2025

Billings Area Pedestrian & Bicycle Master Plan

alta

BILLINGS - YELLOWSTONE COUNTY
MPO
METROPOLITAN PLANNING ORGANIZATION

Contents

Disclaimers: This is a planning level document only. It is not intended to obligate or mandate development of the projects in the plan or obligate any jurisdiction to implement any or the entire document. In addition, this document does not assume prioritization or commitment of any local funds unless authorized by local or state government agency.

This document outlines project recommendations as of the adoption date. However, the City of Billings is considering conducting a system-wide plan which, when completed, may contradict some of the recommendations in the Billings Area Pedestrian and Bicycle Master Plan. If the new, system-wide plan contradicts this plan, the new plan will take precedence. If this is the case, the Billings Area Pedestrian and Bicycle Master Plan may be edited to eliminate contradictions between the two plans.

CHAPTER 1

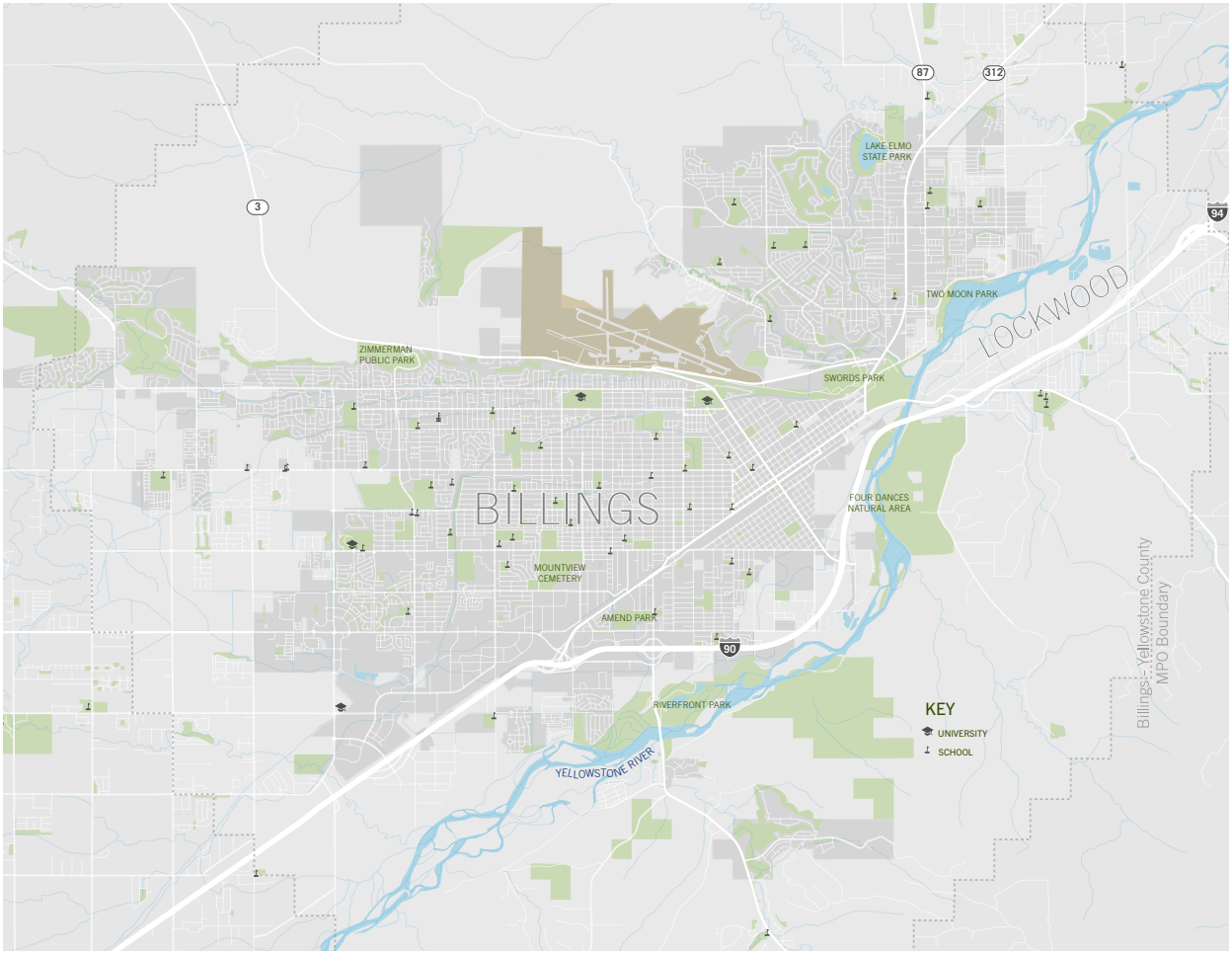
Introduction, Vision & Goals

Introduction

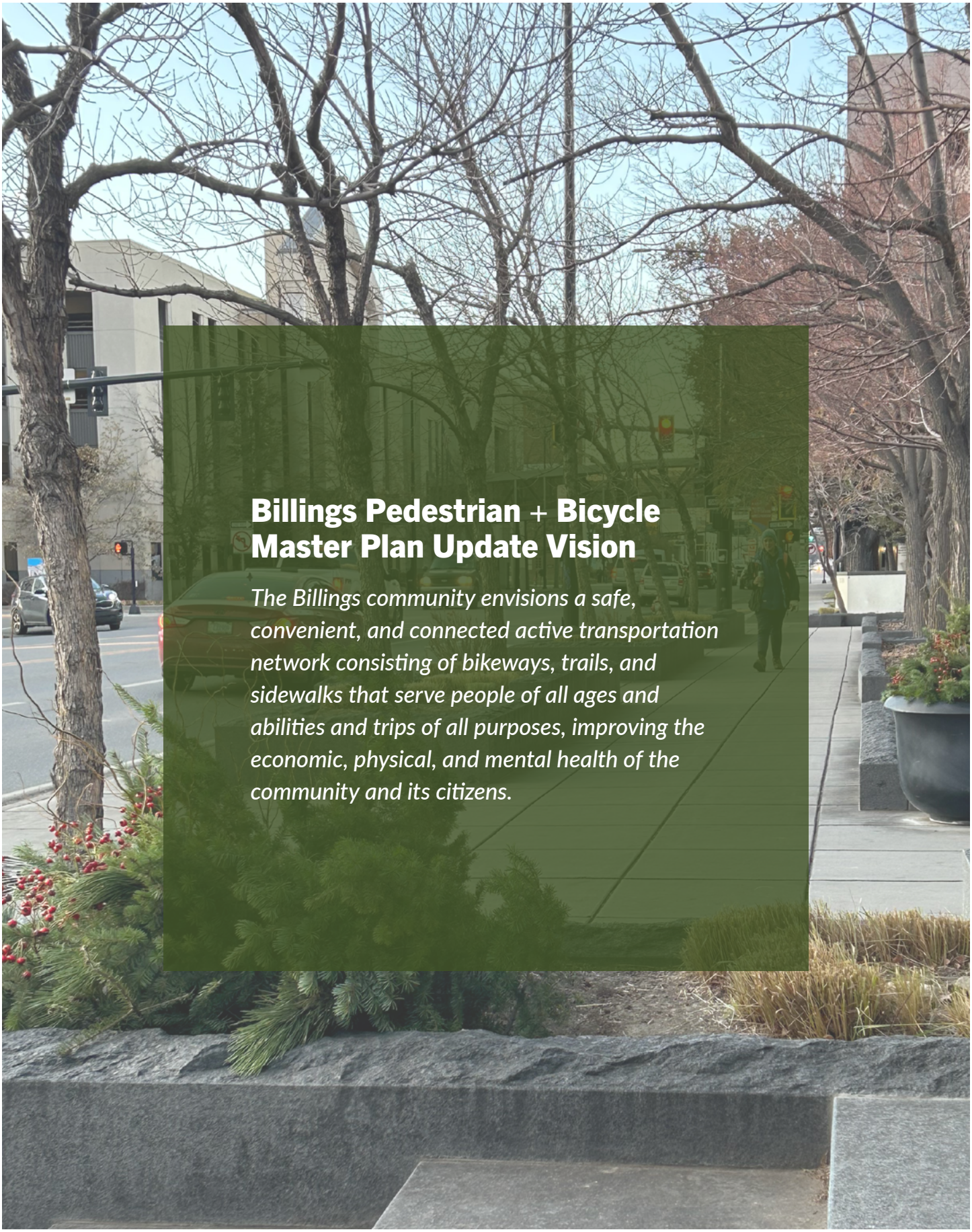
Formerly named the Billings Area Bikeway & Trails Master Plan (2017), the **2024 Billings Area Pedestrian & Bicycle Master Plan** serves as an update to the 2017 plan, and provides the region with a blueprint for improving conditions for active transportation looking forward. The intent of this plan is to identify progress on the system since 2017, identify and prioritize projects that will improve the safety and convenience of walking, biking, and rolling* in the Billings area, and establish strategies for implementing next steps in the process.

This plan combines both pedestrian (shared use path) recommendations and bicycle (neighborhood bikeways, bike lanes, buffered bike lanes, protected bike lanes, and shared use paths) into two categories: high comfort and supplemental. These categories are discussed more in Chapter 5. New in this plan, a Pedestrian Level of Traffic Stress Analysis was conducted for road segments. Chapter 5 also references design guidance for pedestrian crossings. Figure 1.1 shows a map of the study area, which encompasses the City of Billings and immediately adjacent, unincorporated areas served by the Billings-Yellowstone County Metropolitan Planning Organization (MPO).

FIGURE 1.1 - MAP OF STUDY AREA



* ***Rolling*** *refers to the use of any personal mobility device outside of traditional pedal cycles, including wheelchairs, scooters, skateboards, one-wheels, or other human-powered and electric devices. While the spectrum of personal mobility devices continues to expand, the infrastructural needs remain similar to those of pedestrians and bicyclists based on speeds and required space.*



Billings Pedestrian + Bicycle Master Plan Update Vision

The Billings community envisions a safe, convenient, and connected active transportation network consisting of bikeways, trails, and sidewalks that serve people of all ages and abilities and trips of all purposes, improving the economic, physical, and mental health of the community and its citizens.

The Billings Area Pedestrian + Bicycle System* should...

Make useful connections

- To transit
- To schools
- To commercial and civic destinations
- To parks, trailheads, destination trails (e.g., Marathon Loop), and recreation areas
- Close gaps between facilities

Serve a wide variety of people

- The overall network should include a connected **all-ages-and-abilities** network that everyone from young children to seniors feel comfortable and safe using
- Infrastructure should be clean, easy to understand, and **accessible** (ADA & PROWAG (Public Rights of Way Accessibility Guidelines) compliant)
- The system should benefit both **recreational and commuter/utility trips**
- Emphasis should be placed on **demographics that rely on active transportation** for their daily needs

Increase the safety and health of the community

- The system should enable **physical activity** as part of everyday life
- Improvements should contribute to a **reduction in the number of crashes involving bicyclists and pedestrians** and aim to make streets safer for all roadway users
- The system should **increase awareness and visibility** of pedestrians and bicyclists
- The system should contribute to **improved air quality** and a healthier environment

Enable efficient and sustainable implementation

- Policies and initiatives should allow the City and MPO to build the pedestrian/bicycle network **at a faster rate** than in previous years
- The network should be expanded in a way that can be **successfully maintained based on local resources**

Expand transportation choices

- The system should **reduce reliance on motor vehicles**
- The system should contribute to an **increase in walking and bicycling mode share**

*_**The Pedestrian + Bicycle System**_ *refers to both the infrastructure (the physical network) and non-infrastructure (policies, programs, and practices) initiatives that enable safe walking/bicycling in the community.*

CHAPTER 2

Progress Report

What has happened since 2017?

Much has changed since the adoption of the 2017 Billings Area Bikeway & Trails Master Plan, including the completion of several projects and initiatives based on the plan's recommendations. This chapter provides a snapshot of recently completed projects; policies, programs, and other initiatives that have been implemented; and changes in the demographics and travel behaviors of residents over the last six years.

Projects Completed Since 2017

Over the last six years (2017–2023), over 61 miles of active transportation facilities have been constructed in the Billings area, including new on-street bikeways, paved trails, and sidewalks (See Figure 2.1). Figure 2.2 illustrates the locations across the area where these investments have been made.

FIGURE 2.1 – BIKEWAYS, PAVED TRAILS, & SIDEWALKS

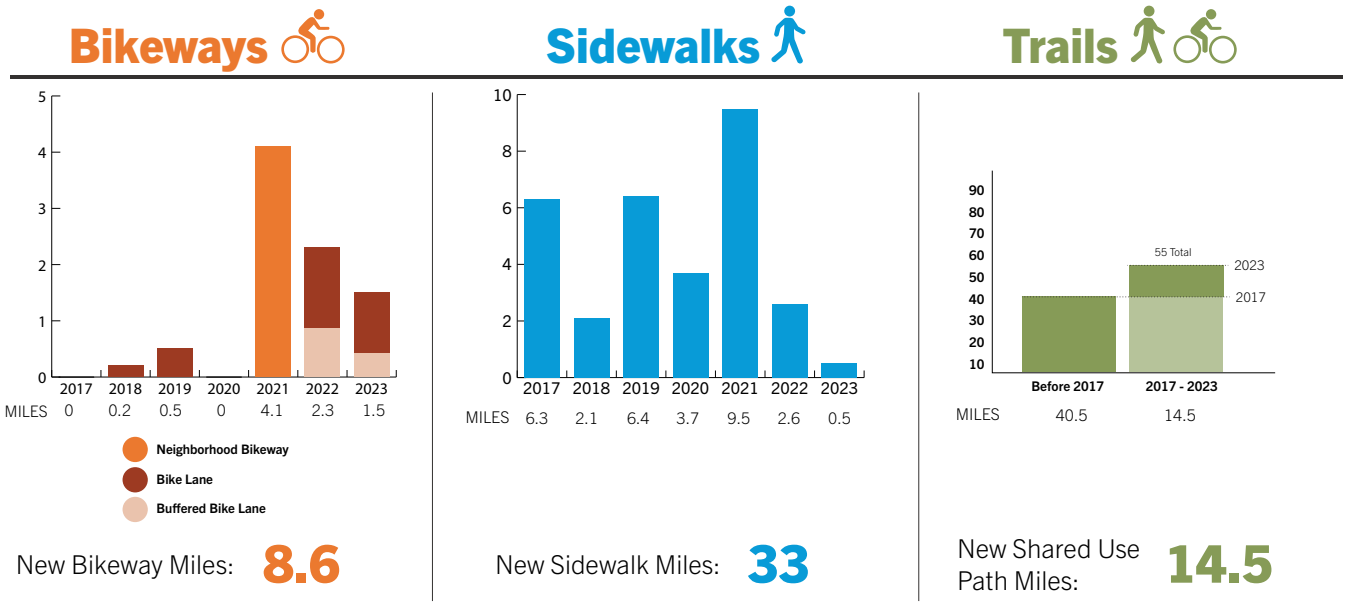
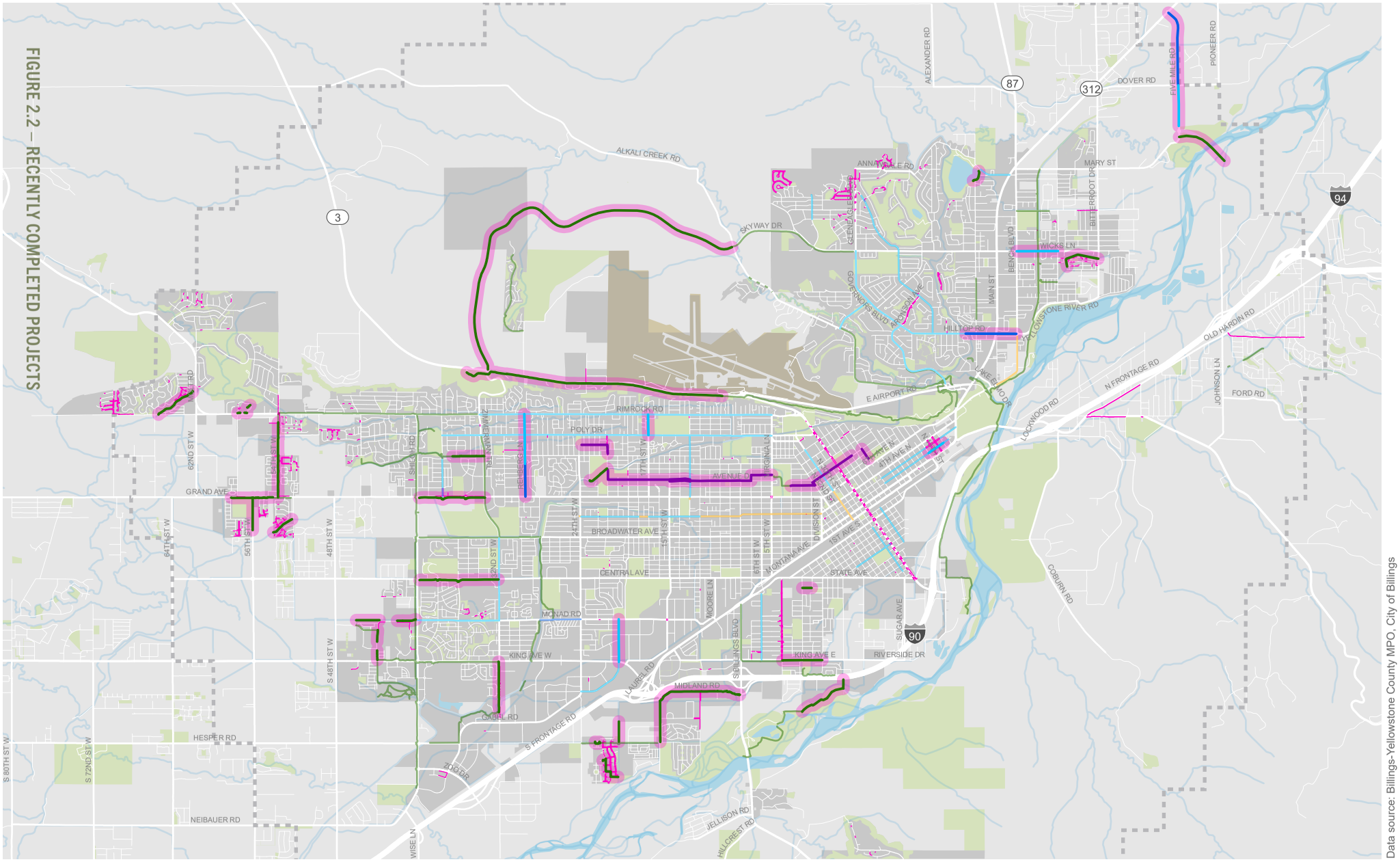


FIGURE 2.2 – RECENTLY COMPLETED PROJECTS



Data source: Billings-Yellowstone County MPO, City of Billings

PROJECTS COMPLETED SINCE 2017

BILLINGS AREA PEDESTRIAN & BICYCLE MASTER PLAN

This map highlights Pedestrian and bicycle projects that have been completed since the adoption of the 2017 Billings Area Bikeway and Trails Master Plan.

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EXISTING FACILITIES

- Shared Use Path
- Buffered Bike Lane
- Bike Lane
- Neighborhood Bikeway
- Shared Lane Marking
- Shared Use Path (in progress)
- Built Since 2017
- Sidewalks completed since 2017
- Billings-Yellowstone Co MPO Boundary
- City of Billings Boundary

Policies, Programs, & Other Initiatives

In addition to investments in physical infrastructure, the City, MPO, and County have dedicated time and resources to the development of new policies, programs, and other initiatives that support active transportation in the Billings area. Table 2.1 summarizes the efforts that were recommended in the 2017 Plan.

TABLE 2.1 – PROGRESS ON POLICIES, PROGRAMS, & OTHER INITIATIVES RECOMMENDED IN THE 2017 PLAN

TYPE	PROGRAM & DESCRIPTION	PROGRESS SINCE 2017
 EQUITY	**BICYCLE GIVE-A-WAYS** Local businesses and organizations, including Billings TrailNet, Lockwood PTA, Merrill Lynch, and Edward Jones, among others, collaborate to provide funding to give away bicycles to the community. These events have proved to be very popular.	The Lockwood Pedestrian Safety District gives away a few bikes a year to students in need. Kids In Motion (KIM), a free bike repair program for students in Billings Public Schools, helps keep bikes that students already have rideable. In 2023, HDR engineering firm donated 24 bicycles to kindergartners at Highland elementary school.
 ENCOURAGEMENT	**MUNICIPAL BIKE FLEET** Promote work-related trips by bicycle; reduce daytime auto trips. Bike Share systems in the United States have become a popular form of micromobility (sometimes referred to as small things on wheels). While these systems were initially implemented primarily in large U.S.. cites, they are now being implemented in small to mid-size cities like Billings. Rather than implement a municipal bike fleet, the City/County should assess the feasibility of implementing a bike share system.	Bike and Scooter Share Feasibility study was completed in 2020. Several companies have approached Billings about bringing shared micromobility (bike and/or scooter share) to town. However, staff plan to set guidelines by issuing an Request for Proposals (RFP) for a provider. As a smaller community, this will help to make expectations clear up front.
 ENCOURAGEMENT	**BICYCLE AND TRAILS MAP (2011 PLAN RECOMMENDATION)** Provide route and facility information and highlight walking and bicycling destinations. Entities should coordinate to ensure that the maps distributed have consistent information. A meeting should be held annually to revise maps as needed. TrailNet should continue maintaining the online interactive map on their website.	The Metropolitan Planning Organization added an app with route and facility information

TABLE 2.1 – POLICIES, PROGRAMS, & OTHER INITIATIVES (CONT.)

TYPE	PROGRAM & DESCRIPTION	PROGRESS SINCE 2017
 ENCOURAGEMENT	**SAFETY EQUIPMENT USE ENCOURAGEMENT** Encourage the use of bicycle lights, helmets and reflective clothing by promoting the use of this equipment and hosting equipment giveaways. Organizations and school districts should coordinate their efforts, share resources, establish best practices and determine program development costs	Lockwood Pedestrian Safety District gives away some helmets and reflective slap bands to 4th graders in May. Previously, the school district had a grant from St. Vincent Healthcare (now Intermountain Health) to sell helmets to students at $5/helmet. The funding for the discounted helmets was exhausted. Both hospitals sell low cost helmets, but they are not free.
 ENCOURAGEMENT	**CONDUCT WALKABILITY, ACCESSIBILITY AND PARK AUDITS** Conduct audits in the city's parks to assess accessibility conditions, lighting and improve safety. To identify assets and barriers in park access, safety and connectivity to other parks	Healthy By Design created a Parks RX program where they evaluated two parks and creating walking route maps showing conditions on the trails. Crime Prevention Through Environmental Design (CPTED) is currently a priority for the City and some parks have received CPTED audits with more audits possible in the future.
 ENFORCEMENT	**INCREASE TRAFFIC ENFORCEMENT** Increase the budget for traffic enforcement in the City of Billings to allow additional officers to be assigned to traffic detail. The community consistently stated that traffic enforcement for all road users in the Billings Area was perceived to be minimal.	A mill levy that passed a couple of years ago provided more funding for police officers, including traffic enforcement. More officers have been added as a result.
 EVALUATION	**ESTABLISH COMPREHENSIVE COUNTS PROGRAM** Data on walking and bicycling is necessary to track growth in these modes and determine where investments are necessary. The city should continue collecting data on bicycling and trail use using manual and automated counters.	In recent years, Billings has shifted entirely to automatic counts. This means not as many pedestrian counts have been taken. A new people-counter downtown under Skypoint was installed, but is out of commission. There is also one new set of permanent bike lane counters on Poly. A new permanent counter was also installed on the HWY 87 path which is through the Lockwood Pedestrian Safety District.

TABLE 2.1 – POLICIES, PROGRAMS, & OTHER INITIATIVES (CONT.)

TYPE	PROGRAM & DESCRIPTION	PROGRESS SINCE 2017
 EVALUATION	**VISION ZERO** The goal of the program is to reduce traffic fatalities and serious injuries to zero.	The Billings Area Community Transportation Safety Plan (CTSP) was updated in 2021 with Vision Zero goals. The CTSP focused on behaviors such as lack of restraint, impaired drivers, and inattentive driving, with a focus on young drivers.
 EVALUATION	**MEASURING THE STREET** Before and after the installation of new bikeway or trail facility, data should be collected on bicycle, pedestrian and motor vehicle volumes, crashes, and motor vehicle speeds. This data can be used to evaluate how effective new bikeways or trails are in achieving goals	This process of data collection was utilized when implementing the new neighborhood bikeway, which set a precedent to continue this type of evaluation on future facilities.
OTHER	**DEVELOP SYSTEM-WIDE WAYFINDING PLAN** A wayfinding system should identify destinations that should be signed to, identify trails and bicycle boulevard routes to be signed, adopt standard placement practices for wayfinding signs, and install signage along priority routes	Billings adopted a wayfinding plan in February 2020. Wayfinding signage has been installed along Ave D neighborhood bikeway.
OTHER	**BICYCLE PARKING** A bike parking code should be part of a future Zoning Code update to standardize rack type and placement practices, and ensure bike parking is installed with new development. A bike parking program, focused on Downtown and other areas of the community, allows the community to request the placement of racks on public lands, and property owners to request racks on their private land (otherwise, these racks may never be installed in areas where they are needed, such as auto-oriented 'strip-mall' developments in the western part of Billings).	Bike parking is now required by City zoning code in some districts. The city established a downtown bike parking program, but the program has run out of funding and is now dormant.

Trends in Travel

Since 2017, the number of people who call the City of Billings home has increased from 109,894 to 118,849 (8% growth over six years, not including unincorporated population growth), placing more pressure on the transportation system and its ability to serve a growing population. Figure 2.4 highlights travel trends based on available American Community Survey (ACS) data, which shows limited changes in mode share. ACS data considers only commute trips to work, and does not account for other daily trips for errands, social life, etc. So while overall biking and walking trips to work decreased between 2014 and 2021 according to ACS data, user count data along Billings' bikeways and trails, as shown in Chapter 3, suggests an upward trend in walking and biking over the last five to six years.

FIGURE 2.3 – POPULATION GROWTH

Source: 2023 Billings Urban Area Long Range Transportation Plan

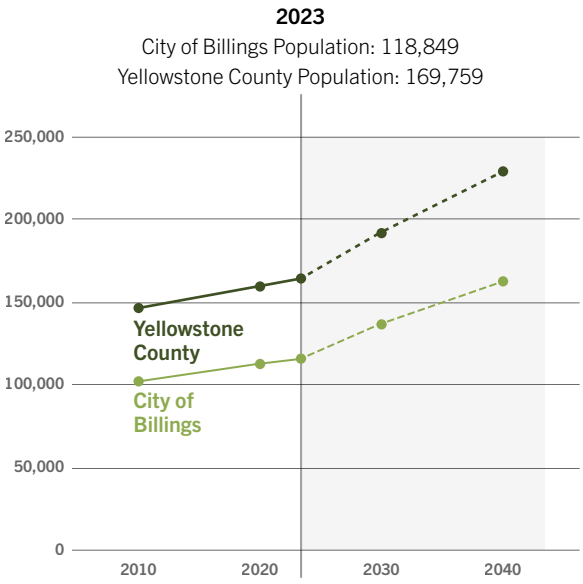
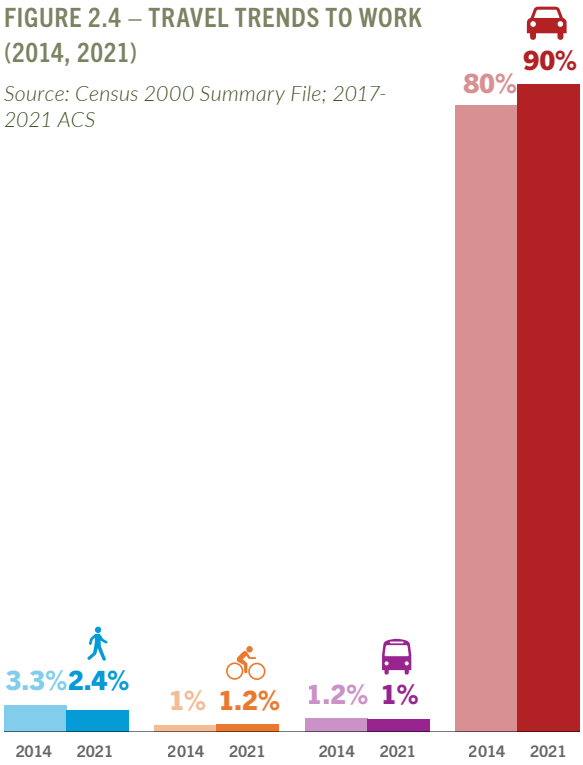


FIGURE 2.4 – TRAVEL TRENDS TO WORK (2014, 2021)

Source: Census 2000 Summary File; 2017-2021 ACS



2017 Recommendations Audit

An audit of the 2017 Plan's recommendations was conducted to identify lessons learned during the last six years of implementation and opportunities to refine the City and MPO's approach moving forward. Both infrastructure (bikeway and trail network) and non-infrastructure (programs, policies, and other initiatives) recommendations were reviewed.

Network Recommendations

Figure 2.5 shows a map of existing bikeways and trails, projects recommended in the 2017 Plan, and priority projects identified in 2017. Some of the questions considered in reviewing the 2017 network recommendations and lessons learned include:

What were some of the primary funding sources for projects that were completed since 2017?

- Local street maintenance funds
- Local gas tax
- Local owner assessments
- Statewide Transportation Improvement Program (STIP)
- State Fish, Wildlife, and Parks Recreational Trails Program Grant
- Federal BUILD Grant (now called RAISE Grant)

Why were some of the 2017 priority projects implemented while others were not?

- Avenue D Neighborhood Bikeway was implemented because it was a new facility type and the top ranked neighborhood bikeway from the plan
- Small section of BBWA Canal Trail between Woody Dr. and 21st St.: no right-of-way constraints; grant received from Recreational Trails Program, with matching contributions from Billings Trail Net, Public Works, and Parks
- Limiting factor for priority projects that were not completed were funding and staff capacity

What led to non-priority projects being completed?

- Several non-priority projects were completed opportunistically in conjunction with Public Works' Pavement Preservation Plan and Capital Improvement Plan (CIP)
- Several shared use paths along roadways (sidepaths) were constructed as part of Public Works' policy that a 10' shared use path (sidepath) is required as part of the reconstruction of any arterial
- The Skyline Trail was pursued because it was a good candidate for a federal BUILD grant

For those projects that were designated in 2017 as "visionary long range bikeways," has anything changed that would lead us to more specific recommendations?

- Some sections of Grand Avenue are not currently part of the Capital Improvement Plan (CIP), but there have been discussions to add them
- There have been discussions about dedicating funding for concept/feasibility studies for these corridors

Are there any previously recommended projects that are slated for near-term implementation?

- Skyline Trail and Inner Belt Loop were completed while this plan was being developed
- See 5-year CIP and Pavement Preservation Plan

In general, what have we learned over the last six years about developing the active transportation network? Is there anything about the approach that should change?

