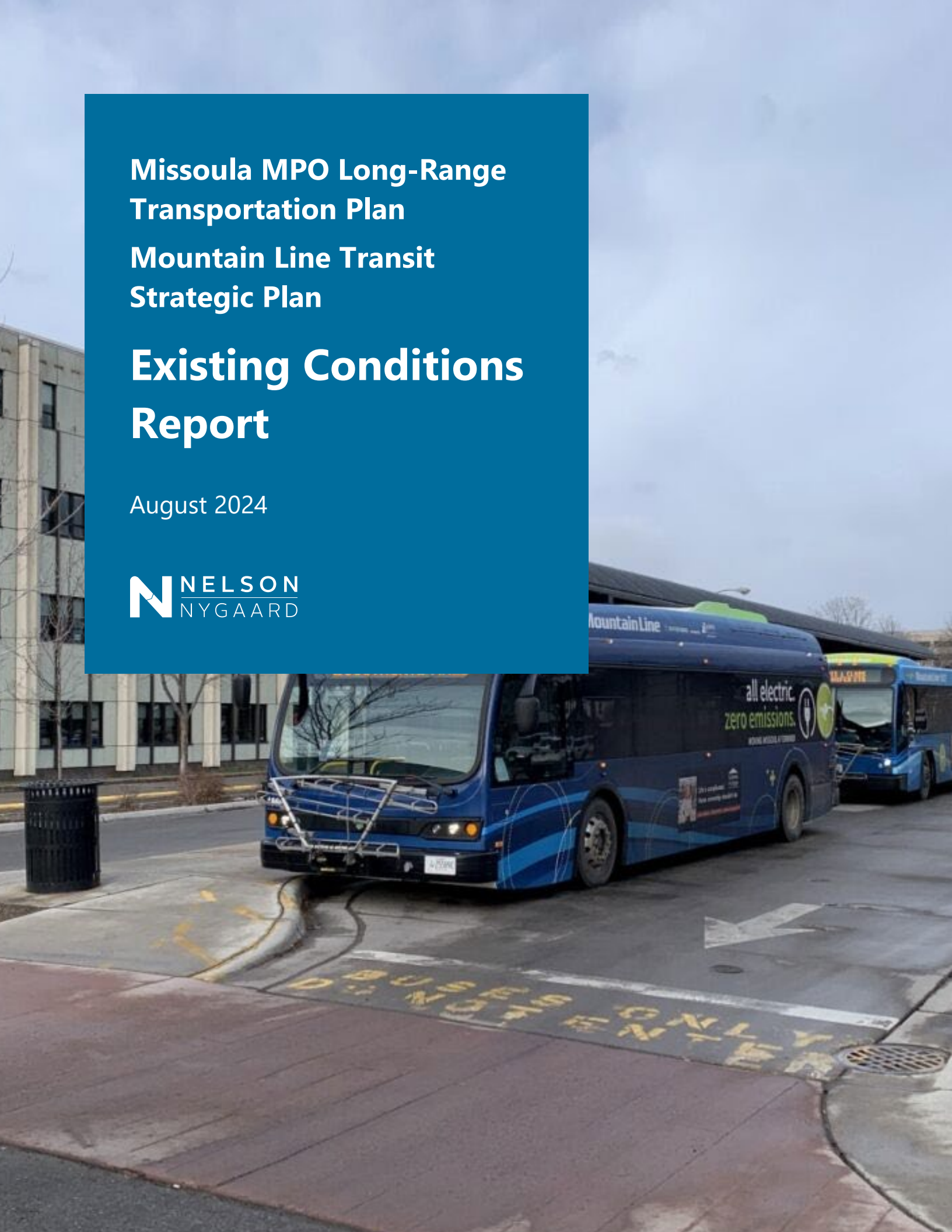

Missoula MPO Long-Range Transportation Plan

Mountain Line Transit Strategic Plan

Existing Conditions Report

August 2024

NELSON NYGAARD

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1 INTRODUCTION

INTRODUCTING THE ORGANIZATIONS

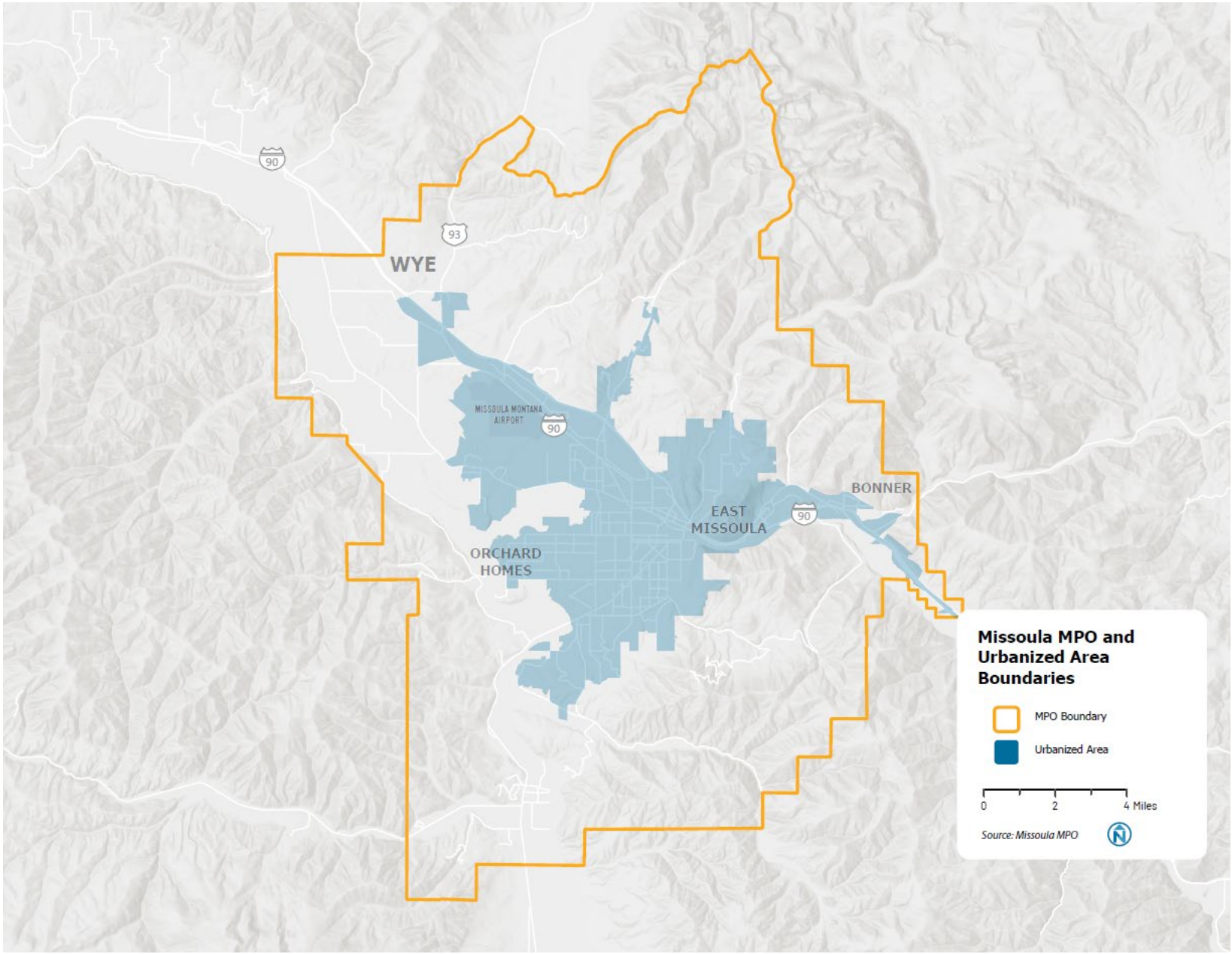
Who is the Missoula MPO?

The Missoula Metropolitan Planning Organization (MPO) works to plan a safe transportation network for the Missoula area to ensure our home has comprehensive, cooperative, and connected transportation systems. The Missoula MPO was formed over 40 years ago, after the region surpassed more than 50,000 residents following the 1980 Census. Today, the MPO is responsible for long-range planning and programming of federal transportation funds within the Missoula area. The MPO's boundaries are shown in Figure 1-1.

Who is MUTD?

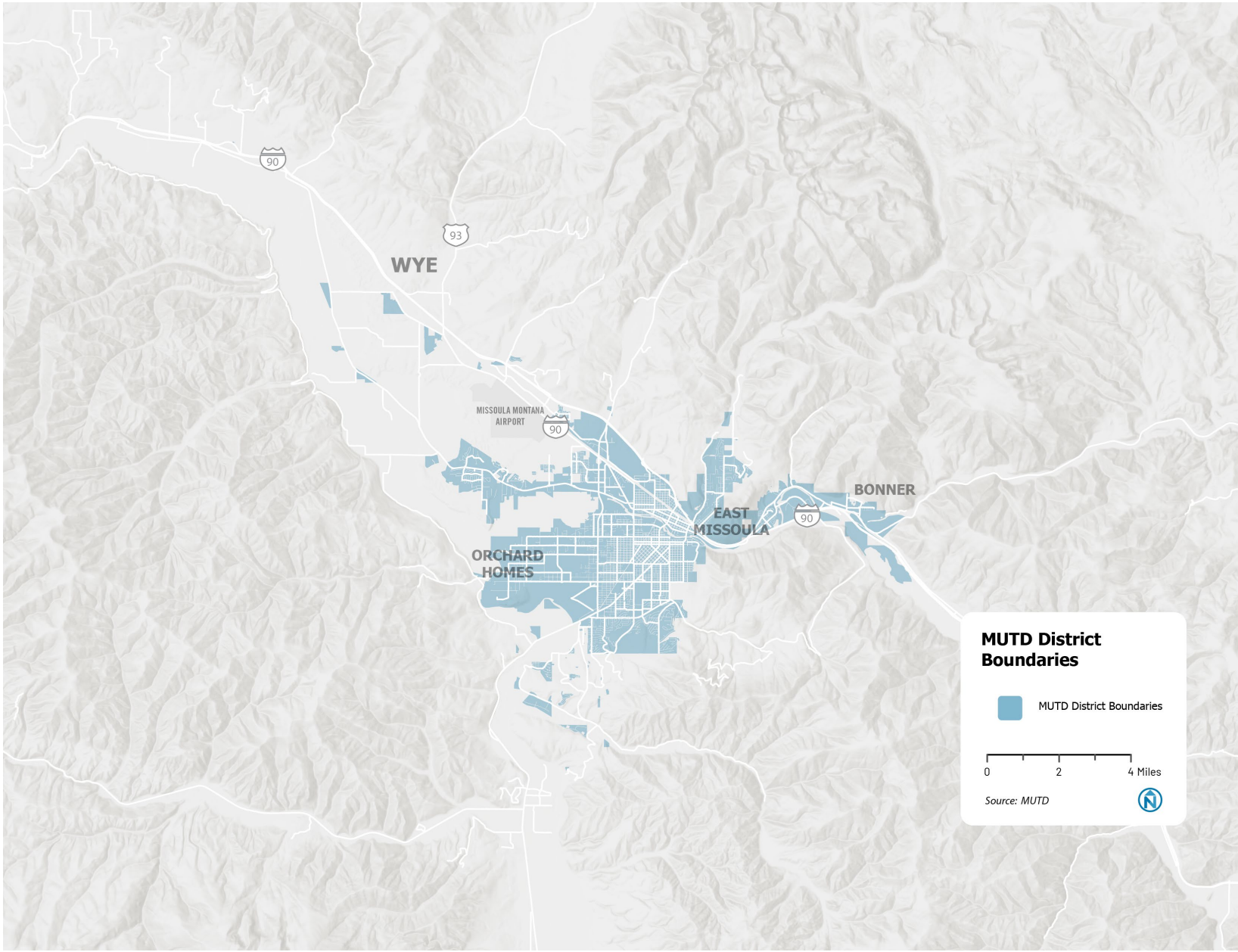
The Missoula Urban Transportation District (MUTD) operates Mountain Line, the Missoula region's transit network. MUTD was established in June 1976 by voters who authorized the creation of the district. Service operating under the Mountain Line brand began on December 12, 1977. MUTD operates both fixed-route and paratransit services within its service area. The service has continually evolved over the years including the introduction of fare-free service, expanding weekend and evening service, transitioning to an electric fleet, and improving frequencies on the highest ridership routes. The MUTD's boundaries are shown in Figure 1-2.

Figure 1-1 MPO Boundaries



Source: Missoula MPO

Figure 1-2 MUTD District Boundaries



Source: MUTD

INTRODUCING THE PLANS

Missoula's Long-Range Transportation Plan

One of the Missoula MPO's primary planning projects in 2024 is an update to our Long-Range Transportation Plan (LRTP), which we're calling Missoula Connect. Missoula Connect is a 30-year plan that looks at all modes of transportation and identifies future priorities for projects and funding.

This action plan will help to steer our community toward a healthier, safer, and more sustainable future while preserving and expanding mobility for all residents. Relying on previous planning work and extensive community outreach, Missoula Connect integrates existing plans and projects to create a sustainable transportation future that improves mobility and access across all modes for all Missoula area residents, workers, and visitors. A strong transportation plan is critical to the success of Missoula's growth policy, and Missoula Connect will knit together our land use and transportation goals. The Missoula region is on the move, and we need to ensure we're not only keeping pace but staying ahead.

Missoula's Transit Strategic Plan

One of MUTD's planning efforts for 2024 is to update their Transit Strategic Plan (TSP). The last plan update, adopted in 2018, laid out a set of phased short-term network changes, along with a longer-term network vision. Three out of the four phases of the short-term network have been implemented. Changes in travel patterns brought on by the COVID-19 pandemic, continued development in the community, and other concurrent planning efforts (e.g., the Brooks Street BRT project) necessitate an update to the TSP.

PROJECT BACKGROUND

In January 2024, the Missoula MPO and MUTD engaged the services of Nelson\Nygaard to perform a combined update of the MPO's Long-Range Transportation Plan (LRTP) and MUTD's Transit Strategic Plan (TSP). The timing of both the LRTP and TSP both needing updates provided a unique opportunity for the MPO and MUTD to partner together to collectively identify improvements that can improve mobility for the region. Both final plans will include a fiscally constrained list of prioritized projects and improvements through the horizon year 2050.

PROJECT GOALS

This project has five goals that are applicable to both the LRTP and TSP efforts. These goals reflect today's needs and priorities, as well as the outcomes our region must achieve over the next 30 years. The goals are consistent with federal requirements and form the basis of the project evaluation/prioritization process that will be completed later in this project.

Improve safety and promote health to enhance quality of life

- Eliminate traffic-related fatalities and serious injuries
- Improve safety for people, walking, biking, and rolling
- Enhance active transportation and transit linkages to lower-income neighborhoods
- Increase physical activity and human connections by making walking and biking convenient modes of travel
- Improve access to recreational facilities and trails to support healthy lifestyles

Maintain assets and invest strategically to boost economic vitality

- Bring existing infrastructure and transit assets into a state of good repair to support the regional economy, local industry, and goods movement
- Balance cost-effective, implementable projects with high-impact projects
- Plan for a transportation system that makes the best use of public financial resources
- Provide a network that targets growth inward to support existing centers and mixed-use development
- Support access to businesses and commercial and industrial centers to enhance economic recovery and growth
- Explore more equitable and sustainable funding sources for transportation projects and programs

Expand mobility choices to improve efficiency and accessibility for people and goods

- Build complete streets and increase access to multimodal options
- Increase street, trail/greenway, and sidewalk network connectivity for all ages and abilities
- Optimize the efficiency and accessibility of the transportation system
- Reduce person hours of delay for people driving and improve freight movement
- Improve access to high-quality and high-frequency transit stops and routes

Connect and strengthen communities to create a more equitable region

- Increase affordability and reduce overall household transportation costs
- Develop an integrated mobility system that connects destinations with sustainable travel options
- Integrate land use and transportation planning to support infill development and create complete neighborhoods
- Improve access to schools, jobs, parks, essential services, affordable and senior housing, and basic life needs
- Engage with and invest in historically disadvantaged areas and in neighborhoods that have been adversely impacted by transportation decisions

Advance sustainability and community resilience to protect natural resources and address climate change

- Improve climate resilience and advance toward carbon neutrality
- Reduce transportation-related air emissions
- Minimize sediment, nutrients, and litter entering surface water
- Expand the urban canopy and green stormwater infrastructure
- Protect and enhance natural, cultural, and historic resources, including agricultural lands
- Create adaptable and resilient infrastructure to respond to changing needs

HOW IS THE REPORT ORGANIZED?

This existing conditions report, serves as a foundation for the development of the recommendations and future improvements for both plans. The existing conditions report synthesizes key aspects of Missoula's regional planning context, including population and employment patterns, and evaluates the existing transportation network.

- Chapter 2 examines planning and policy documents to understand previous planning work done in Missoula. It also includes key demographic and employment information.
- Chapter 3 documents the transit system in Missoula (fixed-route transit and paratransit services), including ridership trends and productivity.
- Chapter 4 provides a multimodal snapshot of transportation conditions in Missoula, which includes the roadway, bicycle, and pedestrian networks. Key performance metrics are also presented.

2 MISSOULA CONTEXT

This chapter sets the stage for the development of the LRTP update and TSP in Missoula. The first half of this chapter summarizes existing planning and policy documents done in Missoula, including two community surveys administered in the last year. The second half of this chapter reviews key demographic and employment information, including a discussion of transportation equity and transit propensity for the region. Unless otherwise noted, any demographic and employment data is sourced from the U.S. Census Bureau and is reported at the urbanized area for Missoula.

OVERVIEW OF COMPLETED AND ONGOING PLANS

Reviewing current planning and policy documents, and understanding what has been successful in the past, helps set our framework to build on previous momentum. This review summarizes improvements (both funded and unfunded) that have been identified, which can be considered as part of the LRTP and TSP. Altogether, eight documents were reviewed. A summary of these documents is included in Figure 2-1.

Figure 2-1 Documents Reviewed with Key Projects Identified

Planning Document	Date Published	Overview of the Document	Key Projects from Studies
Downtown Safety and Mobility (SAM) Project	February 2024	The Downtown Safety and Mobility Project (DowntownSAM) is the name for a suite of long-desired infrastructure projects that the City bundled together in a compelling and successful RAISE grant application. These multimodal safety and access projects will improve connectivity within and to downtown, serving current and future community members by supporting investment in housing, local business, and government services.	▪ Higgins Avenue Multimodal Improvements ▪ Front/Main Two-Way Restoration ▪ Riverfront Trail connections
On-Demand Transit Study	November 2023	The On-Demand Study evaluates the feasibility of an on-demand transit service in the low-density areas of Missoula where fixed route service is limited or unavailable. The potential on-demand transit service would serve multiple destinations and facilitate first- and last-mile connections to Mountain Line's fixed route network.	Five on-demand zones: ▪ North Reserve – Grant Creek ▪ Miller Creek ▪ Sxʷtpqyen ▪ Target Range/Orchard Homes ▪ Northside/Rattlesnake
Wye Infrastructure Needs Assessment	November 2023	The Wye is an area that is expected to grow over the coming years. Out of the 3,400 acres in the area, 1,200 acres are undeveloped and planned for residential development. This residential development, at an average density of 12 units per acre, is expected to create between 10,000 to 15,000 new homes. Another 540 acres are undeveloped industrial land and another 240 are under-developed industrial land. With this immense growth, this plan identifies needed improvements to accommodate this new development.	▪ Highway 93 Trail ▪ Deschamps Lanes Shared Use Path ▪ Reserve to Wye I-90 Trail

Planning Document	Date Published	Overview of the Document	Key Projects from Studies
Missoula Annexation Policy	July 2023	The Annexation Policy provides a set of comprehensive policies and objectives needed to annex Missoula's Utilities Services Area as described in the City Growth Policy. The annexation will support growth in desirable locations and ensure adequate provision of sewer, water, and other public services. The annexation policies aim to promote walkable neighborhoods, infill, and dense development, and ensure that sufficient infrastructure is in place to support future development. The City of Missoula is prioritizing the annexation of the following areas which should be considered when developing Missoula's Project List: ▪ Utilities Services Area ▪ Annexation Area A ▪ Areas that contribute to the logical growth pattern of the City ▪ Properties that would fill in gaps left by previous annexations that created islands and other types of non-contiguous boundaries	▪ N/A

Planning Document	Date Published	Overview of the Document	Key Projects from Studies
Midtown Missoula Master Plan	June 2023	The Midtown neighborhood has been experiencing rapid growth over the years. Community members realized that without a vision to guide the continued development, there was great risk in being caught unprepared to accommodate all the planned growth. The Midtown Missoula Master Plan outlines the neighborhood's vision for growth and identifies improvements that enhance the neighborhood's character and accommodate that growth.	▪ Pedestrian and bicycle crossings at Schilling Street, McDonald Avenue, Mary Avenue, Anges Avenue, Fairview Avenue, South Avenue, Kent Avenue, Mount Avenue, Dore Lane, Paxson Street, Garfield Street, and Stephens Avenue ▪ Brooks Street/Russell Street/South Avenue intersection redesign ▪ Increase access between the Bitterroot Trail to other existing pedestrian and bicycle pathways ▪ Greenway network expansion ▪ Complete Streets implementation at Reserve Street, Brooks Street, South Avenue, Mount Avenue, 14th Street, Higgins Avenue, and Bancroft Street ▪ Pedestrian and bicycle safety measures along Russel Street, 14th Street, Mount Avenue, South Avenue, and Brooks Street ▪ Increase frequency of Mountain Line transit service in Midtown Missoula
Brooks Street BRT/TOD Planning Study	July 2021	The City of Missoula conducted a study to examine bus-rapid transit (BRT) on Brooks Street, running between downtown Missoula and southwest Missoula. In addition to examining the BRT service itself, the study identified pedestrian and bicycle improvements to improve access to the new service and increase safety. The BRT concept, along with the improvements identified in this plan, have been advanced as part of another study that is looking to further refine the concept for BRT.	▪ Brooks Street Bus Rapid Transit, including bicycle and pedestrian improvements

Planning Document	Date Published	Overview of the Document	Key Projects from Studies
Highway 200 Corridor Plan	2021	The Highway 200 Corridor Plan identified infrastructure improvements to increase safety and travel options along three segments of Highway 200 – East Broadway Segment (from Van Buren Street to I-90), East Missoula Segment (from I-90 to Brickyard Hill), and Sha-Ron/Marshall Segment (from Brickyard Hill to Tamarack Road). The lack of roadway infrastructure has created significant barriers for community members to travel in the area and has led to conflicts between pedestrians, bicyclists, and motorists. Improvements as part of this plan are partially funded.	▪ Shared-use path, on-street bike parking, roundabout, and pedestrian crossings on the East Broadway Segment ▪ Sidewalks, raised cycle tracks, and intersection alignment improvements on the East Missoula Segment ▪ Shared-use path and bus pullout on the Sha-Ron/Marshall Segment
Reserve Street Community Input Project	2021	The Reserve Street Community Input Project provided community-developed recommendations to improve travel on the Reserve Street corridor. Many community members recognized Reserve Street as an important corridor in Missoula with its abundance of retail areas. However, community members often avoid Reserve Street because they feel unsafe walking and biking due to high vehicular travel volumes.	▪ Signal timing optimization at Reserve Street and Brooks Street ▪ Transit service from the Community Hospital to downtown ▪ Active transportation infrastructure that includes wider sidewalks, improved pedestrian signals, curb extensions, medians, and protected bicycle lanes

COMMUNITY SURVEYS

This section summarizes the results of two recent community surveys that were administered in 2023. These surveys offer insight into who is using transit, satisfaction with transportation in Missoula, and potential opportunities for improvement, among other things.

Mountain Line 2023 Passenger Survey

A survey of Mountain Line passengers was commissioned by MUTD and was administered by University of Montana's Bureau of Business and Economic Research (BBER) during the period of May 8th through July 5th, 2023. This survey provides MUTD with valuable information on customer sentiment and potential priorities for improving service. The survey was administered by BBER surveyors while riding 12 MUTD bus routes. The survey had 456 responses. The following are some key takeaways.

