

# Executive Summary



The city of Milwaukee adopted its first formal bicycle plan in 1993. Bicycle Milwaukee set goals and objectives designed to increase the safety and ease of cycling in the city. The major recommendations of that plan have been achieved, and over 115 miles of bicycle lanes and routes have been implemented throughout the city. Milwaukee has also added bicycle parking throughout the city and added a full time Bicycle and Pedestrian Coordinator to the Department of Public Works staff. These gains led to Milwaukee being named a bronze-level Bicycle Friendly Community by the League of American Bicyclists.

The 2010 *Milwaukee by Bike* Master Plan builds on the successes and achievements since Bicycle Milwaukee and the current interest in cycling that has seen Milwaukee's bicycle mode share more than double in the past four years. Despite these successes and the increase in cycling in Milwaukee, it became apparent during the development of this plan that many people are still not comfortable biking in the city, and that many Milwaukee residents would like to cycle more than they currently do.

To address these concerns, *Milwaukee by Bike* describes a vision for the city in 2010 and a set of overarching goals to achieve this vision:

## Vision for Milwaukee 2020

In 2020, Milwaukee's neighborhoods will be filled with a noticeable diversity of people riding bicycles on innovative bicycle facilities. Milwaukee is an economically and environmentally healthy world-class city for cycling where people of all ages and abilities have attractive, convenient and safe options to make recreational and utilitarian trips by bicycle.

## Overarching Goals for 2020

- Increase bicycle use so that five percent of all trips are made by bike.
- Create a network of bicycle facilities within one quarter ( $\frac{1}{4}$ ) mile of all City residents that is attractive, safe and appropriate for people of all ages and abilities.
- Reduce the bicycle crash rate by 50% from current levels.

In order to achieve the vision and overarching goals, *Milwaukee by Bike* details specific goals focused on facility and support infrastructure improvements,

providing dedicated funding for a Milwaukee Bicycle Program, providing bicycle education and encouragement programs to residents, enforcing laws related to crash reduction and safety issues, and consistently evaluating progress toward these goals. Each goal is supported by objectives and detailed policies designed to achieve that goal.

Most dramatically, *Milwaukee by Bike* calls for an increase in the city's bicycle network from 116 miles to 356 miles. This increase will include 153 new miles of bike lanes and shared lanes, an expanded bike route system and over 70 miles of bicycle boulevards and paved trails. Bicycle boulevards provide routes for cyclists on traffic-calmed streets while paved trails and paths allow cyclists to ride completely out of traffic. Both options will greatly increase the comfort level of most cyclists riding in Milwaukee.

Implementation of the recommendations below will result in increased bicycle ridership, increased accessibility, and increased cyclist safety in Milwaukee by 2020.

## Facility Recommendations

### The On-Street Bicycle Network

*Goal: Expand Milwaukee's on-street bicycle network so all residents live within one quarter mile of a bicycle facility.*

**Objective 1:** Continue expanding the on-street bicycle network.

- Provide equal, and sometimes preferential consideration, to bicyclists and pedestrians in the planning, design, and operation of transportation facilities. Utilize a green transportation hierarchy or complete streets policy that begins the transportation design and planning process with the local land use rather than motor vehicle traffic volumes.
- Implement the bike lane, bike route and bicycle boulevard network detailed in Maps 3 – 9 and Appendix J of this plan.
- Evaluate the bicycle network for new opportunities, missing links and additional needs on an annual basis and add these to the Proposed Bicycle Network Map.

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- Add bicycle facilities to arterial and collector streets as they are reconstructed or resurfaced.

**Objective 2:** Improve bicycle access at hazard areas and across barriers.

- Sign bicycle routes with “Bicycles May Use Full Lane” R4-11 sign and/or add shared lane pavement markings (MUTCD figure 9C-9) on streets needed to connect bicycle lanes or key destinations where bicycle lanes will not fit due to right-of-way constraints.
- Work with the County, DNR, WisDOT and USDOT to create a bikeway connection from Veterans Park to South Shore Park as a part of the Hoan Bridge Project.
- Cover the bicycle portion of any grated bridges with a solid, non-skid material.
- Convert front-in angle parking to parallel parking or back-in angle parking if the number of parking spots must be retained.
- Maintain bicycle access through or around construction areas or areas where bikeways are closed for a significant period of time.

