Pedestrian and Bicycle Advisory Commission

Whitewater Municipal Building Community Room,
312 West Whitewater St., Whitewater, WI 53190
*In Person and Virtual

Thursday, June 12, 2025 - 5:30 PM

Citizens are welcome (and encouraged) to join our webinar via computer, smart phone, or telephone. Citizen participation is welcome during topic discussion periods.

Please note that although every effort will be made to provide for virtual participation, unforeseen technical difficulties may prevent this, in which case the meeting may still proceed as long as there is a quorum. Should you wish to make a comment in this situation, you are welcome to call this number: (262) 473-0108.

1. Topic: Pedestrian and Bicycle Advisory Commission
   Time: Jun 12, 2025 05:30 PM Central Time (US and Canada)
   Join Zoom Meeting
   https://us02web.zoom.us/j/85714330388?pwd=CjRmjWRlaah98VuaLWvHV61DdRpwLi.1

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   Passcode: 568840

   One tap mobile
   +16469313860,,85714330388#,,,,*568840# US

   Dial by your location

   • +1 312 626 6799 US (Chicago)

AGENDA

CALL TO ORDER

2. Kevin Boehm, Director of Parks, will call the meeting to order acting as City Staff.

ROLL CALL

3. Election of Commission Chairperson
4. Election of Commission Vice Chairperson

APPROVAL OF AGENDA

A Commission member can choose to remove an item from the agenda or rearrange its order; however, introducing new items to the agenda is not allowed. Any proposed changes require a motion, a second,

and approval from the Commission to be implemented. The agenda shall be approved at each meeting even if no changes are being made at that meeting.

HEARING OF CITIZEN COMMENTS

No formal Commission action will be taken during this meeting although issues raised may become a part of a future agenda. Participants are allotted a three minute speaking period. Specific items listed on the agenda may not be discussed at this time; however, citizens are invited to speak to those specific issues at the time the Commission discusses that particular item.

To make a comment during this period, or during any agenda item: On a computer or handheld device, locate the controls on your computer to raise your hand. You may need to move your mouse to see these controls. On a traditional telephone, dial *6 to unmute your phone and dial *9 to raise your hand.

CONSIDERATIONS / DISCUSSIONS / REPORTS

5. Closed Session Memo and discussion.
6. Open Meetings Training Video
7. Discussion on existing Bicycle and Pedestrian Plan and goals moving forward.

FUTURE AGENDA ITEMS

8. Campus to Aldi's pedestrian access
9. Installation of bike lane on Tratt St. and other street with parking restrictions.
10. Access to Kettle Moraine State Park.

ADJOURNMENT

A quorum of the Common Council may be present. This notice is given to inform the public that no formal action will be taken at this meeting.

Anyone requiring special arrangements is asked to call the Office of the City Manager / City Clerk (262-473-0102) at least 72 hours prior to the meeting.

City of WHITEWATER City Clerk
www.whitewater-wi.gov
Telephone: 262-473-0102
Office of the City Clerk
312 W. Whitewater St.
Whitewater, WI 53190

To: All Committee Chairs and Board Members
From: Heather Boehm, City Clerk
Date: May 28, 2025
Subject: Procedures for Recording Minutes in Closed Session Meetings

This memo is to clarify the procedures regarding the recording of minutes during closed session meetings.

For **closed session meetings of governing bodies**, the **municipal clerk** should be present to record the minutes. The clerk's role is essential in ensuring accurate documentation and compliance with open meetings laws.

In the case of **committee closed sessions** where the municipal clerk is not present, the **committee or board chair** must appoint an individual to record the minutes of the closed session. This appointee should be someone who can maintain confidentiality and accurately reflect the proceedings.

All minutes from closed sessions must be maintained separately from open session minutes and handled with appropriate confidentiality in accordance with Wisconsin's Open Meetings Law.

If you have any questions regarding this procedure or require assistance in designating a recorder, please contact the City Manager, John Weidl or City Clerk, Heather Boehm.

Thank you for your attention to this matter.

City of Whitewater
Bicycle and Pedestrian Plan

February 2013

PREPARED BY:
Alta Planning + Design
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alta
PLANNING + DESIGN

Acknowledgments

The City of Whitewater appreciates the efforts of the numerous residents and enthusiasts who participated in the development of this plan. Their creativity, energy, and commitment were the driving force behind this effort. In addition, the following residents, staff, and other agency and organization members contributed regularly to the City of Whitewater Bicycle and Pedestrian Plan.

Common Council

Patrick Singer, President

Lynn Binnie

Dr. Ken Kidd

Jim Olsen

Andrew Crone

Jim Winship

Stephanie Abbott

Parks & Recreation Board

Brandon Knedler, Chairperson

Dr. Ken Kidd

Nathan Jaeger

Jen Kaina

Teri Smith

Rachel DePorter

Bruce Parker

Kim Gosh, Alternate

City Staff

Michelle Dujardin, Recreation & Community Events Programmer

Latisha Birkeland, Neighborhood Services Manager

Scott Weberpal, GIS Technician

Dean Fischer, Public Works Director

Chuck Nass, Parks/Streets Superintendent

Cameron Clapper, City Manager

Kevin Brunner, Former City Manager

Lisa Otterbacher, Chief of Police

Brian Uhl, Captain

Saul Valadez, Juvenile Officer

Timothy Swartz, Patrol Officer

Alta Planning+Design, Wisconsin Bicycle Federation

Alta Planning + Design is firmly committed to the development of a sustainable global community and planet by enhancing transportation options, investing in local communities and reducing our carbon footprint in our personal and professional lives. For more information visit: www.altaplanning.com

Executive Summary

[To be completed after review by the Steering Committee]

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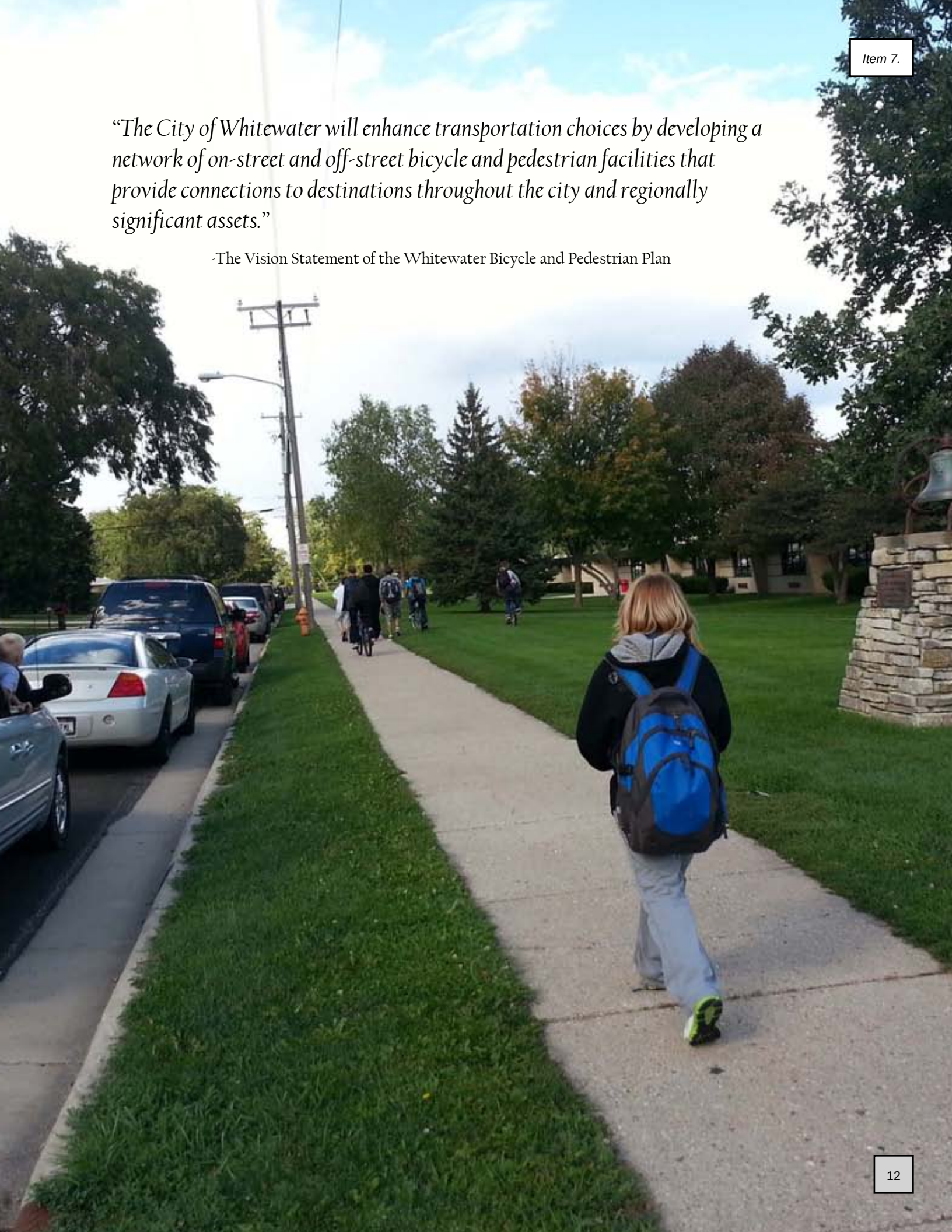
"The City of Whitewater will enhance transportation choices by developing a network of on-street and off-street bicycle and pedestrian facilities that provide connections to destinations throughout the city and regionally significant assets."

-The Vision Statement of the Whitewater Bicycle and Pedestrian Plan



1 Introduction

1.1 Setting

The City of Whitewater is located mostly in the northwest corner of Walworth County, with the northern edge of the city in Jefferson County. In 2010 the city's population was 14,390. University of Wisconsin–Whitewater (also known as UW–Whitewater) is located in the northwest corner of the city. It is a four-year, co-educational, residential college accredited by the North Central Association of Colleges and Secondary Schools. Enrollment in 2010-11 was over 11,500. The city hosts a vibrant downtown, and two large commercial areas on the east and west ends of town. Located less than an hour to either Madison or Milwaukee, and twenty minutes from Whitewater Lake, the Kettle Moraine and other beautiful natural resources, Whitewater is a great place to live and work.

Whitewater Creek, Cravath Lake and Tripp Lake are all located within the city boundaries. The city has made excellent use of its waterfront by developing park land and public gathering spaces on Cravath Lake and trails along Tripp Lake and Whitewater Creek. The trails provide an excellent opportunity for Whitewater residents and visitors to enjoy the outdoors on foot or on bike. The rolling rural landscape surrounding Whitewater also provides fantastic biking opportunities, both on-road and off-road.

In addition to its setting that encourages active and healthy living, Whitewater is fortunate enough to have a community-based collaboration working to increase the longevity and quality of life here. Working for Whitewater's Wellness (W3) is comprised of individuals representing healthcare, school systems, and municipalities within the Whitewater community.

1.2 Contents of the Plan

The Whitewater Bicycle and Pedestrian Plan provides a path forward for expanding and enhancing the existing bicycling and path network, and guides the City toward a solid policy basis for pedestrian focused improvements. The Plan is organized as follows:

Chapter 1: Introduction, provides an overview of this plan and its purpose, and the planning context within Whitewater and Wisconsin.

Chapter 2: Needs Analysis, estimates the amount of walking and bicycling in Whitewater today, and models the benefits of potential increases of walking and bicycling in 2025.

Chapter 3: Existing Conditions, describes Whitewater's existing bikeway and path network and summarizes strengths and weaknesses of the system.

Chapter 4: Recommended Bikeway Network, depicts the recommended system of bikeways and facility types to provide opportunities for cycling throughout the city.

Chapter 5: Recommended Pedestrian Policies, makes the case for a strong Complete Streets policy to support development of the pedestrian environment.

Chapter 6: Recommended Programs, describes education, encouragement, enforcement and evaluation measures the City of Whitewater and/or other local agencies should implement to promote bicycling, increase bicyclist safety, and increase the awareness of bicycling and walking as a viable travel mode.

Chapter 7: Implementation presents evaluation criteria for facilities and programs and details several top-priority projects. This chapter provides cost opinions for the recommended bicycle and trail projects and programs, and identifies potential funding strategies and supporting policies.

1.3 Goals and Objectives

The vision, goals and objectives of the Plan are principles that will guide the development and implementation of bicycle and pedestrian improvements in coming decades. Goals and objectives direct the way the public improvements are made, where resources are allocated, how programs are operated and how implementation priorities are determined. The goals and policies in this Plan were developed through an analysis of existing policies and review of best practices in other similar communities and discussion with the public and stakeholders.

Several objectives are measurable and allow tracking and benchmarking to demonstrate the extent of the City's progress toward the goals and overall vision over time. The Plan has three levels in its framework:

Vision. Pursuit of this statement underpins all of the Plan's goals and objectives.

Goals. The four principal goals provide guidance for achieving the Plan vision.

Objectives. Objectives guide the community on how to achieve and measure progress toward realizing each goal.

Benchmarks. Potential measureable metrics that describe Whitewater's progress towards Plan implementation.

Vision. The City of Whitewater will enhance transportation choices by developing a network of on-street and off-street bicycle and pedestrian facilities that provide connections to destinations throughout the city and regionally significant assets.

Planning Priorities

The most effective bicycle and pedestrian plans are holistic and consider the "Five Es" of non-motorized transportation planning: *Engineering*, *Education*, *Encouragement*, *Evaluation* and *Enforcement*.

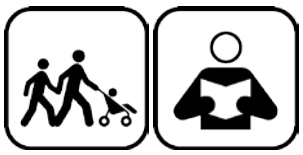
1.) Engineering

2.) Education

3.) Encouragement

4.) Evaluation

5.) Enforcement



Goal 1. Support bicycling and walking as viable transportation modes in the City of Whitewater.

Objective 1.1. Implement the Whitewater Bicycle and Pedestrian Plan facility recommendations to provide bicycling and walking routes to key destinations.

Objective 1.2. Seek new funding sources and strategies to support the implementation of the Whitewater Bicycle and Pedestrian Plan.

Objective 1.3. Improve bicyclists' and pedestrians' safety and comfort by creating a greater awareness and understanding of how these modes may be accommodated during construction or facility repair activities.

Benchmarks

- Miles of new bikeways and sidewalks completed; percentage of high-priority projects identified in the City of Whitewater Bicycle and Pedestrian Plan completed.
- Proportion of roadway restriping, reconstruction, and construction projects that include bicycle and/or pedestrian improvements.
- Number of grants applied for; amount of grant funding acquired.

Goal 2. Promote bicycling and walking in the City of Whitewater by improving awareness of the benefits of bicycling and walking to the entire community.

Objective 2.1. Improve public awareness of the bicycle network and presence of bicyclists.

Objective 2.2. Support education and encouragement efforts in the City.

Objective 2.3. Establish a bicycle and pedestrian count program following the National Bicycle and Pedestrian Documentation Program (NBPD) methodology.

Benchmarks

- Development of a wayfinding signage and trail naming plan;
- Number of signs installed
- Number of encouragement/safety training events in the community
- Completed BFC application; goal of initial recognition at the bronze level with a target of obtaining gold level recognition.
- Track and publish the use and change of active transportation modes over time.

Goal 3. Integrate bicycle and pedestrian planning into the City of Whitewater's planning processes.

Objective 3.1. Institutionalize bicycle and pedestrian planning into all of The City of Whitewater's planning efforts by establishing a Bicycle and Pedestrian Advisory Committee (BPAC).

Objective 3.2. Require inclusion of bicyclists and pedestrians in citywide planning efforts.

Objective 3.3. Adopt and implement a Complete Streets policy.

Objective 3.4. Encourage annual staff and decision maker attendance at conferences and other training opportunities that emphasize bicycle and pedestrian friendly design.

Objective 3.5. Coordinate with neighboring jurisdictions to develop regionally serving on-and off-street bicycle facilities.

Benchmarks

- Revised project priorities list every five years.
- Adopted Complete Streets Policy.

1.4 Public Involvement

The planning process included many opportunities for residents of Whitewater to share their experiences and knowledge of biking and walking in the city. Many people shared detailed information on where they bike and walk, things they would like to see improved and their program ideas to encourage more people to bike and walk. The information gathered from residents inspired the recommendations for both on-road and trail improvements, and ideas for programs to encourage citizens to use active transportation modes and to educate them on how to do so safely. This information has helped to create a better plan. The meeting dates are provided below.

Figure 1-1: The public information meeting featured presenation boards and other plan materials to communicate concepts and proposals to the public.

Steering Committee

The Steering Committee followed the plan development closely, and met 5 times throughout the planning process:

- April 2012
- June 2012
- September 2012
- October 2012
- December 2012
- March 2013

Public Information Meetings

Two public meetings formed the foundation of direct outreach with the public during the planning process:

- June 2012
- December 2012

1.5 Policy Review

Over 10 years of plans and policy documents relevant to the Whitewater Bicycle and Pedestrian Plan were reviewed to support the creation of the Plan. The review focuses on plans and studies prepared by the Wisconsin Department of Transportation (WisDOT), as well as relevant information from the City of Whitewater and related regions of Jefferson, Walworth and Rock counties.

The following plans were reviewed for this analysis. A detailed description of each plan is included in Appendix B: Plan and Policy Review.

Figure 1-2: Administrative code Trans 75 aims to "ensure that bikeways and pedestrian ways are established in all new highway construction and reconstruction projects funded in whole or in part from state funds or federal funds."

Statewide Planning Documents

- Administrative Code Trans 75: BIKEWAYS AND SIDEWALKS IN HIGHWAY PROJECTS (2009)
- Wisconsin State Bicycle Transportation Plan 2020 (1998)
- Wisconsin Pedestrian Policy Plan 2020 (2002)
- Wisconsin Department of Transportation Guide for Path/Street Crossings (2011)
- Developing a Model for Reducing Bicycle/Motor Vehicle Crashes (2006)
- Wisconsin Bicycle Planning Guidance (2003)
- Wisconsin Bicycle Facility Design Handbook (2004)
- Wisconsin Guide to Pedestrian Best Practices (2010)

County Planning Documents

- 2010 Jefferson County Bicycle Plan (2010)

City of Whitewater Planning Documents

- City of Whitewater Comprehensive Bikeway Plan (2000)
- City of Whitewater 2009 Comprehensive Plan Community Survey (2009)

2 Needs Analysis

2.1 Demand Potential and Benefits

To support and quantify the objectives of the Plan, analysts used a walking and biking demand model to measure the impacts of current and potential future trip activity within Whitewater. A detailed description of model assumptions and data sources is included in Appendix C: Demand Benefits Model.

This model uses Census and other national studies to extrapolate the number of bicycling or walking trips taken today within Whitewater. Comparing today's trip making with aspirational future mode share targets can illustrate the potential benefits of achieving such changes.

2.1.1 Current Demand and Benefits

Table 2-1 shows the results of the model, which estimates that 2,428 bicycle and 16,765 walking trips occur in Whitewater each day for transportation purposes. The majority are utilitarian trips not related to work, which include medical/dental services, shopping/errands, family or personal business, obligations, meals, and other trips.

Table 2-1: Model Estimate of Current Walking and Bicycling Trips

	Bicycling	Walking
Work Commute Trips (Daily)	590	2,298
K-12 School Trips (Daily)	15	229
College Commute Trips (Daily)	350	1,364
Utilitarian Trips	1,473	12,874
Total Current Daily Trips	**2,428**	**16,765**

To the extent that bicycling and walking trips replace single-occupancy vehicle trips, they reduce emissions and have the tangible economic benefits of reducing traffic congestion, crashes, and maintenance costs. In addition, the reduced need to own and operate a vehicle saves families money. The current annual household transportation cost savings alone is estimated at $280 per person. Full benefits calculations are available in Appendix C: Demand Benefits Model.

2.1.2 Future Demand and Benefits

Estimating future benefits requires additional assumptions regarding Whitewater's future population and anticipated commuting patterns in 2025, the timeframe for this planning effort. Future population predictions determined in *A Multi-Jurisdictional Comprehensive Plan for Walworth County: 2035* were used in this model. Table 2-2 shows the model results for future trip making in Whitewater.

Table 2-2: Future (2025) Bicycling and Walking Trips

	Bicycling (6% Share)	Bicycling (8% Share)	Walking
Work Commute Trips (Daily)	999	1,332	2,598
K-12 School Trips (Daily)	147	196	259
College Commute Trips (Daily)	594	792	1,545
Utilitarian Trips	2496	3328	14564
Total Current Daily Trips	**4,236**	**5,648**	**18,966**

The important factor to consider with these future assumptions is not the accuracy of the mode share percentages, but the benefits that would accrue to Whitewater *if* those numbers are reached. As more cities across the country track changes in bikeway mileage over time and participate in annual bicycle counts, more data will be available to better understand and refine mode share predictions.

For the 6% bicycle mode share assumption, transportation savings are estimated to accrue at a rate of $322 per person. An 8% bicycle mode share would result in an estimated $366 per person savings. Additional future benefit calculations are available in Appendix C: Demand Benefits Model.

2.1.3 Difficult-to-Quantify Benefits of Bicycling and Walking

Bicycling is a low-cost and effective means of transportation and is non-polluting, energy-efficient, versatile, healthy, and fun. Bicycles offer low-cost mobility to the non-driving public. Bicycling as a means of transportation has been growing in popularity as many communities work to create more balanced transportation systems and individuals seek to be healthier. In addition, more people are willing to bicycle more frequently if better bicycle facilities are provided.[1]

In addition to the tangible financial savings estimated above, bicycling has many other benefits that are challenging to quantify, are increasingly the subject of study. Bike lanes can improve retail business directly by drawing customers and, indirectly, by supporting the regional economy. Patrons who bike to local stores have been found to spend more money than patrons who drive.[2] Other studies show that bikeable and walkable communities attract the young creative class,[3] which can help cities and counties gain a competitive

[1] Pucher, J., Dill, J. and Handy, S. (2010). *Infrastructure, programs, and policies to increase bicycling: An international review.* Preventative Medicine 50:S106-S125.

[2] The Clean Air Partnership. (2009). *Bike Lanes, On-Street Parking and Business: A Study of Bloor Street in Toronto's Annex Neighborhood.*

[3] Cortright, Joe for CEOs for Cities. (2007). *Portland's Green Dividend.*

edge and diversify economic base. By replacing short car trips, bicycling can help middle-class families defray rising transportation costs. Families that drive less spend 10 percent of their income on transportation, compared to 19 percent for households with heavy car use,[4] freeing additional income for local goods and services.

2.1.4 Bicycle Friendly Community Benefits

The League of American Bicyclists sponsors the Bicycle Friendly America program [bikeleague.org] to encourage businesses, cities, states and universities to provide good cycling infrastructure, education, evaluation and enforcement through a standardized review process. Typically, bicycle friendly communities are places where people want to live, work and visit. Benefits of increasing bicycle use include reduced motor vehicle traffic, greater physical health and fitness and improved air quality. People that ride bicycles more often reduce their transportation costs, have more disposable income, and achieve their recommended weekly exercise without a gym workout. Bicycle Friendly Community status can help a community understand how it relates to peers across the US and, by studying the experiences of these communities, put the potential benefits of increasing bike friendliness into perspective. 2012 Gold level BFC Communities with populations comparable to Whitewater include Steamboat Springs, CO; Jackson & Teton County, WY; and Breckenridge, CO.

[4] Center for Neighborhood Technology. (2005). *Driven to Spend: Pumping Dollars out of Our Households and Communities.*

3 Existing Conditions

This chapter describes the current on- and off-street bikeway network and local pedestrian policies in Whitewater. The chapter begins with a local pedestrian policy assessment, followed by an inventory of existing bicycle lane and shared use path facilities. An analysis of system strengths and weaknesses highlights key areas where improvements may be needed concludes this chapter.

3.1 Pedestrian Policy Assessment

Whitewater, like all Wisconsin cities, must conform to Administrative Code Trans 75. The rule aims to "ensure that bikeways and pedestrian ways are established in all new highway construction and reconstruction projects funded in whole or in part from state funds of federal funds."

3.1.1 Local Whitewater Policy

Administrative Code

The municipal code for Whitewater contains many pedestrian-focused regulations. Specific chapters or code items are identified below, sorted according to whether they support or serve as impediments to active travel.

Supportive Code Items	
5.19 - Sidewalk Café Permit	This chapter recognizes the value of active uses of the public right of way and provides guidelines for the placement and use of dining areas on sidewalks adjacent to restaurants. • Placement restrictions identified in the code include: • Sidewalk cafés shall be located in such a manner that a distance of not less than four feet is maintained at all times as a clear and unobstructed pedestrian path. For the purpose of the minimum clear path, parking meters, traffic signs, trees, light poles and all similar obstacles shall be considered obstructions. • Shall not be placed within five feet of fire hydrants, alleys, or bike racks. Shall not be placed within five feet of a pedestrian crosswalk or corner curb cut. • Shall not block designated ingress, egress, or fire exits from or to the restaurant, or any other structures. • Shall be readily removable and shall not be physically attached, chained or in any manner affixed to any structure, tree, signpost, light pole, or other fixture, curb, or sidewalk. • No portion of an umbrella shall be less than six feet eight inches above the sidewalk. All sidewalk shall be constructed in accordance with applicable provisions of the

Supportive Code Items	
	State of Wisconsin Standard Specifications for Road and Bridge Construction, 1981 Edition.
12.20 - Sidewalks	This chapter covers the use and upkeep of sidewalks within Whitewater. It requires the owner or occupant of the adjacent property to ensure the removal of trash and obstructions from the sidewalk, as well as requires the daily removal of snow accumulation.
12.22 - Construction Standards of Sidewalks	This chapter covers the construction, installation, and repair standards of sidewalks within Whitewater. Aside from key streets identified in the Code, "All sidewalks shall be laid within the street right-of-way and shall be laid one foot from the property line, and shall be four feet in width …."
Restrictive Code Items	
12.04 – General Regulations	Item 12.04.020 - Ball playing on streets prohibited, discourages active use of streets within Whitewater. While the penalty is minimal, and enforcement is unlikely, Code items prohibiting active uses may act as a barrier to encouraging pedestrian use of the right of way.
12.22 Construction Standards of Sidewalks	The Code identifies four conditions in which the normal requirement for sidewalks on major roads is waived. As sidewalk provision is an important part of a complete street, waiving the construction requirements should be done after careful considerations. The identified conditions are: • Sidewalk will not be required when the nature of the terrain creates insurmountable engineering problems. • Sidewalk will not be required where there is insufficient right-of-way. • Sidewalk will not be required if the installation would generate a safety hazard by encouraging pedestrian traffic in dangerous areas. • Sidewalks will not be required along vacant land which extends to the city limits which is not situated between areas generating pedestrian traffic, and streets on which curb and gutter has not been installed.

