



CHAPTER 5:
IMPLEMENTATION





5.1 INTRODUCTION

The vision of the Billings Bikeway and Trails Master Plan Update is to create a safe, convenient, and connected active transportation network consisting of streets, trails, sidewalks, and on-street bicycle facilities that are accessible to people of all ages and abilities, thereby improving

the economic and physical health of the community and its citizens. This vision, and the associated goals developed in coordination with community stakeholders, should be referenced often to guide the implementation of this Plan. The Plan's goals include:



1. Complete Streets: *Improve, expand and consider active transportation and recreation facilities within the Billings Urban Area.*



2. Implementation: *Consider the implementation of active transportation facilities at all levels of government and through all related policies, processes, and standards that encourage and enhance walking, bicycling, and other trail-related activities in the Billings area.*



3. Evaluation: *Monitor the implementation of the Billings Area Bikeway and Trail Master Plan*



4. Transit Integration: *Integrate bicycling and walking into the Metropolitan Transit System (MET)*



5. Maintenance: *Ensure bicycle and trail facilities are clean, safe, and accessible.*



6. Education and Encouragement Programs: *Implement comprehensive education and encouragement programs targeted at all ages and abilities.*



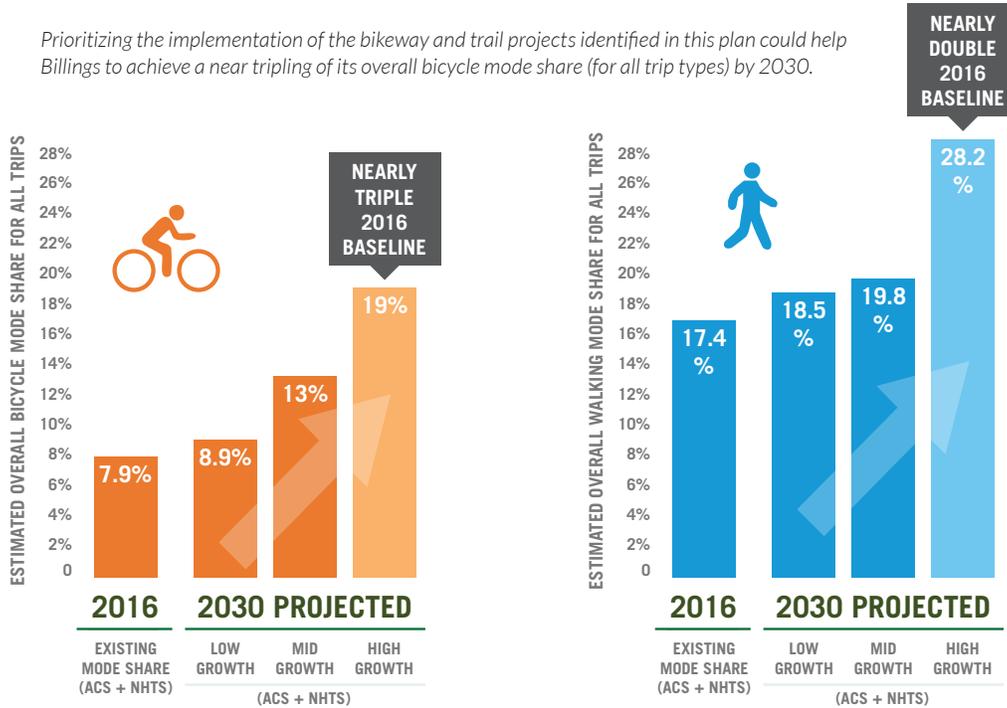
7. Enforcement: *Increase enforcement on City/County streets, trails and bike-ways to make interactions between motorists, bicyclists, and pedestrians safer.*



8. Health and Safety: *Encourage healthy activities through increased access and safe infrastructure for bicyclists and pedestrians.*



Prioritizing the implementation of the bikeway and trail projects identified in this plan could help Billings to achieve a near tripling of its overall bicycle mode share (for all trip types) by 2030.



5.2 IMPLEMENTATION STRATEGIES

Implementation of this Plan will take place incrementally over many years, and involve a number of community partners. The City of Billings, Yellowstone County, MDT, Billings TrailNet, and the private development community will all make contributions to improving the bikeway and trail network in the Billings Area.

