# Connecting People & Communities: Winnebago County Bicycle & Pedestrian Plan

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Winnebago County
*The Wave of the Future*

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# ACKNOWLEDGEMENTS

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# CONTENTS


Executive Summary ..... v

Chapter 1 | Introduction ..... 1

1.1 | Vision and Goals ..... 2

1.2 | Plan Background ..... 3

1.3 | Study Area ..... 3

1.4 | The Case for Supporting Bicycling and Walking ..... 4

1.5 | Public Engagement and Outreach ..... 7

Chapter 2 | Existing Conditions and Context ..... 11

2.1 | Plans and Policies Review ..... 12

2.2 | Demographic, Socioeconomic, and Health Indicators ..... 13

2.3 | Bicycle and Pedestrian Facilities ..... 15

2.4 | County Road Conditions Analysis ..... 16

2.5 | Bicycle and Pedestrian Crash Analysis ..... 17

2.6 | Roadway Bicycle Compatibility ..... 18

2.7 | Current Levels of Bicycling and Walking ..... 19

2.8 | Existing Conditions Summary ..... 21

Chapter 3 | Policy & Program Recommendations ..... 23

3.1 | Intended Policy Outcomes ..... 24

3.2 | Objectives and Actions ..... 25

Chapter 4 | Network & Facility Recommendations ..... 33

4.1 | Classifying User Types ..... 34

4.2 | Bicycle Facility Types ..... 35

4.3 | Pedestrian Facility Types ..... 36

4.4 | Bicycle and Pedestrian Network Identification ..... 37

4.5 | Facility Selection and Recommendations ..... 41

Chapter 5 | Implementation & Funding ..... 45

5.1 | Planning-Level Cost Estimates ..... 46

5.2 | Project Prioritization ..... 49

5.3 | Implementation and Funding Strategies ..... 50

References ..... 56

Maps ..... 57

# TABLES


Table 1: Generalized Bicycling Conditions for Rural Roadways ..... 18

Table 2: Plan objectives and the policy outcomes each is intended to achieve..... 25

Table 3: Recommended network corridors..... 39

Table 4: General guidance for the selection of bicycle facilities and treatments for on-road recommendations ..... 42

Table 5: Wisconsin DOT Guidelines for Sidewalk Placement .....43

Table 6: Typical cost per mile for bicycle facilities ..... 46

Table 7: Planning-level cost estimates for the recommended network on and along County Highways .....47

Table 8: Planning-level cost estimates for the recommended network on and along State and U.S. Highways.....47

Table 9: Planning-level cost estimates for the recommended network on and along local roads..... 48

Table 10: Planning-level cost estimates for paths/trails in independent corridors ..... 48

Table 11: Planning-level cost estimates for the full recommended bicycle and pedestrian network ..... 48

Table 12: Federal funding sources for bicycle and pedestrian projects/activities ..... 54


# FIGURES


Figure 1: Public engagement participation by venue. ..... 8

Figure 2: Prioritization results for actions related to bicycle and pedestrian infrastructure. ..... 9

Figure 3: Prioritization results for actions related to bicycle and pedestrian infrastructure. ..... 9

Figure 4: Shared roadway prioritization. ..... 10

Figure 5: On-road separation prioritization..... 10

Figure 6: Off-road separation prioritization. ..... 10

Figure 7: Select demographics for rural and urban Winnebago County, and the State of Wisconsin.....13

Figure 8: County and State health indicators.10 ..... 14

Figure 9: Bicycle facilities on major rural roadways in Winnebago County.....15

Figure 10: Bicycle facilities on major rural roadways in Winnebago County. .....15

Figure 11: Percentage of rural local roads rated as having good, fair, or poor pavement conditions. ..... 16

Figure 12: Percentage of rural major roads rated as having good, fair, or poor pavement condition. ..... 16

Figure 13: Pedestrian crashes in Winnebago County by roadway type, 2005 - 2015. .....17

Figure 14: Bicycle crashes in Winnebago County by roadway type, 2005 - 2015.....17

Figure 15: Winnebago County means of transportation to work. ..... 19

Figure 16: General population catagorized by interest in bicycling..... 34

Figure 17: Miles of recommended bikeway by roadway type. ..... 41

Figure 18: Miles of recommended bikeway by facility type.. ..... 41

Figure 19: Miles of recommended bikeway by facility type. .....42

# MAPS

Map 1: Plan Study Area ..... 59
Map 2: Existing Bicycle & Pedestrian Facilities and Treatments ..... 60
Map 3: Roadway Functional Classification ..... 61
Map 4: Roadway PASER Ratings (Pavement Quality) ..... 62
Map 5: Reported Bicycle & Pedestrian Crashes, 2005 – 2015 ..... 63
Map 6: Roadway Bicycle Compatibility ..... 64
Map 7: Bicycle and Pedestrian Count Locations ..... 65
Map 8: Additional Bicycle and Pedestrian Count Locations ..... 66
Map 9: Manual Bicycle and Pedestrian Count Locations ..... 67
Map 10: Proposed On-Road Bicycle & Pedestrian Network by Corridor ..... 68
Map 11: Proposed Bicycle & Pedestrian Network by Facility Type ..... 69
Map 12: WikiMap Comments – Good Routes and Destinations ..... 70
Map 13: WikiMap Comments – Bad Routes and Barriers/Hazards ..... 71

# Connecting People & Communities: Winnebago County Bicycle & Pedestrian Plan Executive Summary

*VISION: Winnebago County encourages healthy and active lifestyles and provides a bicycling and walking network that connects communities and destinations and provides comfortable accommodations for recreation and transportation.*

Considerable planning for bicycling and walking has occurred within Winnebago County and the surrounding counties in recent years; however, much of this planning has occurred at the municipal level, leaving plans for disconnected islands of bicycle and pedestrian facilities within the region as a whole. Recognizing this, Winnebago County staff from the Health, Highway, and Parks Departments applied for a grant from the Wisconsin Department of Transportation Transportation Alternatives Program to develop a plan for the rural areas of Winnebago County.

The intent of the Plan is to connect local residents to community amenities, identify multi-modal transportation options that improve the safety and health of all county residents, and connect local and regional bicycle and/or pedestrian plans. Implementation of the Plan will encourage biking and walking for transportation and recreation, and will better connect features like parks, recreation areas, schools, public transit, retail and business centers, and residential areas. The Plan will be used as a guidance document to ensure all residents' transportation needs are considered.

## Goals of the Plan

- Increase bicycling and walking through encouragement, outreach, and education of community members and residents.
- Plan for and develop safe non-motorized transportation and recreation facilities and routes in viable corridors.
- Enforce existing transportation laws and policies to improve safety, reduce conflicts, and build mutual awareness and respect between motorists, bicyclists, and pedestrians.
- Provide performance measures and assessment tools and resources to measure participation in, and the impacts of, bicycling, walking, and active transportation in Winnebago County.

## Public Engagement and Outreach

An extensive, multi-pronged approach to public engagement was used to ensure residents were involved in the development of this plan and its recommendations. Over 150 people provided input for the Plan.

- The 16-member Steering Committee represented a variety of groups, including municipalities, businesses, residents, and other groups or organizations
- Project website disseminated information about the project and engagement opportunities
- Online mapping tool allowed participants to identify and comment on challenge areas and opportunities for improvement
- Six public engagement events solicited input on issues relating to bicycling and walking in Winnebago County
- In-person interviews of residents provided additional insights

# Results from Public Outreach Events

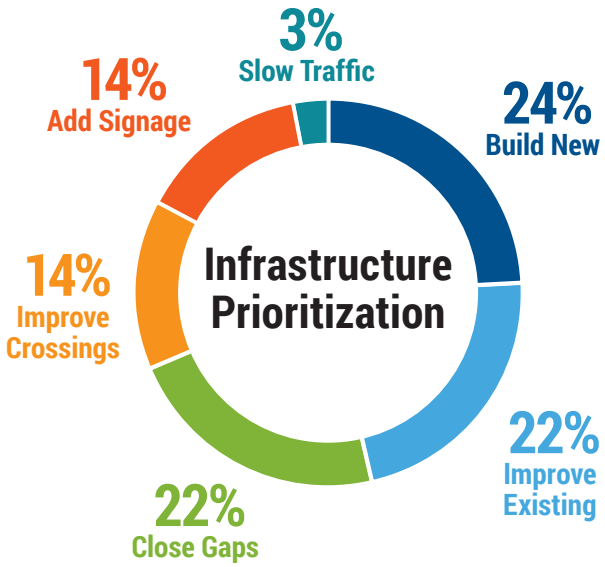
Residents attending the six public outreach events were asked to prioritize infrastructure and non-infrastructure actions.

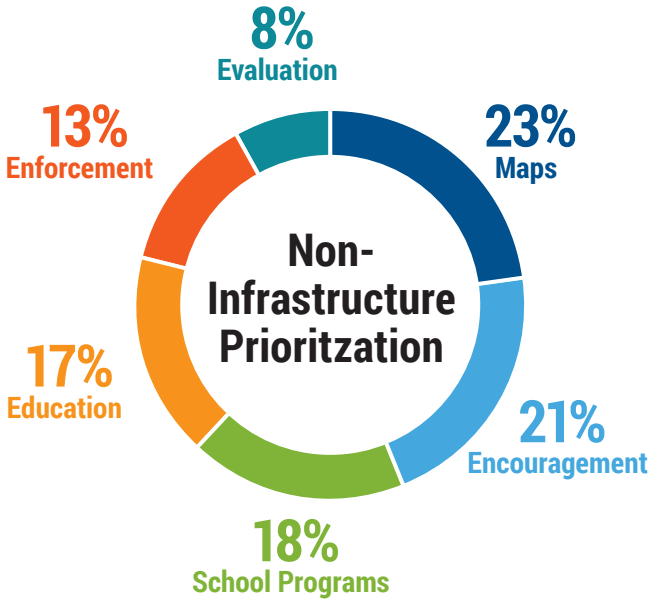
The categories receiving the greatest number of votes in the infrastructure prioritization activity include:

- Build new infrastructure;
- Improve existing infrastructure; and
- Close gaps in the bikeway and pedestrian network.

The categories receiving the greatest number of votes in the non-infrastructure prioritization activity include:

- Provide maps of the bicycle/walking network;
- Provide bicycling/walking encouragement activities; and
- Provide school programs that encourage bicycling/walking.




# Recommended Action Steps

The following recommendations are based on the Plan's goals and intended policy outcomes, which were voiced by different groups including County staff, residents, municipal representatives, and other stakeholders throughout the planning process.

1. Increase countywide cooperation towards non-motorized improvements.
2. Increase walking and bicycling in Winnebago County through education and outreach to community members.
3. Update county documents and plans to include bicycle, pedestrian, active lifestyle, and healthy living components.
4. Provide County staff with bicycling, walking, and healthy lifestyles education best practice resources.
5. Develop resources to promote bicycling and walking in Winnebago County.
6. Create opportunities for local decision-makers, area residents, and municipal staff to be made aware of bicycling and walking facilities and amenities.
7. Develop safe bicycling and walking routes that connect communities and users to destinations.
8. Pursue traditional and non-traditional funding sources for bicycling and walking improvements.
9. Initiate a countywide bicycle and pedestrian count program.
10. Increase cooperation between the Wisconsin DOT, the Highway Department, the Sheriff's Department, and local municipalities to increase safety.

# Designated Spaces to Bike and Walk

The Plan recommends specific bicycle and pedestrian facilities throughout the county, some of which are described below. Rural areas do not need many improvements to make roadways more accessible for bicyclists and pedestrians; in many cases, only minor enhancements or the construction of a paved shoulder is necessary to make the roadways more bicycle and pedestrian friendly. Minor enhancements to roadways comprise a majority of the recommended bicycle and pedestrian facilities in the Plan. Recommendation that require construction of new facilities or expansion of existing facilities should generally occur when the roadway is next scheduled for maintenance.

## Shared-Use Path or Trail

A shared-use path can be located along a road (called a "sidepath") or in an independent right-of-way such as a greenway, along a utility corridor, or an abandoned railroad corridor. Paths as part of county corridors should be at least 10 feet wide and 12 feet or wider where higher use is expected.


## Bike Lane

A bike lane designates a portion of a street for use by people on bicycles, usually in cities and villages on slower, low-traffic streets. Bike lanes are minimum 4 feet wide but are typically 5 feet wide. Wider bike lanes and/or painted buffers can be beneficial when traffic volumes or speeds are higher.

## Paved Shoulder

Paved shoulders should typically be 4 or 5 feet wide to serve as a bicycle accommodation. Many roads in the county have paved shoulders but lack continuity through intersections. Climbing lanes are a variation that provides a paved shoulder in the uphill direction, but not the downhill direction. Higher traffic roads can be improved for bicycling through the provision of wide (6-8 feet) paved shoulders.


## Minor Enhancements

Low-cost, strategically-placed pavement markings and signage can enhance bike routes and existing trails. Shared lane markings (see image) can increase awareness of bicyclists presence, indicate lane positioning, and aid in wayfinding. Consistent signage can aid in wayfinding and raise awareness of the rules of the road.

## Sidewalk

A sidewalk is a paved path along the side of a roadway. Sidewalks are commonly installed along urban roadways with a curb and gutter, but can also be installed along rural roadways. Sidewalks provide a dedicated space for pedestrians that is removed from motor vehicle traffic.

## Crosswalk

Crosswalks are areas of a roadway where pedestrians may cross the road. Crosswalks may be marked or unmarked; unmarked crosswalks exist at intersections where a sidewalk terminates on at least one side of an intersection. In Wisconsin, motorists must yield to pedestrians in crosswalks. Pedestrians may cross roadways at locations other than crosswalks, but must yield the right-of-way to vehicles on the roadway.

# Why Plan for Bicycling and Walking?

**Bicycling and Walking Increase the Quality of Life for Residents**

50% of U.S. adults meet the CDC's recommendation for 150 minutes of physical activity per week

Statewide, bicycle recreation and tourism contributed **$924M** to Wisconsin's **economy** in 2010

**1/3** the amount of the U.S. population that does not drive

**41** Winnebago County's Health Ranking out of 72 counties

There are nearly 2x as many overweight children and almost 3x as many overweight adolescents in the U.S. compared to 1980

**58%** of Winnebago County 5th graders are obese

**58%** of Winnebago County adults are overweight or obese

**In Winnebago County, 4% of workers 16 years and older take public transportation, walk, or bike to work**

## Winnebago County Local Information:

Funding: Wisconsin DOT and Winnebago County
Study Area: Rural Winnebago County
Number of Residents Impacted: 28,118
Departments Involved: Health, Highway, and Parks

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# 1 Introduction

*Connecting People and Communities*, the Winnebago County Bicycle & Pedestrian Plan (the Plan), is a strategic effort to develop a comfortable, safe, and accessible network of bicycle and walking facilities throughout the rural (non-urbanized) portion of Winnebago County. This Plan builds on existing assets in the County, including shared-use paths and trails, low-traffic roadways, Safe Routes to School programs, a diverse range of bicyclists and pedestrians, and interest from the public in improving bicycle and walking conditions and safety. The Plan strives to improve the experience of bicyclists and pedestrians throughout the county, while also addressing issues such as education and awareness, encouragement programs, and maintenance of bicycle and pedestrian facilities.

This Plan provides a succinct summary of the process that was carried out for this project. More detailed research for the project, including public input and other information, is contained in the Appendix.

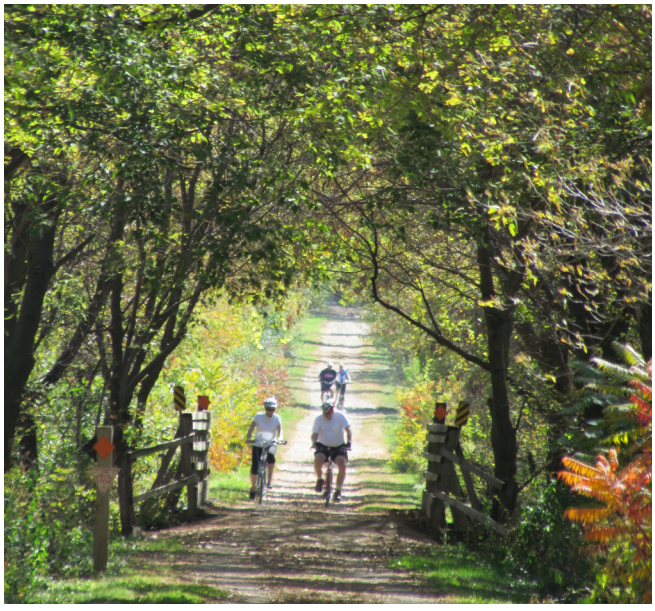
## 1.1 | VISION AND GOALS

The following vision developed by the Steering Committee guided the development of the Plan:

***Winnebago County encourages healthy and active lifestyles, and provides a bicycling and walking network that connects communities and destinations while providing comfortable accommodations for recreation and transportation.***

**Winnebago County will achieve this vision by:**

- Working with partner organizations to promote and encourage safe bicycling and walking;
- Providing safe bicycling and walking education and encouragement;
- Developing non-motorized transportation options along viable routes;
- Providing connections to and opportunities for recreational bicycling, walking, and running;
- Recognizing existing policies and programs while looking ahead towards new issues and opportunities;
- Recognizing and creating positive economic impacts, community partnerships, and regional tourism related to bicycling and walking; and
- Establishing community partnerships and resident support.



*The Mascoutin State Trail runs through Winnebago County from Berlin in Fond du Lac County to Ripon in Green Lake County.*

**Specific goals were developed to support the Plan vision:**

- Increase bicycling and walking in Winnebago County through encouragement, outreach, and education of community members and residents.
- Plan for and develop safe non-motorized transportation facilities and routes in viable corridors.
- Enforce existing transportation laws and policies to improve safety, reduce conflicts, and build mutual awareness and respect between motorists, bicyclists, and pedestrians.
- Provide performance measures and assessment tools and resources to measure participation in, and the impacts of, bicycling, walking, and active transportation in Winnebago County.

These goals are supported by specific actions that are detailed in Chapter 3. Accomplishing these goals will set the County on a course to achieve its vision and to provide transportation and recreation choices for residents, create a well-connected bikeway and pedestrian network that serves a wide range of users, and increase the safety and mobility of people walking and bicycling throughout Winnebago County.

## 1.2 | PLAN BACKGROUND

Considerable planning for bicycling and walking has occurred within Winnebago County and the surrounding counties in recent years; however, much of this planning has occurred at the municipal level, leaving plans for disconnected islands of bicycle and pedestrian facilities within the region as a whole. Recognizing this, in 2014 Winnebago County staff from the Health, Highway, and Parks Departments applied for a grant from the Wisconsin Department of Transportation (WisDOT) Transportation Alternatives Program (TAP) to develop a plan for the non-urbanized portion of Winnebago County. This plan would cover portions of Winnebago County that were not included in previous bicycle and pedestrian planning efforts, while connecting areas of Winnebago County and surrounding counties that have been included in previous plans. In August 2014, the County was awarded funding to develop a bicycle and pedestrian plan, and in September 2015, the official planning process began.

The intent of the Plan is to connect local residents to community amenities, identify multi-modal transportation options that improve the safety and health of all county resident, and connect local and regional bicycle and/or pedestrian plans. Implementation of the Plan will encourage biking and walking for transportation and recreation, and will better connect features like parks, recreation areas, schools, public transit, retail and business centers, and residential areas.

## 1.3 | STUDY AREA

The study area for this project was defined as the rural portions of Winnebago County, outside of the Appleton and Oshkosh urban areas. The Appleton and Oshkosh urbanized areas, including Neenah and Menasha, were included in the *Appleton (Fox Cities) Transportation Management Area and Oshkosh Metropolitan Planning Organization Bicycle and Pedestrian Plan* and are not included in this Plan. Map 1 displays the study area included in this Plan.

*Bicyclists and pedestrians sharing the Mascoutin State Trail.*

## 1.4 | THE CASE FOR SUPPORTING BICYCLING AND WALKING

Counties, cities, and villages across the country and Wisconsin are embracing bicycling and walking as a viable transportation mode and great form of recreation. Bicycling and walking can also support multiple objectives, including improved public health, economic development, higher-quality transportation investments, transportation equity, and reduced environmental impacts. These trends, described in more detail in the following pages, support implementation of this Plan.

### Public Support

Public outreach was a key component of the planning process. Planners and Steering Committee members connected with different groups of Winnebago County residents, employers, employees, and others to gauge interest in bicycling and walking in the county and to address concerns about bicycling and walking. Attendance at public events and input on an online interactive map demonstrated widespread interest in and support for bicycling and walking. This support was expressed by many groups, including active road cyclists; bicycle commuters and people who would like to commute by bicycle; parents of children who walk and bike to school; and recreational bicyclists, walkers and runners. At the same time, significant concerns were noted about the lack of on-road bikeways, lack of connectivity to key destinations, and the perception that bicycling and walking is not safe on many Winnebago County roads. The public outreach activities for this project are detailed in Section 1.5 of this chapter and Appendix A.

### Health

The Centers for Disease Control and Prevention recommends that adults get two and a half hours of moderate-intensity aerobic activity every week, which is equivalent to 10 minutes of brisk walking, three times per day, five days per week; only half of adults in the United States achieve this recommendation.[1] Adults who are physically active are healthier and less likely to develop the chronic diseases that are more common amongst inactive adults. Locally, nearly 60 percent of fifth graders are overweight or obese.[2] The number of children walking to school nationwide dropped substantially from the 1960's into the 2000's and has been a topic of concern in many areas. Expanded and improved bicycle and walking facilities—as well as programming such as the Safe Routes to School (SRTS) programs in Omro and Winneconne—enable children, adolescents, and adults to get exercise as a part of their daily routines. The health benefits of active transportation have also been shown to include increased labor productivity amongst adults and improved academic performance for youth.

*Paved shoulders can provide space to bicycle.*

## Economic Vitality and Tourism

Good bicycling infrastructure can provide economic benefits to residents. A motor vehicle is the second-highest household expense in the United States after housing: Americans spend on average $8,698 each year to own and operate a car.[3] In a period of high-variability in the cost of fuel, bicycling offers a lower-cost transportation option. Bicycling has an annual operating cost of approximately $300 – less than four percent of average annual car operating costs.[4] Providing transportation options can give households the option of owning fewer cars, thus freeing up household money that can be spent in the local economy. Providing transportation options also provides those without vehicles to get to areas not served by transit, as is the case in rural Winnebago County.

The construction of shared-use paths and trails has been shown to increase nearby property values.[5] This increase in property values can benefit property owners in addition to the benefits of the shared-use path or trail itself. Additionally, increases in property values benefit municipalities that recognize increased property taxes.

Tourism and events related to bicycling and walking can have significant economic impacts in communities like Winnebago County. Statewide, bicycle recreation and tourism contributed $924 million ($535 million from out-of-state tourism) to Wisconsin's economy in 2010.[6] One study found that every $1 million of spending on off-road paths and paved shoulders generated an annual $9 million worth of economic activity linked to bicycle tourism each year—an annual nine-to-one return on the investment.[7] Locally, events such as Race the Lake and facilities including the Wiouwash, Mascoutin and Friendship State Trails bring many people to Winnebago County every year to bicycle, run, or walk while also spending money at local businesses.

## Transportation Options

Improving bicycling and walking conditions will expand transportation and recreation options for Winnebago County residents and visitors. Approximately one third of the United States population does not drive because they are too young or too old, have a physical disability, do not have the economic resources to own and operate a car, or simply do not want to drive. However, many of these people can bicycle or walk to destinations if safe and convenient bikeways and pedestrian areas are present. Bicycling and walking may also be an option for the elderly who reach an age where driving is no longer an option. Older adults still need to travel to the grocery store, to medical appointments, to social and worship services, and to access recreational opportunities. Improvements to bicycling and walking conditions make it easier for Winnebago County residents to age-in-place, while also lowering transportation costs.

Providing safe and convenient bicycle and walking facilities also benefits people who rarely or never take advantage of them: for each person who bicycles to the grocery store or other destination, there is one less car on the road and one more parking space available for people who drive to the same destination. Using the bicycle to expand transportation choices in Winnebago County also applies to people who may have temporary or limited access to an auto. By relying on bicycling for a small to moderate number of trips, the purchase of a second or third motor vehicle may be averted.

## Recreation

Creating a comprehensive network of bikeways and pedestrian facilities in Winnebago County increases the opportunities for close-to-home, affordable recreation for people of all ages. Bicycle and pedestrian networks are valuable ways to enhance access to the many public parks and other recreational venues throughout the county, and to provide links into neighboring communities. On their own, shared-use paths such as the Mascoutin, Wiouwash and Friendship State Trails provide excellent recreation opportunities. Bicycling, walking and running along shared-use paths and trails are great ways to de-stress, exercise, and experience nature.

