

Volume V, Appendix D

# **Part VI: Spokane Bicycle Master Plan**

City of Spokane Comprehensive Plan



# SPOKANE BICYCLE MASTER PLAN

MAY 2017



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# EXECUTIVE SUMMARY

The Spokane Master Bicycle Plan creates a vision for enhancing bicycling opportunities for all residents of Spokane. Its policies and actions are intended to make Spokane a more bicycle-friendly city. Communities that embrace active living principles provide healthy environments for its citizenry and are more economically vital.

Although Spokane has performed bicycle facility planning for more than thirty years, the current Bicycle Facilities Network is disconnected and signed bicycle routes are sporadic. There are numerous barriers (hills, high traffic volume streets, the Spokane River, etc.) that make cycling difficult and inconvenient. Additionally, end-of-trip facilities such as bicycle parking and lockers are inadequate. This plan proposes to address these issues by creating a bicycle network that guides cyclists of all ages and abilities safely throughout Spokane and its unique geography. Importantly, the Spokane Master Bicycle Plan includes recommendations and actions that will ensure that bicycling becomes a more viable alternative mode of transportation for all.

Research has consistently shown that enhanced bicycle facilities provide safe options for those individuals who may not bicycle regularly. Therefore, Spokane supports bicycling because it is a cost-effective mode of transportation that promotes health, the environment, and community development.

This commitment to improving bicycle transportation includes facility maintenance, devotion of adequate staff resources to implementing the Plan, and providing sustained funding for projects and programs.

## Vision

*Riding a bicycle is a comfortable and integral part of daily life in Spokane for people of all ages and abilities.*

## Objective and Policies

### Objective

The objective of the Bicycle Master Plan is to meet and support the goals established in the Transportation Chapter, shown below.



## Policies

The policies in this section support all of the goals in the Transportation Chapter while maintaining a focus on the needs of bicyclists within the City of Spokane.

**Policy: BMP 1: Continually increase the bicycle mode share for all trips.**

**Policy: BMP 2: Complete and maintain connected bikeways that provide safe transportation for Spokane cyclists throughout the City.**

**Policy BMP 3: Provide convenient and secure short-term and long-term bike parking to connect people to popular destinations and transit throughout Spokane and encourage employers to provide shower and locker facilities.**

**Policy BMP 4: Increase bicycling by educating people using all transportation modes about the benefits of bicycling to the entire community. Enhance the safety of people riding bicycles through effective law enforcement, education and detailed crash analysis.**

**Policy BMP 5: Develop a collaborative program between a variety of city departments and agencies and several outside organizations to secure funding and implement the Bike Master Plan through capital project delivery as well as community planning processes.**

Spokane's Bicycle Master Plan uses these policies to establish a broad vision for cycling in Spokane. Implementing this plan will be a challenge. However, if the enormous public support for this plan is any indication, the citizens of Spokane are ready to move towards more sustainable transportation options.

## INTRODUCTION

We have reached a point where working towards creating attractive, sustainable communities is an essential part of maintaining our quality of life. Transportation networks are an important part of this sustainability and developing a system that relies less on unsustainable motorized modes of transport and more on sustainable non-motorized transportation, is crucial. Riding a bicycle is the most efficient form of personal transport. The city recognizes this fact and recent planning efforts have focused on finding a way to make cycling, “safe, accessible, convenient, and attractive.” (*Spokane Comprehensive Plan Ch. 4, p. 7*) Spokane is in need of a bicycle network that meets all of these requirements while continuing to accommodate a variety of transportation options. With the vision of creating such a system, citizens, city staff and community leaders created this Bicycle Master Plan, a living document that will provide guidance and serve as a reference as this vision becomes reality.

Currently, there are over 1000 miles of paved streets within the city limits of Spokane; less than 300 miles of those streets are designated as bicycle facilities. Although these lanes provide a starting point for a bicycle network, many are disconnected and not adequately maintained. According to the 2010 census, Spokane has a higher percentage of cyclists than the national average, but there is still room for a significant improvement. 0.9 % of working-age people in Spokane chose to ride their bicycles over other modes of transportation as a means of transportation to work.

Over the next twenty years, we would like to see 5% of all trips in Spokane taken on a bicycle. Fortunately, a number of recent studies have shown that the addition of bicycle facilities and an enhancement of existing facilities can substantially increase the number of riders. If Spokane implements the recommendations contained in this Plan, the results will positively affect the city’s economy, transportation systems, environment and health of its citizens.

## HISTORY

The City’s initial *Bikeways Plan* was adopted by the City Council in October, 1976 and integrated into the Comprehensive Plan in 1980. The 1980 plan was minimally updated in 1987. In 1996, the City Council adopted the *Spokane Regional Pedestrian/Bikeway Plan* that was prepared by the Spokane Regional Transportation Council. This detailed plan outlined a regional network of trails and other related recommendations. In 2001, Spokane adopted a comprehensive plan with updated bicycle-related policies and goals. The adoption also included a revised map of Spokane’s planned regional bikeway network. This marks the most recent occasion of significant changes to Spokane’s bikeway network and bicycle related policies.

In 2006, the Bicycle Advisory Board (BAB) encouraged the Spokane City Council to adopt an amendment to the City of Spokane’s Comprehensive Plan that would require the City of Spokane to adopt a Master Bike Plan. The BAB requested the plan be integrated into the comprehensive plan. On January 17, 2007, Spokane’s City Council adopted a comprehensive plan amendment that included language supporting this request. Shortly thereafter, city staff was assigned to begin work on the plan.



After conducting an extensive public process, on June 8, 2009, the Spokane City Council passed an ordinance adopting an emergency amendment to the City of Spokane Comprehensive Plan including amendments to Chapter 4 Transportation, and adopted a Bike Master Plan including changes to the text of the Transportation Chapter of the Comprehensive Plan and a new planned bikeway network map (map TR 2). The bicycle plan was updated again in 2015.

## 2017 BICYCLE MASTER PLAN UPDATE

This 2017 update of the 2009 Bicycle Master Plan reflects changes made to the system since 2009. This update reflects the current state of bicycle system planning and facility design. Implementing bicycle systems and facility design is evolving quickly across the country as efforts to create safe and attractive systems for a wider range of cyclists has resulted in ever changing strategies and techniques to facilitate the implementation.

The Spokane Bicycle Master Plan is incorporated into the Spokane Comprehensive Plan. The purpose of the Bicycle Master Plan is to improve the environment for bicycling and provide more opportunities for multimodal transportation. The plan focuses on developing a connected bikeway network and support facilities.

The Spokane Bicycle Master Plan contains a list of specific actions that delineate activities or programs to be undertaken by the city or other appropriate agencies to assure successful implementation. In summary these include: Continued institutional commitments to improving bicycle transportation; devote adequate staff resources to implementing the Plan; provide sustained funding for projects and programs; and learn from implementing projects and adjust approaches as necessary.

**Bicycle Master Plan Part 1** contains citywide bicycling policies and action items that will be used to encourage construction of bicycle projects, support facilities, maintenance, education, funding, evaluation, coordination and other critical issues.

**Bicycle Master Plan Part 2** contains facility identification and definitions, and the Existing and Future Bikeway Network maps.