Future Policy Opportunities

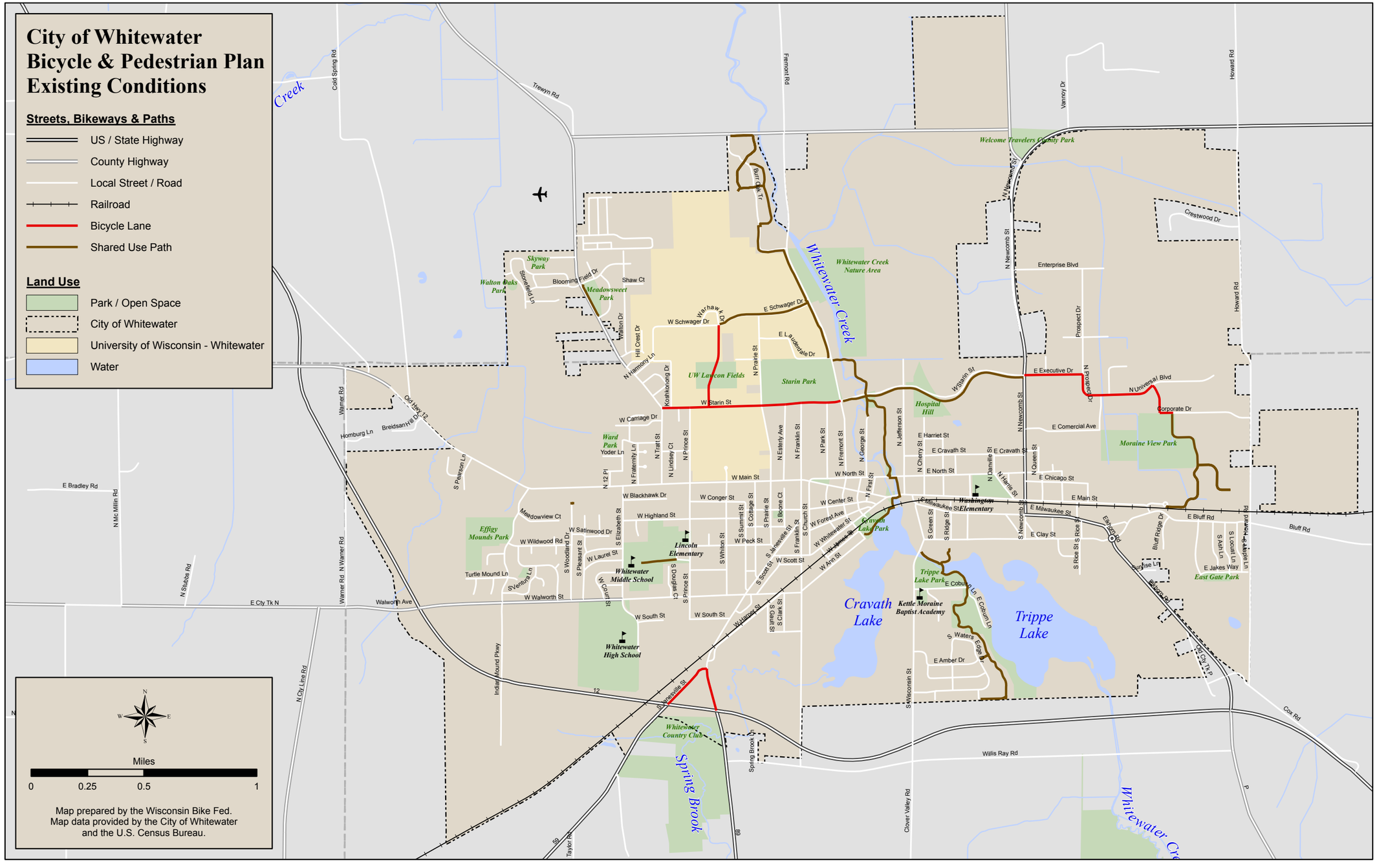
The City of Whitewater may want to consider additional policies and programs to bolster its currently existing pedestrian-supportive regulations. These policies include:

- Creation of a network of "complete streets"
- Balancing motor vehicle mobility with bicycle and pedestrian accessibility
- Encouraging traffic calming and intersection improvements
- Prioritizing traffic calming measures over congestion management
- Assigning high priority to pedestrian and bicycle projects
- Considering establishment of pedestrian only zones
- Enforcing laws that protect pedestrians
- Ensuring that bicycling and walking facilities are provided for all demographics, including people of different ages, races, ethnicities, incomes, and different neighborhoods
- Establishing and participating in Safe Routes to School programs
- Amending Ordinance 12.04.020 so as to encourage Open Streets and other on-street events
- Minimizing impervious surface area

3.2 Existing Bikeway Facilities

Federal and state bicycle planning and design guides define bikeways as preferential roadways accommodating bicycle travel through the use of bicycle route designations, bike lane striping, or shared-use paths to physically separate cyclists from motorists. Map 3-1 shows the existing bikeway network in Whitewater.

Map 3-1: Existing Bikeways in Whitewater



3.2.1 Existing On-Street Bikeways

On-street bikeways can take several forms, depending on the speed and volume of traffic on the roadway, space available to accommodate bicyclists, and type of users expected on the facility. Currently, bike lanes are the only implemented on-street bikeway type in Whitewater. The Whitewater Bicycle and Pedestrian Plan recommends a variety of on-street bikeway facility types in addition to conventional bike lanes. These recommended bikeway types are described briefly below, and are discussed in detail in Appendix D: Bicycle and Pedestrian Design Guidelines.

- **Bike Lanes**: Designated exclusively for bicycle travel, bike lanes are separated from vehicle travel lanes with striping and also include pavement stencils. Bike lanes are most appropriate where higher traffic volumes and/or speeds warrant greater separation of bicyclists and motor vehicles.

There are approximately 3.33 miles of existing bike lanes in Whitewater. These are illustrated on Map3-1 and detailed in Table 3-1.

Table 3-1. City of Whitewater On-Street Bikeways (Bicycle Lanes Only)

Street	From	To	Miles
Corporate Dr	N Technology Dr	Whitewater University Tech Park Path	0.06
E Executive Dr	N Newcomb St	N Prospect Dr	0.26
N Prospect Dr	E Executive Dr	N Universal Blvd	0.09
N Technology Dr	N Universal Blvd	Corporate Dr	0.13
N Universal Blvd	N Prospect Dr	N Technology Dr	0.31
S Janesville St	USH 12	S Janesville St	0.43
W Starin Dr	N Tratt St	N Newcomb St	1.68
Warhawk Dr	W Schwager Dr	W Starin St	0.37
Total			**3.33**

3.2.2 Existing Off-Street Bikeways

Off-Street Bikeways, commonly called shared-use paths (also referred to as "trails" and "multi-use paths" or "off-street trails") are often viewed as recreational facilities, but they are also important corridors for utilitarian trips. Off-street facilities that accommodate bicycle travel can be categorized into the following typologies: multi-use path, a facility that has an exclusive right-of-way; side path, a two-way trail on one side of the road located within the road right-of-way; and park trail, a shared-use facility located within a park.

[Insert Picture of a facility in Whitewater]

Figure 3-3-1. Shared use paths provided throughout the city to accommodate bicyclists and pedestrians.

The following section briefly describes these off-street facilities.

- **Shared-Use Paths** have exclusive right-of-way and are not directly adjacent to a roadway. They provide access across the city and connect to

the regional network. Multi-use paths are frequently used by cyclists riding long distances, whether to go to work in neighboring towns and villages or to get out for a long-distance weekend ride. In addition to fast-moving cyclists, recreational riders use the shared use trails for family outings or more leisurely rides.

- **Side Paths**: Some shared-use paths in Whitewater are directly adjacent to roadways and within the street right-of-way, such as the path adjacent to East Starin Road. These 'side paths' serve both bicyclists and pedestrians and are wider than a standard sidewalk. Side paths provide commuter routes between residential areas and employment centers, as well as to retail areas. They are used by recreational riders mainly to access the shared use path or regional trail network. The high frequency of street crossings limits fast and continuous riding, making them less preferable to on-street bikeways for transportation-oriented riders.

Current off-street bikeways in Whitewater are a mixture of all types of paths and trails, with several facilities providing access to the University of Wisconsin-Whitewater campus. In total, there are approximately 7.5 miles of existing off-street bikeways in Whitewater. These are illustrated on Map 3-1, and identified in Table 3-2 below.

Table 3-2. City of Whitewater Off-Street Bikeways

Name	Miles
Starin Road	0.88
City Garage/Brewery Park	0.73
Whitewater University Tech Park	1.38
Prairie Village	1.34
Waters Edge South	1.37
Cravath Lakefront	0.23
Prairie Village to Lauderdale Dr	0.75
North Tratt	0.16
Schwager Drive	0.41
Whitewater Middle School Path	0.16
Total	**7.4**

3.2.3 Bicycling and Walking at the University of Wisconsin-Whitewater

Several bicycle facilities exist around and through campus including bike lanes on Warhawk Drive and West Starin Road, and off-street trails along portions of Schwager Drive and Fremont Road. The central east-west roadway through campus, West Starin Road, is a boulevard style street that accommodates cyclists, pedestrians and motor vehicles. There are periodic pullouts for motor vehicle loading and parking. In-pavement pedestrian crosswalk signs are placed in the bike lane and may create a hazard for bicycle traffic. Motor vehicle volumes in the campus area range from 4,800 ADT (Average Daily Trips) on Prince Street to 15,100 ADT on Prairie Street. Roadways such as Prince Street that are already designated bikeways, could be

enhanced with additional signing, marking and potential traffic calming. Bicycles may be ridden on campus except where prohibited by posted signs or otherwise noted in the Campus Policy on Skating and Bicycling[5].

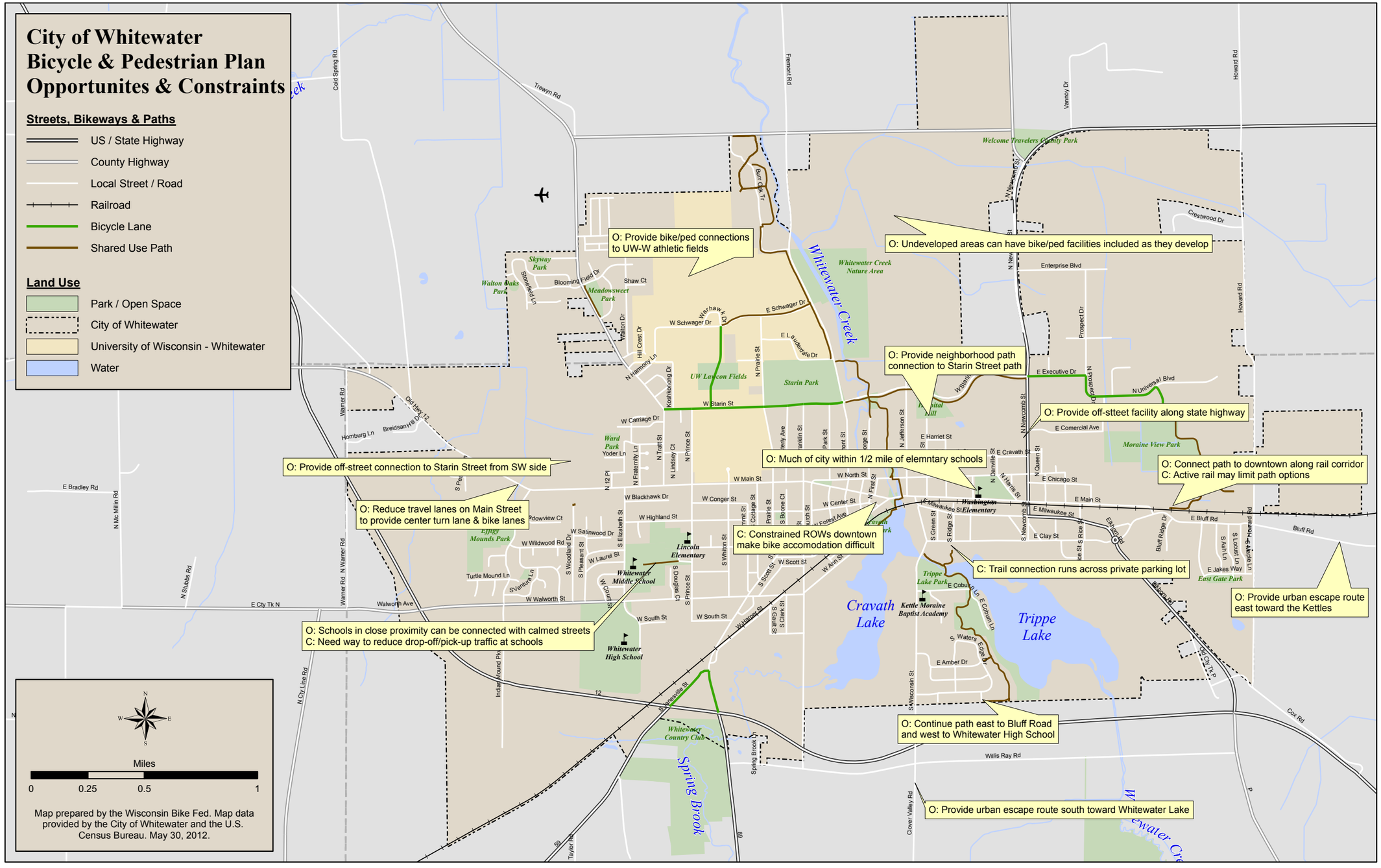
Pedestrians around the university are accommodated by sidewalks, which are generally separated from motor vehicle traffic by a wide planter strip. The bulk of pedestrian traffic occurs in the academic core, south of Starin Road and crosswalks are typically provided at all intersections. In addition to sidewalks, pedestrians are accommodated along numerous pathways connecting campus buildings. Direct access to downtown Whitewater and the Main Street Commercial Area is provided via West Main Street (Old Highway 12).
Constraints and Opportunities

3.2.4 Constraints

Described below, bicyclists in Whitewater face a variety of challenges. Major barriers, challenging intersections, and network gaps are identified on Map 3-2: Opportunities and Constraints on the next page.

[5] Office of the Vice Chancellor for Administrative Affairs. "Skating & Bicycling Policy."2002. Web. Accessed June 6, 2012.

Map 3-2: Opportunities and Constraints



Limited Bikeway Network

The existing network of bicycle routes is limited in scope, and does not comprehensively provide full access to common destinations. Current bikeway corridors do not serve recreational riders who want to connect quickly into the regional trail system for long recreational rides. Filling these gaps can quickly increase the effectiveness of existing bicycling infrastructure. The system also does not serve utilitarian cyclists who want to ride to a workplace or shopping center quickly. A complete network of on- and off-street bikeways would provide routes for cyclists of all abilities and trip purposes.

Barriers

The waterways in Whitewater are a barrier to comfortable bicycle travel. Bridges tend to be narrow, without adequate room for all users. Successfully implementing comfortable facilities on these corridors will be impossible if overcrossings are not made to be bicycle friendly. Overcrossings to consider for improvement include:

- Main Street
- East Starin Road

Challenging Intersections

Major intersections can be challenging for cyclists riding on the bikeway network. These challenges include:

- Intersections of existing shared use paths at arterial roadways that do not provide marked crossings, such as the shared use path through Brewery Hill Park at West North Street.
- Intersections where sidepaths end abruptly or offer inadequate transition to other bikeway types. This may be seen at the transition from the Fremont Street sidepath to a shared use trail in the northeast corner on Starin Park.
- Intersections where on-street bikeways are terminated in advance of the intersection, often done to assign roadway space to turn lanes. This can be seen at West Starin Raod & North Fremont Street.

Gaps

While bicyclists in Whitewater benefit from the existence of some on- and off-street bicycle facilities, these do not offer continuous travel opportunities throughout the entire city. Even small network gaps between facilities require bicyclists to either ride on the road or on a sidewalk to access another bikeway. Filling gaps is an effective way to capitalize on existing infrastructure and was a key strategy used in both development of the cycling network and phasing of project recommendations.

Lack of Wayfinding Tools

Whitewater's bikeway system could benefit from signage and additional wayfinding tools to orient users and direct them to and through major destinations like the downtown, schools, parks, and commercial areas. Currently bicycle and pedestrian wayfinding signing in Whitewater is limited and found primarily at trailheads and within some parks. As the on-street network is being developed, cyclists should be directed to key destinations along the bikeway, to raise awareness of the new facilities and to encourage more residents to try bicycling to different destinations around the city.

Side Path Safety Concerns

The *AASHTO Guide for the Development of Bicycle Facilities* generally recommends against the development of trails adjacent to roadways. Also known as "side paths," these facilities create a situation where a portion of the bicycle traffic rides against the normal flow of motor vehicle traffic. Key concerns about shared-use paths directly adjacent to roadways (e.g., with minimal or no separation) are:

- When the path ends, cyclists riding against traffic tend to continue to travel on the wrong side of the street, as do cyclists going to the path. Wrong-way bicycle travel is a major cause of crashes.
- At intersections, motorists crossing the path may not notice bicyclists approaching from certain directions, especially where sight distances are poor.
- Ambiguity as to expected user behavior at the crossings of paths, streets, and driveways.[6]
- Stopped vehicles on a cross-street or driveway may block the path.
- Because of the closeness of vehicle traffic to opposing bicycle traffic, barriers are often necessary to separate motorists from cyclists. These barriers serve as obstructions, complicate facility maintenance and waste available right-of-way.
- Paths directly adjacent to high-volume roadways diminish users' experience by placing them in an uncomfortable environment. This could lead to a path's underutilization.
- When implementing a side path, special attention should be paid to the design of intersections and driveway crossings to mitigate the concerns noted above.

When designing a bikeway network, the presence of a nearby or parallel path should not be used to preclude adequate shoulder or bike lane width on the roadway, as the on-street bicycle facility will generally be superior to the side path for experienced cyclists and those who are cycling for transportation purposes. Bike lanes should be provided as an alternate (more transportation-oriented) facility whenever possible.

Driver Behavior/Lack of Awareness of Bicycling Facilities

In Whitewater, motorists often disregard marked crosswalks and warning devices. At trail crossings, this lack of compliance requires trail users to wait until the road is clear before proceeding across the street. Motorists' lack of compliance with posted speeds is another safety concern, particularly to bicyclists riding on the shoulder of major roads.

3.2.5 Opportunities

Various characteristics foster an environment where bicycling is safe and enjoyable in Whitewater. These system strengths are described below.

East Main Street Repaving

[6] Wisconsin DOT published the *Wisconsin Department of Transportation Guide for Path/Street Crossings* in 2011 to help clarify path/street crossing ambiguities, though user awareness of this guidance is likely to be limited.

Routine paving of roadways may offer an opportunity to add bike lanes where adequate right-of-way exists. East Main Street is scheduled for repaving in the next five years and should be considered for such an upgrade.

Highway 12 Undercrossing

Built at the time of highway construction, the undercrossing of Highway 12 will offer a safe way to cross the busy roadway away from traffic. When the opportunity arises to connect to this location, the grade-separated crossing will be a useful asset to connecting corridors.

Existing Trail Network

Whitewater already has a number of existing recreational trails that can form the basis of a first-class off-street trail network that provides access to destinations like the Whitewater Creek Natural Area and Cravath Lake. Whitewater could enhance the existing trails by providing improved trailhead facilities, providing wayfinding and extending the existing network. A trail map could be developed and marketed to help increase tourism and recreation associated with the system.

Potential for Neighborhood Greenways

Most neighborhood or residential streets in Whitewater can be classified as "shared roadways." Shared roadways accommodate vehicles and bicycles in the same travel lane. The most suitable roadways for shared vehicle/bicycle use are those with lower posted speeds (25 MPH or less) and lower traffic volumes (3,000 average daily traffic volume or less). Figure 3-2 identifies the traffic volumes of a selection of city streets, and reveals that many of these local streets feature low-traffic volumes appropriate for shared roadway bicycle use.

These streets present a generally good environment for bicycling. Formally designating streets as neighborhood greenways often requires little more than signage and pavement markings, as well as improving crossings at major streets. Other streets that have higher traffic volumes and speeds (but not sufficient to warrant bike lanes or cycle tracks), may require traffic calming techniques to reduce vehicle speeds while limiting conflicts between motorists and bicyclists.

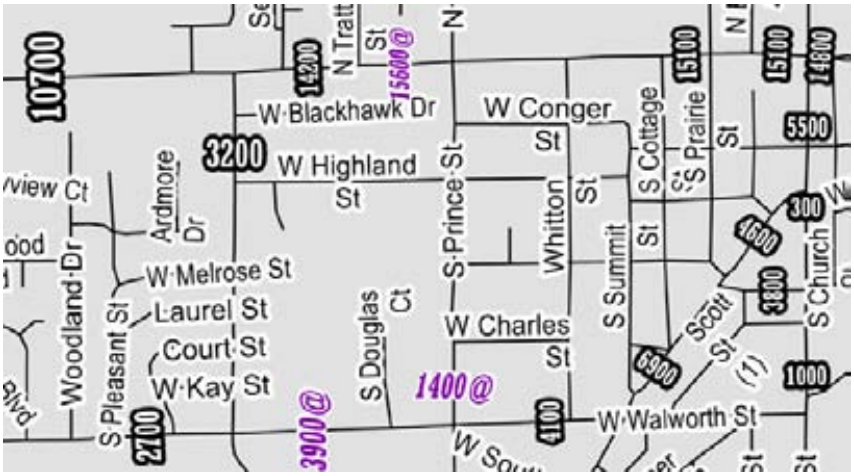


Figure 3-2: 2009 Roadway Traffic Volumes (Figures followed by @ are from 2006)

Planned Bikeway Improvements

Although there are few existing bikeways in Whitewater, many miles have been proposed in existing planning documents. See Appendix B: Plan and Policy Review.

4 Recommended Bikeway Network

This chapter lays out a 20-year plan for completing the system of bikeways in Whitewater. The recommended network builds upon previous and on-going local and regional planning efforts and reflects the extensive input offered by city staff, the project Steering Committee, bicycle and pedestrian stakeholder groups, and Whitewater residents.

Figure 4-1. Restriping bike lanes is a cost effective infrastructure improvement.

The recommended bikeway network includes a comprehensive and diverse set of bicycle and trail facilities connecting key destinations in and around Whitewater. System improvements include establishing a formalized on-street bikeway system, upgrading intersections for safer trail crossings, improvements to bicycle and pedestrian facilities downtown and projects to enhance safety and encourage bicycling and walking. Suggested improvements include low-cost measures yielding immediate results, such as re-striping of streets to accommodate bike lanes (Figure 4-1), map development and low cost signage. Other improvements, such as expanding the local trail system, represent longer-term strategies for transforming Whitewater into a truly bicycle- and pedestrian-friendly community.

4.1 Facility Definitions for the Whitewater Network

Many on-street bicycle facilities can be developed inexpensively with paint and signs. These facilities include bike lane restriping, shared lane markings, and neighborhood greenways. The Draft Bicycle Network for Whitewater has recommendations for four facility types: bike lanes, shared lanes, neighborhood greenways and shared use trails. Each facility type is illustrated below and describe in detail in Appendix D: Bicycle and Pedestrian Design Guidelines.

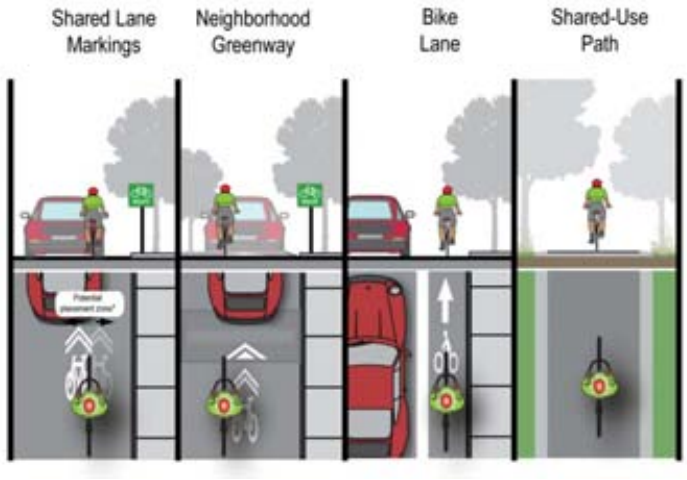


Figure 4-2: Bikeway facility types recommended in the Whitewater Bicycle and Pedestrian Plan

Recommendations for Bike Lanes Requiring Construction

While several of the bike lane projects can be accomplished simply by restriping a roadway, other projects would require additional construction and engineering effort. These projects may be able to reallocate existing street width through road diets or parking reduction to accommodate bike lanes, while some projects may require road widening. Future roads should be constructed with sufficient right-of-way to accommodate bicyclists via bike lanes.

4.2 On-Street Bikeways

A list of recommended on-street bikeways was developed based on public comments, street widths, and providing an interconnected network that links schools, parks, commercial areas, paths and other attractions. Wherever possible, bike lanes were recommended over shared lane markings as they provide both bicyclists and motor vehicle operators with a higher level of comfort. However a number of streets, particularly in the downtown area, are not wide enough to provide bike lanes. In those cases, shared lane markings are recommended.

The proposed network provides formal bicycle facilities in most areas of the city, and will greatly increase the visibility of existing routes. When combined with the existing and proposed shared-use paths, the on-street bikeways will provide a comprehensive network connecting all parts of the city.

4.2.1 Street Corridor Recommendations

Table 4-1, **Table 4-2**, and **Table 4-3** list recommended on-street bike lanes, neighborhood greenways and shared lane bike routes, respectively. **Figure 4-3** through **Figure 4-8** depict how the bike lanes might fit with existing curb to curb street widths typically found in Whitewater. Further study will be necessary before any recommendations can be implemented. Map 4-1 provides an overview of the proposed network.