## Building Community & Public Safety

It cannot be underestimated what bicycling and walking can contribute to building community and promoting public safety. Building a strong sense of community is dependent on knowing your neighbors and meeting the people who live on the next block or in the next town. A community with residents who bicycle and walk frequently will increase the social interactions that create these bonds. More bicycling and walking also means more eyes on the road and paths. The best deterrent to crime is the active presence of people in the public realm who are engaged in constructive activities.

## Traffic Safety

Safe, clear, and consistent accommodations for bicyclists and pedestrians enhance safety for all roadway users. For example, bicycle lanes provide bicyclists clear guidance and more confidence about bicycling in the road, while also alerting motorists where they can expect bicyclists. Similarly, wider paved shoulders can provide space for pedestrians in rural areas outside of the motor vehicle travel lanes. Research indicates that areas with more bicycling trips per capita have a lower frequency of bicycle/motor vehicle crashes than areas with lower numbers of bicycling trips per capita; when bicyclists are encountered more frequently on streets, motorists become more accustomed to sharing the road with them.[8] There is also well-documented research that has found that bicycle accommodations also make driving safer. For instance, paved shoulders reduce the incidence of several motor vehicle crash types, decrease roadway maintenance costs, and also provide space for bicyclists and pedestrians.

## Environment

Replacing motor vehicle trips with bicycling or walking trips can make small, but meaningful contributions to solving environmental issues like air pollution and climate change. Increased levels of bicycling and walking reduce fossil fuel consumption, air pollution, and carbon emissions. While every car trip cannot be replaced with a non-motorized trip, every trip that is replaced by bicycling or walking does reduce pollution, especially when the trip covers a short distance. Based upon research conducted by the U.S. Environmental Protection Agency, it is estimated that up to 80% of the pollution created by automobiles is emitted in the first few minutes of operation, before pollution control devices begin to work effectively.[9] Replacing very short motor vehicle trips with bicycle or walking trips can have an outsized environmental impact.

## Quality of Life

All of the factors noted above can contribute to an increased quality of life for Winnebago County residents. A well-connected network of bikeways and pedestrian facilities throughout the county will provide transportation and recreation options for residents, may lead to improved health for the community as a whole, and may provide economic benefits. All residents, not just the ones who use the bicycle and pedestrian networks, benefit from decreased congestion on local roads, a safer transportation system, improved air quality, and robust local economies.

## 1.5 | PUBLIC ENGAGEMENT

The public should be closely involved in the development of a project such as this one to ensure that the final recommendations meet the needs of residents, have local support, and can be carried out by government officials. An extensive, multi-pronged approach to public engagement was used to ensure that the public was involved in the development of this Plan and its recommendations. A summary of the public engagement process is presented in this section, with more detail presented in Appendix A.

### Public Engagement Forums

Outreach to the public and stakeholders occurred though a variety of forums and venues that are described below.

#### *Steering Committee*

A Steering Committee, comprised of 16 people, was selected to guide the development of the Plan and its recommendations. Steering Committee members were selected to represent a variety of groups, including municipalities within the study area, local businesses, residents, and other groups or organizations. The Steering Committee met five times over the course of the project to set a vision and goals for bicycling and walking in Winnebago County, recommend facility locations, discuss bicycle and walking issues, and review draft recommendations and materials prepared for the Plan, as well as the draft Plan itself.

#### *Online Mapping Tool (WikiMap)*

WikiMap is an online interactive public involvement platform that allows participants to identify and comment on specific challenge areas and opportunities to improve bicycling and walking conditions on an online interactive map. A WikiMap was available for input from April 4 through May 31, 2016, and was promoted on the project website, through email listservs, at public events, and through other venues. WikiMap participants provided information related to barriers to walking and bicycling; destinations for walking and bicycling; good routes for walking and bicycling; and bad routes for walking and bicycling.

*Plan Steering Committee members mapping walking routes.*

#### *Project Website*

The project website, which was hosted at http://www.rethinkwinnebago.org/Our-Projects/bike-ped-plan.html, served as the central place for disseminating information about the project and engagement opportunities online. The website was updated regularly with information about work-to-date and public engagement opportunities.

#### *Public Events*

An "Event in a Box" (EB) kit was prepared as part of the Plan outreach efforts. The EB included materials to solicit input on issues relating to bicycling and walking in Winnebago County, as well as an instruction packet for volunteers or staff to solicit input at events. The EB was employed at six events from March through July 2016. Information promoting the Plan was also made available at additional events, including a Fox Trot Run/Walk in Omro on May 7, 2016, and the Meet in the Middle ride near Butte des Morts on May 21, 2016.

Attendees at the events were asked to participate in two activities to identify their priorities:

- Identify which actions to improve bicycling and walking in Winnebago County should be a priority; and
- Identify which types of bicycling and walking facilities should be implemented by the County.

#### *In-Person Interviews*

An intern for the Winnebago County Health Department, Alyssa Valentyne, conducted in-person interviews about bicycling and walking in Winnebago County. The interviews were conducted at the Winneconne American Legion meeting on April 4, 2016, and at the Saint Mary's Church Spanish Mass in Omro on May 8, 2016. Over 30 people participated in the interviews.

## Public Outreach Summary

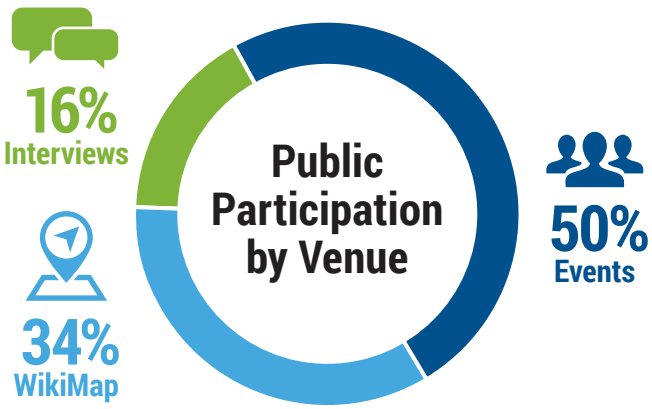
Input from the public was a critical component in developing the recommendations for facilities, programs, and policies to improve bicycling and walking conditions in Winnebago County contained in this Plan. Input from the public highlighted the types of improvements residents and non-residents would like to see for bicycling and walking, the challenges they face while walking and bicycling in the study area, and routes that are good and bad for bicycling and walking. Highlights of the public engagement are provided below with more detail in Appendix A.

### *Participation*

Over 150 people formally signed-in at public engagement events, with additional people participating without signing in as shown in Figure 1.

- Half of the public participation occurred at various events where the Event in a Box was employed.
- Approximately half of the participants at the events reported that they live in the Plan study area; the remainder live in the urban areas of Winnebago County or outside the county.
- Over 60 individuals provided over 180 comments on the WikiMap.

Figure 1: Public engagement participation by venue.





*Event in a Box materials on display at a public outreach event.*

### *Action Prioritization*

People attending events where the Event in a Box was utilized were asked to prioritize actions related to bicycle and pedestrian infrastructure (the built environment), and actions related to non-infrastructure programs and policies that impact bicycling and walking; attendees were allowed to vote for three actions/activities in each category area.

As shown in Figure 2, the categories receiving the greatest number of votes in the infrastructure prioritization activity include:

1. Building new infrastructure,
2. Improving existing infrastructure, and
3. Working to close gaps in the bikeway and pedestrian networks.

As shown in Figure 3, the categories receiving the greatest number of votes in the non-infrastructure prioritization activity include:

1. Providing maps of the bicycle/walking network;
2. Providing bicycling and walking encouragement activities; and
3. Providing school programs that encourage bicycling and walking.

Participants who live within the study area and those who live outside the study area (in urban areas or outside the county) were largely in agreement with the actions they prioritized. However, participants living within the study area were more likely to prioritize adding signage to highlight bicycling and walking routes than participants not living in the study area. Another primary area of difference was that participants living outside the study area prioritize improving existing infrastructure and improving crossings at a higher rate than participants living in the study area. The higher prioritization of improving crossings by participants who live outside the study area is not surprising: these people are more likely to have to cross major roadways to walk, run, or bicycle in the study area than people who already live in the study area. There were not significant differences in the prioritization of non-infrastructure actions.

Figure 2: Prioritization results for actions related to bicycle and pedestrian infrastructure.

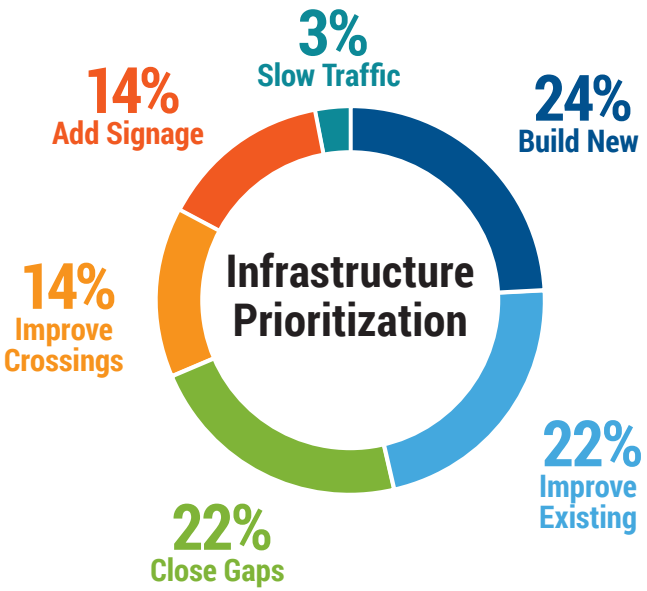
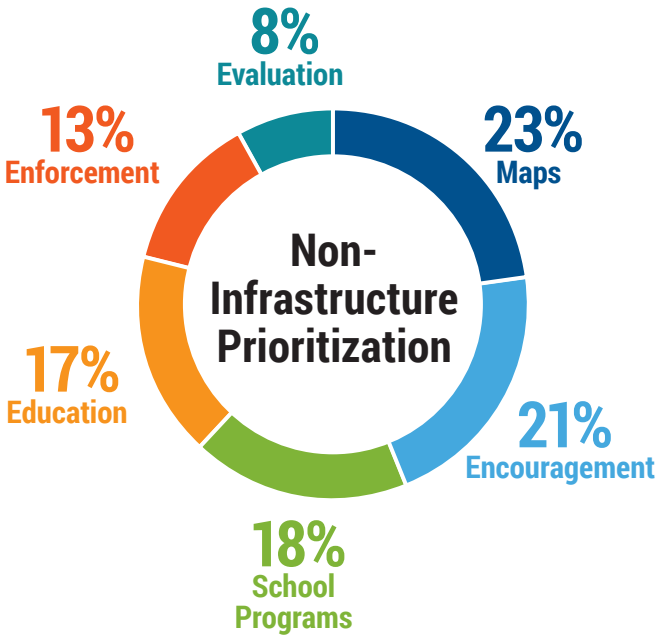



Figure 3: Prioritization results for actions related to bicycle and pedestrian infrastructure.



### *Facility Type Prioritization*

Event participants were also asked to rank various types of bicycle and pedestrian facilities as low, medium, or high priority for the County to consider. Figures 4, 5, and 6 display prioritization results for the following types of facilities:

- **Shared Roadways:** Shared roads, signed routes, and shared lane markings
- **On-Road Separation:** Paved shoulders (4'), wide paved shoulders (6'+), and bike lanes
- **Off-Road Separation:** Shared-use paths, trails, and sidepaths

Participants demonstrated a clear desire for more facilities that provide separation between motor vehicles and bicyclists and pedestrians: facilities that provide separation between bicyclists/pedestrians and motor vehicle traffic—shared-use paths, bike lanes, paved shoulders and sidewalks—were given significantly higher high priority ratings than shared roadways.

Across all facility types, participants living in the study area and outside the study area provided the same overall prioritizations. More detail on the voting results is provided in Appendix A.

### *Key Public Input Themes*

- **Residents want more bicycle and walking infrastructure** When asked to prioritize infrastructure actions, participants overwhelmingly favored building new facilities, in contrast to filling in minor gaps or slowing motor vehicle traffic.
- **Residents want improvements to existing infrastructure** Despite strongly favoring the building of new bicycling and walking facilities, participants also recognized the need to maintain and improve existing facilities for walking and bicycling in Winnebago County.
- **Residents want separation from motor vehicles** Participants prefer shared-use paths, wide paved shoulders, and bike lanes over treatments such as shared lane markings and signed routes, which do not provide separation from motor vehicles.
- **People want investment in non-infrastructure programs** Participants support strategies such as producing maps that show biking and walking routes, as well as increasing traffic education for all road users.

Figure 4: Shared roadway prioritization.

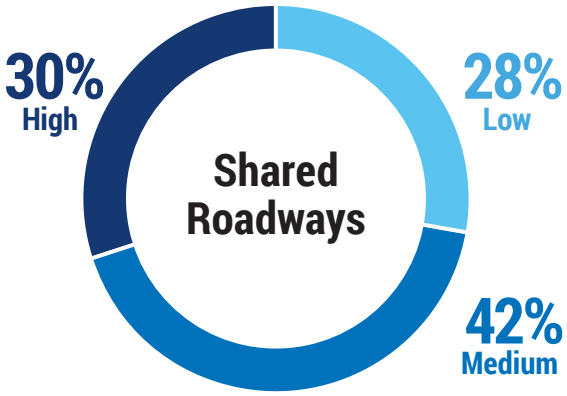



Figure 5: On-road separation prioritization.

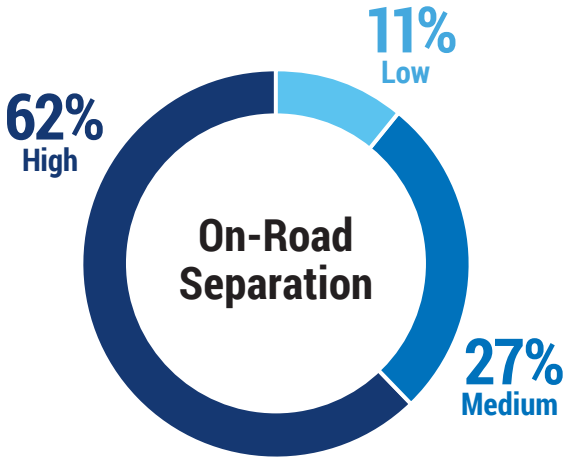
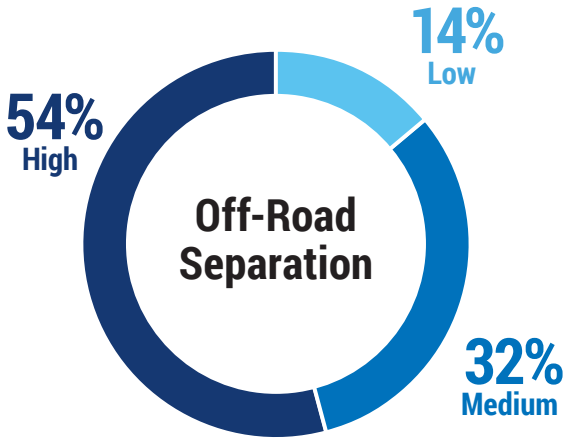



Figure 6: Off-road separation prioritization.



# 2 Existing Conditions and Context

Winnebago County is bounded by Outagamie and Waupaca Counties to the north, Waushara and Green Lake Counties to the west, Fond du Lac County to the south, and Calumet County and Lake Winnebago to the east. As it is a central location within East Central Wisconsin, Winnebago County provides a critical cultural, recreational, economic and infrastructure hub for the region. With an overall countywide population of almost 167,000 residents, it is the seventh-largest county in Wisconsin by population. The county is largely rural in nature but is home to two larger urban centers flanking Lake Winnebago. In addition to the rural qualities, Winnebago County is also part of a larger water system including large lakes, rivers, and streams and has large nature reserves composed of marshes and wetlands.

This chapter and Appendix B focus on the current status of bicycle and walking in Winnebago County. This includes a review of existing plans and policies, demographic and socioeconomic breakdowns, current bicycle and pedestrian trends, and existing roadway conditions.

## 2.1 | PLANS AND POLICIES REVIEW

Winnebago County has a series of local, county, and regional documents relevant to walking and bicycling in Winnebago County. The following existing plans, policies, and programs were reviewed for relevance to this planning process:

- Winnebago County Comprehensive Plan: 2016-2035
- Winnebago County General Code
- Annual Winnebago County Capital Improvements Program Document
- Oshkosh/Winnebago County Community Health Improvement Plan—2010, 2016
- Appleton (Fox Cities) Transportation Management Area and Oshkosh Metropolitan Planning Organization Bicycle and Pedestrian Plan—2014
- Long Range Transportation/Land Use Plan—2050 (Appleton (Fox Cities)/Oshkosh Urbanized Area)
- City of Oshkosh, Wisconsin Pedestrian and Bicycle Circulation Plan—2011
- Town of Menasha (Village of Fox Crossings) Bicycle and Pedestrian Plan—2015
- Regional Safe Routes to Schools (SRTS)
- Local SRTS Programs
- Local Municipal Plans and Documents
- Wisconsin Pedestrian Policy Plan 2020/Wisconsin Bicycle Transportation Plan 2020
- Adjacent County Plans and Tools

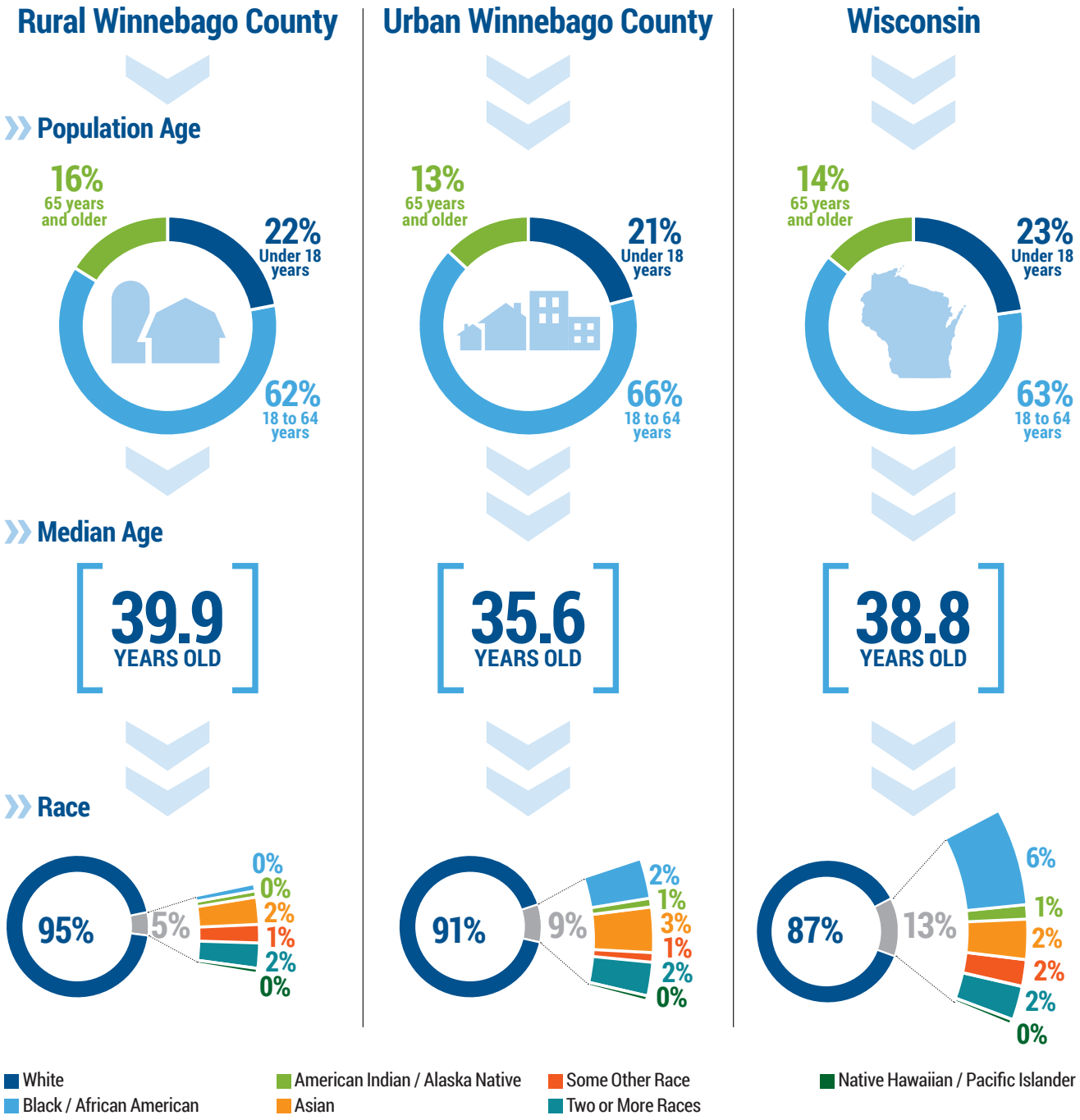
Brief summaries of these plans and their applicability to walking and bicycling in Winnebago County are provided in Appendix B.

*The Tribal Heritage Crossing was completed in 2013 and is popular for walking and bicycling.*

## 2.2 | DEMOGRAPHIC, SOCIOECONOMIC, AND HEALTH INDICATORS

Winnebago County is unique in its development pattern with urban developments located primarily on major waterways while the rest of the county is primarily rural and consists largely of agricultural and recreation-based land uses. The demographic and socioeconomic breakdown reflects these unique aspects of the county. Figure 7 displays select demographic statistics for rural and urban Winnebago County and the state of Wisconsin; for this purpose, the urban area of Winnebago County includes the cities of Appleton, Menasha, Neenah, and Oshkosh. Generally, the population of rural Winnebago County is somewhat older and considerably more Caucasian than the populations of urban Winnebago County and Wisconsin as a whole.

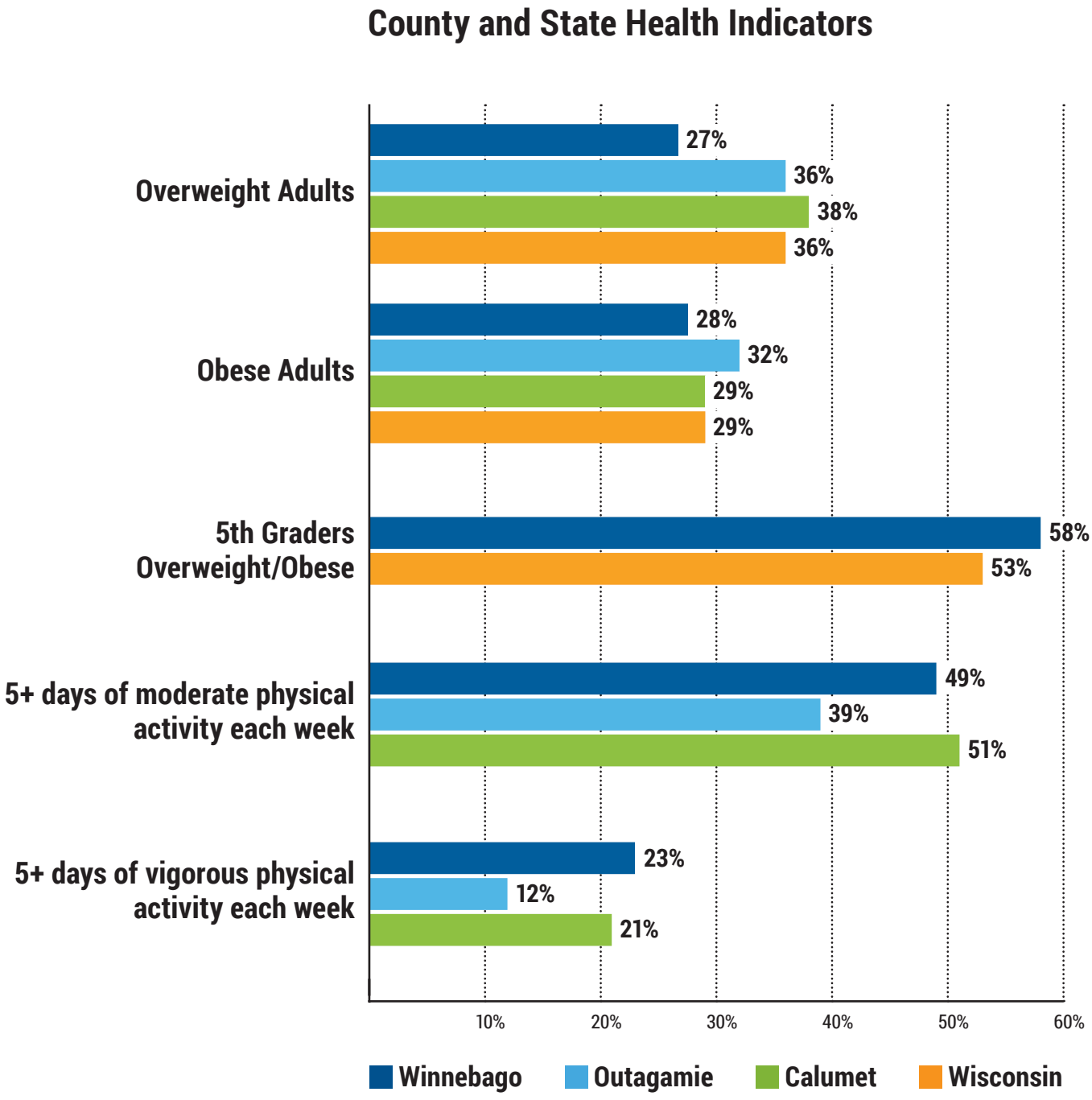
Figure 7: Select demographics for rural and urban Winnebago County, and the State of Wisconsin.