The recommendations included in this plan have been prioritized to provide staff and community stakeholders general guidance about how projects could be implemented. Using the prioritization results should be only one of several factors used to determine the order of project implementation. Bikeway and trail implementation is often based on opportunities. As opportunities arise, projects should not be overlooked if they did not rate near the top of the scoring exercise. The following strategies and actions can guide Billings toward completing the bikeway and trail network identified in this Plan.

Complete Inexpensive ‘Low-Hanging Fruit’

Many projects in this Plan may be accomplished without major roadway reconstruction or resurfacing. Potential projects should be reviewed annually to determine how many of these projects can be completed. Projects that may be low-hanging fruit include bike lanes that require striping only to complete, wayfinding installation, and the bicycle boulevard network.

Leverage Resurfacing Projects

Billings’ streets are subjected to hundreds of freeze/thaw cycles annually, as well as wear-and-tear caused by snow tires, heavy vehicles, plowing operations and other stresses. These conditions reduce the life of the pavement surface, requiring more frequent pavement surface preservation than in other US Cities. Each chip seal, or mill and overlay project, should include a review of this Plan to determine if a bikeway can be integrated into the scheduled roadway resurfacing project. These projects represent blank slate opportunities to implement bikeway facilities with little incremental cost.

Leverage Other Roadway Projects

Roadway reconstruction projects also represent opportunities to implement recommendations included in this Plan. As major reconstruction projects are planned and designed, the Plan’s recommendations should be reviewed and integrated.

Pursue Visionary Projects

In communities across the country, bikeway and trail projects that were originally considered visionary have been constructed. Grants can provide funding that fast-track projects towards implementation. While some projects included in this Plan represent long-term visions, the community should think boldly about how to fund and implement all projects, including expansion of dedicated local funding sources.



Establish Dedicated Local Funding

Bikeway funding in Billings is typically an opportunistic mix of funding sources from the Federal, State and Local levels. In recent years with the passage of the new Federal transportation bills (MAP-21 and the FAST Act), dedicated funding for non-motorized transportation has been reduced and become more competitive with other Montana communities. The Billings area has received only \$664,930 in Transportation Alternatives (TA) grant funding from 2012-2016, versus annual dedicated funding under the previous transportation bill through the Community Transportation Enhancements Program (CTEP). of \$3.87 million from 2008-2012. This 82% reduction has had a palpable effect on the pace and number of projects being developed, resulting in a slowing of bikeway and trail development. To provide additional revenue streams to implement the plan's recommendations, dedicated local funding sources should be established. Section 5.5 provides a summary of available funding sources, including options for creating dedicated local funding sources for non-motorized transportation facilities.

5.3 COST ESTIMATES

Planning level construction cost estimates for shared use path and bicycle boulevard projects are provided in the Appendix. Being a planning level assessment, project unknowns exist, and therefore a high and low cost estimate is provided. This broad range of potential costs is appropriate given the level of uncertainty in the design at this point in the planning process. Engineering costs, and any property acquisition costs (if applicable), are not included in the cost estimate. The following provides greater detail on some of the associated cost estimates (note: additional costs will require additional funding).

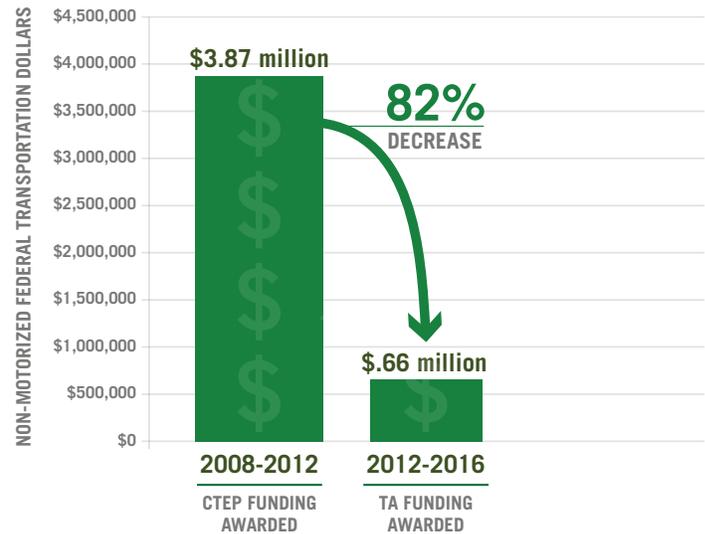
Shared Use Paths

Path construction can require a high level of preparation – purchasing property, engineering design, and coordination with many stakeholders. Costs for a new shared use path typically range from \$80-\$140 per linear foot, depending on complexity. Projects that require minimal grading and pavement will run at the lower end of the range, where projects that require culverts, bridges, retaining walls or other expensive improvements will fall toward the upper end of the estimate.

