plan recommends that within a quarter mile of service extensions there should be a minimum of 15 intersections, 750 households, or 375 jobs. The City of Grand Forks finalized the 2050 plan in mid-2022. This plan highlights activation areas for growth including the northwest and west of the city where there is currently job growth and industrial land use. These areas include 6,788 developable acres. The city is expected to add nearly 35,000 people by 2050. The plan identifies important street corridors to consider for future growth including: Gateway Drive, University Avenue, S 42nd Street, 32nd Avenue S and S Washington Street.

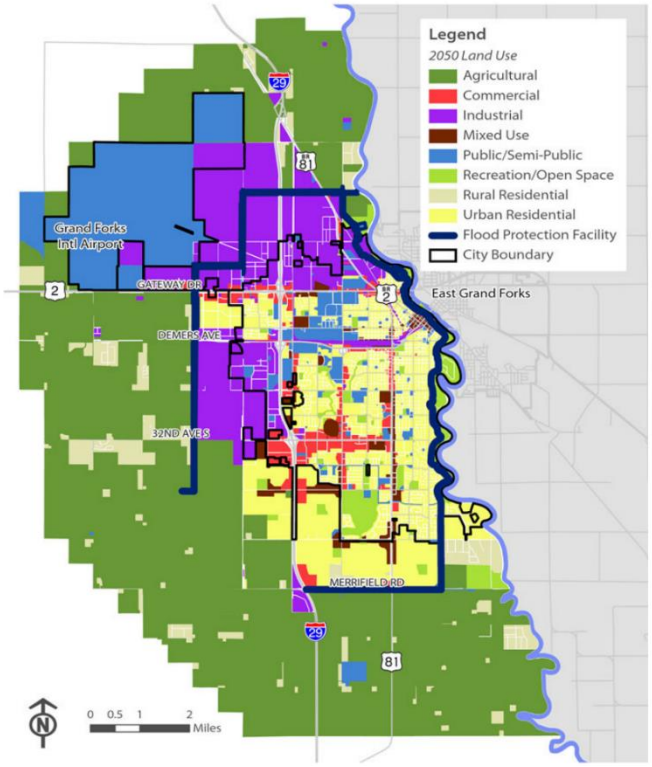


Figure 31 Grand Forks 2050 Land Use Map

East Grand Forks 2050 Land Use Plan (Nov. 2021)

Grand Forks-East Grand Forks Metropolitan Planning Organization and the City of East Grand Forks

This update of the City of East Grand Fork's comprehensive plan outlines land use goals, policies, and implementation strategies through 2050. The plan mentions the relationship between transit and land use. The future land use section of the plan includes a detailed study of three area concept plans (Figure 32). These locations are mostly outside of the city's current boundaries and could potentially be annexed. The proposed concepts for each location mention that transit service should be extended to serve the areas as the city grows outward.

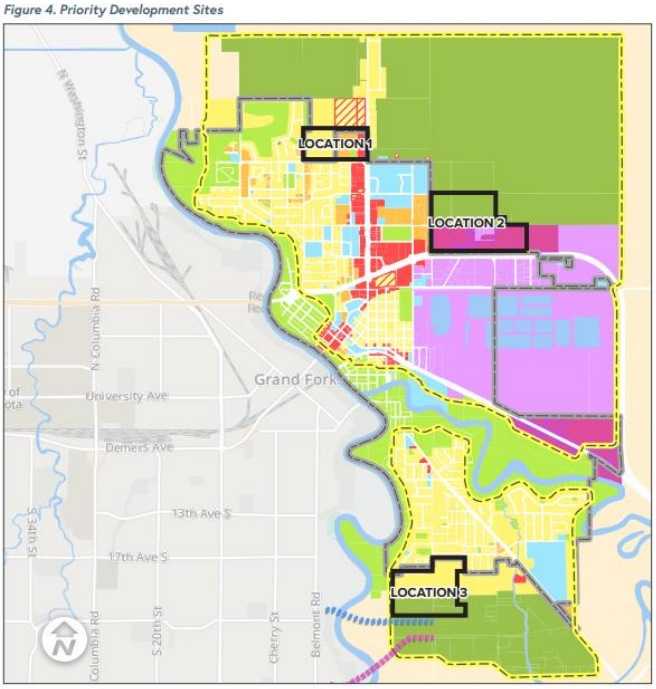


Figure 32: Priority Development Sites (Source: East Grand 2050 Land Use Plan)

Grand Forks-East Grand Forks Downtown Transportation Study (October 2019)

Grand Forks-East Grand Forks Metropolitan Planning Organization

This study used a multimodal levels of service approach to evaluate the transportation system in downtown Grand Forks and East Grand Forks. For this analysis, the MPO determined the transit level of service for each street based on service frequency. They found that CAT's level of service is acceptable on the corridors that it serves directly (**Error! Reference s ource not found.**).

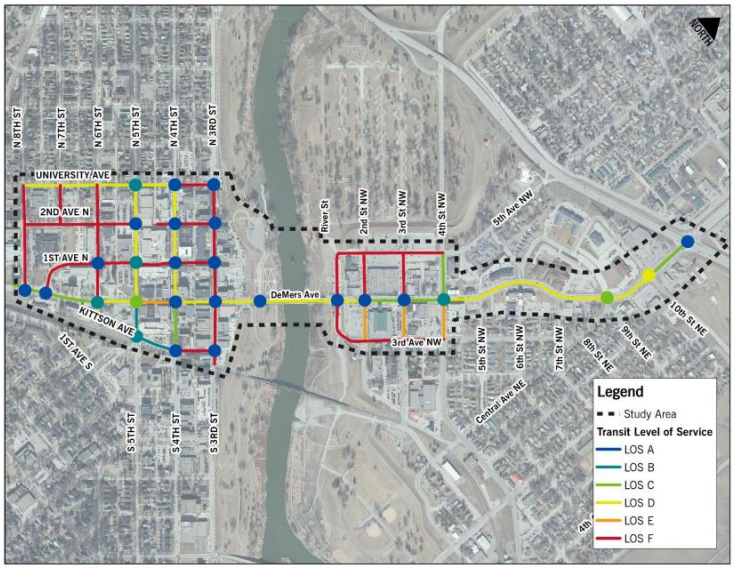


Figure 33: Transit Level of Service (Source: Grand Forks-East Grand Forks Downtown Transportation Study)

City of Grand Forks Downtown Parking Study (June 2019)

Grand Forks-East Grand Forks Metropolitan Planning Organization

This study evaluates existing and projected parking demand in downtown Grand Forks and discusses how multimodal trips, including trips by transit, will influence future parking demands in the area. The plan proposes five strategies for transit in downtown Grand Forks that could shift trips to transit, helping to improve the management of the parking environment downtown. These recommendations for CAT are:

- Conduct a pilot of a high-frequency circulator route to connect the downtowns or to run along 3rd and 4th Street.
- Implement marketing strategies to attract choice riders.
- Seek partnerships to establish park-and-rides on high-frequency routes serving downtown.
- Evaluate travel demand management (TDM) partnerships with businesses to encourage employees to use transit to reduce parking demand downtown.
- Explore partnerships between CAT and downtown event centers to provide free or reduced cost rides to events downtown.

Alternatives Analysis Report: US 2/US 81 Skewed Intersection Study (June 2019)

Grand Forks-East Grand Forks Metropolitan Planning Organization

The purpose of this study is to evaluate intersection design alternatives for the intersection of US 2/Gateway Drive and US 81/Washington Street in Grand Forks. This report addresses unsafe pedestrian conditions in this area and delays caused by train crossings. The existing and future conditions report of this study notes that CAT Route 2 runs along US 2/Gateway but does not have stops at this intersection. The report mentions that CAT had not reported issues with delays at this intersection due to the train. Improvements at this intersection could potentially affect travel time and reliability for CAT routes, although this does not seem to be a major issue for CAT currently.

MN 220 N Corridor Study (June 2019)

Grand Forks-East Grand Forks Metropolitan Planning Organization

The purpose of this corridor study of MN 220N/ Central Ave in East Grand Forks is to identify existing and future transportation issues on the corridor and to develop alternatives to address these issues. Most of the study corridor is in the city's commercial corridor and residential neighborhoods, but the corridor does extend into an area with rural land uses. This study identified this area as a location for future urban development. This study notes that multiple CAT routes run on this corridor and there are multiple bus stops. The study's recommendations for improving transit accessibility on the corridor include:

- Provide transit stop signing, concrete pads, and benches at the four existing transit stops on the corridor.
- Coordination with CAT to reevaluate transit routes and service as future development occurs within the portion of the corridor that is currently rural.

Near Southside Historical Neighborhood Traffic Study (October 2018)

Grand Forks-East Grand Forks Metropolitan Planning Organization

The purpose of this study is to explore traffic calming and safety countermeasures in the City of Grand Forks Near Southside Historic Neighborhood. The study identifies safety and accessibility hazards for transit riders accessing bus stop locations (e.g., lack of marked crosswalks and curb ramps). One recommendation from this study is for the MPO to conduct a regionwide bus stop/pedestrian safety analysis to identify issues facing transit network users. The plan recommends that analysis include walkability and bikeability assessments.

Community Profile and Transit Propensity

This section looks at various demographics for the Grand Forks and East Grand Forks area. It also reviews employment and community characteristics for the area. Finally, it assesses areas of transit propensity to determine potential growth areas for the city.

Community Profile

The Grand Forks-East Grand Forks Metropolitan Planning Organization Environmental Justice Program Manual (2015) (EJ) identifies CAT's responsibility to incorporate EJ into its plans, projects, and activities. This includes considering whether any characteristics associated with CAT's service may "…hinder or make transit services more accessible to low-income, minority, or vulnerable disabled populations." It indentifies people who are Black, Hispanic, Asian, American Indian and Alaskan Native, Native Hawaiian and other Pacific Islander as minority popluations that should be considered in this area and more detail is provided below regarding these groups. This section reviews current demographics for Grand Forks and East Grand Forks using the American Community Survey (ACS) Summary data for 2015-2019 at the block group level.

Population Density

Population density is highest near UND and along Washington Street between Demers Avenue and 32nd Avenue. Population density is an indicator for where transit may be successful in serving more people.

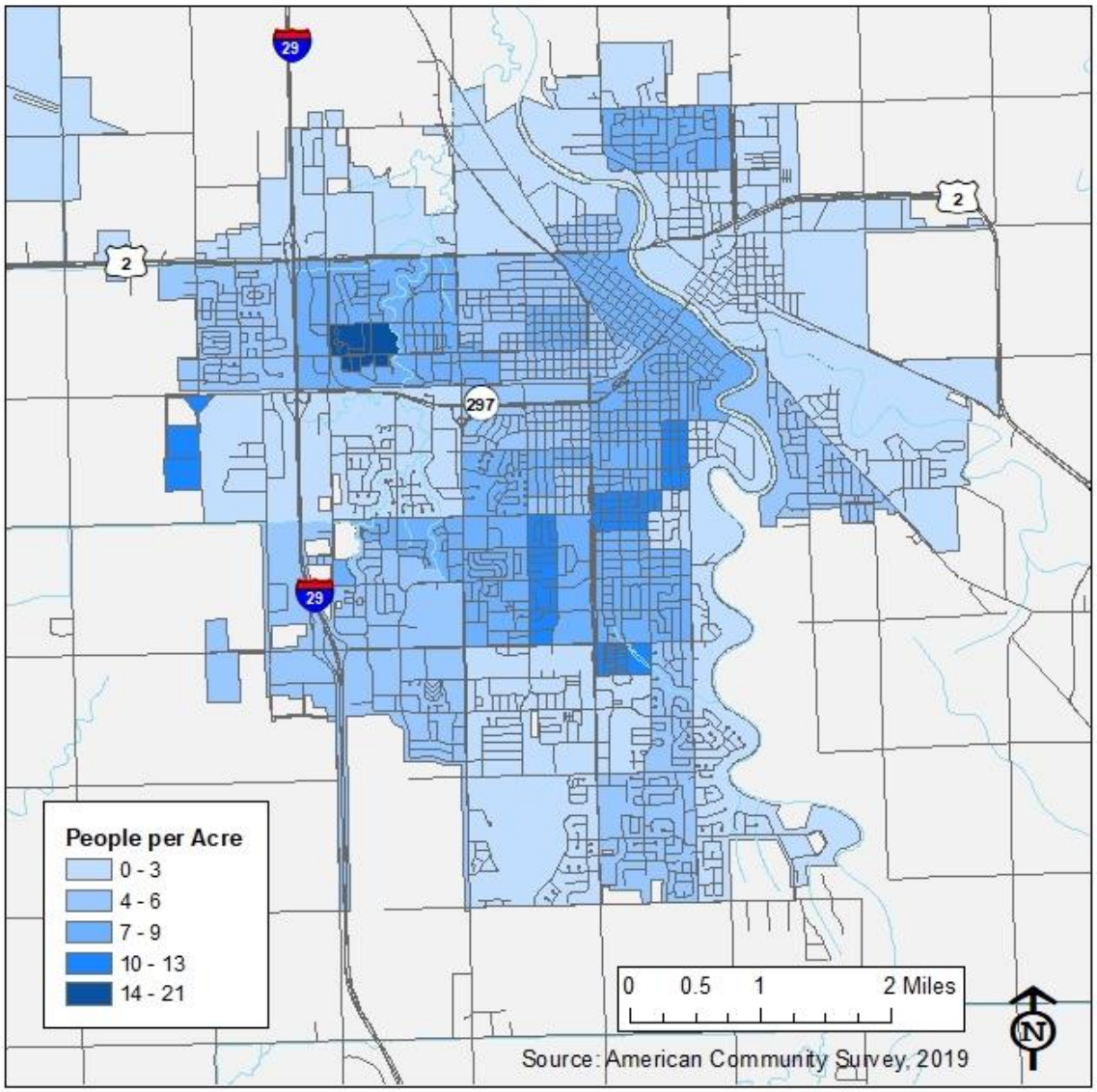


Figure 34: People per Acre (ACS 5-Year Estimates, 2015-2019)

Race and Ethnic Demographics

Black, Asian, American Indian and Alaskan Native, Native Hawaiian and other Pacific Islander are minority popluations that are relevant to the EJ manual and are also known as non-white, communities of color. The cities of Grand Forks and East Grand Forks are 85 percent and 89 percent white, respectively. The areas with the fewest people of these communities of color are located along the river in the southeast portions of Grand Forks and East Grand Forks, while the highest concentrations of people of color are found along Gateway Drive, 32nd Avenue, Columbia Road, and near Central Park.

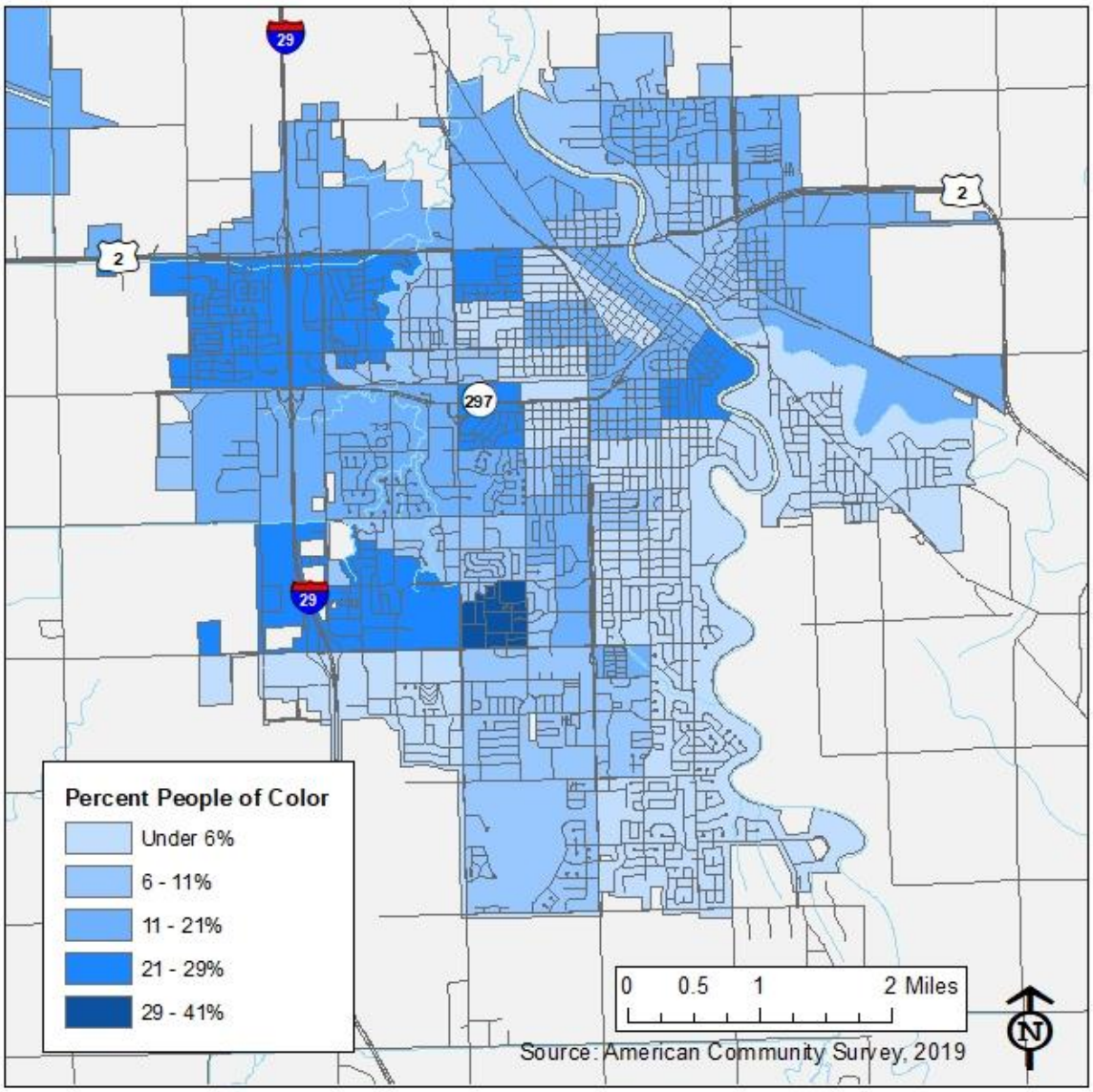


Figure 35: Percent People of Color (Minority Populations) (ACS 5-Year Estimates, 2015-2019)

The EJ manual also identifies the Hispanic community as a minority population. Residential patterns for Hispanic populations are similar to people of color populations, but a higher density of Hispanic and Latino people can be found in block groups in the northern portion of East Grand Forks.

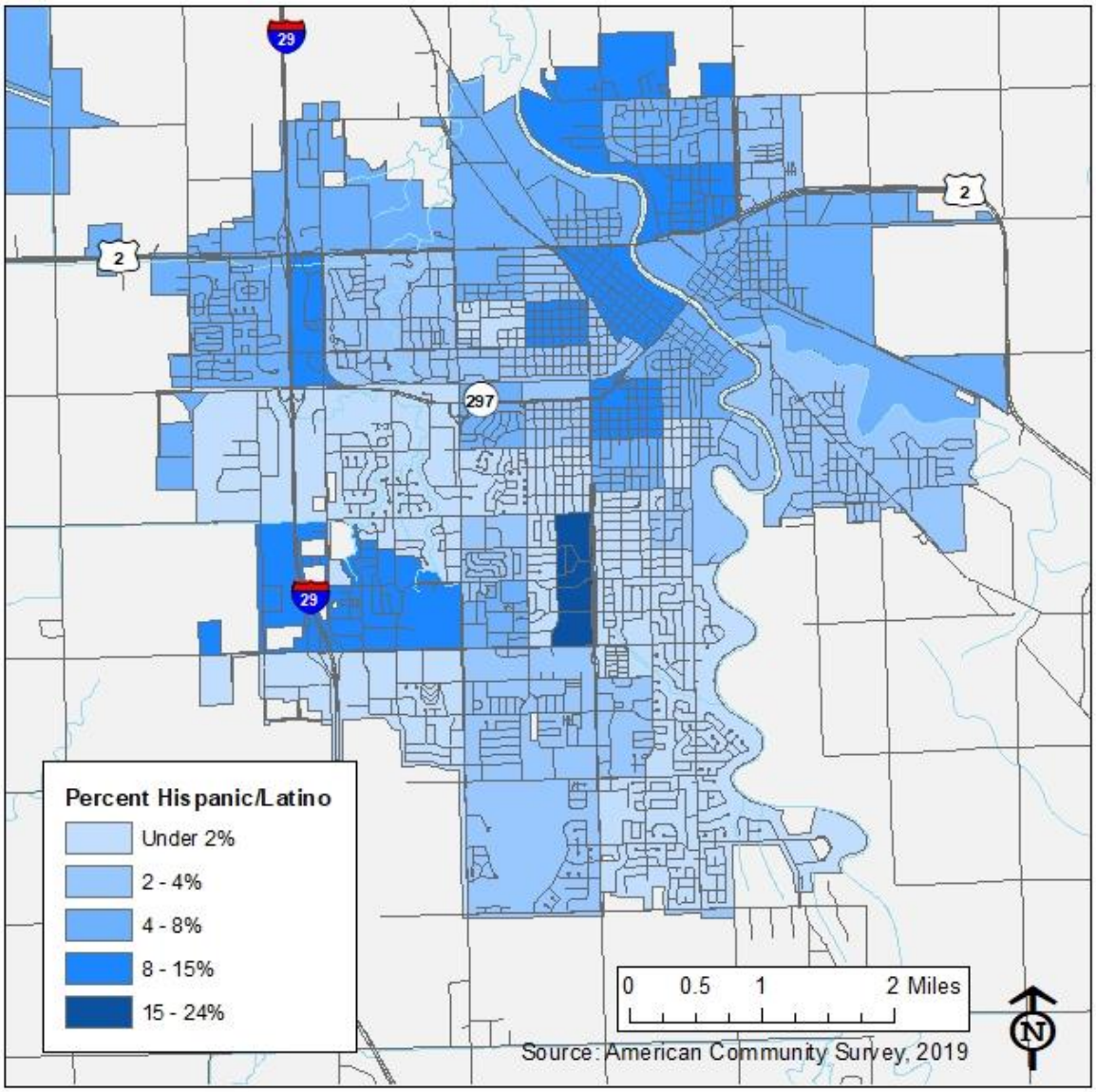


Figure 36: Percent Hispanic/Latino (ACS 5-Year Estimates, 2015-2019)

Low-Income Households

Low-income communities are also included as priority populations for consideration in planning according to the EJ manual. The percentage of households earning under 185 percent of the poverty line, an indicator of low income, is highest in western Grand Forks between 48th Street and Columbia Road, especially around the university, in downtown Grand Forks, downtown East Grand Forks, and the northern part of East Grand Forks.

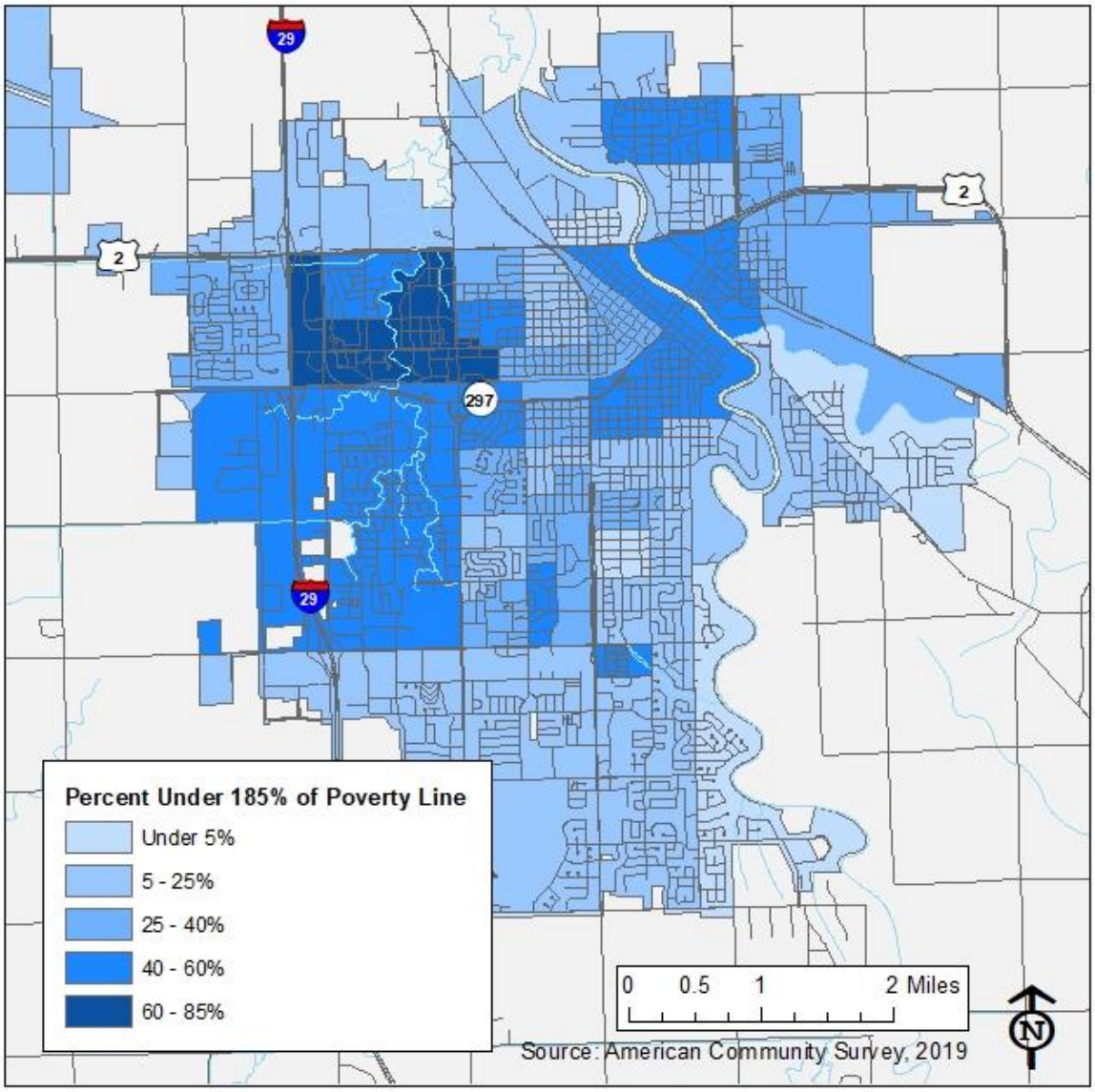


Figure 37: Percent Under 185% of the Poverty Line (ACS 5-Year Estimates, 2015-2019)

Median Household Income

Median household income tend to be higher in northern and southern Grand Forks, particularly along the river in southeast Grand Forks and in southern East Grand Forks. These block groups overlap with higher concentrations of white residents.

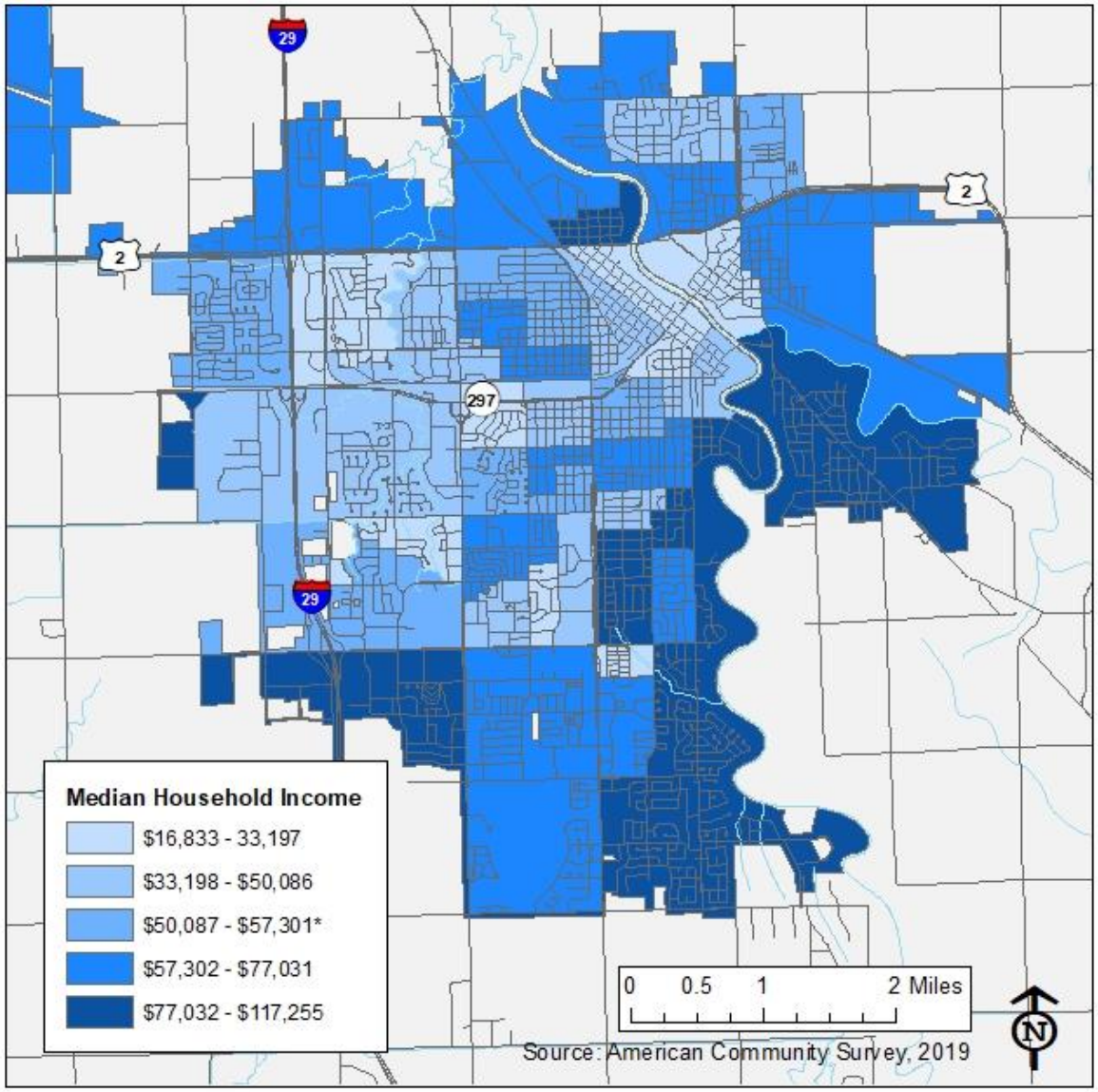


Figure 38: Median Household Income (ACS 5-Year Estimates, 2015-2019)

*Median income for Grand Forks-East Grand Forks

People of Driving Age per Vehicle

The ratio of people of driving age to vehicles is relatively low in Grand Forks, indicating that most drivers have a vehicle available to them. The area with the highest ratio of people of driving age per vehicle is near UND, which likely reflects students who do not have a vehicle with them at school.

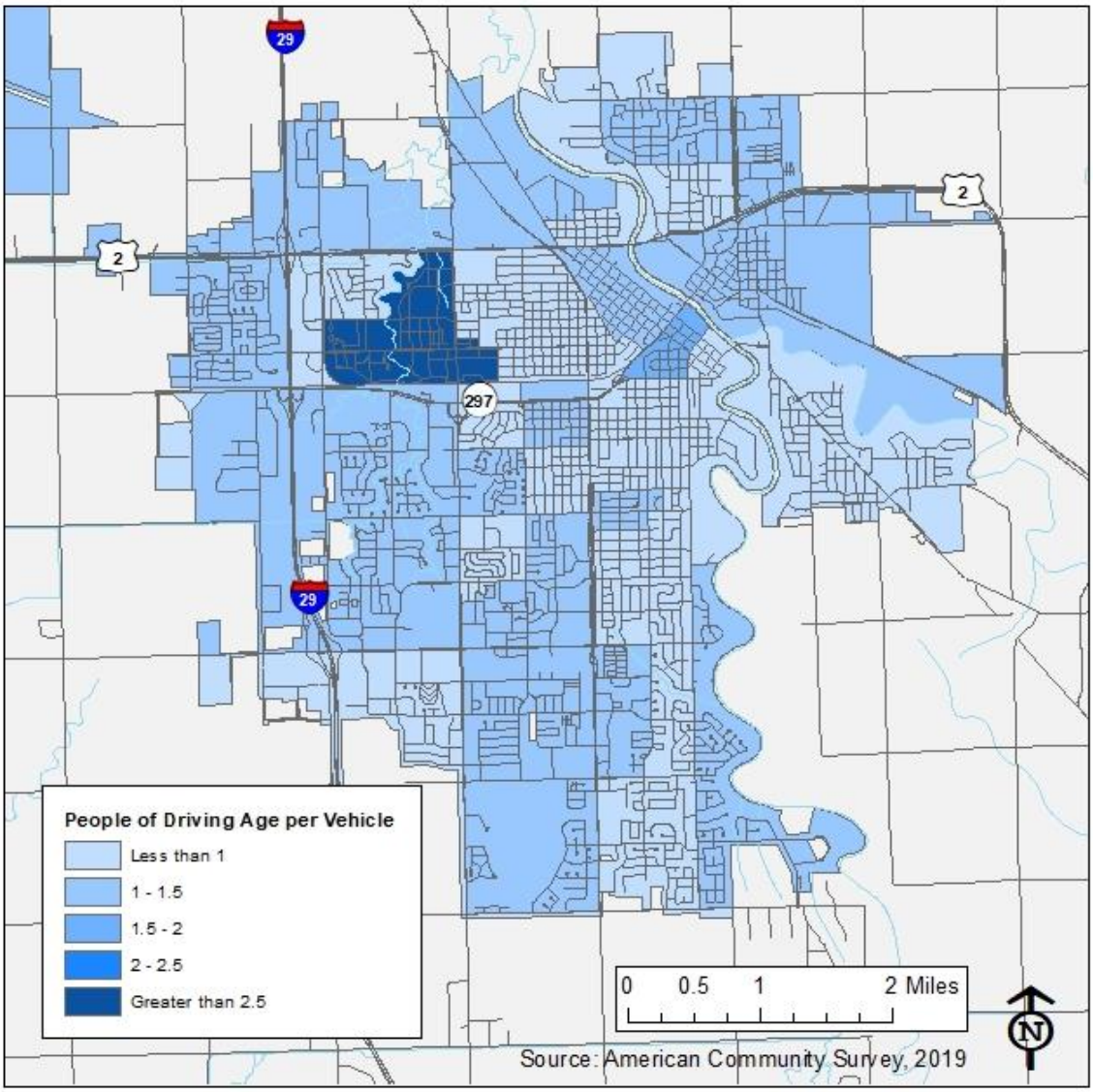


Figure 39: People of Driving Age per Vehicle (ACS 5-Year Estimates, 2015-2019)

Disability

East Grand Forks has a higher percentage of households where at least one resident has a disability. In Grand Forks, households with a disabled member are clustered near Washington Street, similar to population density patterns. People with disabilities may be less likely to drive and more likely to rely on transit.

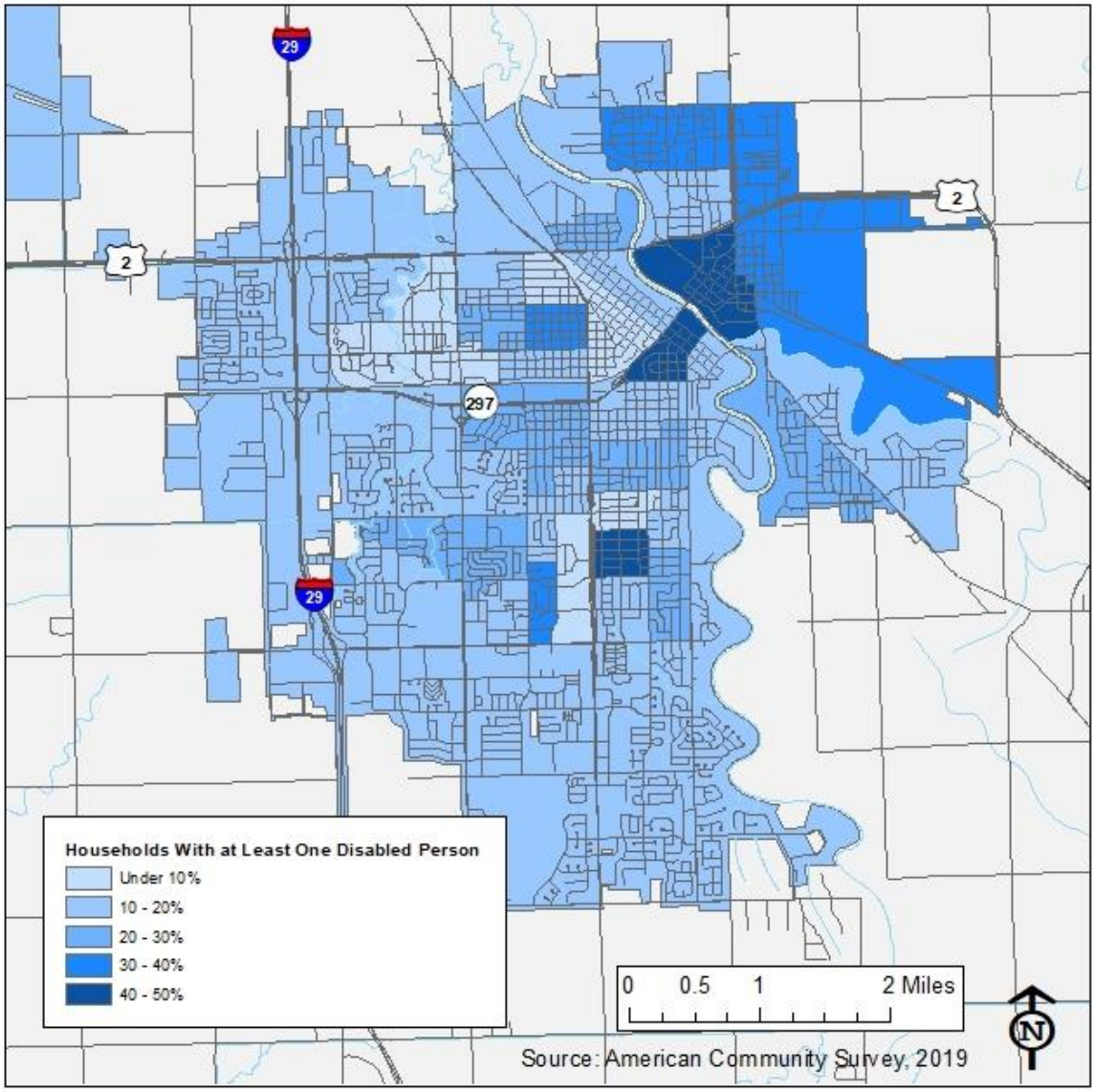


Figure 40: Households with at Least One Disabled Person (ACS 5-Year Estimates, 2015-2019)

Employment

This section reviews employment patterns in the Grand Forks-East Grand Forks area, including the overall job density in both cities, the low wage job density, and the home locations of those working the industrial park.

Job Density

Job density is highest in Grand Forks. It is highest near UND and the shopping area near Columbia Road and 32nd Avenue South where there are over 1,500 jobs in each area. Another major area includes the industrial park on the west side of Grand Forks. The largest dot in the lower part of Grand Forks, which shows 1,5001-3,519 employees, is the Grand Forks School District building, which employs staff and teachers that are actually scattered throughout the city. East Grand Forks has overall lower job concentrations, with some job density near downtown Grand Forks (Figure 41). There is also one spot with 201-500 employees, which represents the East Grand Forks processing area for American Crystal Sugar Company.

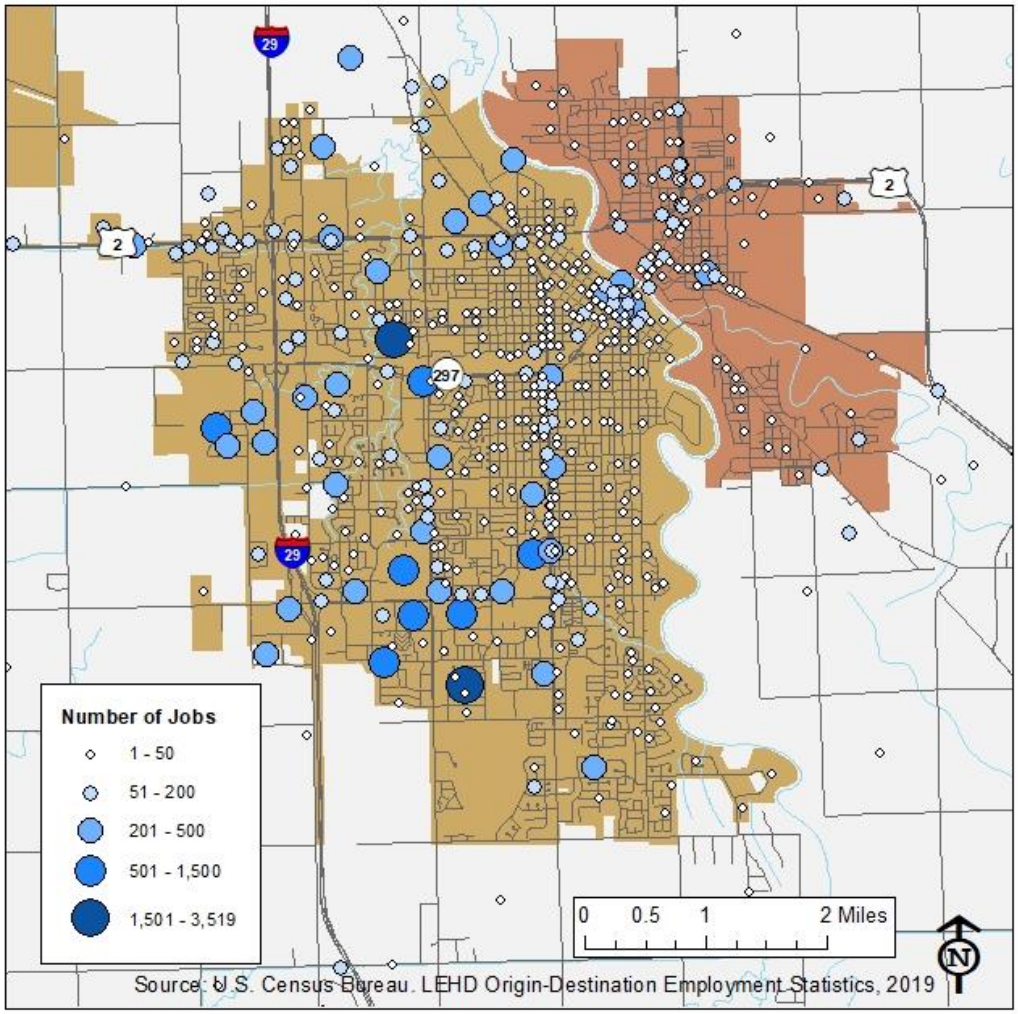


Figure 41: Job Density in the Grand Forks-East Grand Forks area

Low Wage Job Density

Low wage jobs (defined as jobs earning $1,250 per month or less) are densely located in a number of locations along Columbia Road and 32nd Avenue. These jobs likely reflect the retail and service sector jobs along corridors. A lower concentration of these jobs can be seen on South Washington Street (Figure 42).

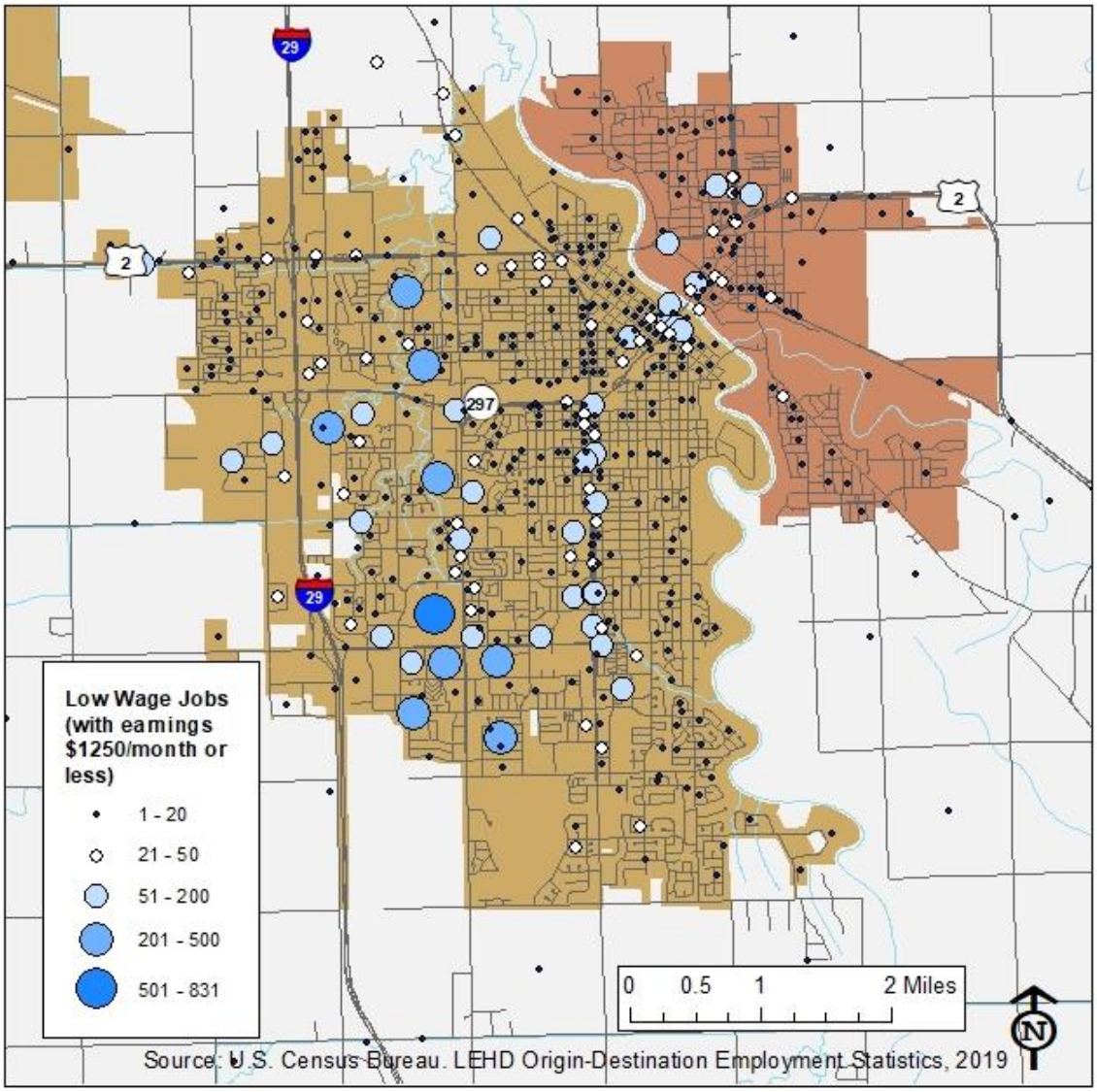


Figure 42: Low Wage Jobs

Industrial Park Jobs

Over 2,000 jobs are located in the industrial park in the western part of Grand Forks. Over 70 percent of these workers commute from less than 10 miles from their employer (U.S. Census LEHD Origin-Destination Employment Statistics, 2019). These workers have a greater tendency to live along 32nd Avenue or between Columbia Road and Washington Street (Figure 43).

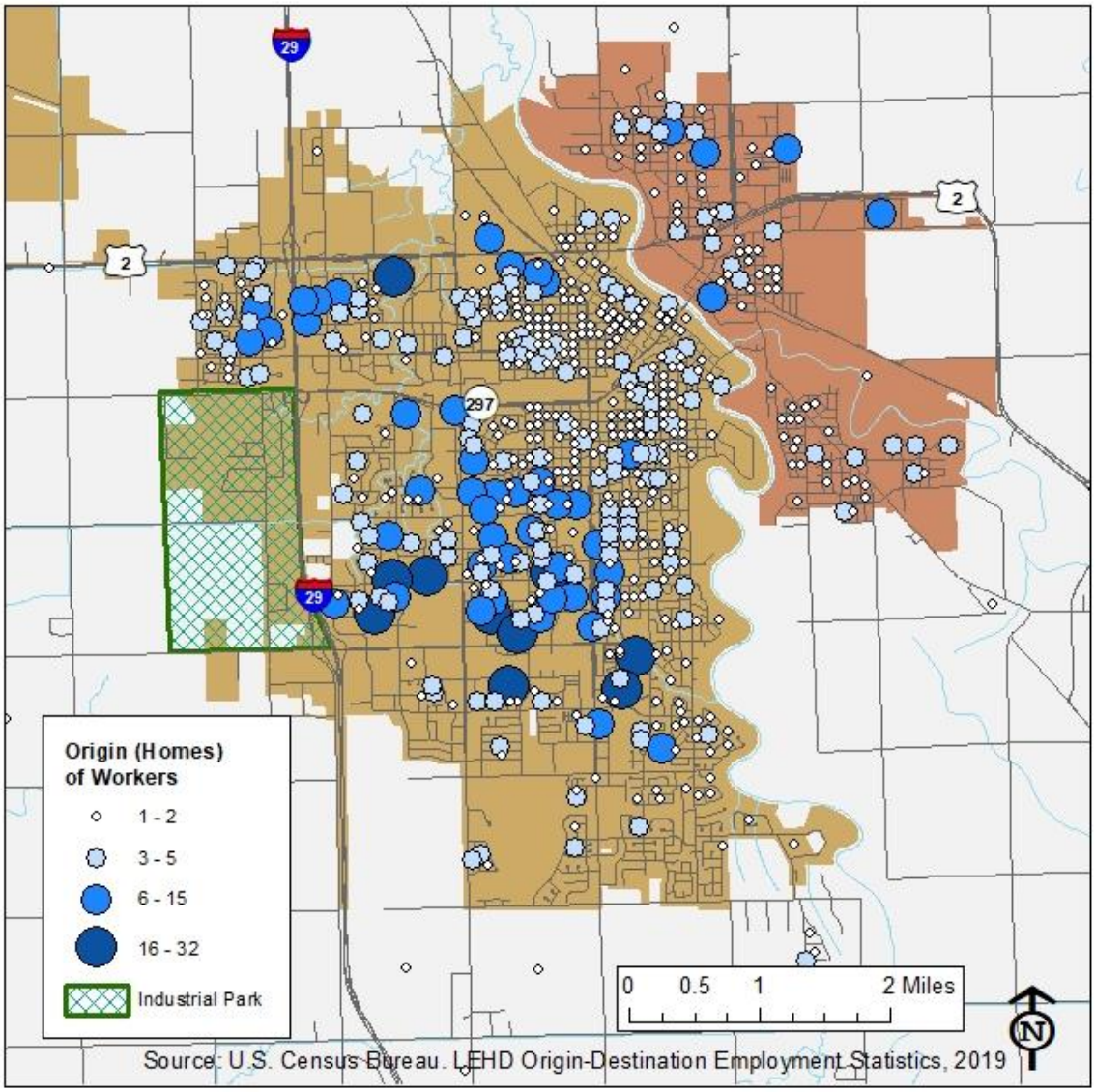


Figure 43: Home Locations of Industrial Park Workers

Land Use

Grand Forks and East Grand Forks are required to update their land use plans every five years. Planned land use can be an indicator of where growth will occur in both housing and employment. The City of East Grand Forks adopted its 2050 Land Use Plan in November 2021. The City of Grand Forks adopted the 2050 plan in the Spring of 2022.

Grand Forks

The most recent land use map is the 2050 Future Land Use map (Figure 44) from the Grand Forks Future Land Use Plan (2022). This map shows two mainland uses for the city: urban residential and agriculture. This map also includes an expansion of industrial land use in the western part of the city. There is also planned growth for the urban residential area in the southern section of the city.

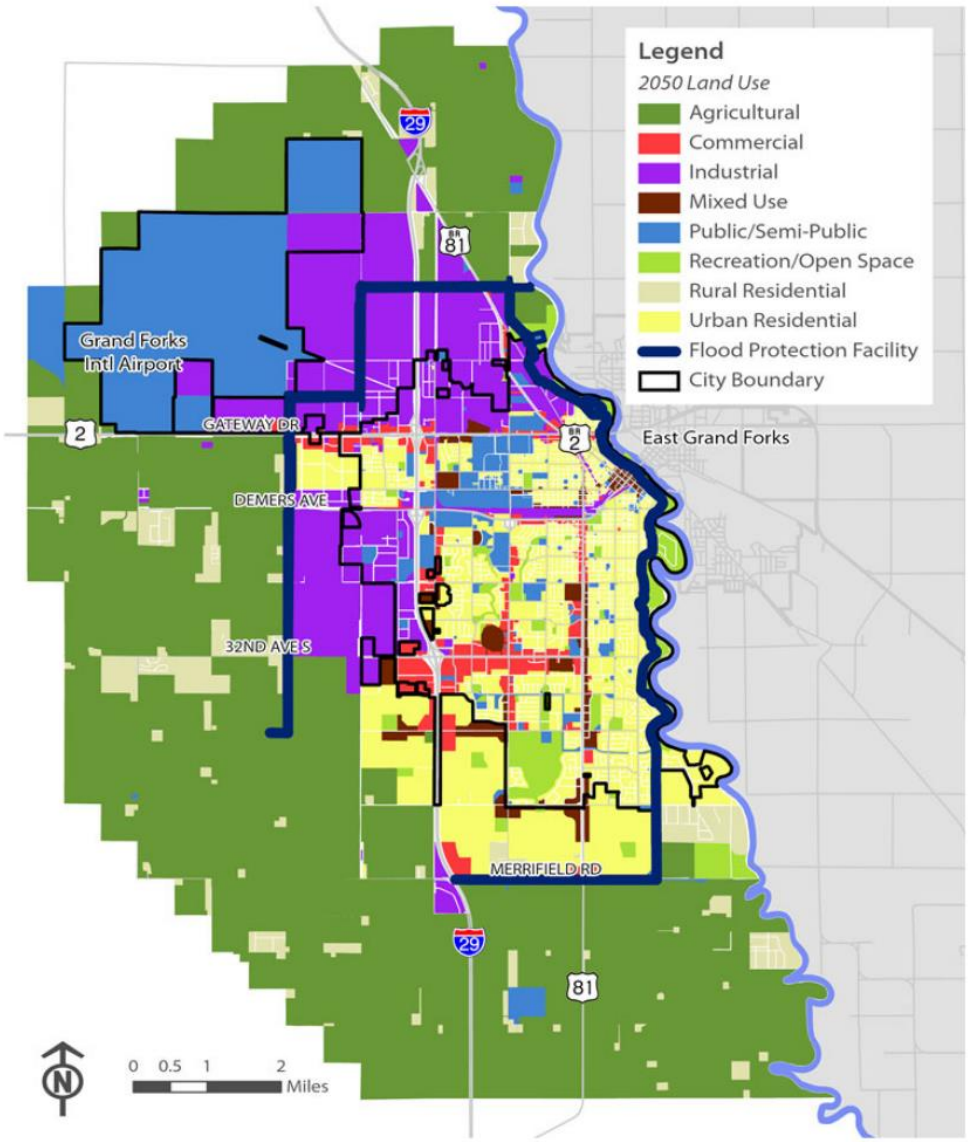


Figure 44: 2050 Grand Forks Future Land Use

East Grand Forks

East Grand Forks latest land use map (Figure 45) is documented in the 2050 Land Use Plan (2021). The map shows some growth in low density residential areas to the north and more industrial area to the east.