## Health Indicators

Winnebago County's health ranking is 41 out of 72 total counties in Wisconsin. Winnebago County is ranked lower on health indicators than Outagamie County (23 of 72) and Calumet County (3 of 72). Winnebago County recognized these concerns in 2010 and set forth priorities within the County Health Improvement Plan (CHIP) to address physical activity and health recreation opportunities. The 2016 CHIP went a step further in identifying "place connectedness" and "access to opportunities that improve health," like active transportation options, as important factors that the community views as health impactors. Figure 8 displays select health indicators for Winnebago, Outagamie, and Calumet Counties, and the State of Wisconsin.

Figure 8: County and State health indicators.[10]



## 2.3 | BICYCLE AND PEDESTRIAN FACILITIES

Increasing amounts of bicycle and pedestrian infrastructure has been provided in Winnebago County in the last ten years, although the majority of this has occurred within the urbanized areas of the County, and not within this Plan's study area. In the rural area of Winnebago County, approximately 22 percent of major roadways have a bicycle facility of some sort, primarily paved shoulders of varying widths. Figure 9 displays the percentage of major rural roads with specific bicycle facility types. Map 2 displays the existing bicycle and pedestrian infrastructure in Winnebago County (excluding sidewalks) and Map 3 shows existing bicycle and pedestrian infrastructure in relation to current Winnebago County major road classifications. More detail about bicycle facilities countywide is provided in Appendix B.

When considering pedestrian facilities, 42 percent of all roadways in Winnebago County (the entire county) have sidewalks. Pedestrian facilities are most desirable due to high motor vehicle traffic speeds and volumes on major urban and rural roads—yet only 30 percent of these roads have sidewalks. Figure 10 displays the miles of major urban, rural, and all major county roads with and without sidewalks. The rural area sidewalks in Figure 10 are largely in the City of Omro and Village of Winneconne.

In addition to the bikeways and sidewalks detailed above, an additional 26 miles of shared-use paths or trails exist in independent corridors and are not associated with a road classification. These facilities include the Wiouwash and Mascoutin State Trails as well as other shared-use trails and paths in independent rights-of-way rather than within roadway corridors.

It is important to note the lack of designated bicycle and pedestrian facilities in the rural sections of the county; while many local roads may not need a bicycle or pedestrian facility due to very low traffic volumes, major roadways often do. While the total mileage of paved shoulders suggests a fairly robust system of bicycle accommodations, Map 2 and Map 3 show a different picture as the majority of paved shoulders are on busier State highways, an environment that is not as comfortable for bicycle and pedestrian travel as County highways or local roads.

Figure 9: Bicycle facilities on major rural roadways in Winnebago County.

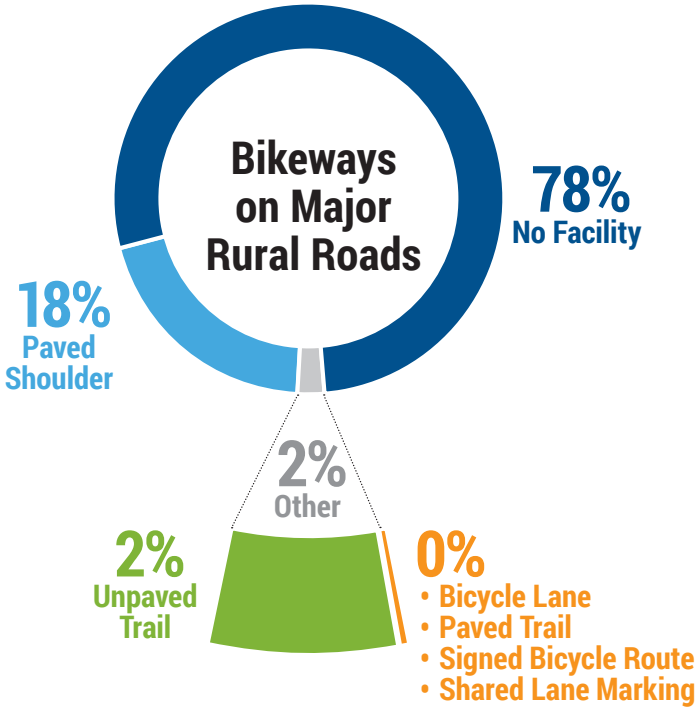
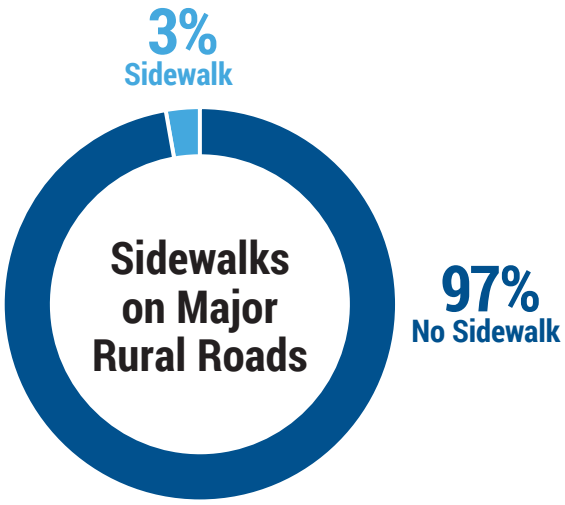



Figure 10: Bicycle facilities on major rural roadways in Winnebago County.



## 2.4 | COUNTY ROAD CONDITIONS ANALYSIS

Winnebago County and the communities within have had an aggressive maintenance schedule for community, county, and regional roadways, and as such, are seeing positive results in road quality rankings.

### Winnebago County WISLR Rating Analysis

The Wisconsin Information System for Local Roads (WISLR) is a road-based conditions analysis tool that municipalities use to rate area roads. Map 4 provides a visual of 2015 WISLR data. The 2015 conditions are rated on a 1-10 scale with ten being the highest quality roadway and one being the poorest. The conditions are further broken down into three categories; Poor (1-4), Fair (5-7), and good (8-10).

Overall, rural Winnebago County has generally good road conditions, as shown in Figures 11 and 12. The majority of local roads and major roads are rated good or fair. Relating the overall 2015 WISLR ratings to future Capital Improvement Program (CIP) and location characteristics will be important in outlining future facility locations and recommendations.

Figure 11: Percentage of rural local roads rated as having good, fair, or poor pavement conditions.

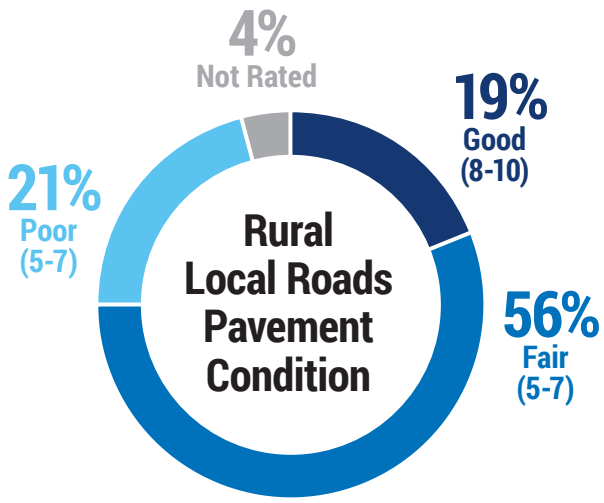
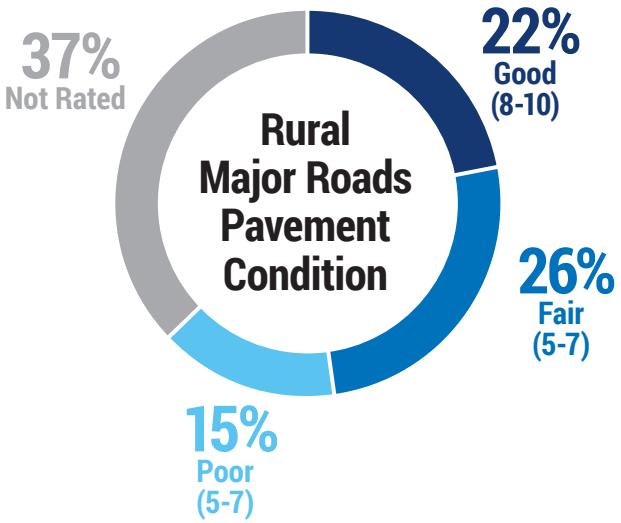



Figure 12: Percentage of rural major roads rated as having good, fair, or poor pavement condition.



## 2.5 | BICYCLE AND PEDESTRIAN CRASH ANALYSIS

Crash information relating to bicyclists and pedestrians is collected for every incident where a report was developed. These incidents were combined from 2005 to 2015 and reduced down to several key locations and user types. It is important to note that the crash documentation only includes collisions where public safety authorities were called and filed a report. If a user did not file a police report or call for aid, then the issue was not documented; this suggests that the numbers provided are lower than the actual incident totals.

Overall the county experienced a total of 983 bicycle- or pedestrian-related crashes from 2005 through 2015. Of the 983, only 49 were recorded outside of the region's urban centers. As shown in Figures 13 and 14, a total of 30 pedestrian and 19 bicyclist crashes were recorded on rural roads over the ten-year period. Map 5 displays the locations of documented crashes. Even though the number of recorded crashes is low in Winnebago County's rural area, some trends are worth noting:

- Larger numbers of crashes occurred in or near the City of Omro and State Highway 21. These crashes could be due in part to the greater population of Omro relative to the rural areas of the County, as well as the higher traffic volume and speeds along the State highway.

A number of crashes occurred along County Highway II in the northern part of the county. This east-west county road leaves the Village of Fox Crossing (formally Town of Menasha) and continues west and north to the Village of Fremont in Waupaca County. The higher occurrence of crashes suggests that County Highway II has higher levels of bicyclists and has countywide transportation significance.

- Many crashes parallel Interstate 41. Though many crashes are located within the urban centers, the regional importance of the interstate should lead to a closer look at how to make interstate crossings safer throughout the county

Figure 13: Pedestrian crashes in Winnebago County by roadway type, 2005 - 2015.

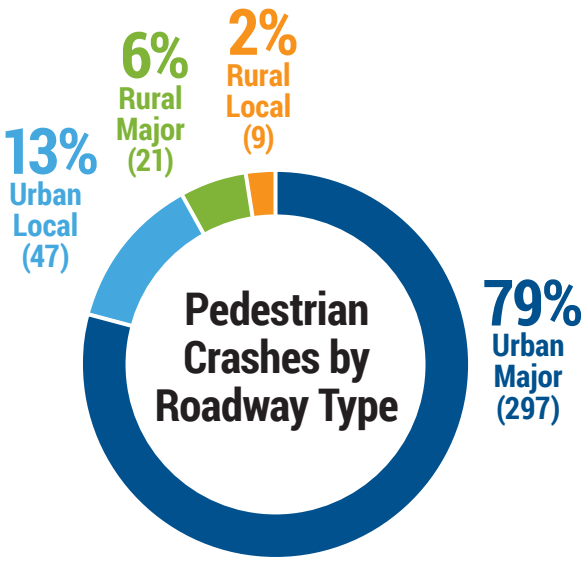
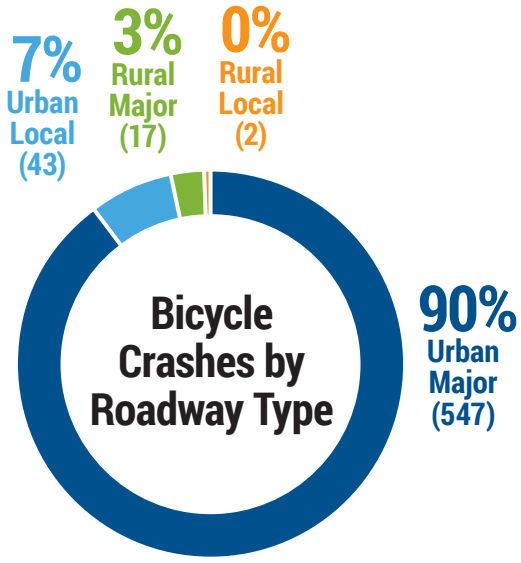



Figure 14: Bicycle crashes in Winnebago County by roadway type, 2005 - 2015.



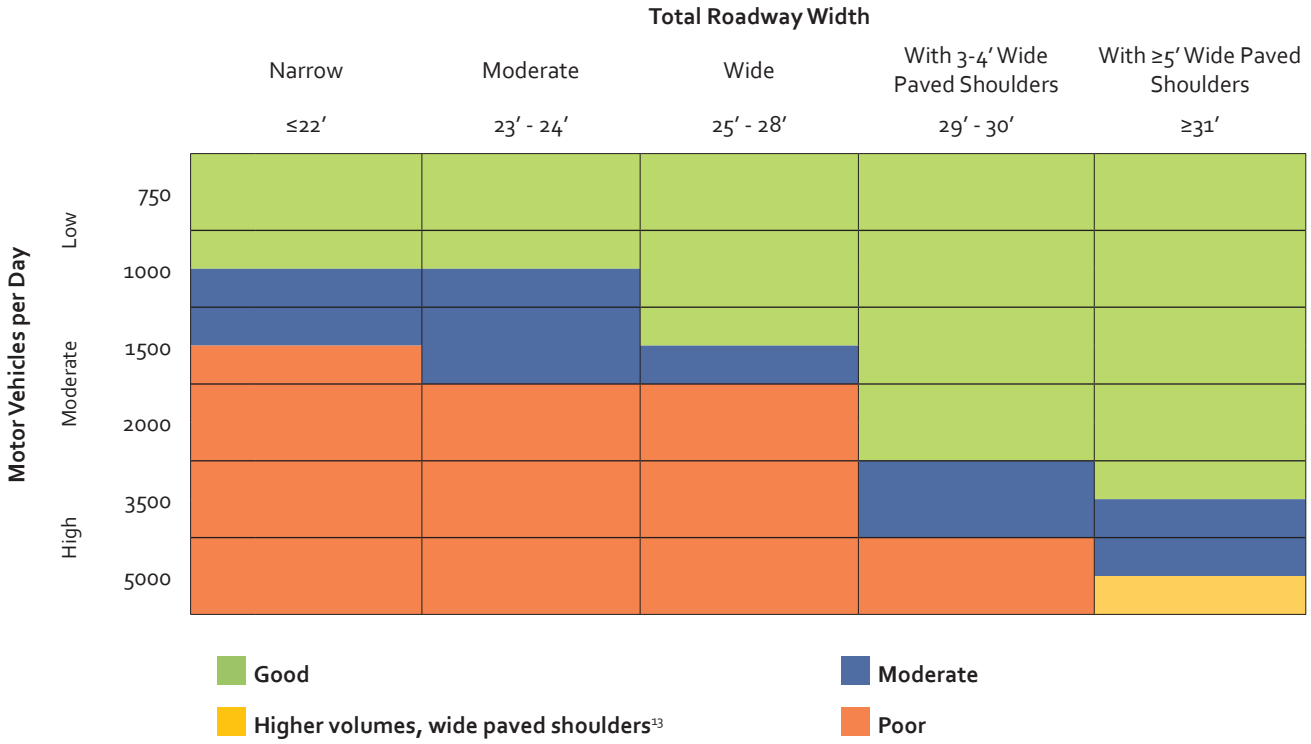
## 2.6 | ROADWAY BICYCLE COMPATIBILITY

The Wisconsin Department of Transportation (WisDOT) provides a methodology for calculating bicycle compatibility for rural roads, which has been used for several decades in Wisconsin, Iowa, and other states. The model was designed to be sensitive to the conditions of low and moderate volume rural roadways and was based on the probability of a conflict between bicyclists and passing vehicles based on research performed as part of a National Cooperative Highway Research Program (NCHRP) study.[11] Very few rural roads with low volumes of traffic have enough width to allow three vehicles (two passing motorists and a bicyclist) to comfortably share the same linear space. The statistical probability of motor vehicle/bicycle conflict has a major impact on the suitability of a roadway for shared use and overall safety. The model was made sensitive to traffic volumes based on earlier research conducted for warranting passing lanes on highways. The model uses factors including average daily traffic volume, roadway width, percent solid yellow center line, and percent truck traffic. Based on a combination of these factors, roadway segments are rated "Good", "Moderate," or "Poor" for bicycling. A generalized explanation of the methodology is displayed in Table 1.

Because of the higher traffic speeds experienced along rural roadways, the "Good conditions" category is appropriate for most adult bicyclists; this type of road would likely not be appropriate for younger children.

Map 6 displays the bicycle compatibility rating described in Table 1 for roadways within the Winnebago County Bicycle and Pedestrian Plan study area. The vast majority of town roads and county highways rate in the "Good" conditions category, while most of the state highways rate in the "Poor" category. While the "Good" roadways cover much of Winnebago County, they are often broken up by "Poor" roadways that must be crossed or traversed for short distances, particularly in and out of urban areas.

Table 1: Generalized Bicycling Conditions for Rural Roadways[12]



## 2.7 | CURRENT LEVELS OF BICYCLING AND WALKING

It is challenging to estimate current levels of bicycling and walking in Winnebago County, or in other locations for that matter. This section briefly describes efforts that have been undertaken to quantify bicycling and walking levels in Winnebago County; more detail is provided in Appendix B.

### American Community Survey

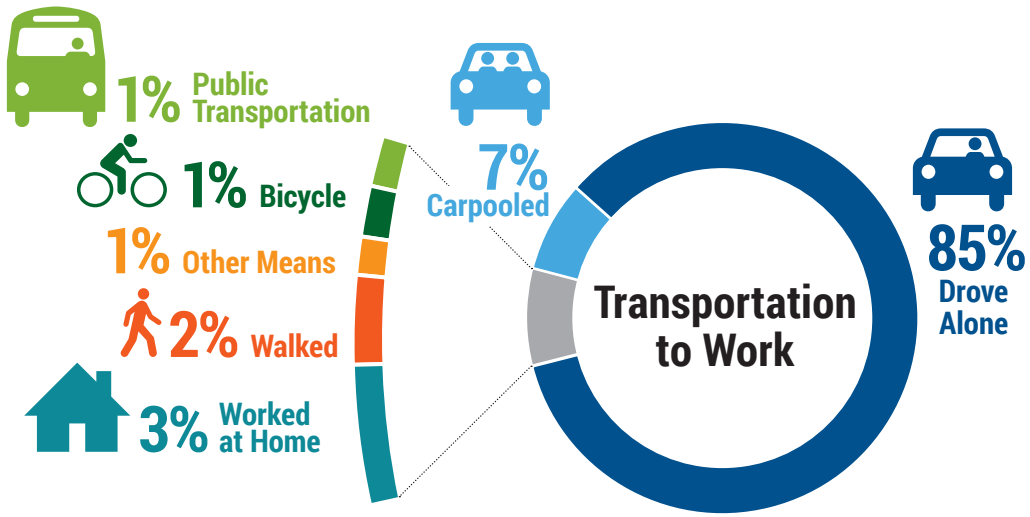
Mode share is the percentage of trips made using specific modes of travel, such as driving, using transit, bicycling, or walking. The primary source for determining the percentage of Winnebago County residents that ride a bike or walk on a regular basis (that is, the bicycle or pedestrian mode share) is the American Community Survey (ACS). The ACS is administered by the U.S. Census Bureau on an ongoing basis and asks, "Thinking about the previous week, what was your primary mode of transportation to work?" The survey presents some issues with accurately measuring mode share:

- The data only represents trips to work, which are a small percentage of the total number of trips people typically make in a week.
- If someone drove to work or took the bus three days out of the week and biked the other two days, they are recorded only as driving or taking transit to work (the primary mode for that week).

Despite these drawbacks, ACS data is one of the best resources available for determining mode share because the survey is carried in the same format for all municipalities from year to year.

The region's rural nature plays into the residents' overall transportation methods. Figure 15 shows that approximately 92 percent of all workers over the age of sixteen drive or commute via automobile on a regular basis. If the urbanized areas are not included, the rate of commuting by motor vehicle is even higher: nearly 98 percent of all worker commute trips. The countywide statistics towards bicycle and walking closely mirror this result. The countywide rate of bicycling or walking to employment for workers over the age of sixteen is 0.9 percent and 2.3 percent, respectively. Again, in rural areas this percentage is likely considerably lower, due to the higher share of walking and biking in the urbanized areas in the eastern part of the county.

Figure 15: Winnebago County means of transportation to work.



## Bicycle and Pedestrian Counts

In 2015 and 2016, Winnebago County, in partnership with East Central Wisconsin Regional Planning Commission and the Wisconsin Department of Transportation, completed a series of bicycle and pedestrian counts intended to provide a snapshot of the number of bicyclists and pedestrians using different roadways and trails. Two different types of counts were conducted:

- **Remote counts** were completed using tools including passive infrared trail counters, pneumatic bicycle counters, and smartphone-based measuring applications.
- **In-person counts** were completed by the Winnebago County Health Department by having a person physically count bicyclists and pedestrians at a specific location.

*Data is collected from an automated count device.*

### *Remote Counts*

A total of 24 individual counts were completed in 2015 with an additional 43 counts in 2016. Of the 67 total count locations completed, 21 sites used pneumatic tubes and measured bicycling levels; pedestrian-only counts were completed at 7 locations; and 46 of the locations counted the bicyclists and pedestrians combined. Maps 7 and 8 display the count locations and the number of bicyclists and pedestrians counted at each location. More information about the counts is presented in Appendix B.

### *In-Person Counts*

In 2015, Winnebago County developed the *2015 Baseline Data & Analysis for Connecting People and Community* to provide a comprehensive look at walking and bicycling trends within the county. The entire baseline analysis is available at http://www.rethinkwinnebago.org/Our-Projects/bike-ped-plan.html. A total of 28 individual audits were completed at various locations within the county to count bicyclists. Map 9 displays the count locations and the number of bicyclists and pedestrians counted at each location. Each audit provided a description of the location and amenities, count characteristics, and various other concerns/assets noted.

## 2.8 | EXISTING CONDITIONS SUMMARY

Winnebago County is experiencing a walking and biking renaissance of sorts: area residents and community members are increasingly using existing facilities and asking for more. Overall the state of walking and bicycling facilities in the county is stronger in the urban areas and small towns like City of Omro and Village of Winneconne, but is limited in the more rural portions of the county. Regional trails such as the Friendship, Mascoutin and Wiouwash State Trails provide valuable connections because of the limited interactions with motor vehicles along their length. The lack of cross streets and driveways allow these trails to function as a sort of multimodal highway where the trail user rarely needs to stop. These few high-quality facilities have not yet grown into a cohesive system of designated routes that connect communities on a countywide basis and primarily function as recreational facilities.

The County's planning and development process supports the inclusion of higher-quality bicycle and pedestrian facilities in new developments and road reconstruction. This is most evident in the policies and plans enacted throughout the county. In conclusion, the County should:

- Continue to support the policy efforts laid out in various county documents such as the Winnebago County Comprehensive Plan and the Oshkosh/ Winnebago County Community Health Improvement Plan; and
- Officially adopt additional administrative policies such as wider paved shoulders.

These actions will help to safely increase the level of non-motorized users and aid in decreasing the number of bicycle and pedestrian crashes with vehicles.

*A family enjoys the Mascoutin State Trail in southwestern Winnebago County.*

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# 3 Policy & Program Recommendations

Policies and programs at the County and municipal levels are essential for the successful implementation of this Plan. This chapter provides objectives and specific actions that will lead to improved walking and bicycling conditions in Winnebago County. The objectives are based on the Plan's goals and intended policy outcomes, while the actions provide specific steps to achieve each objective.