- Passengers enjoy MUTD services:
  - 76% of passengers reported that they are **very likely to recommend MUTD** to others, and an additional 15% said they are somewhat likely.
  - 44% of passengers said that their opinion of MUTD has **improved over the past two years**. Only 5% said their opinion had worsened over the past two years. 51% said their opinion stayed the same.
- Passengers' top three reasons to use MUTD over other transportation modes were:
  - MUTD is better for the **environment** (83% of responding riders);
  - MUTD is **cheaper** than other modes (73%);
  - MUTD is more **relaxing** than driving a car (58%).
- Riders expressed **frequency** as the largest opportunity for service improvement: passengers most frequently said (31% on weekdays and 42% on weekends) that running buses more often would be the main reason for increasing ridership.
- Passengers plan trips with apps:
  - The **Transit App** was the most frequently used trip planning tool, used by 34% of responding passengers.
  - Of the three most used trip planning tools (Transit App, route maps and schedules, and Google Maps), riders expressed the most satisfaction with **Google Maps**. 74% of Google Maps users said they were extremely or very satisfied with the app.
- Riders use MUTD services for the following reasons:

  - Three-quarters of MUTD passengers used the bus on the day they were surveyed for either **personal errands** (41%) or commuting to or from **work** (34%).
  - The top three industries that employed MUTD passengers were:
    - Colleges, universities, professional schools
    - Full service restaurants
    - General medical and surgical hospitals

2023 Missoula Area Transportation Survey

The Missoula Area Transportation Survey was a statistically valid survey of the MPO area. It was conducted by the University of Montana's BBER between November 8, 2023 and February 11, 2024. The 2023 Missoula Area Transportation Survey examines:

- Perceptions of the local transportation system
- Priorities for investments in the system
- Frequency of using certain modes of transportation
- Opinions about electric vehicles, e-scooters, and passenger rail services

Respondents were randomly selected from a database of residential addresses. Altogether, 565 responses were collected for this survey. Key findings from the survey for each topic include:

- About **58% of survey respondents rated the transportation system as good or better**, an 11% decrease from the 2019 survey.
- The **top three transportation investments** that survey respondents wanted Missoula to focus on were:
  - Road maintenance
  - Long distance passenger rail, commuter, or light rail
  - Parking
- About **48% of survey respondents** said that **traffic congestion in Missoula had a very large or somewhat large impact** on them, a 12% increase from 2019.
- Missoula workers spent an **average of 16 minutes to travel to work** which is about the same amount of time spent in 2019 but less than the national average of 27 minutes.
- Most survey participants **(80%) would support the future use of passenger rail service**.

- Both biking and walking decreased to 6% and 3% in 2023, a 3% and 1% change, respectively, compared to 2019. Participants indicated that **weather was the top barrier** for them when biking and walking.[1]
- More participants in 2023 **(44%) expressed support for the use of e-scooters** compared to respondents in 2019 (33%).
- The **majority of participants (66%) noted availability of transit access near their home**. Given the coverage of Mountain Line, it is not surprising more respondents in the City of Missoula than the county responded that they had transit access at home (82% vs. 24%).
- The **top three barriers for using transit** included: bus not going **where it is needed (31%)**, **work schedule/family obligations (23%)**, and bus not running **when it is needed (21%)**.
- The following provides a snapshot of participants who would consider purchasing an electric vehicle as their next vehicle:
  - 39% of participants in the Missoula area
  - 47% of participants who live in the City of Missoula
  - 20% of participants in Missoula County

[1] Note, the two surveys were conducted during different times of the year which may have influenced these results (2019 survey was conducted in summer/fall, 2023 survey was conducted in the fall/winter).

COMPLETED/ONGOING CAPTIAL PROJECTS

New transportation projects are continuously being built to enhance mobility for residents. Creating an inventory of completed and planned projects can help the City of Missoula, Missoula County, Montana Department of Transportation (MDT), and Missoula Urban Transportation District (MUTD) identify new transportation projects needed for other areas of Missoula. Figure 2-2 provides an inventory of current projects and those completed since the previous LRTP in the Missoula area.

Figure 2-2 Completed/Ongoing Capital Projects

Project ID	Project Name	Status	2020 Estimated Cost
128	Bitterroot River Crossing (South Ave Bridge - Maclay Bridge)	Planned, Funded	$18,488,500
130	BUILD Grant Roads - Wye/Mullan Road Plan Collector Routes (roadways)	Partially Completed	$29,788,710
182	Eaton Street Sidewalk/Complete Streets Improvements	Partially Completed	$1,500,000
47	Fort Missoula to Maclay Shared-Use Path and Bridge	Planned, Funded	$2,200,000
41	Ivy Street/Franklin Street Neighborhood Greenway	Partially Completed	$1,085,000
106	Mount Avenue/South 14th Avenue Bike Lane	Partially Completed	$10,066
79	Russell Street Bike Lanes	Completed	$3,306
127	Russell Street Reconstruction	Partially Completed	$47,200,000
UPN 9896	Russell Street Lighting	Planned, Funded	$558,000
183	Turner St/Worden Ave/N 5th Complete Street	Partially Completed	$1,000,000
55	Westside Area Mobility Enhancements	Partially Completed	$1,800,000

Source: Missoula MPO, 2024

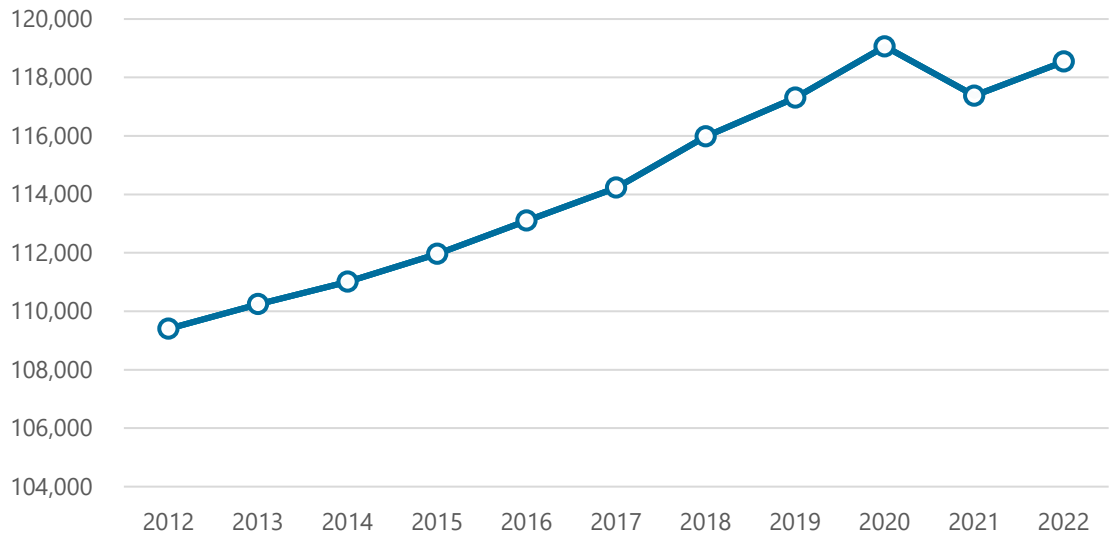
POPULATION AND EMPLOYMENT GROWTH AND TRENDS

The data below represent trends of Missoula's urbanized area, referred to going forward as the Missoula area. The Missoula area has experienced rapid growth over the past decade, with an annual growth rate of 0.81%. As population and employment opportunities continue to grow in the region, high-quality transportation infrastructure and services should be a priority.

Population

Over the past decade, the Missoula area's population increased by 8%, from 109,402 residents in 2012 to 118,541 residents in 2022 (Figure 2-3). There was a dip between 2020 and 2021 which was likely due to the COVID-19 pandemic.

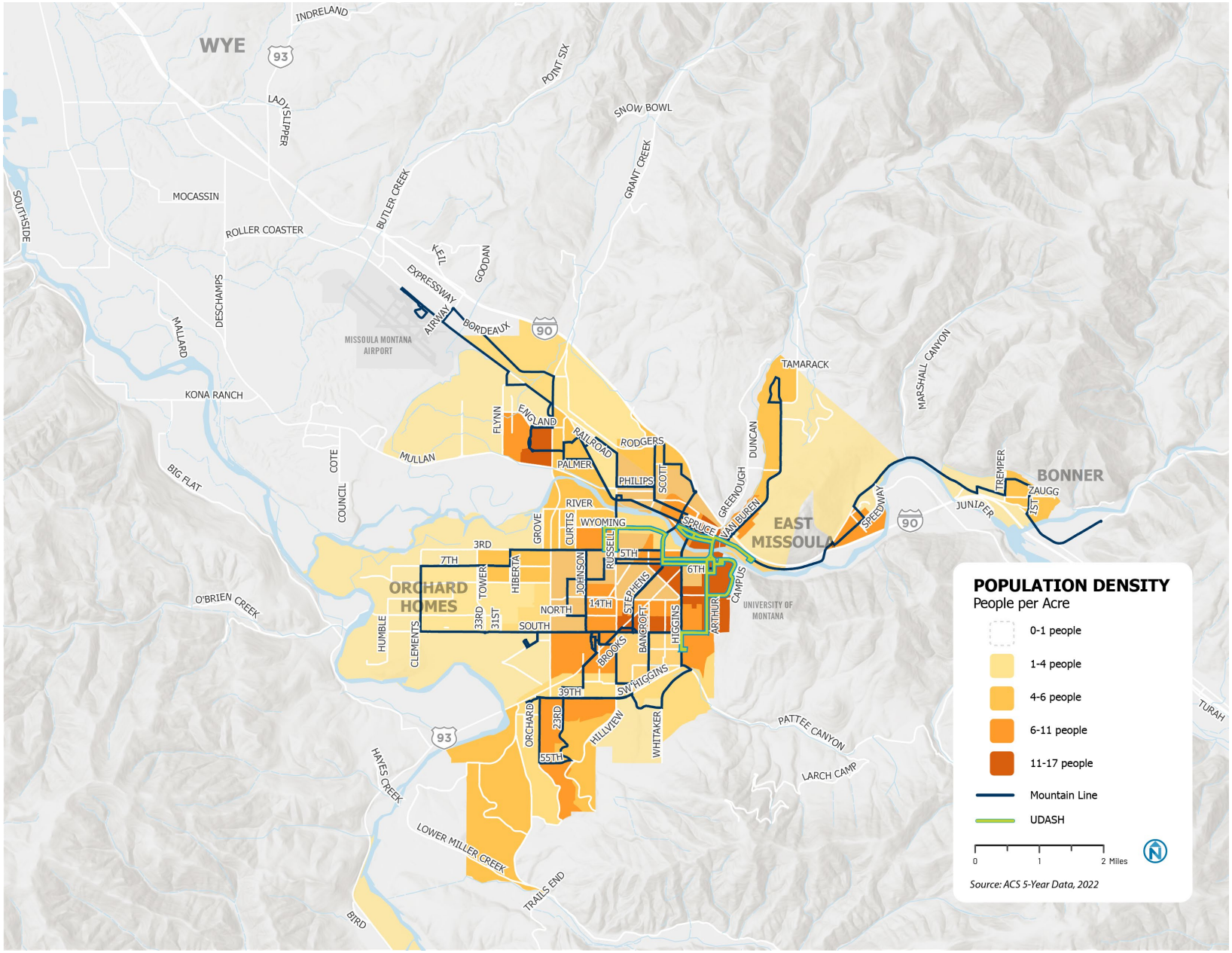
Figure 2-3 Population Growth



Source: American Community Survey (ACS) 5-Year Estimates, 2022

Areas of high population density are clustered in downtown Missoula, neighborhoods surrounding the University of Montana, and neighborhoods along Mullan Road, with about 11 to 17 people per acre. Areas with lower population density are in more rural areas of Orchard Homes and East Missoula, with about 1 to 4 people per acre (Figure 2-4). The City of Missoula has set the vision to promote infill growth in the "Our Missoula" City Growth Policy.

Figure 2-4 Population Density

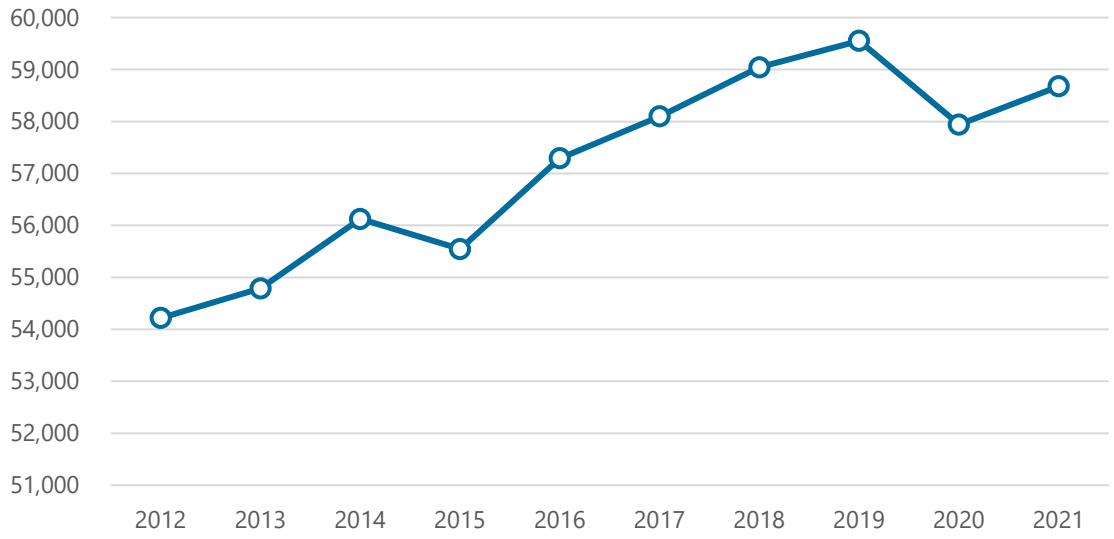


Source: ACS 5-Year Estimates, 2022

Employment

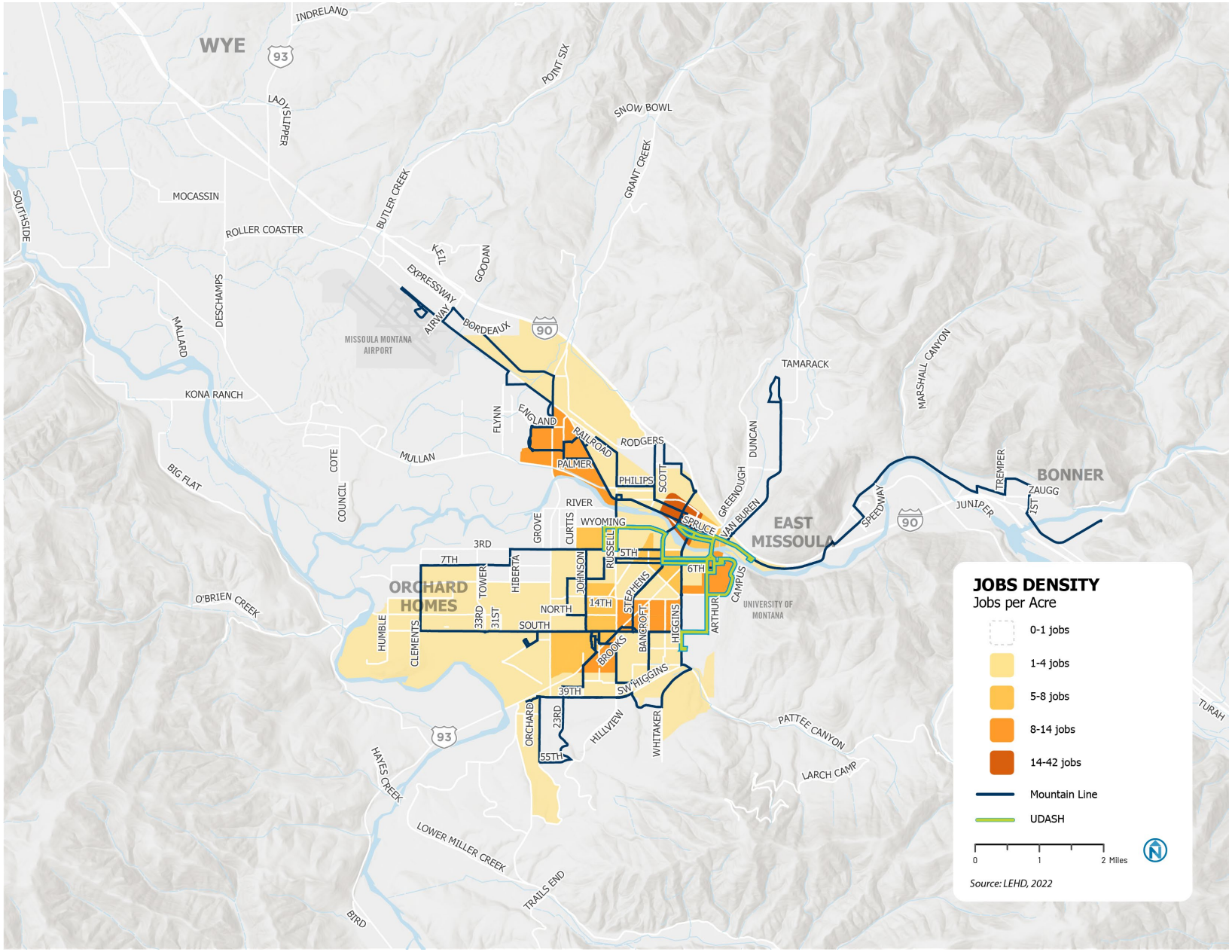
Jobs in the Missoula area increased by 8% in the past decade, with a total of 58,675 jobs in 2022. The number of jobs slightly decreased in 2020, likely due to the COVID-19 pandemic (Figure 2-5). Employment hubs are concentrated in central Missoula. The industries with the most jobs are health care and retail trade, which account for about one-third of all jobs in the region. Other jobs (30%) include agriculture, forestry, fishing, and hunting, public administration, manufacturing, finance and insurance, and wholesale trade (Figure 2-7). As the region continues to grow, transportation options need to be considered to connect people from where they live to jobs in the community.

Figure 2-5 Jobs Growth



Source: Longitudinal Employer-Household Dynamics (LEHD), 2022

Figure 2-6 Job Density



Source: LEHD, 2022

Figure 2-7 Major Employment Sectors in Missoula

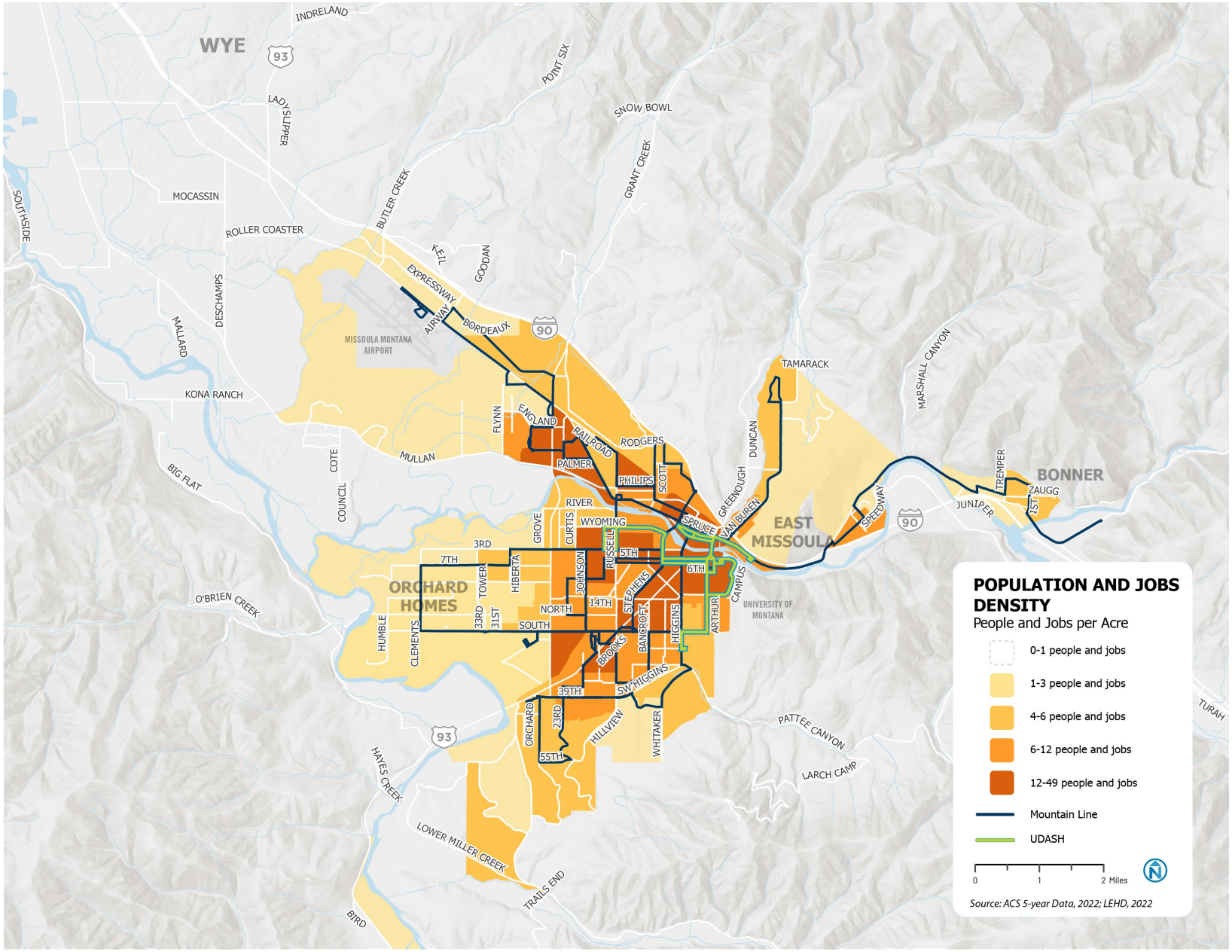
Employment Sector	% of Total Employment Share
Health Care and Social Assistance	18%
Retail Trade	14%
Accommodation and Food Services	9%
Educational Services	9%
Professional, Scientific, and Technical Services	7%
Construction	6%
Public Administration	6%
Other	30%

Source: LEHD, 2022

Population and Employment

Combining population and employment data can better highlight areas that are anticipated to be more supportive of transit service. In locations where population and employment densities are higher, transportation investments benefit more people, and transit service is more productive. As shown in Figure 2-8, the areas with the highest combined population and employment density are concentrated in the urban core and already have access to transit service today.

Figure 2-8 Population and Jobs Density



Source: ACS 5-Year Estimates, 2022 and LEHD, 2022

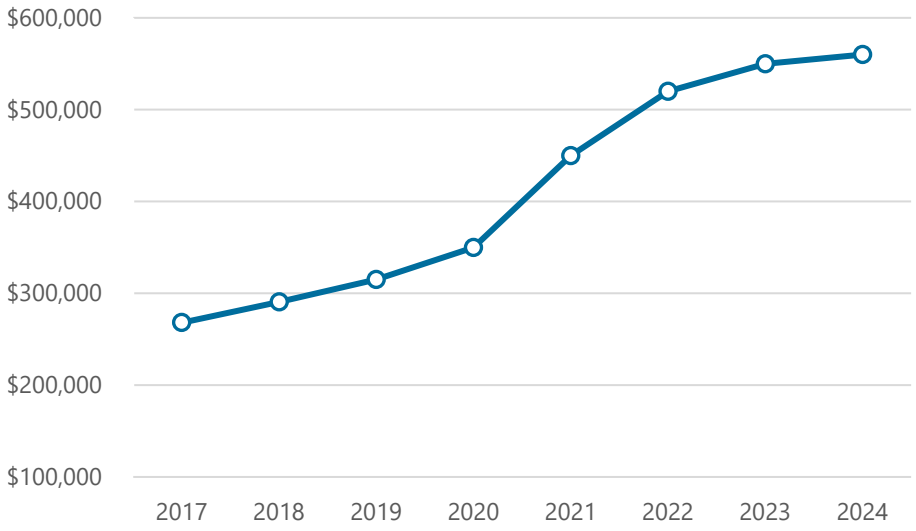
Changes in Affordability and Equity Priority Indicators

Like many regions in the United States, housing costs are rising faster in the Missoula area than wages, making it difficult for many residents to find housing they can afford. Therefore, affordable transportation options are necessary to connect residents with jobs, schools, various services, and recreational opportunities.