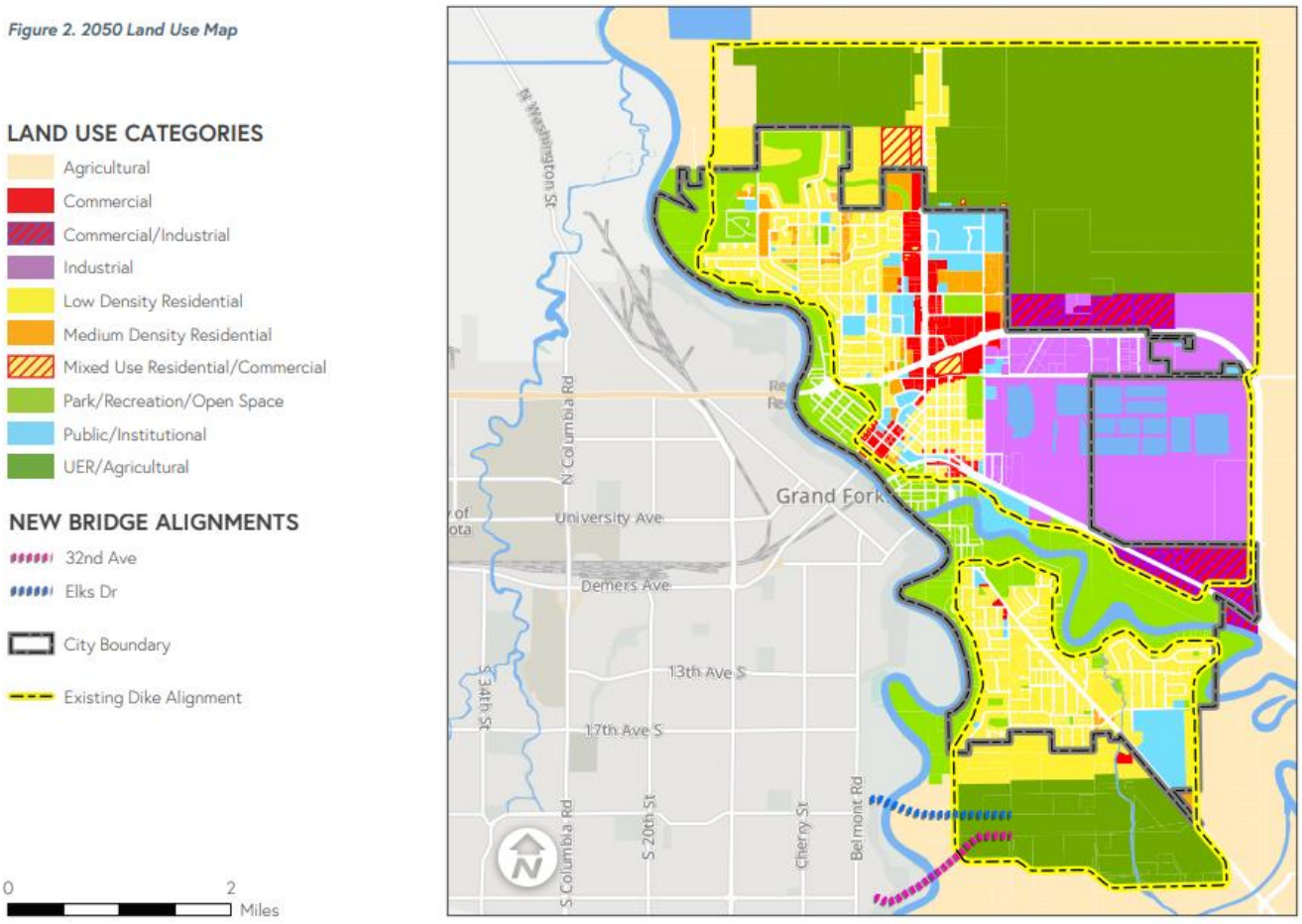


Figure 45: 2050 East Grand Forks Future Land Use

Transit Propensity

Within the Grand Forks and East Grand Forks, population is spread relatively evenly across the area, with the exception of a few areas. People living in the area around UND and residential areas south of UND are more likely to have higher demand for transit based on their characteristics (lower incomes, less access to vehicles, more people with disabilities). The cities are car-rich with a relatively high proportion of automobiles to drivers, although car access is lower around UND.

Job density is highest in the industrial area and in the commercial and shopping areas along Columbia Rd and 32nd Avenue. Low wage jobs are also concentrated in the commercial and shopping area and on Washington Street. While Columbia Road and Washington Street are currently served by transit, there may be an opportunity to improve service along these corridors.

Similarly, UND has multiple routes running through and around its campus, but because population density, low-income residents, communities of color, and people without access to cars are concentrated around UND, this area should be prioritized for service. Because CAT service is mostly hourly and daytime service, even areas with good geographic coverage, where multiple routes visit per hour, may not provide service at a level that meets people's needs.

Transit gaps exist northwest of UND, at the airport, and in the industrial park. The airport, not shown on these maps, is northwest of the city and is not currently served by transit. Limited service to the airport could be explored for higher travel times, or a partnership with other transit services could have potential to serve this need including a partnership with UND. Initial public engagement has indicated the need for more service to the northwest and industrial areas of the city to provide job access. If a service to the airport is pursued, this could potentially also serve jobs in the northwestern part of Grand Forks. People currently working in the industrial district are predominantly commuting from nearby areas within Grand Forks. More engagement will be done to explore how these transit gaps could be addressed in a cost-effective manner. This may include partnership with local employers that want to provide more transit opportunities to attract workers.

Transit Funding Baseline Analysis

Revenue Profiles

An evaluation of local, state, and federal funding was completed based on the Transportation Improvement Programs (TIPs) for the Grand Forks – East Grand Metropolitan Planning Organization (GF-EGF MPO). The first year in each TIP was evaluated for the years 2017 to 2021 and used to provide an annual average based on the five years of inputs for both operational and capital funding. Funding has been split out for the Grand Forks and East Grand Forks system separately. This provides for the ability to understand the unique funding mixes for each part of the whole system. This existing/baseline condition will be used to support future financial forecasting to support the plan recommendations.

Table 17: System Revenue Profile CAT System – (By Source)

	East Grand Forks		
	Revenue	**% City**	**% of System**
Local	$119,000	15%	3%
State	$502,000	62%	12%
Federal	$191,000	24%	4%
Subtotal	**$812,000**		**19%**

	Grand Forks		
	Revenue	**% City**	**% of System**
Local	$1,426,000	41%	33%
State	$249,000	7%	6%
Federal	$1,770,000	51%	42%
Subtotal	$3,445,000		81%
Total	**$4,257,000**		**100%**

Note: State funding for East Grand Forks includes MN State Transit Formal Funds.

Expense Profile

An evaluation of Grand Forks Budget Performance Reports was conducted based on the years 2018-2021. This evaluation provides a baseline expense profile for each component of CAT. Expenses were isolated into three primary categories: Labor, Operations & Maintenance (O&M), and Capital.

Table 18: Expense Profiles for the CAT System

Fixed Route			
Account*	**Cost Center**	**Total**	
400,401, 402	Labor	$1,785,326	
410, 415, 420-460	O & M	$728,056	
		$2,513,056	Subtotal – Operations
700	Capital	**$1,053,650**	Subtotal – Capital
Demand Response			
Account*	**Item**	**Total**	
400-402	Labor	$292,206	
410, 415, 430-460	O & M	$169,326	
		$461,532	Subtotal – Operations
700	Capital	$179,683	Subtotal – Capital
		$641,215	**Total – Dial-a-Ride**
		$4,208,247	**Total**

** Grand Forks Budget Performance Reports (2018-2021).*

Stimulus Funding

Recent one-time awards from the CARES Act and ARPA were excluded from the financial analysis. East Grand Forks currently has approximately $110,000 in unused ARPA funds and no remaining CARES funds. Grand Forks currently has $600,0000 in ARPA and $750,000 in remaining CARES funds. Assumptions regarding expenditures of these funds will be coordinated into the development of TDP financial forecasts.

Summary

The variation between expenses and revenues is less than two percent and is considered an accurate depiction of the existing condition for the purposes of the TDP. The baseline revenue and expense profiles can be used to develop financial forecasting to support the TDP recommendations. Best practices suggest a four percent inflation factor on costs and a 1.5 percent inflation factor for revenues; however, with the recent signing of the Infrastructure Investment and Jobs Act (IJAA), revenue projections will need to be developed in coordination with evolving guidance from both MnDOT and NDDOT.

Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

GRAND FORKS – EAST GRAND FORKS

Transit Development Plan

Appendix 2: Public Engagement Summary

September 2022

Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

GRAND FORKS – EAST GRAND FORKS

Transit Development Plan

Phase 1 Public Engagement Summary / January 2022

PUBLIC ENGAGEMENT PHASE 1 SUMMARY

Introduction

PROJECT OVERVIEW

The Grand Forks-East Grand Forks Transit Development Plan (TDP) is a 10-year plan that provides a vision for transit in the community. Grand Forks – East Grand Forks' previous transit development plan was completed in 2017. The 2022 plan update will evaluate recent system improvements and has the following areas of focus:

- Integration of University of North Dakota (UND) campus bus routes
- New or improved fixed route, paratransit, and Senior Rider services
- Maintenance and growth of CAT ridership
- Fare, pass, or transfer policy changes to increase ridership or funding
- Transit fleet and technology recommendations
- Investments in capital improvements like buses, bus stop enhancements, and support equipment
- Support for existing and future CAT operations at transit facilities such as Midtown Transit Center and Metro Transit Center

PUBLIC AND STAKEHOLDER ENGAGEMENT OVERVIEW

Two rounds of engagement are planned for the Grand Forks – East Grand Forks Transit Development Plan (TDP) update process: Phase I (Fall 2021) and Phase II (Spring 2022). The following schedule outlines the key time periods during which the public and stakeholders are engaged in the project as well as what takes place before and after engagement.

The goal of public engagement is to build and strengthen relationships in the community while gathering stakeholder and public input, responding to comments and concerns, and keeping decision-makers and other stakeholders informed throughout the TDP update process.

PURPOSE OF THIS DOCUMENT

The purpose of this document is to provide a summary of Phase 1 of public engagement for the TDP. In this round, the study team gathered feedback from the public and stakeholders on their experiences using Cities Area Transit and what is/is not working well currently.

Engagement Methods and Results

Phase 1 engagement methods fall in to two primary categories: surveys and meetings. The study team tailored the surveys and meeting information to each stakeholder group. This section discusses each engagement method and key results.

SURVEYS

Public Survey

Methods

The public survey was administered to both current riders of the system and non-riders. The questions asked respondents what they think is currently working well and any issues with the current system as well as barriers to using the system, changes that could be made to make the transit system work for their travel needs, and demographic information. Kimley-Horn developed the survey questions in consultation with Cities Area Transit (CAT) staff and transit administration.

The study team made a special effort to reach people who are traditionally underrepresented in planning processes. To promote the survey, staff strategically placed posters inside buses, at key transit stops, and popular destinations around the Grand Forks – East Grand Forks area to direct people to take the surveys, and they distributed paper surveys on the buses and to locations connected to people who may be less likely to take an online survey (e.g., senior centers, the public school district, social service organizations). The project team also rode buses and was at the transit center to tell people about the project and to encourage riders to take the project survey.

Results

OVERVIEW

We received 208 responses to the public survey. Of these respondents, 55 percent currently ride CAT services or did before the COVID-19 pandemic. Approximately one-third of respondents said they ride/rode CAT daily, while 19 percent said they ride/rode CAT on a weekly basis. Demographically, we heard most from 35 – 44-year-olds (25 percent of respondents) and 18 – 24-year-olds (18 percent of respondents), and 64 percent of respondents identified as female. The majority of respondents identified as White (80%) followed by seven percent identify as American Indian or Alaska Native, five percent as Black or African American, four percent as Other, four percent as Asian, one percent as Latino/Hispanic, and one percent as Middle Eastern or North African[1]. A majority of respondents reported having access to a personal vehicle and being able to drive it (64%).

[1] Percentages add to more than 100%, since respondents could select all of the races/ethnicities with which they identify

The following are some key findings from the survey results:

- Most respondents ride CAT to go to stores/restaurants (35%) and/or work (33%)
- Approximately one-third of respondents ride CAT about the same amount as before the COVID-19 pandemic
- 40 percent of respondents find riding CAT *easy* or *very easy*
- Respondents noted that the biggest barrier to taking transit is that traveling on the bus takes too long (34%)
- Respondents said having the bus serve more locations and come more often would make transit more appealing to them

A full list of survey questions and results are included in Appendix A.

TRADE-OFF SCENARIOS

Respondents were presented with two options and were asked to pick which of the two they strongly preferred or to select that they have no preference between the two. When asked to consider these possible trade-offs for transit service improvements, respondents expressed the following preferences.

- More respondents would prefer increases to service frequency (45% strongly prefer) over an expansion of span of service (27% strongly prefer).
- More respondents would prefer increased weekday service (37% strongly prefer) over increased weekend service (25% strongly prefer). 39% of respondents expressed no preference on this issue.
- More respondents would prefer having more bus stops per route to reduce walking distances (41% strongly prefer) over having fewer bus stops per route for faster travel (19% strongly prefer). 40% of respondents expressed no preference on this issue.
- Respondents were almost evenly split in their preferences to have buses running on fewer streets, but the bus comes more often (27%) or buses running on more streets, but the bus comes less often (30%). 43% of respondents expressed no preference on this issue.
- More respondents would prefer for CAT to improve existing service in the same locations (37%) than expand service to new areas (25%). 38% of respondents expressed no preference on this issue.

STRENGTHS AND AREAS FOR IMPROVEMENT

Regarding strengths of the CAT bus system, respondents noted that drivers are courteous, helpful, and friendly. Some said they like the existing routes and wouldn't change them. Some also noted they are appreciative of the service for school kids. Regarding areas of improvement, respondents most commonly noted wanting more frequent service, faster travel times, and earlier and later transit service.

Service Improvements

- Add services on Sundays (for church, grocery shopping, etc.)
- Increase service on weeknights and weekends (e.g., UND doesn't have weekend service)
- Increase bus frequency

- Reduce bus travel times
- Make routes more direct – have routes that don't require a transfer downtown (e.g., from UND campus to shopping destinations like Target or Walmart)

Facilities Improvements

- Improve visibility of bus stops (especially in East Grand Forks)
- Add more shelters to protect riders from the cold and wind

Customer Information/Experience Improvements

- CAT Prowler app can be glitchy/incorrect – shows stops in places that don't have a bus sign, can be wrong about arrival times
- Improve transit information – easy to read maps, education on how to ride the buses

Locations that Need Transit Service

Respondents were asked to identify locations that need transit service that are not served by CAT today. Respondents highlighted the need for transit service to the locations listed below. Multiple respondents mentioned these locations and they are ordered from most to least mentioned:

- Industrial Park (this location was mentioned many times)
- Belmont Road
- More grocery stores (e.g., more Hugo's locations, south Walmart)
- To schools
- South Grand Forks
- Airport
- East Grand Forks needs better service
- South Columbia Road
- To events/games

Operator Survey

Methods

Transit operators know the system better than anyone due to their interaction with customers and experience driving the routes. We collected surveys from operators to gain their insight about the system and give them an opportunity to voice existing issues with the system. These surveys were available at the garage for operators to complete either before or after their shift.

Results

Two operators responded to this survey. These operators drive routes 1, 2, 6, and UND Purple Route 4 and are assigned to trips that operate at different times of day and days of the week.

SAFETY CONCERNS

The survey asked operators to identify any safety concerns that they have regarding the routes that they operate. Operators identified the following safety concerns:

- Pulling out of Odegard Hall
- Turning left onto University Avenue
- 6th & Hamline traffic
- Feel that the railroad crossing at Gateway & 5th is dangerous
    - Consider routing to Home of Economy as the vehicle would be on the far right, not the center (fast) lane at the tracks

LOCATIONS THAT NEED TRANSIT SERVICE

The survey asked operators to identify any locations in Grand Forks – East Grand Forks that they or their passengers think should be served by bus service that aren't currently served. The respondents identified the following locations:

- Students would like a Friday night UND bus
- Home of Economy stop – locate closer to the correction center and municipal court

ROUTE OR SYSTEM CHANGES

The survey asked operators to identify any changes to the routes or system that would make their jobs easier. Operators identified these:

- Need for a mall route that travels south to 62nd Avenue to serve the residents in that area
- Adjustments needed to relief times for Routes 5 and 9
    - Consider relieving Route 5 across from Odegard Hall

Decision Maker Survey

Methods

The study team also distributed a survey to decision-makers representing the service area, including elected and appointed government officials and staff at the Cities of Grand Forks and East Grand Forks and partner agencies. The survey collected information about issues with existing transit system as well as priorities for the system. Constituents often contact decision makers when systems are not working well, so they are great resources for this information.

Decision makers also influence the distribution of resources and make choices that affect the system, so it is important to understand their perspective of the system at the beginning of the study.

Results

We received seven responses to the decision maker survey. Respondents represented Grand Forks Public Schools, Grand Forks and East Grand Forks City Councils, City Planning Departments, and East Grand Forks Community Development Office. Respondents were asked to rank CAT's service on a scale of 1 to 10, with 10 being the highest, and to provide an explanation for their selection. The average response for each question and comments about the question from respondents are shown below:

Based on what you have heard from constituents or community members, how well does Grand Forks - East Grand Forks public transit system serve those you represent? 6.8/10

Respondents cited concerns about low ridership in East Grand Forks, the need for more shelters at bus stops, the inconvenience of riding transit, the need for increased frequency and shorter travel times, and that important areas like the industrial park are not served (or are underserved). Some respondents also said they felt the system works well, provides an essential service, and does an exceptional job of serving the communities' highest need areas.

In your opinion, how well does the Grand Forks - East Grand Forks transit system serve those you represent? 7.1/10

Respondents cited the need for improved travel times and ridership. One respondent said they like the Dial-A-Ride service because the route times, hours, and days are more frequent, but feel that microtransit or on-demand transit would better serve residents.

STRENGTHS AND AREAS FOR IMPROVEMENT

When asked to describe CAT's strengths, decision-maker respondents identified that the following strengths:

- Availability of service – relatively widespread service
- Bus drivers are nice, courteous, and professional
- Buses are nice
- Timeliness
- Ability to expand service

We also asked these decision makers to identify areas of improvement for the CAT system:

- Later hours of operation
- Need for microtransit or on-demand service

- Need for better travel times and increased frequency
- Improvements to shelters
- Need for service/more service to important destinations (e.g., industrial park)
- More stops needed by schools

PRIORITIES AND GOALS FOR CAT

When asked about their priorities for CAT, the decision makers who responded to this survey identified the following priorities:

- Availability of service
- Increased ridership
- More efficient, cost-effective, and convenient service
- Need for a central hub
- Better travel times
- Transportation near schools

Finally, this questionnaire asked decision makers to rank potential goals for CAT's system (Figure 1). The top ranked goal was "to provide transportation for people who do not have or are unable to use a private automobile."

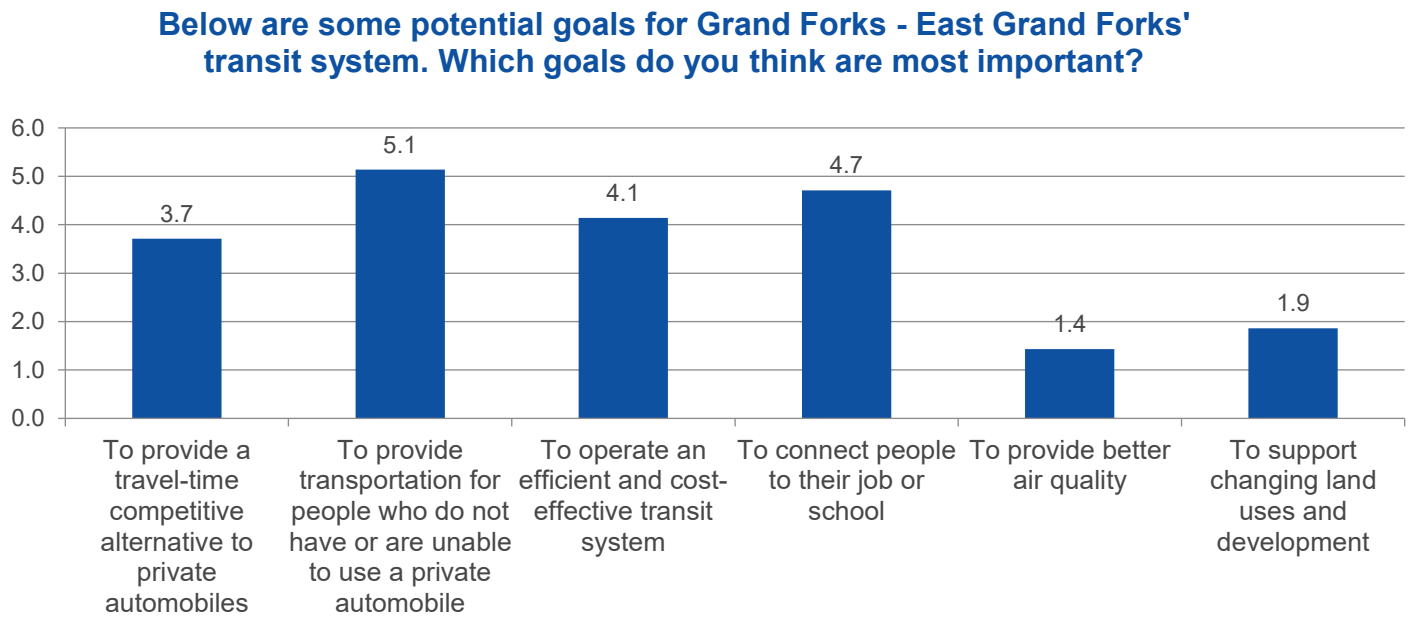


Figure 1. Decision Maker Responses to CAT Goals Question

Interactive Map Comments

Methods

The Kimley-Horn team developed an interactive map to use for both gathering information at the beginning of the project as well as sharing the proposed recommendations for enhanced services and gathering public feedback on the recommendations. This map allows users to add location-specific comments about transit improvements that they would like to see. The map is prominently advertised on the TDP project website.

Results

In Phase 1, we received 16 comments on the interactive map (Figure 2). Respondents were able to add comments in three categories: *Add Bus Service*, *Places I Go*, and *Needs Improvement*. Respondents provided specific requests for locations in the system where they would like to see service improvements (Appendix B).

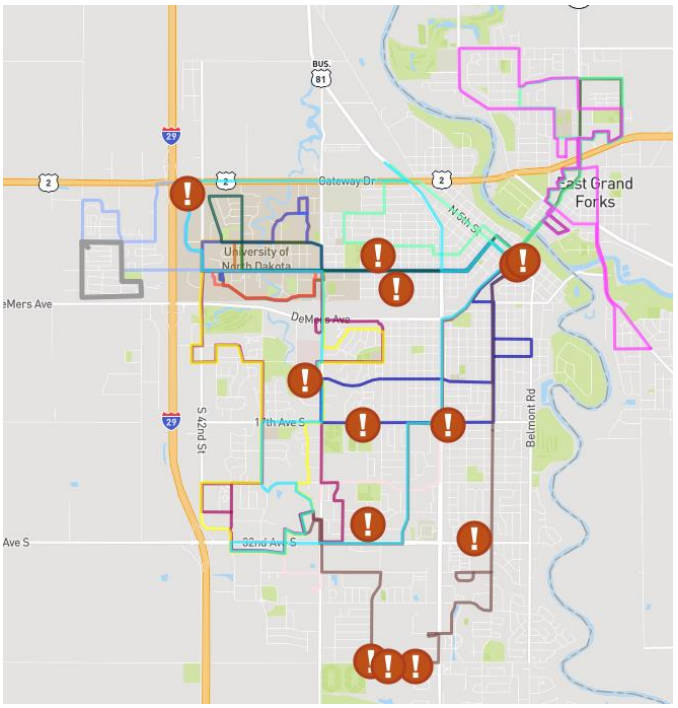


Figure 2. Interactive Map Comment Locations

MEETINGS

Focus Groups

Methods

The study team held three one-hour focus groups discussions on the following dates/times:

- Monday, November 29, 2021; 11 a.m. – noon
- Monday, December 7, 2021; 4 – 5 p.m.
- Wednesday, December 15, 2021; 2 – 3 p.m.

The purpose of these focus groups was to hear from businesses, non-profit organizations, and those living, working, and studying in Grand Forks – East Grand Forks (particularly those already riding the CAT system). We have found focus groups to be especially useful because these representatives are able to share detailed insight and firsthand experiences about how they or their clients use the system. To increase access and accessibility, focus groups were held virtually.

Results

A total of 17 people attended the focus group discussions.

TRAVEL PATTERNS

- For most, travel patterns are the same before the COVID-19 pandemic
  - Some employers mentioned allowing flexibility in shift start/end times with their new hires
- Participants said they travel to appointments, work, downtown, shopping destinations (e.g., Hugo's, Walmart), friends' houses, and the industrial park

LOCATIONS THAT NEED SERVICE

- Industrial Park
- Airport
- New clinics
- Lincoln Drive
- North and west Grand Forks
- South of University Avenue in Grand Forks

LOCATIONS THAT NEED NIGHT SERVICE

- The Mall and shopping destinations (e.g., Target, Hugo's) – routes end too early
- Industrial Park – several businesses are 24 hours, would need to align bus schedules with work shifts

BARRIERS/ISSUES TO USING TRANSIT

- Need for later weekday service and service on Sundays
- Need increased frequency, once per hour isn't sufficient
- Need to align service with school and work start/end times
- Size/bag limitations make transporting groceries difficult
- Transit information can be too overwhelming/frustrating to understand; needed in multiple languages
- Application for disabled riders is too long/intrusive

STRENGTHS OF THE CURRENT SYSTEM

- Fares are reasonable
- Service is widespread
- Buses are generally safe and clean
- Drivers are friendly
- Dial-A-Ride availability is amazing
- Appreciative of the educational programming to learn how to ride the bus
- Like that the CAT Prowler app enables you to track rides

OPPORTUNITIES FOR IMPROVEMENT

- Partner with retailers to sell bus passes
- Partner with employers to have corporate pass for their employees
- Have bus passes for students be free of charge
- Introduce a year-round bus pass option
- Train drivers on how to engage with someone who has a disability
- Increase communication about the CAT Prowler app
- Provide real-time signage at key destinations (e.g., University Ave, Library, Hugo's)
- Add additional shelters and add heating at shelters
- Make the CAT Prowler app more accessible and easier to use

Lessons Learned and Next Steps

While Phase 1 engagement efforts on the Grand Forks – East Grand Forks TDP update were beneficial, the study team has a few key lessons learned that can be factored into the next phase of engagement:

- We experienced high participation from the general public, but participation amongst operators and decision makers was low, so we may need to engage these groups in a different manner in Phase 2.
- Despite dropping off paper surveys at 10 community organizations, we received only one paper survey response in return. We will partner with community organizations in a different manner in Phase 2.
- While the business focus group was promoted broadly to businesses in Grand Forks and East Grand Forks, only businesses in the industrial park or organizations that work with the industrial park attended the focus group. Future efforts will aim to diversify business stakeholder participation.

Table 1 provides a count of participants by method for Phase 1.

Table 1. Phase Public Engagement Participation by Method

Method	Number of people engaged
Public Survey	208
Operator Survey	2
Decision Maker Survey	7
Interactive Map	16
Focus Groups	17

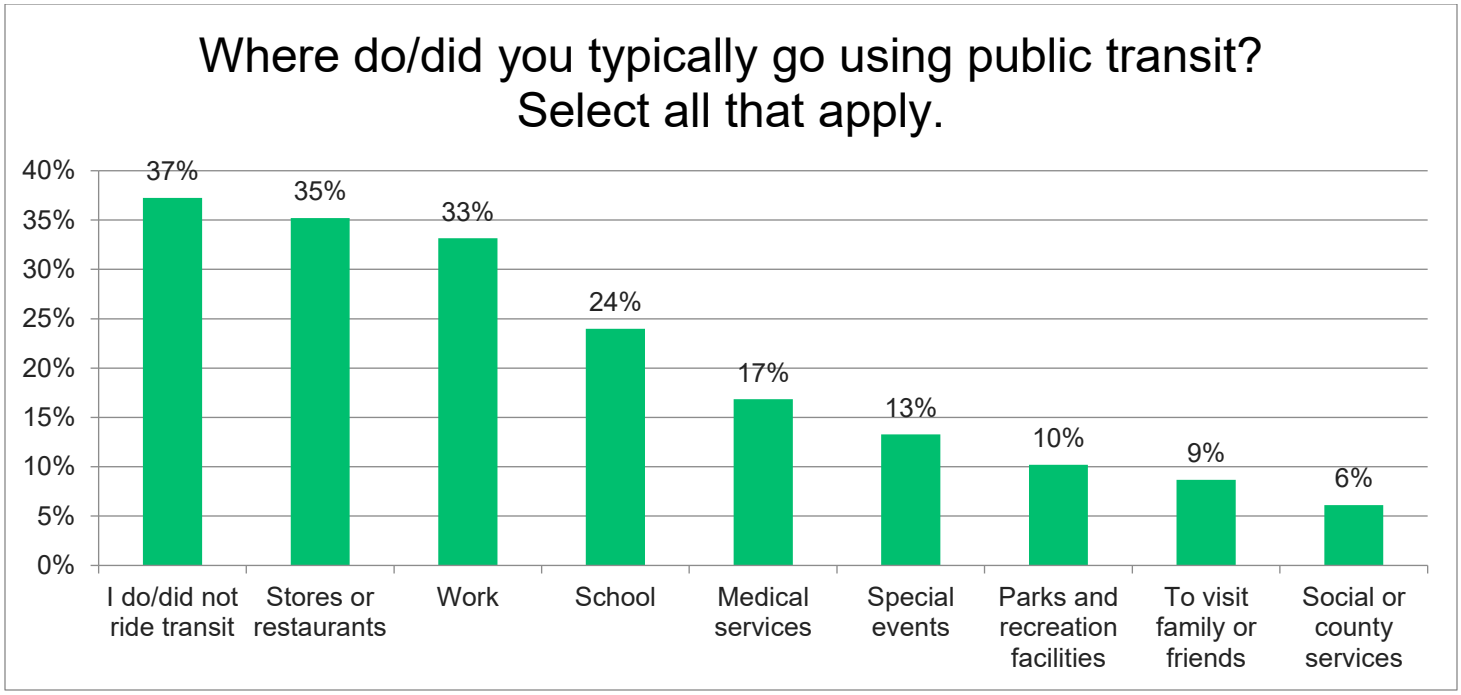
From these different methods, some common themes emerged. These include:

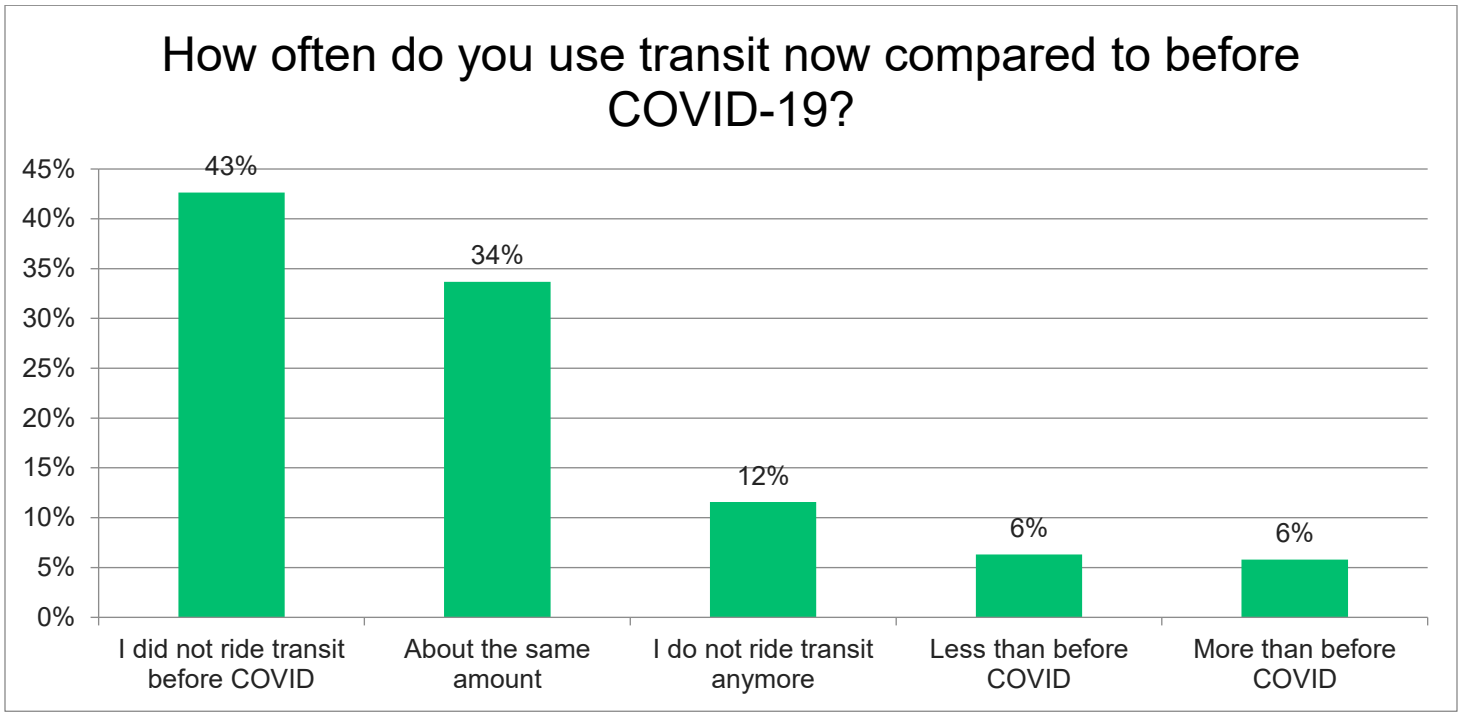
- The quality of bus operators' customer service, the cleanliness of buses, and reasonable fares were frequently cited as CAT's strengths by riders.
- Respondents identified many areas of improvements to CAT service. Key among these were the need for increased frequency, service on weekends (including Sundays) and extended hours on weeknights, service to key destinations like the industrial park and mall, and bus schedules that align with work/school schedules.
- Respondents identified areas of improvement to CAT facilities. Key among these were shelters that protect from the cold/wind and more visible bus stops.
- Respondents identified areas of improvement for customer information and customer experience. Key among these were improvements to information at stops and onboard vehicles and easy navigation/more accurate bus tracking on the CAT Prowler app.

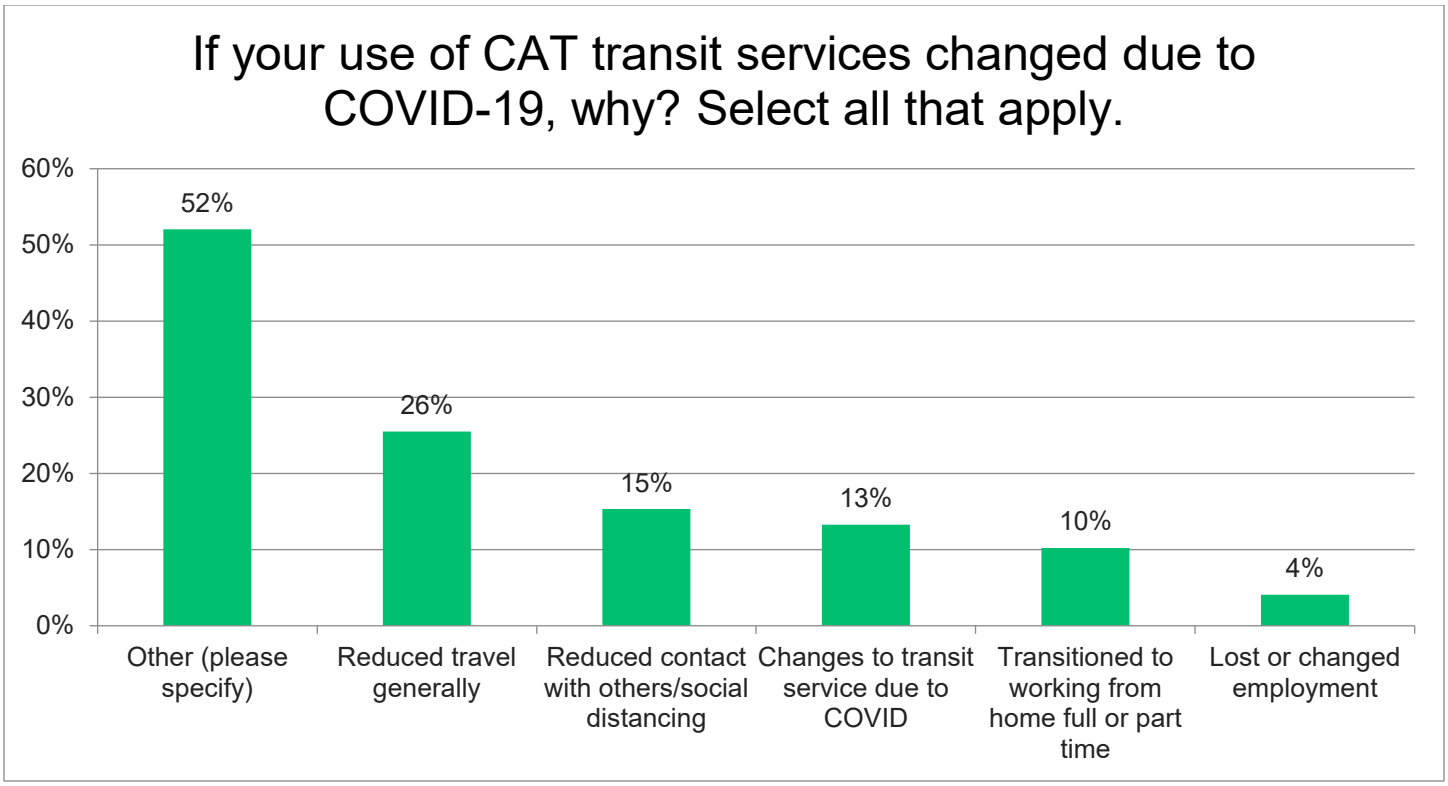
As we move into subsequent phases of the TDP development, the strengths, areas for improvement, and locations that need improved transit service identified in Phase 1 engagement will inform the project team's process.

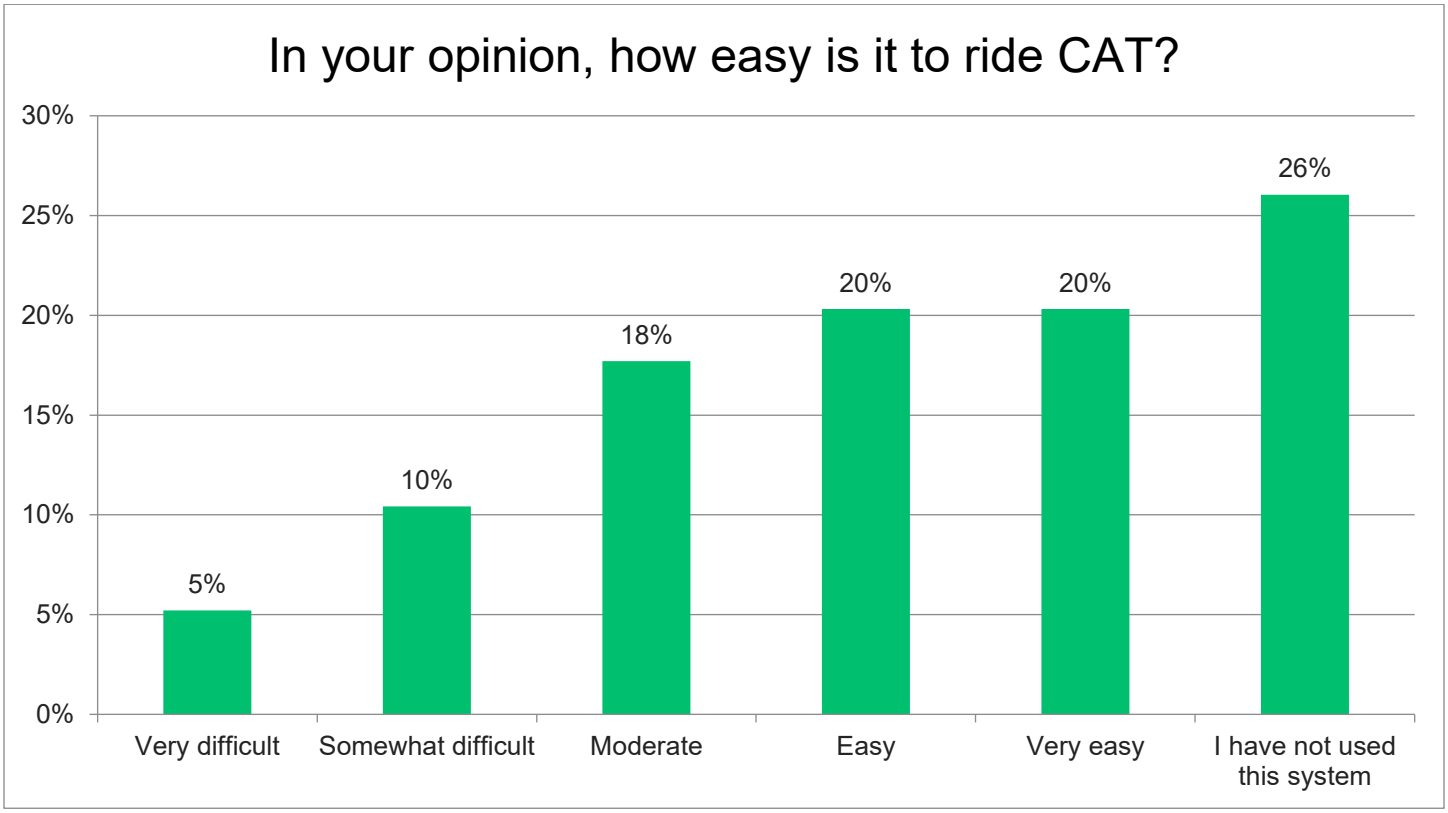
APPENDIX

APPENDIX A. PUBLIC SURVEY RESULTS

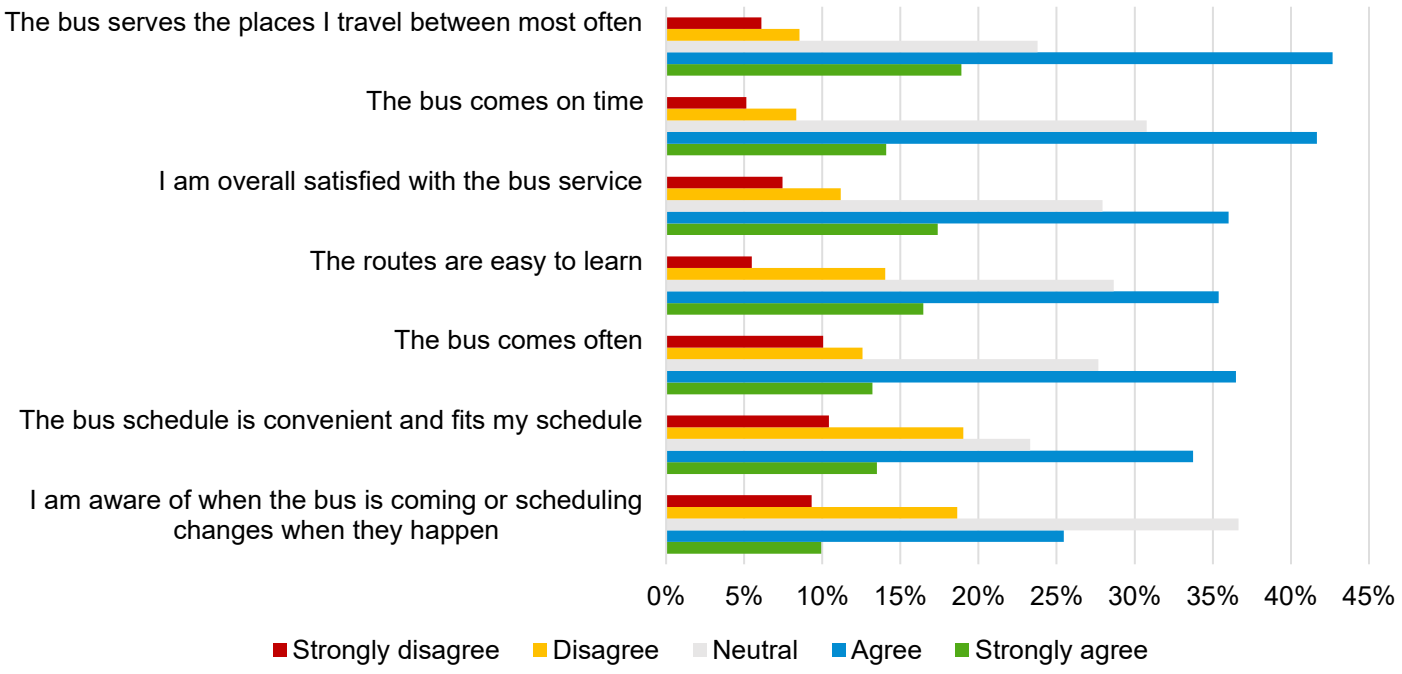




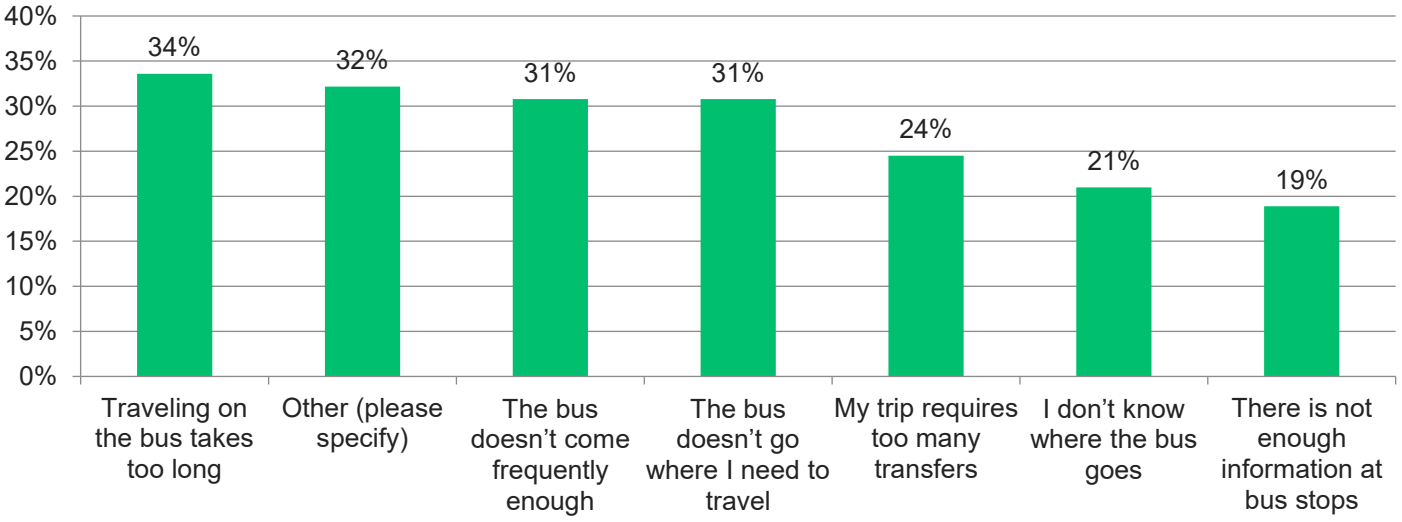

If your use of CAT transit services changed due to COVID-19, why? Select all that apply.
60%
50%
40%
30%
20%
10%
0%
52%
26%
15%
13%
10%
4%
Other (please specify)
Reduced travel generally
Reduced contact with others/social distancing
Changes to transit service due to COVID
Transitioned to working from home full or part time
Lost or changed employment

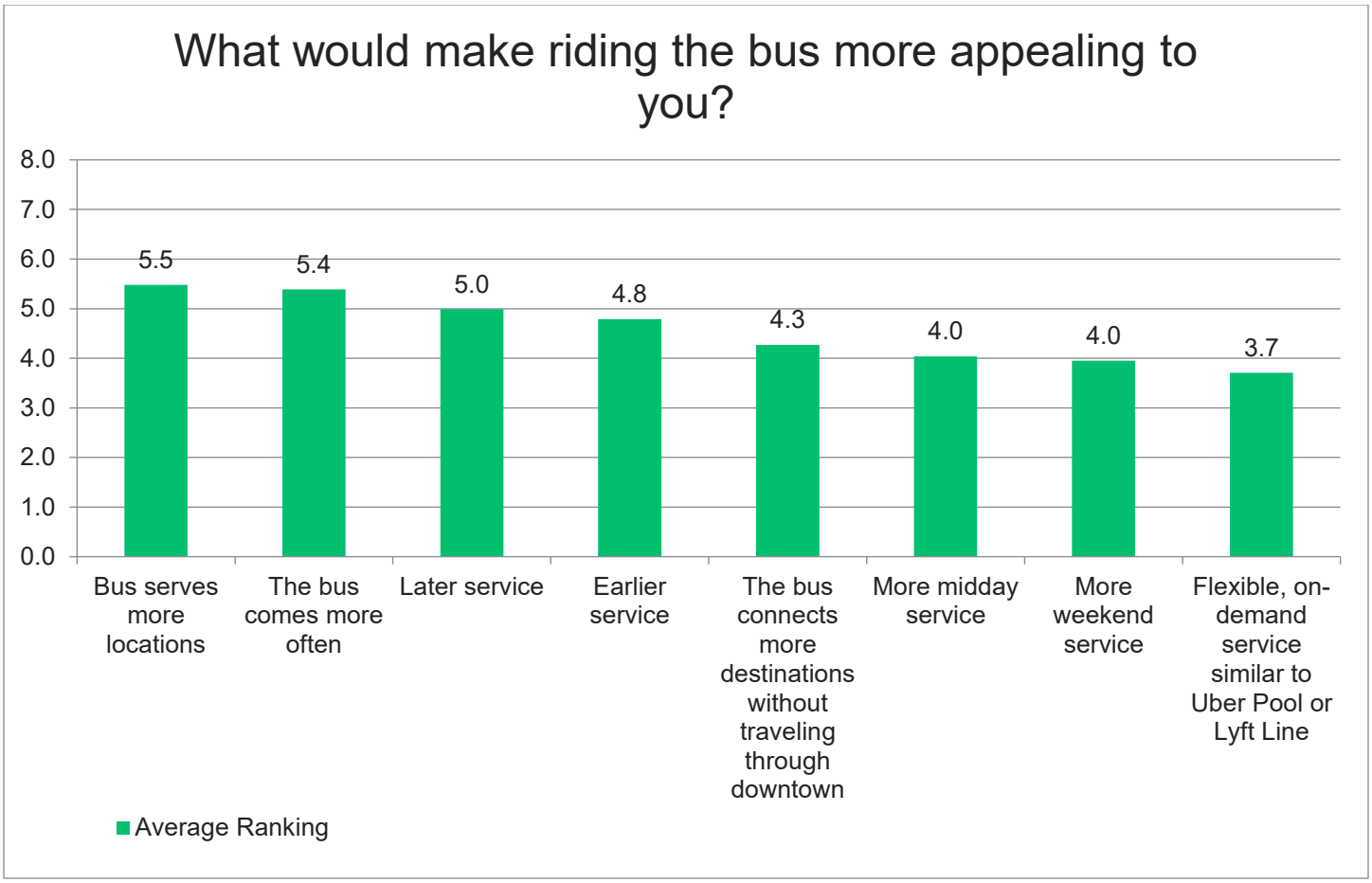

In your opinion, how easy is it to ride CAT?
30%
25%
20%
15%
10%
5%
0%
5%
10%
18%
20%
20%
26%
Very difficult
Somewhat difficult
Moderate
Easy
Very easy
I have not used this system

Please rate how much you agree with the following statements.



What barriers have you experienced to taking transit? Select all that apply.





APPENDIX B. INTERACTIVE MAP COMMENTS

Add Bus Service

- West of I-29/north of Demers Ave
  - This area has a large number of families that would benefit greatly from increased service lines

Needs Improvement

- On S Columbia Rd at Altru Hospital
  - Any chance this route could extend further west to behind the hospital to 34th street and then down to 17th and back east again? Red River High school has zero bussing options, and many high schoolers live in this area around and west of Century elementary that don't drive. They have very long and cold walks in the winter. Looping this route over to 34th and down to 17th would at least shorten that walk for these kids by a mile or more.
- At 17th Ave S and S 12th St
  - I hope you replace the bus shelter there soon!

- Near South Middle School
  - I wish the timing of this route would line up better with the timing of middle school end time. My child would much prefer to ride a quiet city bus than the obnoxious school bus.
  - Add a stop in front of South Middle School
- At 47th Ave S and Curran Ct
  - There is a new Sanford Clinic here but there are no sidewalks or bus stops. There is only one way in or out of their parking lot. Getting off the bus in the winter will be a problem because of snow buildup and no sidewalks on the north side of the street where the clinic is. I'll have to get the driver to let me off in the access street and then walk to the clinic from there, also flagging down the bus to be picked up will mean I will wait in the street in traffic to get picked up.
- Near Valley Junior High
  - Add a stop in front of Valley
- On N 43rd St near Clarion Hotel
  - Future CTE Center- would like routes that connect to both High Schools and the greater community.
- Near Schroeder Middle School
  - Need a stop closer to this school
- On S 21st St north of 30th Ave S
  - Need to add a stop in this neighborhood
- Near 1st Ave N and N 19th St
  - Need to add service to this neighborhood.
- At S 5th St and Kittson Ave
  - The bike path to depot route could use some real improvement. The intersections to be crossed can be dangerous. The sidewalk on S 5th St is narrow and frequently covered by gravel from the railroad.
  - The shortage of bus drivers has created a great opportunity to rethink the city routes and how well they serve (or don't serve) middle & high schools in this town. Families and youth are getting used to riding city buses, let's capitalize on that and find a way to create riders out of these youth. A strong Public transportation system makes for a family friendly city!
- Near Red River High School
  - We only have one stop by RRHS, whose boundary is primarily South of 17th Ave South. The current closest route doesn't go South, rather goes back to Central.

Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

GRAND FORKS – EAST GRAND FORKS

Transit Development Plan

Phase 2 Public Engagement Summary | May/June 2022

PUBLIC ENGAGEMENT PHASE 2 SUMMARY

Introduction

PROJECT OVERVIEW

The Grand Forks – East Grand Forks Transit Development Plan (TDP) is a 10-year plan that provides a vision for transit in the community. Grand Forks – East Grand Forks' previous transit development plan was completed in 2017. The 2022 plan update will evaluate recent system improvements and has the following areas of focus:

- Integration of University of North Dakota (UND) campus bus routes
- New or improved fixed route, paratransit, and Senior Rider services
- Maintenance and growth of CAT ridership
- Fare, pass, or transfer policy changes to increase ridership or funding
- Transit fleet and technology recommendations
- Investments in capital improvements like buses, bus stop enhancements, and support equipment
- Support for existing and future CAT operations at transit facilities such as Midtown Transit Center and Metro Transit Center

PUBLIC AND STAKEHOLDER ENGAGEMENT OVERVIEW

Two rounds of engagement are planned for the Grand Forks – East Grand Forks Transit Development Plan (TDP) update process: Phase I (Fall 2021) and Phase II (Spring 2022). The following schedule outlines the key time periods during which the public and stakeholders are engaged in the project as well as what takes place before and after engagement.

The goal of public engagement is to build and strengthen relationships in the community while gathering stakeholder and public input, responding to comments and concerns, and keeping decision-makers and other stakeholders informed throughout the TDP update process.

PURPOSE OF THIS DOCUMENT

The purpose of this document is to provide a summary of Phase 2 of public engagement for the TDP. In this round, the study team gathered feedback from the public and stakeholders on initial service improvement ideas and draft Cities Area Transit (CAT) goals.

Engagement Methods and Results

Phase 2 engagement methods fall into three primary categories: surveys, meetings, and comment forms. The study team tailored the surveys and meeting information to each stakeholder group. This section discusses each engagement method and key results.

MEETINGS

Input Group Meetings

Methods

The study team held five one-hour meetings on the following dates/times:

- Community meeting: Thursday, April 14, 2022; 5 – 6 p.m.
- Input group meeting: Thursday, April 21, 2022; 5 – 6 p.m.
- Coordinated Human Services focus group meeting: Tuesday, May 24, 2022; 11:30 a.m. – 12:30 p.m.
- University of North Dakota (UND) focus group meeting: Wednesday, May 25, 2022; 9 – 10 a.m.
- Operators focus group meeting: Wednesday, June 15, 6:30 – 8:30 p.m.

At the community meeting, the study team shared information about the initial service improvement ideas and draft CAT goals. At the input group meeting, the study team gave a brief presentation, but the primary purpose of the meeting was to have a discussion and gather feedback from those living, working, and studying in Grand Forks – East Grand Forks. These meetings were held virtually and in-person at the East Grand Forks City Hall. Recordings for both meetings were posted to the TDP website for those unable to attend.

At the Coordinated Human Services focus group, the study team shared information about the TDP update and heard from human services partners on how CAT and the MPO can better coordinate with human services to promote interagency coordination, facilitate access to transportation, and minimize duplication. At the UND focus group meeting, the study team discussed initial service improvement ideas for the routes on UND's campus with students and staff from

UND. At the operators focus group meeting, the study team reviewed each of the service ideas to gather feedback from operators on the benefits and drawbacks of each.

Results

Around 30 non-project staff attended these meetings. Below is a summary of the feedback the study team received from these meetings.