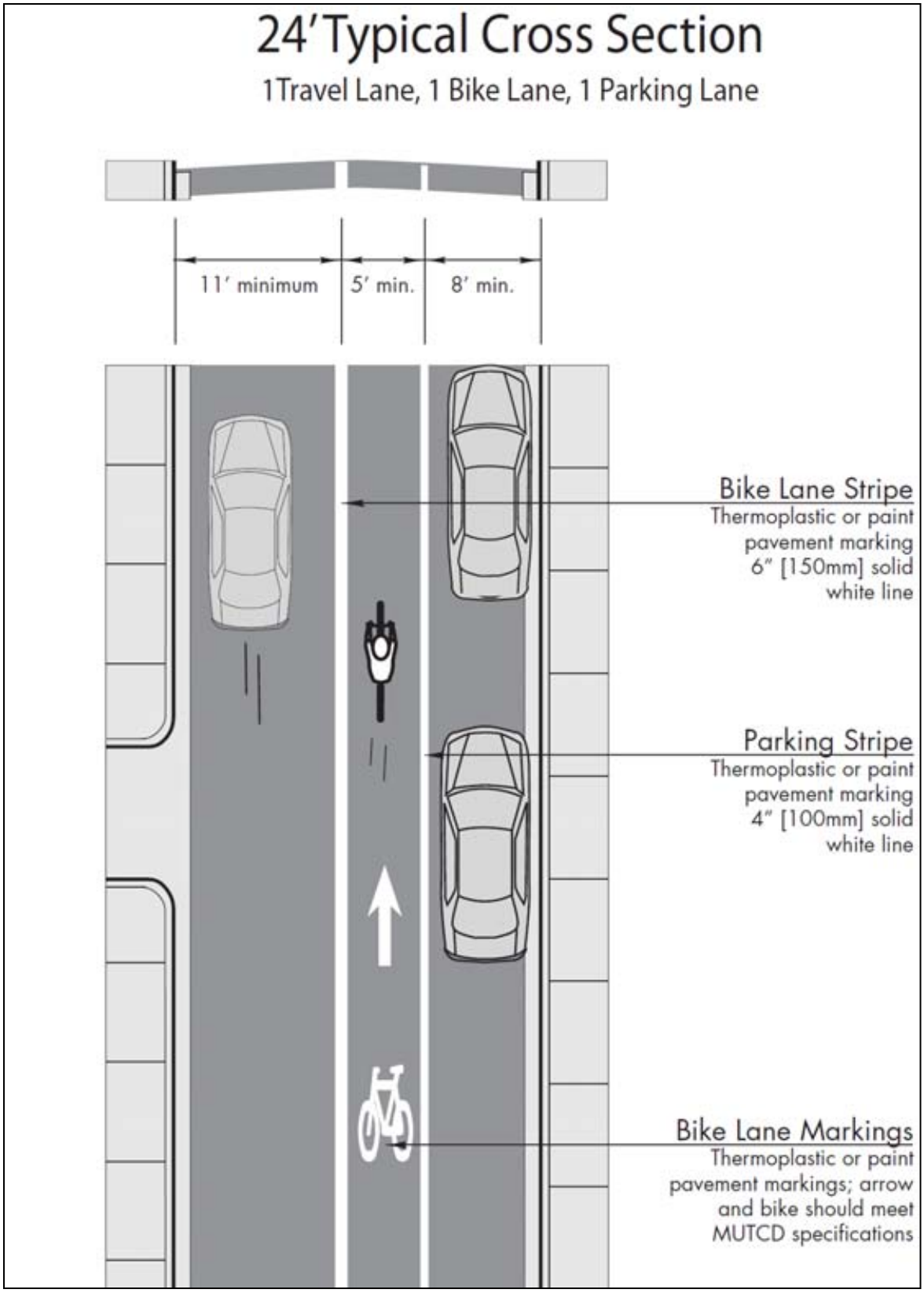


Figure 4-3: Typical 24' Wide Roadway Cross Section

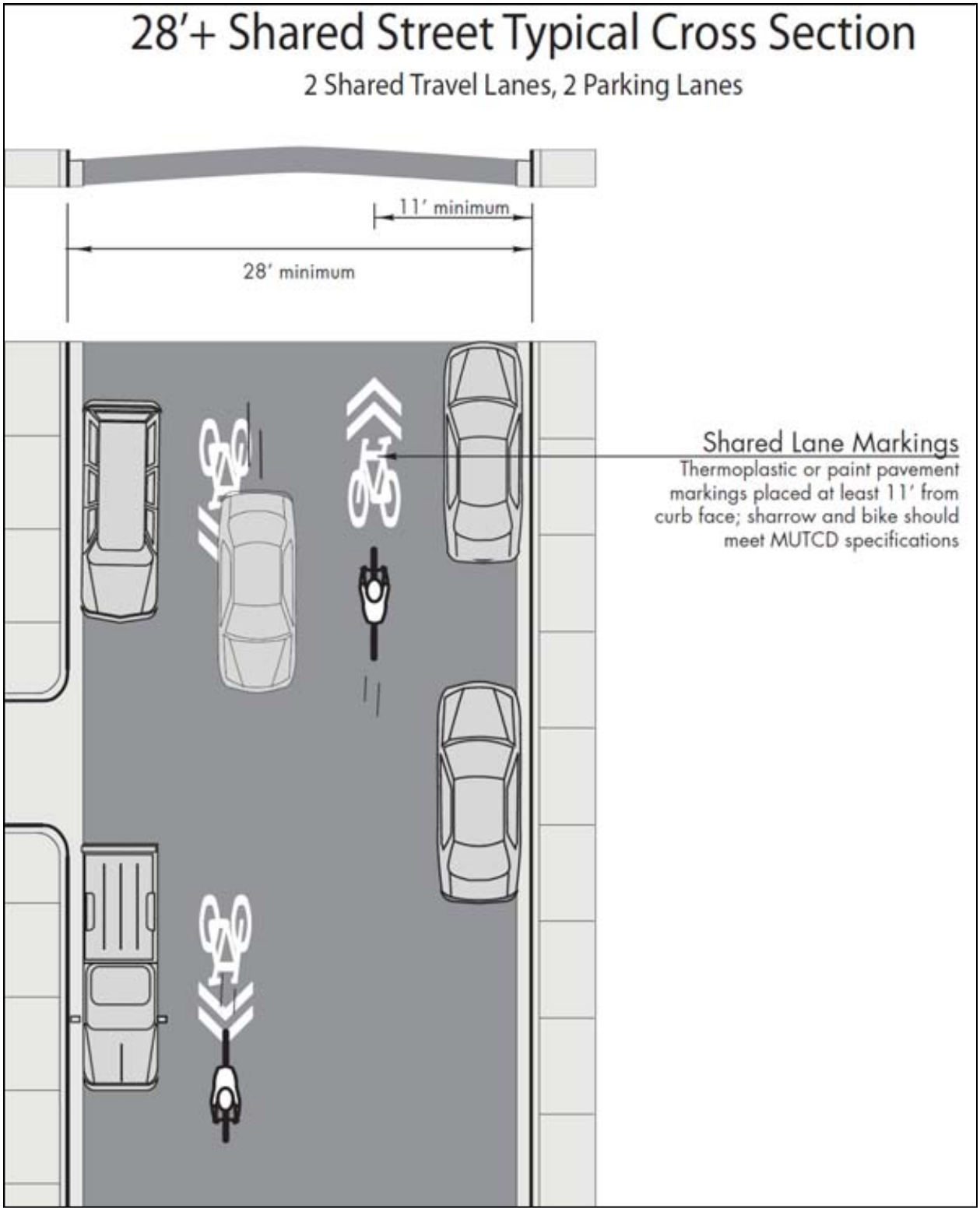


Figure 4-4: Typical 28' Wide Roadway Cross Section

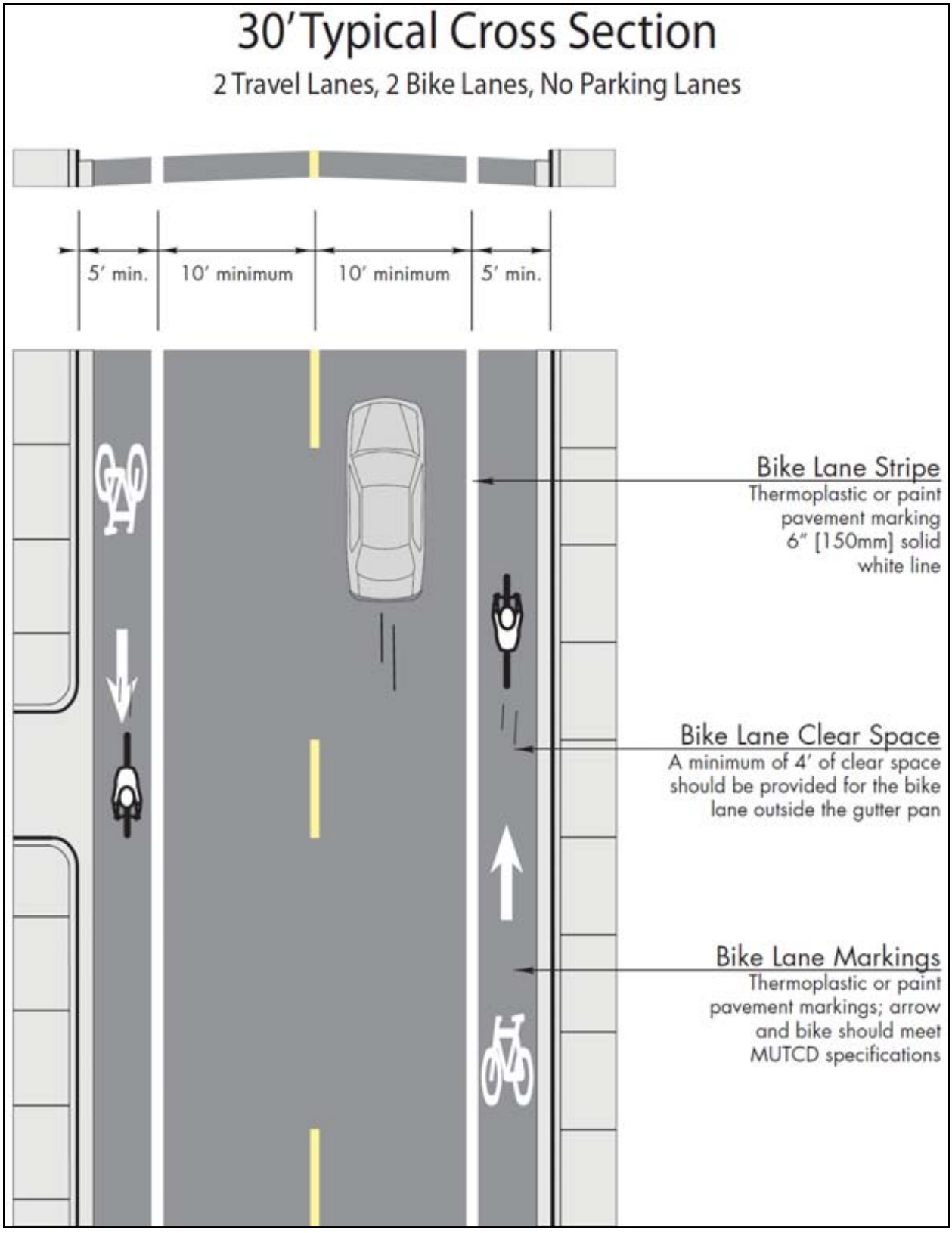


Figure 4-5: Typical 30'Wide Roadway Cross Section

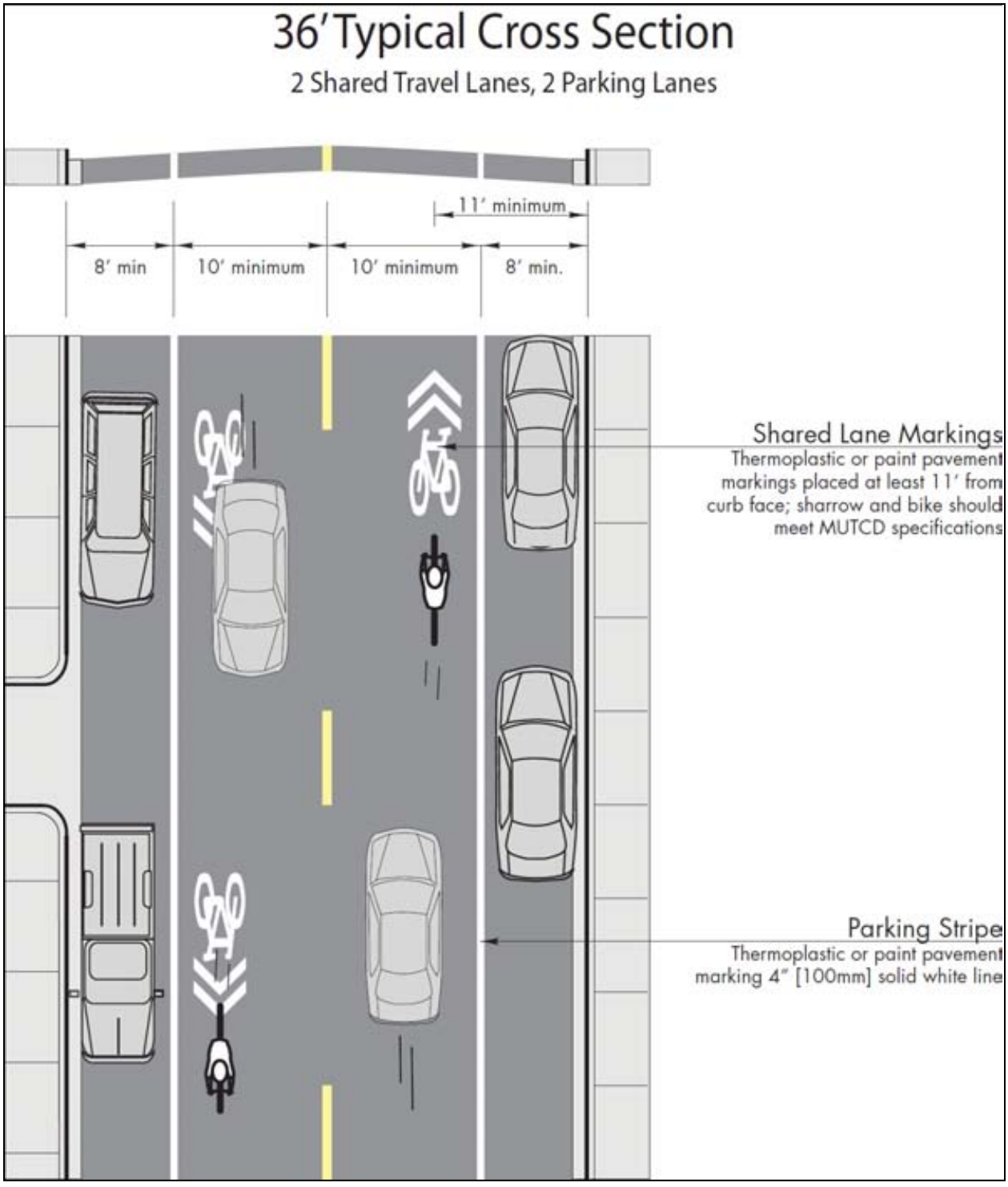


Figure 4-6: Typical 36' Wide Roadway Cross Section

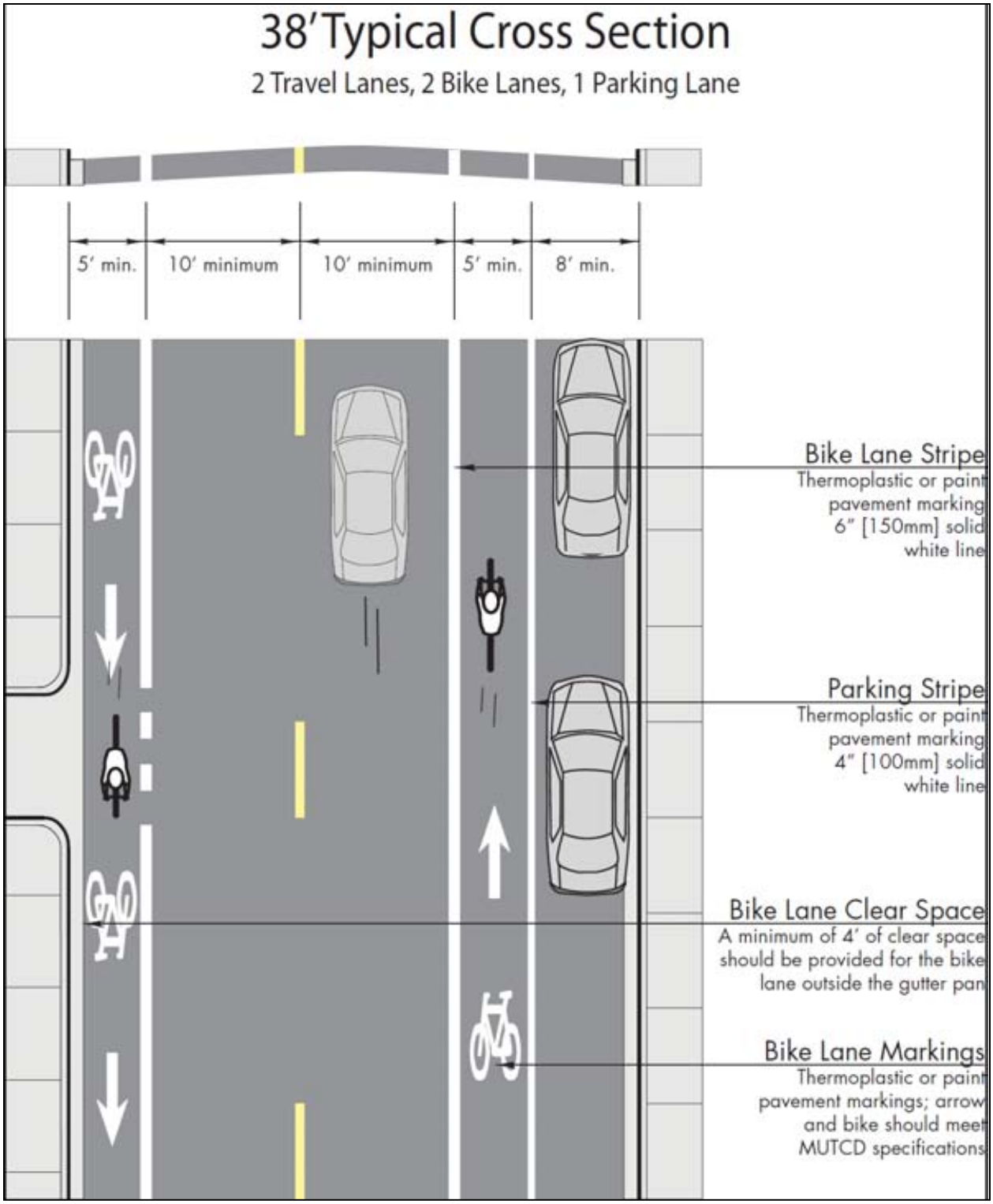


Figure 4-7: Typical 38' Wide Roadway Cross Section

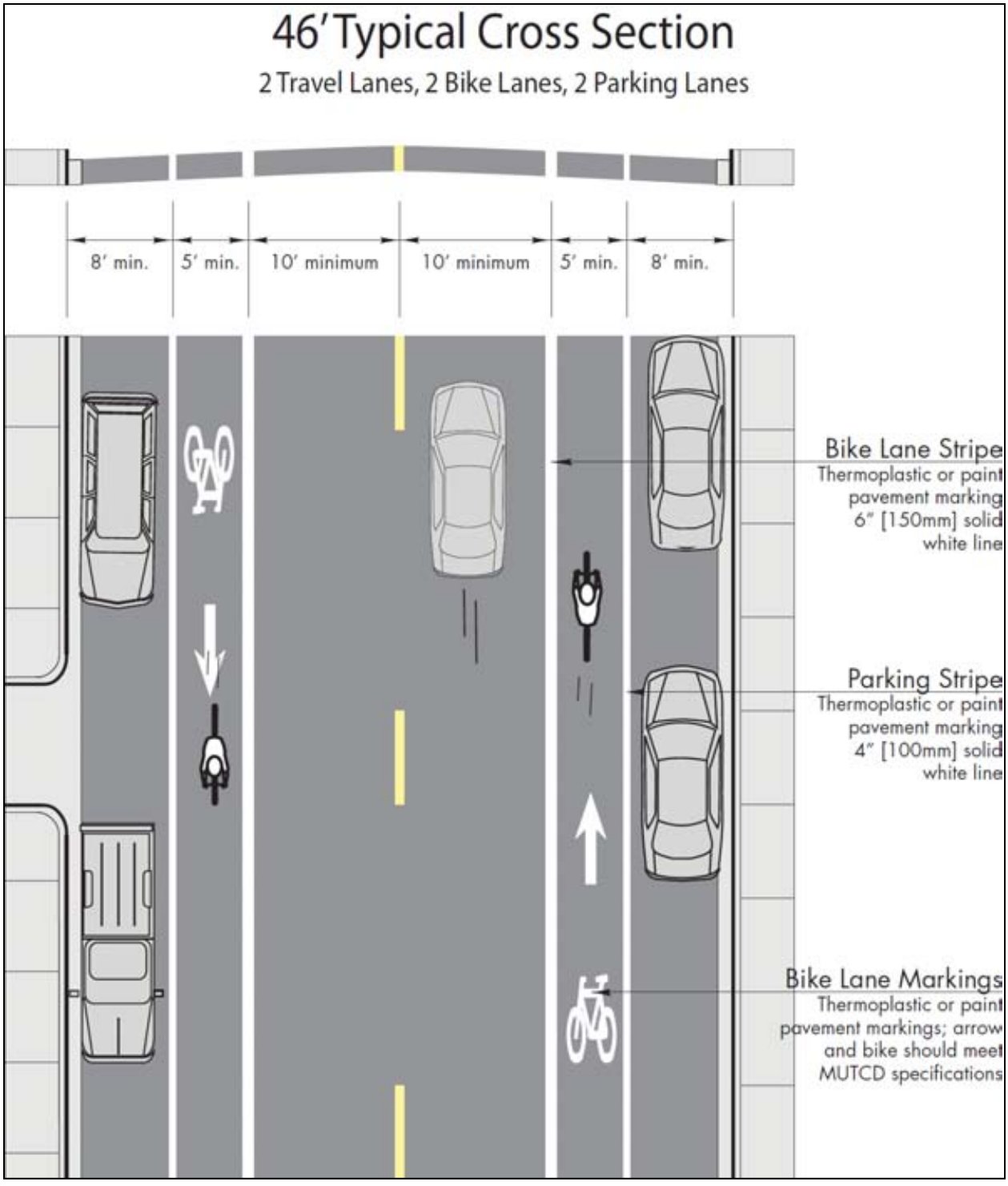


Figure 4-8: Typcial 46' Wide Roadway Cross Section

Table 4-1: Proposed Bike Lanes

Street	From	To	Miles
E County Line Rd	N McMillen Rd	Indian Mound Pkwy	1.99
Indian Mound Pkwy	Indian Mound Pkwy	W Walworth St	0.63
Indian Mound Pkwy	W Walworth St	W Main St	0.54
W Walworth St	STH 12	Indian Mound Pkwy	0.37
W Main St	Indian Mound Pkwy	S Prince St	0.71
W Walworth St	Indian Mound Pkwy	S Prince St	0.83
S Elizabeth St	S Elizabeth St	W Main St	0.76
W Walworth St	S Prince St	S Franklin St	0.50
W Main St	S Prince St	S Franklin St	0.48
S Franklin St	S Janesville St	W Main St	0.96
N Prairie St	W Main St	E Schwager Dr	0.74
CTH N	W Main St	Bloomingfield Dr	1.00
CTH N	Bloomingfield Dr	E Schwager Dr	2.39
N Fremont St	W North St	E Schwager Dr	0.80
E Main St	S Franklin St	S Newcomb St	1.08
E North St	S Franklin St	N Newcomb St	0.99
E Milwaukee St	E Main St	S Newcomb St	0.53
N Newcomb St	E Milwaukee St	E Executive Dr	0.62
E Bluff Rd	Elkhorn Rd	Howard Rd	0.66
E Main St	N Newcomb St	E Bluff Rd	0.57
E Milwaukee St	N Newcomb St	E Bluff Rd	0.41
STH 89	Willis Ray Rd	STH 12	0.22
S Wisconsin St	Willis Ray Rd	E Milwaukee St	1.16
		Total	**18.94**

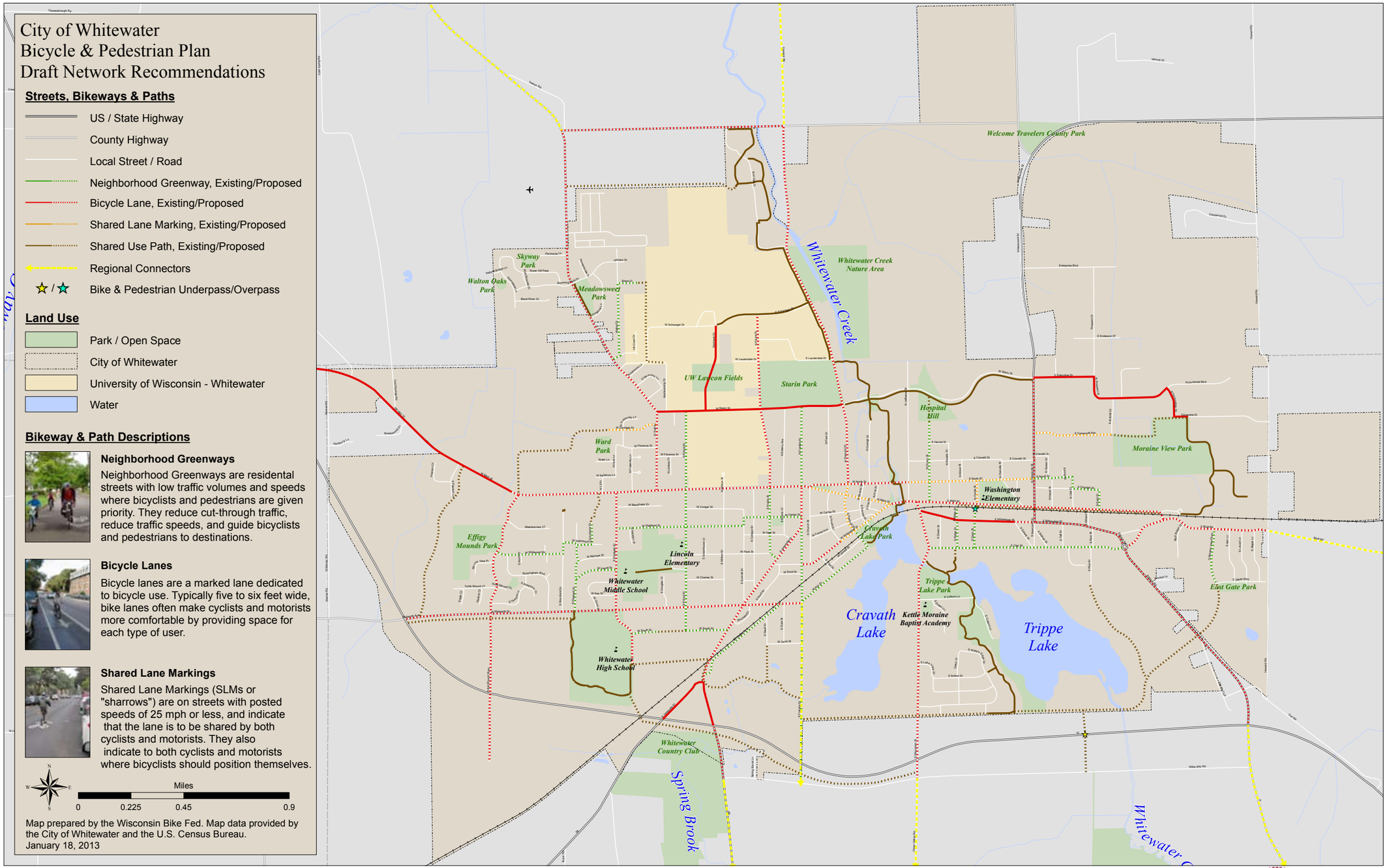
Table 4-2: Proposed Neighborhood Greenways

Street	From	To	Miles
S Pleasant St	W Walworth St	S Ardmore Dr	0.38
W Laurel St	S Pleasant St	S Elizabeth St	0.18
W Wildwood Rd	Indian Mound Pkwy	S Pleasant St	0.39
S Prince St	W South St	W Starin St	0.94
W Peck St	S Prince St	S Janesville St	0.40
S Prairie St	W Peck St	W Main St	0.28
W Harper St	S Janesville St	W Walworth St	0.46
S Franklin St	Willis Ray Rd	S Janesville St	1.09
W Ann St	S Franklin St	W Whitewater St	0.45
N Franklin St	W Main St	W Starin St	0.34
N Cherry St	E Main St	N Cherry St	0.34
E Clay St	S Wisconsin St	Elkhorn Rd	0.83
S Moraine View Pkwy	E Jakes Way	E Bluff Rd	0.24
		Total	**6.32**

Table 4-3: Proposed Shared Lane Bike Routes

Street	From	To	Miles
S Janesville St	STH 12	STH 59	0.19
W Carriage Dr	W Carriage Dr	N Tratt St	0.21
W Main St	W Main St	E Main St	0.35
S Fremont St	W Whitewater St	W North St	0.21
N Fonda St	E Main St	E North St	0.10
E Commercial Ave	N Newcomb St	Industrial Dr	0.33
		Total	**1.39**

Map 4-1: Proposed Bikeway Network



4.3 Shared Use Paths

A number of shared use paths are proposed for Whitewater. These paths range from short segments of a few hundred feet to longer paths of up to two miles. All of these paths serve the same purpose: they increase bicycle and pedestrian access in areas where access does not currently exist, or where users do not feel safe or comfortable using existing streets.