- External funding is available for larger projects, and Billings was successful in being awarded a handful of grants, but staff capacity can be a limiting factor in taking advantage of all the state and federal grant opportunities
- Public Works is doing a good job of referencing the Master Plan to make sure planned bicycle and pedestrian improvements are included in maintenance and new construction projects
- The prioritization process for this plan should consider Public Works' CIP project list
- Billings' Complete Streets Policy has guided Public Works consideration for active modes in implementing the CIP

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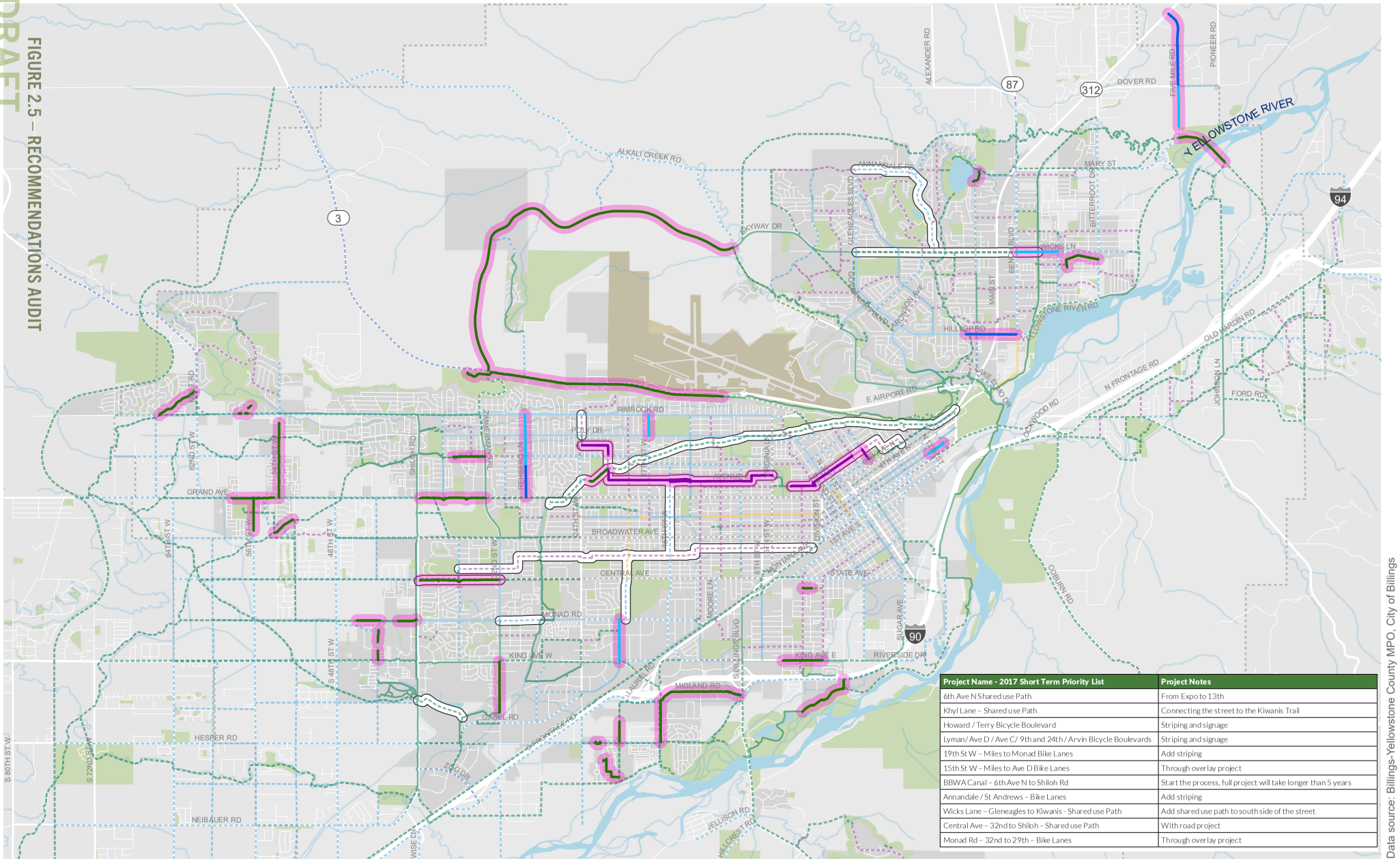
FIGURE 2.5 – RECOMMENDATIONS AUDIT



Project Name - 2017 Short Term Priority List	Project Notes
6th Ave N Shared use Path	From Expo to 13th
Khyl Lane – Shared use Path	Connecting the street to the Kiwanis Trail
Howard / Terry Bicycle Boulevard	Striping and signage
Lyman/ Ave D / Ave C/ 9th and 24th / Arvin Bicycle Boulevards	Striping and signage
19th St W – Miles to Monad Bike Lanes	Add striping
15th St W – Miles to Ave D Bike Lanes	Through overlay project
BBWA Canal – 6th Ave N to Shiloh Rd	Start the process, full project will take longer than 5 years
Annandale / St Andrews – Bike Lanes	Add striping
Wicks Lane – Gleneagles to Kiwanis - Shared use Path	Add shared use path to south side of the street
Central Ave – 32nd to Shiloh – Shared use Path	With road project
Monad Rd – 32nd to 29th – Bike Lanes	Through overlay project

Data source: Billings-Yellowstone County MPO, City of Billings

PROJECTS COMPLETED SINCE 2017

BILLINGS AREA PEDESTRIAN & BICYCLE MASTER PLAN

This map shows projects completed since the 2017 Bikeway and Trails Master Plan was adopted. Projects completed since 2017 are highlighted in pink. Projects listed as priority projects in the 2017 plan are highlighted in white.

2017 Priority Projects

Bikeways & Trails Completed Since 2017

EXISTING FACILITIES

- Shared Use Path
- Buffered Bike Lane
- Bike Lane
- Neighborhood Bikeway
- Shared Lane Marking

PLANNED FACILITIES

- Shared Use Path
- Bufferd Bike Lane
- Bike Lane
- Neighborhood Bikeway
- Shared Lane Marking
- Visionary

N

0 2 4 MILES

Policy & Program Recommendations

In addition to recommendations for expanding the physical bikeway and trail network, this plan also explores lessons learned from progress made over the last six years in implementing the policies, programs, and other initiatives recommended in the 2017 Plan. Of the 52 initiatives recommended, 32 have seen progress or been completed. Some of the lessons learned from investigating the progress and status of these efforts include:

- The City and MPO have been diligent in pursuing additional planning efforts recommended in 2017, including the completion of the Billings Area Wayfinding and Signage Plan, the Billings Area Bike and Scooter Share Feasibility Study, adding vision zero goals to the 2021 Community Transportation Safety Plan, etc.
- Lack of funding and staff capacity are the primary reasons for some policies, programs, and other initiatives not being implemented; some of these initiatives are no longer priorities, while others remain important to pursue
- Related to staff capacity, closer coordination between Planning and Geographic Information Systems (GIS) divisions would benefit efforts to keep data and online mapping resources organized and up to date
- It is important to get buy-in from partnering departments or agencies before committing to an initiative in the plan. This can help ensure there is consensus about the proposed recommendations.

See Table 5.2 in Chapter 5 for a complete list of previously recommended policies and programs, their current status, and future recommendations.

Adopted Plans

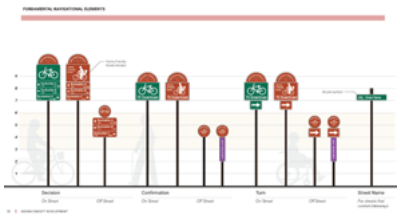
For the Billings Pedestrian & Bicycle Master Plan Update, a total of eleven plans were reviewed, including neighborhood specific, city-wide and regional plans. All of the plans, with the exception of the future City of Billings Transportation Master Plan, were published between 2016 and 2024. This section presents brief summaries of each plan, organized chronologically.

CITY OF BILLINGS GROWTH POLICY (2016)

The City of Billings added more than 6,000 people and expanded by 1.5 square miles between 2008 and 2016 alone. One of the main purposes of the Growth Policy is to determine public values and priorities as the City determines the most cost-effective ways to develop. The Policy lays out a vision for Billings in the next 20 years, which emerged through an extensive public comment process and carefully modeled growth scenario planning.

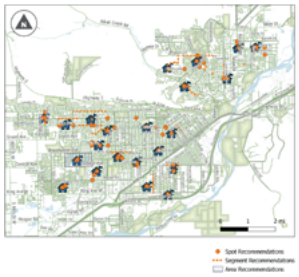
BILLINGS BIKEWAY AND TRAILS MASTER PLAN (2017)

The Billings Area Bikeway and Trail Master Plan establishes both a long-term vision and defined, achievable short-term actions to improve mobility and recreation opportunities in the Billings Area. The plan outlines vision, goals, and objectives for Billings; a review of existing conditions; an analysis of public needs and preferences; policy, program, and engineering recommendations; and a guide to implementation.



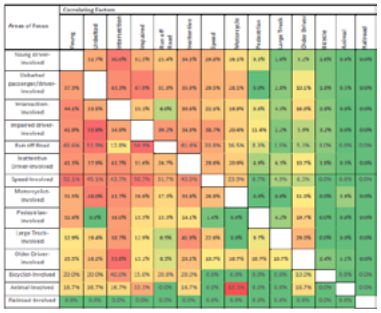
BILLINGS AREA WAYFINDING SIGNAGE PLAN (2020)

The Billings Area Wayfinding Signage Plan establishes a standard for non-motorized wayfinding signage in Billings with branded wayfinding signage. The wayfinding signage system is designed to connect places, keep information simple, help users maintain motion, be predictable, and promote active travel.



BILLINGS SAFE ROUTES TO SCHOOL PLAN UPDATE (PHASE 1) (2022)

This plan updated the original 2011 plan conducted by the City of Billings and evaluated walking, biking, and rolling conditions within a half mile of Billings Public Schools Elementary Schools and developed a list of projects that could improve conditions. Projects included facilities such as enhanced crossings, missing sidewalks, traffic calming, and more.

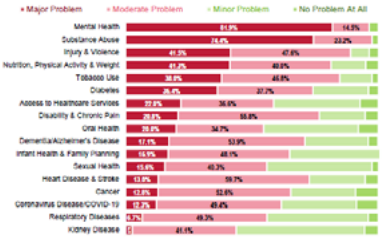


BILLINGS COMMUNITY TRANSPORTATION SAFETY PLAN (2022)

The original Billings Community Transportation Safety Plan (CTSP), adopted in 2016, was a collaborative effort between the Montana Department of Transportation (MDT) and the MPO. The ongoing purpose of the CTSP is to reduce roadway fatalities and serious injuries in the Billings MPO area. This process uses a data-driven approach to identify safety issues and determine areas in need of increased focus and strategies to reduce roadway fatalities and serious injuries.

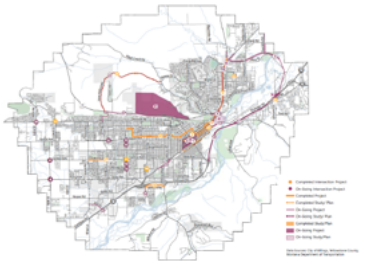
THE NATIONAL COMMUNITY SURVEY REPORT (2022)

The National Community Survey (or NCS) report is about the "livability" of Billings. The survey captures residents' opinions considering ten central facets of a community, including health and wellness, parks and recreation, community design, and mobility, among others.



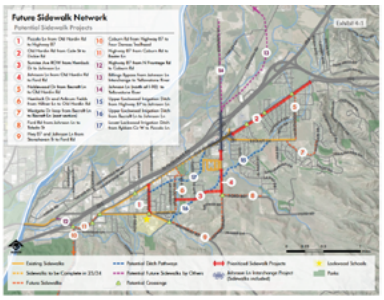
COMMUNITY HEALTH NEEDS ASSESSMENT (2023)

This Community Health Needs Assessment is a systematic approach to determining the health status, behaviors, and needs of residents in Yellowstone County, Montana. This information may be used to inform decisions and guide efforts to improve community health and wellness, including serving as the basis for the county's Community Health Improvement Plan (CHIP). A Community Health Needs Assessment provides information so that communities may identify issues of greatest concern and decide to commit resources to those areas, thereby making the greatest possible impact on community health status.



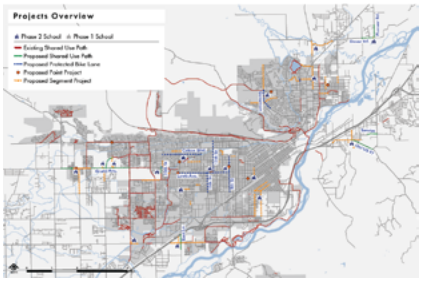
BILLINGS URBAN AREA LONG RANGE TRANSPORTATION PLAN (2023)

The Billings Planning Area Long Range Transportation (LRTP) is a framework to guide the continued development and implementation of multimodal transportation system projects for the Billings planning area. The LRTP is updated every five years, and the previous iteration was completed in 2018. This LRTP assesses today's (2023) land use and transportation conditions to forecast the future (year 2045) conditions, which aids in identifying and strategizing transportation improvements for the region.



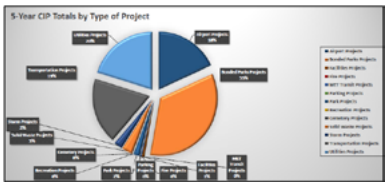
LOCKWOOD NON-MOTORIZED TRANSPORTATION PLAN

Lockwood is a community on the eastern outskirts of the City of Billings and is home to more than 7,000 residents. In 2014, voters passed a measure establishing the Lockwood Pedestrian Safety District to fund sidewalks in the community The Lockwood Non-Motorized Transportation Plan considered where future investments should be made with funds from the district.



BILLINGS SAFE ROUTES TO SCHOOL PLAN UPDATE, PHASE 2 (2024)

At the encouragement of Billings City Council, a second Safe Routes to School plan was conducted to look at walking, biking, and rolling conditions around additional schools including Billings Public Schools middle schools and private and Yellowstone County schools within the Billings urbanized area.



CITY OF BILLINGS CAPITAL IMPROVEMENT PLAN (FY 2025-2029)

This comprehensive five-year plan identifies needs for construction of capital projects or improvements to the City's infrastructure and facilities. The City of Billings FY 2024-2028 Capital Improvement Plan (CIP) contains information on how the City plans to invest available resources into key infrastructure and facilities between fiscal years 2024 and 2028. The CIP provides a forecast of funds available for capital projects and identifies all planned capital improvement projects and their estimated costs over the five-year period.

CITY OF BILLINGS TRANSPORTATION MASTER PLAN

The future City of Billings Transportation Master Plan will consider transportation for all modes across the City of Billings. Outcomes of the plan could vary from new street types to identification of specific elements for specific roadways. An extensive public outreach effort will help shape the plan.

CHAPTER 3

Existing Conditions

Existing Pedestrian and Bicycle Facilities

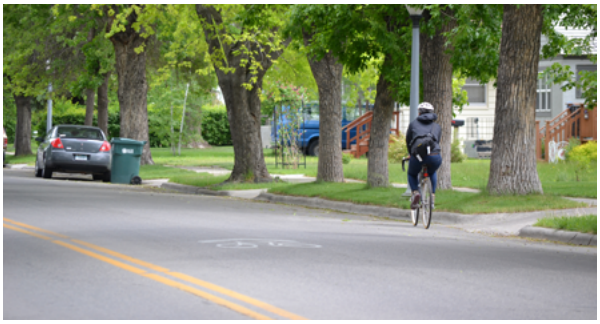
As outlined in Chapter 2, the network of bicycle and pedestrian facilities in the Billings area continues to grow. The types of bicycle facilities that exist in Billings today include conventional bike lanes, buffered bike lanes, shared use paths, neighborhood bikeways, and shared lane markings. Figures 3.1 and 3.2 show maps of existing bicycle and pedestrian facilities in the Billings area.

SHARED USE PATH 55 MILES IN BILLINGS AREA

Shared use paths, also referred to as Sidepaths when adjacent to a roadway, are paved off-street facilities that are physically separated from roadways and design to accommodate two-way, non-motorized travel. Billings has additional miles of paths that are narrower than 10 feet.

BIKE LANE 41 MILES IN BILLINGS AREA

Conventional bike lanes are on-street bikeways that are visually separated from motor vehicle traffic with white striping. They also include pavement markings and signage.



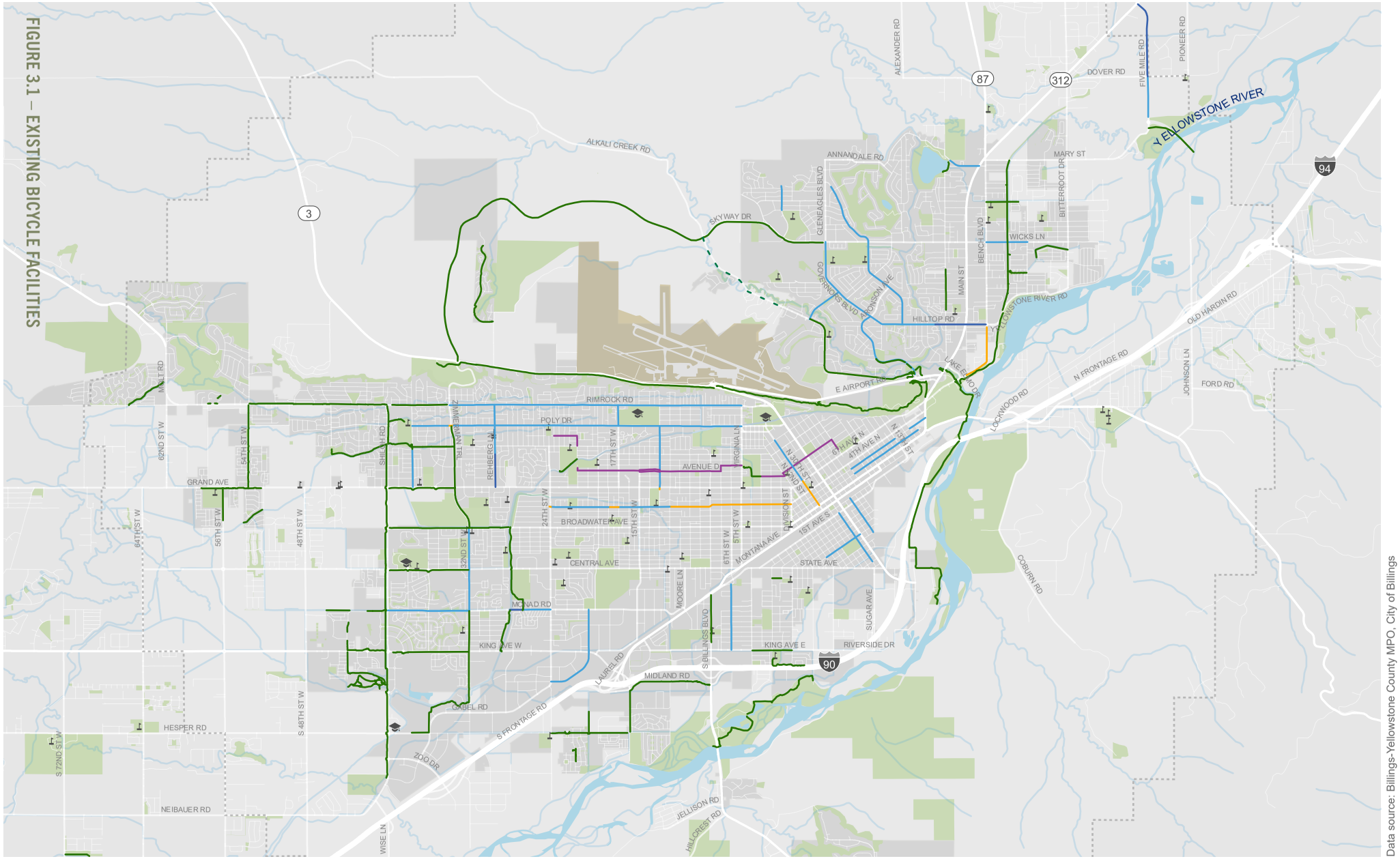
NEIGHBORHOOD BIKEWAY 5.7 MILES IN BILLINGS AREA

Neighborhood bikeways are mixed traffic facilities—meaning bicyclists and motor vehicles share the same roadway space—that prioritize bicyclist safety and comfort. They are planned along low-volume residential streets and include shared lane markings and bicycle wayfinding signage. In some cases, enhanced crossings and/or traffic calming features are included to create a low-stress bicycling experience. 5.7 miles includes all sharrows in Billings.

BUFFERED BIKE LANE 3 MILES IN BILLINGS AREA

Buffered bike lanes are conventional bike lanes that include additional striping, creating a visual buffer and greater separation between the bike lane and motor vehicle traffic. Buffered bike lanes currently exist in locations such as Monad Rd., Hilltop Rd., Rehberg Lane and Five Mile Rd.

FIGURE 3.1 – EXISTING BICYCLE FACILITIES



EXISTING BICYCLE FACILITIES

BILLINGS AREA PEDESTRIAN & BICYCLE MASTER PLAN

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EXISTING

- Bike Lane
- Buffered Bike Lane
- Neighborhood Byway
- Shared Lane Marking
- Shared Use Path

- Parks
- Schools
- Colleges
- City of Billings Boundary
- MPO Boundary

N

0 2 4 MILES

Data source: Billings-Yellowstone County MPO, City of Billings

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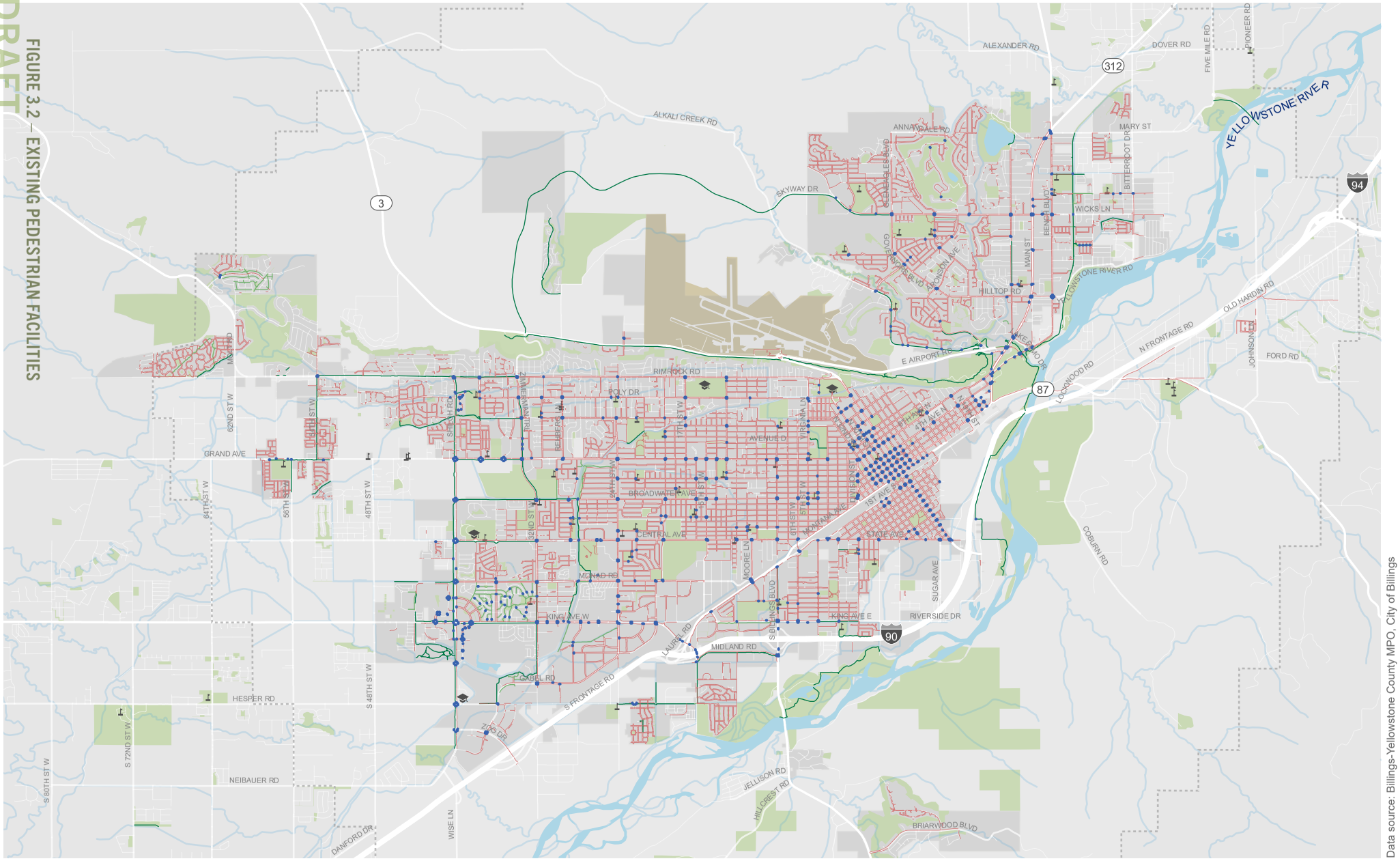
FIGURE 3.2 — EXISTING PEDESTRIAN FACILITIES



Data source: Billings-Yellowstone County MPO, City of Billings

EXISTING PEDESTRIAN FACILITIES

BILLINGS AREA PEDESTRIAN & BICYCLE MASTER PLAN

- Crosswalks (1154)
- Sidewalks
- Shared Use Path
- Neighborhood Trail
- Parks
- Schools
- Colleges
- City of Billings Boundary
- MPOBoundary

N

0 2 4 MILES

Network Analysis

The existing network maps help to identify existing gaps and opportunities for connections; however, further network analysis and mapping of user count data aid in understanding parts of the network that might benefit from future improvements. This section explores takeaways from analyzing the network's Level of Traffic Stress (LTS) for both pedestrian and bicycle networks, crash history and safety, and documented use of Billings' bikeways and trails.

Level of Traffic Stress

A Level of Traffic Stress (LTS) analysis is a method that seeks to quantify the amount of stress a bicyclist or pedestrian is likely to experience on a given corridor, especially related to exposure to motor vehicle traffic. In other words, it gauges how comfortable the network is for people bicycling and walking. LTS analysis is based on research related to bicyclist preferences and behavior, which finds that most people (51–56%) who are interested in using a bicycle for transportation are concerned about safety and prefer lower-stress environments, typically characterized by quiet neighborhood streets or facilities that provide physical separation from motor vehicle traffic. This group is referred to as "interested but concerned" and will usually choose not to ride a bicycle if low-stress bicycle facilities are not provided. Because they make up the majority of the population, the "interested but concerned" group is the target design user when planning and designing bicycle networks. Figure 3.1 on pg. 25 highlights design user profiles of adults who have stated an interest in bicycling, based on national research. Of note, both LTS analyses only evaluate the roadway segments, not specifically the crossings. Future Plans may evaluate crossings.

BICYCLE LEVEL OF TRAFFIC STRESS

Bicycle Level of Traffic Stress (BLTS) is measured by evaluating variables such as roadway speeds, traffic volumes, roadway widths (number of lanes), and bicycle facility characteristics. The methodology used for this plan is based on the 2012 Minnesota Transportation Institute (MTI) Report 11-19: Low-Stress Bicycling and Network Connectivity. Figure 3.3 illustrates the results of the BLTS analysis.

PEDESTRIAN LEVEL OF TRAFFIC STRESS

Similar to BLTS, the Pedestrian Level of Traffic Stress (PLTS) analysis considers factors such as sidewalk presence, sidewalk width, sidewalk buffer, roadway speed, motor vehicle volume of the adjacent roadway and roadway width to evaluate the pedestrian experience along a given corridor and is dependent upon the availability and accuracy of existing data. The methodology used for this plan is based on the methodology used by the Oregon Department of Transportation in their Analysis Procedures Manual. Figure 3.4 shows the results of the PLTS analysis for the Billings area.

FIGURE 3.1 – DESCRIPTION OF LTS

LTS analysis categorizes corridor segments into four LTS tiers:

LTS 1

Corridors that would be tolerable for **all ages and abilities**—including, in most cases, children and elderly adults—to ride or walk

LTS 2

Corridors that could comfortably ridden or walked by the **average adult population**

LTS 3

Corridors that would attract **"somewhat confident"** bicyclists and pedestrians, but would likely deter "interested but concerned" users

LTS 4

Corridors that are only acceptable by **"highly confident"** bicyclists and pedestrians

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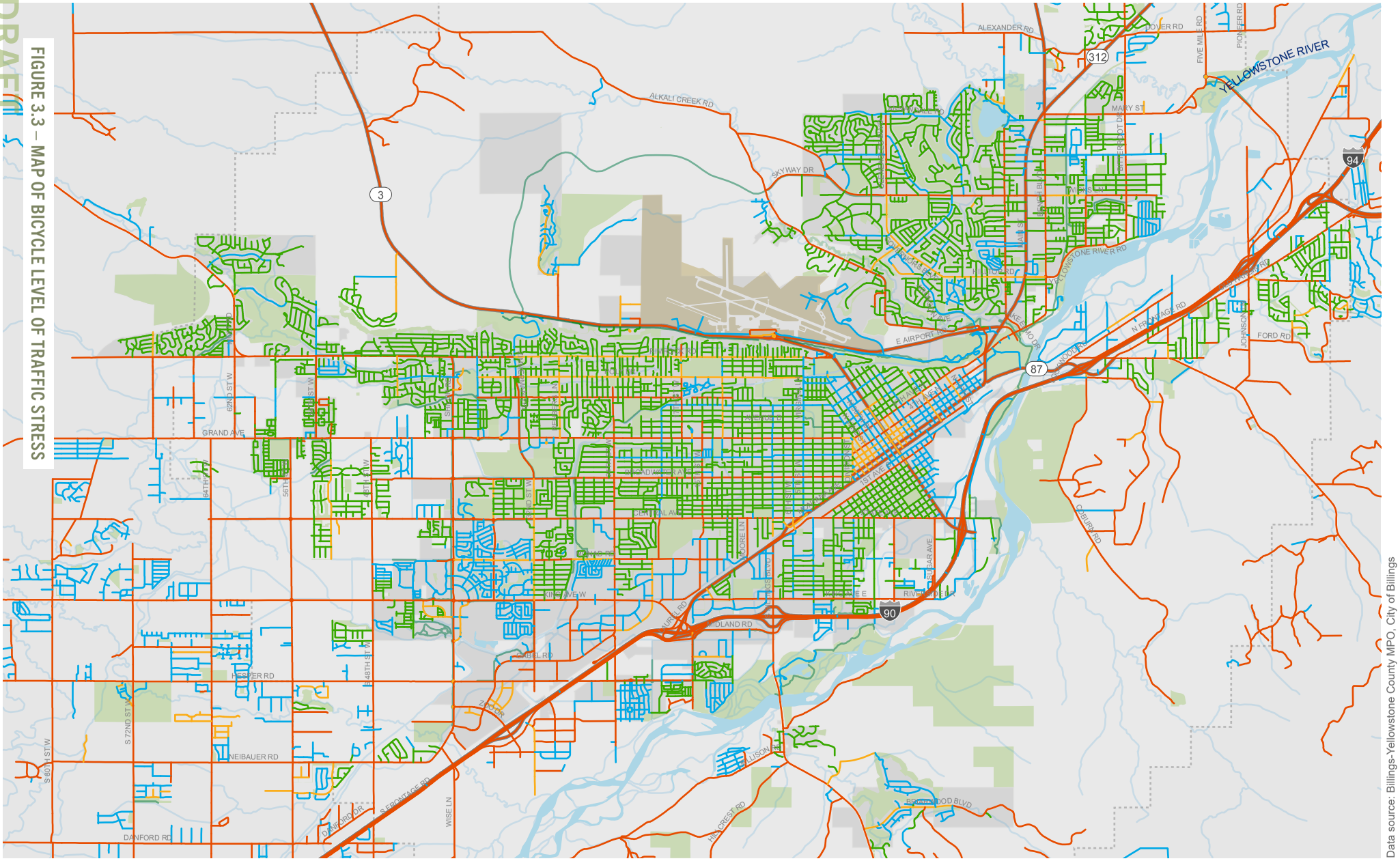
FIGURE 3.3 – MAP OF BICYCLE LEVEL OF TRAFFIC STRESS



Data source: Billings-Yellowstone County MPO, City of Billings

BICYCLE LEVEL OF TRAFFIC STRESS

BILLINGS AREA PEDESTRIAN & BICYCLE MASTER PLAN

The Bicycle Level of Traffic Stress analysis only evaluates road segments and not crossings. This is evaluated using system-wide data, however, when project move into the design phase careful attention must be paid to factors that affect BLTS.