COMMUNITY-WIDE MEETINGS

Draft Cities Area Transit Goals

- Supportive of the draft CAT goals

Service Ideas: Microtransit

- Supportive of the idea
- Questions about:
  - How you far in advance one would need to book a ride
  - If zones could be expanded
  - Possibility of providing training to explain microtransit to those who would benefit from its use
  - Implementing this around shopping areas such as Columbia Mall

Service Ideas: Grand Forks

- Routes 1, 5, and 3: No strong concerns about these changes
- Route 7: Questioned whether this change will make the route faster; wait times and “riding the loop” is a common problem social service providers hear
- Industrial Park Service:
  - Feel that people will be happy about this route as long as it aligns with shift start/end times
  - Will open up the possibility for those without vehicles to apply for jobs in the industrial park

Service Ideas: East Grand Forks

- Consolidation of Routes 4 and 6; Discontinuation of Route 12; Microtransit to East Grand Forks:
  - Would like Route 6 to go past the apartments in East Grand Forks (e.g., behind Cabela’s near East Grand Forks City Hall); individuals there rely on the service

Service Ideas: Evening Service

- Questions concerning:
  - With the Industrial Park shifts, depends on ridership, but the fixed bus routes may be a better fit; if ridership is low, microtransit may be a better fit

Other Feedback

- Like the changes, especially microtransit service in the evening

COORDINATED HUMAN SERVICES

Existing Service

- The application process for people with disabilities to secure transportation is a barrier for clients.
  - Too many steps
  - Processing time is too long
  - Mailing-in application is inconvenient
  - 24-hour schedule-ahead requirement is not feasible
- Technology is another barrier for securing transportation
  - Clients may not have phone/internet access
  - App is not always intuitive for clients, particularly seniors
- Many agencies have transportation programs in place
  - Bus passes for clients
  - Funding via grants or donations
  - Popular programs
  - Not always easy to organize, bus passes are difficult to replace if lost, for example

Service Needs

- Online platform for human services agencies
  - One-time sign up to connect client with multiple services
  - Agencies can act on behalf of client if technology access is an issue
  - Would decrease processing time
- Variety of methods to secure transportation
  - Agencies may not know what their clients have access to
  - Consider technology inequities
- Difficult to prioritize strategies
  - All strategies shared seemed important to attendees
  - Agencies never know for sure what their clients need and/or have
  - Application streamlining might be the place to start

Other Feedback

- Transportation is not something agencies often consider
  - Recognized as a problem that must be remedied
  - Especially a problem with coordination, as transportation often gets left out in those discussions
  - Get transportation agencies more involved in services coordination discussions

UNIVERSITY OF NORTH DAKOTA (UND)

Existing Service

- Strengths of existing UND service:
  - Shuttle is frequent and travels to the places students go (e.g., Wilkerson, Union, Engineering building)
- Opportunities for improvement:
  - Some feel the reliability of the shuttle has gone down since CAT took over service
  - Improvements to the app are needed – would like the app to accurately track the buses' locations
  - Need for signage, maps, QR codes, and other wayfinding at stops on campus; currently there's no indication that buses stop there
  - Need for external identifiers on buses to identify which route more easily is which (e.g., magnets on the outside of the bus with the route name)
  - Need for more advertisement/education around the shuttle system (e.g., have a module during Freshman orientation, info booths on campus, etc.)

Service Ideas

- For routes that go off campus (e.g., Red), would need to confirm with UND that there's enough student usage to warrant the route going off campus
- Red route comments:
  - Some agree that there's a need for a route northeast of campus due to the number of students living in apartments in that area
  - Some feel that, unless you're able to travel between the apartment complexes in that area, it's not worth having the route there, few live on Stanford/Gateway/couple blocks on 42nd
- Concerns about the Blue route:
  - Need for service west of Coulee
  - Many students congregate at Odegard, would prefer to be picked up at the door of Odegard vs. on University
  - Liked the previous route – helpful to have one continuous loop on University and behind Odegard
  - Consider running it on University and looping by Aerospace building instead of 6th
- UND Night Microtransit Zone:
  - For students who take labs (like Chemistry), the time you get out of lab can vary week to week, so having a flexible microtransit option would be helpful for these students
  - The existing night route is too long for it to be efficient for many students
  - Like that the zone include Altru, the Alerus Center, but wish it also included Hugo's
  - Consider partnering with the dining/housing shuttles

OPERATORS

Service Ideas

- Feedback regarding route 2:
  - Remove 25th St from route to save time
  - Busiest stops are Hugo's, St. Anne's in the mornings and afternoons, Valley Middle School

- 5th Street sees high passenger counts, transferring downtown or transferring to routes 3 or 7

- Feedback regarding route 1:
  - JR Simplot and Community High School on Stanford have bus riders
  - The outbound service down University Ave is good
  - Crossing Washington is an issue, consider going right on Washington and down to University
- Feedback regarding route 3:
  - Important to serve Lewis and Clark Elementary
  - All the outbound stops are good
  - Important to have the midtown transfer on 17th
  - The Red River bus stop is very popular, hotels located there
  - Ridership is pretty consistently good
- Feedback regarding route 6:
  - Issues timing the interlining with route 3
- Feedback regarding routes 7, 10, and 11
  - Like that routes 7 and 10 alternate every 30 minutes, helpful if something was missed
  - Need to drop off at Altru South, after Walmart on 20th route all the way to 47th
- Feedback regarding route 17, the industrial park route:
  - If there were a microtransit zone for the industrial park, need transfer points to the 5 on the north end at Walmart and to the 3 on the southern half of the zone

SURVEYS

Service Ideas Survey

Methods

The service ideas survey was administered to both current riders of the system and non-riders. The questions asked respondents about the service improvement ideas and demographic information. Kimley-Horn developed the survey questions in consultation with Cities Area Transit (CAT) staff and transit administration.

The study team made a special effort to reach people who are traditionally underrepresented in planning processes. To promote the survey, staff strategically placed posters inside buses and at key transit stops to direct people to take the surveys, and they distributed paper surveys on the buses. The project team also rode buses and was at the Metro Transit Center to tell people about the project and to encourage riders to take the project survey.

Results

OVERVIEW

We received 59 responses to the public survey. Demographically, we heard the most from 55–64-year-olds (33%) and 35–44-year-olds (22%). Among the respondents, there was an even number of people who identified as male or female (43.5%). Other respondents preferred not to identify their gender (11%) and others' genders were not listed (2%). The majority identified as White (66%) followed by 11% identifying as Latinx/Hispanic, 7.5% as American Indian or Alaska Native, 6% as Black or African American, 4% as Asian, 2% as Middle Eastern or North African, and 9% preferring not to

share their racial/ethnic identity. Of the respondents, 53% reported having access to a vehicle. A majority (63%) reported having an annual household income of less than $25,000.

Detailed findings from the service ideas survey can be found in **Appendix A**.

ROUTE CHANGES

Respondents were asked about their opinions regarding possible changes to existing CAT bus routes.

- 56% of respondents support discontinuing Route 1 and operating Route 5 twice an hour, while 22% disliked this idea. An additional 22% expressed no preference.
- Over half of the respondents (53%) support the proposed changes to Route 3. Only 12% of respondents are not supportive of the changes. 36% of respondents expressed no preference.
- Most respondents (65%) support the idea of splitting Routes 7 and 10, with only 7% of respondents saying they do not like this idea. 27% of respondents expressed no preference.
- 77% of respondents support the idea for a new route that serves the Industrial Park and northwest Grand Forks. 21% of respondents expressed no preference, while 2% disliked this idea.
    - 50% of respondents said they would ride this new route weekly or more frequently

MICROTRANSIT SERVICE

Respondents were asked to provide their opinions about microtransit service in the evenings instead of fixed routes.

- 44% of respondents support changing evening service of Routes 3, 6, 13, and the UND Night Route to microtransit, while 30% prefer to keep evening service as fixed route. 27% expressed no preference.
- Route 5 and Route 13 are the two most common routes respondents said should continue to operate as fixed routes in the evening.

ADDITIONAL COMMENTS AND FEEDBACK

Respondents were asked to provide additional feedback regarding the service ideas. Several respondents noted that they liked the existing routes the way they currently are and don't want to see any changes. One respondent, a student at UND, noted that the proposed plan would complicate riding on campus. A few other respondents provided general support for the proposed changes. Other comments focused on the need for additional service improvements, particularly the need for service on Sundays.

Service Improvements

- Airport service or microtransit is good; 48th Street service is needed
- Increase bus frequency at night (two every hour instead of one)
- Bus service on holidays and Sundays
- Evening service would be great for people coming from the industrial area
- Increased number of stops for all routes
- There should be a bus stop close to the public library
- Increase student ridership in the summer to encourage local outdoor summer activities
- Extend the hours that buses run to include 11 p.m.

Facilities Improvements

- Add garbage cans to the shelters
- Vision at night can be obscured by the advertisements on bus windows

- Bus shelters should be upgraded to provide more protection from the rain and cold
- Employ a mask mandate

University of North Dakota (UND) Survey

Methods

Transportation staff at UND administered their own survey to the undergraduate students, graduate students, and faculty at UND to gather more feedback about their familiarity with the campus shuttle service, travel patterns, strengths of the service, and barriers/opportunities to improve the service. UND shared these survey findings with the TDP study team to help inform service improvement ideas.

Results

UND received 438 responses to the survey. The following are some key findings from the survey results:

- Almost 90% of respondents live on campus or within 5 miles of campus
- The two most popular ways respondents get to campus are by driving alone (40%) or walking (34%)
- 86% of respondents said they are aware of the campus shuttle, while 14% said they are not
- Of respondents that ride, 1/3 said they ride less than once a week
- Of respondents that ride, they do so because of *lack of parking*, the *weather*, and the *convenience of the shuttle*
- Respondents said the biggest barrier to riding the shuttle is that it's late/not reliable
- The top 5 most common responses for preferred locations for campus shuttle stops are Memorial Union, Wilkerson, Odegard, the Medical School, and Columbia
- 80% of respondents are *somewhat* or *very interested* in an on-demand campus ride share service
- Respondents said the two most important things to make riding the shuttle more appealing is *serving more locations* and *more frequent service*

Detailed findings from the UND Survey can be found in **Appendix B**.

Business Survey

Methods

As a result of feedback received during the Phase 1 business focus group meeting, the study team developed a survey for employers and employees in the Grand Forks – East Grand Forks area. The study team shared the survey with business focus group participants and contacts at the Grand Forks Region Economic Development Corporation and Grand Forks – East Grand Forks Chamber of Commerce, who helped promote the survey by emailing it out to their member distribution lists.

Results

The survey was live February 16 through March 11, 2022 and received 50 responses. Key takeaways of the survey are summarized below.

- 56% of respondents identified as employees, while 42% identified as employers
- Respondents represented 24 different organizations in the Grand Forks – East Grand Forks area
- Most respondents we heard from work for organizations7 with less than 25 employees (40%) or 251 – 500 employees (30%)
- 60% of respondents said their organization does not have easy access to transit, while 24% said it does

Detailed findings from the Business Survey can be found in **Appendix C**.

Interactive Map Comments

Methods

The Kimley-Horn team developed an interactive map to use for both gathering information at the beginning of the project as well as sharing the proposed recommendations for enhanced services and gathering public feedback on the recommendations. This map allows users to add location-specific comments about transit improvements that they would like to see. The map is prominently advertised on the TDP project website.

Results

The interactive map platform featured two maps: one of new service ideas and one of existing CAT bus routes. Map users could select a pin and drop it in a location where they wanted to provide feedback. Pin categories included: *Needs Improvement* and *Like service* change. We received two comments on the interactive map. They are summarized below.

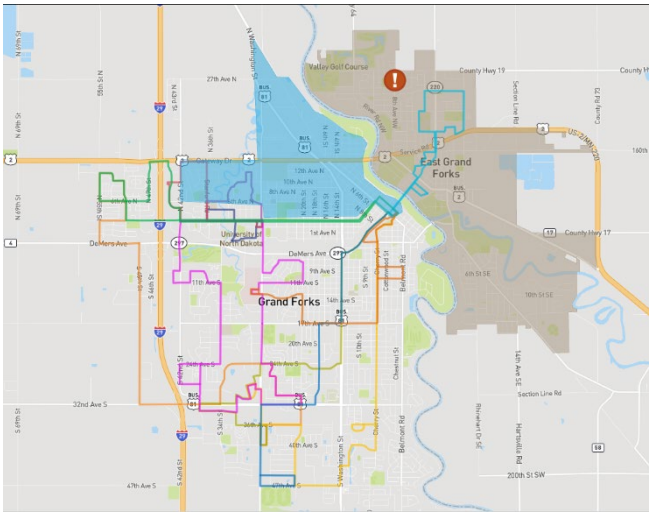


Figure 1. Interactive Map Service Ideas Layer Comment Location

SERVICE IDEAS

- 8th Avenue NW in East Grand Forks needs service

EXISTING BUS ROUTES

- Need a route to the industrial park; many jobs here but people are unable to access them

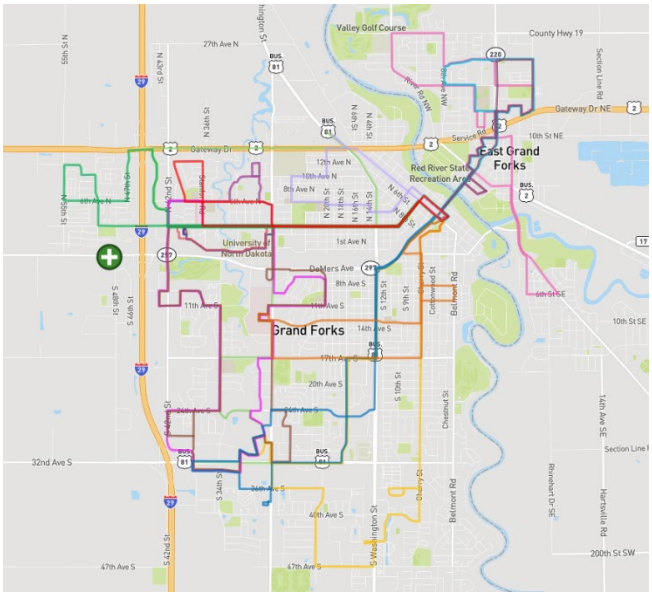


Figure 2. Interactive Map Existing Bus Routes Layer Comment Location

GENERAL COMMENTS

Methods

Community members could share their feedback through comment forms (available when the study team tabled at the Metro Transit Center) and via email.

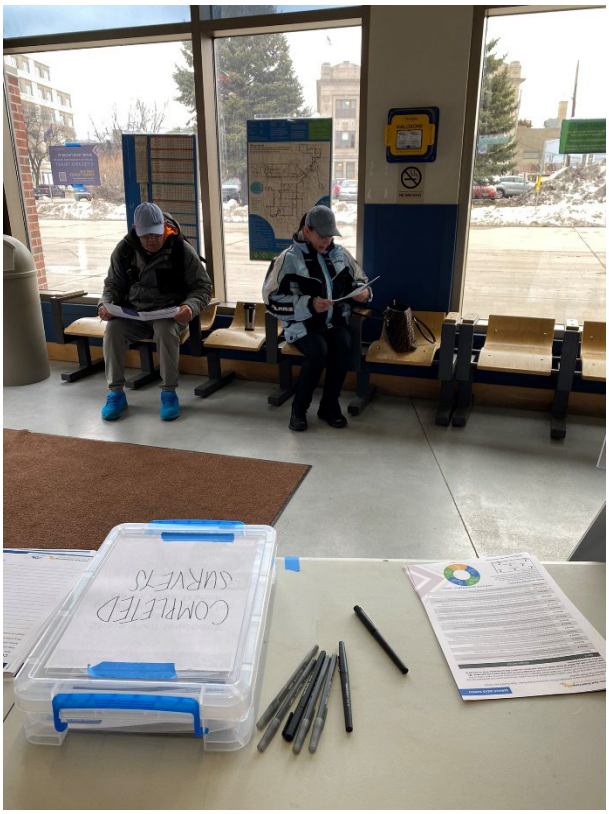
Results

OVERVIEW

We received six comments via email and the comment forms. They offered the following comments as service improvements:

- Like the ideas of Route 7 going farther south on Columbia
- Would like to keep the routes and schedules for Route 7 and Route 3 the way they are
- Route 5 needs increased frequency and to operate at night
- Need for night service (e.g., runs until midnight) and dial-a-ride service throughout the night
- Like that Route 7 is one direction; don't need to know which direction bus is going

- Need for bus route to the Industrial Park; employees at FedEx Ground located on South 48th Street in need of transportation



Lessons Learned and Next Steps

While Phase 2 engagement efforts on the Grand Forks – East Grand Forks TDP update were beneficial, the study team has a few key lessons learned:

- Attendance at the community and input group meetings was low despite promotion on CAT's Facebook page. Future efforts should aim to advertise public meetings more broadly.
- Despite placing boxes with the service ideas surveys on board all of the CAT buses, the study team only received 12 paper surveys in return. Future efforts may need to identify other ways to make paper surveys available to the public and promote them.
- The interactive map only received two comments. Future efforts should look to promote commenting on the interactive map in addition to other feedback tools like the project survey.

Table 1 provides a count of participants by method for Phase 2.

Table 1. Phase 2 Public Engagement Participation by Method

Method	Number of people engaged
Input Group Meetings	30
Service Ideas Survey	59
UND Survey	438
Business Survey	50
Interactive Map	2
General Comments	6

From these different methods, some common themes emerged. These include:

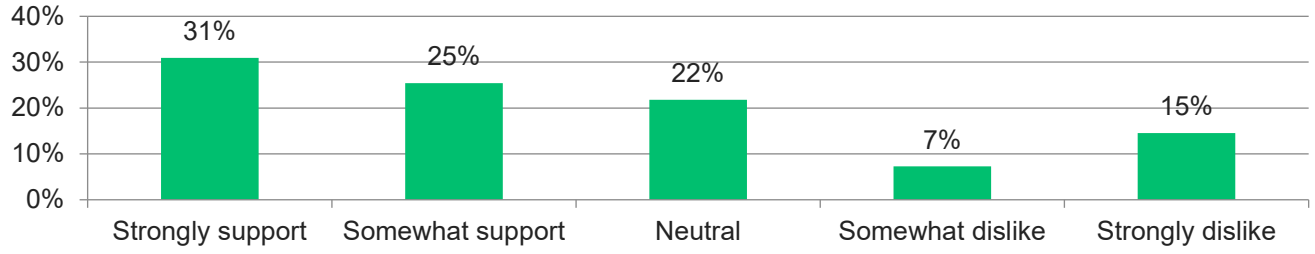
- General need for later service
- Strong support for the proposed route to the Industrial Park and northwest Grand Forks

The feedback received on the proposed changes to CAT fixed route and evening service and the possibility of microtransit will help the study team as they revise the service improvement ideas and propose recommendations for inclusion in the draft final plan.

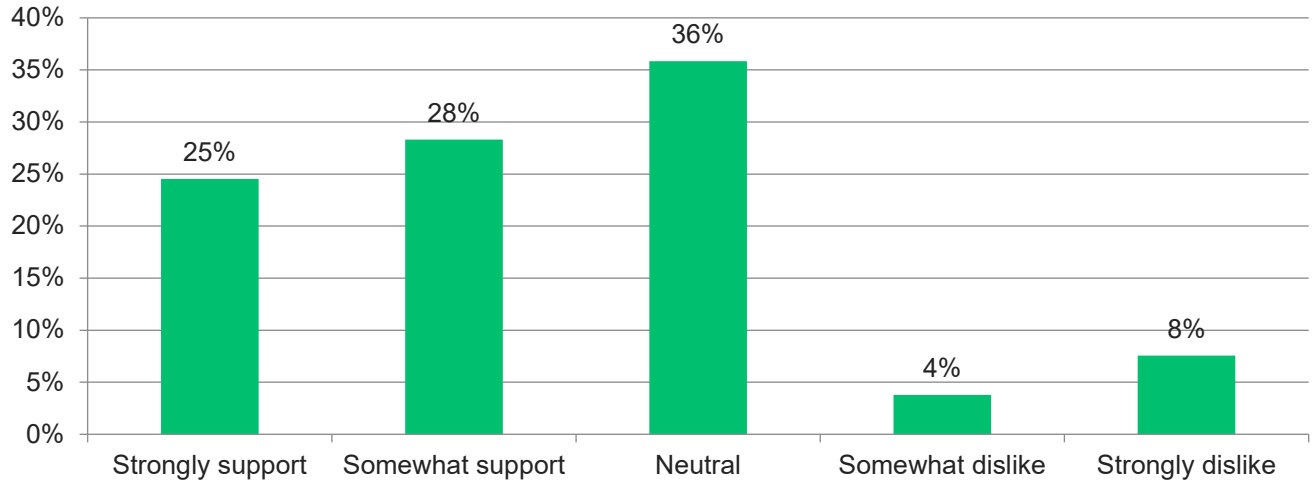
APPENDIX

APPENDIX A. SERVICE IDEAS SURVEY RESULTS

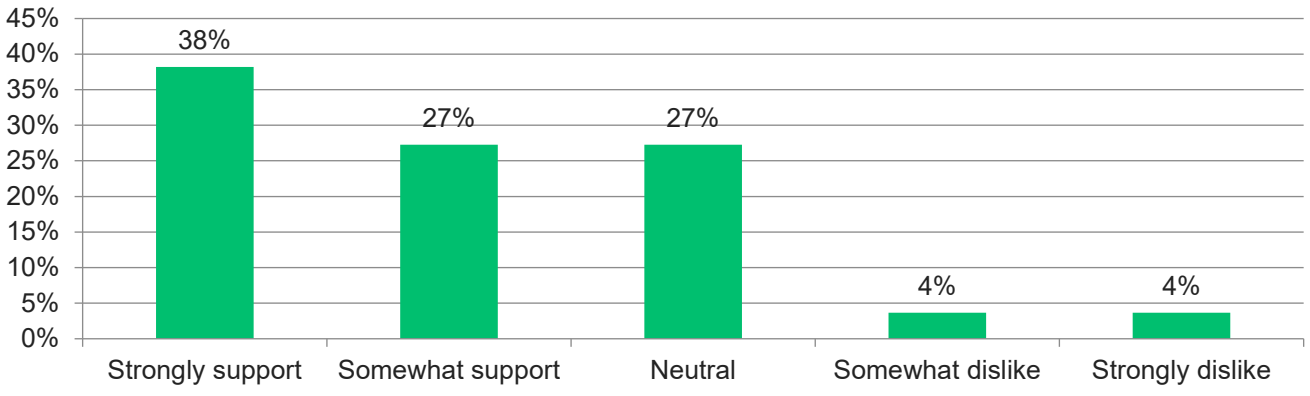
Route 1 and Route 5 currently operate on University Avenue once an hour. One potential service idea is to discontinue Route 1 and operate Route 5 twice an hour. What do you think of this idea?



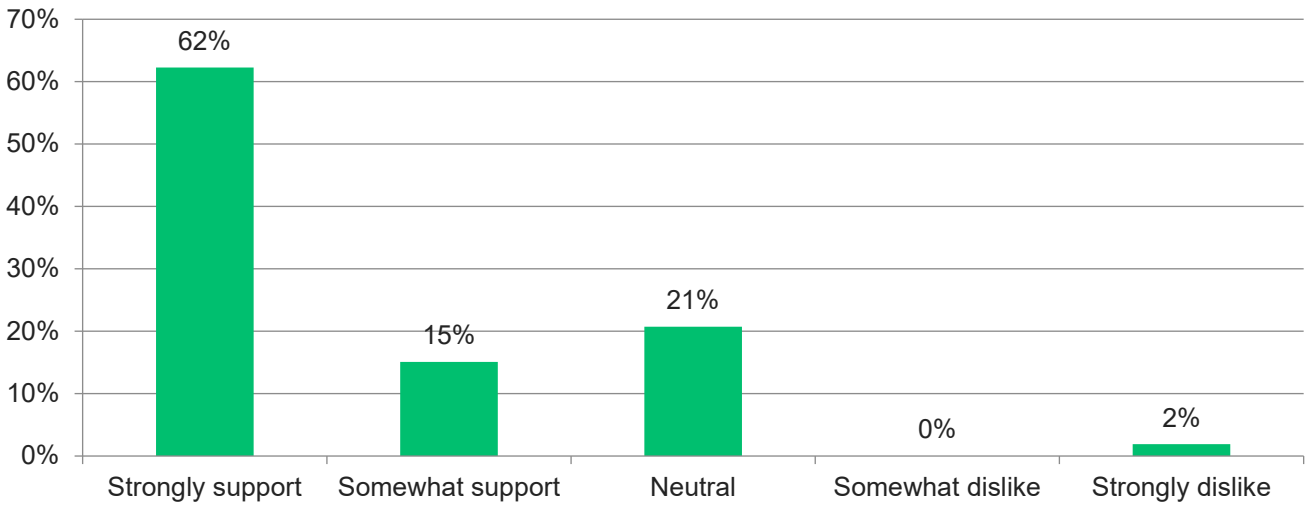
Route 3 currently operates westbound on 13th Avenue and eastbound on 17th Avenue. One potential service idea is to operate in both directions on 17th Avenue between 20th Avenue and Cherry Street and both directions on 13th Avenue between Columbia Road and

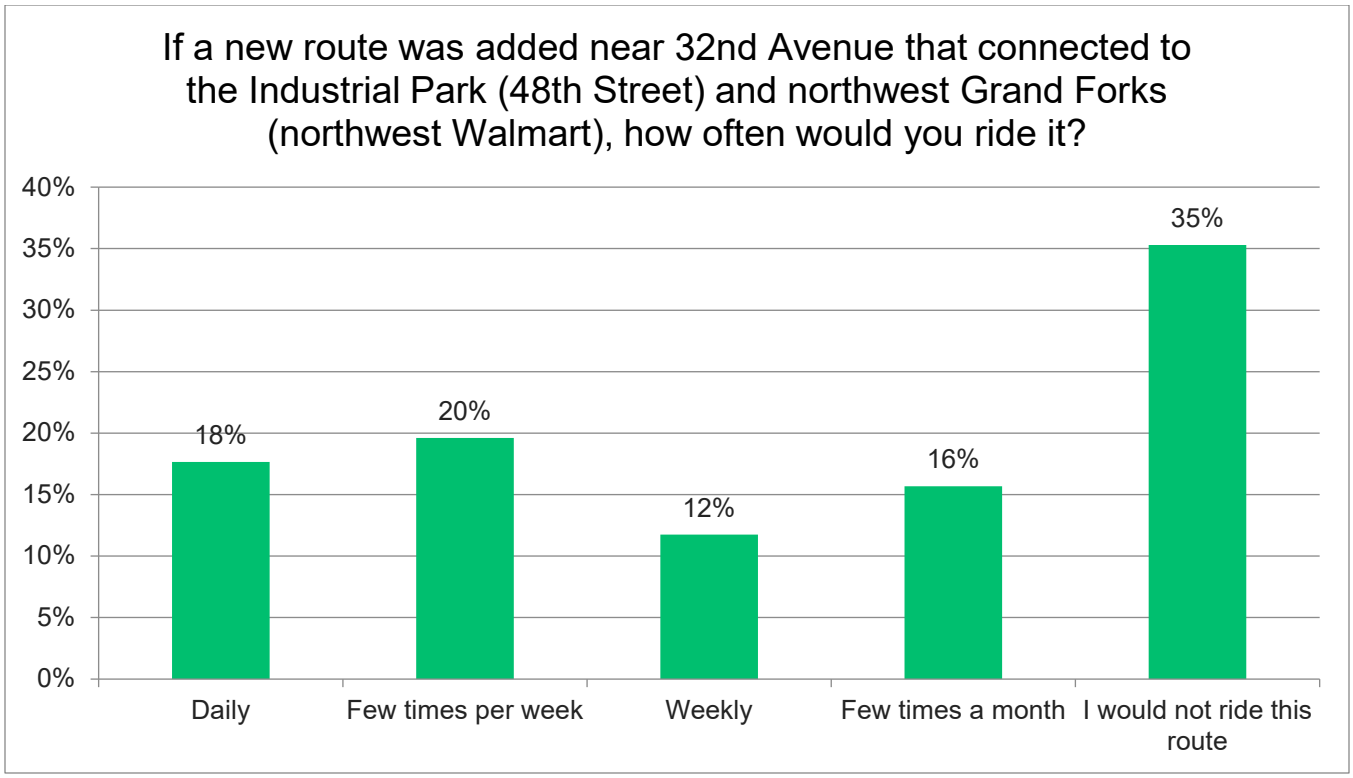


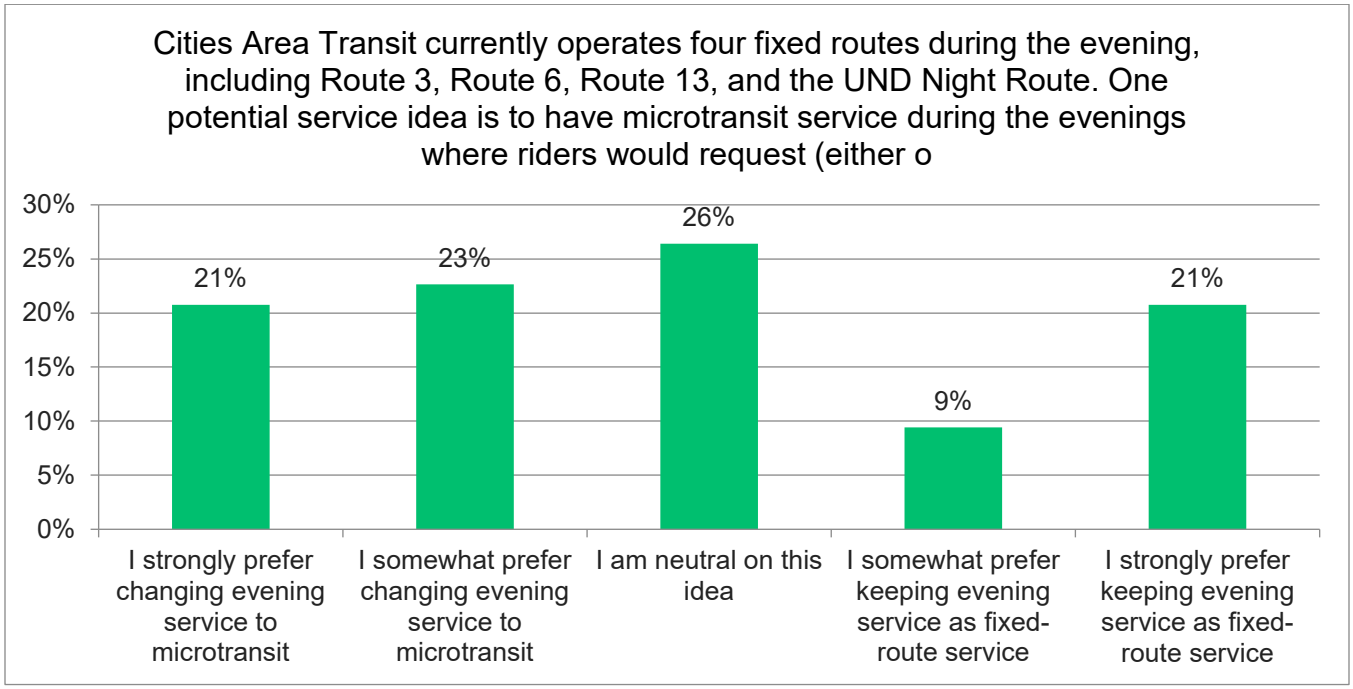
Routes 7 and 10 each currently operate in one-way loops. One potential service idea is to split these two routes into three bidirectional routes and provide service further south on Columbia Road to 47th Avenue. What do you think of this idea?

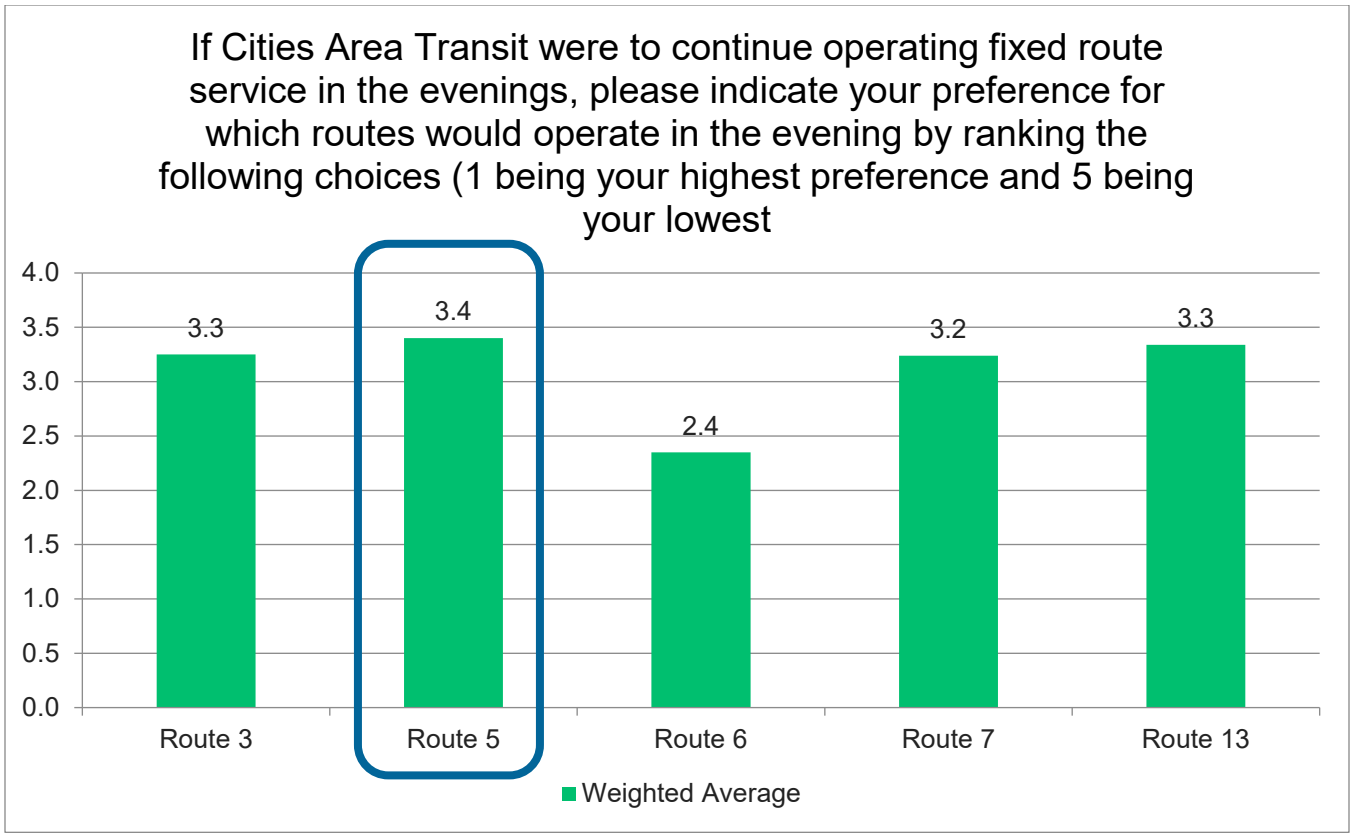


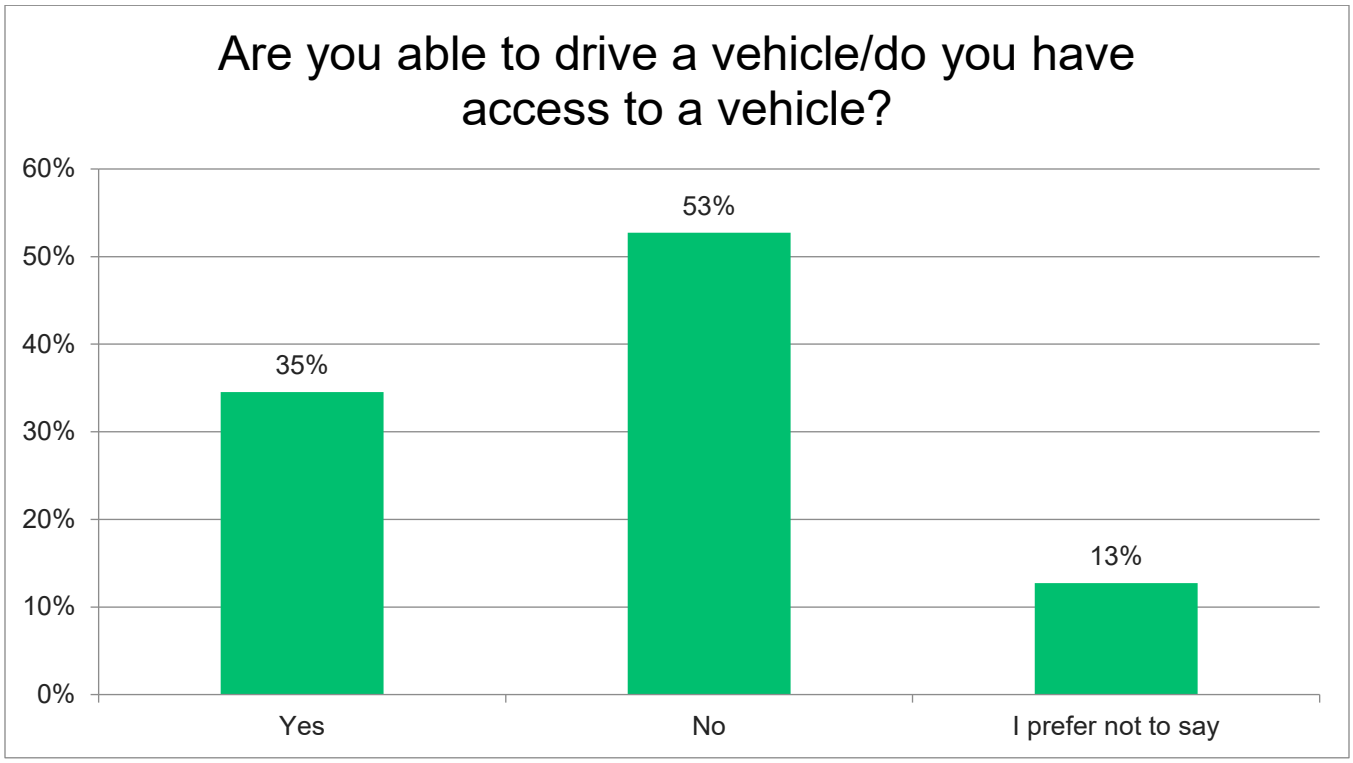
Currently, there is no transit service to the Grand Forks industrial park. One potential service idea is to have a new route near 32nd Avenue that connects to the Industrial Park (48th Street) and northwest Grand Forks (northwest Walmart). What do you thi



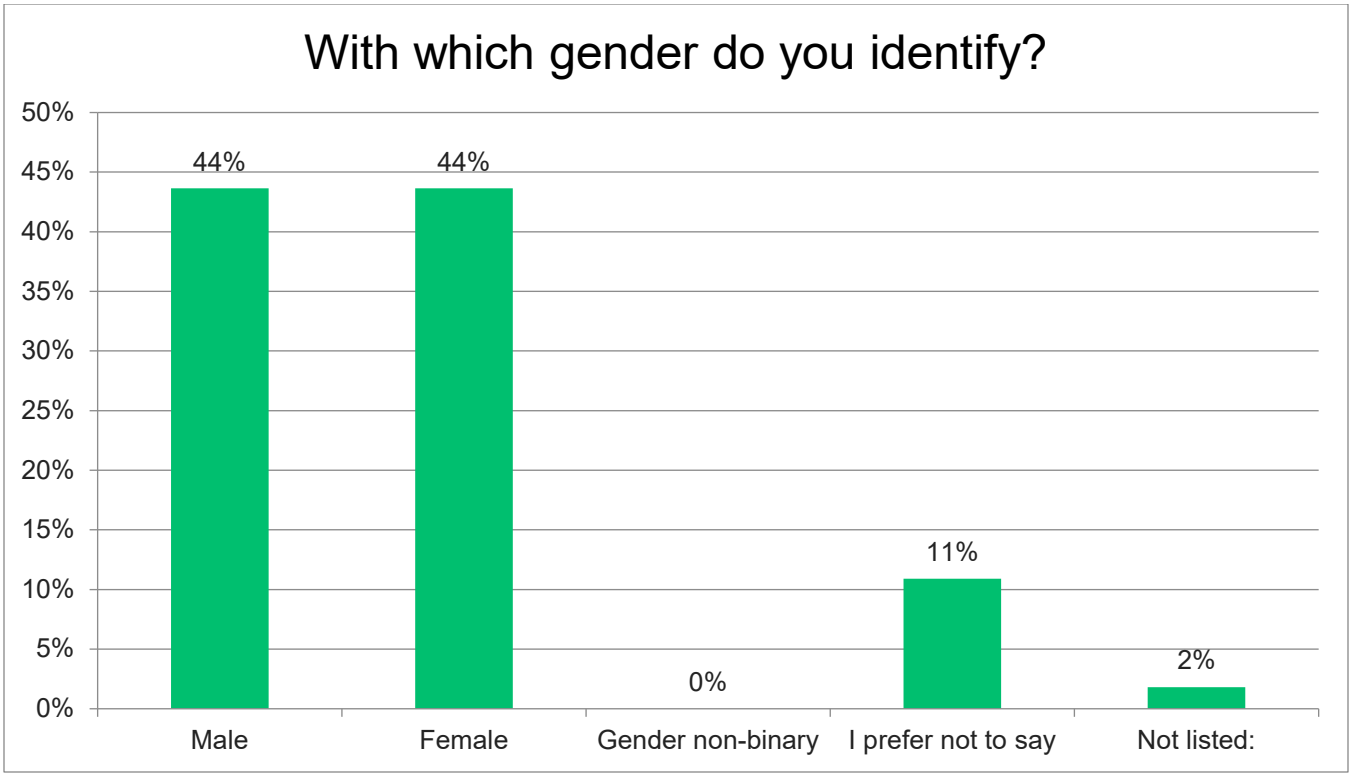

If a new route was added near 32nd Avenue that connected to the Industrial Park (48th Street) and northwest Grand Forks (northwest Walmart), how often would you ride it?
40%
35%
30%
25%
20%
15%
10%
5%
0%
18%
20%
12%
16%
35%
Daily
Few times per week
Weekly
Few times a month
I would not ride this route


Cities Area Transit currently operates four fixed routes during the evening, including Route 3, Route 6, Route 13, and the UND Night Route. One potential service idea is to have microtransit service during the evenings where riders would request (either o
30%
25%
20%
15%
10%
5%
0%
21%
23%
26%
9%
21%
I strongly prefer changing evening service to microtransit
I somewhat prefer changing evening service to microtransit
I am neutral on this idea
I somewhat prefer keeping evening service as fixed-route service
I strongly prefer keeping evening service as fixed-route service

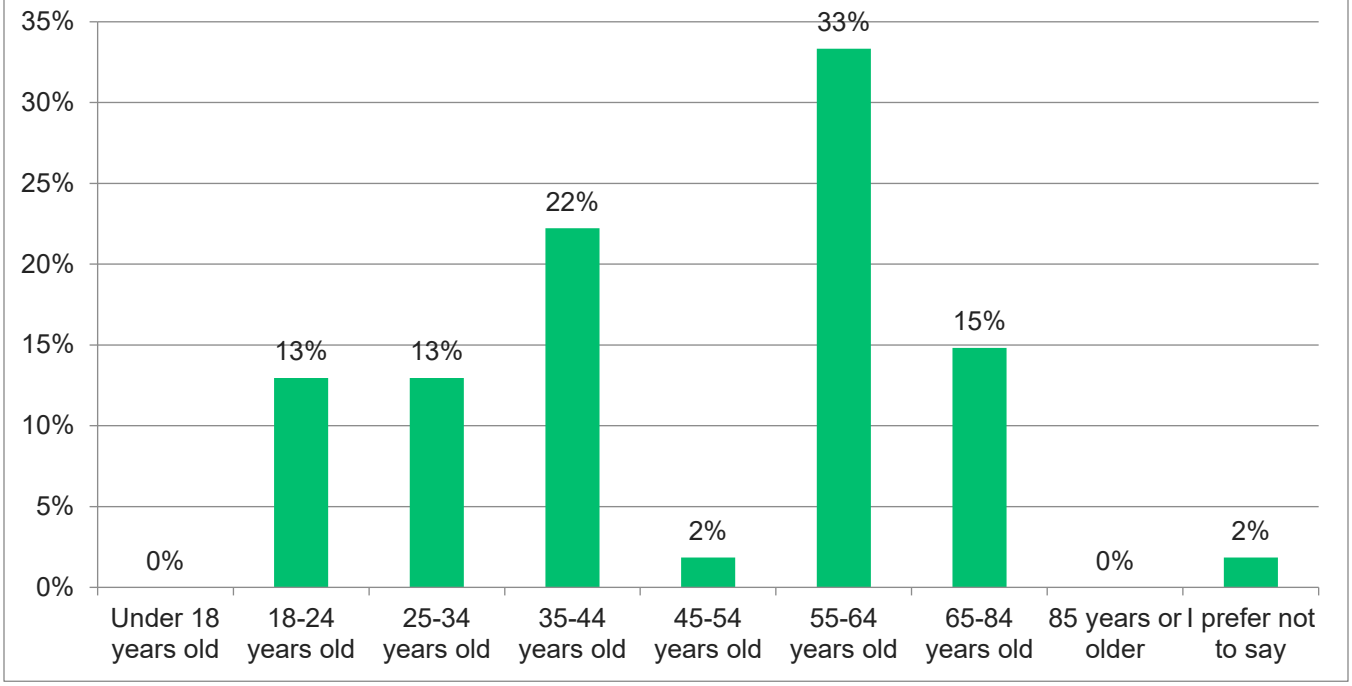

If Cities Area Transit were to continue operating fixed route service in the evenings, please indicate your preference for which routes would operate in the evening by ranking the following choices (1 being your highest preference and 5 being your lowest
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
3.3
3.4
2.4
3.2
3.3
Route 3
Route 5
Route 6
Route 7
Route 13
Weighted Average


Are you able to drive a vehicle/do you have access to a vehicle?
60%
50%
40%
30%
20%
10%
0%
35%
53%
13%
Yes
No
I prefer not to say

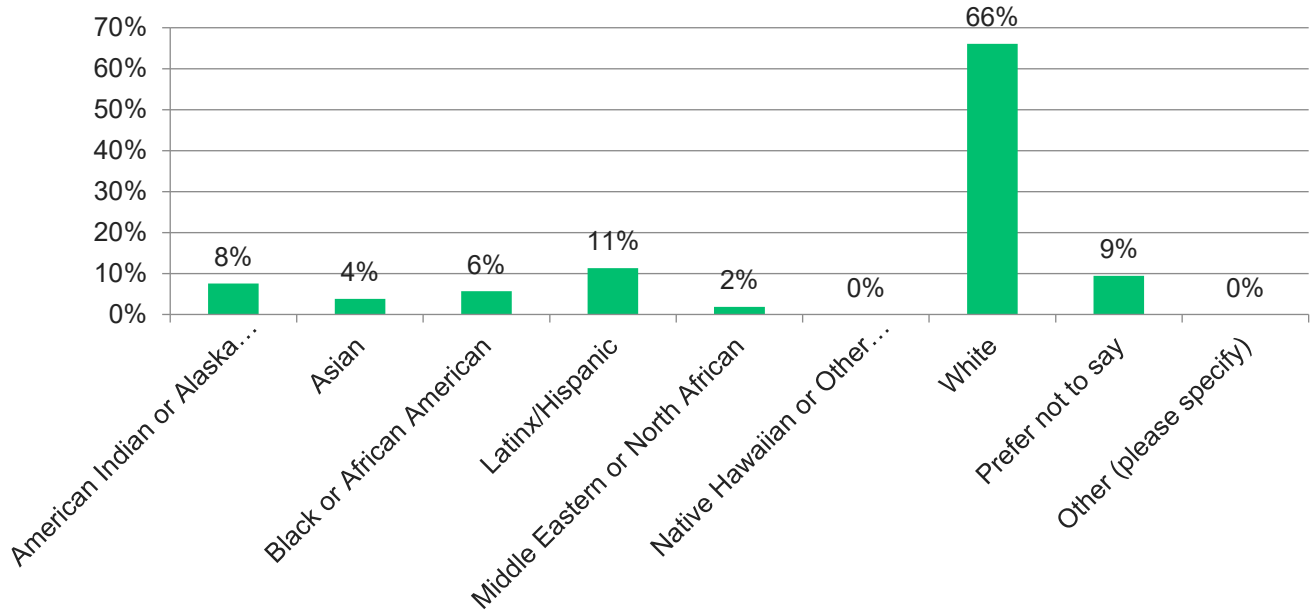
With which gender do you identify?



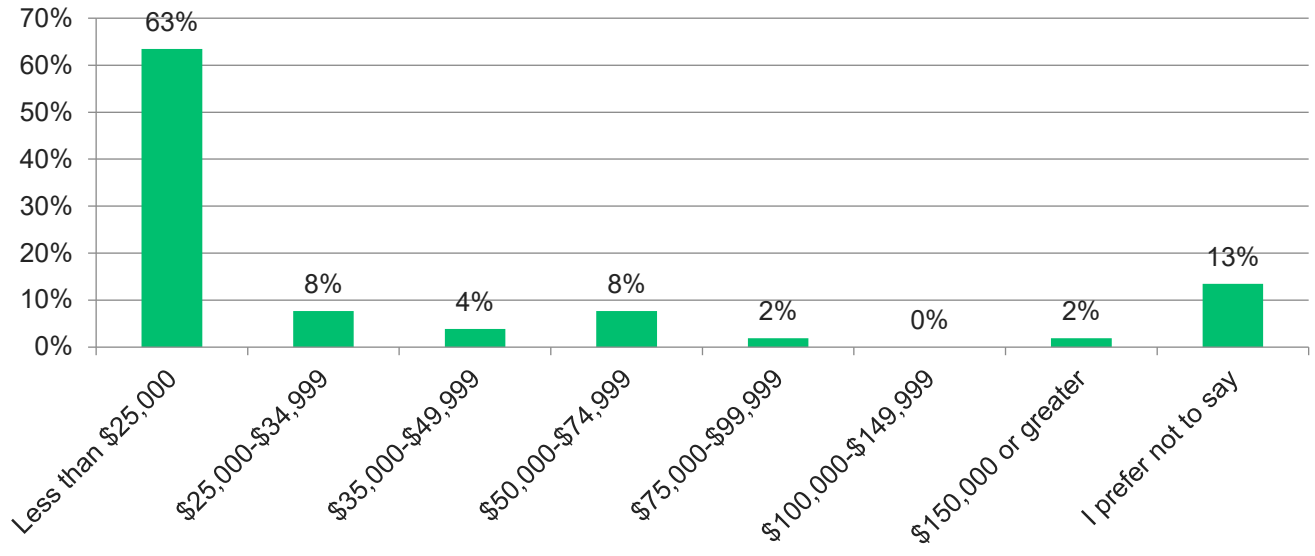
What is your age?



What is your racial, ethnic, or Indigenous identity? Select all that apply.

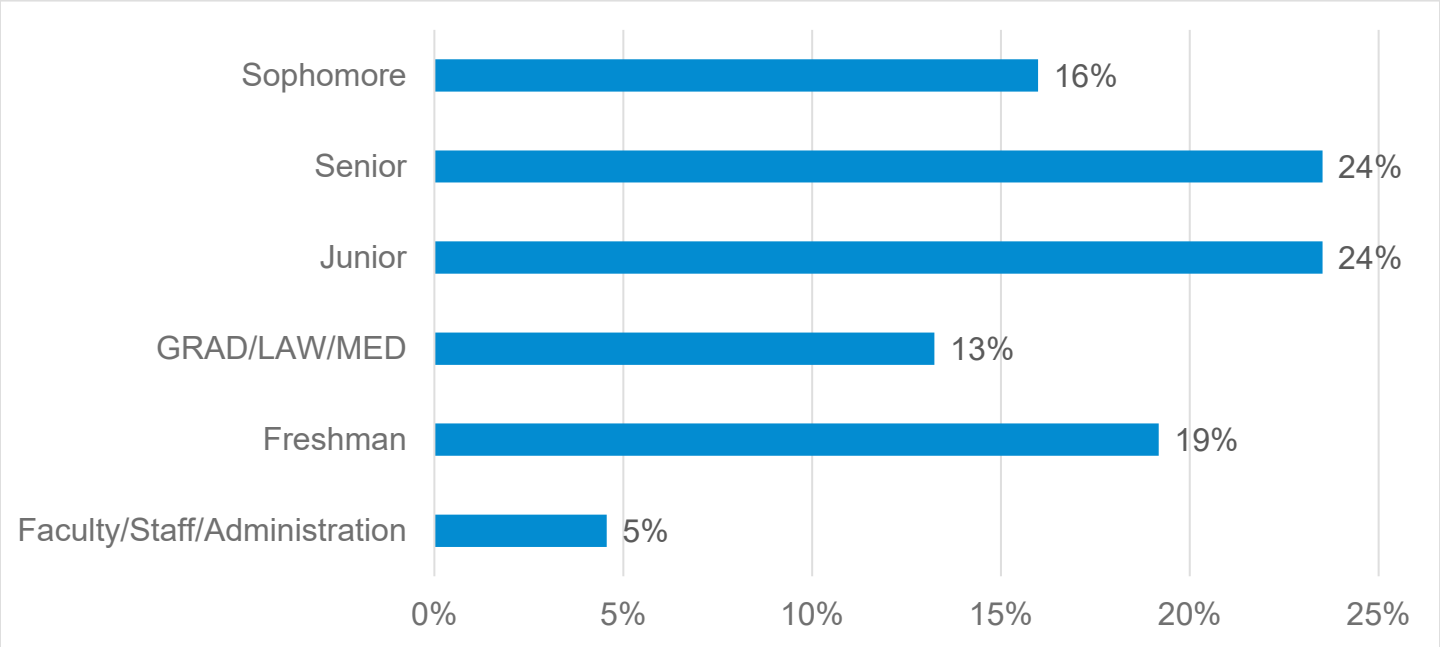


What is your household income (Combined incomes of everyone in the household that is over 15 and working.)

