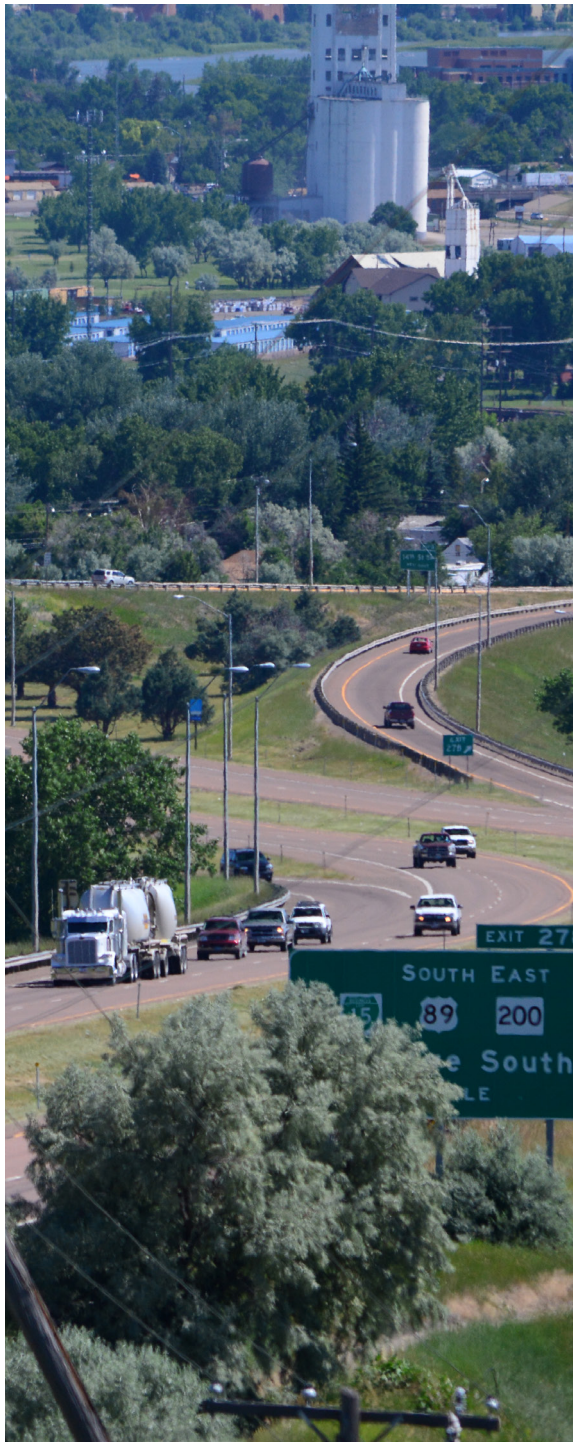

GREAT FALLS AREA LONG RANGE TRANSPORTATION PLAN 2024

November 25, 2024

Great Falls MPO

Prepared for:
Great Falls MPO

RPA

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1. INTRODUCTION

The Great Falls Metropolitan Planning Organization (MPO) has completed a transportation planning process focusing on the City of Great Falls and surrounding areas. The Great Falls MPO was established in 1971 to help guide transportation planning and programming efforts in the area and has continued to periodically prepare and update its Long Range Transportation Plan (LRTP) as the area grows and changes. Recent passage of the Bipartisan Infrastructure Law (BIL) resulted in new federal requirements for MPOs, updated planning emphasis areas, new eligibilities for apportioned highway funding programs, and more than a dozen new discretionary highway funding programs. Accordingly, the *Great Falls Area LRTP* is intended to be fully compliant with BIL and other state and federal requirements while also proactively responding to the changing nature and interests of the community.

Source: RPA

Source: RPA

1.1. Purpose

The *Great Falls Area LRTP* serves as a guide for responsible investment in the community's multimodal transportation systems over a 20-year planning horizon. The LRTP was developed by the Great Falls MPO through a collaborative approach with county, state, and city staff, elected officials, and local residents to provide a blueprint for guiding transportation infrastructure investments based on system needs and associated decision-making principles. The plan incorporates a comprehensive review of relevant background information, detailed analysis of existing and future conditions, and meaningful input from citizens and local officials to provide a framework for future efforts within the context of funding rules, regulations, and budget allocations.

This LRTP provides a comprehensive and integrated strategy for transportation infrastructure and service improvements within the Great Falls area to improve transportation safety and efficiency for all roadway users. Accordingly, the LRTP focuses on strengthening and improving the existing motorized and non-motorized networks while also planning for future strategic connections to facilitate safe and efficient travel between quickly growing parts of the community. The plan also addresses topics such as existing and future land use needs, regional transportation issues, overall travel convenience, connectivity, safe and accessible accommodations for all users, consideration of new transportation technologies, sustainability, transportation demand management, and environmental and fiscal constraints. Ultimately, a prioritized menu of projects ranging from smaller-scale, short-term improvements to long-term, capital improvements is provided to guide development of the transportation system over the next several years.

1.2. Federal Requirements for Transportation Plans

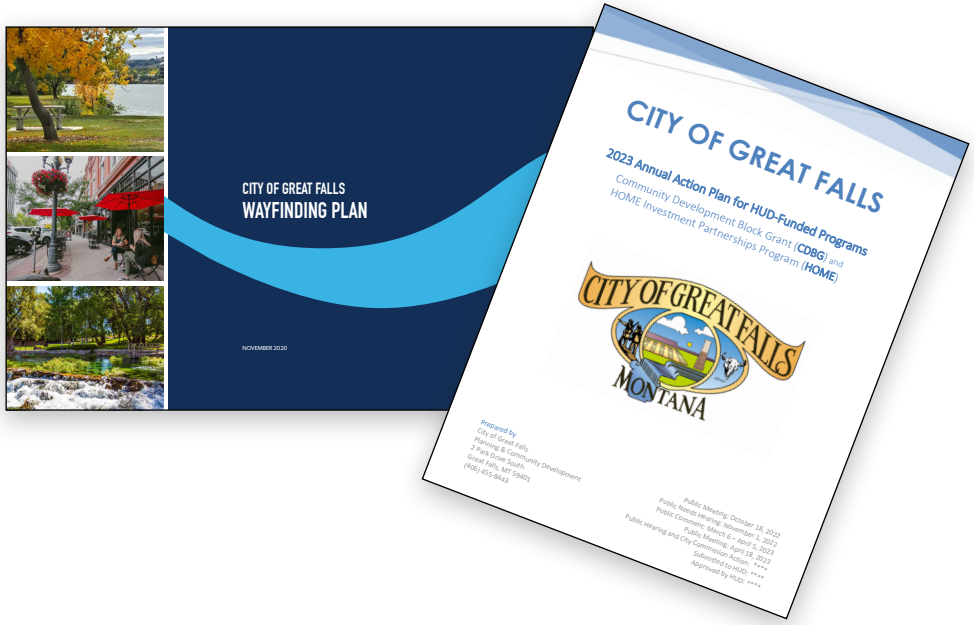
According to federal code, the MPO of urban areas with a population of 50,000 or more is responsible for promoting "…the safe and efficient management, operation, and development of surface transportation systems that will serve the mobility needs of people and freight, foster economic growth and development, better connect housing and employment, and take into consideration resiliency needs while minimizing transportation-related fuel consumption and air pollution". The Great Falls MPO consists of two local governments (City of Great Falls and Cascade County), one public transit operator (Great Falls Transit), and one state agency (MDT). The MPO incorporates transportation planning as one of its many planning functions.

The *2024 Great Falls Area LRTP* complies with and follows all applicable federal requirements for metropolitan transportation plans as set forth in BIL, Title 23 of the U.S. Code (U.S.C) Section 134 and Title 23 of the Code of Federal Regulations (CFR) Section 450.324. The plan is a long-term planning document with a planning horizon out to the year 2045. A checklist documenting compliance with all applicable regulations is provided in **Appendix A**.

1.3. Background

The last major transportation plan for Great Falls was completed in 2014 with a minor update in 2018. The 2024 LRTP is an opportunity to take a fresh look at changed transportation conditions, re-evaluate community priorities, and plan for a transportation system that reflects those changes. The LRTP is also intended to complement and integrate with past transportation plans, current growth policies, and other relevant planning documents completed by the city, MPO, and Cascade County in recent years. These documents include a variety of analyses, growth assessments, and recommendations for future improvements or development strategies to implement within the study area. A review of the following plans and studies completed since the 2018 LRTP update was conducted for this planning effort.

- Great Falls Wayfinding Plan (2020)
- Housing Market Demand Assessment (2021)
- Consolidated Plan for HUD-Funded Programs (2021)
- Great Falls Transportation Improvement Program (2021-2025)
- Great Falls Growth Policy Update – Internal Draft (2022)
- North Great Falls Sub-Area Transportation Study (2022)
- Great Falls Unified Planning Work Program (2024)



1.4. Study Area

The study area boundary for the 2024 *Great Falls Area Long Range Transportation Plan* coincides with the boundary used in preceding plan updates. The boundary includes all lands within the City of Great Falls as well as a substantial amount of unincorporated county lands surrounding the city. This boundary encompasses all the major employers and developed residential land uses in the area as well as those areas likely to be developed over the planning horizon.

The LRTP boundary is shown in **Figure 1** and was used for all aspects of the LRTP planning process. The urban boundary shown in the figure is based on the 2020 census and review by the Great Falls MPO and Montana Department of Transportation (MDT).

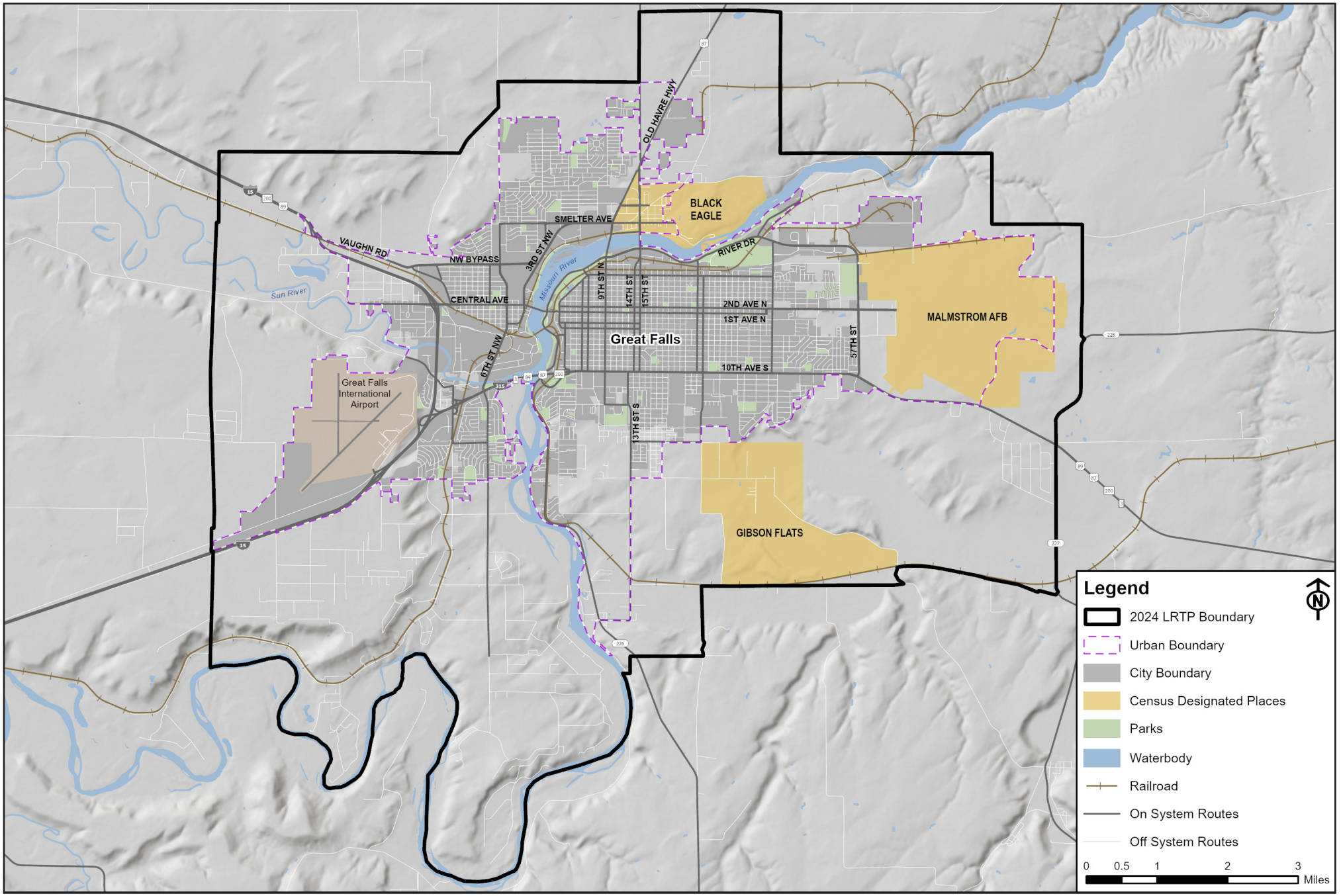


Figure 1: LRTP Study Area

1.4.1. Goals and Objectives

Development of goals and objectives for the LRTP is a critical step in the transportation planning process. In addition to capturing all related information from previous community planning efforts, the goals and objectives lay out the general course of action for the development of LRTP recommendations and represent the community's vision for the future transportation system.

The goals and objectives developed for the LRTP are outlined in **Appendix B** and represent the desired outcome of the community's transportation system once identified projects, programs, and policies are implemented. Goals represent overarching statements of the LRTP's intent and the community's vision, while objectives are more focused statements of specific actions, measures or procedures that reflect how a particular goal can be attained. The goals and objectives must not only align with community desires, but also with federal planning goals and transportation planning requirements for MPOs.

For the 2024 LRTP, revised goals and objectives were developed to reflect evolving community values and priorities. The goals and objectives from the 2018 plan were carried forward as a foundation for this update effort. First, the goals were reviewed and updated to maintain consistency with recent local, state, and federal planning efforts and alignment with community desires. Then, objectives were revised and developed to support the updated goals and provide meaningful action items to help guide implementation of the LRTP. Ultimately, these revised goals and objectives will help support the development, prioritization, and implementation of transportation improvements for years to come.

GOAL 1: Preserve and maintain the existing transportation system.

1.1. Maintain the existing motorized and non-motorized transportation networks to optimize their usefulness and minimize life-cycle costs.

1.2. Establish and apply transportation project selection criteria to identify and prioritize maintenance activities with project development.

1.3. Monitor the condition of key transportation facilities and work with local and regional partners to identify and prioritize critical deficiencies in the network.

1.4. Prioritize system preservation, maintenance, and minor infrastructure improvements over expanding the existing transportation system.

GOAL 2: Improve the accessibility and connectivity of an equitable multimodal transportation system for all users.

2.1. Ensure equitable access to walking, biking, and transit options for underserved populations, including persons with disabilities, senior citizens, children, and low-income individuals in the Great Falls area.

2.2. Improve opportunities for non-motorized transportation as part of daily travel mode choice within the community by increasing pedestrian, bicycle, and transit connections.

2.3. Coordinate with transit providers and the non-motorized transportation community to improve connectivity of walking and biking infrastructure to public transportation routes and services.

2.4. Identify gaps in the existing motorized and non-motorized transportation networks and improve connectivity of the existing transportation system.

GOAL 3: Improve the reliability of the transportation system for the efficient movement of people and goods.

3.1. Ensure the major street network has adequate capacity to accommodate projected traffic safely and efficiently.

3.2. Promote efficient traffic management and operations by implementing projects and practices that manage travel demand, reduce delay, and enhance system reliability.

3.3. Identify opportunities to improve system redundancy to enable access to alternative routes during times of emergency and to relieve recurring congestion.

3.4. Identify opportunities to minimize recurring congestion and delay on major freight corridors while also mitigating the impacts of freight movement on the community.

3.5. Consider mobility of all users during winter maintenance activities and aim to provide consistent service levels, accessibility, and safety year-round.

GOAL 4: Provide a safe, secure, and resilient transportation system.

4.1. Reduce the rates of fatalities, serious injuries, and crashes occurring on all transportation facilities.

4.2. Identify and eliminate barriers to effective and prompt emergency response.

4.3. Implement educational programs and other initiatives aimed at improving safety for all modes of transportation.

4.4. Coordinate with freight operators and agencies on projects that can enhance the security of the freight transportation system in the region.

4.5. Improve the resilience of critical transportation infrastructure by protecting vulnerable assets from extreme weather events, cyber-attacks, and other hazards.

GOAL 5: Promote consistency between transportation improvements, land use, growth, and development to enhance the economic vitality of the community.

5.1. Coordinate transportation planning activities with local and regional land use planning activities, including the city and county Growth Policy Updates, and on-going development activities.

5.2. Provide diverse, functional, and convenient transportation facilities that attract and retain young professionals, families, and older adults, promote economic development, and enhance tourism in the Great Falls Area.

5.3. Promote multimodal access to and between economic generators of the Great Falls Area, including the Great Falls International Airport, Malmstrom Air Force Base, Downtown Great Falls, employment centers, and industrial and commercial areas.

5.4. Develop and implement consistent access management and corridor preservation standards, ordinances, and plans appropriate to the roadway network and land use throughout the area.

GOAL 6: Provide a transportation system that improves quality of life, conserves natural and cultural resources, and protects and enhances the environment.

6.1. Reduce single-occupant vehicle trips and facilitate the use of vehicles or modes of travel that result in lower transportation impacts per person-mile traveled.

6.2. Coordinate with appropriate federal, state, and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation, to avoid and otherwise minimize adverse impacts to the built and natural environment.

6.3. Provide a transportation system that enables access to education, employment, healthcare, and recreation opportunities to support and enhance community well-being.

6.4. Consider the long-term sustainability of transportation improvements.

GOAL 7: Develop and deliver transportation projects in a manner that reduces project costs, promotes jobs and the economy, and eliminates delays.

7.1. Develop cost-effective improvements that balance transportation system needs with available funding and expected expenditures.

7.2. Encourage cooperation between public, private, and non-profit organizations in the development, funding, and management of transportation projects.

7.3. Seek innovative and alternative funding opportunities to supplement limited local funds and expedite project delivery.

7.4. Seek opportunities to use alternative project delivery methods and new technologies to reduce implementation costs and expedite project delivery.

2. OUTREACH AND ENGAGEMENT

Education and public outreach are essential parts of fulfilling the responsibility to effectively inform the public about the transportation planning process. Public involvement is critical to ensure the updated plan reflects community needs, issues, and values relating to the Great Falls area transportation system. Engagement with the public helps increase the community's investment in decisions about the transportation system, fosters a spirit of cooperation, and helps planning staff, consultants, and local officials make informed decisions.

A *Public Involvement Plan* (PIP) was developed early in the transportation planning process to guide public input opportunities throughout the development of the LRTP. The PIP outlined public participation strategies and opportunities for involvement with members of the public, stakeholders, and elected officials. Specific public outreach activities are noted in this chapter. Materials such as advertisements, presentation materials, and engagement summaries are provided in **Appendix C**.

Source: RPA


Source: RPA

2.1. Approach

The *Great Falls Area LRTP* was completed utilizing a three-phased approach to ensure that the planning team provided meaningful outreach opportunities, received feedback on critical needs, properly identified barriers and constraints early in the planning process, and developed improvements that were feasible to implement in the community. The three phases include:

PHASE 1: EXISTING CONDITIONS
The initial public involvement phase was coordinated with the analysis of existing conditions and identification of community needs and areas of concern. This phase focused on understanding what is important to the community and key stakeholders.

PHASE 2: VISIONING
The second phase took place after there was a clear understanding of existing conditions and key areas of transportation concern. This phase focused on establishing a clear vision for the community's future transportation system, developing goals to help achieve the vision, and brainstorming potential solutions.

PHASE 3: RECOMMENDATIONS
The final phase of public involvement focused on presenting and soliciting feedback on the draft recommendations in the LRTP. During this phase, the planning team encouraged public comments, engaged with stakeholders and committees, and worked toward plan approval and adoption.

PHASE 1

EXISTING CONDITIONS

- Establish Baseline Conditions
- Understand Community Priorities
- Identify Needs and Areas of Concern

PHASE 2

VISIONING

- Establish a Clear Vision for the Future Transportation System
- Define Goals to Help Achieve Vision
- Brainstorm Potential Solutions

PHASE 3

RECOMMENDATIONS

- Identify Recommendations
- Present Recommendations to the Public and Stakeholders
- Plan Approval and Adoption

2.2. Outreach Methods

Throughout the development of the LRTP, several public involvement methods were deployed to share information about the planning process, offer opportunities for dialogue, obtain meaningful input, identify areas of concern and opportunities for improvement, and identify potential barriers or constraints that may influence the feasibility of potential improvements. The outreach strategies were designed to work together to reach the most people possible, engage community members with diverse interests and perspectives, and elicit meaningful participation throughout the planning process. These strategies were developed to align with the national focus on integration of in-person and virtual public involvement techniques as well as the use of social media and web-based tools to foster public participation and solicit feedback.

2.2.1. On-Demand Engagement

Multiple tools were used to allow participants to engage in the study process at their convenience. Key audiences included state and local officials, stakeholder organizations, and the public.

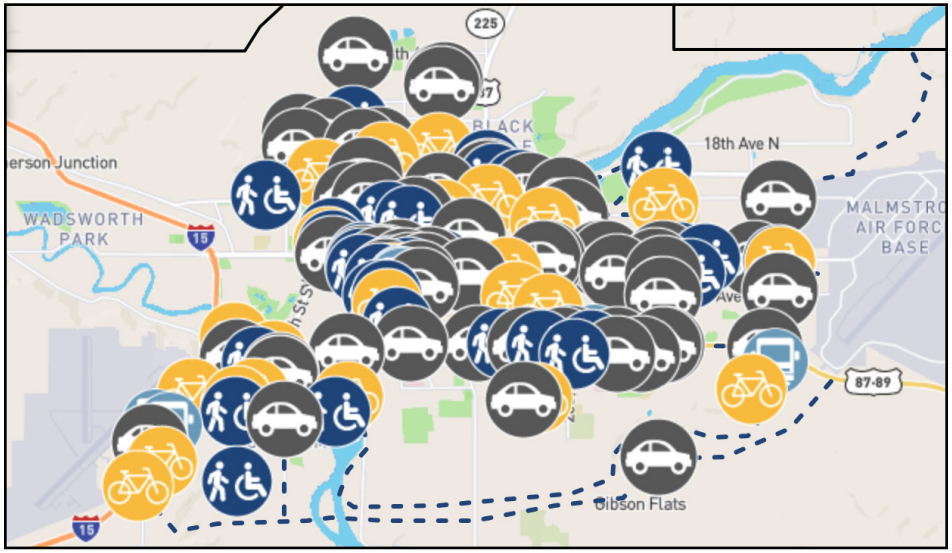
Email Contact List

The LRTP email contact list included individuals, organizations, and other groups with knowledge of the study area as well as individuals who attended public meetings or signed up to receive periodic email updates. Emails were sent prior to informational meetings and engagement opportunities and to notify plan contacts of key milestones in the plan development.

Plan Website

www.greatfallstransplan.com

A website was developed to encourage on-going public interaction and to provide information throughout the planning process. The website contained contact information, overview videos explaining the planning process, meeting announcements, frequently asked questions, maps, and finalized documents. The website also included links to other engagement/commenting opportunities including the online commenting map, survey, and online open house materials discussed in the following sections.



Online Commenting Map

An interactive commenting map, hosted through the wikimap platform, allowed the public to provide feedback throughout the duration of the planning process. Users could leave notes, identify areas of concern, and interact with others' remarks. Over the course of the study, 164 unique comments and 104 replies were posted, with an additional 135 likes and dislikes related to those comments.

2.2.2. Targeted Outreach

Targeted outreach events were scheduled to share important study information, obtain meaningful input and dialogue about the planning process, and to identify important considerations for the plan. Community members were made aware of the engagement opportunities through print and electronic means. Notices were sent through email, press releases sent to local media outlets, updates on the city's social media channels, display ads in the local newspaper, and posts on the city and plan websites. Several news outlets wrote articles and shared information about the plan and engagement opportunities. The following outreach events were conducted to interact with the stakeholders and the public.

Online Survey

An online survey was conducted early in the planning process, between April 10, and May 10, 2023. The survey consisted of 14 questions aiming to understand community travel habits, opinions on traffic and safety matters, and priorities for various transportation system improvements. A total of 575 responses were received for the survey.

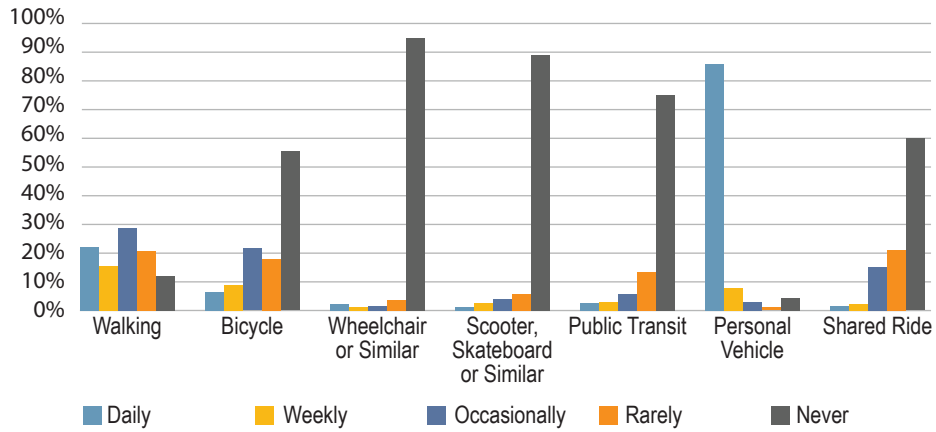
Stakeholder Outreach

During the visioning phase, individual and small group interviews were conducted with interested stakeholders to understand their interests, perspectives, and needs. The planning team met with stakeholders representing the River's Edge Trail, Great Falls Transit District, North Central Independent Living, and the Great Falls Development Alliance.

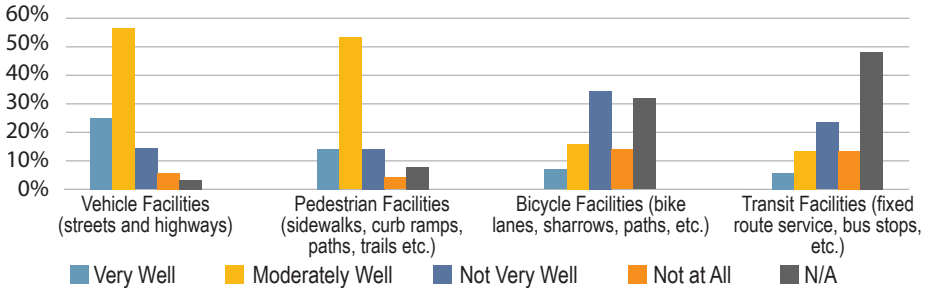
Council Of Councils Meetings

Members of the planning team attended two Great Falls Council of Councils meetings over the course of the planning process to solicit feedback from the nine neighborhood councils. Coordination with the Council of Councils occurred early in the planning process to understand community needs and then later in the process to share and refine draft recommendations.

Transportation mode frequency within Great Falls in the past 12 months



How well do the existing transportation facilities meet your needs?



Public Meetings

Public informational meetings were held at two key points during the planning process. The first informational meeting occurred after the planning team conducted initial socioeconomics and land use analysis as well as a preliminary evaluation of existing and projected conditions. The second meeting coincided with the release of preliminary recommendations.

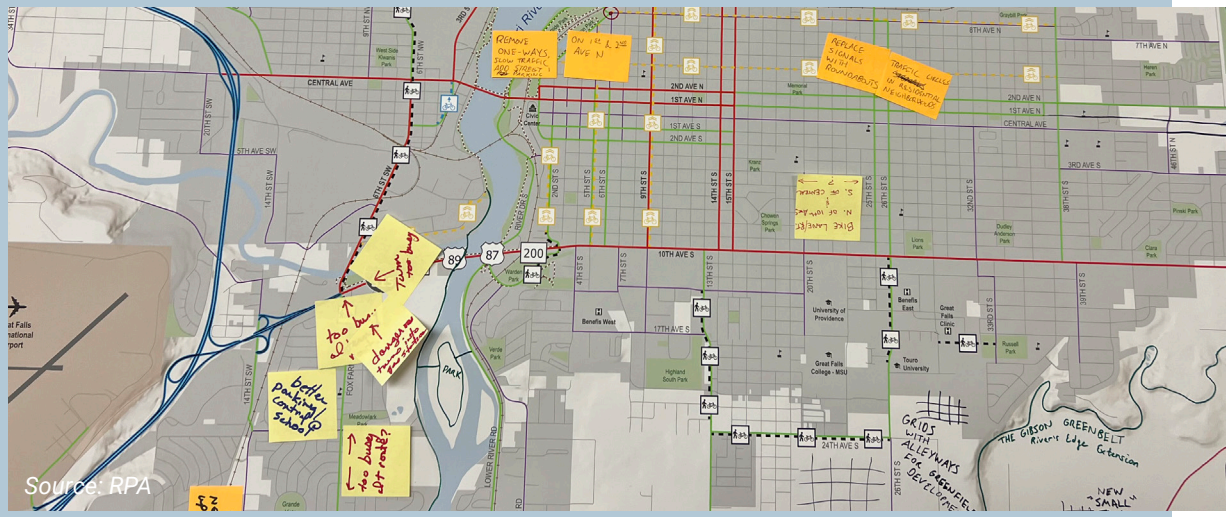
PUBLIC MEETING #1

A public open house was held on Monday, May 22, 2023, at the Great Falls Civic Center Commission Chambers from 4:00 to 6:00 PM. The meeting was formatted as an open house with extended hours so participants could attend at their convenience. A total of 14 participants, including representatives from the City of Great Falls, Great Falls MPO, MDT, Great Falls Chamber of Commerce, Great Falls School District, and interested members of the public, signed in at the open house.

A series of display boards were set up around the room for attendees to view and consider. Members of the planning team were available to greet attendees, share information about the plan, and listen to feedback. The display boards contained a high-level overview of the planning effort, intended outcomes, a map of the planning area boundary, and preliminary findings relating to the existing multimodal transportation system, travel trends, and future considerations.

A station was also set up with a large map of the planning area with pens and sticky notes available for participants to write, draw, and leave notes. This station offered an opportunity for attendees to identify areas of concern, ideas for improvement, and other considerations for the planning team.

Source: RPA



Source: RPA

PUBLIC MEETING #2

A second open house was held towards the end of the planning process on Thursday, May 30, 2024, at the Civic Center in the Gibson Room from 4:00 to 6:00 PM. A total of 22 participants, representing the City of Great Falls, MDT, Great Falls Development Alliance, Neighborhood Councils #3 and #9, Malmstrom Air Force Base, North Central Independent Living, Alliance for Youth, Montana Free Press, and the general public, attended the open house.

The format of the open house was similar to the first, with display boards set up around the room. The displays contained maps of the preliminary facility recommendations and non-motorized recommendations as well as maps of the visionary major street network and visionary non-motorized network. Additional information about the planning process, funding, implementation, and next steps was also provided. The planning team was available to discuss the preliminary recommendations, answer questions, and gather feedback from attendees.

Two weeks prior to the open house, advertisements were sent out directing the public to the plan website which contained a page dedicated to the open house. The page included a brief video describing the proposed recommendations as well as interactive online maps showcasing the recommendations. The public was encouraged to view these materials and submit feedback either through the online commenting form or at the public open house.

Coordination Meetings

To support coordination with other planning efforts and facilitate plan adoption, the following coordination meetings took place throughout the plan development.

PLANNING TEAM

The planning team included representatives from the Great Falls MPO, City of Great Falls, the MDT, and the consultant team (RPA). Planning team meetings were held on a monthly basis to track progress, provide local input, review deliverables, and address any issues or questions that arose.

TECHNICAL ADVISORY COMMITTEE

The Great Falls Technical Advisory Committee (TAC) is made up of representatives from the Great Falls MPO, City of Great Falls, Cascade County, MDT, the Federal Highway Administration (FHWA), and other regional transportation providers. The TAC acted in an advisory and oversight role for the transportation planning effort and will submit formal recommendations to the Great Falls Policy Coordinating Committee (PCC) for adoption of the LRTP. The planning team attended the April 13, 2023, December 14, 2023, and June 13, 2024, TAC meetings to provide updates. The LRTP was approved at the October 7, 2024 TAC meeting.

GREAT FALLS PLANNING ADVISORY BOARD

On October 8, 2024, the LRTP was approved by the City Planning Advisory Board.

GREAT FALLS CITY COMMISSION

On October 15, 2024, the City Commission approved the LRTP.

CASCADE COUNTY PLANNING BOARD

On October 15, 2024, the County Planning Board approved the LRTP.

CASCADE COUNTY COMMISSION

On November 12, 2024, the LRTP was approved by the County Commission.

GREAT FALLS POLICY COORDINATING COMMITTEE

Upon recommendation by the Great Falls TAC, the final LRTP was presented to the Great Falls PCC for approval on November 25, 2024.

2.3. Public and Agency Comments

A formal public and agency commenting period was provided following the release of the draft LRTP extending from August 20, 2024 to September 23, 2024. The planning team also considered all feedback collected throughout the planning process and incorporated comments as determined appropriate by the planning team into the final version of the LRTP. **Appendix D** contains a catalogue of the written comments received throughout the study. A summary of those comments, including those received through the interactive commenting map and the online survey, is provided below.

Roads and Infrastructure

Participants were divided on whether funds should be used to construct/expand new roads or to maintain/improve existing roads. Several participants expressed the desire to create a bypass for 10th Avenue South, construct new bridges across the Missouri River, and add alternate routes through the city to break up traffic. There were also many requests to fill in potholes and generally improve the condition of existing roads and sidewalks.

Pedestrians & Bicyclists

Participants desire more pedestrian and bicycle infrastructure. This includes constructing more sidewalks and protected bike paths and expanding the Rivers Edge Trail. Many don't feel safe on on-street facilities. Better routing, wayfinding, and connectivity are desired. Some community members say they don't walk or bike as often as they'd like due to inconvenience, lack of ADA accommodations or general accessibility, winter maintenance, potholes, safety, and efficiency of facilities.

Transit

There is a large desire for public transportation options to be expanded. Many participants would utilize public transit if it was available in their area and had longer hours of operation. Many expressed a desire for transit options to the airport.

Safety

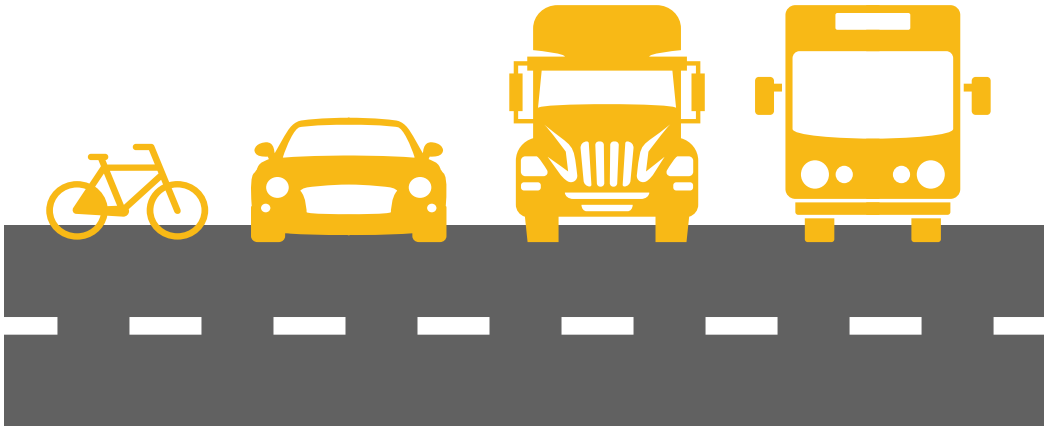
Safety for all road users is a high priority. There is a desire for safer streets, sidewalks, and crosswalks, less traffic near schools, and more signs for bike paths. Participants feel that 10th Avenue South and Fox Farm Road are dangerous and hard to cross.