### **Bicycle Master Plan Purpose**

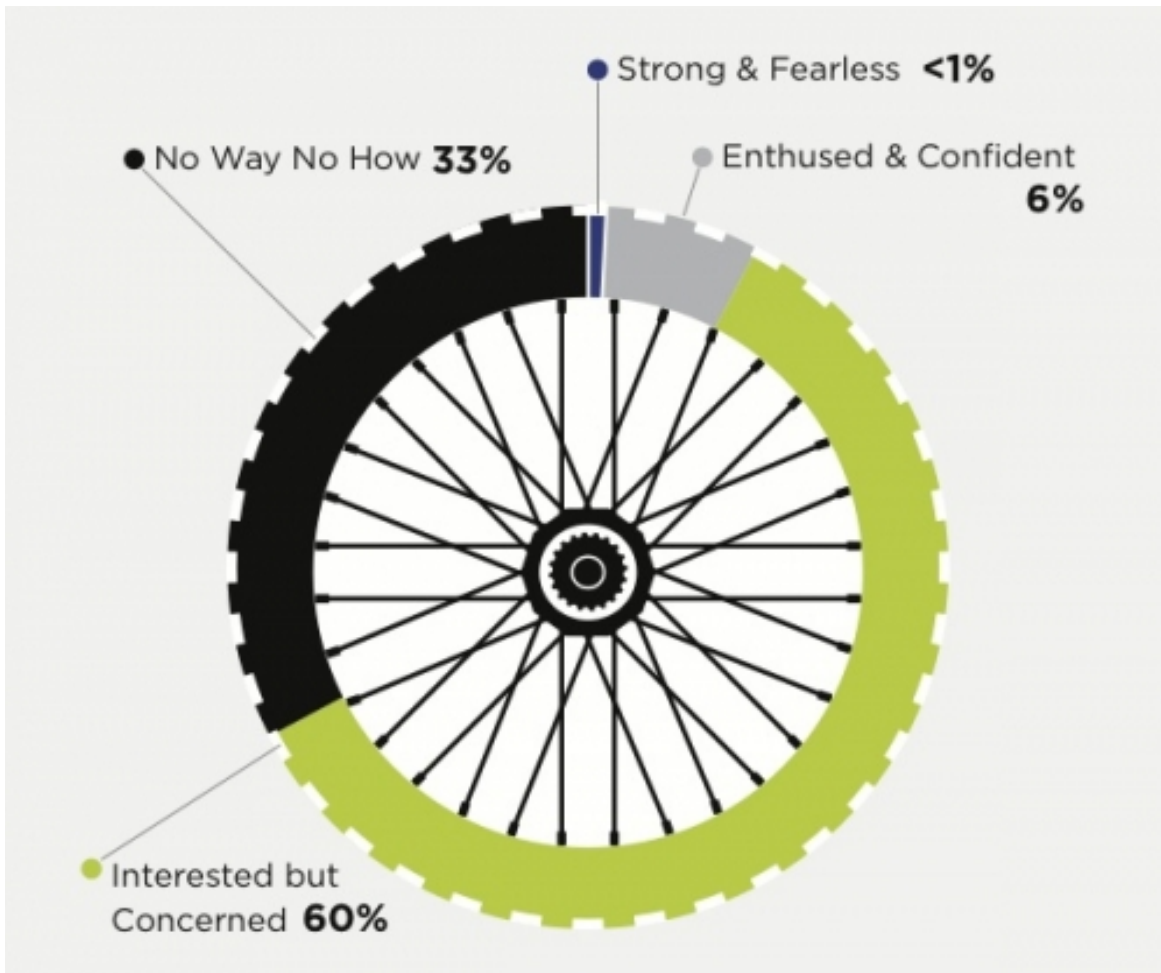
This update to the Master\_Bicycle Plan is designed around a bicycle network that is more appealing to the “interested but concerned” category as the target market for increasing cycling for transportation. The type of facilities to support the “interested but concerned” riders are typically in lower traffic speed environments, and where the separation between bicycles and motor vehicles can be increased, such as in buffered bicycle lanes on arterials, cycle tracks, neighborhood greenways, or on lower-speed, non-arterial streets.

Through research done by the City of Portland in 2005, four categories were proposed to help identify and understand the needs of cyclists and non-cyclists. The “*Four Types of Transportation Cyclists*” categorizes cyclists based on the conditions in which they are willing to ride a bicycle:



- Strong & Fearless: Representing the smallest portion of the population, this group is willing to ride on roads regardless of the speed and volume of traffic or the facilities provided.
- Enthused & Confident: Representing a larger portion of the population than the Strong & Fearless category, this group is comfortable riding in the road next to cars, but appreciates designated bicycle facilities.
- Interested but Concerned: Representing the largest segment of the population. This group likes to ride bicycles, but do not ride regularly due to safety concerns. They generally will not ride on higher volume and higher speed roads such as arterials without facilities that buffer them from automobile traffic. These riders perceive traffic, safety, and other issues as significant barriers to bicycling.
- No Way No How: This category typically represents about a third of the population. This group does not bicycle due to a lack of interest or ability.

Figure 1. The Four Types of Transportation Cyclists



# BICYCLE MASTER PLAN: PART 1 - CITYWIDE BICYCLING VISION, POLICIES AND ACTIONS

## VISION STATEMENT

***Riding a bicycle is a comfortable and integral part of daily life in Spokane for people of all ages and abilities.***

## POLICIES / ACTIONS

**Policy BMP1: Continually increase the bicycle mode share for all trips.**

### Actions

*Action 1.1: Use the performance goals, measurements and targets identified in Table 1.*

**Table 1. Bicycle Master Plan Performance Measures**

Goal	Performance Measure	Baseline Measurement	Performance Target
Increase bicycle trips year after year	Number of bicyclists counted at locations throughout Spokane	2016 citywide counts and daily counts at permanent counter locations, using first year installation as baseline	Quadruple ridership between 2016 and 2036
Increase bicycle share of commute trips	Commute mode share	2010-2014 American Community Survey 0.9%	Triple commute mode share between 2016 and 2036

*Action 1.2: Encourage and support land uses that make bicycling more attractive than driving for trips of 3 miles or less.*

**Policy BMP 2: Complete and maintain connected bikeways that provide safe transportation for Spokane cyclists throughout the City.**

### Actions

*Action 2.1: Design bicycle facilities and the network for all ages and abilities to attract the “interested but concerned” riders. This category represents the largest segment of the community.*

The following is a list of general implementation and design measures that will need to be made by the city to support Action 2.1:

- Provide a high degree of separation between people riding bicycles and people driving cars on high traffic streets
- Incorporate separated bicycle facilities where potential users will be of a variety of ages and

abilities

- Consider a variety of methods to reduce speed differential between motorists and bicyclists where separated bicycle facilities are not possible
- Develop a system of Neighborhood Greenways on low volume and low speed streets, utilizing context appropriate design and traffic calming techniques
- Design bicycle facilities with safety and comfort as basic requirements to attract riders of all ages and abilities

*Action 2.2: Continually monitor best practices in bicycle facility design and update the City's design guidance as necessary to reflect current best practices. National best practice guides such as the NACTO Urban Bikeway Design Guide should be used as reference guides for bicycle system planning and facility design.*

*Action 2.3: Provide bicycle facilities on designated arterial streets.*

Spokane's arterial streets offer the most direct routes to workplaces, shopping areas, schools, transit park-and-ride lots, and other destinations. A lack of a bicycle network and facilities on critical portions of the city's arterial street system prevents more people from making trips by bicycle and makes conditions less comfortable for bicyclists. This plan allows for flexibility in the implementation of the network to take advantage of opportunities to improve upon what is shown the Planned Bicycle Facility Map when the opportunity arises.