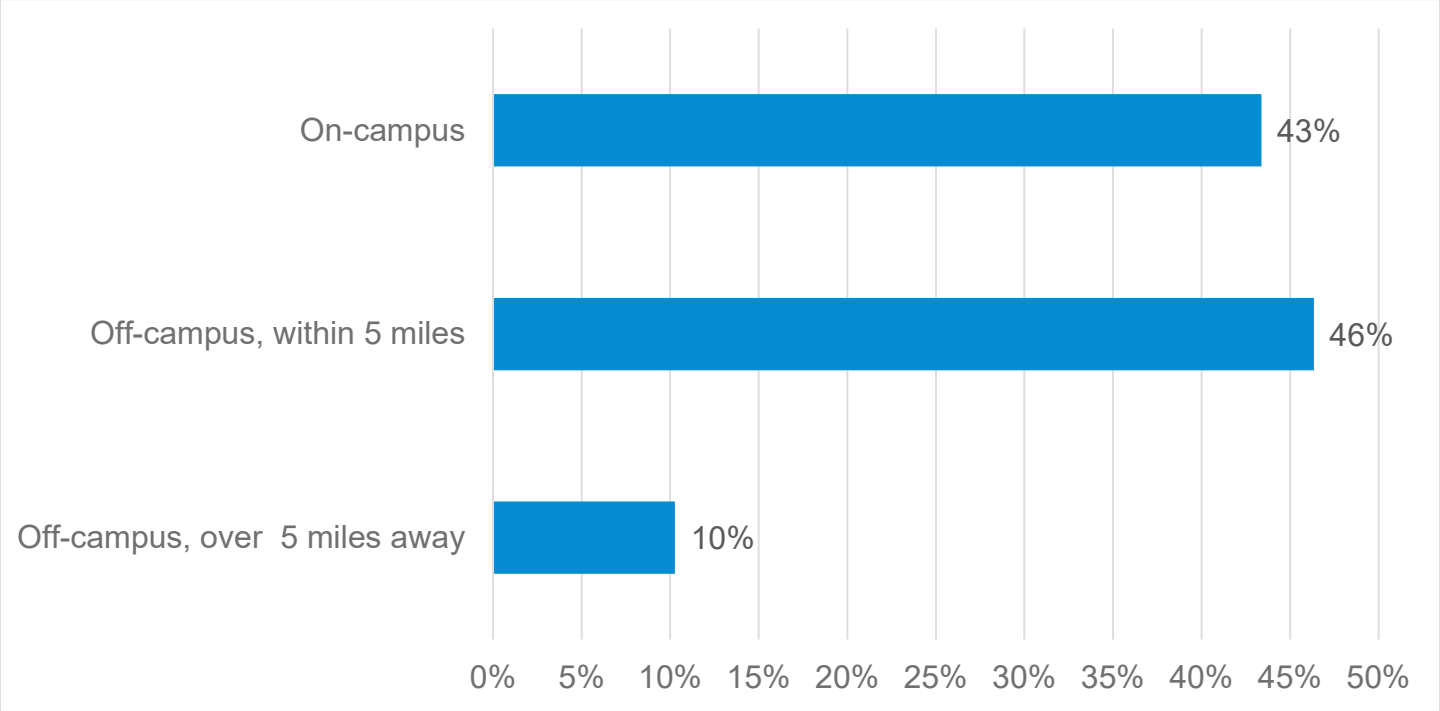


APPENDIX B. UND SURVEY RESULTS

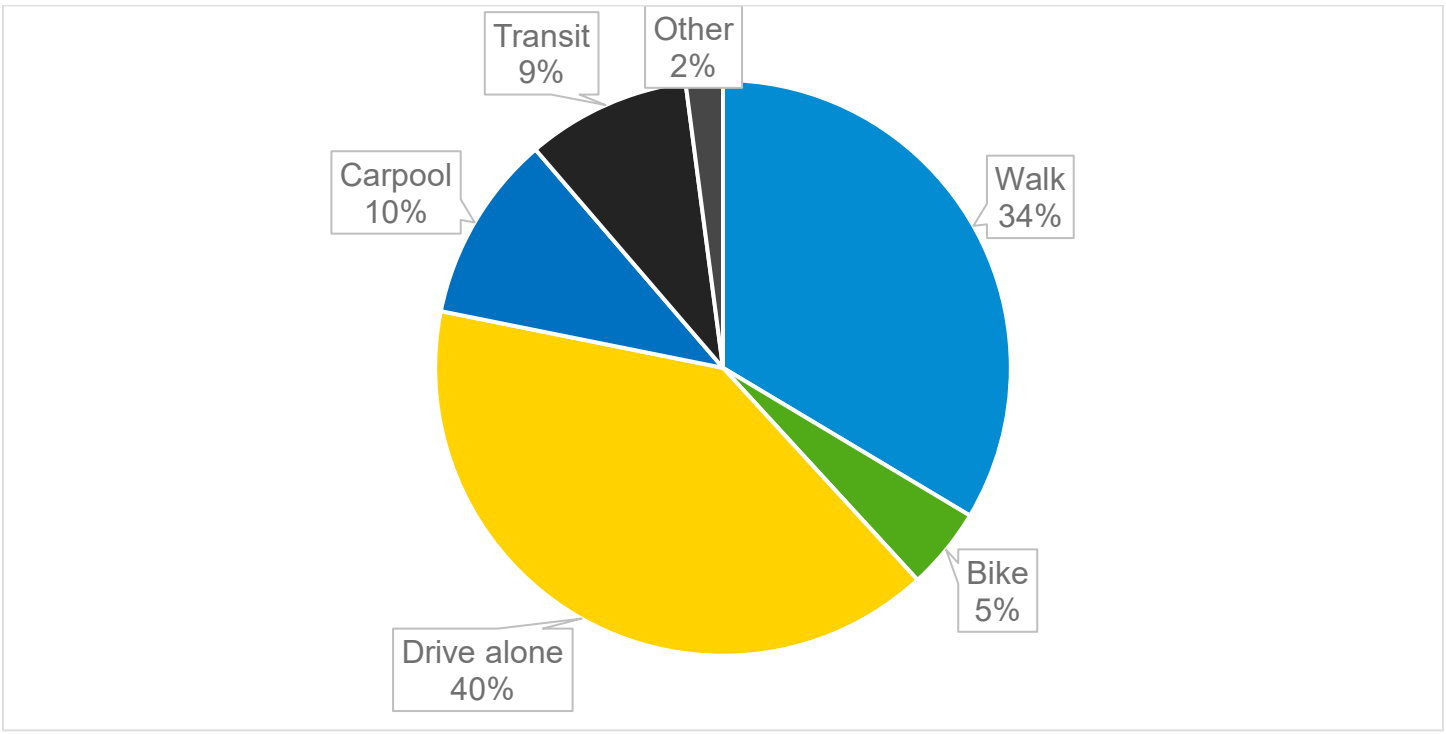
Please select the response that best describes your affiliation with UND:



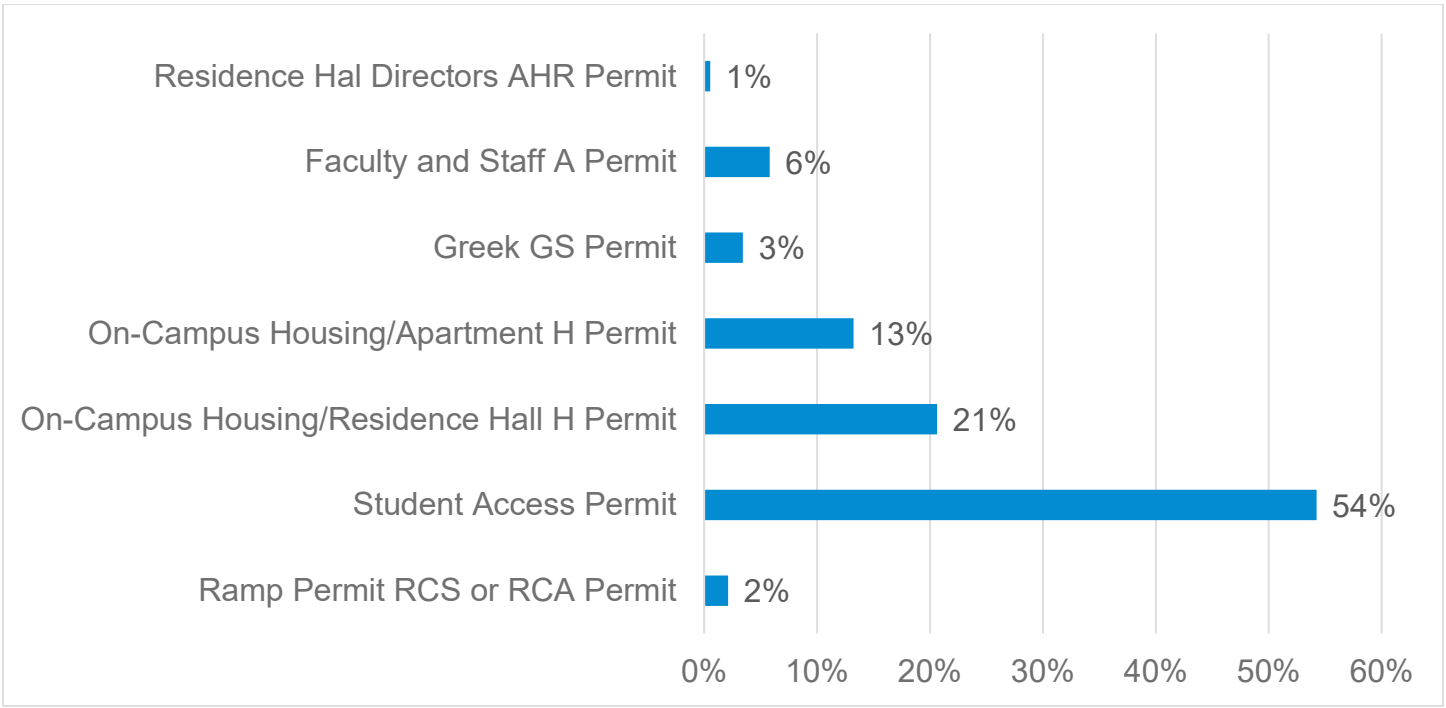
How close to campus do you live?



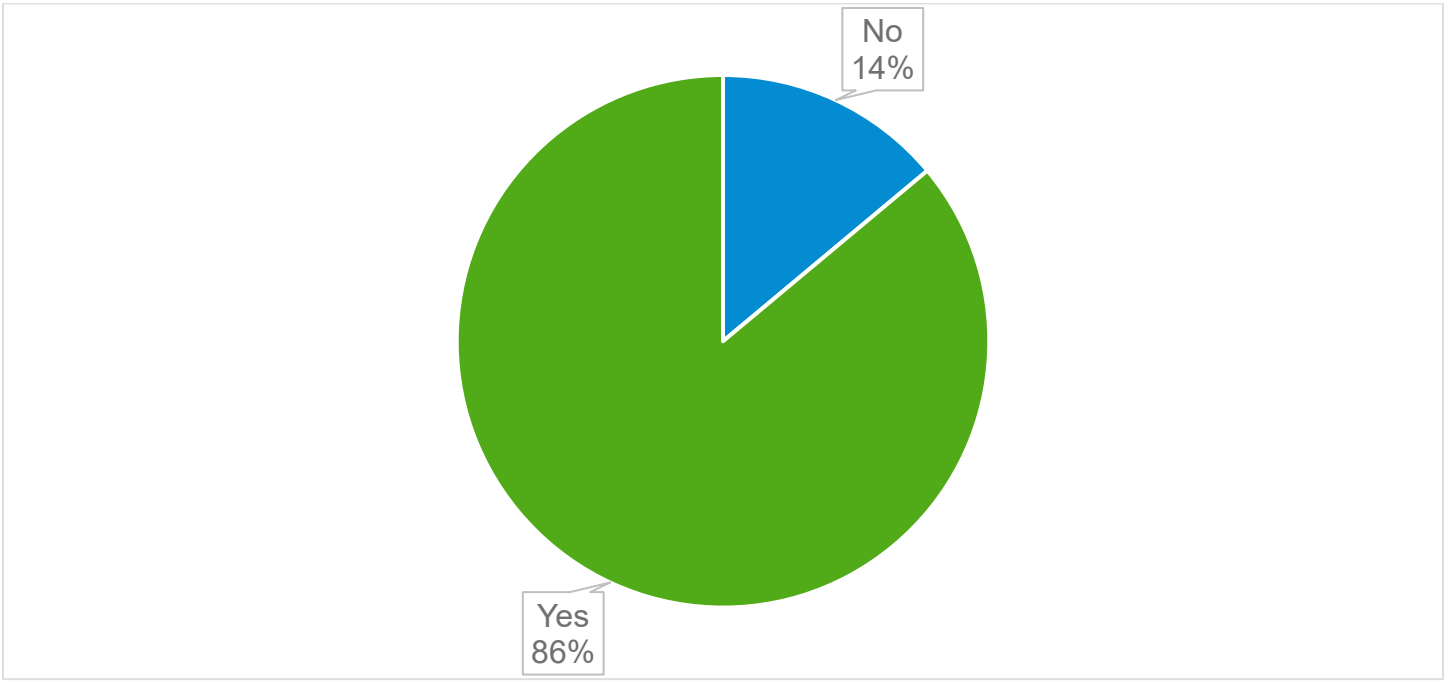
How do you get to campus?



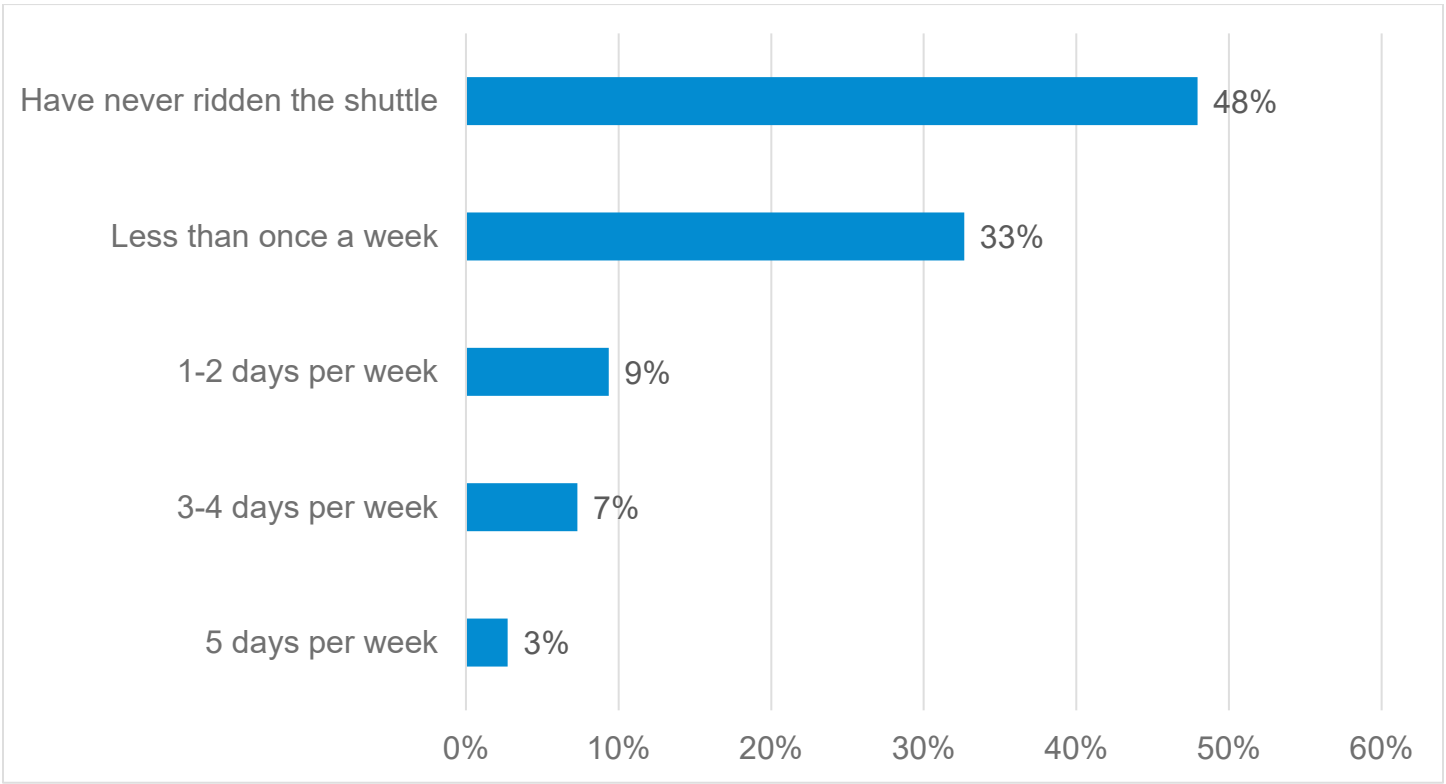
Please select the type(s) of Parking Passes you have:



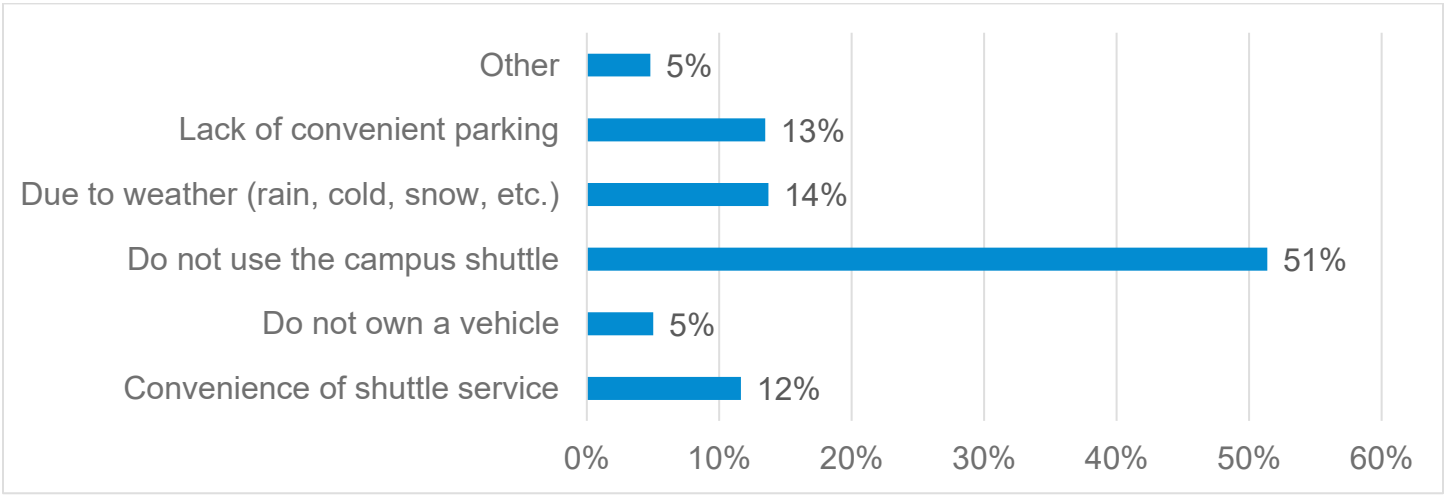
Are you aware of the campus shuttle service that is free to students/faculty/staff?



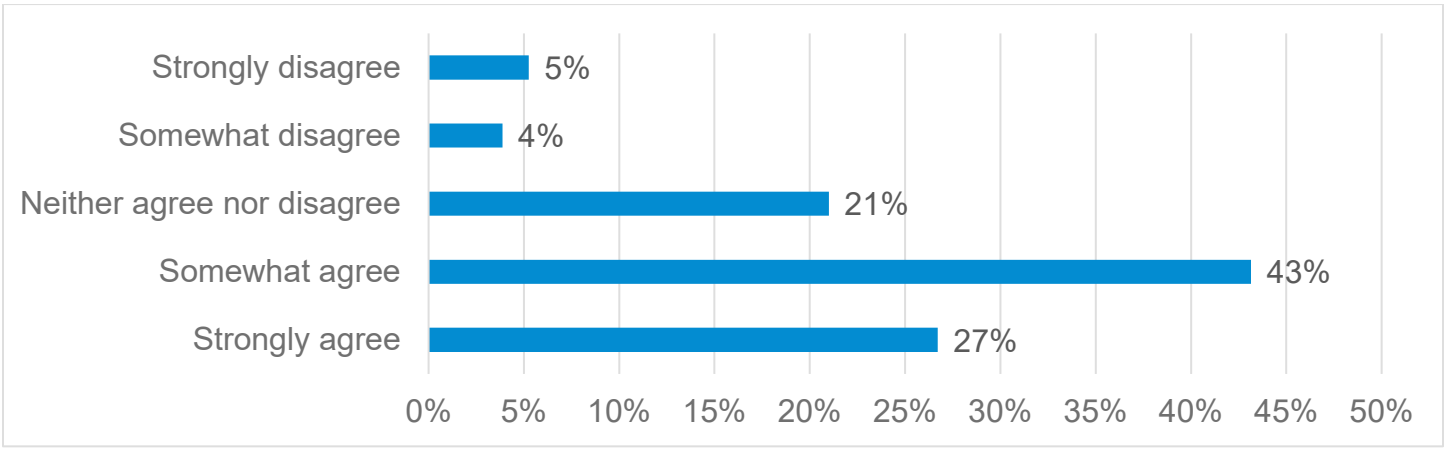
How often do you ride the campus shuttle service?



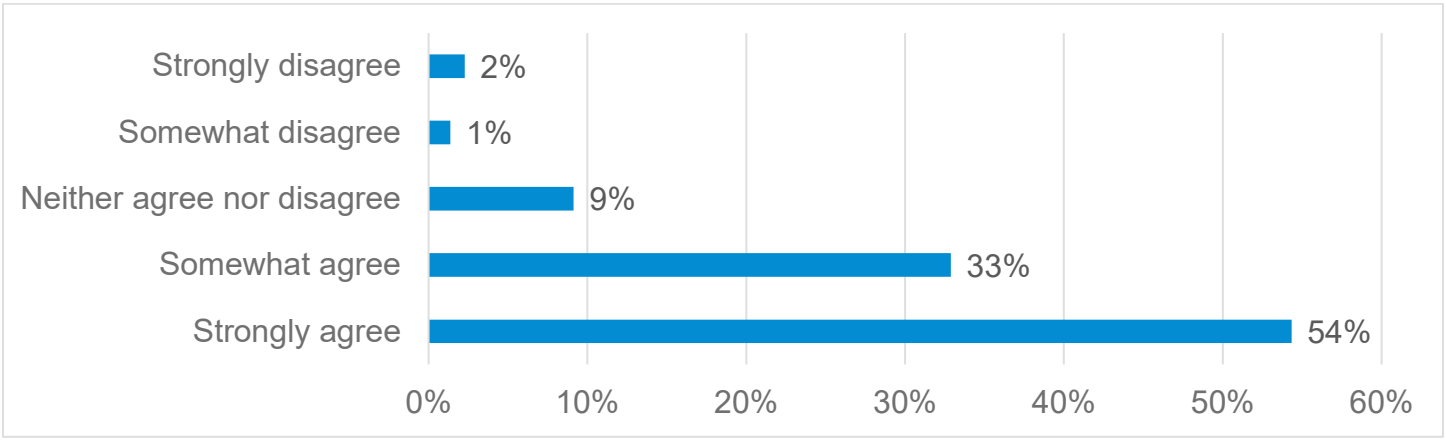
Why do you use the campus shuttle service?



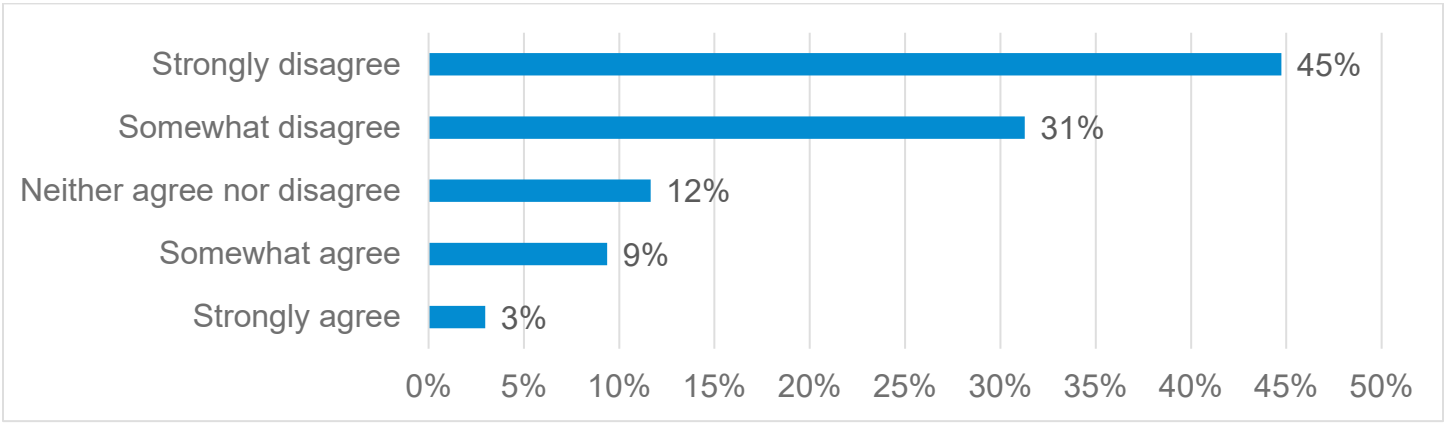
The campus shuttle improves the student experience at UND



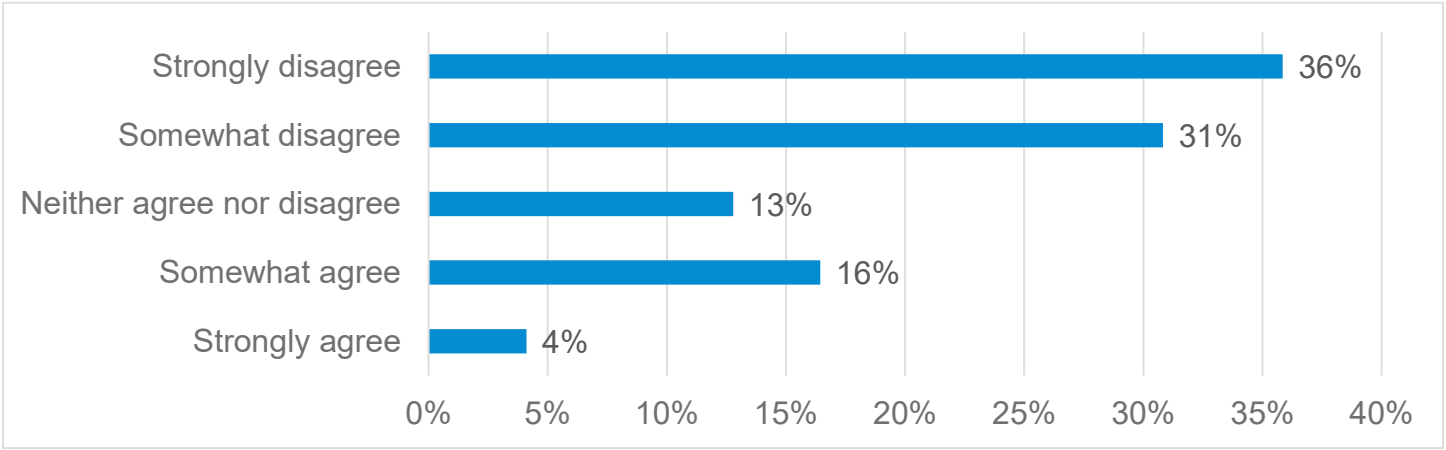
The campus shuttle is an important service for the university



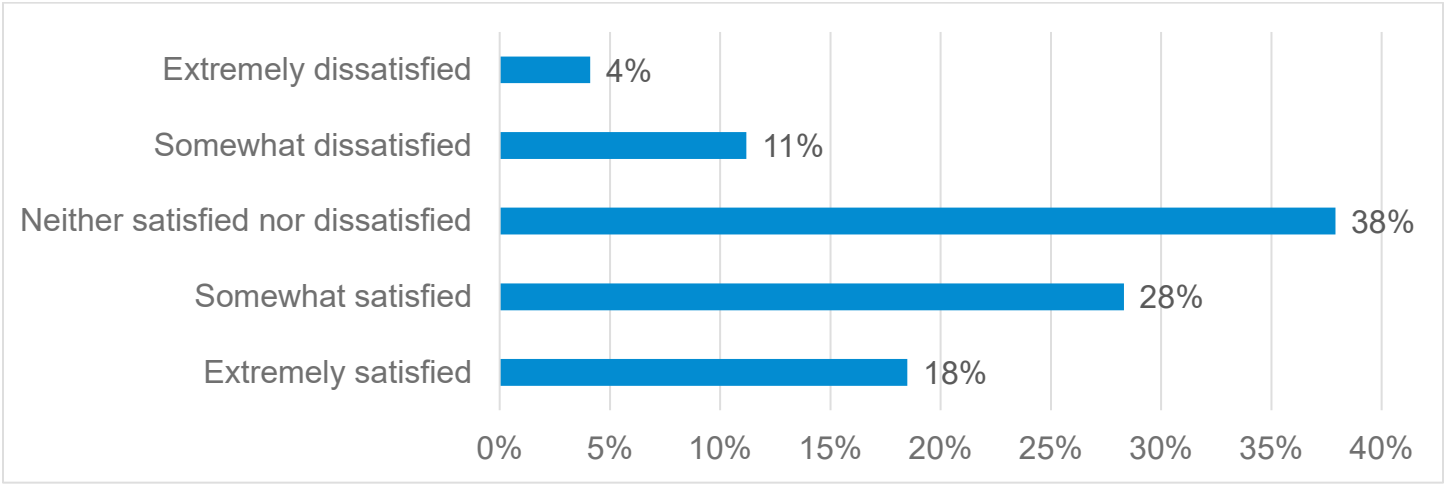
The campus shuttle is only for those without access to an automobile



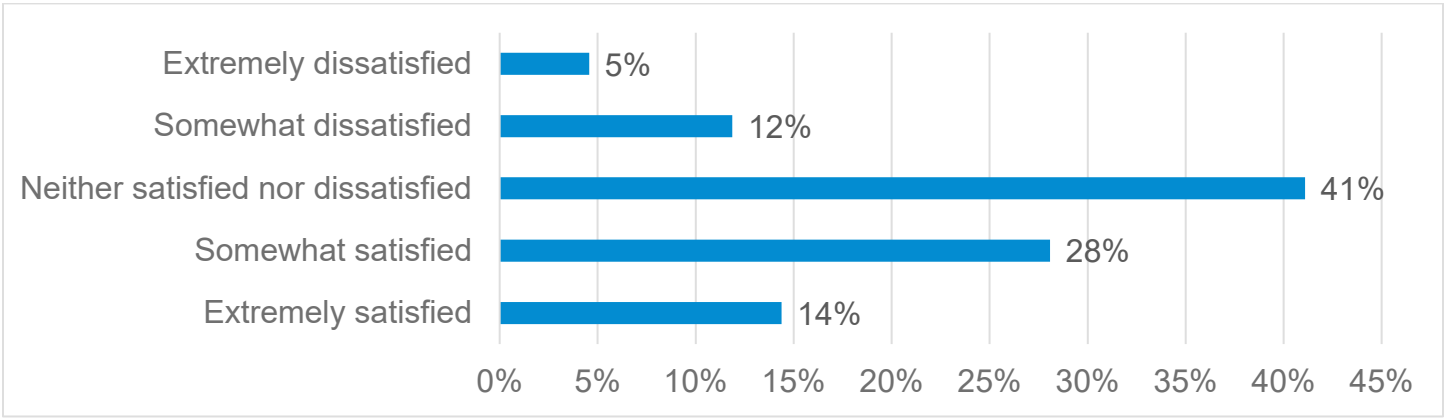
The campus shuttle is only for those who live on campus



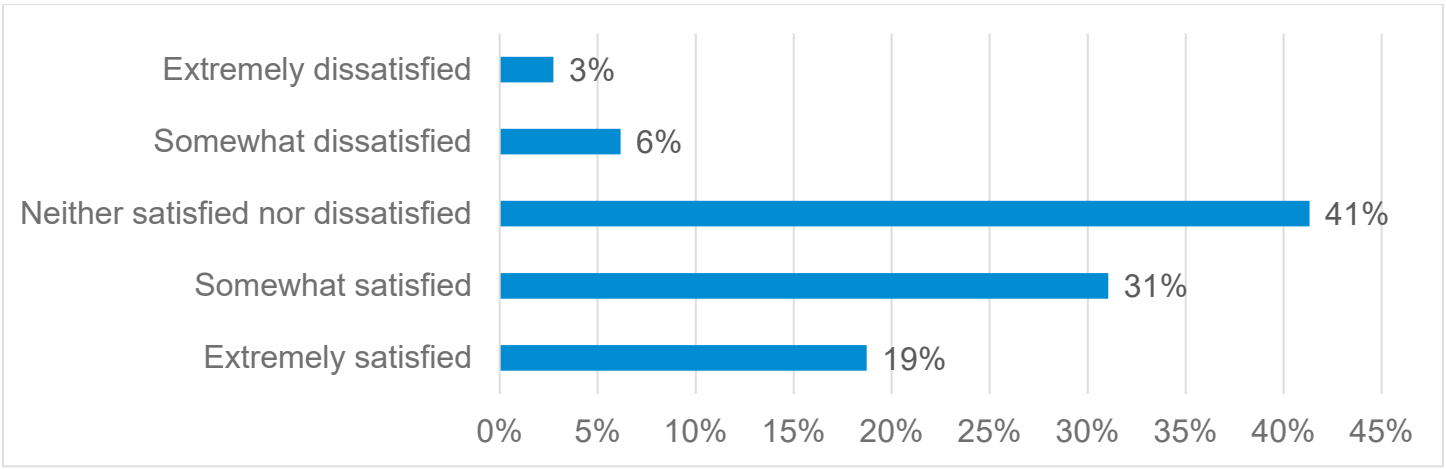
Ease of riding the campus shuttle



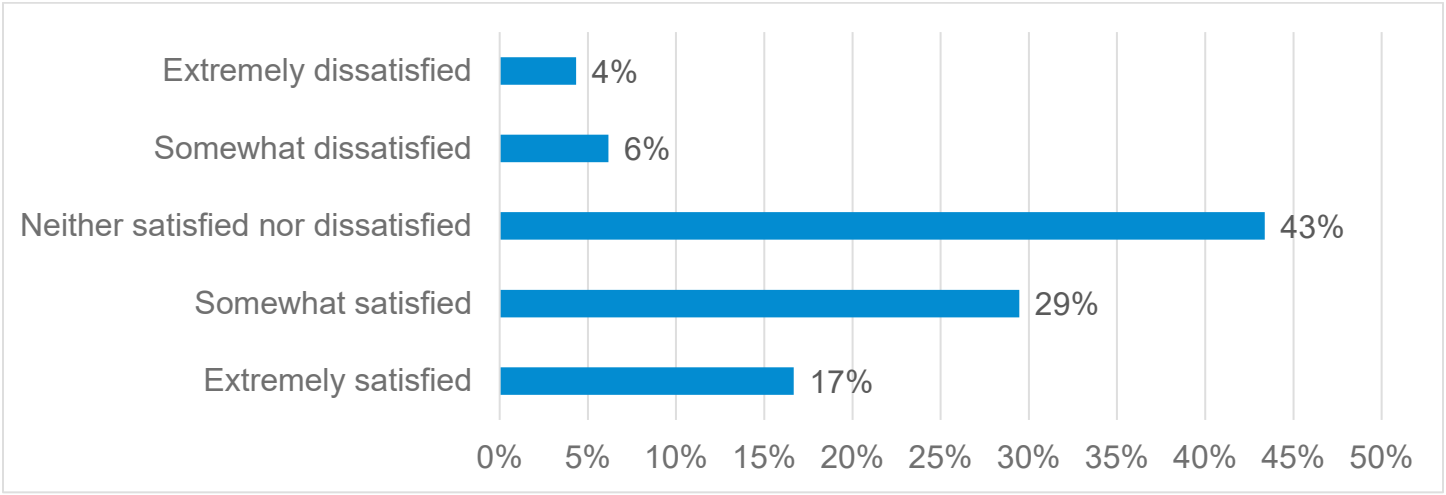
Hours of operation



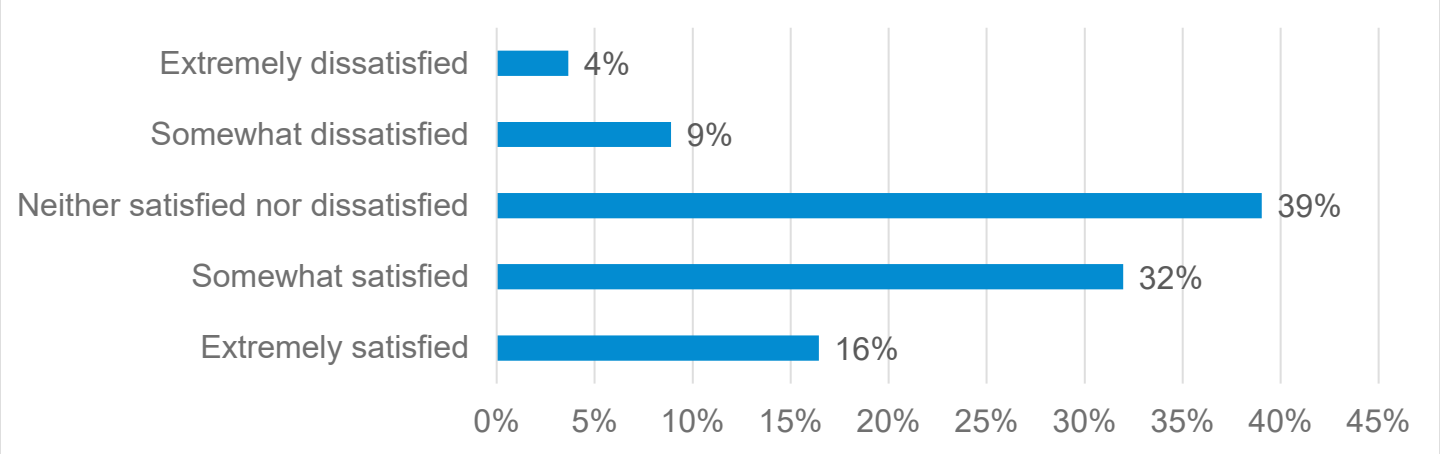
Travel time



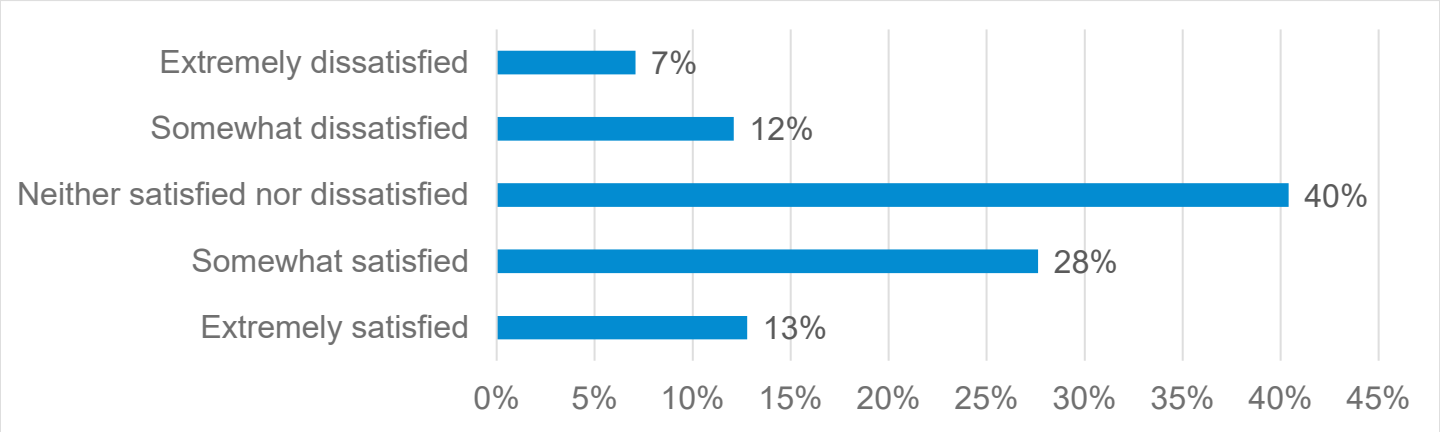
Frequency of stops



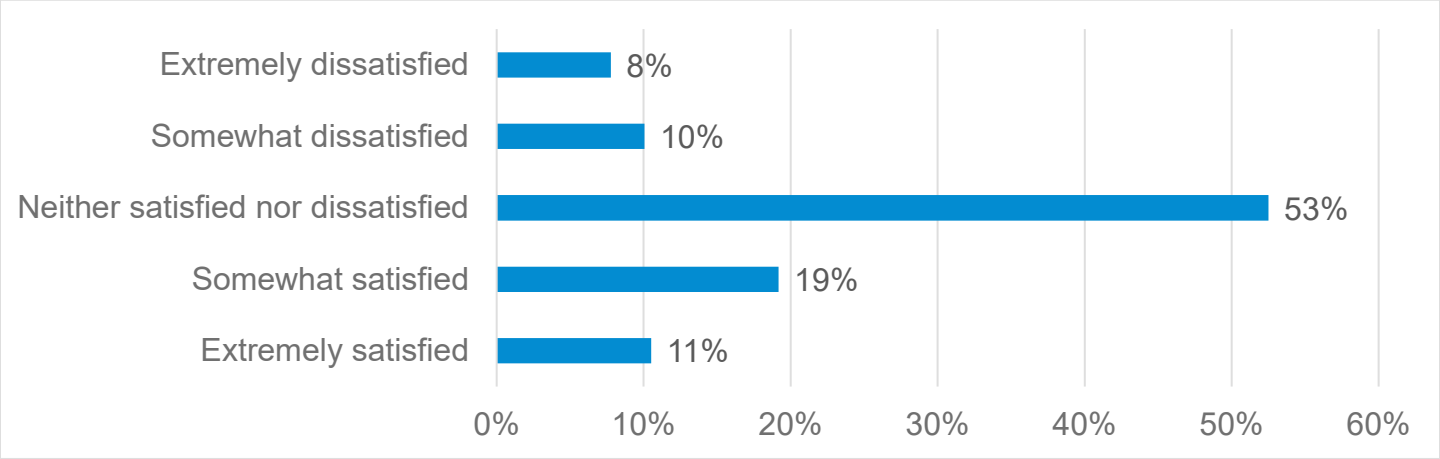
Stop locations



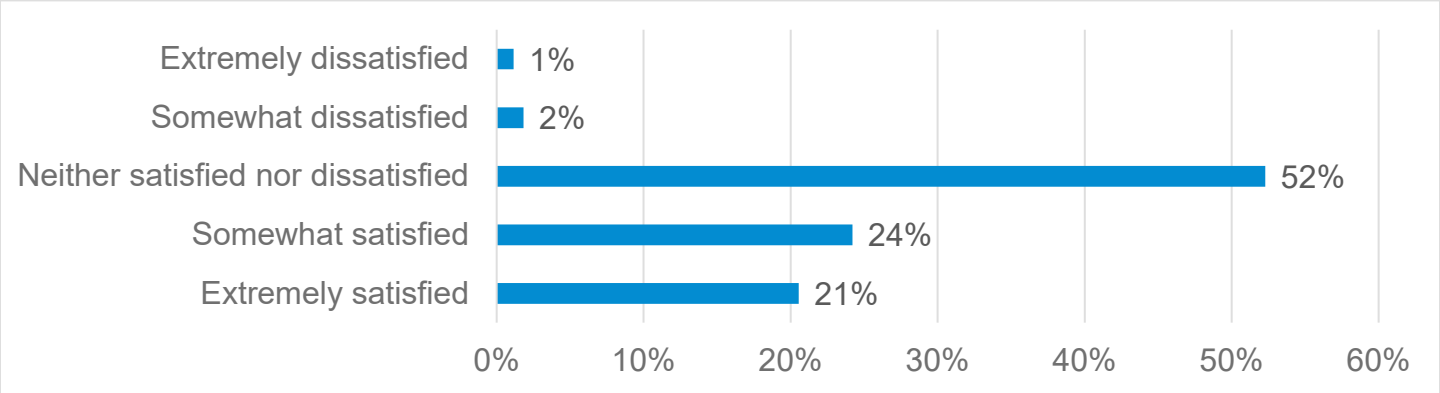
Reliability of scheduled stop times



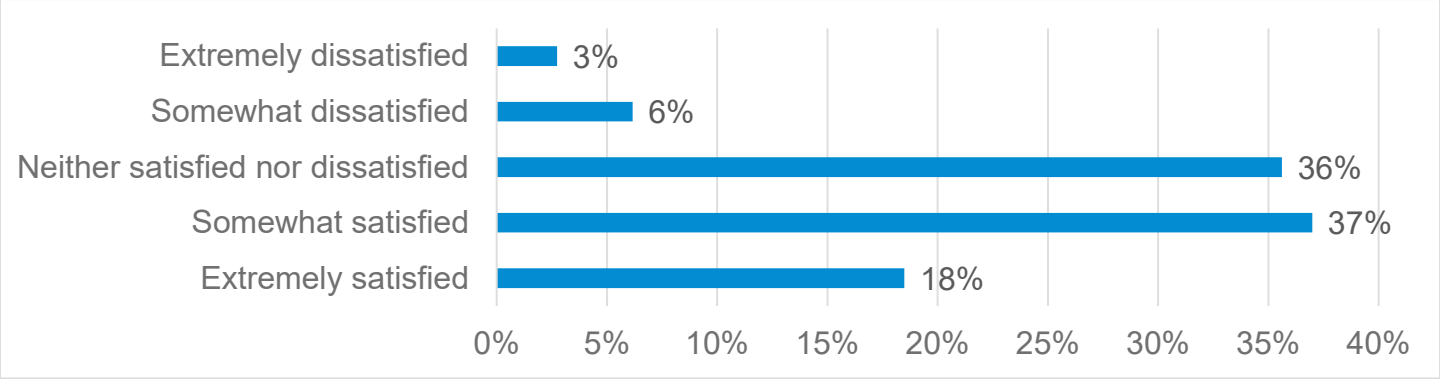
Accuracy of CAT Prowler app



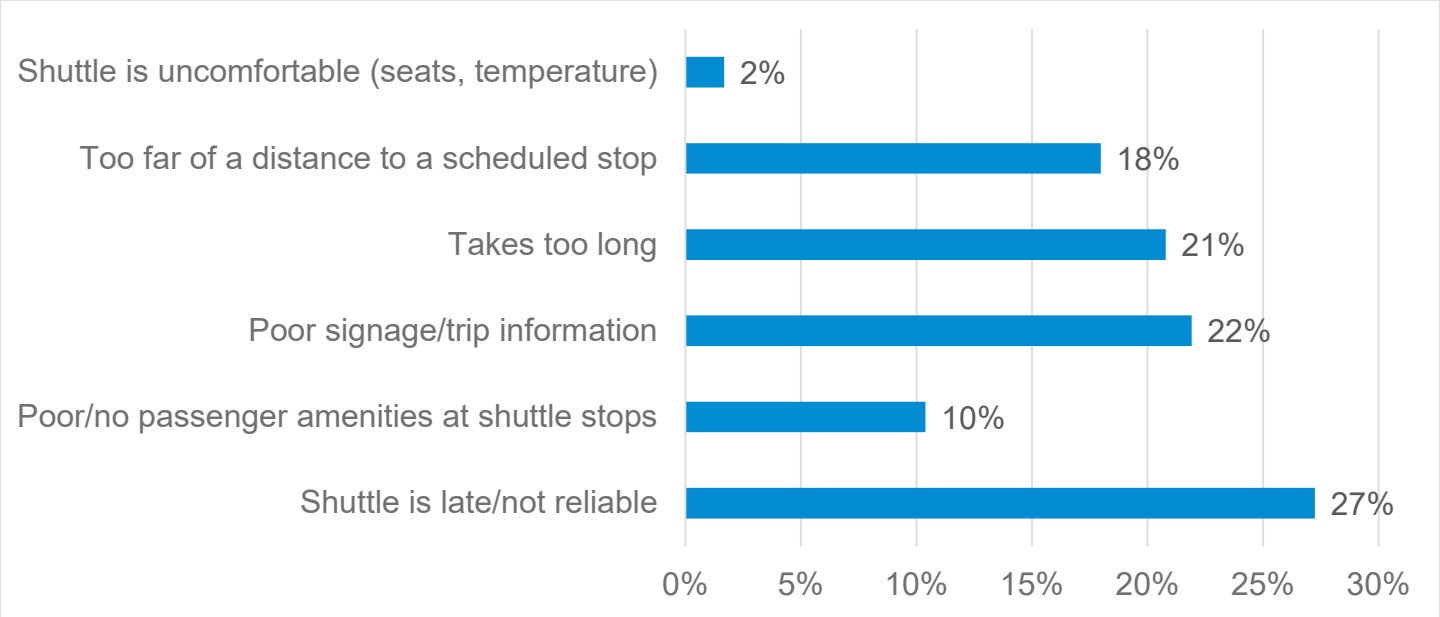
Customer service



Overall campus shuttle service



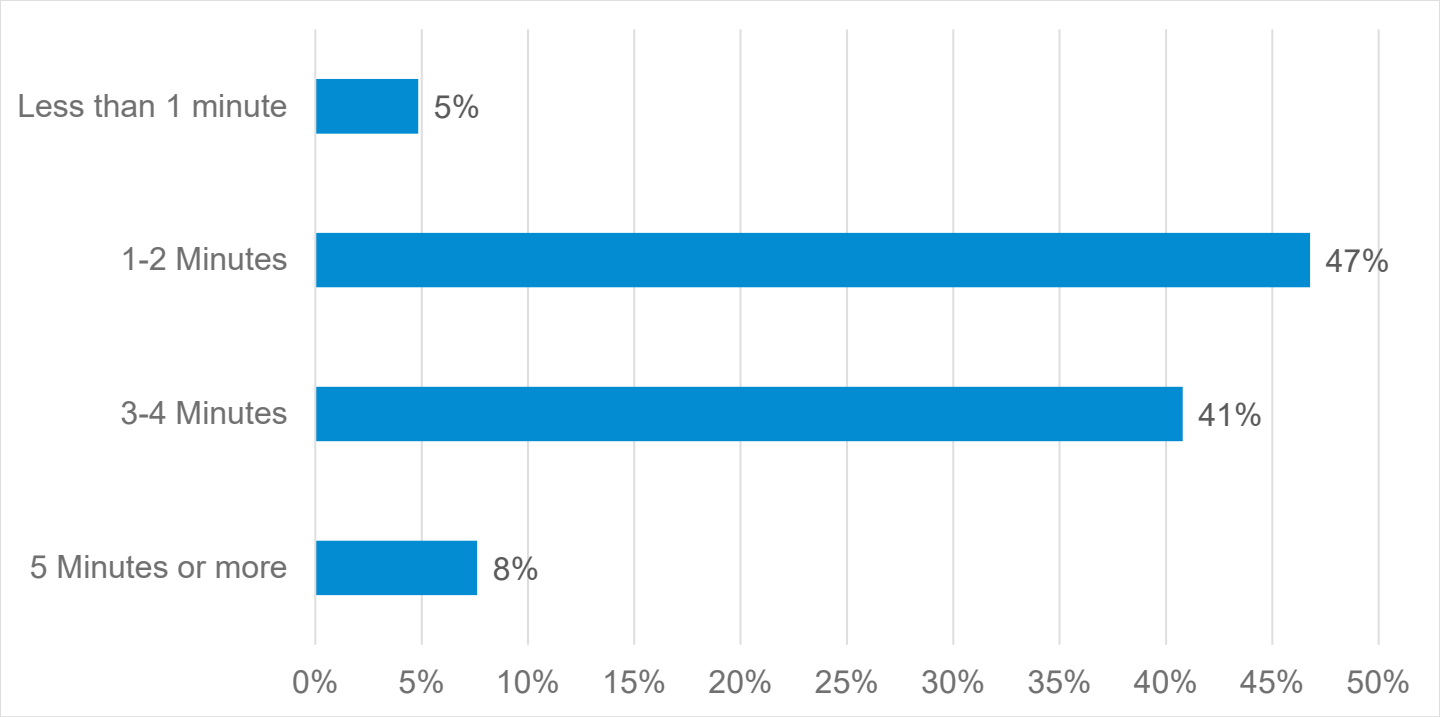
Do you experience barriers to riding the campus shuttle?



Please describe any aspects of riding the campus shuttle that makes it confusing or difficult

- Technological issues with the CAT app and inefficient to use
- Shuttle will often skip over some stops even when students need to get on or off (even more of an issue when the weather is bad)
- Lack of information on shuttle routes and guidance on how to ride the shuttles
- Shuttles take too long to arrive at stops and unreliable scheduled stop times
- Did not know this service existed
- Shuttles don't run frequently enough
- Don't know where the stops and/or the routes are

What do you feel is an appropriate time (in minutes) to walk to your destination from the bus stop?



What are your top five preferred buildings/locations for campus shuttle stops?

Most common responses:

- Memorial Union
- Wilkerson
- Odegard
- Medical School
- Columbia
- Library
- Wellness Center

Between what two locations on campus would you most likely take the shuttle?

Pick-up Location

Most common responses:

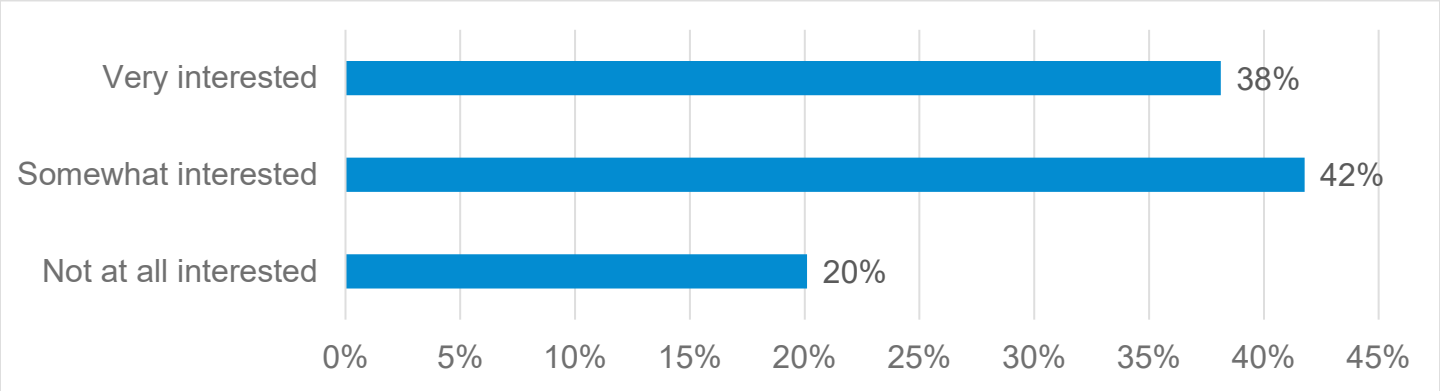
- Wilkerson
- Memorial Union
- Odegard
- Walsh
- University Ave/University Place
- Wellness Center

Drop-off Location

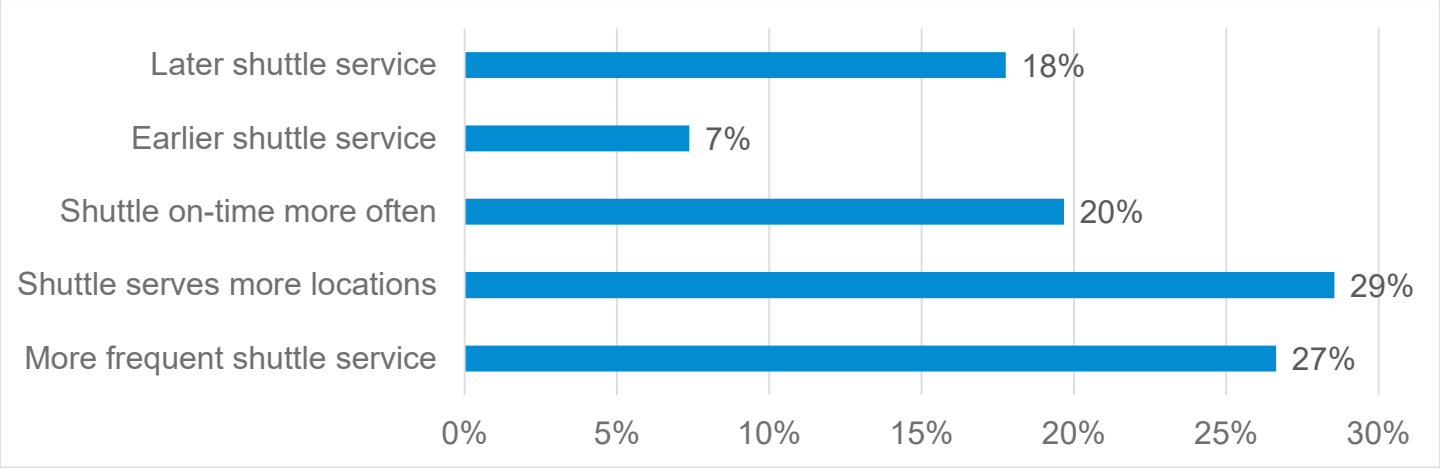
Most common responses:

- Memorial Union
- Wilkerson
- Columbia Hall
- Medical School
- Odegard
- Wellness Center

Would you be interested in an on-demand campus ride share service (similar to Uber), Monday through Thursday, from 5-10 pm?



What would make riding the shuttle more appealing to you?



Please share any other comments related to strengths of the current shuttle system or improvements that you would like to see to the shuttle system

Strengths

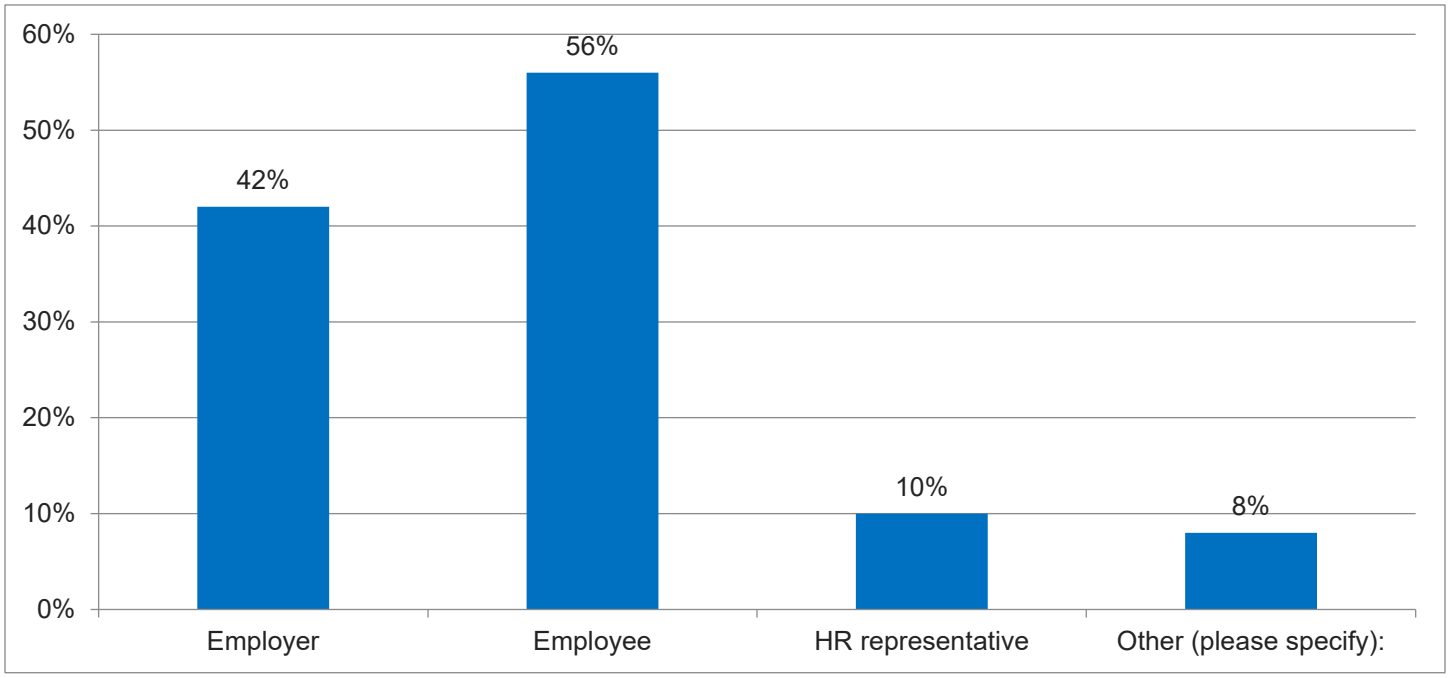
- Better quality buses with higher rider capacity
- Can be reliable, especially during bad weather

Improvements

- Shuttle app needs to be more reliable
- More frequent stops and make full stops at each designated stop
- Extended operating hours (weekends, early and later hours)
- Interactive maps; further guidance on how to use the shuttles and navigate stops and bus routes
- Additional stops at certain locations
- Find ways to promote the shuttle and its services (email, announcements, etc.)