## 3.1 | INTENDED POLICY OUTCOMES

Throughout the development of this Plan, a variety of desired outcomes were voiced by different groups including County staff, the public, municipal representatives, County staff and other stakeholders. These outcomes can be consolidated into eight categories:

**1. Partnerships:** Continue or create internal County partnerships and external interactions with local communities and organizations to implement bicycling or walking improvements.

**2. Behavior:** Encourage behavior change to increase bicycling and walking.

**3. Outreach and Promotion:** Provide coordinated outreach to promote bicycling and walking.

**4. Infrastructure Development:** Provide safe, convenient, and connected bicycling and walking infrastructure.

**5. Safety:** Promote safety for all roadway and trail users through education, outreach, and infrastructure improvements.

**6. Economic:** Provide data to legitimize current initiatives and future investments in bicycling and walking infrastructure and programming.

**7. Document:** Incorporate bicycling and walking components into local, county, and regional planning and implementation processes.

**8. Funding:** Provide strategies, actions, and outcomes to fund future infrastructure, programming, and policy recommendations.

## 3.2 | OBJECTIVES AND ACTIONS

This section presents specific objectives and actions to achieve the vision, goals, and intended policy outcomes of this Plan. Table 2 lists 10 objectives and notes the policy outcomes that each objective is intended to achieve. Specific actions are provided to achieve each objective. Each action includes a performance measure to gauge progress against, a general timeline for implementation, and partners who may be involved with implementing each action. The actions are intended to be carried out or overseen by a Plan implementation team comprised of County staff members; it is recommended that the implementation team include staff from the County Highway, Parks, and Heath departments—the three departments sponsoring development of the Plan.

Appendix C provides a logic model that was used to develop the objectives and actions based on input from the Plan Steering Committee, staff, and the public.

Table 2: Plan objectives and the policy outcomes each is intended to achieve

| | Objective | Partnerships | Behavior | Outreach & Promotion | Infrastructure Development | Safety | Economic | Document | Funding |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Increase countywide cooperation towards non-motorized improvements. | ✓ | | | | | | | |
| 2 | Increase walking and bicycling in Winnebago County through education and outreach to community members. | | ✓ | ✓ | | | | | |
| 3 | Update county documents and plans to include bicycle, pedestrian, active lifestyle, and healthy living components. | ✓ | | | ✓ | | | ✓ | |
| 4 | Provide County staff with bicycling, walking, and healthy lifestyles educational best practice resources. | ✓ | | | | | | ✓ | |
| 5 | Develop resources to promote bicycling and walking in Winnebago County. | | ✓ | ✓ | | | | ✓ | |
| 6 | Create opportunities for local decision-makers, area residents and municipal staff to be made aware of bicycling and walking facilities and amenities. | | | ✓ | | | | | |
| 7 | Develop safe bicycling and walking routes that connect communities and users to destinations. | | | | ✓ | ✓ | | | |
| 8 | Pursue traditional and non-traditional funding sources for bicycling and walking improvements. | ✓ | | | | | ✓ | | ✓ |
| 9 | Initiate a countywide bicycle and pedestrian count program. | | ✓ | | | | | ✓ | |
| 10 | Increase cooperation between the Wisconsin DOT, the Highway Department, the Sheriff's Department, and local municipalities to increase safety. | ✓ | | | | ✓ | | | |

## Objective 1: Increase countywide cooperation towards non-motorized improvements.

Improving bicycling and walking conditions in Winnebago County will require the cooperation and coordination of many different municipalities, agencies, and departments. This coordination will best be achieved through the establishment of formal groups responsible for oversight of walking and bicycling initiatives in Winnebago County.

| ACTION | PERFORMANCE MEASURE | TIMELINE | PARTNERS |
|---|---|---|---|
| Develop an internal coordination group to provide interdepartmental feedback on upcoming infrastructure and policy projects. | Internal County staff coordination group is created to focus on healthy living, bicycling and walking opportunities | 1-3 years | • Winnebago County staff |
| Create an external coordination group to address countywide bicycling and walking opportunities. | Countywide advisory committee focusing on healthy living, bicycling and walking is created (e.g. team within re:TH!NK) | 1-3 years | • Winnebago County staff<br>• Townships and municipalities<br>• Area advocacy organizations |

## Objective 2: Increase walking and bicycling in Winnebago County through education and outreach to community members.

Small incentives or events can help encourage and facilitate walking and bicycling. Often a simple challenge or perks like commuter stations providing coffee and bagels during Bike to Work Week/Walk to Work Week can spur people to walk or bike for a trip for which they may have otherwise driven. In order to encourage more walking and bicycling in Winnebago County and to promote new pedestrian facilities and bikeways that have been installed, the County should work with others to support select bicycle- and walking-related events over the course of the year.

| ACTION | PERFORMANCE MEASURE | TIMELINE | PARTNERS |
|---|---|---|---|
| Provide encouragement and promotional activities year round such as bike/walk to work/school, winter outreach, and curriculum based improvement work. | Number of activities conducted or supported | Ongoing | • Wisconsin Bike Fed<br>• ECWRPC SRTS<br>• Local municipalities<br>• Private entities<br>• Advocacy groups |
| Work with local businesses to provide opportunities for employees and their families to bike and/or walk. | Number of local businesses | Ongoing | • Chambers of Commerce<br>• Area employees |
| Provide a bicycle and pedestrian "safety town" where youth and adults can learn about safe bicycling, walking, and driving. | Establishment of a safety town | 3-5 years | • Winnebago County<br>• Sheriff's Department<br>• WisDOT |

## Objective 3: Update County documents and plans to include bicycle, pedestrian, active lifestyle, and healthy living components.

For bicycling and walking to be convenient, safe, and common forms of transportation and recreation in Winnebago County, support for bicycling and walking needs to be institutionalized in plans and policies. Whenever possible, policies that support walking, bicycling, and active living should be integrated into plans and policies at the regional, county, and local level.

| ACTION | PERFORMANCE MEASURE | TIMELINE | PARTNERS |
|---|---|---|---|
| Include bicycle and walking related policies and performance measures in County park development plans and annual highway Capital Improvement Plans (CIP). | Inclusion of multimodal recommendations in County park development plans and the CIP | 3-5 years | • Winnebago County Parks Department<br>• Winnebago County Highway Department |
| Update health-based planning documents including Community Health Improvement Plans and strategic plans. | Updated CHIP incorporating active lifestyles and enhancement components | 3-5 years | • Winnebago County Health Department |
| Update the Winnebago County Comprehensive Plan to incorporate bicycle and pedestrian best practices. | Updated Comprehensive Plan | 3-5 years | • Winnebago County Planning Department |
| Incorporate bicycle and pedestrian best practices within the Winnebago County Comprehensive Outdoor Recreation Plan (CORP). | Updated CORP | 3-5 years | • Winnebago County Parks Department<br>• Winnebago County Planning Department |
| Work with local municipalities to update their comprehensive plans and CORPs to incorporate bicycle and pedestrian best practices. | Number of comprehensive plans / CORPs updated | 3-5 years | • Winnebago County Planning Department<br>• Local municipalities<br>• ECWRPC |
| Incorporate bicycle and pedestrian best practices in the County zoning code. | Updated zoning code | 5-10 years | • Winnebago County Planning Department |
| Work with local municipalities to incorporate bicycle and pedestrian best practices in zoning codes. | Number of zoning codes updated | 5-10 years | • Winnebago County Planning Department<br>• Local municipalities |

## Objective 4: Provide County staff with bicycling, walking, and healthy lifestyles educational best practice resources.

County staff in various departments should be provided with educational and best practice resources related to walking and bicycling to ensure full understand of the impacts of walking, bicycling, and active living through their job duties.

| ACTION | PERFORMANCE MEASURE | TIMELINE | PARTNERS |
|---|---|---|---|
| Attend regular multimodal and active lifestyle conferences to stay versed in best practices and outreach methods. | Funding provided for and number of conference attended | 1-3 years | • Plan implementation staff |
| Enroll Plan implementation team in Healthy Wisconsin Leadership Institute (HWLI) to gain skills and knowledge that will make implementation successful. | HWLI acceptance and attendance | 1-3 years | • Plan implementation staff<br>• HWLI |
| Distribute *Active Community Environments Wisconsin Resource Kit* to all local and County planning and administration staff. | Number of staff distributed to | 3-5 years | • Plan implementation staff |
| Provide county staff with educational best practice materials pertaining to healthy living including bicycling and walking. | Best practice materials are distributed to communities | 1-3 years | • Winnebago County staff |

## Objective 5: Develop resources to promote bicycling and walking in Winnebago County.

For people to take advantage of walking and bicycling facilities in Winnebago County, they need to understand what those resources are. By continuously tracking and summarizing information about bicycling and walking facilities, the County can promote walking and bicycling while also providing a resource to justify future projects or funding requests.

| ACTION | PERFORMANCE MEASURE | TIMELINE | PARTNERS |
|---|---|---|---|
| Develop a countywide communication plan to promote consistent messages about bicycling, walking and healthy lifestyles. | Completion of communications plan<br>Implementation of communication plan<br>Development of a coordinated effort regarding encouragement events | 1-3 years | • Plan implementation staff |
| Develop a dashboard database indicating current trail mileage, planned trail mileage, count data available to aide in evaluation and provide resources to legitimize future funding opportunities. | Development of an evaluation program to track trail, bicycle, and pedestrian facility mileage, amenities, and related improvements | 1-3 years | • Local advocacy groups<br>• ECWRPC<br>• WisDOT<br>• Area municipalities |
| Develop a printed map or brochure of bicycle routes in Winnebago County. | Map printed and available to the public | 1-3 years | • Winnebago County |
| Develop an interactive web map or smart phone app to display local bicycle and walking facilities and their condition. | Development of web based maps or smart phone apps | 3-5 years | • Winnebago County<br>• ECWRPC |

## Objective 6: Create opportunities for local decision-makers, area residents and municipal staff to be made aware of bicycling and walking facilities and amenities.

Education is critical to the success of a bicycle and pedestrian network within a community. There is often a mentality that "if you build it, they will come" when considering bicycle facilities. However, this is not always the case. If people are not comfortable riding their bicycles for whatever reason, even the best facilities will remain underutilized. Most Americans do not receive any formal training on how to ride their bicycles on a street, how bicycles work, or the rules of the road. Educational activities and strategies attempt to fill that knowledge gap.

| ACTION | PERFORMANCE MEASURE | TIMELINE | PARTNERS |
|---|---|---|---|
| Educate road users about sharing roads (e.g. Share and Be Aware). | Number of education presentations conducted | 3-5 years | • Wisconsin Bike Fed |
| Support "bike rodeos" to educate children about bicycling. | Number of bike rodeos held<br>Number of children and parents participating in bike rodeos | 1-3 years | • ECWRPC<br>• Sheriff's Department<br>• Wisconsin Bike Fed<br>• Local municipalities<br>• Local law enforcement<br>• Schools |
| Work with local municipalities and partner organizations to develop site visits/events for elected officials to experience walking or bicycling in person. | Number of officials that participate | 3-5 years | • Local municipalities<br>• Advocacy groups<br>• Winnebago County |

## Objective 7: Develop safe bicycling and walking routes that connect communities and users to destinations.

For a pedestrian and bikeway network to be effective it must be comprehensive and it must connect the destinations people want to reach. The pedestrian and bicycle facility recommendations in Chapter 4 of this Plan form a network that connects destinations throughout Winnebago County. The actions below relate directly to implementing the bikeway recommendations contained in this Plan.

| ACTION | PERFORMANCE MEASURE | TIMELINE | PARTNERS |
|---|---|---|---|
| Implement the biking and walking facility recommendations contained in this Plan. | Miles of facilities implemented | 1-10+ years | • Winnebago County Highway Department<br>• WisDOT<br>• Local municipalities |
| Develop standard design policy for all infrastructure projects. | Standard policy created | 1-3 years | • Winnebago County Highway Department<br>• WisDOT<br>• ECWRPC<br>• Local municipalities |
| Create a checklist style document to ensure new developments and infrastructure projects accommodate bicycling and walking. | Development review checklist created | 1-3 years | • Plan implementation staff<br>• Winnebago County Planning Department<br>• ECWRPC<br>• Local municipalities |
| Establish an assessment policy to review new projects and the success rate of new accommodations. | Follow up assessments completed | 1-3 years | • Plan implementation staff<br>• ECWRPC<br>• WisDOT |
| Maintain pedestrian and bicycle facilities for safe use through regular pavement maintenance, grading of unpaved trails, sweeping, and plowing. | Miles of facilities maintained | 1-10+ years | • Winnebago County Highway Department<br>• Winnebago County Parks Department<br>• Local Municipalities |
| Provide water and restroom facilities at select trailheads, parks, and other strategic locations. | Number of water fountains and bathrooms installed | 1-10+ years | • Winnebago County Parks Department<br>• Local Municipalities |

## Objective 8: Pursue traditional and non-traditional funding sources for bicycling and walking improvements.

Infrastructure and programs to support bicycling and walking in Winnebago County will require additional financial resources. The County should continue to pursue traditional funding sources, as well as researching and pursuing non-traditional funding sources including grants and partnerships.

| ACTION | PERFORMANCE MEASURE | TIMELINE | PARTNERS |
|---|---|---|---|
| Pursue additional Funding through traditional means (CIP, levy). | Value of funding or number of projects funded | 1-3 years | • Winnebago County |
| Pursue additional funding through grant opportunities and private sponsorships. | Grants or awards given to county projects | 1-10+ years | • Winnebago County |
| Implement a Winnebago County grant opportunity where funds are awarded for local biking/walking projects. | Creation of a Winnebago Greenways fund | 3-5 years | • Winnebago County |
| Explore opportunities for sponsored trails or named routes. | Number of sponsored trails | 1-3 years | • Winnebago County<br>• Plan implementation staff |
| Partner with area business for sponsorships and donations. | Number of or value of donations | 1-3 years | • Local businesses<br>• Winnebago County |
| Coordinate physical and in kind donations. | Number of partnerships created | 3-5 years | • Community foundations<br>• Winnebago County |

## Objective 9: Initiate a countywide bicycle and pedestrian count program.

By evaluating and assessing the levels of walking and bicycling in Winnebago County, community leaders and County staff will be able to more effectively direct their efforts to improve walking and bicycling conditions for residents and visitors. County staff will also be able to justify proposed capital improvement with statistics.

| ACTION | PERFORMANCE MEASURE | TIMELINE | PARTNERS |
|---|---|---|---|
| Create and maintain a countywide bicycle and pedestrian count program to regularly count pedestrians and bicyclists. | Conduct annual count program utilizing bicycle and walking counter equipment | 1-3 years | • ECWRPC<br>• WisDOT<br>• Winnebago County<br>• Local advocacy groups |

## Objective 10: Increase cooperation between the Wisconsin DOT, the Highway Department, the Sheriff's Department, and local municipalities to increase safety.

Despite a number of laws aimed at improving safety for non-motorized users, lack of compliance with those laws is an often-cited reason for why residents do not bicycle or walk to local destinations more frequently. Enforcement of speeding, failure-to-yield, and safe passing laws is often the most effective way of creating a culture of compliance and a greater level of confidence for people bicycling on the street.

| ACTION | PERFORMANCE MEASURE | TIMELINE | PARTNERS |
|---|---|---|---|
| Annual review of County-wide and local vehicle to bicycle and vehicle to pedestrian collision statistics | Conduct annual resident survey on usage and opinions regarding bicycling and walking safety and review state level crash data | 3-5 years | • WisDOT<br>• ECWRPC<br>• Winnebago County Sheriff |
| Provide the Enforcement to Safe Routes to School (SRTS) Course to local law enforcement officers | Number of local law enforcement officers attending training; number of courses held | 1-3 years | • Winnebago County Sheriff<br>• Local enforcement agencies<br>• ECWRPC |
| Partner with law enforcement for bicycle and pedestrian education efforts | Number of local law enforcement agencies involved | 3-5 years | • Winnebago County Sheriff<br>• Local enforcement agencies |
| Address intersection concerns or problem areas through construction or behavior tools | Number of site improvements | 3-5 years | • Winnebago County<br>• Winnebago County Sheriff<br>• Local Municipalities<br>• WisDOT |


# 4 Network & Facility Recommendations

This chapter identifies a network of bicycle and pedestrian facilities throughout rural Winnebago County, including the City of Omro and the Village of Winneconne. This network includes off-street facilities such as shared-use paths and trails, on-street bikeways such as paved shoulders, and a range of other facilities that will make bicycling and walking more convenient and more comfortable for a range of users. The network recommendations were strongly influenced by public input, which revealed that Winnebago County residents desire and see the value in more bicycle and walking infrastructure, improvements to existing infrastructure, and greater separation from motor vehicles in the form of shared-use paths, wide paved shoulders, bike lanes, and sidewalks.

## 4.1 | CLASSIFYING USER TYPES

It is important to understand the wide variety of people walking and bicycling in Winnebago County when making bicycling and pedestrian network recommendations. This section creates three classifications of users for this Plan: pedestrians, casual bicyclists, and confident bicyclists.

### Pedestrians

This category includes all people that walk, run, or use a wheelchair or other mobility device, regardless of age or ability. The needs of almost all pedestrians can be met with the same infrastructure approach since federal and state mandates require all sidewalks and paved paths to be usable for people with disabilities.

### Bicyclists

Anecdotal experience[14] supplemented with survey-based research[15] indicates that people (whether or not they regularly ride a bicycle) fall into one of the four categories shown in Figure 16, based on their traffic stress tolerance, confidence, and willingness to interact with motor vehicle traffic.

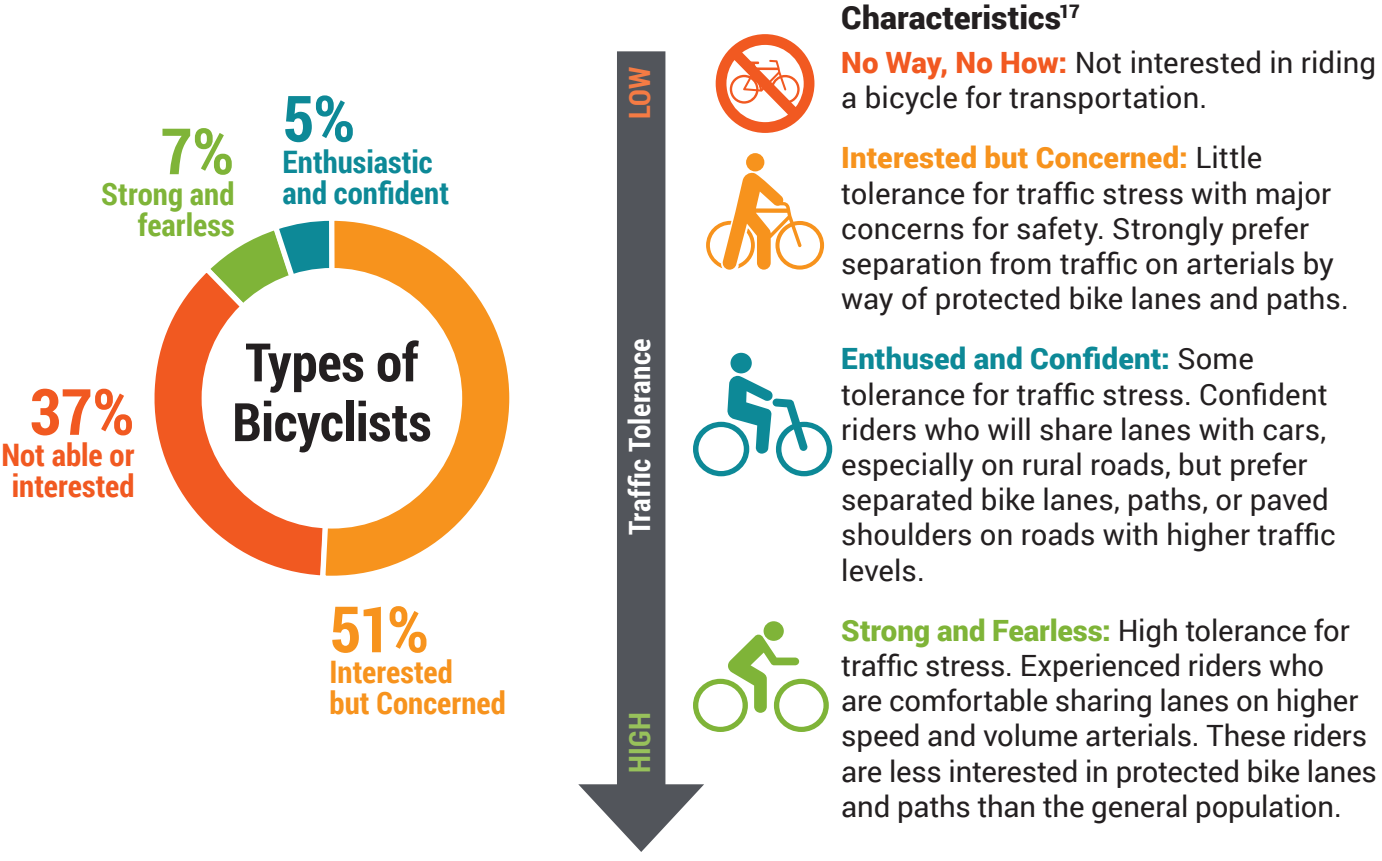
For simplicity in this plan, the groups described in Figure 16 are condensed into two groups:

**Casual Bicyclists:** This category includes the "Interested but Concerned" and "Enthused and Confident" bicyclists and represents approximately 56 percent of the population. Causal bicyclists strongly prefer separation from motor vehicle traffic, although they may be willing to share lanes with cars on low-traffic rural roads.

**Confident Bicyclists:** This category includes the seven percent of the population that are willing to ride on most roadways and in most traffic situations.

An important objective of this Plan is to identify ways to increase safety and meet the needs of a broad cross-section of the population, especially those that are less comfortable interacting with motor vehicle traffic (the "Casual Bicyclists"). It is important to recognize that people can shift between categories depending on where they are or who they are with—for example, someone that regularly bikes on county highways may avoid traffic when biking with their child.

Figure 16: General population categorized by interest in bicycling[16]



## 4.2 | BICYCLE FACILITY TYPES

This section provides brief descriptions of the bicycle facility types recommended in this Plan. More detailed facility descriptions and design guidance can be found in Appendix D.

### Shared-Use Path or Trail

A shared-use path can be located along a road (called a "sidepath") or in an independent right-of-way such as a greenway, along a utility corridor, or an abandoned railroad corridor. Paths as part of county corridors should be at least 10 feet wide and 12 feet or wider where higher use is expected.


### Bike Lane

A bike lane designates a portion of a street for use by people on bicycles, usually in cities and villages on slower, low-traffic streets. Bike lanes are minimum 4 feet wide but are typically 5 feet wide. Wider bike lanes and/or painted buffers can be beneficial when traffic volumes or speeds are higher.

### Paved Shoulder

Paved shoulders should typically be 4 or 5 feet wide to serve as a bicycle accommodation. Many roads in the county have paved shoulders but lack continuity through intersections. Climbing lanes are a variation that provides a paved shoulder in the uphill direction, but not the downhill direction.

### Wide Paved Shoulder

Higher traffic roads can be improved for bicycling through the provision of wide (6-8 feet) paved shoulders. Some roads in the county have wide paved shoulders but lack continuity through intersections. Wider shoulders can be achieved via "lane diets," which means narrowing travel lanes to 11 feet.


### Minor Enhancements

Low-cost, strategically-placed pavement markings and signage can enhance bike routes and existing trails. Shared lane markings (see image) can increase awareness of bicyclists presence, indicate lane positioning, and aid in wayfinding. Consistent signage can aid in wayfinding and raise awareness of the rules of the road.

## 4.3 | PEDESTRIAN FACILITY TYPES

This section provides brief descriptions of the pedestrian facility types recommended in this Plan. More detailed facility descriptions and design guidance can be found in Appendix D. Shared-Use Path or Trail

### Shared-Use Path or Trail

A shared-use path can be located along a road ROW (called a "sidepath") or in an independent right-of-way such as a greenway, along a utility corridor, or an abandoned railroad corridor. Paths as part of county corridors should be at least 10 feet wide and 12 feet or wider where higher use is expected.

### Sidewalk

A sidewalk is a paved path along the side of a roadway. Sidewalks are commonly installed along urban roadways with a curb and gutter, but can also be installed along rural roadways. Sidewalks provide a dedicated space for pedestrians that is removed from motor vehicle traffic.

### Shoulder

Roadway shoulders can provide space for pedestrians on rural roads, but they are not a legal pedestrian facility under state law. Paved shoulders better serve pedestrians than aggregate shoulders as they provide a more stable surface. Pedestrians walking or running on roadway shoulders should always face traffic.