*Action 2.4: Complete the Bikeway Network.*

Continue to allocate funds and seek additional funding to complete the bicycle network and finish 100% of the bicycle network by 2037. Continue to meet the bicycle level-of-service standards established in the transportation element of the Comprehensive Plan.

The Bikeway Network provides a backbone of high-quality bicycle facilities to connect to high priority destinations within the city. These facilities include protected bike lanes, bike lanes, on-street markings, signed routes, neighborhood greenways, or pathways. Select bicycle facility types that provide increasing separation on higher speed and volume roads, where feasible. Important pathway projects include completing the Centennial Trail missing links, the Ben Burr Trail, Fish Lake Trail, and connections to other trails within the greater Spokane area.

Tools for completing the bikeway network include:

- Right size roadways or reduce lane widths to accommodate bicycle facilities on streets with excessive capacity
- Reviewing on-street parking utilization rates to determine the best use of the public right-of-way

*Action 2.5: Improve bicycle safety and access at arterial roadway crossings.*

Improvements are needed at arterial roadway crossings in the Bikeway Network to provide bicyclists

with continuous, safe routes between destinations. Spokane has a number of streets that carry high-speed and high-volume traffic (e.g. Francis, Monroe, Maple/Ash, Wellesley and 29<sup>th</sup> Ave). Many other arterial streets are also challenging to cross, particularly during peak travel periods. In order to make it possible for bicyclists to travel throughout the city, there needs to be opportunities to cross major streets without disrupting the traffic flow of these important corridors.

Recommended improvements include treatments such as traffic signals, median crossing islands, curb extensions combined with signs, and/or markings. These crossings must also be safe and accessible for pedestrians. While the recommended Bikeway Network map identifies many critical needs, it does not represent a complete inventory of the city's intersections. The city should evaluate the Bikeway Network for other potential bicycle crossing improvements. The first priority will be to improve intersections where existing bicycle facilities cross arterial roadways. Other key crossings should be considered as each new segment of the Bikeway Network is implemented. In addition, all future roadway improvement projects should address bicycle crossing needs as a routine part of the design process when feasible.

*Action 2.6: Make key operational improvements to complete connections in the Bikeway Network.*

There are many spot locations in the Bikeway Network where bicycle access should be improved by making changes to roadway operations. The following is a list of general operational improvements that will need to be made by the city to complete bicycle connections:

- Provide bicycle turn pockets at key intersections. Left-turn pockets allow bicyclists to wait in a designated space for a gap in traffic before turning left. These pockets are particularly beneficial on roadways with relatively high traffic volumes and significant bicycle turning movements. Locations with raised medians may provide good opportunities to add pockets.
- Traffic signal timing should consider all modes including bicycling. Therefore, all traffic signals should facilitate safe bicycle crossings. This includes providing a minimum green time and a minimum yellow time to ensure that bicyclists are able to clear intersections, per the AASHTO *Guide for the Development of Bicycle Facilities* (1999 or latest edition). Explore new technologies to detect bicyclists at traffic signals. In the future, explore new detection technologies such as infrared or video sensors that can tell the difference between bicycles and motor vehicles. This can help improve bicycle detection at actuated signalized intersections and make it possible to detect bicyclists at pedestrian crosswalk signals.
- Explore innovative designs for bicycles at intersections. This includes modifying pedestrian crosswalk signals to have separate push-buttons or sensors to detect bicyclists, pedestrians, and motor vehicles. This allows the traffic signal to stop arterial traffic for a shorter amount of time for bicyclist crossings than for pedestrian crossings. Separate crossing signals are provided for bicycles and pedestrians at these intersections. The City of Tucson, AZ has successfully used this signal design. Bicycle boxes should also be considered at signalized locations with high numbers of left turning bicyclists. The design of all types of traffic signals should not confuse pedestrians and should comply with the Americans with Disabilities Act.
- Improve bicycle accommodations on bridges. Bicycle accommodations on bridges need to be

improved as well as on their approaches and access ramps. In the short-term, bicycle access should be improved using signage, marking, maintenance, and other spot improvements. In the long-term, as bridges are repaired or replaced, they should be studied to determine the demand for bicycle facilities. If needed, the bridge project should include new facilities or retrofitted with facilities that provide appropriate bicycle access (e.g., bicycle lanes or wide sidewalks - minimum 10 feet wide). Bridges are critical for providing bicycle connectivity throughout Spokane.

- Additional locations for pedestrian pathways with bicycles permitted (e.g., potential pathways through parks, bike channel improvements to stairs).

*Action 2.7: Provide wayfinding guidance through the Bikeway Network.*

Wayfinding signs and pavement markings should be provided to help bicyclists navigate through the Bikeway Network. The city should begin by signing the regional trail routes, then work on the entire system within close proximity to downtown, and slowly expand outwards. There are a number of locations in the city where it may be necessary to use non-arterial streets, alleys, or sidewalks to connect between existing or proposed bicycle facilities. While many of these complicated connections are shown on the Bikeway Network Map, there are currently no signs or markings along the actual connection to facilitate wayfinding. The city should install a combination of signs and markings to guide bicyclists through these connections.

*Action 2.8: Explore a paid bike share program.*

Many cities with size comparable to Spokane are investing in paid bike sharing programs. These systems provide an alternative travel method to driving or taking transit for short-distance trips (2 miles or less). The City would first need to prepare a feasibility study and financial plan for such a system. Studies have shown that having more cyclists on the road is a big factor in driver awareness of cyclists, with a positive correlation to safety. A paid bike share program would be one method of increasing the overall number of cyclists.

*Action 2.9: Improve the quality and quantity of bicycle facility maintenance.*

Bicycle facility maintenance will be improved by establishing clear maintenance responsibilities and by involving the public in identifying maintenance needs. Maintenance agreements between city agencies should be negotiated to take advantage of the strengths of each agency. In addition, there are also opportunities to utilize volunteers to assist with some maintenance tasks. These actions will improve the efficiency and quality of bicycle maintenance in the city.

- Encourage bicycle organizations and other community groups to assist with minor maintenance activities. The city will work with bicycle organizations, community groups, civic organizations, and businesses to provide periodic upkeep along trail corridors. This will help improve bicycle facility safety, reduce maintenance costs, and build goodwill with neighborhood residents.
- Continue to respond to citizen complaints and maintenance requests. Use these requests to make short term improvements and to set maintenance priorities.
- Educate roadway maintenance crews on the impact to the bicycle facility of abrupt transitions

from new to old surfacing material on street resurfacings and chip sealing and the impact of on the usability of adjacent bicycle facilities.