4.3.1 West Walworth – West Main Connector

This 0.68 mile path will provide an off-street connection between West Walworth Avenue and West Main Street, west of the Effigy Mounds Park. This connection would create a pleasant north/south connection in the city as well as provide access to the park via a spur.

4.3.2 West Main to West Carriage Drive Connector

This path will connect users from the proposed bike lane on Indian Mound Parkway to the proposed shared lane markings on West Carriage Drive. The proposed 0.62 mile trail will allow users to avoid West Main Street when accessing the southwest part of the UW campus.

4.3.3 West Walworth Street Trail

This 0.36 mile proposed trail will allow users to connect off street from the proposed bike lanes on Indian Mound Parkway to the trail that circumnavigates Whitewater High School. Providing this connection will allow for students to ride their bikes to school in a more comfortable atmosphere.

4.3.4 South Ardmore Street Extension

This short segment (0.07 miles) will allow users to connect from the proposed Neighborhood Greenway on South Ardmore Drive to the back of St. Patrick's Catholic Church, where they can continue on to access West Main Street.

4.3.5 Whitewater High School to S. Franklin Street Connector

This 0.9 mile trail will create a connection between the existing trail at the high school, which terminates on South Elizabeth Street, and the proposed neighborhood greenway on South Franklin Street. The trail is proposed to follow the outlet for Cravath Lake – which will make for a pleasant ride. There is also a 0.16 mile spur proposed from this trail to connect with South Gault Street.

4.3.6 South Franklin Street/East Gate Park Connector

This proposed 2 mile trail will travel parallel the city boundary on the southeast side and connect the proposed neighborhood greenway on South Franklin to East Gate Park. It will utilize a segment of the existing trail located on the west side of Tripp Lake. From East Gate Park, cyclists will be able to access Moraine View Park to the north, where many recreational and youth sports events are held.

4.3.7 Spur connection from East Gate Park Trail to S. Rice Street

This 0.48 mile path will connect from the proposed trail mentioned above (East Gate Park) to South Rice Street, on the east side of Tripp Lake. This connection will help to complete a Tripp Lake off –street loop.

4.3.8 East Main Street Rail with Trail

This 0.86 mile trail will run alongside the active rail line from Ridge Street to the existing trail located at the end of East Main Street on the city's northeast side. This trail will facilitate traffic to Washington Elementary School and allow for convenient access to Moraine View Park, home to many sporting events.

4.3.9 East Clay Street Connector

This very short 0.05 mile connection will fill the gap between the existing trail segment that travels to the east of the Tripp Lake condominium development, and East Clay Street.

4.3.10 East Commercial Avenue/Corporate Drive Connector

This 0.39 mile path will provide access from the current terminus of the trail in Moraine View Park to East Commercial Avenue, utilizing existing City of Whitewater parkland. East Commercial Avenue is slated to receive shared lane markings as well.

4.3.11 Hospital Hill Extension

This 0.11 mile proposed trail will connect the proposed Neighborhood Greenway on North Cherry Street to the existing trail that parallels West Starin Street.

4.3.12 Shaw Court Extension

This trail extension, 0.45 miles, will formalize the footpath between Shaw Court and the UW Whitewater Miller Stadium, located on the northwest side of campus (Figure 4-9). The trail will continue to the n/s portion of Koshkonong Drive.

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Figure 4-9. The footpath/desire line pictured was created by students accessing campus from Shaw Court.

4.4 Bicycle Facility Selection

The table below is provided to assist the City of Whitewater in making decisions in the future as to which facility to use for streets with various posted speed limits and average daily traffic (ADT) levels. Guidance from the Minnesota Department of Transportation (MNDOT) was used as a basis for these recommendations. Other factors beyond speed and volume which affect facility selection include traffic mix of automobiles and heavy vehicles, the presence of on-street parking, intersection density, surrounding land use, and roadway sight distance. These factors are not included in the facility identification chart above, but should always be a consideration in the facility selection and design process.

Table 6-4: Bicycle Facility Selection Matrix

2 Lane, ADT	<500	500-1,000	1,000-2,000	2,000-5,000	5,000-10,000
4 Lane, ADT	**<2,000**	**2,000 to 4,000**	**4,000 to 10,000**	**10,000 to 20,000**	**20,000+***
25 MPH	RSO/NG	RSO/NG	SLM	5' BL	6' BL
30 MPH	RSO/NG	SLM	5' BL	5' BL	6' BL
35 MPH	SLM	SLM	5' BL	5' BL	6' BL
40 MPH	5' BL	5' BL	5' BL	6' BL	6' BL
45 MPH	5' BL	5' BL	6' BL	6' BL	6' BL

RSO/NG	Route Signs Only/Neighborhood Greenway
SLM	Shared Lane Marking
BL	Bike Lane, width increases to six feet at higher speeds and ADTs
Source	Based on guidance provided by Minnesota Department of Transportation

It should be noted that providing bicycle lanes on certain streets or designating certain streets as shared signed routes does not imply that bicycles should not be accommodated on all streets. The majority of bicycling takes place on undesignated city streets within neighborhoods. Bicyclists are legally allowed on all city streets and roads regardless of whether the roads are designated as a bikeway or not.

4.5 Safe Routes to School Recommendations

Information to be inserted prior to delivery of final plan

5 Recommended Pedestrian Policies

In order to fulfill the vision outlined for this plan and create a safe, connected pedestrian system, an update to City policies should be pursued to establish a Complete Streets policy. This policy would be in support of State of Wisconsin Complete Street legislation, and further advance the needs of pedestrians and bicyclists in Whitewater.

A Complete Street is a roadway that, in addition to general purpose vehicular travel lanes, includes sidewalks, bike lanes or shoulders, bus lanes, transit stops, crosswalks, median refuges, curb extensions, appropriate landscaping, and other features that add to the usability and livability of the street as determined by context. Complete streets principles aim to provide a balanced transportation system for all modes of travel providing transportation options that are safe, comfortable, and convenient for anyone to travel by foot, bicycle, transit, and automobile regardless of age or ability. Most importantly, complete streets are based on community desires and are the outcome of good planning and design.

Complete streets legislation has been passed in more than 25 states and 300 cities and counties throughout the country.

Infrastructure design guidance to support the following policy recommendations is provided in Appendix D: Bicycle and Pedestrian Design Guidelines.

5.1.1 Complete Streets Accommodation in Wisconsin

Wisconsin's Pedestrian and Bicycle Accommodations law addressing complete streets was codified in 2009 as State statute SS 84.01(35) and later into administrative rule as Transportation 75 (Trans-75). The rule aims to "ensure that bikeways and pedestrian ways are established in all new highway construction and reconstruction projects funded in whole or in part from state funds of federal funds."

While Trans-75 does consider the need for snow storage, disproportionate project costs and areas of low potential use, it places a strong emphasis on the need for roadways to serve all users. Trans-75 is applicable to all state and federally owned and operated roadways. State bicycle and pedestrian coordinators for each region are available to help act as a resources for the planning, design and construction process. Trans 75 is discussed further in Appendix B: Plan and Policy Review.

5.2 Proposed Complete Street Policies for the City of Whitewater

To achieve a roadway network that is safe, comfortable, and attractive for all users, the City of Whitewater should adopt a complete streets policy that is consistent with Trans- 75 and considers the following topics:

- Planning
- Design
- Construction
- Operations
- Exceptions

Action items listed below can form the basis for either a formally adopted policy, or an informal action plan.

Planning

1. Regularly discuss current roadway projects to provide seamless transitions between existing facilities.
2. Adopt a green transportation hierarchy as a common basis for transportation planning.
3. Review and provide comment on the Transportation Plans of Jefferson and Walworth Counties
4. Coordinate trail development with Jefferson and Walworth Counties to prioritize trail segments that provide connectivity to the regional system.

Design

1. When appropriate, consider roadway design that slows motor vehicles and/or limits access so as to provide greater safety for cyclists, pedestrians, and motorists (e.g. lane narrowing or the reduction of lanes; reduction of access etc.).
2. Adopt consistent design principles for cyclists and pedestrians as recommended in this Plan and other Statewide planning documents.
3. Evaluate existing and potential on-road bicycle use in all repaving and re-striping projects (i.e. striping of bicycle lanes, wide curb lanes, paving of roadway shoulders or widening of curb lanes) as well as new roadway construction and reconstruction projects.
4. Evaluate the effectiveness of narrowing pedestrian crossing distances at intersections where high motor vehicle counts and high pedestrian counts are expected.
5. Provide appropriate bicycle accommodation on and along all highway, arterial and collector streets.
6. Maintain the function of existing freight corridors, but evaluate design treatments to improve function of the corridor for cyclists and pedestrians.
7. Provide pedestrian accommodation in the form of sidewalks or shared-use paths adjacent to all arterial, highway and collector streets.
8. Develop a complete streets checklist to guide the development of individual transportation projects.[7]

Construction

1. Provide alternate routes for cyclists and pedestrians during construction, reconstruction, and repair of streets.

2. Develop standards to maintain pedestrian and cyclist access during construction activities.

Operations

1. Time traffic signals to provide adequate/comfortable pedestrian and cyclist crossing time.
2. In pedestrian areas, provide audible and countdown signal heads. Consider exclusive pedestrian timing or leading pedestrian intervals where appropriate.
3. Provide bicycle signal detection at all actuated signals along bikeways and major roads typically used as cycling routes.
4. Develop a coordinated maintenance schedule or program to address bikeway, sidewalk, and shared use path maintenance needs.
5. Establish performance metrics to track the implementation of this policy. These metrics should be consistent with or included in the Policy, Vision, Goals, Objectives and Benchmarks and could include:

[7] A sample checklist from the Metropolitan Transportation Commission in the San Francisco, CA area can be found here: http://www.mtc.ca.gov/planning/bicyclespedestrians/Routine_Accommodation_checklist_FINAL.pdf

a. Miles of bikeways, shared use paths, and sidewalks in relation to miles of roadway
b. Reduced collisions involving people who ride bikes or pedestrians
c. Improvements to air quality
d. Reduced transportation system maintenance costs
e. Increased numbers of people walking and riding bicycles (counted annually)
f. Increased percentage of traffic signals with countdown signalization and/or bicycle detection

Exceptions

Not every street can be ideal for every traveler. However, it is still important to provide basic, safe, and direct access for users regardless of the design strategy used.

Exceptions to the complete streets policy should be made by the mayor or other transportation authority where:

1. A suitable or more desirable alternative is available within a reasonable distance based on public and staff input or criteria defined in Trans-75.
2. The cost of accommodation would be excessively disproportionate to the need or probable use as defined by Trans-75.

6 Recommended Programs

The infrastructure recommendations in the Plan provide safer, more comfortable places for further growth in bicycling and trail use. While improving infrastructure is critical to increasing walking and bicycling rates, the importance of non-infrastructure strategies should not be underestimated. This chapter contains recommendations for education, encouragement, enforcement, and evaluation programs that should be pursued in conjunction with infrastructure investments.

Figure 6-1. Walking schoolbuses are an effective programmatic component of SRTS programs.

Safe Routes to School (SRTS) Program

A SRTS program in Whitewater should address all "Five E's": Engineering, Education, Encouragement, Enforcement, and Evaluation. Several potential partners are already working on or have expressed willingness to address one or more of the E's. The Working for Whitewater's Wellness (W3) organization, a community-based coalition of healthcare, school systems and municipalities within the community, is the right forum for determining the correct next step in light of the organization's mission and membership, especially since the school district is already a partner. The City will take leadership in the Engineering component of SRTS by pursuing funding for school-specific infrastructure recommendations that emerge from this Plan; the School District will actively support this effort. The City should further support the School District as they develop leadership around the remaining 4 E's together. The School District should assign high-level leadership to this effort and plan to support the program on a site-specific level as the program may begin locally with interested parents and teachers rather than the district level. W3 can provide additional support, particularly in the health and encouragement components. Potential first steps include promoting walking school buses and park-and-walk routes and implementing infrastructure recommendations at Abraham Lincoln Middle School and Washington Elementary School.

Whitewater Biking Map

This biking map, which was created as part of this Plan, should be oriented at residents (rather than planners), and should show both biking routes as well as destinations. The City will print and distribute copies of the map, but online distribution will be an important way to extend the reach of the product, including exploring the option of offering it for use on mobile devices. There would be great benefit in having the City partner with the University to print and distribute additional copies of the map as part of university orientation, as well as at other community events. Other potential partners for printing and distribution include the Whitewater Tourism Council, the Whitewater Area Chamber of

Figure 6-2. Sample biking map

Commerce, and Downtown Whitewater, Inc.

UW-Whitewater New Student Orientation

Incoming students (at least freshmen, but preferably all students annually) should receive the walking/biking map and a list of existing community resources, rides, and classes (e.g. Everyone's Biking Group, Lady Flyer's Biking Group, and volunteer opportunities). In addition, workshops and clinics could be offered, such as Bike Commuting 101, flat tire and basic maintenance clinics, or women's biking classes.

Figure 6-3. Volunteers can be trained to assiset with annual bicycle and pedestrian counts.

Crosswalk Enforcement Actions and Speeding Enforcement Campaigns

The goal of these campaigns is to reduce vehicle speeding, increase yielding to pedestrians by both drivers and cyclists, and reduce jaywalking. These campaigns should be organized to garner maximum media attention (e.g. a "Santa sting" in costume during December) and should focus on the beginning of the school year and the end of daylight savings. Main/Old Hwy 12 south of campus should be one priority corridor for these campaigns. For campaigns specific to school traffic safety, state Safe Routes to School grants may be able to fund police overtime for the purposes of enforcement activities.

Bicycle/Pedestrian Counts

The City should identify key locations for bicycling and walking, and organize consistent annual counts at these locations. The counts should follow the National Bicycle and Pedestrian Documentation Project guidelines, and could be manual counts (supported by W3 and local volunteers), automated counts, or a combination of the two. A volunteer training should be coordinated with a professional who is familiar with count procedure (Figure 6-3).

Pedestrian and Bicycle Advisory Committee (PBAC)

It is recommended that the City formalize the current Plan advisory committee as a standing quarterly or bimonthly committee that advises the City on walking and bicycling issues (Figure 6-4). If a City bicycle/pedestrian coordinator is identified, that person should be the staff liaison to the PBAC.

Figure 6-4. Ongoing comAmunity input and support is critical for Plan implementaiton.

Bicycle/Pedestrian Coordinator

Identify a single staff person at the City who is the community liaison for answering walking/bicycling questions, working with W3 and other community organizations, and coordinating Plan implementation.

Professional Development Courses for Engineers and Planners

The City should continue to allow staff to participate in Wisconsin Active Communities Action Institute trainings, and other webinars and on-site trainings (such as webinars offered by the Association of Pedestrian and Bicycle Professionals). These opportunities can support City staff by imparting technical expertise on pedestrian and bicycle infrastructure issues.

Figure 6-5. Tracking Plan implementation progress is useful for the community, staff and visitors alike.

Annual Report Card

The City should publish an annual report summarizing accomplishments (both infrastructure and programs), partnerships, and count results. This report should be co-authored by the PBAC and reviewed by W3 for presentation by the Bicycle/Pedestrian Coordinator to the City Council. The goal is to celebrate accomplishments and raise the overall profile of bicycling and walking efforts in the community (Figure 6-5).

Walk & Bicycle Friendly Community Designation

The City, assisted by W3, should apply for both Bicycle Friendly Community (BFC) and Walk-Friendly Community (WFC) designations, and celebrate the awards with media outreach and a public event (e.g. group ride or walk) when they are received. The application process is involved but very valuable. To reduce the impact on City staff, it is recommended that BFC and WFC applications be completed during different years, and supported by partners from W3.

Bike/Pedestrian Resources Website

The City website should include all official planning documents and reports related to bicycling and walking in Whitewater, including the adopted Plan, any updates about implementation of the Plan, media releases (e.g. about crosswalk enforcement actions), bike/ped counts, the annual report card, and PBAC agendas/minutes. In addition, the City website should include any bicycle and pedestrian events in the community as well as the network map. There should be coordination between the City website and the W3 website and events calendar to reduce duplication of effort.

Open Streets Event

Open Street Events (also called Summer Streets, Ciclovias, or Play Streets) are periodic street closures (usually on Sundays) that create a park-like experience on the street, encouraging walking, bicycling, dancing, hula hooping, roller skating, and more. The purpose of the event is to promote walking and biking to the general public by providing a car-free street event, an especially effective strategy in neighborhoods without close access to parks. The city should partner with W3 and interested downtown businesses to identify the appropriate roadway corridor and time of year for an open street event. W3 can take the lead on coordination with support from city staff.

7 Implementation

The Whitewater Bicycle and Pedestrian Plan is a 20-year plan that city residents and decision makers can use to guide Whitewater's progress towards becoming a great place to walk and bike. This chapter highlights short-term infrastructure recommendations and associated costs, discusses programmatic actions that should be implemented first and provides a suggested timeframe for various actions recommended in previous chapters. Table 7-1 provides a summary of key recommended Plan actions and priority projects, along with implementation timeframes, and notes about likely implementing agencies.

Table 7-1: Recommended Programs and Projects Implementation Summary

Task	Short (0 - 4 Years)	Medium (4- 10 Years)	Long (10+ Years)	Implementers
Encouragement Program Recommendations				
Safe Routes To School (SRTS) Program	Year 2 - 3			W3, Whitewater, School District
Whitewater Walking and Biking Map	Year 1			Whitewater
University New Student Orientation	Year 1			W3, UW-Wisconsin Staff
Crosswalk Enforcement Actions and Speeding Enforcement Campaigns	Year 1			Whitewater Police Department
Bicycle/Pedestrian Counts	Year 2 - 3			W3, Whitewater
Bicycle/Pedestrian Coordinator	Year 1			Whitewater
Pedestrian and Bicycle Advisory Committee (PBAC)	Year 1			Whitewater
Professional Development Courses for Engineers and Planners	Year 2 - 3			Whitewater
Annual Report Card	Year 1			Whitewater, W3, BPAC
Walk & Bicycle Friendly Community Designation		X	X	Whitewater, BPAC
Bike/Ped Resources Website	Year 2 - 3			Whitewater, W3, BPAC
Open Streets Event	Year 4			W3, Whitewater
Priority Project Recommendations				
W Main Street Traffic Safety Project	X			Whitewater, WisDOT
Safe Routes to School Projects	X			Various
South Franklin Street and South Janesville Street	X	X		Whitewater, Walworth County
East Gateway Intersection			X	Whitewater , WisDOT

7.1 Infrastructure Project Prioritization

The Whitewater Bicycle and Pedestrian plan provides a comprehensive set of trail and on-street infrastructure recommendations that Whitewater and other project partners can implement, allowing residents and visitors alike to walk and bike more safely and comfortably. The order in which projects in this plan are constructed will depend on many factors including budget and grant availability, community support and various city policies.

While all projects represent important steps for improving Whitewater's cycling environment, prioritizing projects will allow the City to program limited financial and staff resources in the most strategic fashion. Projects were scored based on the criteria shown in Table 7-2. Points were assigned and then scores for each criterion were weighted, based on input from the steering committee. The outcome of this exercise was then refined based on known existing opportunities (e.g., projects already programmed in the CIP plan) into a coherent, connected cycling network that will grow over time.

Table 7-2: Bicycle Facility Prioritization Criteria

Steering Committee Ranking*	Criterion	Description	Scoring Definitions
1	System Connectivity	To what degree does the project fill a missing gap in the bicycle system?	Projects will receive five points if they fill a gap of less than one-quarter mile and 3 points for gap measuring between one-quarter and one-half mile.
2	Safety and Comfort	How well can the project potentially improve bicycling on routes that will likely be used by children and the elderly,	Projects within one-quarter mile of a school receive 5 points; projects within one-half mile of a school receive 2 points.
3	Provides Access to Community Destinations	Score each project based on its proximity to commercial areas, parks and civic areas. Projects receive a higher score if they are located closer to community destinations.	Projects within one-half mile of a park, school or commercial area receive 5 points; projects within one mile receive 3 points.
4	Roadway Function	Does the street become more complete with a dedicated bicycle facility? Projects are scored based on roadway types. Projects on arterials score higher than projects on local roadways.	Projects will receive 5 points if they are located on state or county highway, 3 points if they are located on a local roadway and 1 point if they are a pathway.