APPENDIX C. BUSINESS SURVEY RESULTS

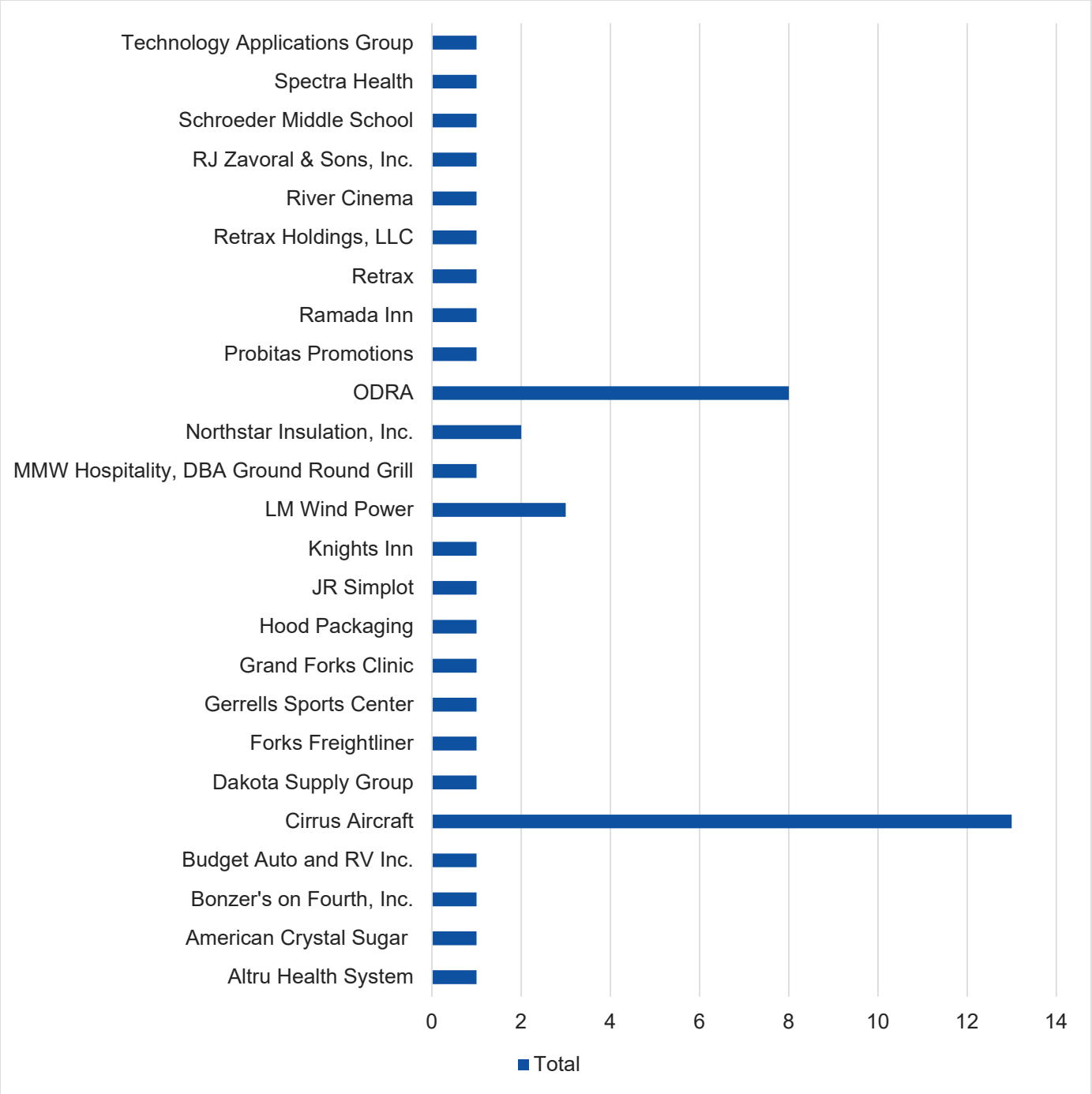
What is your role within your company? Select all that apply.



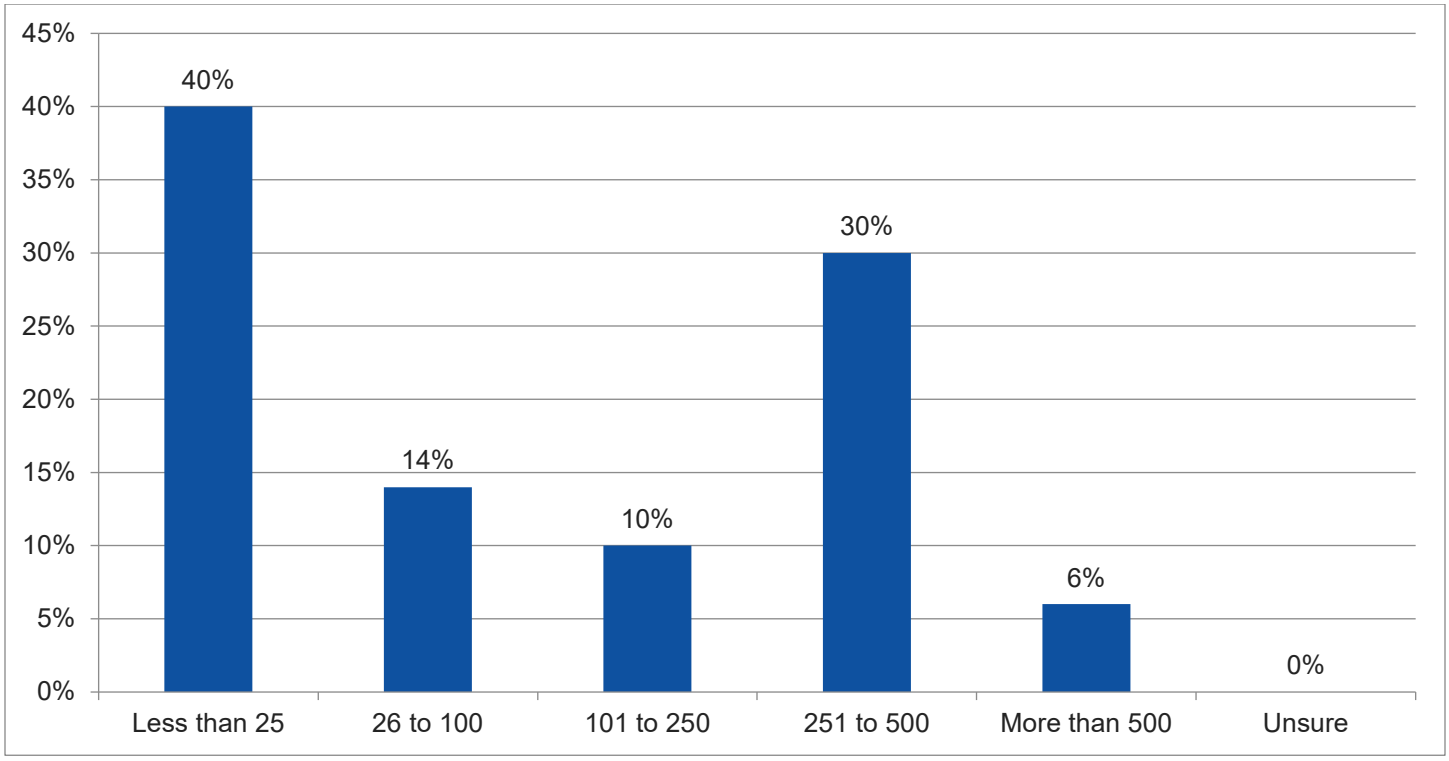
Other (please specify):

- President
- Office assistant
- Operation manager
- Supervisor

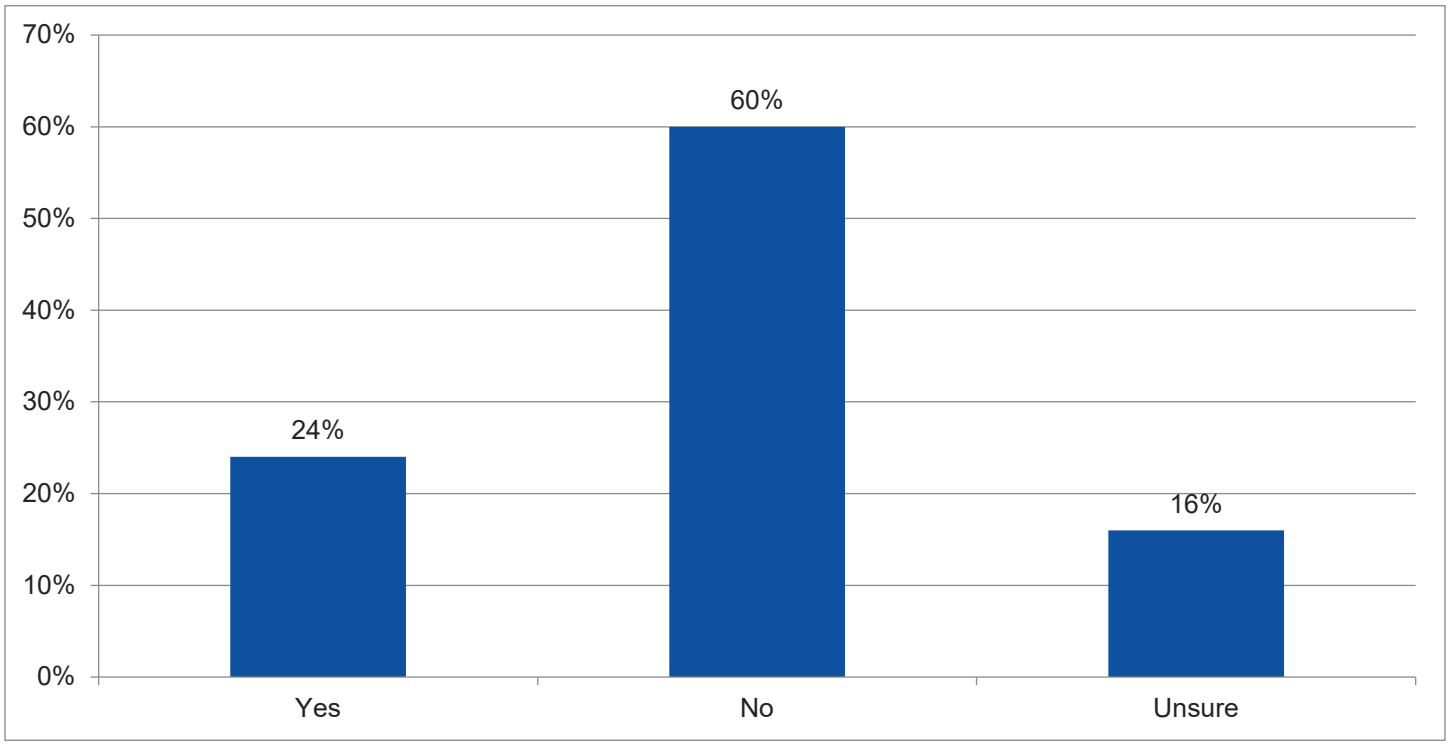
What is the name of your company?



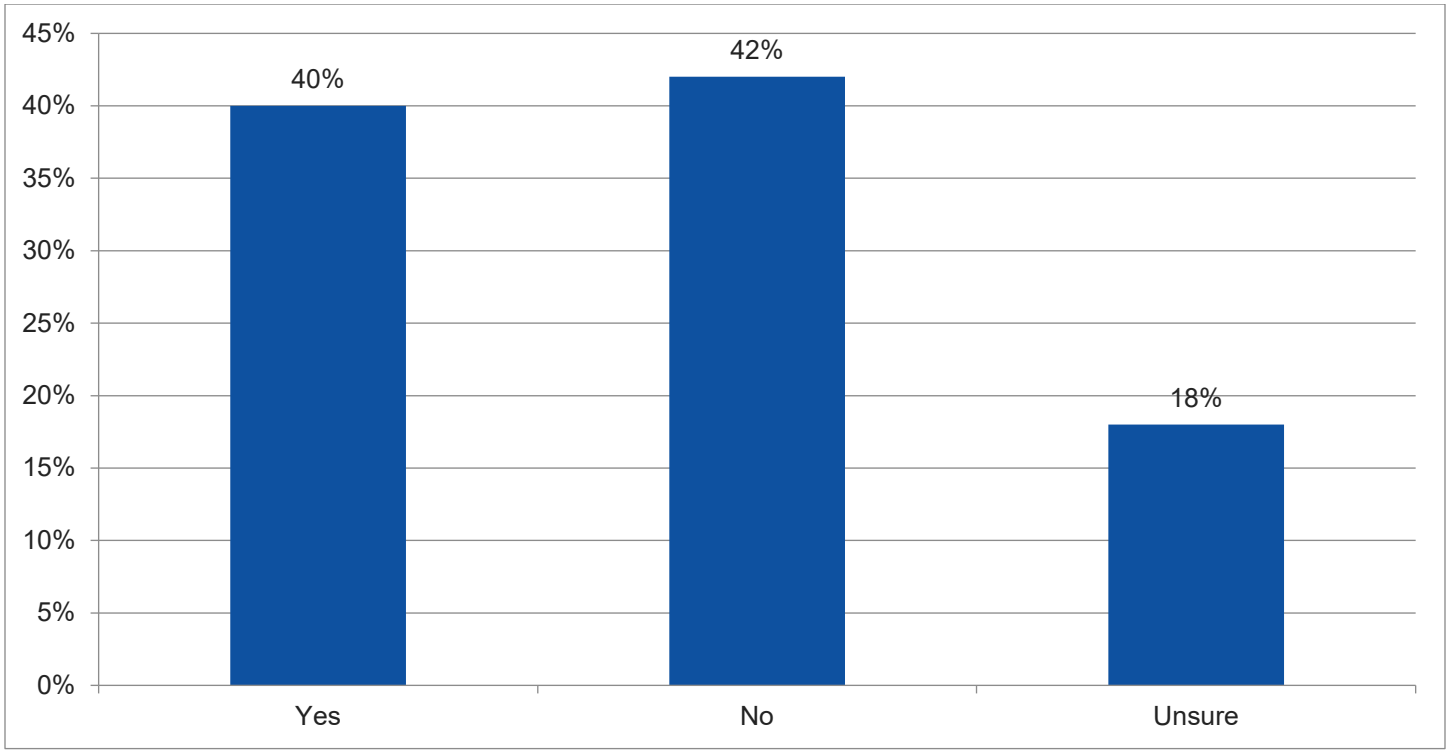
How many employees work at your company?



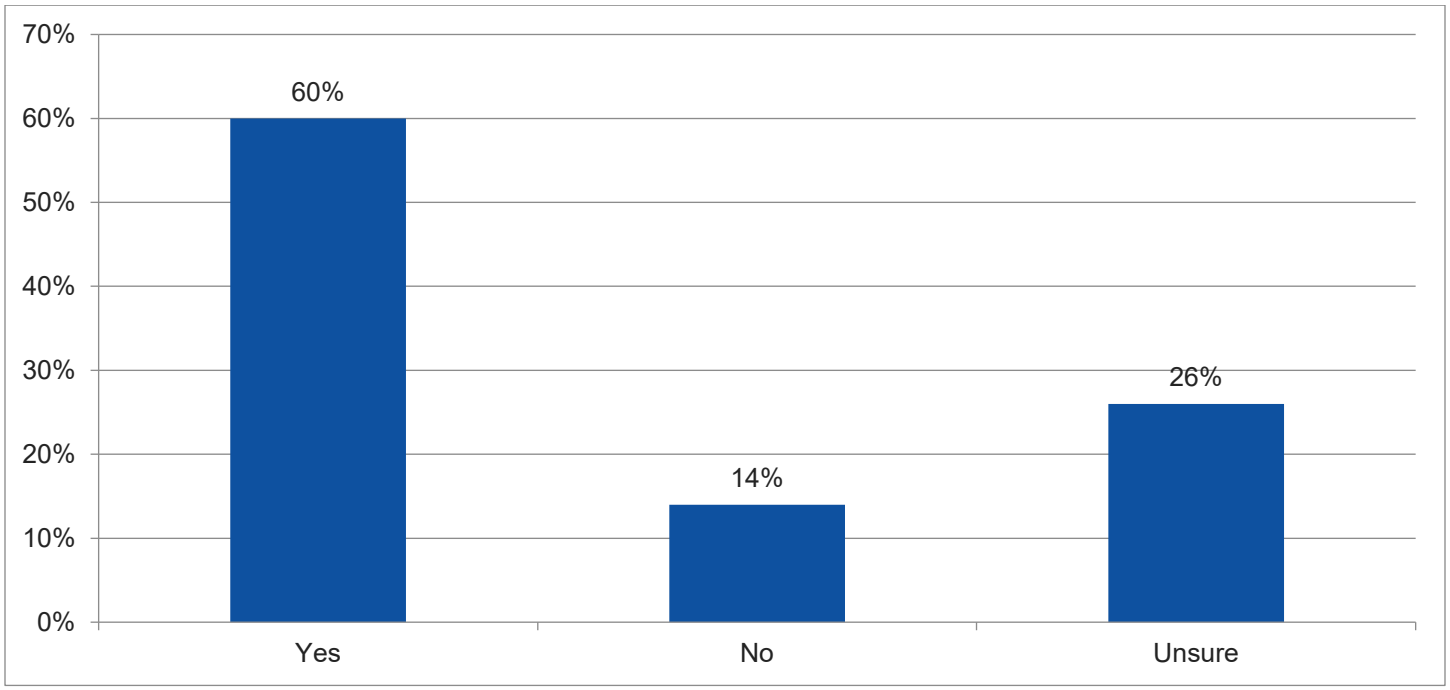
Does your company have easy access to transit?



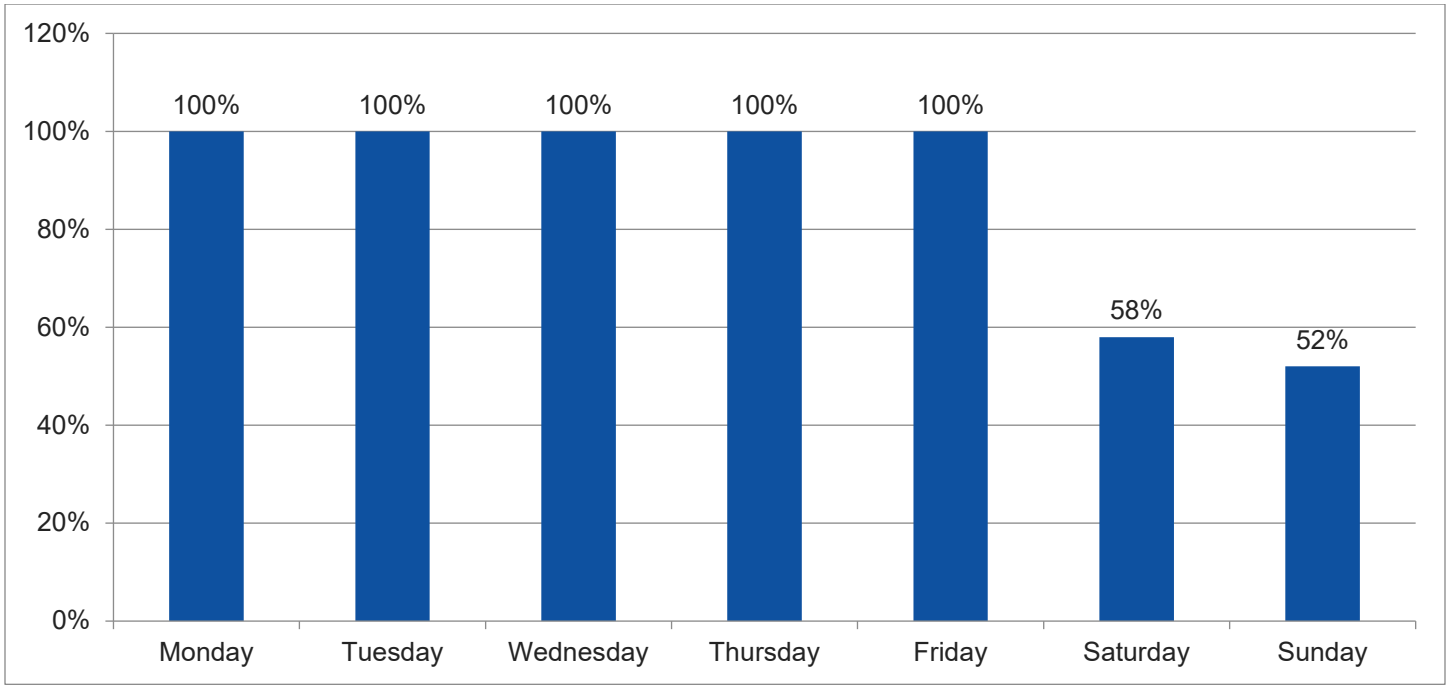
Are you aware of any people at your company that use public transit?



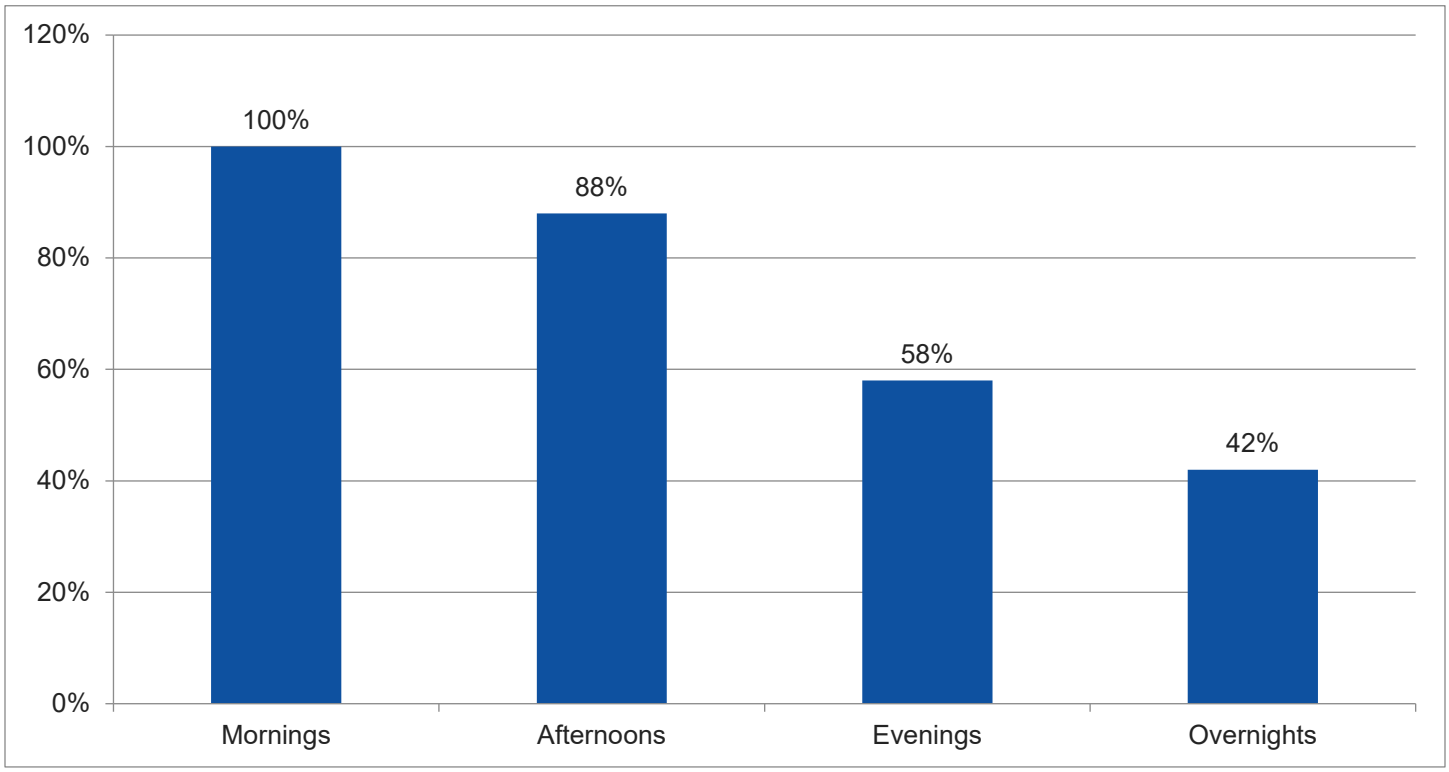
Do you think people at your company would use public transit if a route was available or convenient for them to get to and from work?



Which days of the week do employees at your company work? Select all that apply.



What times of day do employees at your company work? Select all that apply.



What are your company's typical shift start and end times? Please list out the times for each shift.

5 a.m. – 3/3:30 p.m.

5/5:30 a.m. – 5/5:30 p.m. (often on weekends)

6 a.m. – 2/2:30 p.m.

6 a.m. – 6:30 p.m.

7 a.m. – 3/3:30 p.m.

7/7:30 a.m. – 5/5:30 p.m.

7 a.m. – 7 p.m.

8 a.m. – 5/5:30 p.m.

12 p.m. – 9 p.m.

12:30 p.m. – 11 p.m.

2 p.m. – 9 p.m.

2 p.m. – 10:30 p.m.

3 p.m. – 11 p.m.

3 p.m. – 1/1:30 a.m.

3:30 p.m. – 2 a.m.

4 p.m. – 2:30 a.m.

7 p.m. – 7 a.m.

8 p.m. – 4:30 a.m.

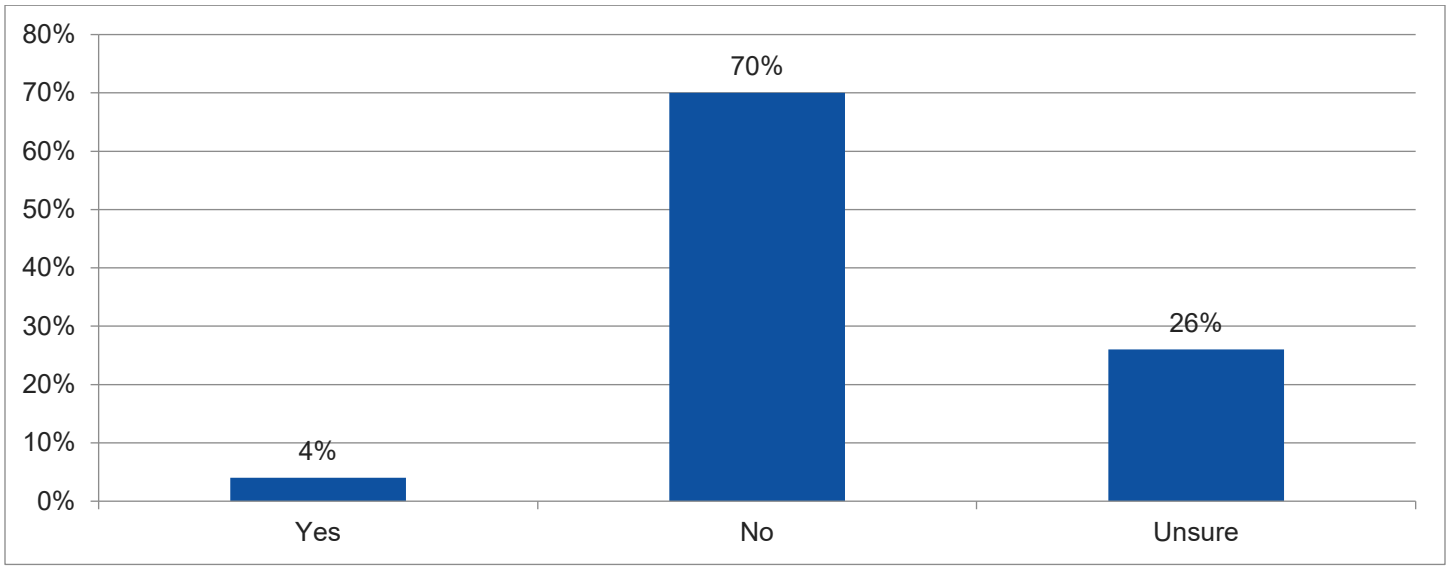
10 p.m. – 6:30 a.m.

11 p.m. to 7/7:30 a.m.

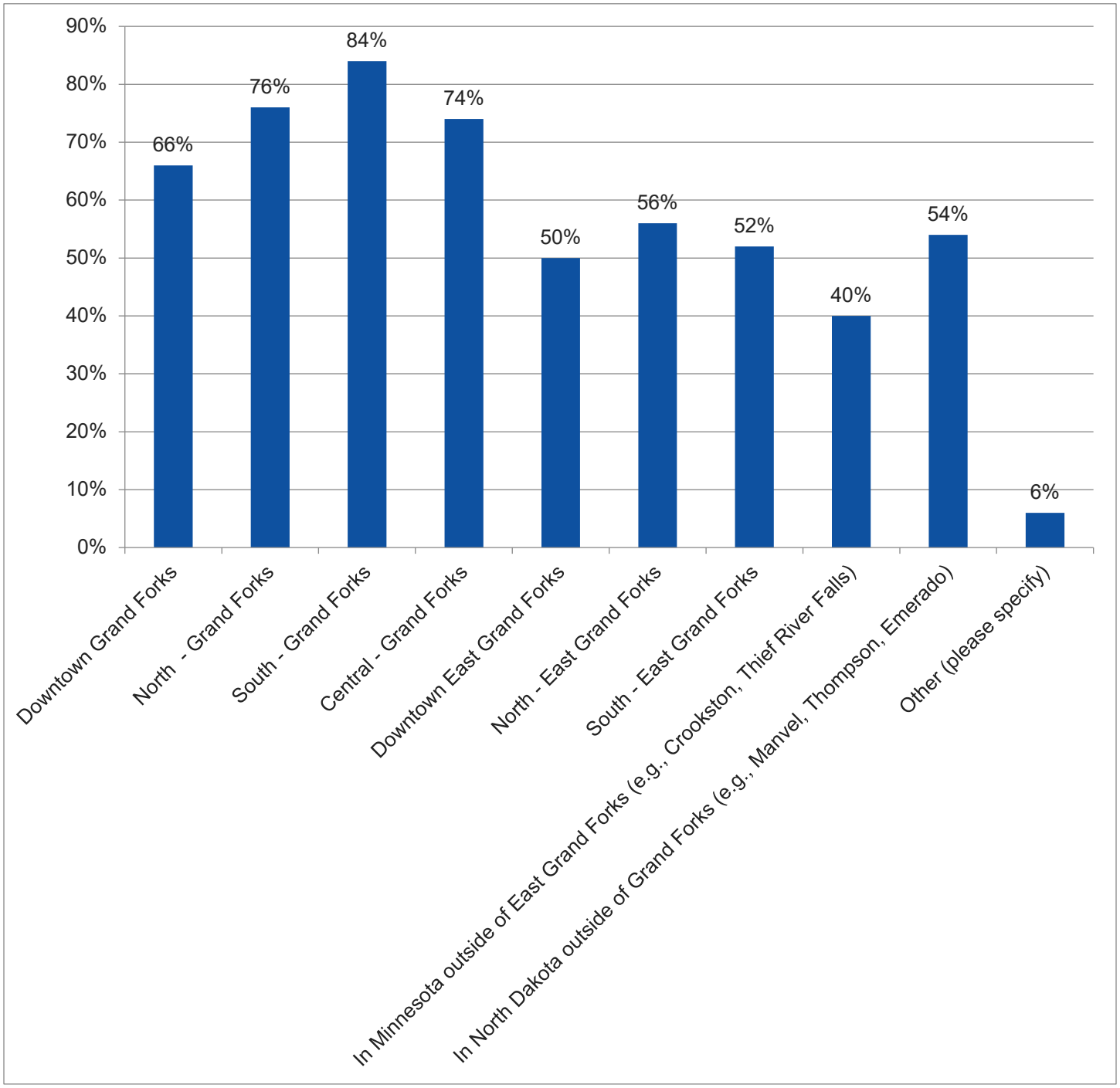
How many employees work per shift?

- Day shift: 130 - 350, Afternoon/Evening shift: 30 – 150, Weekend shift: 15 – 80
- 10
- 50 – 100
- 100
- 200

Would you be willing to change your shift time to better accommodate transit schedules?



In which areas of Grand Forks or East Grand Forks do people at your company live? Select all that apply.



Do those at your company typically run errands or make other trips before or after work? If so, where are they most likely to go?

- Unsure
- Grocery stores
- Stores on the south side of town
- Walmart
- Target
- Gas station
- Menards
- Lowes
- Health/doctor appointments
- Hugo's
- Bank

Do you have any other feedback about the transit system to share with the project team as they plan improvements?

- Have several employees that don't have a driver's license. Having public transportation options for them would be helpful.
- Many employees don't have transportation to the Industrial Park; expanded service to the Industrial Park is needed
    - Think there should be a centralized stop location around Cirrus, LM Windpower, PS Industries, and Stevens Mattress
- Staff and students traveling to Grand Forks schools from Thompson and Mayville would benefit from having transit options during the week
- Need for bus service on Sundays
- Transit serves the north end of Grand Forks near Simplot but times are not conducive to work shifts
- Retrax Holding's primary locations (where vast majority of team members work) is at 5400 32nd Ave S, not the Industrial Park

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

GRAND FORKS – EAST GRAND FORKS

Transit Development Plan

Appendix 3: Performance Management Plan

September 2022

Project Overview

The Grand Forks-East Grand Forks Transit Development Plan (TDP) is a 10-year plan that provides a vision for transit in the community. Grand Forks – East Grand Forks' previous transit development plan was completed in 2017. The 2022 plan update will evaluate recent system improvements and has the following areas of focus:

- Integration of University of North Dakota (UND) campus bus routes
- New or improved fixed route, paratransit, and Senior Rider services
- Maintenance and growth of CAT ridership
- Fare, pass, or transfer policy changes to increase ridership or funding
- Transit fleet and technology recommendations
- Investments in capital improvements like buses, bus stop enhancements, and support equipment
- Support for existing and future CAT operations at transit facilities such as Midtown Transit Center and Metro Transit Center

Purpose of this Document

The purpose of this report is to inform and guide the development of the Goals, Objectives, and Performance Measures chapter of the TDP. This report was developed based on existing plans, guidance, and regulations, as well as public and stakeholder feedback. The goals, objectives, and performance measures in this document will be used to guide plan recommendations and monitor ongoing system performance.

Supporting & Guiding Sources

To meet the guidance established by Fixing America's Surface Transportation Act's (FAST Act), the TDP was developed with performance management elements in mind. These elements were driven, in large part, through close consultation with the North Dakota Department of Transportation (NDDOT) ND Moves Active Transportation and Transit Plan (2019). As the FAST Act requires performance-based planning, the NDDOT Plan provided a very reasonable framework for identification of performance measures and targets for use by Cities Area Transit (CAT). The FAST Act establishes a set of national goals to guide the development of surface transportation investments. It focuses on performance-based approach to transportation planning and has developed seven national performance goals.

- Safety
- Infrastructure condition
- Congestion reduction
- System reliability
- Freight movement and economic vitality
- Environmental sustainability
- Reduced project delivery delays

Goals from the FAST Act were incorporated into the Grand Forks-East Grand Forks MPO's updated 2045 MTP. The approved MTP for the MPO area provides the background architecture for the TDP goals. To ensure consistency with the MTP, the TDP project team has relied on these goals to guide the development of transit-specific goals for CAT. These goals guide the objectives and performance measures that will drive the system moving forward. These goals also serve to ensure that the TDP is compliant with the FAST Act in order to be eligible for transit-specific funding from federal and state sources. The goals from the MTP are as follows:

1. Economic vitality
1) Security
2) Accessibility and mobility
3) Environmental/energy/quality of life
4) Integration and connectivity
5) Efficient system management
6) System preservation
7) Safety
8) Resiliency
9) Tourism

Defining Performance Management

The following terminology will be used to guide the development of the Performance Management Plan.

- **Goal** – Overall guiding topic related to the surface transportation system.
- **Objective** – Desired action or initiative that is perceived as meeting the intent of the overall goal. Further, the objective is also designed to assist in achieving the defined performance level.
- **Performance Target** – Measure used to evaluate system performance.
- **Performance Measure** – Measurement of system performance.
- **Consistency Monitoring** – Effort used to monitor, evaluate, and track performance levels.

Public and Stakeholder Engagement

Surveys

During the first round of public and stakeholder engagement, the project team asked the public and decision-makers their thoughts regarding potential CAT goals. Table 1 shows the results from these surveys, which were conducted in October 2021.

Table 1: Public and Decision Maker Survey Results - Prioritized Goals for Transit Development Plan

Potential CAT Goals	Decision Maker Survey Ranking[1]	Public Survey Ranking[2]
To provide transportation for people who do not have or are unable to use a private automobile	1	1
To connect people to their job or school	2	2

Potential CAT Goals	Decision Maker Survey Ranking[1]	Public Survey Ranking[2]
To operate an efficient and cost-effective transit system	3	4
To provide a travel-time competitive alternative to private automobiles	4	5
To support changing land uses and development	5	6
To provide better air quality	6	3

[1] Based on 7 respondents
[2] Based on 147 respondents

Steering Committee

In addition to the public and decision-maker surveys, potential goals for CAT were discussed at the TDP Steering Committee meeting on November 15th, 2021. Some of the topics that the Steering Committee recommended for inclusion in the CAT goals were:

- Student retention and ridership
- Equity and access of the system
- Availability of information on the system and how to ride transit for current and potential riders
- Use of alternative fuels in the vehicles
- Connectivity and ease of use

Cities Area Transit Goals

Based on the guiding source documents and public and stakeholder engagement, seven goals were identified for the CAT system. These goals relate to the overall public transit system and primarily identify opportunities for system improvement. Table 2 documents how the goals developed for CAT relate to the MPO's MTP goals and relate to federal planning factors named in the FAST act goals. The following sections further outline the CAT goals and their associated objectives and performance measures.

Table 2: 2045 MTP and Cities Area Transit TDP Goals Matrix

	TDP Identified Goals							
GF-EGF MPO 2045 MTP Goals		Community Connectivity	Multimodal Connectivity	Service Quality	Accessibility	Environmental Sustainability & Resiliency	Equity	Fiscal Sustainability & Efficient System Management*
	Safety*				X			X
	System Preservation							X
	Accessibility and Mobility	X	X	X	X		X	
	Integration and Connectivity	X	X	X	X			
	Efficient System Management*			X				X
	Economic Vitality	X		X	X		X	X
	Environmental/ Energy/Quality of Life			X	X	X	X	
	Resiliency					X		
	Tourism			X				
	Security							X

Community Connectivity

The focus of this goal is to connect people to important community destinations by transit.

Objectives

The following objectives support the system goal of Community Connectivity:

- Objective 1: Provide transit service within 1/4 mile of residential areas and to major activity and employment centers

- Objective 2: Facilitate and promote moderate to higher density and mixed-use development in areas near or along planned/existing transit routes
- Objective 3: Encourage the concentration of employment and services along transit routes
- Objective 4: Promote transit-oriented development into small area plans, master-planned developments, and site plans

To achieve these objectives, it is essential to collaborate with the Cities of Grand Forks and East Grand Forks and surrounding communities to affirm and accomplish these objectives.

Performance Measures

Community Connectivity performance measures are provided in Table 3.

Table 3: Community Connectivity Performance Measures and Targets

Performance Measure	System	Performance Target	Overall CAT System (2019)
Residential service availability (all residents)	Fixed Route	90% of service area population within ¼ mile of a transit stop	89.0%
	Demand Response	75% of population covered by service area	100%
Job service availability (all jobs)	Fixed Route	65% of all jobs within ¼ mile of a transit stop	62%
	Demand Response	75% of all jobs covered by service area	100%
Service Hours Per Capita	Fixed Route	0.5	0.47
	Demand Response	0.75	0.45

Multimodal Connectivity

The focus of this goal is to connect transit service to active transportation infrastructure.

Objectives

The following objectives support the system goal of Multimodal Connectivity:

- Objective 1: Connect to other local and regional transit services
- Objective 2: Connect to other first-and-last mile connectivity options
- Objective 3: Provide bicycle parking at transit centers and major bus stops (stops with at least 20 boardings per day)
- Objective 4: Increase pedestrian access by locating bus stops along sidewalks and trails

Performance Measures

Multimodal Connectivity performance measures are provided in Table 4.

Table 4: Multimodal Connectivity Performance Measures and Targets

Performance Measure	System	Performance Target	Overall CAT System (2019)
Bicycle Parking at Transit Stops	Fixed Route	At least 2 bike racks at stops with at least 20 boardings per day, prioritizing stops near existing or planned bike facilities	Stop level data needed for this performance measure
Continuous Walking Route and Crossings	Fixed Route	Pedestrian facilities (e.g., ADA accessible sidewalks, trails) within ¼ mile of stops with at least 20 boarding's per day	Stop level data needed for this performance measure

Service Quality

The focus of this goal is to provide high-quality transit service that attracts and retains riders.

Objectives

The following objectives support the system goal of Service Quality:

- Objective 1: Implement service and infrastructure improvements that improve travel time and reliability (service that is regularly on-time for riders)
- Objective 2: Improve system usability through user-friendly transit vehicles, easy to use stop and route design, and easy to understand information using plain language
- Objective 3: Increase the number of people using public transportation for their main form of transportation (transit mode share)

Performance Measures

Service Quality performance measures are provided in Table 5.

Table 5: Service Quality Performance Measures and Targets

Performance Measure	System	Performance Target	Overall CAT System (2019)
On-time performance	Fixed Route	Zero minutes early to five minutes late. 95% of trips should operate within the on-time range.	On-time performance data needed for this performance measure
	Demand Response	90% of trips on time within published pick-up window (10 minutes before/after)	On-time performance data is now collected by Route Match, but not available for 2019
Frequency	Fixed Route	30 minutes or better during peak hours, 60 minutes or better off peak	Select routes including the Route 3 and UND routes have 30 minutes or better frequency. Most others have 60 minutes.

Mode shift	Both	2% increase in transit mode share per year	-13% change (1.6% to 1.4%;2018-2019)[1]
Ridership	Fixed Route	2% increase in ridership per year	-11% (2018-2019)

Accessibility

The focus of this goal is to provide transit service that is accessible to all riders.

Objectives

The following objectives support the system goal of Accessibility:

- Objective 1: Shift ridership from demand response to fixed-route system through improved information availability and service quality
- Objective 2: Manage system demand between fixed-route and demand response system through eligibility screening and better coordination with demand users and human services agencies
- Objective 3: Improve the customer experience for riders who use mobility devices by monitoring advances in securement technology
- Objective 4: Provide paratransit service that is complementary to fixed-route service and which, at a minimum, meets the requirements of the Americans with Disabilities Act (ADA)

Performance Measures

Accessibility performance measures are provided in Table 6.

Table 6: Accessibility Performance Measures and Targets

Performance Measure	System	Performance Target	Overall CAT System (2019)
Demand response ridership	Demand Response	1% reduction per year	+3.6% (2018-2019)
Stops with ADA access	Fixed Route	Study implementation of stops with ADA pads and other ADA accommodations	Not assessed

Environmental Sustainability & Resiliency

The focus of this goal is to invest in fleet and infrastructure improvements that promote environmental sustainability and resiliency.

Objectives

The following objectives support the system goal of Environmental Sustainability & Resiliency:

[1] "Commuting Characteristics by sex" American Community Survey: 2018 & 2019.

- Objective 1: Develop a Zero-Emission Transition Plan that meets Federal Transit Administration requirements
- Objective 2: Explore the use of an on-site energy storage system to improve resiliency of battery-electric buses
- Objective 3: Evaluate the potential for solar integration at transit facilities
- Objective 4: Integrate CAT as a consideration into future updates to the UND Climate Action Plan and other similar plans for local organizations
- Objective 5: Avoid transit routing on roadways that are frequently subjected to closure due to flooding

Performance Measures

Environmental Sustainability & Resiliency performance measures are provided in Table 7.

Table 7: Environmental Sustainability & Resiliency Performance Measures and Targets

Performance Measure	System	Performance Target	Overall CAT System (2019)
Alternative Fuel/Electric Vehicles in Fleet	Fixed Route	At least 30% of fleet renewable fuels or electric by 2030	0
	Demand Response		

Equity

The focus of this goal is to advance equity through transit access.

Objectives

The following objectives support the system goal of Equity:

- Objective 1: Prioritize transit investments that benefit transit-dependent populations and historically disadvantaged populations
- Objective 2: Improve service for shift-workers and those who commute outside of traditional peak hours
- Objective 3: Provide shelters and benches at bus stops based on ridership warrants (e.g., stops with at least 20 boards per day, major transfer points) and equity considerations (e.g., stops near facilities serving transportation-disadvantaged and historically disadvantaged populations)
- Objective 4: Ensure compliance with Title VI requirements
- Objective 5: Engage in coordinated outreach with key agencies and consortiums to better coordinate Demand Response services with social and human service providers
- Objective 6: Renovate facilities that continue/expand transit service in disadvantaged communities or services that benefit low-income riders
- Objective 7: Train and develop the transit workforce that provides services to disadvantaged communities and rural areas
- Objective 8: Prioritize the enhancement of transit services/routes in areas of affordable housing

Performance Measures

Equity performance measures are provided in Table 8.

Table 8: Equity Performance Measures and Targets

Performance Measure	System	Performance Target	Overall CAT System (2019)
Residential service availability (residents who rely on transit)	Fixed Route	75% of service area population within ¼ mile of a transit stop	70%
	Demand Response	85% of population covered by service area	100%
Job service availability (low-wage jobs)	Fixed Route	70% of low-wage jobs within ¼ mile of a transit stop	65%
	Demand Response	85% of low-wage jobs covered by service area	100%
Shelters	Fixed Route	Shelters at stops with at least 20 boardings per day or major transfer points. Higher priority for installation is given for stops in areas with concentrations of transit-dependent or historically disadvantaged populations.	Stop level data needed for this performance measure
Benches	Fixed Route	Installed at bus stops with 15+ average daily boardings. Higher priority given for stops in areas with concentrations of transit-dependent or historically disadvantaged populations.	Stop level data needed for this performance measure
Equitable level of service for transit-dependent or historically disadvantaged populations	Fixed Route	Transportation-disadvantaged and historically disadvantaged populations have a higher transit level of service than non-transportation disadvantaged populations.	Compared with the 89% of the total population: • 79% of the People of Color that live in the Grand Forks-East Grand Forks area is located within ¼ mile of at least one bus stop • 78% of households with a person with a disability in the Grand Forks-East Grand Forks area are located within ¼ mile of at least one bus • 82% of low-income households in the Grand Forks-East Grand Forks area

Performance Measure	System	Performance Target	Overall CAT System (2019)
			are located within ¼ mile of at least one bus[2]

Fiscal Sustainability & Efficient System Management

The focus of this goal is to operate a safe, efficient, and fiscally sustainable transit system.

Objectives

- Objective 1: Establish twice annual working meetings and roundtables with key human and social service agencies and other organizations who utilize CAT services or provide ancillary service in the MPO area
- Objective 2: Engage the local business community and local, state, and federal governments to combine local and regional transportation improvement efforts
- Objective 3: Coordinate with MPO on local and regional transit improvements and system efficiency enhancements
- Objective 4: Seek community participation and input in planning processes such as route modifications, service expansions, stop/shelter locations
- Objective 5: Coordinate with human services to share resources and align efforts to improve public transportation.
- Objective 6: Seek opportunities for public-private partnerships (e.g., TNCs) to improve transportation options and expand on pilot programs
- Objective 7: Identify and incorporate state and regional emergency, evacuation, and security plans into transportation plans ant TIP project selection
- Objective 8: Continue to track performance measures annually to determine progress.
- Objective 9: Achieve “State of Good Repair” performance levels agreed to between MnDOT, NDDOT and the MPO
- Objective 10: Identify grant and other funding opportunities to maintain and renew/expand transit equipment and services
- Objective 11: Preserve existing infrastructure and protect future infrastructure and right-of-way, with support from other City Departments
- Objective 12: Ensure daily transit operations without interruption for fleet maintenance or repair
- Objective 13: Implement and periodically update Transit Asset Management plan
- Objective 14: Reduce the number, severity and rate of crashes compared to previous years.
- Objective 15: Develop an agency safety plan and certify the plan meets FTA requirements.

Performance Measures

Fiscal Sustainability & Efficient System Management performance measures are provided in Table 9.

[2] 2015-2019 Census American Community Survey Summary File (ACS).

Table 9: Fiscal Sustainability & Efficient System Management Performance Measures and Targets

Performance Measure	System	Performance Target	Overall CAT System (2019)
Road Calls	Fixed Route	Less than 5 annually	0
	Demand Response		
Fleet Maintenance	Fixed Route	At least 75% of all regular fleet available for operations	>100%*
	Demand Response		
Equipment	Non-Revenue Support Vehicles	50% of vehicles at or exceed useful life	8%*
Rolling Stock	Revenue Vehicles	20% of vehicles at or exceed useful life	<20%*
Facilities	Maintenance, Administration & Stations	50% of facilities at TERM rating of 3.0 (adequate) or better by the year 2025	Adequate or better
Spare Ratio	Fixed Route	Spare vehicles to peak requirement less than 20%	15%
	Demand Response		
Passengers per Service Hour	Fixed Route	15.00	7.84
	Demand Response	3.00	2.37
Cost per Revenue Hour	Fixed Route	$70.00	$82.39
	Demand Response	$50.00	$50.94
Cost per Ride	Fixed Route	$5.00	$10.51
	Demand Response	$20.00	$21.50
Farebox Recovery[3]	Fixed Route	15%	7%
	Demand Response	12%	14%
Safety Events	Fixed Route	0 Safety Events	0
	Demand Response	0 Safety Events	0

*represents 2021 information

Consistency Monitoring

Performance Tracking

The MPO should integrate an annual summary report of CAT performance related measures and performance levels included in the TDP. Data used for the development of this element of the TDP is sourced from annual data developed by CAT and NTD datasets. Reporting could be done through a simple and easy to follow dashboard format that shows historic and existing performance levels.

FTA Section 5340 Small Transit Intensive Cities (STIC) Apportionments

FTA Section 5340 STIC funding provides additional operating funds apportioned to transit systems which meet or exceed system averages based on all UZA providers with a population between 200,000 – 999,999. Most recently CAT has been able to attain target levels in Vehicle Revenue Hours per Capita. Based on FY 2021 funding, this amounted to an additional $276,053 in FTA operating funds. The most recent targets for the FTA Section 5340 program and the performance for CAT (2021) are shown in Table 6 below. Performance tracking on FTA Section 5340 program can be reviewed annually with each submittal of the NTD reporting process.

Table 6: FY 2021 Small Transit Intensive Cities Performance Data and Apportionments

Urbanized Area	Passenger Miles/Revenue Mile	Passenger Miles/Revenue Hour	Revenue Mile/Capita	Revenue Hour/Capita	Passenger Miles/Capita	Passenger Trips/Capita	Number of Performance Factors Met or Exceeded	STIC Funding
Grand Forks, ND-MN	1.86	20.35	10.03	0.92	18.67	4.74	1	$276,053
Average	5.68	96.79	11.80	0.76	77.57	11.81	-	-

Bipartisan Infrastructure Law Considerations

The Bipartisan Infrastructure Law (BIL) was passed in November 2021. BIL will provide numerous transportation and transit funding opportunities, which will likely be associated with additional objectives and performance measures. It will be essential for CAT and MPO staff to stay apprised of all funding, guidance, and regulations that come out of BIL that will impact funding, performance monitoring, and future plan requirements.

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

GRAND FORKS – EAST GRAND FORKS

Transit Development Plan

Appendix 4: Service Recommendations Report

July 2022

Service Recommendations

Introduction

Recommendations for service changes for each route were created based on review of previously developed service ideas, data gathered earlier in the project, and input from partner agencies, transit operators, other stakeholders, and the public. These recommendations are presented by route below with cost estimates on the following pages.

Recommendations were developed for a cost-neutral scenario, which maintains a similar level of service hours as is currently provided, as well as an added service scenario, which increases frequencies or adds additional service. Some routes also include options for microtransit replacement service, which would eliminate the existing fixed route to be replaced with a microtransit "zone." For many routes, proposed service under each of the three scenarios is the same.

Programmatic recommendations were also developed for the system. These recommendations include strategies for improving overall service quality through schedule timing, branding, communications, and coordination with other stakeholders. Funding opportunities and prioritization strategies are also recommended.

Proposed Service Changes

This section summarizes proposed service changes to CAT routes. These service changes are summarized in the following route sheets. The map in Figure 1 shows the proposed routes and microtransit zones for future study. Route 12 is not included in this discussion, as it is not currently in service and this plan recommends discontinuing the route permanently.