- Consider different types of weather and road conditions when developing and maintaining bicycle facilities. Weather and seasonal issues will be considered in the development and maintenance of bicycle facilities within reasonable limits. For example, slip-resistance will be a factor considered in the selection of pavement markings for bicycle facilities. Also on-street bicycle facilities and off-street paths should be swept more frequently to ensure the safety of cyclists. Drainage will also be addressed in the design of all roadways and paths. Snow removal and storage is an important consideration especially on more urban corridors.
- Ensure all bicycle legends and markings, including shared lane markings (sharrows), are included in the city's street maintenance program. Coordinate new installations while securing maintenance funds.

*Action 2.10: Prioritize bicycle facility development to maximize the use and safety benefits of these investments.*

Bicycle improvements will often occur as a result of other project investments, such as the reconstruction or repaving of an arterial street as provided by the Street Levy. Other active transportation projects may be the result of specific funding opportunities and/or how well a particular project scores against others in a competitive process. While pursuing those opportunities, improvements will be considered on those facilities that serve high volumes of users, improve safety, are cost-effective, and improve geographic equity.

### **Policy BMP 3: Provide convenient and secure short-term and long-term bike parking to connect people to popular destinations and transit throughout Spokane and encourage employers to provide shower and locker facilities.**

#### **Actions**

*Action 3.1: Require compliance with the City of Spokane Bicycle Parking Design Guidelines*

Working with Planning and Business Development, ensure that any bicycle parking installed in the city follows the City of Spokane Bicycle Parking Design Guidelines with respect to both rack type as well as placement in relation to buildings and other obstacles so that the bicycle racks/lockers/corrals are usable by all bicyclists.

*Action 3.2: Improve bicycle storage facilities at transit facilities.*

Partner with STA to identify and provide bicycle parking improvements at transit facilities including park and ride lots. This includes providing bicycle racks and lockers and reserving adequate space during transit station construction to provide future bicycle racks and lockers. The following actions are recommended:

- Provide sufficient space for bicycle storage at transit stations and multimodal hubs.

- Provide sufficient space for bicycle storage at future transit stations and park and ride lots. As transit systems develop in the future, bicycle parking demand should be evaluated to determine the amount of space that is needed for bicycle racks and lockers. Space for bicycle parking should be included in station designs from the onset of a project.
- Work with the Spokane Transit Authority (STA) to develop a safe bicycle storage facility at the downtown transit center. By funding and promoting a staffed bicycle facility at the downtown transit center, Spokane will be showing support for bicycling as a viable form of transportation. This facility will provide a safe place for commuters to store their bicycle. In addition to parking, this facility could provide resources for bicycle repair, maps and other information.

*Action 3.3: Increase the availability of bicycle parking throughout the city.*

Secure bicycle parking (short-term: appropriate style bike rack, long-term: covered in access restricted location) located in close proximity to building entrances and transit entry points is essential in order to accommodate bicycling. Secure bicycle parking helps to reduce the risk of bicycle damage and/or theft. Update the bicycle parking requirements for new developments in Spokane as necessary.

- Establish a proactive bicycle rack installation program. A proactive bicycle rack installation program should be established to provide additional bicycle parking in urban areas, particularly on commercial and high-density residential blocks. Schools, libraries, and community centers should also be targeted for bicycle rack installation. It will be important to work closely with adjacent property owners to make sure that racks are properly located and do not interfere with loading zones and other business related activities.
- Strengthen city code to ensure properly-installed bicycle racks and lockers are a part of new developments.
- Consider installing covered, on-demand, longer-term bicycle parking. The City of Spokane will work with local agencies and the Spokane Parks and Recreation Department to examine the possibility of installing covered, on-demand, longer-term bicycle parking. Unlike locker facilities, this type of bicycle parking facility also has the advantages of not needing to be rented, not requiring keys, and not being a potential receptacle for trash. Certain types of covered, on-demand bicycle parking facilities can be locked with a padlock provided by the bicyclist.
- Provide incentives for operators of private parking facilities to add secure, high quality bike parking. It will be important for the city and transit agencies to maintain bicycle racks and lockers and use enforcement to deter misuse of these facilities. Abandoned bikes and locks can make existing racks unusable. Other racks can be obstructed by planters, news boxes and other street furniture.
- Develop standard plans and policy for bike corrals. Bike corrals provide a high-capacity option for bicycle parking by replacing one vehicular parking space with up to 24 bicycle parking spaces. Bicycle corrals may also be located in unused/underutilized areas of the street, although they are better utilized when placed directly in front of a business. This option keeps the sidewalk clear for pedestrian use.
- Pursue dedicated funding for bicycle parking



*Action 3.4: Encourage office development and redevelopment projects to include shower and locker facilities.*

The city should amend its development ordinance to strengthen existing requirements for shower and locker facilities based on employment densities. For employees who are considering bicycling to work, such facilities make it possible to shower and change into work clothes after the commute.

**Policy BMP 4: Increase bicycling by educating people using all transportation modes about the benefits of bicycling. Enhance the safety of people riding bicycles through effective law enforcement, education and detailed crash analysis.**

**Actions**

*Action 4.1: Educate Spokane’s transportation system users about all bicycle facilities, including new elements. Additionally, perform community-wide efforts to increase public awareness of the rights and responsibilities of cyclists on the road.*

The city will provide Spokane residents with information about the purpose of new bicycle facility treatments (e.g., neighborhood greenways, shared lane markings, etc.) and safe behaviors for using these facilities. The city will work with the Spokane Police Department (SPD) to educate users about the new facilities, including the following strategies:

- Develop web pages and disseminate information about each treatment.
- Install temporary orange warning flags, or signage at locations where new facilities are installed, where appropriate.
- Increase police patrols for a period of time as roadway users adjust their behavior after a new facility is installed.

*Action 4.2: Promote bicycle education and encouragement in Spokane through city actions and through partnerships with community organizations, school, and private businesses.*

It’s not just enough to develop a program or build a facility – the city must develop appropriate promotional events and materials to let the residents and employees of Spokane know about their travel options. Examples include:

- Work with the Spokane Bicycle Club, Washington Bikes and others to disseminate information regarding bicycling programs and tours in and around Spokane.
- Designate bicycle friendly districts and local service bikeways to encourage bicycling
- Promote business based bicycling programs and incentives
- Participate in Bike to Work Day and other bike events and contests to promote bicycling
- Participate in Sunday Parkways or other Open Streets type events regularly
- Support an individualized marketing campaign to people receptive to replacing automobile trips with bicycling

*Action 4.3: Increase enforcement of bicyclist and motorist behavior to reduce bicycle and motor vehicle crashes.*

The City of Spokane will work with the Spokane Police Department (SPD) to enforce laws that reduce bicycle/motor vehicle crashes and increase mutual respect between all roadway users. This enforcement program will take a balanced approach to improving behaviors of both bicyclists and motorists.

Motorist behaviors that will be targeted include:

- Turning left and right in front of bicyclists.
- Passing too close to bicyclists.
- Parking in bicycle lanes.
- Opening doors of parked vehicles in front of bicyclists.
- Rolling through stop signs or disobeying traffic signals.
- Harassment or assault of bicyclists.

Bicyclist behaviors that will be targeted include:

- Riding the wrong way on a street.
- Riding with no lights at night.
- Riding recklessly near pedestrians on sidewalks.
- Disobeying traffic laws.

Bicyclist safety is a shared responsibility between all roadway users. Enforcement priorities should be established through a collaborative process involving the Bicycle Advisory Board and the Spokane Police Department.