**Objective 3:** Implement innovative facilities to increase bicycling participation.

- Establish a bicycle boulevard/quiet-street network that allows residents to participate in lengthy recreational rides on bicycle designated streets.
- Test raised bicycle lanes.
- Test bicycle boxes throughout the city.
- Install shared lane markings throughout the city.
- Use other innovative facilities detailed in Chapter 6 to increase cycling throughout the City.
- Conduct FHWA experiments and lead the nation in implementing and experimenting with new designs for bicycle and roadway facilities.

**Objective 4:** Provide connectivity in the bicycle network and link key destinations.

- Provide a bicycle network that equitably serves all Milwaukee residents.
- Ensure that the bike system connects to and integrates with the transit system and other multimodal options.

- Recommend the provision of secure bicycle parking lockers at transit stations and the airport.
- Work with adjoining municipalities to ensure that bicycle network provides connectivity throughout the region.

**Objective 5:** Maintain bicycle facilities for safe use and operation.

- Sweep all bikeways regularly.
- Provide prompt maintenance of potholes and other pavement damage on bikeways.
- Ensure that bicycle lane stripes are repainted before they fade.
- Maintain off-street bikeways to the same or higher level as on-street bikeways.
- Clear snow from off-street bikeways in a timely manner.

## The Off-Street Bicycle Network

*Goal: Provide a comprehensive network of off-street trails and paths that connect key destinations and provide recreational opportunities for those who prefer to ride away from motor vehicle traffic.*

**Objective 1:** Increase off-street bicycle facilities and connections throughout the city.

- Establish a City Trails program as part of the Milwaukee Bicycle Program.
- Implement the recommendations made in the 2006 City of Milwaukee Off-Street Bikeway Study.
- Improve connections to existing trails.
- Increase the number of off-street facilities throughout the city.

**Objective 2:** Create officially designated places for mountain biking and BMX riding.

- Work with local volunteers to design, build and maintain mountain bike trails in the city of Milwaukee.
- Work with local volunteers to design, build and maintain a dirt BMX track.

- Work with local volunteers to design, build and maintain pump tracks (short dirt tracks with berms and rollers that allow riders to practice technical skills) in neighborhoods in the city of Milwaukee.

## Support Infrastructure

*Goal: Provide the support infrastructure necessary to encourage and support bicycling throughout the City of Milwaukee.*

**Objective 1:** Ensure that the bicycle network is clearly identified and easy to use.

- Provide ample bike lane and route signage.
- Provide ample directional and location signage throughout the bicycle network.
- Provide a simple, easy to use on-line mapping tool for bicycle facilities.
- Ensure that free city bicycle maps are available for distribution throughout the city.
- Begin tracking the presence and status of bicycle facilities in the DIME and WISLR roadway data databases.

**Objective 2:** Provide ample bicycle parking throughout the city.

- Implement the recommendations of the 2007 Milwaukee Bicycle Parking Project Report.
- Produce a flier with acceptable rack guidelines for business owners and developers.
- Fund a program to continue providing bicycle racks to businesses that request them.
- Provide bicycle parking at all city workplaces.
- Fund a program to maintain or replace existing racks that are damaged or rusting.
- Require attended bicycle parking at large events and sporting events.

## Program Recommendations

### Milwaukee Bicycle Program

*Goal: Establish a funded bicycle program within the Department of Public Works.*

**Objective 1:** Fund a Milwaukee Bicycle Program.

- Create a dedicated \$450,000 budget to be used to fund bicycle and pedestrian programming in Milwaukee.
- Increase the number of full-time staff dedicated to bicycle and pedestrian issues.
- Add a student-intern staff to the bicycle and pedestrian staff similar to the Traffic Engineering section.

**Objective 2:** Increase bicycle access in the central business district.

- Conduct in-depth, multi-modal study of downtown focused on lane and parking configurations.
- Ensure that the Downtown Master Plan accommodates bicyclists both on the street and in parking and other facilities.