Intersections

Participants noted several intersections that feel unsafe or cause major delays. Several noted that traffic lights are not effectively coordinated on major arterials. There is a desire for more left and right turning lanes, and left turn signals to improve intersection efficiency. There were also suggestions for more roundabouts in place of signals and stop signs to control traffic better and keep it flowing.

Corridors

Many participants had concerns about high traffic volumes in major corridors impacting traffic flows and safety for pedestrians and bicyclists. Many comments indicated that commercial truck volumes on major arterials make travel uncomfortable for other road users. A general desire to reduce driving lanes, add angled on-street parking, slow travel speeds, and increase comfort for non-motorists was reiterated by many participants.



3. STATE OF THE COMMUNITY

Population and economic growth in the Great Falls area have remained moderate and consistent for the past few decades. In recent years, Great Falls has experienced a rebound with upward growth trends due, in part, to a population influx that occurred during and after the COVID-19 pandemic. Economic indicators suggest that Great Falls is thriving in areas such as employment, market support, and affordable housing, providing an incentive for people to relocate to the area. As Great Falls and Cascade County continue to grow and change, it is important to understand population and economic trends to properly accommodate and prepare for the area's current and future transportation needs.

Demographic information was reviewed to gain an understanding of historical trends in population, age, employment, and other socioeconomic conditions. Regional development patterns and land use plans were also reviewed to help understand where conditions may be favorable for new residential and commercial growth. By using population, employment, and other socioeconomic trends as aids, the future transportation needs can be evaluated. For more detailed information about socioeconomic conditions and future projections, please refer to the *Socioeconomic and Land Use Technical Memorandum* in **Appendix E**.

Source: RPA

3.1. Socioeconomics

Local and regional population demographic and economic characteristics have important influences on travel characteristics within the Great Falls area. The study area for the LRTP includes the City of Great Falls, Malmstrom Air Force Base (AFB), the unincorporated communities of Black Eagle and Gibson Flats, and adjacent lands in Cascade County where suburban development has occurred or may occur in the future. Great Falls area residents work, shop, attend educational institutions, and recreate across the city, and their travel patterns impact the local transportation system. To understand the transportation-related decisions made by area residents, demographic and employment characteristics were evaluated for Cascade County, the City of Great Falls, and the local Census Designated Places (CDP).

3.1.1. Population and Demographic Trends

The total population of Great Falls decreased over the 1970 to 1990 period but has increased steadily over the past 30 years, with the most recent census recording the highest population since incorporation. The City of Great Falls makes up approximately 70 percent of Cascade County's population, so both geographies follow similar trends. The population losses seen in both Cascade County and the City of Great Falls during the 1970s and 1980s, coupled with relatively slow growth over the last 20 years, have resulted in long term growth rates of near zero. Although positive population growth rates have been recorded for both the county and city in the last 10 to 30 years, these growth rates are well below those for the state and nation. **Figure 2** shows the overall population changes in Cascade County and the City of Great Falls over the 1970 to 2020 period.

Geographic mobility data suggests that approximately 18 to 19 percent of the residents in Cascade County and Great Falls changed their place of residence between 2017 and 2021. The majority of the moves were made by residents already living within Cascade County (10 to 11 percent). Approximately 3 percent of moves originated from a different Montana county, and approximately 4 to 5 percent of moves originated outside the state or country.

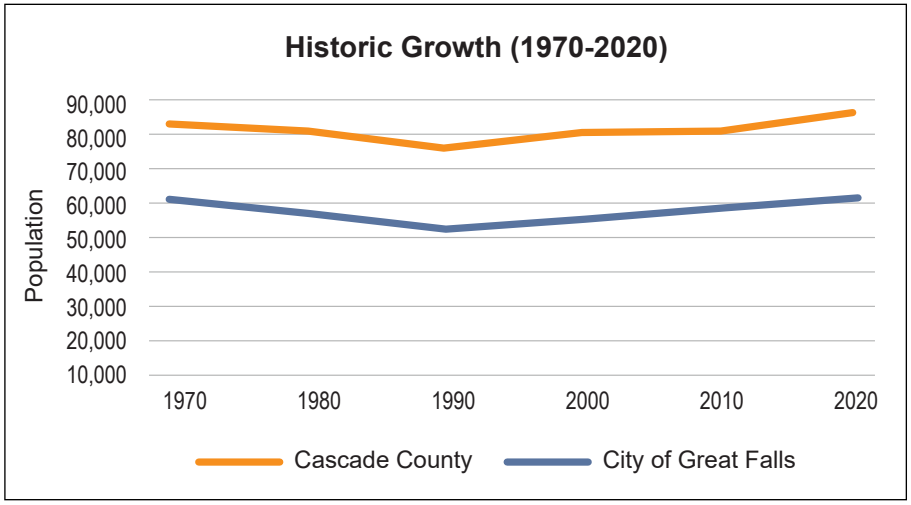


Figure 2: Historic Growth (1970-2020)

Race and Ethnicity

The populations of Cascade County and the City of Great Falls are predominately white with percentages of minority populations generally similar to those for the State of Montana. The racial and ethnic compositions of the Malmstrom AFB and Black Eagle CDPs are slightly more diverse. The Malmstrom AFB CDP has a higher concentration of Black or African American, Asian, and Hispanic or Latino residents compared to the broader county and city geographies. The Black Eagle CDP has a higher proportion of American Indian and Alaska Native residents than any of the other geographies.

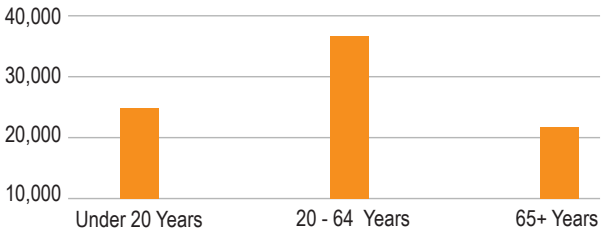
Overall, approximately 5 percent of the Great Falls population is American Indian and Alaska Native. The Little Shell Tribe of Chippewa Indians of Montana has been state recognized in Montana for several years and was granted federal recognition on December 20, 2019. The Tribe has many members across the state as well as a Tribal Council in the City of Great Falls but does not have a designated reservation in Montana. However, the Little Shell Tribe owns land northwest of the City of Great Falls centered on Hill 57 which will be used to create a food sovereignty program to confront food shortages that the tribal community has faced.

Age Distribution

Three age categories (residents less than 20 years old, 20 to 64 years old, and 65 years and over) were considered in the analysis of age distribution. The age group from 18 to 64 generally represents the working-age population while the younger and older populations may represent residents who cannot or choose not to drive and require transportation modes alternative to driving.

While the median age of the county, and city is around 38 to 39 years old, the median ages for the Malmstrom AFB, Black Eagle, and Gibson Flats CDPs are 22.6, 45.2, and 70.9, respectively. Malmstrom AFB CDP has the highest percentage of working-age population (20 to 64 years) and no residents over the age of 65. Conversely, the Gibson Flats CDP only has residents over the age of 65. The Black Eagle CDP consists primarily of residents between the ages of 20 and 64. The county, city, state, and nation all have similar proportions of children and young adults (under 20 years), which averages around 24 percent.

Great Falls Population Age



Disability Status

Information about the number of residents with disabilities (which include hearing or vision difficulties, cognitive difficulties, and ambulatory difficulties) within Cascade County, Great Falls, and the study area communities was obtained to understand the segments of the population which may require special accommodations for transport or unique considerations in the design of transportation infrastructure.

About 15 percent of the residents in both Cascade County and the City of Great Falls have a disability, including hearing or vision difficulties, cognitive difficulties, and self-care or independent living difficulties. About 7 percent of those individuals are under the age of 18 and about 42 percent are over the age of 65. The Malmstrom AFB CDP has the lowest percentage of residents with disabilities (1.8 percent) while the Gibson Flats CDP has the highest percentage (85.7 percent).

39 is the median age of Great Falls residents

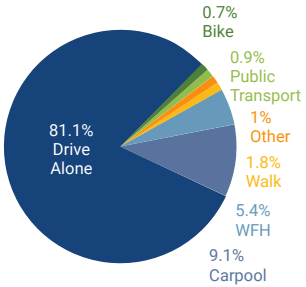
15% of **Great Falls** residents live with a disability; **7%** have ambulatory difficulties which limit mobility.

Commute and Travel Characteristics

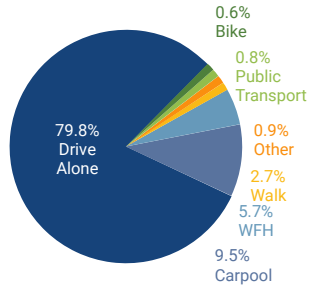
Estimates of the total share of workers who commute or work at home, the transportation modes used by commuters, and the mean travel times to work for commuters are presented in **Table 1** for workers in Cascade County, Great Falls, and the study area communities, with statistics for the state and the nation provided for comparison.

Available data indicates that residents in 96.7 percent or more of all occupied housing units in the City of Great Falls and other local geographies had access to one or more vehicles to commute to work or meet other personal needs. The majority of workers in the Great Falls area also worked within Cascade County. Less than four percent of workers in the local geographies had jobs outside the county or state. Of all workers in the Great Falls area, over 94 percent commuted to work.

Commute to Work Transportation Mode:



Great Falls



Cascade County

Malmstrom AFB CDP had the highest proportion of workers who carpooled (16.5 percent) and walked to work (11 percent). For all other local geographies, including Great Falls, approximately 80 percent of workers drove alone, 9 percent carpooled, and less than 1 percent used public transportation, a bicycle, or another means of commuting. The Black Eagle CDP had the second highest proportion of commuters who walked to work (8.9 percent), followed by the county as a whole (2.7 percent). Data suggests public transportation options are more limited for Montana residents as compared to elsewhere in the United States.

Commute times for workers in the local geographies are much lower than those of the state and nation. The aggregate commute times for county and city residents are 2 - 3 minutes longer than those of residents in the smaller CDPs. Commute time data suggests that residents generally live close to their place of work.

Subject	Cascade County	City of Great Falls	Malmstrom AFB CDP	Black Eagle CDP	State of Montana	United States
Number of workers 16+	**39,957**	**29,017**	**2,204**	**302**	**518,868**	**155,284,955**
Commuted to Work	94.3	94.6	96.2	100.0	90.7	90.4
Worked at Home	5.7	5.4	3.9	-	9.4	9.7
Commuting Transportation Mode						
Drove alone, car, truck, van	79.8	81.1	67.6	81.8	74.3	73.2
Carpooled	9.5	9.1	16.5	9.3	9.2	8.6
Public Transportation	0.8	0.9	0.6	-	0.7	4.2
Walked	2.7	1.8	11.0	8.9	4.3	2.5
Bicycled	0.6	0.7	0.5	-	1.1	0.5
Commuting Means	0.9	1.0	-	-	1.1	1.4
Mean Travel Time to Work	**16.8 min**	**15.1 min**	**13.0 min**	**13.3 min**	**18.6 min**	**26.8 min**

Table 1: Commuting Characteristics (2017 - 2021)
Source: ACS Report, 2017-2021 (5-year estimates)

3.1.2. Housing Units

The Census Bureau identifies a housing unit as a house, apartment, mobile home, group of rooms, or single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building, and which have direct access from outside of the building or through a common hall. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements.

Table 2 lists the number of housing units that existed within Cascade County, the City of Great Falls, and local CDPs during past decennial censuses. Overall, the number of housing units in the county increased by 21% since 1980 with moderate, steady increases in the number of housing units recorded each decade. This trend is similar for the City of Great Falls which showed an increase of 17% between 1980 and 2020.

The data in **Table 2** show that the population per housing unit has continually decreased in Cascade County and the City of Great Falls over the 1980-2020 period with minimal change over the past decade. The smaller CDPs, however, all experienced increases in population but little increase or loss in housing units, resulting in overall increases in the population per housing unit over the 2010-2020 period.

Area		1980	1990	2000	2010	2020
Cascade County	Population	80,696	77,691	80,357	81,327	84,414
	Housing Units	32,199	33,063	35,225	37,276	38,937
	Net Change	-	864	2162	2,051	1,661
	PPHU	**2.51**	**2.35**	**2.28**	**2.18**	**2.17**
City of Great Falls	Population	56,725	55,097	56,690	58,505	60,442
	Housing Units	24,056	24,152	25,243	26,854	28,202
	Net Change	-	96	1,091	1,611	1,348
	PPHU	**2.36**	**2.28**	**2.25**	**2.18**	**2.14**
Malmstrom AFB CDP	Population	6,675	5,938	4,544	3,472	4,131
	Housing Units	1,566	1,496	1,405	1,171	1,384
	Net Change	--	-70	-91	-234	213
	PPHU	**4.26**	**3.97**	**3.23**	**2.96**	**2.98**
Black Eagle CDP	Population	(a)	(a)	914	904	949
	Housing Units	(a)	(a)	458	474	481
	Net Change	--	--	--	16	7
	PPHU	**--**	**--**	**1.99**	**1.91**	**1.97**
Gibson Flats CDP	Population	(a)	(a)	(a)	199	203
	Housing Units	(a)	(a)	(a)	85	84
	Net Change	--	--	--	--	-1
	PPHU	**--**	**--**	**--**	**2.34**	**2.42**

Table 2: Number of Housing Units (1980 - 2020)
Source: US Bureau of the Census
(a) No data available
PPHU = Population per Housing Unit

3.2. Employment and Income Trends

Cascade County is Montana's fifth most populous county, while Great Falls, the county seat, is the state's third largest city. Great Falls accounts for about 72 percent of Cascade County's total population. The city is home to Malmstrom AFB and the Montana Air National Guard, which are driving forces in the regional economy. Great Falls is also home to the C. M. Russell Museum, Lewis & Clark Interpretive Center, Benefis Health System, Great Falls College Montana State University, and associated College of Technology. Employment growth is expected to continue due to increased demand in the oil and gas industry, increased military activity, and general in-migration.

The most recent available data shows that total full and part-time employment in the county was 50,706 in 2021, 98 percent of which were non-farm related employment. Total full and part-time employment in Cascade County grew at an annual rate of approximately 0.60 percent.

The majority of the employment in Cascade County and the City of Great Falls is associated with the services industry, followed by retail trade and construction industries. Residents in the Malmstrom AFB CDP are primarily employed in the services, public administration, and retail trade industries while Black Eagle CDP residents are primarily employed in the construction, manufacturing, and services industries. In 2022, Malmstrom AFB employed 4,017 people, including 3,324 military and 693 civilian personnel. The largest civilian employers within the City of Great Falls include:

- Benefis Heath Care Center (3,322 employees)
- Great Falls Public Schools (1,963 employees)
- Walmart (818 employees)
- Great Falls Clinic (688 employees)
- Pacific Hide & Fur Depot (500 employees)
- City of Great Falls (487 employees)
- Cascade County (450 employees)
- US Government (350 employees)

Within the study area, estimated median household incomes are lowest in the Black Eagle CDP (~$51,400) and highest in the Malmstrom AFB CDP (~$59,700). Median household incomes within Great Falls as a whole (~$53,100) are lower than the county (~$56,000), and state (~$61,000). The number of county residents living below the poverty line (12.9 percent) is similar to levels for the State of Montana (12.5 percent) but lower than the level for the City of Great Falls (14.5 percent). The unemployment rate for Cascade County in January 2023 was 2.4 percent which is lower than the state's unemployment rate (2.9 percent). However, when compared to other counties in Montana, Cascade County ranks 31st in terms of unemployment rates, meaning 30 counties have lower unemployment rates.

14.5% of Great Falls residents live below the poverty line

Median household income in Great Falls is **$53,126**

2.4% of Cascade County residents are unemployed

3.3. Land Use and Development

Land use plays a critical role in shaping transportation networks. Land use decisions affect the transportation system and can increase viable options for people to access work and recreation sites, goods, services, and other resources in the community. In turn, the existing and future transportation system will be impacted by the location, type, and design of land use developments through changes in travel demands, travel mode choices, and travel patterns. For this reason, it is important to review community development patterns over time and understand where conditions may be favorable for new residential and non-residential growth.

3.3.1. Historic Development Patterns and Current Land Uses

The City of Great Falls was built on a grid system of streets with a defined Central Business District surrounded by residential development. Commercial and industrial uses were typically concentrated in the Central Business District or along railroad lines or major roads and streets. The community has evolved over the years as population growth and new development has occurred. Commercial development is no longer focused on the downtown area and many retail functions have shifted to outlying shopping centers and commercial areas, like those along 10th Avenue South and 3rd Street Northwest. Since it is no longer necessary for industrial land uses to be located near railroad lines, few substantial concentrations of new industrial development occur within the city limits. Today, downtown Great Falls is the governmental and financial center of the community and houses many professional offices and specialty retail stores.

Extensive residential uses are still seen in the areas around the central city. However, the residential development pattern has extended to the fringe areas surrounding the city and is characterized by low-density residential development on lots of one to ten acres. Multifamily residential development is widely scattered throughout the community. Most new housing development in the Great Falls area has occurred to the southwest, southeast, and north of the city.

Figure 3 illustrates current land uses in the City of Great Falls. Residential is the largest land use category in the city, with the majority being characterized as single-family detached units. The city has several vacant and underutilized properties. Some lots are intentionally vacant to serve as buffers by adjacent property owners.

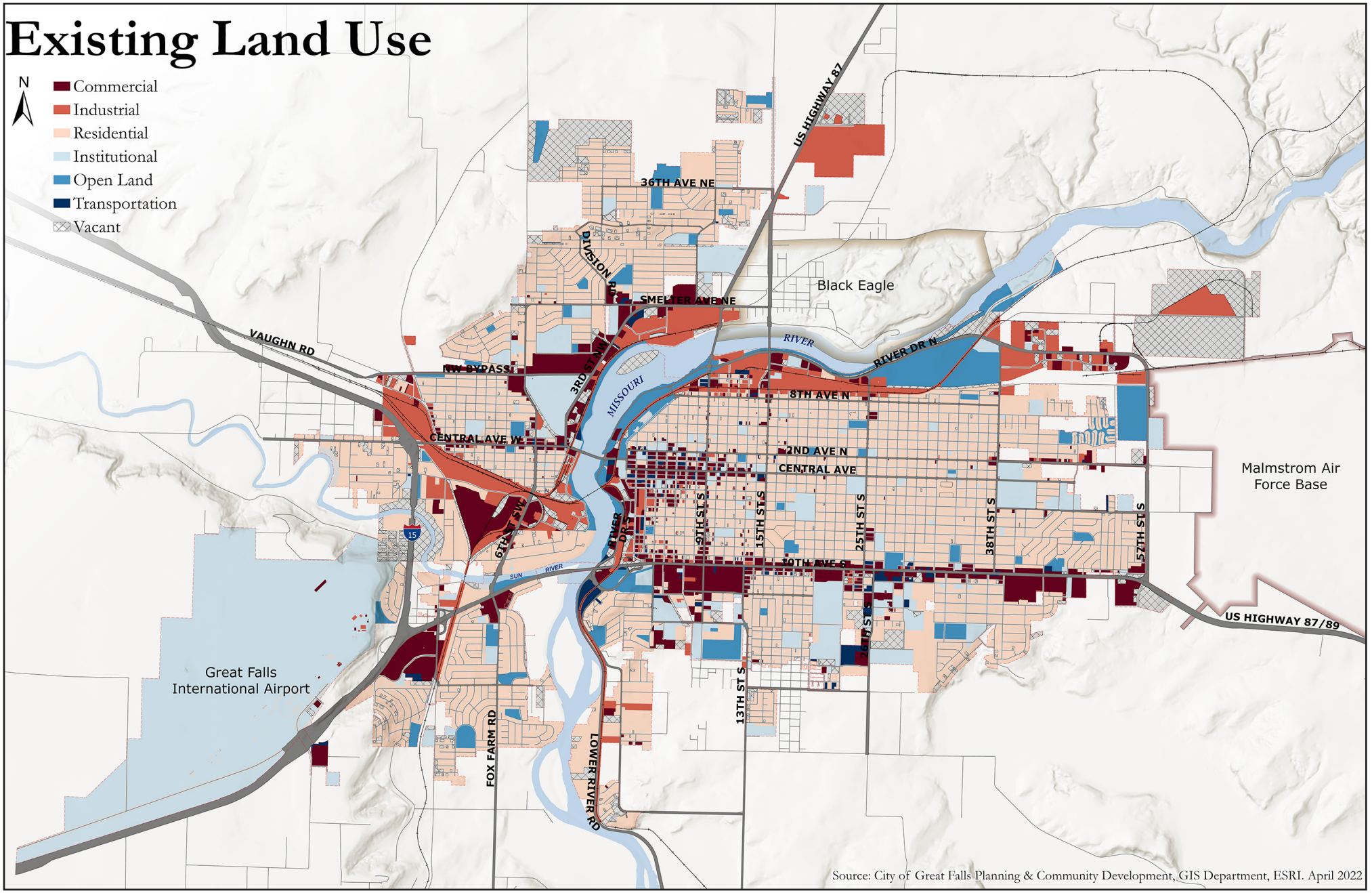


Figure 3: City of Great Falls Land Use Designations (2022)

3.3.2. Future Growth Areas

In 2021, the City of Great Falls undertook an effort to update its 2012 Growth Policy. The approval and adoption processes were then stalled due to the desire to complete a full update which kicked off in the spring of 2024. The policy describes Great Falls as having a dense central core with decreasing density in extended portions of the city. In the early years of the city's development, this suburban development pattern was typical. Cities were designed around the idea that cars would be the primary mode of transportation and that homes should be separate from places of work and other activities. Over time, lot sizes have increased, and population and housing densities have decreased. This trend impacts the way residents and local service providers travel, resulting in longer trips accommodating fewer people. This development pattern encourages auto-centric travel, especially initially, before surrounding areas in suburban parts of the city develop to provide complementary retail, civic, and commercial land uses nearby. Over time, new development and enhanced connectivity can help create a balance with greater convenience and opportunities for mode choice.

Between 1970 and 2020 the incorporated area of the city increased by 6,353 acres, or 42 percent. The city has grown around most of its periphery. Most of the newer commercial development has been a result of infill and redevelopment opportunities while a large proportion of new residential development has occurred in unincorporated areas of the county, partially due to lack of available city lots with city services.

As part of the effort to update the growth policy, potential growth areas within the community were identified, as shown in **Figure 4**. The principal areas for new residential growth were envisioned along the southern edge of the city in the southwestern portion of the community. Residential growth was also anticipated along the northern perimeter of the city west of US Highway 87. Non-commercial development and industrial growth are envisioned around the airport, east of US Highway 87 and north of Black Eagle, and in the northeastern portion of the urban area near Malmstrom AFB. The downtown is especially ready to support increased vertical residential development, through the restoration and repurposing of lofts, upper floors and other opportunities. These potential growth areas were considered when predicting where future growth will occur over the planning horizon.

Source: RPA

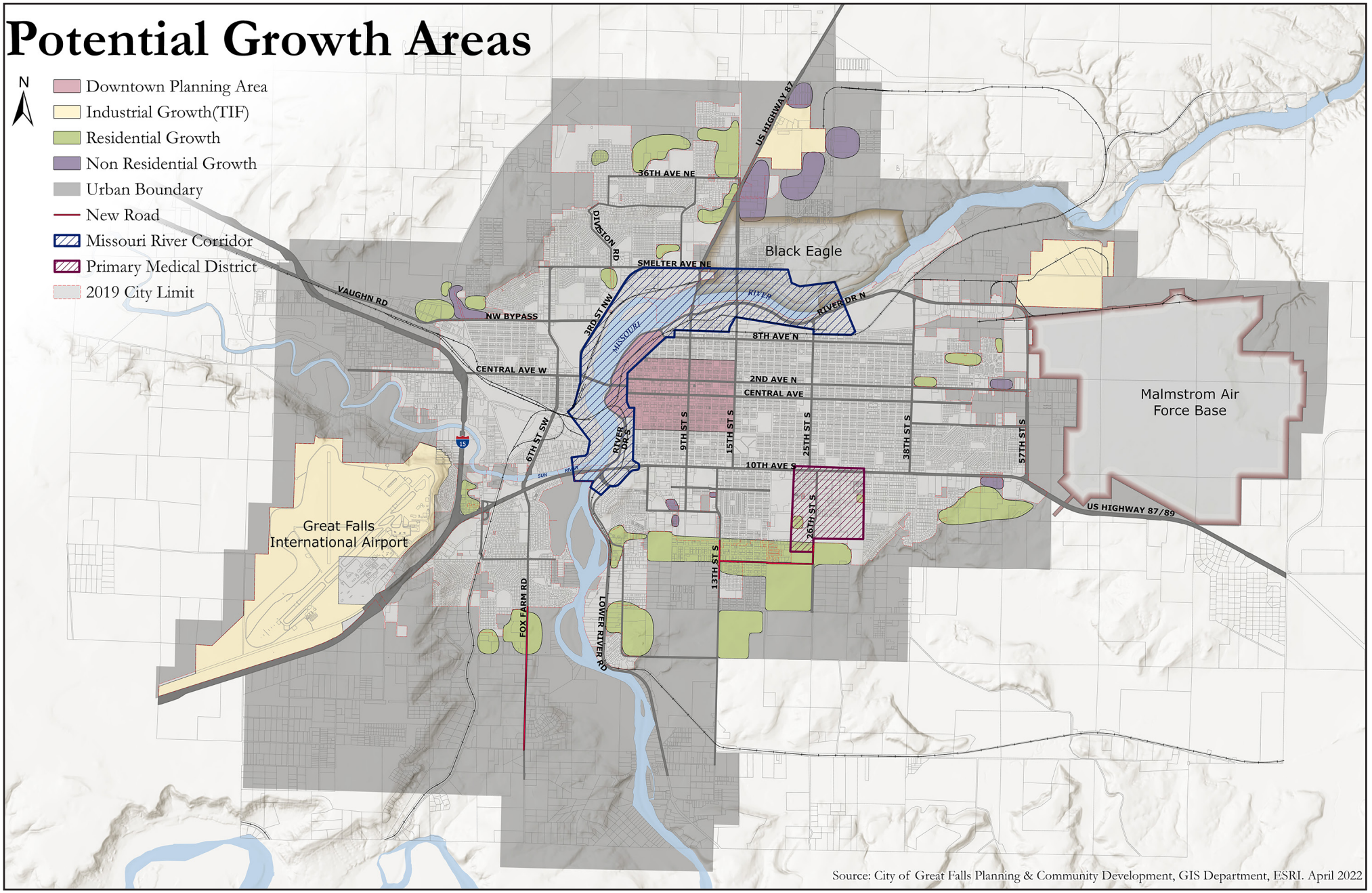


Figure 4: Potential Growth Areas (2022)

4. EXISTING TRANSPORTATION SYSTEM

As the Great Falls area continues to grow and evolve, it is important to understand the current transportation network and identify opportunities for improvement to properly accommodate and prepare for the area's future transportation needs. The following analysis of transportation conditions includes a planning-level examination of the roadway network within the LRTP study area based on existing traffic data, vehicle crash history, field observations, pavement and structure condition data, aerial imagery, and geographic information system data. Existing data were provided by City of Great Falls and MDT. Additional data were collected by RPA in Spring and Summer 2023 to supplement the available information. Using a combination of the supplied and collected data, the existing operational characteristics of the transportation network were established. More detailed information about the existing transportation conditions can be found in **Appendix F**.

Source: RPA

4.1. Transportation Network

A transportation network is made up of multiple connected road segments to facilitate vehicular movement, as well as public transportation, bicycles, pedestrians, freight, rail, and other modes of transportation. Gaining a thorough understanding of each component of the transportation network will help ensure that all modes of transportation are able to navigate the transportation network safely and efficiently.

4.1.1. Roadway Network

A community's transportation system is made up of a hierarchy of roadways classified according to certain parameters such as geometric configuration, traffic volumes, spacing in the transportation grid, speed, and adjacent land use. These characteristics help define the role that each segment of roadway plays within the overall network. Functional classification defines the nature of travel within the network in a logical and efficient manner by defining the part that any particular road should play in serving the flow of trips through the entire network.

For the LRTP, emphasis was placed on roadways within the study area that are functionally classified as collectors, minor arterials, and principal arterials. **Figure 5** presents the existing major street network. Note that the functional classifications shown on these figures represent classifications determined by the Great Falls MPO and are not the "Federally Approved" functional classification system for the Great Falls area.

Interstate System

The main purpose of the interstate system is to provide for both regional and interstate transportation of people and goods. Primary users range from residents and commuters to long-distance travelers and freight. Interstates have fully controlled access with a limited number of interchanges, high design speeds, and a high level of driver comfort and safety.

Principal Arterial System

The purpose of a principal arterial is to serve the major centers of activity, the highest traffic volume corridors, and the longest trip distances in an area. Significant intra-area travel, such as between central business districts, outlying residential areas, and major suburban centers, is also typically served by principal arterials. Principal arterials mainly connect to other principal arterials or to the interstate system.

Minor Arterial Street System

The minor arterial street system interconnects with and supplements the principal arterial system. Minor arterials accommodate trips of moderate length at a somewhat lower level of mobility compared to principal arterials. They distribute travel to smaller geographic areas and provide some access to adjacent lands.

Collector Street System

The collector street network provides links from residential, commercial, and industrial areas to the arterial street network. Collectors distribute trips from the arterials to the user's ultimate destinations while also collecting traffic from local streets in residential neighborhoods and channeling the traffic to arterials.

I-15 passes through Great Falls providing both regional and interstate transportation.

10th Avenue South is an east-west principal arterial connecting I-15 and US 87.

Outside of Downtown Great Falls, 1st and 2nd Avenues South comprise a one-way couplet of minor arterials.

36th Ave NE serves as a collector street for the North Great Falls neighborhoods.

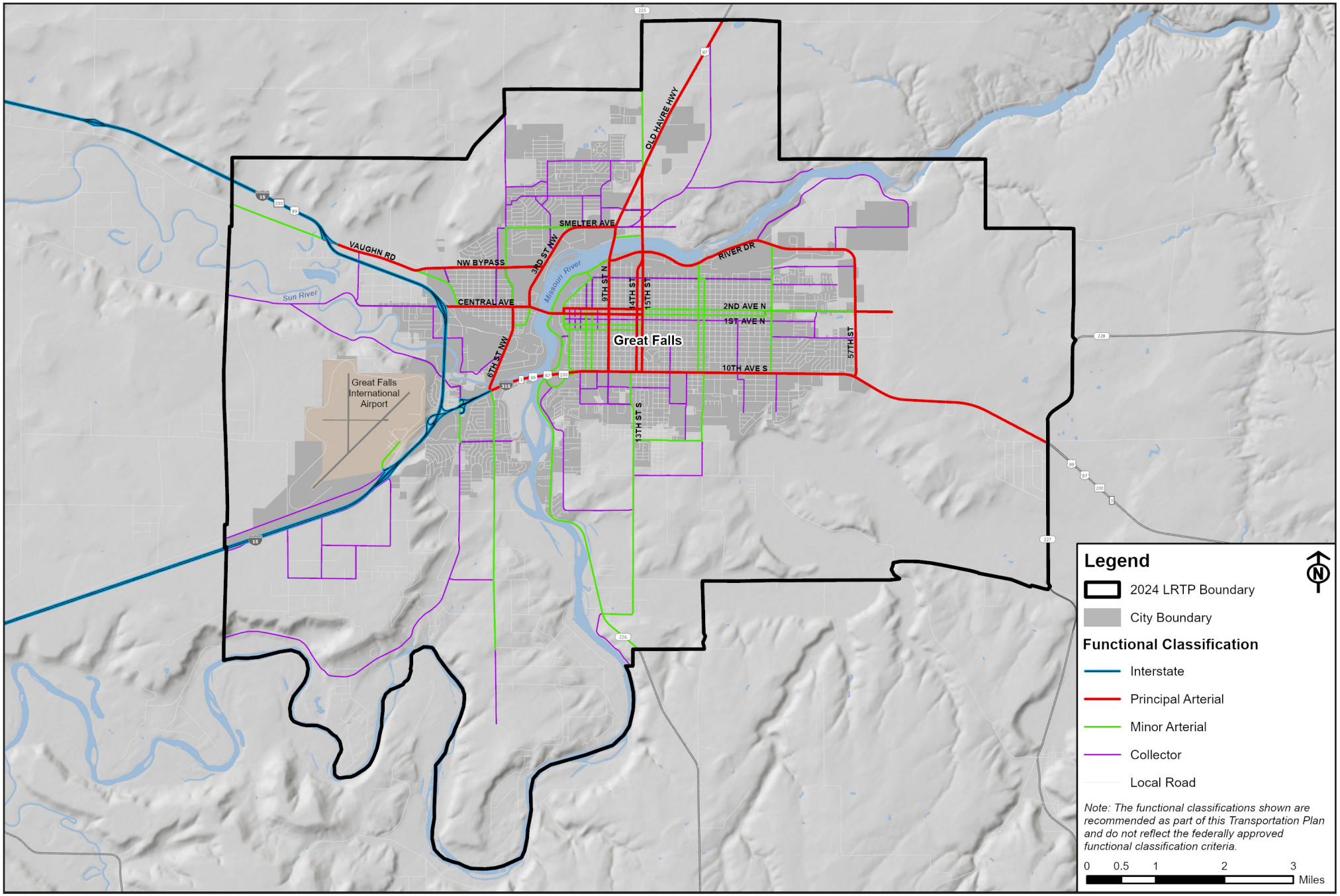


Figure 5: Existing Major Street Network

4.1.2. Non-Motorized Network

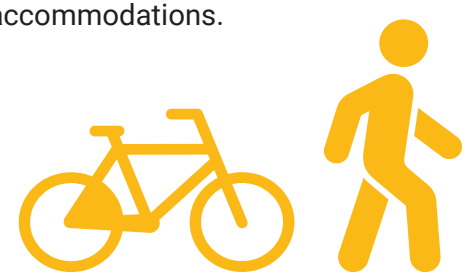
The Great Falls Area is home to the River's Edge Trail (RET) which boasts an approximately 60-mile off-street bicycling and walking system along the banks of the Missouri River. In general, Great Falls' older core neighborhoods and grid street system with small blocks lend themselves to walking and bicycling. While pedestrians have ample access to sidewalks, paths, and trails in and around the city, there is a relative lack of designated bicycle infrastructure. The city's first bike lane was installed in Summer 2013 with relatively few additions since then. As such, there are many opportunities for improvement to the non-motorized transportation network, especially improvements to the bicycle network. The following list describes the existing bicycle and pedestrian facilities in the study area. A map of the existing bicycle and pedestrian facilities is presented in **Figure 6**.

On-Street Bicycle Facilities

Bike lanes are a portion of a roadway which have been designated by striping, signage, and pavement markings for the preferential or exclusive use of bicyclists. Bike lanes encourage predictable movement by both bicyclists and motorists. Great Falls currently has 4.1 miles of bike lanes, primarily on the east side of the city near Malmstrom AFB.