*Action 4.4: Support efforts to obtain funding for bicycle education and enforcement programs.*

Efforts might include working with partner agencies in establishing a mini-grant program to support community bicycle related encouragement efforts

*Action 4.5: Work with local and regional partners, and private corporations, to develop incentive programs to encourage bicycling and other non-single occupancy vehicle use.*

Work with the Spokane County Commute Trip Reduction program (<http://www.mycommute.org/>) to promote and further develop incentives promoting bicycling as an active form of transportation. Types of incentives identified include:

- Including bicycle incentives in travel demand management programs
- Creating incentives to promote active transportation to employment centers, commercial districts, transit, schools, public institutions and recreational destinations
- Providing incentives for bicycle use and incorporate bicycle travel in all reimbursable travel expenses

**Policy BMP 5: Develop a collaborative program between a variety of city departments and agencies and outside organizations to implement the Bike Master Plan through capital project delivery as well as community planning processes.**

Implementation of this Plan will be a collaborative effort between a variety of city departments, agencies and outside organizations. Bicycle and pedestrian coordination efforts will ensure that the Plan recommendations are implemented as a part of these departments regular work. The Street Department will provide technical expertise on issues related to bicycling and ensure that implementation of the Plan moves forward.

Key departments within the city for planning and implementing bicycle improvements include:

- Street Department
- Integrated Capital Management
- Planning and Development Services
- Police Department

Progress on implementing the Plan will be monitored on an annual basis, and every transportation project offers an opportunity to implement a piece of this Master Bike Plan.

Therefore, institutionalizing bicycle improvements will be essential for successful implementation of this Plan. As stated in Action item 5.1, bicyclists' needs should be considered in the planning, design, construction, and maintenance of all transportation projects in the city.

**Actions**

*Action 5.1: Provide bicycle facilities as a part of all transportation planning and capital projects to all possible extents.*

Incorporate requirements for bicycle facilities in the city Engineering Standards Manual, standard specifications, and standard plans.

- Actively seek opportunities to provide protected bicycle lanes, bicycle lanes, shared lane markings, and other on-road bicycle facilities as a part of repaving projects. (This includes roadways in the Comprehensive Plan Planned Bikeway Network as well as viable alternatives to the routes proposed, if necessary.)
- Provide higher quality facilities (i.e. add a buffered bike lane instead of a bike lane) than the Planned Bikeway Network calls for when the opportunity exists.
- Develop trails in conjunction with the installation of underground cable, water, sewer, electrical, and other public or private efforts that utilize or create linear corridors. If possible, develop new trails along these utility corridors.
- Continue to develop trails in railroad corridors no longer needed for railroad purposes. Where appropriate, develop trails adjacent to rails.

- Leverage other types of projects that could potentially include bicycle facilities.
- Integrate bicycle planning into neighborhood and commercial planning efforts
- Encourage and support the transformation of auto-oriented commercial areas into compact mixed-use centers that are equally conducive to pedestrian, bicycle, transit and motor vehicle activity.
- Fix potholes, surface hazards, sight distance obstructions, and other maintenance problems on a regular basis.

*Action 5.2: Dedicate funding for bicycle project planning and implementation using a portion of currently available transportation dollars to implement the bicycle network.*

*Action 5.3: A Bicycle Program should provide the necessary staff expertise and commitment to implement the Bikeway Network within 20 years.*

*Action 5.4: Continue to make minor improvements for bicycling.*

Spokane should continue to make the following types of improvements:

- Surface improvements (patch potholes, fill seams between concrete panels in the street, replace drain grates, etc.).
- Signing and striping (bicycle lane striping and stenciling, motor vehicle warning signs at trail crossings, etc.).
- Access improvements (adjust electronic detection for bicyclists at traffic signals, traffic island modification, etc.).
- Bicycle rack installation in public rights-of-way (sidewalks, parking spaces, etc).
- Other low cost bicycle improvements as appropriate.

*Action 5.5: Continue to receive regular input and guidance from the Bicycle Advisory Board.*

The Bicycle Advisory Board should continue to provide regular input and guidance regarding bicycle issues. This will include monitoring the progress of implementation. Work with the Bicycle Advisory Board to develop and distribute an annual report card describing progress on Master Bike Plan implementation and key performance measures such as system mileage and use.

*Action 5.6: Provide bicycle planning and facility design training for appropriate project-level staff and consultants, and encourage staff from other agencies to attend.*

Staff and consultants working on projects that affect bicycle access, directly or indirectly, should be strongly encouraged to attend training sessions on bicycle planning and facility design.

*Action 5.7: All divisions of the City of Spokane should consult the Bike Master Plan when working on projects.*

All divisions should consult this Plan to ensure that the recommended facilities and maintenance practices are implemented in accordance with this Plan. For roadway repaving and reconstruction

projects, the Bike Master Plan recommendation represents the best option. As conditions change, better alternatives to the proposed bicycle network may form. Further study, additional public involvement and consultation with the Bicycle Advisory Board may ultimately result in an even better strategy to provide bicycle access.

*Action 5.8: Integrate the recommendations of the Bike Master Plan into other city ordinances, plans, and guidelines.*

This action includes, but is not exclusive, to the following actions:

- Require compliance with bike plan policies and standards for new development
- Review and strengthen subdivision ordinances to ensure a connected street network
- Require long-term parking, bike rooms, showers or other amenities in large commercial and residential projects
- Require bicycle parking to be located close to building entrances and no further away than the closest car parking space
- Disconnect the amount of bicycle parking from the amount of car parking, particularly in downtown and designated centers and corridors

*Action 5.9: Coordinate within the city and between the agencies and organizations where necessary to implement the Master Bike Plan.*

*Action 5.10: Update the Bike Master Plan on a regular basis.*

*Action 5.11: Develop, implement, and enforce a written bicycle access policy and guidance for use at public and private construction projects that impact the public right-of-way*

## POTENTIAL FUNDING SOURCES

The Bicycle Master Plan should be used as a guide to identify bicycle improvement projects and decide which to fund. The evaluation of bicycle improvement needs should be considered as a part of all projects when city controlled sources of funding are eligible.

### Investment Approach

Other top cycling cities have shown that a broad-based approach to bicycle investment that funds bicycle infrastructure, marketing, education, maintenance, and transit access improvements can simultaneously realize marked increases in bicycle use and bicycling safety. A balanced investment approach will be important.

Spokane should employ a funding allocation strategy that is flexible and allows for opportunistic spending. The funding approach should be multi-pronged, covering investments not just in constructing new bicycle facilities, but also in offering bicycle parking, encouraging people to use facilities and bicycles in general, educating people about the rules of the road, maintaining bicycle facilities, and tracking the success of bicycle projects and programs. Several examples of funding sources are listed within the Transportation Chapter and many of the sources are available for financing bicycle improvement projects. A few newer funding sources that could be used for bicycle facilities are listed below.

### Local

#### Transportation Impact Fees

The city intends to expand the Transportation Impact Fee program to allow use of the funds on infill type bicycle and pedestrian projects. Bicycle project funding will be set aside in each of the districts.