**Objective 3:** Pilot a bicycle sharing program.

- Gather local support for a bike sharing program.
- Research program technology, planning and funding options.
- Plan and procure the system.
- Launch the program.
- Ongoing operations and program enlargement.

### Education Programs

*Goal: Increase the safety of bicyclists by educating all road users on applicable laws and how to share the road.*

**Objective 1:** Provide regular bicycle education to city residents.

- Provide bicycle and pedestrian education to all students enrolled in a Milwaukee elementary school.
- Provide education to road users and pedestrians through targeted enforcement when new facilities are implemented.

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- Partner with the Bicycle Federation of Wisconsin or other educational organizations to offer regular teen and adult bicycling classes.
- Offer “Share the Road” education classes in lieu of a fine for first time minor traffic offenses.
- Expand the existing Downtown Ambassadors program to include Bike Ambassadors.
- Require “Share the Road” training for all municipal vehicle drivers and work with MCTS to train all transit drivers.

## Encouragement Programs

*Goal: Increase bicycling in Milwaukee through public and private encouragement events.*

**Objective 1:** Support cost effective encouragement events, programs and organizations.

- Support the events and programs of groups promoting bicycling.
- Encourage non-profit retail bike shop and bike education opportunities in underserved communities.
- Offer mini-grant opportunities that support community efforts that encourage bicycling, particularly to infrequent cyclists.

**Objective 2:** Provide top-notch bicycle publications and media materials.

- Update the *Milwaukee by Bike* promotional study and implement its recommendations.
- Develop a logo for *Milwaukee by Bike* that is used on all city webpages, publications, and media.
- Partner with media outlets for public service announcements (PSAs) and bike-positive stories.
- Update all publications annually.
- Identify and produce new bicycle publications that may be needed.
- Target promotional materials at specific groups or neighborhoods to increase bicycle usage.
- Utilize innovative communication technology such as Facebook, Twitter, Ning and other social networking sites to promote cycling.

## Enforcement Programs

*Goal: Increase bicyclist safety by better enforcing the rules of the road for all street users.*

**Objective 1:** Ensure that Milwaukee police understand bicycle issues.

- Work with MPD to appoint a police department bicycle liaison.
- Increase the number of Milwaukee police specially trained for bicycle safety enforcement.
- Educate police officers on bicycle safety issues.

**Objective 2:** Better enforce existing traffic laws for both motorists and bicyclists.

- Work with MPD to better enforce all traffic violations, particularly failure to yield, speeding and safe passing distance violations.
- Increase enforcement of traffic violations by bicyclists.
- Increase funding and support for the MPD bicycle unit.
- Improve police reporting of all bike crashes and conduct annual crash analysis to determine problem areas that may require infrastructure improvements or enforcement efforts.
- Implement 24-hour speed zones around all parks and schools

## Evaluation Programs

*Goal: Evaluate bicycle facilities and programs to ensure they are effective.*

**Objective 1:** Gather robust data on bicycle usage throughout the city.

- Conduct semi-annual bicycle counts at locations around the city.
- Install automated bicycle counters around the city such as those from Eco-Counter.
- Include bicycle and pedestrian counts in all manual traffic counts.
- Monitor MCTS’s Bikes on Buses counts to determine program usage and heavily used corridors that may need additional bicycle parking and support.

## Promotional Programs

*Goal: Promote bicycling in Milwaukee with a clear brand identity, social networking, and print materials.*

**Objective 1:** Establish a clear brand identity and logo for the Milwaukee Bicycle Program.

- Develop a clear brand identity for Milwaukee by Bike to consistently identify all aspects of the city’s bicycle program.
- Develop a simple, easily identifiable logo for the bicycle program.

**Objective 2:** Create a Milwaukee by Bike webpage that Presents Useful Information.

- Utilize the Milwaukee by Bike brand identity clearly throughout the city’s official bicycle webpage.
- Update the city’s official bicycle webpage with basic content that is frequently sought by residents.
- Present current information on the city’s webpage.
- Provide quick links on the city’s webpage that allow users to easily report a problem with the bicycle network, request a bike rack and link to social networking sites.