Bike boulevards are streets that have been modified to accommodate bicycle traffic and minimize motor traffic. Bike boulevards are typically characterized as streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority through the use of signs, shared lane markings (sharrows), and speed and volume management measures to discourage through trips by motor vehicles and create safe, convenient bicycle crossings of busy arterial streets. In Great Falls, there are approximately 4.9 miles of roadways with painted sharrows, although they generally lack signage designating them as a bike boulevard. Additionally, some of the sharrows on these roadways have not been maintained since their installation and are sometimes difficult to discern.

In Great Falls, several streets with lower traffic volumes and convenient connections to high-use destinations in the community are signed as **bike routes**. No other accommodations, such as striping or pavement markings, presently exist on these routes. Bike route signage is typically used to help bicyclists navigate the bicycle network and indicate roadways in which bicycle traffic is prioritized. Great Falls has two roadways, totaling approximately 6.6 miles, with bike route signage but no other bicycle accommodations.



Bike lanes are painted on 57th Street North, a relatively high-speed roadway. There is a gap between the 57th Street North and 18th Avenue North bike lanes.

Sharrows are painted on 5th Street North which is a one-way street. There is not a parallel street with sharrows provided in the opposite direction.

4th and 8th Avenues North are signed as bike routes. Some of the signage is difficult to see through dense vegetation and old growth trees.

Natural Surface Trails

There are several natural surface trails in the study area. This type of facility can serve both transportation and recreational purposes. The RET is the most notable natural surface trail in the study area providing over 35 miles of gravel trails primarily used for single-track mountain bike riding and walking/hiking.

Shared Use Paths

Shared use paths are off-street paved facilities that are designated for the use of bicyclists, pedestrians, and other non-motorized users such as skateboarders and rollerbladers. The RET consists of over 20 miles of paved shared use path. A paved path was recently constructed adjacent to 24th Avenue South.

Widened Sidewalks

In the 1980s, the Great Falls City Commission began installing widened sidewalks (8 to 10 feet in width) to separate vehicular traffic from bicycle and pedestrian traffic. These widened sidewalks have since functioned as shared use paths. In 2018, the city passed an ordinance updating the city code to indicated that, "unless otherwise allowed by designated city approved signage, or conditions render bicycle travel on a street unsafe, bicycles may only be ridden on those portions of the sidewalk that are a portion of the River's Edge Trail System," (Official City Code of Great Falls, 12.11.020). There are approximately 4.2 miles of widened sidewalks supplementing the shared use path network, some of which are located in south Great Falls and are neither designated as part of the RET nor signed as bike routes.

Sidewalks

Most of the established residential and commercial areas of Great Falls have a cohesive and continuous sidewalk network. However, there are areas, primarily in suburban areas, where connectivity is lacking. The areas where most of the sidewalk gaps occur were subdivided and constructed prior to being incorporated into the city. Developers in unincorporated areas of Cascade County are not required to build sidewalks.

Sidewalk gap on 2nd Avenue North.

A widened sidewalk was recently installed connecting to the 10th Street pedestrian bridge.

The River's Edge Trail consists of both paved shared use paths and natural surface trails.

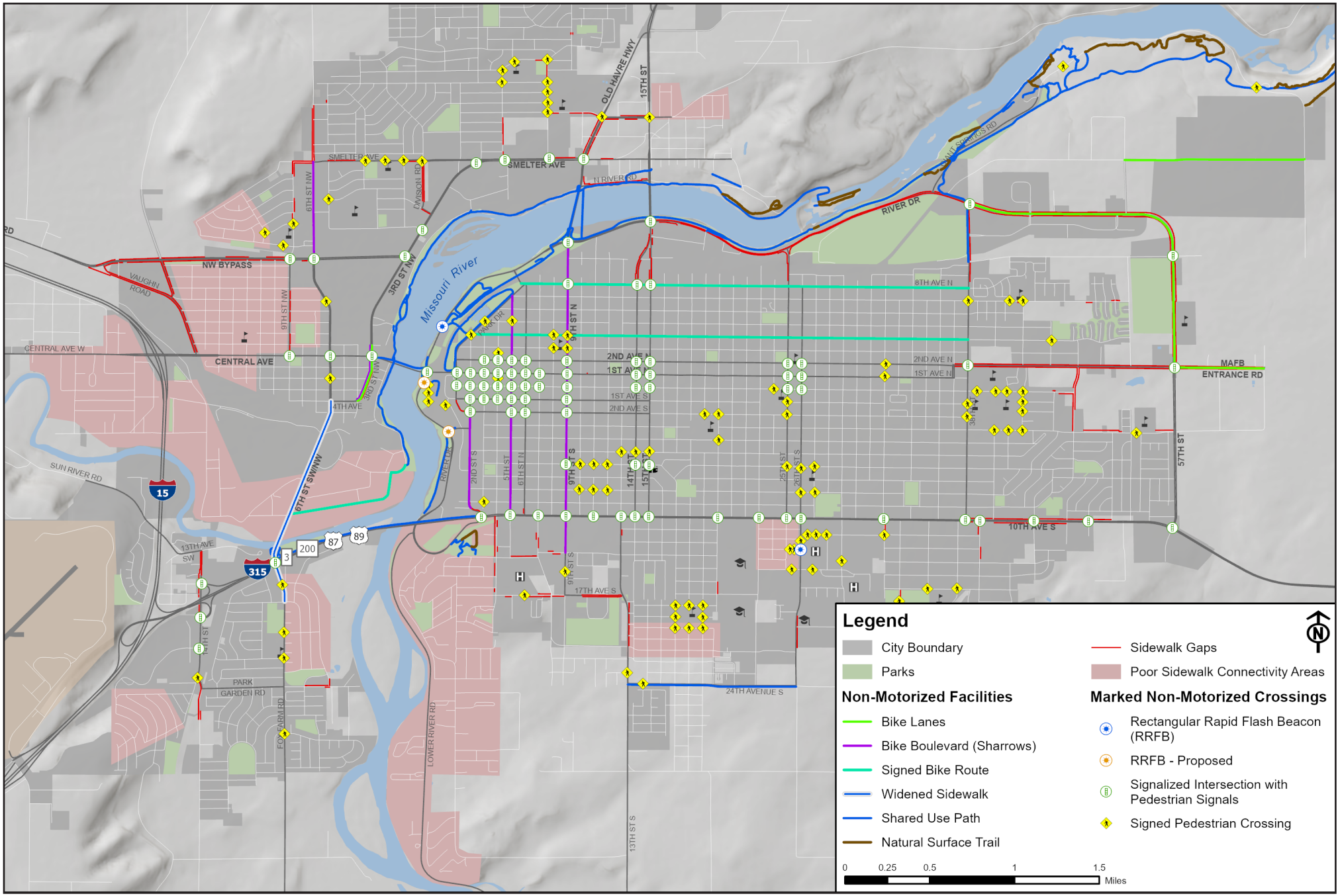


Figure 6: Existing Non-Motorized Network

4.1.3. Transit Services

A variety of public transportation options are available in the Great Falls area via Great Falls Transit and other regional transit providers. Bus service provides an important transportation connection within and between Montana communities. Buses can help travelers reach their desired destinations without or with reduced reliance on personal vehicles. By aggregating multiple travelers in a single bus, transportation emissions can be reduced. Increased connectivity and integration with active transportation facilities can also help encourage reduced reliance on single-occupancy vehicles.

Great Falls Transit

The Great Falls Transit District (GFTD) was established in 1978 to provide an alternative to private vehicles in the Great Falls area. Funding for the district is provided through a combination of fare collections, property tax revenue, and state and federal funds. The GFTD Board of Directors hired a consultant in 2023 to update the organization's comprehensive *Transit Development Plan* (TDP).

Source: Great Falls Tribune

SERVICE AREA AND ROUTES

The GFTD covers a service area of 20 square miles primarily within the City of Great Falls. Many users have indicated that, as Great Falls continues to expand outward, transit services in their residential areas are limited, inconvenient, or unavailable. There are also many consumers located within a 100-mile radius of Great Falls who have problems accessing transportation from outlying areas to Great Falls, limiting access to jobs, education opportunities, medical facilities, shopping, recreation and special events in Great Falls.

The GFTD currently operates seven regular fixed routes. The fixed routes operate from roughly 6:00 AM to 6:30 PM on weekdays and from 9:30 AM to 5:30 PM on Saturday. There is no transit service provided on Sundays or major holidays. Six of the seven routes, with the exception of Route 7-Southwest, operate on 30-minute headways during the morning and afternoon peaks to allow for increased coverage during school and commuter travel times. Saturday service is hourly on every line. The current operating hours may preclude people from job opportunities, with some users citing that the current hours allow them to get to work on time for their shift but they are unable to easily return home due to limited service hours and lack of affordable transportation opportunities.

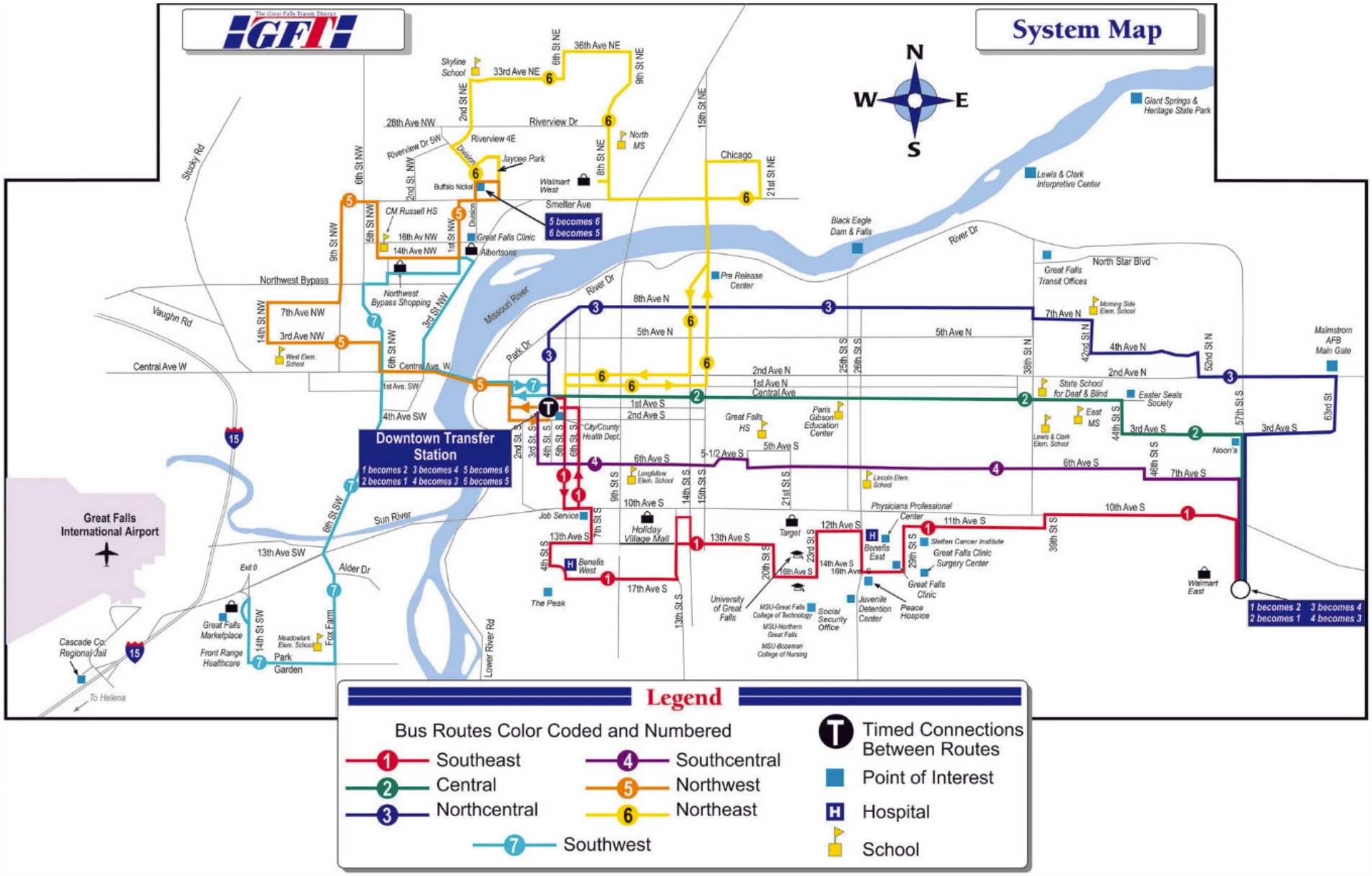
A map of the current routes is shown in **Figure 7**. The GFTD operates as a flag-down system and buses will stop at any street corner along the route that is deemed safe by the driver. Consideration of transitioning to a fixed stop system has been discussed internally at GFTD but has not been pursued yet.

PARATRANSIT OPERATIONS

All GFTD vehicles are mobility device accessible. The GFTD Paratransit Service also provides curb-to-curb transportation for individuals who are disabled and unable to use the fixed route system. Individuals must meet eligibility criteria, be within the service area, and carry a valid Medicare ID or Para ID issued by GFTD. Paratransit services are offered Monday through Friday from 6:00 AM to 6:30 PM and Saturdays from 9:30 AM to 5:30 PM. Ride requests must be scheduled at least 1 day in advance but can be scheduled up to 14 days before the trip date. Many social service organizations purchase GFTD passes in order to meet the transportation needs of their clients.

FARES

The transit services operate on a fixed fare basis. Passengers can either pay with exact change on the bus or obtain passes from the main transit office. All fares are for one-way trips. When a transfer between routes is required, a driver will issue a transfer slip to allow riders to complete their one-way trip from their initial fare. Transfers are valid for a limited time, approximately 5 minutes, and are free.



Source:Great Falls Transit District, July 2024

Figure 7: Existing Transit System Route Map

Regional Transit Services

There are several transit providers that offer regional transit services to the Great Falls area. These routes connect residents and visitors to destinations across Montana and more broadly to destinations across the US through these providers and others.

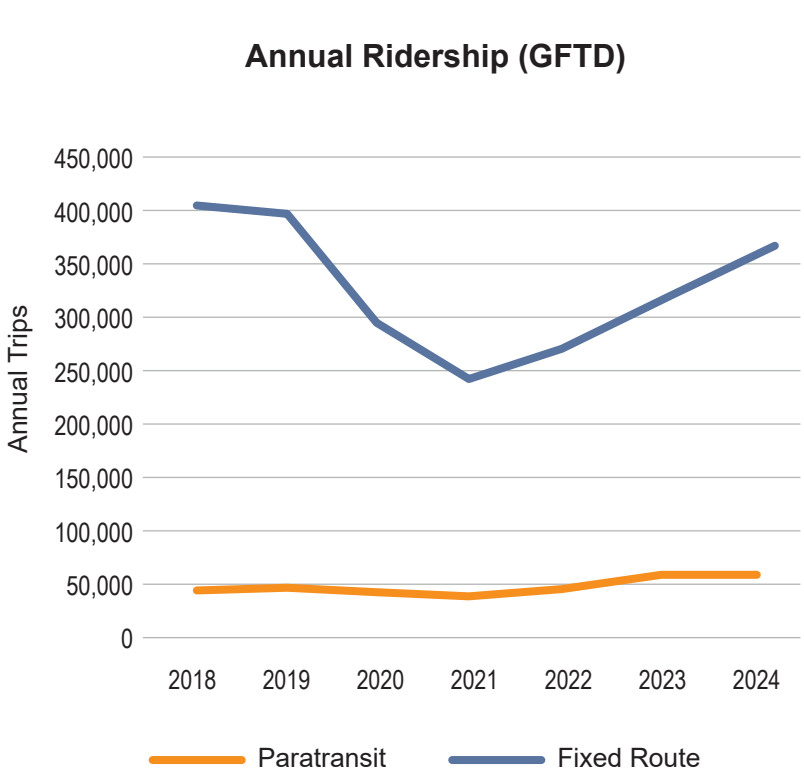
SALT LAKE EXPRESS: In January of 2002, Great Falls began offering intercity bus service through Salt Lake Express. The intercity buses operate a daily fare-based route from Great Falls, south to Helena, then Butte, and continuing into Idaho.

NORTHERN TRANSIT INTERLOCAL: In 2007, the Northern Transit Interlocal (NTI) was founded. NTI's Green Route operates a fare-free route between Cut Bank, Shelby, and Great Falls on Mondays and Thursdays.

NORTH CENTRAL MONTANA TRANSIT: North Central Montana Transit (NCM) operates a free public transportation system serving the Hi-Line communities of Hill and Blaine counties as well as coordinated services with Fort Belknap and Rocky Boy's Transit systems. NCM Transit also offers a fare-based route between Havre and Great Falls on Mondays, Wednesdays, and Fridays.

Private Transportation Services

Great Falls also has several private transportation options including network companies, such as Uber, Lyft, and local taxi services. These providers offer scheduled or on-demand door-to-door transportation services in the area.



Transit ridership decreased significantly in 2020 and 2021 due to the COVID-19 pandemic but has rebounded in recent years.

4.1.4. Goods Movement Network

Goods movement affects all modes of transportation and a broad mix of land uses in the Great Falls area. Goods move through the region alongside drivers, pedestrians, cyclists, and passengers traveling by bus, rail, and air. The goods movement network connects and passes through commercial and industrial districts, residential neighborhoods, and parks. Demand for goods movement is increasing as the region's economy and population grows. Integrating goods movement into the multimodal transportation system and local land uses is critical to protecting safety and quality of life.

Within the study area, I-15 and US 87 play an important role in the national and international goods movement network. These routes and area rail lines are also part of the strategic military networks in the US. Malmstrom AFB is reliant on an efficient and secure goods movement network to transport goods to and from the base. In particular, the AFB relies on roadway connections to Great Falls International Airport, which is a key component of the military transportation network as well as being the location of the Montana Air National Guard Facilities. Additionally, the 341st Missile Wing, headquartered at Malmstrom AFB, is one of three US Air Force Bases that operates, maintains and secures the Minuteman III intercontinental ballistic missile (MMIII ICBM). In the coming years, the US Air Force plans to replace all land-based MMIII ICBMs with Sentinel ICBMs. The updated technology requires upgrades to existing launch centers, support facilities, and utility corridors in and around the Malmstrom AFB.

Trucks

Figure 8 illustrates the routes generally used by trucks in the Great Falls Area. Official truck routes to be used by through trucks (those that aren't providing local service) are identified in the City of Great Falls city code. Typical truck routes include those that are outside the municipal boundary and connect to the official truck routes. The highest volumes of trucks traveling in the study area use I-15, presumably to access markets outside the region. Locally serving trucks appear to access the city via the NW Bypass or Central Avenue. From the southwest, trucks access the city on Country Club Boulevard and 10th Avenue South, which also provide access to commercial areas in the Downtown core. Trucks access the city via US 87 in the northeast, with connections to Smelter Avenue and River Drive. From the southeast, trucks enter along US 87 and 10th Avenue South.

Source: RPA

Source: RPA

Rail

Great Falls is well-integrated into the nation's freight rail system, with numerous facilities and services. Rail facilities carry freight on lines northeast of the city and along the east side of the Missouri River, crossing the river south of downtown. The rail lines connect to the BNSF rail yard just west of the river. Great Falls is located on the 100-mile BNSF main line that links Shelby and Great Falls, known as "The Great Falls Subdivision". Shelby is also located along "The Hi-Line Subdivision", a BNSF main line that runs east-west. The rail facilities in Shelby also serve an Amtrak passenger rail station on the Empire Builder Route (Chicago to Portland/ Seattle).

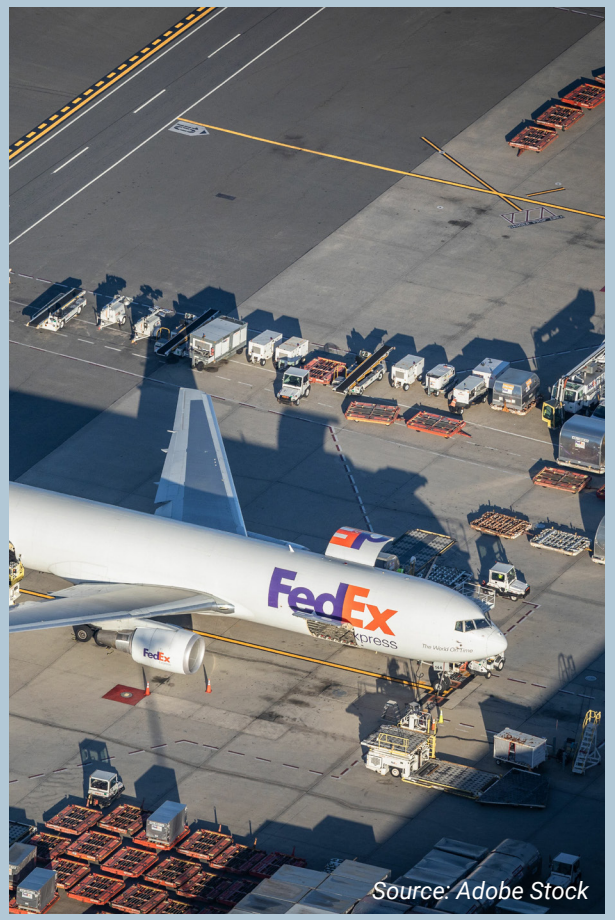
Rail spurs connect the rail network to several industrial facilities in the Great Falls area, providing direct access to major goods movement facilities. Figure 8 illustrates the rail lines serving the Great Falls Area. A circuitous railroad spur deviates from the area near the AgriTech Industrial Park, crosses the Missouri River just west of Rainbow Dam, and circles north and west to the Malteurop Malting Plant between US 87 and Black Eagle Road. This spur line is located outside the City of Great Falls but supports significant goods movement activity in and through the area. The city plans to continue constructing rail spurs to serve the AgriTech Industrial Park as industrial development occurs in the area.

There are currently 35 active, public, at-grade rail crossings within the Great Falls LRTP study area, as shown in **Figure 8**. These crossings primarily occur in the vicinity of the BNSF Rail Yard, the Agri-Tech Industrial Park, along the southern boundary of the study area, and in the northern core of Great Falls. At-grade crossings can contribute to vehicle delay and safety concerns. Additionally, there are 10 grade-separated crossings within the study area including four overpasses and six underpasses. These crossings primarily occur along the major street network. Grade-separated crossings can improve traffic conditions and safety by eliminating intermodal conflicts.

Air

The Great Falls International Airport (GTF) offers substantial infrastructure for the air cargo and passenger air travel industries. The airport operates a control tower and five terminal gates. FedEx uses the warehouse space as a sorting and distribution hub for Montana. UPS does not directly operate air cargo flights out of GTF, although its affiliate, Alpine Air, operates a few routes. The airport operates a foreign trade zone that offers tax-free purchases to international customers.

For commercial passenger air travel, GTF is serviced by Alaska Airlines, Allegiant Air, Delta Airlines, and United Airlines. Direct flights are offered to Denver, CO, Las Vegas, NV, Minneapolis, MN, Phoenix, AZ, Salt Lake City, UT, and Seattle, WA. The U.S. Customs Border Patrol operates an office at the airport, which facilitates international travel.



Source: Adobe Stock

Source: RPA

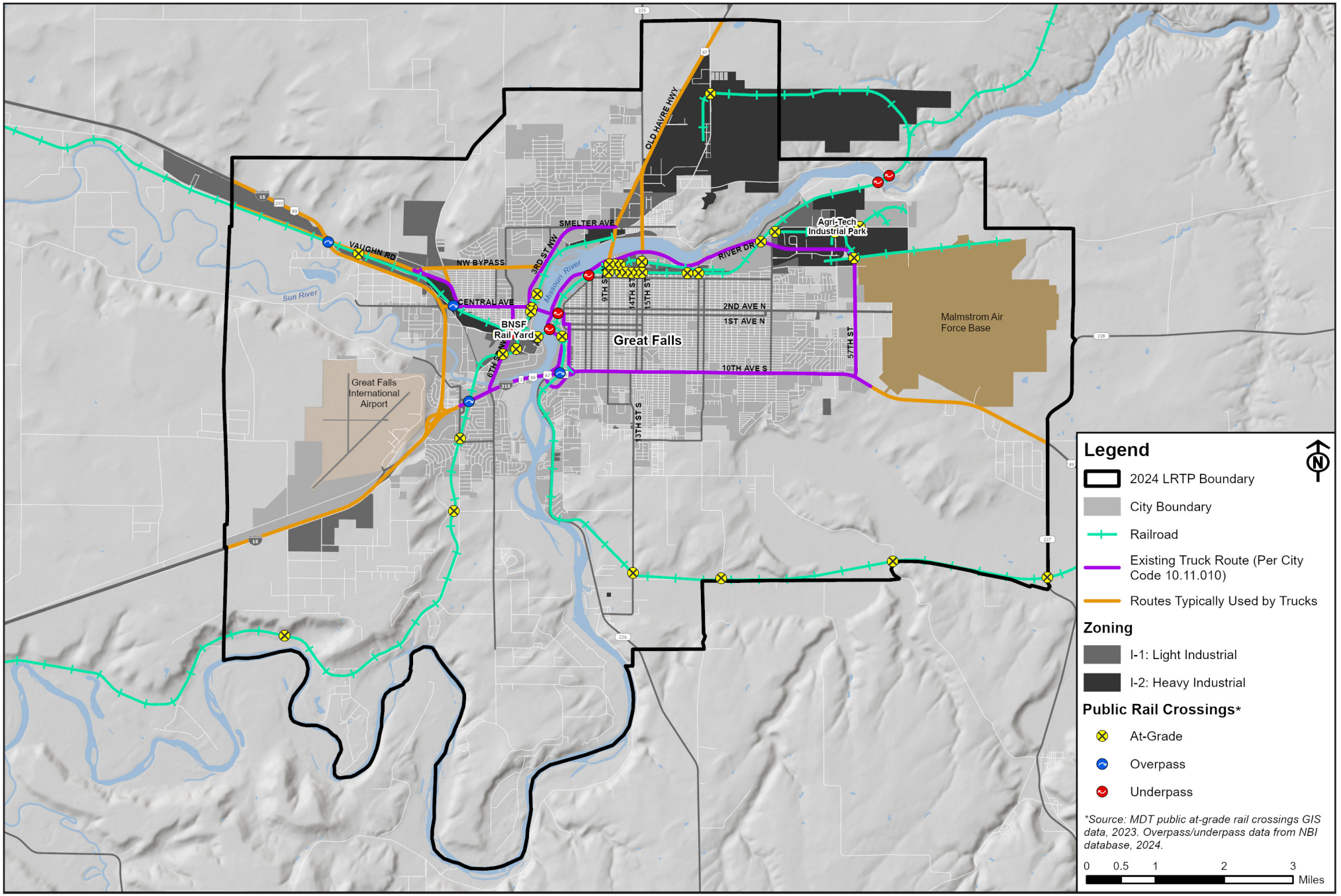
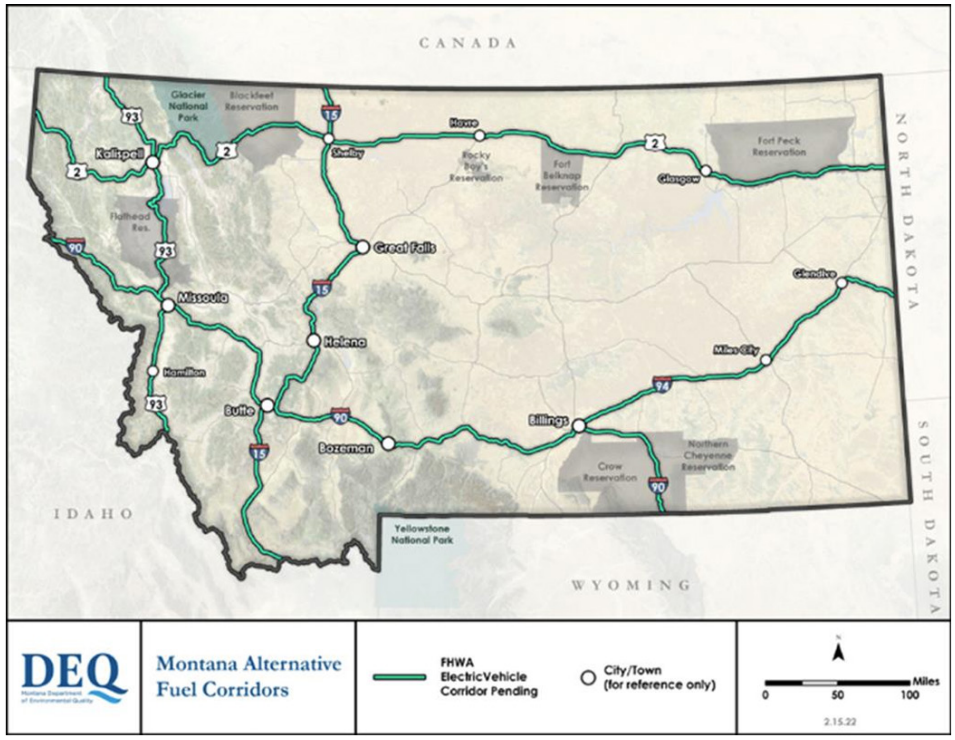


Figure 8: Existing Goods Movement Network

4.1.5. Electric Vehicle Network

Recent legislation has placed increased emphasis on alternative fuel vehicles, especially electric vehicles (EVs) and the role they will play in combating transportation emissions. In Cascade County, there were 109 EVs on the road in 2022, which represents about 2.5 percent of the statewide total (4,555).

Great Falls currently has 7 public electric vehicle charging stations, with 21 total ports. All existing charging infrastructure supports I-15, the only designated Alternate Fuel Corridor (AFC) in Great Falls. The AFC is pending completion of full buildout of EV charging infrastructure along the corridor.



Source: Montana's Electric Vehicle Infrastructure Deployment Plan, 2023

FHWA has designated over 2,000 corridor miles as electric vehicle pending corridors in Montana. Montana's EV Plan prioritizes funding charging locations that meet the National Electric Vehicle Infrastructure Program (NEVI) requirements along each of these corridors.

The Tesla Supercharging Station at the Hampton Inn in Great Falls is one of seven public EV charging stations in the area.

4.2. Transportation Conditions

An evaluation of traffic operations for the study area was completed using available data provided by the City of Great Falls, Cascade County, and MDT in addition to supplemental field-collected data. Turning-movement counts and mainline traffic volume data was bolstered by visual observations such as driver behavior, vehicle queuing, and other general traffic characteristics. This data aids in understanding how the existing road network operates and helps determine future planning needs.

4.2.1. Existing Roadway Volumes and Capacity

The capacity of the roadways is of critical importance when looking at the growth of the community. As traffic volumes increase, vehicle flow deteriorates. When traffic volumes approach and exceed the available capacity, users experience congestion and vehicle delay. As such, it is important to investigate the size and configuration of the existing roadways and compare their capacity to current or projected demands.

The capacity of a roadway is based on various features including the number of lanes, intersection function, access and intersection spacing, vehicle fleet mix, roadway geometrics, and vehicle speeds. Individual roadway capacity varies greatly and should be calculated on an individual basis. However, for planning and comparison purposes, theoretical roadway capacities were developed based on the existing roadway configuration. **Table 3** presents the capacities, given in vehicles per day (vpd), that have been used for this work. The values given in the table are not intended to be used to set any thresholds for roadway performance, but rather provide general information to be used for comparison purposes.

A roadway's capacity, and associated volume-to-capacity (v/c) ratio, can be used as a comparison tool when looking at the transportation system. The v/c ratio of a roadway is defined as the traffic volume on the roadway divided by the capacity of the roadway. **Figure 9** presents the resultant v/c ratios for the existing major street network based on 2021 traffic volumes. The v/c ratios help identify potential capacity deficiencies on the transportation system.

Road Configuration[a]	Capacity (vpd)[b]
2 Lane	12,000
2 Lane - Divided/TWLTL	18,000
3 Lane	18,000
3 Lane - Divided/TWLTL	24,000
4 Lane	24,000
4 Lane - Divided/TWLTL	32,000
6 Lane - Divided/TWLTL	48,000
Interstate	68,000

Table 3: Theoretical Roadway Capacity

[a] TWLTL = Two-Way Left-Turn Lane

[b] Values represent planning level daily capacities developed for this LRTP and are intended for comparison purposes only. Actual physical roadway capacity can vary greatly depending on road design features and access control.

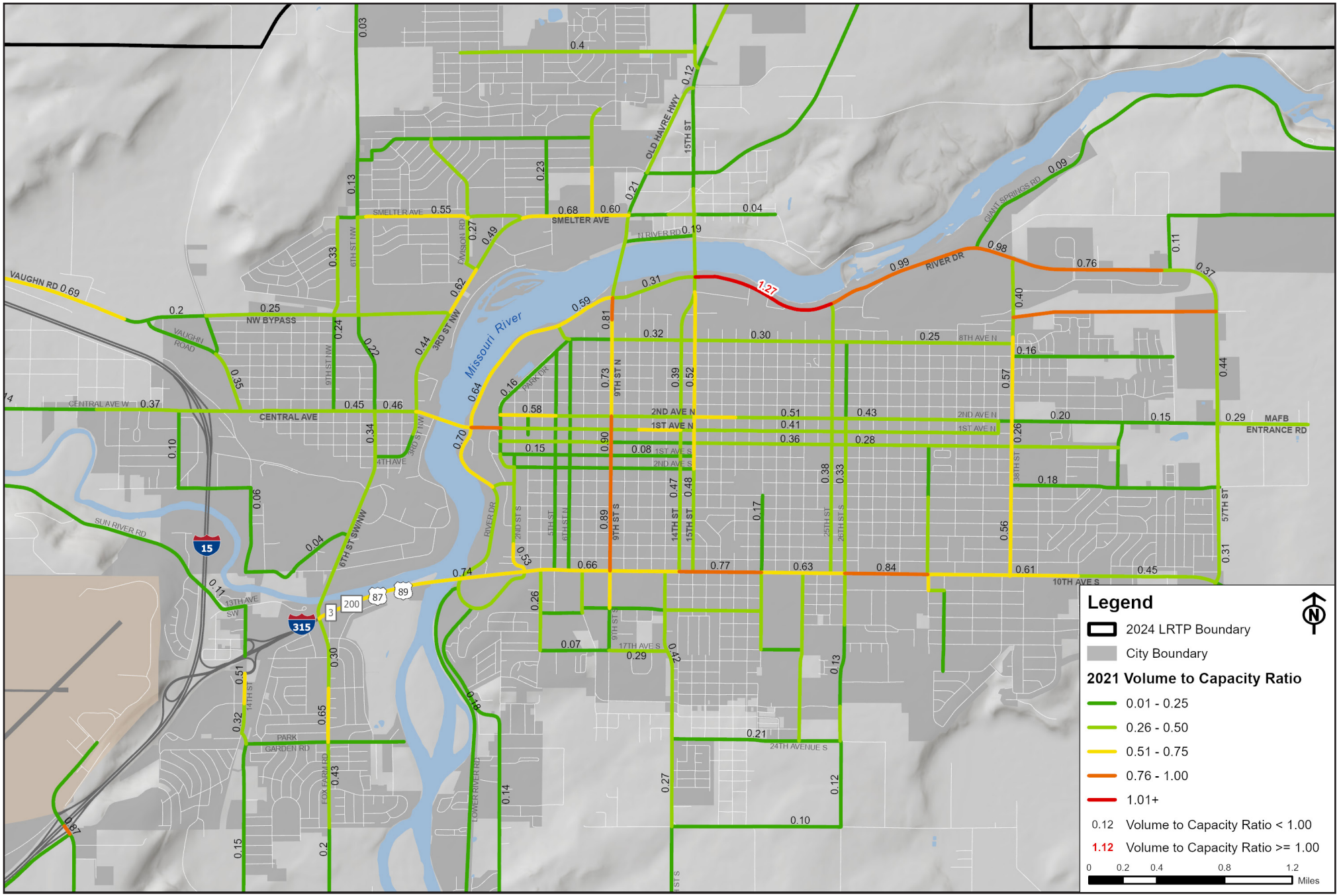


Figure 9: Existing Volume to Capacity Ratios (2021)

4.2.2. Intersection Operations

Intersection performance is evaluated in terms of vehicle delay. The amount of vehicle delay experienced at an intersection correlates to a measure called level of service (LOS). LOS is used to identify intersections that are experiencing operational difficulties. The LOS scale ranges from A to F representing the full range of operating conditions. The scale is based on the ability of an intersection to accommodate the traffic using the intersection. LOS A indicates little, if any, vehicle delay, while F indicates significant vehicle delay and congestion. **Table 4** shows the relationship between LOS and vehicle delay.