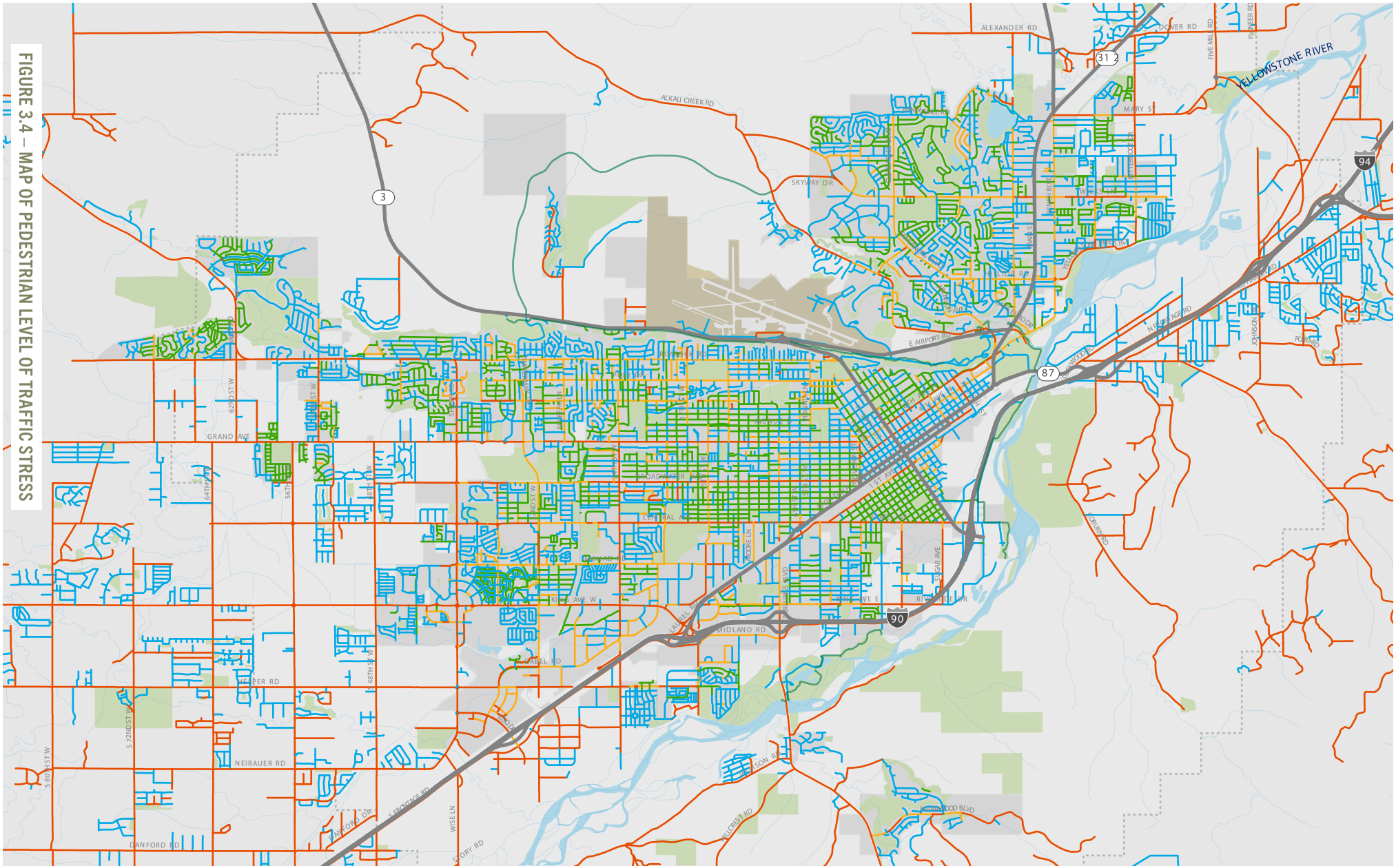
N

0 2 4 MILES

LTS SCORE

- 1 - All Ages and Abilities
- 2 - Most Adults
- 3 - Enthused and Confident
- 4 - Strong and Fearless
- Shared Use Path
- MPOBoundary
- City of Billings Boundary

FIGURE 3.4 – MAP OF PEDESTRIAN LEVEL OF TRAFFIC STRESS



PEDESTRIAN LEVEL OF TRAFFIC STRESS

BILLINGS AREA PEDESTRIAN & BICYCLE MASTER PLAN

The Pedestrian Level of Traffic Stress analysis only evaluates road segments and not crossings. This is evaluated using system-wide data, however, when project move into the design phase careful attention must be paid to factors that affect BLTS.

DRAFT

N

0 2 4 MILES

LTS SCORE

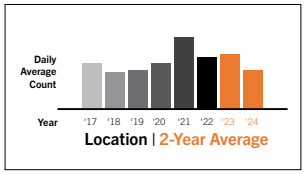
- 1 - All Ages and Abilities
- 2 - Most Adults
- 3 - Enthused and Confident
- 4 - Strong and Fearless
- Shared Use Path
- MPOBoundary
- City of Billings Boundary

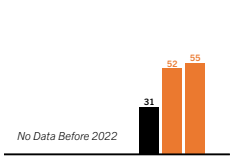
Data source: Billings-Yellowstone County MPO, City of Billings

User Count Data

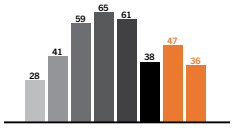
Bike Lane Counts

Daily Average Counts: 2017-2024

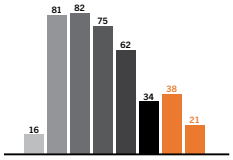




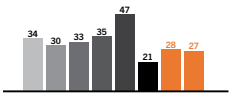
Poly Drive | 54
West of Shadow Lawn Ct



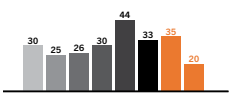
Poly Drive | 42
West of 21st St West



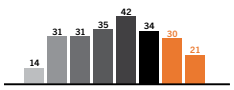
South 28th St | 30



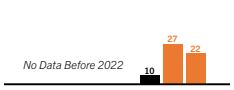
North 30th St | 28



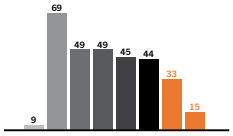
Rimrock Rd | 27



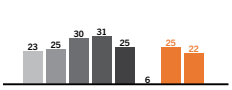
Lewis Ave | 25



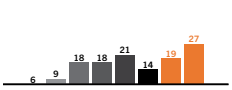
Ave D Bikeway | 24



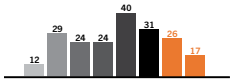
2nd Ave North | 24



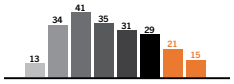
Governors Blvd | 23



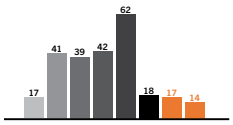
38th St West | 23



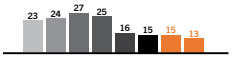
3rd Ave North | 21



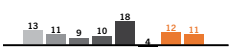
6th Ave South | 18



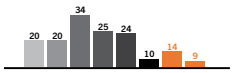
13th St West | 15



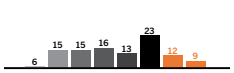
Nutter Blvd | 14



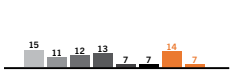
Senators Blvd | 12



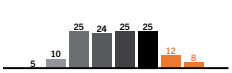
Monad Rd | 11



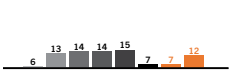
High Sierra Blvd | 10



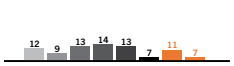
Aronson Ave | 10



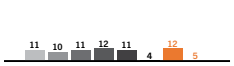
Lake Hills Dr | 10



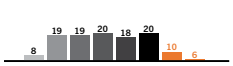
32nd St West | 10



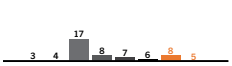
Pemberton Ln | 9



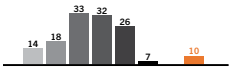
Overland Ave | 8



S 25th Street | 8

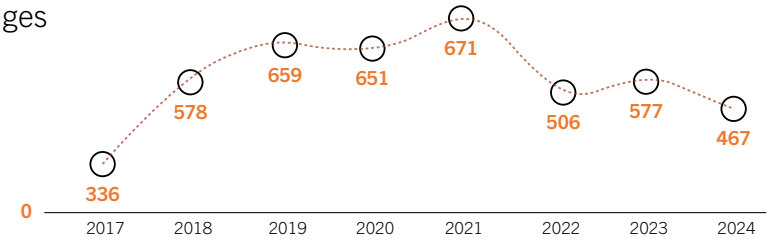


Briarwood Blvd | 7



Calhoun Ln | 5
No Data for 2023

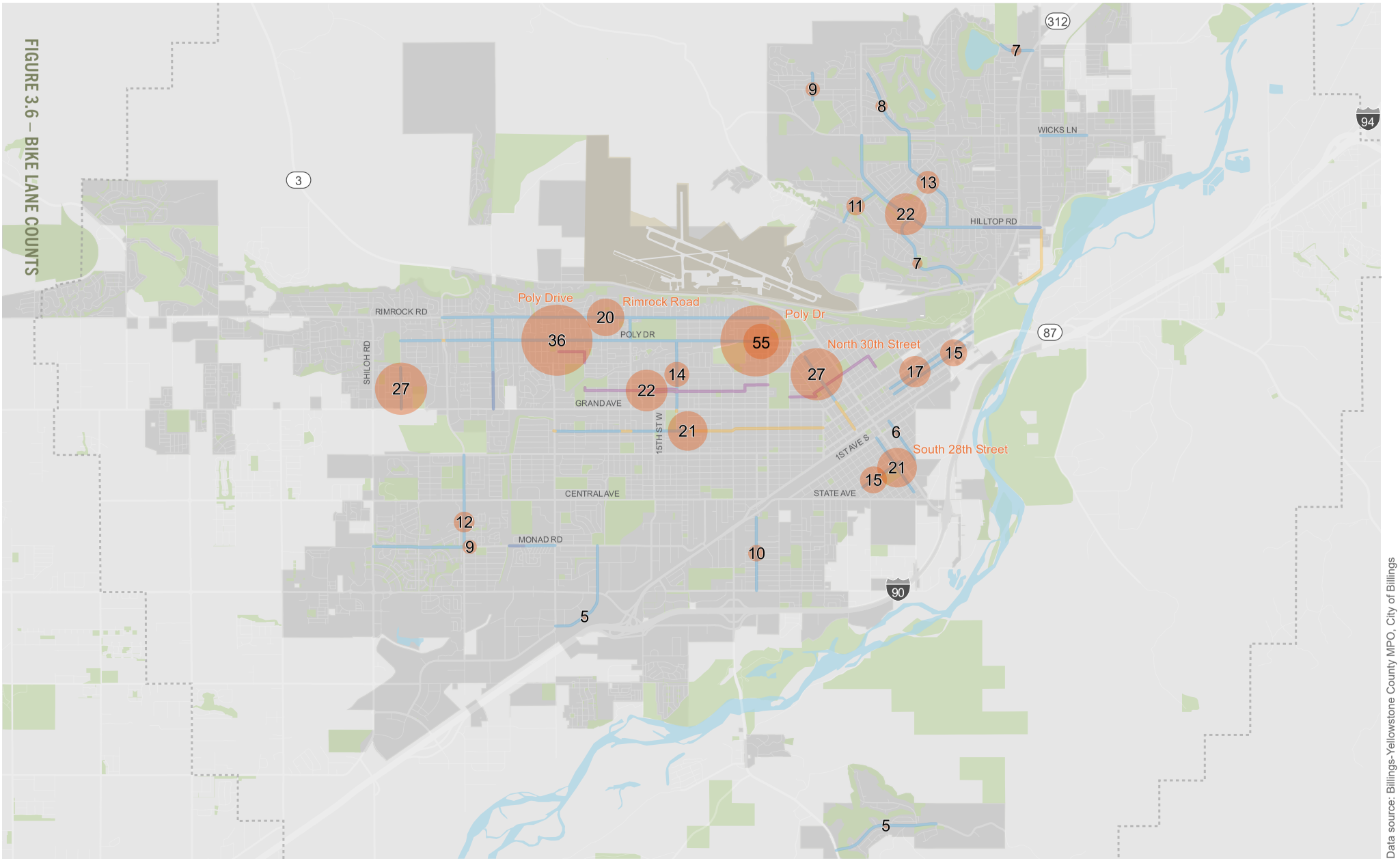
Total Daily Averages



Bike lane counts peaked in many locations during the COVID-19 pandemic bicycling boom of 2020-2021, where many residents turned to biking, walking, and rolling outside to safely stay active, see friends, and relieve stress.

Bike lane counts tend to be higher in areas with a more connected bikeway network, rather than in areas where bike facilities were isolated.

FIGURE 3.6 – BIKE LANE COUNTS



BIKE LANE COUNTS

BILLINGS AREA PEDESTRIAN & BICYCLE MASTER PLAN

2024 Average Daily Counts

- Neighborhood Bikeway
- Bike Lane
- Buffered Bike Lane
- Shared Roadway
- MPO Boundary
- City of Billings Boundary

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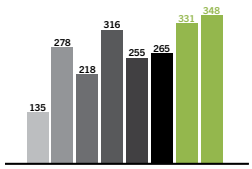
N

0 2 4 MILES

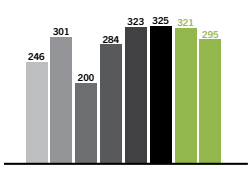
Data source: Billings-Yellowstone County MPO, City of Billings

Trail User Counts

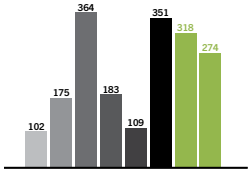
Daily Average Counts: 2017-2024



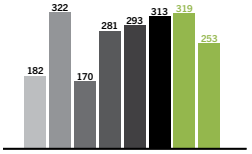
Big Ditch Trail | 340



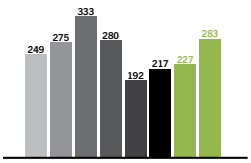
Descro Park Trail | 308



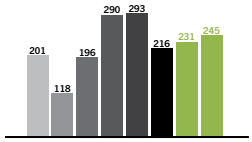
Two Moon Park Trail | 296



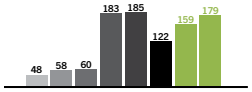
Pioneer Park Trail | 286



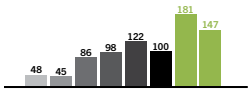
Kiwanis Trail | 255



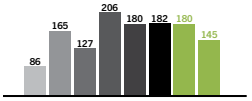
Swords Park Trail | 238



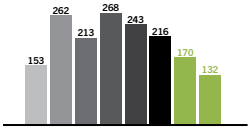
Stewart Park Trail| 169



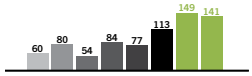
54th St West Trail| 164



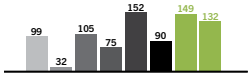
Metrapark Trail | 162



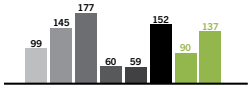
Norm's Island Trail | 151



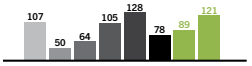
Alkali Creek Rd | 145



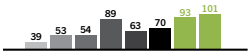
Rimrock Rd Trail | 141



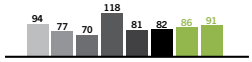
Will James Cut | 114



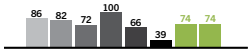
Mystic Park Trail | 105



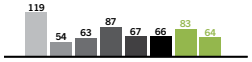
Rehberg Estates Trail | 97



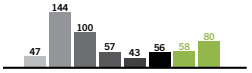
Lampman Strip Park | 89



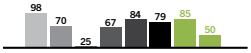
Shiloh North | 74



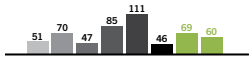
Broadwater Trail East | 73



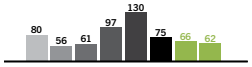
Cabela's Trail | 69



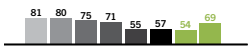
Bannister Drain Trail | 67



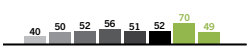
Broadwater Trail West | 65



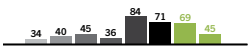
Shiloh South | 64



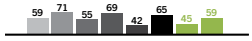
Midland Trail | 61



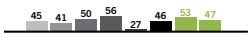
TransTech | 60



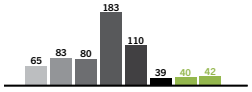
South Billings Blvd | 57



Zimmerman Road | 52



Aronson Road | 50

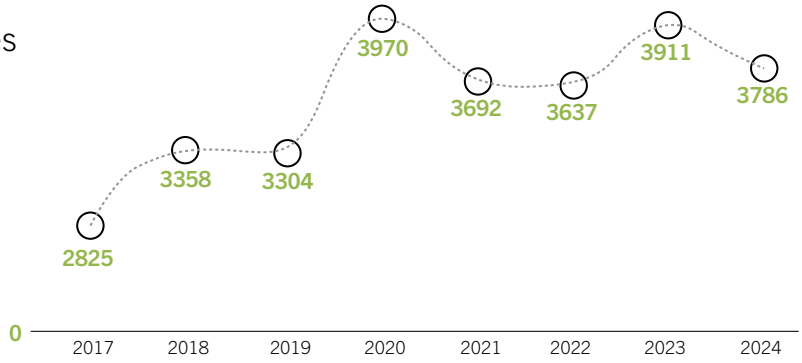


Coulson Park | 41

King Ave West | 30

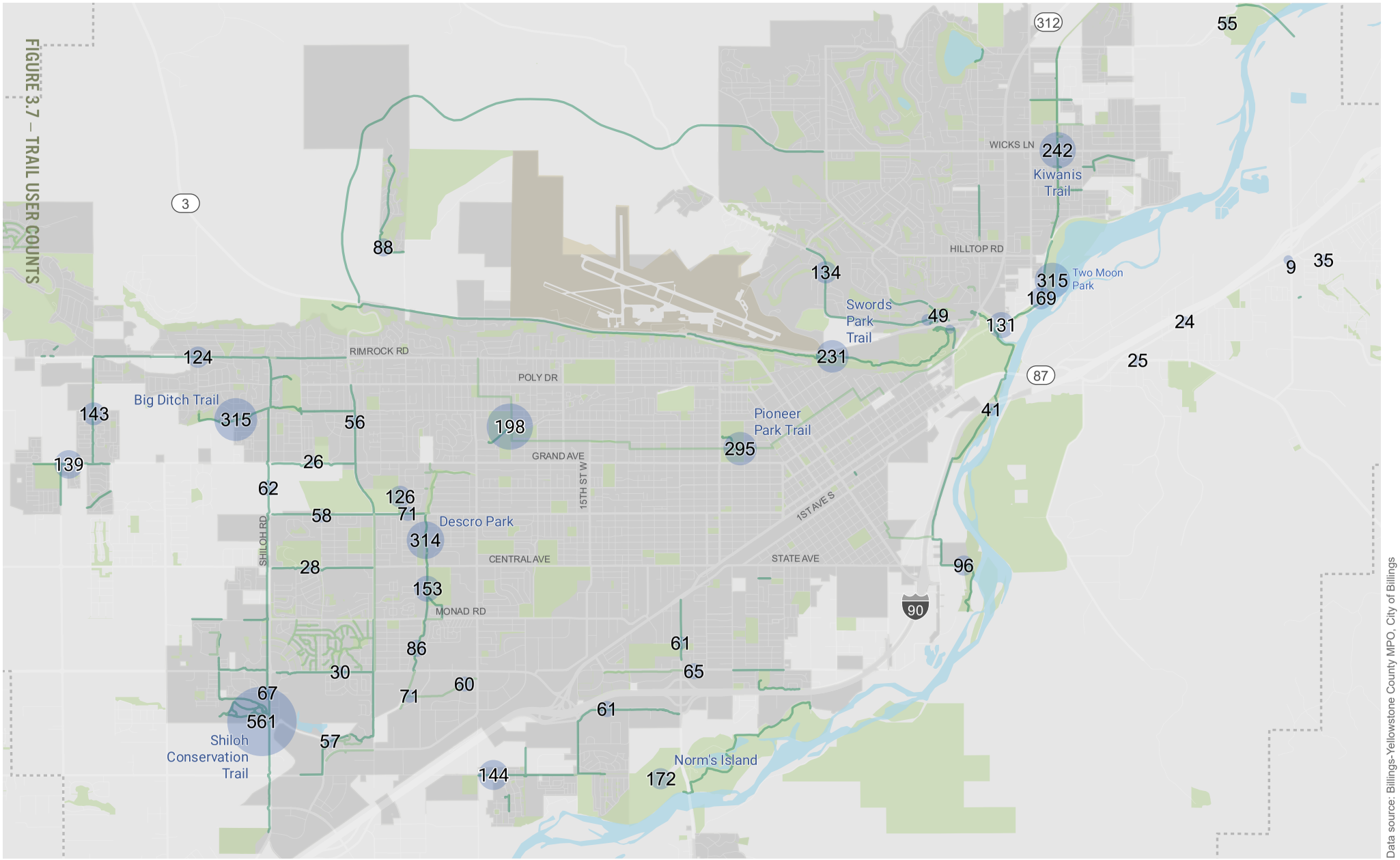
Grand Ave Trail | 27

Total Daily Averages



While Shared Use Path (trail) counts peaked during the COVID-19 pandemic, they remain high at less than a 5% decrease in 2024 over 2020.

Shared use paths appeal to a wide variety of users. as can be seen by their high volume of use.



TRAIL USER COUNTS

BILLINGS AREA PEDESTRIAN & BICYCLE MASTER PLAN

*Includes all trail users (pedestrians, cyclists, etc.)

2024 Average Daily Counts

- Shared Use Path
- Neighborhood Trail
- MPO Boundary
- City of Billings Boundary

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CHAPTER 4

Community Input

Phase I Outreach

From mid-November 2023 to early January 2024, the general public was engaged in both online and in-person settings to provide input on preference, challenges, and opportunities surrounding bicycle and pedestrian mobility in the Billings Area. Public input was solicited via an online survey and interactive comment map. The in-person open house held in November mirrored the same input opportunities as the online options and are included in this summary of what was heard.

Phase I Participation

201
survey responses

189
map comments from approx. 64 IP addresses

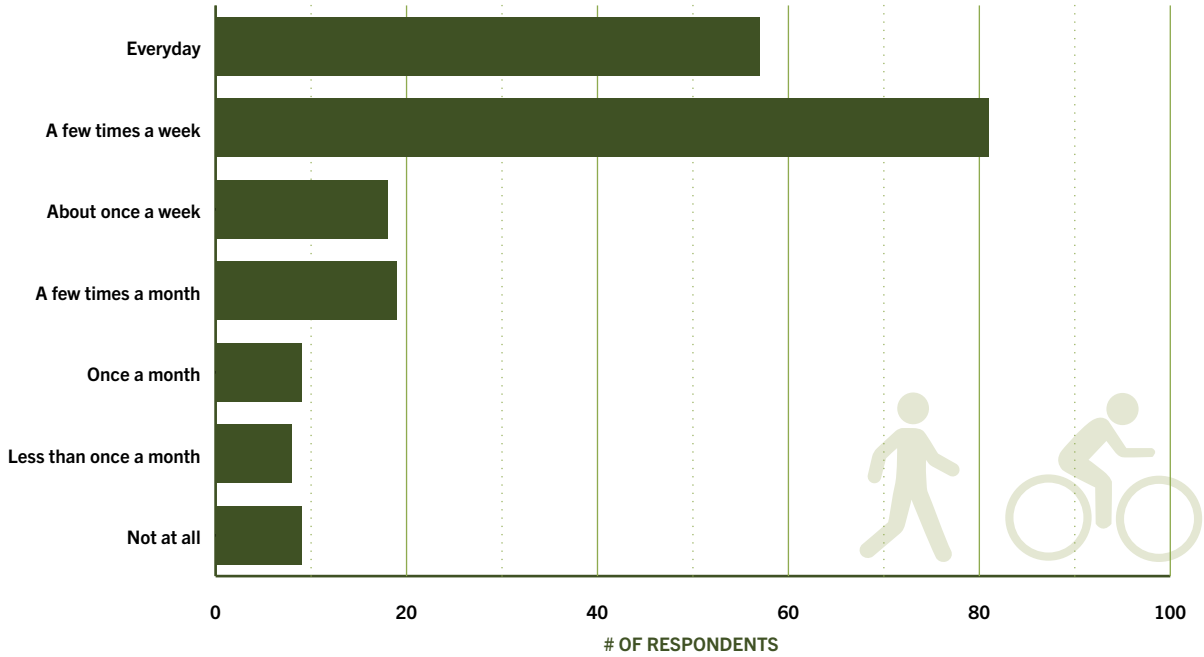
74
event attendees

1800
website visits from 10/13/23-6/1/24

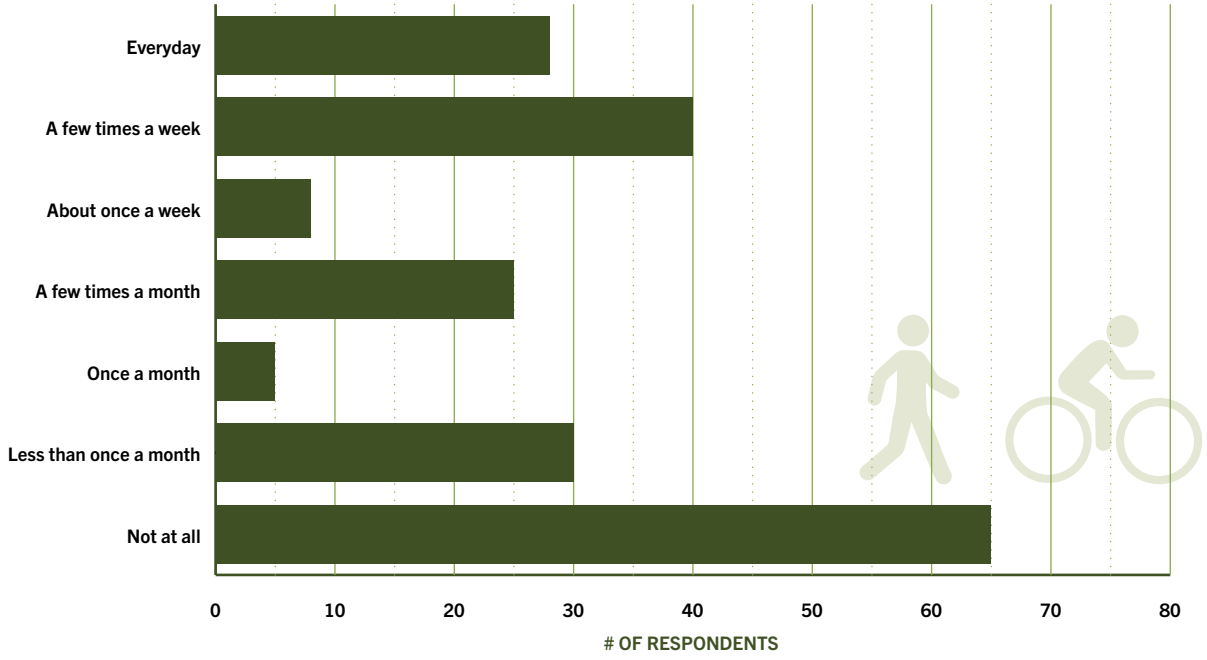
839
unique website users

Online Survey Results

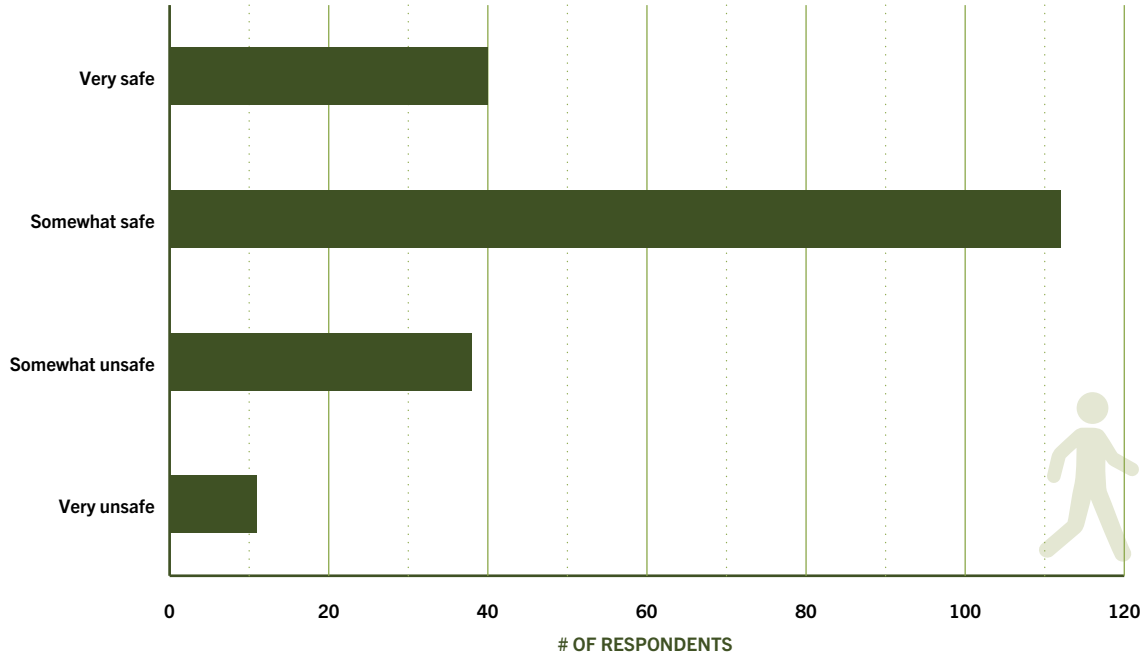
On average, how often do you walk or bike for recreation?



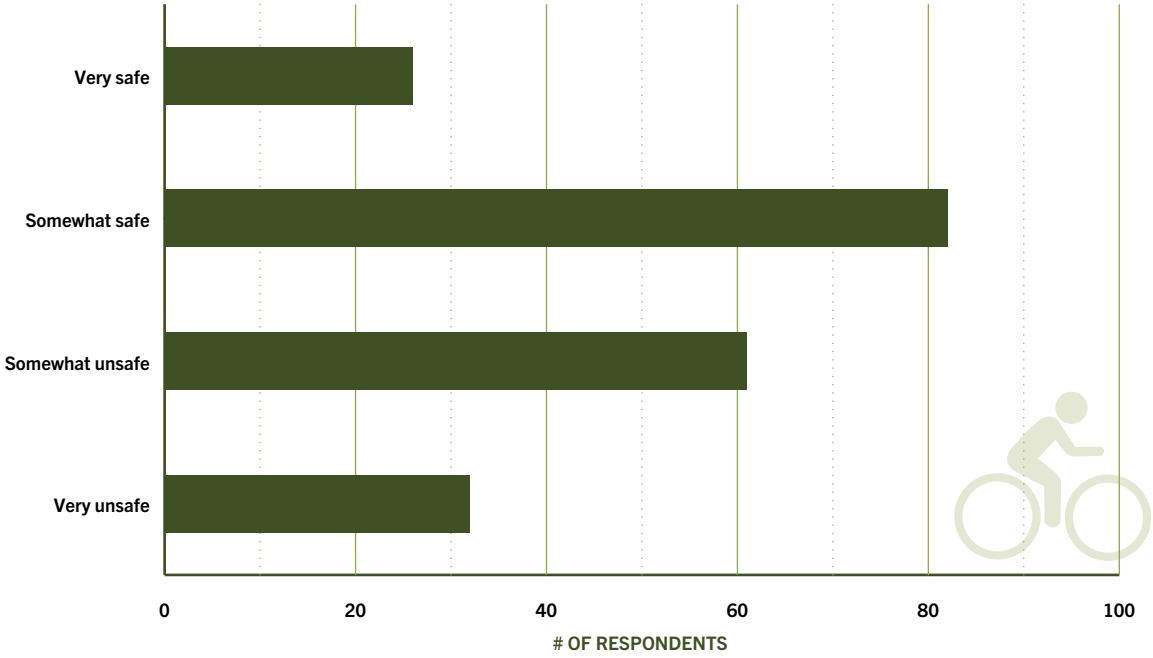
On average, how often do you walk or bike for transportation, including to access transit?