The proposed bikeway system is comprised of about 80 projects which have been organized into three tiers representing the relative project priority and a suggested construction timeframe:

- Short Term (0 – 10 Years)
- Medium Term (10 – 20 Years)
- Long Term (More than 20 Years)

Projects are shown on Map 7-1 and described in Table 7-3: Recommended Bikeway Project Phasing. The City should regularly revisit the project list to schedule near term projects, as there are many factors that can and should affect project implementation, including:

- Any changes to existing grant programs, or creation of new grant or funding programs that affect the type or number of large-budget projects that can be implemented
- Any changes in City policy that could affect how local, state or federal funds can be spent
- Changes to zoning and land use that will affect where and how development occurs in Whitewater
- Changes to staff capacity to manage project implementation
- Community input (e.g., through the Bicycle Advisory Committee)
- Directives (policy or otherwise) from elected officials and other governing bodies
- Interest from partners (i.e., University of Wisconsin Whitewater) in implementing projects that are partially or entirely within their jurisdiction

Table 7-3: Recommended Bikeway Project Phasing

Name	From	To	Facility Type	Length (Mi.)	Priority
STH 89	Willis Ray Rd	STH 12	Bike Lane	0.22	Short
E Cty Line Rd	W Main St	Indian Mound Pkwy	Bike Lane	0.04	Short
Elkhorn Rd	STH 12	STH 12	Bike Lane	0.94	Short
E Main St	W Main St	N Newcomb St	Bike Lane	0.62	Short
E Milwaukee St	S Wisconsin St	E Main St	Bike Lane	0.04	Short
E Milwaukee St	S Esterly St	S Newcomb St	Bike Lane	0.09	Short
N Newcomb St	E Milwaukee St	E Executive Dr	Bike Lane	0.62	Short
W North St	S Franklin St	N Jefferson St	Bike Lane	0.46	Short
S Elizabeth St	S Elizabeth St	W Main St	Bike Lane	0.76	Short
S Wisconsin St	Willis Ray Rd	E Milwaukee St	Bike Lane	1.16	Short
W Main St	Indian Mound Pkwy	S Prince St	Bike Lane	0.71	Short
W Main St	S Prince St	S Franklin St	Bike Lane	0.48	Short
W Walworth St	Indian Mound Pkwy	S Prince St	Bike Lane	0.83	Short
W Whitewater St	S Franklin St	S Fourth St	Bike Lane	0.20	Short
S Dann St	E Clay St	E Main St	Neighborhood Greenway	0.18	Short
W Highland St	S Elizabeth St	S Summit St	Neighborhood Greenway	0.54	Short
N Franklin St	W Main St	W Starin St	Neighborhood Greenway	0.34	Short
S Ridge St	E Clay St	E Main St	Neighborhood Greenway	0.17	Short
S Pleasant St	W Walworth St	S Ardmore Dr	Neighborhood Greenway	0.45	Short
S Prince St	W South St	W Starin St	Neighborhood Greenway	0.94	Short
W South St	S Elizabeth St	Proposed MUP	Neighborhood Greenway	0.11	Short

Name	From	To	Facility Type	Length (Mi.)	Priority
W Laurel St	S Pleasant St	S Elizabeth St	Neighborhood Greenway	0.18	Short
Proposed MUP	W South St	S Prince St	Off Street Trail	0.12	Short
West Walworth	Indian Mound Pkwy	High school MUP	Off Street Trail	0.36	Short
Proposed MUP	Existing MUP	E Clay Street	Off Street Trail	0.04	Short
Hospital Hill Trail Extension	N Cherry St	Existing MUP	Off Street Trail	0.11	Short
N Fonda St	E Main St	E North St	Shared Lane Marking	0.10	Short
E Milwaukee St	N Newcomb St	E Bluff Rd	Bike Lane	0.41	Medium
Indian Mound Pkwy	W Walworth St	W Main St	Bike Lane	0.54	Medium
N Fremont St	W North St	E Schwager Dr	Bike Lane	0.80	Medium
N Prairie St	W Main St	E Schwager Dr	Bike Lane	0.74	Medium
S Franklin St	S Janesville St	W Main St	Bike Lane	0.96	Medium
W Walworth St	S Prince St	S Franklin St	Bike Lane	0.50	Medium
W Center St	S Franklin St	S Summit St	Neighborhood Greenway	0.25	Medium
E Clay St	S Wisconsin St	Elkhorn Rd	Neighborhood Greenway	0.83	Medium
N Cherry St	E Main St	N Cherry St	Neighborhood Greenway	0.34	Medium
N Oak St	E North St	E Chicago Ave	Neighborhood Greenway	0.41	Medium
W Peck St	S Prairie St	S Janesville St	Neighborhood Greenway	0.04	Medium
S Moraine View Pkwy	E Jakes Way	E Bluff Rd	Neighborhood Greenway	0.24	Medium
S Prairie St	W Peck St	W Main St	Neighborhood Greenway	0.28	Medium
W South St	S Janesville St	S Prince St	Neighborhood Greenway	0.18	Medium
W Summit St	W Highland St	W Center St	Neighborhood Greenway	0.04	Medium
W Ann St	S Franklin St	W Whitewater St	Neighborhood Greenway	0.45	Medium
W Harper St	S Janesville St	W Walworth St	Neighborhood Greenway	0.46	Medium
W Wildwood Rd	Indian Mound Pkwy	S Pleasant St	Neighborhood Greenway	0.39	Medium
Walton Dr	CTH N	Shaw Ct	Neighborhood Greenway	0.43	Medium
Proposed MUP	Industrial Dr	Corporate Dr	Off Street Trail	0.39	Medium
STH 89	Willis Ray Rd	Willis Ray Rd	Regional Connection	0.44	Medium
E Commercial Ave	N Newcomb St	Industrial Dr	Shared Lane Marking	0.33	Medium
E North St	N Jefferson St	N Newcomb St	Shared Lane Marking	0.54	Medium
S Fremont St	W Whitewater St	W North St	Shared Lane Marking	0.21	Medium

Name	From	To	Facility Type	Length (Mi.)	Priority
W Carriage Dr	W Carriage Dr	N Tratt St	Shared Lane Marking	0.21	Medium
W Main St	W Main St	E Main St	Shared Lane Marking	0.35	Medium
Whitewater	Fourth	Main	Shared Lane Marking	0.27	Medium
CTH N	W Main St	Bloomingfield Dr	Bike Lane	1.00	Long
CTH N	Bloomingfield Dr	E Schwager Dr	Bike Lane	2.39	Long
E Bluff Rd	Elkhorn Rd	Howard Rd	Bike Lane	0.66	Long
E Main St	N Newcomb St	E Bluff Rd	Bike Lane	0.57	Long
Indian Mound Pkwy	Indian Mound Pkwy	W Walworth St	Bike Lane	0.63	Long
W Walworth St	STH 12	Indian Mound Pkwy	Bike Lane	0.37	Long
S Franklin St	Willis Ray Rd	S Janesville St	Neighborhood Greenway	1.09	Long
Proposed MUP	N Tratt Rd	Existing MUP	Off Street Trail	0.74	Long
Proposed MUP spur	Existing MUP	S Gault Street	Off Street Trail	0.16	Long
Proposed MUP	West Walworth	West Main	Off Street Trail	0.68	Long
Proposed MUP	West Main St	West Carriage Dr	Off Street Trail	0.62	Long
Proposed MUP	South Ardmore Drive	St Patrick's Church Property	Off Street Trail	0.07	Long
Proposed MUP	S Elizabeth St	S Franklin St	Off Street Trail	0.90	Long
Proposed MUP	South Franklin	Existing MUP	Off Street Trail	0.80	Long
Proposed MUP	Existing MUP	S Morraine View Pkwy	Off Street Trail	1.19	Long
Proposed MUP	Proposed MUP	S Rice St	Off Street Trail	0.48	Long
Proposed Trail with Rail	S RIdge St	East Main end	Off Street Trail	0.86	Long
Proposed MUP	Shaw Court	Koshkonong Dr	Off Street Trail	0.45	Long
Proposed MUP	STH 12	Indian Mound Pkwy	Off Street Trail	0.36	Long
Proposed MUP	Proposed MUP with underpass	Willis Ray Rd	Off Street Trail	0.26	Long
Proposed MUP	Existing MUP	S Wisconsin St	Off Street Trail	1.36	Long
Bluff Rd	Howard Rd	Regional destination	Regional Connection	0.59	Long
Clover Valley Rd	Willis Ray Rd	Regional destination	Regional Connection	0.38	Long
CTH N	CTH U	Regional destination	Regional Connection	0.86	Long
S Franklin St	W Walworth St	Regional destination	Regional Connection	0.77	Long
Freemont Rd	CTH U	Regional destination	Regional Connection	0.56	Long
CTH P	STH 12	Regional destination	Regional Connection	0.62	Long

Map 7-1: Project Priority Map

City of Whitewater
Bicycle & Pedestrian Plan
Draft Project Priority

Streets, Bikeways & Paths

- US / State Highway
- County Highway
- Local Street / Road

Proposed Bikeway Project Phasing

- Short (0 - 10 Years)
- Medium (10 - 20 Years)
- Long (Longer Term)

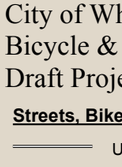
Land Use

- Park / Open Space
- City of Whitewater
- University of Wisconsin - Whitewater
- Water

Bikeway & Path Descriptions

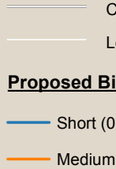
Neighborhood Greenways

Neighborhood Greenways are residental streets with low traffic volumes and speeds where bicyclists and pedestrians are given priority. They reduce cut-through traffic, reduce traffic speeds, and guide bicyclists and pedestrians to destinations.



Bicycle Lanes

Bicycle lanes are a marked lane dedicated to bicycle use. Typically five to six feet wide, bike lanes often make cyclists and motorists more comfortable by providing space for each type of user.



Shared Lane Markings

Shared Lane Markings (SLM's or "sharrows") are on streets with posted speeds of 25 mph or less, and indicate that the lane is to be shared by both cyclists and motorists. They also indicate to both cyclists and motorists where bicyclists should position themselves.

Miles
0 0.225 0.45 0.9

Map prepared by the Wisconsin Bike Fed. Map data provided by the City of Whitewater and the U.S. Census Bureau.
January 18, 2013

7.2 Priority Project Sheets

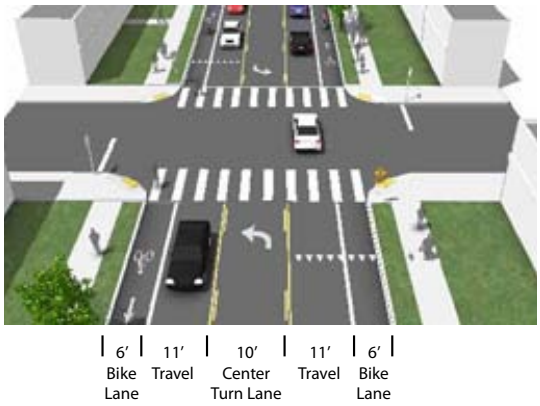
The following pages provide project description sheets with specific recommendations and maps for three high priority projects, which represent the first stage of Plan implementation. Specific recommendations were based on field visits, high-resolution aerial photos, and discussions with local and regional planning staff and system users. Each map depicts the recommended bikeway or trail under focus, as well as selected nearby connections. Please refer to the larger system maps for each project's context within the overall surrounding bikeway and trail networks.

Appendix E: West Main Street Safety Project provides a more detailed description and needs analysis for improvements on West Main Street, including detailed planning level cost estimates.

Roadway Reconfiguration Cross Section Dimensions:

Before

After



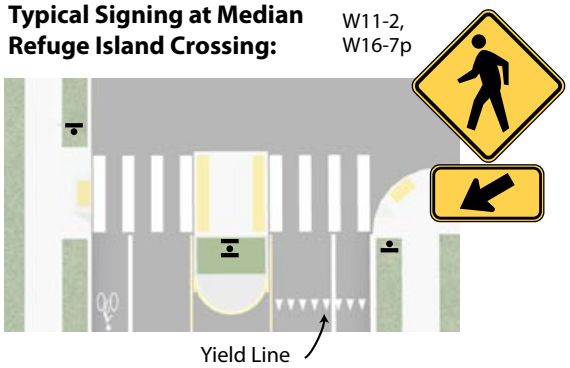
Description:

The West Main Street Traffic Safety Project proposes a series of related roadway improvements to reduce excessive speeding, promote smooth traffic flow, and increase safety and mobility for non-motorized transportation. This project proposes the following:

- Roadway reconfiguration
  Going from 4 lanes to 3 lanes to provide a two-way center turn lane provides dedicated space for turning vehicles, encourages consistent through travel speed and removes the "double threat" at pedestrian crossings.
- New bicycle lanes
- One new mid block pedestrian crossing
- Two new median refuge islands
  Median Refuge islands enhance new and existing unsignalized marked pedestrian crossings
- High Visibility Striping
  Black backing striping will be used to increase the contrast and visibility of roadway markings.

Planning Level Cost Opinion: **$242,000**

Typical Signing at Median Refuge Island Crossing:



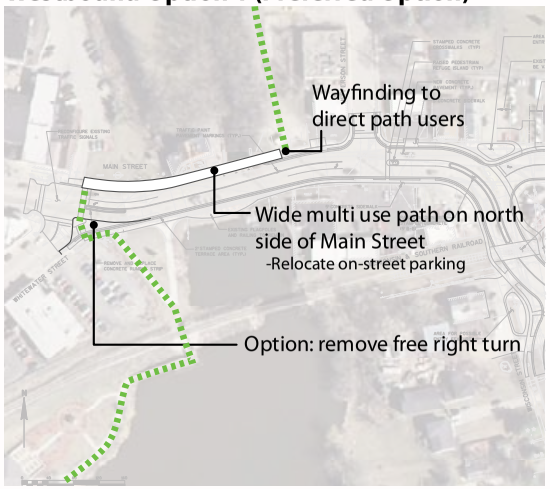
Pedestrian Crossing Enhancement Locations:

Project Sheet: West Main Street Traffic Safety Project

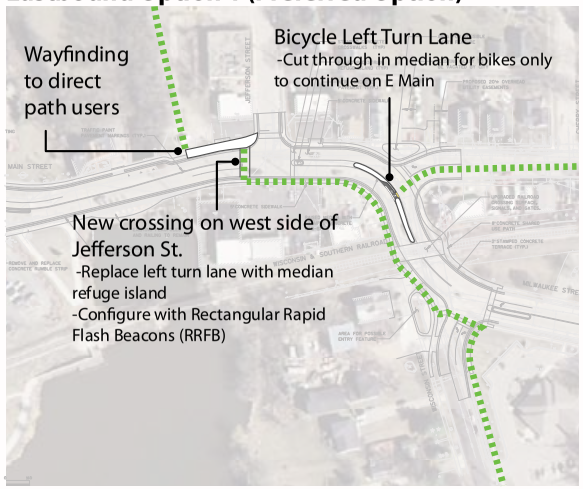
City of Whitewater
Whitewater Bicycle and Pedestrian Plan
Source: Bing Maps
Author: NF
Date: February 2013

0 750 1,500 3,000 Feet

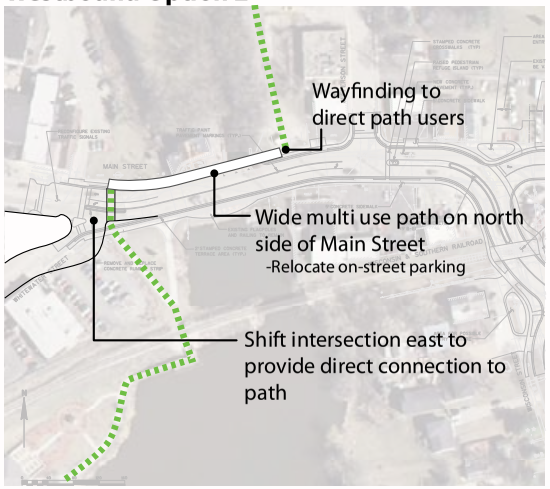
Westbound Option 1 (Preferred Option)



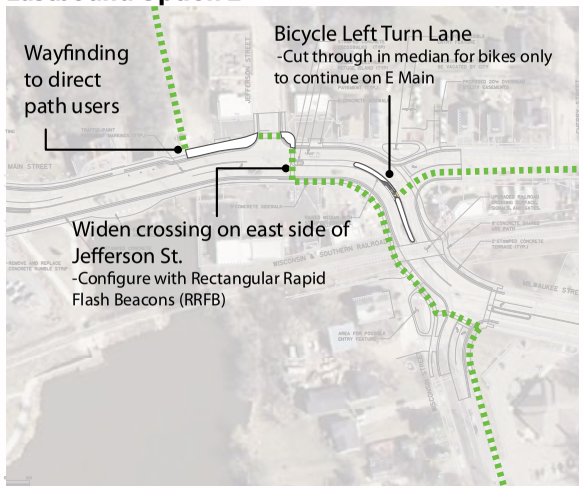
Eastbound Option 1 (Preferred Option)



Westbound Option 2



Eastbound Option 2



Description:

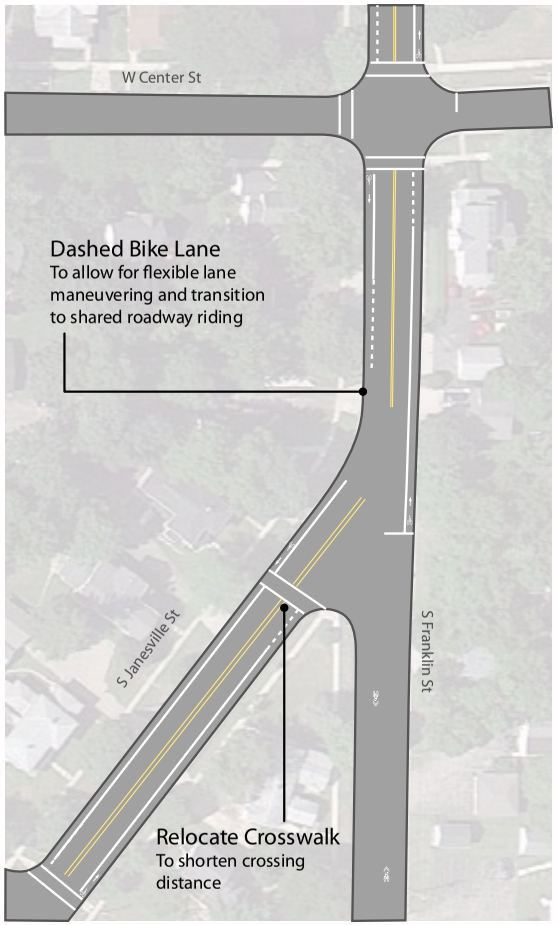
The East Gateway intersection, defined as the intersection of Milwaukee Street, East Main Street and Main Street, is a complicated intersection with a rail road crossing Milwaukee Street just to the south of the intersection and a bridge just to the west on Main Street. The City of Whitewater has been working with an engineering consultant to redesign the intersection with the goal of having an intersection that functions better for traffic, as well as pedestrian and bicycle traffic. In the summer of 2012, the City of Whitewater installed a new shared use trail along the east side of Whitewater Creek. The new trail terminates at the sidewalk on the north side of Main Street just west of North Jefferson Street.

The Bicycle and Pedestrian Plan Steering Committee requested further study to produce options for helping bicyclists safely navigate from this trail to the existing trails on Cravath Lake and south on Tripp Lake. The graphics to the left provide two options for westbound bicycle and pedestrian traffic heading to or from the Cravath Lake trails and two options for traffic heading to or from the Tripp Lake trails. Further engineering study will be needed to determine which option is the best option for the City of Whitewater.

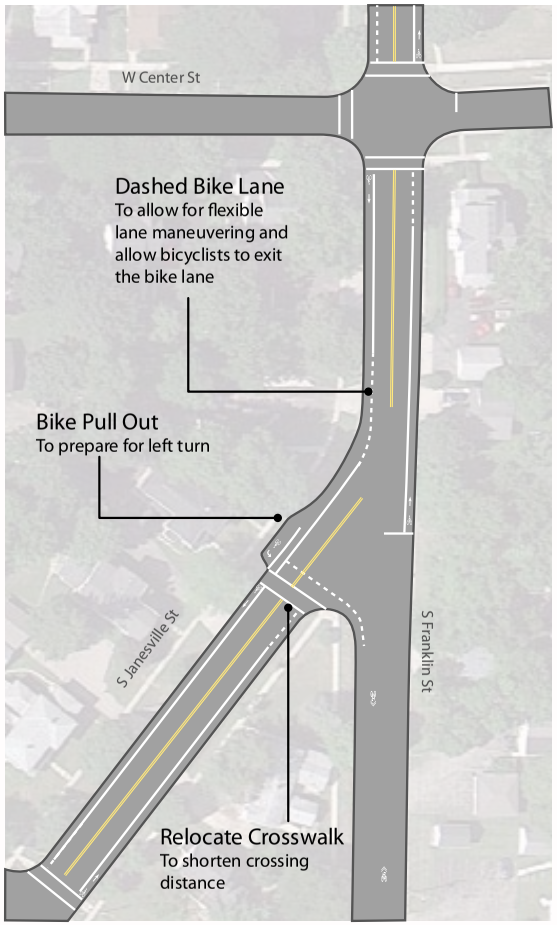
Project Sheet: East Gateway

City of Whitewater
Whitewater Bicycle and Pedestrian Plan
Source: Downtown East Gateway: Street Reconstruction Concept. City of Whitewater. 2008.
Author: NF
Date: December 2012

Option 1 - Drop Bike Lane



Option 2 - Two Stage Turn



Description:

South Janesville Street intersects with South Franklin Street at an angle from the southwest. Most vehicles traveling south on South Franklin, take the easy right and continue south on South Janesville, most bicyclists however, will wish to cross South Janesville here, and continue south on South Franklin. This plan presents two options to make that movement more comfortable for the bicyclist. In either case, the bicyclist will need to look back at traffic coming from South Franklin, wait for a gap in traffic from behind, then continue south on South Franklin.

Project Sheet: Intersection of South Franklin Street and South Janesville Street

City of Whitewater
Whitewater Bicycle and Pedestrian Plan
Author: NF
Date: December 2012

7.3 Cost Estimates

A project cost for each type of on-street bicycle and trail facility is shown in Table 7-4: Cost Assumptions . These cost opinions were developed based on initial planning-level examples of similarly constructed projects and industry averages. These costs are fully burdened estimates provided in 2012 dollars rounded to the nearest thousand and do not include costs for right-of-way acquisition, wayfinding signs or other site-specific costs.

Table 7-4: Cost Assumptions

Facility Type	Cost Per Mile	Annualized On-Going Costs*	Notes
Shared Lane Markings	$20,000	$7,000	Assumes SLM marking every 200' each direction, regulatory signage every 400' each direction. May reduce on-going costs by using thermoplastic markings.
Neighborhood Greenways	$100,000	$7,000	Assumes an "Average" treatment, including speed humps, median refuge islands, curb extensions and sidewalk curb ramps as needed along the corridor.
Bike Lane	$36,000	$29,000	Assumes striping removal and restriping. Bike lane markings every 800' in both directions. May reduce on-going costs by using thermoplastic markings.
Shared-Use Path	$1,250,000	Varies***	Assumes 12' path. Estimates do not include ROW acquisition costs; costs for potentially required bridges or retaining walls; or costs for amenities including lighting, benches, bicycle parking, interpretive kiosks, etc.

*Costs include engineering (25%), contingency (15%), and design (20%) allowances.
**Annualized costs assume repainting stripes and pavement markings twice per year.
*** Asphalt paths typically require repaving every 7 – 15 years and concrete pathways every 25

Maintenance Costs

On-street bikeways and trails require regular maintenance and repair. On-street bikeways are typically maintained as part of standard roadway maintenance programs, and extra emphasis should be placed on keeping bike lanes and roadway shoulders clear of debris and keeping vegetation overgrowth from blocking visibility or creeping into the roadway.

7.4 Funding Sources

Acquiring funding for projects and programs is considerably more likely if it can be leveraged with a variety of local, state, federal and public and private sources. This section identifies potential matching and major funding sources available for bicycle and trail projects and programs. A detailed description of these funding programs is available in Appendix F: Funding Sources.

Moving Ahead for Progress in the Twenty-First Century (MAP-21)

The largest source of federal funding for bicycle and pedestrian projects is the United States Department of Transportation's (US DOT) Federal-Aid Highway Program, which Congress has reauthorized roughly every six years since the passage of the Federal-Aid Road Act of 1916. The latest act, Moving Ahead for Progress in the Twenty-First Century (MAP-21) was enacted in July 2012 as Public Law 112-141.

MAP-21 authorizes funding for federal surface transportation programs including highways and transit until September 2014. There are a number of programs identified within MAP-21 that are applicable to bicycle and pedestrian projects. These programs include:

- Transportation Alternatives (TAP)
    - Transportation Alternatives
    - Recreational Trails
    - Safe Routes to School
    - Planning, designing, or constructing roadways within the right-of-way of former Interstate routes or divided highways
- Surface Transportation Program (STP)
- Highway Safety Improvement Program (HSIP)
- Congestion Mitigation/Air Quality Program (CMAQ)
- New Freedom Initiative
- Pilot Transit-Oriented Development Planning

Other Federal Grant Programs

- Partnership for Sustainable Communities
- Community Development Block Grants
- Community Transformation Grants
- Land and Water Conservation Fund
- Rivers, Trails, and Conservation Assistance Program

The City of Whitewater should track federal communications and be prepared to respond proactively to announcements of grant availability.

State Funding Sources

The State of Wisconsin has historically funded bicycle and pedestrian projects above and beyond Federal Transportation Enhancement (TE) dollars through two State grant programs: the Bicycle and Pedestrian Funding Program (BPFP) and the Surface Transportation Program – Discretionary (STP-D). Funding levels and cycles for both programs has been somewhat sporadic since the early 1990s. In 2002 the Surface Transportation Program – Discretionary (STP-D) was dismantled, but the Bicycle and Pedestrian Funding Program (BPFP) still exists.

WisDOT Bicycle and Pedestrian Funding Program (BPFP)

The most recent funding cycle of the BPFP in 2010 provided more than half a million dollars for bicycle and pedestrian planning and design throughout the state. Funding through the program is competitive – a

committee ranks projects and makes funding recommendations to the Wisconsin Department of Transportation Secretary.

All BPFP funds have been awarded through FY 2014. Information on the next BPFP funding cycle will be posted on the WisDOT Bicycle and Pedestrian Facilities Program webpage in 2013: http://www.dot.wisconsin.gov/localgov/aid/bike-ped-facilities.htm.

State Recreation Grant Programs

The Wisconsin Department of Natural Resources administers several grant programs that may support bicycle and pedestrian facilities that provide a recreational benefit to the state. Grants are due on May 1st of each year. With the exception of the Recreational Trail Aids program, each program below is part of the Knowles-Nelson Stewardship Program, a fund created by the Wisconsin Legislature in 1989 to "preserve valuable natural areas and wildlife habitat, protect water quality and fisheries, and expand opportunities for outdoor recreation."

- Acquisition & Development of Local Parks
- Friends of State Lands
- Habitat Area
- Recreational Trail Aids (RTA)
- State Trails
- Urban Green Space
- Urban Rivers

Private Foundations

Private foundations are an increasingly important source of funds for bicycle and pedestrian planning and implementation. For example, planners in Ozaukee County successfully secured a $10,000 grant from the Bikes Belong Coalition and a $25,000 grant from the Wisconsin Energy Corporation Foundation to partially fund the Ozaukee Interurban Trail.

To read a case study of the Ozaukee Interurban Trail, visit:
http://www.bicyclinginfo.org/library/details.cfm?id=4154

For more information on private foundations, including an extensive list of national foundations visit:
http://www.foundationcenter.org/

Table 7-5: Summary of Potential Funding Sources

			Planning Design and/or Construction			
		Funding Program	On-Street Pedestrian Facilities	On-Street Bicycle Facilities	Off-Street Shared-Use Paths	Non-Infrastructure Programs
Federal Sources	MAP-21	Transportation Alternatives (TAP)	✓	✓	✓	✓
		Recreational Trails Program (RTP)			✓	
		Safe Routes to School (SRTS)	✓	✓	✓	✓
		Surface Transportation Program (STP)	✓	✓	✓	
		Highway Safety Improvement Program (HSIP)	✓	✓	✓	✓
		Congestion Mitigation/Air Quality (CMAQ)	✓	✓	✓	✓
		New Freedom Initiative	✓		✓	✓
		Pilot Transit-Oriented Development (TOD)				
		Partnership for Sustainable Communities	✓	✓	✓	
		Community Development Block Grants (CDBG)	✓			✓
		Community Transformation Grants (CTG)	✓	✓	✓	✓
		Land and Water Conservation Fund (LWCF)			✓	✓
		Rivers, Trails, and Conservation Assistance (RTCA)			✓	
State Sources		WisDOT Bicycle and Pedestrian Funding Program (BPFP)	✓	✓	✓	
	DNR	Acquisition & Development of Local Parks			✓	
		Friends of State Lands			✓	
		Habitat Area			✓	
		Recreational Trails Aids (RTA)			✓	
		State Trails			✓	
		Urban Green Space			✓	
		Urban Rivers			✓	
		Private Foundations	✓	✓	✓	✓

Appendix A: Best Practices Review of Vision, Goals and Objectives

The Vision, Goals, and Objectives of the Whitewater Bicycle and Pedestrian Plan are the principles that will guide the development and implementation of the plan for years to come. Goals and objectives direct the way the public improvements are made, where resources are allocated, how programs are operated, and how City priorities are determined.

This section provides a 'best practices' review of goals formulated by the state of Wisconsin and other cities comparable to Whitewater. The intent is to assist Whitewater and the Steering Committee in understanding common elements of Visions, Goals and Objectives and to facilitate initial discussions around these topics.

Please note that different cities and plans use terms such as "goal" and "objective" in different ways. For example, many goals stated in some cities' plans are highly quantitative and fit this paper's description of an "objective". This discrepancy should not be allowed to distract from the intent to demonstrate which subjects are being prioritized and how they are being framed.

7.4.1 Wisconsin Vision, Goals, and Objectives

A collection of goals and objectives from the bicycle and pedestrian plans of Wisconsin DOT, surrounding counties and the previous Whitewater Comprehensive Bikeway plan are listed in the following table. In the Wisconsin bicycle and pedestrian planning documents, objectives are designed to support the overall plan goals, though they are not structured around individual goal statements. Instead, they are structured around the four-E's of transportation safety: engineering (and planning), education, enforcement and encouragement.