#### Automated Traffic Safety Cameras funding allocation

On September 30, 2013 the City Council passed Resolution No. 2013-0070 related to allocation of funds from infractions issued with automated traffic safety cameras. Among the items to be allocated funding, the resolution provides a flexible matching fund for neighborhood traffic calming projects, neighborhood business districts, streetscape improvement or community development projects related to public safety.

### State

#### Paths and Trails Reserve

A portion of the State gasoline tax revenue which, by Washington State Law, is returned to local government to be used for the development and maintenance of paths and trails. One half of one percent (0.5%) of the tax is returned to the City. Presently the City receives approximately \$14,000 per year from this funding source. Both pedestrian and bike facilities can utilize these funds, however historically these funds have been extremely limited.

## **Federal**

The Federal Fixing America's Surface Transportation (FAST) Act was signed into law in 2015. The FAST Act is a five-year bill that will slightly increase funding and slightly change some policy. The biggest change is that it will create long-term certainty for states, local governments and transportation stakeholders.

### **Surface Transportation Block Grant (STBG) Program**

The FAST Act eliminates the MAP-21 Transportation Alternatives Program (TAP) and replaces it with a set-aside of Surface Transportation Block Grant (STBG) program funding for transportation alternatives (TA). These set-aside funds include all projects and activities that were previously eligible under TAP, encompassing a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, community improvements such as historic preservation and vegetation management, and environmental mitigation related to stormwater and habitat connectivity.

TAP funding was set at 2% of all the core highway programs and yielded approximately \$820 million in FY 2015. Funding levels in the new STBG Set-aside Program are set at \$835 million for FY2016 and FY2017, rising to \$850 million in FY2018-FY2020. Within that, funding for the Recreational Trails Program is preserved at the 2009 level and is effectively a set-aside of the STBG.

### **TIFIA and TIGER**

In 1998, Congress created the Transportation Infrastructure Finance and Innovation Act (TIFIA) to provide credit assistance to large-scale surface transportation projects. The threshold for project eligibility was set at a minimum cost of \$50 million (\$25 million for rural infrastructure projects). The FAST Act lowers this threshold to \$10 million for projects involving local governments, and allows the bundling of projects to meet this lower threshold. This should make it easier for active transportation projects to use these credit and innovative financing mechanisms. The Transportation Investment Generating Economic Recovery (TIGER) grant program was created in 2009 and has included many bicycling and walking projects and programs in the seven rounds of funding awarded since then. While the program is administered by the US Department of Transportation, funding is provided by an annual appropriation rather than a periodic transportation bill such as the FAST Act.

### **Community Development Block Grant Program**

This funding comes from the Housing and Community Development Act of 1974 and authorizes the Department of Housing and Urban Development to distribute funds to local governments for the purpose of improving their community. The Community Development Block Grant (CDBG) program primarily addresses capital construction needs in low-to-moderate income neighborhoods. Funds for pedestrian and bicycle facilities are included.



### **Congestion Management Air Quality**

CMAQ funding has been available to the Spokane region for several years. It can be used on projects that reduce vehicular travel and therefore reduce emissions. A certain percentage of the regional funding is typically set aside for bicycle and pedestrian projects. In recent years that funding has been allocated to a neighborhood greenway and a shared-use path.

### **Other Sources**

Another potential resource is the partnering with other agencies, foundations and the private sector for future awareness and education campaigns. The City should continue partnering with other agencies like the Spokane Regional Health District that have a considerable interest in improving bicyclist safety. Strengthening these partnerships and forming new ones will provide additional opportunities to increase awareness of active transportation safety issues.

# BICYCLE MASTER PLAN PART 2 – BIKEWAY NETWORK FACILITY DEFINITIONS AND MAPS

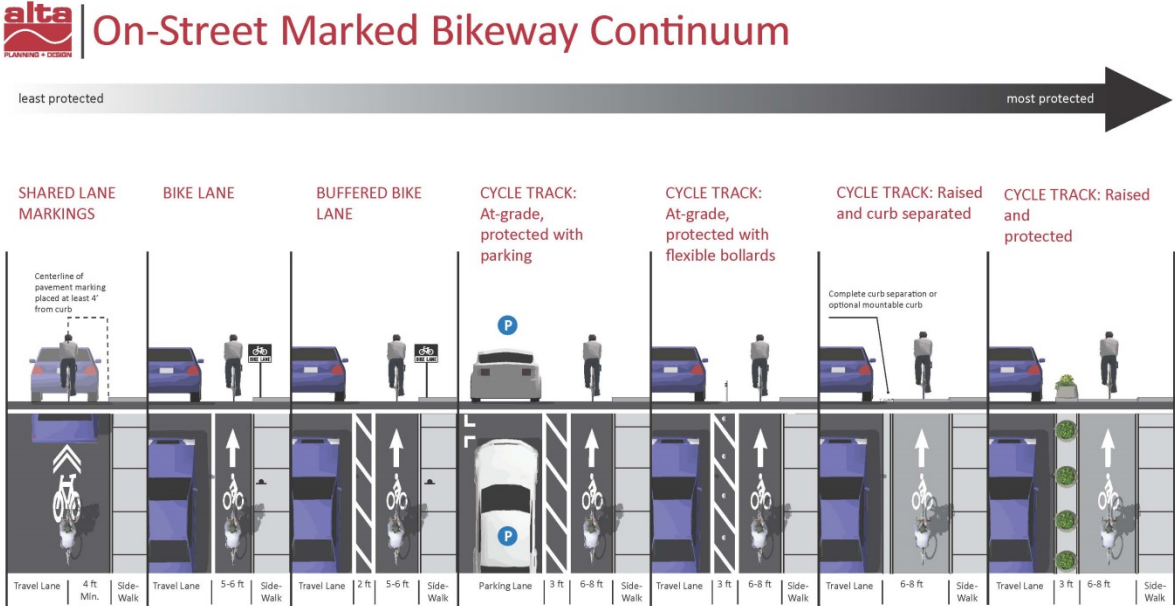
Providing a network of bicycle facilities throughout Spokane is fundamental to achieving the goals of this Plan. Additional bike lanes, roadway crossing improvements, multi-use trails, and other facilities are needed in order to encourage more Spokane residents to bicycle.

## BIKEWAY NETWORK DEFINITION

Implementation of this Plan will establish roughly a 400 -mile network of bikeways throughout the city of Spokane. This Bikeway Network is composed of all of the locations throughout the city where specific improvements have either already been made or are proposed in the future to accommodate bicycles.

Almost all Bikeway Network segments will have some type of visible cue (i.e. a bike lane, a bike route sign, a pavement marking, a trail, etc.) to indicate that accommodations have been made for bicyclists. While the network will provide primary routes for bicycling, it is important to note that, by law, bicyclists are permitted to use *all* roadways in Spokane (except limited access freeways or where bicycles are otherwise prohibited). Therefore, the Bikeway Network will serve as a core system of major routes that can be used to safely access all parts of the city and other parts of the transportation system.