Data from various sources were compiled to display LOS for intersections in the study area. Intersections having poor operations or safety concerns were identified by the city as needing analysis and were therefore included herein. Data from recent traffic studies conducted by the City of Great Falls and MDT were also used to supplement the analysis. In total, 63 intersections have been included in the LOS analysis including 40 intersections with updated turning movement counts collected in Summer 2023 and 23 intersections with turning movement counts collected by other agencies between 2020 and 2023. Of these 63 intersections considered, 29 were signalized and 34 were unsignalized. Each intersection was analyzed for the morning and evening peak hours, defined as 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. The results of the LOS analysis are presented in **Figure 10.**

Intersection LOS defines intersection performance in terms of vehicle delay and does not factor in alternative travel modes or the health of the overall transportation system. Intersection LOS is often based on a single hour, or peak hours, for which the system is most congested. Rather than reducing peak hour delay at single intersections, a broad approach should be taken to improve the entire transportation system.

The data indicates that a handful of intersections are operating at or beyond their available capacity during peak hours under existing traffic conditions (LOS E and F). All of these intersections are unsignalized and may be candidates for a higher form of intersection control. Several other intersections experience LOS C or D during peak hours and may experience worsening conditions as growth occurs. These conditions primarily occur on major arterials such as 10th Avenue South, Fox Farm Road, 6th Street Northwest, 3rd Street Northwest, 38th Street North, Central Avenue, and 1st Avenue North.

LOS	Signalized Delay (sec)	Unsignalized Delay (sec)	Description
A	<10	<10	Free Flow Low volumes <1 vehicle in queue
B	10 - 20	10 - 15	Mostly free flow Somewhat low volumes Occasionally 1+ vehicles
C	20 - 35	15 - 25	Smooth Flow Moderate volumes Standing queue; >1 vehicle
D	35 - 50	25 - 35	Approaching unstable flow High volume: capacity ratios Standing queue of vehicles
E	50 - 80	35 - 50	Unstable flow Volumes at/near capacity Standing queue of vehicles
F	>80	>50	Saturation condition Volumes over capacity Standing queue of vehicles

Table 4: Intersection LOS Descriptions

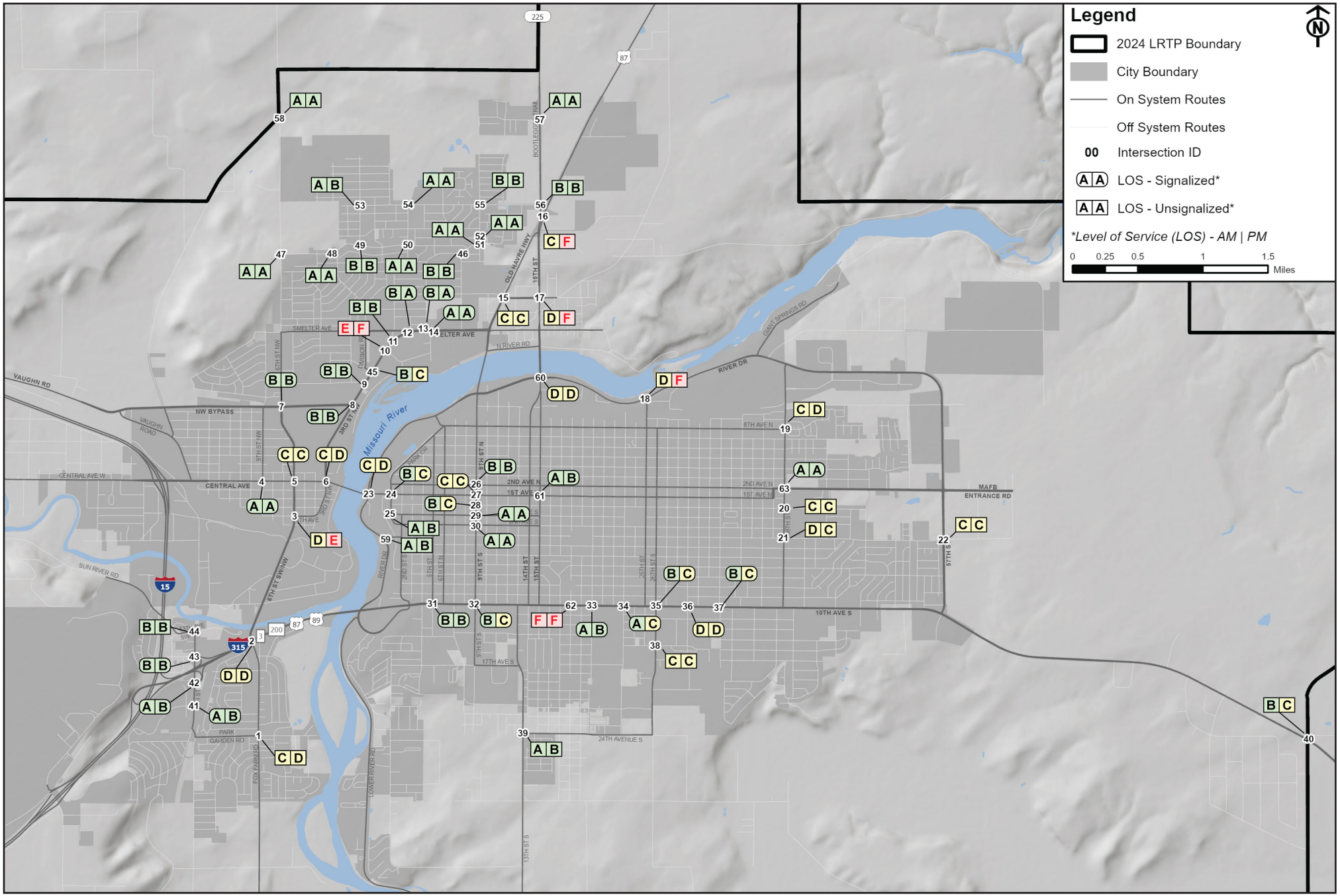


Figure 10: Existing Intersection Operations

4.2.3. Non-Motorized Activity

Providing an accurate picture of pedestrian and bicycle activity within any community is difficult. Typically, data is not available or not comprehensive enough to form a complete picture of active transportation behavior. Data for vehicles is, by comparison, much more readily available. The following subsections summarize available data from the American Community Survey (ACS) and the National Household Travel Survey (NHTS) pertaining to active transportation.

Commuting (ACS)

Commuting mode share data was presented in **Table 1**. When compared to prior years, the proportion of residents who walk, bike, or take public transportation to work have all seemingly decreased in the last decade. Although the margin of error in this dataset is high, it is important to note this trend, especially considering that the city has seen a decrease in personal vehicle ownership over the last two decades. However, the city has seen nearly two times as many workers who work from home which decreases the number of commuters overall. The downward trend of non-motorized transportation users could be due to a larger number of households being constructed at a greater distance from destinations.

Personal Travel Behavior (NHTS)

The recently launched Next-Generation NHTS provides a continuous travel monitoring program with local data products including multimodal passenger and truck origin-destination information. Data for the Great Falls area indicates that about 84.9 percent of passenger trips are made via vehicle while about 14.8 percent are made via active transportation modes on a yearly basis. Of those trips made by vehicle, approximately 91.8 percent are less than 10 miles long. Of those trips made by active transportation modes, 99.9 percent are inter-zonal trips that start and end within the Great Falls area. Overall, work trips make up about 3.4 percent of all trips made within the Great Falls area. For truck trips, about 85.3 percent are inter-zonal trips. About 74.5 percent of truck trips are less than 10 miles long. Overall, there are approximately 46 passenger trips for every one truck trip within the Great Falls area.

Walk Score

Walkscore.com measures how "walkable" or "bikeable" a community is by measuring the availability of non-motorized facilities and connectivity to nearby amenities. The site indicates that Great Falls is a car-dependent city with most errands requiring a car. The site gives the city a walk score of 44 and a bike score of 43 (out of 100). The downtown area generally scores the highest in terms of walkability with scores decreasing in further parts of the city, as shown in **Figure 11**. By comparison, Bozeman has a walk/bike score of 47/62; Helena scores 49/45; Missoula scores 45/60; and Billings scores 35/47.

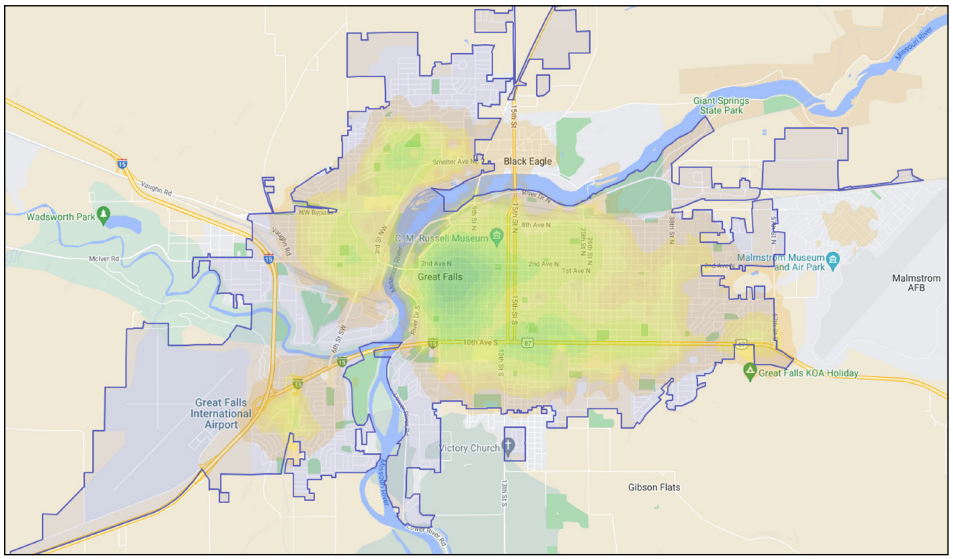


Figure 11: Trip Volumes by Hour

4.2.4. Regional Travel Patterns and Trends

To understand travel patterns throughout the Great Falls area, field-collected data was supplemented with traffic data from StreetLight, an on-demand provider of traffic data collected from smart phones and navigation devices. StreetLight uses anonymized location records from these devices to infer individual trips that took place within a given geographic boundary and during a given time period. For this analysis, StreetLight data representing the 2022 calendar year for both passenger vehicles and commercial trucks were examined.

Figure 12 illustrates the average number of trips taken by all vehicles and trucks during each hour of the day categorized by weekdays, weekends, and all days. As shown in the figure, weekday traffic experiences distinct peaks during the morning (7:00 AM – 8:00 AM), midday (11:00 AM – 1:00 PM), and evening (4:00 PM – 6:00 PM) timeframes which align with typical commuting patterns. On weekends, traffic volumes are approximately 34 percent less than on weekdays. Truck volumes, on the other hand, peak around 8:00 AM on weekdays then decrease throughout the day with drops in traffic volumes during the evening commuting hours (5:00 PM). On weekends, truck traffic volumes are approximately 53 percent less than on weekdays.

Annual traffic patterns were also examined. Available data indicates that more trips are taken in the Great Falls area during the late summer/early fall months (August and September) but otherwise experience little variation throughout the year. Trucks are also shown to peak in the late summer/early fall months as well as in February. Due to the agricultural nature of the majority of Cascade County, and its proximity to regional trade centers, it is possible that the increased number of trips during this time period could be related to fall harvests.

Figure 13 indicates that approximately 50 percent of truck trips are less than 10 miles long, presumably serving local needs, while about 50 percent of truck trips are longer than 10 miles presumably serving regional freight needs. When averaged with all vehicles, approximately 75 percent of all trips in the Great Falls area are less than 5 miles long, with over 30 percent being less than two miles long and nearly 10 percent being less than 1 mile long. Note, StreetLight's analysis methodology ends a 'trip' after a user's location doesn't move 5 meters in 5 minutes, so it does not necessarily account for trip chaining, or completing several shorter distance, nearby trips in one outing. It is, however, possible that increased investment in non-motorized infrastructure could shift some of these shorter vehicle trips to walking or biking trips in the future.

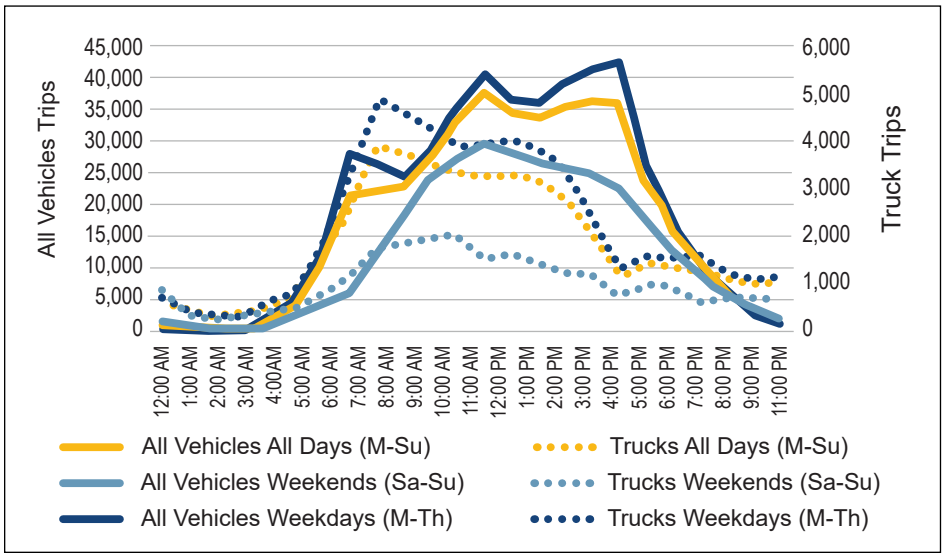


Figure 12: Great Falls Walk Score

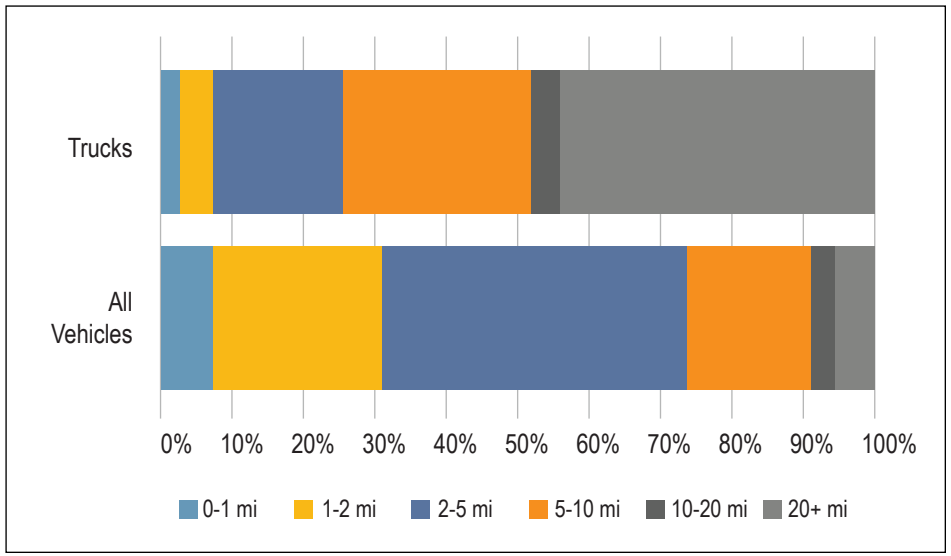


Figure 13: Trip Lengths

4.3. Transportation Equity

To address underinvestment in disadvantaged communities, the US Department of Transportation (USDOT) developed the Justice40 Initiative (J40). The initiative helps transportation agencies identify and prioritize projects that benefit communities facing barriers to affordable, equitable, reliable, and safe transportation. In accordance with J40, the USDOT developed the Equitable Transportation Community (ETC) Explorer which provides data that allows agencies to understand how a community is experiencing transportation disadvantage according to five indicators, shown in **Figure 14**. The ETC Explorer calculates the cumulative impacts of each disadvantage indicator across each census tract and uses percentile rankings to determine each census tracts component score against all other census tracts both nationally and on a statewide basis.

When comparing to the Nation as a whole, approximately 68 percent of Cascade County is considered disadvantaged, with the majority of disadvantaged census tracts being located within the Great Falls LRTP planning area. On a statewide basis, approximately 19 percent of the Great Falls MPO is considered disadvantaged.

Figure 15 illustrates the ETC Explorer results for the Great Falls area identifying disadvantaged census tracts, based on both national and statewide comparisons, as well as the percentile ranking for the Transportation Insecurity indicator compared on a statewide basis. As shown in the figure, the area generally bounded by 10th Avenue South, River Drive, and 38th Street North is ranked relatively low in terms of Transportation Insecurity with Transportation Insecurity increasing in further reaches of the city and in the county. Areas with higher Transportation Insecurity scores are characterized by longer commute times and limited access to personal vehicles or transit, spend a greater percentage of household income on transportation, and experience higher rates of fatal crashes. This information will help inform the LRTP project prioritization process in relation to projects' ability to provide equitable access to transportation within the community.

Indicators of Disadvantage

Transportation Insecurity: Occurs when people are unable to get where they need to go regularly, reliably, and safely. Characterized by long commutes times, high transportation costs, and high crash rates.

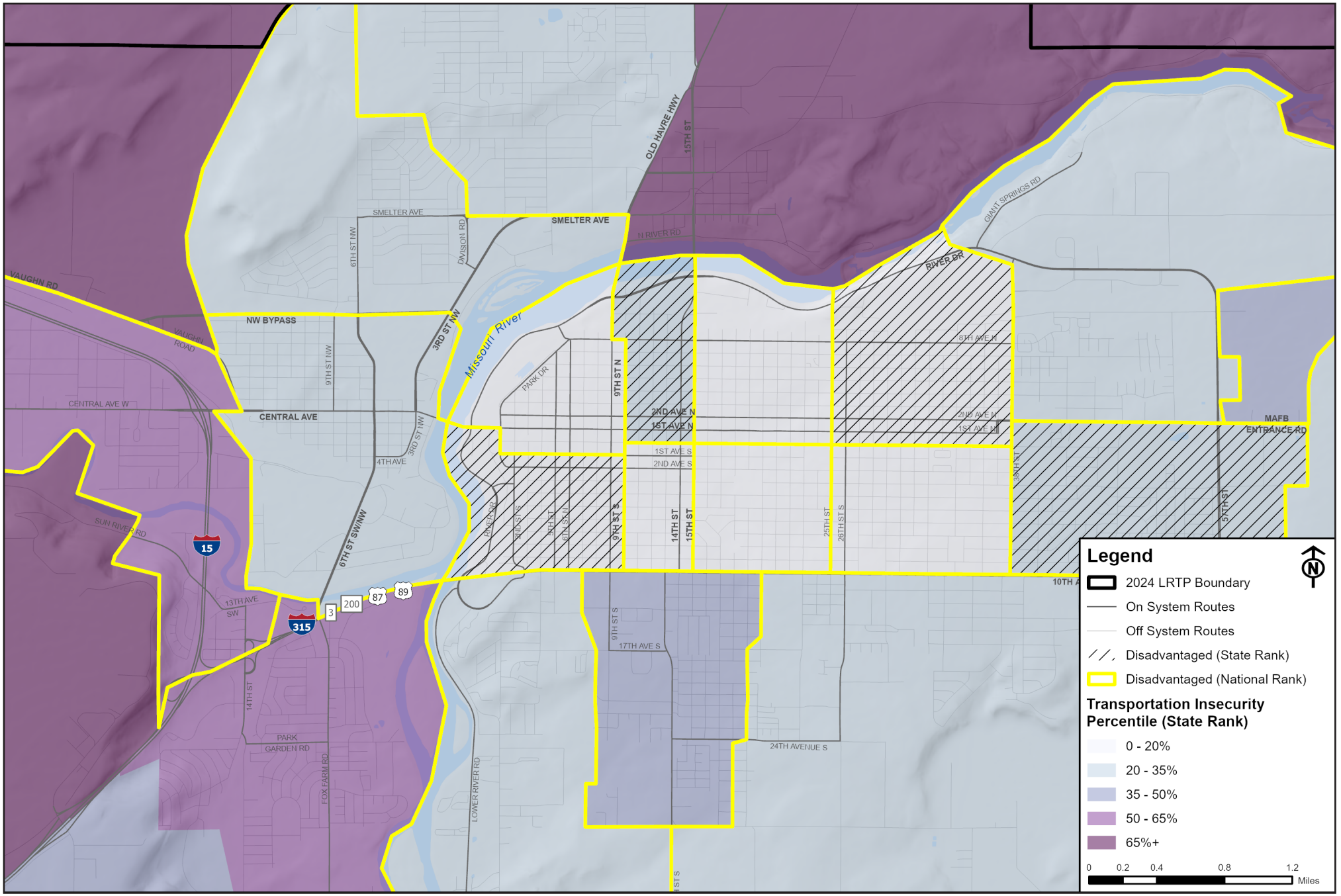
Environmental Burden: Assesses levels of air and water pollution and proximity of hazardous facilities which negatively affect health, education, and the economy.

Social Vulnerability: Measures indicators that have a direct impact on quality of life such as employment, educational attainment, poverty, housing cost, disability status, age, and language.

Health Vulnerability: Assesses the increased frequency of health conditions that may result from exposure to pollution, as well as lifestyle factors such as walkability, car dependency, and commute times.

Climate and Disaster Risk Burden: Reflects sea level rise, changes in precipitation, extreme weather, and heat which pose risks to transportation system performance, safety, and reliability.

Figure 14: ETC Explorer - Indicators of Disadvantage



Source: USDOT Equitable Transportation Community (ETC) Explorer, 2023

Figure 15: Transportation Equity

4.4. Transportation Asset Condition

Effectively managing transportation assets is a vital part of ensuring good condition and performance for all transportation users. Two assets that are often monitored by transportation agencies include structures (bridges, culverts, stock passes, tunnels, etc.) and pavement. Condition and performance ratings for these assets are important to consider when planning preservation, rehabilitation, and reconstruction projects.

4.4.1. Structure Condition

MDT performs regular inspections of all in-service publicly owned structures to identify needed repairs and inform funding decisions. National Bridge Inventory item ratings are determined based on MDT inspections, and vary on a scale from 0 to 9, with 0 depicting an element that is out of service and beyond corrective action (repair) and 9 depicting an item that is new or in excellent condition. An overall structure rating is given based on the lowest sub- or superstructure rating.

Figure 16 shows the structures within the study area color-coded based on their overall structural rating. Of the 43 structures within the study area, 31 are owned and maintained by MDT. The remaining 12 bridges are owned and maintained by the City of Great Falls (5), Cascade County (2), and the BNSF Railroad (5). All of the bridges received an element rating of fair or good and none of the bridge were rated poor.

The westbound section of the Warden Bridge, on 10th Avenue South spanning the Missouri River has been noted as needing repair or replacement within the planning horizon.

4.4.2. Pavement Condition

The pavement condition index (PCI) is a numerical index between 0 and 100, which is used to indicate the general condition of a pavement section. The PCI is widely used by municipalities to measure the performance of their road infrastructure. The PCI rating assessment is based on visual surveys. Each segment of road is evaluated based on the number, type, and severity of distresses in the pavement. Pavement distress types for asphalt pavements include cracking, bleeding, swelling, raveling, rutting, potholes, patching, and ride quality, among others. A PCI score of 86-100 is rated as “good,” 71-85 as “satisfactory”, 56-70 as “fair”, 41-55 as “poor”, and 25-40 as “very poor”. Any PCI rating below 25 is considered failing.

The PCI history of a pavement section can help establish its rate of deterioration and identify future major rehabilitation needs. PCI values are also typically used in prioritizing, funding and executing maintenance and repair efforts. **Figure 16** shows the PCI values reported by the City of Great Falls Public Works Department in 2019 and updated sporadically in the past 3 years. Approximately 11.3 miles of roadways are classified as failing, about 10.5 miles are reported as very poor, and about 13.8 miles are in poor condition. These segments are candidates for major rehabilitation or reconstruction. The majority of the network, about 343 miles, is reported as being in fair condition. These segments are candidates for pavement preservation efforts. About 60.7 miles of roadway within the study area is considered to be in satisfactory or good condition. The city is planning to conduct a full pavement inventory in 2024 to re-establish baseline conditions and help inform future investment decisions.

The city routinely evaluates the condition of city streets to determine what, if any, maintenance must be performed. The Public Works Department finds that periodic maintenance is more efficient and cost-effective than full reconstruction.

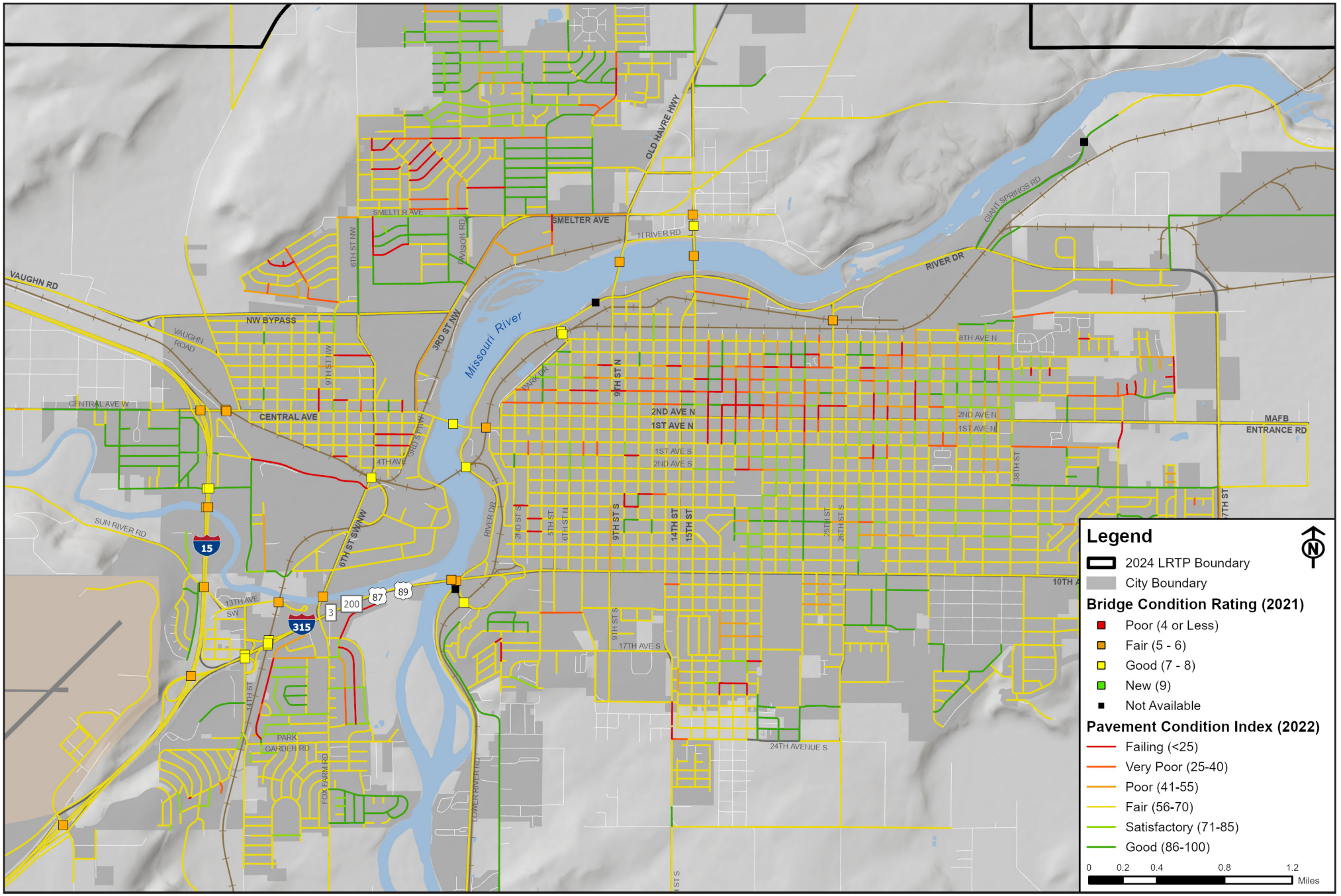


Figure 16: Existing Asset Condition

4.5. Transportation Safety Conditions

Crash data were provided by the MDT Traffic and Safety Bureau for the five-year period between January 1st, 2017, and December 31st, 2021. The crash reports are a summation of information from the scene of the crash provided by the responding officer. As such, some of the information contained in the crash reports may be subjective.

According to the MDT crash database, there were 8,567 crashes reported within the LRTP study area during the five-year analysis period. The number of crashes per year decreased from 1,834 crashes in 2017 to 1,472 crashes in 2020. In 2021, the number of yearly crashes increased to 1,768 crashes. The number of suspected serious injury crashes increased consistently from 9 in 2017 to 16 in 2021. Fatal crashes generally trended upwards from 2017 to 2020 then decreased in 2021. **Figure 17** presents the number of reported suspected serious injury crashes, fatal crashes, and total crashes per year for the five-year analysis period. The total crash figures includes crashes of all severities, from property damage to fatal, as well as unknown crashes.

The spatial distribution of all crashes was plotted based on the reported crash locations. The density of crashes within the study area is displayed in **Figure 18**. The locations of fatal and serious injury crashes are also shown in the figure. The majority of crashes within the LRTP study area occurred within city limits with a larger concentration of crashes in Downtown Great Falls and along 10th Avenue South. Locations with higher traffic volumes appear to have a higher number of crashes.

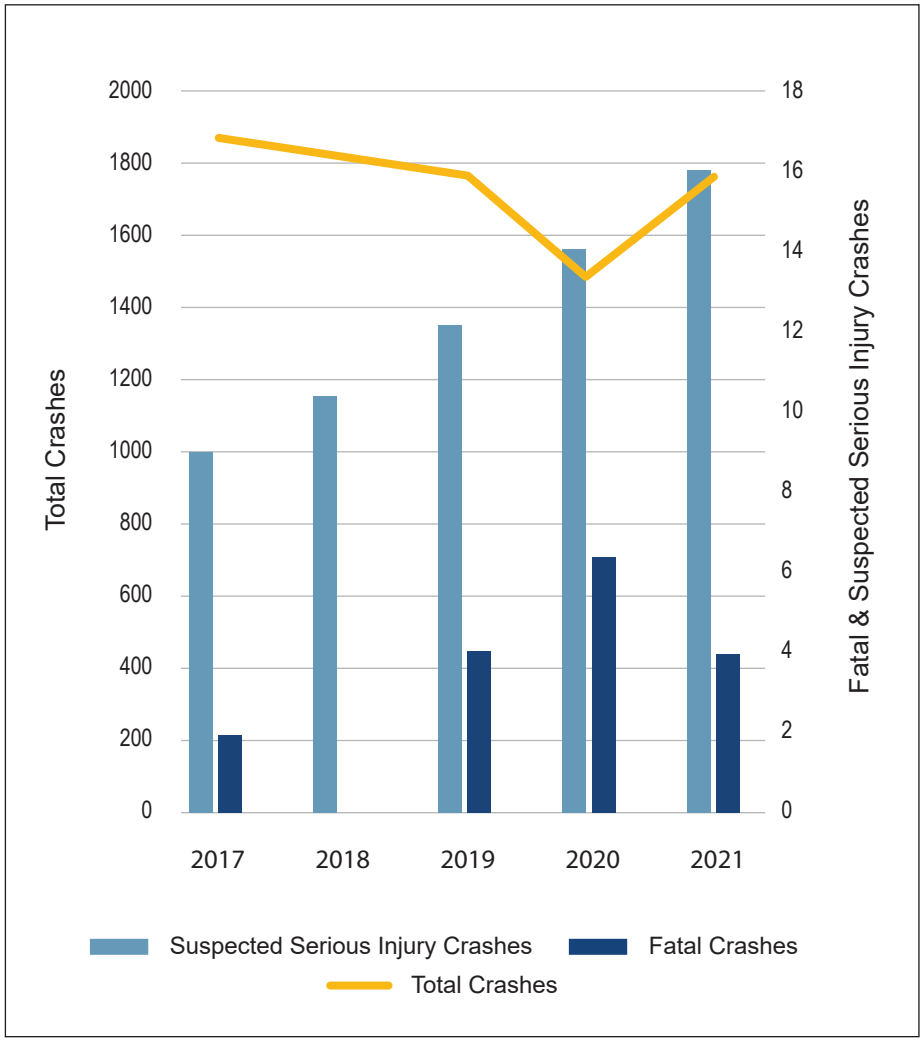


Figure 17: Number of Crashes by Year

16 fatalities

80 serious injuries

2,216 minor/possible injuries

17,731 property damage/unknown

The most common crash types include rear end, right angle, and sideswipe crashes

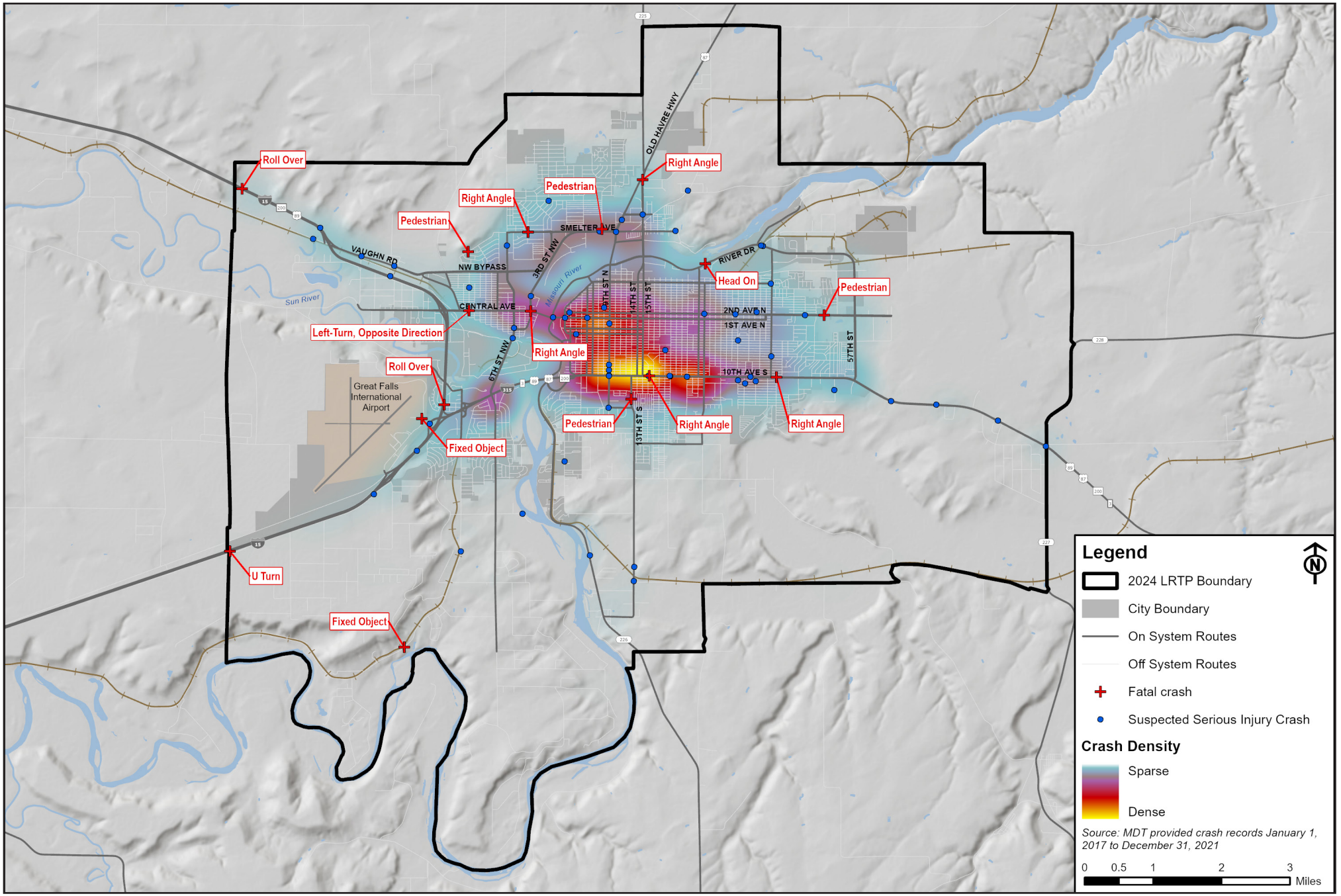


Figure 18: Crash Density

4.5.1. Crash Trends

Crash data within the study area were analyzed to determine problem areas, "hot-spot" crash locations, and behavioral characteristics. Observed crash trends and contributing factors are summarized below.