Based on ACS 5-Year estimates for 2022, half of workers have an annual income of less than $40,000. As of 2022, the official poverty rate, as defined by Bureau of Labor Statistics, is $15,225 for an individual, and just over 11% of the United States population reported living below the poverty line in 2022. In the City of Missoula, 14.6% of residents live below the poverty line compared to only 9.2% of Missoula County residents. Additionally, the median home sale price has doubled since 2017, posing a challenge for residents to live comfortably in the Missoula area (Figure 2-9). About 60% of Missoula area residents own and about 40% rent; the percentage of renters and owners has not changed since it was reviewed in the previous LRTP. This percentage may change in the future as housing prices continue to rise and more people choose to rent due to the high price to purchase a home (Figure 2-10).

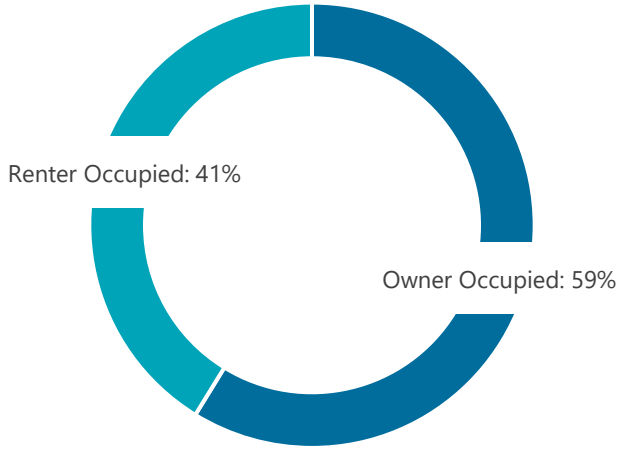
The City of Missoula recently completed an Equity in Land Use report that addresses these affordability issues in greater detail. The project website includes links to the final report and an executive summary.

Figure 2-9 Median Home Sale Price, 2017-2024



Source: Montana Regional MLS, 2024

Figure 2-10 Renter-Occupied vs. Owner-Occupied Housing Units



Source: ACS 5-Year Estimates, 2022

EQUITY CONSIDERATIONS

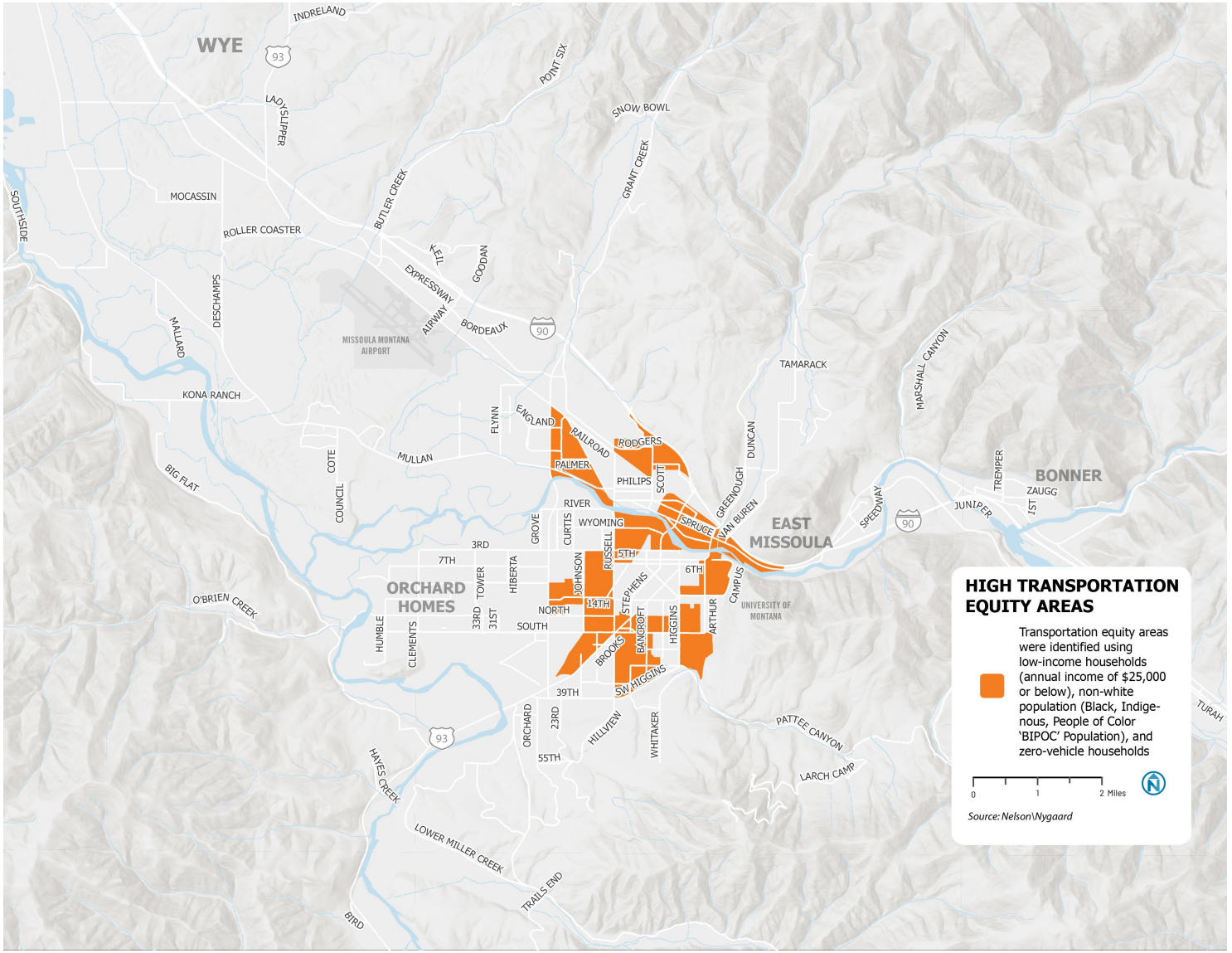
In recent years, the topic of transportation equity has been discussed more frequently and with increasing levels of importance. At its core, transportation equity seeks to prioritize resources to those that need it most. Nelson\Nygaard conducted an analysis to identify potential transportation equity areas within the greater Missoula area.

Using the latest Census block group data, three variables with strong indicators for high transportation equity needs were examined. These variables were:

- Households with annual income of $25,000 and below (Low-Income)
- Non-white population (Black, Indigenous, People of Color 'BIPOC' Population)
- Zero-vehicle households

Using the three variables, the percentage of households/population in each block group was computed. From there, each variable for each block group was given a score from 0 to 10 based on the distribution of percentages. The three scores were then added together to get a final, combined equity score. The results are shown in Figure 2-11. The darker colors indicate areas with a higher equity need.

Figure 2-11 Identified Transportation Equity Areas



Source: Nelson/Nygaard

TRANSIT PROPENSITY

Using select demographic, socioeconomic, and employment data can help determine the overall transit need for a given area. Areas of higher propensity, or demand, are more likely to generate ridership and support transit service that is provided.

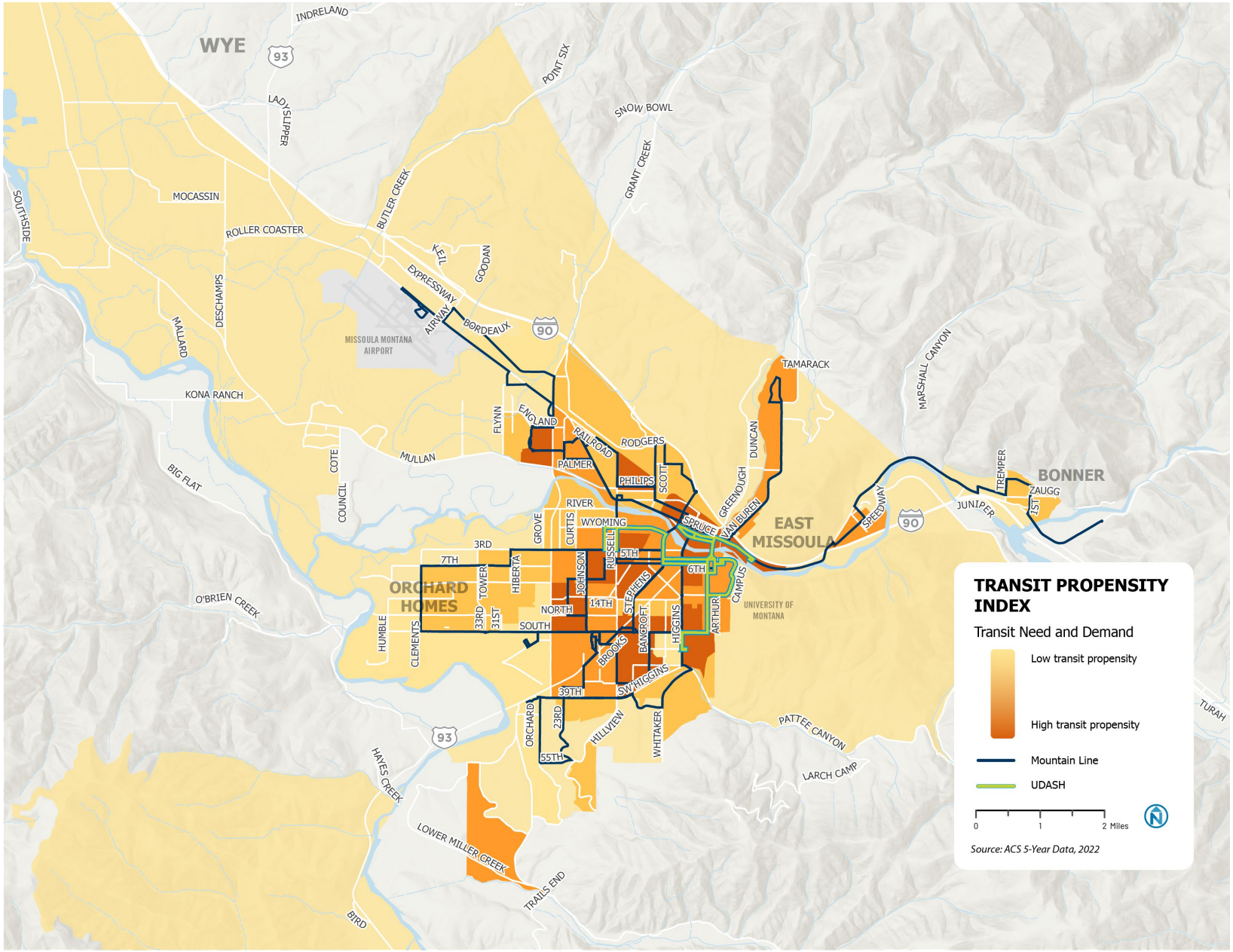
To assess transit propensity, the following demographic and socio-economic factors were used as individuals from these groups are more likely to use transit:

- Young adults between the ages of 16 to 24
- Non-white individuals
- Individuals born outside of the U.S.
- Low-income individuals defined as earning less than 150% of the federal poverty level
- Households without a vehicle
- Households that rent their homes

In the greater Missoula area, using Census Journey to Work data, all six of these variables were associated with having a higher correlation of using transit than the overall population. A composite transit propensity score was computed for each block group by summing up the individual percentages of population or households in each block group that met the given criteria. A higher composite score indicates a greater transit propensity.

As shown in Figure 2-12, downtown and northwest Missoula are areas with the highest propensity to use transit. These areas already have MUTD fixed-route services; however, improving transit service to these areas (e.g., greater frequency, longer spans of service) can continue to improve mobility for these individuals.

Figure 2-12 Transit Propensity



Source: ACS 5-Year Estimates, 2022

KEY FINDINGS

- Population in Missoula **has increased by 8%** in the past decade except for a dip in 2020 and 2021, most likely due to the COVID-19 pandemic. Historically, population grew by 0.81% annually.
- **Population density is concentrated in downtown and neighborhoods surrounding the University of Montana and Mullan Road.** The City of Missoula is promoting infill growth to meet the needs of the growing population.
- Jobs **increased by 8% in the past decade** except for a dip in 2021, most likely due to the COVID-19 pandemic. Employment is concentrated in central Missoula.
- **MUTD fixed-route services exist in areas with high population density, employment density, and transit propensity**. It is crucial for Missoula's agencies to continuously improve transportation to meet the travel needs of community members in these areas and other areas that are expected to grow in population.
- Most passengers reported that they are **very likely to recommend MUTD** to others, and almost half of passengers said that their opinion of MUTD has **improved over the past two years**.
- Top reasons riders use MUTD over other transportation modes include: being better for the **environment**, being **less expensive**, and being more **relaxing**.
- MUTD riders have expressed a **desire for more frequent weekday and weekend service**.
- Riders use MUTD services for purposes including: **medical, work, school, and personal errands.**
- About 60% of survey respondents rated the **transportation system as good or higher**.
- Weather was indicated as the **top barrier** for riding a bicycle or walking in Missoula.
- Most survey participants would **support future passenger rail service**.
- Biking and walking **decreased** in the past six years.[2]
- The average commute time (16 minutes) **has not changed** in Missoula and remains lower than the national average of 27 minutes.

[2] [2] Note, the two surveys that support this finding were conducted during different times of the year which may have influenced these results (2019 survey was conducted in summer/fall, 2023 survey was conducted in the fall/winter).

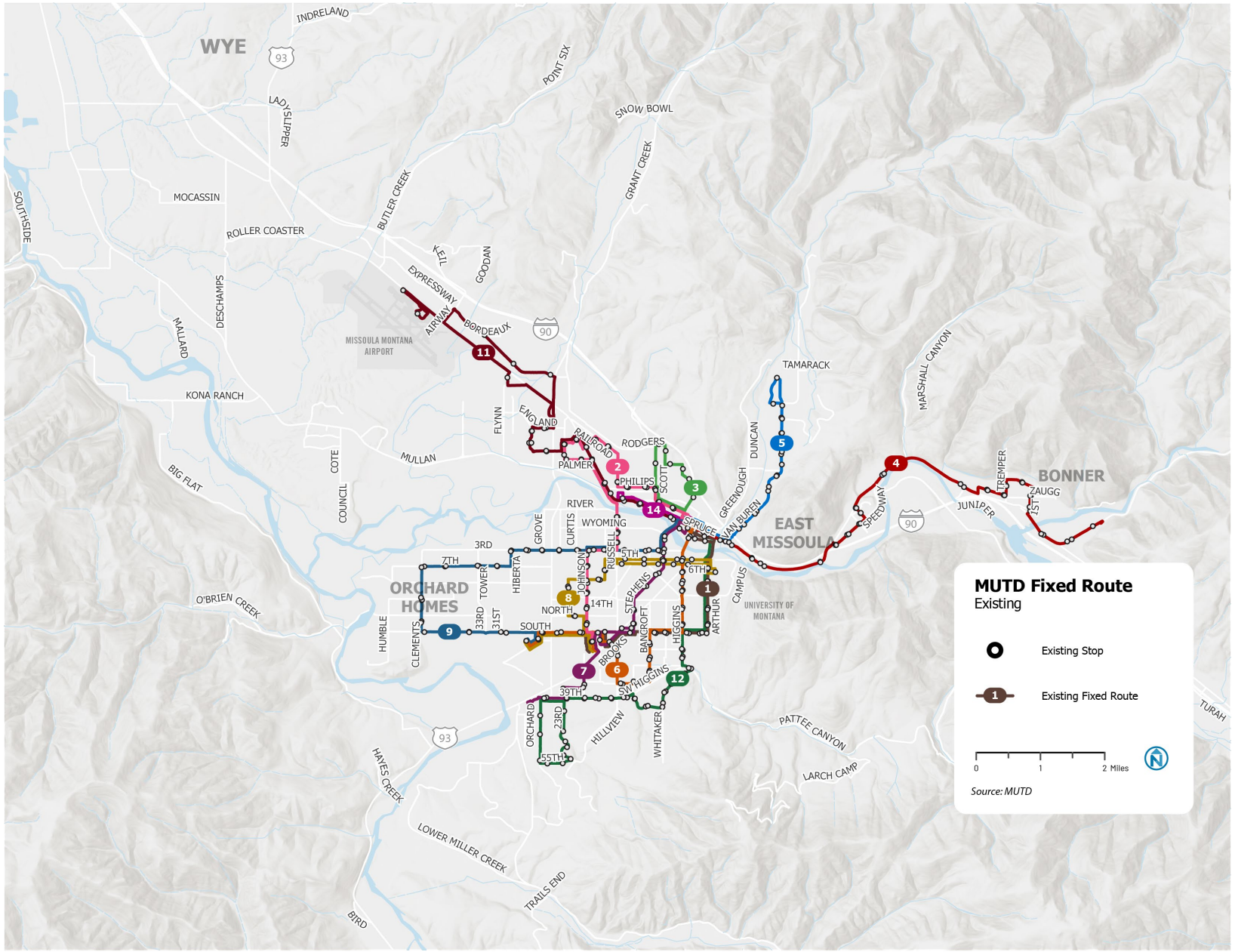
3 TRANSIT CONDITIONS

This chapter provides an overview of transit services in Missoula, including those provided by Missoula Urban Transportation District (MUTD) and University of Montana's UDASH.

MOUNTAIN LINE CURRENT SERVICES

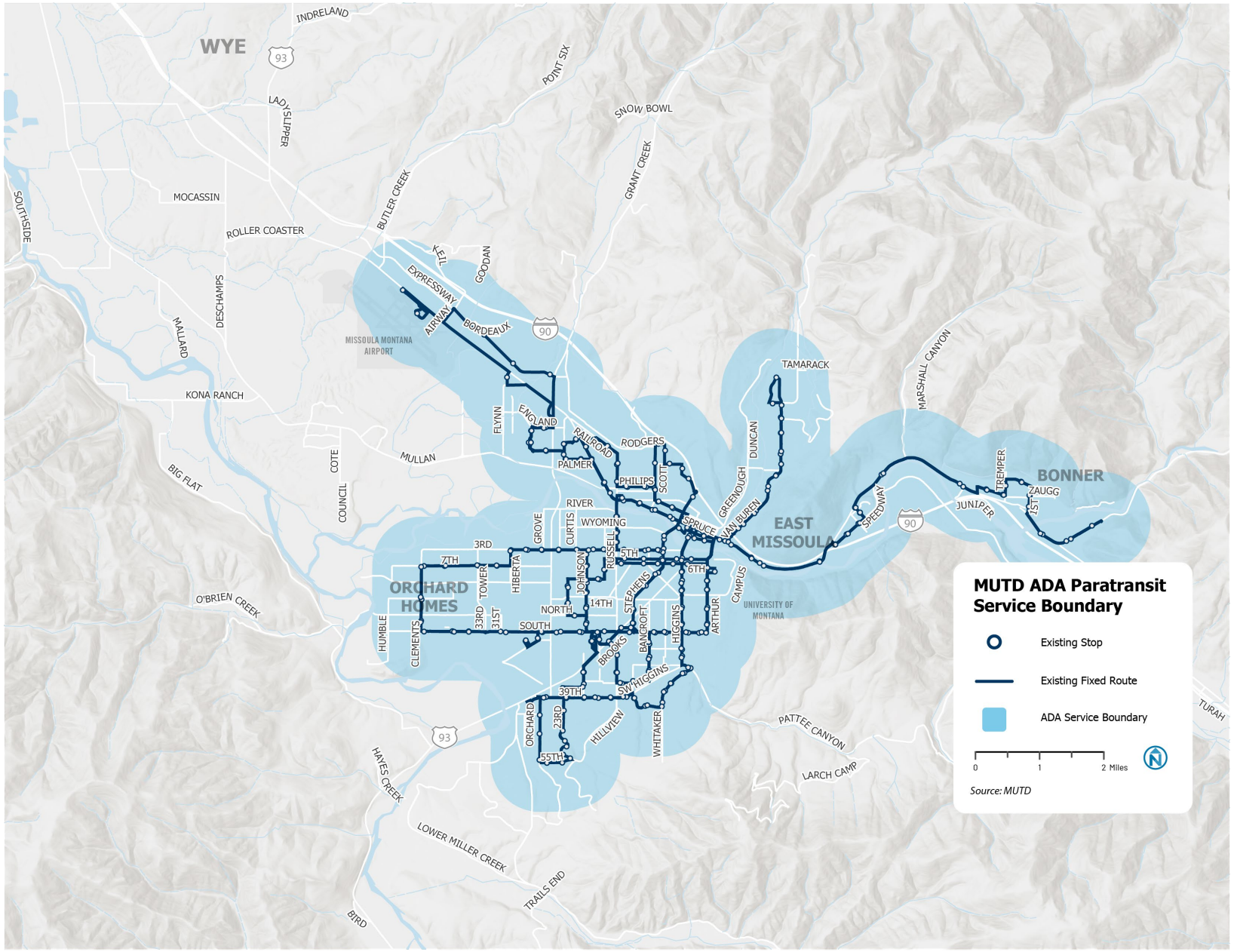
MUTD, also known as Mountain Line, is the primary transit provider in Missoula, operating zero-fare fixed-route bus and paratransit service. Figure 3-1 illustrates the fixed-route network. Figure 3-2 illustrates the paratransit service area, which is defined as a ¾ mile buffer around the fixed route network.

Figure 3-1 MUTD Fixed-Route



Source: MUTD

Figure 3-2 MUTD Paratransit Service Area



Source: MUTD

OTHER REGIONAL PROVIDERS

UDASH

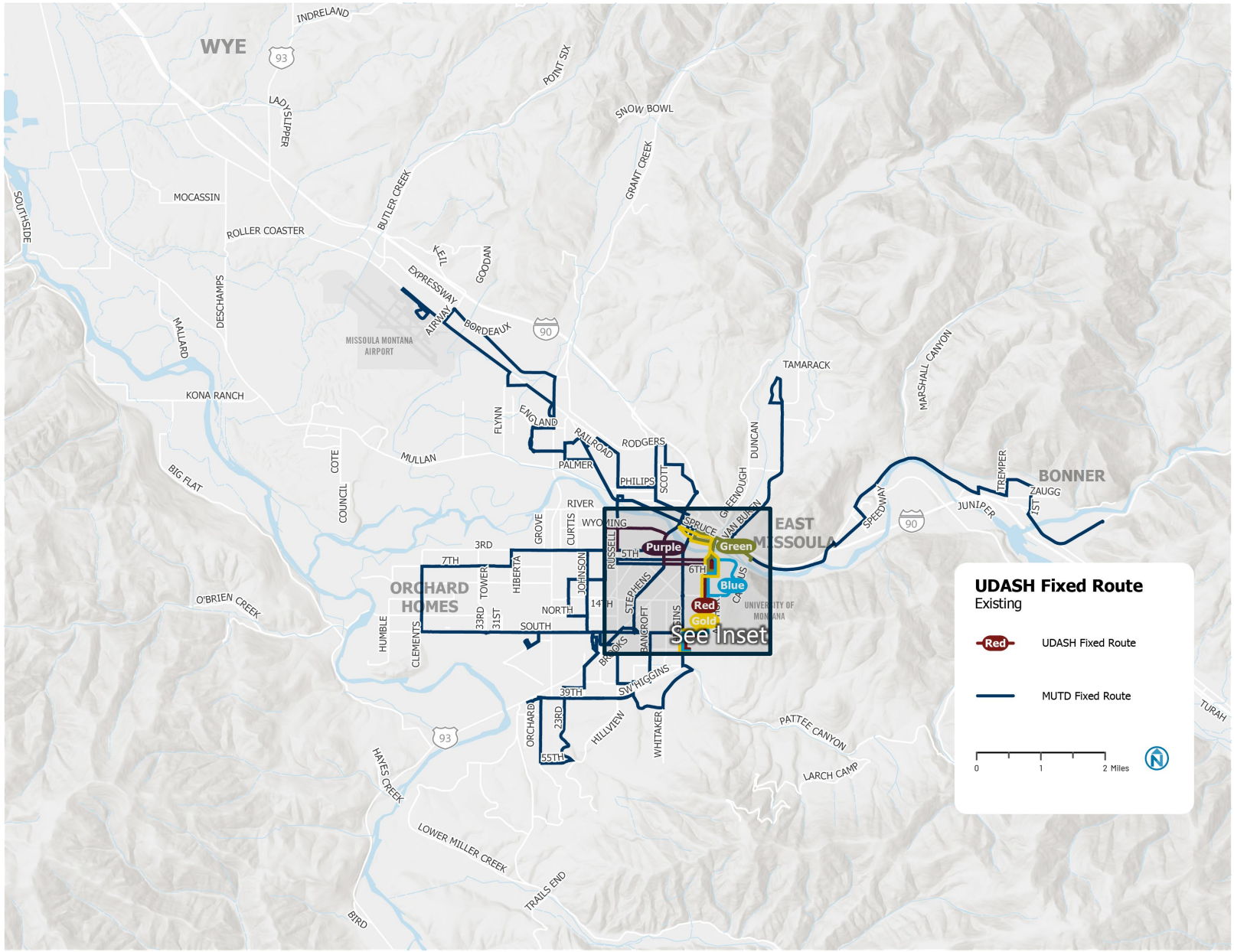
The University of Montana's (UM) UDASH is the transportation service for the University.