Plan, Vision	Goals, Objectives
Wisconsin State Bicycle Transportation Plan 2020 (1998) "To establish bicycling as a viable, convenient and safe transportation choice throughout Wisconsin."	**Goals** • Increase levels of bicycling throughout Wisconsin, doubling the number of trips made by bicycles by the year 2010. • Reduce crashes involving bicyclists and motor vehicles by at least 10% by the year 2020. **Objectives** • Objective 1 - Plan and design new and improved transportation facilities to accommodate bicyclists and encourage their use. • Objective 2 - Expand and improve a statewide network of safe and convenient routes for bicycle transportation and touring, including safe and convenient access to and through the state's urban areas. • Objective 3 - Provide consistent safety messages and training to all roadway users by expanding the range of education activities through driver licensing and training, bicycle safety

	education, increasing understanding of traffic laws, and provision of public service information. • Objective 4 - Improve the enforcement of laws to prevent dangerous and illegal behavior by motorists and bicyclists. • Objective 5 - Encourage more trips by bicycles by promoting the acceptance and usefulness of this transportation mode.
Wisconsin Pedestrian Policy Plan 2020 (2002) "To establish pedestrian travel as a viable, convenient, and safe transportation choice throughout Wisconsin."	**Goals** • Increase the number and improve the quality of walking trips in Wisconsin. • Reduce the number of pedestrian crashes and fatalities. • Increase the availability of pedestrian planning and design guidance and other general information for state, local officials and citizens. **Objectives** • Objective 1.0: State Trunk Highways Working in partnership with local governments and other interested stakeholders, WisDOT will increase accommodations for pedestrian travel to the extent practicable along and across State Trunk Highways (STHs) • Objective 2.0: Engineering and Planning Working in partnership with local governments and other interested stakeholders, WisDOT will plan, design and promote new transportation facilities, where appropriate, and retrofit existing facilities, where appropriate, to accommodate and encourage pedestrian use. • Objective 3.0: Education Working in partnership with local governments and other interested stakeholders, WisDOT will expand the range of education activities, such as driver licensing and training, technical workshops on planning and design of facilities, pedestrian safety education and provision of public service training to all roadway users. • Objective 4.0: Enforcement Working in partnership with local governments and other interested stakeholders, WisDOT will work to improve the enforcement of laws to prevent dangerous and illegal behavior by motorists, pedestrians, and bicyclists. • Objective 5.0: Encouragement Working in partnership with local governments an d other stakeholders, WisDOT will encourage more trips that pedestrian by promoting the acceptance and usefulness of walking and through the promotion of pedestrian safety efforts.

2010 Jefferson County Bicycle Plan (2010) a. **CONNECTIONS AND LINKAGES:** We will have a well-connected bicycle transportation system that links a variety of communities and activity generators (e.g. parks, schools, employment centers, restaurants, downtowns, shopping areas) together into a cohesive and safe transportation system. b. **TRANSPORTATION ALTERNATIVES:** We will have a multi-modal transportation system (bicycling, walking and other forms of transportation) as part of a desirable and livable Jefferson County region for our residents and visitors. c. **HEALTHY AND ACTIVE LIFESTYLES:** We will have bicycling facilities that support healthy and active lifestyles. d. **SMALL TOWN LIVING:** We will have bicycle facilities that support and enrich our small town lifestyle. e. **ECONOMIC DEVELOPMENT:** We will have bicycle facilities that will help grow our existing businesses, contribute to our tourism industry and provide a competitive edge for attracting top talent and companies. f. **ENVIRONMENT:** We will have well connected and safe bicycle facilities enabling residents to replace automobile trips with bicycle trips while experiencing the natural resources and scenic beauty of Jefferson County.	**Goals/Objectives** • Develop a well-connected trail system that links a variety of facilities together into a cohesive transportation system. • Increase the utilization, availability, and demand for funding to improve bicycle and pedestrian facilities. • Design roads to be compatible with surrounding uses and be pedestrian, bicycle and transit friendly. • Reduce the number and severity of vehicular crashes with particular emphasis on reducing vehicle-bicycle and vehicle-pedestrian conflicts and crashes. • Supplement facilities improvements with adequate education, encouragement, and enforcement programs. • Enhance intergovernmental cooperation and coordination for improving multimodal transportation. • Develop shared-use transportation standards to include in development review processes used by local communities when reviewing new developments. • Enhance the livability of Jefferson County by improving transportation variety throughout the region. • Increase the numbers of commuters who live within urbanized areas that bicycle to work. • Increase the number of commuters who walk to work. • Continue to monitor progress toward implementing this plan and increasing mode share for non-motorized transportation.
City of Whitewater Comprehensive Bikeway Plan (2000)	**Goals** • "To develop a safe, convenient and effective bikeway system that promotes bicycle travel as a viable transportation model connects work, shopping, parks and schools with residential areas; and enhances recreational opportunities." **Objectives** • To identify bicycle routes between important destination within the City (e.g., University campus, parks, downtown, schools, business park, West Main Street commercial area). • To provide design standards for recommended bike

	facilities. • To provide detailed recommendations for an off-road or multi-use trail system along Whitewater Creek and looping around the City to increase recreational opportunities for both residents and visitors. • To mitigate parking space demand and traffic problems in and around the University by promoting and implementing bikeway facilities which connect the campus internally and to nearby residential and commercial areas. • To bring together bikeway recommendations from previous plans and studies into one planning document • To survey available funding sources for future implementation of bikeway improvements including, but not limited to, new off-road routes, signage and marking, and route promotion.

7.4.2 Best Practices Review of Vision, Goals and Objectives

A collection of goals and objectives from the bicycle and pedestrian plans of comparable cities around the country is listed in the following table.

City	Goals, Objectives
Philomath, OR	• Link the bicycle and pedestrian routes to key land uses and activity centers • Link the bicycle and pedestrian routes to the recreational bicycle and pedestrian network • Provide well-designed, visible, safe and convenient route access points and street crossings • Increase the route's potential to function as a meaningful transportation alternative by providing shorter trip lengths between key destinations.
La Grande, OR	• Provide a comfortable environment for bicyclists and pedestrians by enhancing safety • Develop plans that reflect community interests • Provide a plan with implementable solutions • Alleviate congestion and improve air quality by reducing vehicle-miles of travel on State Highways and local streets • Develop plans that reflect community interests
Ada County, ID	• Encourage cycling • Promote bicycle safety and increased bicycling through education and encouragement activities

	• Expand the network and support facilities • Implement the Roadways to Bikeways Recommended Bikeway Network to encourage increased use of the bicycle for transportation • Provide for bicycle support facilities
Davis, CA	• Planning for bicycles in new developments • Provide bike lanes along all arterial and collector streets. Provide separated bike paths adjacent to arterial and collector streets only where justified, with full consideration of potential safety problems this type of facility can create. • Ensure that bicycle routing is an integral part of street design so that lanes and pathways form an integrated network • Consider bicycle-operating characteristics in the design of bikeways, intersections and traffic control systems • Provide adequate bike parking. • Design bike routes as integral parts of new greenways, open space areas and "greenstreets" to complete and expand the existing bikeway system • Plan bikeways to provide attractive, shaded linkages between destinations
Madison, WI	• Consider the needs of all bicyclists when planning and designing bicycle facilities • Accommodate bicyclists on roadways by providing appropriate on-street bicycle facilities • Create and improve continuous bicycle through routes on local connector streets that provide alternatives to arterial roadways. • Eliminate bicycling barriers and hazards • Utilize opportunities for providing multi-use paths when planning parks and other linear corridors
Ft. Collins, CO	• Continue and improve maintenance of Priority Commuter Routes. • Improve signal detection loops. • Examine innovative bicycle traffic solutions such as bike boxes and bike boulevards. • Bridge the gap of understanding between bicyclists and local enforcement agencies by providing current and consistent information. • Coordinate training sessions to ensure knowledge on current local, regional, and national bicycle policies and ordinances. • Establish enforcement techniques for handling special events and protests. • Explore the creation of a Share the Road Safety Class. • Establish “sting” operations in coordination with local enforcement agencies to address bicycle theft and traffic-law

evasion by bicyclists.

- Consider the implementation of Cyclovias (car-free events).

Appendix B: Plan and Policy Review

Summary of Existing Plans and Policies

This section describes background plans and policy documents relevant to the Whitewater Bicycle and Pedestrian Plan. The text summarizes previous and on-going planning efforts affecting biking and walking in Whitewater. The summary identifies issues that may impact the findings and ultimate recommendations of this project. The review focuses on plans and studies prepared by the Wisconsin Department of Transportation (WisDOT), as well as relevant information from the City of Whitewater and Jefferson County.

The following plans were reviewed for this analysis.

Statewide Planning Documents

- Administrative Code Trans 75: BIKEWAYS AND SIDEWALKS IN HIGHWAY PROJECTS (2009)
- Wisconsin State Bicycle Transportation Plan 2020 (1998)
- Wisconsin Pedestrian Policy Plan 2020 (2002)
- Wisconsin Department of Transportation Guide for Path/Street Crossings (2011)
- Developing a Model for Reducing Bicycle/Motor Vehicle Crashes (2006)
- Wisconsin Bicycle Planning Guidance (2003)
- Wisconsin Bicycle Facility Design Handbook (2004)
- Wisconsin Guide to Pedestrian Best Practices (2010)

County Planning Documents

- 2010 Jefferson County Bicycle Plan (2010)

City of Whitewater Planning Documents

- City of Whitewater Comprehensive Bikeway Plan (2000)
- City of Whitewater 2009 Comprehensive Plan Community Survey (2009)

Statewide Documents

Administrative Code Trans 75: BIKEWAYS AND SIDEWALKS IN HIGHWAY PROJECTS (2009)

Wisconsin's Pedestrian and Bicycle Accommodations law addressing complete streets was codified in 2009 and codified as State statute SS 84.01(35) and later into administrative rule as Transportation 75 (Trans-75). The rule aims to "ensure that bikeways and pedestrian ways are established in all new highway construction and reconstruction projects funded in whole or in part from state funds of federal funds." Exceptions to the law include the following circumstances:

- Cyclists and pedestrians are prohibited by law from using the highway.
- The cost of establishing a bikeway or pedestrian way is disproportionate to the probable use of the bikeway or pedestrian way (specifically defined as 20 percent of the total project cost), however, the highway project will spend up to 20 percent of the project costs on establishing bicycle and pedestrian facilities.
- A facility would have excessive negative impacts in a constrained environment, defined as:
    - Reduction of a terrace width to less than 3 feet for more than 50 percent of the total project length.
    - Eliminating structures, improvements or landscaping would dramatically reduce the aesthetic or functionality of the area.
    - A loss or degradation of natural resources, historical or archaeological sites.
- There is an absence of need as indicated by sparse population, traffic volumes or other factors, defined as:
    - **Sidewalk** – May be omitted in an outlying district defined as "territory near or contiguous to a community where within any 1,000 feet along the highway the buildings average more than 200 feet apart." Sidewalks may also be omitted in an outlying district or rural area unless land use plans indicate significant development within 10 years.
    - **Bikeway** – Bikeways may be omitted in an outlying district or rural area unless land use plans indicate significant development within 10 years A bikeway may be omitted in an outlying district or rural area that will have less than 750 ADT in the design year and:
        - 2-way bicycle traffic volume is or is expected to be less than 25 per day during peak travel days.
        - The highway is not identified in any government bike transportation plan.
        - The highway does not provide a connection of 1 mile or less between any existing and planned routes.
        - The highway does not provide a connection of 1 mile or less between an existing bikeway and the nearest local road
- Community refuses to accept maintenance responsibility (with the exception of the National Highway System)

While Trans-75 does consider the need for snow storage, disproportionate project costs and areas of low potential use it places a strong emphasis on the need for roadways to serve all users. Trans-75 is applicable to all state and federally owned and operated roadways. State bicycle and pedestrian coordinators for each region are available to help act as a resources for the planning, design and construction process.

Wisconsin State Bicycle Transportation Plan 2020 (1998)

This plan provides guidance on the state-owned and state-supported transportation systems in the state of Wisconsin. Policies are divided into *urban* and *intercity* (rural) geographies. Policies from both categories will apply to the City of Whitewater.

Urban:

- "Bicycle provisions on urban arterial streets (i.e., wide curb lanes, bicycle lanes or paved shoulders) should be made in accordance with Metropolitan Planning Organization (MPO) and community bicycle plans."
- "On Urban State Trunk Highways, where suitable accommodations for bicyclists now exist, new highway improvements will be planned to continue an acceptable level of service and safety for bicyclists."
- "WisDOT will cooperate with local jurisdictions to help develop "stand alone" bikeway projects, including bicycle path facilities, when they are consistent with an approved plan and provide important bicycle transportation improvements."
- "Safe crossings should be maintained or created when bikeways and streets intersect highways. Crossing controls or grade separations should be considered where there are inadequate gaps in traffic for safe bicycle path crossing."
- ""Intersection design should consider the needs of bicyclists. All intersections should be wide enough for safe bicyclist crossing;""

Rural:

- On all higher-volume rural roadways (generally with motor vehicle volumes exceeding 1,000 per day), paved shoulders should be provided.
- On higher-volume roadways with a moderate number of bicyclists currently using or anticipated to use the roadway, wider paved shoulders should be provided.
- On lower-volume roadways generally no special improvements are necessary to accommodate bicyclists.
- Multi-use paths should be considered when 1) bicyclists cannot be safely accommodated with on-street facilities; or, 2) an opportunity exists to improve the transportation aspects of bicycling by locating a rural bicycle path within an abandoned rail corridor, utility corridor, or river grade.

Wisconsin Pedestrian Policy Plan 2020 (2002)

The Policy Plan encourages local governments, MPOs and Regional Planning Commissions (RPCs) to provide increased attention to meeting pedestrian needs on roadways in their areas. This Guide is WisDOT's primary method to help these and other interested groups.

Key WisDOT actions include:

- WisDOT will review all state trunk highway projects for pedestrian needs using scoping criteria and guidelines.
- WisDOT supports stand-alone sidewalk projects through such programs as the Transportation Enhancement Program for sidewalk retrofit projects to fill in gaps.

- WisDOT commits to minimizing the "barrier effect" to walking. This is sometimes posed by state trunk highways or by joining local sidewalks to state trunk highway sidewalks. Particular attention will be paid to needs near high traffic generators such as schools and commercial areas

Wisconsin Department of Transportation Guide for Path/Street Crossings (2011)

This document prepared by WisDOT identifies and clarifies intersection right-of-way rules at the intersection of bicycle multi-use paths with streets and highways. The document differentiates between bicyclists using a crosswalk along a path facility and those using a crosswalk at a traditional intersection. Generally:

- Bicyclists should obey traffic controls as they encounter them on the path, and proceed through crossings in a manner that is consistent with the safe use of the crosswalk by pedestrians.
- Drivers must yield to pedestrians and bicyclists in the crosswalk, and do everything they can to keep from hitting a pedestrian or bicyclists even if they have failed to meet their obligations.

Bicycle crash Analysis for Wisconsin Using a Crash Typing Tool (PBCAT) and Geographic Information System (GIS). (2006)

This document is a WisDOT research project discussing a method and results of evaluating the relationship between road and intersection conditions and incidences of bicycle crashes, to support safety improvements and countermeasure design to be included in future plans and projects. Key findings include:

- Crashes between bicyclists and motorists in the State of Wisconsin continue to decrease in an annual basis
- Four of the top five crash types indicated that the motorist made the critical error that contributed to the crash
- There were far more urban crashes than rural crashes (94% compared to 6%),
- The majority of crashes occurred at intersections (66% compared to 34%)
- There was a high frequency of sidewalk/crosswalk-type crashes (28% of all crashes)
- Crash rates were lower on wider roadways for both local roads and state highways
- While urban streets had a much higher crash rate, rural highways had a much higher rate of fatalities

Wisconsin Bicycle Planning Guidance (2003)

This document is a reference for Metropolitan Planning Organizations (MPOs) responsible for planning in urbanized areas of Wisconsin. It discusses the importance of bicycling for transportation and outlines and describes the bicycle planning process and content requirements. The focus of these guidelines is on the utilitarian and transportation aspects of bicycling and less on recreational uses.

Wisconsin Bicycle Facility Design Handbook (2004)

This handbook is the primary source for facility design guidance in the state of Wisconsin. It discusses the operating characteristics and needs of bicyclists, and presents the wide range of design options for enhancing

a community's bicycle transportation system. The guide covers basic roadway improvements for shared streets, details for on-street bicycle lanes, and the design of shared-use paths. Shared Lane Markings (SLMs), introduced into the 2009 edition of the FHWA Manual on Uniform Traffic Control Devices and in common use around the country are not included in this guide.

Wisconsin Guide to Pedestrian Best Practices (2010)

The Wisconsin Guide to Pedestrian Best Practices provides detailed design, planning and program information for improving all aspects of the pedestrian environment. The guide serves as a companion document to the Wisconsin Pedestrian Policy Plan 2020 to assist in the implementation of the goals, objectives and actions of the plan and serve as a reference or guidebook for state and local officials.

County Documents

2010 Jefferson County Bicycle Plan (2010)

The Jefferson County Bicycle Plan assesses the existing bicycle routes within Jefferson County communities and addresses route effectiveness, connectivity to key destinations, and safety.

Directly relevant to the City of Whitewater, the plan identifies *Priority Corridors* for bicycle accommodation and *Parks Department Recreational Loops* with connections to Whitewater. Priority Corridors are routes identified as important routes for connecting communities, parks, trails, and other destinations, and were the focus of recommended improvements. Plan elements relevant to Whitewater include:

- The City of Whitewater is identified as a "Point of Interest" within Jefferson County.
- *Parks Department Recreational Loop 11* - Fort Atkinson/Whitewater/Palmyra connects Whitewater to surrounding areas.
- A *Priority Corridor* to Whitewater is identified along Highway 12 (route 89).
- A recommended network for Whitewater is proposed, shown in Figure 1.

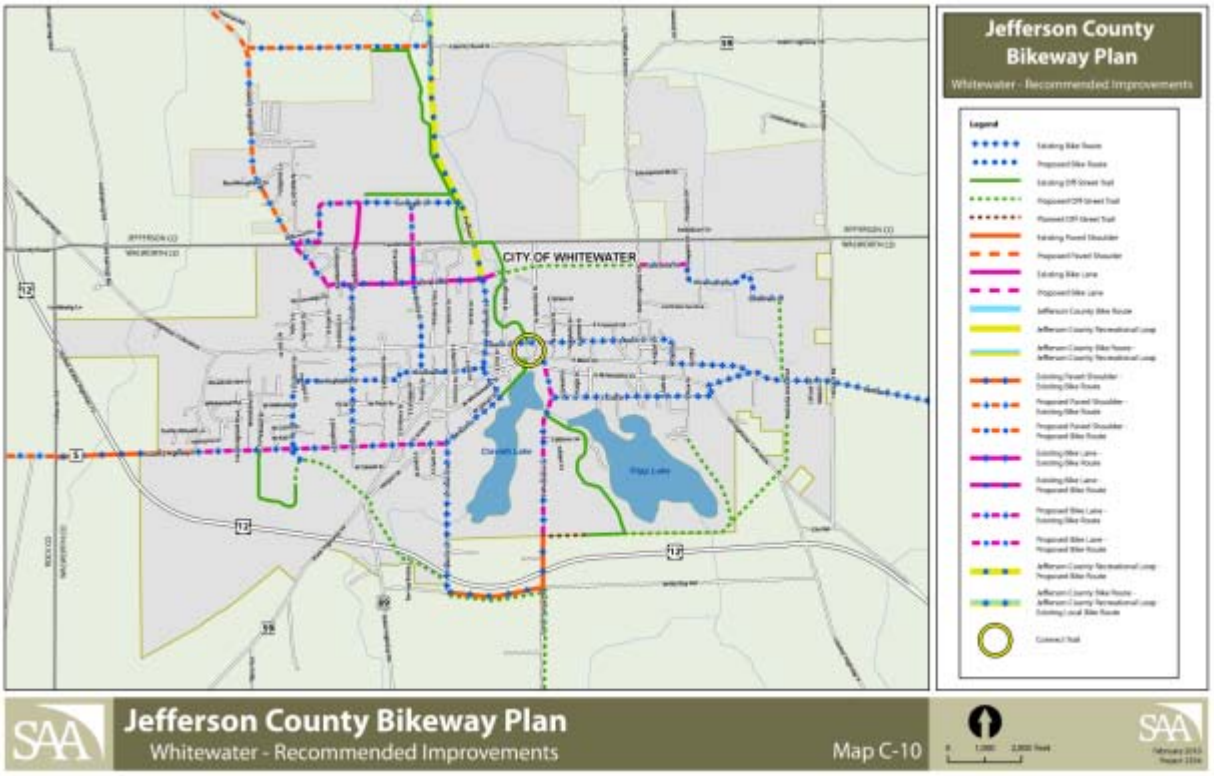


Figure 1. Recommended Network map from the 2010 Jefferson County Bicycle Plan

City of Whitewater Documents

City of Whitewater Comprehensive Bikeway Plan (2000)

The Comprehensive Bikeway Plan is a component of the city's master plan, intended to provide a strategy for designing and implementing a comprehensive bicycle network for Whitewater. The plan includes a comprehensive bikeway plan map of on and off street bicycle routes, and recommended standards for facility design, shown in Figure 2.

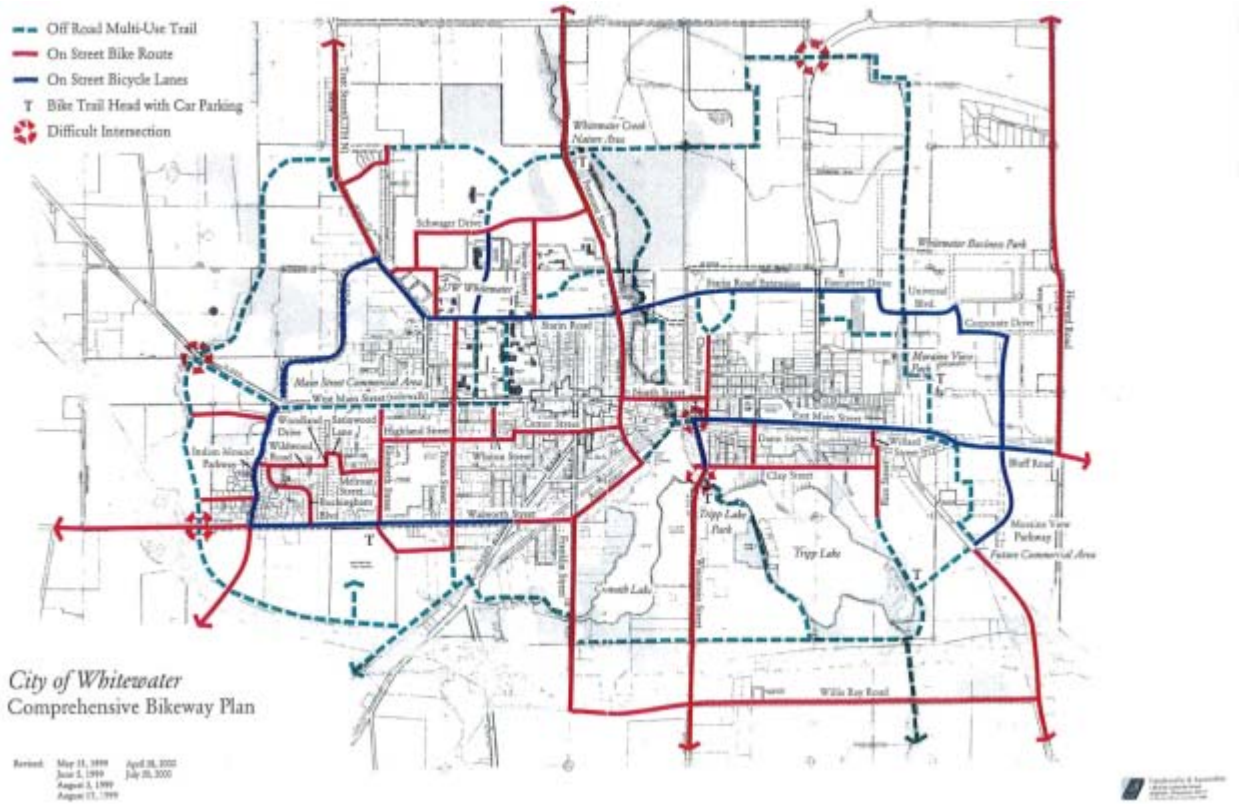


Figure 02. Plan Map from the 2000 City of Whitewater Comprehensive Bikeway Plan

City of Whitewater 2009 Comprehensive Plan Community Survey (2009)

As part of its comprehensive planning process, the City of Whitewater conducted a survey of its residents. The purpose of the survey was to allow residents to participate in the planning process by providing feedback on a number of different items. This report summarizes residents' perceptions of the overall quality of life in Whitewater, their evaluation of facilities, services, and safety in Whitewater, and their preferences for future development in Whitewater. Relevant findings include:

- A large majority of Whitewater residents support the development of off-street bicycle/pedestrian paths (76% in support)
- Over half of Whitewater residents support on-street bike lanes (56% in support)
- Half of Whitewater residents support greenway corridors as part of future residential development (52% in support)
- Only 11% of residents supported "Narrower Streets" as a part of future residential development, with 65% opposed to the design feature

Appendix C: Demand Benefits Model

Introduction

The Demand Benefits model determines the number of walking or bicycling trips that occur in a day. This model uses Census and other national studies to extrapolate the number of bicycling or walking trips taken by populations that traditionally have a higher bicycle/walking mode split than work commuters (such as elementary school and college students). National transportation surveys have also shown that commute trips are only a fraction of total trip an individual takes on a given day (National Household Travel Survey [NHTS], 2009). The model uses the NHTS findings to estimate the number of non-work, non-school trips taken by commuters and provide an estimate of additional utilitarian trips (e.g., trips that are not made for exercise or other types of recreation).

The benefits portion of this analysis tool uses 2009 NHTS trip length data to estimate the mileage of trips that are replaced by walking and bicycling. The model uses data from the EPA and other respected sources to quantify the air quality and other benefits of reduced vehicle miles traveled (VMT). This appendix identifies the assumptions made in the model and the resulting estimate of the number of current and future bicycling trips in Whitewater.

Table 1: Commute Mode Share Data Sources and Assumptions

	Bicycling	Walking	Source
Employed	4.01%	15.60%	2010 ACS
K-12	0.67%	10.57%	NHTS 2009
College	4.01%	15.60%	Assumed same as 2010 ACS "Employed"

Data Used in the Model

Journey-to-work information collected by the U.S. Census Bureau's *American Communities Survey* (ACS) from the 2010 five-year estimate is the foundation of this analysis. Model variables from the ACS include:

- Total population (14,390 people)
- Employed population (7,365 people)
- School enrollment (1,083 students grade K-12; 4,373 college students)
- Travel-to-work mode split (see Table 1).