Crash Period

Crash occurrences increased during peak travel hours including commute times, school pick-up/drop off times, and lunch time. Weekend crashes (Saturday and Sunday) accounted for approximately 19 percent of all crashes and 27 percent of severe crashes (fatal or suspected serious injury crashes). Approximately 48 percent of all crashes occurred during winter months (November to March) while a larger number of severe crashes occurred during the summer months (June to September).

Crash Type

Multi-vehicle crashes accounted for 83 percent of all reported crashes with the most common crash types being rear-end, right angle, and sideswipe, same direction crashes. Fixed object crashes were the most commonly reported single-vehicle crash type, followed by wild animal and roll over crashes.

Crash Location

Approximately 53 percent of severe crashes occurred at non-junction locations while about 42 percent of severe crashes occurred at or were related to intersections. The greatest number of crashes most often occurred on principal arterials (39 percent) where 32 percent of severe crashes occurred. Local roads had the second highest number of crashes (38 percent) where 29 percent of severe crashes occurred.

Environmental Conditions

Adverse weather conditions, including snow and rain, were reported in approximately 13 percent of crashes. Severe crashes occurred primarily on dry roads (82 percent) with about 13 percent occurring on snowy, icy, or frost covered roads. About 23 percent of severe crashes occurred at dark without street lighting.

Impairment

Approximately 26 percent of severe crashes and 6 percent of all crashes involved an impaired driver.

Vehicle Type

Of the 16,276 vehicles involved in crashes over the five-year period, 92 percent were passenger vehicles (cars, trucks, vans). Approximately 16 percent of severe crashes involved motorcycles and about 4 percent of severe crashes involved heavy trucks, buses, or other large equipment and machinery.

Person Type

About 55 percent of drivers involved in crashes were male and 45 percent were female. With respect to age, about 12 percent of drivers were over the age of 65 and about 2 percent of drivers were under the age of 15.

Vulnerable Road Users

There were 49 bicycle and 94 pedestrian-related crashes that occurred within the analysis period. None of the bicycle-related crashes resulted in severe injuries and 11 pedestrian-related crashes resulted in severe injuries. Overall, about 8.5 percent of the severe injuries in the study area were non-motorists.

4.6. Transportation Security

The Great Falls area is exposed to many hazards, all of which have the potential to disrupt the community and cause damage. Hazards include a range of human and environmental incidents or events with varying probabilities of occurring and ranging severities of resulting impacts. The transportation system is a valuable asset in mitigating and responding to emergencies, however, hazards may also threaten the security of the regional transportation system.

4.6.1. Emergency Response Plans and Policies

Federal, state, and local agencies, and their private partners work together to create plans and policies to maintain a secure regional transportation system. These organizations coordinate to ensure that the transportation system is available as a resource to respond to emergencies in the region. Security and emergency plans guide government agencies and private organizations to ensure efforts are coordinated and comprehensive. A range of different types of plans address emergency response at different levels of the transportation system in the Great Falls Area.

The *Cascade County Multi-Jurisdictional Multi-Hazard Mitigation Plan* (MHMP) applies to and incorporates security activities from all jurisdictions in Cascade County, including Great Falls, Belt, Cascade, and Neihart. The MHMP identifies 18 potential hazards facing Cascade County and the municipalities based on historic events, available GIS data, public input, expert opinions, and past disaster declarations. Four hazards stem directly from the transportation system, including hazardous material incidents (highly likely), railroad accidents (highly likely), mass casualty highway accidents (highly likely), and aircraft accidents (likely). The transportation system is also critical to facilitating response efforts of nearly every identified hazard such as fires, severe weather, and flooding.

4.6.2. Transportation Security Roles and Coordination

The Great Falls area's transportation infrastructure is owned and operated by different public agencies and organizations. These entities coordinate with representatives of federal, state, and local governments, neighboring owners/operators, and the surrounding community. The MHMP Plan identifies responsibilities for agencies and officials at Cascade County, and departments or officials in the cities of Great Falls, Belt, Cascade, and Neihart. It identifies local support organizations relevant to transportation security in the event of an emergency. For example, the Public Works and Planning departments have specific roles related to regional transportation security such as monitoring culvert and drainage projects, planning for and coordinating transportation safety improvements, and educating the public.

Cascade County and local jurisdictions periodically review emergency and security plans to share local knowledge, update hazard assessments and enhance interagency coordination. In the Great Falls area, Cascade County and the local jurisdictions jointly plan for and closely coordinate on regional security issues. Coordination activities between regional agencies have resulted in, and are guided by, formal agreements to support security-related planning and provide aid in the event of an emergency.

4.6.3. Critical Infrastructure

The Great Falls area has an extensive transportation network. Critical infrastructure and key resources essential to emergency preparedness, economic vitality, and overall quality of life include the interstate system, highways, bridges, Malmstrom AFB, Great Falls International Airport, the rail network, and the Great Falls transit system. These resources are critical to the transportation of Great Falls citizens. During times of emergency response, it is critical that these transportation routes and accompanying assets move traffic efficiently, are built out enough so they don't create pinch-points, have viable alternative routes in the event of a closure, and are in good operating condition. Consideration of natural hazards affecting these assets is equally important, as flooding, wildfire, severe weather, or crashes could impact the use of these routes.

5. GROWTH, TRAVEL FORECASTS, AND FUTURE NEEDS

This chapter discusses the background and assumptions used to project growth in the Great Falls Area to the year 2045. By using population, employment, and other socioeconomic trends as aids, the future transportation needs were projected. A travel demand model of the transportation system for Cascade County was built by MDT. Information about future growth was used to allocate anticipated residential and employment development to project future conditions. Changes to the transportation system that are committed to occur in the next five years were incorporated into the model to forecast future transportation conditions. An analysis of the projected transportation conditions was performed to estimate how traffic patterns and characteristics may change from existing conditions. Additional information pertaining to future forecasts and projected transportation conditions is provided in **Appendices E** and **F**.

Projecting to the year 2045 is necessary to comply with federal regulations for the development of community long range transportation plans which require a minimum 20-year planning horizon. It is acknowledged that the City of Great Falls generally focuses on a 5-year planning horizon per the *Great Falls Transportation Improvement Plan (TIP)* process to fund and schedule improvements prioritized by the LRTP.

Source: Crexi

5.1. Future Growth and Development

Projections are estimates of various characteristics at future dates. They illustrate reasonable estimates of future conditions based on assumptions about current or expected trends. Population and employment projections, in the form of housing units and total jobs, are used to help predict future travel patterns and assess the performance of the transportation system. Over multiple land use forecasting workshops, representatives of the city, county, and MDT predicted where future housing units and employment centers may occur within the LRTP study area. The growth assignments were developed based on local knowledge of recent land use trends, land availability and development limitations, land use and zoning regulations, local growth policies, planned public improvements, and known development proposals.

5.1.1. Population and Housing Projections

Population and housing totals are used to help determine where vehicle trips originate within the study area. Residential growth is best represented by housing units. Several sources of population projections for Cascade County were examined to help understand how the population is expected to grow within the county and general Great Falls area. These sources consisted of both published community planning documents and recognized sources for demographic projections.

For purposes of the *2024 Great Falls Area LRTP*, the growth rate derived from the past two censuses (0.37 percent) was selected as a starting point for the projected population in the county over the planning horizon. This growth rate was slightly higher than the growth rates predicted by other population models but is considered conservative for this planning effort. At the initial land use forecasting workshop with city, county, and MDT staff, it was determined that growth resulting from planned developments would exceed the projected housing growth figure calculated using the 0.37 percent population growth rate. Accordingly, the population growth rate was increased to **0.44 percent** to capture both planned development and additional development that may occur over the 2045 planning horizon.

The 2020 base-year conditions for the study area use the population total for Cascade County determined by the decennial census, which was factored down based upon the percentage of the county's total population within the Great Falls study area in the calibrated base mode for year 2019 (87 percent). This percent distribution of the county's population within the study area was then carried forward for future projections, being held constant through the year 2045.

Housing units distribute people throughout the roadway network to their desired destinations. They represent the population and act as a hub for traffic within the network. Having a realistic value for number of people per housing unit helps distribute the traffic more accurately. According to the 2020 Census, Cascade County had 84,414 residents distributed among 38,937 housing units, translating to approximately 2.17 people per household within the county. Within the study area, 73,096 residents are distributed among 32,960 housing units, resulting in an occupancy factor of 2.22 people per household.

West Bank Landing is a new large mixed-use development adjacent to 3rd Street NW and the Missouri River.

Under the selected growth scenario (0.44 percent), applying the 2020 occupancy rates to the projected 2045 population for Cascade County results in 43,417 housing units, an increase of 5,322 units from 2019. For the study area, an increase of 4,505 housing units is projected from 2019 to 2045. **Table 5** provides the population and housing unit projections for the study area. **Figure 16** shows where future housing units are expected to be developed by the year 2045.

Area	2019 (Calibrated Model)	% of County Totals	2020 (Census)	2045 (Future Model)	Model Growth (2019-2045)
Cascade County					
Population	83,047	100%	84,414	94,127	11,080
Housing Units	38,095	100%	38,937	43,417	5,322
Population per housing unit					*2.17*
Great Falls Study Area					
Population	71,913	87%	73,096	81,507	9,594
Housing Units	32,248	85%	32,960	36,753	4,505
Population per housing unit					*2.22*
Outside Study Area					
Population	11,135	13%	11,318	12,620	1,486
Housing Units	5,847	15%	5,977	6,664	817
Population per housing unit					*1.89*

Table 5: Future Population and Housing Growth

5.1.2. Employment Projections

Employment data is used to help determine where vehicle traffic is distributed within the roadway network. Places with more employees tend to generate high levels of vehicle traffic from both an employee and customer standpoint. Several sources of employment data for Cascade County, including historic growth and future projections, were examined to help understand potential growth within the county.

For the purposes of the *2024 Great Falls Area LRTP,* the Woods & Poole (W&P) projection was selected by city and county representatives as the preferred employment projection for Cascade County. The W&P projections predict about 56,400 jobs in the county by 2045 which translates into a **0.57 percent** growth rate. This is slightly higher than the growth rate used for population projections (0.44 percent) but is more conservative than the historic trends.

The total employment within the study area was also extracted from the 2019 travel demand model developed by MDT in a similar process to that used to establish baseline population data. The travel demand model also distinguishes between retail and non-retail jobs. Within the county, retail jobs accounted for about 23 percent of all jobs while non-retail jobs accounted for the remaining 77 percent of jobs. Within Great Falls, retail and non-retail jobs accounted for 22 and 78 percent of the area's total employment in 2019.

Using the 0.57 percent annual growth rate determined previously, the jobs within Cascade County were projected from 2019 to 2045. This growth resulted in a total of 48,313 jobs in the county by 2045. The proportion of jobs within the Great Falls study area (92 percent) was held constant for the future projections, resulting in a total of 44,551 jobs in the study area in 2045. The percentages of retail and non-retail jobs within each area were also held constant for the future projections.

An additional 6,120 jobs (1,361 retail and 4,759 non-retail) were allocated within the study area. An additional 517 jobs were distributed in other areas of the county to account for the employment increases anticipated to occur in Cascade County by 2045. **Table 6** presents the employment projections used in the model for Cascade County and the Great Falls LRTP study area to the year 2045. The total number of jobs within each

Area	2019 (Calibrated Model)	% of Totals	2045 (Future Model)	Model Growth (2019-2045)
Cascade County				
Total Jobs	41,676	100%	48,313	6,637
Retail Jobs	9,752	23%	11,305	1,553
Non-Retail Jobs	31,924	77%	37,008	5,084
Great Falls Study Area				
Total Jobs	38,431	92%	44,551	6,120
Retail Jobs	8,549	22%	9,910	1,361
Non-Retail Jobs	29,882	78%	34,641	4,759
Outside Study Area				
Total Jobs	3,245	8%	3,762	517
Retail Jobs	1,203	37%	1,395	192
Non-Retail Jobs	2,042	63%	2,367	325

Table 6: Future Employment Growth

area were divided into retail and non-retail jobs according to existing job distributions in the area. Where jobs don't currently exist, the jobs were allocated based on known development plans and job distributions of surrounding developments.

Figure 19 shows where the projected increases in employment are anticipated through the year 2045. The Great Falls International Airport and Calumet Refinery are both considered special generators, meaning the existing jobs at each location are directly grown at 0.57 percent.

5.2. Projected Transportation Conditions

An analysis of the projected transportation system was performed to estimate how existing traffic patterns and characteristics may change over the next 20 plus years. The inputs for this analysis include known existing conditions and anticipated land development expected to occur out to the year 2045. The land use projections were applied to the MDT-developed travel demand model to forecast future traffic conditions. The model assumes that traffic characteristics will remain similar to those that are seen today. Many factors can influence this assumption, including fluctuations in fuel prices, shifts in mode choice, technological advances, and other unknown circumstances. The model also assumes that all socioeconomic projections will be realized by the year 2045. Ultimately, the projected conditions model is a valuable planning tool that can help predict where traffic growth and congestion may occur due to forecasted development.

5.2.1. Projected Roadway Volumes and Capacity

Projected traffic volumes were estimated using the travel demand model. A comparison of the existing and projected conditions models was performed to determine the percent change in traffic volumes. The percentage changes were then applied to known traffic counts to estimate future traffic volumes. **Figure 20** shows the projected v/c ratios along the major street network. Note that the values shown in the figures assume that no changes to the transportation system will be made other than those which already have committed funding.

Figure 20 also shows the difference between the traffic volumes in the 2019 and 2045 travel demand models for roadways on the major street network. This visualization helps identify which roads may need additional investment to accommodate future growth. Roadways such as River Drive and 10th Avenue South are shown to experience low to moderate growth despite showing v/c ratios near or over 1.0. This is due to these roadways already operating at or near capacity, leaving little capacity for additional traffic volumes. Other roadways, such as 1st and 2nd Avenues North and 15th St are shown to experience much higher traffic growth while still maintaining relatively low v/c ratios over the planning horizon. These roadways may have capacities which exceed current and future traffic demands.

5.2.2. Projected Intersection Operations

Projections for intersection traffic volumes were made for the 63 intersections analyzed previously. These projections were based on percent growth rates calculated from the travel demand model for the year 2045. An average growth rate for the intersection was determined and applied to individual turning movements to represent projected conditions. The intersection LOS was calculated using the existing street layouts, lane-use configurations, and traffic control devices. The results of the analysis are shown in **Figure 21**.

Source: RPA

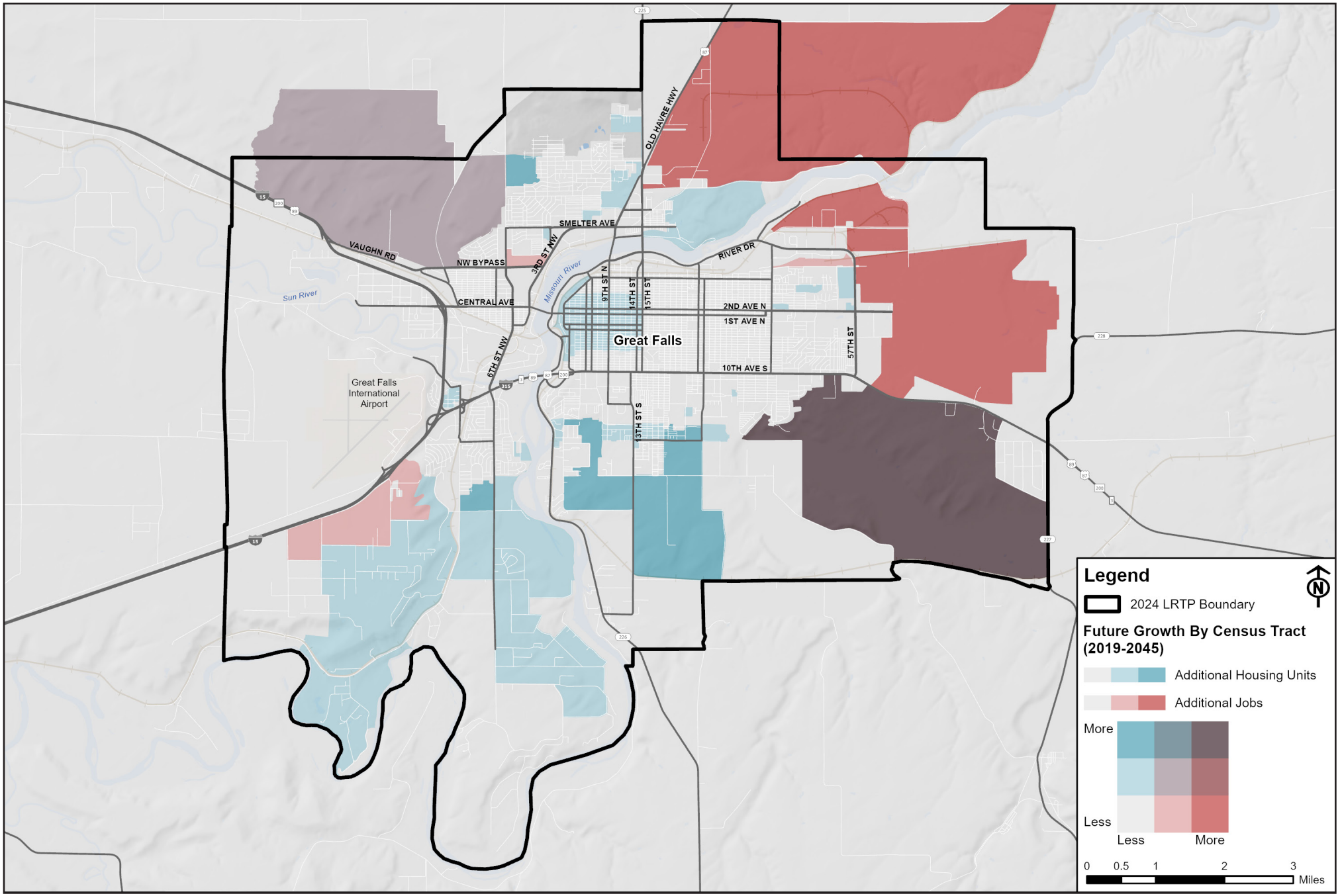


Figure 19: Future Housing Unit and Employment Allocations (2019-2045)

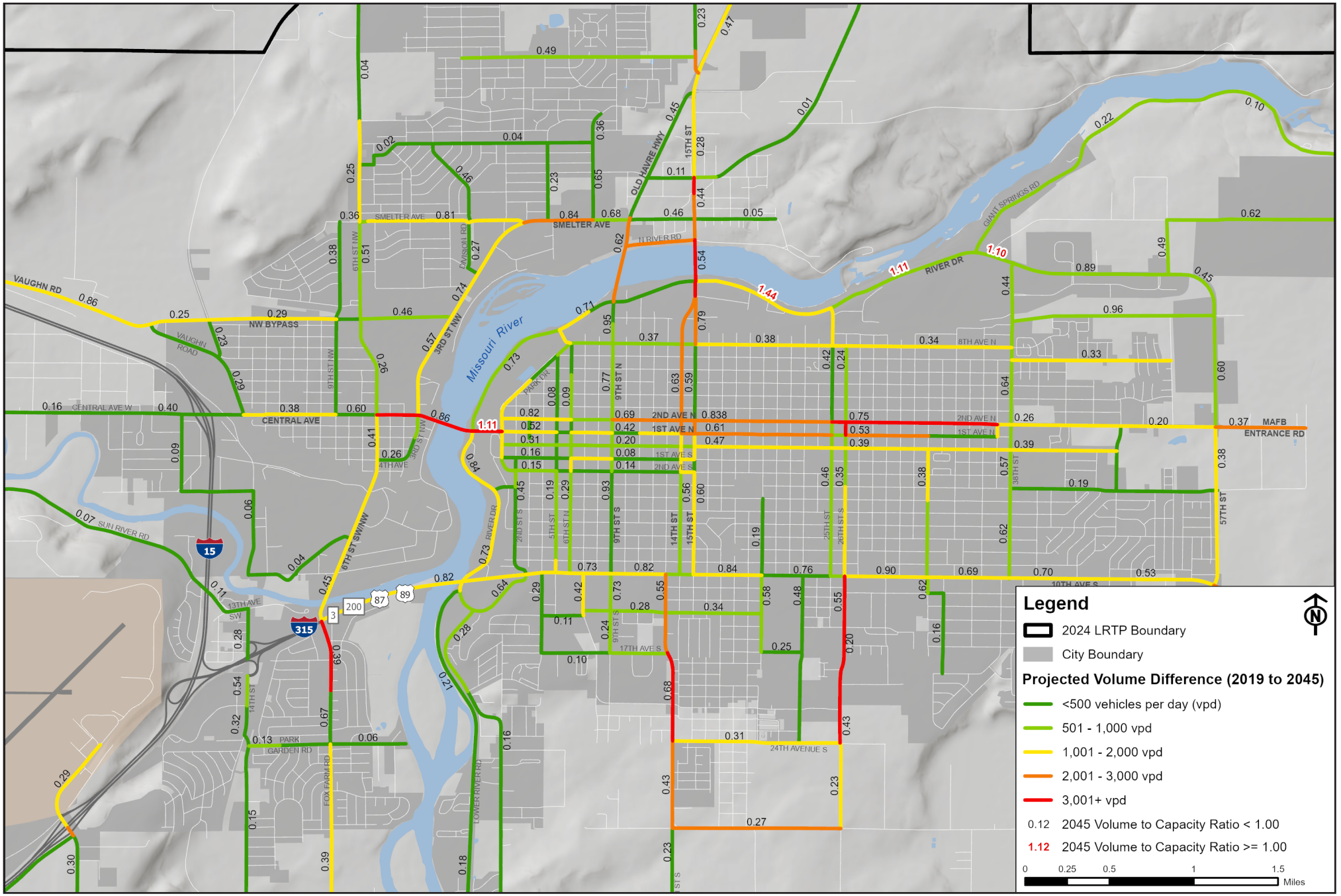


Figure 20: Projected Volume to Capacity Ratios (2045)

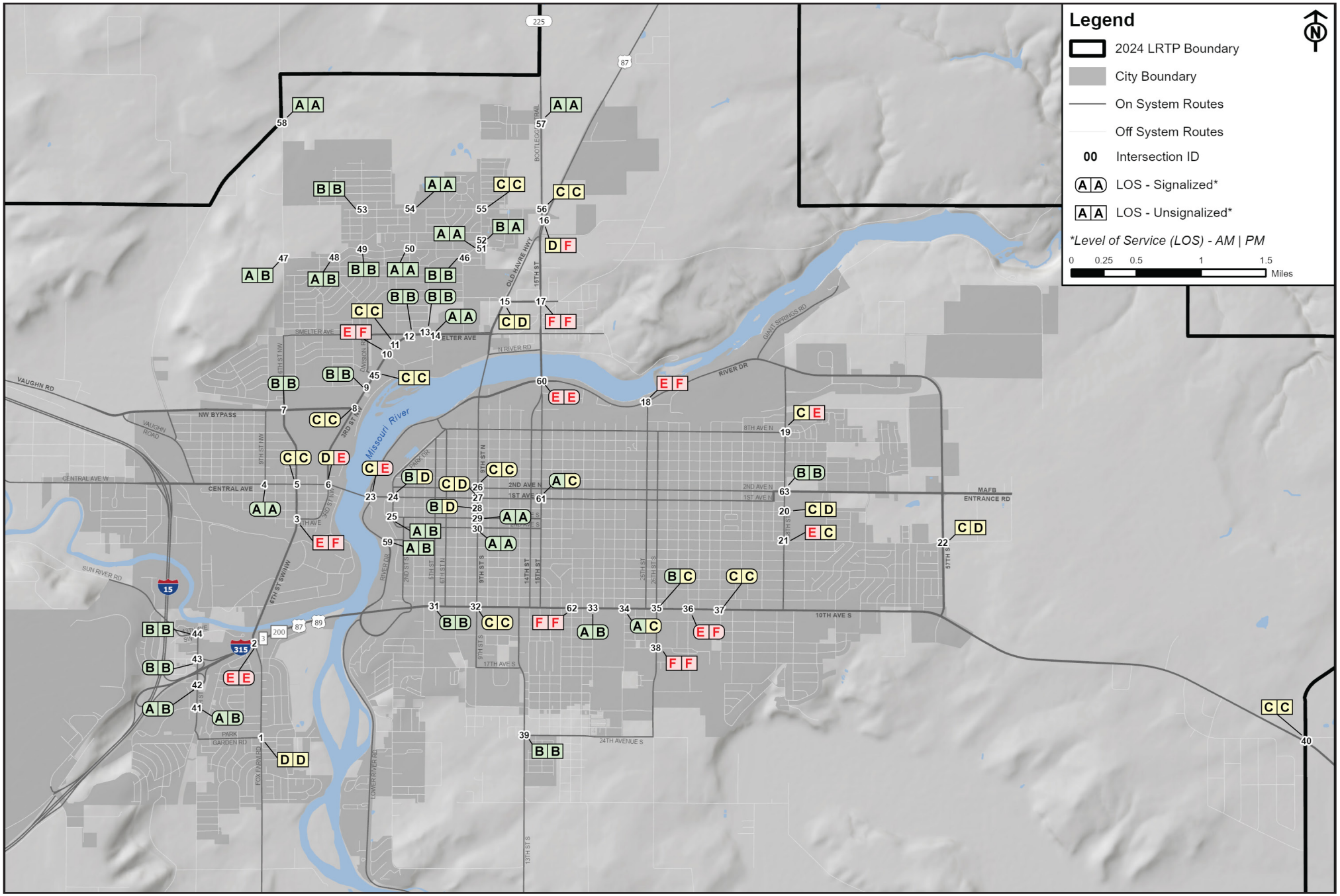


Figure 21: Projected Intersection Operations (2045)

5.2.3. Projected Conditions Summary

The projected conditions analysis is based on a travel demand model developed for Cascade County to represent predicted 2045 conditions. The model relies on anticipated development patterns. The analysis assumes that all roadway and intersection configurations, aside from projects that are already committed, will remain the same over the next 20 years. Therefore, changes in travel patterns resulting from new road connections, revised intersection configurations, and development could impact the projected traffic volumes and intersection operations initially predicted by the model. The projected v/c ratios and intersection operations presented in previous sections are intended to provide an estimate for planning purposes. Traffic conditions are continually evaluated as development occurs and as improvements are needed.

Based on forecasted population and employment growth and the associated traffic growth, River Drive, Central Avenue, 10th Avenue South, and Smelter Avenue are likely to approach or exceed available roadway capacity by 2045 if traffic continues to grow as anticipated. As a result, traffic is anticipated to shift to other arterials in the roadway network, such as the 1st Avenue North / 2nd Avenue North and 14th Street / 15th Street couplets and Park Drive, to avoid congestion on parallel routes. Considerable growth is also anticipated to occur in the southern part of the city near the universities and hospitals, in the Fox Farm area, and in the North Great Falls area, contributing to increasing traffic volumes on adjacent roadways such as Bootlegger Trail, 6th Street Northwest, Fox Farm Road, 13th Street South, 26th Street South, 24th Avenue South, and 33rd Avenue South. However, projected traffic volumes on these roadways are not expected to exceed the available capacity of the existing roadways within the planning horizon.

In addition to increased traffic volumes, these arterials are also expected to experience worsening intersection operations during peak hours. Projected shifts in traffic to parallel, less congested routes help alleviate some demand at major intersections without causing operational failures at intersections along those routes.

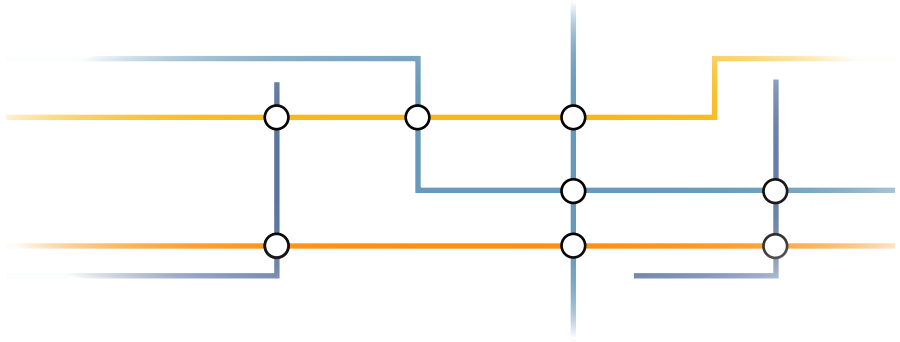
5.2.4. Alternative Network Improvement Scenarios

Using the base year 2045 travel demand model, the effects of various network improvements were analyzed according to a set of four alternative modeling scenarios developed in coordination with the MPO and MDT. The scenarios include roadway capacity additions, changes in functional classification, or new roadway links in areas where transportation needs presently exist, or where future investment may be needed as a result of expected population/employment growth.

The alternatives, presented in **Figure 22**, are for modeling purposes only and are not actual project recommendations by themselves. The analysis of these alternatives was made to give a theoretical idea of how certain network modifications made to the transportation system may affect the overall network and surrounding area. More information is contained in **Appendix G**.

1 Alternative 1: North Great Falls Sub Area

This alternative includes buildout of the street network in the North Great Falls sub area to accommodate projected development in the area. The results indicate that completion of these roadway extensions and connections will draw east-west through traffic from neighborhood streets to 36th Avenue NE with connections to Bootlegger Trail or 6th Street NW. Some traffic is also anticipated to use Stuckey Road/Vinyard Road to access the North Great Falls area instead of other major arterials such as NW Bypass and Smelter Avenue. In general, traffic impacts are expected to be confined to the North Great Falls sub area and do not extend to other parts of the network.



2 Alternative 2: North Great Falls Sub Area - Visionary Build Out

Alternative 2 includes all of the improvements shown in Alternative 1 as well as construction of 43rd Avenue NE between US 87 and 6th Street NW and paving Stuckey Road/Vinyard Road to a collector standard. The results indicate that completion of the North Great Falls area transportation network, in conjunction with improvements to Stuckey Road/Vinyard Road will help shift eastbound traffic away from the Central Avenue/I-15 interchange and increase use of the Vaughn interchange. The alternative also shows decreased traffic on 10th Street North and Smelter Avenue, especially in the westbound direction. Traffic on 6th Street NW is shown to decrease south of Skyline Drive but increase north of Skyline Drive where drivers can use 36th Avenue NE and 43rd Avenue NE as primary east-west arterials to access the North Great Falls area. The model shows traffic impacts extending outside the immediate area of improvements, potentially due to shifts in which of the I-15 interchanges or Missouri River crossings that vehicles are anticipated to use to access their destinations.

3 Alternative 3: Southern Arterial & Network Buildout

Alternative 3 builds out the major street network in the southern part of the study area where a substantial amount of development is anticipated to occur. Extension of 24th Avenue South provides a continuous east/west route which offers an alternative to 10th Avenue South and is intended to help relieve congestion. Various collector routes are also provided to increase mobility through this area of Great Falls. The results indicate that completion of the southern Great Falls area transportation network will help shift some traffic away from 10th Avenue South, especially between 2nd Street South and 23rd Street South. The majority of this traffic is shifted to the new 24th Avenue South arterial. However, east of and 23rd Street South, these connections are projected to have little effect on traffic patterns.

4 Alternative 4: 10th Avenue S Expansion

10th Avenue South is a principal arterial serving a large percentage of traffic in the Great Falls area. The arterial is also designated as a US and State Highway serving regional traffic needs. As traffic on 10th Avenue South grows, additional lanes may be needed to add capacity and relieve congestion. The results indicate that expansion of 10th Avenue South would draw additional traffic to the route, shifting traffic away from other major east-west arterials, including Central Ave, 1st Avenue North, 2nd Avenue North, and 8th Avenue North. The improvement is also shown to alleviate some congestion on River Drive/57th Street South east of 38th Street South. Increased traffic on 38th Street South is expected as traffic from these other east-west arterials shifts to 10th Avenue South. Traffic impacts are generally localized to the northeast part of the city.