Figure 3-3 illustrates UDASH fixed-route service. The University operates five bus routes that connect the University of Montana's south and main campuses and residential areas. All five routes operate Monday to Friday, when UM is in session. The University also operates several special event shuttles for commencement and football games.

The Purple Line operates between UM Transit Hub and Caitlyn Street / Wyoming Street via 5th Street, 6th Street, and Cregg Lane. Service operates every 30 minutes from 7:15 a.m. to 6:00 p.m. The Green Line operates between UM Transit Hub, Missoula College (River Campus), and downtown near ROAM Student Living via Broadway Street, Main Street, and Front Street. The service operates every 20 minutes from 7:30 a.m. to 6:10 p.m. The Red Line operates between UM Transit Hub and Lewis and Clark Park and Ride via Arthur Avenue and S Avenue. The service operates every 20 minutes from 7:15 a.m. to 8:30 p.m. The Blue Line operates between UM Transit Hub and Lewis and Clark Park and Ride via Campus Drive, Arthur Avenue and S Avenue. The service operates every 30 minutes from 7:00 a.m. to 8:50 p.m. The Gold line operates between the Transit Hub, Downtown Missoula, and Lewis & Clark. The service operates every 30 minutes from 8:30 p.m. to 10:18 p.m. from Monday to Thursday and to 12:48 a.m. on Fridays.

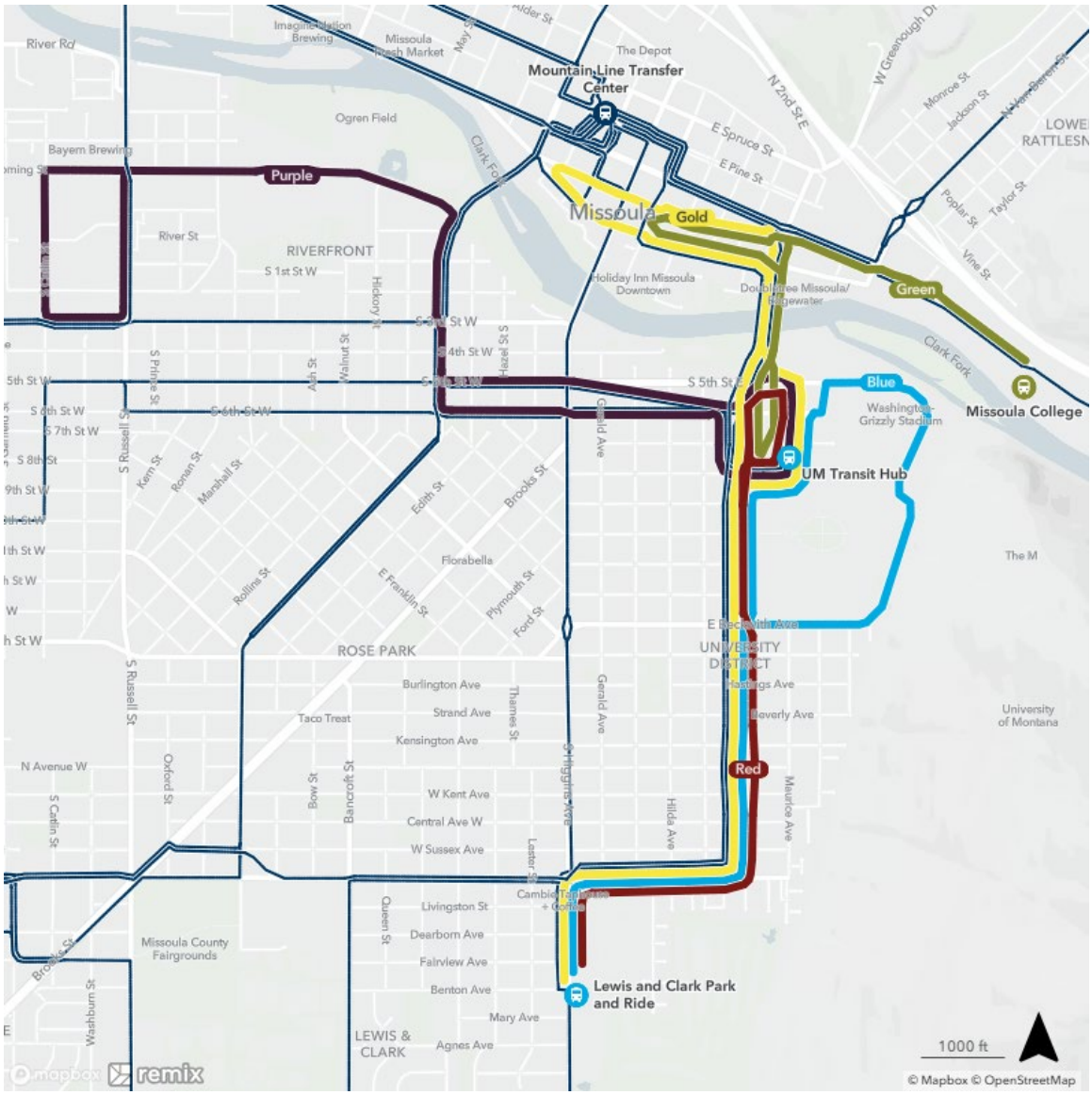
There are several corridors where UDASH service is duplicative with MUTD service. The Blue and Red Lines duplicate Routes 1 and 12 on Arthur Avenue. The Green Line duplicates Route 4 on Broadway Street. The Purple Line duplicates with Route 8 on 5th Street and 6th Street.

Figure 3-3 UDASH Fixed-Route



Source: University of Montana, 2023

Figure 3-4 UDASH Fixed-Route Inset



Source: University of Montana, 2023

FIXED ROUTE

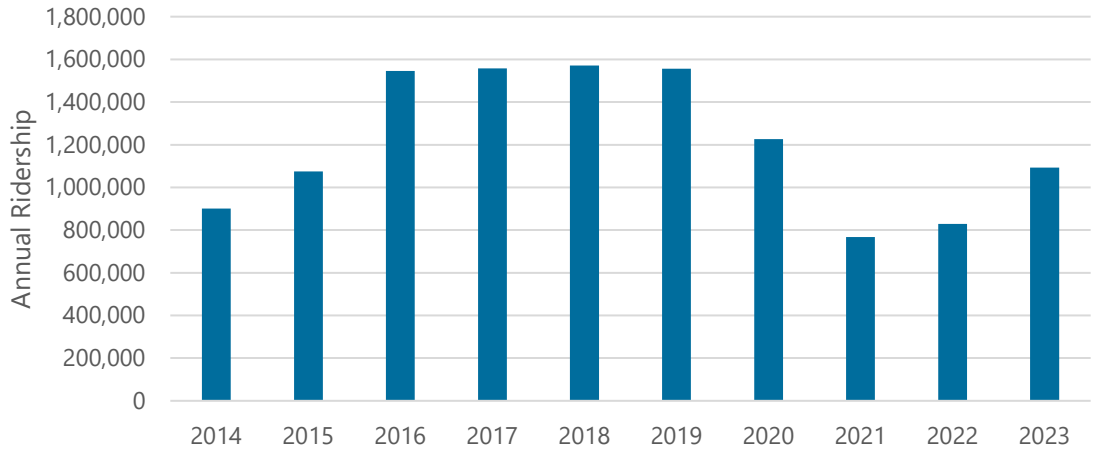
MUTD currently operates 13 fixed routes in its network (including one seasonal historic trolley route). This section describes MUTD's fixed-route service in greater detail, including historical trends and route-level analysis of service span and frequency, ridership, productivity, and on-time performance. It also includes an overview of existing transit facilities, bus stops and amenities, and geographic coverage. The purpose of this analysis is to understand the baseline level of service upon which to build for future recommendations.

Historical Trends

Providing a historical context of MUTD's fixed-route service is important to set the stage for where the agency is today.

As seen in Figure 3-5, ridership on MUTD's fixed-route service peaked during 2016 to 2019 at slightly less than 1.6 million trips. Like many agencies, MUTD experienced a drop in ridership due to the COVID-19 pandemic. Ridership has not fully recovered, with MUTD's 2023 annual ridership at roughly 70% of 2019 ridership.

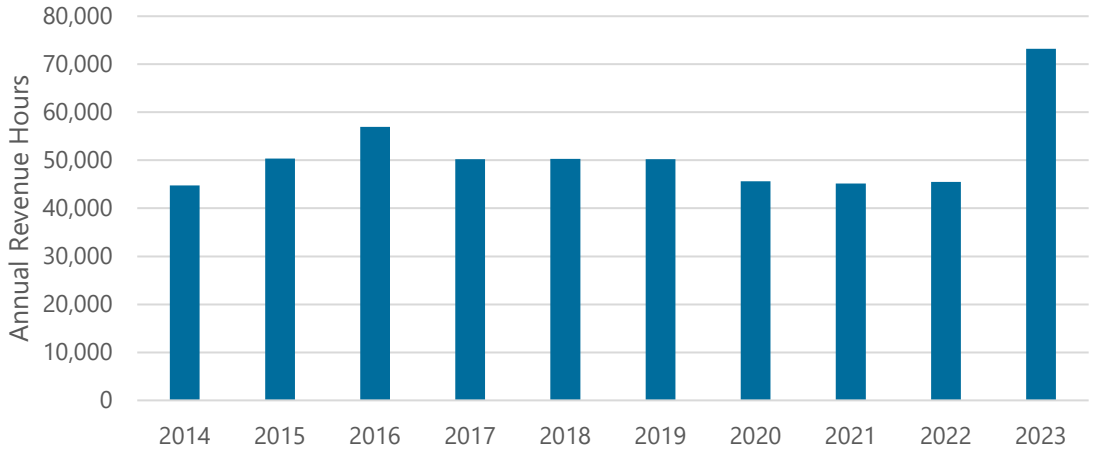
Figure 3-5 Historical Fixed-Route Ridership



Source: MUTD, 2023

Revenue hours is the amount of time buses operate in service, including recovery time and operator breaks at the end of each trip. As seen in Figure 3-6, revenue hours had been generally steady except for a small decrease in 2020 to 2022. Revenue hours in FY 2023 increased with the implementation of various service improvements in July 2022, including introduction of new Sunday service, longer Saturday service, and more weekday service. Weekday service enhancements included earlier and later service as well as all-day service on Routes 4 and 11.

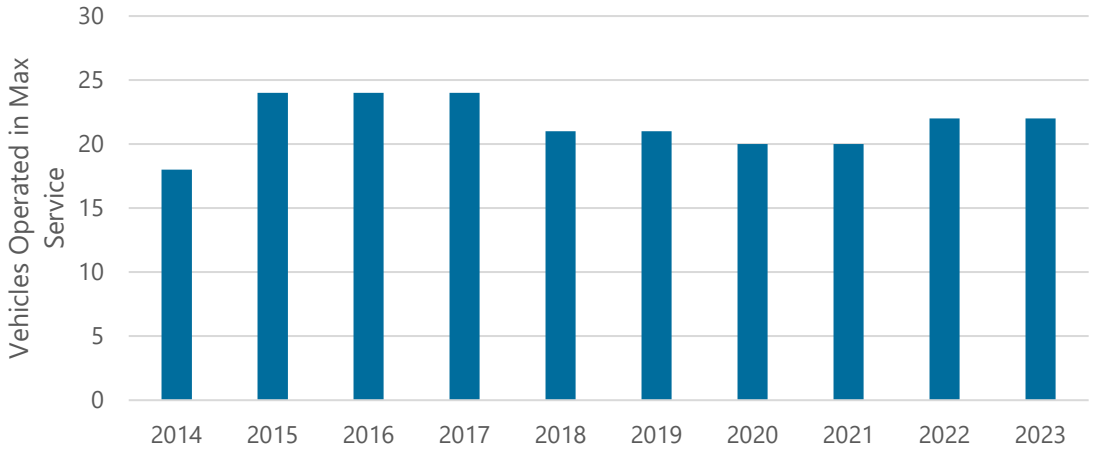
Figure 3-6 Historical Fixed-Route Revenue Hours



Source: MUTD, 2023

Vehicles operated in max service is the maximum number of vehicles needed at a single time to provide peak service. As seen in Figure 3-7, vehicles operated in max service peaked in 2015 to 2017 at 24 vehicles. Notably, the service increases implemented in July 2022 did not require an increase in the number of vehicles operated in max service in 2023.

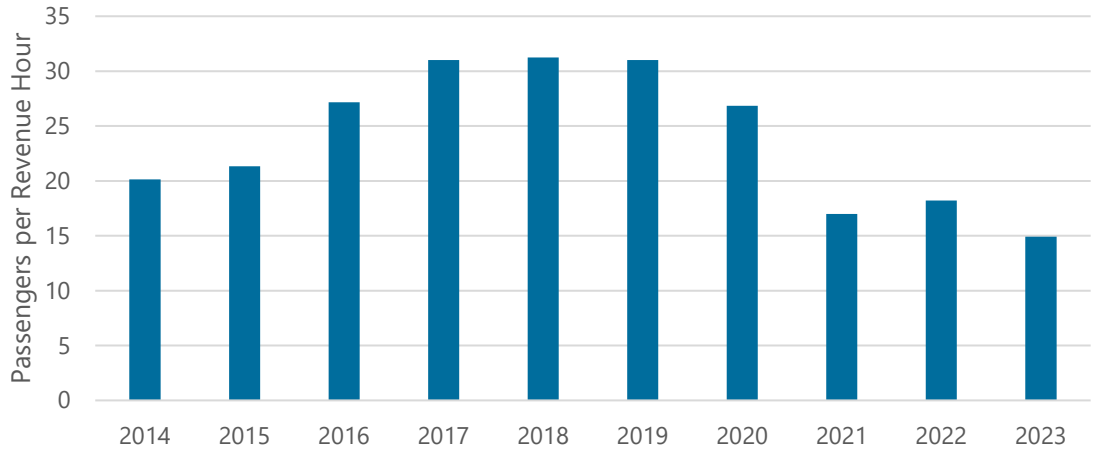
Figure 3-7 Historical Fixed-Route Vehicles Operated in Max Service



Source: MUTD, 2023

The productivity of service is typically measured in terms of passengers per revenue hour. Service productivity (Figure 3-8) peaked in 2017 to 2019 and is currently at a ten year low of about 15 passengers per revenue hour. Low productivity in 2023 is likely due to the large service expansion, particularly into new time periods (Sunday and early morning/late evening service). While this new service no doubt improves mobility within the community, more time is needed for ridership to fully mature.

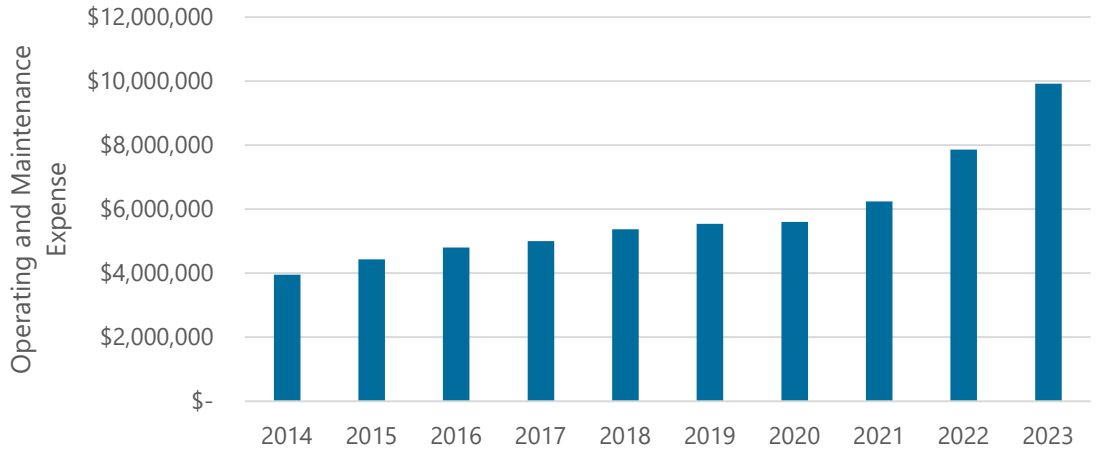
Figure 3-8 Historical Fixed-Route Productivity



Source: MUTD, 2023

Figure 3-9 shows the annual operating and maintenance (O&M) costs for the fixed-route system, not adjusted for inflation. Prior to the pandemic, costs rose an average of 6% per year. Between 2021 and 2023, costs increased by an average of 20% per year.

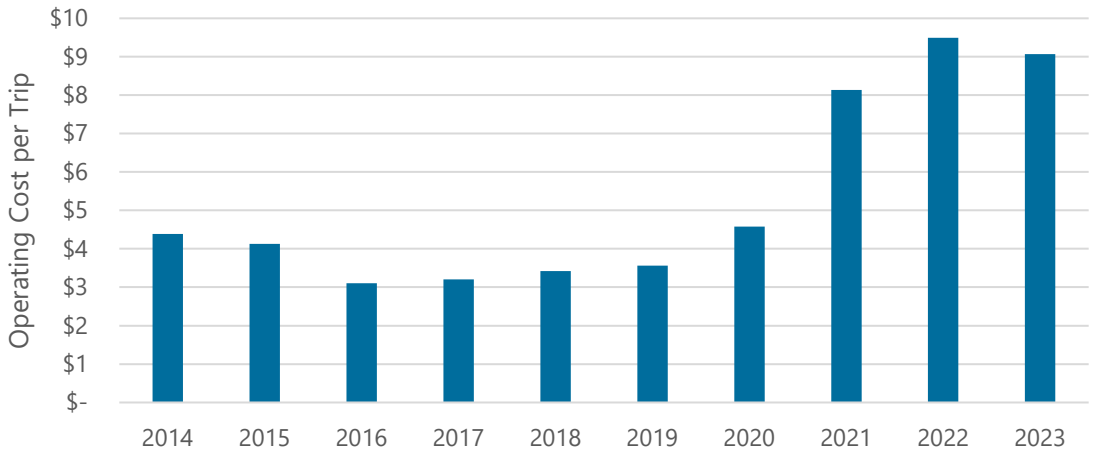
Figure 3-9 Historical Fixed-Route Operating and Maintenance Expense



Source: MUTD, 2023

Figure 3-10 normalizes O&M costs by number of passengers, or trips. It shows that the cost per trip hovered around $3.77 between 2014 and 2020. Due to COVID-19 related ridership declines and higher operating costs, the cost per trip increased to an average of $8.90 between 2021 and 2023, a 136% increase.

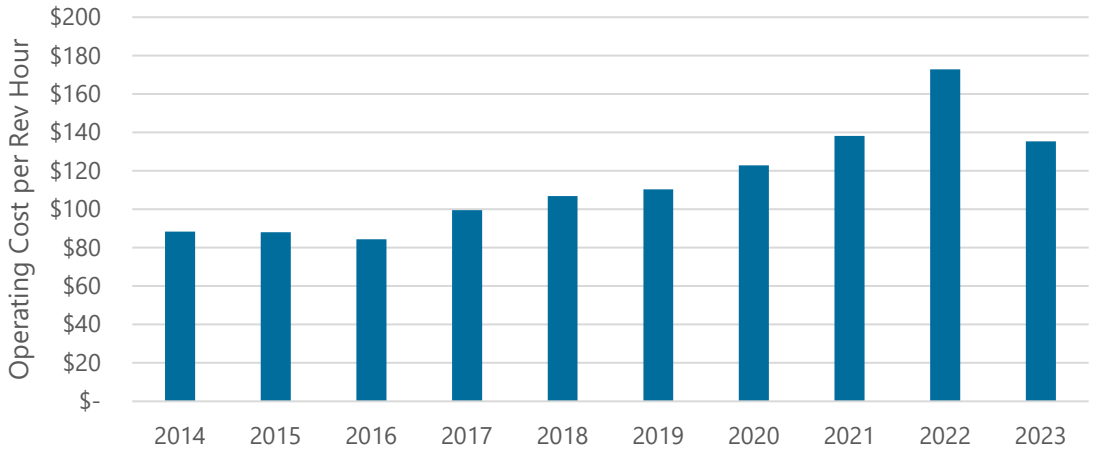
Figure 3-10 Historical Fixed-Route Cost per Trip



Source: MUTD, 2023

Figure 3-11 normalizes O&M costs by revenue hours. Between 2014 and 2023, cost per revenue hour increased by an average of 6% per year. 2022 saw a significant increase of 25% from the previous year.

Figure 3-11 Historical Fixed-Route Cost per Revenue Hour



Source: MUTD, 2023

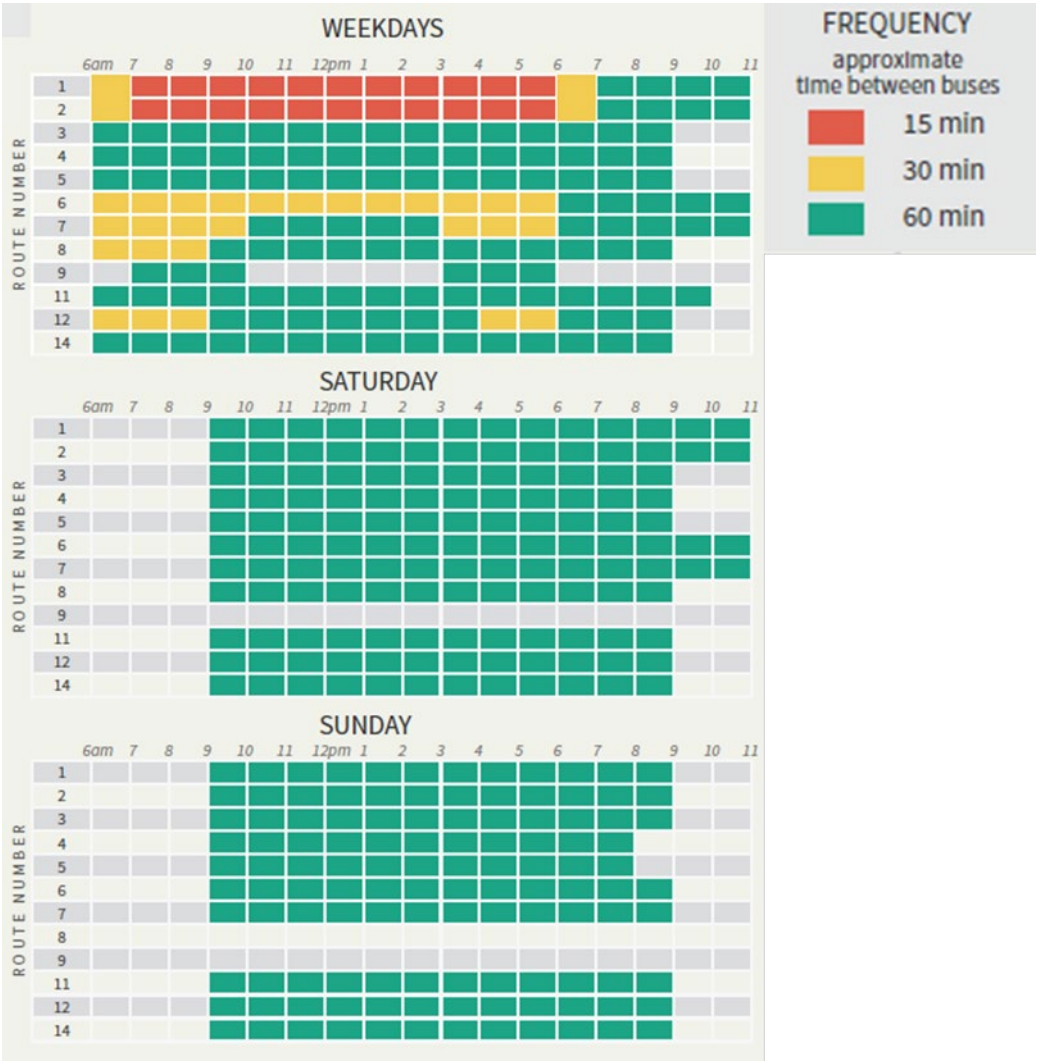
Span of Service and Frequency

Figure 3-12 shows headways and service span for each route, and the subsequent maps (Figure 3-13, Figure 3-14, Figure 3-15, and Figure 3-16) show the spatial distribution of routes by service frequency for weekday daytime (peak), weekday evening (off-peak), Saturdays, and Sundays.