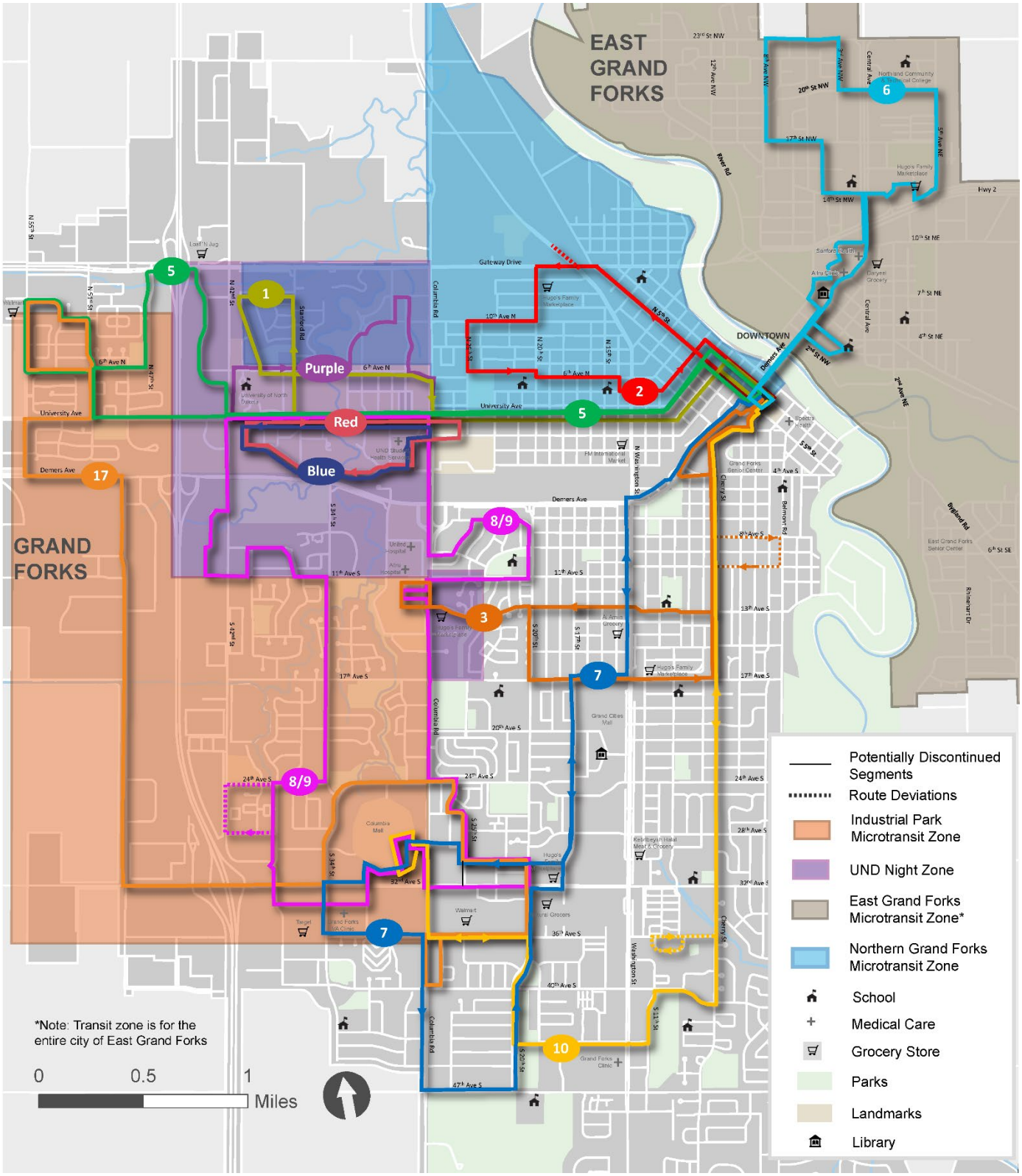


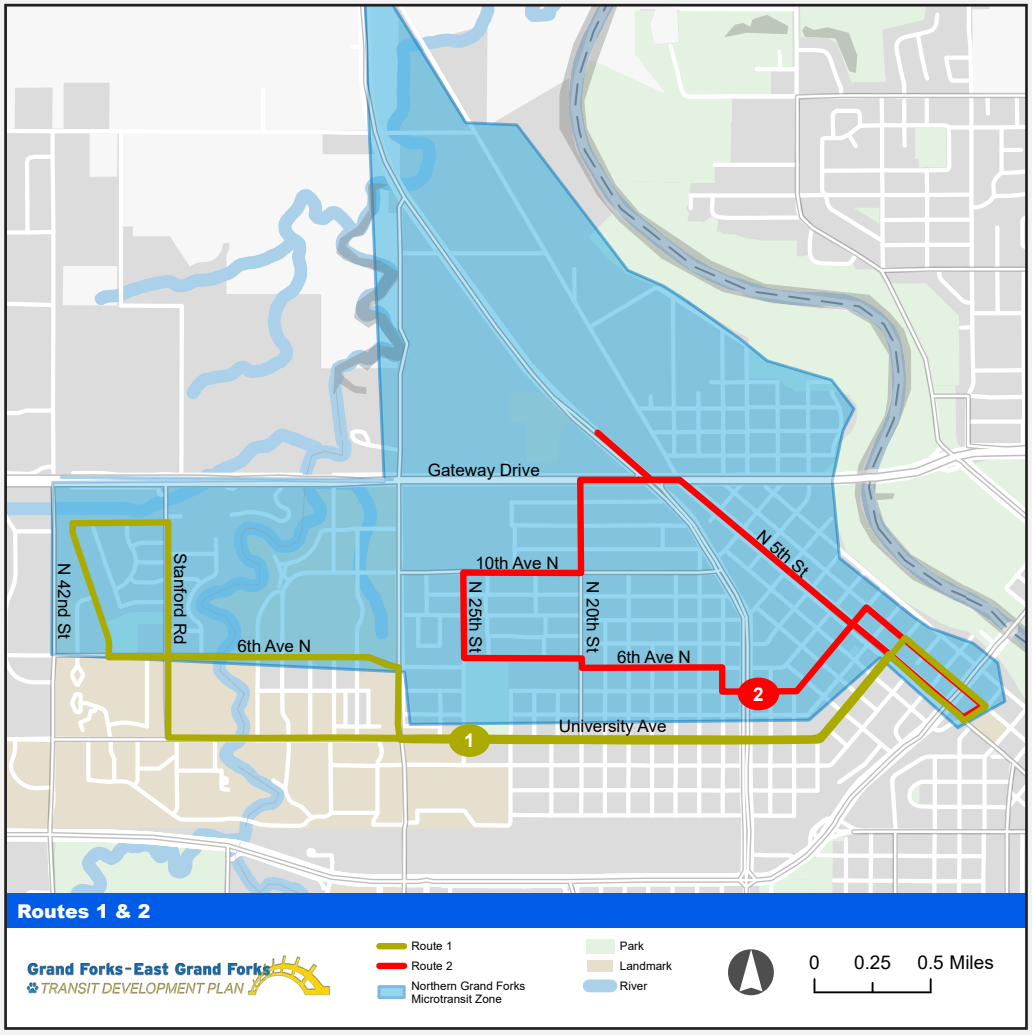
Figure 1. Proposed Routes and Microtransit Z

Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTES 1 & 2

Key Destinations: Downtown, Salvation Army, Hamline & University, UND - Stanford Center, N 39th St Shelter, Princeton & 6th Ave N, 15th & University, YMCA, N 5th St & 10th Ave, Home of Economy, Hugo's, Valley Middle School, St. Anne's

ROUTE MAP



PROJECT OBSERVATIONS

- Provide needed access to social services and K-12 schools
- Area north of Route 2 is developing and will need access to transit in the future
- Both routes have low ridership and demand from future development is unknown

IMPROVEMENT STRATEGIES

- Could be replaced with demand-responsive microtransit
- A limited fixed-route schedule could provide school bus service as needed

RECOMMENDATIONS

- Short term - Maintain routes as they are and explore funding possibilities for fixed-route school bus service
- Medium term - Study microtransit as potential option for the future

	WEEKDAY
SPAN	7:00AM – 5:30PM
FREQUENCY	60 minutes

	WEEKEND
SPAN	8:00AM - 5:30PM
FREQUENCY	60 minutes

ANNUAL STATISTICS

THESE VALUES RELATE TO THE SHORT TERM RECOMMENDATIONS LISTED ABOVE

REVENUE HOURS	AVG OF 1,650 EACH	RANK 9/10 (TIE)
OPERATING COSTS	AVG OF $151,721 EACH	RANK 9/10 (TIE)

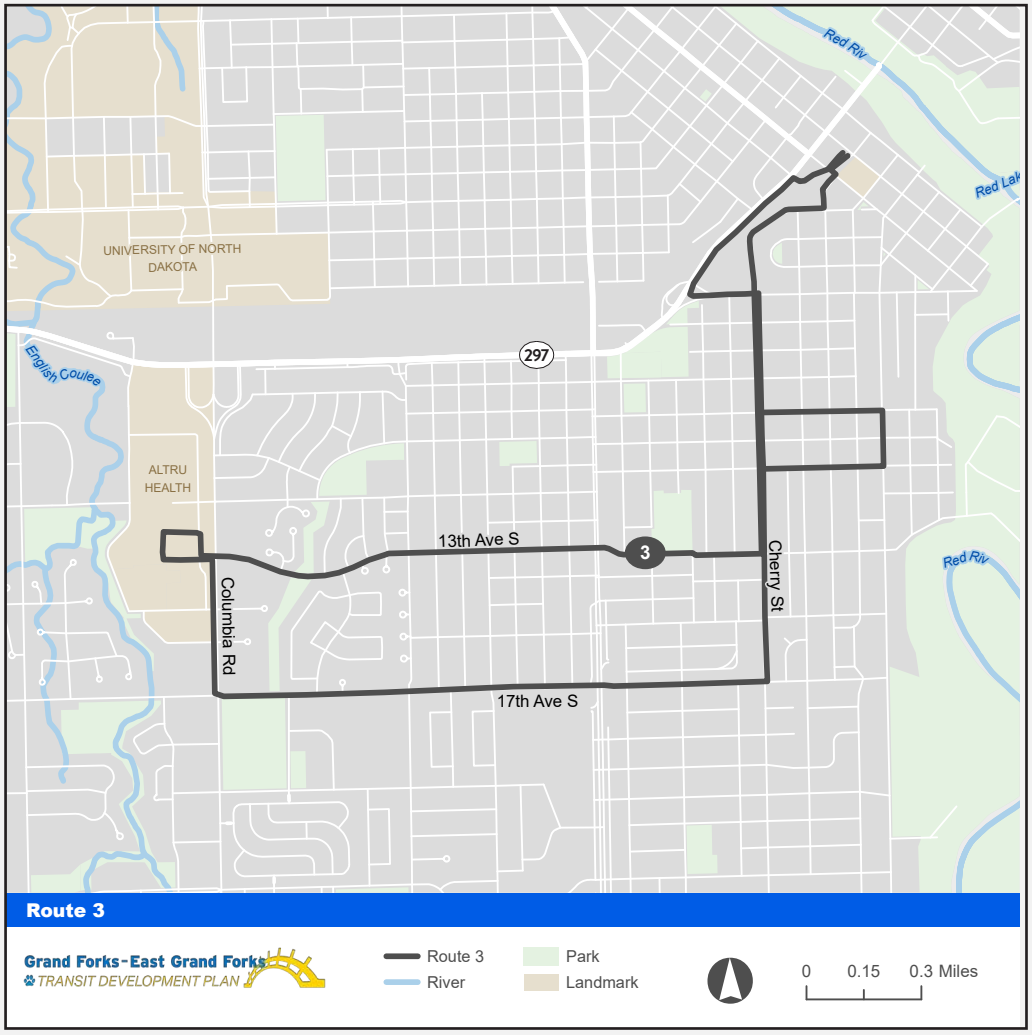
Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 3

Day & Evening Service Route

Key Destinations: Downtown, the Link, 10th & Belmont, Hugo's, Altru - Columbia Rd, Red River High, Midtown, 17th Ave & Cherry

ROUTE MAP



PROJECT OBSERVATIONS

- Route 3 includes a loop which is not a standard service practice and may be confusing to riders

IMPROVEMENT STRATEGIES

- Instead of a loop, Route 3 could be modified to have out-and-back service using 17th and 13th Avenues

RECOMMENDATIONS

- Short term - Service should be maintained as-is and a stop level study should be conducted to determine options to simplify the route

	WEEKDAY
SPAN	6:30AM – 9:30PM
FREQUENCY	30 min. to 6PM, then 60 min.

	WEEKEND
SPAN	8:00AM - 9:30PM
FREQUENCY	30 min. to 6PM, then 60 min.

ANNUAL STATISTICS

THESE VALUES RELATE TO THE SHORT TERM RECOMMENDATIONS LISTED ABOVE

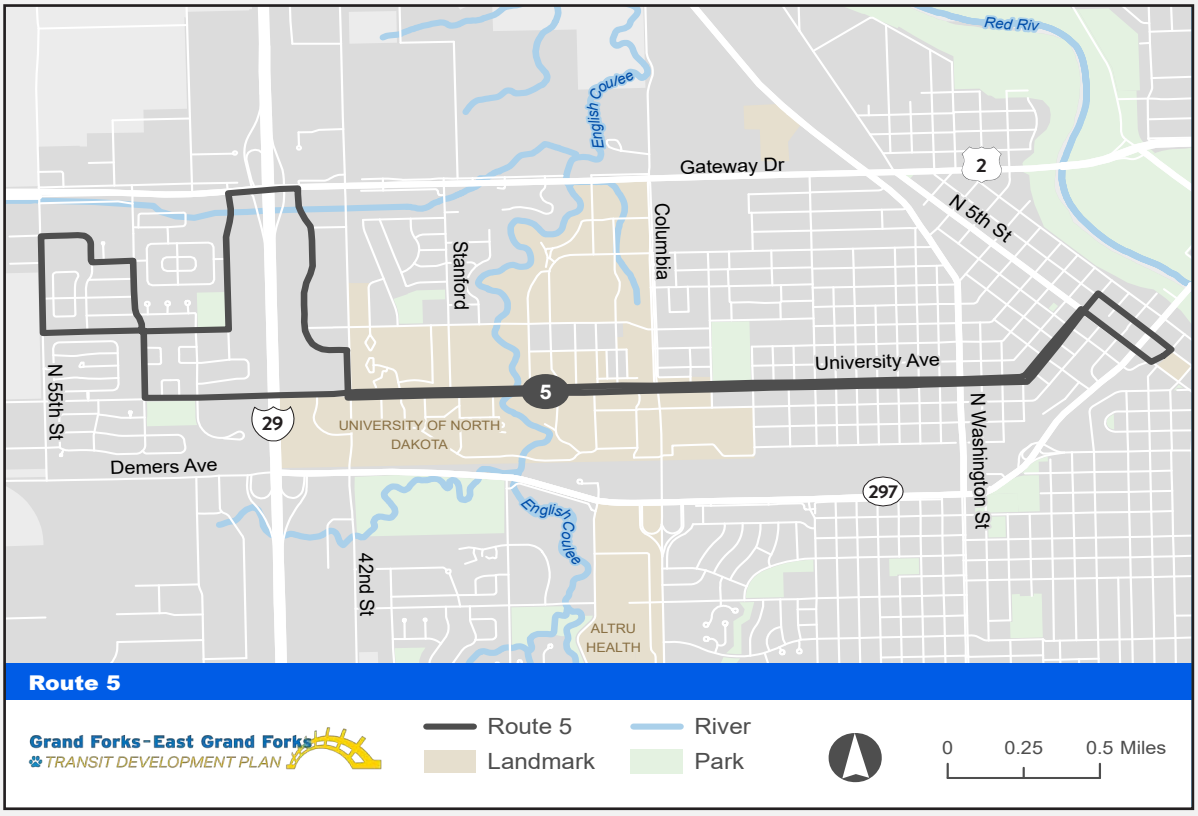
REVENUE HOURS	3,990	RANK 1/10
OPERATING COSTS	$366,977	RANK 1/10

Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 5

Key Destinations: Downtown, Salvation Army, Hamline & University, N 51st St Shelter Walmart West, Gateway Terrace, N 43rd St Shelter, UND - Odegard Hall, UND - Memorial Union, 15th & University, YMCA

ROUTE MAP



PROJECT OBSERVATIONS

- Route 5 is CAT's most popular route, serving K-12 schools, UND, and shopping destinations.
- It overlaps much of Route 1

IMPROVEMENT STRATEGIES

- Discontinuing Route 1 and shifting its service hours to Route 5 could allow Route 5 service to extend inot the evening, benefitting shoppers
- Route 5 could also be modified to be more direct

RECOMMENDATIONS

- Short term - Route 5 should remain as is and funding partnerships with the school district for K-12 bussing should be explored
- Medium term - Route 5 should run twice an hour and into the evening

	WEEKDAY	WEEKEND
SPAN	6:00AM – 6:00PM	8:00AM - 6:00PM
FREQUENCY	60 minutes	60 minutes

ANNUAL STATISTICS

THESE VALUES RELATE TO THE SHORT TERM RECOMMENDATIONS LISTED ABOVE

REVENUE HOURS	3,453	RANK 3/10 (TIE)
OPERATING COSTS	$317,561	RANK 3/10 (TIE)

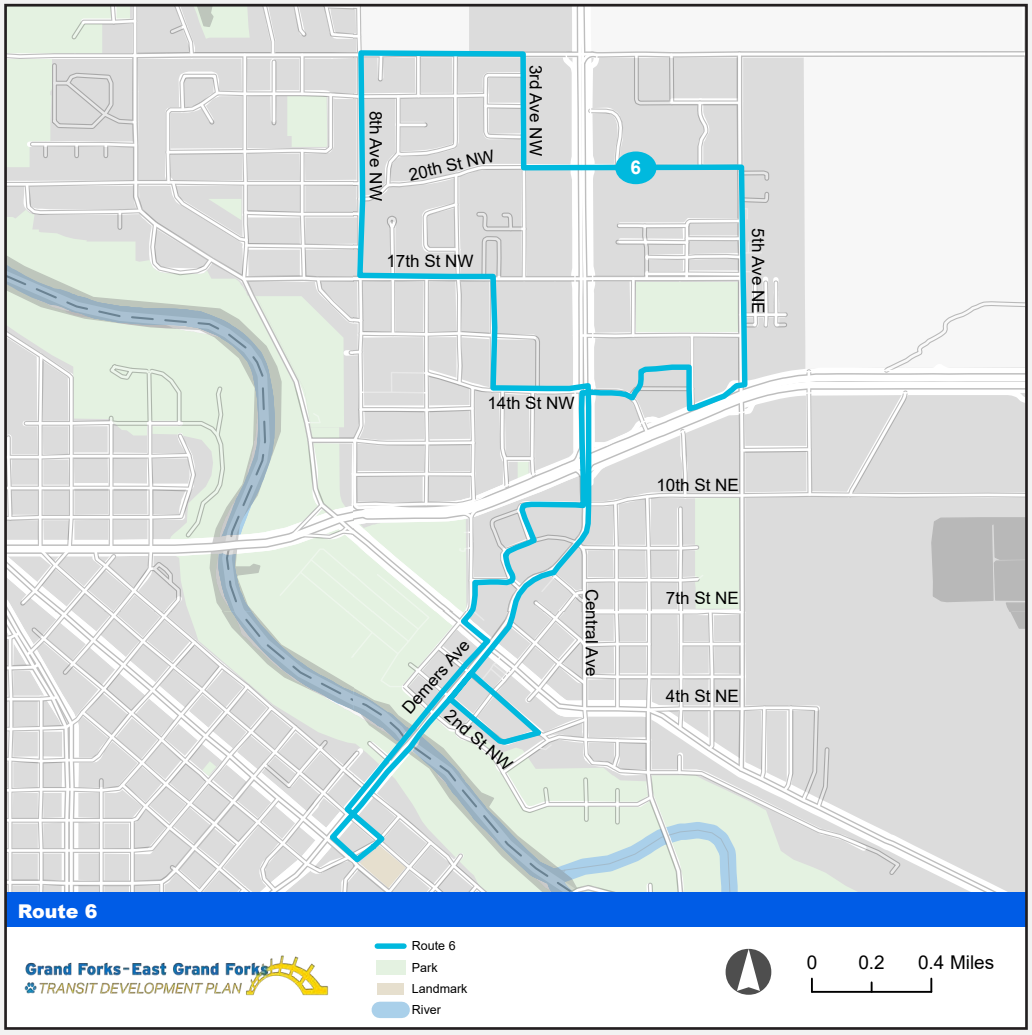
Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 6

Day & Evening Service Route

Key Destinations: Downtown, the Link, 10th & Belmont, Hugo's, Altru - Columbia Rd, Red River High, Midtown, 17th Ave & Cherry, Cabela's, Northland College, Sunshine Terrace, Campbell Library, Town Square Apartments

ROUTE MAP



PROJECT OBSERVATIONS

- Routes 4 & 6 have significant overlap and include stretches where service is suboptimal
- Route 4 runs in a residential area with low ridership and challenging road conditions
- Both routes deviate from Demers Ave due to inadequate pedestrian connections

IMPROVEMENT STRATEGIES

- Combining Routes 4 and 6 would allow Route 6 to run more frequently at twice an hour, and the new route could be modified to serve more Route 4 destinations and avoid areas of concern

RECOMMENDATIONS

- Short term - Routes 4 and 6 should be combined and should run interlined with Route 3 to determine any schedule issues
- Options for better pedestrian connections to Demers Ave should be studied and implemented in the medium term

	WEEKDAY	WEEKEND
SPAN	6:00AM – 9:30PM	8:00AM - 9:30PM
FREQUENCY	30 min. until 6PM, then 60 min.	30 min. until 6PM, then 60 min.

ANNUAL STATISTICS

THESE VALUES RELATE TO THE SHORT TERM RECOMMENDATIONS LISTED ABOVE

REVENUE HOURS	3,964	RANK 2/10
OPERATING COSTS	$364,585	RANK 2/10

ROUTE 6

Day & Evening Service Route

Key Destinations: Downtown, the Link, 10th & Belmont, Hugo's, Altru - Columbia Rd, Red River High, Midtown, 17th Ave & Cherry, Cabela's, Northland College, Sunshine Terrace, Campbell Library, Town Square Apartments

MAP OF PROPOSED IMPROVEMENTS TO PEDESTRIAN ACCESS ON ROUTE 6

RECOMMENDATIONS, CONTINUED

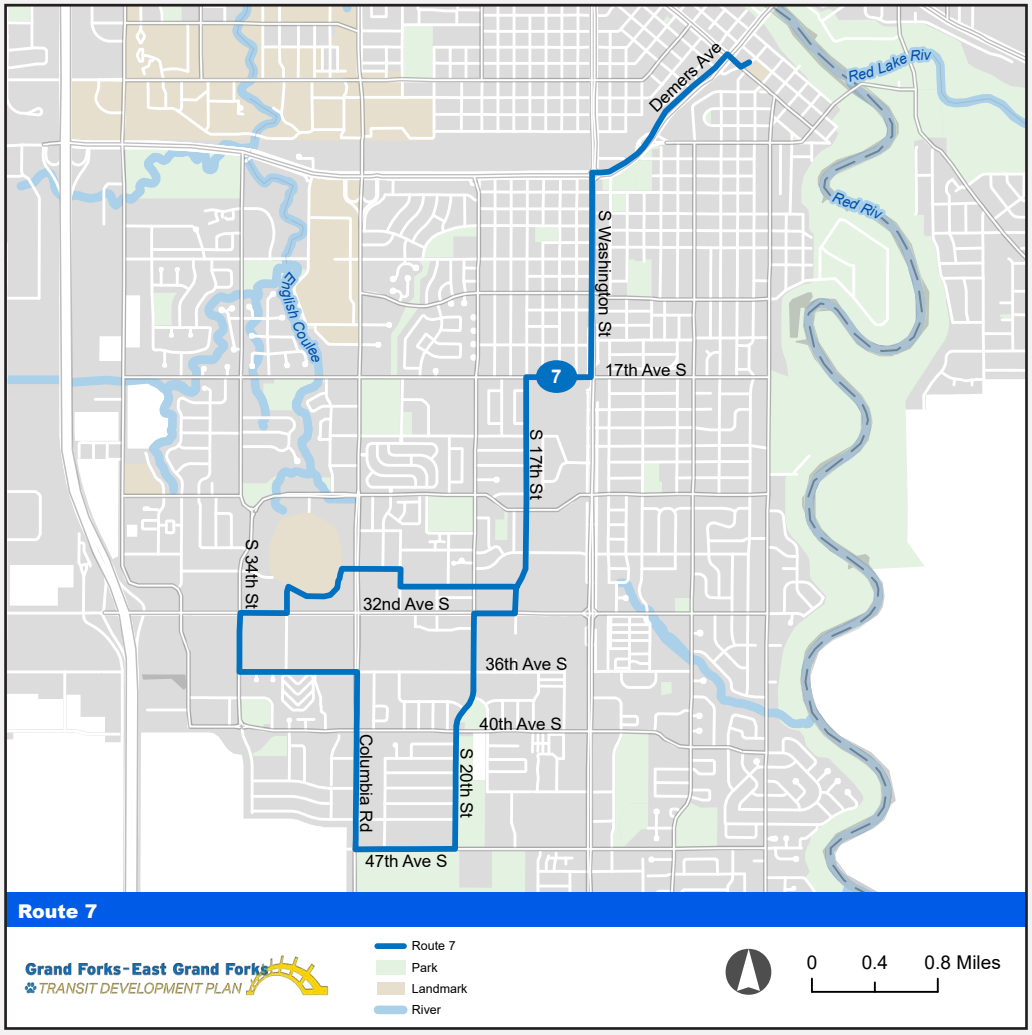
Southbound Route 6 currently diverts off of Demers Ave between 10th St NE and 4th St NW because there are not safe pedestrian connections from Demers Ave to the medical facilities in this area. If pedestrian access were improved, the route could operate a more direct route with bidirectional service on Demers Ave. This map shows potential sidewalk improvements that could be made to facilitate safe pedestrian connections to these medical facilities. CAT should partner with the City of East Grand Forks to evaluate potential pedestrian improvements in this area.

Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 7

Key Destinations: Downtown, Grand Forks Library, Columbia Mall, Target, Development Homes, Walmart, Hugo's, Midtown

ROUTE MAP



PROJECT OBSERVATIONS

- Route 7 is one of CAT's most popular routes
- It serves an area south of 32nd Ave that is likely to see economic growth and development, making it a good candidate for expansion
- Route 7 currently runs in an indirect loop which is not a standard service practice and can be difficult for riders to navigate

IMPROVEMENT STRATEGIES

- Route 7 could be modified to run the same route both inbound and outbound or split into two routes

RECOMMENDATIONS

- Route 7 should be modified to be more direct
- The connection to Target should be removed and transfers to routes 8 and 9 should be encouraged
- The route should provide a direct connection to the Post Office in downtown and be extended further south to reach new development on 47th Ave

	WEEKDAY
SPAN	6:00AM – 6:00PM
FREQUENCY	60 minutes

	WEEKEND
SPAN	8:30AM - 6:00PM
FREQUENCY	60 minutes

ANNUAL STATISTICS

THESE VALUES RELATE TO THE SHORT TERM RECOMMENDATIONS LISTED ABOVE

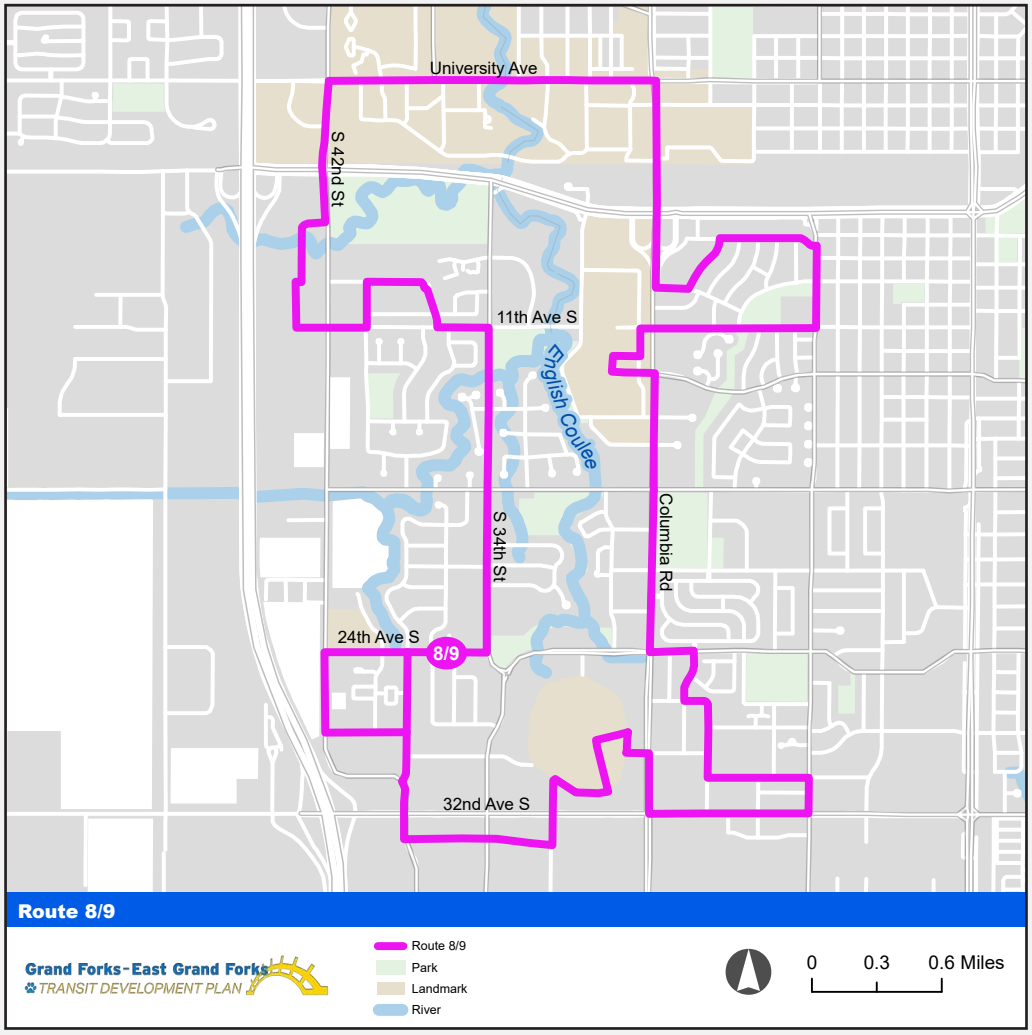
REVENUE HOURS	3,453	RANK 3/10 (TIE)
OPERATING COSTS	$317,561	RANK 3/10 (TIE)

Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 8/9

Key Destinations: UND - Memorial Union, Altru Business Center, Altru Columbia Rd, Post Office, Columbia Mall, Super Target, Linden Place, Primrose Ct, Garden View Dr, Alerus Center, UND Odegard Hall, UND - Stanford Center, Amberwood Apartments

ROUTE MAP



PROJECT OBSERVATIONS

- Routes 8 and 9 have significant overlap with each other and some overlap with Route 13
- These routes could also serve the post office

IMPROVEMENT STRATEGIES

- Routes 8 and 9 could be aligned
- The new route could be modified to add service on 30th and 32nd Avenues between S 20th and 25th Streets and on South 26th St and 7th Ave S as well remove service from Demers Ave

RECOMMENDATIONS

- Short term - Routes 8 and 9 should be aligned and should provide service to the Verge apartments
- Medium term - Aligned Routes 8 and 9 will provide daytime service for the area previously covered by Route 13

	WEEKDAY	WEEKEND
SPAN	6:00AM – 6:00PM	8:00AM - 6:00PM
FREQUENCY	60 minutes	60 minutes

ANNUAL STATISTICS

THESE VALUES RELATE TO THE SHORT TERM RECOMMENDATIONS LISTED ABOVE

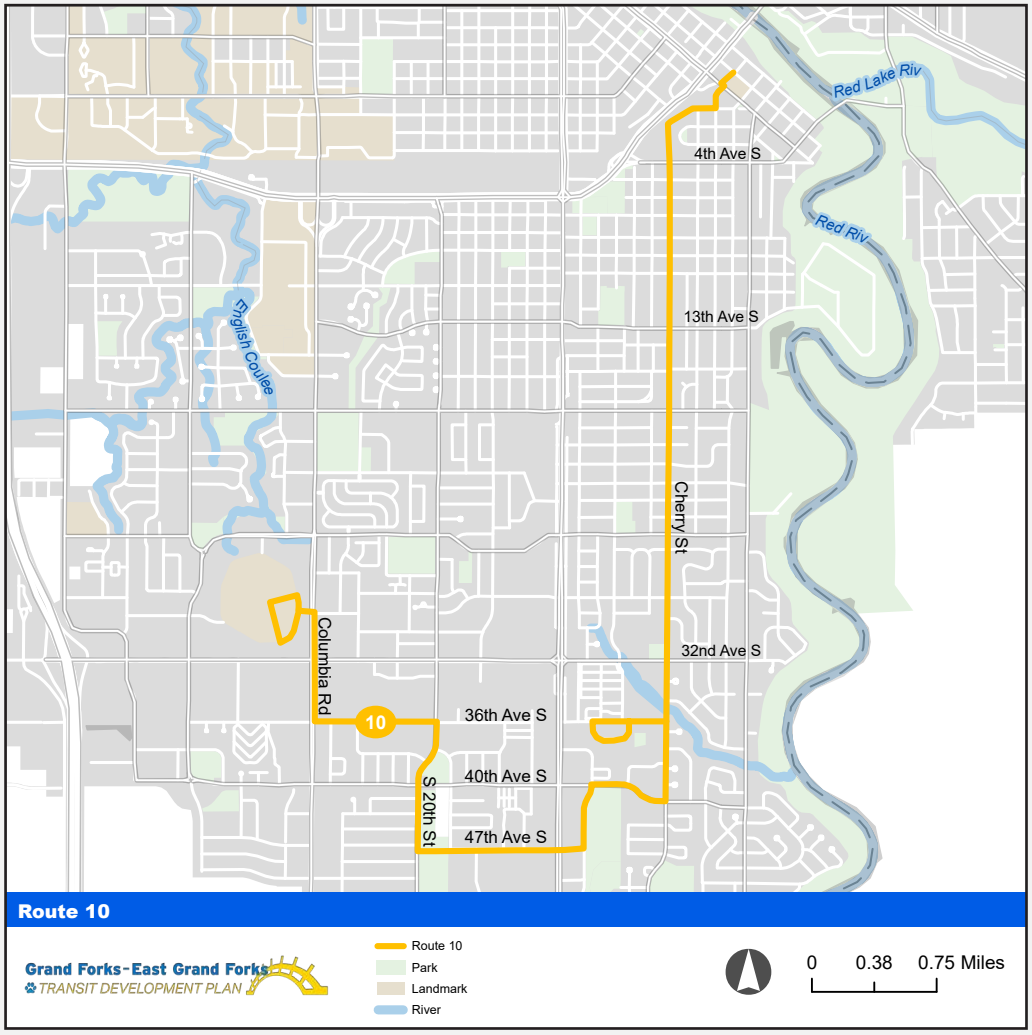
REVENUE HOURS	3,453 EACH	RANK 3/10 (TIE)
OPERATING COSTS	$317,561 EACH	RANK 3/10 (TIE)

Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 10

Key Destinations: Downtown, The Link, 17th Ave & Cherry, Goodwill, Choice Health & Fitness, Altru South, South Middle School, Columbia Mall, Walmart, Midtown

ROUTE MAP



PROJECT OBSERVATIONS

- Route 10 runs in a large loop which can be confusing for riders
- It has low ridership over much of its service area

IMPROVEMENT STRATEGIES

- Shift Route 10 to a bi-directional route and provide north-south service on Cherry St

RECOMMENDATIONS

- Short term - Route 10 should shift to bi-directional service, starting downtown and ending at the Columbia Mall
- Transfer locations with Route 7 should be promoted for connections to Hugo's on 32nd and the Grand Cities Mall

	WEEKDAY
SPAN	6:00AM – 6:00PM
FREQUENCY	60 minutes

	WEEKEND
SPAN	8:00AM - 6:00PM
FREQUENCY	60 minutes

ANNUAL STATISTICS

THESE VALUES RELATE TO THE SHORT TERM RECOMMENDATIONS LISTED ABOVE

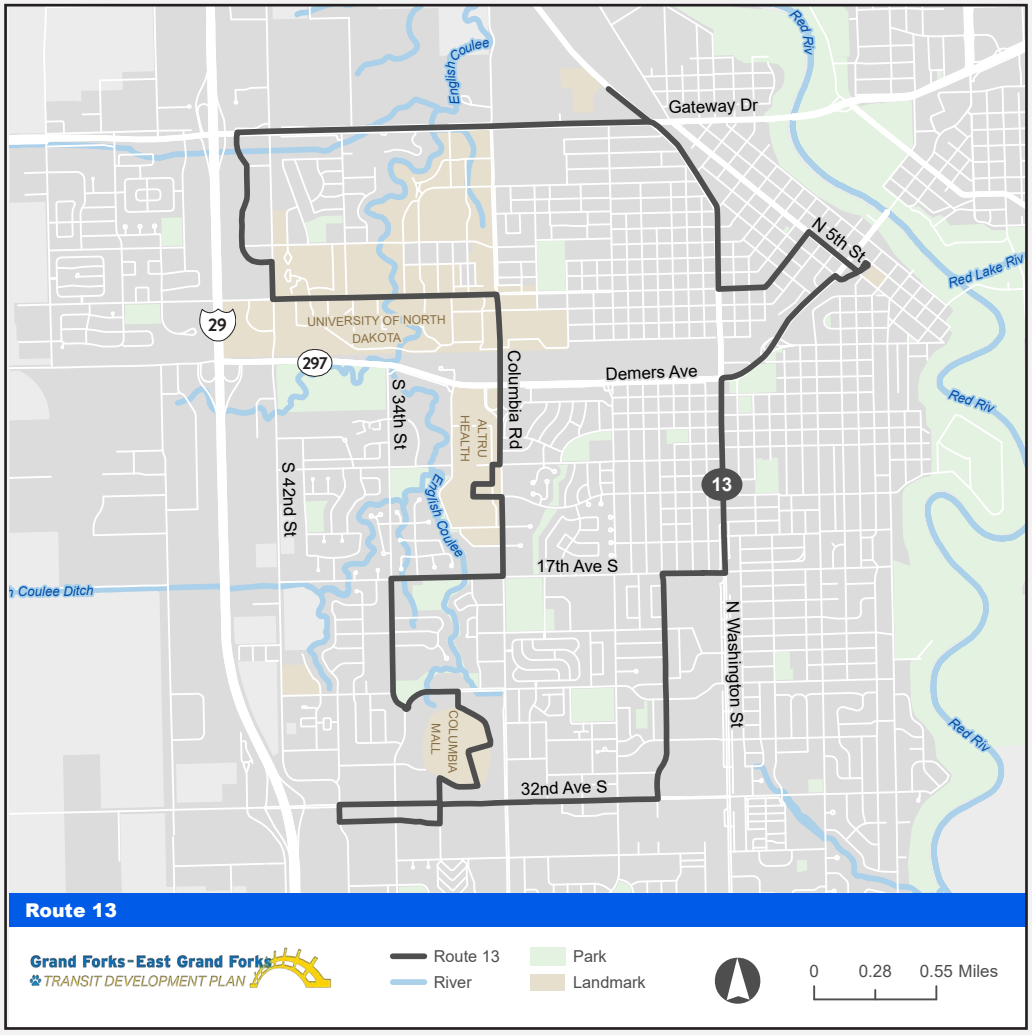
REVENUE HOURS	3,453	RANK 3/10 (TIE)
OPERATING COSTS	$317,561	RANK 3/10 (TIE)

Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 13

Key Destinations: Downtown, Home of Economy, N 43rd St Shelter, UND - Memorial Union, Altru Columbia Rd, Columbia Mall, Walmart, Midtown

ROUTE MAP



PROJECT OBSERVATIONS

- Route 13 has low ridership and a long circular route

IMPROVEMENT STRATEGIES

- The route could be converted to microtransit or discontinued in favor of routes 8/9, which serve a similar area

RECOMMENDATIONS

- Short term - Service should continue as it is today
- Medium term - The microtransit study should include replacing Route 13 with nighttime service

	WEEKDAY	WEEKEND
SPAN	6:00AM – 6:00PM	8:00AM - 6:00PM
FREQUENCY	60 minutes	60 minutes

ANNUAL STATISTICS

THESE VALUES RELATE TO THE SHORT TERM RECOMMENDATIONS LISTED ABOVE

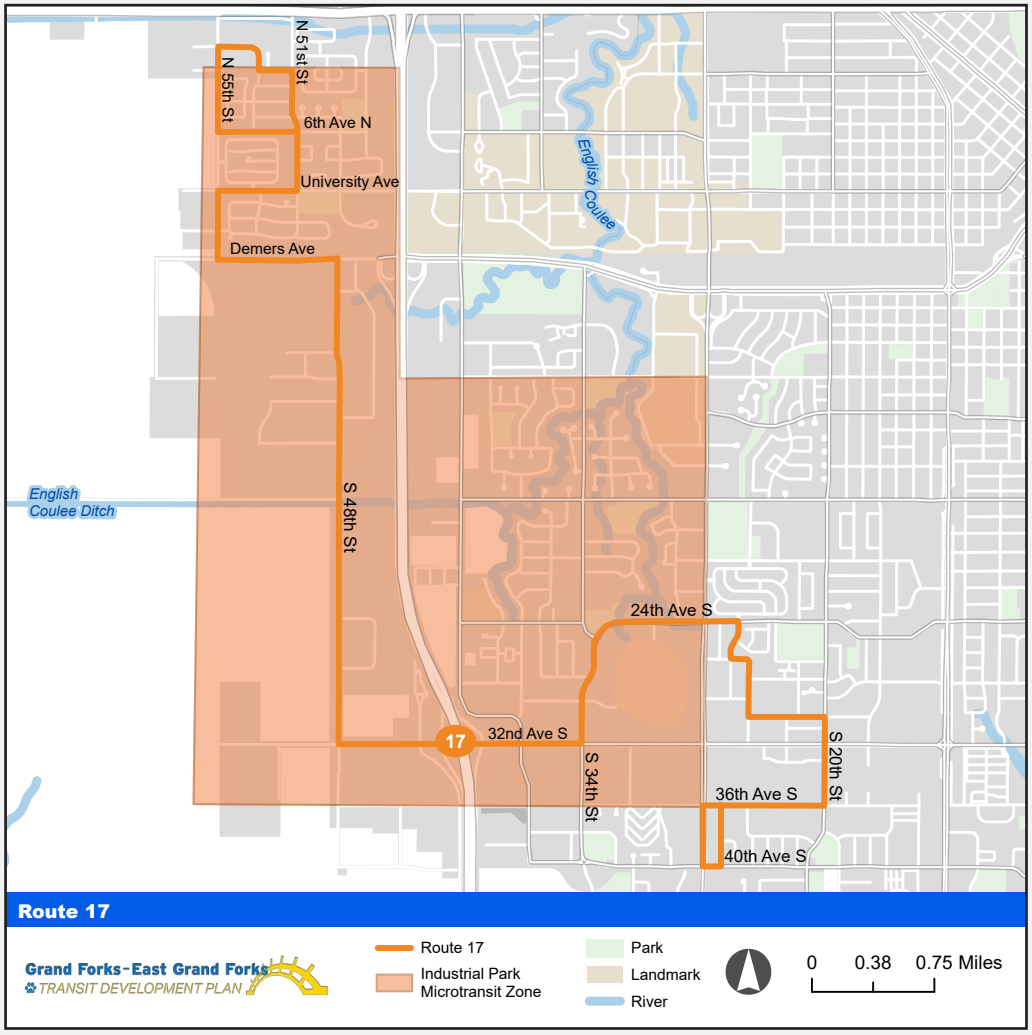
REVENUE HOURS	1,228	RANK 10/10
OPERATING COSTS	$112,951	RANK 10/10

Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

ROUTE 17

Key Destinations: Walmart on 32nd Ave S, Walmart on Gateway Dr, Target, Columbia Mall, LM Wind Power, FedEx Ground, and other industry west of I-29

ROUTE MAP



PROJECT OBSERVATIONS

- The proposed Route 17 would serve industrial shift workers and represents a major service gap
- Past attempts to provide this service have been challenging due to shift schedules, and service has been generally unpopular

IMPROVEMENT STRATEGIES

- The previous industrial park route, which served the Columbia Mall and Walmart on the NE end, could be extended
- Connections to Routes 3, 5, and 7 could be implemented

RECOMMENDATIONS

- Short term - Funding opportunities should be pursued through public-private partnerships or other sources and service times should accommodate industrial park shift changes
- Medium term - Replacement of this route should be included in the microtransit study

	WEEKDAY
SPAN	5AM – 9AM; 3PM - 8PM
FREQUENCY	60 minutes

	WEEKEND
SPAN	5AM – 9AM; 3PM - 8PM
FREQUENCY	60 minutes

ANNUAL STATISTICS

THESE VALUES RELATE TO THE SHORT TERM RECOMMENDATIONS LISTED ABOVE

REVENUE HOURS	2,763	RANK 8/10
OPERATING COSTS	$254,140	RANK 8/10

UND Campus Shuttle Service

OVERALL ISSUES AND IMPROVEMENTS SUMMARY

During public engagement and coordination, UND staff and students shared their concerns about UND bus service and ways to improve it. Staff noted low ridership. They were concerned about whether students got good value from this service and whether it is an effective use of resources. Students expressed frustration with reliability of buses and the system app, especially in cold weather.

Other factors affecting transit service include changes in parking passes and general growth on campus. Parking passes are now issued for specific lots, so students are less likely to drive across campus to get to classes or activities. UND is experiencing growth and development that does not reflect the current route system.

Overall, improvement ideas reflect a need to redesign routes to serve more destinations, new housing, and improve reliability. Operators and staff expressed a desire to maintain current routes and service hours as they are, which are reflected in short-term recommendations.

The proposed changes to UND service are summarized in the following route sheets.

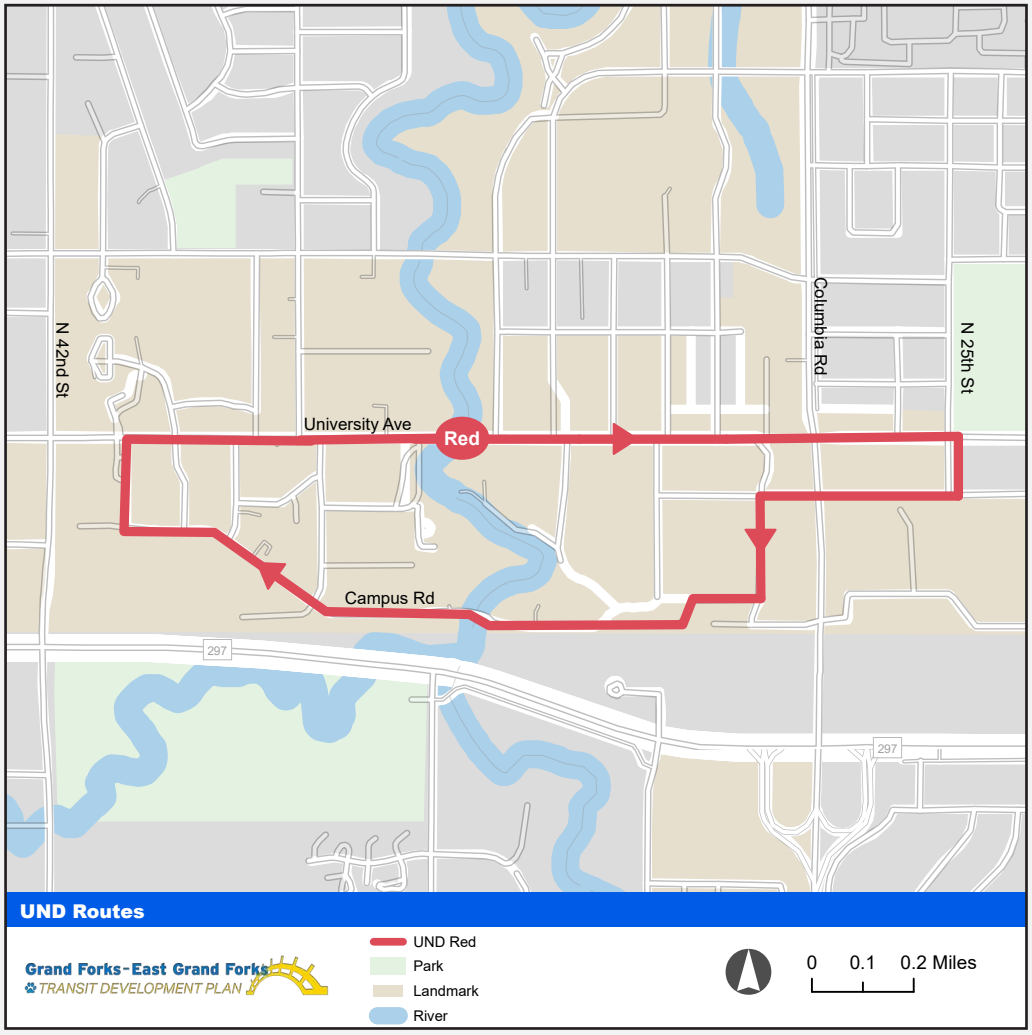
Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

UND RED ROUTE

Runs only Fall and Spring Semesters

Key Destinations: Odegard Hall, University Place, Chester Fritz Auditorium, Johnstone/Gamble, Chester Fritz Library, Memorial Union, East Parking Lot, Witmer, Upson I, Hughes Fine Arts, Central Receiving, Fritz Pollard Athletic Center, Memorial Stadium

ROUTE MAP



PROJECT OBSERVATIONS

- The Red Route may not serve all potential destinations on the west end of campus

IMPROVEMENT STRATEGIES

- Alter the Red Route to travel bi-directionally on University Ave as well as serve the northwestern part of campus

RECOMMENDATIONS

- Short term - Maintain Red Route service as it is today
- Medium term - Reroute to travel to 25th on the east side of campus, and re-time route schedules to reflect new traffic patterns on campus

	WEEKDAY	WEEKEND
SPAN	7:30AM – 4:30PM	-
FREQUENCY	15 minutes	-

ANNUAL STATISTICS

THESE VALUES RELATE TO THE SHORT TERM RECOMMENDATIONS LISTED ABOVE

REVENUE HOURS	1,530	RANK 1/4 (TIE)
OPERATING COSTS	$140,729	RANK 1/4 (TIE)

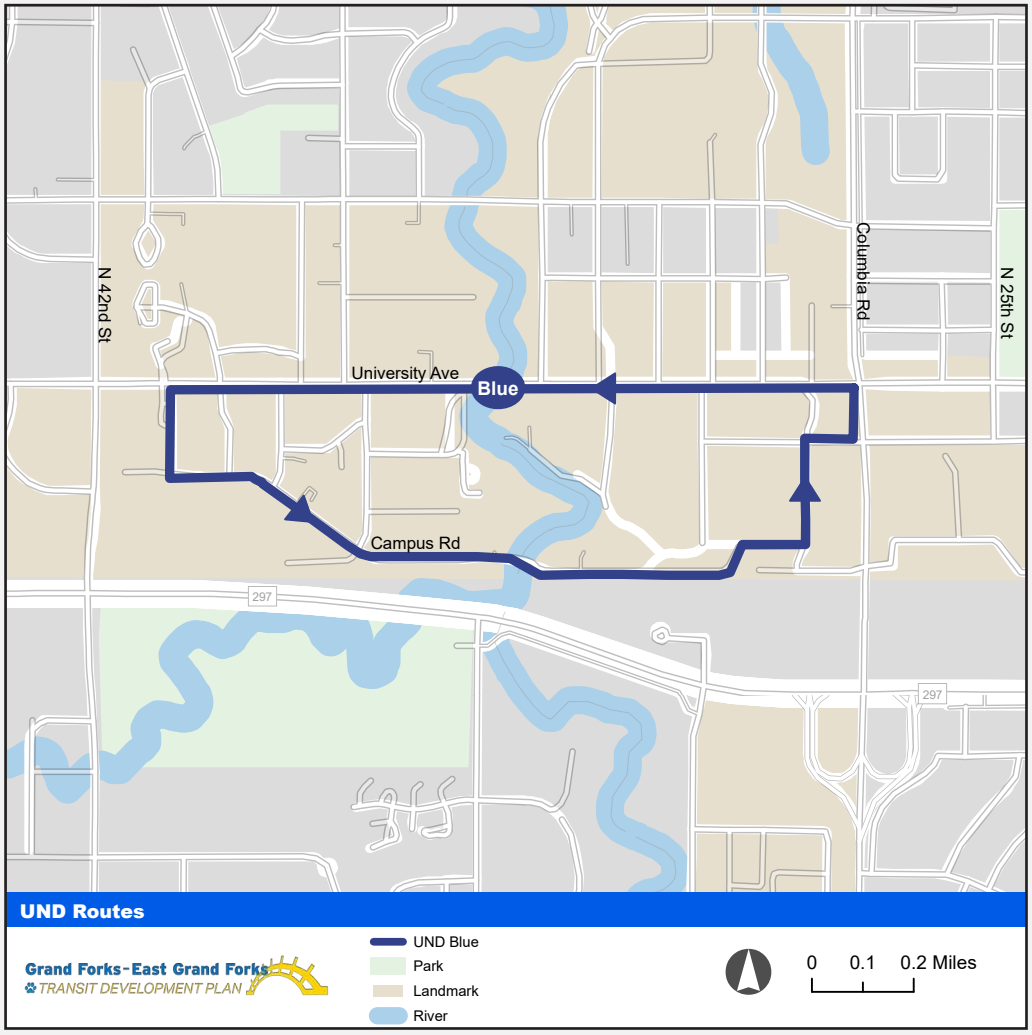
Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

UND BLUE ROUTE

Runs only Fall and Spring Semesters

Key Destinations: Odegard Hall, Central Receiving, Hughes Fine Arts, Steam Plant, Upson I, Hyslop, Memorial Union, Christus Rex, Hancok/Bek, Wilkerson, State St/University Ave

ROUTE MAP



PROJECT OBSERVATIONS

- The Blue Route could better serve destinations and growth in the southern half of campus
- The loop service may be confusing to riders

IMPROVEMENT STRATEGIES

- Alter the Blue Route to travel bi-directionally on Campus Road as well as serve the northwestern part of campus

RECOMMENDATIONS

- Maintain Blue Route service as it is today

	WEEKDAY	WEEKEND
SPAN	7:30AM – 4:30PM	-
FREQUENCY	15 minutes	-

ANNUAL STATISTICS

THESE VALUES RELATE TO THE SHORT TERM RECOMMENDATIONS LISTED ABOVE

REVENUE HOURS	1,530	RANK 1/4 (TIE)
OPERATING COSTS	$140,729	RANK 1/4 (TIE)

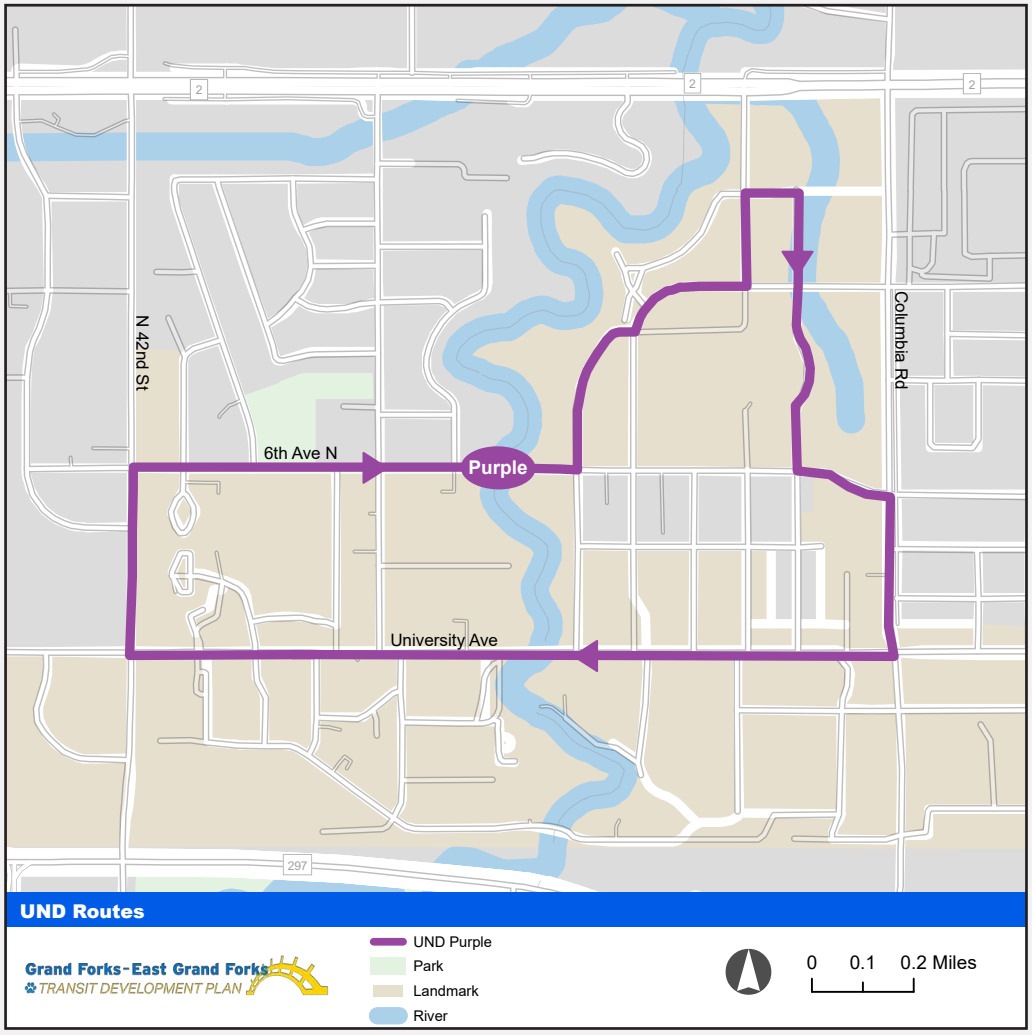
Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

UND PURPLE ROUTE

Runs only Fall and Spring Semesters

Key Destinations: Odegard Hall, Gallery Apartments, Stanford Rd, Wellness Center, Medical School, Bookstore, Memorial Union, Christus Rex, Hancock/Bek, Wilkerson, State St/University Ave

ROUTE MAP



PROJECT OBSERVATIONS

- The Purple Route is the most popular route on campus but has had problems with on-time service

IMPROVEMENT STRATEGIES

- This route could be altered to serve parking near the Nursing School and remove some service on Columbia Road

RECOMMENDATIONS

- Short term - Maintain Purple Route service as it is today.
- Medium term - To improve on-time performance, consider keeping service as it is today along Columbia Road and 6th, assess ridership for the part of the route that deviates to the south to serve Odegard Hall, and remove this stop and follow University Avenue to avoid traffic concerns with the deviation and required left turn

	WEEKDAY	WEEKEND
SPAN	7:30AM – 4:30PM	-
FREQUENCY	20 minutes	-

ANNUAL STATISTICS

THESE VALUES RELATE TO THE SHORT TERM RECOMMENDATIONS LISTED ABOVE

REVENUE HOURS	1,530	RANK 1/4 (TIE)
OPERATING COSTS	$140,729	RANK 1/4 (TIE)

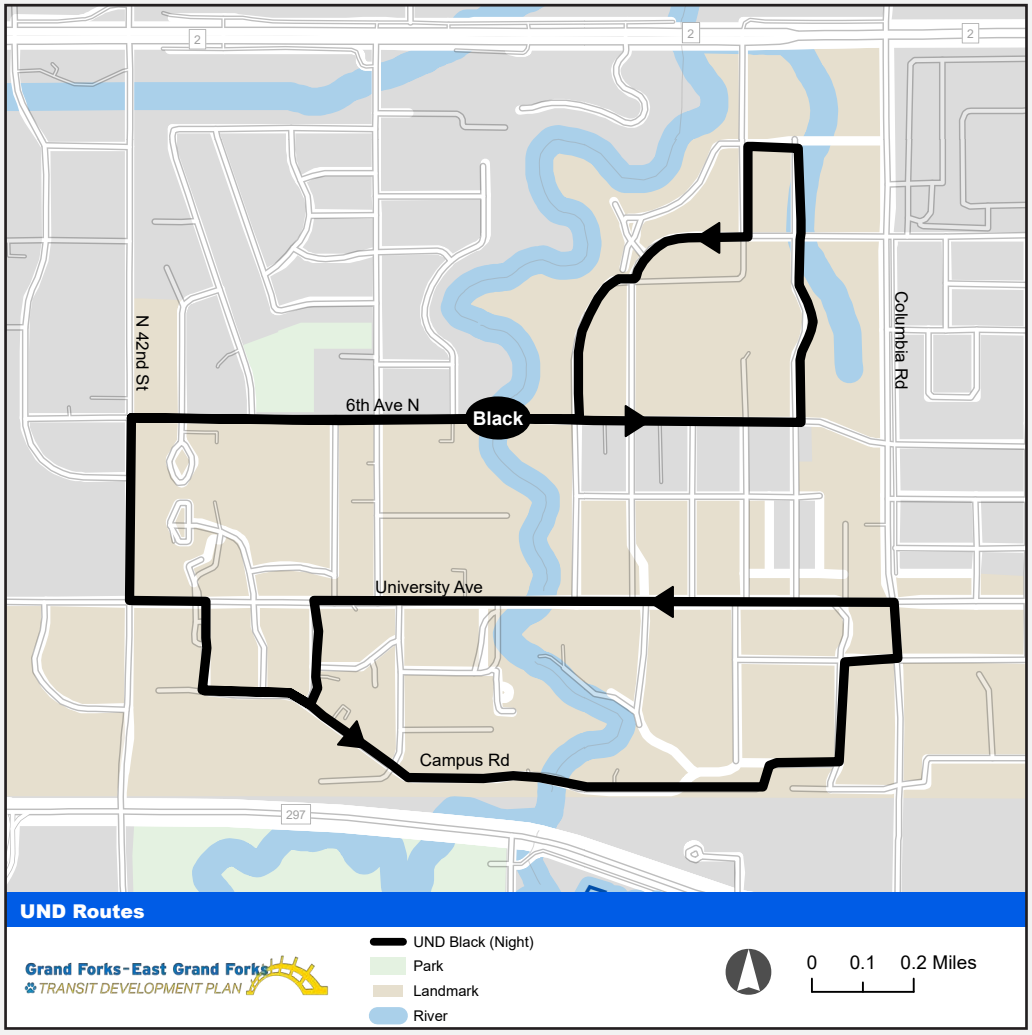
Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

UND BLACK ROUTE

Runs only Fall and Spring Semesters at night

Key Destinations: Odegard Hall, Central Receiving, Hughes Fine Arts, Steam Plant, Upson I, Hyslop, Memorial Union, Christus Rex, Hancok/Bek, Wilkerson, State St/University Ave, State St/6th Ave, Medical School, Wellness Center, Stanford Rd, Gallery Apartments

ROUTE MAP



PROJECT OBSERVATIONS

- This route is long and ridership is low
- Medical school students who could use the route have labs with varying times and the route's unreliability makes it challenging to ride

IMPROVEMENT STRATEGIES

- The route could be converted to a microtransit service that would offer flexibility for classes and labs that end at various times
- It could also be altered to provide access to some shopping destinations for students

RECOMMENDATIONS

- Short term - Maintain Black Route service as it is today
- Medium term - Replace night service with a microtransit pilot and consider implementing weekend and later evening service

	WEEKDAY	WEEKEND
SPAN	5:00PM – 10:00PM	-
FREQUENCY	30 minutes	-

ANNUAL STATISTICS

THESE VALUES RELATE TO THE SHORT TERM RECOMMENDATIONS LISTED ABOVE

REVENUE HOURS	680	RANK 4/4
OPERATING COSTS	$62,546	RANK 4/4

MICROTRANSIT IMPLEMENTATION

Recommendation

Determine pick-up and drop-off locations for the established zone, develop a user guide for students and a plan for dissemination/communication of the plan, and establish trial period and metrics for success. These should include quantitative metrics, such as ridership, costs, and on-time performance, and qualitative metrics, such as customer feedback and meetings with UND staff and student leadership.