**Objective 3:** Utilize Social Networking Sites to Promote Bicycling.

- Maintain the existing Ning site as an online hub for bicycling in Milwaukee.
- Establish an official Milwaukee by Bike Facebook page.
- Establish a Milwaukee by Bike Twitter account and use it to disseminate information about bicycling in Milwaukee
- Utilize intern staff to help maintain the Milwaukee by Bike social networking sites.

**Objective 4:** Produce and Distribute Bicycle Education Materials.

- Produce pamphlets and brochures related to bicycling in Milwaukee.
- Regularly update all printed materials to ensure they are current and relevant.

- Use brochures and pamphlets to establish and expand the Milwaukee by Bike brand identity.
- Widely distribute pamphlets and brochures.

## Bike Facility Design Options

*Milwaukee by Bike* details bicycle facility design options for the city of Milwaukee in Chapter 5. These facilities build upon current state and federal design guidelines, as well as non-traditional design treatments that may not be found in current guidance. Intended to supplement the city’s existing *Milwaukee Bike Lane Design Guide*, this section describes numerous facilities including many innovative ones that are not currently in use in the city.

This chapter focuses on facilities and signage recently approved in 2009 Federal guidance as well as “non-standard” facilities that are increasing use in Europe and a number of North American cities. These facilities include raised bike lanes, cycle tracks, bike boxes, colored bike lanes, and other innovative treatments. These treatments are designed to increase cyclist visibility and safety on Milwaukee’s streets.

## Costs, Budget and Implementation

*Milwaukee by Bike* recommends a network of new on-street and off-street bicycle facilities. Chapter 6 of the plan presents a brief overview of the planning-level cost opinions for proposed bicycle improvements and maintenance activities as well as a discussion of implementation policies that can bolster and institutionalize the development of a high-quality bikeway network. The costs presented in this plan are based on national and local cost averages for similar projects. Based on these and a number of other assumptions, implementing the facilities portion of *Milwaukee by Bike* will have the following costs:

Improvement	Proposed (MI)	Cost
Bike Routes	9.30	\$46,500
Bike Lanes	138.55	\$5,337,638
Bike Boulevards	52.07	\$1,598,549
Raised Bike Lanes	4.77	\$1,061,229
Shared Use Paths	13.63	\$1,518,491
Path Connections	4 Ramps	\$1,000,000
<b>Total</b>	<b>218.32</b>	<b>\$10,562,407</b>

In addition to planning-level cost opinions, this chapter presents sample budgets for the Milwaukee Bicycle Program for 2010 – 2015. The budgets focus on the

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primary recommendations of this plan including expanding and maintaining the bicycle network; increasing the bicycle program staff; and adding funding for education, marketing, and encouragement programs. While this budget addresses many of the recommendations made in this plan, it is not a complete budget for the bicycle program, and there are many recommendations within this plan that are not included.

## Maps and CD

This plan includes eight maps of existing conditions for bicycling in Milwaukee and the facilities proposed in this plan. An additional large-scale map is included on the supplemental compact disc that accompanies the plan. These maps display existing bike lanes, routes and trails in the city of Milwaukee and the expansion of the bicycle network proposed in this plan.

In addition to the large-scale map, the compact disc accompanying this plan includes digital copies of the plan and appendix and past bicycle planning documents produced by the city.

## Conclusion

The city of Milwaukee is already a good place to ride a bike. The city has done much to improve bicycling conditions since the adoption of its first bicycle plan in 1993. These improvements have led to increased bicycle ridership and increases in safety for bicyclists.

However, many potential improvements for bicycling in Milwaukee remain. *Milwaukee by Bike* recommends extensive facility and program improvements to improve bicycling in the city. These recommendations focus on all aspects of bicycling: improved facilities, education of road users, encouragement and enforcement efforts, evaluation of the programs being implemented and promotional efforts. Implementing these recommendations will truly make Milwaukee a world-class city for bicycling.