All but two of MUTD's routes operate seven days per week. On weekdays, routes generally operate between 6 a.m. and 9 p.m., except for Routes 1, 2, 6, 7, and 11, which end around 10 or 11 p.m. On weekends, routes generally run from 9 a.m. to 9 p.m., except for Routes 1, 2, 6, and 7, which operate until 11 p.m. on Saturdays.

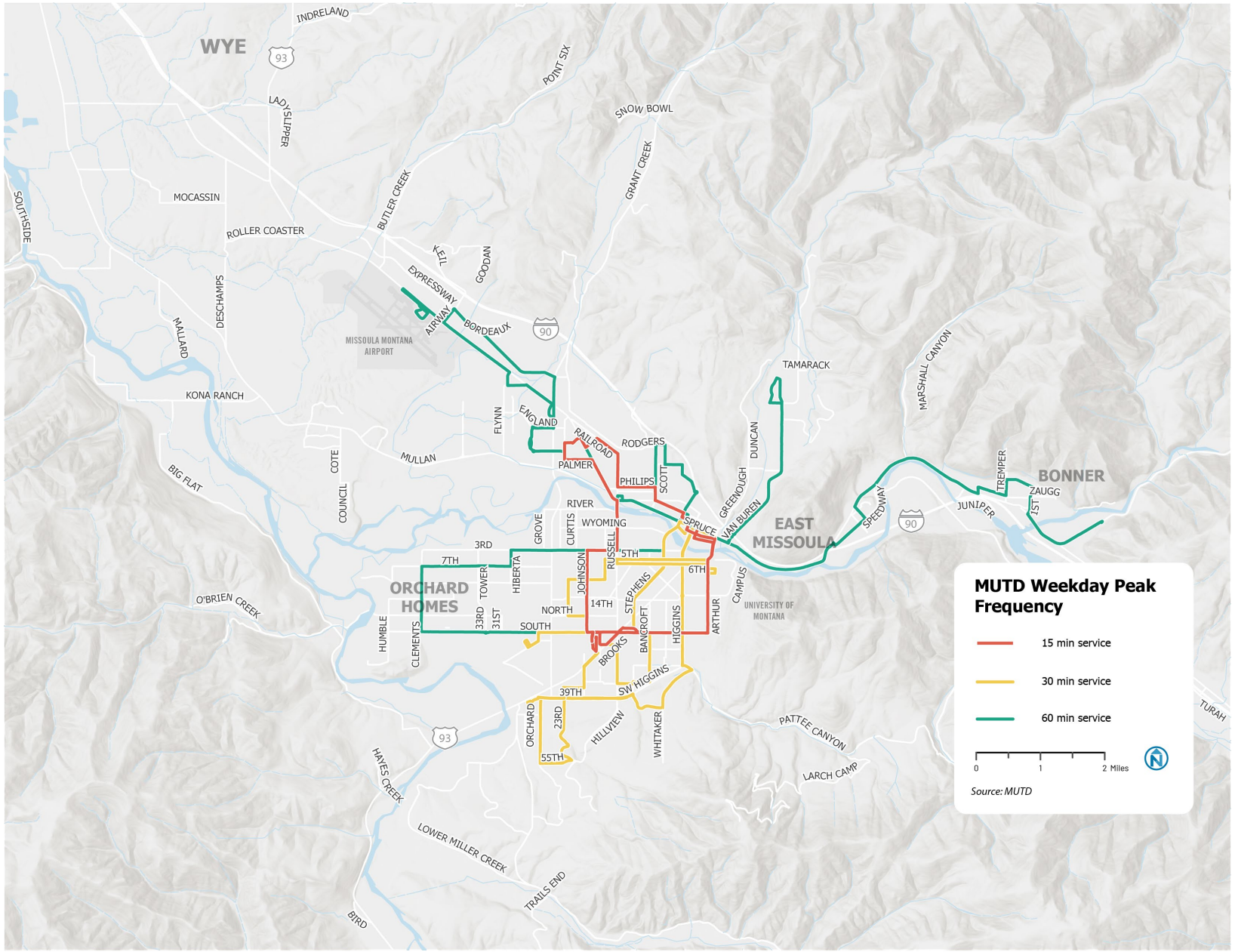
Aside from two routes, most operate with headways of between 30 and 60 minutes on weekdays. Routes 1 and 2 operate a 15-minute weekday service from 7 a.m. to 6 p.m. On weekends, all routes operate with 60-minute service.

Figure 3-12 Fixed-Route Span and Frequency



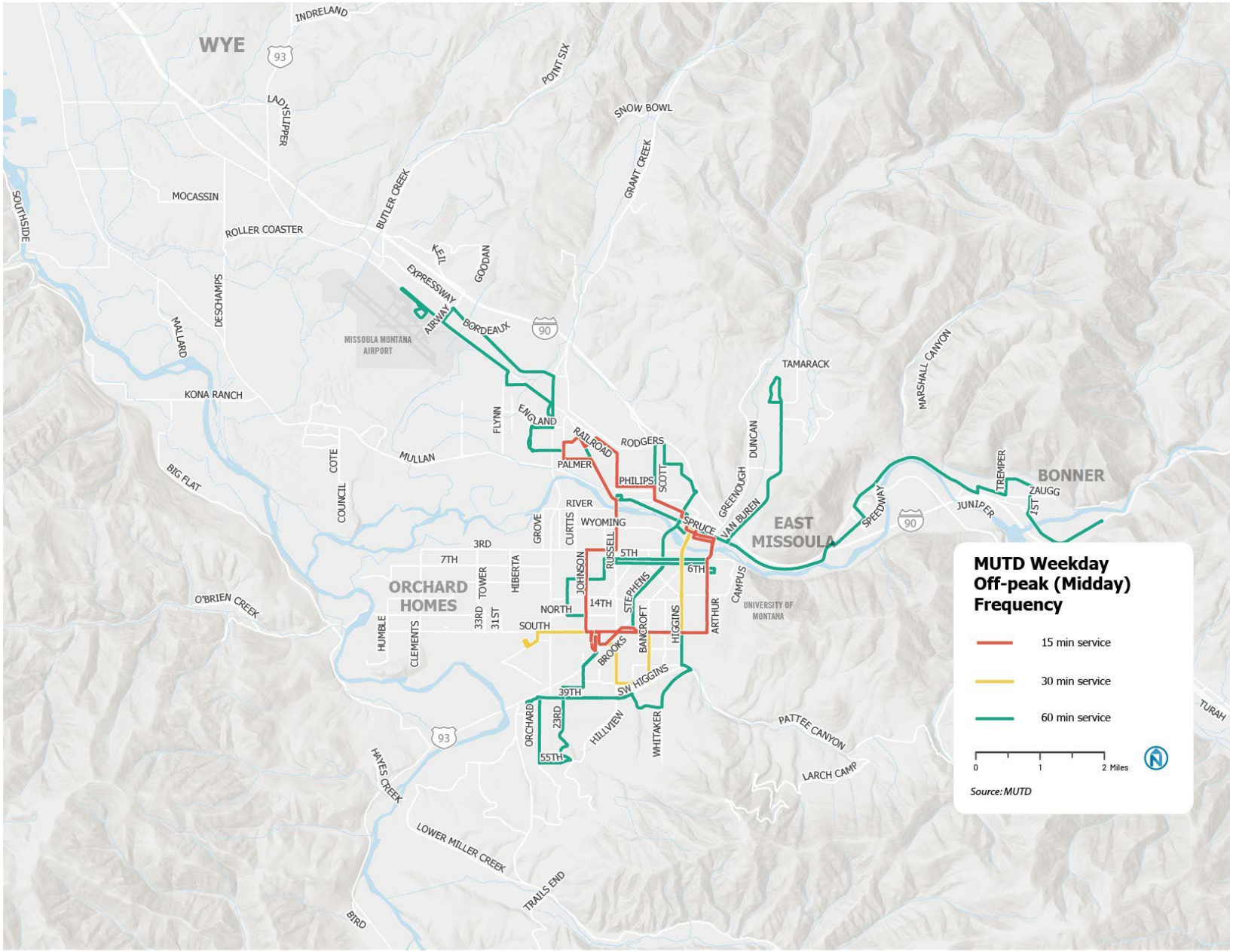
Source: MUTD, Effective July 10, 2022

Figure 3-13 Fixed-Route Weekday Peak Frequency



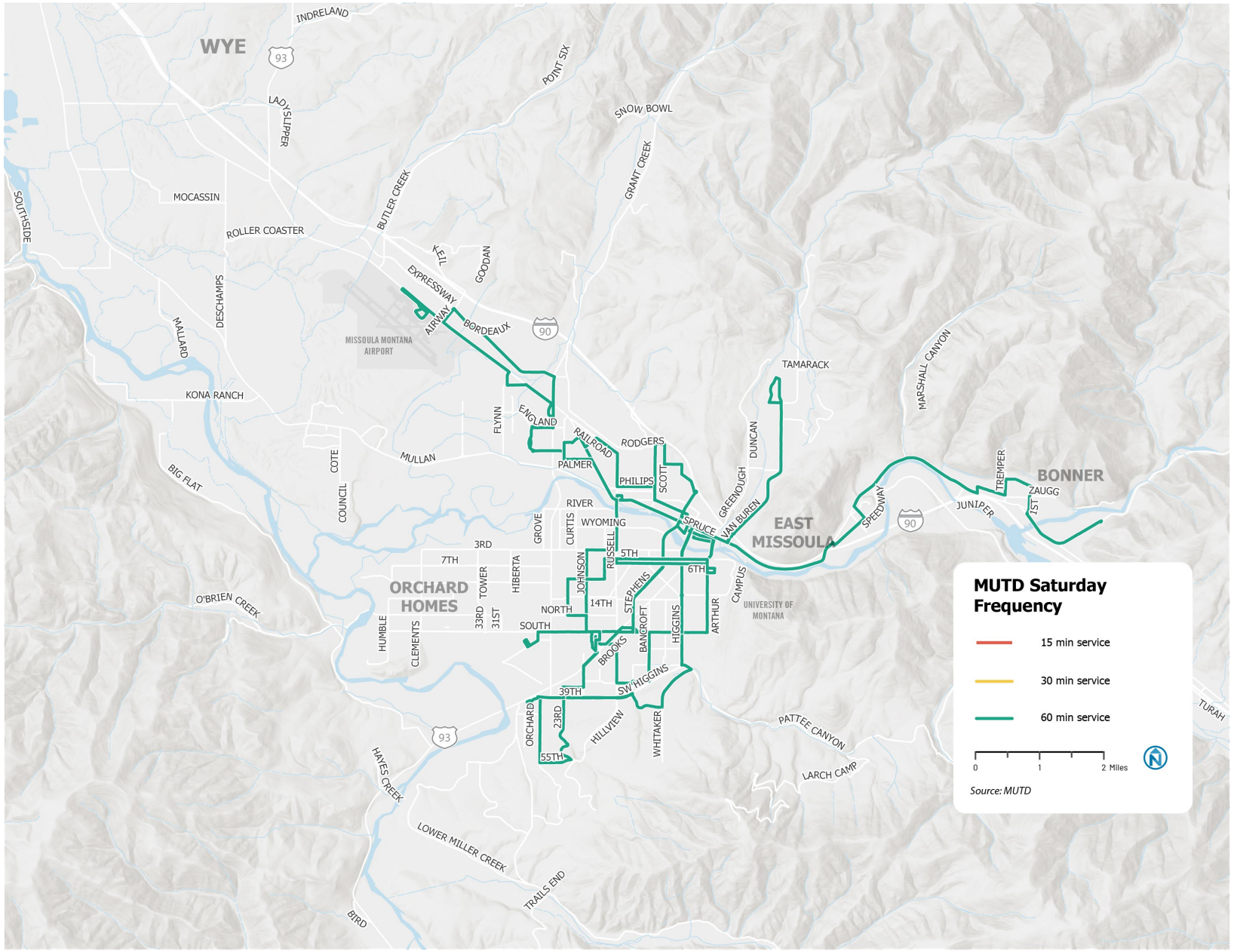
Source: MUTD

Figure 3-14 Fixed-Route Weekday Off-Peak Frequency



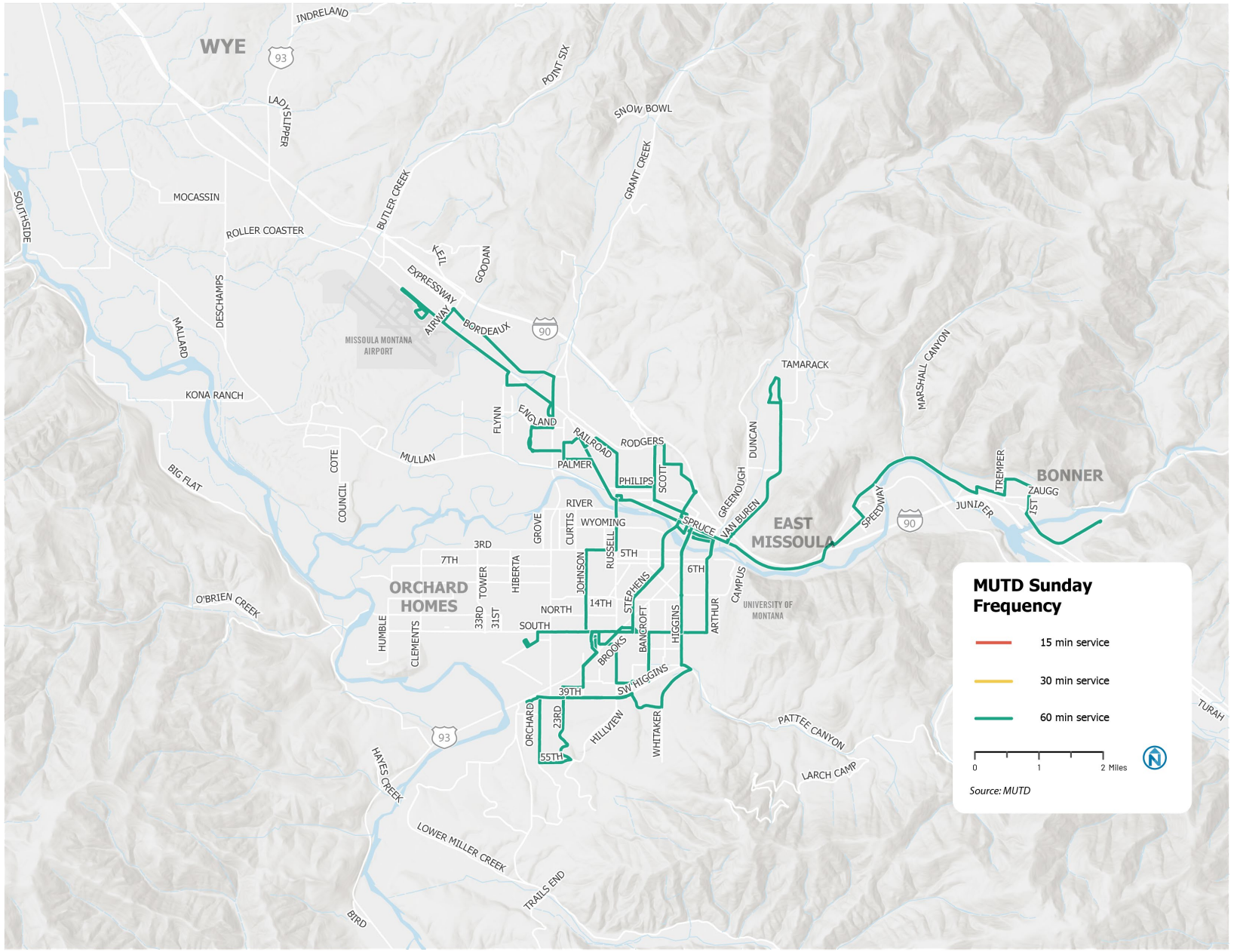
Source: MUTD

Figure 3-15 Fixed-Route Saturday Frequency



Source: MUTD

Figure 3-16 Fixed-Route Sunday Frequency



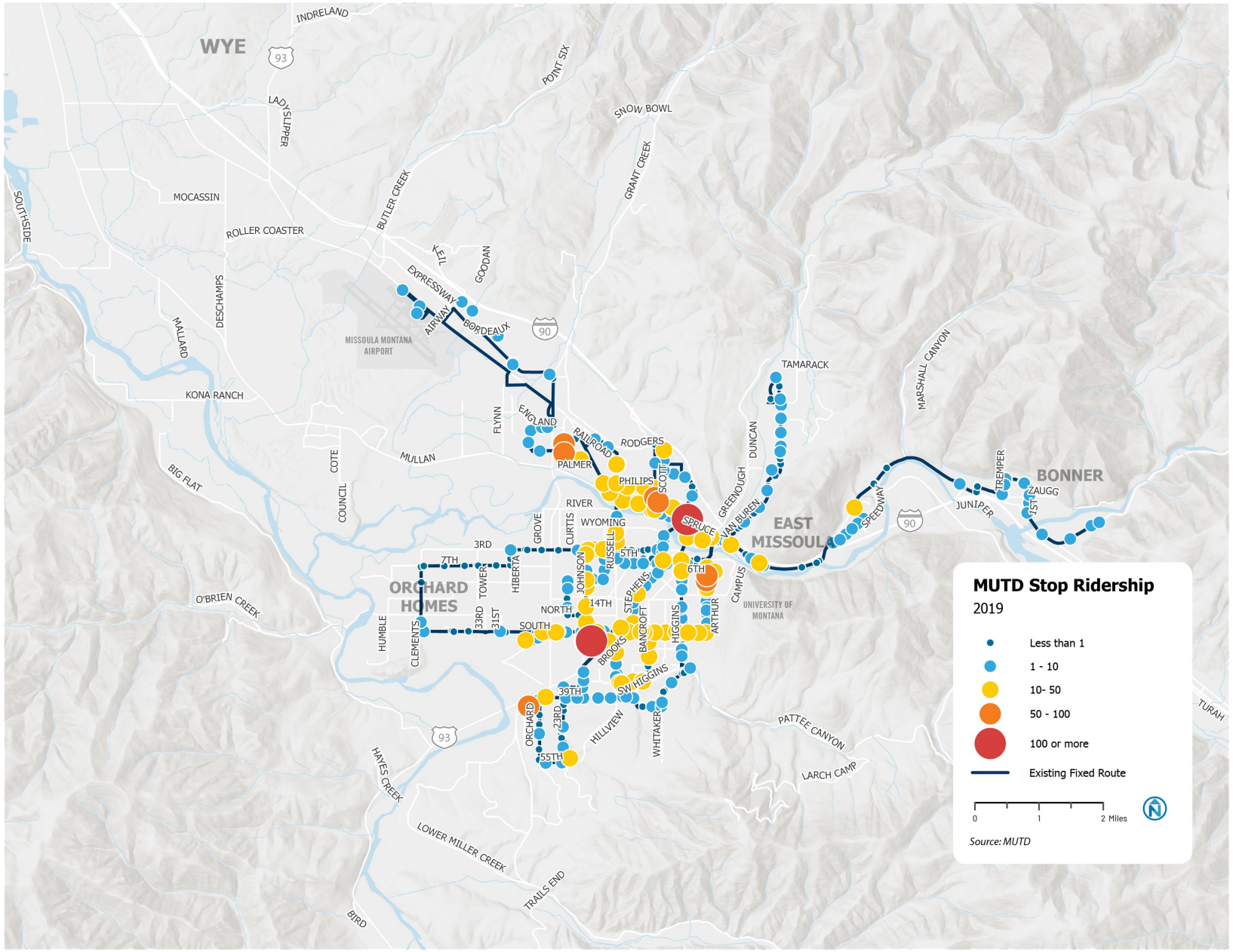
Source: MUTD

System Ridership

In 2019, MUTD's fixed-route network averaged over 5,043 boardings on weekdays. In 2023, the system had an average of 3,892 weekday boardings. Figure 3-17 and Figure 3-18 show the average weekday ridership throughout the system at the stop level in 2019 and 2023, respectively. Some of the high ridership corridors in the system include S Johnston Street, South Avenue, Russell Street, and Broadway Street.

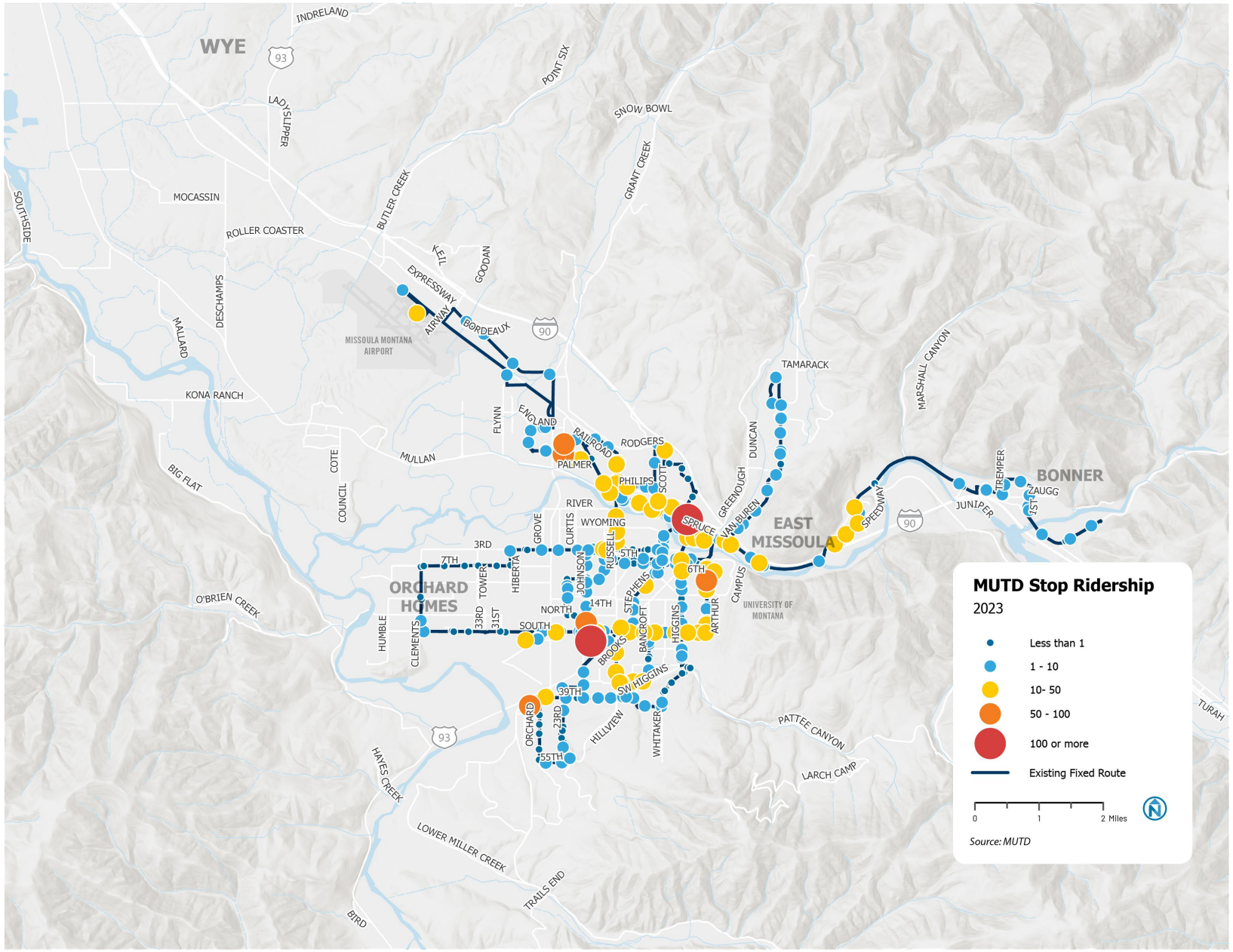
Figure 3-19 shows the change in ridership between 2019 and 2023. Ridership declined around the intersection of S 3rd Street W and S Johnson Street, and around the Westside, Northside, Heart of Missoula, Southgate Triangle, and Lewis and Clark neighborhoods.