The 2009 NHTS provides a substantial national dataset of travel characteristics, particularly for bicycling and walking trips. Data used from this survey include:

- Student mode split, grades K-12
- Ratio of walking and bicycling work trips to non-work, non-social/recreational trips
- Ratio of work trips to social and recreational trips
- Average trip length by trip purpose and mode

Several of these variables provide an indirect method of estimating the number of walking and bicycling trips made for non-work reasons, such as shopping and running errands. NHTS data indicate that for every bicycle work trip, there are slightly more than two utilitarian bicycle trips made. Although these trips cannot be directly attached to a certain group of people (not all utilitarian bicycling trips are made by people who

bicycle to work), these multipliers allow a high percentage of the community's walking and bicycling activity to be captured in an annual estimate.

The *Safe Routes to School Baseline Data Report* (2010) was used to determine the average distances of school-related walking and bicycling trips.

Disclaimer

As with any modeling projection, the accuracy of the result is dependent on the accuracy of the input data and other assumptions. Effort was made to collect the best data possible for input to the model, but in many cases the use of national data was required where local data was unavailable. Examples of information that could improve the accuracy of this exercise include detailed results of local Safe Routes to Schools parent and student surveys, a regional household travel survey, and a travel survey of college students.

Existing Walking and Bicycling Trips

Table 2 shows the results of the model, which estimates that 2,428 bicycle and 16,765 walking trips occur in Whitewater each day for transportation purposes. The majority are non-work utilitarian trips, which include medical/dental services, shopping/errands, family or personal business, obligations, meals, and other trips.

Table 2. Model Estimate of Current Walking and Bicycling Trips

	Bicycling	Walking	Source
Work Commute Trips			
Work commuters	295	1,149	Employed population multiplied by mode split
Weekday trips	590	2,298	Number of commuters multiplied by two for return trips
K-12 School Trips			
K-12 commuters	7	114	School children population multiplied by mode split
Weekday trips	15	229	Numbers multiplied by two for return trips
College Commute Trips			
College commuters	175	682	College population multiplied by mode split
Weekday trips	350	1,364	College bicyclists multiplied by two for return trips
Utilitarian Trips			
Daily trips (includes Sat/Sun)	1,473	12,874	Adult trips (sum of work and college) multiplied by ratio of utilitarian to work trips (NHTS).
Total Current Daily Trips	**2,428**	**16,765**	

Trips made for social or recreational purposes are not included in this model since its underlying goal is estimating the transportation benefits of bicycling and walking. However, it is worth noting that NHTS data show that there are approximately 6.5 social and recreational bicycle trips made for every bicycle commute trip. This means that there are an estimated 15,600 bicycle trips being made in Whitewater every day for purely social and recreational purposes. NHTS data estimate that 5.9 social and recreational walking trips are made for every walking commute trip, which equals an estimated 99,000 pedestrian trips. These social and

recreational trips are not included in the estimates of existing and future bicycling and walking activity, which only take into account non-discretionary trips (e.g., trips to work, the grocery store and medical appointments).

Current Trip Replacement and Reduction in Vehicle Miles Traveled

To estimate the total distance that Whitewater residents travel to work or school by walking and bicycling, the model isolates different walking and bicycling user groups and applies trip distance information by mode based on the 2009 NHTS. The model values shown in Table 3 estimate that in Whitewater about 6 million bicycling and walking trips each year replace approximately 5 million vehicle trips and more than 4 million vehicle-miles traveled.

Table 3: Current Walking and Bicycling Trip Replacement

	Bicycling	Walking	Source
Commute Trips			
Weekday trips reduced	411	1,821	Trips multiplied by the drive-alone trip percentage to determine auto trips replaced by bicycle trips
Weekday miles reduced	1,456	1,220	Number of vehicle trips reduced multiplied by average bicycle/walking work trip length (NHTS 2009)
School Trips			
Weekday trips reduced	9	152	Trips multiplied by drive alone trip percentage to determine auto trips replaced by bicycle/walking trips
Weekday miles reduced	9	70	Number of vehicle trips reduced multiplied by average trip length to/from school (SRTS 2010)
College Trips			
Weekday trips reduced	244	1,081	Trips multiplied by drive alone trip percentage to determine auto trips replaced by bicycle/walking trips
Weekday miles reduced	361	606	Number of vehicle trips reduced multiplied by average school/daycare/religious trip length (NHTS 2009) for bicycling/walking modes
Utilitarian Trips			
Daily trips reduced (includes Sat/Sun)	1,026	10,204	Trips multiplied by drive alone trip percentage to determine auto trips replaced by bicycle/walking trips
Daily miles reduced (includes Sat/Sun)	1,943	6,803	Number of vehicle trips reduced multiplied by average utilitarian trip length (NHTS 2009) for bicycling/walking modes
Yearly Results	**Bicycling**	**Walking**	**Total**
Yearly trips by mode	763,251	5,613,427	6,376,678
Yearly vehicle trips replaced by mode	531,619	4,443,586	4,975,205
Yearly vehicle miles replaced by mode	1,161,899	2,935,304	4,097,203

Current Benefits

To the extent that bicycling and walking trips replace single-occupancy vehicle trips, they reduce emissions and have tangible economic impacts by reducing traffic congestion, crashes, and maintenance costs. These benefits are shown in Table 4. Annual household transportation savings alone is estimated at $280 per person.

Table 4: Annual Benefits of Current Bicycling and Walking Trips in Whitewater

	Bicycling	Walking	Source
Yearly vehicle miles reduced	1,161,899	2,935,304	
Air Quality Benefits			
Reduced Hydrocarbons (pounds/year)	3,484	8,801	EPA, 2005[8]
Reduced Particulate Matter (pounds/year)	26	65	EPA, 2005
Reduced Nitrous Oxides (pounds/year)	2,433	6,148	EPA, 2005
Reduced Carbon Monoxide (pounds/year)	31,763	80,243	EPA, 2005
Reduced Carbon Dioxide (pounds/year)	31,763	80,243	EPA, 2005
Economic Benefits of Air Quality			
Particulate Matter	$2,173	$5,490	NHTSA, 2011[9]
Nitrous Oxides	$4,867	$12,295	NHTSA, 2011
Carbon Dioxide	$16,206	$40,941	U.S. Government
Reduced External Costs of Vehicle Travel			
Traffic Congestion	$51,124	$129,153	AAA, 2008[10]
Vehicle Crashes	$267,237	$675,120	AAA, 2008
Roadway Maintenance Costs	$162,666	$410,942	Kitamura, R., Zhao, H., and Gubby, A. R., 1989[11]
Household Transportation Savings			
Reduction in HH transportation spending	$2,667,704	$11,962,633	IRS operational standard mileage rates for 2010[12]
Total	**$5,286,938**	**$23,707,915**	

[8] From EPA report 420-F-05-022 "*Emission Facts: Average Annual Emissions and Fuel Consumption for Gasoline-Fueled Passenger Cars and Light Trucks.*" 2005.

[9] NHTSA Corporate Average Fuel Economy for MY 2011 Passenger Cars and Light Trucks, Table VIII-5 (http://www.nhtsa.dot.gov/portal/site/nhtsa/ menuitem.d0b5a45b55bfbe582f57529 cdba046a0/).

[10] Crashes vs. Congestion – What's the Cost to Society?" http://www.aaanewsroom.net/Assets/Files/200835919l0.CrashesVsCongestionFullRe

[11] Kitamura, R., Zhao, H., and Gubby, A. R. (1989). *Development of a Pavement Maintenance Cost Allocation Model.* Institute of Transportation Studies – University of California, Davis (http://pubs.its.ucdavis.edu/publication_detail.php?id=19). $0.08/mile (1989), adjusted to 2010 dollars using the Bureau of Labor Statistics Inflation Calculator (http://www.bls.gov/data/inflation_calculator.htm).

[12] http://www.irs.gov/newsroom/article/0,,id=216048,00.html

Future Walking and Bicycling Trips

Estimating future benefits requires additional assumptions regarding Whitewater's future population and anticipated commuting patterns in 2025, the timeframe for this planning effort. Future population predictions determined in *A Multi-Jurisdictional Comprehensive Plan for Walworth County: 2035* were used in this model. Table 5 shows the demographics used in the future analysis.

Table5: Projected 2025 Demographics

	Number	Percent of 2025 Population	Source
Population	16,295	100.0%	A Multi-Jurisdictional Comprehensive Plan for Walworth County: 2035. The 2025 population estimate assumes a 1.83% annual growth
Employed population	8,237	51.1%	Assumes same percentage of population is employed
School population, K-12	1,2268	7.5%	Assumes same percent as from ACS 2009 estimate
College student population	4,952	30.4%	Assumes same as 2009 ACS estimate

Table 6 shows projected 2025 bicycling and walking trips for two assumed bicycle mode share scenarios. The first scenario assumes a 6% bicycle mode share and the second assumes an 8% mode share. For simplicity, these mode shares were assumed to apply for all trip types (commuting, utilitarian, school, etc.). Walking mode share was assumed to remain consistent based on an assessment of existing conditions, opportunities and constraints.

Table 6: Future (2025) Bicycling and Walking Trips

	Bicycling		Walking	Source
	6% Share	8% Share		
Commute Trips				
Work commuters	500	666	1,299	Employed population multiplied by mode split
Weekday trips	999	1,332	2,598	Number of commuters multiplied by two for return trips
School Trips				
K-12 commuters	74	98	130	School children population multiplied by mode split
Weekday trips	147	196	259	Numbers multiplied by two for return trips
College Trips				
College commuters	297	396	772	College population multiplied by mode split
Weekday trips	594	792	1,545	College bicyclists multiplied by two for return trips
Utilitarian Trips				
Daily trips	2,496	3,328	14,564	Adult trips (sum of work and college) multiplied by ratio of utilitarian to work trips (NHTS).
Total Future Weekday Trips	**4,236**	**5,648**	**18,966**	

The important factor to consider with these future assumptions is not the accuracy of the mode share percentages, but the benefits that would accrue to Whitewater *if* those numbers are reached. As more cities across the country track changes in bikeway mileage over time and participate in annual bicycle counts, more data will be available to better understand and refine future mode share predictive measures.

Future Trip Replacement

The same trip replacement factors used for the existing analysis were applied to the numbers in Table 6 in order to generate estimates of bicycling and walking trip replacement for the 2025 scenario. Table 7 shows that a 6% bicycle mode share scenario would result in more than seven million annual walking and bicycling trips, which will reduce vehicle trips by about 5.9 million and vehicle-miles traveled by about 5.3 million. An 8% bicycle mode share would result in an estimated 8.1 million annual walking and bicycling trips, along with reductions of 6.3 million vehicle trips and more than million 3.1 vehicle-miles traveled.

Future Benefits

Table 8 shows the air quality and economic benefits of the future projected walking and bicycling trips in Whitewater. For the 6% bicycle mode share assumption, annual household transportation savings are estimated to accrue at a rate of $322 per person cost savings. An 8% bicycle mode share would result in an estimated $366 per person savings.

Table 7: 2025Walking and Bicycling Trip Replacement

	Bicycling		Walking	Source
	6% Share	8% Share		
Commute Trips				
Weekday trips reduced	711	969	2,059	Trips multiplied by the drive-alone trip percentage to determine auto trips replaced by bicycle and walking trips
Weekday miles reduced	2,517	3,429	1,380	Number of vehicle trips reduced multiplied by average bicycle/walking work trip length (NHTS 2009)
School Trips				
Weekday trips reduced	93	127	172	Trips multiplied by drive alone trip percentage to determine auto trips replaced by bicycle/walking trips
Weekday miles reduced	71	97	61	Number of vehicle trips reduced multiplied by average trip length to/from school (SRTS 2010)
College Trips				
Weekday trips reduced	423	576	1,225	Trips multiplied by drive alone trip percentage to determine auto trips replaced by bicycle/walking trips
Weekday miles reduced	626	853	686	Number of vehicle trips reduced multiplied by average school/daycare/religious trip length (NHTS 2009) for bicycling/walking modes
Utilitarian Trips				
Daily trips reduced (includes Sat/Sun)	1,776	2,420	11,543	Trips multiplied by drive alone trip percentage to determine auto trips replaced by bicycle/walking trips
Daily miles reduced (includes Sat/Sun)	3,363	4,581	7,696	Number of vehicle trips reduced multiplied by average utilitarian trip length (NHTS 2009) for bicycling/walking modes
Yearly Results				**Total at 6% bicycle mode share (at 8%)**
Yearly trips by mode	1,317,317	1,756,423	6,350,161	7,667,479 (8,106,584)
Yearly vehicle trips replaced by mode	935,206	1,274,049	5,026,779	5,961,985 (6,300,827)
Yearly vehicle miles replaced by mode	2,021,473	2,753,890	3,316,920	5,338,392 (6,070,810)

Table 8: Benefits of Future Bicycling and Walking Trips in Whitewater

	Bicycling		Walking	Source
	6% Share	8% Share		
Yearly vehicle miles reduced	2,021,473	2,753,890	3,316,920	
Air Quality Benefits				
Reduced Hydrocarbons (pounds/year)	6,061	8,257	9,945	EPA, 2005[13]
Reduced Particulate Matter (pounds/year)	45	61	74	EPA, 2005
Reduced Nitrous Oxides (pounds/year)	4,234	5,768	6,947	EPA, 2005
Reduced Carbon Monoxide (pounds/year)	55,262	75,284	90,676	EPA, 2005
Reduced Carbon Dioxide (pounds/year)	1,644,480	2,240,306	2,698,333	EPA, 2005
Economic Benefits of Air Quality				
Particulate Matter	$3,781	$5,151	$6,204	NHTSA, 2011[14]
Nitrous Oxides	$8,438	$11,535	$13,894	NHTSA, 2011
Carbon Dioxide	$28,195	$38,411	$2,698,333	U.S. Government
Reduced External Costs of Vehicle Travel				
Traffic Congestion	$88,945	$121,171	$6,204	AAA, 2008[15]
Vehicle Crashes	$464,939	$633,395	$13,894	AAA, 2008
Roadway Maintenance Costs	$283,006	$385,545	$42,264	Kitamura, R., Zhao, H., and Gubby, A. R., 1989[16]
Household Transportation Savings				
Reduction in HH transportation spending	$1,111,810	$1,514,640	$1,824,306	IRS operational standard mileage rates for 2010[17]
Total	**$1,989,143**	**$2,709,847**	**$3,263,872**	

[13] From EPA report 420-F-05-022 "*Emission Facts: Average Annual Emissions and Fuel Consumption for Gasoline-Fueled Passenger Cars and Light Trucks.*" 2005.

[14] NHTSA Corporate Average Fuel Economy for MY 2011 Passenger Cars and Light Trucks, Table VIII-5 (http://www.nhtsa.dot.gov/ portal/site/nhtsa/ menuitem.d0b5a45b55bfbe582f57529 cdba046a0/).

[15] Crashes vs. Congestion – What's the Cost to Society?" http://www.aaanewsroom.net/Assets/Files/20083591910.CrashesVsCongestionFullRe

[16] Kitamura, R., Zhao, H., and Gubby, A. R. (1989). *Development of a Pavement Maintenance Cost Allocation Model.* Institute of Transportation Studies – University of California, Davis (http://pubs.its.ucdavis.edu/publication_detail.php?id=19). $0.08/mile (1989), adjusted to 2010 dollars using the Bureau of Labor Statistics Inflation Calculator (http://www.bls.gov/data/inflation_calculator.htm).

[17] http://www.irs.gov/newsroom/article/0,,id=216048,00.html

Difficult-to-Quantify Benefits of Bicycling and Walking

Bicycling is a low-cost and effective means of transportation and is non-polluting, energy-efficient, versatile, healthy, and fun. Bicycles offer low-cost mobility to the non-driving public. Bicycling as a means of transportation has been growing in popularity as many communities work to create more balanced transportation systems and individuals seek to be healthier. In addition, more people are willing to bicycle more frequently if better bicycle facilities are provided.[18]

In addition to the tangible economic benefits estimated above, bicycling has many other benefits that are challenging to quantify, but which have been studied by some communities and organizations. The League of American Bicyclists reported that bicycling makes up $133 billion of the U.S. economy, funding 1.1 million jobs.[19] The League also estimates bicycle-related trips generate another $47 billion in tourism activity. Many communities have enjoyed a high return on their investment in bicycling. For example, the Outer Banks of North Carolina spent $6.7 million to improve local bicycle facilities, and reaped the benefit of $60 million of annual economic activity associated with bicycling.[20] Multiple studies show that bikeable neighborhoods are more livable and attractive, increasing home values[21], and resulting in both increased wealth for individuals and additional property tax revenue for the community.

Bike lanes can improve retail business directly by drawing customers and indirectly by supporting the regional economy. Patrons who bike to local stores have been found to spend more money to visit local businesses than patrons who drive.[22] Other studies show that bikeable and walkable communities attract the young creative class,[23] which can help cities and counties gain a competitive edge and diversify economic base. By replacing short car trips, bicycling can help middle-class families defray rising transportation costs. Families that drive less spend 10 percent of their income on transportation, compared to 19 percent for households with heavy car use,[24] freeing additional income for local goods and services.

Bicycling can also improve quality of life. Since bicycling is among the most popular forms of recreational activity in the U.S.[25], when bicycling is available as a daily mode of transportation, substantial health benefits

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[18] Pucher, J., Dill, J. and Handy, S. (2010). *Infrastructure, programs, and policies to increase bicycling: An international review.* Preventative Medicine 50:S106-S125.

[19] Flusche, Darren for the League of American Bicyclists. (2009). *The Economic Benefits of Bicycle Infrastructure Investments.*

[20] N.C. Department of Transportation, Division of Bicycle and Pedestrian Transportation. (). *The Economic Impact of Investments in Bicycle Facilities.* atfiles.org/files/pdf/NCbikeinvest.pdf

[21] Cortright, Joe for CEOs for Cities. (2009). *Walking the Walk: How Walkability Raises Home Values in U.S. Cities.*

[22] The Clean Air Partnership. (2009). *Bike Lanes, On-Street Parking and Business: A Study of Bloor Street in Toronto's Annex Neighborhood.*

[23] Cortright, Joe for CEOs for Cities. (2007). *Portland's Green Dividend.*

[24] Center for Neighborhood Technology. (2005). *Driven to Spend: Pumping Dollars out of Our Households and Communities.*

[25] Almost 80 million people walking and 36 million people bicycling for recreation or exercise nationally, and 27.3 percent of the population over 16 bicycling at least once over the summer. (National Sporting Goods Association survey, 2003)

result. The health benefit of bicycling for exercise can reduce the cost of spending on health care by as much as $514 a year, which provides a financial incentive to businesses that provide health coverage to their employees.[26]

Safety concerns are another reason to improve bicycling conditions. Although the incidence of crashes involving bicycles may be low, concerns about safety have historically been the single greatest reason people do not commute by bicycle, as captured in polls as early as 1991.[27] A Safe Routes to School survey in 2004 similarly found that 30 percent of parents consider traffic-related danger to be a barrier to allowing their children to walk or bike to school. Addressing those concerns for bicyclists through physical and program improvements is another major objective of the Whitewater Bicycle and Pedestrian Plan. Improving bicyclist safety can also be accomplished by increasing the number of people who bike.

[26] Feifei, W., McDonald, T., Champagne, L.J., and Edington, D.W. (2004). *Relationship of Body Mass Index and Physical Activity to Health Care Costs Among Employees.* Journal of Occupational and Environmental Medicine. 46(5):428-436

[27] Lou Harris Poll (2001)

Appendix D: Bicycle and Pedestrian Design Guidelines

[Design Guidelines to be Inserted]

Appendix E: West Main Street Safety Project

This appendix discusses the current conditions of a segment of West Main Street from Indian Mound Parkway to Franklin Street, identifies operational and safety issues, and proposes a potential improvement. Additionally, this appendix discusses potential education and enforcement countermeasures to implement in conjunction with roadway improvements. This multi-faceted approach can lead to significant safety improvements and behavior modification that will result in improved corridor function for all roadway users.

Problem Statement

The study area of West Main Street is a 1.2 mile long multimodal corridor serving motor vehicles, transit riders, and non-motorized transportation users. This diverse mix of users and their separate transportation needs has led to real and perceived safety concerns for the community. During outreach events as part of the planning process, community members identified the following concerns:

- **Unsafe pedestrian crossing behavior.** There are complaints about a high incidence of pedestrians crossing outside of marked crosswalks (e.g., midblock crossings) as well as crossing against the traffic signal at marked crosswalks. Pedestrians are also seen crossing at unmarked but legal crossings, though there is a common perception that unless a crosswalk is marked, the crossing is illegal and unsafe. While this perception is not based on the law, it may lead to misunderstanding between road users.[28]

- **Perception of excessive speed by motorists.** Community members reported excessive speeding, particularly on the west end of the study area as the land use transitions into a more rural setting. Within the analysis area, West Main Street has a 25 mph speed limit, which is appropriate for urban commercial conditions. Beyond Indian Mound Parkway, the speed limit increases to 35 mph, and outside of the City limits, the speed limit increases again to county highway speeds of 45 mph. West Main Street is also designated as Old Highway 12, which passes through Whitewater and directly connects the downtown district with the rest of Walworth County. Community observations indicate that some drivers travel at county highway speeds before they have fully exited the city and continue at highway speeds as they approach from the west.

- **Lack of facilities for bicycling.** West Main Street currently lacks bicycling facilities, and no alternative route exists for bicyclists to access the many commercial and cultural destinations along the corridor. Currently, bicyclists must operate on-road with automobiles or on the sidewalk with pedestrians. On-street shared roadway operation may be uncomfortable for bicyclists, particularly when paired with excessive speeding. Bicycle operation on sidewalks is also undesirable, due to an increased risk of collision with motor vehicles due to poor visibility, frequency of curb cuts and opposite direction travel, as well as an increase in bicycle-pedestrian interactions

- **History of collisions.** There are general traffic safety concerns on West Main Street. The traffic fatality data available from the National Highway Traffic Safety Administration (NHTSA) indicates

[28] Wisconsin Statute 340.01(10) provides a description of unmarked crosswalks, which exist at each intersection unless signs are posted noting otherwise.

that there were four traffic fatalities in Whitewater between 2008 and 2010. Two of those fatalities were on West Main Street, one involving a pedestrian.[29]

Existing Conditions

Land Use

Land use adjacent to West Main Street is diverse, with multi-family residential, commercial, institutional and retail uses. The mix of origins and destinations in relatively close proximity increases the demand and potential for pedestrian travel, as well as the demand for pedestrian crossings. The University of Wisconsin – Whitewater Campus (located on the north side of the street) is the single biggest driver of activity along the corridor. A significant amount of student housing is located on the south side of the street.

Automobile Conditions

Speed Limit: The speed limit on this segment of West Main Street is posted at 25 mph. Outside of the area, the speed limit increases incrementally to 45 mph.

Traffic: The City of Whitewater reports Annual Average Daily Traffic (AADT) vehicle volumes of 15,100 cars per day.

Configuration: In this vicinity, West Main Street is a 4-lane undivided highway, with no on-street parking. East of the study area, East Main Street is two lanes, sometimes with parking on one or two sides of the street depending on available curb-to-curb width. To the west of the study area, West Main Street is two lanes, with no on-street parking and a rural cross section.

Pedestrian Conditions

The University of Wisconsin-Whitewater is a primary source of pedestrian activity along the corridor. UW-Whitewater is a major destination for the city and the region, serving 12,034 students.[30] The UW-Whitewater campus itself is pedestrian friendly, and students are encouraged to get around by walking and biking.

There are 11 4-way or 3-way intersections along the segment, with an average spacing of 630 feet between intersections as well as frequent driveway cuts. Six of these intersections are signalized;3 are unsignalized with marked crossings. There are no median refuge islands or curb extensions to shorten or assist pedestrian crossings.

[29] NHTSA. State GIS Fatal Traffic Crash Maps. 2010

[30] UW-Whitewater Vital Statistics About Student Enrolment, Costs and Campus Resources. http://www.uww.edu/campus-info/about-uww/vital-statistics. 2012.

Transit Conditions

The Janesville Milton Whitewater Innovation Express transit line travels along West Main Street as part of its route through Whitewater with service to the University of Wisconsin.[31] There are no designated bus stops for this route along West Main Street.

Bicyclist Conditions

As part of the Whitewater Bicycle and Pedestrian Plan, West Main Street is identified as a future bikeway with a bicycle lane. Whitewater does not have an official bike route map, but the Whitewater Tourism Department identifies West Main Street as part of the Turtle Valley bike loop.

Proposed Solution: Roadway Reconfiguration (4 Lane – 3 Lane Conversion), and Enhanced Pedestrian Crossings

Reconfiguring West Main Street from the current four lane undivided street to a three lane street with a two-way-center-turn-lane (TWCTL) is a promising solution that addresses many of the concerns identified by City of Whitewater community members. Communities across the country have completed similar conversions with great success.

The proposed improvements would result in reconfiguration of 1.2 miles of roadway. The new cross section would include a single motor vehicle travel lane in each direction, 6-foot wide bicycle lanes in each direction as well as a dedicated two-way center turn lane. Potential benefits and impacts are identified below and illustrated on the attached project sheet.

Roadway Reconfiguration

Benefits

The Federal Highway Administration (FHWA) classifies a 4-lane to 3-lane roadway reconfiguration as a Proven Safety Countermeasure, and identifies the following safety and operational benefits for vehicles, pedestrians and bicyclists:[32]

- Decreasing vehicle travel lanes for pedestrians to cross, therefore reducing the multiple-threat crash (when one vehicle stops for a pedestrian in a travel lane on a multi-lane road, but the motorist in the next lane does not, resulting in a crash) for pedestrians,
- Providing room for a pedestrian crossing island,
- Improving safety for bicyclists when bike lanes are added (such lanes also create a buffer space between pedestrians and vehicles),
- Providing the opportunity for on-street parking (also a buffer between pedestrians and vehicles),
- Reducing rear-end and side-swipe crashes, and
- Improving speed limit compliance and decreasing crash severity when crashes do occur.

[31] http://www.uww.edu/adminaffairs/parking/jtsbrochure.pdf

[32] http://safety.fhwa.dot.gov/provencountermeasures/fhwa_sa_12_013.htm

Potential Impacts

While road reconfigurations are not guaranteed to function appropriately on every street, recent experience and analysis has shown that roadways with Average Daily Traffic (ADT) of 20,000 or less are good candidates for further evaluation. Roads with 15,000 ADT or less have demonstrated safety and operations benefits, as above.[33]

West Main Street is a primary route from downtown to the outside of the city, and transitions between the different city areas must be carefully considered for impacts to safety, access and traffic flow. This is particularly important at the key intersections of Franklin Street and Indian Mound Parkway, where a level of service analysis could be conducted to see if additional lanes would be required.