Bicycle Boulevards

The costs assume that the project consists of wayfinding signs every quarter-mile, and roadway markings about

FEDERAL FUNDING FOR NON-MOTORIZED TRANSPORTATION PROJECTS



Nationally, federal funding for bicycle and pedestrian projects has become more competitive. Between 2012 to 2016, the Billings Area received 82 percent less federal funding through the TA Program than from 2008 to 2012 through CTEP. This drop in funding emphasizes the need for additional mechanisms to fund bicycle and pedestrian projects, such as a dedicated local funding source. Options to establish this type of funding source are described in Table 5.4.

every 200 feet. At about \$400 per installed sign and \$200 per marking, the per mile cost is roughly \$17,000. Thermoplastic markings are recommended, as paint markings will typically wear out completely in less than one year. Intersection improvements are estimated based on the level of complexity. In general, the more that concrete and signal work is required, the more expensive the improvement will be. Some bicycle boulevards include short sections of other facility types, such as shared use paths or bicycle lanes. All segments for individual projects should be implemented simultaneously.

Bicycle Lanes

Some bicycle boulevards include sections of bike lanes. Painting a bicycle lane on a road with sufficient width costs roughly \$10,000 per linear mile (\$5,000 in one direction) for paint striping and thermoplastic stencils. For such retrofit projects, some may require few or no other changes to the roadway configuration, however some may require lane configuration or orientation changes. This can be done by removing the existing road markings and applying new ones, or it also may be included as part of a routine resurfacing. When bike lanes are added as part of a resurfacing project, additional features such as buffers or separated bike lanes, increase the cost further.



5.4 PROJECT PRIORITIZATION

For the 2011 Plan, projects were prioritized based upon scoring criteria, which were then weighted by the project steering committee. The plan had two-sets of scoring criteria, one specific to off-street facilities and the other specific to on-street bikeways, and scores were developed for every project. For this Plan Update, rather than using two sets of scoring criteria, the two lists have been consolidated into a single, more focused set.

These criteria are described in Table 5.1, and were determined in coordination with the project steering committee, along with weights for each criterion.

Additionally, for this Plan Update, the total number of recommended projects has increased. Projects that would be funded through new development, or through the standard resurfacing and complete streets elements of other roadway projects, have not been scored, as those projects will be implemented according to the CIP and engineering schedules. Overall, this strategy results in a smaller list of scored projects, and provides a more useful tool for staff to pursue bicycle, pedestrian or trail specific funding for projects that require external funding sources. Project descriptions and scores are provided in the Appendix.

TABLE 5.1: PROJECT PRIORITIZATION CRITERIA

Criteria	Description
Public Input	The Billings Area Bikeway and Trail Master Plan has engaged the public through two public workshops, stakeholder meetings, an online mapping exercise, and online survey. Recommended projects with demonstrated public endorsement will qualify for this prioritization criterion.
Proximity to Schools	To encourage more students to walk and bicycle to school, proposed facilities that connect to, or travel within 1/4 mile of K-12 schools (public and private), Montana State University-Billings, and Rocky Mountain College would qualify for this prioritization criterion.
Connectivity to Existing Facilities	Extending the existing network to create longer continuous routes will result in a more connected system as it expands versus implementing isolated and disconnected projects. Facilities that connect to an existing bikeway or trail will receive this scoring criterion.
Network Gaps	Gaps in the bikeway network discourage use because they limit route continuity, or require users to choose less direct paths to access their destinations. Some users feel “stranded” when a facility abruptly ends, sometimes forcing them to walk or ride on a street that does not accommodate them. Facilities that fill gaps between two otherwise continuous facilities in the existing bikeway and trail network will qualify for this criterion.
Connections to Activity Centers	Activity centers are the major trip-originating destinations within Billings (e.g. parks, commercial districts, large employment centers, etc.). By increasing bicycle accessibility to major activity centers, the Billings Area Bikeway and Trail Master Plan can reduce traffic congestion and support residents and visitors who choose to bicycle or walk for transportation. Projects that connect to these centers qualify for this prioritization criteria.
Ease of Implementation	Bikeway and trail facilities range in project readiness and the amount of construction or prior work that needs to be completed before a facility can be installed. Some streets or existing public rights of way can accommodate bike lanes and/or trails without extensive modifications; where as other projects may require significant changes to the travel lanes, medians, street parking, topography, etc. Many cities choose to pursue the “low-hanging fruit” projects to achieve quick wins and build support for more politically complex projects. Bikeway projects that require minimal changes to the built environment will score higher on this criterion.
Equity	As the bikeway and trail network continues to develop, it is important to serve areas of the community that have a high concentration of traditionally underserved populations. These areas typically have higher rates of transportation based walking and bicycling, and are usually more underserved when it comes to existing infrastructure. US Census data will be used, and projects that serve areas with a high concentration of historically underserved populations will score more points than areas with lower concentrations of these populations. Included data will cover poverty, people of color, high school diploma, percent of population that is non-English speaking, and percentage of population without access to a private vehicle.
Downtown	Downtown Billings is a major trip generator for the region. Downtown is a major entertainment, commercial and employment hub. As such, it is the destination for many daily trips in Billings. Providing adequate, and a variety of bikeway and/or trail connections to downtown can positively impact daily use in the City. Bikeway or trail facilities that provide direct or secondary connectivity to downtown will qualify for this criterion.