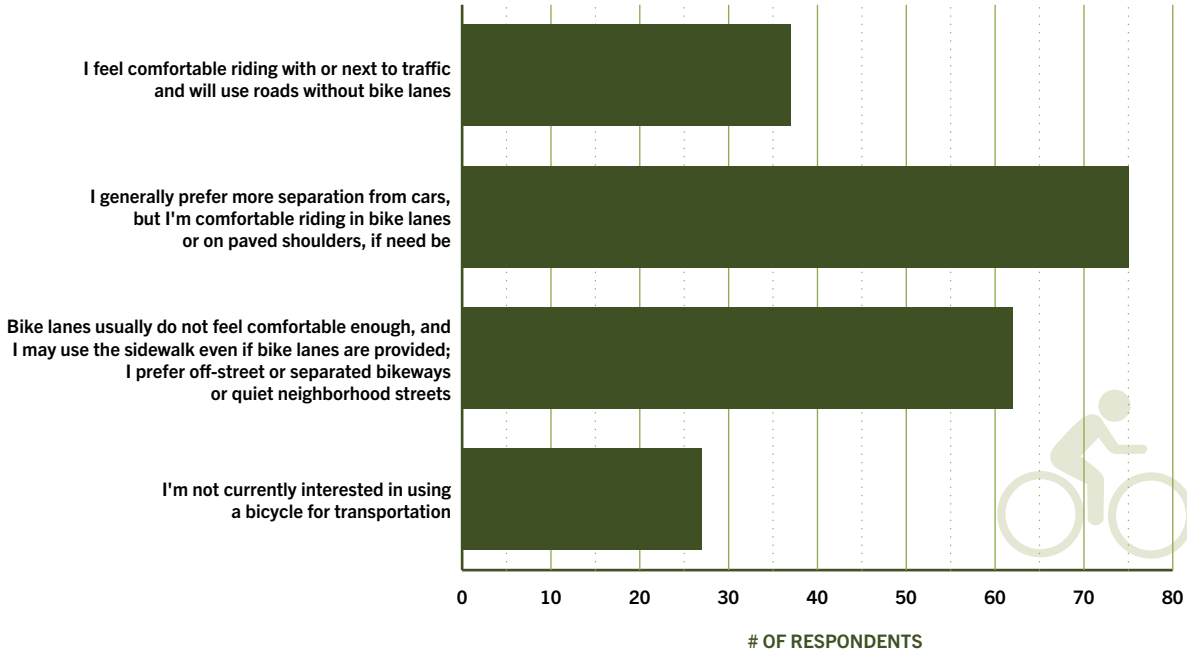
In general, how safe do you feel when walking in Billings?



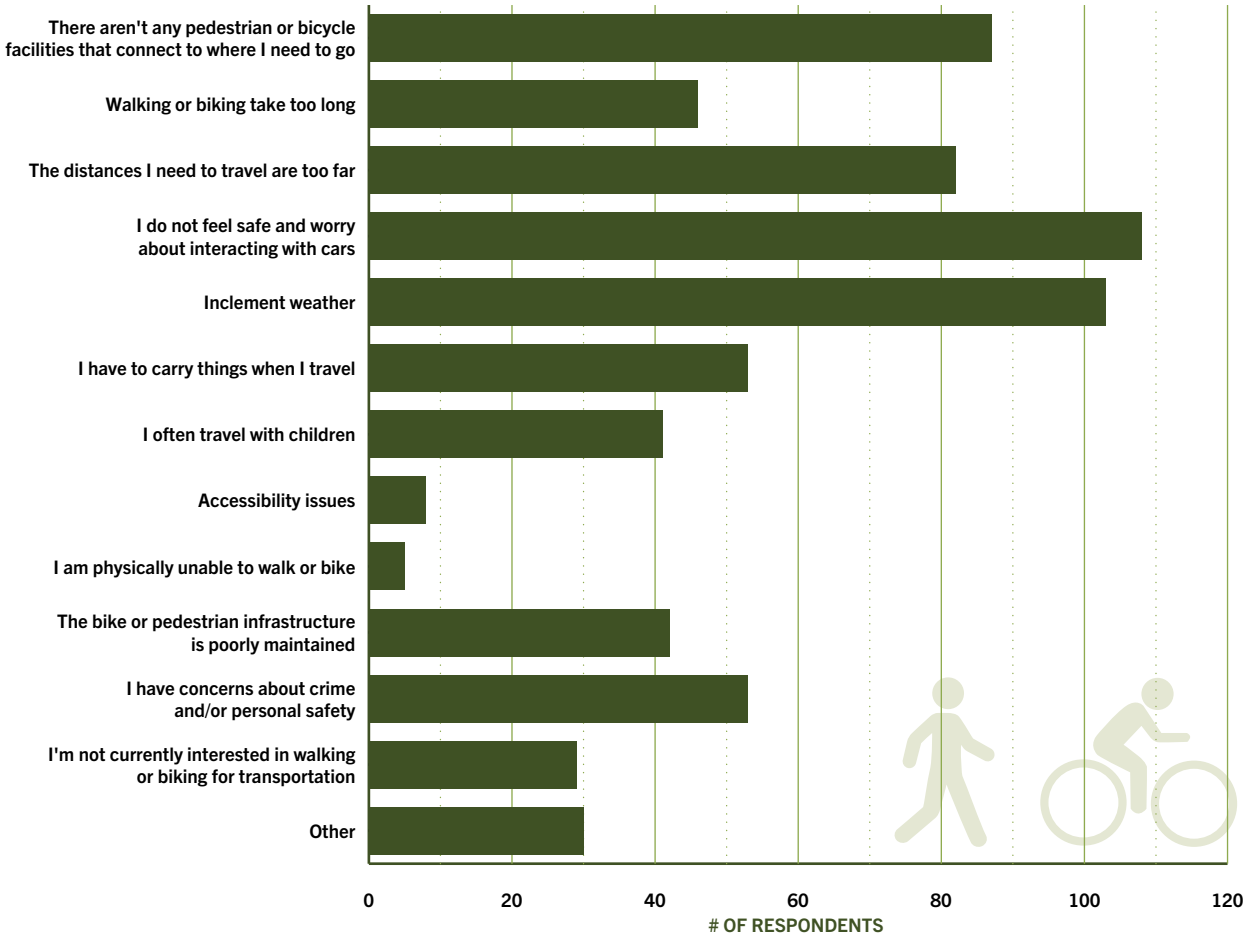
In general, how safe do you feel when biking in Billings?



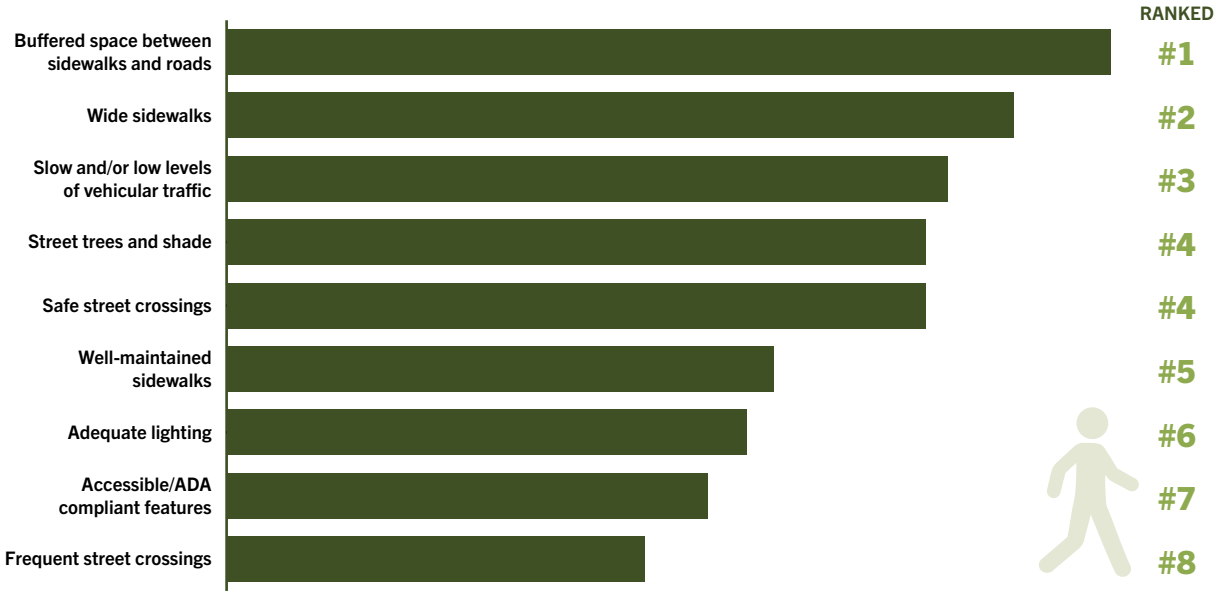
How would you describe yourself when it comes to riding a bicycle?



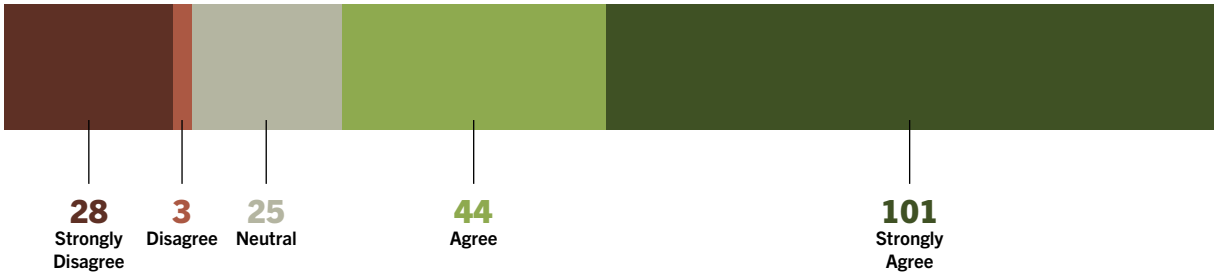
What are some things that prevent you from walking or biking more often?



What is most important to you for a comfortable walking experience? (Ranking question)



I would like to dedicate more investment dollars towards bicycle or pedestrian facilities such as walkways, paved pathways, restrooms, wayfinding signage, etc.



Open-ended Question Response Themes

What would encourage you to walk or bike for transportation more often?

RESPONSE THEME	# COMMENTS	CRITERIA
Infrastructure Improvements	81	Responses indicating a desire for **changes in the physical infrastructure**, such as the construction of new bike lanes, trails, improved crossings, and general enhancements to support walking and biking.
Connectivity	52	Responses emphasizing the **need for improved connectivity between existing paths and trails**, including requests for better-connected routes to destinations like workplaces and shopping areas.
Safety	49	Any response that primarily expressed concerns related to personal safety or the potential danger of biking and walking in certain areas.
Weather and Terrain	21	Feedback related to **weather conditions** impacting the feasibility of walking or biking, as well as comments on the state of sidewalks, trails, and paths in different weather conditions.
Amenities and Comfort	21	Responses indicating a **desire for additional amenities**, such as benches and trees, along walking and biking routes, as well as requests for bike parking and storage facilities.
Traffic Management	14	Concerns or suggestions regarding **traffic management**, including speeding issues and recommendations for better traffic control in neighborhoods.
Travel Distance	10	Concerns related to the **distance between destinations** and ease of getting to destination
Crime and Homelessness	9	Feedback addressing **concerns about crime and suggestions related to addressing homelessness**, with a focus on how these factors impact safety for pedestrians and bikers.
Public Awareness and Education	8	Any suggestion or concern related to the **education of both drivers and the general public regarding pedestrian and bike safety**, including calls for awareness campaigns.
Equipment	6	Owning **equipment that functions properly** or fits the needs of the individual.
Cultural Shift and Community Engagement	4	Responses indicating a **desire for a cultural shift to promote walking and biking**, as well as suggestions for community engagement initiatives.
Incentives and Workplace Support	3	Suggestions or requests for **workplace incentives to encourage walking or biking to work**, as well as comments on the availability of bike-friendly facilities at workplaces and tax incentives.
Specific Trail Requests	3	Explicit requests for the **development or improvement of specific trails or paths**, such as the Skyline Trail or East-West trails.
Public Transportation	2	Feedback expressing a **desire for improved public transportation options**, especially for commuting purposes, and suggestions for enhancements to existing systems.
Concerns About Tax Spending	2	Dissatisfaction or **concerns related to how funds are allocated** and the perceived shift from grant-funded projects to taxpayer-funded initiatives.
Physical Limitations	2	Physical limitations that **hinder the individuals ability to bike or walk** more frequently or for longer distances

What do you like about current walking and biking facilities (trails, sidewalks, bike lanes, neighborhood bikeways, etc.) in Billings and why?

RESPONSE THEME	# COMMENTS	CRITERIA
Trail Quality	111	General comments regarding **preference for or state of the trails and paths**. For example: Separated from roadways, dedicated bike lanes, well lit areas, wayfinding ease, maintenance of trails/paths, scenic views, specific attributes about trails/paths/routes
Existing Routes	66	Specific comments about **existing trails, paths, or routes that are enjoyed or appreciated.**
Accessibility and Connection	52	Remarks about **connectivity and access to trails/paths/routes**, with emphasis on networks of interconnected trails/paths/routes, low- to no-cost, and number of trails/paths.
Infrastructure and Development	26	Feedback on the **development of new biking and walking facilities**, suggestions for infrastructure improvements, such as better signage, lighting, and overall design, requests for more trails/paths, especially connecting different parts of the City, requests for more dedicated bike lanes to enhance safety, requests for improved connectivity between neighborhoods and various parts of the City.
Concerns	23	General **concerns about safety,** especially in high vehicle traffic areas, tax burdens, reckless drivers, general concerns with biking/walking in Billings.
Community Health and Recreation	21	Recognition of **health benefits of walking and biking**, enjoyment of recreational opportunities provided by paths/routes, and general statements about using paths/trails/routes for recreation.

What do you think could be improved about walking and biking facilities (trails, sidewalks, bike lanes, neighborhood bikeways, etc.) in Billings and why?

RESPONSE THEME	# COMMENTS	CRITERIA
Infrastructure Enhancement	96	Responses indicating a desire for **changes in the physical infrastructure**, such as the construction of new bike lanes, trails, improved crossings, signage, general lighting upgrades, and general enhancements to support walking and biking.
Connectivity and Accessibility	54	Remarks about **connectivity and access to trails/paths/routes**, with emphasis on networks of interconnected trails/paths/routes, low- to no-cost, number of trails and paths.
More Parks and Paths	36	Suggestions and comments requesting **additional parks, build out of paths**.
Safety	33	Any response that primarily expressed **concerns related to personal safety**, the potential danger of biking and walking in certain areas, or crime prevention tactics. Requests for **enhanced safety measures** such as upgrades/changes to intersections, 4-way stops, flashing crosswalks, lighting for safety purposes, etc.
Education and Awareness	17	Responses indicating a desire for a **cultural shift to promote walking and biking**, as well as suggestions for community engagement initiatives. Any suggestion or concern related to the **education of both drivers and the general public regarding pedestrian and bike safety**, including calls for awareness campaigns. Publicizing and encouraging the use of trails.
Traffic Management	16	Concerns or suggestions regarding **traffic/vehicle management**, including speeding issues and recommendations for better traffic control in neighborhoods.
Maintenance and Cleanliness	14	Requests and general comments regarding the **general upkeep of bike lanes and paths**, regular litter pickup, and enhanced maintenance.
Amenities and Comfort	14	Responses indicating a desire for **additional amenities**, such as benches, shade trees, water stations, bathrooms, trash cans, etc. along walking and biking routes, as well as requests for bike parking and storage facilities.
Prioritization	7	Requests for **prioritizing infrastructure efforts for active transportation** over purely recreational use, and encouragement for cooperative efforts between city and county areas.
Funding	6	General comments regarding the **funding of new paths**, maintaining paths, or putting funding/dollars towards activities other than biking/walking infrastructure.
Public Transportation	5	Feedback expressing a desire for **improved public transportation options**, especially for commuting purposes, and suggestions for enhancements to existing systems.

Online Interactive Map

The online interactive map allowed the public to explore the existing bicycle and pedestrian network as well as previously planned projects that have yet to be implemented. Participants were prompted to drop markers and draw lines on the map to voice opinions about locations that need bicycle and pedestrian improvements. Map comments are illustrated in Figures 4.1 and 4.2, and are categorized into one of seven categories:

ACCESSIBILITY (6 COMMENTS)

These comments included concerns about barriers to access important destinations or facilities, pointed out facilities that need improvements to accommodate young or inexperienced riders, or identified constrained sidewalks or bike lanes that do not currently meet the needs of all users

CONNECTIVITY (19)

Concerns regarding connectivity focused on connecting the pedestrian and bike network to important origins and destinations, connecting existing fragmented segments and filling in gaps to create a more complete network, leveraging partnerships with developers and local organizations to fill in gaps, coordinating with transit infrastructure to provide multi-modal integration.

INFRASTRUCTURE UPDATE (14)

Residents pointed out specific infrastructure needing maintenance or otherwise not currently meeting the needs of cyclists and pedestrians. These comments also included proposed improvements to existing infrastructure or desired additions.

PROTECTION FROM VEHICLES (28)

These are largely areas that feel unsafe for biking and walking due to a lack of protection from cars. Many of these are unprotected intersections or sections of roads with heavy traffic. Many concerns mentioned speeding as well as overly aggressive or distracted drivers as a barrier to walking and biking, and called for traffic calming, lower speed limits, and physically separated facilities.

CROSSING IMPROVEMENTS (34)

Comments around crossing improvements focused on locations that lack safe pedestrian crossings. These include areas where additional crosswalks are needed or crossings need additional facilities to make them safer, such as more signage, curb bulbouts, or lights. Some residents also suggested grade separated crossings.

PEDESTRIAN EXPERIENCE (7)

Many comments stated the importance and need for an improved pedestrian experience, such as pointing out gaps in the sidewalks, or calling attention to places where adding wider sidewalks, trees, benches, or art would make walking more enjoyable.

OTHER (7)

Some of the comments didn't quite fit into the above categories. These included concerns about poor visibility, confusion about trail routes, or questions about specific policies.

LINE SEGMENTS

Some residents chose to draw lines on the map to illustrate their concerns or ideas. These fell into one of two categories: **needed improvements on existing routes**, and **desired new connections**. Needed improvements included comments on trails that need maintenance, better protection from traffic, or other safety improvements to make the experience of walking and biking more comfortable and enjoyable. Comments pointing to new desired connections focused on connecting important origins and destinations that are currently difficult to reach, and suggested extensions of current trails. Corridors that received the most attention included Poly Dr, Broadwater Ave, 6th Ave N, Central and Grand Ave in the West End, and the Yellowstone River.

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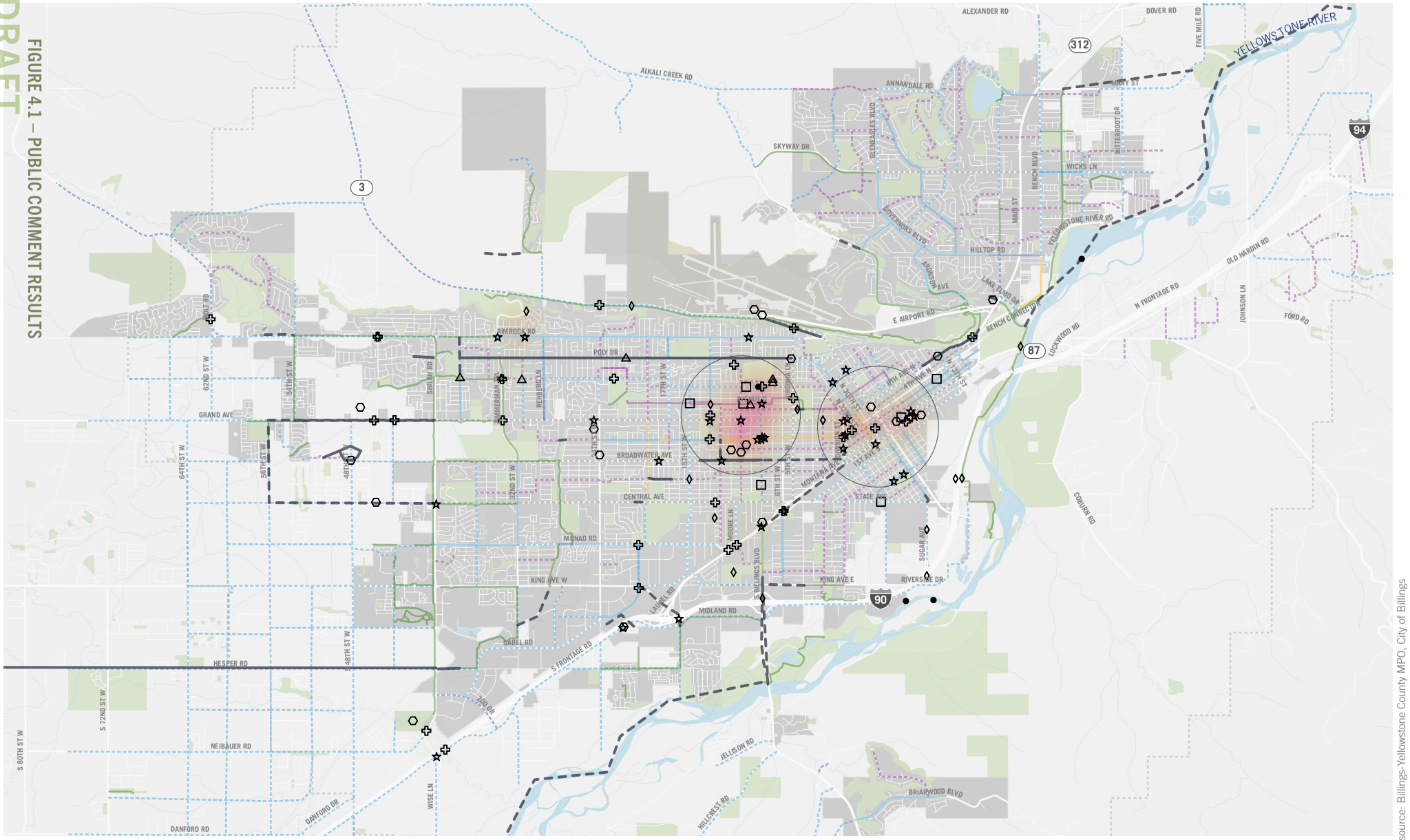
FIGURE 4.1 – PUBLIC COMMENT RESULTS



PUBLIC COMMENTS

BILLINGS AREA PEDESTRIAN BICYCLE MASTER PLAN &

COMMENT CATEGORIES

- Accessibility
- Connectivity
- Pedestrian Experience
- Infrastructure Update
- Protection from Vehicles
- Crossing Improvements
- Other
- High Density Areas
- Improve Existing
- New Connection

EXISTING BIKE FACILITIES

- Buffered Bike Lane
- Bike Lane
- Neighborhood Bikeway
- Shared Lane Marking
- Share Use Path

PROPOSED FACILITIES

- Bufferd Bike Lane
- Bike Lane
- Neighborhood Bikeway
- Shared Lane Marking
- Visionary

N

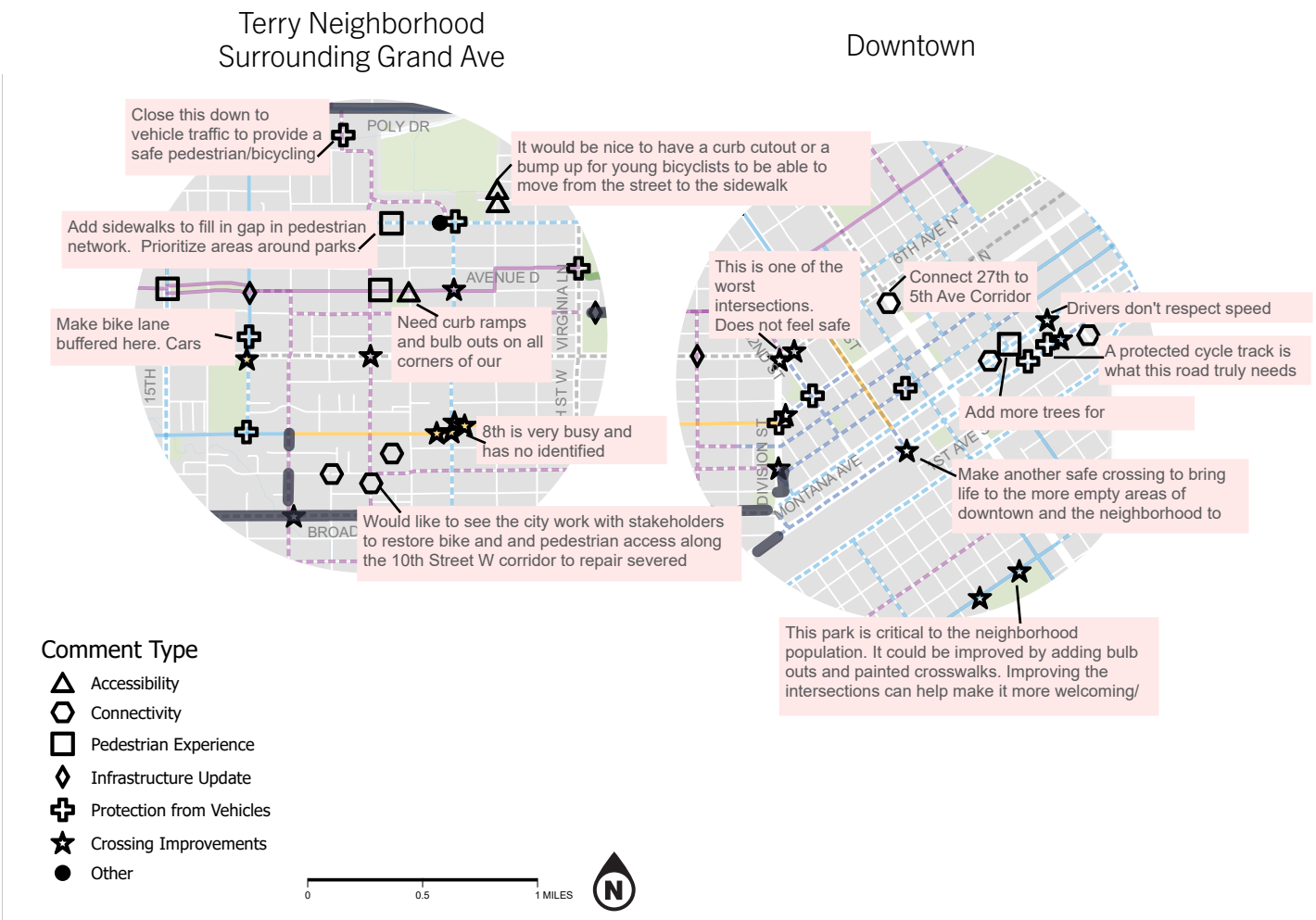
0 2 4 MILES

Data source: Billings-Yellowstone County MPO, City of Billings

Summary

Overall, Billings residents expressed a strong desire for more protection for pedestrians and cyclists, especially young or less experienced riders. Many residents have concerns about speeding cars and distracted drivers and do not feel like popular streets are comfortable without physical buffers and separation from traffic. Many also suggested reduced speeds would help with safety. Lewis Ave, Broadwater Ave, and Division Street were commonly cited as difficult to cross with current infrastructure, traffic speeds and volumes. Montana Ave, Grand Ave, and the downtown area stood out as places where many residents are calling for more protection.

FIGURE 4.2 – AREAS OF FOCUS



Phase II Outreach

Phase II public outreach took place during the month of July 2024; the public was asked to give feedback on the recommended network. Feedback was gathered via the same online interactive mapping tool used in Phase I. In addition to online outreach, the City facilitated a pop-up event along Poly Drive near Veterans Park to drive more traffic to the online comment map and test ideas for a protected bike lane along Poly Drive using temporary materials. MPO staff also talked with more than 200 people at the 2024 Strawberry Fest about what makes a comfortable walking experience.

Phase II Participation

203
map users

186
map comments from 48 IP addresses

310
total event attendees

990
website visits from 7/1/24-8/5/24

724
unique website users

Online Interactive Map

Similar to Phase I's online interactive map, the Phase II map provided the public with the opportunity to provide feedback on the recommended high-comfort and supplemental networks. Participants were prompted to drop pins along proposed routes and provide feedback to voice support, opposition, or general comments about the project. Figure 4.3 shows a screenshot of the interactive web map. In total, 203 people interacted with the online map and 186 comments were left. Respondents identified things like missing connections and crossings, dangerous path and bike lane conditions, inadequate or poor quality infrastructure, and high speed corridors, among many others. They also indicated what proposed routes they disagreed with and the changes they would make.

Each suggestion from the interactive web map was evaluated by planning and public works staff and considered for inclusion in the final network recommendations based on feasibility and the goals of the plan. Public suggestions that aligned with the plans goals and were evaluated as feasible additions to the network were flagged as "highly possible" or "possible", while others were flagged for further evaluation or no action at all. In all, 11 projects were added to the recommended network based on public suggestions. Figure 4.4 shows the specific locations and feasibility of all the comments that were received.

FIGURE 4.3 – PHASE II PUBLIC COMMENT RESULTS

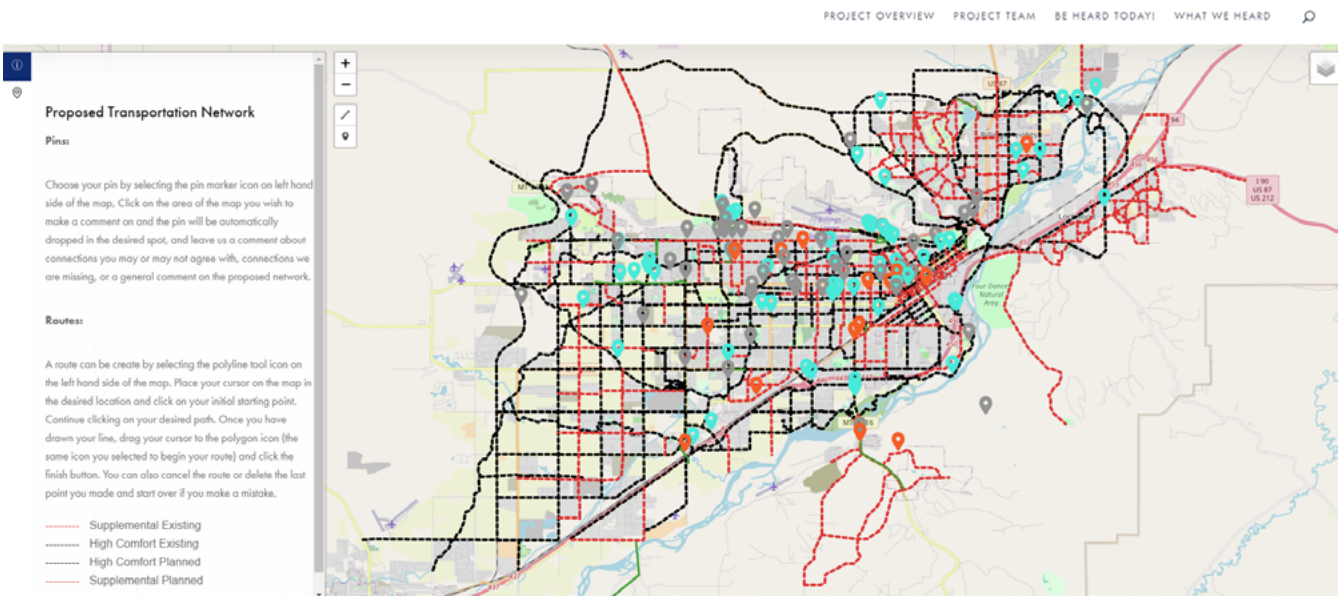


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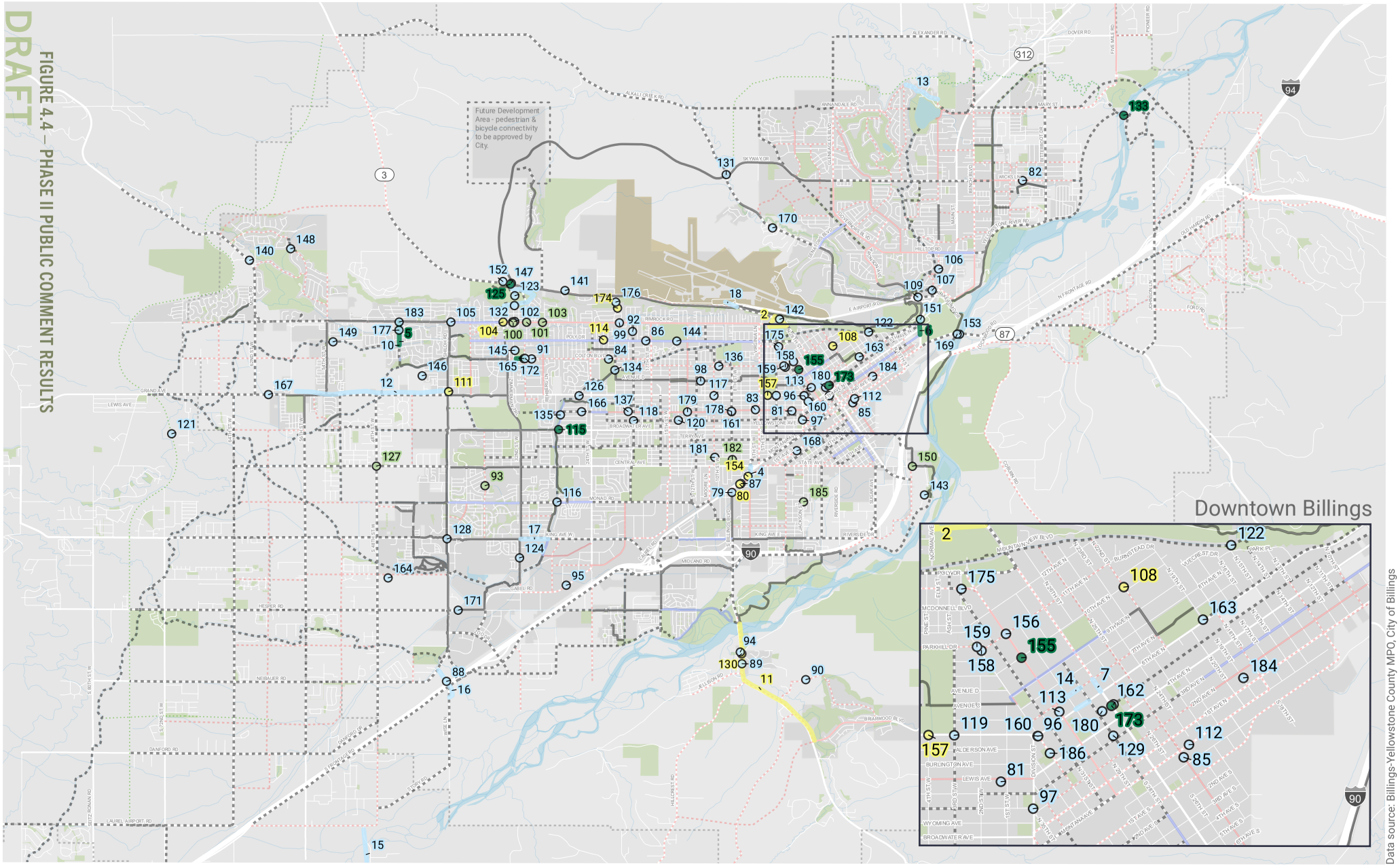
FIGURE 4.4 — PHASE II PUBLIC COMMENT RESULTS



RECOMMENDED NETWORK PUBLIC COMMENTS

BILLINGS AREA PEDESTRIAN & BICYCLE MASTER PLAN

0 2 4 MILES

Notes:

1. Route alignments and facility types are subject to change pending further study and public input process.

2. "High-comfort" facility types vary depending on context, but imply physical separation from motor vehicle traffic OR a low-speed, low-volume mixed traffic environment.