Source: Ursuline Center

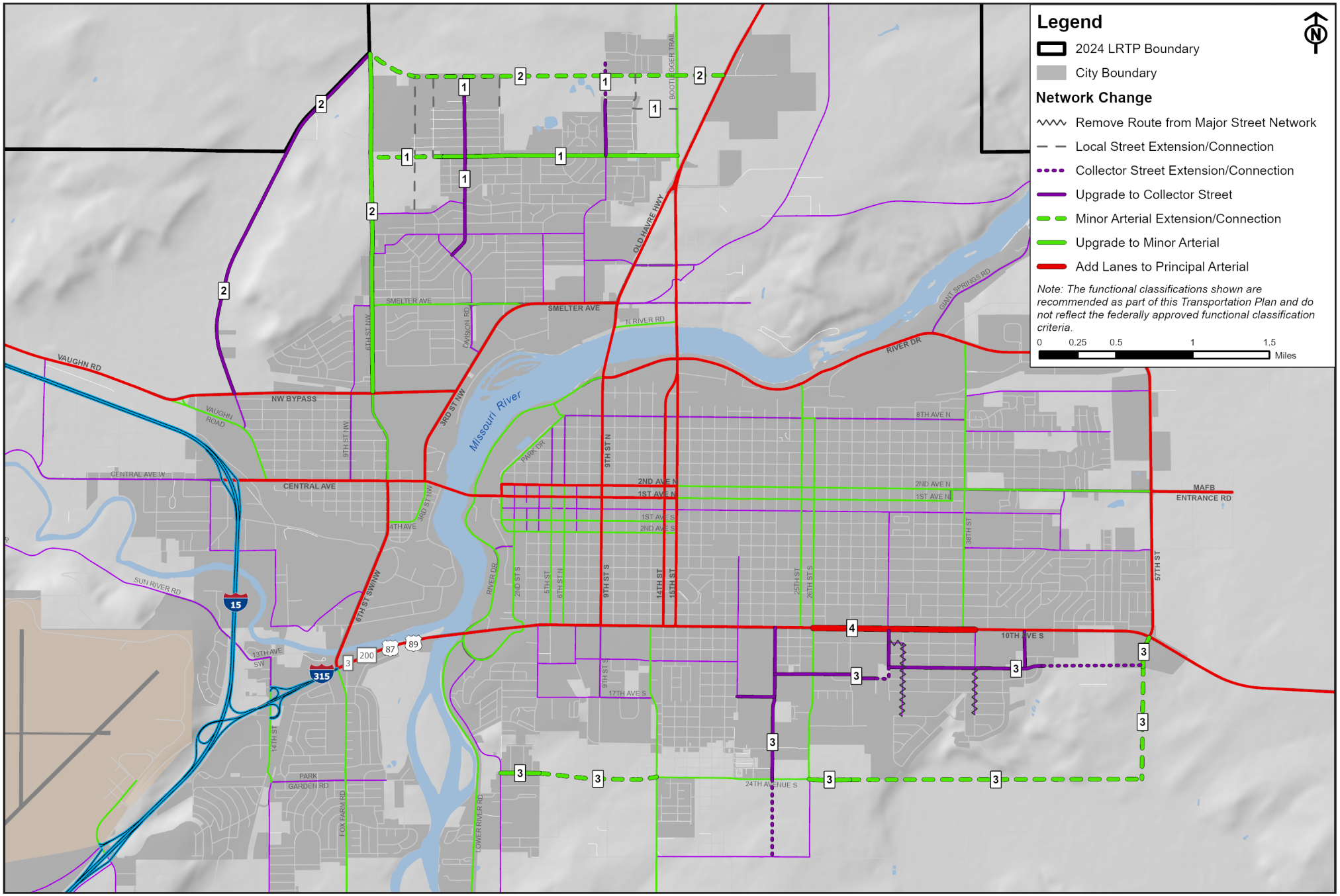


Figure 22: Travel Demand Model - Alternative Scenarios

6. IMPROVING THE SYSTEM

Recommended improvements were developed through a combination of public outreach, project solicitation from partnering agencies, travel demand modeling, traffic engineering analysis, and policy choices to support the identified goals and objectives. Recommendations contained in prior planning documents, including the 2018 *Great Falls Long Range Transportation Plan* and the 2022 North *Great Falls Sub-Area Transportation Study*, were also reviewed and included as appropriate for the current LRTP. In most cases, the recommended projects are needed to bring roadways up to current standards, address existing operational concerns, improve safety, or meet anticipated traffic demands for the year 2045. Refer to **Appendix H** for more detailed explanations of the recommendations.

Source: Great Falls Tribune

6.1. Recommendations Overview

As an MPO, Great Falls is required to develop an LRTP that has a prioritized, fiscally constrained menu of projects. Projects are categorized into categories based on status and availability of funding. Recommendations categorized as **COMMITTED** are those with dedicated funding and are planned to be completed in a four-year time frame (2025-2028). **ANNUAL PROGRAMS** are programs that receive an annual allocation of funding but do not have specific projects assigned to them; these programs occur yearly through the planning horizon (2025-2045). Projects categorized as **RECOMMENDED** are anticipated to be completed within the planning horizon (year 2045) but may need further analysis or identification of available funding before becoming committed. **ILLUSTRATIVE** projects are currently unfunded recommendations that are supported by a sponsoring agency but are not prioritized for implementation over the planning horizon. **OTHER** projects are those that involve planning-level analyses to diagnose issues and identify solutions before developing project recommendations for future iterations of the LRTP.

Also included are **NON-MOTORIZED** recommendations which address needs for accommodating pedestrians and bicyclists in the Great Falls area, and to provide mode choice for transportation users. Although estimated costs are given for the non-motorized recommendations, neither a funding source nor a year of expenditure are assigned to the projects. It is expected that the non-motorized projects will be completed in conjunction with other facility recommendations or as funding becomes available.

The facility recommendations are shown spatially in **Figure 23** and the non-motorized recommendations are shown in **Figure 24**.

Committed

Projects with dedicated funding which are generally expected to be implemented between 2025 and 2028.

Annual Programs

Programs that receive an annual allocation of funding but do not have specific projects assigned to them.

Recommended

Projects recommended to be completed through the planning horizon (year 2045) but may require further analysis before being committed to funding and implementation.

Illustrative

Projects that are not currently prioritized for implementation with anticipated funding between 2024 and 2045.

Other

Planning-level studies that are needed to diagnose safety or operational issues and identify feasible improvements to remedy those issues.

Non-Motorized

Recommendations for improving walking and bicycling in the Great Falls area that do not yet have an identified funding source.

6.1.1. Committed Projects

Committed projects have been approved by the Great Falls PCC and have funding identified for obligation via the MPO's TIP, local funds, transit funds, private funds (via development), or other funding sources. The committed projects listed in **Table 7** are generally expected to be completed within the next four years (2025 – 2028). Note that known pavement preservation activities are included in this list, even though maintenance projects are typically addressed through generalized preservation and maintenance categories in the TIP and are typically not described as specific projects.

Committed Planning Projects

From a fiscal constraint perspective, LRTPs typically do not include planning-level studies as committed projects due to nuances in how funds are allocated and tracked. However, MDT is planning to conduct a significant planning effort that may identify substantial projects impacting the Great Falls transportation system. The Central Montana Regional Study is being conducted in response to two major projects occurring in the central region of Montana: US Air Force's Sentinel Project and construction of VACOM Manufacturing's new US-based headquarters in Lewistown. The study is scheduled to kick off in 2024 and will include six distinct subarea analyses investigating traffic and safety in and around the Great Falls area.

ID	Project	Description	Funding Source	Estimated Cost*
C1	SF 209 Great Falls Dist. Signs	Intersection safety improvements (signs, delineation, chevrons, etc.) at 12 locations within the Great Falls District. Two locations are within the LRTP boundary(Fields Rd and Gibson Flats Rd).	HSIP	$140,500
C2	6th Street NW/Fox Farm Rd - GF	Pavement preservation on Fox Farm Rd (10th Ave S to Alder Dr) and 6th St NW (Central Ave W to NW Bypass)	UPP	$907,400
C3	6th Street SW - Great Falls	Pavement Preservation from Fox Farm Rd to Central Ave (RP 0.0 - 1.3)	NH	$11,200,000
C4	57th Street - Great Falls	Pavement Preservation from 2nd Ave N to 10th Ave S (RP 7.49 - 8.20)	NH	$1,975,500
C5	Black Eagle NHS Routes - GF	Scrub seal on River Dr (15th to 38th), Overlay on Old Havre HWY (Smelter Ave to HWY 87) and HWY 87 (end of PCC to GTF North)	NH	$3,557,900
C6	Central-Vaughn Rd to 9th St NW	Pavement preservation Central Ave W (RP 0.23 - 0.792)	NH	$1,128,900
C7	GF District ADA Upgrades	Various ADA improvements on 14th St (8th Ave N to 9th Ave S), 15th St (9th Ave S to 8th Ave N), and 1st Ave N (Park Drive to 8th St N)	CRP, MACI (CMAQ)	$3,000,000
C8	9th St NW - Great Falls	Reconstruction between Central Ave and NW Bypass (RP 0 and 0.57)	NH, STPU	$5,370,700
C9	River's Edge Trail Connector	Bike/Ped shared use path connector along River Drive (3rd Ave S to 1st Ave N) with RRFBs at River Drive at-grade crossings (water park & 3rd Ave S)	CMAQ	$4,270,500
C10	SF 189 Turn Lane 34th Vaughn Rd	Turn lane on Vaughn Rd at 34th St NW intersection	HSIP	$40,4400
C11	Gore Hill Interchange - GTF	Reconstruction of existing I-15 interchange with auxiliary travel lane	IM, NHFP, BR	$31,469,900
C12	Watson Coulee Road - Great Falls	Reconstruction between RP 0 and 0.24	STPU, CMAQ	$6,368,000
C13	Great Falls - Northwest	Pavement preservation & scrub seal on I-15 (RP 278.5 to 285.918)	IM	$2,541,300
C14	Great Falls Area Bridge Decks	Bridge rehabilitation project on 6 structures in Cascade County. The Sun River Rd/I-15 Overpass and 10th Ave S/Missouri River Bridge are the only structures within the LRTP boundary that are included in the project.	BR	$18,632,200
C15	14th/15th St - Great Falls	Pavement preservation on 14th and 15th Streets	NH	$1,849,900
C16	NEVI Program - Interstate System	Install NEVI Compliant EV Charging Stations with 4-150kw ports along I-15. Specific locations to-be-determined.	NEVI	$1,250,000
C17	Slide Repairs - Great Falls Area	Drainage improvements and slope stabilization/restoration on I-15 RP 278.5 to 278.8	IM	$624,400
C18	Off System Sidewalks-GF	Improve sidewalk/ADA upgrades in NW quadrant of GF (Riverview area)	CMAQ	$4,324,800
			Total Committed Projects	**$99,016,300**

Table 7: Committed Projects (2025-2028)

**Estimated cost based on current funding obligation contained in the DRAFT 2024-2028 Great Falls TIP*

6.1.2. Annual Programs

Annual allocations for various programs are included in the Great Falls TIP. These programs are included to account for typical annual expenditures that are generally less costly and more routine than stand-alone projects. Estimates of annual funding allocations are included in **Table 8**. Funding for these programs is not guaranteed and is determined annually on a case-by-case basis. Specific projects have yet to be identified for these programs. These programs are intended to identify funding needs for routine annual projects and are not intended to be allocated for the LRTP recommendations.

Source: Cascade County

ID	Project	Description	Estimated Annual Allocation*
P1	Durable Pavement Markings Program	Install markings on Urban routes per City, County, and MDT	$50,000
P2	MDT Preventative Maintenance	Maintenance - striping, durable pavement markings, pavement preservation	$1,582,100
P3	Urban Pavement Preservation	Perform chip seals, overlays and related maintenance activities on Urban Routes	$500,000
P4	Traffic Mitigation	Complete signalization projects that help mitigate traffic congestion	$250,000
P5	ADA Compliance	Complete projects that help make the transportation system compliant with the Americans with Disabilities Act	$250,000
P6	Transportation Alternatives Projects	Complete sidewalk infill, non-motorized transportation projects, and other eligible Transportation Alternatives projects	$500,000
P7	Transit Operating Expense	General transit operating expenses	$5,076,600
P8	Transit Capital Purchase	Acquire vehicles and related equipment	$251,700
P9	MDT-nominated HSIP Safety Projects	Safety improvement projects	$200,000
P10	City of Great Falls 2024-2029 CIP Projects	ADA upgrades, sidewalk projects, pavement preservation projects	$3,750,000
		Anticipated Annual Allocation	**$12,410,400**

Table 8: Annual Programs (2025-2045)

**Anticipated future funding based on current annual funding obligations contained in the DRAFT 2024-2028 Great Falls TIP*

6.1.3. Recommended Projects

During the preparation of the 2024 LRTP, a number of projects, in addition to those not yet completed from the 2018 LRTP, were developed to address identified areas of concern. Through public and stakeholder outreach and partner agency coordination, a project prioritization process was developed and conducted to identify the projects that should be prioritized for funding within the LRTP planning horizon (2045). The process involved scoring each project according to how well it supports the LRTP goals and objectives and according to the level of public and agency support for the project. The highest scoring projects were then prioritized for available funding over the full planning horizon. In some cases, lower scoring projects with smaller lower costs, were able to be prioritized within the planning horizon based on anticipated funding. The projects that can reasonably expect to be funded between 2029 and 2045 are included as **RECOMMENDED** projects and are listed in **Table 9**. Lower scoring projects and larger, more costly projects that could not expect to be funded given current funding amounts are included as **ILLUSTRATIVE** projects. Other projects that are expected to be funded primarily with planning funds, which are not included in the fiscal constraint component of the plan, are included as **OTHER** projects. The scoring results for the LRTP projects as well as the project expenditures by source and year for recommended projects are shown in **Appendix I**.

Provided cost estimates are planning-level estimates. Initial estimates were calculated in 2023 dollars and subsequently inflated to year-of-expenditure (YOE) dollars using a three percent annual inflation factor based on anticipated funding timeframes (2029 – 2033, 2034 – 2039, or 2040 – 2045). All project development phases are included in the estimate. A current cost estimate should be prepared for any project considered for advancement, including an examination of site-specific conditions and subsequent development of more detailed project scope.

Proposed funding sources for the recommended projects are also listed. These funding sources are the most likely, given anticipated funding and the scope of the project. Other sources may be available to fund these projects and costs may be distributed among additional or other sources as needed to fulfill funding obligations.

ID	Project	Description	Proposed Funding Source	Estimated Funding Timeframe	Estimated Cost in YOE
R-1	City Sidewalk Infill Projects	Infill sidewalk gaps at various locations across the city	TA, CITY	2029 - 2033	$3,600,000
R-2	Central Avenue / 38th Street Intersection	Reconstruct intersection (traffic signal or roundabout)	STPU, CMAQ	2029 - 2033	$6,000,000
R-3	1st & 2nd Ave S (9th St S to 15th St S)	Overlay with new asphalt	CITY	2029 - 2033	$4,500,000
R-4	36th Avenue NE Traffic Calming	Traffic calming between Bootlegger Trail and terminus to heighten pedestrian visibility	CITY	2029 - 2033	$880,000
R-5	10th Ave S / 54th St S	Intersection safety improvements (access modifications)	HSIP	2029 - 2033	$77,000
R-6	2nd Ave N / 38th St N	Install dedicated north/ southbound left-turn lanes	STPU, CMAQ, PRIVATE	2029 - 2033	$710,000
R-7	10th Avenue S Signal Improvements (20th St S & 23rd St S)	Install dedicated north/ southbound left-turn lanes	NH, CMAQ	2029 - 2033	$3,000,000
R-8	River Drive N / 25th St N Intersection Improvements	Reconstruct intersection (traffic signal or roundabout)	NH, MACI	2029 - 2033	$6,700,000
R-9	Flood Road Curve Warning	Install enhanced curve warning signage	HSIP, CITY	2029 - 2033	$9,000
R-10	Lower Sun River Road Curve Warning	Install enhanced curve warning signage	HSIP, CITY	2029 - 2033	$4,000
R-11	Skyline Drive NW/NE Corridor Improvements	Traffic calming and evaluation of stop-control warrants along route	CITY	2029 - 2033	$1,500,000
R-12	Smelter Ave / 6th St NW	Intersection traffic study to identify priority movements, reconfigure stop control accordingly	CITY	2029 - 2033	$25,000
R-13	Skyline Drive NE / 9th St NE / 32nd Ave	Improve intersection definition (short-term), consider roundabout as a long-term solution	CITY	2029 - 2033	$32,000

Continued on next page

Table 9: Recommended Projects (2029-2045)

Source: Google Street View

*The 15th Street Bridge is recommended to be rehabilitated or replaced over the 20-year planning horizon to address structural deficiencies due to age (**R-21**). Replacement of the bridge would allow for the 15th Street NE / River Drive intersection to be reconstructed to add additional capacity (**R-26**).*

ID	Project	Description	Proposed Funding Source	Estimated Funding Timeframe	Estimated Cost in YOE
R-14	11th Ave S Traffic Calming	Traffic calming between 26th St S and 32nd St S to heighten pedestrian visibility	CITY	2029 - 2033	$640,000
R-15	North Great Falls Geometric Intersection Improvements	Modify traffic control and improve intersection geometrics	CITY	2029 - 2033	$31,000
R-16	Park Drive - 8th Ave N to 2nd Ave N	Reconstruct to current standards with non-motorized accommodations and intersection improvements at Park Dr/6th St N/8th Ave N	STPU, CMAQ, MACI	2034-2039	$9,200,000
R-17	25th Avenue NE - Old Havre Hwy to 15th St N	Restripe to three-lane roadway, install shared use path	STPU, CRP, NH	2034-2039	$3,300,000
R-18	Fox Farm Road - Alder Dr to Park Garden Rd	Restripe to four-lane roadway, remove on-street parking, corridor safety improvements	STPU	2034-2039	$820,000
R-19	Fox Farm Intersection Improvements	Install dual eastbound left-turn lanes; install dedicated northbound left-turn lane if redevelopment occurs	CMAQ	2034-2039	$250,000
R-20	25th Street S – 10th Ave S to 11th Ave S	Modify to be one-way in the southbound direction	CMAQ	2034-2039	$45,000
R-21	15th Street Bridge Improvements	Rehabilitate or replace 15th Street Bridge	NH, NHFP, BR	2040-2045	$70,900,000
R-22	Warden Bridge Improvements	Rehabilitate or replace eastbound Warden Bridge	NH, NHFP, BR	2040-2045	$54,300,000
R-23	25th Street N - River Dr to 2nd Ave N	Reconstruct to urban minor arterial standards	NH, NHFP, BR	2040-2045	$13,400,000
R-24	15th Avenue S - 30th St S to 32nd St S	Extend eastward as a collector street, connecting at 14th Ave S/32nd St S	STPU, HSIP, CITY	2040-2045	$1,600,000
R-25	10th Avenue S - 26th St S to 32nd St S	Widen to six-lane principal arterial	NH, NHFP	2040-2045	$15,800,000
R-26	15th St NE / River Drive N	Reconstruct intersection with additional capacity	NH, CMAQ	2040-2045	$2,300,000
R-27	24th Ave S - 3A St S to Eastern Terminus	Pave roadway to urban local street standard including urban design features	CITY	2040-2045	$550,000
				Total Recommended Projects	**$200,173,000**

6.1.4. Illustrative (Unfunded) Projects

High construction costs paired with constrained funding sources means system deficiencies and needs are often not fundable in the foreseeable future. However, funding opportunities often arise over time from unexpected sources, such as competitive grant programs or private funding sources. To be prepared to take advantage of such opportunities, a list of projects is provided in **Table 10**, with no identified funding source or schedule for construction/implementation. While the project costs have been estimated, they are presented with 2045 year-of-expenditures. Such projects are included for illustration purposes only and are not considered to be applicable components of the fiscal constraint requirements of the LRTP.

ID	Project	Description	Possible Funding Source	Estimated Cost in YOE
I-1	6th Street NW - Smelter Ave to Vinyard Rd	Reconstruct to urban minor arterial standards with bike lanes between Smelter Ave and 36th Ave NE	CITY, PRIVATE	$25,800,000
I-2	2nd Ave N (38th St N to 57th St N)	Install curb, gutter, and sidewalks, as development occurs	CITY, PRIVATE	$10,600,000
I-3	38th Street N - 10th Ave N to River Dr N	Reconstruct to urban minor arterial standards with bike lanes	STPU	$6,400,000
I-4	Lower River Road Reconstruction	Reconstruct roadway including bank stabilization and river wall improvements	STPU, COUNTY	$5,600,000
I-5	26th Street N - 8th Ave N to 2nd Ave N	Reconstruct to urban minor arterial standards	STPU	$8,200,000
I-6	36th Avenue NE - 1st St NE to 6th St NW	Extend 36th Ave NE to 6th St NW as a minor arterial	CITY, PRIVATE	$7,800,000
I-7	Vaughn Frontage Road – LRTP Boundary to I-15	Reconstruct to rural minor arterial standards	STPX	$12,400,000
I-8	Vaughn Road – I-15 to Central Ave W	Reconstruct to urban principal arterial standards	NH, STPU	$47,400,000
I-9	17th Avenue S - 7th St S to 13th St S	Reconstruct to collector standards with bike lanes	STPU, CITY	$7,600,000
I-10	43rd Avenue NE – Bootlegger Trail to US 87	Construct a new roadway to minor arterial standards	CITY, PRIVATE	$5,900,000
I-11	43rd Avenue NE – Bootlegger Trail to 6th St NW/Vinyard Rd	Construct a new roadway to minor arterial standards	CITY, PRIVATE	$38,100,000
I-12	River Drive - 3rd Ave S to 1st Ave N	Reconstruct to urban collector standards	STPU	$10,400,000
I-13	River Drive N - 25th St N to 38th St N	Reconstruct to three-lane arterial	NH	$26,800,000
I-14	3rd Avenue S East of 57th St	Reconstruct to urban local street standards	CITY, PRIVATE	$7,500,000
I-15	9th Street NW/Smelter Avenue NW (Ave E NW to 6th St NW)	Reconstruct to urban collector standards	CITY, PRIVATE	$3,000,000
I-16	Skyline Drive NW (6th St NW to Improved Section)	Reconstruct to urban collector standards	CITY, PRIVATE	$2,300,000
I-17	26th Street S - 24th Ave S to 33rd Ave S	Rebuild shoulders and flatten fill slopes; modify approach grade at 26th St S/33rd Ave S	COUNTY	$570,000
I-18	67th Street NE - Giant Springs Rd to 18th Ave N	Reconstruct to rural local street standards (matching Giant Springs Road) with shared use path	CITY	$6,150,000
I-19	20th St S - 18th Alley S to 20th Ave S	Extend 20th St S as a collector standard	CITY	$3,000,000
I-20	52nd Street N - 7th Ave N to 10th Ave N	Pave roadway to urban local street standard including urban design features and bike boulevard	CITY	$3,800,000
I-21	Central Avenue W - 20th St NW to 27th St NW	Reconstruct to urban collector standards	STPU	$11,400,000
I-22	Upper River Road - Overlook Dr to 19th Ave S	Reconstruct to urban collector standards	CITY	$11,500,000

Continued on next page

Table 10: Illustrative Projects

ID	Project	Description	Possible Funding Source	Estimated Cost in YOE
I-23	13th Avenue S - 57th St West to Terminus	Extend to 57th St S as an urban local street	CITY, PRIVATE	$9,800,000
I-24	13th Street S - 31st Ave S to 40th Ave S	Reconstruct to urban minor arterial standards	STPU	$11,300,000
I-25	Flood Road - Park Garden Rd to Dick Rd	Reconstruct to collector standards	COUNTY, CITY	$20,800,000
I-26	Wilson Butte Road / 55th Avenue S / Eden Road / Lower River Road	Reconfigure as a roundabout	STPU, STPX	$4,500,000
I-27	River Drive (15th St to 25th St)	Reconstruct to three-lane arterial	NH	$21,400,000
I-28	10th Avenue S – 32nd St S to 39th St S	Widen to six-lane principal arterial	NH, NHFP	$18,600,000
			Total Illustrative Projects	**$348,620,000**

Source: RPA

6.1.5. Other Projects

Since LRTPs typically do not include planning-level studies as fiscally constrained projects, all of the recommended planning and feasibility studies have been categorized as "Other" projects and are not considered in the fiscal constraint component of the plan. Planning studies are often needed to help diagnose operational and safety issues within a certain area and develop feasible project recommendations. Additionally, the city should conduct periodic intersection operational studies and speed studies to monitor the status of problem areas to determine if become warranted as the area grows and develops.

Other projects, listed in **Table 11**, are expected to be funded with general city funds or federal planning funds over the 20-year planning horizon of the LRTP. Estimated planning costs are presented in 2024 dollars with no inflationary factors applied.

ID	Project	Description	Estimated Cost (2024$)
O-1	8th Street NE / 9th Street NE (Smelter Ave to 36th Ave NE)	Planning study to identify improvements to address safety and operational problems	$100k - $125k
O-2	Downtown Traffic Flow and Parking Study	Planning study to investigate the feasibility of converting downtown one-ways to two-way streets, reducing travel lanes, modifying parking, and incorporating non-motorized improvements	$250k - $300k
O-3	Intersection Control Study	Monitor various intersections for increased traffic control to improve operations and safety	$15k - $35k per location
O-4	Speed Study	Conduct periodic speed studies	$7.5k - $25k per location
O-5	Central Avenue W - Vaughn Rd to 1st Ave N	Corridor feasibility study to investigate potential improvements	$250k - $300k
O-6	Emerson Junction Feasibility Study	Conduct an operational analysis/ feasibility study investigating a full access interchange	$325k - $350k
O-7	Smelter Ave / 3rd St NW (4th St NE - 5th St NE)	Intersection safety improvements (realignment, access modifications)	$200k - $250k
O-8	Great Falls Connector (US 87 to I-15, North of Great Falls)	Feasibility study to evaluate a new principal arterial corridor connection between US 87 and I-15.	$950k - $1.1M

Table 11: Other Projects

6.1.6. Non-Motorized Improvements

Recommendations for improving walking and bicycling in the Great Falls area were based on analysis of deficiencies, crash data, public and stakeholder input, and overall opportunities and constraints in the Great Falls area. The recommendations are intended to encourage the use of sustainable transportation modes and active living by residents and visitors and accommodate a variety of ability levels with particular emphasis on establishing a well-connected pedestrian and bicycle network that is comfortable and accessible to a wider range of the population.

A summary of the non-motorized recommendations is provided in **Table 12** and a detailed list of projects is provided in **Appendix H**. Estimated costs for the non-motorized recommendations are given as a range to account for differences in potential material types or complexities of implementation. It is expected that the non-motorized projects be completed in conjunction with other facility recommendations, in conjunction with future development, or as stand-alone projects as funding becomes available. At this time, no funding sources have been committed and there is no schedule for construction/implementation of the recommended projects. It is likely that many projects will become funded at some point during the planning horizon even though a current source may not be known.

Facility Type	Number of Projects	Total Length of Projects (mi)	Estimated Cost (2024$)	
			LOW	HIGH
Shared Use Paths	17	9.55	$6,963,600	$10,691,300
Widened Sidewalks	19	7.99	$7,175,100	$10,382,500
Bicycle Boulevards	53	52.71	$891,300	$1,114,600
Bike Lanes	20	22.36	$241,500	$302,200
Sidewalks	27	3.55	$1,594,200	$2,307,100
Spot Improvements	31	N/A	–	$1,546,500
Total	**167**	**96.16**	**$16,865,700**	**$26,344,200**

Table 12: Non-Motorized Recommendations

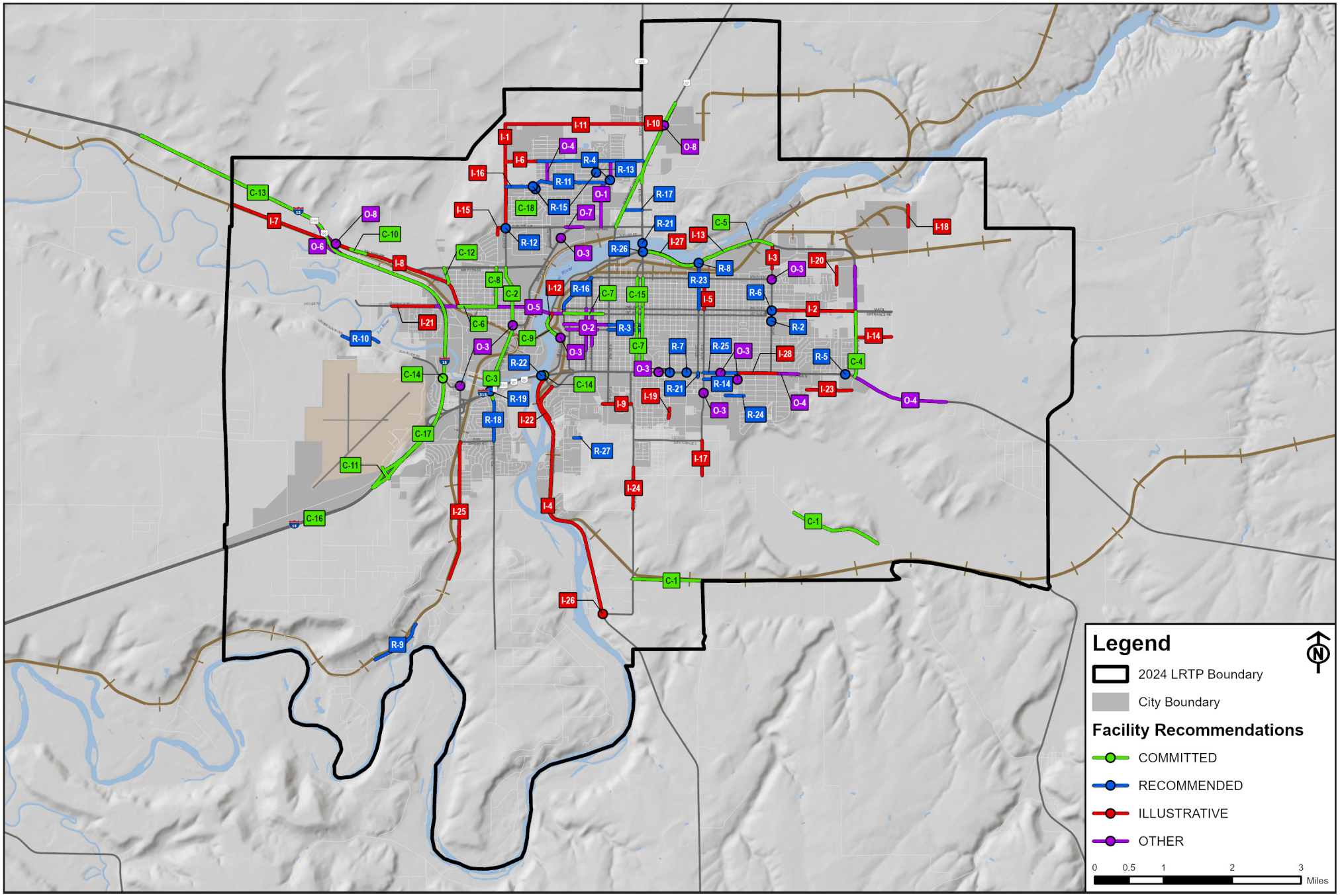


Figure 23: Facility Recommendations

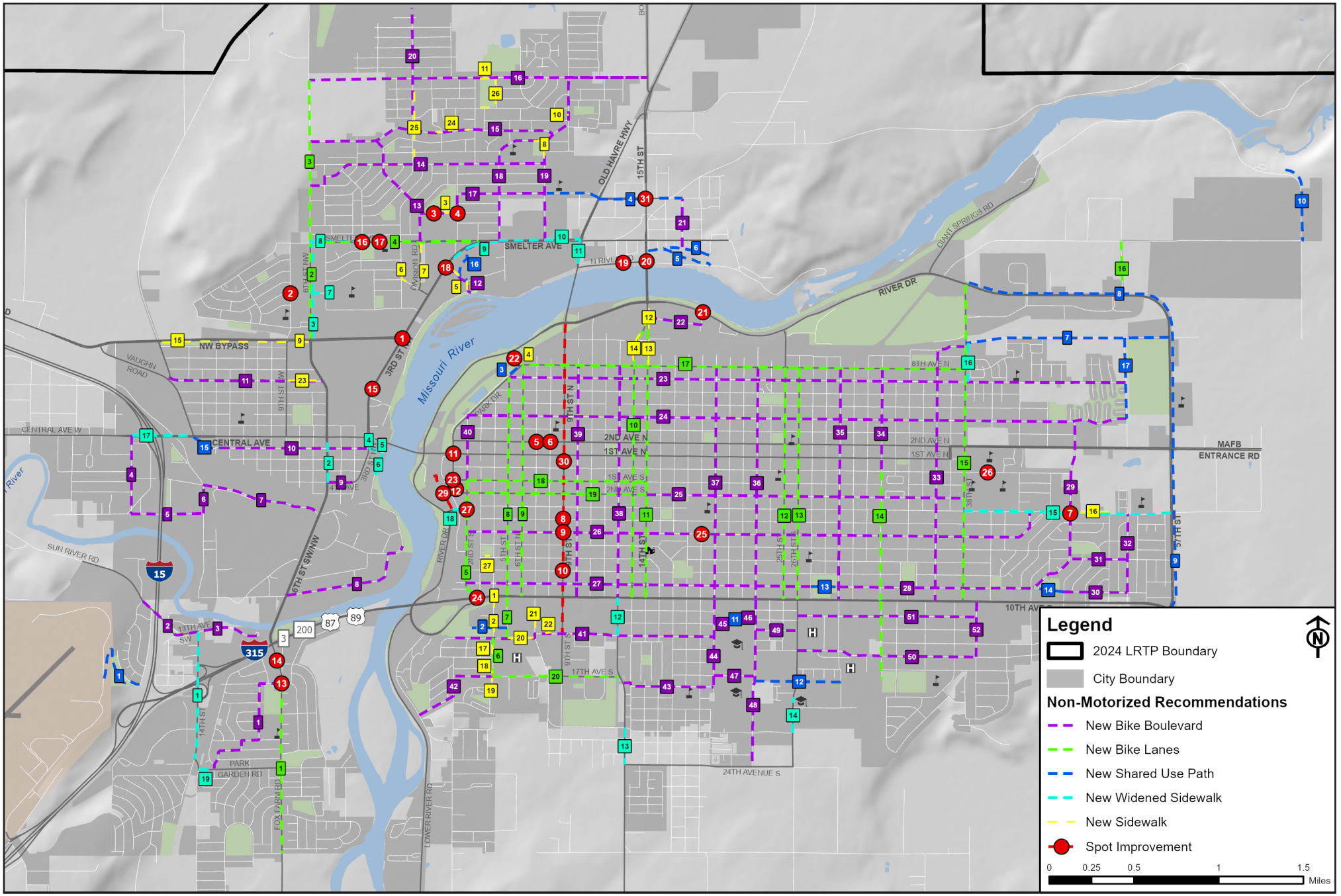


Figure 24: Non-Motorized Recommendations

6.1.7. Transit Improvements

Public transit in the Great Falls Area has historically been used by residents that are dependent on transit due to a lack of access to other transportation modes, such as a personal vehicle. The LRTP envisions an integrated multimodal transportation system that meets sustainable growth expectations, supports economic vitality, and improves quality of life. To achieve this vision, transit must play a much greater role in providing travel choice within the Great Falls Area. This includes increased service frequency, longer service hours, and expanded coverage.

An updated TDP is in progress and will include an updated list of improvements to be completed over the next 10 years. The TDP will respond to current mobility patterns in Great Falls and address the changed needs of the community, especially since the COVID-19 pandemic. The draft TDP was reviewed to understand proposed transit improvements within the Great Falls area. Based on findings from public outreach and a service evaluation, four sets of goals and objectives were defined to help shape recommendations for the TDP. Specific recommendations will be developed to support the following transit goals for the Great Falls area.

Improve Pre-Trip Infrastructure for Customers: Improving pre-trip infrastructure for customers involves shifting from a flag stop arrangement currently practiced by GFTD to designated stops with appropriate amenities for customer comfort such as benches, shelters as well as information about the bus routes serving the stop.

Provide Better Trip Planning Tools to Riders: Providing better trip planning tools for riders can be achieved by providing apps for smart phones and computers that can provide real time information on bus arrivals at a specific stop and provide clear step by step directions for planning specific trips on transit.

Increase Service Span and Frequency: Increase service span and frequency will make transit usable for more trips by providing service at times GFTD is not operating and reducing the time a customer needs to wait for a bus.

