November 28, 2011

City of Red Wing

Bicycle and pedestrian Master Plan

IMAGINE Red Wing

A Bikeable, walkable community

Acknowledgments

This plan was compiled with help from an advisory committee and various City staff. The following people were instrumental in the Bicycle and Pedestrian Planning Process.

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Photo Courtesy: www.pedbikeimages.org/Trey Lyons

Photo Courtesy: www.pedbikeimages.org/Dorothy Bracket

Photo Courtesy: www.pedbikeimages.org/Trey Lyons

"Biking is the rite of passage for all children. In some ways, it is the freedom to explore more of the world outside the confines of parental supervision. Biking to me means 'freedom'. I experience total exhilaration as I fly down a hill, hair flying behind me underneath my helmet. It is ironic that halfway around the world, in Africa, a bicycle could also mean freedom."

-Alexandra Kung, age 13, From the International Bicycle Fund's 2011 Annual Student Bicycle Essay Contest

Photo courtesy: www.pedbikeimages.org/Dan Burden

Pearl Street Pedestrian Mall in Boulder Colorado

EXECUTIVE SUMMARY

The Bicycle and Pedestrian Plan was developed as an action of the Complete Streets Policy Resolution adopted by the City Council on January 10, 2011. The Complete Streets Policy Resolution called for the Planning Commission to draft a bicycle and pedestrian network plan for City Council adoption by December 31, 2011.

The Bicycle and Pedestrian Master Plan sets the framework to position Red Wing as a bicycle and pedestrian friendly city. It highlights the many benefits of bicycling and walking that include economic and environmental benefits as well as positive impacts on public health and livability. Now more than ever, there is a demand for alternative transportation options nationwide. The implementation of the Bicycle and Pedestrian Master Plan will provide Red Wing residents and visitors with a variety of transportation options.

Implementation of the Bicycle and Pedestrian Master Plan will not be accomplished overnight, but rather over the course of the next several decades by many incremental improvements as funding and project opportunities arise. The plan provides a vision for bicycling and walking in Red Wing and a framework for accomplishing the City's goals in a strategic and cost effective way.

Public participation and input were crucial components of the planning process. Throughout the planning process, there were many ways for the public to shape and guide the plan, ranging from a community survey, interviews, walkabouts and bikeabouts and an open house to comment on the draft document. Public participation was helpful to understand current conditions and determine priorities.

The Plan creates a vision and goals for biking and walking in Red Wing, furthering broad transportation goals set forth in the City's Comprehensive Plan to increase transportation options for all users. The vibrancy of the City and its historic downtown depend on a bikeable, walkable community that is easily accessible to all users.

The existing conditions section shows that Red Wing has a fairly compact and walkable downtown and many excellent recreational trails in the area. However, parts of the system are not well connected and the City lacks an on-street bicycle network. It acknowledges physical and social barriers to bicycle and pedestrian transportation such as terrain and social norms that perpetuate the auto culture.

The Plan identifies and sets forth priorities for bicycle and pedestrian projects including the development of an on-street bicycle network, bicycle and pedestrian connections, educational and promotional programs and enforcement strategies. It emphasizes integrating bicycle and pedestrian needs with ongoing road construction and maintenance projects to minimize costs and maximize outcomes.

Identifying potential funding sources as well as partners is an important part of the Bicycle and Pedestrian Master Plan as non-city funds will be needed to accomplish the goals of the Plan. Securing funding for bicycle and pedestrian projects and programs is more likely if there is a well thought out Bicycle and Pedestrian Plan that included public participation and input from various stakeholders.

Additionally, having a long range Plan for bicycle and pedestrian needs throughout Red Wing allows the City to incorporate bicycle and pedestrian amenities into already planned road construction projects which would minimize additional costs and inconvenience due to construction.

The purpose of the Plan is to capture the wide variety of benefits that bicycling and walking bring to a community and its residents as well as to provide Red Wing with a long-range plan that integrates bicycling and walking into the City's transportation system and best uses its limited resources to improve the transportation network as a whole.

Photo Courtesy: www.pedbikeimages.org/Dan Burden

Photo Courtesy: www.pedbikeimages.org/Dan Burden

Photo Courtesy: www.pedbikeimages.org/Dan Burden

Photo Courtesy: www.pedbikeimages.org/Carl Sundstrom

Introduction

Red Wing (16,459) is a growing community located about 45 miles southeast of the Twin Cities Metro area, nestled amidst the scenic bluffs of the upper Mississippi River. It is a thriving regional center for tourism, medical care, industry and technology offering an abundance of natural resources in a historic setting that honors the past and celebrates the future.

Red Wing's Bicycle and Pedestrian Master Plan is a tool to guide the long-term programs, policies and physical projects that will support walking and bicycling in Red Wing. The intent is to provide facilities that make walking and bicycling safer and more convenient for people of all ages and abilities and to transform Red Wing into a community where choosing to walk or bicycle are safe, convenient, easy and enjoyable recreation and transportation options for all users.