Refuge Islands

Median refuge islands are proposed for each of the existing unsignalized marked crosswalks to limit pedestrian exposure to motor vehicle traffic during a crossing. To reduce the distance between marked crossings along the roadway, one new mid-block crossing with a refuge island is proposed east of Indian Mound Parkway. Like the roadway reconfiguration, crossing islands and median refuge islands are proven FHWA Safety Countermeasures.[34]

Benefits

Refuge islands can:

- Reduce pedestrian crashes by up to 46% and motor vehicle crashes by up to 39%
- May decrease motor vehicle delays by more than 30%
- Provide pedestrians a safe place to stop at the mid-point of the roadway before crossing the remaining distance
- Enhance the visibility of pedestrian crossings, particularly at unsignalized crossing points.
- Reduce the speed of vehicles approaching pedestrian crossings
- May be used for access management for vehicles (allowing only right-in/right-out turning movements)

Potential Impacts

If designed and implemented incorrectly, benefits of refuge islands may not be fully realized and potential safety risks may be created. Careful engineering review and relevant studies should be undertaken prior to roadway reconfiguration.

[33] http://safety.fhwa.dot.gov/provencountermeasures/fhwa_sa_12_013.htm

[34] http://safety.fhwa.dot.gov/provencountermeasures/fhwa_sa_12_011.htm

Cost Opinion

Based on conceptual design, the planning level cost opinion for roadway reconfiguration, including three small pedestrian refuge islands, is $256,000.

This estimate are based on a planning-level understanding of the components, rather than on a detailed design. American Society for Testing and Materials (ASTM) Standard E2620 defines Order of Magnitude as being cost estimates accurate to within plus 50% or minus 30%. This broad range is appropriate given the level of uncertainty in the design at this point in the process. Many factors can affect final construction costs, including:

- Final construction phasing
- Selected alignment
- Revisions to the design as required by local, state and federal permitting agencies
- Additional requirements imposed by property owners as a condition of granting property rights (e.g., fencing, vegetated buffers, etc.)
- Fluctuations in commodity prices during the design and permitting processes
- Selected construction materials
- Type and quantity of amenities (e.g., benches, lighting, bike racks, etc.)
- Extent of landscaping desired
- Availability of donated materials and volunteer labor
- Property Acquisition (excluded from estimates shown here.)

As the project progress through preliminary, semi-final and final design phases, expected construction costs become more accurate.

W Main Street Traffic Safety Project – Planning Level Cost Estimate

Item Description	Unit	Qty	Unit Cost	Cost	Notes
Striping Removal	LF	25,340	$0.50	$50,680	Removal of double yellow centerline and dashed lane lines
Restriping: Center Turn lane solid yellow	LF	12,670	$1.00	$12,670	2 lines
Restriping: Center Turn lane dashed yellow	LF	12,670	$0.75	$9,503	2 lines
Restriping: 6" Bike lane line	LF	12,670	$1.50	$19,005	2 lines
Bike lane symbol (paint)	EA	20	$75.00	$1,500	
Pedestrian refuge island, small (1100 sf)	EA	3	$12,000.00	$36,000	At each existing and proposed unsignalized marked crossing
New/relocated crossing striping	EA	3	$120.00	$360	
ADA ramps for new/relocated crossings	EA	3	$2,500.00	$7,500	
ADA Detectable warnings			$650.00		
Access sidewalk extensions for new midblock crossing	SF	192	$8.00	$1,536	
Regulatory signs for pedestrian refuge islands	EA	12	$300.00	$3,600	

Estimated Direct Cost		**$142,354**
Contingency	25%	$35,589
Engineering / Design	20%	$28,471
Construction / Overhead / Mobilization	15%	$21,353
Project Administration	10%	$14,235
Estimated Construction Costs (70% burden)		**$242,002**

Recommended Education, Encouragement and Evaluation Activities

While improving infrastructure is critical, the importance of encouragement, education, enforcement, and evaluation programs should not be underestimated. These efforts can teach local residents about new and improved facilities, provide the tools they need to integrate walking into their daily activities, and provide positive reinforcement for walking. In essence, the new and enhanced programs market the idea of walking to local residents and encourage a shift to walking and bicycling as transportation options. This relationship has been explored and documented in a comparison of bicycle mode shift in Chicago and Salt Lake City.[35]

Community members and City staff have observed and documented both motor vehicle speeding and unsafe crossing behaviors along West Main Street. Supportive programmatic measures should be implemented in conjunction with infrastructure improvements. Recommended actions are detailed in Chapter 6: Recommended Programs and include targeted crosswalk and speeding enforcement. These activities should be conducted in September, around the time of new student orientation. The University should be engaged as a project partner who can help with traffic safety campaigns.

Conclusion

Current traffic volumes on West Main Street are likely to support a successful 4 lane to 3 lane conversion. This volume is well within the FHWA's recommended range for further evaluation.

The reconfiguration is likely to create widespread benefit for all users of the roadway for safety, mobility and access, and could be an instrumental piece of implementing the *Whitewater Bicycle and Pedestrian Plan*.

Conducting outreach, education, and evaluation with this roadway reconfiguration will increase community awareness and understanding of the proposed change. The outreach should include the opportunity to address opposition or skepticism from the community based on concerns about increased traffic congestion.

[35] Douma, F., Cleaveland, F. *The Impact of Bicycling Facilities on Commute Mode Share.* 2008 Minnesota DOT.

Appendix F: Funding Sources

Moving Ahead for Progress in the Twenty-First Century (MAP-21)

The largest source of federal funding for bicycle and pedestrian projects is the United States Department of Transportation's (US DOT) Federal-Aid Highway Program, which Congress has reauthorized roughly every six years since the passage of the Federal-Aid Road Act of 1916. The latest act, Moving Ahead for Progress in the Twenty-First Century (MAP-21) was enacted in July 2012 as Public Law 112-141. The Act replaces the Safe, Accountable, Flexible, Efficient Transportation Equity Act – a Legacy for Users (SAFETEA-LU), which was valid from August 2005 - June 2012.

MAP-21 authorizes funding for federal surface transportation programs including highways and transit until September 2014. There are a number of programs identified within MAP-21 that are applicable to bicycle and pedestrian projects. These programs are discussed below.

More information: http://www.fhwa.dot.gov/map21/summaryinfo.cfm

Transportation Alternatives (TAP)

Transportation Alternatives (TAP) is a new funding source under MAP-21 that consolidates three former SAFETEA-LU programs: Transportation Enhancements (TE), Safe Routes to School (SRTS), and the Recreational Trails Program (RTP). These funds may be used for a variety of pedestrian, bicycle, and streetscape projects including sidewalks, bikeways, shared-use paths, school safety, and rail-trails. TAP funds may also be used for selected education and encouragement programming such as Safe Routes to School. The Wisconsin Department of Transportation (WisDOT) has allocated roughly 2/3rds of TE funds to bicycle and pedestrian projects since the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991.

Unless the Governor of a given state chooses to opt out of Recreational Trails Program funds, $85 million in dedicated funds for recreational trails continues to be provided nationally as a subset of TAP[36]. Governor Scott Walker chose to opt in, which means that Wisconsin will receive $2,167,754 in RTP funds per year through FY2014.

Eligible Projects for TAP include:

- **Transportation Alternatives** as defined by Section 1103 (a)(29). This category includes the construction, planning, and design of a range of bicycle and pedestrian infrastructure including "on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990." Infrastructure projects and systems that provide "Safe Routes for Non-Drivers" is a new eligible activity. For the complete list of eligible activities, visit:

  http://www.fhwa.dot.gov/environment/transportation_enhancements/legislation/map21.cfm

[36] See: http://www.fhwa.dot.gov/map21/funding.cfm

- **Recreational Trails.** TAP funds may be used to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, and other non-motorized and motorized uses. These funds are available for both paved and unpaved trails, but may not be used to improve roads for general passenger vehicle use or to provide shoulders or sidewalks along roads.

  Recreational Trails Program funds may be used for:

  - Maintenance and restoration of existing trails
  - Purchase and lease of trail construction and maintenance equipment
  - Construction of new trails, including unpaved trails
  - Acquisition or easements of property for trails
  - State administrative costs related to this program (limited to seven percent of a State's funds)
  - Operation of educational programs to promote safety and environmental protection related to trails (limited to five percent of a State's funds)
- **Safe Routes to School.** Safe Routes to School activities are eligible for the Transportation Alternatives Program. Both infrastructure and non-infrastructure projects are eligible, and the program elements described in SAFETEA-LU are still in effect. The purpose of the Safe Routes to Schools eligibility is to promote safe, healthy alternatives to riding the bus or being driven to school. All projects must be within two miles of primary or middle schools (K-8).

  Eligible projects may include:
  - *Engineering improvements*. These physical improvements are designed to reduce potential bicycle and pedestrian conflicts with motor vehicles. Eligible improvements include sidewalk improvements, traffic calming/speed reduction, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, and secure bicycle parking facilities.
  - *Education and Encouragement Efforts.* These programs are designed to teach children safe bicycling and walking skills while educating them about the health benefits and environmental impacts. Projects and programs may include creation, distribution and implementation of educational materials; safety based field trips; interactive bicycle/pedestrian safety video games; and promotional events and activities (e.g., assemblies, bicycle rodeos, walking school buses).
  - *Enforcement Efforts.* These programs aim to ensure that traffic laws near schools are obeyed. Law enforcement activities apply to cyclists, pedestrians and motor vehicles alike. Projects may include development of a crossing guard program, enforcement equipment, photo enforcement, and pedestrian targeted enforcement operations.

- **Planning, designing, or constructing roadways within the right-of-way of former Interstate routes or divided highways.** As of mid-December 2012, detailed guidance from the Federal Highway Administration on this new eligible activity was not available.

Average annual funds available through TAP over the life of MAP-21 equal $814 million nationally, which is based on a two percent set-aside of total MAP-21 authorizations. Projected apportionments for Wisconsin total $18.7 million for FY 2013 and $18.9 million for FY 2014. Note that state DOTs may elect to transfer up to fifty percent of TAP funds to other highway programs, so these amounts represent the maximum potential funding.

The City of Whitewater is eligible to compete for TAP funds through two separate competitive grant programs administered by WisDOT:

- MAP-21 requires WisDOT to allocate a set amount of TAP funding to rural communities in Wisconsin. These funds are distributed through a competitive grant program that is not open to government agencies located in urban areas containing 200,000 or more residents.

- Remaining TAP funds (those monies not re-directed to other highway programs) are disbursed through a separate competitive grant program also administered by WisDOT. Local governments, school districts, tribal governments, and public lands agencies are permitted to compete for these funds.

Interim guidance released by the Federal Highway Administration clarifies that the Transportation Alternatives Program does not establish specific standards or procedures for the competitive grant process, but indicates that the USDOT plans to develop best practices for consideration: "DOT will publish a model Request for Proposal or Notice of Funds Available that States and MPOs may use at their discretion." For more information, see: http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm.

As of this writing additional information regarding WisDOT's plans for administering the grant programs is not available publicly. As WisDOT completes its review of potential programming changes due to MAP-21, further information should become available at: http://www.dot.wisconsin.gov/localgov/aid/bike-ped-facilities.htm.

Surface Transportation Program (STP)

The Surface Transportation Program (STP) provides states with flexible funds which may be used for a variety of highway, road, bridge, and transit projects. A wide variety of bicycle and pedestrian improvements are eligible, including on-street bicycle facilities, off-street trails, sidewalks, crosswalks, bicycle and pedestrian signals, parking, and other ancillary facilities. Modification of sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA) is also an eligible activity. Unlike most highway projects, STP-funded bicycle and pedestrian facilities may be located on local and collector roads that are not part of the Federal-aid Highway System. The United States Code Title 23, Chapter 1 defines the Federal-aid Highway system as "a highway eligible for assistance under this chapter other than a highway classified as a

local road or rural minor collector." Fifty percent of each state's STP funds are suballocated geographically by population; the remaining fifty percent may be spent in any area of the state.

Highway Safety Improvement Program (HSIP)

MAP-21 doubled the amount of funding available through the Highway Safety Improvement Program (HSIP) relative to SAFETEA-LU. HSIP provides $2.4 billion nationally for projects and programs that help communities achieve significant reductions in traffic fatalities and serious injuries on all public roads, bikeways, and walkways. MAP-21 requires each state to formulate a state safety plan, produced in consultation with non-motorized transportation representatives, in order to receive HSIP funds. Eligible projects will be evaluated on anticipated cost-effectiveness of reducing serious injuries and fatalities.

MAP-21 preserves the Railway-Highway Crossings Program within HSIP but discontinues the High-Risk Rural roads set-aside *unless* safety statistics demonstrate that fatalities are increasing on these roads. Bicycle and pedestrian safety improvements, enforcement activities, traffic calming projects, and crossing treatments for non-motorized users in school zones are eligible for these funds. WisDOT estimates that it will receive an average of $47.1 million annually for this program through the lifetime of MAP-21.[37]

Congestion Mitigation/Air Quality Program (CMAQ)

The Congestion Mitigation/Air Quality Improvement Program (CMAQ) provides funding for projects and programs in air quality non-attainment and maintenance areas for ozone, carbon monoxide, and particulate matter which reduce transportation related emissions. States with no nonattainment areas may use their CMAQ funds for any CMAQ or STP eligible project. These federal dollars can be used to build bicycle and pedestrian facilities that reduce travel by automobile. Purely recreational facilities generally are not eligible.

Between 1993-2011 the CMAQ program provided $53 million to 78 projects in 11 southeastern counties in Wisconsin non-attainment areas.[38] For current information on designated non-attainment and maintenance zones, including a map of affected counties, please visit the Environmental Protection Agency's (EPA) website: http://www.epa.gov/oaqps001/greenbk/mapnmpoll.html

New Freedom Initiative

MAP-21 continues a formula grant program that provides capital and operating costs to provide transportation services and facility improvements that exceed those required by the Americans with Disabilities Act. Examples of pedestrian/accessibility projects funded in other communities through the New Freedom Initiative include installing Accessible Pedestrian Signals (APS), enhancing transit stops to improve accessibility, and establishing a mobility coordinator position.

More information: http://www.hhs.gov/newfreedom/

[37] http://www.fhwa.dot.gov/map21/funding.cfm

[38] http://www.dot.wisconsin.gov/localgov/docs/te-1993-2004.pdf

Pilot Transit-Oriented Development Planning

MAP-21 establishes a new pilot program to promote planning for Transit-Oriented Development. At the time of writing the details of this program are not fully clear, although the bill text states that the Secretary of Transportation may make grants available for the planning of projects that seek to "facilitate multimodal connectivity and accessibility," and "increase access to transit hubs for pedestrian and bicycle traffic."

The City of Whitewater should track federal communications and be prepared to respond proactively to announcements of grant availability.

Partnership for Sustainable Communities

Founded in 2009, the Partnership for Sustainable Communities is a joint project of the EPA, the U.S. Department of Housing and Urban Development (HUD), and USDOT. The partnership aims to "improve access to affordable housing, more transportation options, and lower transportation costs while protecting the environment in communities nationwide." The Partnership is based on five Livability Principles, one of which explicitly addresses the need for bicycle and pedestrian infrastructure:

> Provide more transportation choices: Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.

The Partnership 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 (including both TIGER I and TIGER II grants). The City of Whiteater should track Partnership communications and be prepared to respond proactively to announcements of new grant programs. Initiatives that speak to multiple livability goals are more likely to score well than initiatives that are narrowly limited in scope to bicycle and pedestrian efforts.

More information: http://www.sustainablecommunities.gov/grants.html

Community Development Block Grants

The Community Development Block Grants (CDBG) program provides money for streetscape revitalization, which may be largely comprised of pedestrian improvements. Federal CDBG grantees may use the funds for real property, public facility improvements, and planning. Pedestrian and Bicycle Master Plan projects that enhance accessibility are a good fit for this funding source. CDBG funds could also be used to write an ADA Transition Plan for the city or support design and construction of projects.

More information: www.hud.gov/cdbg

Community Transformation Grants

Community Transformation Grants administered through the Center for Disease Control support community-level efforts to reduce chronic diseases such as heart disease, cancer, stroke, and diabetes. Active transportation infrastructure projects 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.

More info: http://www.cdc.gov/communitytransformation/

Land and Water Conservation Fund

The Land and Water Conservation Fund (LWCF) provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. Funds can be used for right-of-way acquisition and construction. The program is administered by the Wisconsin Department of Natural Resources as a grant program. Any Pedestrian and Bicycle Master Plan projects located in future parks could benefit from planning and land acquisition funding through the LWCF. Trail corridor acquisition can be funded with LWCF grants as well.

More info: http://dnr.wi.gov/Aid/LWCF.html and http://www.nps.gov/lwcf/

Rivers, Trails, and Conservation Assistance Program

The Rivers, Trails, and Conservation Assistance Program (RTCA) is a National Parks Service (NPS) program providing technical assistance via direct NPS staff involvement to establish and restore greenways, rivers, trails, watersheds and open space. The RTCA program provides only for planning assistance—there are no implementation monies available. Projects are prioritized for assistance based on criteria including conserving significant community resources, fostering cooperation between agencies, serving a large number of users, encouraging public involvement in planning and implementation, and focusing on lasting accomplishments. This program may benefit trail development in the City of Whitwater indirectly through technical assistance, particularly for community organizations, but should not be considered a future capital funding source.

More info: http://www.nps.gov/pwro/rtca/who-we-are.htm

Additional Federal Funding

The landscape of federal funding opportunities for bicycle and pedestrian 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 bicycle and pedestrian 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/

State Funding Sources

The State of Wisconsin has historically funded bicycle and pedestrian projects above and beyond Federal Transportation Enhancement (TE) dollars through two State grant programs: the Bicycle and Pedestrian Funding Program (BPFP) and the Surface Transportation Program – Discretionary (STP-D). Funding levels and cycles for both programs has been somewhat sporadic since the early 1990's. In 2002 the Surface Transportation Program – Discretionary (STP-D) was dismantled, but the Bicycle and Pedestrian Funding Program (BPFP) still exists.

WisDOT Bicycle and Pedestrian Funding Program (BPFP)

The most recent funding cycle of the BPFP in 2010 provided more than half a million dollars for bicycle and pedestrian planning and design throughout the state. Funding through the program is competitive – a committee ranks projects and makes funding recommendations to the Wisconsin Department of Transportation Secretary.

All BPFP funds have been awarded through FY 2014. Information on the next BPFP funding cycle will be posted on the WisDOT Bicycle and Pedestrian Facilities Program web page in 2013: http://www.dot.wisconsin.gov/localgov/aid/bike-ped-facilities.htm. Eligibility, schedule and application requirements from the most recent BPFP funding cycle are described below as a reference. Please note that as of January 2013 this program is undergoing review by WisDOT and that future eligibilities, grant cycle schedule, and required elements may change as a result of this process.

Eligibility

- Funds are available for both planning and construction, including:
    - Planning projects costing $50,000 or more
    - Construction projects costing $200,000 or more
- No funding cap, but WisDOT's ability to fund projects over $1 million is "very limited", according to the BPFP application guidelines (See: http://www.dot.wisconsin.gov/localgov/docs/smip-sample.pdf)
- Statutory language specifically excludes pedestrian-only facilities, such as sidewalks and streetscaping projects
- Local governments with taxing authority and Indian Tribal Nations may apply for funding
- The project must be usable when completed - not staged so that additional money is necessary to make it a useful project

Application Cycle

- Applications are typically accepted every other year (even numbered years most common)
- Two to three years of funding is made available to projects for the three to four fiscal years following the calendar year in which projects are selected. (For example, in 2010 projects are developed for FY 2011-2014 funding.)
- In the past, WisDOT has reviewed BPFP and Transportation Enhancements (TE) applications simultaneously due to similarities in program objectives and eligibility criteria. WisDOT may choose to coordinate BPFP and Transportation Alternatives (TAP) application in a similar fashion.

Required Elements

- Project Summary and Description
- Sponsor and Contact Information
- Prioritization (if requesting funds for more than one project in an urbanized area)
- Project Costs and Dates
- A realistic estimate of how many people will use the proposed facility on an annual basis
- Project benefits (transportation system improvements, preservation of state historic, environmental and scenic resources, and/or promotion of economic development, tourism, or safety)
- Narrative response to set of detailed questions:

- Construction projects:
  - Location, length, width, surface materials, connections to existing or planned facilities
  - Relationship to bicycle or pedestrian plan (if applicable)
  - Summary of bicycle and pedestrian plans developed over the past five years
  - Summary of programs in the community designed to encourage walking and bicycling
- Historic related projects:
  - Documentation from National and/or State Register of Historic Places, locally adopted landmarks ordinance, and/or Wisconsin Historical Society.
  - Description of historic significance
  - Photograph(s) of historic elements
- Landscaping/streetscape applications
  - Describe how improvements will promote walking and bicycling

A sample BPFP application can be found here: http://www.dot.state.wi.us/localgov/aid/bike-ped-facilities.htm

For more information on the history of bicycle and pedestrian funding in Wisconsin, including a list of WisDOT-funded projects from state and federal sources, see:

http://www.dot.wisconsin.gov/localgov/aid/bike-ped-funding.htm

State Recreation Grant Programs

The Wisconsin Department of Natural Resources administers several grant programs that may support bicycle and pedestrian facilities that provide a recreational benefit to the state. With the exception of the Recreational Trail Aids program, each of the programs below are part of the Knowles-Nelson Stewardship Program, a fund created by the Wisconsin Legislature in 1989 to "preserve valuable natural areas and wildlife habitat, protect water quality and fisheries, and expand opportunities for outdoor recreation."

Acquisition & Development of Local Parks

Eligibility and Purpose: Helps to buy land or easements and develop or renovate local park and recreation area facilities for nature-based outdoor recreation purposes including trails. Applicants compete for funds on a regional basis.

Friends of State Lands

Eligibility and Purpose: Grants from this program help improve facilities, build new recreation projects, and restore habitat on state properties.

Habitat Area

Eligibility and Purpose: Protects and restores important wildlife habitat in Wisconsin in order to expand opportunities for wildlife-based recreation such as hunting, trapping, hiking, bird watching, fishing, nature appreciation and wildlife viewing.

Recreational Trail Aids (RTA)

Eligibility and Purpose: Municipal governments and incorporated organizations are eligible to receive reimbursement for development and maintenance of recreational trails and trail-related facilities for both motorized and non-motorized recreational trail uses. Eligible sponsors may be reimbursed for up to 50 percent of the total project costs. This program may be used in conjunction with the state snowmobile or ATV programs and Stewardship development projects.

- Maximum grant amount: $45,000 ($200,000 every third calendar year)
- Match requirement: 50 percent
- Contact: Tim Parsons, 608-267-9385
- Deadline: May 1

State Trails

Eligibility and purpose: Applications for grants under this subprogram must be for properties identified as part of the State Trail system. It is possible for sponsors to nominate additional trails for state trail designation. The Streambank Protection Program, a sub-program of the State Trails program, protects water quality and fish habitat in Wisconsin by establishing buffers along high-priority waterways.

Urban Green Space

Eligibility and Purpose: These grants help buy land or easements in urban areas to preserve the scenic and ecological values of natural open spaces for nature-based outdoor recreation, including non-commercial gardening.

Urban Rivers

Eligibility and Purpose: These grants helps buy land on rivers flowing through urban or urbanizing areas to preserve or restore the scenic and environmental values of riverways for nature-based outdoor recreation.

For more information see: http://dnr.wi.gov/Aid/Grants.html#tabx4

Private Foundations

Private foundations are an increasingly important source of funds for bicycle and pedestrian planning and implementation. For example, planners in Ozaukee County successfully secured a $10,000 grant from the Bikes Belong Coalition and a $25,000 grant from the Wisconsin Energy Corporation Foundation to partially fund the Ozaukee Interurban Trail.

To read a case study of the Ozaukee Interurban Trail, visit:
http://www.bicyclinginfo.org/library/details.cfm?id=4154

For more information on private foundations, including an extensive list of national foundations visit: http://www.foundationcenter.org/

Recommended Next Steps

In order to realize construction of the greatest portion of the bicycle and pedestrian network, the following actions are recommended:

- Track federal communications and be prepared to respond proactively to announcements of grant availability.
- Identify local funding sources for capital and non-infrastructure bicycle, pedestrian and Safe Routes to School projects.
- Review identified high priority projects against the summary of potential funding sources in Table 1 (below) to find potential complementary matches.
- Work with partners such as health advocacy agencies to develop grant proposals for facility design and construction.
- Work with partners such as health advocacy or safety agencies to identify and apply for support from nontraditional funding sources for capital and non-infrastructure projects.
- Consider identifying a dedicated funding source in the annual city budget (e.g., a dedicated portion of general fund dollars).
- Review the list of currently programmed roadway capital improvements and maintenance projects to identify opportunities for construction of pedestrian and bicycle facilities as an incidental element of these larger ongoing projects.

Table 1: Summary of Potential Funding Sources

			Planning Design and/or Construction			
		Funding Program	**On-Street Pedestrian Facilities**	**On-Street Bicycle Facilities**	**Off-Street Shared-use Paths**	**Non-Infrastructure Programs**
Federal Sources	MAP-21	Transportation Alternatives (TAP)	✓	✓	✓	✓
		Recreational Trails Program (RTP)			✓	
		Safe Routes to School (SRTS)	✓	✓	✓	✓
		Surface Transportation Program (STP)	✓	✓	✓	
		Highway Safety Improvement Program (HSIP)	✓	✓	✓	✓
		Congestion Mitigation/Air Quality (CMAQ)	✓	✓	✓	✓
		New Freedom Initiative	✓		✓	✓
		Pilot Transit-Oriented Development (TOD)				
		Partnership for Sustainable Communities	✓	✓	✓	
		Community Development Block Grants (CDBG)	✓			✓
		Community Transformation Grants (CTG)	✓	✓	✓	✓
		Land and Water Conservation Fund (LWCF)			✓	✓
		Rivers, Trails, and Conservation Assistance (RTCA)			✓	
State Sources		WisDOT Bicycle and Pedestrian Funding Program (BPFP)	✓	✓	✓	
	DNR	Acquisition & Development of Local Parks			✓	
		Friends of State Lands			✓	
		Habitat Area			✓	
		Recreational Trails Aids (RTA)			✓	
		State Trails			✓	
		Urban Green Space			✓	
		Urban Rivers			✓	