Improve Reliability of Bus Routes: Improve reliability of bus routes can be achieved by targeted actions designed to address the afternoon period when delays due to traffic and heavier ridership are common.

Source: Great Falls Transit

7. IMPLEMENTATION STRATEGIES

This chapter addresses several strategies for the LRTP that provide broader guidance for implementation of the recommended transportation improvement projects. Strategies discussed in this chapter are intended to support and supplement the recommended improvements as part of this transportation plan to provide a cohesive, multimodal transportation system that facilitates the efficient movement of people and goods while also supporting enhanced quality of life. Refer to **Appendix J** for a complete discussion on each of topics in this chapter.

Source: RPA

7.1. Corridor Preservation

Corridor preservation helps to assure that a transportation system will effectively and efficiently serve existing and future development within a community, region or state, and prevent costly and difficult property acquisitions after the fact. Preserving right-of-way for planned transportation facilities, including roadways, sidewalks, bikeways, shared use paths, high occupancy vehicle lanes, or fixed route transportation infrastructure, helps promote orderly and predictable development. Corridor preservation policies, programs and practices provide numerous benefits to communities, taxpayers, and the public at large. These benefits include, but are not limited to, the following:

- Reducing transportation costs by preservation of future corridors in an undeveloped state.
- Enhancing economic development by minimizing traffic congestion and improving traffic flow, saving time and money.
- Increasing information sharing so landowners, developers, engineers, utility providers, and planners understand the future needs for developing corridors.
- Preserving arterial capacity and right-of-way in growing corridors.
- Minimizing disruption of private utilities and public works.

  Promoting urban and rural development compatible with local plans and regulations.
- Reducing adverse social, economic, and environmental impacts on people and communities.

A variety of techniques have been applied by communities to help preserve right-of-way for future transportation corridors, ranging from setback ordinances to mandatory dedication. Communities that have been most successful at corridor preservation are those that have assembled a variety of tools that they can match to specific circumstances. The following elements are important to successful corridor preservation programs:

- Developing a long-range transportation plan with broad community support;
- Determining desired design objectives and cross-sections for transportation improvements to establish a basis for future right-of-way needs;
- Setting clear priorities for transportation improvement projects and complete them in a timely manner;
- Identifying a funding source for advance acquisition of necessary or desired rights-of-way; and
- Providing a range of mitigation measures to preserve property rights and address potential hardship on property owners.

7.2. Access Management

Access management is the proactive management of vehicular access points to adjacent land parcels. Access management techniques are increasingly fundamental to preserving the safety and efficiency of a transportation facility by increasing the carrying capacity of a roadway, reducing congestion, and minimizing potential conflicts. Basic principles of access management include separating turning and through movements to limit conflict points, spacing traffic signals to enhance traffic flow, establishing a hierarchy of roadways based on intended function, and limiting direct access to higher classifications of roadways.

State, regional, and local governments across the nation use access management policies to preserve the functionality of their roadway systems. This is often done by designating an appropriate level of access control for each facility type. Local residential roads typically allow full access while major highways and freeways allow very little. In between are a series of road types that require standards to help minimize crashes and ensure the free flow of traffic appropriate to the roadway context while still allowing access to major businesses and other land uses along the road.

7.3. Transportation Demand Management

Transportation Demand Management (TDM) measures were first introduced during the 1970s and 1980s to help save energy, improve air quality, and reduce peak-period congestion by identifying alternatives to single occupant vehicle use during commuting hours. Accordingly, carpooling, vanpooling, transit use, walking, and bicycling for work purposes are most often associated with TDM. Over the past several decades, the concept of TDM has changed and expanded to include strategies such as flextime, compressed workweeks, and telecommuting. In addition to addressing commute trips, TDM strategies can also address traffic congestion associated with special events such as the fireworks display on the 4th of July, Great Falls White Sox baseball games, and other large cultural or sporting events.

When implemented correctly, demand management allows the same amount of transportation infrastructure to effectively serve more people. As the Great Falls area grows, TDM can be an important and useful tool to extend the useful life of the transportation system without relying on the construction of expensive infrastructure to accommodate demand. TDM benefits extend beyond the commuting public and can easily adapt to the needs of tourism, special events, emergencies, and construction. Aside from transportation benefits, TDM strategies can also help encourage a sense of community, increase physical activity, and enhance quality of life.

To implement an effective TDM program in Great Falls, the following strategies are recommended strategies.

- Encourage employers to provide alternate work schedules to their employees.
- Implement a guaranteed ride home program for transit users.
- Provide convenient bike racks in the downtown area for bicycling commuters.
- Increase bicyclist access to River's Edge Trail for commuting purposes.
- Encourage walking and biking as commute choices.
- Consider ways to increase transit ridership for work and non-work purposes.
- Review access to the Great Falls Voyagers ballpark and develop a plan to manage traffic into and out of the ballpark.
- Consider factors such as land use/zoning issues when approving non-rural projects in the outlying areas.
- Use Intelligent Transportation Systems methods, where appropriate, to alert motorists of disruptions to the transportation system.

7.4. Traffic Calming

Traffic calming refers to the methods used to reduce vehicle speeds, improve safety, and enhance the quality of life in transportation corridors. Effective traffic calming involves changing the physical environment to reduce the negative effects of motor vehicle use, alter driver behavior, and improve comfort and safety for pedestrians and other non-motorized street users. Traffic-calming techniques are typically aimed at lowering vehicle speeds, decreasing truck volumes, and/or reducing the amount of cut-through traffic in a given area. Traffic calming is rarely seen on roadway facilities with functional classifications higher than a collector. This is primarily because the primary purpose of arterial streets is to move traffic, whereas the purpose of collector and local roadways is to serve adjacent land uses and provide access into neighborhoods.

There are two forms of traffic calming, active and passive. Active measures are usually applied after a street has been constructed to correct a perceived problem with driver behavior and include education and enforcement, signing or pavement markings, deflection, and diversions or restrictions. Passive measures, such as grassy boulevards, center medians, or on-street parking, are more likely to be included during the initial design of a roadway and are often installed for aesthetics or utility rather than serving the primary purpose of traffic calming.

In general, the success of traffic calming measures depends upon the degree of support from residents in the immediate area. Traffic calming projects which involve installing “hard” improvements should meet several criteria before being considered for implementation because they can be disruptive to the residents in the surrounding area, are difficult to fund and maintain, and are difficult to remove once installed. “Soft” improvements, or pop-up traffic calming projects, are often installed temporarily to gauge the level of support from the community and evaluate their effectiveness for long-term implementation.

7.5. Context Sensitive Solutions

The Context Sensitive Solutions (CSS) approach is an interdisciplinary method that seeks effective, multimodal transportation solutions by working with stakeholders to develop, build, and maintain cost-effective transportation facilities which fit into and reflect the project’s surroundings – its “context.” With respect to transportation projects, context can be defined as “all elements related to the people and place where a project is located.” This includes both visible elements such as environmental or historic resources and invisible elements such as community values, traditions, and expectations.

Context sensitive designs involve a multidisciplinary team including road designers, residents, business owners, local institutions, city officials, interest groups, and affected local, state, and federal agencies. CSS aims to balance project needs with both agency and community values while considering all trade-offs in decision making. Through early, frequent, and meaningful communication with stakeholders, and a flexible and creative approach to design, the resulting projects should improve safety and mobility for the traveling public, while seeking to preserve and enhance the scenic, economic, historic, and natural qualities of the settings through which they pass.

7.6. Intelligent Transportation Systems

Intelligent Transportation Systems (ITS) technologies have been widely used throughout the country to improve safety and efficiency for the transport of people and goods by integrating advanced communications technologies into transportation infrastructure and vehicles. ITS encompasses a broad range of wireless and traditional communications-based information and electronic technologies. Some of the most common ITS technologies deployed across the country include electronic toll collection, ramp meters, red light cameras, traffic signal coordination, transit signal priority, and traveler information systems.

7.7. Livability

The concept of livability is often used to describe a range of initiatives aimed at improving community quality of life while supporting broader sustainability goals. Livability encompasses multi-dimensional issues relative to community design, land use, environmental protection and enhancement, mobility and accessibility, public health, and economic well-being. Livability in transportation involves integrating the quality, location, and type of transportation facilities and services available with other more comprehensive community plans and programs to help achieve broader community goals such as access to a variety of jobs, community services, affordable housing, quality schools, and safe streets. This includes:

- Addressing road safety and capacity issues through better planning, design, and construction.
- Integrating health and community design considerations into the transportation planning process to create more livable places where residents and workers have a full range of transportation choices.
- Using TDM approaches and system management and operation strategies to maximize the efficiency of transportation investments.
- Maximizing and expanding new technologies such as ITS, green infrastructure, and quiet pavements.
- Developing fast, frequent, dependable public transportation to foster economic development and accessibility to a wide range of housing choices.
- Strategically connecting the modal pieces such as bikeways, pedestrian facilities, transit services, and roadways into a truly intermodal, interconnected system.
- Enhancing the natural environment through improved storm water mitigation, enhanced air quality, and decreased emissions.

7.8. Transit Considerations

Transit service is an important component of the multimodal transportation system and offers an alternative mode of transportation for those who cannot or choose not to drive. Increased accessibility of the transit system helps promote equitable transportation options and can help increase ridership. Incorporating high-quality transit stop design and amenities into capital projects can expand pedestrian capacity, promote transit streets as a desirable place in the urban environment, and help transform transit from a basic service to a desirable mobility option.

For the most part, transit considerations and needs are addressed in the most current version of the Great Falls Transit District's *Transit Development Plan*. **Appendix J** provides planning-level guidance on the placement of bus stops and other transit elements within transportation right-of-way. These guidelines include best practices and design considerations, however, other resources such as the National Association of City Transportation Officials' *Transit Street Design Guide*[1] or the Transit Cooperative Research Program's *Guidelines for the Location and Design of Bus Stops*[2] should be referenced for the most up to date standards and guidance.

7.9. Environmental Mitigation

Metropolitan LRTPs are required to discuss environmental mitigation activities and opportunities to carry out the activities in areas with the greatest potential to restore and maintain the environmental functions affected by implementation of the transportation plan. These provisions originated from a desire to realize benefits for overall transportation project development by considering environmental resources early on in the transportation planning process. The early consideration of environmental resources can assist in program predictability, project decision-making, project deliverability, and mitigation decisions while responding to the desire to improve both transportation infrastructure and the environment.

[1] *National Association of City Transportation Officials, Transit Street Design Guide, April 2016, https://nacto.org/publication/transit-street-design-guide/station-stop-elements/*
[2] *Transit Cooperative Research Program, Report 19, Guidelines for the Location and Design of Bus Stops, National Academy Press, 1996.*

Environmental mitigation is the process of addressing damage to the human and/or natural environment caused by transportation or other public works and infrastructure projects. The human and natural environment includes neighborhoods and communities; homes and businesses; cultural resources (archaeological or historical sites); parks and recreation areas; streams and wetlands; important farmlands; wildlife and their habitats; and air and water quality. Environmental mitigation activities, in reference to transportation planning, refers to the strategies, policies, programs, actions, and activities that, over time, will serve to avoid, minimize, or compensate for the negative effects of a transportation project on the human and/or natural environment. **Appendix J** lists possible mitigating measures commonly implemented with transportation projects to help avoid, minimize, or compensate for negative project-related impacts. During development of any transportation project, the Great Falls MPO always reviews potential environmental impacts, consults appropriate agencies to determine proper mitigation activities, and obtains all required permits.

7.10. Transportation Infrastructure Resilience and Reliability

Transportation infrastructure in the Great Falls area faces significant vulnerabilities, including an aging system, increasing interdependencies between physical and electronic controls, threats from nearby hazardous material production or transport, and risks from extreme weather events like flooding or wildfires. These challenges underscore the importance of developing resilient transportation systems.

Resiliency in transportation entails creating systems that can withstand and recover rapidly from disruptions such as natural disasters, structural failures, or human-caused incidents. A resilient transportation system should possess three key attributes: robust design capable of withstanding severe disruptions, adaptability to respond effectively to threats, and efficient response and recovery operations to mitigate consequences.

Potential actions, programs, and projects that can enhance resilience include:

- Identifying and fortifying vulnerable transportation facilities and systems to enhance their ability to withstand disruptions.
- Prioritizing investments in critical facilities, corridors, and routes that must remain functional during crises or be swiftly restored.
- Integrating sustainable infrastructure designs that can operate effectively under changing environmental and operational conditions.
- Strategically expanding the transportation system to introduce redundancies and increase flexibility and adaptability.
- Implementing effective stormwater management systems to reduce vulnerabilities to infrastructure from weather-related hazards.
- Coordinating transportation and land use planning to proactively address development in vulnerable areas of the community.

7.11. Travel and Tourism

Travel and tourism, which includes travel for both business purposes and for leisure, represents a significant share of Montana's economy. The interdependence of transportation, tourism, and travel is apparent since those visiting and recreating in Montana arrive via various forms of transportation and rely primarily on the road system to travel to and from cultural, historical, and recreational sites within the state.

The Great Falls Tourism Business Improvement District (TBID) is currently working to develop a *Comprehensive Tourism Strategic Master Plan* that evaluates Great Falls' current and potential status as a tourism destination. The plan will provide a host of strategies for marketing and increasing the appeal of Great Falls to visitors. It is important that the transportation network considers the strategies proposed in the Master Plan to ensure that the future transportation can facilitate and support current and future tourism by providing access to popular destinations, supporting multimodal travel, and ensuring visitors can easily navigate the transportation system. These measures will help create and sustain an integrated transportation network and contribute to the overall economic vitality of Great Falls.

7.12. Carbon Reduction

Nationwide, there has been increased focus on reducing greenhouse gas emissions in an effort to combat climate change. In the transportation sector, federal, state, and local entities are placing emphasis on reducing carbon emissions through efforts to reduce single occupant vehicle (SOV) trips, facilitate travel by lower emission transportation modes, and by implementing lower-emission construction practices.

The *Montana Carbon Reduction Strategy*[3] (CRS), prepared in consultation with the Billings, Great Falls, and Missoula MPOs, provides information to assist transportation officials in making project and program decisions to help reduce transportation carbon emissions. The CRS provides a comprehensive set of strategies, including investments in infrastructure projects, new technologies, vehicle fleets, and maintenance equipment as well as development of operational and maintenance practices, policies, and service offerings, to address carbon reduction in Montana from numerous angles. These strategies to reduce carbon reduction build upon, rely on, and support many of the other concepts presented in this section including transportation demand management, freight management, traffic calming, mode choice, context sensitivity, livability, and environmental mitigation.

Many of these carbon reduction strategies are already in use in Montana and in Great Falls, however, increased investment in these strategies could help further state and national carbon reduction goals. These efforts may also result in a host of co-benefits including reduced travel time and congestion, improved safety, accessibility, and connectivity, economic growth, decreased fuel costs, climate resiliency, and improved air quality, health outcomes, and overall quality of life.

7.13. Non-Motorized Facility Maintenance

The *Montana Vulnerable Road User Safety Assessment*[4] (VRU-SA) provides a coordinated and collaborative approach to ensuring all who walk, bike, or roll have full and safe access to the transportation system. The VRU-SA identifies several strategies aimed at reducing safety risks through all stages of the planning, management, and maintenance of non-motorized facilities. Prioritizing maintenance of non-motorized facilities is just as important as maintenance of motorized roadway facilities. The following sections discuss management, maintenance, and proactive considerations for non-motorized facilities recommended within the Great Falls area.

Shared Use Path Maintenance

Shared use paths are typically asphalt paved paths, and like paved roadways, shared use paths require on-going pavement preservation and maintenance. General maintenance typically requires monitoring and evaluating path conditions, mowing, cleaning drainage structures, sweeping and cleaning, and snow removal. For preservation of asphalt paved paths, there are four general treatments including crack sealing, patching, fog sealing, and pavement overlays. Good initial planning and design of shared use paths are crucial to reduce future maintenance problems (such as erosion, water or edge deterioration) and maximize the life of the path. Sometimes larger initial costs and more conservative designs can reduce long-term maintenance needs.

In addition to establishing minimum maintenance requirements for shared use paths, it is critical to identify who is responsible for the work, coordinate efforts when possible, and secure funding sources. To help ensure the proper maintenance is funded and performed, a maintenance plan should be developed. Maintenance of shared use paths within the Great Falls area is currently performed by several entities including River's Edge Trail Foundation, Great Falls Park & Recreation Department, PPL Montana, and Montana State Parks.

Source: River's Edge Trail

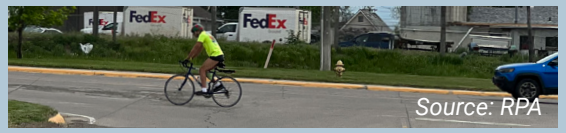
[3] *Montana Department of Transportation, Montana Carbon Reduction Strategy, October 12, 2023, https://www.mdt.mt.gov/pubinvolve/crs/docs/Montana-Carbon-Reduction-Strategy.pdf*

[4] *Montana Department of Transportation, Montana Vulnerable Road User Safety Assessment, October 27, 2023, https://www.mdt.mt.gov/visionzero/plans/docs/chsp/2023/VRU-Safety-Assessment-2023-10-27.pdf*

On-Street Bicycle Facility Maintenance

On-going maintenance of on-street bicycle facilities is important to consider when implementing either bike boulevards, striped bike lanes, or widened shoulders intended for bicycle use. Formal bike boulevards and bike lanes tend to require more maintenance due to the need for striping and signing. Bicyclists are particularly sensitive to sudden changes in width and surface texture, including potholes, debris in the roadway, cracks, ridges caused by pavement overlays, or obstructions such as drainage grates, railroad tracks, or rumble strips, in locations where bicyclists are expected to ride. In general, satisfying bicycling maintenance requirements only requires slight modifications to current maintenance procedures.

In addition to regular on-going maintenance, implementing maintenance-friendly design and construction techniques can reduce the need for costly maintenance treatments later. As with shared use paths, defining maintenance responsibilities for facilities is important to ensure all maintenance needs are met.



Source: RPA

Sidewalk Maintenance

Sidewalk construction, management, and maintenance programs help renew and expand sidewalk networks that, due to myriad reasons, are currently fragmented, disconnected, or poorly maintained. Many Montana communities, including Great Falls, have programs for repairing aging sidewalk infrastructure. Generally, when surface conditions degrade to a point where tripping hazards exist or worsening running or cross slope conditions are making routes inaccessible, maintenance needs to occur. Maintenance is also necessary to respond to seasonal conditions such as fallen snow or overgrown vegetation. Beyond sidewalks, jurisdictions should also ensure signage, curb ramps, pedestrian signals, and crosswalk markings are properly maintained.


Source: RPA

The best way to maintain sidewalks and other pedestrian facilities is to start by building them to last. Some common types of sidewalk damage can be prevented or slowed through the implementation of best practices in initial sidewalk construction. The thickness of the sidewalk material, use of reinforcing bars or mesh use of aggregate base, depth of sub-base below the sidewalk, distance from trees, and other design details impact how well a sidewalk will age over time. If best practices are followed, the service life of concrete sidewalks can be as long as 80 years.


Source: RPA

8. ACHIEVING THE LONG-TERM VISION

This part of the LRTP details the long-term vision for the Great Falls Area transportation system as well as strategies for achieving the vision. In addition to establishing the visionary transportation network, this section provides federally required performance measures and targets which help ensure the transportation system is accomplishing the goals and objectives set forth in this LRTP. Implementation of the envisioned transportation system which meets all performance targets requires extensive coordination with various agencies, many years of execution, and a substantial amount of funds. This section also discusses financial strategies for funding the implementation of the visionary transportation network. Additional funding information can be found in **Appendix H** and details regarding performance measures can be found in **Appendix K**.

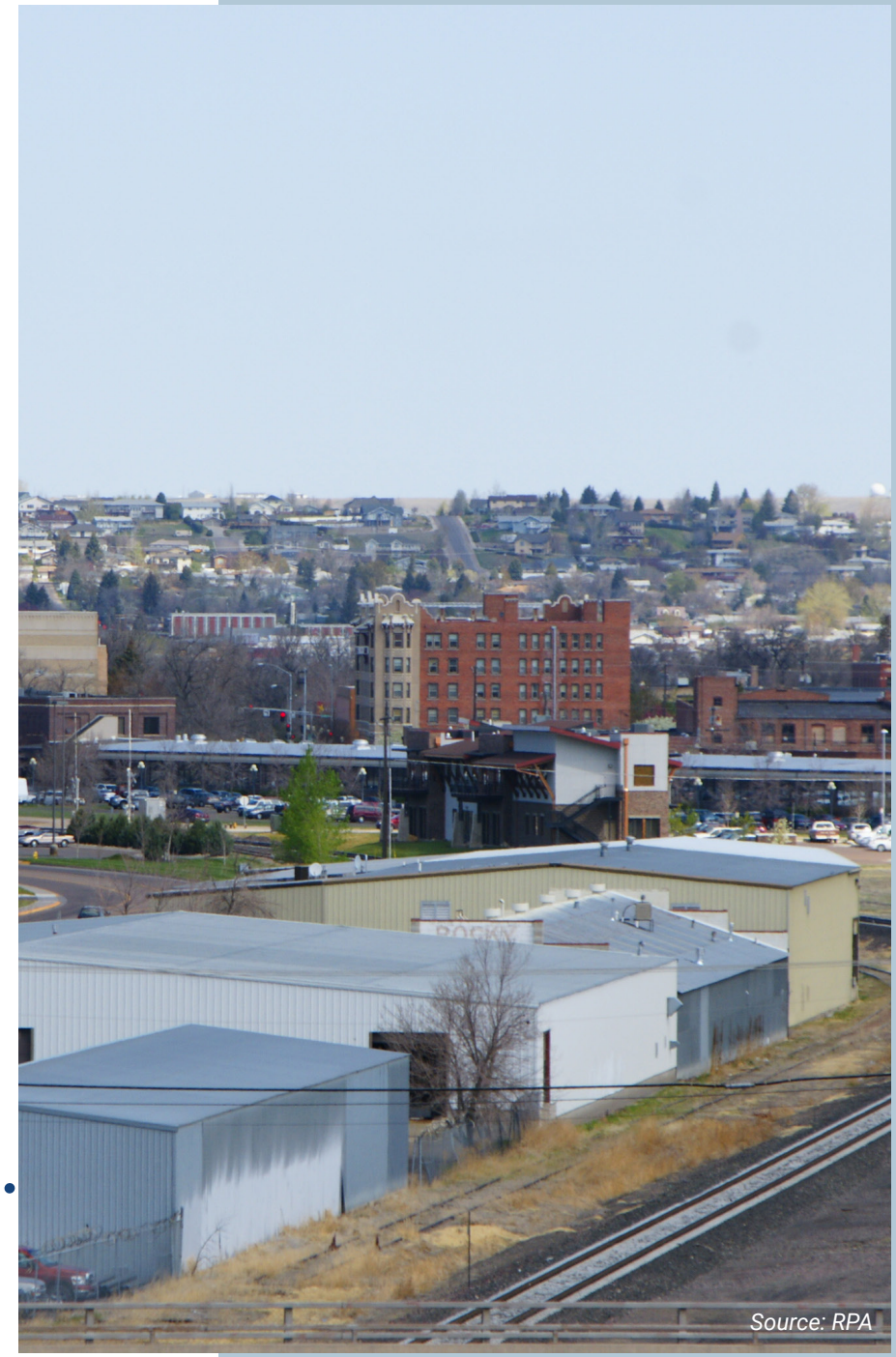
Source: RPA

8.1. Visionary Transportation Network

An established plan for the future transportation system within the Great Falls area is an essential component to community planning and future land development. It ensures that planners, landowners, and developers know the intent and location of the future road network and facilitates a long-term planning strategy. An approved visionary major street and non-motorized network will assist local decision makers in anticipating right-of-way needs, and developing new facilities and transportation improvements that serve and compliment new development.

Figure 25 presents the visionary major street network which consists of all interstate principal arterial, non-interstate principal arterial, minor arterial, and collector routes. Local streets are not included on the visionary major street network. **Figure 26** presents the visionary non-motorized network including the recommendations for sidewalks, trails, bicycle lanes, shared roadways, and shared use paths.

All future alignments shown in **Figures 25** and **26** are conceptual in nature and may vary based on factors such as topography, wetlands, land ownership, and other unforeseen factors. The purpose of these figures is to illustrate the visionary transportation network at full build-out. It is likely that many of the corridors shown will not be developed for many decades to come. However, if development occurs in a particular area, the visionary transportation network will ensure facilities are established in a fashion that produces an efficient and logical future transportation system. Presenting the visionary transportation network herein is an effort to help plan for the future development of the transportation system.



Source: RPA

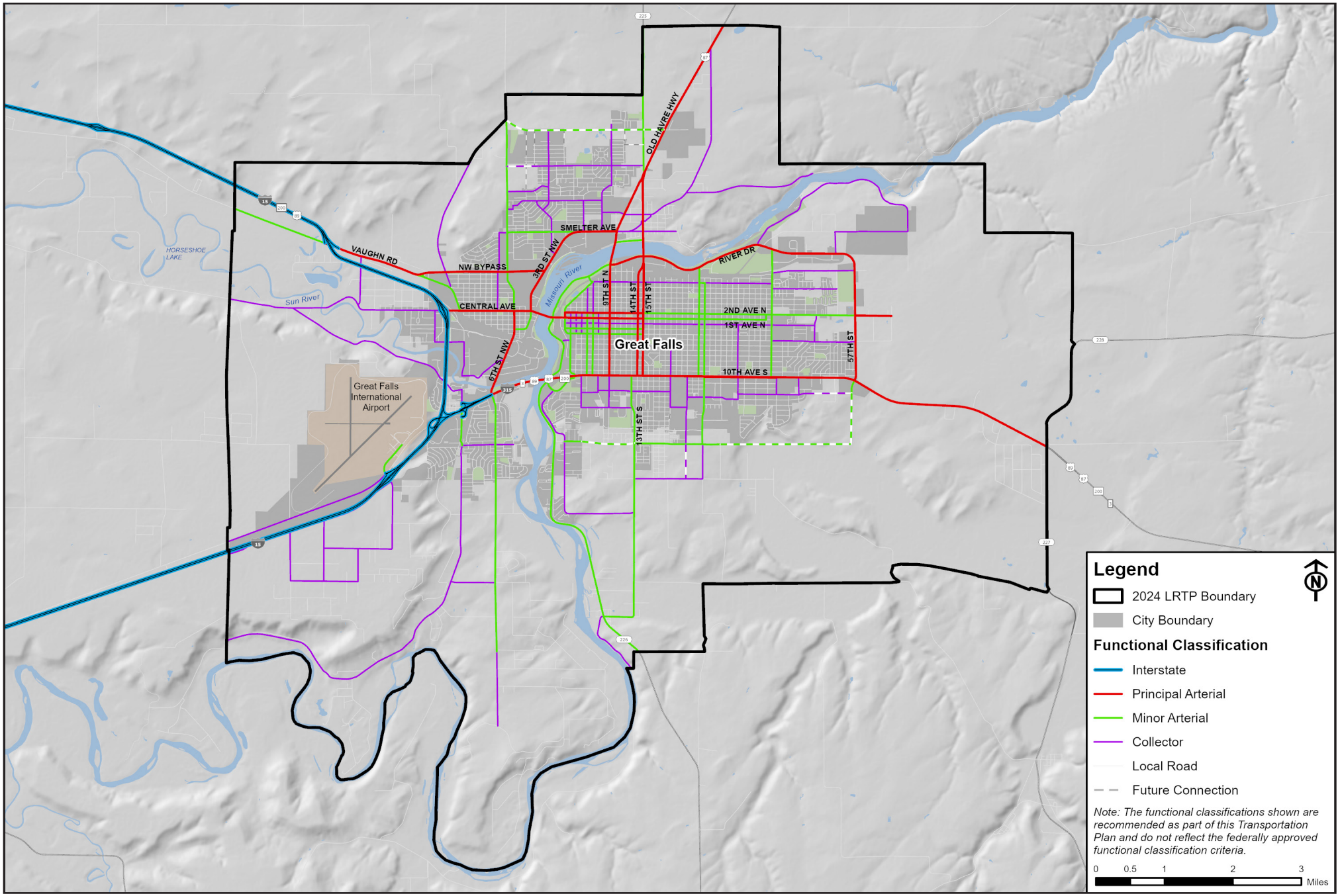


Figure 25: Visionary Major Street Network

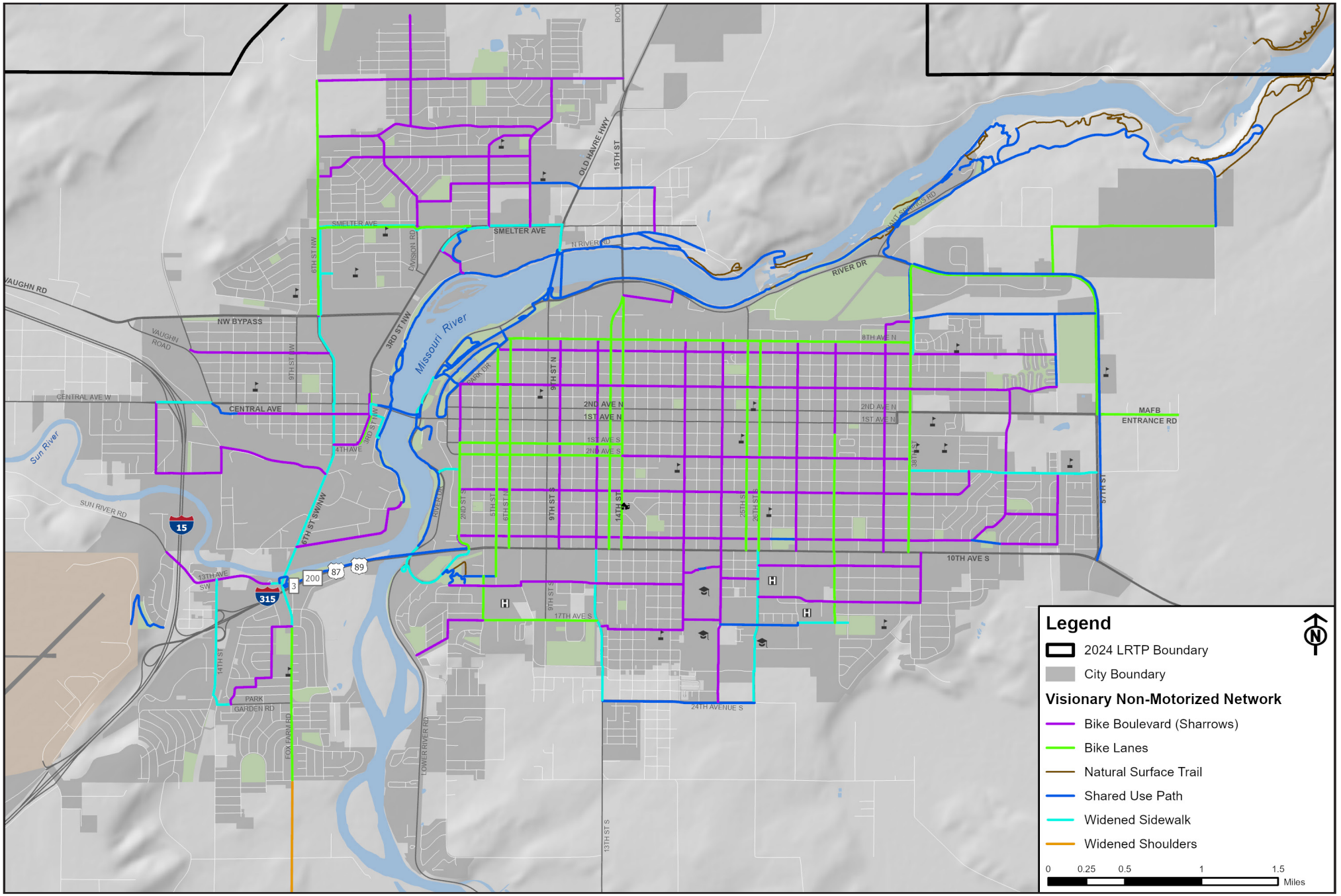


Figure 26: Visionary Non-Motorized Network

8.2. Performance Measures and Targets

Performance measures are essential elements of a performance-based planning process. Performance measures are derived from adopted goals and objectives, and provide metrics that can be used to assess progress toward meeting the identified goals and objectives. How performance is defined and measured can significantly affect the types of projects and strategies that are advanced through the planning process by decision makers.

Performance measures serve a variety of important purposes within performance-based planning and programming processes including:

- Defining metrics for achievement of goals for the transportation system
- Providing metrics to track the performance and overall effectiveness of transportation projects or strategies over time
- Helping define performance targets
- Providing a consistent basis for comparing alternative investments or policies to make better decisions

While a performance measure provides a metric for comparison, a performance-based planning approach requires the identification of a desired trend (direction of results) or target (specific level of performance to be achieved within a certain timeframe) for each measure to track the performance of projects and analyze their effectiveness. Performance targets may be directional (reduce, increase, or maintain), aspirational (reflecting a broad objective), or numerical targets (annual reduction) but must be realistic and achievable.

8.2.1. Policy Overview

Under current guidance, state departments of transportation (DOTs), MPOs, and operators of public transportation are required to link investment priorities to the achievement of performance targets for seven national goal areas which are codified in Title 23 of the United States Code (USC), Section 150(b):

- **Safety** – To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- **Infrastructure Condition** – To maintain the highway infrastructure asset system in a state of good repair.
- **Congestion Reduction** – To achieve a significant reduction in congestion on the National Highway System.
- **System Reliability** – To improve the efficiency of the surface transportation system.
- **Freight Movement and Economic Vitality** – To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- **Environmental Sustainability** – To enhance the performance of the transportation system while protecting and enhancing the natural environment.
- **Reduced Project Delivery Delays** – To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

Source: RPA

8.2.2. Established Performance Measures and Targets

Federal requirements establish a strong linkage between performance measures and performance targets. These measures and targets are connected through transportation plans and programs developed at the statewide level and locally for metropolitan areas. In accordance with Federal law, the US Department of Transportation is responsible for identifying performance measures related to national highway and transit performance goals for which states and MPOs must then establish performance targets. With these national goals as a baseline, state DOTs and MPOs may identify additional performance measures and targets that address local community visions and goals.

State of Montana Performance Measures and Targets

The enacted final rules require MDT to measure and report performance in the following areas: safety performance, pavement and bridge, system performance/congestion, freight movement, congestion mitigation and air quality, and transit asset management. The federal rulemakings outlined a process to be used by state DOTs to establish quantifiable statewide performance targets to be achieved over 2-year and 4-year performance periods, with the first performance period beginning in 2018 and the second performance period beginning in 2022.

After targets were established, FHWA has regularly assessed states' progress in achieving defined performance targets. Significant progress is considered to be demonstrated if the reported condition is equal to or better than the established target, or better than the baseline condition. MDT continues to regularly submit Performance Reports to FHWA.

MPO Performance Measures and Targets

MPOs must also establish performance targets that reflect adopted national performance goals and the performance measures. To ensure consistency, federal law requires coordination between state DOTs, MPOs, and transit agencies when setting performance targets. MPOs have the option to either: 1) set their own targets for each performance measure; or 2) adopt the state targets and agree to plan and program projects so that they contribute to the accomplishment of the relevant state target.

Consistent with this requirement, the Great Falls MPO has elected to adopt the state-established performance targets for safety, pavement and bridge condition, system performance, freight, congestion mitigation, and air quality, and will support the GFTD's targets associated with transit, as shown in **Table 13**. The performance measures are directly related to the goals and objectives established for the LRTP.