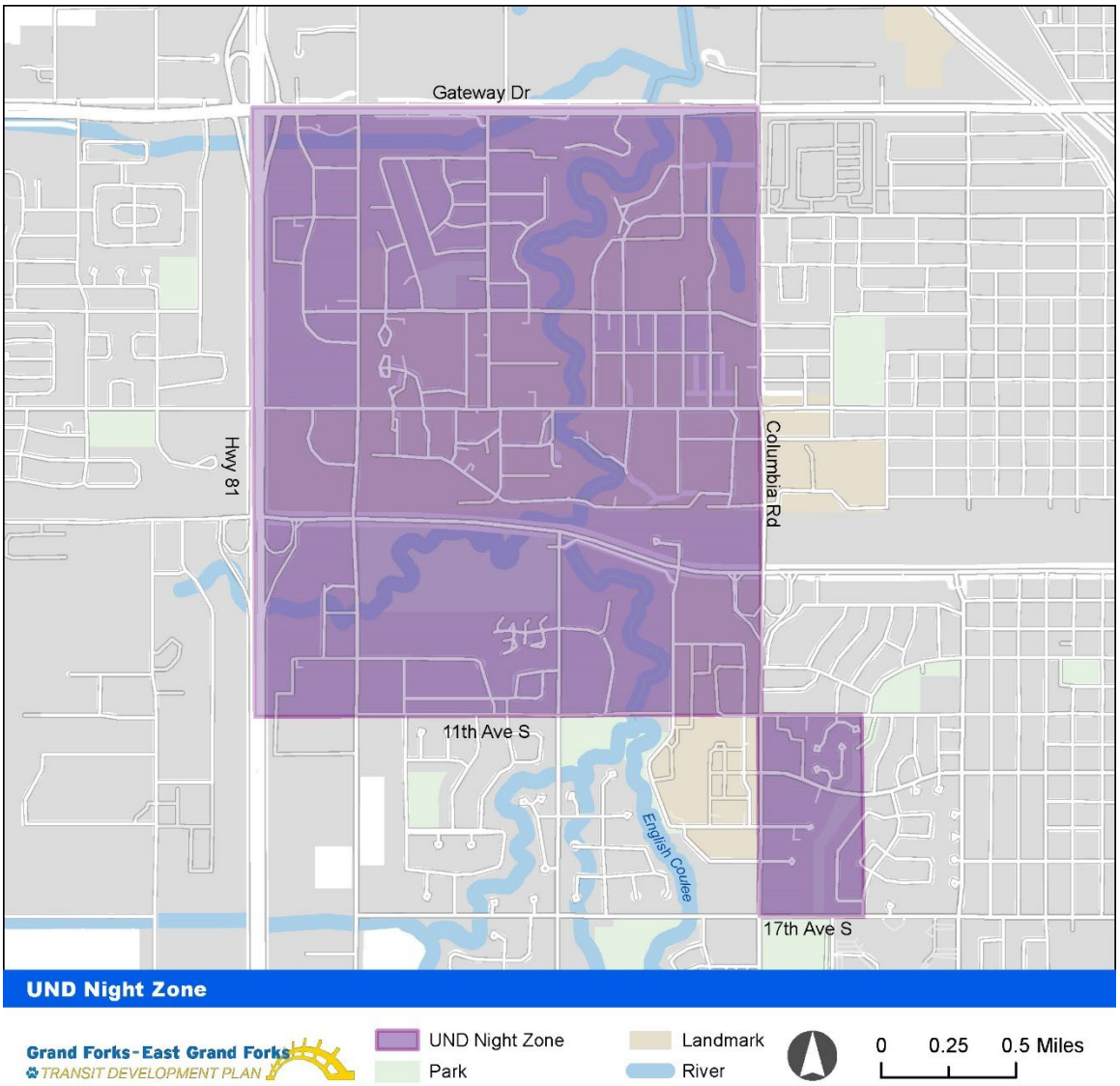


Figure 2. UND Microtransit Zone

Route Service Cost Estimates

CAT SERVICE

Route 1

Route 1 service costs and annual revenue hours remain the same in the Budget Neutral and the Added Service scenarios. In the Microtransit Replacement Service scenario, Route 1 would be eliminated and replaced with the Northern Grand Forks Daytime microtransit service.

Scenario	Annual Revenue Hours	Annual Operating Costs (2022)
Budget Neutral	1,586	$145,857
Added Service	1,586	$145,857
Microtransit Replacement Service	N/A – Replaced with Northern GF Daytime Microtransit	

Route 2

Route 2 service costs and annual revenue hours remain the same in the Budget Neutral and the Added Service scenarios. In the Microtransit Replacement Service scenario, Route 2 would be eliminated and replaced with the Northern Grand Forks Daytime microtransit service.

Scenario	Annual Revenue Hours	Annual Operating Costs (2022)
Budget Neutral	1,713	$157,585
Added Service	1,713	$157,585
Microtransit Replacement Service	N/A – Replaced with Northern GF Daytime Microtransit	

Route 3

Route 3 service costs and annual revenue hours for daytime and evening service remain the same in all three of the service scenarios.

Scenario	Service Type	Annual Revenue Hours	Annual Operating Costs (2022)
Budget Neutral	Total	3,990	$366,977
	Daytime	*3,453*	*$317,561*
	Evening	*537*	*$49,416*

Added Service	Total	3,990	$366,977
	Daytime	3,453	*$317,561*
	Evening	537	*$49,416*
Microtransit Replacement Service	Total	3,990	$366,977
	Daytime	*3,453*	*$317,561*
	Evening	*537*	*$49,416*

Route 4

Route 4 is eliminated in all three of the service scenarios.

Route 5

In the Added Service scenario, frequency for Route 5 would be doubled. In the Budget Neutral and Microtransit Replacement Service scenarios, service hours and costs remain the same.

Scenario	Annual Revenue Hours	Annual Operating Costs (2022)	Notes
Budget Neutral	3,453	$317,561	60-min frequency
Added Service	6,905	$635,122	30-min frequency
Microtransit Replacement Service	3,453	$317,561	60-min frequency

Route 6

Route 6 service costs and annual revenue hours for daytime and evening service remain the same in all three of the service scenarios.

Scenario	Service Type	Annual Revenue Hours	Annual Operating Costs (2022)
Budget Neutral	Total	3,964*	$366,977
	Daytime	*3,427*	$315,169
	Evening	*537*	*$49,416*
Added Service	Total	3,964	$366,977
	Daytime	*3,427*	$315,169

	Evening	*537*	*$49,416*
Microtransit Replacement Service	Total	3,964	$366,977
	Daytime	*3,427*	$315,169
	Evening	*537*	*$49,416*

**Revenue hours are doubled from existing conditions because routes 4 and 6 are combined.*

Route 7

Service hours and frequency remain the same in all scenarios.

Scenario	Annual Revenue Hours	Annual Operating Costs (2022)
Budget Neutral	3,453	$317,561
Added Service	3,453	$317,561
Microtransit Replacement Service	3,299	$303,442.02

Route 8

Service hours and frequency remain the same in all scenarios.

Scenario	Annual Revenue Hours	Annual Operating Costs (2022)
Budget Neutral	3,453	$317,561
Added Service	3,453	$317,561
Microtransit Replacement Service	3,453	$317,561

Route 9

Service hours and frequency remain the same in all scenarios.

Scenario	Annual Revenue Hours	Annual Operating Costs (2022)
Budget Neutral	3,453	$317,561
Added Service	3,453	$317,561
Microtransit Replacement Service	3,453	$317,561

Route 10

Service hours and frequency remain the same in all scenarios.

Scenario	Annual Revenue Hours	Annual Operating Costs (2022)
Budget Neutral	3,453	$317,561
Added Service	3,453	$317,561
Microtransit Replacement Service	3,453	$317,561

Route 12

Route 12 is discontinued in all scenarios.

Route 13

Route 13 service costs and annual revenue hours remain the same in the Budget Neutral and the Added Service scenarios. In the Microtransit Replacement Service scenario, Route 13 would be eliminated and replaced with the Grand Forks Nighttime route.

Scenario	Annual Revenue Hours	Annual Operating Costs (2022)
Budget Neutral	1,228	$112,951
Added Service	1,228	$112,951
Microtransit Replacement Service		N/A – Replaced with GF Night Microtransit

Route 17

Route 17 is not implemented in the Budget Neutral scenario. It is implemented in the Added Service scenario and replaced with on-demand microtransit service in the Microtransit Replacement Service scenario.

Scenario	Annual Revenue Hours	Annual Operating Costs (2022)
Budget Neutral		N/A – Not implemented
Added Service	2,763	$254,141
Microtransit Replacement Service		N/A – Replaced with IP Microtransit

UND CAMPUS SHUTTLE SERVICE

Red Route

Service hours and frequency remain the same in all scenarios.

Scenario	Annual Revenue Hours	Annual Operating Costs (2022)
Budget Neutral	1,530	$140,729
Added Service	1,530	$140,729
Microtransit Replacement Service	1,530	$140,729

Blue Route

Service hours and frequency remain the same in all scenarios.

Scenario	Annual Revenue Hours	Annual Operating Costs (2022)
Budget Neutral	1,530	$140,729
Added Service	1,530	$140,729
Microtransit Replacement Service	1,530	$140,729

Purple Route

Service hours and frequency remain the same in all scenarios.

Scenario	Annual Revenue Hours	Annual Operating Costs (2022)
Budget Neutral	1,530	$140,729
Added Service	1,530	$140,729
Microtransit Replacement Service	1,530	$140,729

Black (Night) Route

Service hours and frequency remain the same in all scenarios.

Scenario	Annual Revenue Hours	Annual Operating Costs (2022)
Budget Neutral	680	$62,546
Added Service	680	$62,546
Microtransit Replacement Service	N/A – Replaced with UND Campus Night Microtransit	

Microtransit Service

Route	Annual Revenue Hours	Annual Operating Costs (2022)
Grand Forks Night	2,456	$141,269
Northern Grand Forks Daytime	3,273	$188,263
East Grand Forks Night	1,228	$70,635
East Grand Forks Day	3,273	$188,263
UND Night	956	$55,004
Industrial Park	2,295	$132,008

Programmatic Recommendations

This section includes strategies that could support rider experience and operations for the CAT system. These were developed through public engagement and inter-agency coordination throughout the development of the TDP.

SCHEDULE TIMING

Potential Improvement Strategies

For all routes, schedules should be reviewed for timing and customer experience, and revised as necessary.

BRANDING

Potential Improvement Strategies

Consistent branding should be implemented across websites, bus stops, and other communications tools. This includes iconography, fonts, slogans, messaging. An internal branding guide should be created to support staff.

UND branding for UND buses could include magnet clings with UND logo and colors.

Peer Examples of Bus Branding

University of Iowa CAMBUS

The University of Iowa's CAMBUS provides bus service throughout the campus to students, faculty, staff, visitors, and the general public. The system is operated and supervised by students. CAMBUS branding is focused on the University of Iowa's school colors.

Clean and Consistent Design. Focus branding on school colors and simple graphic elements. Create bus wraps that are consistent across the transit buses and vans.

Website Design. Maintain branding consistency across all platforms, including the university's transit webpage, by utilizing the same color scheme and design elements as the vehicles.

Figure 3. University of Iowa's CAMBUS, Jenna Galligan via the Daily Iowan

University of Minnesota-Twin Cities Campus Buses

The University of Minnesota operates two main campus buses: the Campus Connector (between campuses) and the Campus Circulators (within campuses). Campus bus branding is focused on the University of Minnesota's mascot, the Golden Gopher. Riders can track buses in the GopherTrip app.

Incorporate the Mascot. Create bus wraps that depict the school mascot and utilize school colors. Icons, maps, and other graphics should be consistent with vehicle design.

Transit App. If possible, create an app that allows riders to view transit information or track buses. Maintain consistent branding in the app.

Figure 4. University of Minnesota-Twin Cities campus bus, via UMN

Minnesota State University, Mankato Campus Buses

Mankato Transit System operates several buses that serve the Minnesota State University, Mankato community, including a campus circulator. The university also operates a separate shuttle service that serves the campus area. Students, faculty, and staff can ride both systems free of charge. Recent bus wraps depict photographs of campus and students, highlighting Minnesota State University, Mankato history and student life.

Photos of Campus Life. Create bus wraps that use photographs of the campus and students. Additional icons and design elements can use school colors.

On-Board Branding. Produce posters to display inside the bus that highlight campus history, athletics, and culture.

Figure 5. Minnesota State University, Mankato campus bus, via MSU, Mankato

Branding Materials

Sticker Genius

Sticker Genius produces temporary vinyl bus graphics that can be any size and shape. The reusable bus graphic can be peeled and re-stuck 100+ times, while the removable bus graphic is repositionable a few times and removes easily.

- Reusable bus graphic
  - White background only
  - 30"x 144" (Bus King): $211.42
  - 16" x 72" (Tail): $67.67
- Removable bus graphic
  - Clear or white vinyl
  - 30" x 144" (Bus King): $203.73 (clear vinyl)
  - 16" x 72" (Tail): $65.21 (clear vinyl)

Figure 6. Sticker Genius Temporary Bus Graphic, via Sticker Genius

Premier Media Group

Premier Media Group has several vinyl decal and wrap types available for vehicles. The transit-specific removable vinyl decal is removable for up to one year.

- Transit Removable Decal
  - Cut options: decal cut, contour cut, bubble cut, die cut
  - 3.5-mil matte white opaque vinyl film

Figure 7. Premier Media Group Removable Bus Decal, via PMG

Contra Vision

Contra Vision is a leading producer of transit window advertisements. They produce various short- and long-term films with varying levels of transparency. Their bus-specific products are meant for longer-term use, while their films for static surfaces are meant to be removed within a few years.

- Contra Vision *Campaign*
  - Meant for short-term use, under two years
  - Best for glass bus shelters

Figure 8. Contra Vision Campaign Film, via Contra Vision

CUSTOMER COMMUNICATIONS

Website Improvements

By improving its online presence, CAT could make it easier for customers to ride transit and share their feedback. New website features could include:

Trip Planning. Implement trip planning options that provide information about connecting routes. Users could select a beginning and end point and a route and schedule could be provided for trip planning.

Interactive Map. Provide an interactive map that shows routes along with destinations that would be familiar to users.

Link Routematch. Include an embedded map that provides the Automatic Vehicle Location (AVL)/real-time route information provided through Routematch for the fixed route service.

Customer Feedback. Create a page that hosts a customer feedback form and all contact information, such as the customer service phone line and email.

Customer Feedback System

The ability to provide feedback easily and feel heard by CAT management is important to maintain a high level of customer satisfaction with the system. This feedback will be particularly important as CAT begins to make improvements and test new service options. Options for customer feedback could include:

Online Feedback Portal. An online feedback portal with basic information about how to contact CAT staff and an easy-to-use comment form is recommended. These comment forms should be formatted for computers and mobile devices, confirm receipt through an automated email or text reply, and provide a guarantee from CAT to review the comment within a short window (for example, 1-7 days).

Transit 311. A one-stop phone line which riders could call or text to get information and provide feedback could support riders as they navigate system changes. This service could be a simple phone line such as 311 that provides automated information like service hours, closures, and other urgent updates. It could also provide direct contact to CAT staff and give options to share feedback. A texting version would allow residents to text the number and receive a basic set of information such as service hours and closures. The text option could also allow users to alert CAT staff of any issues or to provide feedback on the service.

Marketing and Outreach. With changes to the fixed route, service spans, and features, a robust marketing effort could help with the transition and generate enthusiasm for the improvements. This outreach should involve consistent branding and ADA accessible materials. A launch could be advertised through regular CAT channels as well as Facebook advertisements and signs posted at bus stops. The website should be ready in advance of the route changes so riders can familiarize themselves with the changes before the go into effect.

Peer Agency Website Examples

GO Transit (Oshkosh, WI) Website

GO Transit riders can access trip planning, route schedules and maps, fare information, detours and alerts, and more on the GO Transit website. Riders can also use the GO Transit App, which has much of the same information and capabilities at a more basic level.

Figure 9. Screenshot of GO Transit homepage

Easy-to-Access URL. Create a URL which will be easy to remember and create a better landing space for transit users.

Trip Planning. Implement trip planning options that provide information about connecting routes if possible. Users could select a beginning and end point and a route and schedule could be provided.

Clear Iconography. Select website icons that are easy to understand and graphically appealing to improve website use and accessibility.

Bis-Man Transit (Bismarck, ND) Website

Bis-Man Transit riders can access information on fixed route and paratransit transit options, as well as regional transportation connections. Other website capabilities include a live bus tracker, service change announcements, civil rights information, and transit-related plans.

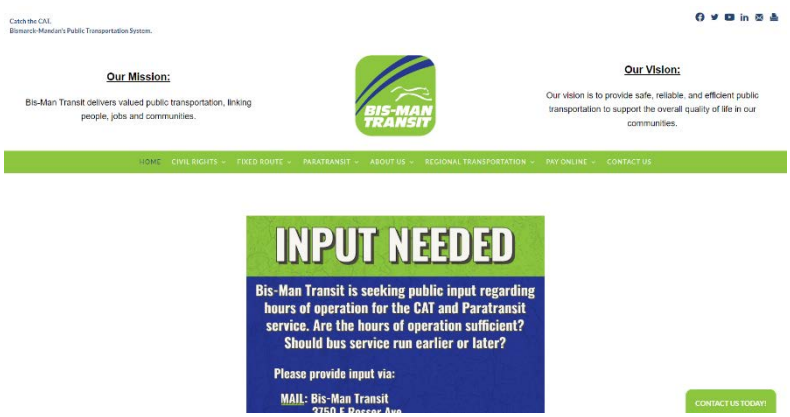


Figure 10. Screenshot of Bis-Man Transit homepage

Contact Page. Create a page that hosts a contact form that can be used to gather customer feedback. Include all contact information, such as the customer service phone line and email.

Interactive Map. Provide and interactive map where riders can view routes, stops, and schedules, along with destinations that would be familiar to users. Implement live bus tracking if possible.

EXTERNAL PARTNERSHIPS & COORDINATION

City Coordination

- City partners should consider ways to include transit in conversations about economic development, site planning, roadway improvements. Consider jointly developing a guide to help employers and other activity generators to implement transit-friendly development.

- Consider a cost sharing/fee assessment to support transit development.
- Consider opportunities to implement and enhance pedestrian/multimodal connectivity, like the Demers Avenue pedestrian improvements for Route 6.

Service Cost Sharing

- Identify the level of funding appropriate to reimburse CAT for service to schools
- Consider cost sharing opportunities for Industrial Park service.

UND Coordination

- CAT and MPO should be involved in site planning and design for major developments; this would help with operations and service planning.
- CAT, MPO and UND should have regular meetings, perhaps on a quarterly basis, particularly in the short-term, to coordinate service needs and changes.

DEMAND-RESPONSE SERVICE

The demand-response service, which includes Paratransit and Senior Rider programs, is popular and experiencing growing demand. Programmatic recommendations that would support the coordination and manage costs of this service are included in the Coordinated Human Services Transportation Plan (CHSTP). Additional considerations that will better integrate service and use driver time more efficiently include:

- Short-term: Consider options for shared taxis to fill some gaps in service, modify costs and provide quicker turnaround of service.
- Medium-term: consider integration of services with the microtransit service. Demand-response services are different from microtransit service in that they provide origin-to-destination services and assistance for riders, while microtransit provides pick-up and drop-off locations within a zone. CAT's service with Routematch could be used to integrate these two services. This should be part of the microtransit study.

TAXI/RIDESHARE SERVICES

In addition to fixed-route and demand response service, CAT could subsidize the costs of taxi and ride hailing services, such as Uber and Lyft, after service hours for regular service have ended or to extend service connection of the fixed route and solve "first/last mile" issues.

Some national best practices include:

- Make reimbursement easy by paying providers directly or creating a system that deposits reimbursement immediately.
- Provide full reimbursement or offer a flat stipend for these services that is well communicated. Full reimbursement assures the program is not cost-prohibitive for users; offering a flat stipend will allow the agency to manage costs and offer the program to more riders.
- Consider contracting with multiple companies to assure dependable service and options that are universally accessible under the Americans with Disabilities Act (ADA).
- Seek companies that qualify for shared-ride service reimbursement through the Federal Transit Administration (FTA).
- Clarify policies for users such that they cover the cancellation fees and understand boundaries of the service.

Peer Examples of Taxi/Rideshare Programs

Case studies of taxi/rideshare programs at large and small transit agencies and government entities from across the country are included for reference. They include Onondaga County, the City of Rancho Cordova, GoMonrovia, Pinellas Suncoast Transit Authority, and Minneapolis/St. Paul Metro Transit. These programs use a variety of different pricing mechanisms and funding sources to either improve service span or solve first and last mile connections to fixed route transit:

Improving Service Span or Network

- THE CITY OF MONROVIA, CA has created a multimodal transportation program, GoMonrovia, by repurposing some of the city's dial-a-ride funding to offer subsidized Lyft rides and bikeshare access through LimeBike. For $0.50 users can take a Lyft anywhere in the Monrovia service area by applying a promo code in the Lyft app. LimeBike bicycles are available to rent for $1 for 30 minutes of use or through a monthly membership.[1]
- MINNEAPOLIS/ST. PAUL METRO TRANSIT has created the Guaranteed Ride Home program, a free reimbursement program for registered commuters. It is designed to minimize the instance of transit riders being "stuck at work" after working longer than expected or an emergency that runs past regular transit service hours. The program can be used by participants up to four times per year for up to $100 of total ride reimbursements. The program is not designed to cover regular trips or errands but as a measure to provide rides in special circumstances.[2]
- ONONDAGA COUNTY, NY and JOBSPlus! created a partnership with Lyft designed to help get people who met income requirements additional support to travel to work. They provide free rides to three area companies looking to hire and to childcare if needed. The pilot was paid for by the publicly funded JOBSPlus! organization and is designed to alleviate transportation-related barriers for jobseekers. Although this group of riders also receives free bus passes, the hope was to provide improved access to these specific destinations. [3]

First and Last Mile/Transit Connections

- THE CITY OF RANCHO CORDOVA, CA launched "Free $5 to Ride," a pilot program subsidizing trips to/from the Sacramento Regional Transit District (SacRT) light rail stations in the city. This is a partnership with Lyft and was supported by a $75,000 grant from Sacramento Area Council of Governments (SACOG). The program was designed to make it cheaper and easier to access SacRT light rail stations.[4]
- PINELLAS SUNCOAST TRANSIT AUTHORITY (PSTA) has created the Direct Connect program is designed to help riders with first mile/last mile service connections in Pinellas County, which includes St. Petersburg and Clearwater, FL. There are three operators that provide trips through the program – Uber (rideshare), Taxi United (taxi), and an additional service that accommodates wheelchairs. For the Uber bookings, a link on the PSTA website allows users to add their Uber account to the PSTA app. The account linking results in an additional Uber service offering (i.e., Direct Connect) as long as trips start or end at one of 26 designated points in the county. These designated points are considered transfer points to the fixed-route system. The system does not require PSTA staff to make Uber bookings, but PSTA staff can monitor trips in real time. Those who cannot use the mobile app, need to make a cash payment, or those who require non-ambulatory service can call in and request Direct Connect service through the other two providers.

---

[1] https://learn.sharedusemobilitycenter.org/overview/gomonrovia-monrovia-ca-2018/
[2] https://www.metrotransit.org/guaranteed-ride-home
[3] https://learn.sharedusemobilitycenter.org/overview/onondaga-county-partners-with-lyft-for-welfare-rides-to-work-syracuse-new-york-2019/
[4] https://learn.sharedusemobilitycenter.org/overview/city-of-rancho-cordova-lyft-partner-for-free-5-to-ride-rancho-cordova-ca-2019/

Funding Recommendations

As CAT works to expand and streamline the system, recommendations are provided for funding shared mobility services.

FTA FUNDING FOR SHARED MOBILITY SERVICES

In response to increasing interest from the transit industry for partnering with ride-hailing companies, the FTA has clarified policy regarding reimbursement for ridesharing services. The FTA identifies that "shared-ride" services are reimbursable if the service is not for the exclusive use of individuals or private groups: *"A recipient passing funds through to a taxi company or shared mobility operator should request documentation from the company to assure the company is providing shared-ride service."*

Additionally, ride-splitting or dynamic carpooling as is provided by a number of ride-hailing companies (e.g. UberPOOL or Lyft Shared) is considered a shared-ride service, so long as the contract with the company allows both the drivers and the passengers to accept additional riders if they are identified along the trip.[5] Mobility management is an eligible capital expense and can coordinate mobility services with other alternatives or traditional public transportation. Funding for shared mobility operators may be available in places where federal public transportation law allows for funding of operating expenses (small urban and rural areas), or for reverse commute, job access, and ADA paratransit services. It also may be available under the Enhanced Mobility of Seniors and Individuals with Disabilities (Section 5310) program.

CAT could potentially use this mechanism to fund the after-fixed route hours rideshare program. CAT should follow guidance from FTA and use the following steps to set up the program. When identifying contractors that can provide the mobility service:

1. **Contract with companies that can assure they provide shared-ride service reimbursable by the FTA.** Companies like Lyft and Uber have been used by transit agencies throughout the country. Traditional taxi service is also an option used in many places. They should be able to provide documentation that makes them eligible under FTA guidelines. The service they provide must allow for riders to share the ride, although not every trip needs to be a shared ride for a service to be a shared ride operator.[6]

2. **Investigate opportunities for partnership which include joint marketing, integration of schedules or travel operations systems on the website or payment systems.** Contractors should be able to integrate their platform with existing transit. The shared ride service could provide connections to CAT and other systems, which reduce the length of the shared ride portion of the trip. This system could help manage costs while still providing excellent service and connectivity.

3. **Provide equivalent service that is ADA accessible.** The mobility contractor must have ADA accessible vehicles available that have the same service characteristics as non-ADA accessible vehicles. These characteristics include response time, fares, geographic area, hours and days, restrictions or priorities based on trip purpose, availability of information and reservations capability, and any other constraints on capacity or service availability.[7] If the cost of service provision for accessible vehicles is greater, CAT must offset those costs. Some agencies use their demand-response vehicles to service this need. Lyft and other companies have made accessible options available on their app which may qualify for this purpose, however there should be assurance that these companies can provide equal wait times for rides between vehicle types.

[5]https://www.transit.dot.gov/regulations-and-guidance/shared-mobility-faqs-eligibility-under-fta-grant-programs
[6] https://www.transit.dot.gov/regulations-and-guidance/shared-mobility-faqs-eligibility-under-fta-grant-programs
[7] https://www.transit.dot.gov/regulations-and-guidance/shared-mobility-faqs-americans-disabilities-act-ada#ada_4

RECOMMENDED FURTHER STUDIES

Airport Connectivity Study: Consider options to collaborate with public and private partners to provide regular service to the airport. Collaborate with airport to determine ideal scheduling.

ADA Improvements Study: Updates to capital and communications. Examples of capital improvements include ADA pads and shelters. Examples of communications improvements include websites and other media in ADA-accessible formats.

Rideshare Alternatives Study: Investigate use of federal funding for rideshare reimbursement.

Industrial Park Service Study: Review existing research on this service area. Develop ridership estimates and proposed cost sharing.

Microtransit Study: A microtransit study should be conducted in the short term for implementation of microtransit options in the long term. The study should include costs, a transition/education plan, anticipated ridership, fare review, a plan for integration with demand-response service, and a review of peer agency best practices.

The following table and map show proposed microtransit service ideas that could be inputs for this microtransit study.

Microtransit	Vehicles	Hours per Day	Weekday Revenue Hours		Hours	Vehicles	Saturday Revenue Hours	Annual Revenue Hours
GF Night (Replaces Route 22)	2	4	8		4	2	8	2,456
Northern GF Daytime (Replaces Routes 1 and 2)	1	11	11		9	1	9	3,273
EGF Night (Added Service in Addition)	1	4	4		4	1	4	1,228
EGF Day (Replaces Route 12)	1	11	11		9	1	9	3,273
UND night (Replaces UND Black/Night service)	1	5	5		0	0	0	956
Industrial Park Area Zone	1	9	9		0	0	0	2,295

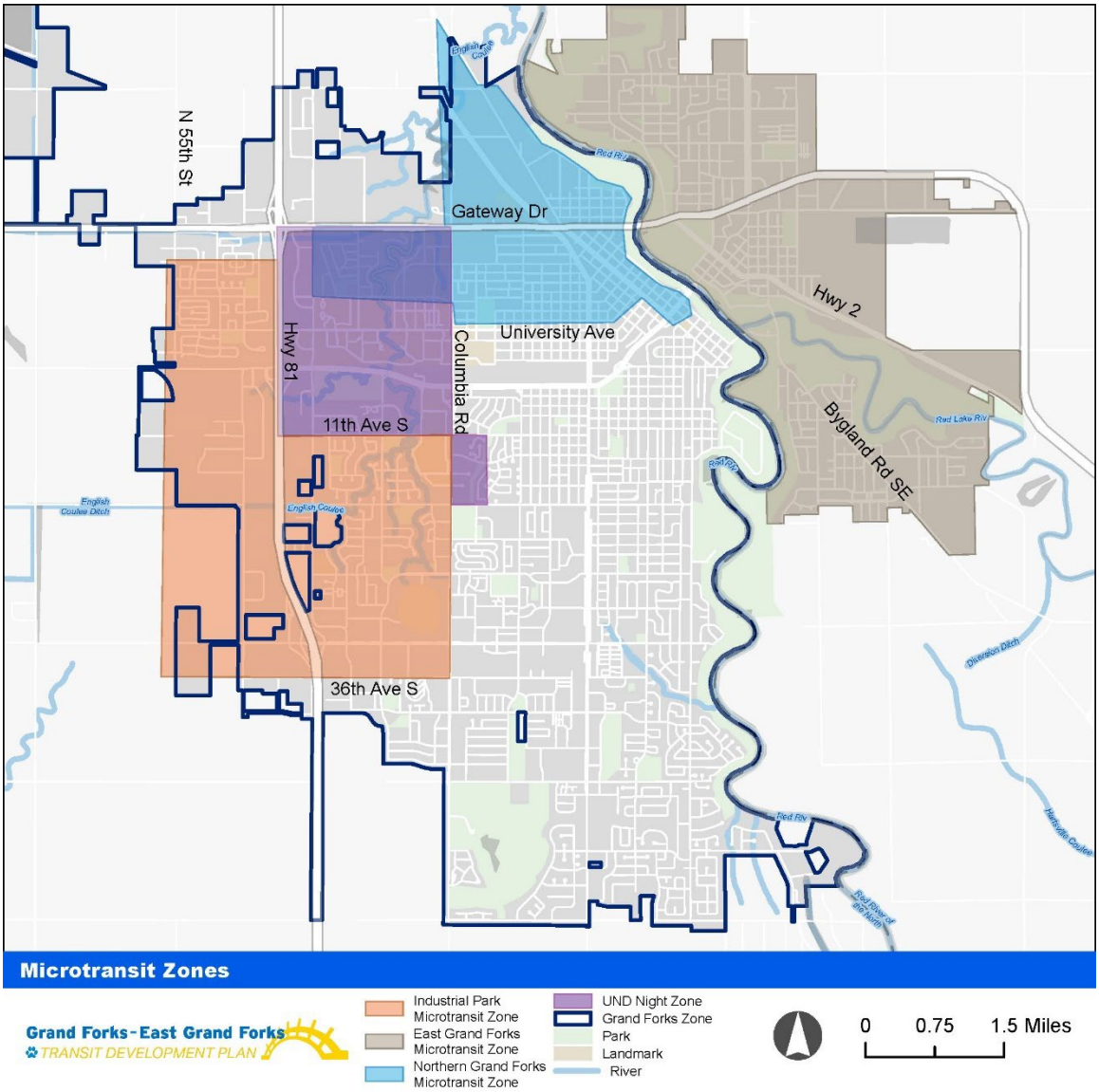


Figure 11. Microtransit Zones for Further Study

SERVICE RECOMMENDATIONS BUDGET SCENARIOS

	Service Conditions	Approximate Total Annual Revenue Hours	Cost based on 2022 Cost per Revenue Hour	Difference from Existing Condition
Budget Neutral*	> Replaces route 4 service with route 6 Service > Includes route modifications listed above > Assumes Route 12 is eliminated as it is today	36,500	$3,300,000-$3,400,000	Estimated to be budget neutral (same costs as existing services)
Added Service*	> Add service hours for an industrial park route which would run 5-9AM and 3-8PM Monday-Friday > Add 11 daily revenue hours to either increase frequency or span for Route 5	Adds around 2,700 revenue hours for the industrial park route Doubles revenue hours for the Route 5 Total added annual revenue hours: 5,900	$3,850,000-3,950,000	Estimated $540,000 added to budget from existing conditions
Microtransit Implementation**	> Uses the assumptions in **Error! Reference source not found.**	Includes about 13,500 revenue hours for microtransit in place of fixed route services	$3,350,000-3,500,000	Estimated $60,000 added to budget from existing conditions

Prioritization and Implementation

Service recommendations have been categorized into short- and long-term and aligned with broader plan goals.

SHORT TERM

Could be implemented immediately

CAT Service

Routes 1 and 2: Routes should be maintained as they are and funding possibilities for fixed-route school bus service should be explored.

Goals supported: Fiscal Sustainability and Efficient System Management

Route 3: Service should be maintained as-is. A stop-level study should be conducted to determine options to simplify the route.

Goals supported: Service Quality

Routes 4 and 6: Routes 4 and 6 should be combined and the new Route 6 should run interlined with Route 3 to determine any schedule issues. Options for better pedestrian connections between medical facilities and Demers Avenue should be studied.

Goals supported: Multimodal Connectivity, Service Quality, Equity

Route 5: Route 5 should remain as it is today, and funding partnerships with the school district for K-12 bussing should be explored.

Goals supported: Fiscal Sustainability and Efficient System Management

Route 7: Route 7 should be modified to be more direct. The connection to Target should be removed and transfers to routes 8 and 9 should be encouraged instead. The route should provide a direct connection to the Post Office from downtown. Route 7 should also be extended further south to reach new development on 47th Avenue.

Goals supported: Community Connectivity, Service Quality

Routes 8 and 9: Routes 8 and 9 should be aligned and should provide service to the Verge apartments.

Goals supported: Community Connectivity

Route 10: Route 10 should shift to bi-directional service, starting downtown and ending at the Columbia Mall. Transfer locations with Route 7 should be promoted for connections to Hugo's on 32nd and the Grand Cities Mall.

Goals supported: Community Connectivity

Route 12: Route 12 should be discontinued as fixed-route service and converted to microtransit service, providing connection to Route 6 for inter-city transportation.

Goals supported: Community Connectivity

Route 13: Service should continue as it is today.

Goals supported: Service Quality

Route 17: Funding opportunities for this route should be pursued through public-private partnerships or other sources. Service in this area should run between 5AM-9AM and 3PM-8PM to accommodate industrial park shift changes.

Goals supported: Equity, Fiscal Sustainability and Efficient System Management

UND Campus Shuttle Service

All routes: Maintain service as it is today.

MEDIUM TERM

Could be implemented before the next TDP

CAT Service

Routes 1 and 2: Microtransit should be studied as a potential option for the future.

Goals supported: Community Connectivity, Service Quality, Fiscal Sustainability and Efficient System Management

Routes 4 and 6: Implement better pedestrian connections between medical facilities and Demers Avenue.

Goals supported: Multimodal Connectivity, Equity

Route 5: Route 5 should run twice an hour and into the evening.

Goals supported: Equity

Routes 8 and 9: Aligned routes 8 and 9 should replace Route 13 for evening service.

Goals supported: Service Quality

Route 12: Replacement of Route 12 daytime and evening service should be included in the microtransit study.

Goals supported: Community Connectivity, Service Quality, Fiscal Sustainability and Efficient System Management

Route 13: The microtransit study should include replacing Route 13 with nighttime service.

Goals supported: Community Connectivity, Service Quality, Fiscal Sustainability and Efficient System Management

Route 17: Replacement of this route should be included in the microtransit study.

Goals supported: Community Connectivity, Service Quality, Fiscal Sustainability and Efficient System Management

UND Campus Shuttle Service

Red Route: Reroute to travel to 25th on the east side of campus, and re-time route schedules to reflect new traffic patterns on campus.

Goals supported: Service Quality

Purple Route: To improve on-time performance, consider keeping service as it is today along Columbia Road and 6th, assess ridership for the part of the route that deviates to the south to serve Odegard Hall, and remove this stop and follow University Avenue to avoid traffic concerns with the deviation and required left turn.

Goals supported: Service Quality

Black (Night) Route: Replace night service with a microtransit pilot and consider implementing weekend and later evening hours.

Goals supported: Equity, Service Quality

Grand Forks-East Grand Forks
TRANSIT DEVELOPMENT PLAN

GRAND FORKS – EAST GRAND FORKS

Transit Development Plan

Appendix 5: Coordinated Human Services Transportation Plan

September 2022

Coordinated Human Services Transportation Plan

INTENT

The Coordinated Human Services Transportation Plan (CHSTP) looks at specific needs and opportunities to improve the transportation options for low income, senior and disabled individuals. This CHSTP also outlines the framework for the funding of specialized transportation systems, which aim to improve mobility for the special needs population within the larger community.

In keeping with Executive Order 13330, the CHSTP will address the following goals:

- Promote interagency cooperation and the establishment of appropriate mechanisms to minimize duplication and overlap of Federal programs and services so that transportation-disadvantaged persons have access to more transportation services.
- Facilitate access to the most appropriate, cost-effective transportation services within existing resources.
- Encourage enhanced customer access to the variety of transportation and resources available.
- Formulate and implement administrative, policy, and procedural mechanisms that enhance transportation services at all levels.

The CHSTP is developed as a framework approach to addressing mobility management and as a guidebook for initiatives and strategies to improve transportation options through outreach with and coordination of the network of community groups and agencies in the larger community. This approach is catered specifically to the Grand Forks-East Grand Forks metropolitan area.

TARGET POPULATIONS AND NEEDS ANALYSIS

The CHSTP as a subset of the overall TDP focuses on addressing transportation needs for three specific target groups: elderly, low-income and minority and individuals with disabilities. The demographic and geographic context of these populations was discussed in depth in the Existing Systems Analysis.

A key feature of the CHSTP is a refined assessment of key transportation destinations for these target populations. The Existing Systems Analysis established the location of Social Service agencies, large employers and major community destinations and in relation to the current CAT Fixed Route services. The CHSTP aims to distill these larger needs into a more refined assessment of need. Areas of need include the area around UND, which stands out in terms of low-vehicle access, low-income households; East Grand Forks, which has a higher percentage of households with disabled people; and portions of south Grand Forks, where there are higher rates of low-income households and clusters of low-wage jobs. Currently these areas are generally well served by Fixed Route operations provide by CAT. *Table 1* is a list of major regional employers and an assessment of fixed route access.

Table 1. Top Ten Employers in the Grand Forks – East Grand Forks Metro Area (Data source: grandforks.org)

Employer	Industry	Number of Employees	Fixed Route Access
Altru Health System	Healthcare	3950	Yes (although varies on location)
University of North Dakota	Education	3464	Yes
Grand Forks Air Force Base	Government	1643	No
Grand Forks Public Schools	Education	1100	Yes
LM Wind Power	Manufacturing	1000	No

Valley Memorial Homes	Healthcare	801	Yes
City of Grand Forks	Government	518	Yes (although varies on location)
Development Homes	Healthcare	500	Yes
Hugo's	Retail/Food	450	Yes (all locations)
J.R. Simplot	Food Processing	440	No

EXISTING PROVIDERS AND DEMOGRAPHICS

Assembling a mobility management framework starts first with a documentation of current transportation assets in the community. To a large degree, these are providers of more specialized services and, in many cases, transportation provided by these groups is available only for clients specific to a facility or organization. *Table 2* shows the current system of other significant transportation providers serving the Grand Forks-East Grands MPO area.

Table 2. Transportation Providers in the Grand Forks – East Grand Forks MPO Area

Public	General Public	Clients Only	Promotes CAT Programs	Intra City	Inter City	Major Demand Response Generator
Tri-Valley	X				X	
City of East Grand Forks Senior Center			X		X	
Pembina County	X				X	
Walsh County	X				X	
Polk County Social Services		X*			X	
Nelson County	X				X	
Private						
Jefferson Lines	X				X	
Dietrich Bus Service	X**					
Grand Forks Taxi & Nodak Cab	X				X	
City Cab Taxi	X					
Hengwa Taxi	X					
S & S Taxi	X			X		
Agency Services						
Development Homes		X		X		X
Grand Forks YMCA Family Center		X**		X		X

Disabled American Veterans		X			X	
Northlands Rescue Mission		X		X		
L.I.S.T.E.N. Center		X		X		X
REM North Dakota		X			X	
North Dakota Association for the Disabled	X			X		
Valley Memorial Homes		X			X	
Polk County DAC		X		X		
Parkwood Place		X		X		X
Altru		X		X		X
Success Unlimited			X		X	
Grand Forks Senior Center			X		X	X
Good Sam – Heritage Grove		X			X	
St. Anne's Guest House		X		X		X
The Salvation Army of Grand Forks		X***		X		
Red River Valley Community Action		X			X	
Valley Senior Living	X				X	X
Jobs Service North Dakota		X	X		X	
University of North Dakota		X	X	X		

*Promotes use of Tri-Valley Heartland Express
**Mainly child-care or school bus services
***Gas assistance program

Public Providers

- Tri-Valley Heartland Express is a curb-to-curb service and provides public transportation services to the general public in eight Minnesota counties: Polk, Red Lake, Norman, Marshall, Kittson, Pennington, Mahnomen and Clearwater.
- City of East Grand Forks Senior Center promotes CAT services as a means of transportation.
- Pembina County operates demand-response transportation services in Pembina County and to Grand Forks.
- Walsh County Public Transit operates demand-response transportation services in Walsh County and to Grand Forks, Grafton, and Fargo.
- Polk County Social Services promotes use of the Tri-Valley Heartland Express.

- Nelson County is served by the South-Central Transit Network, a demand-response transportation system that serves the county, Grand Forks, Devils Lake, and Fargo. Free rides are offered through Social Services.

Private Providers

- Jefferson Lines provides regional bus service from Grand Forks to points in Minnesota, west as far as Missoula, Montana, east to Milwaukee, Wisconsin and south to the Texas-Oklahoma border.
- Dietrich Bus provides contract bus service to the Grand Forks School District for school busing and provides service to other clients as needed.
- Taxi Service (Grand Forks Taxi & Nodak Cab Co.; S & S Taxi) are typical traditional taxicab services in Grand Forks and East Grand Forks with fleets ranging from one to 10 vehicles and providing service in the city and to the airport.

Agency Providers

- Development Homes provides service to their clients to-and-from Development Homes properties.
- Grand Forks YMCA Family Center provides transportation services and assistance mainly for their child-care programs.
- Disabled American Veterans provides weekly transportation for DAV members to the VA Medical Center in Fargo.
- Northlands Rescue Mission provides transportation to residents for medical appointments and jobs.
- L.I.S.T.E.N Center provides transportation for clients to medical, community, and social appointments as part of their residential services.
- North Dakota Association for the Disabled, in cooperation with Altru Alliance, provides transportation assistance for residents of Grand Forks and East Grand Forks for in-town medical travel.
- REM North Dakota provides service to REM home residents and clients.
- Valley Memorial Homes has shuttle service for residents for medical, social and recreational visits.
- Polk County DAC provides rides to-and-from home and the DAC and from the DAC to jobs for program clients.
- Parkwood Place has fixed schedule transportation for medical appointments.
- Altru provides transport to Altru Rehab within Grand Forks and East Grand Forks.
- Grand Forks Senior Center promotes the use of CAT “Senior Rider” program as a means of transportation.
- Success Unlimited promotes the use of CAT services as a means of transportation.
- Good Sam - Heritage Grove provides transportation for residents.
- St. Anne's Guest House provides transportation for clients to medical appointments.
- The Salvation Army of Grand Forks maintains a gas assistance program for clients.
- Red River Valley Community Action provides transportation services for clients under their Supportive Services for Veteran Families program.
- Valley Senior Living provides service to residents of Trail and Steele counties and some rural residents of Grand Forks County on a fixed route.
- Jobs Service North Dakota promotes the use of CAT services as a means of transportation. Financial assistance programs are available for bus passes and gas.
- University of North Dakota runs on-campus shuttle service, operated by CAT, and shuttle service to airport for aviation students.

No Longer Providing Services

Since 2017 TDP

- Red White & Blue Taxi
- Yellow Cab Company

DEMAND RESPONSE CHARACTERISTICS

There were over 65,000 rides given on the Demand Response system in 2019 (Table 6-2). Ridership fell for the first time in 2020 when only 38,000 rides were provided. About sixty percent of Demand Response trips were paratransit and forty percent were senior rides. Paratransit had a 6% decline in ridership and senior riders had an 11% growth rate from 2013-2020. Thus, senior rider service is growing while paratransit service is declining. *Table 3* shows the demand response system usage by rider type.

Table 3. 2013 to 2020 Demand Response System Usage

	2013		2014		2015		2016	
Type	Total	% Total	Total	% Total	Total	% Total	Total	% Total
Senior	19,485	37.1	19,733	36.3	19,195	35.1	16,026	33.1
Paratransit	33,041	62.9	34,602	63.7	35,553	64.9	32,337	66.9
Total	52,526		54,335		54,748		48,363	
	2017		**2018**		**2019**		**2020**	
Type	Total	% Total	Total	% Total	Total	% Total	Total	% Total
Senior	19,828	37.5	22,837	36.3	22,965	35.2	15,413	41.1
Paratransit	33,079	62.5	40,056	63.7	42,218	64.8	22,129	58.9
Total	52,907		62,893		65,183		37,542	

Paratransit "Dial-A-ride" Riders

To understand demand for paratransit riders on the Demand Response system, major ridership generators were reduced to the top 15 combined origin-destination points, as shown in *Table 4*. The top fifteen paratransit generators are 79.9 percent of the total paratransit system, and just over half of the total Demand Response system. *Table 4* shows the major paratransit generators in the Grand Forks – East Grand Forks Metro.

Table 4. Major Paratransit Generators (2019)

Rank	Service	Destination Address	Destination Name	Annual Ride
1	Paratransit	2016 S Washington Street	Anne Carlson Center	6,061
2	Paratransit	1407 24th Ave S	L.I.S.T.E.N. Services	5,460
3	Paratransit	3880 S Columbia Rd	Development Homes	3,745
4	Paratransit	2105 Gateway Dr	Agassiz Enterprises	3,475
5	Paratransit	1211 10th Ave S	N/A	1,707
6	Paratransit	1405 Library Cir	Community Options North Dakota	1,539
7	Paratransit	2463 S 42nd St	Linden Place Apartments	1,437
8	Paratransit	2720 S 17th Street	N/A	1,401
9	Paratransit	101 Chestnut Street	N/A	1,372
10	Paratransit	1639 24th Ave S	Homestead Place	1,351
11	Paratransit	802 N 4th Street	Development Homes	1,291
12	Paratransit	1200 S Columbia Rd	Altru Hospital	1,260
13	Paratransit	1551 24th Ave S	N/A	1,243
14	Paratransit	615 Sherlock Pkwy	Sunshine Terrace Apartments	1,200
15	Paratransit	2401 36th Ave S	Ashland Apartment Complex	1,179
Total Paratransit Trips (2019)				42,218
% of Total Paratransit System				79.9%
% of Total Demand Response System (both Senior Rider and Paratransit)				51.7%

Senior Riders

Table 5 demonstrates the overall major origin-destination points for Senior Rider trips on the Demand Response system. The top 15 generators make up 62 percent of the total Senior Rider system and 21.8 percent of the total Demand Response system. The YMCA (number 6) and University Children's Center (number 10) are related almost exclusively to the Foster Grandparents Program. Figure 1 shows the major Senior Rider generators within the study area in relation to the existing CAT Fixed Route system. All but two major Senior Rider generators are adjacent to the current CAT Fixed Route system.

Table 5. Major Senior Ride Generators (2019)

Rank	Service	Destination Address	Destintation Name	Annual Ride
1	Senior	1451 44th Ave S	Altru South/Stadter Center	1,453
2	Senior	1200 S Columbia Road	Altru Hospital	1,367
3	Senior	620 4th Ave S	Grand Forks Senior Center	1,346
4	Senior	1224 Walnut St	Alcott Manor Apartments	1,104
5	Senior	3350 Cherry St	Valley Memorial Homes – Tufte Manor	1,087
6	Senior	215 N 7th Street	YMCA	1,003
7	Senior	1300 S Columbia Road	Altru Rehab	975
8	Senior	4440 S Washington Street	Altru South/Stadter Center	911
9	Senior	2551 32nd Ave S	Walmart Supercenter	874
10	Senior	525 Stanford Rd	University Children's Center/Housing Office	824
11	Senior	749 S 30th St	Edgewood Healthcare – Parkwood Center	749
12	Senior	2800 S Columbia Rd	Columbia Mall	684
13	Senior	524 N 17th Street	St. Anne's Guest Home	642
14	Senior	813 Lewis Blvd	Riverside Manor	618
15	Senior	5755 Gateway Dr	Walmart Supercenter	600
Total Senior Trips (2019)				22,965
% of Total Senior System				62%
% of Total Demand Response System (both Senior Rider and Paratransit)				21.8%

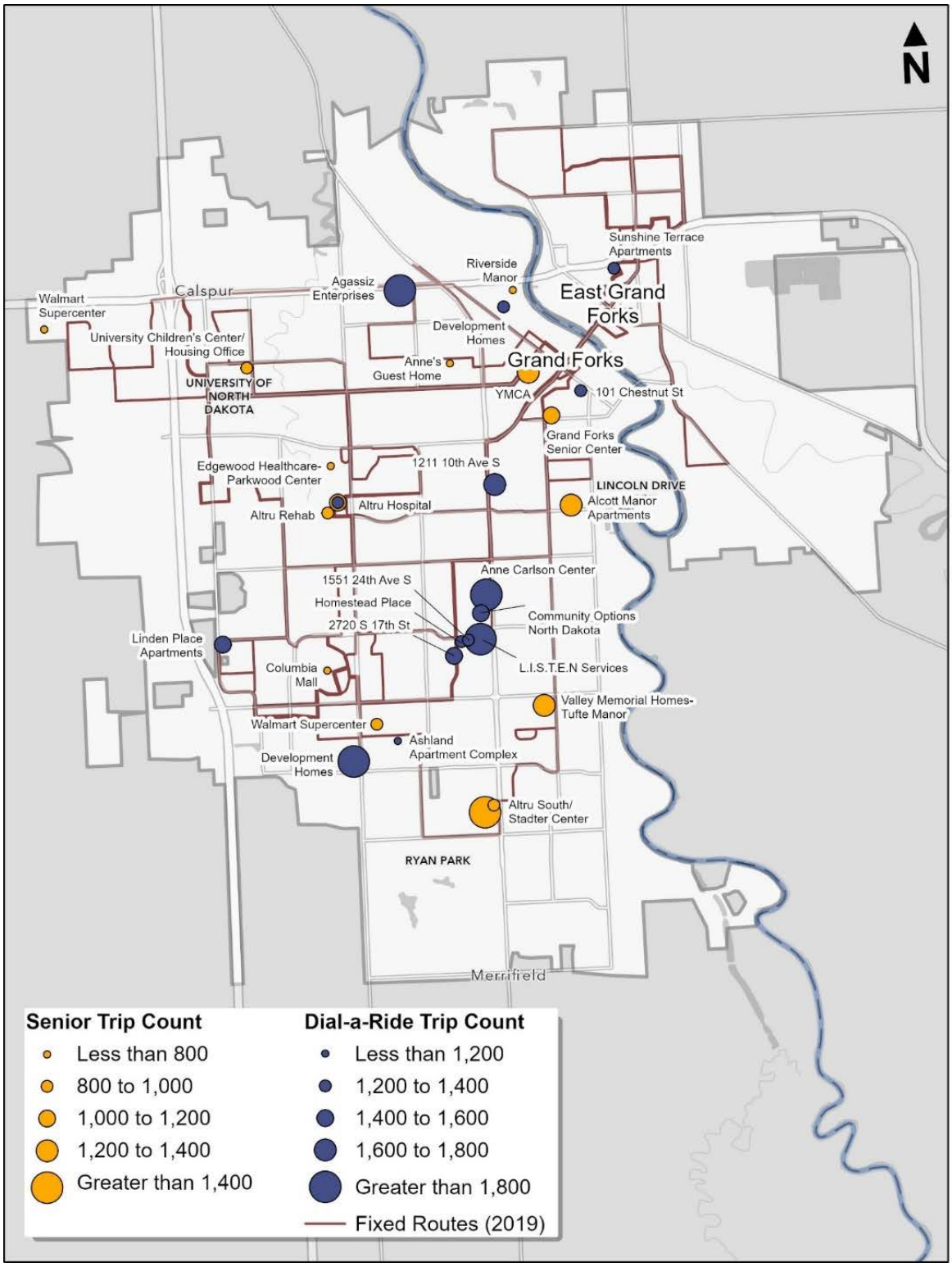


Figure 1. Major Demand Response Generators and the existing Fixed Route System

SYSTEM NEEDS AND ISSUES

Human Services Barriers

Previously Identified Barriers (2012 and 2017 CHSTP) and System Changes

As part of the public input process, the base set of transportation barriers from the 2012 and 2017 CHSTP were discussed and evaluated. Based on the input received from key stakeholders, including CAT and the MPO, those barriers were evaluated for development of an updated framework.

- **Information Gap:** A common barrier to accessing public transit is a simple lack of information about services provided. Many potential riders don't know where to get on the bus, how much it costs, etc.
- **Accessibility of Fixed Routes:** ADA requires accessibility to routes. Some routes and bus stops present difficulties to segments of the population who cannot overcome some physical barriers which are worsened during cold weather months.
- **Coverage Area**: A Fixed Route system necessarily has limited coverage capacity. Some areas of Grand Forks/East Grand Forks remain underserved.
- **Frequency of Service:** Frequency has a great impact on riders' lives. Waiting for a bus on a 30- or 60-minute headway can eat up significant portions of time and require users to schedule their lives around bus service.
- **Hours of Operation:** Current CAT Fixed Route service runs day routes from roughly 6 A.M. to 6 P.M. and night routes 3, 6 and 13 until 10 P.M. Saturday service is from 8 A.M. to 6 P.M., with nigh routes running until 10PM; there is no Sunday service. These hours present significant difficulties to potential users who work outside of traditional nine to five hours or have Sunday transportation needs.
- **Route Indirectness:** Related to coverage area, route indirectness creates barriers to riders who must sit through winding bus routes to reach their destinations.
- **Cost of Service:** Paying full cost will be perceived as too high for most users. Although fares are subsidized, many target users may still see fare prices as prohibitive.
- **System Interface (Marketing & Outreach):** The single most significant opportunity within the context of the CHSTP is the need to greatly improve outreach and marketing to targeted populations.
- **System Effectiveness:** An effective public transit system is critical to the quality of the transit dependent populations including the targeted populations.
- **System Performance & Operations:** For those most dependent on public transit systems, a well performing and operating public transportation system is the key to access employment, education and quality of life opportunities.
- **UND Coordination:** UND is a major transit generator, significant employer and the region's premier educational institution. Improved coordination and service options between CAT and UND can only serve to improve the overall mobility needs of targeted populations.
- **Capital Needs:** A critical need facing CAT will be sustaining capital inputs to support existing and potentially expanded service levels. Related to the targeted populations, the need to identify potential capital assets may also serve to improve mobility of these populations and also reduce demand on the Demand Response system.
- **Balancing System Needs:** Needs to grow the CAT system cover the full spectrum, including frequency of service, hours of service, days of service, etc. While investment in all these areas is not possible, thoughtful deliberation is needed to understand which of these investments may best serve the needs of the targeted populations.
- **Community Support:** As noted in early chapters, there has been an uptick in support for public transit in the Grand Forks-East Grand Forks area. The targeted populations, including those agencies and organizations who represent them, should be considered critical champions for increased support and investment in the public transit infrastructure.