5.5 FUNDING SOURCES

This section provides an overview of available federal, state, and local funding sources. Most funding sources are competitive and require the preparation of applications.

For multi-agency projects, applications may be more successful if prepared jointly with other local and regional agencies. The majority of non-local public funds for bikeway and pedestrian projects

are derived through a core group of federal and state programs. In addition to federal, state, and regional funding sources, the Billings Area could develop a dedicated local funding source for active transportation improvements through a variety of measures. The Billings Area should also take advantage of private-public partnerships to fund projects identified in this Plan as well.

TABLE 5.2: FEDERAL FUNDING SOURCES

Funding Opportunity	Eligible Project Types	Qualifications	Lead Agency	Funding Source Detail
Surface Transportation Block Grant Program (STBGP)	Bicycle and pedestrian improvements, among others	Varies	MDT and MPO	With the passage of the 2016 Federal Transportation Bill, Fixing America's Surface Transportation Act (FAST Act), the former Surface Transportation Program (STP) has become the Surface Transportation Block Grant Program (STBGP), which now includes Transportation Alternatives Program funding (described below). Billings- Yellowstone County Metropolitan Planning Organization (MPO) accepts concept reports for consideration of programing funds. This program has a state and an MPO component.
Transportation Alternatives Program (TAP)	Bicycle and pedestrian improvements only	Funds can be used for construction, planning and design of on and off-road bicycle and pedestrian facilities	MDT and MPO	The FAST Act combines the former TAP (which included the former Recreational Trails and the Safe Routes to School programs) into the STBGP (above). Though program requirements will stay roughly the same, total funding has been slightly increased. Most projects have an 80/20 federal/local match split, and can include sidewalks, paths, trails (including Rails-to-trails), bicycle facilities, signals, traffic calming, lighting and safety infrastructure, and ADA improvements. Unless a state opts out, it must use a specified portion of its TA funds for recreational trails projects. Since the Billings Urban Area is less than 200,000 people, the Billings Area competes with other Montana communities for this source to fund projects. Funds are distributed by MDT.
Highway Safety Improvement Program (HSIP)	Infrastructure and program safety improvements	Public road with a correctable crash history, expected to reduce crashes, positive cost-benefit ratio, or, a systemic safety project	MDT	Program purpose is to reduce fatalities and serious injuries on public roads through infrastructure and programs. Like SSIP, HSIP can fund low cost, systemic improvements if benefit-cost is met.
Transportation Infrastructure Finance and Innovation Act (TIFIA) Loans	Large projects	Varies	USDOT	While not a competitive grant funding source, these loans do provide financing options, including credit assistance in the form of direct loans, loan guarantees, and standby lines of credit for large, surface transportation projects of national or regional significance, as well as public-private partnerships.
Transportation Investments Generating Economic Recovery (TIGER)	Shovel ready, surface transportation projects	Positive estimated cost-benefit ratio meeting federal transportation goals, benefitting country as a whole	USDOT, State and Local Gov'ts	Approvals for the eighth round of TIGER, totalling \$500 million, were signed into law in 2015 and applied for in 2016. Projects involving highways, bridges, bicycle and pedestrian facilities, transit, rail, and intermodal are eligible. Detailed application must be completed. Projects are highly competitive, and require a minimum 20 percent local match funding. While this funding source currently exists, it could be discontinued in the future.
Partnership for Sustainable Communities	Bicycle and Pedestrian infrastructure	Project must fulfill Livability Principles	EPA, HUD, and USDOT	Joint project of the Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Transportation (USDOT). It is based on five Livability Principles, one of which explicitly addresses the need for pedestrian and bicycle infrastructure. It is not a formal agency with a regular annual grant program. Nevertheless, it is an important effort that has already led to some new grant opportunities