### Crosswalk

Crosswalks are areas of a roadway where pedestrians may cross the road. Crosswalks may be marked or unmarked; unmarked crosswalks exist at intersections where a sidewalk terminates on at least one side of an intersection. In Wisconsin, motorists must yield to pedestrians in crosswalks. Pedestrians may cross roadways at locations other than crosswalks, but must yield the right-of-way to vehicles on the roadway.

# 4.4 | BICYCLE AND PEDESTRIAN NETWORK IDENTIFICATION

The recommended bicycle and pedestrian network is designed to meet the needs of people already bicycling and walking in Winnebago County as well as the needs of potential and future bicyclists and pedestrians. This Plan places a high value on developing a network that over the long run will allow children and senior bicyclists, novice and experienced bicyclists, pedestrians, runners, regular and occasional commuters, students, visitors, and tourists to all feel comfortable bicycling and walking in Winnebago County.

It is important to recognize that some bicyclists will only venture onto busier roads if they are provided with a facility that clearly delineates space in which they can operate or offers a significant degree of separation from traffic. Some bicyclists will avoid roads with high speeds and heavy volumes, regardless of the accommodations. Some will seek only quiet local roads, and some experienced bicyclists will actually prefer major roads because they provide the most direct route to their destination with a minimum of traffic controls.


*Low traffic town roads may already be great for bicycling.*

This Plan recommends improving major roads to accommodate bicycles and pedestrians, and providing shared-use paths, when possible, to meet the needs of different bicyclists. Roads and shared-use paths or trails were selected for inclusion in the recommended network to create direct, convenient, and logical connections throughout Winnebago County. The network includes roads and shared-use paths or trails that are currently used, as well as roads that are likely to be used according to public input received during the development of this Plan.

The network is intended to encourage maximum use and comfort, while fostering safe and responsible bicycling and walking. At the same time, network recommendations were developed to take advantage of the County's existing road network. In some cases, this may result in bicycle facilities that are comfortable primarily for experienced bicyclists, and not for the full range of bicyclists in Winnebago County.

## Network Identification

As a County plan, the recommendations for a bicycle and pedestrian network focuses on County highways. However, in many instances, State and U.S. highways and local roads provide important connections to destinations. These connections may be more direct than County highways, or may provide better conditions for bicycling. The following steps were completed to identify the bicycle and pedestrian network for this Plan:

1. Area bicycle plans were assembled and mapped. Some of the most important plans included the 2014 *Appleton (Fox Cities) Transportation Management Area & Oshkosh Metropolitan Planning Organization Bicycle and Pedestrian Plan;* the *City of Oshkosh, Village of Fox Crossing (formally Town of Menasha) Bicycle and Pedestrian Plan; Wisconsin Pedestrian and Bicycle Circulation Plan—2011;* the 2009 *Winnebago County Bicycle and Pedestrian Plan;* and WisDOT's *State of Wisconsin Bicycle Transportation Plan*.
2. Broad corridors were selected that connected major destinations such as the County's two urban areas (Oshkosh and Neenah/Menasha), the Village of Winneconne, the City of Omro, and communities in bordering areas of the four adjacent counties including Fond du Lac, Ripon, Berlin, Fremont, and Hortonville, and other major destinations, like parks

or existing facilities such the Mascoutin, Wiouwash, and Friendship State Trails and the Terrell's Island Trail.

3. Within each corridor, roadways were examined and considered for their bicycle compatibility (based on average daily traffic volume and width of pavement), directness of route, and other features that might make one road more bicycle friendly than another road.
4. Where parallel routes exist, County roadways were considered over town roads unless conditions on the County road were likely to be considerably less comfortable for bicycling due to higher traffic volumes and speeds.
5. Bicycle and pedestrian crash data for Winnebago County was examined to see if there were specific locations with a relatively high number of crashes. However, very few crashes were reported outside of the urban areas of the county and there were no meaningful clusters of crashes to address.
6. Comments and recommendations were considered from the Plan Core Team, the Plan Steering Committee, and the public submitted through various forums. More information about public input is provided in Chapter 1 and Appendix A.
7. A draft bicycle and pedestrian network was developed. Following selection of the network, recommendations were made for specific bicycle and/or pedestrian facilities; this is detailed in section 4.5.

The recommended network is grouped into corridors—roads that taken together make a longer linear run across the county. These corridors are not always continuous; they may have gaps where a bikeway does not exist or may be divided by a freeway. However, over time, these gaps may be filled and continuous bikeway connections can be made through the corridor. The corridors may also include parallel roads and spurs off of the primary corridor. The intent of the corridors is to show connections that the network makes, and not to guide implementation. The recommended bicycle and pedestrian network is displayed by corridor on Map 10 and Table 3 displays a brief description of each corridor.

Map 10 displays recommendations for some roadways and trails outside of the Plan study area, but still within Winnebago County; this was done to provide connections into the urbanized areas of the County where recommendations from the *Appleton (Fox Cities) Transportation Management Area and Oshkosh Metropolitan Planning Organization Bicycle and Pedestrian Plan* apply.

*Marble Park in Winneconne includes numerous shared-use paths and a bicycle and pedestrian bridge.*

Table 3: Recommended network corridors (also see Map 10)

| # | PRIMARY ROADS | FROM | TO | MILES | DESCRIPTION |
|---|---|---|---|---|---|
| 1 | CTH H | Waushara County | Waupaca County Line | 7.9 | Connection through NW Winnebago County to Village of Fremont |
| 2 | CTH II<br>Town Line Road | Waushara County | Clayton Avenue | 18.7 | Connection across northern portion of county from Menasha to Village of Fremont |
| 3 | CTH S<br>Bison Road<br>Sohrweide Road<br>Town Line Road<br>Ball Prairie Road | Outagamie County | CTH T | 16.7 | Parallel route to USH 45 and USH 10 from Town of Oshkosh to Outagamie County |
| 4 | CTH M<br>CTH T<br>Larsen Road | Outagamie County | CTH CB | 10.0 | Route west from Neenah to Rat River State Wildlife Area and Outagamie County |
| 5 | Shady Lane<br>Center Road | Pioneer Road | Irish Road | 6.3 | Village of Fox Crossing to Wiouwash State Trail (via future trail connection) |
| 6 | CTH M<br>Village of Winneconne Local Roads | CTH II | STH 116 | 8.3 | Connection from northern portion of county to Village of Winneconne |
| 7 | CTH G | CTH M | I-41 | 10.0 | Connection from Neenah toward Village of Winneconne |
| 8 | STH 76 | Outagamie County | CTH Y | 12.8 | Direct connection from Oshkosh to Outagamie County |
| 9 | STH 116<br>CTH GG | Winneconne Bridge | CTH A | 11.4 | Connection from eastern portion of county to Village of Winneconne |
| 10 | Green Valley Road<br>Woodenshoe Road | Snell Road | CTH G | 8.7 | Parallel route to I-41 from Oshkosh to Neenah |
| 11 | CTH A | Indian Point Road | CTH G | 3.7 | Direct connection between Oshkosh and Neenah |
| 12 | CTH Y | CTH S | Community Park Drive | 3.1 | Connection to Winnebago County Community Park and Fairgrounds |
| 13 | CTH B<br>Village of Winneconne Local Roads | CTH D | STH 116 | 11.9 | Route along Lake Poygan west of Village of Winneconne |
| 14 | CTH D | Waushara County | STH 116 | 7.9 | Connection from Winneconne west to Borth in Waushara County |
| 15 | CTH F<br>Webster Avenue | CTH D | CTH K | 8.4 | Connection north and south from City of Omro |
| 16 | Grant Street<br>3rd Street | STH 116 | STH 116 | 1.4 | Local connections through Village of Winneconne |
| 17 | Ginnow Road | CTH D | CTH F | 3.7 | Parallel route to STH 116 north of Omro |
| 18 | Liberty School Road | Waushara County | Ginnow Road | 6.7 | Low traffic east-west connection |

Table 3 Continued (also see Map 10)

| # | PRIMARY ROADS | FROM | TO | MILES | DESCRIPTION |
|---|---|---|---|---|---|
| 19 | CTH M<br>STH 116 | Winneconne Bridge | Fond du lac County | 19.1 | Major north-south connection from Winneconne, through Omro, Waukau, and Pickett, toward Ripon in Fond du lac County |
| 20 | Rivermoor Road<br>Shubert Road | Springbrook Road | Terrell's Island | 2.6 | Connection to Terrell's Island |
| 21 | Omro Road<br>Leonard Point Road<br>Lincoln Avenue | STH 21 | STH 21 | 8.4 | Direct connection from City of Omro to City of Oshkosh |
| 22 | River Road | Waushara County | CTH E | 2.3 | Connection to City of Berlin in Waushara County |
| 23 | CTH E<br>CTH K<br>Eureka Road<br>Lake Poygan Road | CTH B | Fond du lac County | 16.2 | Major north-south connection on western side of county |
| 24 | City of Omro Local Roads | CTH E | STH 21 | 2.3 | Route west from Omro; alternative to STH 116 |
| 25 | 9th Street Road<br>West 9th Avenue | CTH F | I-41 | 7.9 | Popular route west from Oshkosh |
| 26 | STH 21 | Waushara County | I-41 | 15.5 | Direct connection from Oshkosh to Omro and Waushara County |
| 27 | CTH E | CTH F | I-41 | 8.0 | Direct route west from Oshkosh toward Omro |
| 28 | CTH K | CTH E | STH 44 | 13.6 | Direct connection from southern Oshkosh across the county to Eureka |
| 29 | STH 91 | Waushara County | STH 44 | 14.9 | Direct connection from southern Oshkosh across the county |
| 30 | CTH FF | Springbrook Road | Fond du lac County | 12.1 | North-south connection through central portion of the county |
| 31 | STH 44 | Fond du lac County | CTH K | 11.9 | Direct connection from Oshkosh to Ripon |
| 32 | South Washburn Street<br>Planeview Drive | CTH K | STH 26 | 3.5 | Parallel route to I-41 |
| 33 | CTH N<br>STH 26<br>Fisk Avenue | STH 44 | USH 45 | 11.3 | East-west connection across southern portion of the county |
| 34 | STH 26 | I-41 | Fond du lac County | 4.2 | Direct connection from southern Oshkosh to Fond du lac County toward Rosendale |
| 35 | CTH I | West Waukau Avenue | Fond du lac County | 6.0 | Direct connection from southern Oshkosh to Fond du lac County |
| 36 | CTH Z | STH 26 | USH 45 | 6.9 | East-west connection across the southern portion of the county |
| 37 | USH 45 | West Waukau Avenue | Fond du lac County | | Direct connection from southern Oshkosh to Fond du lac County along Lake Winnebago |

*Note: Roads only used for short sections may not be included in list of primary roads for each corridor*

# 4.5 | FACILITY SELECTION AND RECOMMENDATIONS

Specific bicycle and pedestrian facility types are recommended for each section of the bicycle and pedestrian network identified in Section 4.4. This section describes how specific facility types were selected, and the overall application of facility types across the network.

It should be noted that final facility selection will be determined during project implementation. For a variety of reasons, the facilities recommended in this chapter may not be feasible due to various constraints. When a lower-level facility is implemented in place of what is recommended in this Plan, efforts should be made to include the recommended facility whenever the road is next reconstructed.

## Bicycle Facility Recommendations

Map 11 displays the recommended bicycle and pedestrian network by facility type while Figure 17 displays the miles of recommended bikeways within the study area by roadway type; recommendations made for roadways outside the study area are not included in Figure 17.

The recommended bikeway network includes five types of facilities:

- Shared-Use Paths/Trails
- Bike Lanes
- Paved Shoulder
- Wide Paved Shoulder
- Minor Enhancements

Descriptions of each facility type are provided in section 4.3, and more detailed design guidance is provided in Appendix D. The facility that was selected for each roadway segment was based on the current traffic volume of the roadway. Table 4 displays the guidance that was generally used when selecting facility types. The Paved Shoulders design guidance included in the Appendix includes more information about when paved shoulders should be provided.

Figure 18 displays the miles of recommended bikeways within the study area by facility type; recommendations made for roadways outside the study area are not included in Figure 18. Figure 19 displays the miles of facility type by roadway type. It should be noted that some parts of the recommended network already contain the recommended facility. For example, County Highway S between State Highway 116 and County Highway Y already contains a paved shoulder. In this case, no facility changes are required.

Figure 17: Miles of recommended bikeway by roadway type.

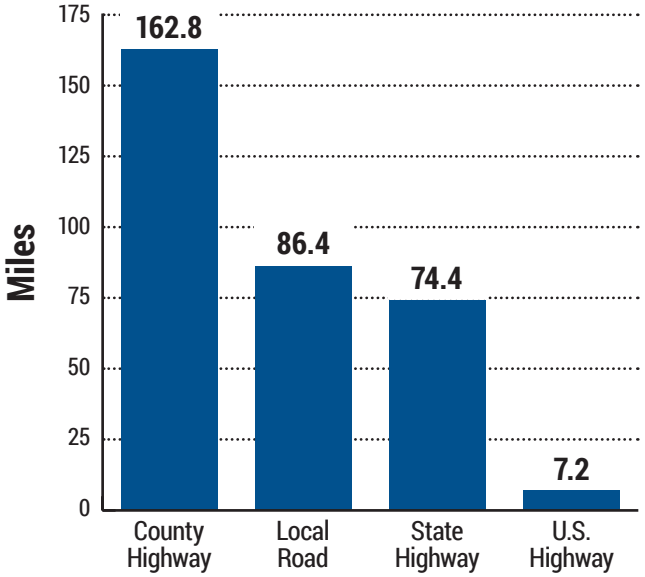



Figure 18: Miles of recommended bikeway by facility type.

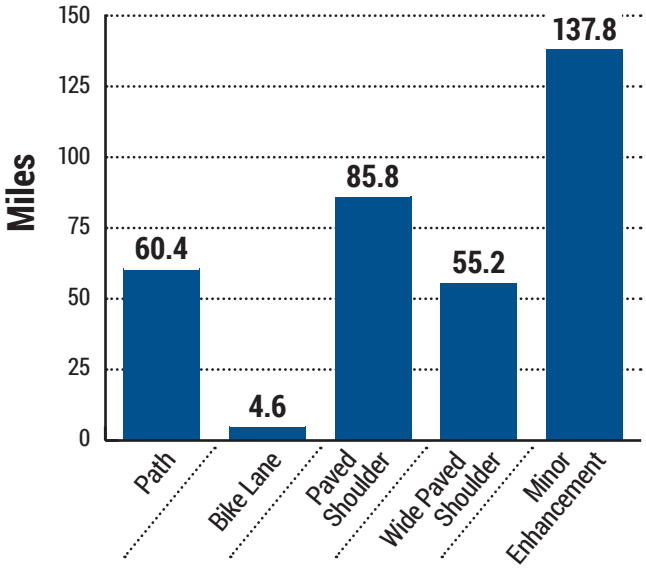
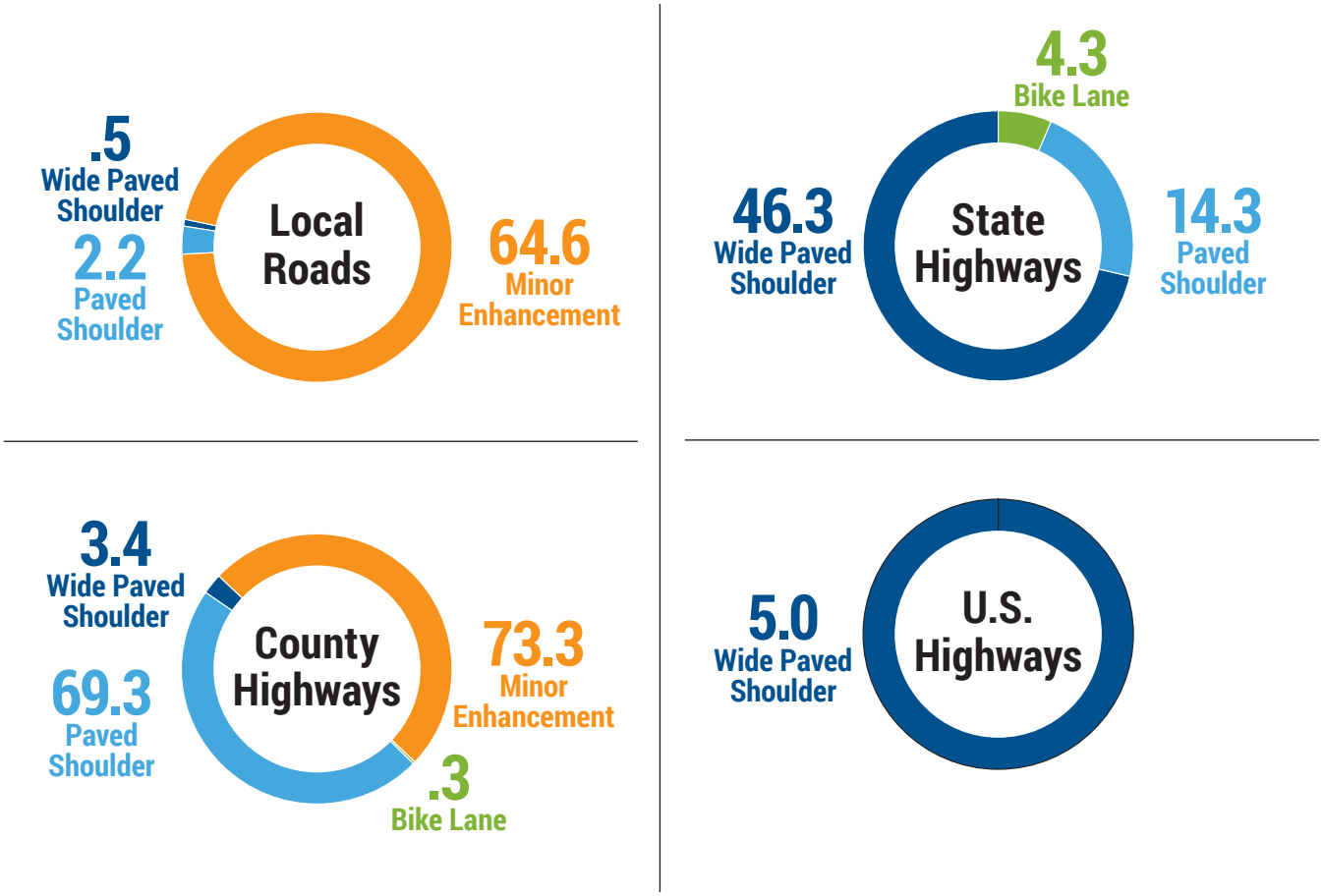


Table 4: General guidance for the selection of bicycle facilities and treatments for on-road recommendations

| RECOMMENDED FACILITY/ TREATMENT | DESCRIPTION | GUIDANCE |
|---|---|---|
| Minor Enhancement (Shared Roadway) | Signs and/or shared lane markings | Average Daily Traffic (ADT) < 750 |
| Paved Shoulder | 4-5 feet wide | ADT 750 – 4,500 |
| Wide Paved Shoulder | 6-8 feet wide | ADT > 4,500 |

Figure 19: Miles of recommended bikeway by facility type.



## Pedestrian Facility Recommendations

Many of the bicycle facilities recommended in this section can also serve pedestrians. Shared-use paths are specifically designed for both bicycle and pedestrian use, and paved shoulders, while not a legally recognized pedestrian facility in Wisconsin, provide space that pedestrians can use. Locations for sidewalks are not specifically recommended in this Plan, as the vast majority of the study area is rural. However, sidewalks should be installed in many parts of the study area. The Wisconsin Department of Transportation has guidelines for sidewalk installation that are presented in Table 5. This guidance should be followed in all areas of the study area that have or will have urban or suburban-style development; this specifically includes the City of Omro, Village of Winneconne, and developments in the Towns of Clayton, Winneconne, Omro, Utica, and other areas.

Table 5: Wisconsin DOT Guidelines for Sidewalk Placement

| LAND USE, DWELLING DENSITY, OR FUNCTIONAL CLASSIFICATION | NEW URBAN AND SUBURBAN STREETS | EXISTING URBAN AND SUBURBAN STREETS |
|---|---|---|
| Commercial and Industrial (all) | Both sides | Both sides.<br>Every effort should be made to add sidewalks where they do not exist and complete missing links. |
| Residential (arterials) | Both sides | Both sides |
| Residential (collectors) | Both sides | Multifamily—both sides.<br>Single family—prefer both sides; require at least one side. |
| Residential (local)<br>More than 4 units/acre | Both sides | Prefer both sides;<br>at least one side required. |
| Residential (local road)<br>1 to 4 units/acre | Prefer both sides;<br>at least one side required | One side preferred;<br>at least four feet wide. |
| Residential (local road)<br>Fewer than 1 unit/acre | One side preferred;<br>shoulder on both sides | At least 4-foot shoulder<br>required on both sides. |

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# 5 Implementation & Funding

This chapter provides a summary of the project costs, prioritization, implementation, and funding strategies for bicycling and walking infrastructure efforts within Winnebago County. This summary includes planning-level cost estimates, prioritization and phasing of projects, and implementation and funding strategies as it relates to recommendations within the planning document.

## 5.1 | PLANNING-LEVEL COST ESTIMATES

Planning-level cost estimates for the projects recommended in this Plan are based on typical per-mile cost for various treatments multiplied by the project's length. The estimates, displayed in Table 6, were developed conservatively and are based on the cost of a stand-alone project. The estimates include excavation, grading, milling, pavement marking eradication, base course, surface course, new pavement markings, signs, construction zone traffic control, and a 25 percent contingency for unique situations such as drainage crossings or complex intersection treatments. In some cases, per-mile estimates also include landscaping, drainage, and utility adjustments. Pavement markings and striping costs are based on epoxy, which is more durable and longer lasting—but more expensive—than waterborne paint. Since many of the projects recommended simply involve striping, the cost of each project could be reduced if less expensive (but less durable) pavement marking materials are used.

When built as part of a larger roadway project, the marginal cost of bikeway improvements is substantially less than if the bikeway is built as a standalone project. Road diets (removing travel lanes), lane diets (narrowing travel lanes), and other striping projects performed as part of regular repaving projects would negate the need for eradication and additional mobilization. To account for this, "coordinated project" cost estimates are provided. Even these marginal costs could be less depending on the type of pavement marking materials used and other efficiencies that could be found during construction.

Tables 7 through 11 display planning-level cost estimates for the bicycle and pedestrian network recommended in Chapter 4. The tables display the estimated cost for the for County highways, for State and U.S. highways, for local roads, for shared-use paths or trails in independent corridors, and for the full network. The costs presented here are only for facilities within the study area, and do not include the cost for paths along now active railroad corridors.

Table 6: Typical cost per mile for bicycle facilities[19]

| Facility Type and Implementation Method | Stand-Alone Project Typical Cost per Mile (2016 Dollars) | Coordinated Project Typical Cost per Mile (2016 Dollars) |
|---|---|---|
| **Shared Use Path** | | |
| Widen Existing Path (by 4 feet) | $176,000 | $169,000 |
| Construct New (10 feet) | $488,000 | $469,000 |
| **Bike Lanes** | | |
| Add Striping and Markings | $37,000 | $35,000 |
| Lane Diet (Narrow Travel Lanes) | $48,000 | $35,000 |
| Road Diet (Reduce Number of Travel Lanes) | $82,000 | $45,000 |
| Widen Roadway | $556,000 | $255,000 |
| Buffered Bike Lane (Road Diet) | $84,000 | $70,000 |
| **Paved and Striped Shoulders** | | |
| Move Edge Line (Lane Diet) | $24,000 | $0 |
| Pave New or Widen Existing Shoulders (by 2 feet each side) | $89,000 | $73,000 |
| Pave New or Widen Existing Shoulders (by 4 feet each side) | $208,000 | $160,000 |
| **Minor Enhancements** | | |
| Add Shared Lane Marking (Sharrow) | $5,000 | (same) |
| Add Bike Route Signage/Wayfinding | $2,000 | (same) |

As previously noted, the costs presented here are provide a very rough estimate of the implementation costs for the recommendations of this Plan. It should be noted that many of these costs—primarily those for paved shoulders—may be incurred regardless of if this Plan is adopted. Paved shoulders provide substantial safety benefits for all roadway users, reduce lifetime maintenance costs of roadways, and are required by WisDOT guidance when many types of roads are reconstructed. Paved shoulders comprise over half of the total planning-level cost estimates provided here—and three quarters of the total for the County highways—but should be constructed even without consideration of the benefits provided to bicyclists and pedestrians.