System Changes Since the last CHSTP

Several changes were made since the last CHSTP was included in the 2017 Transit Development plan. These system changes are highlighted below and sought to address some of the issues listed previously.

- **Systemwide route changes (July 2018):** Adjustments were made to the fixed route service to improve connectivity to and address issues with coverage, frequency, and route indirectness. Some peak-hour frequencies were increased to better serve riders on the most popular routes. These changes to peak-hour service did not yield higher ridership for the system and were discontinued.
- **Relocation of the central transit hub from downtown to Grand Cities Mall:** This change addressed some missing capital needs and improved bus travel times and reliability.
- **Incorporation of UND campus bus services:** UND campus bus service is now operated by CAT and have improved coordination between the two entities, allowing for students and university employees to be better served by the entire system, and the general public to have better access to UND and their routes.
- **Integration of on-demand transit service in East Grand Forks:** This service was brought into the CAT system. Additionally, when the Route 12 saw a significant decline in ridership during the pandemic.

New Transit System Issues

As part of the engagement process, a focus group was held with agency and human services providers in which the following issues were highlighted as new or additional concerns regarding coordination of services. Insight was also gathered from project staff and the TDP Steering Committee. These issues are summarized below.

- **Existing Application Process:** The application process for people with disabilities to secure transportation is complicated and inaccessible. There are too many steps, the processing time is too long, and mailing-in an application is inconvenient.
- **Ride Scheduling:** The day-before schedule-ahead requirement is not feasible for many clients. A client may not know they need a ride until day-of (i.e., a client wakes up feeling unwell and needs to travel to a medical facility).
- **Technology Access:** Clients may not have phone and/or internet access, making the process to secure transportation difficult. An app is not always intuitive for clients, especially seniors, either.
- **Funding Coordination:** Many human services agencies have transportation assistance programs that reduce fares or provide bus passes for clients. However, these programs vary greatly, complicating funding coordination, and may not be the most financially sustainable for agencies.
- **Discussions About Transportation:** Transportation is not something human services agencies often consider when coordinating their services. Many have existing programs, but there is little transportation coordination with other agencies or with transportation agencies.
- **Agency Responsibilities:** Coordinating transportation services can be time-consuming for human services agency staff, and many have responsibilities outside of organizing transportation. This often results in transportation being a smaller priority for agencies.
- **Connections Beyond Grand Forks-East Grand Forks:** Human services agencies located outside of Grand Forks-East Grand Forks have a difficult time coordinating transportation to and from the cities. Additionally, Dial-A-Ride service is only provided for rides within the city limits of Grand Forks and East Grand Forks.

PROGRAM GUIDANCE

Having considered the range of most significant transit system issues and human service barriers, the following set of programmatic strategies that would serve to improve the overall transportation options for targeted populations. Further, these efforts would improve the dialogue among human service agencies and significant transportation providers in the Grand Forks-East Grand Forks area.

System Route Improvements

As CAT seeks to improve the fixed route system, the areas of frequency, service span, Sunday service, service area, and route connectivity were all considered. More detail will be provided in the recommendations section of the TDP. *Figure 2* shows how route changes could improve connection to frequently visited on-demand destinations. More information is provided in the Service Recommendations section of the TDP.

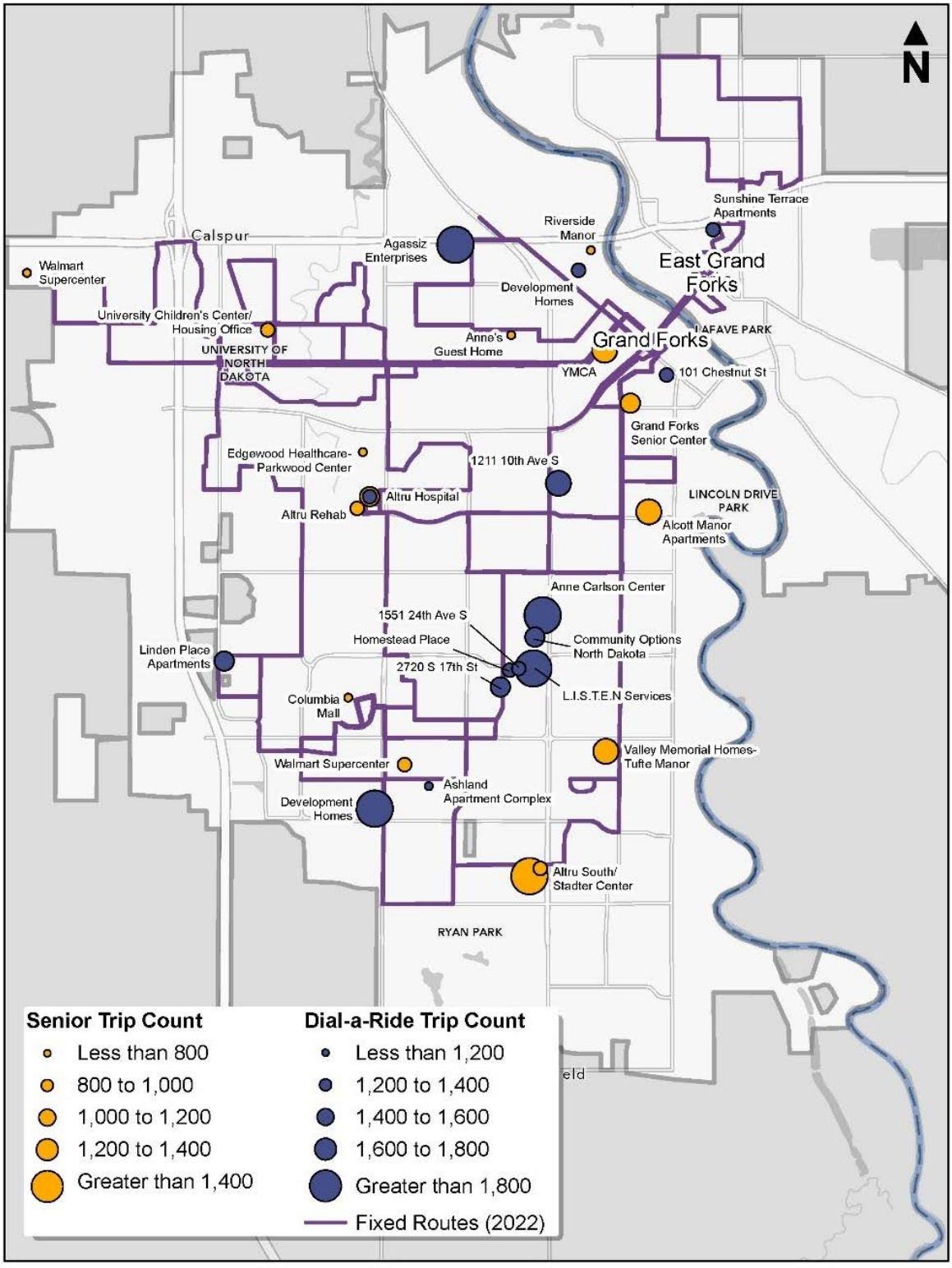


Figure 2. Major Demand Response Generators Ridership and Fixed-Route Changes

Microtransit Implementation

Implementation of microtransit could provide more cost-efficient service than the current demand response service by limiting unnecessary miles from the fixed route system. While less customized than curb-to-curb service that senior riders currently qualify for, it may still provide an appealing alternative that will provide service area coverage that is not currently possible with the current fixed routes. Since it would be offered to the general public, this service would eliminate the barrier of eligibility and the application process in cases of emergent needs for seniors and paratransit users. This service will continue to be studied by CAT and may have benefits for human services mobility and cost efficiencies for the system.

System Coordination

A major overall issue identified is the system coordination. A number of initiatives should be explored to improve outreach and marketing to disadvantaged populations within the larger community.

Establish Dedicated Senior/Paratransit Coordinator Role

To support coordination and the recommendations of this plan, a dedicated staff person should be assigned as a coordinator. A coordinator would be an employee of CAT who could serve as a contact person and liaison between the government entities and social service agencies. This role would help fill some of the coordination and staffing needs identified in the strategies listed below. They could work on continuous improvement of the system and monitoring progress of the recommendations of this plan. Given the existing staffing constraints, this role should be filled by existing staff with a plan to increase responsibility as staffing levels increase. Establishing a tiered plan for implementation is part of the prioritization section of this plan and could support the staff person in this role.

Annual "Major Users" Meetings

CAT should meet annually with the significant users of the Demand Response system, specifically those agencies and entities discussed earlier. These regular meetings provide for valuable information exchange on transportation needs and opportunities within the targeted populations in the larger community. Annual meetings would strike the right balance of serving the need to communicate across agencies while using time effectively for all.

Community Agency Networking Association

CAT should look to build upon the Community Agency Networking Association (CANA) to improve outreach and marketing to key agency representatives from critical user groups from the larger community. CANA is a consortium of local service agencies and organizations and provides a direct network of information sharing and resource coordination. These venues offer CAT and participating agencies an opportunity to review system operations and discuss efforts to better coordinate and streamline services to targeted populations.

Interagency Forum

Attend the regular monthly meetings of the Interagency Forum (IAF). The IAF is a consortium of local human and social service agencies from around the community. The venue is a great outreach opportunity, but also an opportunity to build consensus among key agencies on potential new strategies to improve and enhance all elements of CAT, specifically Demand Response.

Rural Transportation Collaborative

The Rural Transportation Collaborative (RTC) is a volunteer driver program focused on transporting rural residents to urban settings. CAT or MPO staff should increase coordination with the RTC operated by the Tri-Valley Opportunity Council and continue to attend regular meetings of the RTC.

Northwest Regional Transportation Coordination Council

The Northwest Regional Transportation Coordination Council works with transportation providers, human services, and the private sector to identify transportation barriers and solutions in northwestern Minnesota counties, including Polk

County. Project staff attended a meeting of the council to update them on this plan and should continue to coordinate with them as the plan is implemented.

Intercity Service Coordination

Triangle Coach Service and Jefferson Lines provide significant intercity bus services to-and-from East Grand Forks. Increased coordination with both entities is important to ensuring a match between transfers and to maximize the ability of CAT to integrate with both.

Targeted Marketing Materials and Communications

Directory of Transportation Services (Annual Update) - Print + Web

CAT and the MPO should develop a Directory of Specialized Transportation Services. The Directory would serve to provide a one stop reference of available transportation providers in the larger community. The Directory should be published in print and be made available online. This should be updated annually and could be reviewed at the annual "Major Users" meeting.

Senior and Paratransit Ride Guides

Provide updated ride guides and route information on the CAT System to key user groups such as senior citizens. Existing ride guides include a one-pager with general information and a comprehensive document for paratransit. *A* one-pager should be developed for paratransit and other senior transportation needs, which are typically focused on quality-of-life trips such a shopping, medical and social destinations. This guide could provide information on how to leverage the fixed route service to reach frequently visited destinations (*Figure 1*).

How to Ride Seminars

CAT should hold quarterly rider orientation meetings to assist agency clientele in learning about the CAT system. These "how to ride" seminars would be helpful in improving both case worker and client's familiarity with the public transit system. In some cases, these seminars would be helpful in communicating the variation in eligibility requirements for access to the Demand Response system and demonstrate how Fixed Route options may be more convenient for certain rider types. The seminar should be live-streamed, recorded and available online with an ADA accessible format, so it is available at any time.

Online Comment and Question Portal

Currently riders can communicate with CAT staff via email and phone in order to ask questions or provide feedback on the system. An online form should be established on CAT's website that could provide an opportunity for riders to provide questions, comments or concerns about the system. An online form would have the benefit of having an anonymous option and could also facilitate the organization and tracking of comments. These should be reviewed and if required, responded to regularly at an interval that is explicit on the website and manageable with current staffing levels (i.e., responses within one week of submission).

Eligibility and Screening

Eligible User Lists

CAT should incrementally review and recertify current registered paratransit users. Part of this effort would relate to the development of an expanded and more robust eligibility screening process to ensure those who need paratransit services are provided mobility options they require. At the same, an emphasis on certifications allows an opportunity for CAT to manage demand between Senior Ride, paratransit and the Fixed Route system more efficiently. These eligibility reviews need to be closely coupled with the previously mentioned marketing and outreach efforts to key agencies and constituents. Many specialized users such as seniors migrate immediately to the Senior Rider program without adequate consultation and consideration of the Fixed Route options that may better serve their needs. Increased education and awareness of Fixed Route options will assist in easing negative responses from potentially effected clients and agencies if more consistency and thoughtful eligibility certifications are implemented and communicated broadly. Providing riders with the correct eligibility also may help with funding and reimbursement.

Applications and Initial Screening

Public engagement revealed a concern from some organizations that the initial screening process was too complicated, time-intensive and prohibitive for emergent needs. The following are some improvements that could be made to the application process:

- Online form: CAT should create a form embedded on the website that will allow for easier digital access. While not all applicants will be able to complete an online form, this would make the process easier for staff that may provide assistance.
- Form questions: CAT should review the form and verify whether all information is explicitly needed for eligibility.
- Review process: CAT should audit the review process to identify if there are critical path steps that disproportionately slow the process.
- Emergent needs: CAT should consider options to provide rides prior to eligibility verification, by providing a temporary pass while the forms are processed. This solution should be costed out to determine what percentage of rides would then not be covered by funding and further funding will have to be sought outside of the existing areas.

Service and Program Development Coordination

Assuring the best use of funding and the balance of funding options is critical to this plan. Through the communications strategies listed above, CAT and the MPO can collaborate with area providers to support the allocation of funding in the best ways possible. These areas of funding include:

Capital and Operating Needs (Agencies)

CAT and the MPO should look to develop capital and operational support to improve service delivery systems for special needs populations. Several agencies within the Grand Forks-East Grand Forks area may benefit from access to funding to assist with both operational and capital funding. Funding for these programs could be sought through the FTA Section 5310 programs administered by both the NDDOT and the MnDOT. Additional options exist through the Community Development Block Grant (CDBG) Program administered by the City of Grand Forks.

Community Capital Assistance Program

A Community Capital Assistance Program (CCAP) could be developed to provide capital funding to agencies with a proven ability to improve mobility options for targeted populations. Additionally, the CCAP would be structured to support capital programs to benefit service providers who demonstrate an ability to reduce demand on Demand Response.

Coordinated Service Delivery Initiative

Like the CCAP, the Coordinated Service Delivery Initiative (CSDI) would look to allocate federal, state or local resources to provide coordinated transportation programs and services. Programs would be developed through existing or new provider consortiums aimed at developing more coordinated service delivery concepts. Prioritization would be given to

programs that serve to coordinate existing duplicated service or service initiatives which could reduce demand on the Demand Response system through more cost effectiveness delivery methods to key generators. Related to the current Tripper system, coordinating among potential benefiting agencies on a similar service either between CAT and related agencies or between related agencies would meet the intent of the CSDI.

Full Cost Allocation

The CHSTP is focused on outlining system improvements which will generally improve mobility options for the targeted populations discussed previously. Specifically, the framework focuses on understanding system alternatives to better maximize investments in the CAT Demand Response system. CAT is currently investing nearly a third of its resources into this system. To manage existing resources and to grow the overall CAT system, cost allocation strategies have been developed to capture new potential revenue from agencies who are currently utilizing CAT at a disproportionately high level.

Full cost allocation models look to partner with agencies who receive the benefit of CAT services for their clients but are not currently sharing in the cost of those services. As demonstrated earlier, a very small number of agencies are putting about 25 percent of the total demand for paratransit related usage of Demand Response. Additionally, programs such as Foster Grandparents (operated by Grand Forks County) place a measurable demand on the Senior Rider component of the CAT system. While full cost allocation options could be considered for medical related trips for certain skilled nursing facilities, those issues do not appear to be prevalent in the existing condition.

Agency Rates

Special focus for increased financial coordination and cooperative partnership should be aimed at agencies involved in Day Training & Habilitation (DT&H) related programs. As noted earlier, a large portion of the paratransit trip generation relates specifically back to DT&H provider transportation. Implementing a cost allocation model to the paratransit system could develop a two-tiered approach.

- Tier I of this effort would be to explore funding or financial partnerships with these agencies to assist in offsetting the cost of paratransit. When presented with the financial and operating limitations of CAT, agencies may be willing to look for funding cooperation more progressively. Further, this level of discussion between CAT and local agencies may reveal other options to cooperatively streamline service delivery methods and approach to reduce cost to CAT while maintaining acceptable levels of service to agencies and their clients.
- Tier II options would relate to the development of an Agency Rate for these organizations. Typically, agency rates are applied to agencies' transportation for individuals who otherwise qualify for human service or transportation-related programs or services due to disability, income or advanced aged coordination, consistent with Executive Order 13330, referenced earlier.

Pricing for agency rates can range anywhere from a full cost allocation of the ride to a price brokered between CAT and affected agencies. To effectively implement an agency rate, the following considerations should be closely reviewed:

- USC 49 Part 37.131 (c) – Agency fares are permissible, however must be tied to an agreement in which the transit agency is guaranteeing a certain number of rides at a certain rate.
- DT&H providers in North Dakota are not always provided transportation costs through the state, who administers Medicaid funding.
- North Dakota-based DT&H providers are not currently required to provide transportation to their clients. Therefore, North Dakota-based DT&H agencies may be hesitant, if not hostile, to the suggestion of an agency rate.
- Given Medicaid funding rules in Minnesota related to DT&H, Minnesota-based agencies may be more open to agency rates.

PROJECT PROGRAMMING AND PRIORITIZATION

Funding to Support the Mobility Management Framework

The following section of CHSTP provides an overview of the project programming and prioritization process for implementation of this element of the Transit Development: Section 5310, Section 5539, Section 5309, Community Development Block Grant (CDBG) and Community Service Block Grant (CSBG). These will be discussed in more detail in the financial plan section of this TDP

Project Prioritization

The following table (

Table 6) shows prioritization of the strategies listed above based on goals established for the CHSTP federally. The Top Priority Strategies are strategies that could be the first step, shorter-term actions (1-2 years). Secondary Priority Strategies include policies and programs that may require initial steps or more input from policymakers and could fit in a medium-term timeline (3-5 years).

Table 6. Strategy Prioritization

CHSTP Goals	Top Priority Strategies	Secondary Priority Strategies
Promote interagency cooperation and the establishment of appropriate mechanisms to minimize duplication and overlap of Federal programs and services so that transportation-disadvantaged persons have access to more transportation services.	> Dedicated Senior/Paratransit Coordinator Role > Annual "Major Users" Meetings > Capital and Operating Needs (Agencies)	> Interagency Forum > Rural Transportation Collaborative
Facilitate access to the most appropriate, cost-effective transportation services within existing resources.	> Directory of Transportation Services (Annual Update) - Print + Web > Senior and Paratransit Ride Guides	> Coordinated Service Delivery Initiative
Encourage enhanced customer access to the variety of transportation and resources available.	> How to Ride Seminars > Online Comment and Question Portal	> Intercity Service Coordination
Formulate and implement administrative, policy, and procedural mechanisms that enhance transportation services at all levels.	> Eligible User Lists > Applications and Initial Screening	> Community Capital Assistance Program

Grand Forks - East Grand Forks
TRANSIT DEVELOPMENT PLAN

GRAND FORKS – EAST GRAND FORKS

Transit Development Plan

Appendix 6: Capital Plan and Financial Plan

September 2022

Introduction

Project Overview

The Grand Forks-East Grand Forks Transit Development Plan (TDP) is a 10-year plan that provides a vision for transit in the community. Grand Forks – East Grand Forks' previous transit development plan was completed in 2017. The 2022 plan update will evaluate recent system improvements and has the following areas of focus:

- Integration of University of North Dakota (UND) campus bus routes
- New or improved fixed route, paratransit, and Senior Rider services
- Maintenance and growth of CAT ridership
- Fare, pass, or transfer policy changes to increase ridership or funding
- Transit fleet and technology recommendations
- Investments in capital improvements like buses, bus stop enhancements, and support equipment
- Support for existing and future CAT operations at transit facilities such as Midtown Transit Center and Metro Transit Center

Capital Plan

The purpose of this report is to document the Grand Forks – East Grand Forks Public Transit's existing capital assets as well as their replacement needs and future system capital needs. The capital plan will be used to identify the financial resources needed to purchase the capital assets necessary to keep the system in a state of good repair as well as those needed for system growth.

Existing Capital Assets

Vehicles

CAT has a fleet of 26 active vehicles, as shown in Table 1 and Table 2. The fleet is comprised of 14 fixed route vehicles and 12 demand response vehicles. All vehicles are accessible and feature bicycle racks. These vehicles are stored at the City Bus Garage and Administrative Office.

The fixed route fleet includes 11 heavy-duty buses, one light-duty bus, and two light-duty cutaway buses. The average age of the fleet is 5.8 years. This is slightly newer on average than the national average fleet age for buses, which is 7.4 years.[1] The conditions of the vehicles range between "Good" and "Excellent." Fixed route vehicles have a remaining service life ranging between 19 percent and 100 percent of the built service life.

[1] National Transit Database. National Transit Summaries and Trends 2019. Available online: https://www.transit.dot.gov/ntd

The demand response fleet includes 11 light-duty minivans and one light-duty van. The average age of the fleet is 2.9 years, which is similar to the national average of 2.7 years.[2] The conditions of the vehicles range between "Good" and "Excellent." Demand response vehicles have a remaining service life ranging between 19 percent and 100 percent of the built service life.

Table 1: Fixed Route Fleet Inventory

Fleet ID	Vehicle Type	Make/Model	Vehicle Year	Current Mileage	Useful Life (Months)	Actual Service (Months)	Remaining Months	Useful Life (Mileage)	Remaining Life (Mileage)
105	Bus	New Flyer D35LFR	2010	376,053	168	144	24	500,000	25%
106	Bus	New Flyer D35LFR	2010	404,746	168	144	24	500,000	19%
103	Bus	New Flyer DE35LFR	2010	372,799	168	156	12	500,000	25%
104	Bus	New Flyer DE35LFR	2010	381,397	168	156	12	500,000	24%
192	Cutaway Bus	Dodge Promaster	2016	39,937	120	84	36	150,000	73%
191	Cutaway Bus	Dodge Promaster	2016	36,312	120	84	36	150,000	76%
183	Bus	New Flyer Xcelsior	2018	58,805	168	60	108	500,000	88%
185	Bus	Xcelsior	2018	43,503	168	60	108	500,000	91%
193	Bus	Alexander Dennis Enviro - 200	2019	23,797	168	48	120	500,000	95%
194	Bus	Alexander Dennis Enviro - 200	2019	19,713	168	48	120	500,000	96%
201	Bus	New Flyer XD35	2020	5,563	168	36	132	500,000	99%
202	Bus	New Flyer XD35	2020	5,261	168	36	132	500,000	99%
203	Bus	New Flyer XD35	2020	4,944	168	36	132	500,000	99%
215	Bus	Dodge Promaster	2021	79	168	108	60	150,000	100%
Average				126,636	161	86	75	425,000	72%

[2] Ibid.

Table 2: Demand Response Fleet Inventory

Fleet ID	Vehicle Type	Make/Model	Vehicle Year	Current Mileage	Useful Life (Months)	Actual Service (Months)	Remaining Months	Useful Life (Mileage)	Remaining Life (Mileage)
172	Minivan	Dodge Grand Caravan	2017	76,622	96	96	0	100,000	23%
171	Minivan	Dodge Grand Caravan	2017	83,542	96	96	0	100,000	16%
196	Minivan	Braun Entervan	2019	12,290	96	60	36	100,000	88%
181	Minivan	Dodge Grand Caravan	2017	52,805	96	84	12	100,000	47%
182	Van	Ford Transit	2018	40,520	96	84	12	100,000	59%
198	Minivan	Braun Entervan	2019	19,845	96	60	36	100,000	80%
197	Minivan	Braun Entervan	2019	11,383	96	60	36	100,000	89%
195	Minivan	Braun Entervan	2019	14,087	96	60	36	100,000	86%
211	Minivan	Chrysler Voyageur	2021	1,435	96	48	48	100,000	99%
212	Minivan	Chrysler Voyageur	2021	2,890	96	48	48	100,000	97%
213	Minivan	Chrysler Voyageur	2021	20	96	48	48	100,000	100%
214	Minivan	Chrysler Voyageur	2021	14	96	48	48	100,000	100%
Average				26,288	96	66	30	100,000	74%

Facilities

CAT currently uses two facilities for its operations, further details can be found in Table 3. The Cities Area Transit Metro Transit Center Downtown facility serves as a bus transfer center, and the Grand Forks Cities Area Transit facility currently functions as a general-purpose maintenance facility/depot. Both facilities are owned by the City of Grand Forks. CAT has made several recent investments to improve facilities. In 2020, phase one of a two-part plan to improve the Cities Area Transit administrative, operations, and maintenance building was completed.

Table 3: Facility Inventory

Organization	Facility Name	Facility Type	Facility Class	Year Built	Condition Rating	Remaining Useful Life (Years)	Total Cost	Federal Share	Local Share
City of Grand Forks	Cities Area Transit Metro Transit Center Downtown	Bus Transfer Center	Bus Transfer Center	2000	Good	18	N/A	80%	20%
City of Grand Forks	Grand Forks Cities Area Transit	General Purpose Maintenance Facility/Depot	Maintenance	1978	Excellent	37	$5,180,441	80%	20%

Other Infrastructure

In addition to vehicles and facilities, CAT also several other capital assets, including heavy machinery, fare collection equipment, lighting, and cleaning tools necessary to maintain the CAT fleet in good condition and working order. Table 4 details the non-fleet assets. The condition of the equipment ranges from "Good" to "Excellent", and the average cost of the assets is $40,372.42. Federal grants, most notably Section 5339 funds, were used to purchase the equipment.

CAT has 49 bus shelters at stops, which provide a glass enclosed structure with benches that protects riders from the weather elements.

Table 4: Capital Equipment Inventory

DOT ID	Name	Equipment Type	Manufacturer	Production Year	Condition Rating	Funding Program	Total Cost	Federal Share	Local Share
101	2 - Man Scissors Lift	Shop Equipment	Skyjack	2019	Excellent	Section 5339 Urban	$12,912	80%	20%
102	Brake Mate Lifting Machine	Shop Equipment	Vehicle Inspection Systems, Inc	2019	Excellent	Section 5339	$13,459	80%	20%
103	Bus Wash	Bus Wash	Navigator	2017	N/A	Section 5339	$115,559	80%	20%
104	Fare Collection Equipment	Fareboxes	Genfare	2017	Good	Section 5339 Urban	$34,705	80%	20%
105	Fare Collection Project Costs	Fareboxes	RouteMatch	2016	Good	Section 5339 Urban	$36,350	80%	20%
106	Fare Collection System	Fareboxes	RouteMatch	2016	N/A	Section 5339 Urban	$86,840	80%	20%

DOT ID	Name	Equipment Type	Manufacturer	Production Year	Condition Rating	Funding Program	Total Cost	Federal Share	Local Share
107	Fare Collection System	Fareboxes	RouteMatch	2016	Good	Section 5339 Urban	$50,491	80%	20%
108	LED Shop Lights	Shop Equipment	RAB Lighting	2016	Good	Section 5339 Urban	$9,774	80%	20%
109	Tennant Floor Sweeper	Floor Sweeper	Tennant	2020	Excellent	Section 5339	$34,644	80%	20%
1010	Vane Air Compressor	Shop Equipment	Chaigo Pnuematic	2020	Excellent	Section 5339 Urban	$8,990	80%	20%
Average							$40,372		

Existing Capital Asset Replacement Needs

As capital assets age, they will need to be replaced to keep the agency in a state of good repair and to keep CAT running smoothly. Capital assets are eligible for federal funding from the FTA that provides 80 percent of the cost, in association with 20 percent of the cost from a local source.

Vehicles

As shown in Tables 1 and 2, of the existing fleet two demand response vehicles are beyond their useful life age, and a few fixed route and demand response vehicles are nearing their useful life in both age and mileage. Replacement of these vehicles will be critical to keep assets in a state of good repair and keep CAT service running smoothly.

A vehicle replacement schedule and associated costs were developed for the CAT fleet that extends through the ten-year horizon of this plan. As shown in Table 5, 20 vehicles in CAT's fleet of revenue vehicles, including fixed-route and demand-response vehicles, will reach their useful life benchmark (ULB) over the next 10 years. Of those 20 vehicles, six are 40' heavy duty buses and the remainder consist of the entire cutaway, minivan, and van fleets. Replacement of these vehicles is essential to maintaining a state of good repair (SGR) and to ensure reliable and high-quality service.

Fleet replacement costs are shown by year in Table 6 Replacement costs for each vehicle type are based on updated vehicle costs provided by MnDOT, which take into account recent inflation. Those replacement costs were inflated to year of expenditure (YOE) costs using a 4% annual inflation rate. The replacement schedule, if followed, will result in total expenditure of $5,308,946 over a ten-year timespan.

Table 5: Fleet Replacement Schedule by Year (Maintaining 40' Bus Fleet)

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total

Vehicle Type												
40' Bus Fleet	0	0	4	0	0	0	0	0	0	0	2	**6**
20' Bus Fleet (Cut-Away)	0	0	0	0	2	0	0	0	0	0	0	**2**
Mini-Vans	0	0	0	3	0	4	0	4	0	0	0	**11**
Van	0	0	0	0	1	0	0	0	0	0	0	**1**
All Vehicles	0	0	4	3	3	4	0	4	0	0	2	**20**

Table 6: Fleet Replacement Costs by Year (Maintaining 40' Bus Fleet)

Vehicle Type	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
40' Bus Fleet	$0	$0	$2,457,395	$0	$0	$0	$0	$0	$0	$0	$1,681,558	**$4,138,953**
20' Bus Fleet (Cut-Away)	$0	$0	$0	$0	$439,867	$0	$0	$0	$0	$0	$0	**$439,867**
Mini-Vans	$0	$0	$0	$161,980	$0	$233,597	$0	$252,659	$0	$0	$0	**$648,237**
Van	$0	$0	$0	$0	$81,890	$0	$0	$0	$0	$0	$0	**$81,890**
All Vehicles	$0	$0	$2,457,395	$161,980	$521,757	$233,597	$0	$252,659	$0	$0	$1,681,558	**$5,308,946**

Table 7 shows the replacement schedule if the 40' buses are replaced with cutaway buses once they reach their ULB. The difference in cost is reflected in Table 8. As shown in the tables, significant savings can be achieved as total fleet costs for replacement of the 40' bus fleet with cutaway vehicles equal $2,539,929 million for replacement of the 40' bus fleet with cutaway vehicles and that equates to under half of the total costs of purchasing new 40' buses (i.e., $5.3 million). While CAT staff has inquired about this potential transition of their fleet, further study of different service delivery models, including service, technology, and capital needs, will be required.

Table 7: Fleet Replacement Schedule by Year (Transitioning 40' Bus Fleet to 20' Bus Fleet)

Vehicle Type	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total

40' Bus Fleet	0	0	0	0	0	0	0	0	0	0	0	**0**
20' Bus Fleet (Cut-Away)	0	0	4	0	2	0	0	0	0	0	2	**8**
Mini-Vans	0	0	0	3	0	4	0	4	0	0	0	**11**
Van	0	0	0	0	1	0	0	0	0	0	0	**1**
All Vehicles	0	0	4	3	3	4	0	4	0	0	2	**20**

Table 8: Fleet Replacement Costs by Year (Transitioning 40' Bus Fleet to 20' Bus Fleet)

Vehicle Type	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
40' Bus Fleet	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
20' Bus Fleet (Cut-Away)	$0	$0	$813,363	$0	$439,867	$0	$0	$0	$0	$0	$556,572	**$1,809,802**
Mini-Vans	$0	$0	$0	$161,980	$0	$233,597	$0	$252,659	$0	$0	$0	**$648,237**
Van	$0	$0	$0	$0	$81,890	$0	$0	$0	$0	$0	$0	**$81,890**
All Vehicles	$0	$0	$813,363	$161,980	$521,757	$233,597	$0	$252,659	$0	$0	$556,572	**$2,539,929**

Facilities

The Grand Forks Cities Area Transit facility was built in 1978 and remodeled in 2019-2020. This two-phase project has initially added on 11,520 square feet to the facility. It is now in excellent condition and will be able to be of service for another 37 years. CAT consistently maintains its facilities to ensure a state of good repair and includes this in its overall operating budgets. This will be important to continue.

The other facility, Cities Area Transit Metro Transit Center Downtown, is a bus transfer center that has a remaining useful life of 18 years. While this facility continues to meet the needs of CAT, future budgets should consider additional improvements to or future replacement of this facility, given its growing age (the Federal Transit Administration estimates the useful life of transit facilities at 40 to 50 years).

Other Infrastructure

Currently existing other infrastructure are active and in good or excellent condition. However, these assets will need to be replaced over time as they age and on longer meet the needs of CAT operations and service. A list of CAT capital

equipment is shown in Table 9. All equipment is active and in good or excellent condition. However, these assets will need to be replaced over time as they age and may no longer meet CAT operations and service requirements. Useful life benchmarks for each asset in CAT's capital equipment list were identified using FTA Transit Economic Requirements Model (TERM) Lite ULB guidance. Using information in that database, it was possible to develop a capital replacement schedule for all equipment. Table 5 shows the purchase year, ULB, and recommended disposal year of all CAT capital equipment. Based on the identified ULBs, only the fare collection equipment purchased in 2017 is scheduled to reach its useful life over the next ten years. Replacement costs for the fare collection equipment are estimated to be $55,564 in 2029 YOE$.

Table 9: CAT Equipment Inventory – Useful Life Benchmarks (ULBs)

DOT ID	Purchase Year	Category	Equipment Name	Useful Life (Years)	Disposal Year
101	2019	Shop Equipment	2 - Man Scissors Lift	15	2034
102	2019	Shop Equipment	Brake Mate Lifting Machine	25	2044
103	2017	Bus Wash	Bus Wash	20	2037
104	2017	Fare Boxes	Fare Collection Equipment	12	**2029**
105	2016	Fare Boxes	Fare Collection Project Costs	20	2036
106	2016	Fare Boxes	Fare Collection System	20	2036
107	2016	Fare Boxes	Fare Collection System	20	2036
108	2016	Shop Equipment	LED Shop Lights	25	2041
109	2020	Floor Sweeper	Tennant Floor Sweeper	25	2045
1010	2020	Shop Equipment	Vane Air Compressor	25	2045

Future Capital Assets Needed to Accommodate Service Growth

Other Capital Needs – Service Recommendations

New Route 17

In the 2017 Grand Forks-East Grand Forks TDP, Route 12 was identified as the least effective route in CAT's system, having the lowest ridership and highest cost per passenger trip, $39.07. In the short-term, discontinuing Route 12 in favor of an on-demand service that provides connection to Route 6 can provide a means for improving the overall effectiveness of the CAT system. In addition, CAT has proposed the addition of Route 17 to their fixed-route system which would serve the proposed Industrial Park Micro Transit Zone. CAT can implement this new route without purchasing a new expansion vehicle by reallocating Route 12 equipment (i.e., one bus) to operation of the new on-demand service.

Bus Stop Improvements and Safe and Accessible Paths

Providing increased space and accessible paths within roadway right-of-way for bus stops and passenger amenities enhances access to transit and improves customer satisfaction levels as CAT, Grand Forks MPO, and other agency partners undertake roadway improvement projects. CAT should collaborate with partners to develop and maintain a cohesive inventory of transit assets including, but not limited to, bus stop locations, route maps, accurate timetables, and amenities.

Furthermore, it is recommended that CAT identify non-compliant bus stop locations (i.e., Americans with Disabilities Act [ADA]) in the bus stop inventory and prioritize the construction of ADA-compliant bus boarding pads, passenger amenities such as benches and shelters, and accessible paths. Improvements specific to ADA accessibility will ensure equitable access for all CAT patrons. To transition to a fully compliant network of bus stops, ADA accessible bus stops can first be placed at high ridership locations or at bus stops frequented by persons with disabilities.

Based on public engagement with CAT patrons and other community stakeholders, providing a comfortable means of accessing bus stops is essential for patrons heavily reliant on non-motorized travel to access transit. Accessible paths can consist of sidewalk connections to existing pedestrian and bicycle facilities, or even the nearest driveway, at a minimum. Street crossings can further benefit from signalization and street markings that facilitate safe pedestrian movements and that designate roadway space for pedestrian and bicycle travel. CAT plans to work further with the Grand Forks-East Grand Forks MPO and other community partners to prioritize improvements in the bicycle and pedestrian network to enhance connections to existing transit lines.

Bus Stop Construction Costs

Table 10 provides a range of cost estimates, low and high-cost estimates, for the design and construction of bus shelters along with a range of pricing for various stop amenities. The design and engineering costs are based on peer-reviewed information from other small and large transit agencies. Stop amenity costs reflect 2022 pricing obtained for Buy America compliant bus stop infrastructure collected from multiple transit shelter vendors.

Table 10: Cost Estimates for Bus Shelter Design/Construction and Amenities

Cost Component	Design/Construction		Stop Amenities	
	Low	High	Low	High
Design/Engineering*	$8,700	$15,400		
Construction	$7,300	$19,700		
Installation			$0	$3,500
Shelter			$3600 (8' x 3')	$9300 (12' x 5')
Lighting Package (Interior)			$900	$1,700
Solar Powered Light Post			$1,100	
Map/Schedule Frame			$100	
Bench			$300	$1,000
Trash Receptacle			$500	$700
Bike Rack	$300	$300	$300	$400
Total	**$16,000**	**$38,600**	**$6,700**	**$14,300**

*Source: *Design/Engineering: High – PalmTran (Palm Beach County, FL). Low – SunTran (Ocala, FL)*

Zero Emission Buses and Solar Additions to Facilities

CAT is currently looking towards transitioning to a zero-emission vehicle fleet and aims to explore feasibility through a Zero Emission Fleet Transition Plan. The Zero Emission Transition Plan is essential for CAT and other transit agencies to be able to apply for various Federal Transit Administration (FTA) grants that support the transition to zero or low-emission fleets and other related infrastructure and facilities. The Bipartisan Infrastructure Law, as enacted in the infrastructure Investment and Jobs Act (IIJA), reauthorized surface transportation programs for FY 2022-2026. The law authorizes up to $108 billion to support federal public transportation programs, including $91 billion in guaranteed funding. Table 11 shows the grant programs. Transit agencies transitioning towards low and zero-emission vehicles and facilities can apply for such as the Grants for Buses and Bus Facilities Formula Program – 5339(a), Grants for Buses and Bus Facilities Competitive Program - (49 U.S.C. 5339(b)), and the Low and No-Emission Vehicle Program – 5339(c).

Table 11: FTA Grants Available to Support Zero and Low-Emission Vehicle and Infrastructure

Program Name	Funding Type	Federal Match	Eligible Activites
Grants for Buses and Bus Facilities Formula Program - 5339(a)	Formula	N/A	Capital projects to replace, rehabilitate, and purchase fleet inventory or other transit-related equipment and construct transit-related facilities including innovations that modify low or no-emission vehicles or facilities
Grants for Buses and Bus Facilities Competitive Program - (49 U.S.C. 5339(b))	Competitive	Up to 85% if purchasing or leasing low or no- emission transit buses, up to 90% if acquiring or leasing low- or no- emission bus-related equipment and facilities, and up to 80% for all other activities	Capital projects to replace, rehabilitate, and purchase fleet inventory or other transit-related equipment and construct transit-related facilities including innovations that modify low or no-emission vehicles or facilities
Low and No-Emission Vehicle Program - 5339(c)	Competitive	Up to 85% if purchasing or leasing low or no- emission transit buses, up to 90% if acquiring or leasing low- or no- emission bus-related equipment and facilities	Purchase or lease of low or no-emission buses, acquisition of low or no-emission buses with a leased power source, construction or lease of facilities and related equipment (including intelligent technology and software) for low or no-emission buses, or rehabilitation or enhancement of existing public transportation facilities to accommodate low or no-emission buses. 0.5% of a request may be for workforce training and an additional 0.5% for trainings at the National Transit Institute (NTI)

Source: (https://www.transit.dot.gov/funding/grants/busprogram, https://www.transit.dot.gov/bus-program, https://www.transit.dot.gov/lowno)

The Grants for Buses and Bus Facilities Formula Program – 5339(a) provides funding through a statutory formula to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities. These funds can be used for eligible activities such as fleet and equipment replacement. This includes any transit agency efforts that transition fleets and facilities towards low or zero-emission infrastructure.

In addition to the Formula Grant Program, transit agencies transitioning towards low and zero-emission vehicles and facilities can apply to two additional competitive grant programs. The Grants for Buses and Bus Facilities Competitive Program (49 U.S.C. 5339(b)) provides federal resources for transit agencies to replace and rehabilitate bus fleets and related equipment, including technological changes that that modify low or no emission vehicles and facilities. The Low and No-Emission Vehicle Program – 5339(c) also provides funding for the purchase or lease of buses, facilities, technology, and rehabilitation or enhancement of public transportation facilities relating to low or no-emission buses. Agencies can request an additional 0.5% of funding for workforce training and another additional 0.5% for workforce trainings at the National Transit Institute (NTI).

Importantly, a key eligibility requirement for the FTA 5339(c) program is the preparation of a "Zero-Emission Fleet Transition Plan." Requirements for Fleet Transition Plans are detailed by the Federal Transit Administration (FTA). Transition Plan development costs are ineligible to be covered under the Buses and Bus Facilities or Low-No Programs but are eligible through planning programs (49 U.S.C. § 5305), along with the urbanized area formula (49 U.S.C. § 5307) and rural area formula (49 U.S.C. § 5311) programs. It is recommended that CAT develop a Zero-Emission Fleet Transition Plan to be eligible for FTA grants related to low or zero-emission fleets and infrastructure.

Transit Hub Improvements

CAT operates transit hub facilities at Columbia Mall, Grand Forks Mall and at Metro Transit Center (MTC). While the MTC serves as the central transit hub for CAT's system, Columbia Mall and Grand Forks Mall serve as essential hubs for many of the system's routes. Currently, proposed enhancements to all three centers are intended to improve overall operations and accessibility. A summary of enhancements for the Columbia Mall and Grand Forks Mall transit center locations includes the following:

- **Columbia Mall**: Parking space directly east of JCPenney's entrance is proposed to be repurposed as a more robust transit hub including shelters, shaded areas, enhanced ADA accessibility, and crosswalk connections.

  Preliminary cost estimate: **$236,200**

- **Grand Forks Mall**: Similar plans to enhance shading, ADA accessibility, pedestrian connections are proposed. Preliminary cost estimates for enhancements

  Preliminary cost estimate: **$102,900**

Financial Plan

The financial plan is a critical component of the Transit Development Plan that examines the system's current finances, identifies any ongoing funding challenges, and lays out a plan to fund the system over the next 10 years.

CURRENT REVENUES AND EXPENSES

Revenue Profile

Funding for the CAT system is currently made up of a variety of federal, state, and local sources. An evaluation of local, state, and federal funding was completed based on the Transportation Improvement Programs (TIPs) for the Grand Forks – East Grand Forks Metropolitan Planning Organization (GF-EGF MPO). The first year in each TIP was evaluated for the years 2017 to 2021 and used to provide an annual average based on the five years of inputs for both operational and capital funding.

Funding has been split out for the Grand Forks and East Grand Forks systems separately. This provides for the ability to understand the unique funding mixes for each system.

Table 1.1 – System Revenue Profile CAT System - (By Source)

East Grand Forks			
	Revenue	**% City**	**% of System**
Local	$119,000	15%	3%
State	$502,000	62%	12%
Federal	$191,000	24%	4%
Subtotal	**$812,000**		**19%**
Grand Forks			
	Revenue	**% City**	**% of System**
Local	$1,426,000	41%	33%
State	$249,000	7%	6%
Federal	$1,770,000	51%	42%
Subtotal	**$3,445,000**		**81%**
Total	**$4,257,000**		**100%**

Note: State funding for East Grand Forks includes MN State Transit Formula Funds.

Current Expenses

An evaluation of Grand Forks Budget Performance Reports was conducted based on the years 2018-2021. This evaluation provides a baseline expense profile for each component of Cities Area Transit (CAT) Transit System. Expenses were isolated into three primary categories: Labor, Operations & Maintenance (O&M) and Capital.

Table 1.2 – Expense Profiles – CAT System (by city)

Fixed Route			
Account*	Cost Center	Total	
400, 401, 402,	Labor	$1,785,326	
410, 415, 420-460	O & M	$728,056	
		$2,513,382	Subtotal - Operations
700	Capital	**$1,053,650**	Subtotal Capital
		$3,567,032	**Total - Fixed Route**
Demand Response			
Account*	Item	Total	
400-402	Labor	$1,126,000	
410, 415, 430-460	O & M	$169,326	
		$1,295,326	Subtotal - Operations

700	Capital	$179,683	Subtotal - Capital
		$1,475,683	Total – Demand Response
		$5,042,041	Total

** Grand Forks Budget Performance Reports (2018-2021)*

FUTURE FUNDING FORECASTS

Financial forecasts are needed to support the update of the Grand Forks Transit Development (TDP). Historical data for the year 2017 to 2025 was used to assist with understanding revenue trends supporting transit operations for Cities Area Transit (CAT). Additionally, changes in urbanized area funding are imminent based on the Bipartisan Infrastructure Law (BIL). Specifically, the impacts of BIL on the Federal Transit Administration (FTA) Urbanized Area Formula Program, Section 5307, need to be accounted for with the TDP update. The results of the 10-year revenue forecast are shown in Table 1.3.

Federal

Section 5307 – Urbanized Area Funds

These funds are apportioned to designated recipients by the Federal Transit Administration (FTA). In the case of the Grand Forks - East Grand Forks MPO area, funds are apportioned to both Grand Forks and East Grand Forks. Section 5307 funds providing ongoing operations funding for the system, and also may be used to implement small scale programmatic and marketing efforts to aid implementation of the TDP.

Section 5307 apportionments under BIL are projected to grow by about 5%. However, a more conservative estimate of 2% is proposed. This rate is lowered also so it can be applied across the life of the 10-year projection, whereas the BIL only goes through 2026. However, several newer operations and capital programs come into play with BIL, for which estimating the impact on the CAT are not yet possible, so this 2% forecast could in fact be low when the full impact of BIL is more fully understood especially on capital programs such as Section 5339, etc. Therefore a 2% growth seems appropriate. For comparison, under the FAST Act (FY 2015-2019) the rate of growth in the 5307 programs would have been about 2%.

The 2% forecasts should apply equally to both the Grand Forks and East Grand Forks system revenues for Federal funds.

State

State funding for public transit is different between both Minnesota and North Dakota. Looking at historic trends and current budget outlooks for both state two separate growth are proposed for State revenue to the CAT System.

East Grand Forks

A 3% growth is proposed based on both historic trends and likelihood that MnDOT will enhance funding for transit operators based on the impacts of the BIL and state revenue projections over the next several years. This rate is slightly higher than roughly 2% growth in state transit funding provided through MnDOT to East Grand Forks over the past five years.

Grand Forks

State aid for public transit in North Dakota has grown slowly in recent years and has been a small part of the overall funding for Grand Forks share of CAT. Therefore, we are proposing only a 1.5% growth rate in North Dakota State Aid for public transit. This rate roughly follows historic trends about 1.4%.

Local

Local funding for transit will be set at 2% growth rate for both Grand Forks and East Grand Forks. This should be seen as the bare minimum needed to match anticipated increases in Federal funds under BIL. In fact, later stages of the TDP may identify the need to recommend greater increases in local funding assumptions to meet gaps in either local match or publicly desired services levels.

Stimulus Funding

Recent one-time awards from the CARES Act and ARPA were excluded from the financial analysis. East Grand Forks currently has approximately $110,000 in unused ARPA funds and no remaining CARES funds. Grand Forks currently has $600,0000 in ARPA and $750,000 in remaining CARES funds. Assumptions regarding expenditures of these funds will be coordinated into the development of TDP financial forecasts.

Table 1.3 – 10 Year Revenue Forecast by System and Source

East Grand Forks				YoY Inflation rate	East Grand Forks								
	Revenue	% City	% of System		10 Year Revenue Forecast								
2022					2023	2024	2025	2026	2027	2028	2029	2030	2031
Local	$119,000	15%	3%	2%	$121,380	$123,808	$126,284	$128,809	$131,386	$134,013	$136,694	$139,427	$142,216
State	$502,000	62%	12%	3%	$517,060	$532,572	$548,549	$565,005	$581,956	$599,414	$617,397	$635,919	$654,996
Federal	$191,000	24%	4%	2%	$194,820	$198,716	$202,691	$206,745	$210,879	$215,097	$219,399	$223,787	$228,263
Subtotal	**$812,000**	**100%**	**19%**		**$833,260**	**$855,096**	**$877,523**	**$900,559**	**$924,221**	**$948,525**	**$973,489**	**$999,133**	**$1,025,475**
Grand Forks				**YoY Inflation rate**	**Grand Forks**								
	Revenue	**% City**	**% of System**		**10 Year Revenue Forecast**								
2022					**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Local	$1,426,000	41%	33%	2%	$1,454,520	$1,483,610	$1,513,283	$1,543,548	$1,574,419	$1,605,908	$1,638,026	$1,670,786	$1,704,202
State	$249,000	7%	6%	1.50%	$252,735	$256,526	$260,374	$264,280	$268,244	$272,267	$276,351	$280,497	$284,704
Federal	$1,770,000	51%	42%	2%	$1,805,400	$1,841,508	$1,878,338	$1,915,905	$1,954,223	$1,993,307	$2,033,174	$2,073,837	$2,115,314
Subtotal	**$3,445,000**	**100%**	**81%**		$3,512,655	$3,581,644	$3,651,995	$3,723,733	$3,796,886	$3,871,482	$3,947,551	$4,025,120	$4,104,220
System Total	**$4,257,000**		**100%**		**$4,345,915**	**$4,436,740**	**$4,529,518**	**$4,624,292**	**$4,721,107**	**$4,820,007**	**$4,921,040**	**$5,024,253**	**$5,129,695**

FUTURE EXPENSE FORECASTS

Based on recent inflation trends, as well as historic data, expenses are forecast to increase an average Results from applying the recommended inflation rates to *Expense* totals by mode (CAT System profile Table 1.2 - *Fixed Route and Demand Response*) are shown in Tables 1.4 and 1.5.

Operating Expenses (Costs) per Vehicle Revenue Hour (VRH)

Using National Transit Database (NTD) CAT System profile data, the forecasted *Operations (Subtotal) Expenses for each year* (*Operating Costs, *excluding Capital Expenses*) were divided by an average *Annual Vehicle Revenue Hours* (AVRH) for *Fixed Route* (27,325 AVRH) and *Demand Response* (22,518 AVRH). The averaged AVRH provided the baseline to

generate *Operating Expenses* (Costs) *per Vehicle Revenue Hour* (VRH) for the years 2013 to 2020. Overall, *Operating Expenses (Costs)* for *Fixed Route* are higher than *Demand Response* by a range of approximately $35 to $50 per *Vehicle Revenue Hour* (VRH), over the years 2013 to 2020. Note that *Cost per VRH* increases in-line with the calculated 4% YoY inflation rate for all expense categories.

Fixed Route Cost per VRH

Based on 2022 **Operating Costs* and the *Fixed Route* baseline average of 27,325 AVRH per year, current 2022 *Fixed Route Expense* (Cost) *per VRH* is $91.98. At the midpoint forecast in 2026, *Cost per VRH* increases to $107.60, and to $130.92 in 2031. Over the ten-year forecast period, the Fixed Route *Cost per VRH* increases approximately $39.00. Refer to Table 1.4.

Table 1.4 - Forecasted Expenses: Fixed Route

Fixed Route Expenses (10 yr. Forecast): *Assumes inflation factor of 4% YoY*											
Year		2022 (*Baseline)	2023	2024	2025	2026	2027	2028	2029	2030	2031
Account	Cost Center	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
All Accounts	Labor	$1,785,326	$1,856,739	$1,931,009	$2,008,249	$2,088,579	$2,172,122	$2,259,007	$2,349,367	$2,443,342	$2,492,209
All Accounts	O & M	$728,056	$757,178	$787,465	$818,964	$851,723	$885,791	$921,223	$958,072	$996,395	$1,036,251
	Operations (Subtotal)	$2,513,382	$2,613,917	$2,718,474	$2,827,213	$2,940,301	$3,057,914	$3,180,230	$3,307,439	$3,439,737	$3,577,326
All Accounts	Capital (Subtotal)	$1,053,650	$1,095,796	$1,139,628	$1,185,213	$1,232,621	$1,281,926	$1,333,203	$1,386,532	$1,441,993	$1,499,672
Total - Fixed Route		$3,567,032	$3,709,713	$3,858,102	$4,012,426	$4,172,923	$4,339,840	$4,513,433	$4,693,971	$4,881,730	$5,076,999
Fixed Route: Forecasted Operating Expenses *(Cost) per Vehicle Revenue Hours*		$91.98	$95.66	$99.49	$103.47	$107.60	$111.91	$116.39	$121.04	$125.88	$130.92
Fixed Route: Averaged *Annual Vehicle Revenue Hours* (AVRH)		27,325									

Demand Response Cost per VRH

Based on 2022 **Operating Costs* and the *Demand Response* baseline average of 22,518 AVRH per year, current 2022 *Demand Response Expense* (Cost) *per VRH* is $57.52. At the midpoint forecast in 2026, *Cost per VRH* increases to $67.29, and to $81.87 in 2031. Over the ten-year forecast period, the *Demand Response Cost per VRH* increases approximately $24.00. Refer to Table 1.5.

Table 1.5 – Forecasted Expenses: Demand Response

Demand Response Expenses (10 yr. Forecast): *Assumes inflation factor of 4% YoY*										
Year	2022 (*Baseline)	2023	2024	2025	2026	2027	2028	2029	2030	2031

Account	Cost Center	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
All Accounts	Labor	$1,126,000	$1,171,040	$1,217,882	$1,266,597	$1,317,261	$1,369,951	$1,424,749	$1,481,739	$1,541,009	$1,602,649
All Accounts	O & M	$169,326	$176,099	$183,143	$190,469	$198,087	$206,011	$214,251	$222,821	$231,734	$241,004
	Operations (Subtotal)	$1,295,326	$1,347,139	$1,401,025	$1,457,066	$1,515,348	$1,575,962	$1,639,001	$1,704,561	$1,772,743	$1,843,653
All Accounts	Capital (Subtotal)	$179,683	$186,871	$194,345	$202,119	$210,204	$218,612	$227,357	$236,451	$245,909	$255,745
Total - Demand Response		$1,475,009	$1,534,010	$1,595,370	$1,659,185	$1,725,552	$1,794,574	$1,866,357	$1,941,012	$2,018,652	$2,099,398
Demand Response: Operating Expenses *(Cost) per Vehicle Revenue Hour*		$57.52	$59.82	$62.22	$64.71	$67.29	$69.99	$72.79	$75.70	$78.73	$81.87
Demand Response: Averaged *Annual Vehicle Revenue Hours* (AVRH)		22,518									

Combined System Expenses

Based on 2022 **Operating Costs* and the *Combined System* baseline average of 49,842 AVRH per year, current 2022 *Combined System Expense* (Cost) *per VRH* is $76.42. At the midpoint forecast in 2026, *Cost per VRH* increases to $89.40, and to $108.76 in 2031. Over the ten-year forecast period, the *Combined System Cost per VRH* increases approximately $33.00.

Additionally, Total System Wide Expenses (excluding capital costs), increase $1.6 million over the 10-year forecast period from $3.8 million in 2022, to 4.5 million at the midpoint in 2026, to $5.4 million in 2031. Refer to Table 1.6.

Table 1.6 – Forecasted Total System Expenses

Combined System Expenses: Excluding Capital - (10 yr. Forecast): *Assumes inflation factor of 4% YoY*										
Year	2022 (*Baseline)	2023	2024	2025	2026	2027	2028	2029	2030	2031
TOTAL EXPENSES	$3,808,708	$3,961,056	$4,119,499	$4,284,279	$4,455,650	$4,633,876	$4,819,231	$5,012,000	$5,212,480	$5,420,979
TOTAL: Operating Expenses *(Cost) per Vehicle Revenue Hour*	$76.42	$79.47	$82.65	$85.96	$89.40	$92.97	$96.69	$100.56	$104.58	$108.76
TOTAL: Averaged *Annual Vehicle Revenue Hours* (AVRH)	49,842									

Summary

Over the 10-year financial plan period, operating expenses are increasing faster than system revenues. This is forecasted to result in an operating shortfall by the year 2029 if not corrected. Additional sources of local funding may be necessary to shore up system finances if expenses continue to increase at the forecasted rates.

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Total Revenues	$4,257,000	$4,345,915	$4,436,740	$4,529,518	$4,624,292	$4,721,106	$4,820,007	$4,921,040	$5,024,253	$5,129,694
Total Expenses	$3,808,708	$3,961,056	$4,119,498	$4,284,278	$ 4,455,649	$4,633,875	$4,819,230	$5,011,999	$5,212,479	$5,420,979
Surplus/Shortfall	$448,292	$384,858	$317,241	$245,239	$168,642	$ 87,230	$776	$(90,959)	$(188,226)	$(291,284)