TABLE 5.2: FEDERAL FUNDING SOURCES (CONTINUED)

Funding Opportunity	Eligible Project Types	Qualifications	Lead Agency	Funding Source Detail
Community Transformation Grants	Bicycle and Pedestrian Infrastructure and Programs	Projects and programs aimed at increasing physical activity to reduce risk of disease	CDC	Community Transformation Grants, administered through the Center for Disease Control (CDC), support community-level efforts to reduce chronic diseases such as heart disease, cancer, stroke, and diabetes. Active transportation infrastructure and programs that promote healthy lifestyles are a good fit for this program, particularly if the benefits of such improvements accrue to population groups experiencing the greatest burden of chronic disease.
Federal Transit Administration (FTA) Funding	Bicycle and pedestrian infrastructure	Project must enhance or be related to public transportation facilities	FTA	Multiple FTA funding sources exist. Most FTA funding can be used to fund pedestrian and bicycle projects “that enhance or are related to public transportation facilities.”
Additional Federal Funding	Varies	Varies	Varies	The landscape of federal funding opportunities for pedestrian and bicycle programs and projects is always changing. A number of Federal agencies, including the Bureau of Land Management, the Department of Health and Human Services, the Department of Energy, and the Environmental Protection Agency have offered grant programs amenable to pedestrian and bicycle planning and implementation, and may do so again in the future. For up-to-date information about grant programs through all federal agencies, see: http://www.grants.gov/

TABLE 5.3: STATE/REGIONAL FUNDING SOURCES

Funding Opportunity	Eligible Project Types	Qualifications	Lead Agency	Funding Source Detail
State Legislation	Legislation dependent	Legislation dependent	State of Montana	State legislation can create taxes, such as a gas tax, that provide dedicated funding for transportation. Funding raised for the tax could be directed to MDT and local municipalities. A new initiative to the state legislature to raise the Montana gas tax by \$.10/gal has been proposed. If approved, \$.04/gal would be directed to MDT, and \$.06/gal would be directed to local governments, which a portion of the revenues could be used to fund bicycle/ pedestrian projects locally.
Spot Safety Improvement Program (SSIP)	Infrastructure and program safety improvements	Identified safety issue, similar to the HSIP	MDT	Because SSIP is only state, and not federal, money, spending can be more flexible to fix crash-prone locations.
Statewide Transportation Improvement Program (STIP)	Transportation projects, including bicycle and pedestrian infrastructure	Varies	MPO and MDT	The Statewide Transportation Improvement Program (STIP) is MDT’s short-term capital improvement program, providing project funding and scheduling information for the department and Montana’s metropolitan planning organizations. The MDT, as well as the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) approve the STIP.
Metropolitan Planning Organization Transportation Improvement Program (TIP)	Transportation projects, including bicycle and pedestrian infrastructure	Varies	MPO	MPOs are responsible for planning and prioritizing all federally funded transportation improvements within an urbanized area. The Billings-Yellowstone County Metropolitan Planning Organization is the Metropolitan Planning Organization (MPO) for Billings and surrounding urban areas. MPOs maintain a long-range transportation plan (LRTP) and develop a transportation improvement program (TIP) to develop a fiscally constrained program based on the long-range transportation plan. This Plan recommends that the City and County and its partners continue to work closely with MPO to ensure pedestrian, bikeways and transit improvement projects recommended in this Plan are listed in the TIP.