Figure 1. On-Street Marked Bikeway Continuum

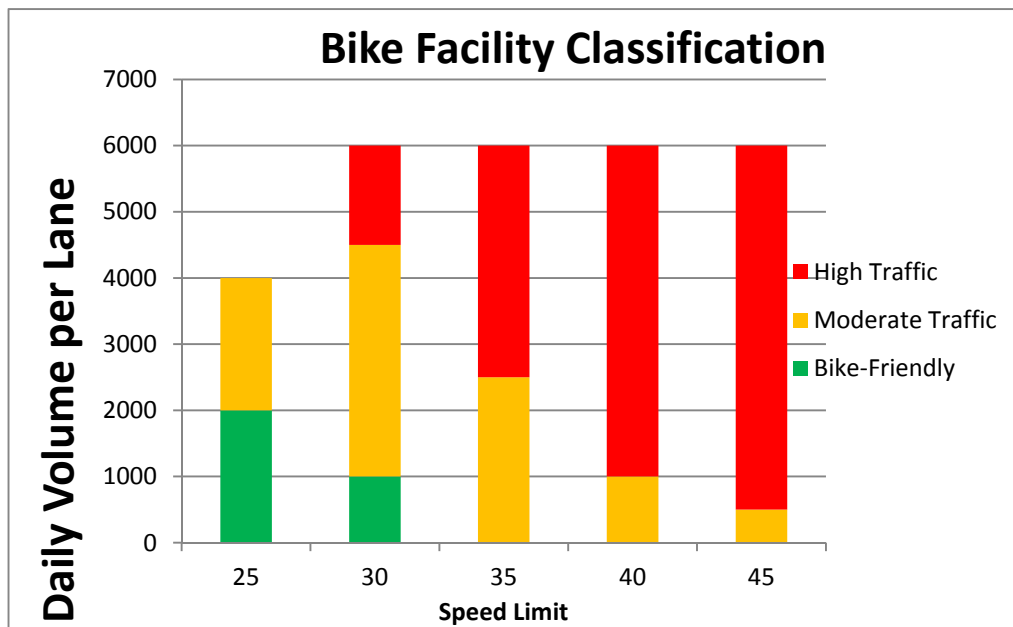


With this update the city has changed the bikeway classifications. The goal of this change is to provide better information to users of the bike routes while moving facility design to the right on the continuum in Figure 1 whenever possible. The classification system now factors in the traffic volume on each facility. The new classifications are listed below and are summarized in greater detail in the following pages:

- High Traffic (Bike Lane)
- High Traffic (Shared)
- Moderate Traffic (Bike Lane)
- Moderate Traffic (Shared)
- Bike Friendly Route
- Neighborhood Greenway
- Shared Use Path
- Soft Surface Path

Figure 2 provides a matrix of daily traffic volumes that can be expected with each bike facility classification.

**Figure 2. Bike Route Classification based on traffic volume and speed**



## High or Moderate Traffic (Shared):

A Shared Roadway designation is typically found on important roadways where bicycle lanes may not be feasible. The High and Moderate designation provides an indication of the level of traffic and/or conflict the cyclist can expect to experience. See figure 1 above for Bike Route Classification based on traffic volume and speed. A Shared Roadway may use on-street markings and signs to alert motorists and cyclists to the designation. Shared Lane Markings (aka Sharrows) are used to remind all roadway users that bicyclists may be present and are allowed to use the full lane while directing cyclists out of the “door zone”. In cases of steep terrain, a “climbing lane” should be used on the uphill side of the roadway and sharrows should be used to guide cyclists in the downhill lane.

Figure 3. Examples of Shared Roadway treatments



## High or Moderate Traffic (Bike Lane):

A bike lane is identified by on-street striping. Buffered bike lanes and cycle tracks are also included in this category. The High and Moderate designation provides an indication of the level of traffic and/or conflict the cyclist can expect to experience. The actual design will depend on the roadway width and traffic conditions. A 5 foot bike lane with a 3 foot buffer is preferred. As an alternative, a bike lane width of 6 feet is desirable. An on-street marking of a bicyclist and/or street signs identifying the bike lane may accompany the striping.

### High traffic bike lane

- A collector, minor, or principal arterial
- Traffic lanes are striped
- Higher volume and/or speed as shown in Figure 2.
- Greater chance of conflicts between cyclists and vehicular traffic
- Attractive to advanced cyclists comfortable with taking the lane, or those who can keep up with traffic

### Moderate traffic bike lane

- Typically a collector, minor, or principal arterial, but may include some local streets
- Centerline and/or traffic lanes are striped
- Attractive to advanced and intermediate level riders - including typical commuter cyclists
- Any facility that doesn't fit the High traffic route or Bike-Friendly categories

Figure 4. Examples of potential bike lane designs

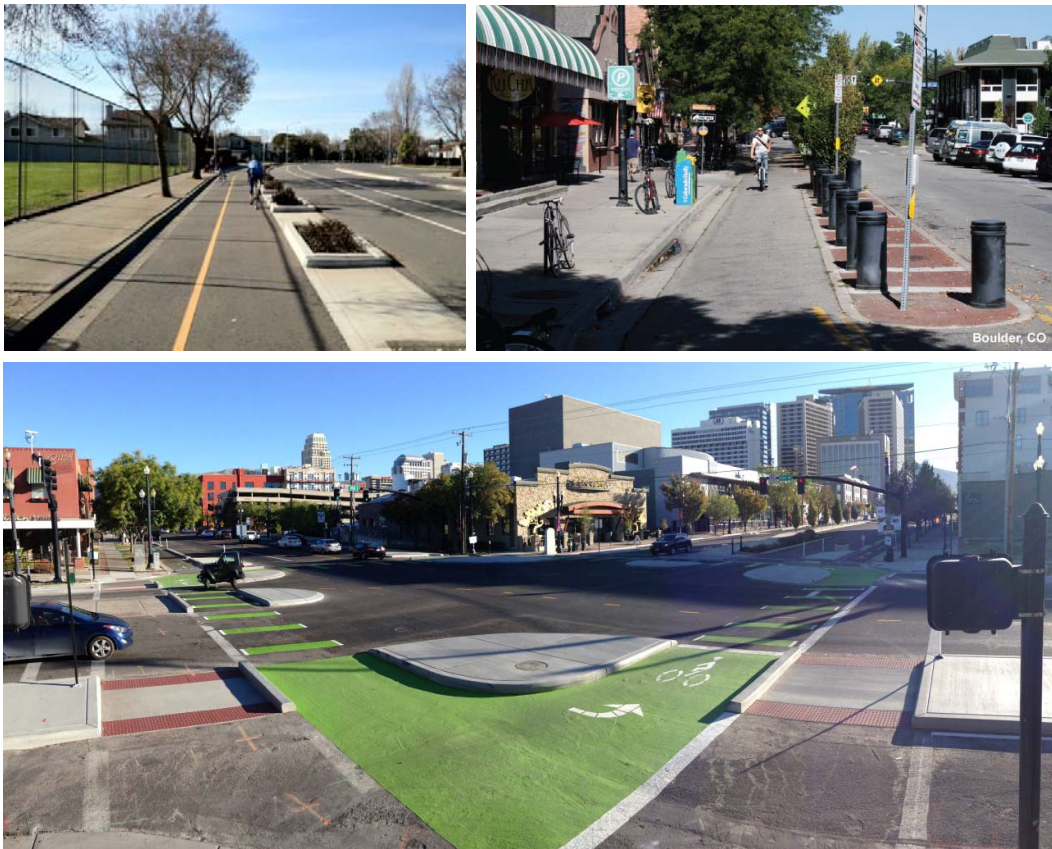


## Protected Bike Lanes

A protected bike lane is an exclusive bike facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane. A protected bike lane is physically separated from motor traffic and distinct from the sidewalk. Protected bike lanes have different forms but all share common elements—they provide space that is intended to be exclusively or primarily used for bicycles, and are separated from motor vehicle travel lanes, parking lanes, and sidewalks. In situations where on-street parking is allowed protected bike lanes are located to the curb-side of the parking (in contrast to bike lanes).