Figure 3-17 Average Weekday Stop Ridership 2019



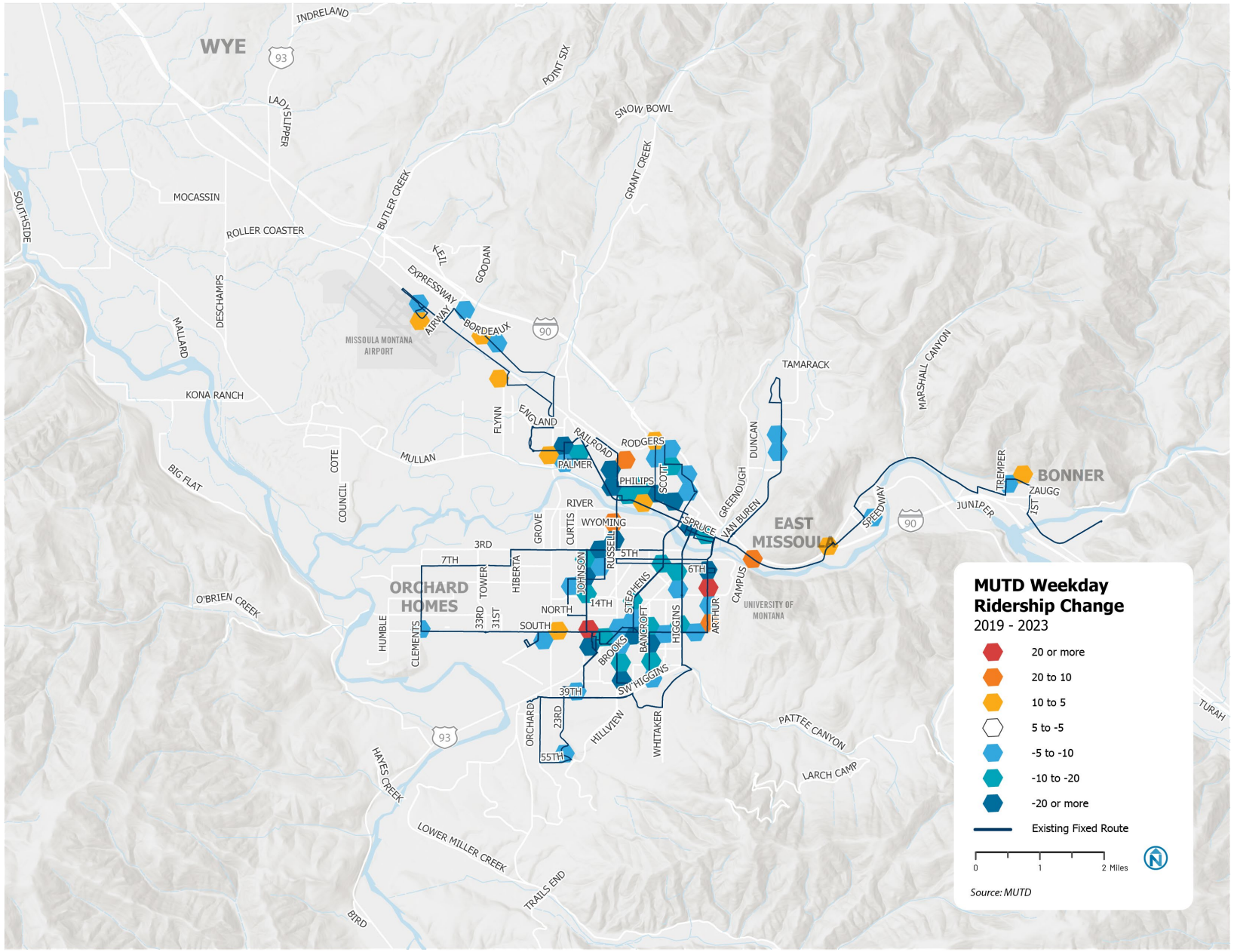
Source: MUTD

Figure 3-18 Average Weekday Stop Ridership 2023



Source: MUTD

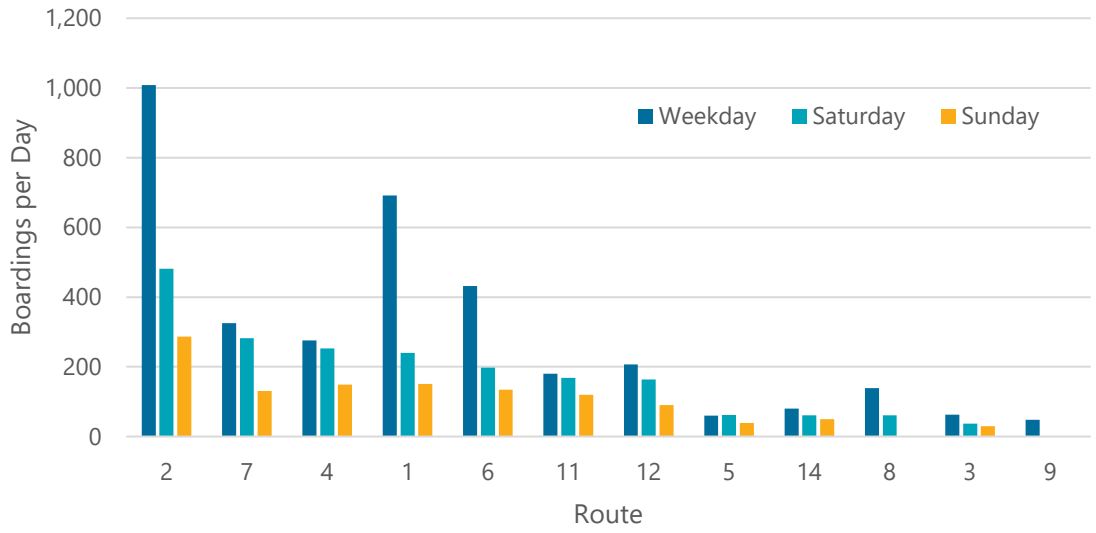
Figure 3-19 Weekday Ridership Change 2019 - 2023



Source: MUTD

Figure 3-20 shows the ridership at the route level in September and October of 2022. On weekdays, the top three routes are: Route 2, Route 1, and Route 6. The boardings of the three routes combined comprise 61% of daily ridership. On Saturdays, the routes with the highest ridership are Route 2, Route 7, and Route 4. On Sundays, the routes with the highest ridership are Route 2, Route 1, and Route 4. On both Saturdays and Sundays, the top three routes total to 50% of daily boardings.

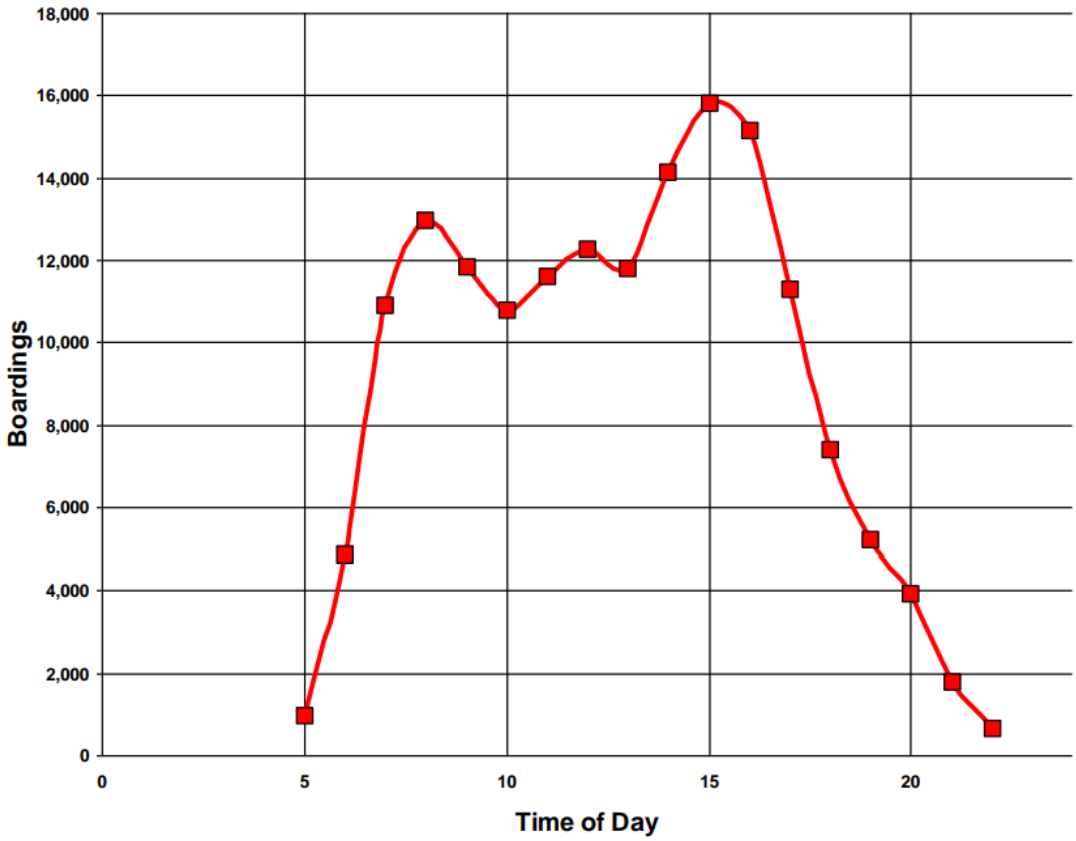
Figure 3-20 Average Weekday Route Ridership 2022



Source: MUTD, September to November 2022

As seen in Figure 3-21, a temporal analysis of ridership was also performed. The results show weekday ridership gradually increases from 5 a.m. before peaking between 7 a.m. and 9 a.m. A second peak occurs between 2 p.m. and 4 p.m. before ridership declines toward the end of service at 10 p.m. Ridership is steady throughout most of the day, aside from the p.m. peak. Periods with the highest ridership coincide with the highest frequencies of service.

Figure 3-21 Weekday Boardings by Time of Day



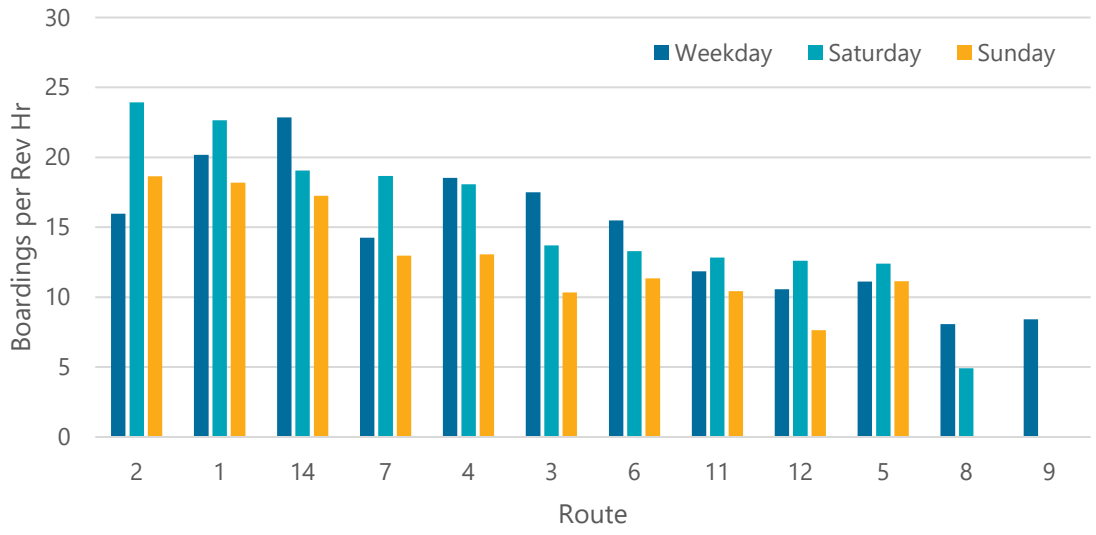
Source: MUTD, September and October 2023

Productivity

Productivity is measured in boardings per vehicle revenue hour. Revenue hours is the amount of time buses operate in service, including recovery time and operator breaks at the end of each trip.

Figure 3-22 shows the weekday boardings per revenue hour for MUTD fixed-route service. On weekdays, the three most productive routes in the MUTD system are Route 14, Route 1, Route 4, all of which have 18 or more boardings per revenue hour. The three least productive routes are Route 12, Route 9, and Route 8, all of which have ten or fewer boardings per revenue hour. On Saturdays and Sundays, Route 2, Route 1, and Route 14 have the highest ridership productivity. Route 8 and Route 12 have the lowest ridership productivity on Saturdays and Sundays, respectively.

Figure 3-22 Route Boardings per Revenue Hour 2022



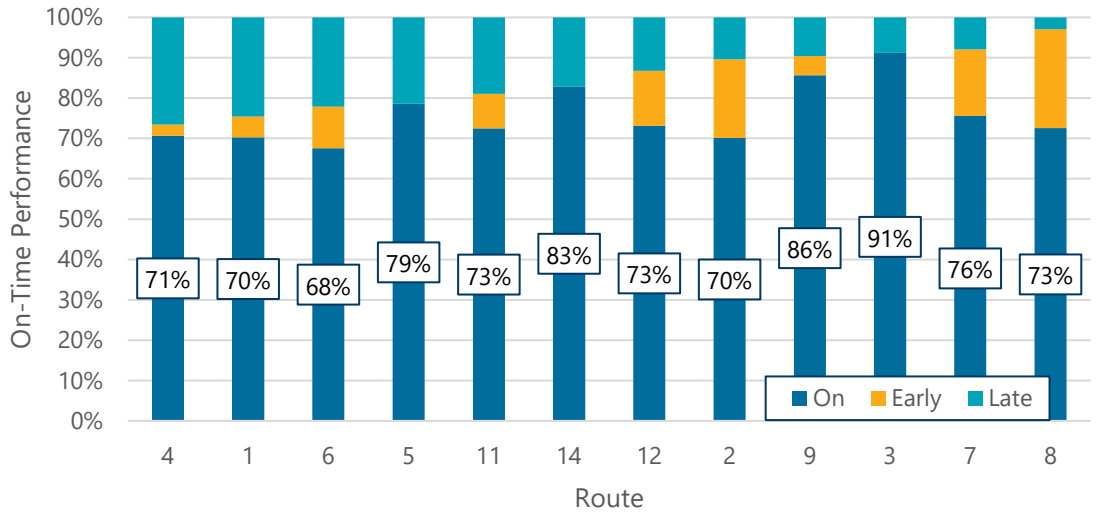
Source: MUTD, 2022

On-Time Performance

MUTD measures on-time performance by comparing the timepoint on the schedule with the actual time the bus arrives. A bus is considered on time if it arrives up to one minute before or five minutes after the scheduled time. Buses that arrive earlier or later than that window are considered early or late. MUTD currently has no on-time performance goal for service. Figure 3-23 illustrates the on-time performance of routes in September and October of 2023. Route 3 saw the highest on-time performance with 91%, while Route 6 saw the worst, with 68%. Routes 3, 5, and 14 had no early arrivals, while Route 8 experienced the largest number

of early arrivals, at 24%. Route 8 also experienced the lowest rate of late arrivals, at 3%, while Route 4 experienced the highest rate of late arrivals, at 27%.

Figure 3-23 On-Time Performance 2023



Source: MUTD, 2023

Bus Stops and Amenities

MUTD currently has 346 stops in its system as of December 2023. 66 (19%) stops have some sort of seating, and 56 additional (16%) stops have shelters. The number and percentage of stops with various amenities are shown in Figure 3-24. There is an opportunity to invest in more bus stop amenities to improve the passenger waiting experience.

Figure 3-24 Bus Stop Amenities

	Number of Stops	Percent
Seating (Bench or Simme-Seat)	66	19%
Shelter	56	16%
Total	346	100%

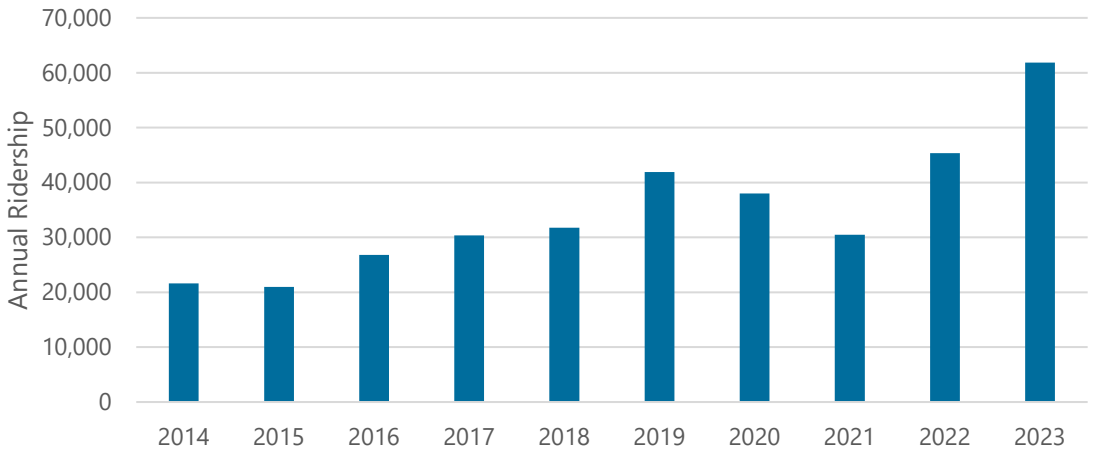
Source: MUTD, December 2023

PARATRANSIT

Historical Trends

Figure 3-25 illustrates historical paratransit ridership. Ridership on MUTD's paratransit service was on an upward growth trend from 2014 to 2019. Between 2014 and 2019, ridership increased by an average of 19% a year. Between 2019 and 2021, MUTD experienced a 27% drop in ridership due to the COVID-19 pandemic. However, between 2021 and 2023, ridership rebounded with a 103% increase in ridership. In 2023, ridership was 61,872, about a 48% increase from pre-pandemic levels.

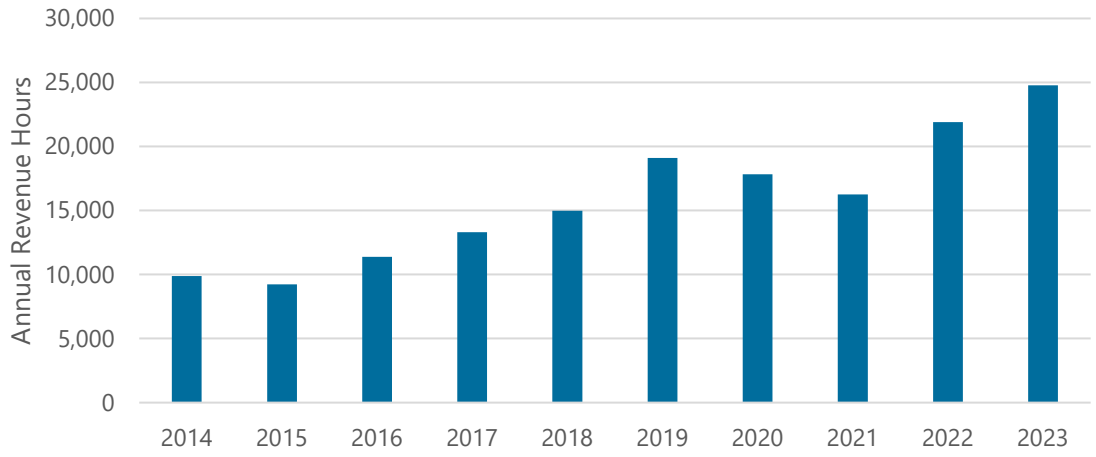
Figure 3-25 Historical Paratransit Ridership



Source: MUTD, 2023

Revenue hours is the amount of time buses operate in service, including recovery time and operator breaks at the end of each trip. Figure 3-26 illustrates historical paratransit vehicle revenue hours. Between 2013 and 2019, revenue hours increased by an average of 15% a year. Between 2019 and 2021, MUTD experienced a 15% drop in ridership due to the COVID-19 pandemic. However, between 2021 and 2023, revenue hours followed ridership and rebounded with a 52% increase. In 2023, MUTD operated 24,785 revenue hours, about a 30% increase from pre-pandemic levels.

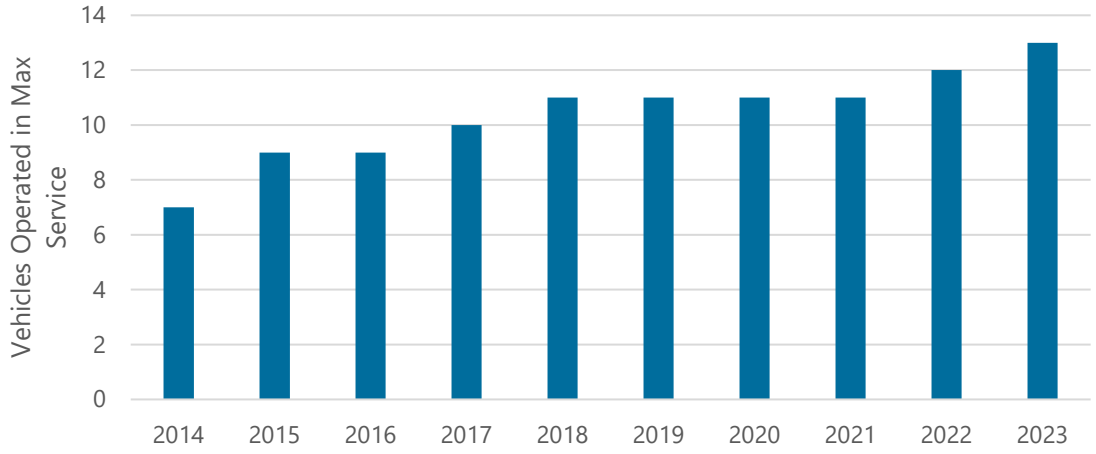
Figure 3-26 Historical Paratransit Vehicle Revenue Hours



Source: MUTD, 2023

Vehicles operated in max service is the maximum number of vehicles needed at a single time to provide peak service. As seen in Figure 3-27, vehicles operated in max service had been increasing between 2013 and 2018 before plateauing for four years. One additional vehicle per year was added to max service in 2022 and 2023.

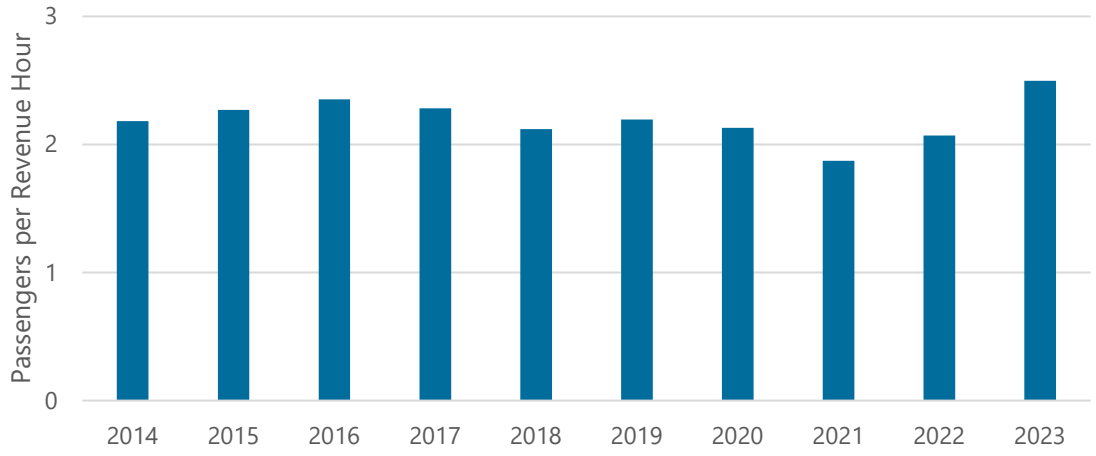
Figure 3-27 Historical Paratransit Vehicles Operated in Max Service



Source: MUTD, 2023

The productivity of service is typically measured in terms of passengers per revenue hour. Service productivity (Figure 3-28) has hovered between 2.1 to 2.3 passengers per revenue hour over the last decade. In 2021, ridership fell slightly below 1.9 passengers per revenue hour. Ridership rebounded to 2.5 passengers per revenue hour in 2023.