TABLE 5.4: LOCAL FUNDING SOURCES

Funding Opportunity	Eligible Project Types	Qualifications	Lead Agency	Funding Source Detail
General Fund	Maintenance, Capital Improvements List projects	Projects should incorporate active transportation accommodation	Local Gov't	Street and park maintenance districts are used to pay for maintenance expenses. Projects identified for reconstruction or re-pavement as part of the Capital Improvements list should also incorporate recommendations for bicycle or pedestrian improvements in order to reduce additional costs.
Bond Financing	Varies	Varies	Varies	Bonds are a financing technique and not a funding source. Money is borrowed against a source of revenue or collateral (i.e. parcel tax revenue). Bonds do not increase total funding, but rather shift investment from future to present. A previous General Obligation Bond (GO Bond) funded many of the Billings Area trails.
Special Assessments or Taxing Districts	Varies	Varies	Local Gov't	Local municipalities can establish special assessment districts to pay for improvements. The Lockwood Pedestrian Safety District is a local example of this type of funding source, which is a special assessment program for implementing pedestrian improvements, including sidewalks.
Business Improvement Area of District	Varies	Projects should benefit surrounding businesses' customers	Billings BID	Trail, pedestrian, and bicycle improvements can often be included as part of larger efforts aimed at business improvement and retail district beautification. Business Improvement Areas, such as the Billings Business Improvement District, collect levies on businesses in order to fund area wide improvements that benefit businesses and improve access for customers. A portion of this revenue could be used to fund bicycle and pedestrian improvements.
Development and Impact Fees	Varies	Varies	Local Gov't	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 an impact fee program.
Sales Tax	Varies	Varies	Local Gov't	Local governments can choose to exercise a local option sales tax, and use the tax revenues to provide funding for a wide variety of projects and activities. No sales tax is currently established in the Billings Area, but if there ever is, a small portion of the funds being directed towards transportation should be dedicated for active transportation projects. State approval required to enact local sales tax.
Property Tax	Open space acquisitions	Varies	Local Gov't	Property taxes generally support a significant portion of a local government's activities. However, the revenues from property taxes can also be used to pay debt service on general obligation bonds issued to finance open space system acquisitions. Property taxes can provide a steady stream of financing while broadly distributing the tax burden. It should be noted that other public agencies compete vigorously for these funds, and taxpayers are generally concerned about high property tax rates.
Excise Tax	Varies	Varies- could specifically focus on tourism	Local Gov't	Excise taxes are taxes on specific goods and services. These taxes require special legislation and the use of the funds generated through the tax are limited to specific uses. Examples include lodging, food, and beverage taxes that generate funds for promotion of tourism, and the gas tax that generates revenues for transportation-related activities.
Tax Increment Financing	Infrastructure projects	Projects should specifically benefit the TIF area	Local Gov't	Tax Increment Financing is a tool to use future gains in taxes to finance the current improvements that will create those gains. When a public project (e.g., shared use path) is constructed, surrounding property values generally increase and encourage surrounding development or redevelopment. The increased tax revenues are then dedicated to support the debt created by the original public improvement project.



TABLE 5.4: LOCAL FUNDING SOURCES (CONTINUED)

Funding Opportunity	Eligible Project Types	Qualifications	Lead Agency	Funding Source Detail
Street User Fees	Infrastructure projects	Varies	Local Gov't (Public Works)	Many cities administer street user fees through residents' monthly water or other utility bills. The revenue generated by the fee can be used for operations and maintenance of the street system, and priorities would be established by the Public Works Department. This approach could be more equitable than property taxes, which just impact property owners.
In Lieu of Fees	Open space or trail projects	Varies	Local Gov't	Developers often dedicate open space or trail projects in exchange for waiving fees associated with park and open space allocation requirements in respect to proposed development.

Creation of a City of Billings and/or MPO level Bikeway and Trail Account.

To address federal funding shortfalls and provide a more dependable and consolidated funding stream the creation of a Bikeway and Trail Account is recommended. A Bikeway and Trail Account intends to fund safety improvements, enhancements, and targeted expansions of the city's bikeway and trail network. The fund would operate as a catch-all for various smaller funding sources, and could be used to fund capital projects or be used as matching funds to leverage larger amounts. Combining these sources could result in more effective projects than if the funds remained divided. Transferring other moneys to this account will help fund larger projects and allow them to happen more quickly. The proposed bicycle parking program could exist as a component of the Bikeway

and Trail Account. The Account funding would need to be allocated within the City's and/or MPO's annual budget. The Bicycle Transportation Account may be funded through existing sources or may be funded through a new source such as an increase in fees or other new sources of revenue. Transfers from other sources such as a gas tax apportionment, would augment City or MPO funding. Likely candidate projects would include prioritized projects in the Appendix, which do not include bicycle or pedestrian facilities implemented as part of existing capital road construction projects or routine pavement preservation.