Table 7: Planning-level cost estimates for the recommended network on and along County Highways

| FACILITY TYPE | MILES | STAND-ALONE PROJECT COST | COORDINATED PROJECT COST |
|---|---|---|---|
| Shared-Use Path/Trail | 3.7 | $1,796,000 | $1,726,000 |
| Bike Lane (Lane Diet) | 0.3 | $12,000 | $9,000 |
| Paved Shoulder (Widen 2 feet) | 69.3 | $6,166,000 | $5,057,000 |
| Wide Paved Shoulder (Widen 4 feet) | 3.4 | $705,000 | $542,000 |
| Minor Enhancement (Add Signage) | 73.3 | $147,000 | $147,000 |
| **Total** | **344.3** | **$8,826,000** | **$7,481,000** |

*Note: Includes sidepath along segments of CTH A*

Table 8: Planning-level cost estimates for the recommended network on and along State and U.S. Highways

| FACILITY TYPE | MILES | STAND-ALONE PROJECT COST | COORDINATED PROJECT COST |
|---|---|---|---|
| Shared-Use Path/Trail | 19.7 | $9,604,000 | $9,230,000 |
| Bike Lane (Lane Diet) | 4.3 | $208,000 | $152,000 |
| Paved Shoulder (Widen 2 feet) | 14.3 | $1,274,000 | $1,045,000 |
| Wide Paved Shoulder (Widen 4 feet) | 51.3 | $10,664,000 | $8,203,000 |
| Minor Enhancement (Add Signage) | 0.0 | $0 | $0 |
| **Total** | **344.3** | **$21,750,000** | **$18,630,000** |

*Note: Includes sidepaths along segments of STH 76, USH 10, and USH 45*

Table 9: Planning-level cost estimates for the recommended network on and along local roads

| FACILITY TYPE | MILES | STAND-ALONE PROJECT COST | COORDINATED PROJECT COST |
|---|---|---|---|
| Shared-Use Path/Trail | 0.0 | $0 | $0 |
| Bike Lane (Lane Diet) | 0.0 | $0 | $0 |
| Paved Shoulder (Widen 2 feet) | 2.2 | $198,000 | $163,000 |
| Wide Paved Shoulder (Widen 4 feet) | 0.5 | $106,000 | $82,000 |
| Minor Enhancement (Add Signage) | 64.6 | $129,000 | $129,000 |
| **Total** | **344.3** | **$433,000** | **$374,000** |

Table 10: Planning-level cost estimates for paths/trails in independent corridors

| FACILITY TYPE | MILES | STAND-ALONE PROJECT COST | COORDINATED PROJECT COST |
|---|---|---|---|
| Shared-Use Path/Trail | 5.1 | $2,503,000 | $2,406,000 |
| **Total** | **5.1** | **$2,503,000** | **$2,406,000** |

Table 11: Planning-level cost estimates for the full recommended bicycle and pedestrian network

| FACILITY TYPE | MILES | STAND-ALONE PROJECT COST | COORDINATED PROJECT COST |
|---|---|---|---|
| Shared-Use Path/Trail | 28.5 | $13,903,000 | $13,362,000 |
| Bike Lane (Lane Diet) | 4.6 | $220,000 | $161,000 |
| Paved Shoulder (Widen 2 feet) | 85.8 | $7,638,000 | $6,265,000 |
| Wide Paved Shoulder (Widen 4 feet) | 55.2 | $11,475,000 | $8,827,000 |
| Minor Enhancement (Add Signage) | 137.8 | $276,000 | $276,000 |
| **Total** | **344.3** | **$33,512,000** | **$28,891,000** |

## 5.2 | PROJECT PRIORITIZATION

Minor enhancements to roadways comprise the majority of bicycle and pedestrian facilities recommended in this Plan. These enhancements may include wayfinding signs and shared lane markings in select locations. Recommendations that require construction of new facilities or expansion of existing facilities should generally occur when the roadway is next scheduled for maintenance due to pavement condition. In other words, when a roadway is scheduled for resurfacing, pavement replacement, or reconstruction, bicycle facilities should be added at that time. Because pavement condition drives this process, this Plan does not prioritize the recommended bicycle and pedestrian facilities.

The one exception to this is County Highway A between Oshkosh and Neenah. County Highway A is a heavily traveled connection between the Oshkosh and Neenah/Menasha/Appleton urban area. Currently, the road has shared-use paths along it in Neenah and south of Indian Point Road in the Town and City of Oshkosh, and paved shoulders over most of its length. In the near term, the existing paths should be connected with a paved path, and paved shoulders at least four feet wide should be provided on the roadway itself. The shared-use path will provide a connection between the urban centers for pedestrians and Casual Bicyclists, while the paved shoulders will provide a bicycle facility for Confident Bicyclists.

Additionally, the County should consider developing a coordinated and consistent plan for signing the bicycle and pedestrian network throughout Winnebago County in the near to mid-term.

*The Fire Bridge on the Tribal Heritage Crossing provides a safe crossing of Lake Butte des Morts for people bicycling and walking.*

## 5.3 | IMPLEMENTATION AND FUNDING STRATEGIES

Collaboration between County departments, local municipalities, and partner organizations is crucial to the implementation of the Winnebago County Bicycle and Pedestrian Plan. While bicycle and pedestrian infrastructure is built throughout the county, educational outreach and encouragement efforts should also coincide with the infrastructure projects.

Measuring progress through evaluation techniques of the Educational, Encouragement, Enforcement, and Engineering strategies implementation should be completed through each stage of implementation.

Funding and financing of bicycle and pedestrian infrastructure projects depend on the individual roadway project and if it coincides with a reconstruction or resurfacing project. Typically, it is more efficient at the county or local level to build the cost of bicycle and pedestrian accommodations into a reconstruction project. It is recommended that Winnebago County and local municipalities fund bicycle and pedestrian infrastructure through their local capital improvement programs and build the cost of the facility into the cost of the roadway project. It is also recommended that Winnebago County work with local municipalities to develop a uniform policy for the implementation of bicycle and pedestrian infrastructure. This policy will increase the consistency of bicycle and pedestrian facilities throughout Winnebago County.

While state and federal funding may be leveraged by the County for larger bicycle and pedestrian projects, it is important to consider federal and state funding requirements into the cost of the overall project. It is recommended that as the County or local municipalities consider federal or state funding for bicycle and pedestrian infrastructure, they work with the Wisconsin Department of Transportation – Northeast Region (WisDOT-NE Region) and ECWRPC to ensure that the state and federal funding is appropriate for the project.

*A trail along Marble Park in Winneconne provides transportation and recreation opportunities.*

The following sections describe the various funding sources available to the County, which are summarized in Table 12 at the conclusion of this chapter.

## County and Local Capital Improvement Programs (CIPs)

As county and local roadways are scheduled for reconstruction or resurfacing, bicycle and pedestrian infrastructure accommodations should be considered by Winnebago County and the local municipality. It is much more cost efficient to include bicycle and pedestrian accommodations as part of the project versus trying to retrofit the bicycle and pedestrian infrastructure once the project is completed. The costs of the bicycle and pedestrian infrastructure accommodations can then be included in the cost of the project.

## Surface Transportation Block Grant Set-Aside Program (previously known as the Transportation Alternatives Program - TAP)

The Fixing America's Surface Transportation (FAST) Act replaced the Transportation Alternatives Program (TAP) with a set-aside of funds under the Surface Transportation Block Grant Program (also known by the Federal Highway Administration as the TA Set-Aside). With certain exceptions, projects that meet eligibility for criteria for the Safe Routes to School Program, the transportation enhancements, and/or the bicycle and pedestrian facilities program are eligible TAP projects. The funding ratio is usually 80% federal funds and 20% local matching funds.

- FHWA Website: http://www.fhwa.dot.gov/environment/transportation_alternatives/
- WisDOT Website: http://wisconsindot.gov/Pages/doing-bus/local-gov/astnce-pgms/aid/tap.aspx

## Surface Transportation Block Grant Program – Rural (STBG-Rural)

The Surface Transportation Program – Rural (STP-Rural) allocates federal funds to complete a variety of improvements to rural highways (primarily county highways) that are located outside of the urban areas. These projects must be used for roads classified as major collectors or higher.

- Website: http://wisconsindot.gov/Pages/doing-bus/local-gov/astnce-pgms/highway/stp-rural.aspx

## Highway Safety Improvement Program (HSIP)

The Highway Safety Improvement Program (HSIP) develops and implements, on a continuing basis, stand-alone safety projects designed to reduce the number and severity of crashes on all streets and highways (both state and local). The federal funding ratio for the HSIP funds is usually 90% federal funds and a 10% match of state and/or local funds. The HSIP Program currently prioritizes sites that have experienced a high crash history with an emphasis on low cost options that can be implemented quickly.

- Website: http://wisconsindot.gov/Pages/doing-bus/local-gov/astnce-pgms/highway/hsip.aspx

## Congestion Mitigation and Air Quality Improvement Program (CMAQ)

The Congestion Mitigation and Air Quality Improvement Program funds may be used to construct bicycle facilities, pedestrian walkways, and non-construction projects related to bicycle and pedestrian activities in designated non-attainment areas. Currently, Winnebago County is not designated as a non-attainment area; however, if that designation should change, it could become eligible for funding.

- Website: http://wisconsindot.gov/Pages/doing-bus/local-gov/astnce-pgms/aid/cmaq.aspx

## U.S. Department of Housing and Urban Development (HUD) Community Development Block Grants (CDBG)

The CDBG program provides eligible metropolitan cities and urban counties (called "entitlement communities") with annual direction grants that they can use to revitalize neighborhoods, expands affordable housing and economic opportunities, and/or improve communities' facilities and services, typically to benefit underserved communities. Winnebago County is not designated an entitlement county; however, CDBG funding still exists through the state-administered non-entitlement program.

- Website: http://www.doa.state.wi.us/Divisions/Housing/Bureau-of-Community-Development/

## Regional Multi-Modal Transportation Planning Program (through East Central WI Regional Planning Commission)

The Regional Multi-Modal Transportation Planning Program is available to member counties and local municipalities within the East Central Region through a technical assistance program. The purpose of the program is to provide local municipalities and counties with staff resources and support for the implementation of their local bicycle and pedestrian plan.

## Recreational Trails Aid Program (RTA)

The Recreation Trails Program provides funds to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. This is the only federal transportation source that can be used for maintenance activities.

- FHWA Website: http://www.fhwa.dot.gov/environment/recreational_trails/
- WDNR Website: http://dnr.wi.gov/aid/rta.html

*Children walking to school in Winneconne.*

## Wisconsin Department of Natural Resources Knowles-Nelson Stewardship Funds

The Knowles-Nelson Stewardship Funds are available each year to help fund land acquisition and recreational development throughout the state of Wisconsin.

- Website: http://dnr.wi.gov/topic/stewardship/grants/

## USDA Rural Development

The USDA Rural Development is committed to helping improve the economy and quality of life in rural America. They offer loans, grants and loan guarantees to create a healthy, safe, and prosperous place to live and work in rural America.

- Website: www.rd.usda.gov

## The Robert Wood Johnson Foundation

The Robert Wood Johnson Foundation seeks to improve the health and health care of all Americans. One of the primary goals of the Foundation is to "promote healthy communities and lifestyles. Specifically, the Foundation has ongoing "Active Living by Design" grant programs that promote the principals of active living including non-motorized transportation. Other related calls for grant proposals are issued as developed, and multiple communities nationwide have received grants related to the promotion of trails and other non-motorized facilities.

- Website: http://www.rwjf.org/en/how-we-work/grants.html#q/maptype/grants/ll/37.91,-96.38/z/4

## Centers for Disease Control and Prevention (CDC)

Across the nation, there has been increased collaboration between transportation and health professionals. Through this collaboration, there are increased opportunities to apply for funding for initiatives where health and transportation are already collaborating. As this momentum continues to build, Winnebago County staff should continue to work with partner organizations to pursue funding through the CDC as a way to implement recommendations from the Winnebago County Bicycle and Pedestrian Plan.

- Website: http://www.cdc.gov/

## Local Hospitals and Healthcare Organizations

A majority of hospitals within the United States currently operate as nonprofit organizations and, as such, are exempt from most federal, state, and local taxes. In order for hospitals and health care organizations to maintain this status they need to complete a number of requirements, including developing a Community Health Needs Assessment (CHNA) and support community initiatives that are consistent with their CHNA. One example of this is the partnership between Affinity Health System, Winnebago County, and ECWRPC. ECWRPC received funds from to Affinity Health Systems as part of a joint application with the Winnebago County Health Department to develop a wayfinding signage pilot project.

## Public Private Partnerships

As federal and state funds become more competitive for local communities, it is recommended that Winnebago County and local municipalities work with the private sector to help secure funds for various types of bicycle and pedestrian projects. The private sector could help to provide the 20% local match for state and federal grant programs, making the local grant application more competitive for funding.

Additionally, local businesses have a vested interest in bicycle and pedestrian accommodations, as healthy active employees help reduce the business's health insurance costs and the employees are also more productive. Local health insurance companies are interested in having healthy employees, as it reduces their health insurance claims related to chronic diseases. In addition, many hospitals and health care organizations are recognized by the Internal Revenue Service to be non-profit organizations because of the "community benefit" they provide. These organizations may be interested in providing funding for community improvements (i.e. sidewalks, trails, wayfinding signage, etc.). Private and public partnerships should be explored by Winnebago County and local municipalities as a direct correlation with the health of the local community members.

## Additional Funding Resources

In addition to the resources mentioned above, other funding opportunities may exist through local, state, and national organizations may be found in the follow organizations:

- National Recreation and Park Association
- http://www.nrpa.org/Grants-and-Partners/Recreation-and-Health/Park-Prescriptions/
- International Mountain Biking Association
- https://www.imba.com/resources/grants
- Rails-to-Trails Conservancy
- http://www.railstotrails.org/build-trails/trail-building-toolbox/acquisition/financing-and-funding/
- National Trails Training Partnership
- http://www.americantrails.org/resources/fedfund/


*A pedestrian bridge in Omro provides a safe route for children to walk to school.*

Table 12: Federal funding sources for bicycle and pedestrian projects/activities

| ACTIVITY | CMAQ** | HSIP | NHPP | STBP-RURAL | TA | RTP | SRTS | 402 | 405 | FLTTP | TIGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Access enhancements to public transportation | • | | • | • | • | | | | | • | • |
| ADA/504 self-evaluation/transition plan | | | | • | • | • | | | | • | |
| Bicycle plans | | | | • | • | | • | | | • | |
| Bicycle helmets (project or training related) | | | | • | •SRTS | | • | •* | | | |
| Bicycle helmets (safety promotion) | | | | • | •SRTS | | • | | | | |
| Bicycle lanes on road | • | • | • | • | • | | • | | | • | • |
| Bicycle parking | • | | • | • | • | • | • | | | • | ~• |
| Bicycle share | • | | • | • | • | | | | | • | • |
| Bicycle storage or service centers | • | | | • | • | | | | | • | ~• |
| Bridges/overcrossings | •* | • | • | • | • | • | • | | | • | • |
| Coordinator positions (state or local) | •* | | | • | •SRTS | | • | | | | |
| Crosswalks (new or retrofit) | •* | • | • | • | • | • | • | | | • | • |
| Curb cuts and ramps | •* | • | • | • | • | • | • | | | • | • |
| Counting equipment | | • | • | • | • | • | • | | | • | |
| Data collection & monitoring for pedestrians and/or bicyclists | | • | • | • | • | • | • | | | • | |
| Historic preservation (bike, ped, transit facilities) | | | | • | • | | | | | • | • |
| Land/streetscaping (bike/ped route; transit access); related amenities (benches, water foundations); generally as part of a larger project | | | • | • | • | | | | | • | ~• |
| Lighting (bike/ped scale associated w/ bike/ped project) | | • | • | • | • | • | • | | | • | • |
| Maps (for bicyclists and/or pedestrians) | • | | | • | • | | • | | | | |
| Paved shoulders | •* | • | • | • | • | | • | | | • | • |
| Pedestrian plans | | | | • | • | | • | | | • | |
| Recreational trails | | | | • | • | • | | | | • | ~• |
| Road diets (for bicycle and pedestrian portions) | | • | • | • | • | | | | | • | • |
| Road safety assessments for pedestrians and bicyclists | | • | | • | • | | | | | • | |
| Safety education and awareness activities/programs to inform pedestrians, bicyclists, and motorists on bike/ped safety | | | | •SRTS | •SRTS | | • | •* | •* | | |
| Safety education positions | | | | •SRTS | •SRTS | | • | •* | | | |
| Safety enforcement (including police patrols) | | | | •SRTS | •SRTS | | • | •* | •* | | |
| Safety program technical assistance (for peds/bicyclists) | | | | •SRTS | •SRTS | | • | • | | | |
| Separated bicycle lanes | • | • | • | • | • | | • | | | • | • |
| Shared use paths / transportation trails | •* | • | • | • | • | • | • | | | • | • |
| Sidewalks (new or retrofit) | • | • | • | • | • | • | • | | | • | • |
| Signs / signals / signal improvements | • | • | • | • | • | | • | | | • | • |
| Signed bicycle or pedestrian routes | • | | • | • | • | | • | | | • | • |
| Spot improvement programs | | • | • | • | • | • | • | | | • | • |
| Stormwater impacts related to pedestrian and bicycle projects | | • | • | • | • | • | • | | | • | • |
| Traffic calming | | • | • | • | • | | • | | | • | • |
| Trail bridges | •* | • | • | • | • | • | • | | | • | • |
| Trail construction and maintenance equipment | | | | •RTP | •RTP | • | | | | | |
| Trail/highway intersections | •* | • | • | • | • | • | • | | | • | • |
| Trailside and trailhead facilities (includes restrooms and water, but not general park amenities) | | | | •* | •* | •* | | | | • | ~•* |
| Training | • | • | | • | • | • | • | •* | | | |
| Training for law enforcement on ped/bicyclist safety laws | | | | •SRTS | • | | • | | •* | | |
| Tunnels/undercrossings | •* | • | • | • | • | • | • | | | • | • |

Notes:

- • Funds may be used for this activity, but restrictions may apply
- ~ Eligible, but not competitive unless part of a larger project
- * See program-specific notes for restrictions
- ** This region is currently not a non-attainment area

### *Table 10 Key*

**CMAQ:** Congestion Mitigation and Air Quality Improvement Program

**HSIP:** Highway Safety Improvement Program

**NHPP:** National Highway Performance Program

**STBG:** Surface Transportation Block Grant Program

**TA:** Transportation Alternatives Set-Aside

**RTP:** Recreational Trails Program

**SRTS:** Safe Routes to School Program

**NHSTA 402:** State and Community Highway Safety Grant Program

**NHSTA 405:** National Priority Safety Programs

**FLTTP:** Federal Lands and Tribal Transportation Programs

**TIGER:** Transportation Investment Generating Economic Recovery

# References


1 Centers for Disease Control and Prevention, How Much Physical Activity do Adults Need? http://www.cdc.gov/physicalactivity/everyone/guidelines/adults.html accessed 8/7/13

2 US Census, 2010-2014 American Community Survey, 2015 BRFSS for Fox Cities, CTG Program, UW Madison, DPI. wi.gov.

3 The American Automobile Association reports the average annual cost of owning a small sedan was $6,729 per year and a SUV is $10,624 in 2015. http://newsroom.aaa.com/2015/04/annual-cost-operate-vehicle-falls-8698-finds-aaa-archive/

4 "Pedaling to Prosperity." The Sierra Club. http://www.sierraclub.org/pressroom/downloads/BikeMonth_Factsheet_0512.pdf

5 Racca, David P. and Dhanju, Amardeep. Property Value/Desirability Effects of Bike Paths Adjacent to Residential Areas. Newark, DE: Center for Applied Demography & Survey Research. November 2006.

6 Grabow, et al, "Valuing Bicycling's Economic and Health Impacts in Wisconsin," The Nelson Institute for Environmental Studies, Center for Sustainability and the Global Environment, University of Wisconsin-Madison, January 2010. https://www.adventurecycling.org/default/assets/File/USBRS/Research/Wisconsin_bicycling_Final_Report.pdf

7 Lawrie, et al, "Pathways to Prosperity: the economic impact of investments in bicycling facilities," N.C. Department of Transportation Division of Bicycle and Pedestrian Transportation, Technical Report, July 2004.

8 http://headwaterseconomics.org/wphw/wp-content/uploads/Trail_Study_7-pathways-to-prosperity-bicycle-facilities.pdf

9 Bicycling and Walking in the United Sates: 2012 Benchmarking Report, Alliance for Biking and Walking, 2012

10 Catalysts for the Control of Automotive Cold Start Emissions, United States Environmental Protection Agency, http://cfpub.epa.gov/ncer_abstracts/index.cfm/fuseaction/display.abstractDetail/abstract/1450/report/0.

11 County Health Rankings and Roadmaps, http://www.countyhealthrankings.org/, Behavioral Risk Factor Surveillance Survey;

12 Glennon, John C. Design and traffic control guidelines for low-volume rural roads. Washington, D.C.: Transportation Research Board, National Research Council, 1979.

13 Wisconsin Rural Bicycle Planning Guide. Wisconsin Department of Transportation. April 2006. 15.

14 Not used for this analysis.

15 Geller, R. "Four Types of Cyclists." Portland Office of Transportation. https://www.portlandoregon.gov/transportation/article/264746.

16 Dill, J. and N. McNeil. (2013, January) "Four Types of Cyclists? Examining a Typology to Better Understand Bicycling Behavior and Potential." Paper presented at the Annual Meeting of the Transportation Research Board.

17 These category names were developed by Roger Geller of the City of Portland Office of Transportation. They have become the standard naming convention, but some advocates and industry professionals feel they cast a negative tone on certain types of bicyclists.

18 Dill, J. and N. McNeil. (2013, January) "Four Types of Cyclists? Examining a Typology to Better Understand Bicycling Behavior and Potential." Paper presented at the Annual Meeting of the Transportation Research Board.

19 Dill, J. and N. McNeil. (2013, January) "Four Types of Cyclists? Examining a Typology to Better Understand Bicycling Behavior and Potential." Paper presented at the Annual Meeting of the Transportation Research Board.

20 These typical costs were developed in part using Wisconsin Department of Transportation Average Unit Price data as well as historical average costs observed by Toole Design Group. WisDOT data available at: http://wisconsindot.gov/hcciDocs/contracting-info/average-unit-price.pdf.


# 6 Maps

This chapter provides maps referenced within the planning document.