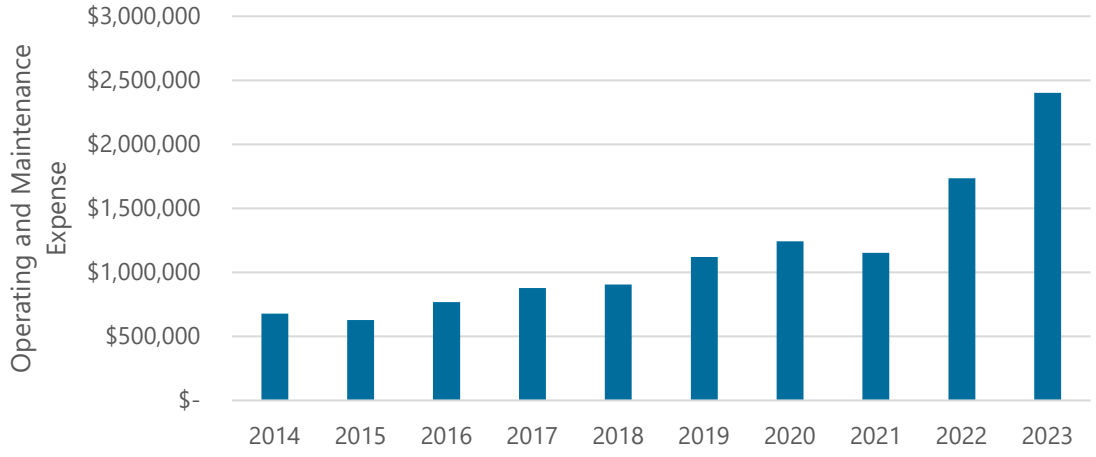
Figure 3-28 Historical Paratransit Productivity



Source: MUTD, 2023

Figure 3-29 shows the annual operating and maintenance (O&M) costs for the paratransit service, not adjusted for inflation. Prior to the pandemic, costs rose an average of 11% per year. 2021, which saw a decline of 7%, was the only year where costs did not increase. In the following two years, expenses increased by an average of 45% per year.

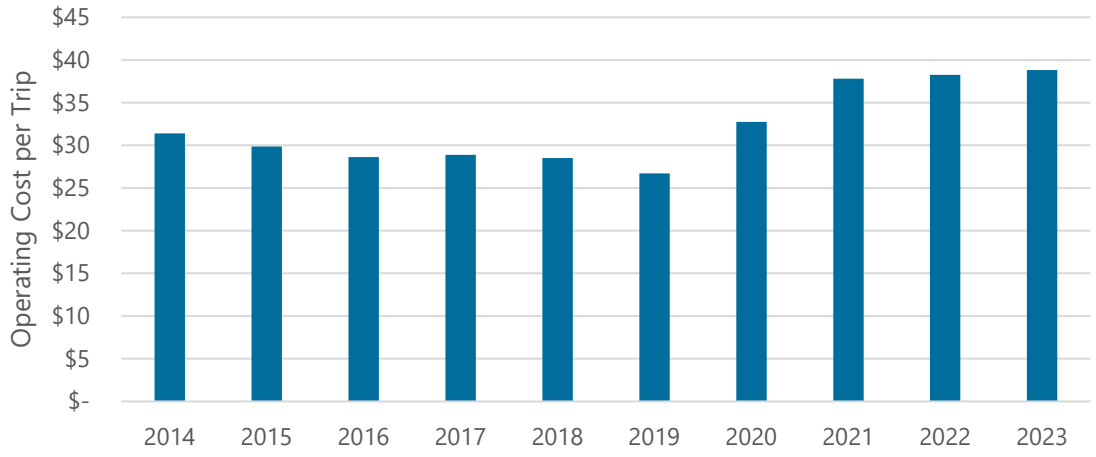
Figure 3-29 Historical Paratransit Operating and Maintenance Expenses



Source: MUTD, 2023

Figure 3-30 normalizes O&M costs by number of passengers, or trips. Between 2013 and 2019, cost per trip decreased by an average of $1, or 3% per year, from $31 to $26. Cost per trip increased significantly during the pandemic from 2019 to 2021 – averaging a $5.50 increase per year. Since 2021, cost per trip has plateaued at about $39, a 44% increase from pre-pandemic levels.

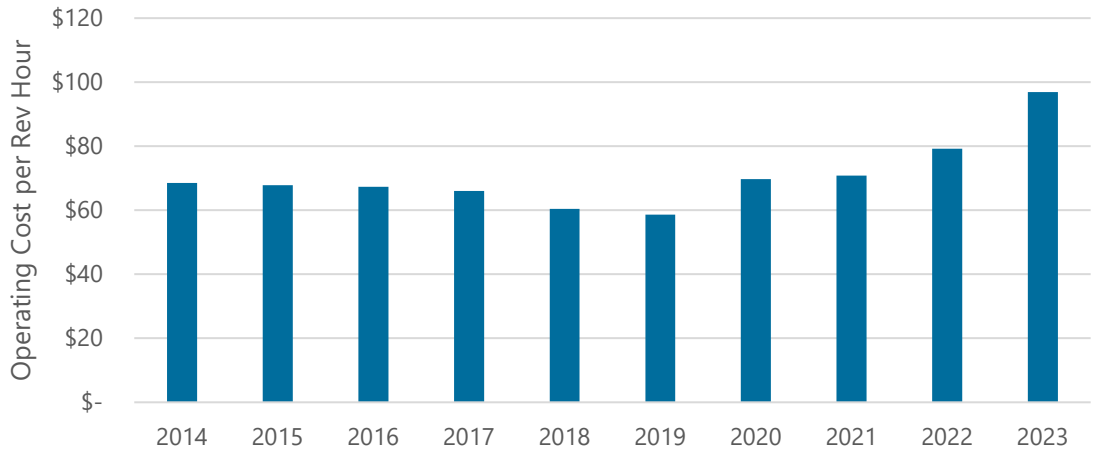
Figure 3-30 Historical Paratransit Cost per Trip



Source: MUTD, 2023

Figure 3-31 normalizes O&M costs by revenue hours. Between 2013 and 2019, cost per revenue hour declined by an average of 2% per year. Cost per revenue hour since pre-pandemic levels in 2019 has increased by 64%, an average of 16% per year.

Figure 3-31 Historical Paratransit Cost per Revenue Hour



Source: MUTD, 2023

FLEET

MUTD has 30 vehicles in its fixed-route fleet, 12 of which are battery electric. The complete fleet roster, along with age and replacement year, are shown in Figure 3-32.

Figure 3-32 Fixed-Route Fleet

Number of Vehicles	Year	Make	Replacement FY	Propulsion Type
1	1996	Chance	2024	Diesel
10	2009	Gillig	2025	Diesel
4	2010	Eldorado	2024/2025	Diesel
3	2014	Gillig	2029	Diesel
6	2019	Proterra	2031	Battery Electric
4	2021	Gillig	2033/2034	Battery Electric
2	2021	New Flyer	2034	Battery Electric

Source: MUTD, 2023

MUTD has 16 vehicles in its paratransit fleet. The complete fleet roster, along with age and replacement year, are shown in Figure 3-33.

Figure 3-33 Paratransit Fleet

Number of Vehicles	Year	Make	Replacement Year	Propulsion Type
2	2014	Chevrolet	2022	Diesel
1	2018	Champion	2025	Diesel
3	2018	Dodge	2025	Diesel
4	2019	Dodge	2027	Diesel
4	2021	Elkhart	2027	Diesel
2	2022	Ford	2030	Diesel

Source: MUTD, 2023

FACILITIES

MUTD has one major transit hub, where riders can transfer between routes: the Mountain Line Transfer Center, located at 200 W Pine St. All routes except Route 8 use the transfer center as an end of line. MUTD also has an administrative and maintenance facility at 1221 Shakespeare St.

KEY FINDINGS

- Historical trend data helps to paint where MUTD has been and the direction they are heading.

  Fixed Route

  - **Ridership on the fixed-route network was steady before COVID** and is slowly recovering back to pre-pandemic levels. MUTD's 2023 ridership was 1.09 million boardings, which is approximately 70% of MUTD's 2019 annual ridership.
  - **2023 saw an increase in revenue hours** due to implementations of various service improvements, including:
    - Earlier and later weekday service
    - All-day weekday service on two new routes
    - Longer Saturday service
    - New Sunday service
  - **Productivity has been declining since COVID** and is now at 15 passengers per revenue hour, less than half of what it used to be in 2019. Some of this decrease in productivity can be attributed to the service expansions implemented in 2023 which added service on Sundays and in the early morning/late evening, which needs time for ridership to mature.
  - **Operations and maintenance costs have been increasing** over the last decade, with the highest increases being during the last three years.

  Paratransit

  - **Ridership on MUTD's paratransit service has exceeded pre-pandemic levels**. Despite a ridership drop in 2020 and 2021, ridership rebounded in the following years, with 2023 seeing a 48% increase from pre-pandemic levels.
  - **Productivity is relatively stable**, with numbers holding steady around two passengers per hour for the last decade, aside from a dip during the COVID-19 pandemic.
  - Without adjusting for inflation, **operating and maintenance expenses have drastically increased**; expenses in 2023 were twice as high as expenses in 2019.
- The **top three ridership routes** in MUTD's system based on 2022 average weekday ridership are: **Route 2**, **Route 1**, and **Route 6**.
- The **weekday systemwide temporal distribution** of ridership shows an **8 a.m. peak and a 3 p.m. peak, with ridership generally steady during the middle of the day.** This ridership pattern supports the daytime service schedule MUTD currently operates.

- The five **most productive routes** in the MUTD system based on average weekday boardings per revenue hour are **Route 14, Route 1, Route 4, Route 3, and Route 2.**
- The **strongest ridership corridors have high-frequency (15 min) service.** Some of the high ridership corridors in the system include S Johnston Street, South Avenue, Russell Street, and Broadway Street.
- **Ridership patterns suggest latent demand for more weekend service:** Routes 1, 2, 7, and 12 have hourly service on weekends but have higher productivity levels than on weekdays when service operates at 30-minute headways or better during peak hours. **Out of the 346 stops in the system, 16% have shelters, and 19% have either Simme-Seats or benches.** There is an investment opportunity to increase the number of stops with shelters and seating.

4 MULTI-MODAL TRANSPORTATION CONDITIONS

While Chapter 3 focused on the transit network, this chapter summarizes the rest of the transportation network in Missoula. Driving, walking, biking, and safety are all included in this chapter. A series of performance metrics are also included at the end of this chapter.

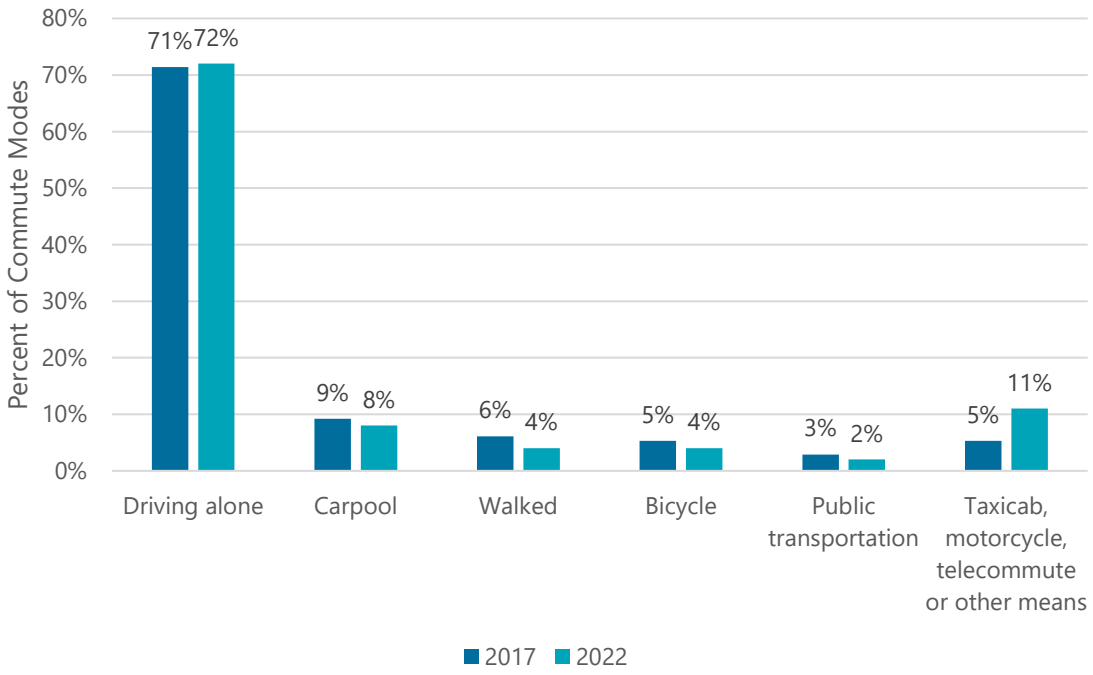
HOW PEOPLE GET AROUND

A reliable transportation system is essential for the livelihood of all residents, connecting them to neighborhoods, commercial and recreational areas, and job centers. Understanding how people travel will help create a better traveling experience for them.

As shown in Figure 4-1, driving alone is the primary transportation mode for 72% of area residents who commute to work, a 1% increase from 2017. A small percentage of residents take public transportation, walk, and bike, a one to two percent decrease for these modes from 2017.

Out of the 11% of people who use taxicabs, motorcycles, or telecommute, approximately 10% of employees work remotely. This no doubt has been due to changes brought on by the COVID-19 pandemic. Commute to work data does not include travel patterns for the more than 7,000 University of Montana students in Missoula.

Figure 4-1 Percent of Commute Modes 2017 vs. 2022



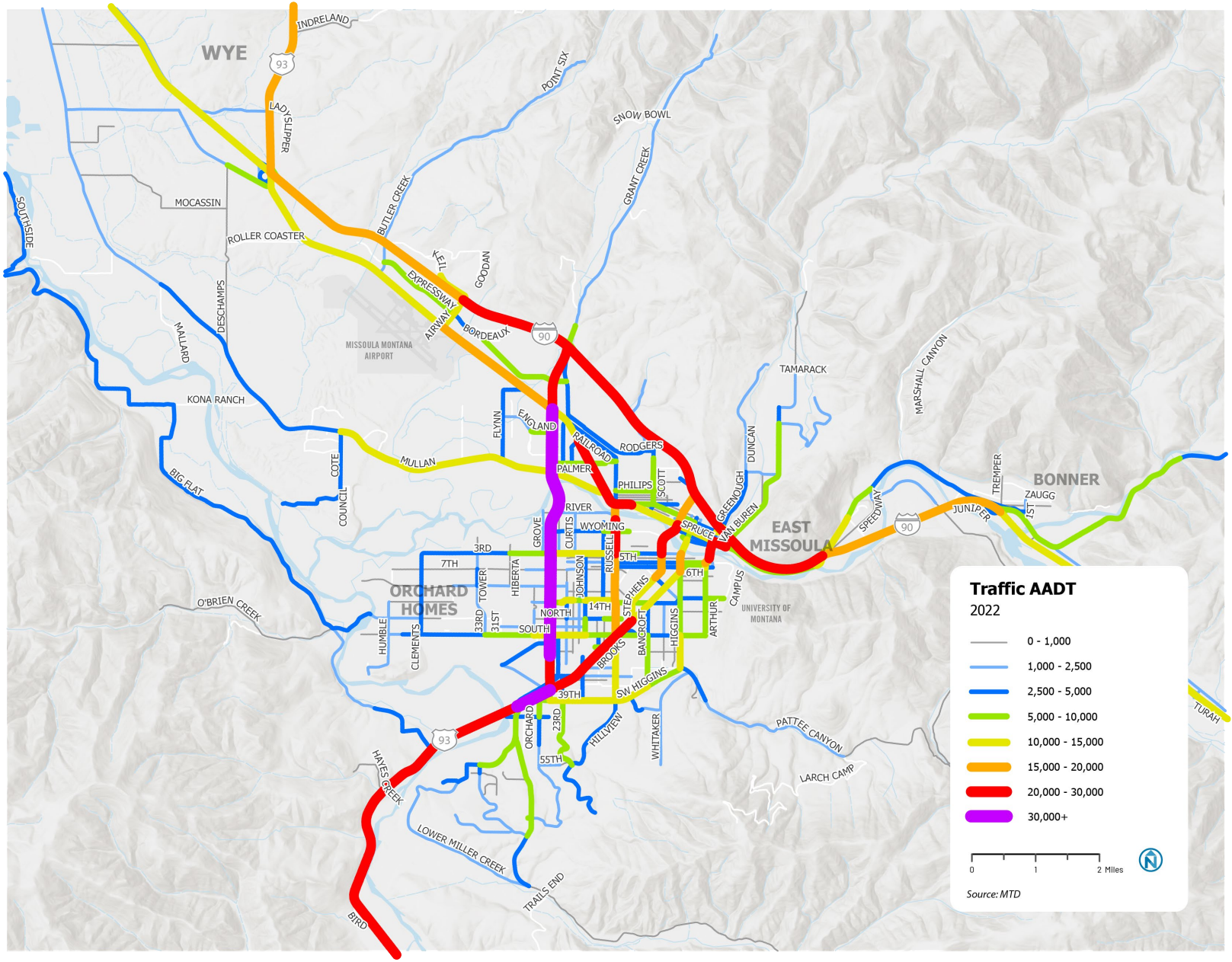
Source: ACS, 2017 and 2022

DRIVING IN MISSOULA

Many residents rely on driving to travel throughout Missoula. The busiest corridors have remained the same since 2017.

As shown in Figure 4-2, the highest concentration of daily auto trips is along the Reserve Street corridor, which carries more than 30,000 vehicles each day. Other roadways with high traffic volumes include Brooks Street in the Southgate Triangle area, the bridges into downtown, and I-90 between downtown and East Missoula. Within the MPO, 59% of lane miles – the neighborhood streets and local connections – are owned by the City of Missoula. The county owns about 24% of roads, and state and federal roads make up about 17%. The busiest streets like Reserve Street fall outside of the City's jurisdiction.

Figure 4-2 Annual Average Daily Trips (AADT)



Source: MUTD

WALKING IN MISSOULA

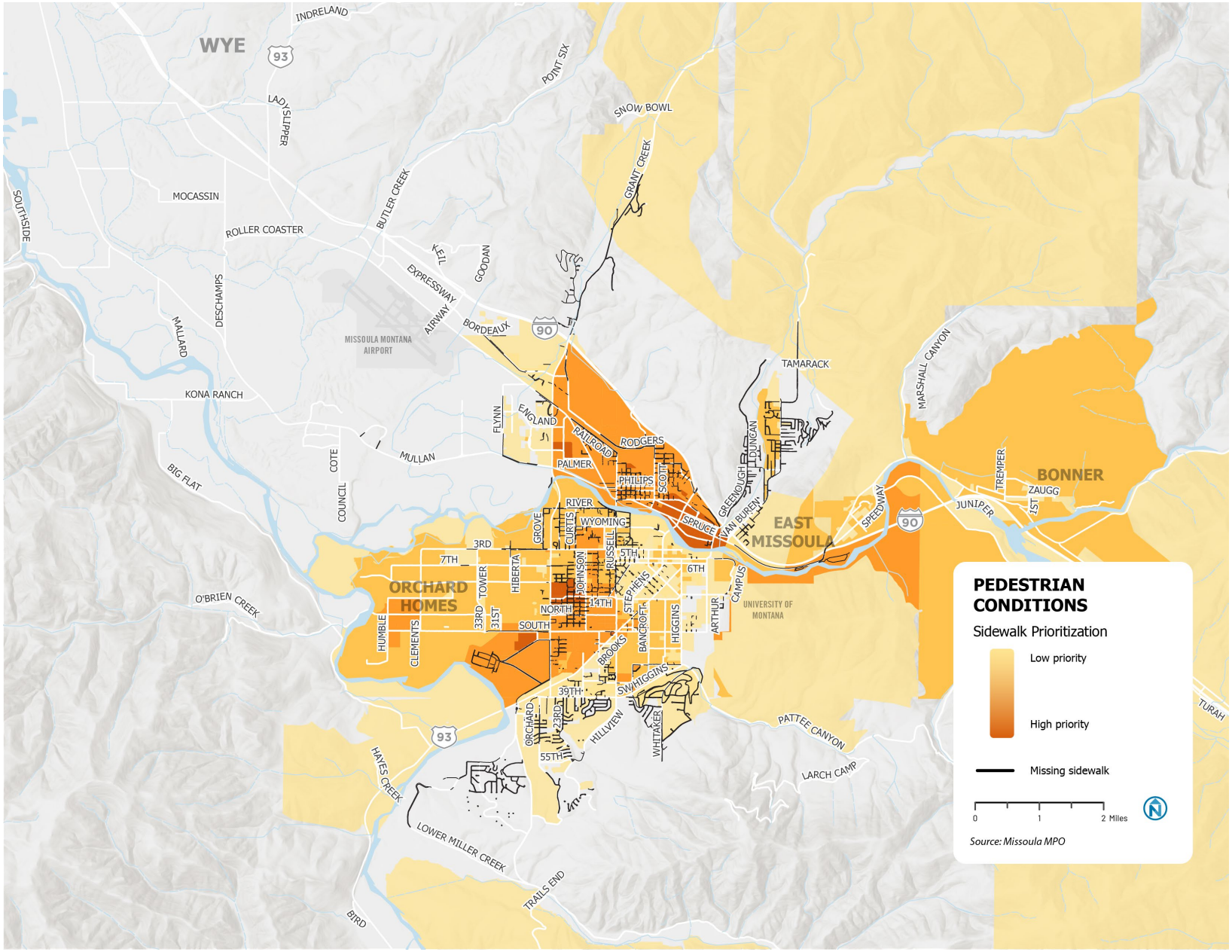
Accessible and maintained sidewalks are essential for people to walk, roll, and use mobility devices comfortably and safely in the Missoula area. While sidewalks on both sides of the street may not be necessary in rural areas, a designated pathway is needed for travel within and between residential neighborhoods and other community destinations. As the region's population continues to grow, a complete pedestrian network will need to be a priority to meet community mobility needs.

The City of Missoula's 2019 Pedestrian Facilities Master Plan identified 199.2 miles of missing sidewalk, shown in black in Figure 4-4. Most of the sidewalks in Missoula are in older and newer neighborhoods such as Riverfront, Southgate Triangle, and the University District. The Facilities Master Plan helps prioritize where sidewalks should be installed. The prioritization consisted of two major categories: social demographics data and built environment data. The following table breaks down the scoring elements and criteria. Missoula County has their own plan, titled the Missoula County Pathways and Trails Master Plan, which examines the existing paved pathways across the county and prioritizes projects for implementation.

Figure 4-3 Scoring Elements/Criteria for Pedestrian Facilities Master Plan

Element	Criteria
Social Demographic Scoring: Demographics	Low/moderate income households
	Adult obesity
	Zero car households
	Persons with a disability
	Persons aged 65+
Physical Element Scoring: Attractors (within ¼ mile)	Schools
	Transit stops
	Grocery stores
	Parks
	Commuter paths
	Post offices
	Medical clinics
	Independent Living Services
	Emergency/support services
	Religious/civic
Physical Element Scoring: Density (Residential/Employment)	Residential (> 7 households/acre or > 4 households/acre)
	Employment (< 12 jobs/acre)

Figure 4-4 Pedestrian Conditions



Source: Missoula MPO

BIKING IN MISSOULA

Missoula has continued to make investments in its bicycle network to encourage more active transportation and to reduce vehicular trips. Presently, there are approximately 47 miles of bicycle facilities (Figure 4-5). There are plans to add another 100 miles to the network, which would more than double the bicycle facilities currently in the city. In the 2019 Bicycle Facilities Master Plan, the City of Missoula adopted new bicycle facility nomenclature, meaning there is not a one-to-one comparison of facility type between the existing and proposed network. Nearly half of all proposed bicycle facilities will be protected, with 25.5 miles of shared-use off-street paths and 23.1 miles of buffered on-street lanes.