Protected bike lanes may be one-way or two-way, and may be at street level, at sidewalk level, or at an intermediate level. If at sidewalk level, a curb or median separates them from motor traffic, while different pavement color/texture separates the protected bike lanes from the sidewalk. If at street level, they can be separated from motor traffic by raised medians, on-street parking, or bollards. These design features do raise different considerations – such as driveway conflicts, driver expectations, and maintenance issues that need to be addressed. By separating cyclists from motor traffic, cycle tracks can offer a higher level of security than bike lanes and are attractive to a wider spectrum of the public. Routes classified as future bike lanes in this plan may be considered for protected bike lane designs following additional assessment and review. Further network-level planning will be required to identify a system of routes best suited to these designs.

**Figure 5. Examples of potential protected bike lane designs**





## **Bike Friendly Routes:**

A bike-friendly route is a low-volume route marked by bicycle signage and/or the use of shared lane markings. These routes are attractive to beginning and intermediate level riders. Other features include:

- Primarily local streets with a few collector arterials
- No centerline stripe except in CBD
- Cyclists can comfortably ride mixed with traffic - bike lane not needed, but a few have them such as in the CBD.
- Low vehicle volumes, low vehicle speeds
- Posted speed 30 mph and less than 1,000 volume (ADT) per lane
- Posted speed 25 mph and less than 2,000 volume (ADT) per lane

**Figure 6. Bike Friendly Route**





## Neighborhood Greenways:

Neighborhood Greenways are low-volume and low-speed streets that have been optimized for bicycle and pedestrian travel. Neighborhood Greenway treatments can be applied at several different intensities, which should be identified in detail during project design. Wayfinding signs, pavement markings, traffic calming and intersection treatments are potential elements of these facilities. Neighborhood Greenways are designed to attract bicyclists of all ages and abilities, especially those in the Interested but Concerned category. The design of the neighborhood greenway is flexible and will be tailored to meet the specific needs of the roadway. Below are examples of possible neighborhood greenway treatments.

**Figure 7. Examples of Neighborhood Greenway treatments**



## Shared Use or Multiuse Path:

A shared use or multiuse path is an off-street facility designed for certain non-motorized uses. These paths have a minimum width of ten feet to accommodate two-way traffic. These paths are often identified by signs and barriers preventing auto-traffic from using the path. Examples include the Centennial Trail and the Fish Lake Trail.

Figure 8. Shared Use Paths



## Soft Surface Path:

A soft surface path is an off-street facility allowing non-motorized uses. These paths are unpaved and have a minimum width of 5 feet. Surfacing may be gravel or dirt. They often form a key connection in the bicycle network and may be designated for paving in the future.



Figure 9. Soft Surface Path

## State of the Practice:

The City of Spokane endorsed the NACTO (National Association of City Transportation Officials) Urban Street Design Guide and Urban Bikeway Design Guide in November 2014. In an overview, the NACTO Urban Bikeway Design Guide states: “The purpose of the NACTO Urban Bikeway Design Guide (part of the Cities for Cycling initiative) is to provide cities with state-of-the-practice solutions that can help create complete streets that are safe and enjoyable for bicyclists.

The NACTO Urban Bikeway Design Guide is based on the experience of the best cycling cities in the world. The designs in this document were developed by cities for cities, since unique urban streets require innovative solutions. Most of these treatments are not directly referenced in the current version of the AASHTO Guide to Bikeway Facilities, although they are virtually all (with two exceptions) permitted under the Manual on Uniform Traffic Control Devices (MUTCD). The Federal Highway Administration has posted information regarding MUTCD approval status of all of the bicycle related treatments in this guide and in August 2013 issued a memorandum officially supporting use of the document. All of the NACTO Urban Bikeway Design Guide treatments are in use internationally and in many cities around the US.”

Examples of bike facilities / techniques found in the NACTO guide that may be implemented in Spokane are provided below. There are numerous other suggested designs.

## Colored Bicycle Facilities:

Colored pavement within a bicycle lane increases the visibility of the facility, identifies potential areas of conflict, and reinforces priority to bicyclists in conflict areas and in areas with pressure for illegal parking. Colored pavement can be utilized either as a corridor treatment along the length of a bike lane or cycle track, or as a spot treatment, such as a bike box, conflict area, or intersection crossing marking. Color can be applied along the entire length of bike lane or cycle track to increase the overall visibility of the facility. Consistent application of color across a bikeway corridor is important to promote clear understanding for all users.





### Intersection Crossing Markings:

Intersection crossing markings indicate the intended path of bicyclists. They guide bicyclists on a safe and direct path through intersections, including driveways and ramps. They provide a clear boundary between the paths of through bicyclists and either through or crossing motor vehicles in the adjacent lane.



### Bike Box at Intersection:

A bike box is a designated area at the head of a traffic lane at a signalized intersection that provides bicyclists with a safe and visible way to get ahead of queuing traffic during the red signal phase.



## Protected Intersections:

A protected intersection is an at-grade road junction in which cyclists and pedestrians are separated from cars. Vehicles turning right (in countries driving on the right, or left in countries driving on the left) are separated by a car length from crossing cyclists and pedestrians, providing increased reaction times and visibility. Drivers looking to turn right have better visibility to cyclists and pedestrians as they can look to the side for conflicts instead of over their shoulders.



## BIKEWAY NETWORK MAPS

Spokane's bicycle facilities network includes protected bicycle lanes, bike lanes, shared-use paths, neighborhood greenways, shared roadways, and bike-friendly routes. The development of bicycle facilities is expected to take place over the course of the next 20 years. A number of unforeseen circumstances may affect the way that Spokane's bike network will develop. The Bicycle Facility Network Development Maps are not intended to define a specific time frame for the development of bike facilities within the city. These maps represent how the network may develop over time recognizing that the network cannot be created immediately. If an opportunity to develop any of the facilities on the map arises, that opportunity should be pursued. The bikeway network is shown in Map TR-5 in Comprehensive Plan Chapter 4: Transportation.

## **FURTHER EVALUATION OF BICYCLE FACILITY RECOMMENDATIONS**

The projects that are shown on the maps will require additional evaluation during the implementation process to determine if there are other factors that may either help or hinder their development.

Additional traffic analysis will be needed in some cases to determine the optimum design for specific locations and transportation capacity impacts, with the understanding that the network is a flexible tool that can and should be modified as circumstances dictate. Like other public projects, neighborhood involvement will also be an important part of the evaluation process. Some locations shown on the map may be determined, after more detailed analysis, to require different or more costly improvements and, therefore, may become longer-term projects. However, for every project, the first assumption will be that the bicycle facilities, as shown in the Bicycle Master Plan, will be implemented. If the city decides not to proceed with implementing the Bicycle Master Plan recommendation on a particular roadway an explanation shall be provided to clarify why it is not implementing a recommendation in the Plan.