3. For "supplemental" routes, high-comfort facilities should always be considered and studied for feasibility.

4. Labeled segments are associated with the comments in the Public Suggestions Table, see table for more details.

Active Transportation Network

- High Comfort: Existing, to remain
- High Comfort: Existing, future improvement
- High Comfort: New connection
- Supplemental: Existing, to remain
- Supplemental: New connection
- High Comfort: Future concept

Public Comments

- Highly Possible
- Possible
- Evaluation Needed
- No Action

- Highly Possible
- Evaluation Needed
- No Action

Strawberry Festival

In July, the MPO set up a booth at the annual Strawberry Festival, Billings' largest street festival. Staff gathered input and feedback on people's priorities related to what makes a comfortable walking experience in the City. To engage with the public, they used a pinto bean polling activity, in which each resident who engaged was given three beans to vote on what aspects of comfort were most important to them. 792 votes were cast, and approximately 264 people were engaged during the festival, with the table below providing the details of respondents priorities.

Please note, temperatures topped 100 degrees the day of the outdoor event, which may have influenced the top rank of street trees and shade. During the online outreach, participants said that buffered space between sidewalks and roads, wide sidewalks, and slow and/or low levels of vehicular traffic were most important for a comfortable walking experience. In comparison, Strawberry event attendees were more focused on the condition of the sidewalks and street crossings, in addition to street trees and shade.

What is most important to you for a comfortable walking experience?

PRIORITIES	TOTAL VOTES	PERCENT OF TOTAL VOTES
Street trees and shade	194	24.49%
Well-maintained sidewalk	124	15.66%
Safe street crossings	118	14.90%
Adequate lighting	100	12.63%
Buffered space between sidewalks and roads	66	8.33%
Wide sidewalks	60	7.56%
Slow and low traffic	54	6.82%
Accessibility/ADA compliant features	51	6.44%
Frequent street crossings	25	3.16%

Pop-up Protected Bike Lane

On July 10th, the MPO hosted a pop-up protected bike lane along Poly Dr. near Veterans Park using temporary materials like traffic candles and hay bales. The goal was to test ideas for potential protected bike lanes, promote the plan, and direct more people to the online public comment map for providing feedback on the overall network. In all, 46 people engaged with the demonstration. Feedback on the event was largely positive with attendees remarking that they enjoyed the additional protection from traffic. One attendee remarked that the drivers also seemed more comfortable in their lanes with the additional space afforded to people biking and that drivers tended to swerve away less from the bike lane, indicating that they felt there was a safe distance provided between them and bicyclists in the lane.

CHAPTER 5

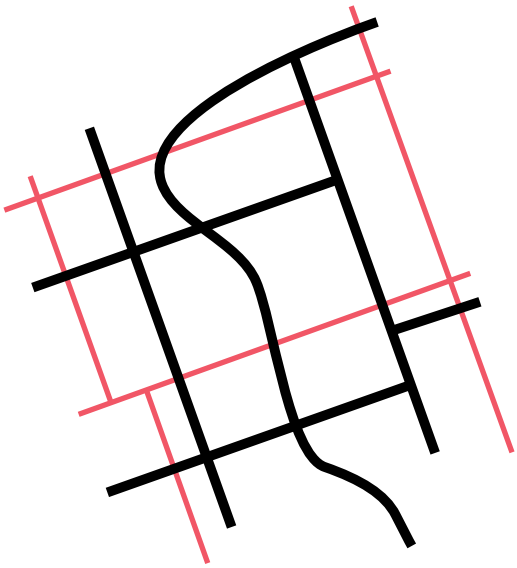
Recommendations

The Network

The recommended bicycle and pedestrian network for the Billings Area builds on previously planned improvements from the 2017 Plan, the existing conditions analysis, and public input. Guided by the goals of this plan, the approach to developing the network was focused on establishing an all-ages-and-abilities network that connects to important destinations in the area. As illustrated on the map in Figure 5.2, planned route improvements are organized into two categories: the high-comfort network and the supplemental network. Please note, recommendations in this plan are subject to change based on development of the upcoming future land use map required by state law and the Transportation Master Plan in development by the City of Billings.

High-Comfort Network

The high-comfort network is meant to be the backbone of the bicycle and pedestrian network and aims to serve a wide variety of bicyclists and pedestrians by emphasizing facility quality and low exposure to motor vehicle traffic. While "high comfort facilities" generally refers to bike facilities in transportation planning vocabulary, high comfort facilities in this plan could include multi-use trails, which are shared by both people who walk and people who bike and roll. Where multi-use trails are implemented after consideration of the surrounding land use and expected user profile, additional consideration should be given to pedestrian crossings of the street.



When implemented, high comfort routes are intended to provide a high-comfort experience where people of all ages and abilities feel confident and safe. Each route in the high-comfort network will require further engineering analysis and public input to determine what specific improvements are appropriate and feasible, but should aim to achieve a post-construction Level of Traffic Stress (LTS) score of LTS 1. It is understood that when design begins, there may be constraints that make it not possible to achieve LTS 1 for some facilities or parts of facilities. If a significant portion of the proposed route is unable to meet LTS 1, Figure 5.1, which is adopted from the *Bikeway Selection Guide from the Federal Highway Administration* (FHWA), may be used to determine alternative solutions.

High-comfort network improvements are typically prioritized before other connections, but may require more effort and resources to implement. See pages 54-60 for more guidance on selecting the appropriate facility.

Supplemental Network

The supplemental network augments the high-comfort network and includes other connections to destinations. It emphasizes making connections, even if high-comfort facilities are not provided; however, high-comfort facilities should always be considered when implementing the supplemental network. The supplemental network will likely consist primarily of striped bike lanes and shared lane markings. While investments should be focused first on completing the high-comfort network, supplemental network improvements may be implemented before high-comfort connections as opportunities arise (e.g., pavement preservation projects, new development, etc.).

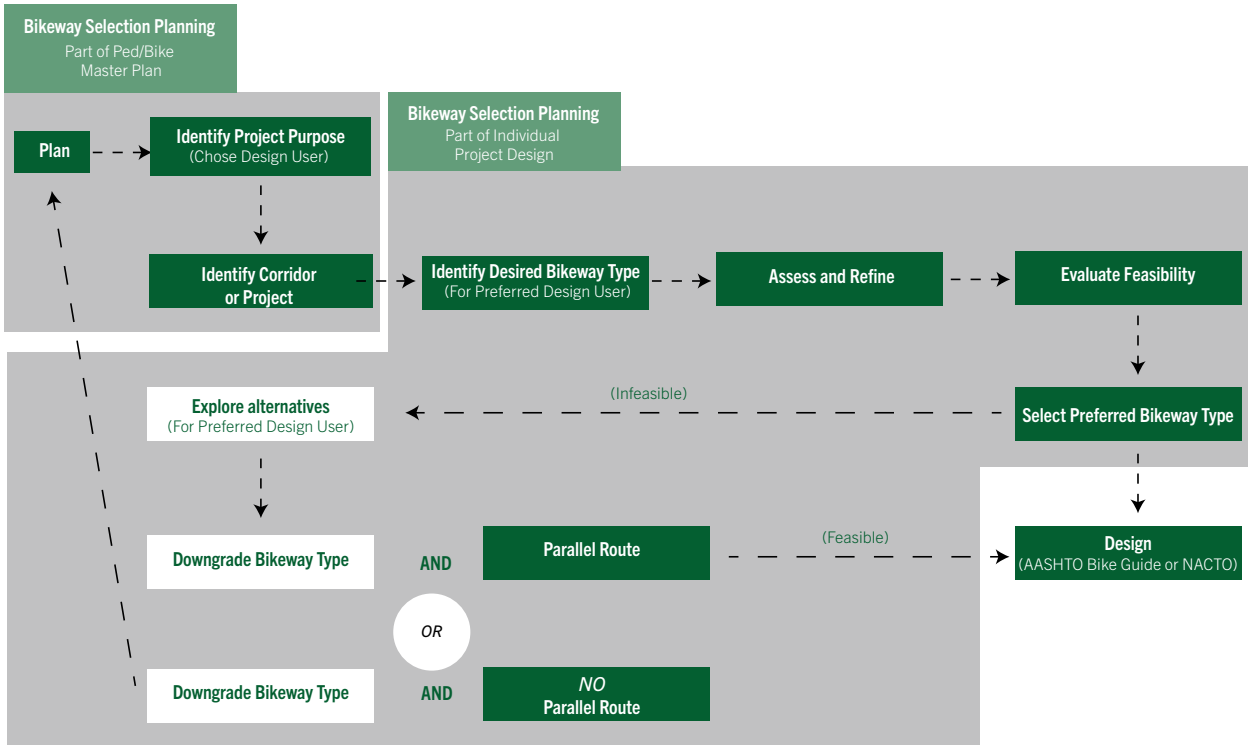
High-Comfort Routes

- Intended to serve all ages and abilities by mitigating exposure to motor vehicle traffic
- Physical separation may not be required depending on roadway context

Supplemental Routes

- Provides additional connections
- May not be feasible or practical to implement high-comfort facilities

FIGURE 5.1 - SUGGESTED PROCESS FOR SELECTING FACILITY TYPE
ADOPTED FROM FHWA BIKEWAY SELECTION PROCESS AND GUIDE OUTLINE



Pedestrian Considerations

Everyone is a pedestrian at some point in their journey, regardless of whether their primary mode is driving, bicycling, riding transit, or walking. Therefore, the Billings area aims for every roadway and trail corridor to be accessible and safe for people walking and using mobility devices. Improvements to the bikeway and trail network inherently benefit both bicyclists and pedestrians. On-street bikeways create a slower, calmer environment for all roadway users, including pedestrians, and shared use paths provide a physically separated pedestrian way. Converting one-way streets to two-way can help slow traffic and increase pedestrian level of comfort.

Pedestrian improvements should be considered on all routes, not just the network identified in Figure 5.2. As previously mentioned, some of these high comfort routes, in the form of shared use paths, are expected to serve pedestrians as well as people biking. Where shared use paths are implemented, designers can consult, "Safe Transportation for Every Pedestrian" or STEP safety counter measures as a guideline for

improving pedestrian crossings. STEP measures are one tool to use in conjunction with other design guidance and federal requirements. STEP measures come from the Federal Highway Administration and include:

- Raised Crosswalks
- In Street Pedestrian Signs
- Advanced "yield here to" Markings and Signage
- Pedestrian Refuge Islands
- Curb Extensions and Bulbouts
- Road Diets
- Grade Separation

Appropriate countermeasures based on speed, volume, and roadway configuration can be determined by reviewing the following tables for uncontrolled crossings.

While this plan groups pedestrian projects with bike projects, previous and future planning efforts specify or will specify additional pedestrian improvements, such as missing sidewalks and enhanced crosswalks. The Safe Routes to School Plan Update, Phase 1 and Phase 2, both completed by the MPO, address pedestrian and biking projects around schools in the urbanized area. Additionally, the standard is to include sidewalks with new streets, the City of Billings Complete Streets Policy ensures all modes are considered on arterial road projects, and the City of Billings subdivision regulations require shared-use paths to be installed with some subdivisions.

Additionally, soon after the completion of this plan the City of Billings will develop a Transportation Master Plan, which may include more robust standards and guidelines for the design and construction of pedestrian facilities along Billings' roadways.

While covered by other documents such as the subdivision regulations, some considerations to guide development of recommended pedestrian realm

TABLE 5.1 – FHWA APPLICATION OF PEDESTRIAN CRASH COUNTERMEASURES BY ROADWAY FEATURE

Roadway Configuration	**Posted Speed Limit and AADT** (Annual Average Daily Traffic)								
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
2 lanes (1 lane in each direction)	❶ 2 4 5 6	❶ 5 6 7 9	① 5 6 ❼ ❾	❶ 4 5 6	❶ 5 6 7 9	① 5 6 ❼ ❾	❶ 4 5 6 7 9	① 5 6 7 9	① 5 6 ❾
3 lanes with raised median (1 lane in each direction)	❶ 2 3 4 5	❶ ❸ 5 7 9	① ❸ 5 ❼ ❾	① 3 4 5 7 9	① ❸ 5 ❼ ❾	① ❸ 5 ❼ ❾	① ❸ 4 5 7 9	① ❸ 5 ❼ ❾	① ❸ 5 ❾
3 lanes w/o raised median (1 lane in each direction with a two-way left-turn lane)	❶ 2 3 4 5 6 7 9	❶ ❸ 5 6 7 9	① ❸ 5 6 ❾	① 3 4 5 6 7 9	① ❸ 5 6 ❼ ❾	① ❸ 5 6 ❾	① ❸ 4 5 6 7 9	① ❸ 5 6 ❾	① ❸ 5 6 ❾
4+ lanes with raised median (2 or more lanes in each direction)	❶ ❸ 5 7 8 9	❶ ❸ 5 7 8 9	① ❸ 5 8 ❾	① ❸ 5 7 8 9	① ❸ 5 ❼ 8 ❾	① ❸ 5 8 ❾	① ❸ 5 ❼ 8 ❾	① ❸ 5 8 ❾	① ❸ 5 8 ❾
4+ lanes w/o raised median (2 or more lanes in each direction)	❶ ❸ 5 6 7 8 9	① ❸ 5 ❻ 7 8 9	① ❸ 5 6 8 ❾	① ❸ 5 ❻ 7 8 9	① ❸ 5 ❻ ❼ 8 ❾	① ❸ 5 ❻ 8 ❾	① ❸ 5 ❻ ❼ 8 ❾	① ❸ 5 ❻ 8 ❾	① ❸ 5 ❻ 8 ❾

Given the set of conditions in a cell,

- # Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location.
- ● Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location.
- ○ Signifies that crosswalk visibility enhancements should always occur in conjunction with other identified countermeasures.*

The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.

1 High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs
2 Raised crosswalk
3 Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line
4 In-Street Pedestrian Crossing sign
5 Curb extension
6 Pedestrian refuge island
7 Rectangular Rapid-Flashing Beacon (RRFB)**
8 Road Diet
9 Pedestrian Hybrid Beacon (PHB)**

treatments in the Transportation Master Plan include:

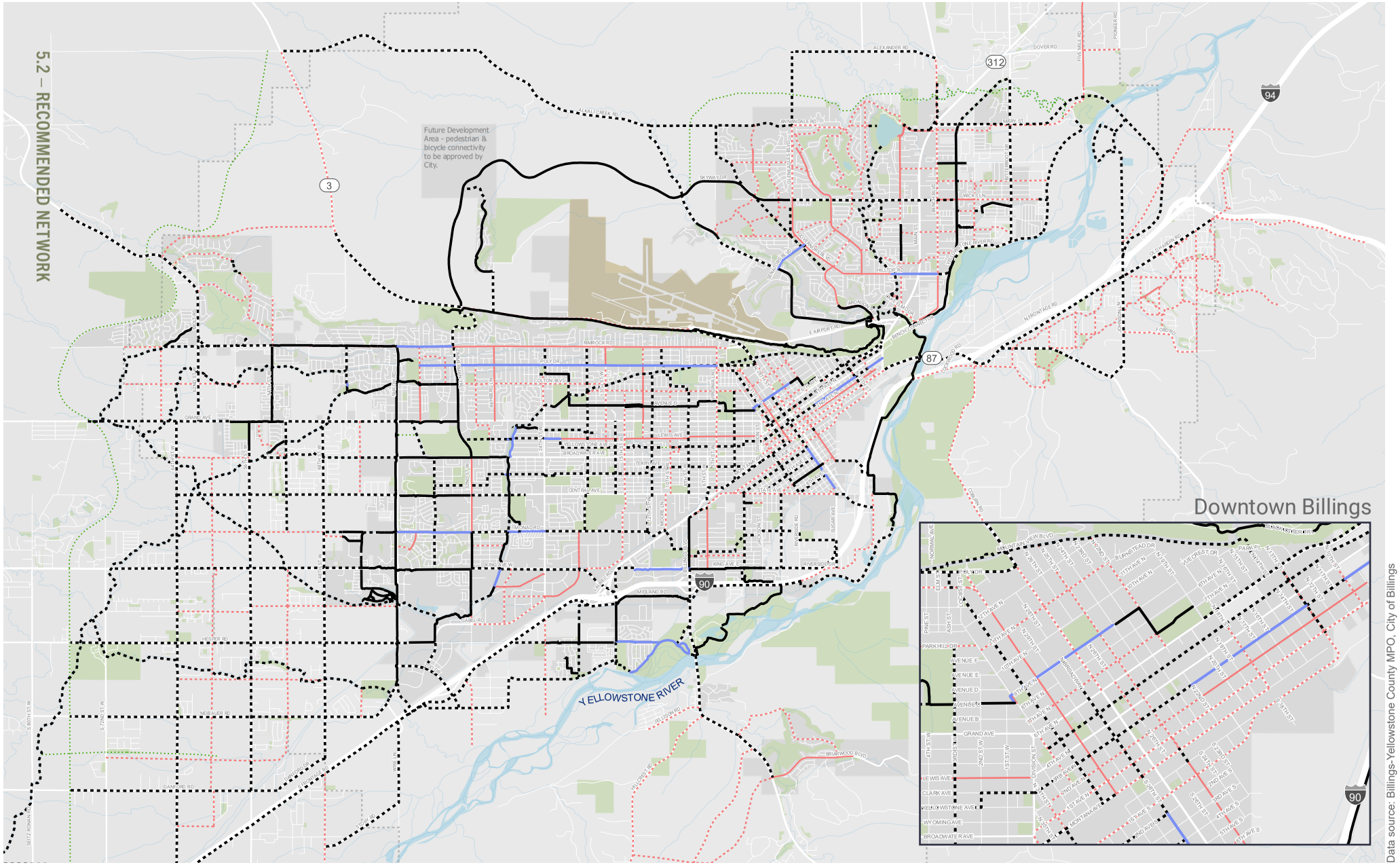
- Sidewalk widths
- How buffer zones, and building frontage zones (if applicable) should react to both pedestrian demand and vehicular roadway characteristics
- Levels of pedestrian demand based on adjacent land uses and by the presence of transit stops. Corridors with a higher density of fronting land uses and transit service typically require greater allocation of space for wider sidewalks, buffer/amenity zones, and space between storefronts and the travelled pedestrian way. Lower intensity adjacent land uses, such as single-family residential neighborhoods, experience less pedestrian demand.

Based on public input from both phases, residents show a clear preference for boulevard sidewalks. Boulevard sidewalks have a buffer, generally 5 feet wide, between the sidewalk and the street which helps increase the level of comfort.

Residents also show a preference for traffic calming, and safe street crossing based on the fact that the highest number of survey respondents responded that they "do not feel safe and worry about interacting with cars" when asked what prevents them from walking and biking more. Slow and/or low levels of vehicular traffic ranked as #3 for the online survey when asking what is most important for a comfortable walking exierence. Safe street crossings ranked as the third most important factor for a comfortable walking expierence from the Strawberry Festival poll.

TABLE 5.2 – SAFETY ISSUES ADDRESSED PER COUNTERMEASURE

COUNTERMEASURES	CONFLICTS AT CROSSING LOCATIONS	EXCESSIVE VEHICLE SPEED	INADEQUATE CONSPICUITY/ VISIBILITY	DRIVERS NOT YIELDING TO PEDESTRIANS	INSUFFICIENT SEPARATION FROM TRAFFIC
Crosswalk visibility enhancement	X	X	X	X	X
High-visibility crosswalk markings	X		X	X	
Parking restriction on crosswalk approach	X		X	X	
Improved nighttime lighting	X		X		
Advanced "yield here to"markings and signage	X		X	X	X
In-Street Pedestrian Crossing sign	X	X	X	X	
Curb extension	X	X	X		X
Raised crosswalk	X	X	X	X	
Pedestrian refuge island	X	X	X		X
Pedestrian Hybrid Beacon	X	X	X	X	
Road Diet	X	X	X		X
Rectangular Rapid-Flashing Beacon	X		X	X	X



RECOMMENDED NETWORK

BILLINGS AREA PEDESTRIAN & BICYCLE MASTER PLAN

DRAFT

0 2 4 MILES

Notes:

1. Route alignments and facility types are subject to change pending further study and public input process.

2. "High-comfort" facility types vary depending on context, but imply physical separation from motor vehicle traffic OR a low-speed, low-volume mixed traffic environment.

3. For "supplemental" routes, high-comfort facilities should always be considered and studied for feasibility.

- High Comfort: Existing, to remain
- High Comfort: Existing, future improvement
- High Comfort: New connection
- Supplemental: Existing, to remain
- Supplemental: New connection
- High Comfort: Future concept

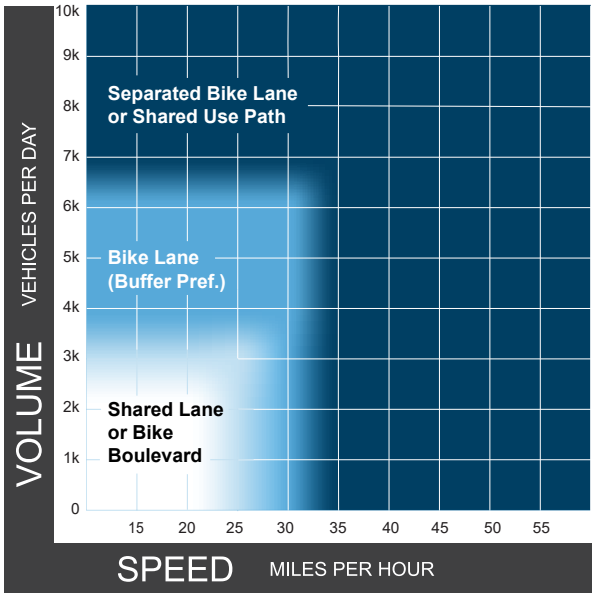
Data source: Billings-Yellowstone County MPO, City of Billings

Selecting the Appropriate High Comfort Facility

Figure 5.2 does not identify specific facility types, but instead indicates where the MPO intends to prioritize high-comfort facilities. Each project will be addressed individually and assessed for available right-of-way, public support, and any engineering constraints impacting project feasibility. Figure 5.3 is a resource developed by the Federal Highway Administration (FHWA) to guide decision making for appropriate facility type selection based on roadway speeds and volumes.

FIGURE 5.3 – FHWA BIKEWAY SELECTION MATRIX

Chart assumes operating speeds are similar to posted speeds; use operating speeds if available



While there is flexibility in the chart above, the *Separated Bike Lanes on High Speed Roadways* report from FHWA notes that "The FHWA Bikeway Selection Guide advises planners to propose separated bike lanes on all higher speed roads in order to meet an all-ages-and-abilities goal" and later states that "Higher speed roadways were defined for the purpose of this guide as roadways with a posted speed limit of 35 mph or greater."

Facility Toolbox

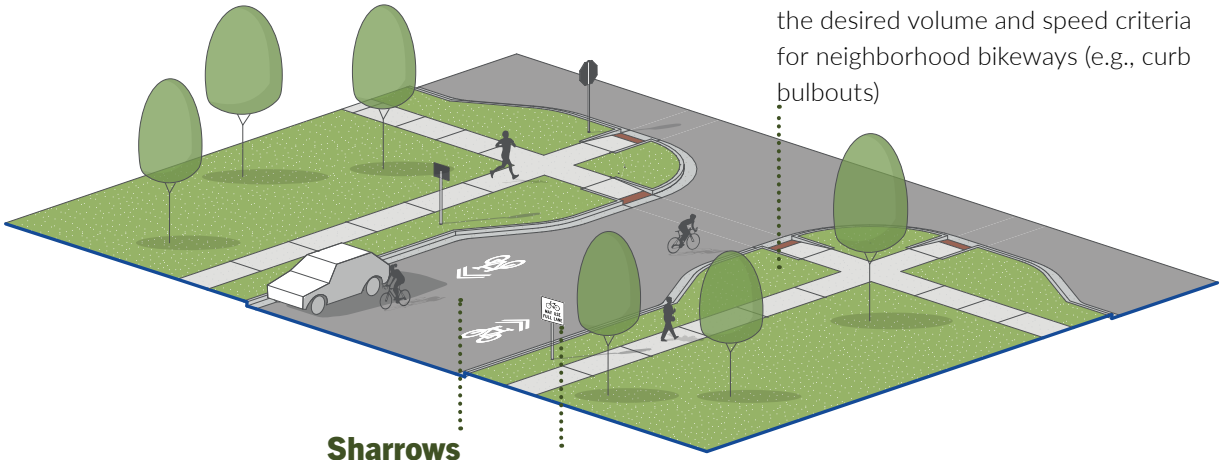
The following pages outline best practices for various bicycle and pedestrian facility types. Thresholds for roadway speeds and volumes are based on national guidance for achieving a high-comfort, or all-ages-and-abilities, network. The designs referenced below are for high comfort facilities; the supplemental network may use facilities like bike lanes on roads with high speeds and volumes than listed below.

When implementing improvements to a route, engineering judgement should be used to determine the most appropriate facility type based on available right-of-way, roadway characteristics, land use context, and public input. In addition to the considerations in this chapter, the City of Billings references the *Heritage Trail Design* document when designing trail and bikeway facilities. Those design standards can be found here: https://mt-billingspublicworks.civicplus.com/DocumentCenter/View/101/Design-Standards-PDF The latest standards for high comfort facilities can be found in publications such as the *Guide for the Development of Bicycle Facilities* from the American Association of State Highway and Transportation Officials (AASHTO) or the *Urban Bikeway Design Guide* from the National Association of City Transportation Officials (NACTO). New versions of both of these documents were published in late 2024 and early 2025 respectively. Additional design guidance from governmental agencies such as FHWA may be referenced during the design process

Neighborhood Bikeways

Traffic Calming

Traffic calming measures can be implemented as required to achieve the desired volume and speed criteria for neighborhood bikeways (e.g., curb bulbouts)



Sharrows

Shared lane markings (sharrows) may be used to assist cyclists with lateral positioning, to alert road users, etc

Signage

Branded wayfinding signage from the approved Billings Wayfinding Signage Plan and regulatory signage as required by the Manual on Uniform Traffic Control Devices (MUTCD) marks the route

Neighborhood Bikeways are generally quiet neighborhood streets with lower vehicle volumes & speeds. Bicyclists and pedestrians are prioritized by managing speeds and volumes via traffic calming elements. Signage, pavement markings, and safe crossings at busy streets are also incorporated. These improvements will need to be determined on a case-by-case basis, studied, and recommended by the project designer.

FHWA High-Comfort Guidelines

Volume: ≤ 3,000 vehicles per day

Roadway Speed: ≤ 25 MPH

If Need, Paired With: Traffic Calming, Wayfinding

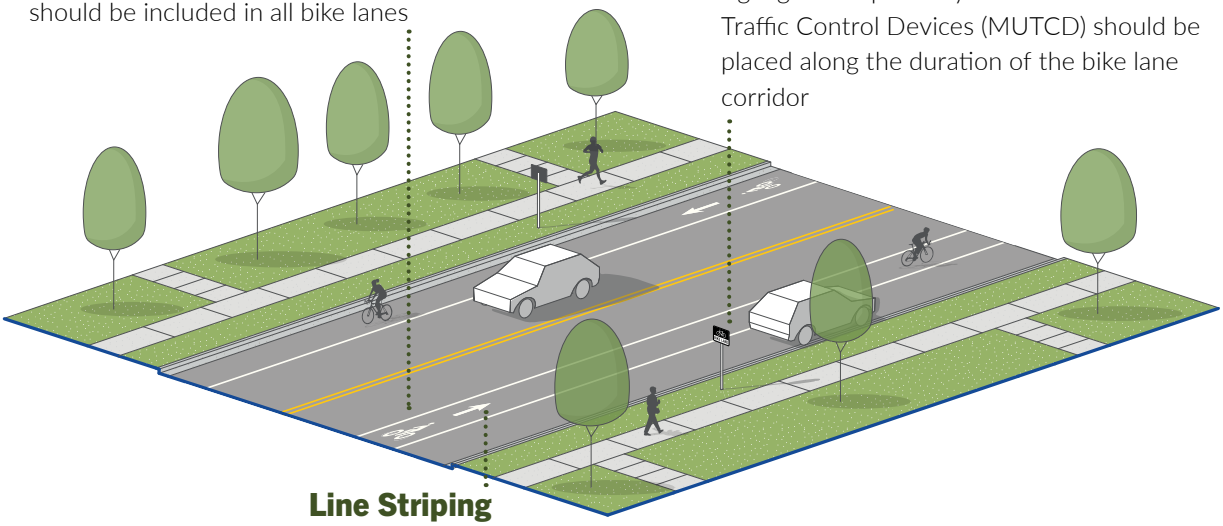
Bike Lanes

Bike Lane Symbol

The standard bike lane pavement legend should be included in all bike lanes

Signage

Branded wayfinding signage from the approved Billings Wayfinding Signage Plan and regulatory signage as required by the Manual on Uniform Traffic Control Devices (MUTCD) should be placed along the duration of the bike lane corridor



Line Striping

Striped lines should be placed to visually separate vehicle traffic and parking spaces from bike lane traffic

Bike Lanes designate exclusive space for bicyclists through the use of striping, pavement markings, and signage. They are located adjacent to motor vehicle travel lanes and are typically used in the same direction of traffic flow, however contra-flow lanes are sometimes implemented along one-way streets. More width should be provided adjacent to on-street parking.