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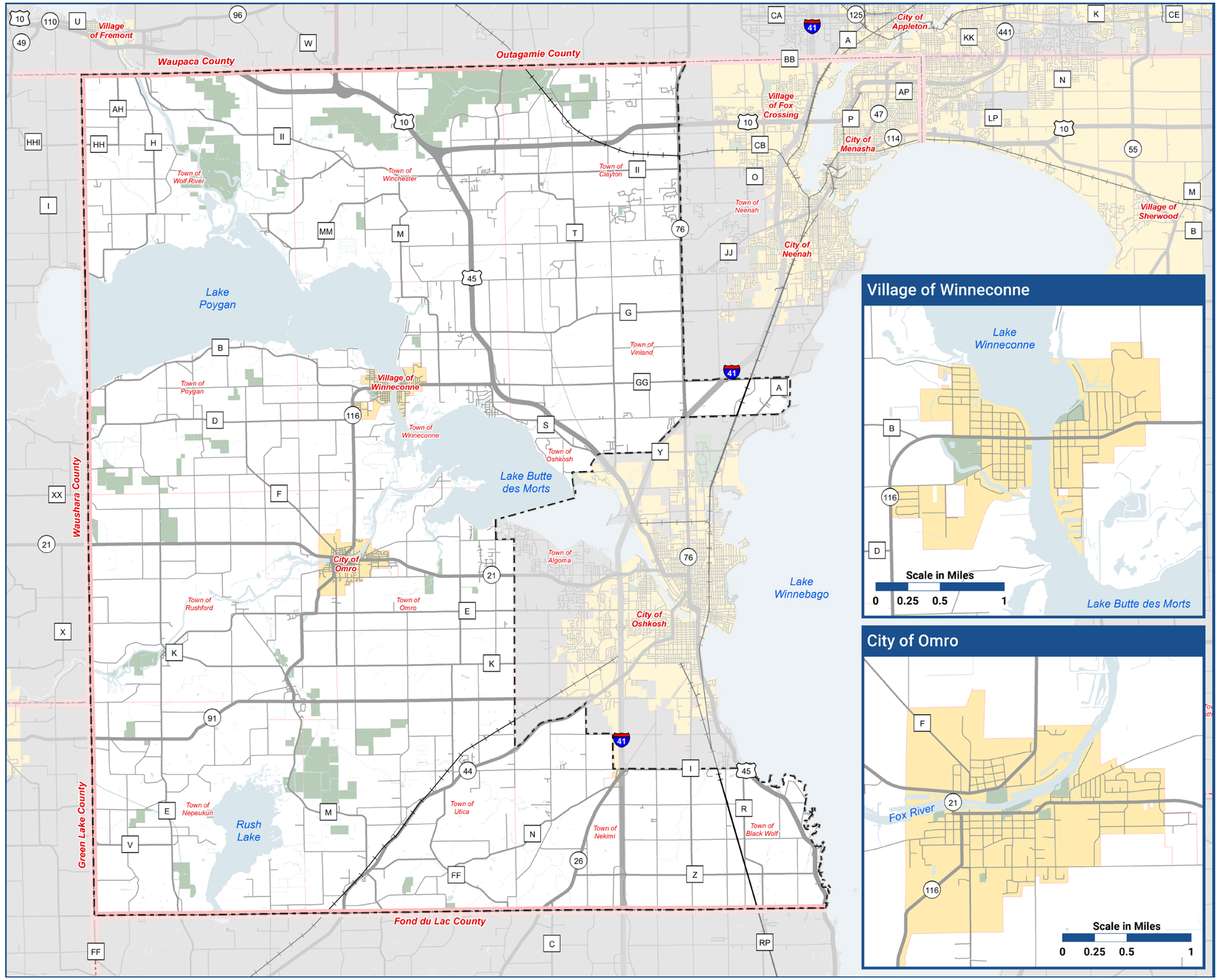
# Winnebago County Bicycle & Pedestrian Plan

## Map 1: Plan Study Area




### Village of Winneconne




### City of Omro




**Legend**

- Railroad
- Study Area
- Incorporated Municipality
- Town Boundary
- County Boundary
- Recreational Parks
- Water

Scale in Miles
0 2 4 8

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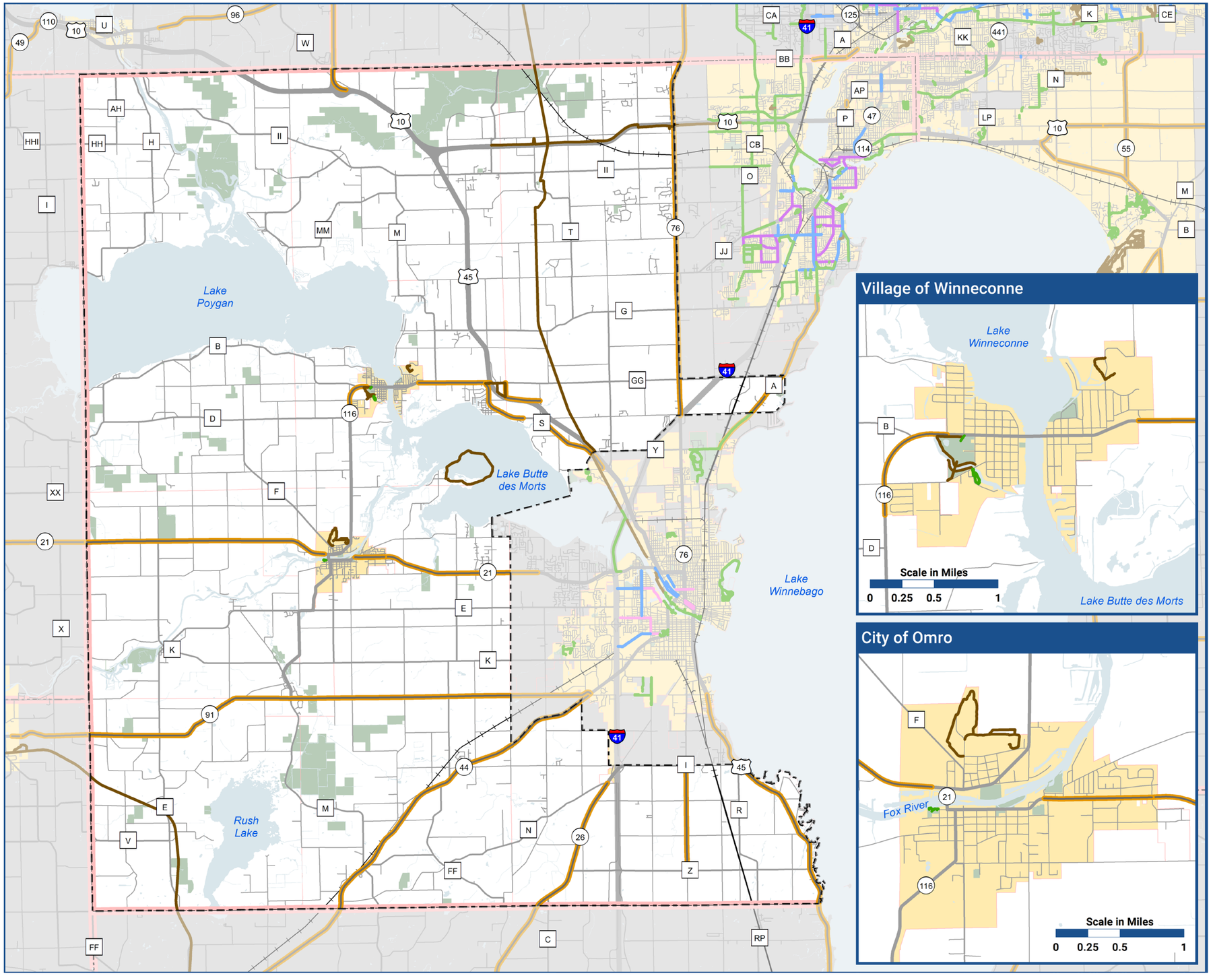
# Winnebago County Bicycle & Pedestrian Plan

## Map 2: Bicycle & Pedestrian Facilities and Treatments




### Village of Winneconne




### City of Omro




**Legend**

- Shared-Use Path (Paved)
- Shared-Use Path (Unpaved)
- Bike Lane
- Paved Shoulder
- Shared Lane Marking
- Signed Bicycle Route
- Railroad
- Study Area
- Incorporated Municipality
- Town Boundary
- County Boundary
- Recreational Parks
- Water

N W E S

Scale in Miles
0 2 4 8

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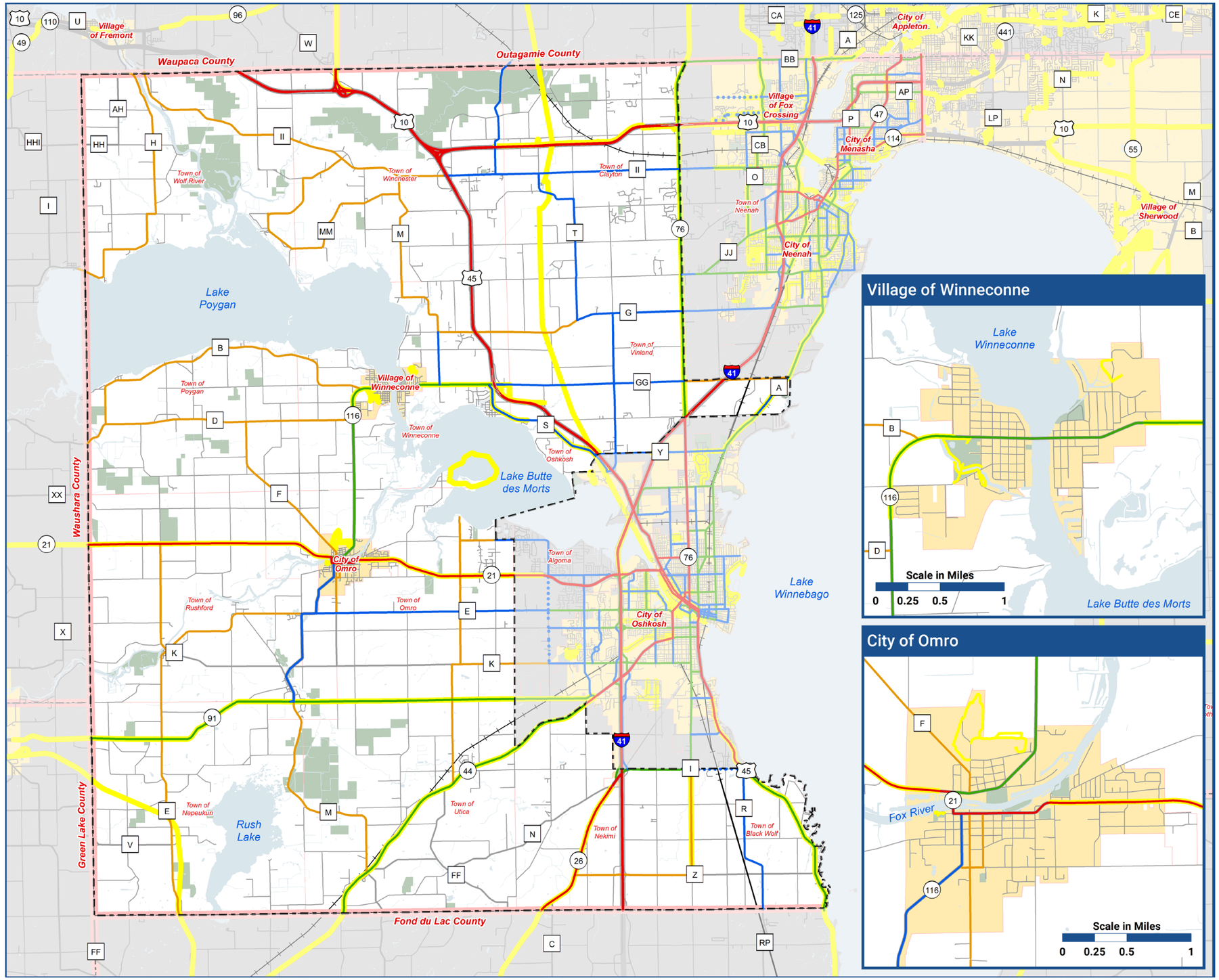
# Winnebago County Bicycle & Pedestrian Plan

## Map 3: Roadway Functional Classification




### Village of Winneconne




### City of Omro




### Legend

**Roadway Functional Class**

- Principal Arterial
- Planned Principal Arterial
- Major Collector
- Planned Major Collector
- Minor Arterial
- Minor Collector
- Local Roads
- Bicycle Facility / Treatment
- Railroad
- Study Area
- Incorporated Municipality
- Town Boundary
- County Boundary
- Recreational Parks
- Water

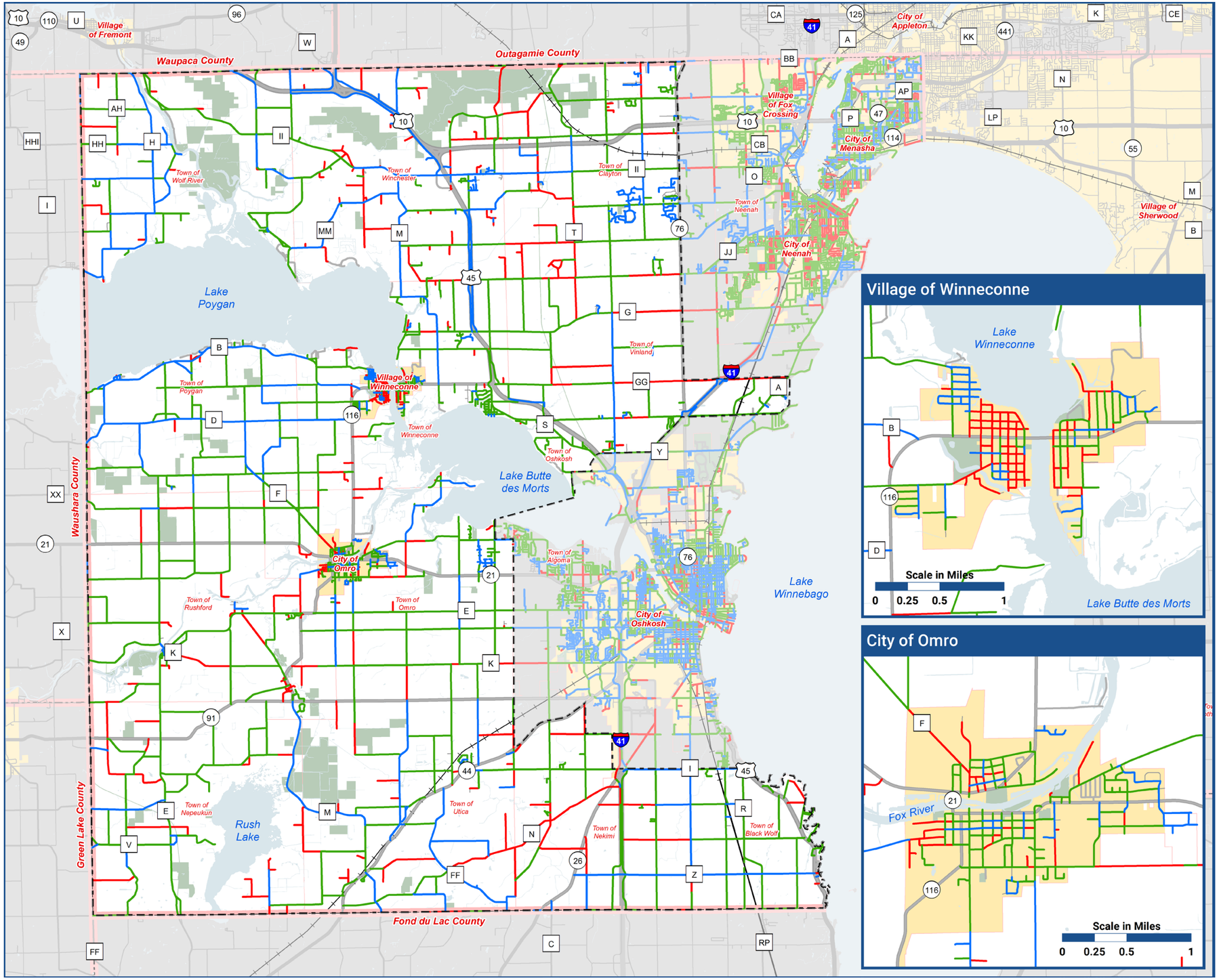
N W E S

Scale in Miles

0 2 4 8

# Winnebago County Bicycle & Pedestrian Plan

## Map 4: Roadway PASER Ratings (Pavement Quality)




### Village of Winneconne




### City of Omro




**Legend**

2015 Roadway PASER Ratings

- Good
- Fair
- Poor
- Not Rated
- Study Area
- Incorporated Municipality
- Town Boundary
- County Boundary
- Recreational Parks
- Water

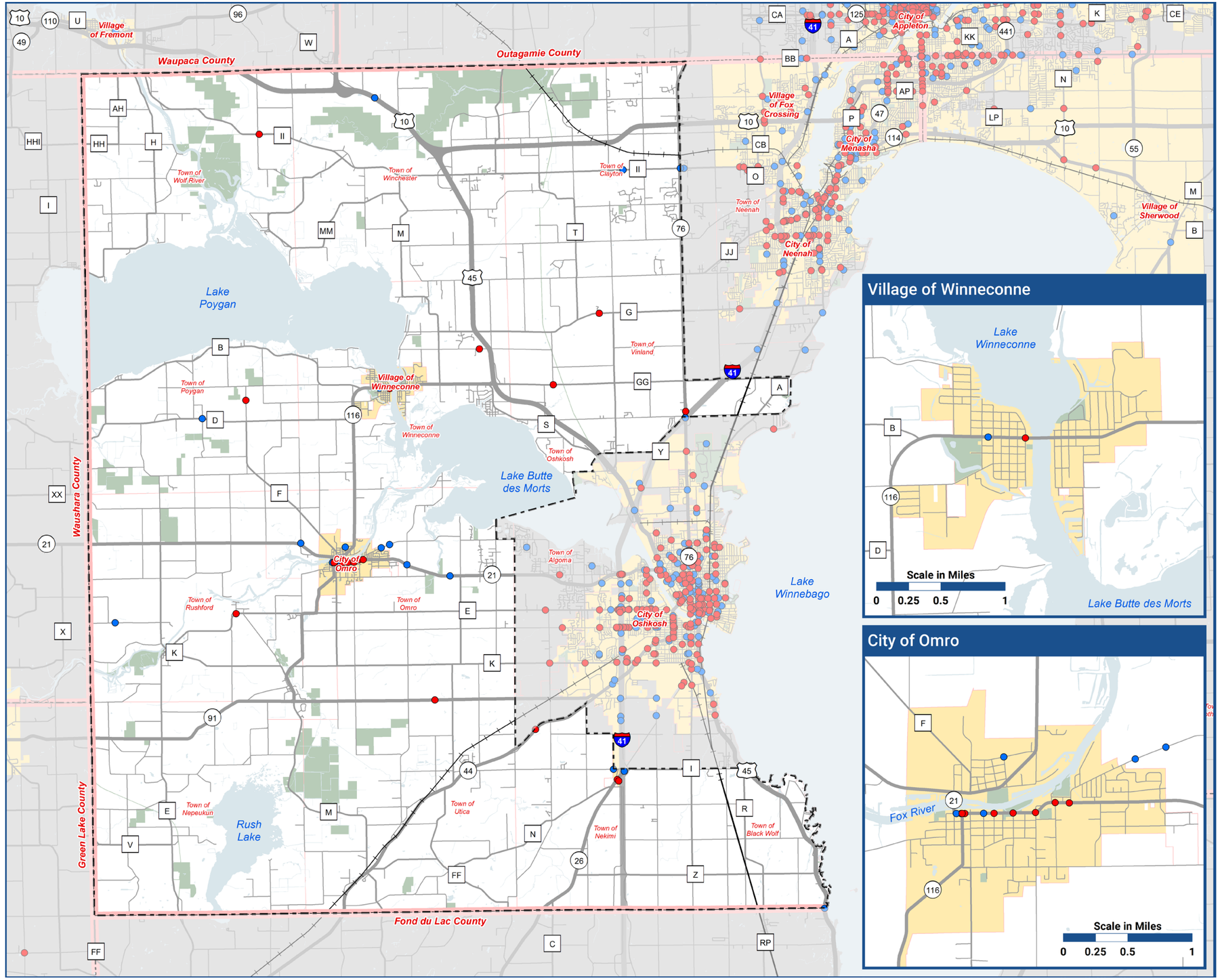
N W E S

Scale in Miles

0 2 4 8

# Winnebago County Bicycle & Pedestrian Plan

## Map 5: Reported Bicycle & Pedestrian Crashes, 2005 - 2015




### Village of Winneconne




### City of Omro




**Legend**

- Crash Location - Bicycle
- Crash Location - Pedestrian
- Study Area
- Incorporated Municipality
- Recreational Parks
- Water

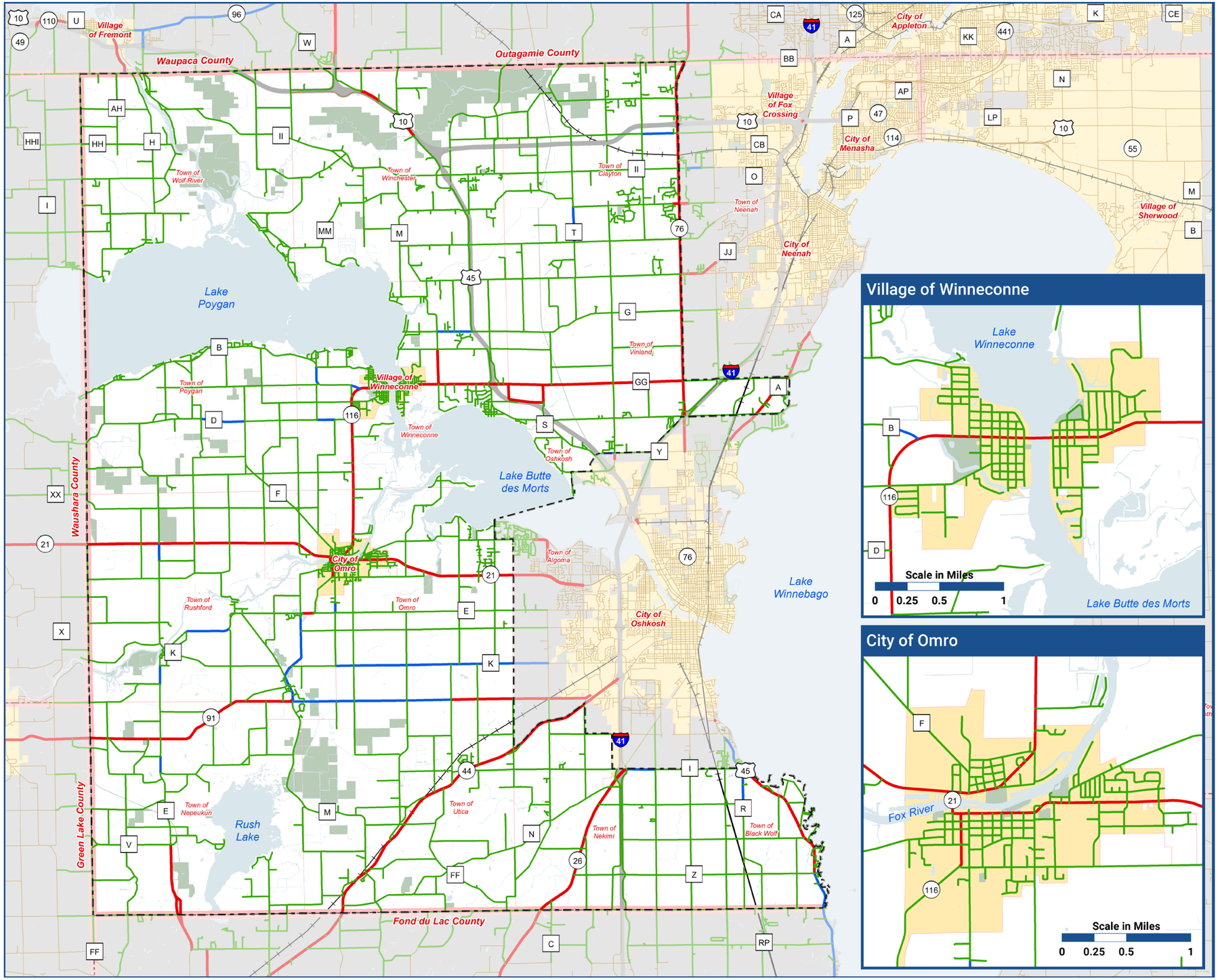
N W E S

Scale in Miles

0 2 4 8

# Winnebago County Bicycle & Pedestrian Plan

## Map 6: Roadway Bicycle Compatibility




### Village of Winneconne




### City of Omro




**Legend**

**Bicycle Compatibility**

- Not Rated
- Good
- Moderate
- Poor
- Bikes Not Permitted
- Railroad
- Study Area
- Incorporated Municipality
- Town Boundary
- County Boundary
- Recreational Parks
- Water

N W E S

Scale in Miles
0 2 4 8

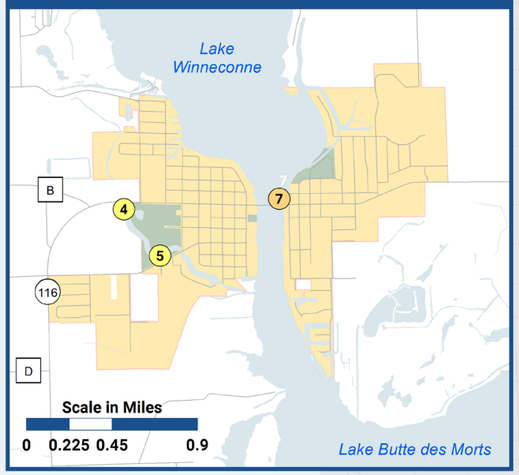
# Winnebago County Bicycle & Pedestrian Plan

## Map 7: Bicycle and Pedestrian Count Locations

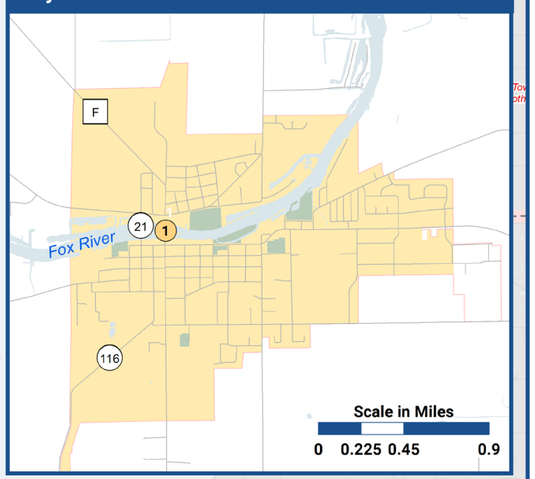
### Note

The automated bicycle and pedestrain counts were conducted between May 1, 2016 and August 15, 2916 throughout Winnebago County. Each count was conducted for a one week time span, and counts were averaged to provide an average daily count. The count numbers presented here are a snapshot of bicycle and pedestrian usage only at the time the count was conducted, and were not extrapolated to longer timeframes. Count technology has a 95% accuracy rate.