SAFETY PERFORMANCE TARGETS

The Great Falls MPO supports the state's targets for applicable safety performance measures. The MPO has demonstrated some progress toward reducing fatalities and serious injuries within the MPO boundary and has consistently met the state's targets on a rate basis in all years except 2020. Crash trend analyses performed for the LRTP have informed the plan's recommended improvements, programs, and policies through data-driven decision making. These analyses have allowed the MPO to identify intersections and roadway segments which have experienced out of the ordinary crash trends and prioritize improvements on those with the highest crash rates, frequencies, and severities. These efforts will help the MPO continue to make progress in reducing fatal and serious injuries and continue to improve safety for non-motorists and motorists alike. These targets are supported by LRTP goal #4.

PAVEMENT AND BRIDGE CONDITION PERFORMANCE TARGETS

The Great Falls MPO supports MDT's targets for NHS pavement and bridge condition and aims to strategically address pavement condition on local, state, and federal facilities within its jurisdiction. Pavement condition ratings for the Interstate and NHS systems are not able to be evaluated by metropolitan planning area at this time. Instead, MDT provided condition ratings for the pavement within Cascade County over the 2018 to 2021 period. Only the 2021 bridge condition data was able to be obtained for the MPO and is reported accordingly. While pavement condition targets have generally been met within the Great Falls area over the past several years, continued investment in preservations efforts is necessary. According to available bridge condition ratings, there are no poor condition NHS bridges and over half of the NHS bridges are in good condition, suggesting a sound preservation program in the MPO. These targets are supported by LRTP goals #1 and #7.

RELIABILITY AND SYSTEM PERFORMANCE TARGETS

The Great Falls MPO adopted MDT's targets for system reliability, congestion, and air quality. Consistent with federal guidance, the Great Falls MPO was not required to set CO_2 emissions reduction targets during the 2018 – 2022 performance period. The MPO will continue to consider vehicular emissions regardless of federal air quality designations. Travel time reliability in the Great Falls MPO over the 2018 to 2021 period was calculated by the National Performance Management Research Dataset (NPMRDS), a dataset used by states to report and monitor on transportation performance measures. Great Falls did not consistently meet the targets for interstate reliability (TTR) for person-miles traveled and Truck Travel Time Reliability but met targets for non-interstate TTR. Although the MPO missed state targets, the demonstrated reliability is still considered good by national standards. The MPO is committed to continuing coordination with MDT and FHWA to improve reliability of the Interstate system through Great Falls and will continue to improve the function and reliability of non-interstate routes in the area.

These targets are supported by LRTP goals #2, #3, and #6. These goals and their associated objectives aim to provide alternative mode choice options to both support the reduction of tailpipe emissions and improve congestion. Expanding mobility choices helps improve network efficiency, accessibility, and the movement of people and goods.

TRANSIT PERFORMANCE TARGETS

In compliance with federal requirements, the GFTD has developed a *Transit Asset Management Plan* (TAMP) which includes transit performance measures and targets. The TAMP is updated annually and performance metrics are reported to the Federal Transit Administration (FTA) as part of the National Transit Database reporting process. In addition to asset management performance targets, the GFTD develops safety performance targets related to fixed route and paratransit services. The safety performance targets are contained in the *Agency Safety Plan* (ASP)which is reviewed and updated annually. The newest transit performance measures and targets included in the 2023 TAMP and ASP are incorporated into the LRTP by reference. The Great Falls MPO supports progress towards achieving these targets and is committed to working with the GFTD to make transit services accessible, safe and convenient for residents and visitors. Coordination with transit services is also interwoven throughout the Great Falls LRTP goals and objectives.

ACHIEVING PERFORMANCE TARGETS

The Great Falls MPO will continue to incorporate the state's adopted performance targets into the TIP and discuss how the targets will be advanced and linked to investment priorities. The MPO will also continue to coordinate with MDT to obtain routinely collected data from the agency about the condition of roadway pavement and bridges, safety performance, and the overall operation of the transportation system within the Great Falls metropolitan area in support of the identification and development of projects which will support adopted performance targets at the statewide and local level.

Performance Measure		Targets (2022-2025)
Safety Performance Measures		**2025 Target***
Number of Fatalities		213.4
Fatality Rate (per 100 million VMT)		1.546
Number of Serious Injuries		737.4
Serious Injury Rate (per 100 million VMT)		5.487
Combined Non-Motorized Fatalities and Serious Injuries		55.2
Infrastructure Condition Performance Measures		**(2-Year & 4-Year)**
Interstate Pavement - Good Condition		50%
Interstate Pavement - Poor Condition		2%
Non-Interstate NHS Pavement - Good Condition		40%
Non-Interstate NHS Pavement - Poor Condition		3%
NHS Bridge - Good Condition		16%
NHS Bridge - Poor Condition		9%
Highway Reliability Performance Measures		**(2-Year & 4-Year)**
Interstate Travel Time Reliability		98%
Non-Interstate Travel Time Reliability		80%
Interstate Truck Travel Time Reliability Index		1.30
Emissions Reductions Performance Measures		**(2-Year & 4-Year)**
CO Emissions		> 0 kg/day
PM10 Emissions		> 0 kg/day
PM2.5 Emissions		> 0 kg/day
Transit Performance Measures		**2024 Target ****
Revenue Vehicles-% of vehicles that have met or exceeded their useful life	Bus	21%
	Mini-van	50%
Equipment-% of vehicles that have met or exceeded their useful life	Other Rubber Tire Vehicles	50%
Facilities-% of facilities with a condition rating below 3.0	Passenger Facilities	0%
	Administrative Maintenance Facilities	0%

Performance Measure		Targets (2022-2025)
Transit Safety Performance Measures		**2023 Target*****
Fixed Route Bus	Fatalities (Total / per 100,000 VRM)	0 / 0
	Injuries (Total / per 100,000 VRM)	0 / 0
	Safety Events (Total / per 100,000 VRM)*	1 / 0.25
	System Reliability (VRM between Failures	7,054
Paratransit	Fatalities (Total / per 100,000 VRM)	0 / 0
	Injuries (Total / per 100,000 VRM)	0 / 0
	Safety Events (Total / per 100,000 VRM)*	1 / 0.33
	System Reliability (VRM between Failures	19,873

Table 13: Current MDT/MPO/Transit Performance Targets (2022 - 2025 Performance Period)

**Based on preliminary 2023 FARS & MDT Serious Injury Data (5/17/2023). MDT updates safety targets on an annual basis based on a five-year average.*
***Accurate as of 2023 TAMP; GFTD updates transit targets on an annual basis.*
****Targets listed are from the 2023 GFTD ASP and are based on FY 2023 data. GFTD updates transit targets on an annual basis. VRM = Vehicle Revenue Miles.*

8.3. Conformity Determination

On November 15, 1990, the Clean Air Act Amendments (CAAA) of 1990 were signed into law to regulate air emissions from stationary and mobile sources. Among other things, this law authorizes the Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants.

Transportation conformity is a process required by Section 176(c) of the CAAA to ensure that Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) funding and approvals are given to highway and transit activities that are consistent with air quality goals.

On September 9, 1980, the United States Environmental Protection Agency (EPA) designated 10th Avenue South in Great Falls as non-attainment for carbon monoxide (CO). Following many years of air quality monitoring and maintenance activities, the EPA announced

on July 28, 2022, that the Great Falls area successfully completed 20 years of maintenance of the CAAA transportation conformity requirements for the Great Falls CO area. For transportation conformity purposes, the Great Falls CO area 20-year maintenance period began on July 8, 2002, and ended on July 8, 2022. Accordingly, the Great Falls MPO is no longer required to address the transportation conformity determination requirements as elements of future iterations of the Great Falls LRTP and TIP.

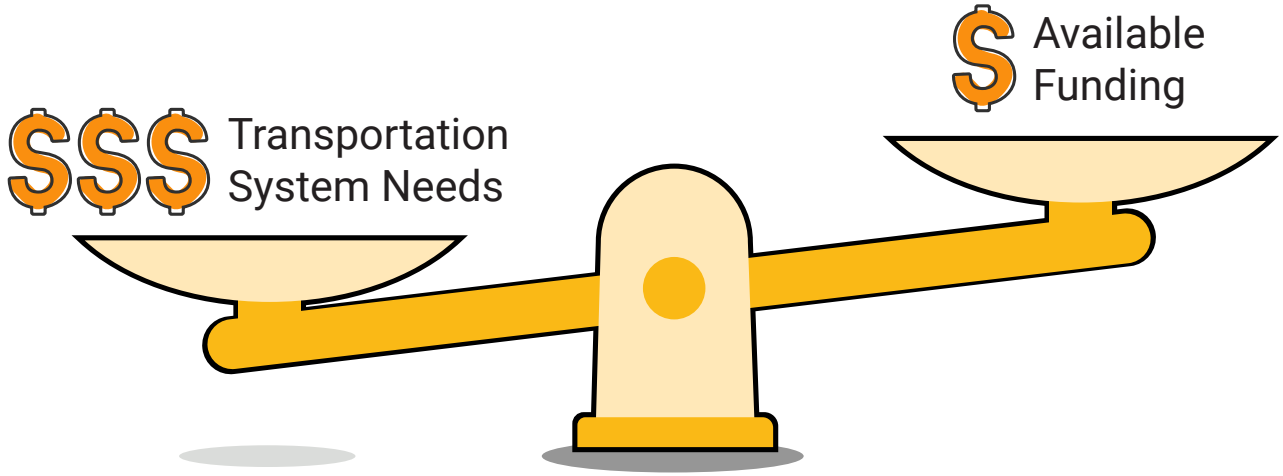
Although transportation conformity requirements for the Great Falls CO area have ended, the provisions of the 2011 *Great Falls CO Limited Maintenance Plan* remain in effect. This includes using the state's alternative monitoring strategy which utilized traffic counts to determine average monthly traffic volumes during the traditional high CO concentration season (November – February). The state agrees to compare the latest rolling 3-years of monthly volumes to the 2008 to 2010 baseline volumes. If the rolling 3-year traffic volumes are 25% higher than the average value of 35,151 from the 2008-2010 baseline period, the state will re-establish CO ambient monitoring in Great Falls the following high season (November-February). The maintenance requirement of CAA Section 110(a)(1) also remains in place for all areas, including attainment areas.

At the time of writing, the Great Falls area is not designated as a nonattainment or maintenance area for any other air pollutant and is therefore not required to address transportation conformity determination requirements for the *2024 Great Falls LRTP*.

8.4. Funding Mechanisms

Transportation improvements can be implemented using federal, state, local, and private funding sources. Historically, federal and state funding programs have been used almost exclusively to construct and upgrade the major roads in the Great Falls area. Considering the current funding and eligibility limits of these traditional programs, and the extensive list of recommended road projects, more funding will be required from discretionary, local, and/or private sources if all transportation network needs are to be met over the planning horizon.

A summary of the various funding programs is provided in **Table 14**, and detailed information about each source is contained in **Appendix H**. Depending on their intended purpose, some of the funding sources may not be entirely available for construction of capital improvements. Several of the sources listed allocate money for routine and/or deferred maintenance activities. Many of the federal funding sources are also constrained to use for improving specific route systems including National, Primary, Secondary, or Urban Highway Systems, and Off-system as shown in **Figure 27** at the end of this section.



Program	Description / Subprograms
FEDERAL	
Discretionary Programs	New funding opportunities for roadways, bridges, and other major projects authorized under IIJA. Eligibility, allocations, and matching requirements vary by program. • Bridge Investment Program • Safe Streets and Roads for All (SS4A) • Rural and Tribal Assistance Pilot Program • Nationally Significant Multimodal Freight and Highway Projects Program (INFRA) • Rebuilding American Infrastructure Sustainability and Equitably (RAISE) Grants • National Infrastructure Project Assistance (MEGA) • Rural Surface Transportation Grant Program (RURAL)
Promoting Resilient Operations for Transformative, Efficient, and Cost Saving Transportation (PROTECT)	Formula funding to make surface transportation infrastructure more resilient to the effects of extreme weather and natural disasters.
National Electric Vehicle Infrastructure (NEVI) Program	Formula funding to strategically deploy EV charging stations and to establish an interconnected network to facilitate data collection, access, and reliability.
Carbon Reduction Program (CRP)	Formula funding to reduce transportation emissions.
Bridge Formula Program (BR)	Formula funding to replace, rehabilitate, preserve, protect, and construct bridges on public roads.
National Highway Performance Program	Provides funding for the NHS, including the Interstate System and NHS roads and bridges. • Interstate Maintenance (IM) • National Highway (NH) • NHPP Bridge (NHPB)
National Highway Freight Program (NHFP)	Funding to improve the efficient movement of freight on the National Highway Freight Network.
Highway Safety Improvement Program (HSIP)	Funds are apportioned for safety improvement projects included in the State Strategic Highway Safety Plan. Projects must correct or improve a hazardous road location or feature or address a highway safety problem. • Railroad Crossing Improvements (RRS)

Program	Description / Subprograms
FEDERAL	
Surface Transportation Block Grant Program (STBG)	Funds available for projects to preserve or improve conditions and performance on state-designated Primary, Secondary, and Urban Highway Systems and some Off-System routes. • Primary (STPP) • Secondary (STPS) • Urban (STPU) • Bridge (STPB) • Off-System Routes (STPX) • Urban Pavement Preservation Program (UPP) • Transportation Alternatives (TA) Program / Recreational Trails Program (RTP)
Congestion Mitigation and Air Quality Improvement Program (CMAQ)	Federal funds available under this program are used to finance transportation projects and programs to help improve air quality and meet the requirements of the Clean Air Act. • CMAQ (formula) • Montana Air & Congestion Initiative (MACI)- Guaranteed & Discretionary Programs
Transit Capital and Operating Assistance Funding	The MDT Transit Section provides funding to eligible recipients through federal and state programs. All funded projects must be derived from a locally developed, coordinated public transit-human services transportation plan (a "coordinated plan"). • Urbanized Area Formula Grants (Section 5307) • Enhanced Mobility of Seniors and Individuals with Disabilities (Section 5310) • Formula Grants for Rural Areas (Section 5311) • Bus and Bus Facilities (Section 5339)
STATE	
State Funded Construction (SFC)	Provides funding for projects that preserve the condition and/or extend the service life of state highways.
TransADE	Grant program offering operating assistance to eligible organizations providing transportation to the elderly and persons with disabilities.
State Funds for Transit Subsidies	Provides funds to offset expenditures of a municipality or urban transportation district for public transportation.
State Fuel Tax	State taxes assessed on each gallon of gasoline and clear diesel fuel sold in the state are allocated to cities and counties for the construction, reconstruction, maintenance, and repair of roads. • City and County Fuel Tax Formula Distributions

Continued on next page

Table 14: Funding Sources Summary

Program	Description / Subprograms
LOCAL	
City of Great Falls	Accounts for the proceeds of specific revenue sources that are legally restricted to expenditures for specified purposes. • Special Improvement District (SID) Revolving Fund • Gas Tax Apportionment • Street District • Great Falls Parking Commission • Tax Increment Financing (TIF) • Community Development Block Grant Program (CDBG)
Cascade County	Accounts for the proceeds of specific revenue sources that are legally restricted to expenditures for specified purposes. • Road Fund • Bridge Fund • Motor Vehicle License Fee • Urban Transportation Districts • County Elderly Activities Tax • Special Revenue Funds • Capital Improvements Fund • Rural Special Improvement District (RSID) Revolving Fund • Tax Increment Financing (TIF)
Other Potential Funding Sources	Various other sources of funding may be available in the future, pending legislation and other political decisions made by governing entities. • General Obligation Funds • Multi-Jurisdictional Service District • Local Improvement District • User Fees • Local Sales Tax • Wheel Tax • Local Options Motor Fuel Tax • Excise Taxes • Value Capture Taxes
Private Funding Sources	Private financing of roadway improvements, in the form of right-of-way donations and cash contributions, has been successful for many years. In recent years, the private sector has recognized that better access and improved facilities can be profitable due to increase in land values and commercial development possibilities. • Missouri-Madison River Fund Grant • River's Edge Trail Endowment Fund • Cost Sharing • Private Ownership • Transportation Corporations • Road Districts • Private Donations • Privatization

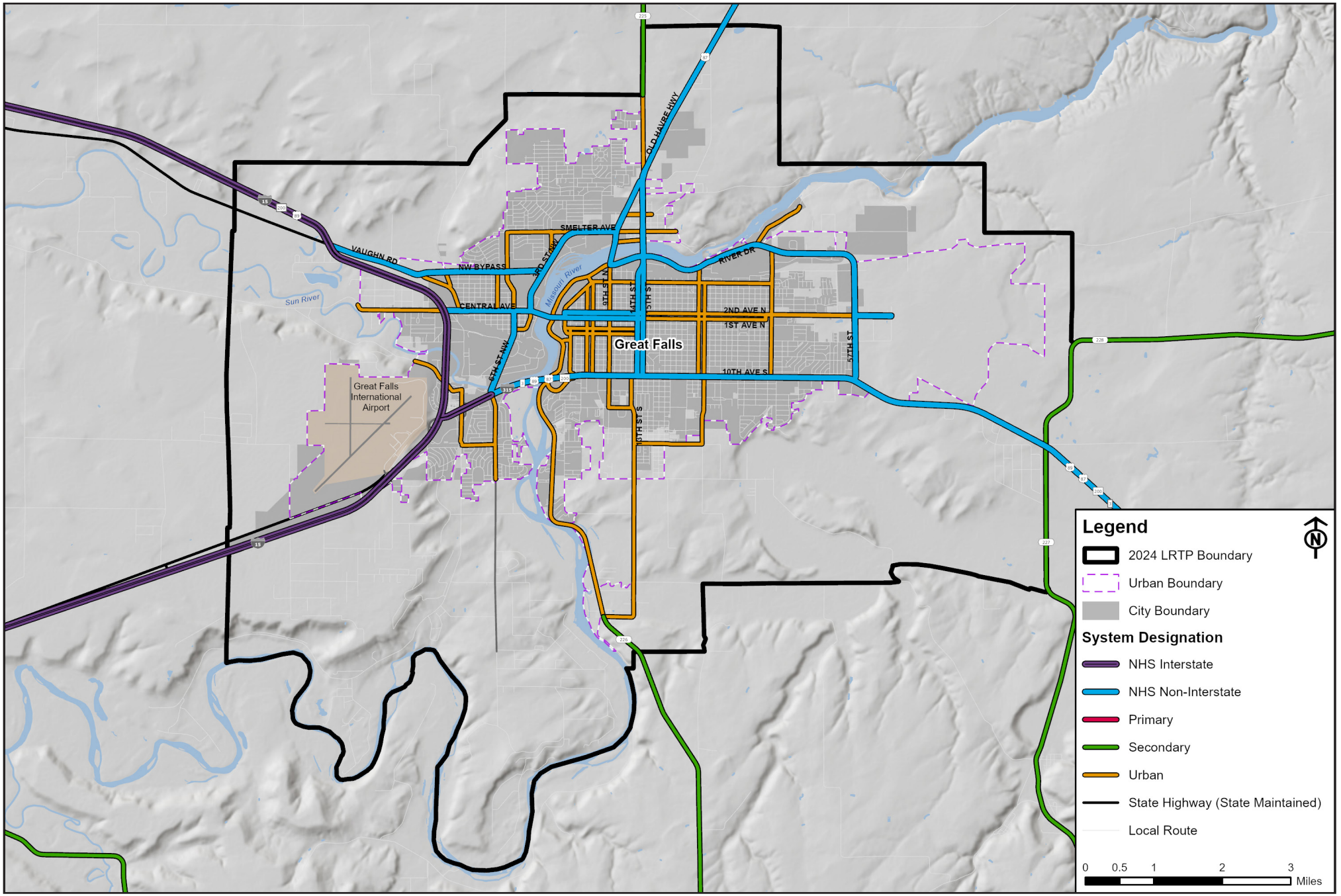


Figure 27: Highway System Designations

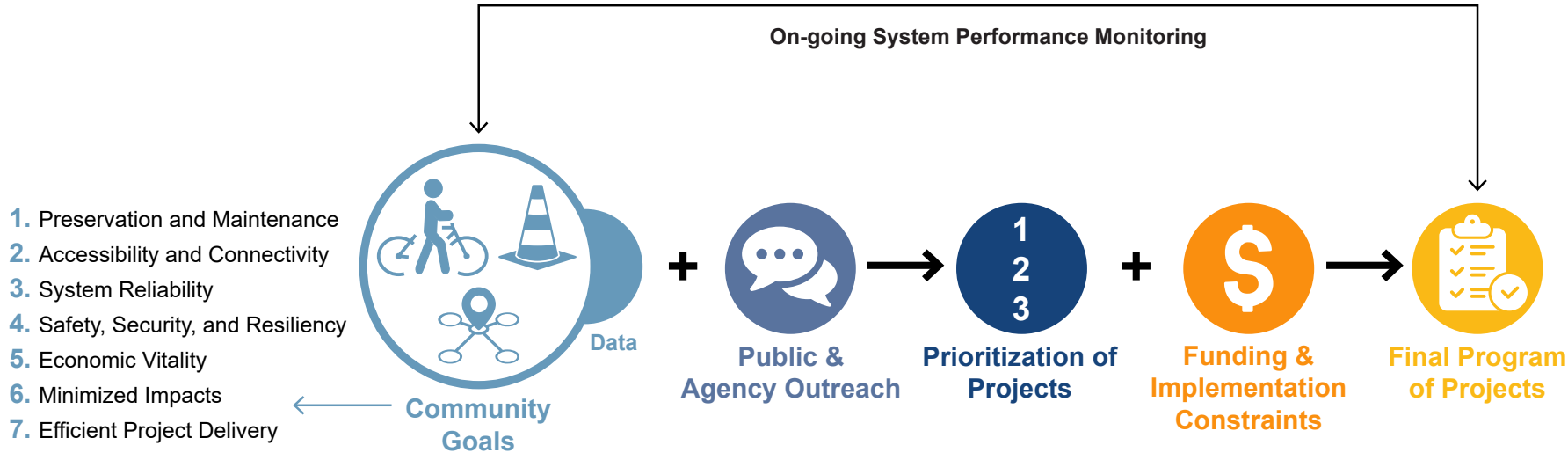
8.5. Fiscal Constraint

Current financial information was obtained from the MDT Statewide and Urban Planning Section to get a picture of the projected revenue available for funding transportation projects in the Great Falls area over the next 20 years. This information is summarized in the following sections and in **Appendices H** and **I**.

Federal regulations require that the cost of all projects in the LRTP must be estimated using inflated YOE dollars in order to provide a consistent and equivalent comparison of project costs to available revenue. Converting all costs to YOE dollars theoretically presents a more accurate picture of costs compared to revenues, and identifies potential deficits associated with the LRTP's recommendations. To provide for such a comparison, the total costs of committed projects, and the total costs of committed + recommended projects, were correlated to anticipated total revenue available through the year 2045. The portrayal of estimated costs against potential revenue throughout the life of the LRTP is a requirement of fiscal constraint. Initial project cost estimates were calculated in 2023 dollars and subsequently inflated to YOE dollars using a three percent annual inflation factor.

Due to funding requirements and jurisdictional boundaries, transportation financing is somewhat compartmentalized. Because of this, it is necessary to evaluate each project, and identify the most likely funding programs to finance each project.

Through public and stakeholder outreach and partner agency coordination, a project prioritization process was developed and conducted to identify the projects that should be prioritized for funding within the LRTP planning horizon (2045). The process involved scoring each project according to how well it supports the LRTP goals and objectives and according to the level of public and agency support for the project. The highest scoring projects were then prioritized for available funding over the full planning horizon. Ultimately, the TAC and PCC will determine which projects will be prioritized for funding and advanced into the TIP. On-going performance monitoring will help evaluate project effectiveness and inform future transportation investment decisions.



8.5.1. Funding Facility Recommendations

Recommended facility improvements are listed in **Chapter 6**. These projects will be completed by various agencies including city, county, and state governments. Each of these entities may have separate priorities for implementing projects under their respective jurisdictions, which may impact if and when projects are prioritized for available funding.

Implementing facility improvements will demand creative and flexible project financing. To capitalize on available funding opportunities, local governments should proactively consider the following:

- Several discretionary funding programs are available. Governments should be educated on eligibility requirements for such programs and proactively and strategically identify qualified projects to submit for potential funding.
- Numerous conventional methods of financing are available to local government (such as bonds and Special Improvement Districts) and should not be overlooked.
- Financing for special types of projects is sometimes available. Currently, funding is available for certain kinds of safety projects, and projects for pedestrian and bicycle facilities.
- Local government should attempt to link private beneficiaries of improvements with private sources of financing. Additionally, if private individuals come forward with funding, local government should be prepared to accept it.

8.5.2. Funding Non-Motorized Recommendations

Because the LRTP presents a visionary network for the non-motorized transportation system, it is likely that improvements will coincide with roadway projects as they are developed. Accordingly, the network will be built over time. Non-motorized projects are not "recommended projects" in the conventional sense, however they should be developed as time and funding allows. Non-motorized network recommendations in this LRTP should be consulted any time a road or intersection project is being programmed. Most, if not all, of the funding sources previously mentioned can be used to contribute to non-motorized improvements, either as part of an overall project or as a stand-alone project.

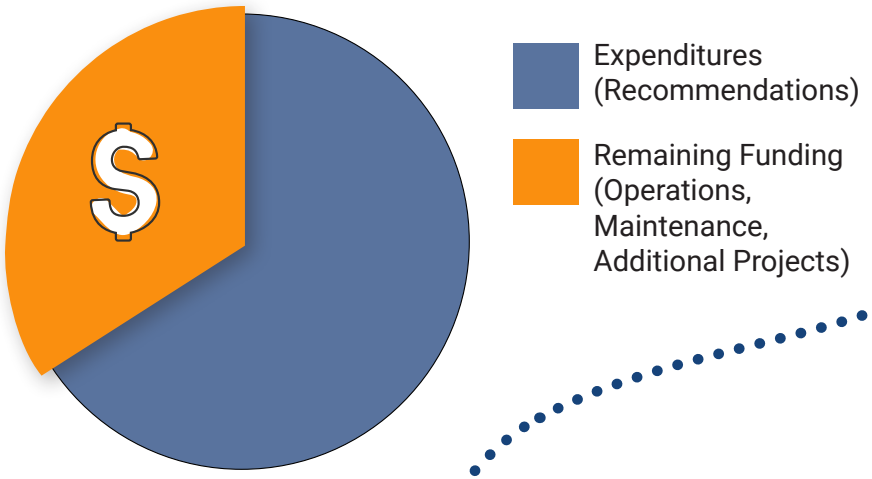
8.5.3. Funding of Transit Projects

As seen in the recommendations, there are no specific committed improvement projects for the transit system, there are only annual funding allocations that contribute to operations and the acquisition of new vehicles and related equipment over the years. The TDP will contain various transit-specific recommendations to implement over the next several years. The Great Falls MPO should continue to coordinate with GFTD to improve and enhance transit services within Great Falls.

8.5.4. Funding Summary

A comparison of the estimated costs for the various transportation improvements and the potential funding from various federal, state, and local sources confirms that the LRTP is fiscally constrained over the 20-year life of the Plan (see **Table 15**). The anticipated funding includes both direct allocations as well as other investments made within the MPO that further support the goals and strategies outlined in the LRTP, but aren't necessarily allocated directly to the MPO. The anticipated funding available is greater than the estimated costs.

Illustrative projects do not have definite funding sources within the timeframe of the Plan. Therefore, these projects are not included in the summary for the purposes of fiscal constraint. As the MPO and its partner agencies review needs, identify new funding sources, and plan projects, the list of illustrative projects should be used as a guide for new projects.



Funding Source	2025 - 2028			2029 - 2045		
	Anticipated Funding[1]	Expenditures	Difference	Anticipated Funding[2]	Expenditures	Difference
FEDERAL						
National Highway Performance Program (NHPP)	**$43,892**	**$43,892**	**$0**	**$124,542**	**$80,684**	**$43,859**
Interstate Maintenance (IM)	$19,889	$19,889	$0	$28,533	$8,000	$20,533
National Highway (NH)	$24,003	$24,003	$0	$96,010	$72,684	$23,326
National Highway Freight Program (NHFP)	**$14,358**	**$14,358**	**$0**	**$16,000**	**$12,715**	**$3,285**
Surface Transportation Program	**$17,964**	**$13,573**	**$4,391**	**$41,539**	**$39,904**	**$6,026**
Surface Transportation Program Urban Highways (STPU)	$9,802	$8,566	$1,236	$21,018	$20,196	$2,058
Surface Transportation Program Off-System (STPS), State Funded Construction (SFCN)	$100	$100	$0	$400	$400	$0
Urban Pavement Preservation Program (UPP)	$2,907	$2,907	$0	$11,630	$8,000	$3,630
Set-aside Program - Transportation Alternatives (TA)[3]	$5,155	$2,000	$3,155	$8,491	$11,308	$338
Bridge Program (BR)	**$21,021**	**$21,021**	**$0**	**$84,083**	**$81,380**	**$2,703**
Highway Safety Improvement Program (HSIP)	**$1,345**	**$1,345**	**$0**	**$5,379**	**$3,284**	**$2,096**
Congestion Mitigation and Air Quality Improvement Program (CMAQ)	**$31,711**	**$14,707**	**$17,004**	**$43,846**	**$21,589**	**$39,261**
CMAQ - Guaranteed Program	$26,711	$11,907	$14,804	$23,846	$9,949	$28,701
Montana Air and Congestion Initiative (MACI) - Discretionary Program[4]	$5,000	$2,800	$2,200	$20,000	$11,640	$10,560
Carbon Reduction Program (CRP)	**$3,872**	**$2,200**	**$1,672**	**$8,765**	**$1,815**	**$8,622**
National Electric Vehicle Infrastructure (NEVI) Program	**$1,250**	**$1,250**	**$0**	**$0**	**$0**	**$0**
Federal Transit Authority (FTA) Funds	**$25,011**	**$23,286**	**$1,726**	**$86,699**	**$86,699**	**$1,726**
STATE AND LOCAL						
TransADE	**$1,815**	**$1,815**	**$0**	**$7,258**	**$7,258**	**$0**
Operations and Maintenance	**$38,618**	**$15,000**	**$23,618**	**$154,472**	**$12,066**	**$166,024**
State	$4,103	$0	$4,103	$16,411	$0	$20,514
City [5]	$22,183	$15,000	$7,183	$88,732	$12,066	$83,849
County [5]	$12,332	$0	$12,332	$49,329	$0	$61,661
State Fuel Tax	**$10,371**	**$0**	**$10,371**	**$44,358**	**$0**	**$54,729**
City [5]	$8,606	$0	$8,606	$36,618	$0	$45,223
County [5]	$1,765	$0	$1,765	$7,741	$0	$9,506
TOTAL	**$211,226**	**$152,445**	**$58,781**	**$616,943**	**$347,394**	**$328,331**

Table 15: Comparison of Estimated Project Costs and Available Revenue (Thousands, 2025-2045)

[1] 2025-2028 Expected Funding is per the Draft Great Falls Transportation Improvement Program FY 2024-2028.

[2] 2029-2045 Projected Funding is estimated based on past funding levels and is the best information available at this time. There is no guarantee that funding will be available in the future.

[3] TA funds are allocated through a competitive process. Funding is not guaranteed and is dependent on availability.

[4] Great Falls does not receive an annual allocation of MACI Discretionary funding. Funding is allocated based on need and is not guaranteed.

[5] City and county funds received from state fuel taxes, local street assessments, and mill levies are primarily used for routine operations and maintenance. Excess funds are prioritized for capital expenditures based on need and priority.

8.6. Implementation of Projects and Programs

The LRTP is a planning document that helps identify transportation improvements to be completed over a 20-year planning horizon. At this time, funding has only been identified for Committed projects. No funding has presently been programmed for Recommended projects, although the fiscal constraint section demonstrates that the recommended projects can be implemented within the planning horizon given current anticipated funding revenues and estimated project costs.

Figure 28 illustrates the project implementation process. After the LRTP is complete, projects will be advanced from the planning stage into the project development and eventual construction phases. Public involvement should occur throughout all phases. The general next steps for implementation are also listed to the right.

1. A funding source(s) is identified and secured.
2. The project is nominated for implementation by the TAC / PCC (or other partner agency).
3. Feasibility studies, environmental investigations, and other development processes are completed as applicable.
4. A design is completed for the project and approved by responsible agency(ies) as needed.
5. Right-of-way is acquired for the project if necessary.
6. The project is constructed.

The majority of the recommended improvements contained in this LRTP will be able to be implemented within existing right-of-way. However, the proactive acquisition of right-of-way for future roadway upgrades or extensions is essential to the community as development occurs to the outlying areas. If the property necessary for a low priority improvement, however, does become available prior to the time local government has scheduled the improvement, consideration should be given to changing the project's priority and acquiring the right-of-way at today's lower costs.

Furthermore, in undertaking major network improvements, local governments should be aware of opportunities for constructing projects in separate phases. Oftentimes funding is simply not available to address an improvement in its entirety. In such cases, a great deal can be accomplished by tackling separate components of individual improvements over the long term. However, such division of effort should not include separating bicycle and pedestrian facilities from initial street construction.

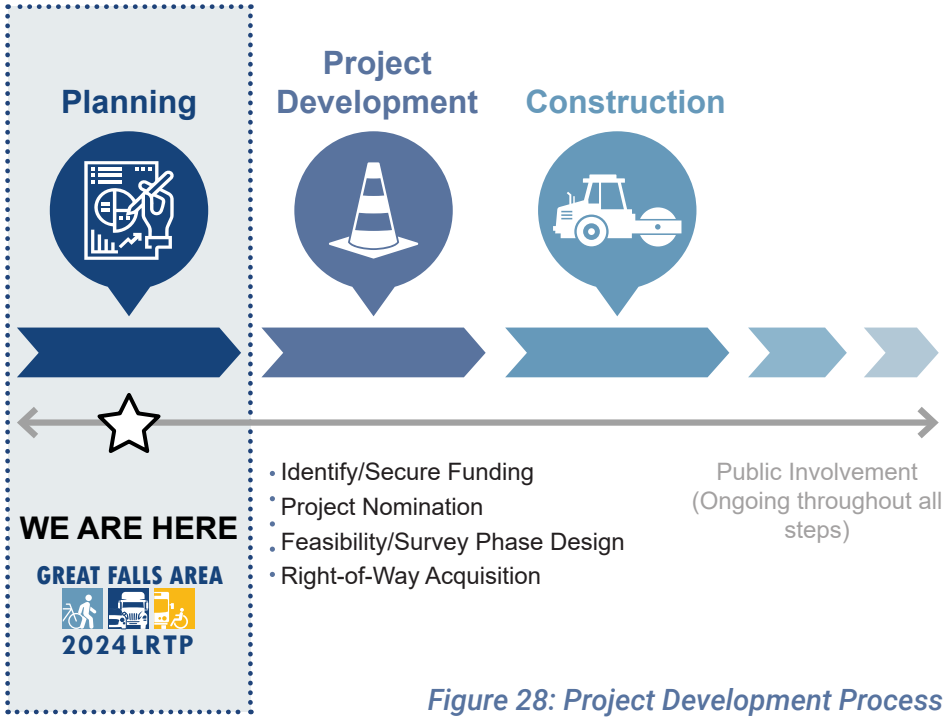


Figure 28: Project Development Process

GREAT FALLS AREA LONG RANGE TRANSPORTATION PLAN 2024