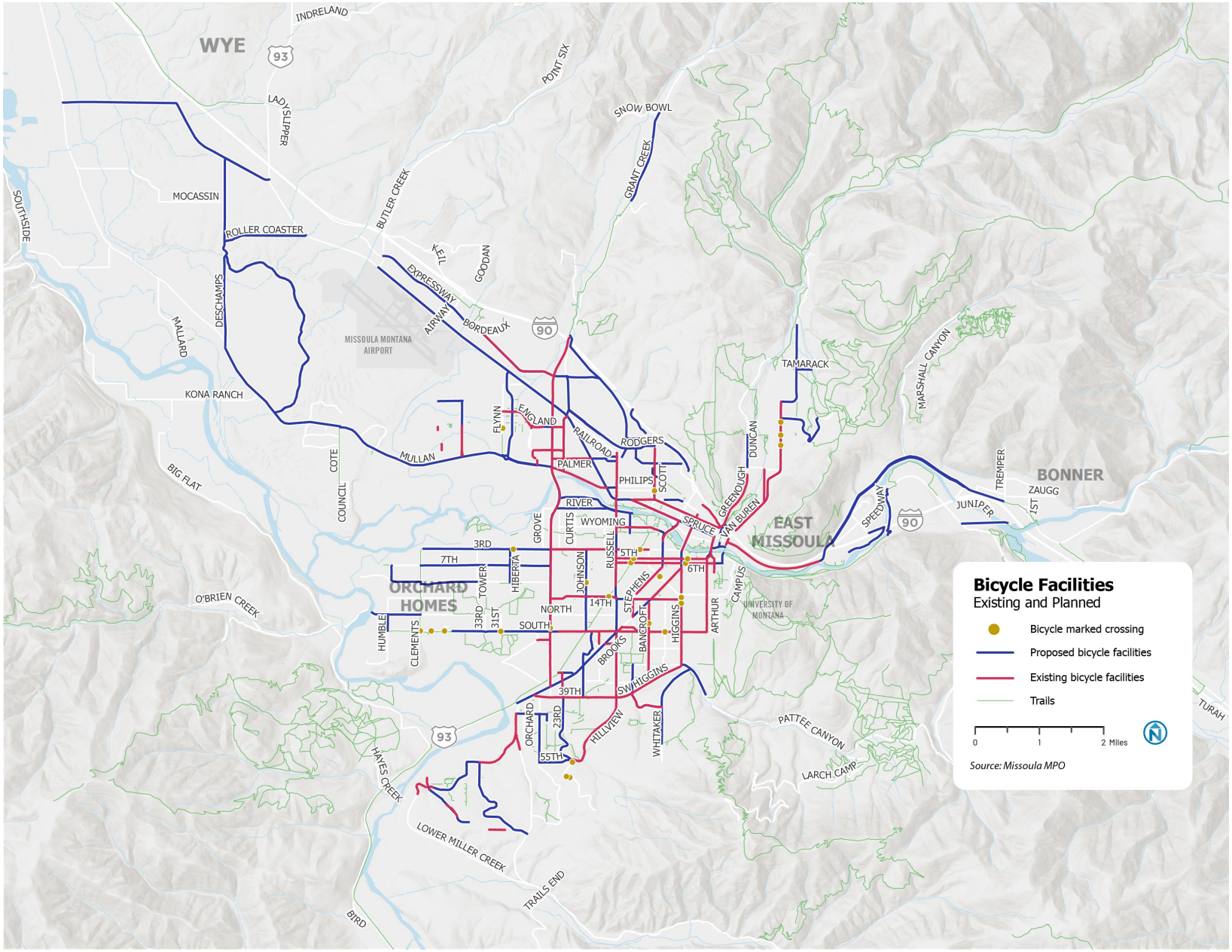
Figure 4-5 Miles of Existing and Proposed Bicycle Facilities

Bicycle Facility	Length (miles)
Existing Facilities	**47 miles**
Cycle Track	0.9 miles
Lanes	46.1 miles
Proposed Facilities	**100 miles**
Advisory Bike Lane	0.5 miles
Bike Lanes	41.4 miles
Buffered Bike Lanes	23.1 miles
Separated Bike Lanes	6.3 miles
Shared Use Paths	25.5 miles
Total Existing + Proposed Facilities	**147 miles**

Source: City of Missoula, Bicycle Facilities Master Plan

The current bicycle network is primarily concentrated in central Missoula (Figure 4-6). There are plans to expand the bicycle network outside the urban core, northwest to Wye and west to the Orchard Homes neighborhood. The Missoula County Pathways and Trails Master Plan has identified proposed projects for new paved trails that fall outside Missoula city limits.

Figure 4-6 Existing and Planned Bicycle Facilities

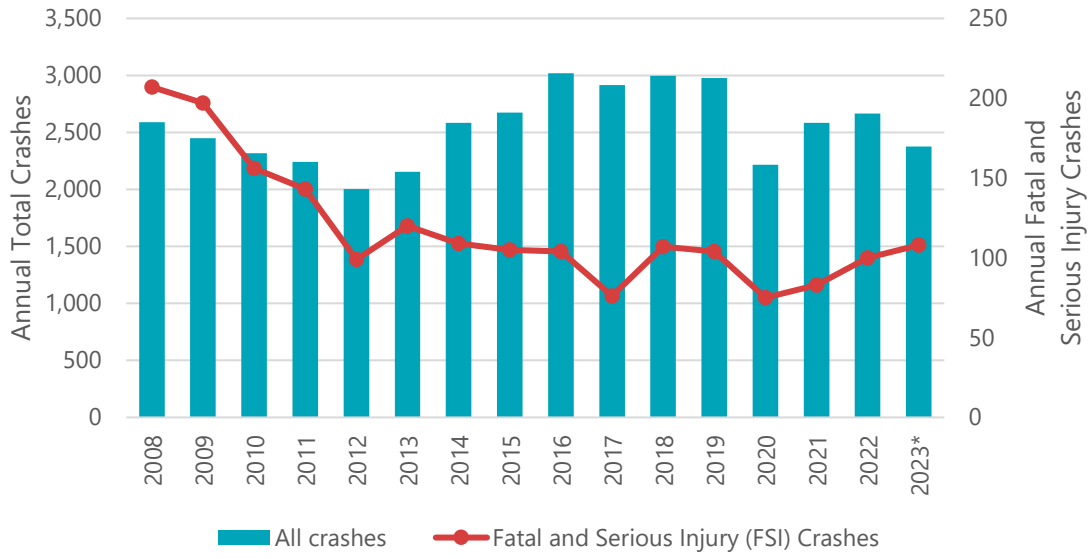


Source: Missoula MPO

TRANSPORTATION SAFETY IN MISSOULA

The Montana Department of Transportation (MDT) maintains records on vehicle crashes. Figure 4-7 shows the historical crash trends in Missoula County since 2008. After being on a downward trend until 2012, total crashes started to go up, peaking between 2016 and 2019 at about 3,000 annual crashes. In 2020, total crashes decreased to 2,200 due to reduced travel from the COVID-19 pandemic. Since then, total crashes have been increasing as travel rebounds. When looking at fatal and serious injury (FSI) crashes only, they decreased from 200 to 100 annual crashes between 2008 and 2012 but have remained relatively constant at around 100 crashes per year since then.

Figure 4-7 Historical Crash Trends

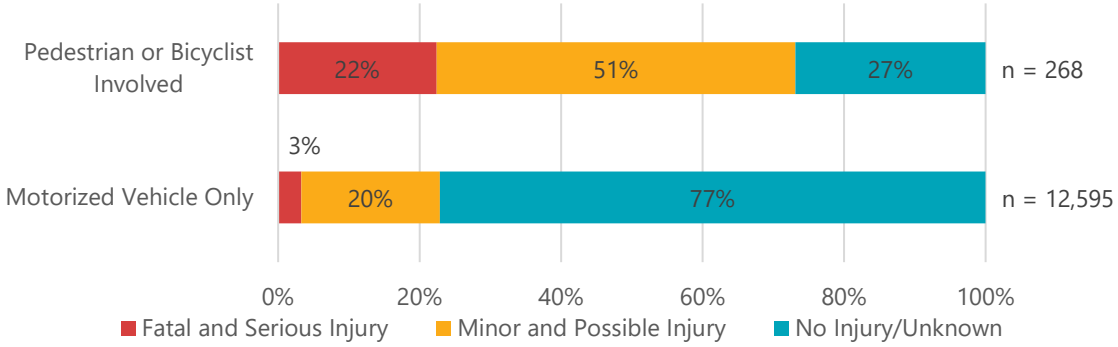


*Note: 2023 data has not yet been verified by MDT

Source: MDT Crash Data

Figure 4-8 compares the injuries and fatalities of motorized with pedestrian and bicyclist crashes. The figure shows that more than 70% of crashes involving people walking or biking resulted in some level of injury or a fatality. This differs greatly with crashes involving only motorized vehicles, where less than a quarter of those crashes resulted in some level of injury or a fatality. Notably, the incidence of pedestrian or bicyclist crashes resulting in a fatality or serious injury is much higher than for motorized vehicle crashes. This highlights the importance of promoting safety improvements that protect people walking, biking, and rolling throughout Missoula.

Figure 4-8 Motorized Vehicle Only Crashes vs pedestrian and bicyclist by injury level, 2019-2023

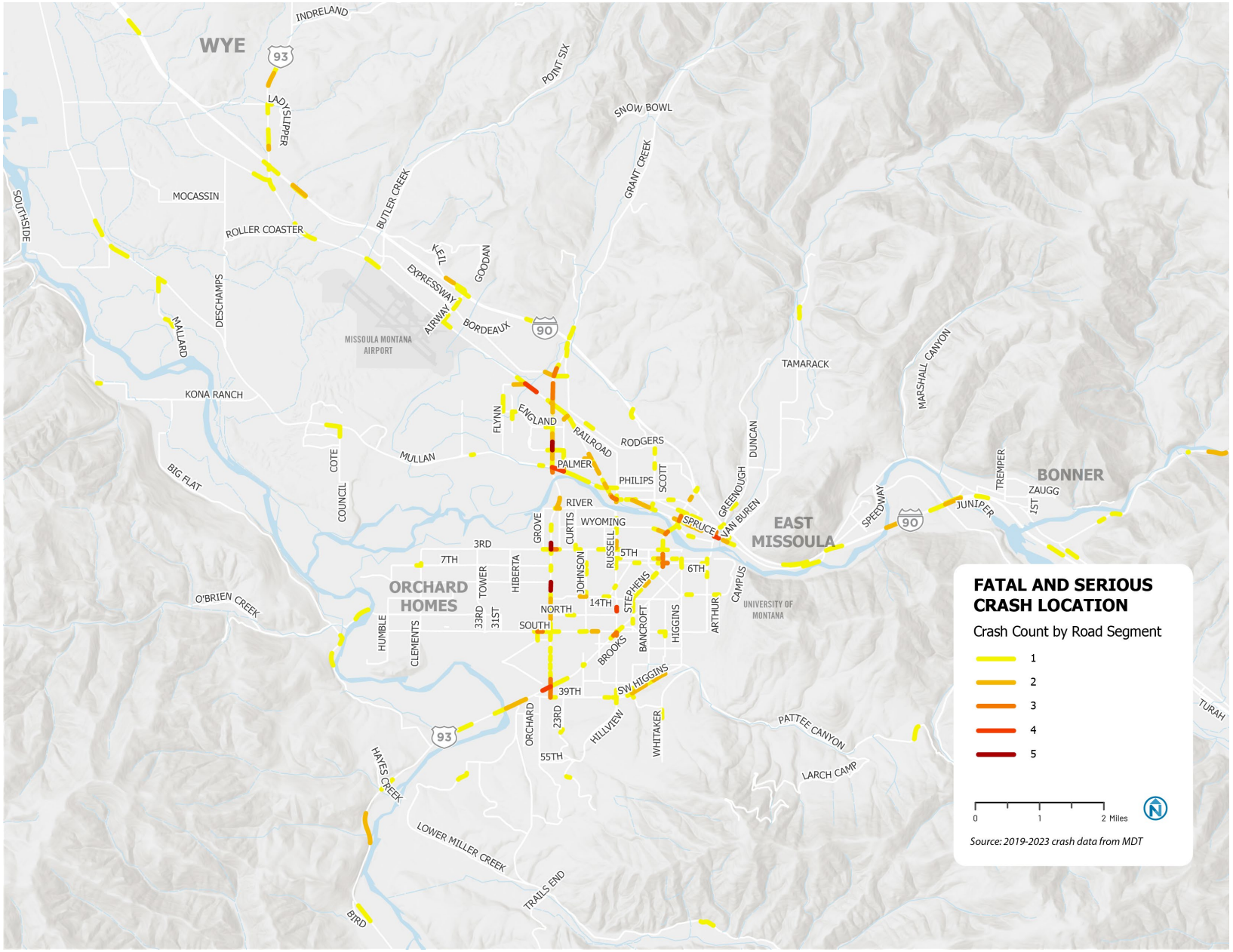


Source: MDT Crash Data

Figure 4-9 illustrates crashes that resulted in a fatality or serious injury between 2019 and 2023. Reserve Street has the highest concentration of fatal and serious injury crashes. Corridors with higher traffic volumes generally have higher crash rates.

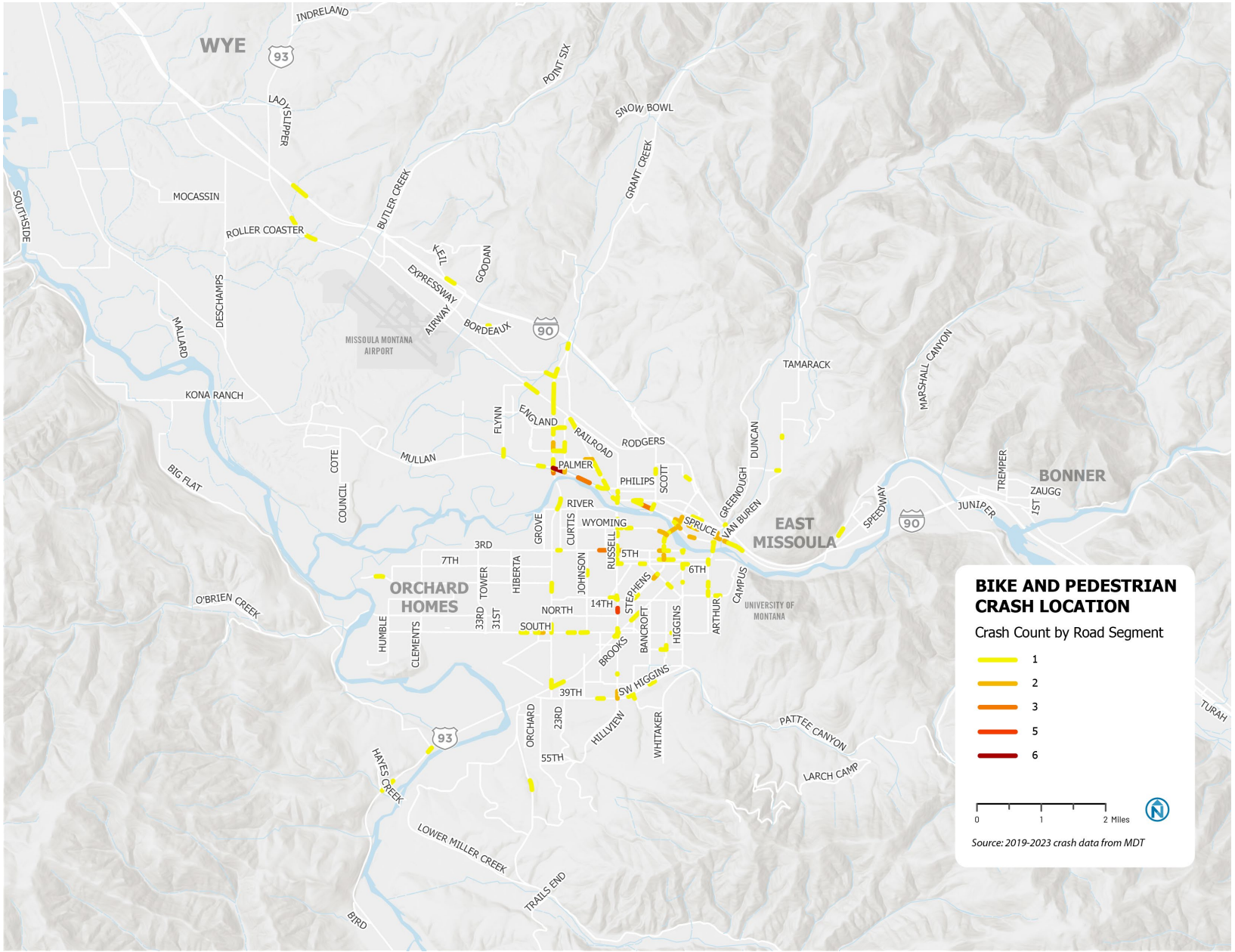
Figure 4-10 illustrates crashes involving pedestrians and bicyclists that resulted in any level of injury between 2019 and 2023. Mullan Road and Broadway Street have the highest concentrations of pedestrian and bicyclist crashes.

Figure 4-9 Fatal and Serious Injury Crash Locations 2019 - 2023



Source: MDT crash data, 2019-2023

Figure 4-10 Pedestrian and Bicyclist Crash Locations 2019 - 2023



Source: MDT crash data, 2019-2023

Most crash reports include information on factors that contributed to the crash. A review of the crash data shows that most crashes are caused by human factors, rather than environmental conditions or vehicle issues. Looking at human factors specifically, the top three causes of crashes are:

- Driving distracted or in a careless/inattentive manner
- Failing to yield right-of-way
- Driving in an erratic, reckless, negligent, or aggressive manner

MISSOULA CONNECT PERFORMANCE METRICS ANALYSIS

Missoula Connect produced a series of metrics to evaluate the performance of Missoula's transportation network. The following table is a snapshot of some key metrics included in that plan, along with time periods and targets, if available. Unless otherwise noted, data is measured for Missoula County.

Category	Metric	Definition	Period	Performance	Target	Source
Safety and Performance	Rate of serious injury and fatality from collisions per 100 million vehicle miles traveled (VMT)	Suspected serious injury	2023	7.75	No more than 5.9 serious injuries by 2020	MDT, Target from TIP
		Fatality	2023	1.48	No more than 1.28 annual fatalities by 2020	MDT, Target from TIP
	Rate of transit on-time performance	% of trips that arrive up to one minute before or five minutes after the scheduled time.	Sep–Nov, 2023	76%	N/A	MUTD
	Freight corridor travel time	Truck Travel Time Reliability Index (Statewide Data)	2018 - 2021	1.23	1.3	Montana State Freight Plan (2022)
Equity	Household connections to job centers via transit	% Households in Missoula within a 30 min transit travel time of downtown at 8 a.m. on a weekday	2024	33%	N/A	MUTD
	Average household housing and transportation (H&T) costs	% of block groups where a household with the county average median income spends over 45% of income on H&T	2023	74%	N/A	Center for Neighborhood Technology (CNT)

Category	Metric	Definition	Period	Performance	Target	Source
Infrastructure	% of lane miles of pavement in good condition	Interstate System	N/A	65%	54%	MDT, Target from TIP
		Non-Interstate System	N/A	78%	40%	
		Non-NHS Roads	N/A	44%	N/A	
	% of lane miles of pavement in poor condition	Interstate System	N/A	15%	3%	
		Non-Interstate System	N/A	10%	6%	
		Non-NHS Roads	N/A	24%	N/A	
	% of bridges in good structural condition	Structure Condition	N/A	69%	12%	MDT, Target from TIP
	% of bridges in poor structural condition	Structure Condition	N/A	5%	9%	
	% of transit assets in a state of good repair	Fixed-Route	2024	86%	66%	MUTD, Target from TIP
		Paratransit	2024	87%	86%	
Project Progress	Progress of Missoula Connect near-term projects	# of Partially Completed projects	2024	4 of 39	N/A	Missoula Connect
		# of Fully Completed projects	2024	6 of 39	N/A	Missoula Connect

Note: Green shading indicates metric that meet or exceed the target. Red shading indicates metrics that do not meet the target.

KEY FINDINGS

- Mode share in Missoula, except for telecommuting, has not changed since 2017. **Telecommuting increased** to 10%, likely due to the COVID-19 pandemic which allowed more employees to work from home.
- **Driving remains the most common mode of transportation** for many residents and has remained the same since the Missoula Connect LRTP in 2017. A **small percentage take transit, walk, or bike**.
- Missoula is **expanding its active transportation networks** to meet the mobility needs of current and future residents.
  - Sidewalk installation will be prioritized in the following areas:
    - Areas that serve high-need communities (e.g., people without a vehicle, low-income neighborhoods)
    - Serve community destinations along the roadway (e.g., grocery store, parks, medical clinics)
    - Are located in areas with higher levels of population and employment density
  - Bicycle facilities will be added to areas northwest of Wye and west of Orchard Homes. The **bicycle network will more than double,** and nearly half of all proposed bicycle facilities will be protected, with 25.5 miles of shared-use off-street paths and 23.1 miles of buffered on-street lanes being proposed throughout the City and beyond.
- Select metrics from the Missoula Connect study were computed to gain a better understanding of the transportation network in Missoula. Some notable metrics include:
  - The **rate of serious injury and fatalities from collisions** in 2023 is **higher than the Montana DOT goals** from 2020.
  - **Household connections to job centers via transit are strong** – 75% of the households in the county can reach downtown Missoula within 45 minutes at 8 a.m. on a weekday.
  - **Many households in Missoula County struggle to cover housing and transportation costs**. 74% of block groups with the county's average median income spend over 45% of their income on housing and transportation costs.
  - **Some roadways have poor pavement conditions** – Interstate and non-Interstate roadways both have poor pavement conditions that exceeds the target.
  - **Bridges and transit assets are in a state of good repair** – Both exceed the targets set forth by the MPO.

5 CONCLUSION

This report summarizes the state of the current transportation conditions, which will be the foundation for updating the recommendations and improvements in Missoula Connect, the Long-Range Transportation Plan (LRTP), and the Transit Strategic Plan. These plans will help the region to prioritize limited funding for projects that improve mobility in the greater Missoula area. Key findings from our assessment will inform the new plans' recommendations to include a focus on affordability, mode shift, and safety.

Affordable, accessible, and high-quality transportation is essential to maintaining a thriving community. The population of Missoula has increased by 8% in the past decade, and the median home sales price has nearly doubled. Many households in the Missoula area spend over 45% of their income on housing and transportation costs, causing people to move farther out from the city to have affordable housing options. The tradeoff with moving farther away is increased transportation costs. Transportation investments can help relieve some of the financial burdens by increasing access to jobs, schools, and opportunities for everyone.

MUTD ridership on fixed-route service is slowly recovering from the pandemic. The region continues to make investments to improve service, with the most recent improvement being operating on Sundays. The strongest ridership corridors have high-frequency service with buses coming every 15 minutes. At the same time, commute mode share in Missoula, except for telecommuting, has not changed since 2017. Driving alone remains the most common mode of transportation for commuting to work for many residents and has remained the same since the 2017 Missoula Connect plan. Continued investment in transit service will be important to reduce the drive alone mode share and mitigate the impacts of additional growth.

Safety on streets is among the highest priorities to address with the LRTP. After an overall decline in crash activity during 2020, total crash numbers and Fatal and Serious Injury crashes are increasing. The rate of serious injury and fatalities from collisions in Missoula in 2023 was higher than the target Montana DOT set in 2020, and it is vital to take steps to address this. Increased transportation safety will have far-reaching benefits across our entire transportation landscape.

There is much work to be done to achieve the Missoula region's transportation vision, but there is a strong foundation on which to start for Missoula Connect and the Transit Strategic Plan.