### Village of Winneconne




### City of Omro




### Legend

- Pneumatic Tube Count Locations (Bikes)
  - 1: Omro Pedestrian Bridge - 39
  - 2: Springbrook Road - 16
  - 3: Fond du Lac Road - 9
  - 4: CTH I - 1
  - 5: CTH A - 22
  - 6: Green Valley Road - 1
  - 7: STH 116 - 7
  - 8: CTH G - 11
  - 9: CTH II - 11
  - 10: CTH II @ Rat River - 1
  - 11: 9th Avenue - 159
  - 12: CTH E - 6
- Infrared Count Locations (Bikes/Pedestrians)
  - 1: CTH A Trail - 37
  - 2: Wiowash Trail @ Medina Junction Road - 0
  - 3: Wolf Wilderness Trail @ STH 45 / CTH GG - 9
  - 4: Marble Park west path - 25
  - 5: Marble Park foot bridge - 200
  - 6: Terrell Island west side - 61
  - 7: Terrell Island east side - 106
  - 8: Aurora Hospital Mountain Bike Trail - 58
  - 9: Waukau Creek Dam Trail @ Dehli Road - 16
  - 10: Waukau Creek Dam Trail @ STH 116 - 298
  - 11: Mascoutin Trail @ Quarry Street - 19
  - 12: Mascoutin Trail @ Willard Road - 18
  - 13: Mascoutin Trail @ Koro Road - 0
  - 14: Mascoutin Trail @ Grams Road - 60
  - 15: Mascoutin Trail @ Rich Road - 19
  - 16: Mascoutin Trail @ Cork Street - 26
- Study Area

N W E S

Scale in Miles
0 2 4 8

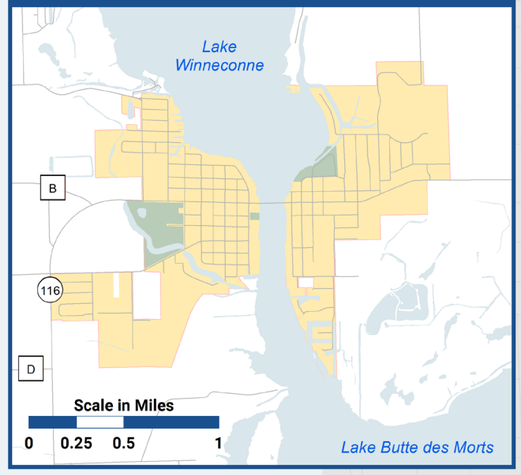
# Winnebago County Bicycle & Pedestrian Plan

## Map 8: Additional Bicycle and Pedestrian Count Locations

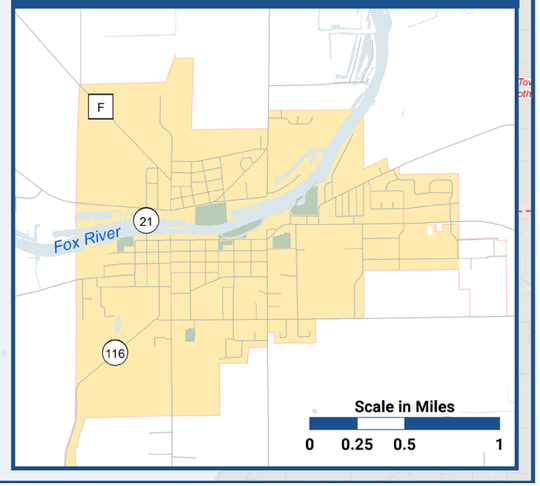
### Note

The automated bicycle and pedestrain counts were conducted between May 1, 2016 and August 15, 2916 throughout Winnebago County. Each count was conducted for a one week time span, and counts were averaged to provide an average daily count. The count numbers presented here are a snapshot of bicycle and pedestrian usage only at the time the count was conducted, and were not extrapolated to longer timeframes. Count technology has a 95% accuracy rate.

### Village of Winneconne




### City of Omro




**Legend**

- Infrared Count Locations (Bikes & Peds)
  1: Friendship Trail @ STH 76 - 48
  2: Friendship Trail @ Oakwood Avenue - 131
  3: Friendship Trail @ Wiouwash Trail - 19
  4: Wiouwash Trail @ USH 10 - 131
  5: Wiouwash Trail @ Oakridge Road - 61
  6: Wiouwash Trail @ Grimson Road - 48
  7: Wiouwash Trail @ Brooks Road - 73
  8: Wiouwash Trail @ CTH S - 92
  9: Wiouwash Trail @ Slough Bridge - 203
  10: Wiouwash Trail @ Marine Drive - 108
  11: Wiouwash Trail @W Riverside Cemetery - 157
  12: Wiouwash Trail @ New York Ave - 122
  13: Wiouwash Trail @ UWO - 214
  14: Oshkosh Riverwalk @ UWO - 187
  15: Oshkosh Riverwalk @ South River - 200
  16: Jackson Street Bridge East - 64
  17: Jackson Street Bridge West - 80
  18: Oshkosh Riverwalk River 1 Building - 125
  19: Oshkosh Riverwalk River Best Western - 134
  20: Oshkosh Riverwalk West - 280
  21: Oshkosh Riverwalk East - 122
  22: Winnebago County Park North - 27
  23: Winnebago County Park West - 60
  24: Winnebago County Park South - 27
- Study Area

N W E S

Scale in Miles
0 2 4 8

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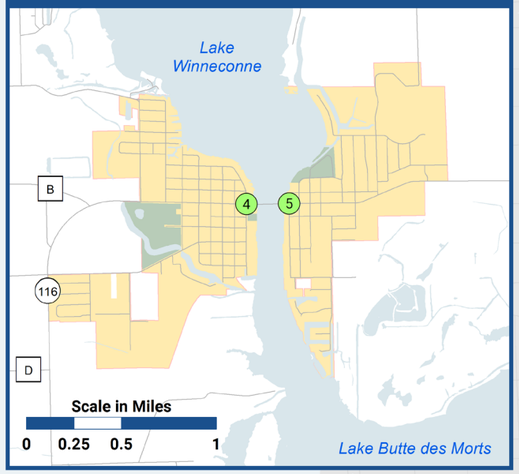
# Winnebago County Bicycle & Pedestrian Plan

## Map 9: Manual Bicycle and Pedestrian Count Locations

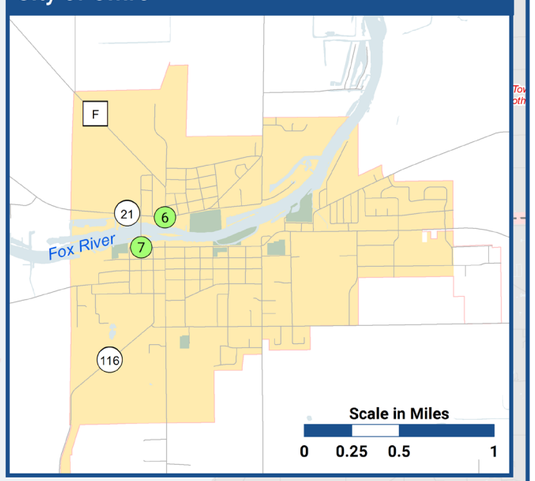
### Note

The manual bicycle and pedestrain counts were conducted between June 11, 2015 and July 14, 2015 throughout Winnebago County. Each count was conducted for a one hour time span, usually between 11:00 am and 5:00 pm. The count data was not extrapolated to a longer timeframe; the count numbers presented here are a snapshot of bicycle and pedestrian usage only at the time the count was conducted.

### Village of Winneconne




### City of Omro




**Legend**

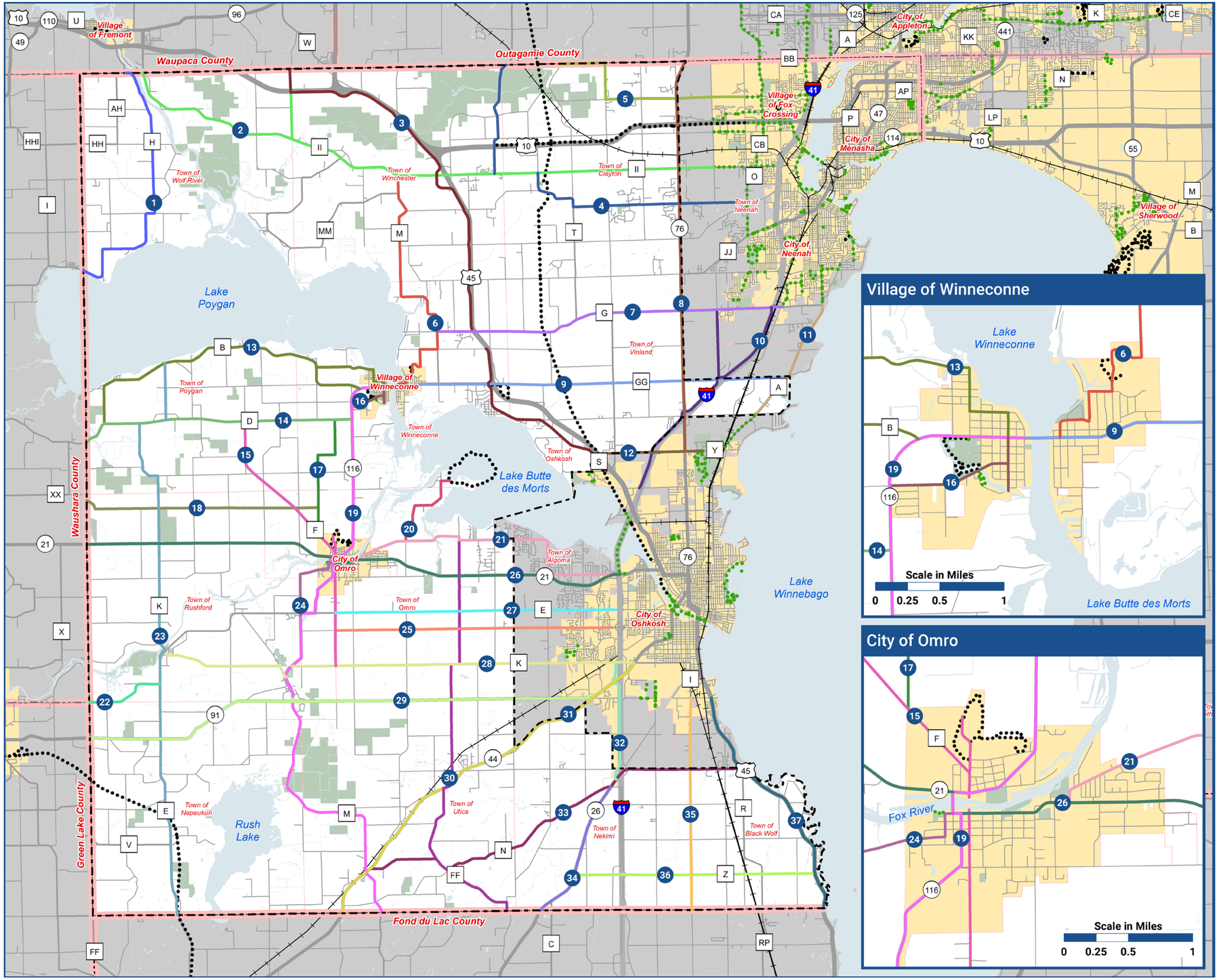
- Manual Count Locations (Bikes & Peds)
  - 1: County Rd Y & Green Valley Rd - 0
  - 2: Lake Butte Des Morts Dr & Westwind Rd - 1
  - 3: Lake Butte Des Morts Dr & Marine Dr - 6
  - 4: STH 116 & 1st St - 13
  - 5: STH 116 & 1st Ave - 14
  - 6: STH 116 & N Webster Ave - 24
  - 7: STH 116/STH 21 & Adams Ave - 24
  - 8: STH 21 & Omro Rd & Leonard Point Rd- 1
  - 9: STH 44 & S Koeller St - 1
  - 10: USH 45 & CTH R & E Fisk Ave - 2
  - 11: CTH E & Rich Rd & Mascoutin Valley Trl - 1
  - 12: CTH K (Eureka Rd) & Eureka Lock Rd - 0
  - 13: CTH E & CTH K (Eureka Rd) - 1
  - 14: CTH F & CTH E - 4
  - 15: Planeview Dr & Washburn St - 28
  - 16: CTH GG & Wiouwash Trail - 11
  - 17: Brooks Rd & Green Valley Rd - 1
  - 18: CTH GG & Green Valley Rd - 1
  - 19: CTH FF & CTH K - 1
  - 20: STH 116 & CTH S & Ball Prairie Rd - 6
  - 21: Grimson Rd & Hilltop Rd & Wiouwash Trail - 9
  - 22: CTH M & Friendship Trail - 0
  - 23: CTH II & Bison Rd & Mudcreek Rd - 0
  - 24: CTH I & CTH Z - 0
  - 25: Fairview Rd & Medina Junction Rd - 2
  - 26: Wiowash Trail & Friendship Trail - 7
  - 27: Oakwood Ave & Friendship Trail - 6
  - 28: Shubert Rd & Rivermoor Dr (Terrell Island) - 1
  - 29: Nekemi Rd & Old Knapp Rd - 2
- Study Area

N W E S

Scale in Miles
0 2 4 8

# Winnebago County Bicycle & Pedestrian Plan

## Map 10: Proposed On-Road Bicycle & Pedestrian Network by Corridor




### Village of Winneconne




### City of Omro




**Legend**

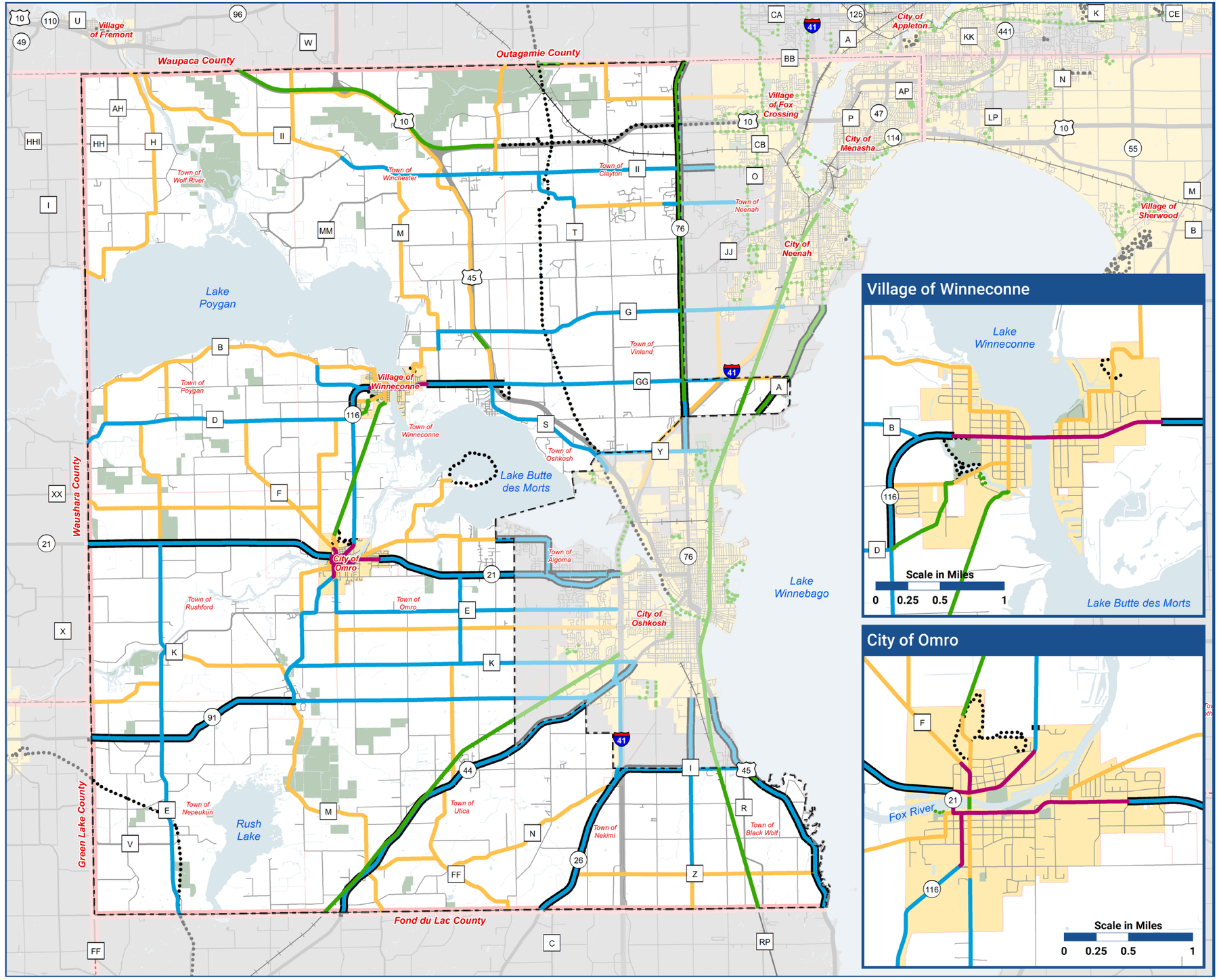
- Network Corridor
- Shared-Use Path (Paved) - Existing
- Shared-Use Path (Unpaved) - Existing
- Railroad
- Study Area
- Incorporated Municipality
- Town Boundary
- County Boundaries
- Recreational Parks
- Water

N W E S

Scale in Miles
0 2 4 8

# Winnebago County Bicycle & Pedestrian Plan

## Map 11: Proposed Bicycle & Pedestrian Network by Facility Type




### Village of Winneconne




### City of Omro




### Legend

- Shared Use Path
- Bike Lane
- Paved Shoulder
- Wide Paved Shoulder
- Minor Enhancement
- Shared-Use Path (Paved) - Existing
- Shared-Use Path (Unpaved) - Existing
- Railroad
- Study Area
- Incorporated Municipality
- Town Boundary
- County Boundaries
- Recreational Parks
- Water

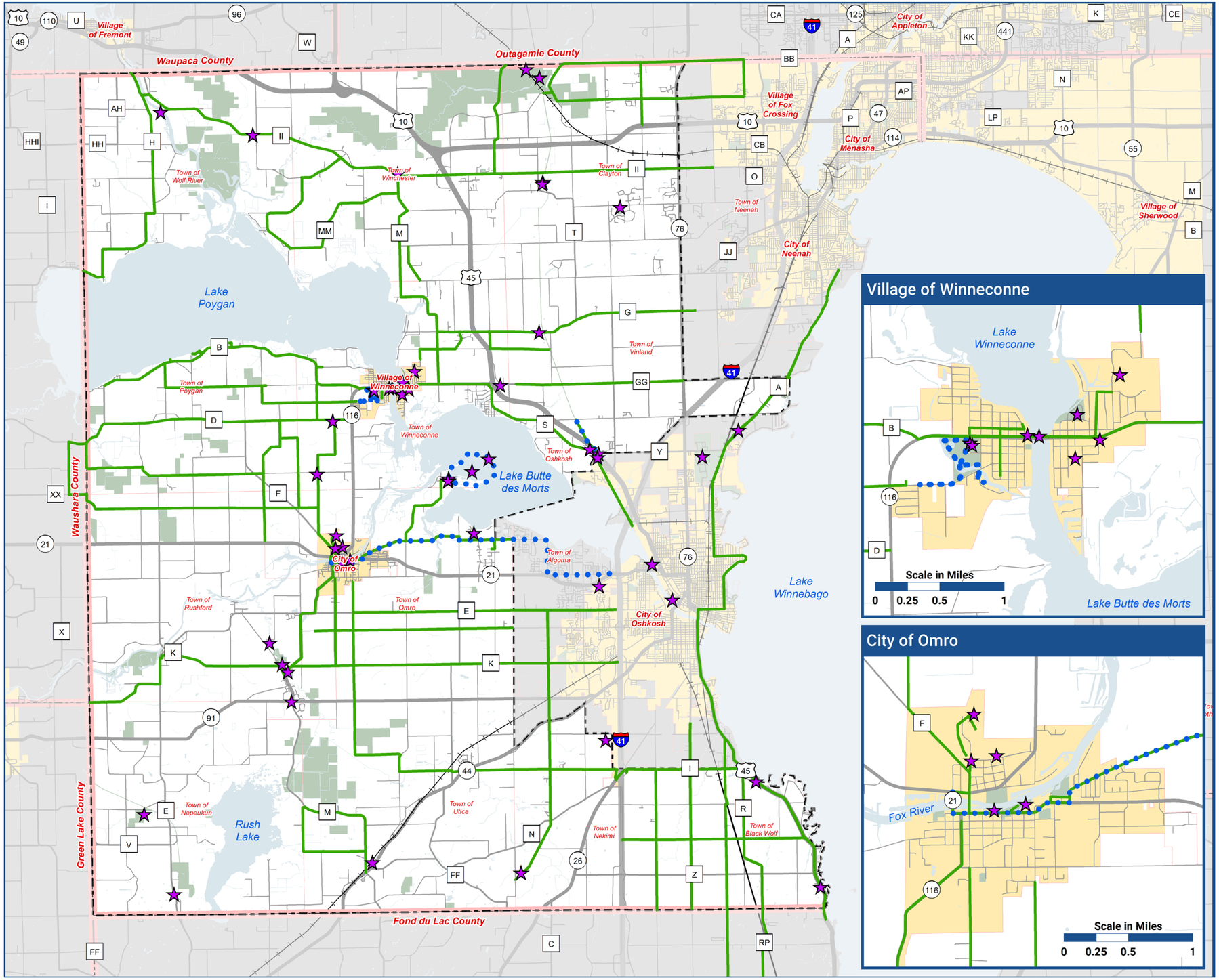
N W E S

Scale in Miles

0 2 4 8

# Winnebago County Bicycle & Pedestrian Plan

## Map 12: Wikimap Comments Good Routes and Destinations




### Village of Winneconne




### City of Omro




### Legend

**Wikimap Input**

- Walk: Good Route
- Bike: Good Route
- Destination
- Railroad
- Study Area
- Incorporated Municipality
- Town Boundary
- County Boundary
- Recreational Parks
- Water

N W E S

Scale in Miles
0 2 4 8

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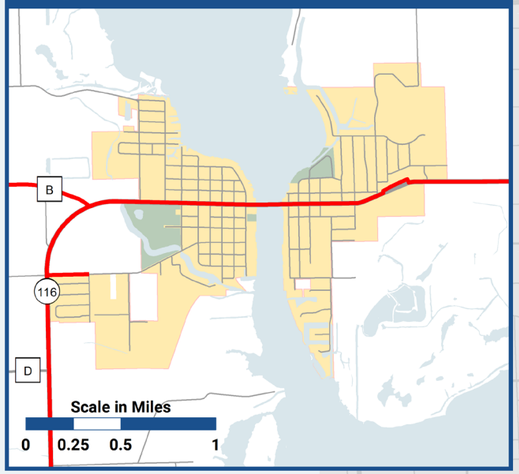
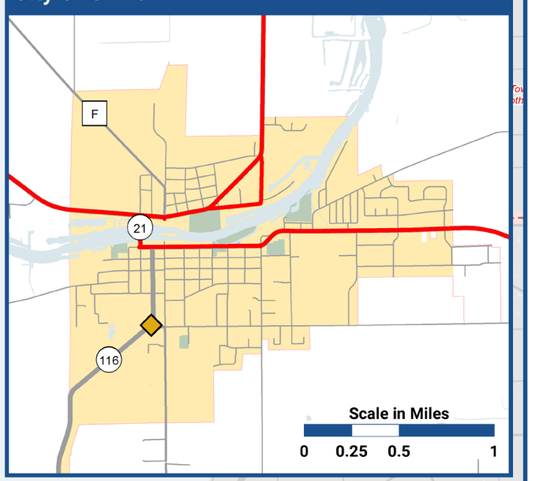
# Winnebago County Bicycle & Pedestrian Plan

## Map 13: Wikimap Comments Bad Routes and Barriers/Hazards

### Village of Winneconne




### City of Omro




### Legend

**Wikimap Input**

- Walk: Bad Route
- Bike: Bad Route
- Barrier / Hazard
- WI_State_Railroad
- Study Area
- Incorporated Municipality
- Town Boundary
- County Boundary
- Recreational Parks
- Water

N W E S

Scale in Miles
0 2 4 8

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Winnebago County

*The Wave of the Future*