FHWA High-Comfort Guidelines

Volume: ~2,500-less than 7,000 vehicles per day

Roadway Speed: ~25-less than 35 MPH

Width

Refer to latest *Guide for the Development of Bicycle Facilities* from AASHTO or *Urban Bikeway Design Guide* from NACTO

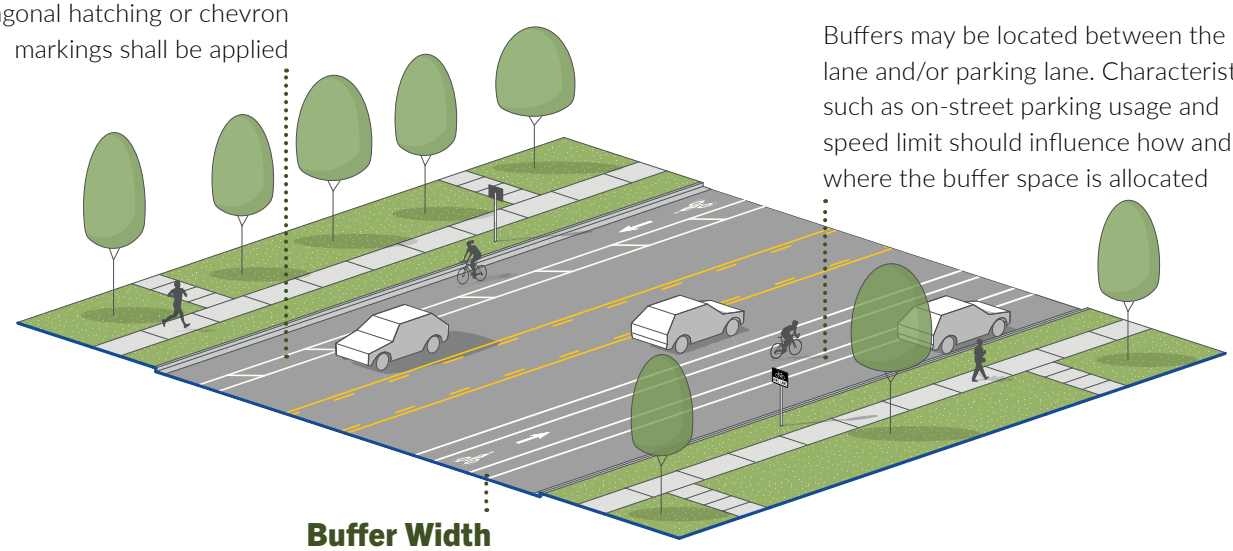
Buffered Bike Lanes

Buffer Striping

If a buffer is wider than 3', diagonal hatching or chevron markings shall be applied

Buffer Placement

Buffers may be located between the bike lane and/or parking lane. Characteristics such as on-street parking usage and speed limit should influence how and where the buffer space is allocated



Buffer Width

Buffers should be a minimum of 18" in width. However, wider is preferred

Buffered Bike Lanes are similar to bike lanes, but include an additional striped buffer to provide visual separation between the bike lane and the adjacent motor vehicle travel lane and/or parking lane.

FHWA High-Comfort Guidelines

Volume: ~2,500-less than 7,000 vehicles

Roadway Speed: 25-less than 35 MPH

Width

Refer to latest *Guide for the Development of Bicycle Facilities* from AASHTO or *Urban Bikeway Design Guide* from NACTO

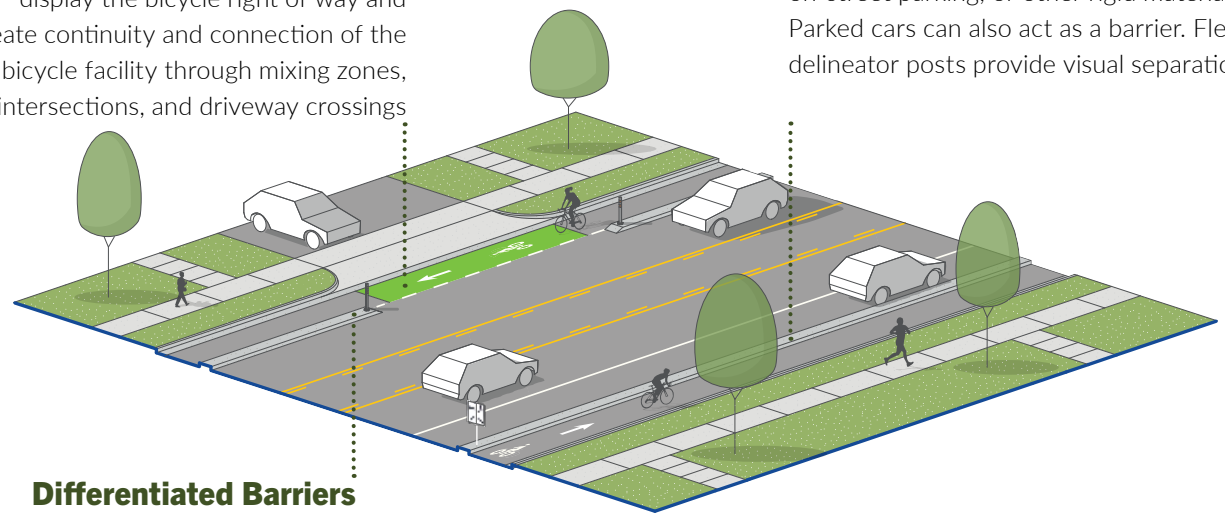
Separated Bike Lanes

Conflict Markings

If included, green conflict markings display the bicycle right of way and create continuity and connection of the bicycle facility through mixing zones, intersections, and driveway crossings

Physical Barrier

Materials for barriers may include concrete curbing, jersey barriers, bollards, planters, on-street parking, or other rigid materials. Parked cars can also act as a barrier. Flexible delineator posts provide visual separation



Differentiated Barriers

A physical barrier should be clearly marked at an intersection or driveway through the use of a colored surface and/or delineators

Separated Bike Lanes are on-street bikeways that are physically separated from vehicle traffic by a vertical element between the bikeway and vehicular travel lane. They typically share the same elevation as the travel lanes, but the bikeway could also be raised above the street level, either at or below sidewalk level.

FHWA High-Comfort Guidelines

Volume: 7,000+ vehicles per day

Roadway Speed: 30+ MPH

Width

Refer to latest *Guide for the Development of Bicycle Facilities* from AASHTO or *Urban Bikeway Design Guide* from NACTO

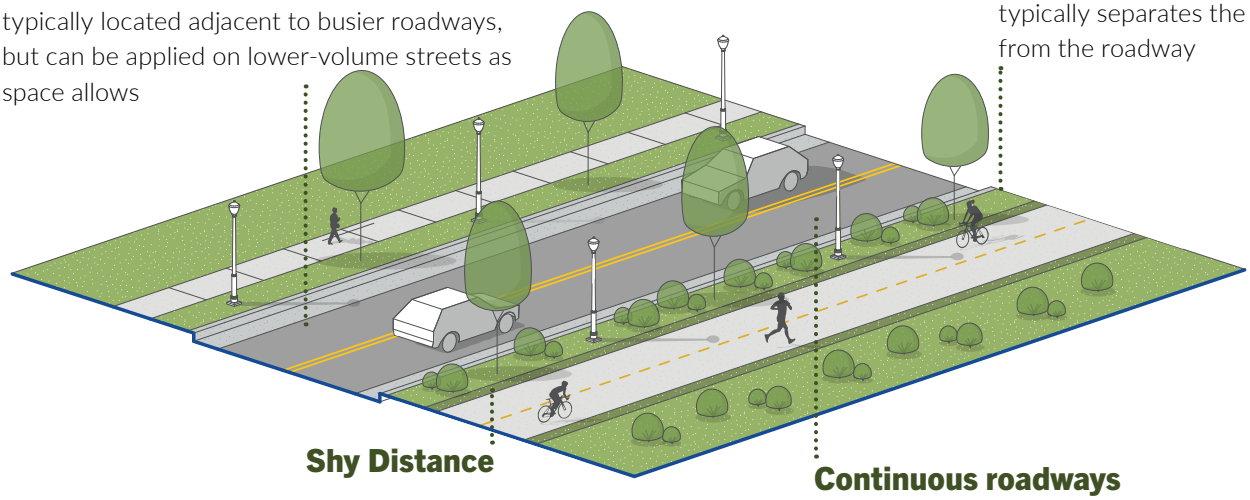
Shared Use Path (Parallel to Roadway)

Typical Location

Shared use paths parallel to roadways are typically located adjacent to busier roadways, but can be applied on lower-volume streets as space allows

Buffer

A paved or landscaped buffer typically separates the sidepath from the roadway



Shy Distance

A clear or shy zone between edge of sidepath and any vertical obstructions such as utility poles, signs, or trees allows the full width of the trail to be used effectively

Continuous roadways

Sidepaths are applied most effectively on roadways with limited driveway entrances/ exits. At driveways, sidepaths should maintain the grade wherever possible

Shared Use Paths, parallel to roadways, are paved off-street pathways that run alongside roadways and are designed to accommodate two-way, non-motorized travel, including bicyclists, pedestrians, skaters, wheelchair users, joggers, and other users. They are preferable for bicyclists of all skill levels due to their separation from traffic.

FHWA High-Comfort Guidelines

Volume: 7,000+ vehicles per day

Roadway Speed: 30+ MPH

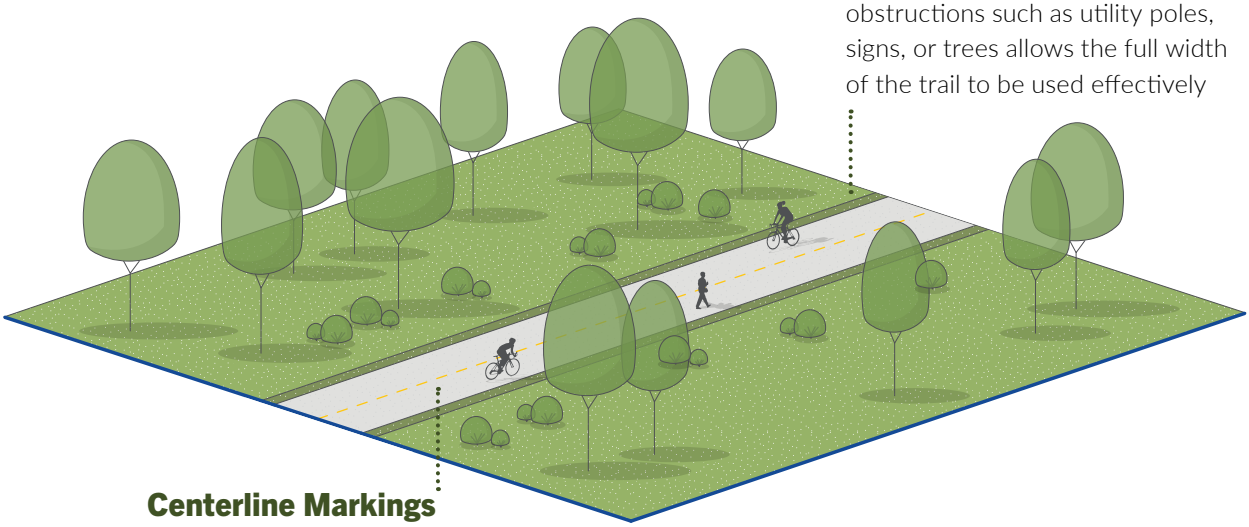
Width

Refer to latest *Guide for the Development of Bicycle Facilities* from AASHTO or *Urban Bikeway Design Guide* from NACTO or local subdivision regulations

Shared Use Path

Shy Distance

A clear or shy zone between edge of sidepath and any vertical obstructions such as utility poles, signs, or trees allows the full width of the trail to be used effectively



Centerline Markings

Centerline markings may be used, and are especially recommended in congested areas, at intersection approaches, or where visibility concerns exist

Shared Use Paths, or trails, are paved off-street pathways that are completely separated from the roadway and can serve both recreation and transportation-related trips. When located away from roadways, they are desirable for all skill levels, given minimal street crossings.

Width

Refer to latest *Guide for the Development of Bicycle Facilities* from AASHTO or *Urban Bikeway Design Guide* from NACTO or local subdivision regulations

Program & Policy Recommendations

In addition to making physical improvements to the bicycle and pedestrian network, the Billings Area is committed to improving the safety and convenience for people walking and bicycling through non-infrastructure initiatives, or programs and policies. Table 5.3 provides a list of program and policy recommendations that aim to make the Billings Area a more walkable and bikeable area.

TABLE 5.3 – PROGRAM & POLICY RECOMMENDATIONS

PROGRAM NAME	TYPE	DESCRIPTION	STATUS	FUTURE RECOMMENDATIONS
Bicycling Skills Training	Education	Provide bicyclists with needed road and riding skills	Current efforts include: Kids In Motion (KIM) curriculum still being distributed to Health Enhancement Teachers prior to KIM visits; Waves and Wheels at the Oasis and the education provided by the Lockwood Pedestrian Safety District. City staff are unsure how many Health Enhancement teachers implement the KIM curriculum. Having a dedicated staff member to provide the teach the lessons to students would be a benefit.	Organize staff member visits to schools
Road User Respect Campaign	Education	Increase respectful behavior between bicyclists, pedestrians, and motorists	Take the Hi Road PSAs, which were a partnership between TrailNet and Public Works still sometimes run.	Discuss with Billings TrailNet to see if they would consider running additional PSAs.
Education about traffic laws and how to use new infrastructure	Education	Educate both drivers and walkers/bikers about the laws related to sharing the road	A Safe Routes to School educational campaign funded by a Safe Streets for All grant from the US Department of Transportation will address this.	Develop campaign. In addition to covering laws such as yielding to crosswalk users, consider educating pedestrians on how to use ped activated lights (RRFBs)
Share the Trail Campaign	Education	Encourage responsible, respectful behavior by trail users	Trail etiquette signs are beginning to be implemented as part of the wayfinding signage. Funding and time is needed to map out signs.	Continue implementing signage and explore other outlets such as social media.
Bicycling and Trails Website	Education	Provide Billings bicycling information on a single website	Website exists, but some information is old	Continue to update

PROGRAM NAME	TYPE	DESCRIPTION	STATUS	FUTURE RECOMMENDATIONS
Coordination with MET Transit	Education and Encouragement	Promote MET Transit to help residents extend active trips	The Commuter Challenge includes MET Transit and recent outreach events, including for this plan, have targeted MET Transit riders. Use of the bike racks on MET buses has skyrocketed from 8,662 uses in 2023 to 14,421 uses in 2024.	Continue to encourage use of MET Transit and explore options to introduce walkers, bikers and rollers to using MET for longer trips or in the winter.
Bike Month	Encouragement	Encouraging bicycling to work and school through fun, social activities and incentives	The program is in progress. In May, RiverStone Health helps organize bike/walk to school competitions. Commuter Challenge takes place in June, which is mainly for adults.	Continue program while brainstorming ways to involve businesses and partners. It may be possible to combine with bicycle benefits program.
Bikeshare System	Encouragement	Promote work-related trips by bicycle; reduce daytime vehicle trips	Bike and Scooter Share Feasibility study completed in 2020. Several companies have approached Billings about bringing shared micromobility to town. Staff want to develop an RFP for potential providers.	City to consider development of an RFP to define priorities and implementation.
Bicycle Benefits Program	Encouragement	Create incentives for bicycling by partnering with local businesses to provide discounts on purchases for registered bicyclists	Incentives offered annually as part of Commuter Challenge but not year round.	Explore options for combining program with Bike Month.
Bicycle and Trails Map	Encouragement	Provide route and facility information, as well as highlight walking and bicycling destinations	An app has also been created. Multiple different entities distribute their own materials. Consolidation of information would ensure consistent information is distributed.	Continue to distribute maps and update app.
Walking to School Promotion	Encouragement	Facilitate activities that get students excited about walking to school.	RiverStone Health currently runs a committee that helps get walking school buses started, “Walktober”, and more.	Continue supporting walk to school activities.

PROGRAM NAME	TYPE	DESCRIPTION	STATUS	FUTURE RECOMMENDATIONS
Wayfinding Signage	Encouragement	Increase navigability of the shared use path and bikeway system	Wayfinding signage is being implemented with new shared use path and bikeway projects.	Continue implementing wayfinding signage along new and existing facilities.
Safety Equipment Use	Encouragement	Encourage the use of bicycle lights, helmets, and reflective clothing by promoting the use of this equipment and hosting equipment giveaways	Lockwood Ped. Safety District gives away some helmets and reflective slap bands to 4th graders in May. Previously, the school district had a grant from St. Vincent Healthcare (now Intermountain Health) to sell helmets to students at $5/helmet, but the grant funding was exhausted. Both hospitals sell low cost helmets, but they are not free. Gifted and talented students from grades 2-3 in Billings Public Schools developed a campaign to fund free helmets and as of this writing have fundraised for about 270 helmets.	Encourage organizations and school districts to coordinate their efforts, sharing resources, establishing best practices, and program development costs.
Organized Bicycle Rides	Encouragement	Organize critical mass rides to raise awareness of bicyclists in the community	Tour de Fleur, a bicycling event by Billings TrailNet, has occurred annually since 2016. The Commuter Challenge has done a "Slow Walk/ Roll" for its kickoff event for several years.	Continue to support rides, as well as organize rides with different purposes: accessibility, youth rides, etc.
Fun Runs	Encouragement	Use of trails for running/ walking events	Many fun runs/runs exist throughout the community. Some use trails or the neighborhood bikeway.	Continue to organize more events
Conduct walkability, accessibility, and park audits	Encouragement	Conduct audits in the city's parks to assess accessibility conditions, lighting, and improve safety	Healthy By Design completed a Parks RX program where they evaluated two parks and created walking route maps showing conditions on the trails. Crime Prevention Through Environmental Design (CPTED) is a City priority, and the City has conducted CPTED audits on some parks.	Formalize Billings' CPTED criteria and lead walking audits
City of Billings Bicycle Friendly Business (BFB)	Encouragement	Encourage employees to commute by bicycle through programs and on-site bicycle parking	With developments such as the new City Hall containing indoor bike parking, applying for BFB status could lead to the City becoming certified.	City of Billings should apply for BFB status, encouraging businesses around Billings to also take steps to achieve BFB status as well

PROGRAM NAME	TYPE	DESCRIPTION	STATUS	FUTURE RECOMMENDATIONS
Street Trees	Encouragement	Increase the number of street trees in Billings to help provide pedestrians protection from sun and extreme heat.	Street trees and shade rose to the top of the list of elements important for creating a comfortable walking experience during the Strawberry Fest outreach event. Parks and Recreation has a grant to plant street trees in Billings and trees are now required through the City of Billings zoning code in some districts.	Continue implementation of the tree grant from Parks and Recreation and discuss tree planting as an important part of walkability.
Lighting	Encouragement	Promote street lighting as an important element of walkability.	Lighting was one of the top 3 most important elements for creating a comfortable walking experience to Strawberry Festival participants. Lighting is now required in residential subdivisions in the City.	Implement lighting through the subdivision process and look for ways to incorporate lighting into new and existing bicycle and pedestrian facilities.
Boulevard Sidewalks	Encouragement	Continue to require and build sidewalks with a boulevard (buffer) between the sidewalk and the street.	During public outreach, Billings residents showed a clear preference for separation between the sidewalk and the street. Boulevards (buffers) are required by City subdivision regulations and are the standard for City projects, unless space does not allow.	Continue building boulevard sidewalks. Incorporate boulevards into the Transportation Master Plan recommendations.
Volunteer Bike Patrol Unit (VBPU)	Enforcement	The VBPU patrols the city's bike trails and parks and leads bike patrols in identified hot spot areas to report suspicious activities. Volunteers more commonly serve as "trail ambassadors," providing a positive presence on the trail system to help people feel safe.	The program is currently paused, however the Bicycle Advisory Committee would like it to continue.	Follow up with Bicycle Advisory Committee and City Police Volunteer Coordinator
Increase Traffic Enforcement	Enforcement	Increase the budget for traffic enforcement in the City of Billings to allow additional officers to be assigned to traffic detail	A Safety mill levy, which passed several years ago, provided more funding for police officers, including traffic enforcement.	Continue a focus on traffic enforcement

PROGRAM NAME	TYPE	DESCRIPTION	STATUS	FUTURE RECOMMENDATIONS
Establish Comprehensive Counts Program	Evaluation	Collect data on bicycling and trail use using automated counters	In recent years, the City has shifted entirely to automatic counts. Due to this, not as many ped. counts have been taken. There is one counting device available for year round pedestrian counts. It was previously placed at Skypoint, but is out of commission while more permanent housing is made for the counter. There is also one set of permanent bike lane counters on Poly and two permanent trail counters.	Continue current program and add additional counters, both temporary and permanent
Bicycle-Friendly Communities Designation	Evaluation	Assess progress and celebrate success made towards improving bicycling conditions	The application is every couple years. The City recently reapplied and was awarded bronze.	Review report card and reapply when necessary
Measuring the Street	Evaluation	Before and after the installation of new bikeway or trail facilities, collect data on bicycle, pedestrian, and motor vehicle volumes, crashes, and motor vehicle speeds	The City has conducted this process on a neighborhood bikeway, and will continue to conduct them on future facilities.	Continue to conduct studies and develop a findings report for each
Maintenance Documentation and Cost Estimation	Evaluation	Complete assessment the maintenance costs of walking and biking facilities.	The Street and Traffic Division is working on putting together a more accurate cost estimate of maintenance costs for pedestrian and bicycle infrastructure. The Parks Department has an estimated per mile cost of maintaining shared use paths in their care. Additional costs for shared use paths and bike lanes include snow plowing, mowing, water/irrigation, crosswalk painting, replacing Rectangular Rapid Flashing Beacons, adding accessible ramps, seal coating, surface maintenance, and occasional sign replacement. The City maintains shared use paths and trails while property owners are responsible for maintenance of most sidewalks. Future protected bike lanes will also need to consider maintenance of any provided barrier such as flex posts and will see an increased cost of maintenance as it related to snow removal and sweeping and maintenance of any intersection paint.	Continue working on estimation of maintenance costs for existing and future types of pedestrian and bicycle infrastructure.

PROGRAM NAME	TYPE	DESCRIPTION	STATUS	FUTURE RECOMMENDATIONS
Bicycle Kitchen	Equity	Bike Kitchens teach people of all ages and backgrounds how to repair bicycles. Through bike repair and bicycle related projects, bike kitchen organizations promote personal development and provide leadership opportunities.	Currently, no Bicycle Kitchens exist in Billings.	Explore program feasibility and potential partners
Bicycle Giveaways	Equity	Provide bicycles, bike education, bike safety equipment, and locks to low income children, veterans, people in substance abuse programs, and people in half-way houses.	The Lockwood Pedestrian Safety District gives away a few bikes a year to students in need. KIM provides an educational campaign for schools it visits.	Continue and support current programs
Bicycle Advocacy	Equity	Educate local and state governments about the needs of active transportation users.	There are many opportunities for engagement, including BPAC's annual presentation to governing bodies, presentations as part of plans, and others. Bike Walk Montana works with the state legislature.	Continue to engage with state and local governments

CHAPTER 6

Implementation Strategy

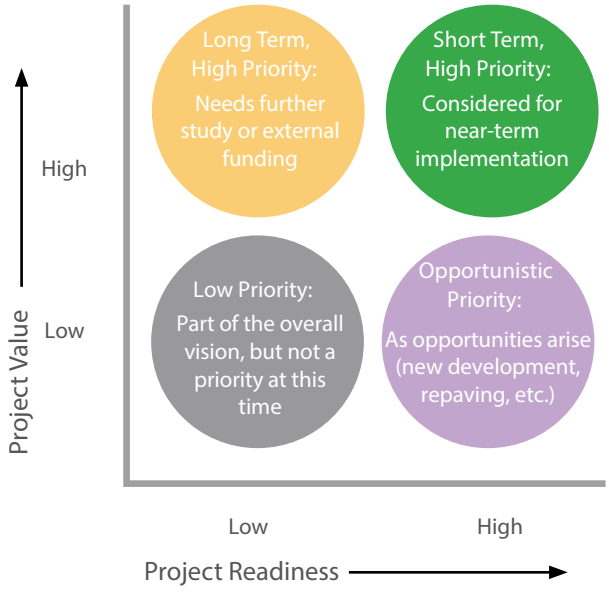
Prioritization & Implementation

Chapter 6 details the MPO's approach for prioritizing projects, provides planning level cost estimates, and identifies potential funding strategies for implementing the plan.

Project Prioritization

The project prioritization process consists of two evaluations of each project based on: 1) project value, or benefit, and 2) project readiness, or feasibility. Projects are graded as either "High" or "Low" for each evaluation, which results in a project landing in one of four possible priority categories, as shown in Figure 6.1. This approach serves as a guide for local and state governments and agencies who want to implement recommendations from this Plan, in understanding which projects to focus on first; however, agencies should be flexible in their approach. Priorities may change based on future study or as other synergies arise with new development, reconstruction, or other opportunities for cost savings. Grant funding may also shift priorities, as the amount available or the priorities of funding agencies may drive project implementation.

FIGURE 6.1 – PROJECT PRIORITY CATEGORIES



Project Value

Project value, or benefit, is determined by how well projects achieve the goals of the plan in Chapter 1. Table 6.1 provides details about the criterion that were used to evaluate each project. Projects could score either a 0 or 1, with the former indicating that the project did not meet the criteria and the latter indicating that it did. Since some criteria are more important than others, either because they are more effective in achieving the plan's goals or have been designated as a priority by the City, multipliers were added to the evaluation. For example, creating more connections to schools is considered a higher priority than creating more connections to transit.

Project Value Evaluation Results

Figure 6.2 on the following page shows the project value evaluation results. A complete list of recommended active transportation facilities and spot improvements, ranked by project value, are included in Table B.1 in Appendix B.

Project Readiness

Project readiness refers to the feasibility of a project, and is evaluated based on the complexity of a project related to design, funding availability (including funding for additional planning and design), constructability, and maintenance. Projects that only minimally alter the roadway (pavement striping and signage only), such as bike lanes, received a high project readiness rating.

Project Readiness Evaluation Results

Figure 6.3 on the following pages show the project readiness evaluation results.

TABLE 6.1 – PROJECT VALUE CRITERION

CRITERION	DESCRIPTION	MULTIPLIER
Closes gap in spine network	Projects that extend a high-comfort facility or closes a gap between two high-comfort facilities	4
Connects to schools	Projects that create a direct or meaningful connection to any school	3
Connects to transit	Projects that create a direct connection with, run adjacent to, or intersect with designated transit routes	2
Serves major commercial, recreation, or civic destination	Projects that make a direct or meaningful connection to a significant trip generator or OD Zone	2
Serves geographies where people rely on active modes	Projects that make a direct or meaningful connection to areas that are classified as disadvantaged populations	1

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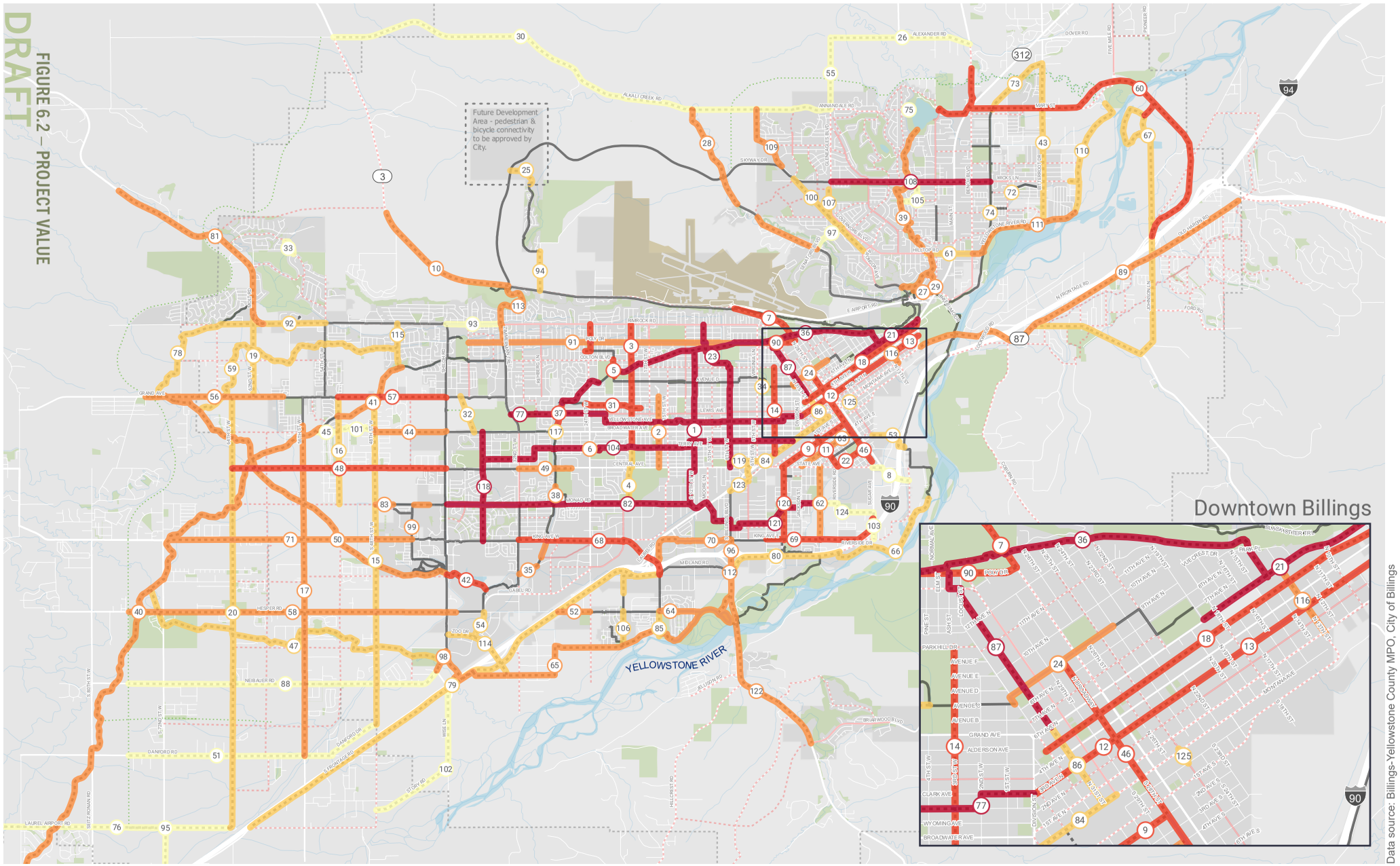
FIGURE 6.2 – PROJECT VALUE



PROJECT VALUE

BILLINGS AREA PEDESTRIAN & BICYCLE MASTER PLAN

0 2 4 MILES

Notes:

1. Route alignments and facility types are subject to change pending further study and public input process.

2. "High-comfort" facility types vary depending on context, but imply physical separation from motor vehicle traffic OR a low-speed, low-volume mixed traffic environment.

3. For "supplemental" routes, high-comfort facilities should always be considered and studied for feasibility.

Active Transportation Network

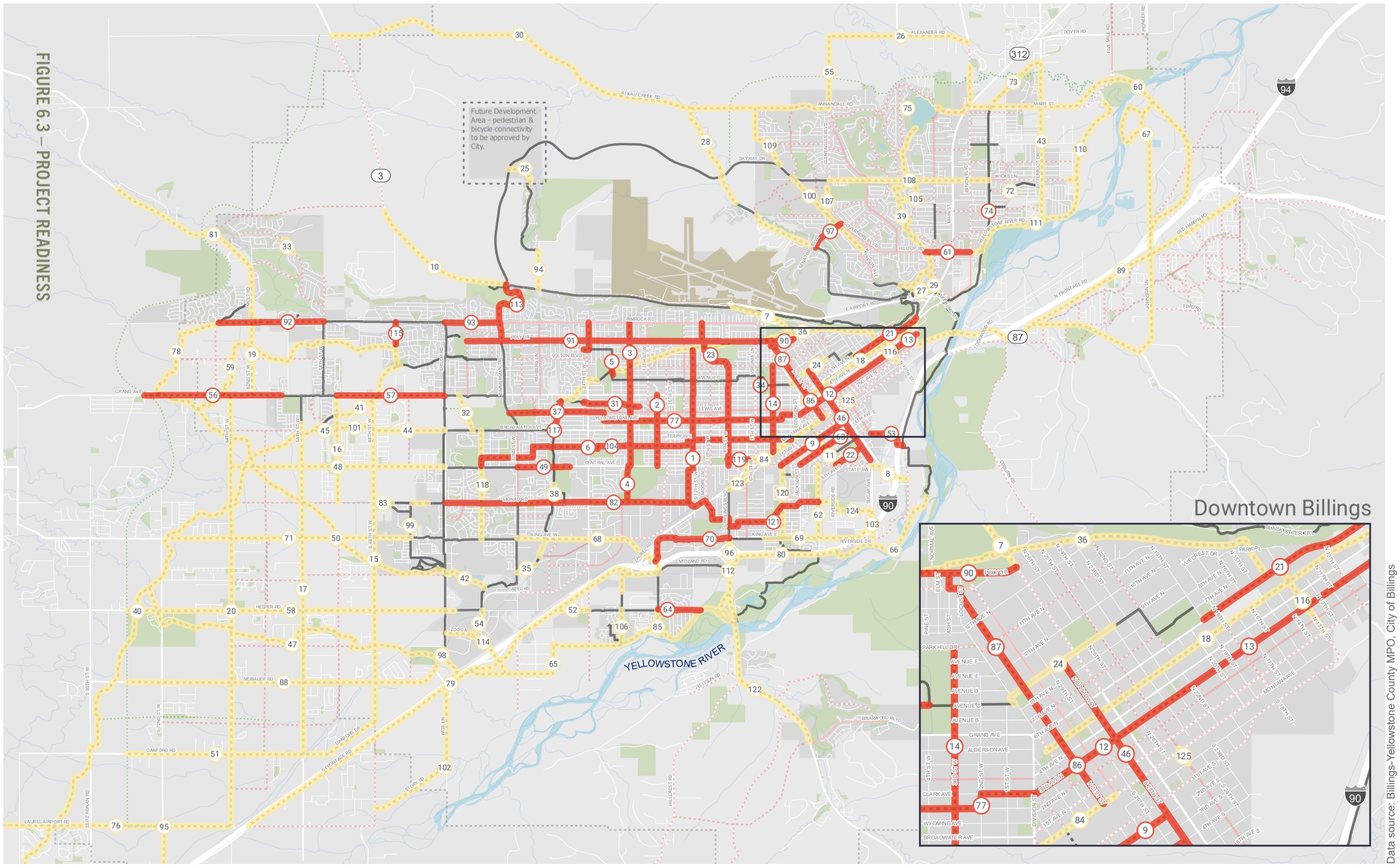
- High Comfort: Existing, to remain
- High Comfort: Existing, future improvement
- High Comfort: New connection
- Supplemental: Existing, to remain
- Supplemental: New connection
- High Comfort: Future concept

Project Value

- 12
- 9 - 11
- 6 - 8
- 3 - 5
- 0 - 2

Data source: Billings-Yellowstone County MPO, City of Billings

FIGURE 6.3 – PROJECT READINESS



Data source: Billings-Yellowstone County MPO, City of Billings

PROJECT READINESS

BILLINGS AREA PEDESTRIAN & BICYCLE MASTER PLAN

DRAFT

0 2 4 MILES

Notes:

1. Route alignments and facility types are subject to change pending further study and public input process.

2. "High-comfort" facility types vary depending on context, but imply physical separation from motor vehicle traffic OR a low-speed, low-volume mixed traffic environment.

3. For "supplemental" routes, high-comfort facilities should always be considered and studied for feasibility.

Active Transportation Network

- High Comfort: Existing, to remain
- High Comfort: Existing, future improvement
- High Comfort: New connection
- Supplemental: Existing, to remain
- Supplemental: New connection
- High Comfort: Future concept

Project Readiness

- High Readiness
- Low Readiness or TBD

Priority Project Categories: Project Value & Readiness Combined

- **Short term, high priority:** These projects score high on both project value and readiness, meaning that they achieve several of the plan's goals and are easy to implement. These projects should be considered for near-term implementation and are contingent on funding availability.
- **Long term, high priority:** These projects score high on project value, but low on readiness, meaning that they achieve several of the plan's goals, but may need further feasibility study or require external funding. These projects should be prioritized for further concept and feasibility studies, as well as applications for external grants.
- **Opportunistic priority:** These projects score lower on project value, but high on project readiness, meaning that although they may not achieve as many of the plan's goals, they are easy to implement. These projects may become a priority after short-term priorities are complete, if an opportunity arises (e.g., new development and pavement preservation), or if safety needs become evident.
- **Low priority:** These projects score low on both project value and readiness, meaning they present a lower benefit and may be more challenging to implement. These projects could be pursued long term but are not a priority currently.

For a complete list of projects, see Appendix (B). The results of this evaluation are subject to change based on further studies, partnership opportunities, funding availability, or other circumstances that may influence the City's ability to implement and maintain improvements. Some of the projects listed will likely be constructed in phases or segments as funding and project limits allow.

Top 10 Priority Projects (Based on Value and Readiness Criteria)

Below are the top ten scoring projects. The number in the parenthesis next to the name lists the project number which can be used to locate the project on the map.

PROJECT	EXTENT	DISTANCE
12th St. W./Plainview St. (#1)	BBWA Canal to Monad Rd.	2.20
6th Ave N (#21)	N. 19th St. to existing trail	1.03
8th St. W./Delphinium/ Azalea/11th/Missouri (#23)	Rimrock Rd. to Central Ave.	2.04
Yellowstone Ave/Clark Ave/Lewis Aves (#77)	Zimmerman Tr. to Division St..	4.26
Monad Rd. (#82)	32nd St. W. to Billings Blvd..	4.20
N 31st St (#87)	Poly Dr. to 6th Ave. N	0.82
Terry/Miles/Howard/St. Johns Aves (#104)	36th St. W. to 1st St. W.	4.53
Phillips St. (#121)	S.. Billings Blvd. to Washington St.	1.43
19th St. (#3)	Rimrock Rd. to Miles Ave.	1.71
Grand Ave (#57)	52nd St. W. to Shiloh Rd.	1.51

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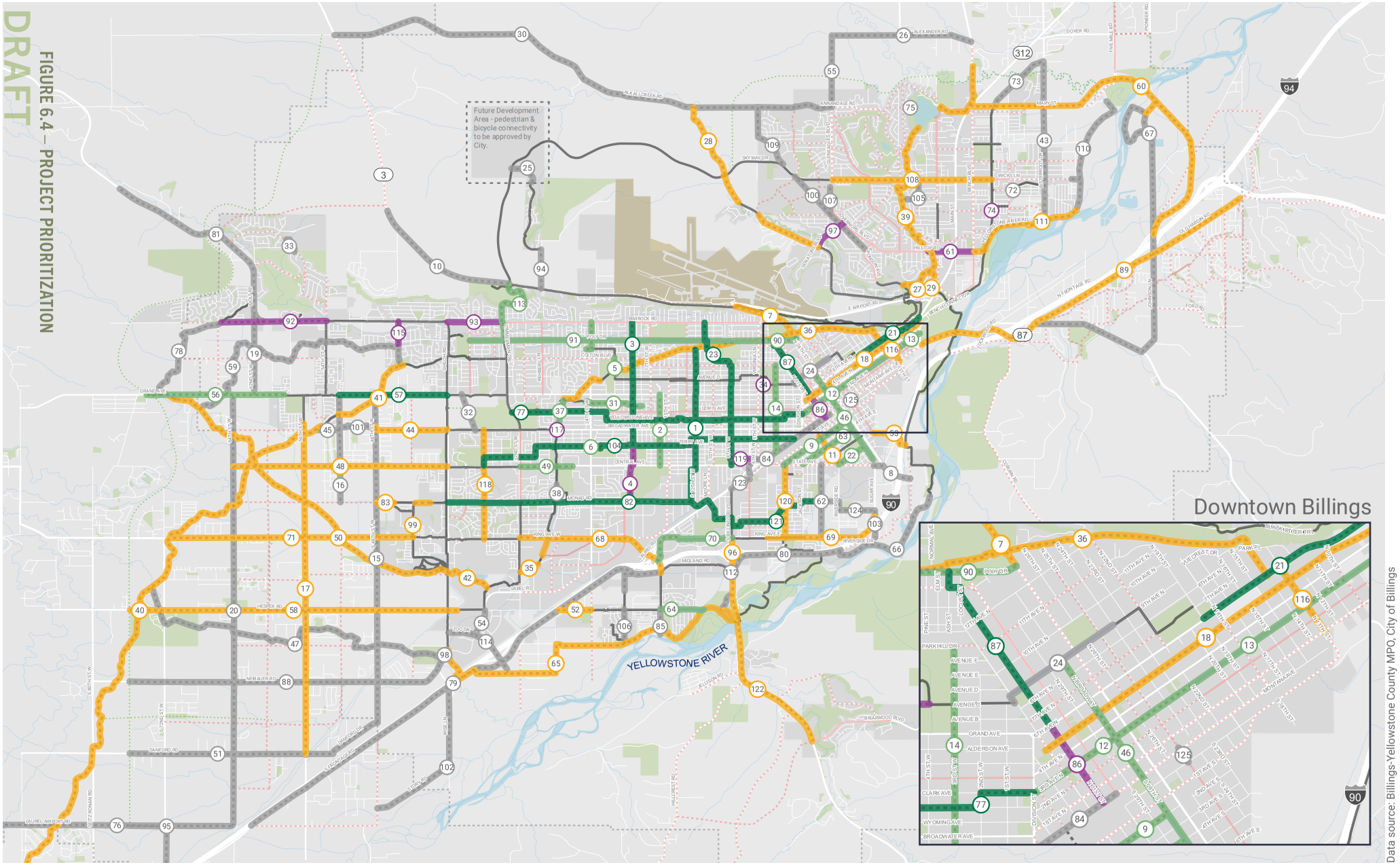
FIGURE 6.4 – PROJECT PRIORITIZATION



Data source: Billings-Yellowstone County MPO, City of Billings

PROJECT PRIORITIZATION

BILLINGS AREA PEDESTRIAN & BICYCLE MASTER PLAN

0 2 4 MILES

Notes:

1. Route alignments and facility types are subject to change pending further study and public input process.

2. "High-comfort" facility types vary depending on context, but imply physical separation from motor vehicle traffic OR a low-speed, low-volume mixed traffic environment.

3. For "supplemental" routes, high-comfort facilities should always be considered and studied for feasibility.

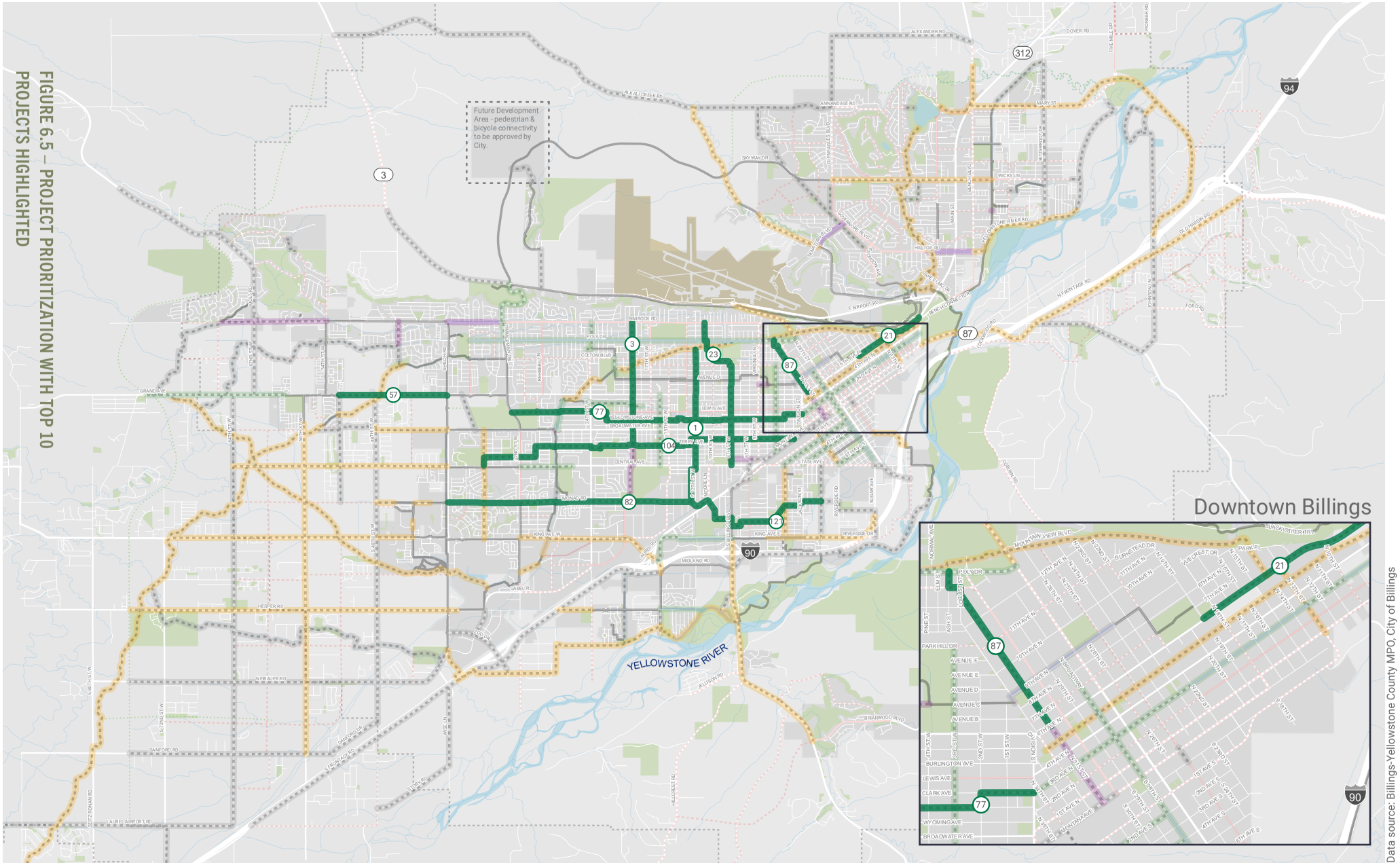
Active Transportation Network

- High Comfort: Existing, to remain
- High Comfort: Existing, future improvement
- High Comfort: New connection
- Supplemental: Existing, to remain
- Supplemental: New connection
- High Comfort: Future concept

Facility Priority

- Top 10 Priority Projects
- High Priority, Short Term
- High Priority, Long Term
- Opportunistic Priority
- Low Priority

FIGURE 6.5 – PROJECT PRIORITIZATION WITH TOP 10 PROJECTS HIGHLIGHTED



Data source: Billings-Yellowstone County MPO, City of Billings

PROJECT PRIORITIZATION

BILLINGS AREA PEDESTRIAN & BICYCLE MASTER PLAN
TOP TEN PROJECTS HIGHLIGHTED

DRAFT

0 2 4 MILES

Notes:

1. Route alignments and facility types are subject to change pending further study and public input process.

2. "High-comfort" facility types vary depending on context, but imply physical separation from motor vehicle traffic OR a low-speed, low-volume mixed traffic environment.

3. For "supplemental" routes, high-comfort facilities should always be considered and studied for feasibility.

Active Transportation Network

- High Comfort: Existing, to remain
- High Comfort: Existing, future improvement
- High Comfort: New connection
- Supplemental: Existing, to remain
- Supplemental: New connection
- High Comfort: Future concept

Facility Priority

- Top 10 Priority Projects
- High Priority, Short Term
- High Priority, Long Term
- Opportunistic Priority
- Low Priority

Cost Estimates

Table 6.2 outlines planning level cost estimates for the facility types listed earlier in the plan. Planning level cost estimates are meant to provide a high level understanding of the potential costs associated with a project. Applying these estimates on a network scale can generate potential discrepancies when compared to actual implementation costs. A 20 percent is applied to these planning level cost estimates to account for costs such as final engineering and design, traffic control, permitting, mobilization and demobilization, taxes, bonds, insurance, landscaping, inflation, and others. Additionally, these costs do not account for enhanced crossings as these will be designed as part of the project. Crossing costs will need to be added in to create a more accurate cost estimate for each route. All estimates assume a standard City of Billings street, that the existing curb and gutter will remain, and that no striping needs to be obliterated. There will likely be exceptions to these conditions, so these estimates are starting point. Pairing projects with pavement preservation projects can help lower cost significantly as some of these additional elements can be covered under the pavement preservation project.

Additionally, estimates include a generic cost for signage, while project specific signage costs will vary on a per project basis.

TABLE 6.2 – PLANNING LEVEL COST ESTIMATES*

FACILITY TYPE	COST PER MILE
Neighborhood Bikeways	$62,652
Bike Lanes	$88,320
Buffered Bike Lanes	$124,116
Separated Bike Lane	$1,523,145
Asphalt Shared/Sidepath	$553,616
Concrete Shared/Sidepath	$1,486,546
Unsignalized Mid-Block Crosswalk	$20,564
Mid-block Crosswalk with Rectangular Rapid Flash Beacon (RRFB)	$60,170
Marked Crosswalk & Ped Warning	$280,664
Intersection Reconstruction (Bulbout)	$176,226

**Each cost estimate includes facility type specific assumptions that can be found in Appendix A.*

Funding Sources

Funding plays a pivotal role in Billings' ability to transform the goals and projects in this plan from ideas into reality. The following tables outline the various funding sources available to support the implementation of bicycle and pedestrian facilities. Leveraging these opportunities will put Billings on the path to realizing this plan's vision for a safer and more accessible active transportation system.

TABLE 6.2 – FUNDING SOURCES

NAME	SOURCE TYPE	DESCRIPTION	MORE INFORMATION	ELIGIBILITY/REQUIRED MATCH
Safe Streets and Roads for All (SS4A) Grant Program	Federal	The new SS4A Grant Program funds the development or update of a comprehensive safety action plan (Action Plan), conducting planning, design, and development activities in support of an Action Plan, and/or carrying out projects and strategies identified in an Action Plan.	Link	20% state or local match. Cities eligible to apply. Offers planning and demonstration grants or implementation grants.
Active Transportation Infrastructure Investment Program (ATIIP)	Federal	The ATIIP provides grants to states and localities to strategically invest in projects that connect active transportation networks and spines, such as safe bike paths and walking trails, while reducing carbon emissions and creating new jobs. The program will help connect people to destinations within or between communities, including schools, workplaces and other community areas. Active transportation spines can connect communities, metropolitan regions and states.	Link	20% state or local match. Local government organizations eligible to apply.
Transportation Alternatives (TA)	Federal	Transportation Alternatives (TA) is a funding source under the FAST Act that consolidates three formerly separate programs under SAFETEA-LU: Transportation Enhancements (TE), Safe Routes to School (SRTS), and the Recreational Trails Program (RTP). Funds are available through a competitive process. These funds may be used for a variety of projects including: * SRTS programs (infrastructure and non-infrastructure programs * Construction, planning, and design of on- and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation, including sidewalks, bikeways, pedestrian + bicycle signals, traffic-calming, lighting, and other safety-related infrastructure * Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for children, seniors, and individuals with disabilities who cannot drive * Construction of rail-trails * Recreational trails program	Link	13.42% state or local match. Local governments eligible to apply.

NAME	SOURCE TYPE	DESCRIPTION	MORE INFORMATION	ELIGIBILITY/REQUIRED MATCH
Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grants	Federal	RAISE grants, which were originally created under the American Recovery and Reinvestment Act as TIGER grants, can be used for a wide variety of projects, including road, rail, and transit projects. These grants provide capital funding to any public entity, including municipalities and counties.	Link	20% state or local match but includes exceptions. Local governments eligible to apply
Federal Transit Administration (FTA) Grants	Federal	The FTA has several grant programs available to local and state governments to enhance active transportation connections to public transportation facilities.	Link	
Federal Lands Access Program (FLAP)	Federal	The FLAP is intended to improve transportation facilities that provide access to, are adjacent to, or are located within Federal lands. The fund is administered through MDT in coordination with the Central Federal Lands Highway Division, which develops a Programming Decisions Committee. The Committee puts out the call for projects, establishes selection criteria, and prioritizes selected projects. The next call for projects is anticipated to be in 2026.	Link	
Congestion Mitigation and Air Quality Improvement (CMAQ)	Federal	This program provides funds to state DOTs, MPOs and other sponsors to fund projects that will contribute to air quality improvements in ozone, carbon monoxide and/or particulate matter, and provide congestion relief. Many types of projects are eligible under the CMAQ program including electric vehicles and charging stations, diesel engine replacements and retrofits, transit improvements, bicycle and pedestrian facilities, shared micromobility projects including shared scooter systems, and more. In addition to improving air quality and reducing congestion, CMAQ projects can improve equitable access to transportation services, improve safety, and promote application of new and emerging technologies.	Link	20% state and local match, typically. Must apply in partnership with state DOT or MPO. Projects must contribute to the attainment of air quality standards (reducing emissions) in the region.
Recreational Trails Program (RTP)	Federal	The Bipartisan Infrastructure Law continued the Recreational Trails Program (RTP) as a set-aside from the Transportation Alternatives program. The RTP provides funds to states to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. The funds represent a portion of the motor fuel excise tax collected from non-highway recreational fuel use by snowmobiles, all-terrain vehicles, off-highway motorcycles, and off-highway light trucks.	Link	20% state or local match. Local governments eligible to apply.

NAME	SOURCE TYPE	DESCRIPTION	MORE INFORMATION	ELIGIBILITY/REQUIRED MATCH
Surface Transportation Block Grant Program (STP)	Federal	The Infrastructure Investment and Jobs Act's Surface Transportation Block Grant Program (STP) provides funds to states to preserve or improve conditions and performance on any federal-aid highway. Funds are apportioned to Montana and then allocated by the Montana Transportation Commission. The STP Urban, a subset of the program, provides funds for the urban highway system, and can be used for resurfacing, rehabilitation, or reconstruction of bicycle facilities and pedestrian walkways.	Link	13.42% state or local match.
Carbon Reduction Program (CRP)	Federal	The Bipartisan Infrastructure Law's Carbon Reduction Program (CRP) provides funds for projects that reduce transportation emissions. Projects can include the construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other nonmotorized forms of transportation.	Link	13.42% state or local match
Additional Federal Grants/ Programs	Federal	The list above may not be exhaustive and new sources of federal funding may become available. The Federal Highway Administration maintains a spreadsheet of funding opportunities at the link to the right.	Link	
Highway Safety Improvement Program (HSIP)	State	HSIP funds are available for projects aimed at improving safety on all public roads to reduce traffic fatalities and serious injuries. Bike lanes, roadway shoulders, crosswalks, intersection improvements, underpasses, and improved signage are examples of eligible projects. The program is managed by MDT's Safety Engineering Section.	Link	
Trail Stewardship Grant Program	State	The State of Montana funds the Trail Stewardship Grant Program for new trail and shared-path construction, maintenance, and construction of trail side facilities.	Link	10% local match. Local governments and non-profits eligible.
Bond Financing	City	Bonds can be approved by voters to fund a range of projects.		
Special Assessment or Taxing Districts	City	Local municipalities can establish special assessment districts for infrastructure improvements, like sidewalks, that are missing or in need of improvement in certain areas.		
Parking Fees	City	Some cities have instituted parking fees for public parking spaces that are then used to pay for infrastructure improvements.		

NAME	SOURCE TYPE	DESCRIPTION	MORE INFORMATION	ELIGIBILITY/REQUIRED MATCH
Development Impact Fees	City	Development impact fees are one-time charges collected from developers for financing new infrastructure construction and operations and can help fund bicycle and pedestrian improvements. Impact fees are assessed through a city's impact fee program.		
New Construction	City	Future road widening and construction projects are methods of providing improved bike and pedestrian infrastructure. To ensure that roadway construction projects provide these improvements, it is important that the review process includes a review of any relevant active transportation related plans.		
PeopleForBikes Community Grant Program	Private	The PeopleForBikes Community Grant Program supports bicycle infrastructure projects and targeted advocacy initiatives that make biking safer for people of all ages and abilities. PeopleForBikes accepts requests for funding up to $10,000. Projects that qualify for funding include: 1 - Costs related to the development of permanent bike infrastructure, including trails, shared-use paths, bike parks, pump tracks, bicycle playgrounds, neighborhood greenways/bike boulevards, and protected bike lanes 2 - Costs related to "quick-build" or "demonstration projects," provided that any temporary infrastructure is part of a strategy to subsequently develop permanent infrastructure 3 - Land or easement acquisition costs for bike infrastructure 4 - Events or programs that support cultural acceptance and support of specific planned or recently constructed bike infrastructure projects, like "bike buses" or "community bike rides." Such events or programs must show a connection between the event and organizing for permanent infrastructure improvements and must show a likelihood of permanence beyond the term of the grant.	Link	No required match. Local government agencies are encouraged to apply.
Private Developers	Private	Developers should consider constructing local streets with bike- and pedestrian-oriented facilities within subdivisions, including dedicating right-of-way to trails and parks. In fact, active transportation facilities are now required as part of City of Billings Subdivision regulations. Cities can encourage developers to include additional active transportation amenities during development review.		

APPENDIX

Appendix A

PLANNING LEVEL COST ESTIMATES

ITEM	SPACING (FT)	QTY	ROUNDED		UNIT PRICE		COST PER MILE
Sharrow Markings	250	42.24		44	$ 500.00	$	22,000.00
Signage	300	35.2		36	$ 650.00	$	23,400.00
			ADMIN		15%	$	6,810.00
					SUBTOTAL	$	52,210.00
				CONTINGENCY	20%	$	10,442.00
					TOTAL	$	62,652.00

Engineer's Opinion of Probable Cost
for
Neighborhood Bikeways (Cost Per Mile)

ITEM NO.	EST. QTY.	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
101	1	LS	Administrative Cost (15%)	$ 6,810.00 / LS =	$ 6,810.00
102	44	EA	Sharrow Markings	$ 500.00 / EA =	$ 22,000.00
103	36	EA	Signage	$ 650.00 / EA =	$ 23,400.00

**This estimate is assumed that the proper typical section has adequate curb and gutter and existing striping does not need to be obliterared to accommodate the new improvements.*

**Project specific signage will vary on a per project basis. The above estimate is only a generic estimate. Bike lane project signage may include but not be limited to signs such as R3-17, R7-9A, R4-11, W11-1 and R4-4.*

Subtotal = $ 52,210.00

Total = $ 52,210.00

Contingency (20%) = $ 10,442.00

Total Price = $ 62,652.00

ITEM	SPACING/LENGTH (FT)	QTY	ROUNDED		UNIT PRICE		COST PER MILE
Bike Lane Markings	300	17.6		44	$ 500.00	$	22,000.00
Signage	500	10.56		24	$ 650.00	$	15,600.00
6" White Epoxy Striping	5280	10560		10560	$ 1.75	$	18,480.00
4" White Epoxy Striping	5280	10560		10560	$ 0.75	$	7,920.00
			ADMIN		15%	$	9,600.00
					SUBTOTAL	$	73,600.00
				CONTINGENCY	20%	$	14,720.00
					TOTAL	$	88,320.00

Engineer's Opinion of Probable Cost
for
Bike Lanes (Cost Per Mile)

ITEM NO.	EST. QTY.	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
101	1	LS	Administrative Cost (15%)	$ 9,600.00 / LS =	$ 9,600.00
102	44	EA	Bike Lane Markings	$ 500.00 / EA =	$ 22,000.00
103	24	EA	Signage	$ 650.00 / EA =	$ 15,600.00
104	10560	LF	6" White Epoxy Striping	$ 1.75 / LF =	$ 18,480.00
105	10560	LF	4" White Epoxy Striping	$ 0.75 / LF =	$ 7,920.00

**This estimate is assumed that the proper typical section has adequate curb and gutter and existing striping does not need to be obliterared to accommodate the new improvements.*

**Estimate for striping assumes that all three white stripes shown in exhibit will be painted as part of this project. The 6-inch stripe shall be on the travel lane side and 4-inch stripe shall be on the parking lane side of the bike lane.*

**Project specific signage will vary on a per project basis the above estimate is only a generic estimate. Bike lane project signage may include but not be limited to signs such as R3-17, R7-9A, R4-11, W11-1 and R4-4.*

Subtotal =	**$**	**73,600.00**
Total =	**$**	**73,600.00**
Contingency (20%) =	**$**	**14,720.00**
Total Price =	**$**	**88,320.00**

ITEM	SPACING/LENGTH (FT)	QTY	ROUNDED		UNIT PRICE	COST PER MILE
Bike Lane Markings	300	17.6		44	$ 500.00	$ 22,000.00
Signage	400	13.2		28	$ 650.00	$ 18,200.00
6" White Epoxy Striping	5280	25344		25344	$ 1.75	$ 44,352.00
6" White Epoxy Diagonal Hatching	10	1267.2		1268	$ 1.75	$ 2,219.00
4" White Epoxy Striping	5280	4224		4224	$ 0.75	$ 3,168.00
			ADMIN		15%	$ 13,490.85
					SUBTOTAL	$ 103,429.85
*XX% "DEFFICIENCY" factor included for line breaks and intersections				CONTINGENCY	20%	$ 20,685.97
					TOTAL	$ 124,115.82

Engineer's Opinion of Probable Cost
for
Buffered Bike Lanes (Cost Per Mile)

ITEM NO.	EST. QTY.	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
101	1	LS	Administrative Cost (15%)	$ 13,490.85 / LS =	$ 13,490.85
102	44	EA	Bike Lane Markings	$ 500.00 / EA =	$ 22,000.00
103	28	EA	Signage	$ 650.00 / EA =	$ 18,200.00
104	25344	LF	6" White Epoxy Striping	$ 1.75 / LF =	$ 44,352.00
105	1268	LF	6" White Epoxy Diagonal Hatching	$ 1.75 / LF =	$ 2,219.00
106	4224	LF	4" White Epoxy Striping	$ 0.75 / LF =	$ 3,168.00

**This estimate is assumed that the proper typical section has adequate curb and gutter and existing striping does not need to be obliterared to accommodate the new improvements.*

**The defficiency factors was assumed for any drive approaches and intersections causing line breaks.*

**It is assumed that one side of the road with new bike lane would have a diagonally hatched buffer zone. With the other side of the street having a buffer zone 2-feet either side of the bike lane with then an adjacent parking lane between the bike zone and existing curb and gutter.*

**Estimate for striping assumes that all three white stripes shown in exhibit will be painted as part of this project. The 6-inch stripe shall be on the travel lane side and 4-inch stripe shall be on the parking lane side of the bike lane.*

**It is assumed that the buffer zone for the diagonal hatching would be 3-foot wide and the hatching be 10-feet O.C.*

**Project specific signage will vary on a per project basis the above estimate is only a generic estimate. Bike lane project signage may include but not be limited to signs such as R3-17, R7-9A, R4-11, W11-1 and R4-4.*

Subtotal =	**$**	**103,429.85**
Total =	**$**	**103,429.85**
Contingency (20%) =	**$**	**20,685.97**
Total Price =	**$**	**124,115.82**

ITEM	SPACING/LENGTH (FT)	QTY	ROUNDED	UNIT PRICE	COST PER MILE
Bike Lane Markings	300	17.6	44	$ 500.00	$ 22,000.00
Signage	400	13.2	28	$ 650.00	$ 18,200.00
6" White Dashed Epoxy Striping	5280	2112	2112	$ 1.75	$ 3,696.00
4" White Parking Striping	5280	4224	4224	$ 0.75	$ 3,168.00
Pin-down Concrete Barrier	5280	15375.36	15376	$ 60.00	$ 922,560.00
Flexible Delineators	50	307.52	308	$ 190.00	$ 58,520.00
Green Conflict Markings	5280	1408	1408	$ 10.00	$ 14,080.00
Yellow Epoxy Curb Paint		15375.36	15376	$ 4.00	$ 61,504.00
			ADMIN	15%	$ 165,559.20
				SUBTOTAL	$ 1,269,287.20
*XX% "DEFFICIENCY" factor included for line breaks and intersections			CONTINGENCY	20%	$ 253,857.44
				TOTAL	$ 1,523,144.64

Engineer's Opinion of Probable Cost
for
Separated Bike Lane (Cost Per Mile)

ITEM NO.	EST. QTY.	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
101	1	LS	Administrative Cost (15%)	$ 165,559.20 / LS =	$ 165,559.20
102	44	EA	Bike Lane Markings	$ 500.00 / EA =	$ 22,000.00
103	28	EA	Signage	$ 650.00 / EA =	$ 18,200.00
104	2112	LF	6" White Dashed Epoxy Striping	$ 1.75 / LF =	$ 3,696.00
105	4224	LF	4" White Parking Striping	$ 0.75 / LF =	$ 3,168.00
106	15376	LF	Pin-down Concrete Barrier	$ 60.00 / LF =	$ 922,560.00
107	308	EA	Flexible Delineators	$ 190.00 / EA =	$ 58,520.00
108	1408	SY	Green Conflict Markings	$ 10.00 / SY =	$ 14,080.00
109	15376	LF	Yellow Epoxy Curb Paint	$ 4.00 / LF =	$ 61,504.00

**This estimate is assumed that the proper typical section has adequate curb and gutter and existing striping does not need to be obliterared to accommodate the new improvements.*

**The defficiency factors was assumed for any drive approaches and intersections causing line breaks and the ommision of concrete barriers in that area.*

**The pin-down concrete barrier would be Type A Median Curb set back to back to create a 2 foot wide barrier. The length was calculated assuming every 50 linear feet in the barrier there would be a 5 foot break to accommodate storm water and a deffiency was calculated in for potential intersections and approaches. Additionally flexible delineators would be place atop the barrier on either side of the 5 foot barrier breaks.*

**Project specific signage will vary on a per project basis the above estimate is only a generic estimate. Bike lane project signage may include but not be limited to signs such as R3-17, R7-9A, R4-11, W11-1 and R4-4.*

Subtotal =	**$ 1,269,287.20**
Total =	**$ 1,269,287.20**
Contingency (20%) =	**$ 253,857.44**
Total Price =	**$ 1,523,144.64**

ITEM	SPACING/LENGTH (FT)	QUANTITY	ROUNDED		UNIT PRICE		COST PER MILE
Signage	400	13.2		28	$ 650.00	$	18,200.00
4" Yellow Dashed Centerline	5280	5280		5280	$ 0.75	$	3,960.00
10-ft Ashalt Trail (3" Thickness)	5280	5866.667		5867	$ 40.00	$	234,680.00
1-1/2" Minus Base Gravel (6" thickness)	5280	1368.889		1369	$ 44.00	$	60,236.00
Unclassified Excavation	5280	1368.889		1369	$ 40.00	$	54,760.00
Geotextile Fabric	5280	5866.667		5867	$ 5.00	$	29,335.00
			ASMIN		15%	$	60,175.65
					SUBTOTAL	$	461,346.65
				CONTINGENCY	20%	$	92,269.33
					TOTAL	$	553,615.98

Engineer's Opinion of Probable Cost
for
Asphalt Shared/Sidepath (Cost Per Mile)

ITEM NO.	EST. QTY.	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
101	1	LS	Administrative Cost (15%)	$ 60,175.65 / LS =	$ 60,175.65
102	28	EA	Signage	$ 650.00 / EA =	$ 18,200.00
103	5280	LF	4" Yellow Dashed Centerline	$ 0.75 / LF =	$ 3,960.00
104	5867	SY	10-ft Ashalt Trail (3" Thickness)	$ 40.00 / SY =	$ 234,680.00
105	1369	CY	1-1/2" Minus Base Gravel (6" thickness)	$ 44.00 / CY =	$ 60,236.00
106	1369	CY	Unclassified Excavation	$ 40.00 / CY =	$ 54,760.00
107	5867	SY	Non-Woven Geotextile Fabric (Mirifai 140N)	$ 5.00 / SY =	$ 29,335.00

**The unclassified excavation estimate is based off of the volume from exisitng ground elevation to 6-inches down to subgrade to accommodate 1-1/2' minus base gravel.*

**It is assumed that some of the unclassified excavation will be allocated for new 2-foot wide shoulders adjacent to the new asphalt trail.*

**Project specific signage will vary on a per project basis the above estimate is only a generic estimate. Bike lane project signage may include but not be limited to signs such as R3-17, R7-9A, R4-11, W11-1 and R4-4.*

**If soil conditions worsen the geofabric should be changed to accommodate the on site conditions with the advice of a geotechnical engineer.*

Subtotal = $ 461,346.65

Total = $ 461,346.65

Contingency (20%) = $ 92,269.33

Total Price = $ 553,615.98

ITEM	SPACING/LENGTH (FT)	QUANTITY	ROUNDED		UNIT PRICE		COST PER MILE
Signage	400	13.2		28	$ 650.00	$	18,200.00
4" Yellow Dashed Centerline	5280	5280		5280	$ 0.75	$	3,960.00
10-ft Concrete Trail (4" Thickness)	5280	52800		52800	$ 17.50	$	924,000.00
1-1/2" Minus Base Gravel (6" thickness)	5280	977.7778		978	$ 44.00	$	43,032.00
Unclassified Excavation	5280	1466.667		1467	$ 40.00	$	58,680.00
Geotextile Fabric	5280	5866.667		5867	$ 5.00	$	29,335.00
			ADMIN`		15%	$	161,581.05
					SUBTOTAL	$	1,238,788.05
				CONTINGENCY	20%	$	247,757.61
					TOTAL	$	1,486,545.66

Engineer's Opinion of Probable Cost
for
Concrete Shared/Sidepath (Cost Per Mile)

ITEM NO.	EST. QTY.	UNIT	DESCRIPTION	UNIT PRICE		TOTAL PRICE
101	1	LS	Administrative Cost (15%)	$ 161,581.05 / LS =	$	161,581.05
102	28	EA	Signage	$ 650.00 / EA =	$	18,200.00
103	5280	LF	4" Yellow Dashed Centerline	$ 0.75 / LF =	$	3,960.00
104	52800	SF	10-ft Concrete Trail (4" Thickness)	$ 17.50 / SF =	$	924,000.00
105	978	CY	1-1/2" Minus Base Gravel (6" thickness)	$ 44.00 / CY =	$	43,032.00
106	1467	CY	Unclassified Excavation	$ 40.00 / CY =	$	58,680.00
107	5867	SY	Non-Woven Geotextile Fabric (Mirifai 140N)	$ 5.00 / SY =	$	29,335.00

**The unclassified excavation estimate is based off of the volume from exisitng ground elevation to 9-inches down to subgrade to accommodate 1-1/2' minus base gravel.*

**It is assumed that some of the unclassified excavation will be allocated for new 2-foot wide shoulders adjacent to the new asphalt trail*

**Project specific signage will vary on a per project basis the above estimate is only a generic estimate. Bike lane project signage may include but not be limited to signs such as R3-17, R7-9A, R4-11, W11-1 and R4-4.*

**If soil conditions worsen the geofabric should be changed to accommodate the on site conditions with the advice of a geotechnical engineer.*

Subtotal = $ 1,238,788.05

Total = $ 1,238,788.05

Contingency (20%) = $ 247,757.61

Total Price = $ 1,486,545.66

Description	QTY	Unit Price				Cost
Sign Assembly	2	$ 700.00			$	1,400.00
24" Solid White Epoxy Striping	110	$ 30.00			$	3,300.00
24" Thermoplastic White Sharks Teeth	30	$ 45.00			$	1,350.00
6" ADA Ramps	250	$ 30.00			$	7,500.00
Curb & Gutter	20	$ 45.00			$	900.00
Unclassified Excavation	5.4	$ 40.00			$	214.81
1-1 1/2" Minus Base Course	5.4	$ 44.00			$	236.30
			ADMIN	15%	$	2,235.17
				SUBTOTAL	$	17,136.28
				CONTINGENCY 20%	$	3,427.26
				TOTAL	$	20,563.53

Engineer's Opinion of Probable Cost
for
Unsignalized Mid-Block Crosswalk

ITEM NO.	EST. QTY.	UNIT	DESCRIPTION		UNIT PRICE			TOTAL PRICE
101	1	LS	Administrative Cost (15%)	$	2,235.17	/ LS	= $	2,235.17
102	2	EA	Sign Assembly	$	700.00	/ EA	= $	1,400.00
103	110	LF	24" Solid White Epoxy Striping	$	30.00	/ LF	= $	3,300.00
104	30	SF	24" Thermoplastic White Sharks Teeth	$	45.00	/ SF	= $	1,350.00
105	250	SF	6" ADA Ramps	$	30.00	/ SF	= $	7,500.00
106	20	LF	Curb & Gutter	$	45.00	/ LF	= $	900.00
107	5	CY	Unclassified Excavation	$	40.00	/ CY	= $	214.81
108	5	CY	1-1 1/2" Minus Base Course	$	44.00	/ CY	= $	236.30

	Subtotal =	**$ 17,136.28**
	Total =	**$ 17,136.28**
	Contingency (20%) =	**$ 3,427.26**
	Total Price =	**$ 20,563.53**

**This estimate is assumed that the proper typical section has adequate curb and gutter and existing striping does not need to be obliterared to accommodate the new improvements.*

**This estimate is based on a standard City of Billings local street with a 34' width back of curb to back of curb.*

**This estimate can vary depending on any other accomodations needed for the specific project.*

**The sizing for the ADA ramps is meant to be a 5'x5' ramp with 5' flares tying into an assumed existing sidewalk. Concrete curb and gutter will be laid in front of the width of the ADA ramp (10').*

Description	QTY	Unit Price			Cost
24" Solid White Epoxy Striping	200	$ 30.00		$	6,000.00
24" Thermoplastic White Sharks Teeth	150	$ 45.00		$	6,750.00
Solar Powered RRFB Signal System	1	$22,000.00		$	22,000.00
6" ADA Ramps	250	$ 30.00		$	7,500.00
Curb & Gutter	20	$ 45.00		$	900.00
Unclassified Excavation	5.4	$ 40.00		$	214.81
1-1 1/2" Minus Base Course	5.4	$ 44.00		$	236.30
			ADMIN 15%	$	6,540.17
			SUBTOTAL	$	50,141.28
			CONTINGENCY 20%	$	10,028.26
			TOTAL	$	60,169.53

Engineer's Opinion of Probable Cost

for

Mid-block Crosswalk with Rectangular Rapid Flash Beacon (RRFB)

ITEM NO.	EST. QTY.	UNIT	DESCRIPTION	UNIT PRICE		TOTAL PRICE
101	1	LS	Administrative Cost (15%)	$ 6,540.17 / LS	= $	6,540.17
102	200	LF	24" Solid White Epoxy Striping	$ 30.00 / LF	= $	6,000.00
103	150	SF	24" Thermoplastic White Sharks Teeth	$ 45.00 / SF	= $	6,750.00
104	1	LS	Solar Powered RRFB Signal System	$ 22,000.00 / LS	= $	22,000.00
105	250	LF	6" ADA Ramps	$ 30.00 / LF	= $	7,500.00
106	20	LF	Curb & Gutter	$ 45.00 / LF	= $	900.00
107	5	CY	Unclassified Excavation	$ 40.00 / CY	= $	214.81
108	5	CY	1-1 1/2" Minus Base Course	$ 44.00 / CY	= $	236.30

**This estimate is assumed that the proper typical section has adequate curb and gutter and existing striping does not need to be obliterared to accommodate the new improvements.*	**Subtotal**	= $	**50,141.28**
	Total	= $	**50,141.28**
**This estimate is based on a standard City of Billings 3-lane commercial street with a 45' width back of curb to back of curb.*	**Contingency (20%)**	= $	**10,028.26**
**This estimate can vary depending on any other accomodations needed for the specific project.*	**Total Price**	= $	**60,169.53**
**The sizing for the ADA ramps is meant to be a 5'x5' ramp with 5' flares tying into an assumed existing sidewalk. Concrete curb and gutter will be laid in front of the width of the ADA ramp (10').*			

Description	QTY	Unit Price	Cost		
Sign Assembly	10	$ 700.00	$	7,000.00	
12" Solid White Epoxy Striping	82	$ 15.00	$	1,230.00	
24" Thermoplastic White Sharks Teeth	30	$ 45.00	$	1,350.00	
Pedestrian Hybrid Beacon Traffic Signal	1	$ 190,000.00	$	190,000.00	
6" Concrete ADA Ramp	100	$30.00	$	3,000.00	
Detectable Warning Panels	16	$50.00	$	800.00	
		15%	$	30,507.00	ADMIN
			$	233,887.00	SUBTOTAL
		20%		$46,777.40	CONTINGENCY
			$	280,664.40	TOTAL

Engineer's Opinion of Probable Cost

for

Marked Crosswalk & Ped Warning

ITEM NO.	EST. QTY.	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
101	1	LS	Administrative Cost (15%)	$ 30,507.00 / LS =	$ 30,507.00
102	10	EA	Sign Assembly	$ 700.00 / EA =	$ 7,000.00
103	82	LF	12" Solid White Epoxy Striping	$ 15.00 / LF =	$ 1,230.00
104	30	SF	24" Thermoplastic White Sharks Teeth	$ 45.00 / SF =	$ 1,350.00
105	1	LS	Pedestrian Hybrid Beacon Traffic Signal	$ 190,000.00 / LS =	$ 190,000.00
106	100	SF	6" Concrete ADA Ramp	$ 30.00 / SF =	$ 3,000.00
107	16	SF	Detectable Warning Panels	$ 50.00 / SF =	$ 800.00

**This estimate is assumed that the proper typical section has adequate curb and gutter and existing striping does not need to be obliterared to accommodate the new improvements.*

**This estimate is based on a standard City of Billings 3-lane commercial street with a 45' width back of curb to back of curb.*

**This estimate can vary depending on the location of the power source for the signal as well as any other accomodations needed for the specific project.*

**Project specific signage will vary on a per project basis the above estimate is only a generic estimate. Bike lane project signage may include but not be limited to signs such as R1-5L, R11-2, W16-7P, R10-6 and R10-23.*

**It is assumed the ADA ramp to accommodate a crosswalk would be a 5' by 5' ramp with 5' flares to tie into existing sidewalk.*

Subtotal	=	**$ 233,887.00**
Total	=	**$ 233,887.00**
Contingency (20%)	=	**$ 46,777.40**
Total Price	=	**$ 280,664.40**

Description	QTY	Unit Price	Cost	
Demo Curb & Gutter	280	$ 17.50	$ 4,900.00	
Remove Concrete Flatwork	140	$ 40.00	$ 5,600.00	
Remove Asphalt	360	$ 25.00	$ 9,000.00	
Curb & Gutter	300	$ 45.00	$ 13,500.00	
4" Concrete Sidewalk	1900	$ 13.50	$ 25,650.00	
1-1/2" Minus Base Gravel	50	$ 44.00	$ 2,200.00	
6" Concrete ADA Ramp	400	$ 30.00	$ 12,000.00	
Detectable Warning Panels	40	$ 50.00	$ 2,000.00	
12" White Epoxy Striping	240	$ 15.00	$ 3,600.00	
24" White Epoxy Striping	60	$ 20.00	$ 1,200.00	
Yellow Curb Paint	300	$ 4.00	$ 1,200.00	
Storm Drain Inlet (Type II)	4	$ 3,500.00	$ 14,000.00	
Storm Drain Manhole	2	$ 4,000.00	$ 8,000.00	
Storm Drain Pipe	135	$ 100.00	$ 13,500.00	
Asphalt Restoration	35	$ 250.00	$ 8,750.00	
Signage	4	$ 650.00	$ 2,600.00	
		15%	$ 19,155.00	ADMIN
			$ 146,855.00	SUBTOTAL
		20%	$29,371.00	CONTINGENCY
			$176,226.00	TOTAL

Engineer's Opinion of Probable Cost
for
Intersection Reconstruction (Bulbout)

ITEM NO.	EST. QTY.	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
101	1	LS	Administrative Cost (15%)	$ 19,155.00 / LS =	$ 19,155.00
102	280	LF	Demo Curb & Gutter	$ 17.50 / LF =	$ 4,900.00
103	140	SY	Remove Concrete Flatwork	$ 40.00 / SY =	$ 5,600.00
104	360	SY	Remove Asphalt	$ 25.00 / SY =	$ 9,000.00
105	300	LF	Curb & Gutter	$ 45.00 / LF =	$ 13,500.00
106	1900	SY	4" Concrete Sidewalk	$ 13.50 / SY =	$ 25,650.00
107	50	CY	1-1/2" Minus Base Gravel	$ 44.00 / CY =	$ 2,200.00
108	400	SF	6" Concrete ADA Ramp	$ 30.00 / SF =	$ 12,000.00
109	40	SF	Detectable Warning Panels	$ 50.00 / SF =	$ 2,000.00
110	240	LF	12" White Epoxy Striping	$ 15.00 / LF =	$ 3,600.00
111	60	LF	24" White Epoxy Striping	$ 20.00 / LF =	$ 1,200.00
112	300	LF	Yellow Curb Paint	$ 4.00 / LF =	$ 1,200.00
113	4	EA	Storm Drain Inlet (Type II)	$ 3,500.00 / EA =	$ 14,000.00
114	2	EA	Storm Drain Manhole	$ 4,000.00 / EA =	$ 8,000.00
115	135	LF	Storm Drain Pipe	$ 100.00 / LF =	$ 13,500.00
116	35	SY	Asphalt Restoration	$ 250.00 / SY =	$ 8,750.00
117	4	EA	Signage	$ 650.00 / EA =	$ 2,600.00

**This estimate is based on a standard City of Billings 3-lane commercial street with a 45' width back of curb to back of curb.*

**This estimate can vary depending on the location of existing storm drain manholes and inlets*

**Project specific signage will vary on a per project basis the above estimate is only a generic estimate. Bike lane project signage may include but not be limited to signs such as R11-2 and W16-7P.*

**It is assumed the ADA ramp to accommodate a crosswalk would be a 5' by 5' ramp with 5' flares to tie into existing sidewalk.*

Subtotal	**= $ 146,855.00**
Total	**= $ 146,855.00**
Contingency (20%)	**= $ 29,371.00**
Total Price	**= $ 176,226.00**

Appendix B

TABLE B.1 FULL PROJECT LIST FOR HIGH COMFORT NETWORK

PROJECT ID	NAME	FROM	TO	STATUS	VALUE SCORE	PROJECT VALUE	PROJECT READINESS	PRIORITIZATION
1	12th St W & Plainview St	BBWA Canal	Monad Rd	Planned	12	High	High	High Priority, Short Term
21	6th Ave	N 19th St	Existing trail	Planned	12	High	High	High Priority, Short Term
23	8th St W, Delphinium, Azalea, 11th, Missouri	Rimrock Rd	Central Ave	Planned	12	High	High	High Priority, Short Term
77	Lewis Ave/Yellowstone Ave/Clark Ave	Zimmerman Trl	Division St	Planned	12	High	High	High Priority, Short Term
82	Monad Rd	32nd St W	Billings Blvd	Planned	12	High	High	High Priority, Short Term
87	N 31st St	Poly Dr	6th Ave N	Planned	12	High	High	High Priority, Short Term
104	Terry/Miles/Howard/ St Johns	36th St W	1st St W	Planned	12	High	High	High Priority, Short Term
121	Phillips St	S Billings Blvd	Washington St	Planned	12	High	High	High Priority, Short Term
3	19TH	Rimrock Rd	Miles Ave	Planned	11	High	High	High Priority, Short Term
57	Grand Ave	52nd Street West	Shiloh Rd	Planned	10	High	High	High Priority, Short Term
37	BBWA Canal Trail Corridor	Broadwater Ave	BBWA Canal Trail	Existing: Future Improvement	10	High	High	High Priority, Short Term
5	21ST	Mariposa Ln	Solomon Ave	Planned	9	High	High	High Priority, Short Term
9	2nd Ave S	State Ave	N 28th St	Planned	9	High	High	High Priority, Short Term
12	3rd	Division St	N 22nd St	Planned	9	High	High	High Priority, Short Term
13	3rd Ave N	N 22nd St	Main St	Planned	9	High	High	High Priority, Short Term

PROJECT ID	NAME	FROM	TO	STATUS	VALUE SCORE	PROJECT VALUE	PROJECT READINESS	PRIORITIZATION
14	3rd St W	Parkhill Dr	Montana Ave	Planned	9	High	High	High Priority, Short Term
22	8TH Ave. S.	S 28th St	S 34th St	Planned	9	High	High	High Priority, Short Term
31	Arnold Drain	25th St W	18th St W	Planned	9	High	High	High Priority, Short Term
46	Broadway	9th Ave N	12th Ave S	Planned	9	High	High	High Priority, Short Term
90	Poly Dr	Virginia Ln	N 27th St	Planned	9	High	High	High Priority, Short Term
49	Central Ave	32nd St W	Stewart Park Rd	Planned	8	High	High	High Priority, Short Term
91	Poly Dr	38th St W	Virginia Ln	Existing: Future Improvement	8	High	High	High Priority, Short Term
113	Zimmerman Trail	3	Poly Dr	Planned	8	High	High	High Priority, Short Term
2	16th St W	Grand Ave	Central Ave	Planned	7	High	High	High Priority, Short Term
6	24TH	Howard Ave		Planned	7	High	High	High Priority, Short Term
56	Grand Ave	Shiloh Rd	74th St W	Planned	7	High	High	High Priority, Short Term
63	Jackson St	S 28th St	King Ave E	Planned	7	High	High	High Priority, Short Term
64	Jim Dutcher Trail Corridor	Mullowney Ln	Jim Dutcher Trl	Existing: Future Improvement	7	High	High	High Priority, Short Term
70	King Ave E	King Ave W	S Billings Blvd	Planned	7	High	High	High Priority, Short Term
36	BBWA Canal	Park Pl	6th Ave N	Planned	12	High	Low	High Priority, Long Term
108	Wicks Ln	Gleneagles Blvd	Kiwanis Trl	Planned	12	High	Low	High Priority, Long Term
118	36th St W	Broadwater Ave	King Ave W	Planned	12	High	Low	High Priority, Long Term

PROJECT ID	NAME	FROM	TO	STATUS	VALUE SCORE	PROJECT VALUE	PROJECT READINESS	PRIORITIZATION
42	Billings Canal	South Shiloh Rd	TransTech Trl	Planned	11	High	Low	High Priority, Long Term
48	Central Ave	Shiloh Rd	S 64th St W	Planned	11	High	Low	High Priority, Long Term
120	Hallowell Ln	State Ave	King Ave E	Planned	11	High	Low	High Priority, Long Term
7	27th	Highway 3	5th Ave N	Planned	10	High	Low	High Priority, Long Term
60	Highway 87 Bypass	Roundup Rd	Johnson Ln	Planned	10	High	Low	High Priority, Long Term
69	King Ave	Orchard Ln	Sugar Ave	Planned	10	High	Low	High Priority, Long Term
11	34th	1st Ave S	State Ave	Planned	9	High	Low	High Priority, Long Term
18	5th Ave N	N 28th St	Main St	Planned	9	High	Low	High Priority, Long Term
68	King Ave	32nd St W	Midland Rd	Planned	9	High	Low	High Priority, Long Term
28	Alkali Creek	Future Annandale Rd	Senators Blvd	Planned	8	High	Low	High Priority, Long Term
35	Bannister Drain Trail	32nd St W	King Ave W	Planned	8	High	Low	High Priority, Long Term
50	Cove Ditch	Grand Ave	Shiloh Rd	Planned	8	High	Low	High Priority, Long Term
52	Elysian Rd	Mullowney Ln	S Frontage Rd	Planned	8	High	Low	High Priority, Long Term
71	King Ave W	Big Ditch	South 44th St W	Planned	8	High	Low	High Priority, Long Term
83	Monad Road	S 48th St W	Monad Rd	Planned	8	High	Low	High Priority, Long Term
99	South 44th St W	South 44th St W	Dobrinka Dr	Planned	8	High	Low	High Priority, Long Term
17	56th	Grand Ave	Danford Rd	Planned	7	High	Low	High Priority, Long Term

PROJECT ID	NAME	FROM	TO	STATUS	VALUE SCORE	PROJECT VALUE	PROJECT READINESS	PRIORITIZATION
27	Alkali Creek	Aronson Ave	Main St	Planned	7	High	Low	High Priority, Long Term
29	Alkali Creek	Alkali Creek	Emerald Dr	Planned	7	High	Low	High Priority, Long Term
39	BBWA Canal Trail North	East of Shadow Heights	Aronson Ave	Planned	7	High	Low	High Priority, Long Term
40	Big Ditch	Yard Office Road	Beringer Way	Planned	7	High	Low	High Priority, Long Term
41	Big Ditch	52nd Street West	Rimrock West Park	Planned	7	High	Low	High Priority, Long Term
44	Broadwater Ave	48th St W	Shiloh Rd	Planned	7	High	Low	High Priority, Long Term
58	Hesper Rd	Gabel Rd	East of Kraft Ln	Planned	7	High	Low	High Priority, Long Term
65	Jim Dutcher Trail/ Marathon Loop	Shiloh Rd	Yrpa Conservation	Planned	7	High	Low	High Priority, Long Term
89	Old Hardin Rd	Main St	US 90	Planned	7	High	Low	High Priority, Long Term
96	S Billings Blvd	King Ave E	South Billings Bridge	Planned	7	High	Low	High Priority, Long Term
111	Yellowstone River Rd	Bench Blvd	Erin St	Planned	7	High	Low	High Priority, Long Term
116	N 13th St	6th Ave N	1st Ave N	Planned	7	High	Low	High Priority, Long Term
122	Blue Creek Road	Yellowstone River	Briarwood	Planned	7	High	Low	High Priority, Long Term
53	Erie Dr	7th Ave S	Charlene St	Planned	5	Low	High	Opportunistic Priority
61	Hilltop Rd	BBWA Canal Trail North	Bench Blvd	Existing: Future Improvement	5	Low	High	Opportunistic Priority
86	N 31st St	6th Ave N	Montana Ave	Planned	5	Low	High	Opportunistic Priority
117	Broadwater Ave	Descro Park Trl	Parkview Dr	Planned	5	Low	High	Opportunistic Priority

PROJECT ID	NAME	FROM	TO	STATUS	VALUE SCORE	PROJECT VALUE	PROJECT READINESS	PRIORITIZATION
4	19th St. W	Miles Ave	Monad Rd	Planned	4	Low	High	Opportunistic Priority
34	Avenue C	Virginia Ln	Existing Trail Pioneer Park	Planned	4	Low	High	Opportunistic Priority
74	Kiwanis Trl	Steffanich Dr	Kiwanis Trl	Planned	4	Low	High	Opportunistic Priority
92	Rimrock Rd	Little Cove Creek	54th St W	Planned	4	Low	High	Opportunistic Priority
115	46th St W	Rimrock Rd	Silver Creek Trl	Planned	4	Low	High	Opportunistic Priority
119	St. John's	8th St W	6th St W	Planned	3	Low	High	Opportunistic Priority
93	Rimrock Road Trail	Shiloh Rd	Zimmerman Trl	Existing: Future Improvement	2	Low	High	Opportunistic Priority
97	Senators Blvd	Alkali Creek Rd	Governors Blvd	Existing: Future Improvement	1	Low	High	Opportunistic Priority
10	HWY 3	Shorey Rd	Inner Belt Loop	Planned	6	Low	Low	Low Priority
24	9th Ave	N 32nd St	N 24th St	Existing: Future Improvement	6	Low	Low	Low Priority
38	BBWA Canal Trail Corridor	Monad Rd	BBWA Canal Trail Corridor	Planned	6	Low	Low	Low Priority
62	Jackson St	S 28th St	King Ave E	Planned	6	Low	Low	Low Priority
81	Molt Rd.	Charolais St	Rimrock Rd	Planned	6	Low	Low	Low Priority
98	Shiloh Rd	Neibauer Rd	Shiloh Rd	Planned	6	Low	Low	Low Priority
109	Wicks Ln	Annandale Rd	Skyway Dr	Planned	6	Low	Low	Low Priority
112	Yrpa Conservation Pond Trails	Jim Dutcher Trail/Marathon	S Billings Blvd	Planned	6	Low	Low	Low Priority
15	48TH St. W	Grand Ave	Danford Dr	Planned	5	Low	Low	Low Priority

PROJECT ID	NAME	FROM	TO	STATUS	VALUE SCORE	PROJECT VALUE	PROJECT READINESS	PRIORITIZATION
32	Arnold Drain	Grand Ave	Broadwater Ave	Planned	5	Low	Low	Low Priority
47	Canyon Creek	Big Ditch	Shiloh Rd	Planned	5	Low	Low	Low Priority
66	Jim Dutcher Trl	S Frontage Rd	Jim Dutcher Trl	Planned	5	Low	Low	Low Priority
79	S Frontage Rd	Mullowney Ln	Rudio Rd	Planned	5	Low	Low	Low Priority
80	S Frontage Rd	Riverside Rd	S Billings Blvd	Planned	5	Low	Low	Low Priority
84	Montana	State Ave	30th	Planned	5	Low	Low	Low Priority
85	Mullowney	Elysian Rd	South of Story Rd	Planned	5	Low	Low	Low Priority
106	Walter Creek Blvd	S Frontage Rd	Jim Dutcher Trail/	Planned	5	Low	Low	Low Priority
114	Zoo St	S Shiloh Rd	Entryway Dr	Planned	5	Low	Low	Low Priority
16	52nd St W	Grand Ave	Monad Rd	Planned	4	Low	Low	Low Priority
25	Access	Inner Belt Loop	North of Payton Trl	Planned	4	Low	Low	Low Priority
43	Bitterroot	Elaine St	Wicks Ln	Planned	4	Low	Low	Low Priority
54	Gabel	Hesper Rd	Zoo Dr	Planned	4	Low	Low	Low Priority
59	High Ditch	Cove Ditch	Rimrock West Park	Planned	4	Low	Low	Low Priority
67	Johnson Ln	Old Hardin Rd	Yellowstone River	Planned	4	Low	Low	Low Priority
72	Kiwanis Trail Corridor	Hawthorne Ln	Kiwanis Trl	Planned	4	Low	Low	Low Priority
73	Kiwanis Trail Corridor	Bitterroot Dr	Mary ST	Planned	4	Low	Low	Low Priority

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78	Little Cove Creek	Grand Ave	Rimrock Rd	Planned	4	Low	Low	Low Priority
94	Rod and Gun Club	Iron Horse Trl	High Way 3	Planned	4	Low	Low	Low Priority
100	South of Governors Blvd	W Wicks Ln	Aronson Ave	Planned	4	Low	Low	Low Priority
123	Underpass Ave	S Billings Blvd	Calhoun	Planned	4	Low	Low	Low Priority
19	62nd	North of Rimrock Rd	Grand Ave	Planned	3	Low	Low	Low Priority
20	64th	Grand Ave	Laurel Airport Rd	Planned	3	Low	Low	Low Priority
107	West of Governors Blvd	South of W Wicks Ln	Constitution Ave	Planned	3	Low	Low	Low Priority
110	Yellowstone River Corridor	Yellowstone River Rd	Yellowstone River	Planned	3	Low	Low	Low Priority
125	25th St Bridge	Montana Ave	Minnesota Ave	Planned	3	Low	Low	Low Priority
75	Lakewood Ln	Lakewood Ln	Lake Elmo	Planned	2	Low	Low	Low Priority
8	27th St	Sugar Ave	Garden Ave	Planned	1	Low	Low	Low Priority
102	Story Rd / Wise Ln	Duck Creek Rd	Frontage Rd	Planned	1	Low	Low	Low Priority
103	Sugar	State Ave	King Ave E	Planned	1	Low	Low	Low Priority
105	Uinta Park/Twin Oaks Park	Wicks Ln	Ditch Trail	Planned	1	Low	Low	Low Priority
124	Kratz Ln	Washington St	Sugar Ave	Planned	1	Low	Low	Low Priority
26	Alexander Rd	Gleneagles Blvd	Roundup Rd	Planned	0	Low	Low	Low Priority
30	Alkali Creek Rd/ Annandale Rd	HWY 3	Gleneagles Blvd	Planned	0	Low	Low	Low Priority

PROJECT ID	NAME	FROM	TO	STATUS	VALUE SCORE	PROJECT VALUE	PROJECT READINESS	PRIORITIZATION
33	Autumnwood Dr	Autumnwood Dr	Ben Hog Ave	Planned	0	Low	Low	Low Priority
45	Broadwater Ave	Big Ditch	52nd St W	Planned	0	Low	Low	Low Priority
51	Danford	S 48th St W	West of Evening Star	Planned	0	Low	Low	Low Priority
55	Gleneagles Blvd	Alexander Rd	Annandale Rd	Planned	0	Low	Low	Low Priority
76	Laurel Airport	S 64th St W	Buffalo Trail Rd	Planned	0	Low	Low	Low Priority
88	Neibauer	Autumn Ln	East of Holly Ln	Planned	0	Low	Low	Low Priority
95	S 72nd St W	Laurel Airport Rd	S Frontage Rd	Planned	0	Low	Low	Low Priority
101	Stone Ridge	48th St W	52nd St W	Planned	0	Low	Low	Low Priority