This plan builds on previous Red Wing Plans and Policies such as the Comprehensive Plan, Downtown Action Plan, Hastings to Red Wing Trail Master Plan, Red Wing Sustainability Report and the adoption of a Complete Streets Policy. Carried throughout Red Wing's Comprehensive Plan is the notion of Livability. Livability, or the presence of amenities that contribute to a high quality of life, has become the driving force behind the growth and success of communities. Ingredients like natural beauty, vibrant neighborhoods, architectural and artistic quality, transportation alternatives and pursuit of sustainable practices contribute to a livable community.

This new focus on livability also leads to a shift in the way communities pursue growth and economic vitality. There was a time when attracting economic activity was done by building a ship yard, rail line or freeway. Today, the top priority is attracting creative talent and the best way to do that is to build a livable community. This requires innovative and thoughtful approaches to development that preserve inherent landscape and cultural qualities. A complete and well maintained bicycle and pedestrian network is a key component to enhance Red Wing's livability.

The Bicycle and Pedestrian Master Plan follows the City's 2011 decision to enact a Complete Streets Policy, a policy that complements the City's Comprehensive Plan, approved in 2007, and calls for an increased number of safe and aesthetically pleasing byways for bicyclists and pedestrians. The transportation section of Red Wing's Comprehensive Plan sets the goal to, "accommodate a variety of travel modes such as bike, walk, transit and vehicles and that such corridors should function both as a movement corridor and an amenity/identity feature for the community." This Plan sets forth the process and steps to be taken to make that goal a reality.

The Red Wing Bicycle and Pedestrian Master Plan sets the framework to create an environment—physical and social—that provides for safe, convenient, and enjoyable travel by bicyclists and walkers throughout the City of Red Wing. The Plan establishes a baseline measurement of bicycling and walking activity in Red Wing and identifies long-range opportunities and priorities for improved bicycle and pedestrian infrastructure and services within the city. It establishes an Action Plan that sets priorities and a cohesive network plan for bicycle and pedestrian improvements for future street reconstruction projects as well as an implementation strategy for goals set forth in the Comprehensive Plan pertaining to bicycle and pedestrian mobility. In addition, this baseline measurement of bicycle and walking activity will help the City track progress made on implementation and the success of the Plan over time. Lastly, the Plan identifies potential funding sources and partnerships that will be crucial to its success.

The Action Plan is organized according to the widely accepted 5 E's of bicycle and pedestrian planning used by the Federal Highway Administration (FHWA), the National Highway Traffic Safety Administration (NHTSA) as well as many communities and organizations nationwide. The 5 E's of bicycle and pedestrian planning are:

1. ***Engineering:*** physical projects such as bike lanes and signage that improve the pedestrian and bicycling environment throughout Red Wing
2. ***Education:*** educating people about the benefits of biking and walking, biking and walking safety and creating maps of routes and infrastructure
3. ***Enforcement:*** enforcement of existing traffic laws by local officials and police as well as community members to create a more friendly bicycle and pedestrian environment
4. ***Encouragement:*** programs and events to get people excited about biking and walking
5. ***Evaluation:*** measuring the success of the bicycle and pedestrian plan and efforts

Red Wing's vision statement "the Community Vision for the City of Red Wing is to capture the vibrancy of growth while preserving and enhancing the city's unique historic and natural environmental character."

–adopted March 27, 2006

BENEFITS OF BICYCLING AND WALKING

Why create a Bicycle and Pedestrian Plan?

The benefits of bicycling and walking are numerous and wide ranging. Bicycling and walking have positive impacts on personal and public health, congestion, the environment, personal and public finances, tourism, economic development, land use patterns and sprawl, livability and much more. For these reasons bicycling and walking should be viewed not only as recreational activities, but also as viable modes of transportation.

Economic

Bicycling or walking as a means of transportation can mean substantial savings for individuals as well as the public. On a personal level, AAA's Your Driving Costs estimates that owning and operating a vehicle costs $7,834 per year compared to $120 for a bicycle (League of American Bicyclists) and walking is free. As a community, bicycling and walking infrastructure is less expensive than automobile infrastructure. The World Watch Institute found that, "A mile's worth of urban highway can cost US$20–80 million and often more, compared to a few thousand dollars or up to a million dollars for biking infrastructure. Similarly, bike parking is some 30 to 300 times cheaper than car parking."

Street design is another aspect that has a financial impact and can encourage or discourage bicycle and pedestrian traffic. Narrow streets are more pedestrian friendly, and less costly than the wide streets that currently make up many residential areas. Not only do narrow streets cost less to build, as they use less material, but they cost less to

Compact, walkable developments provide economic development benefits through increased property values, enhanced marketability and faster sales than conventional developments. (The Economic Benefits of Open Space, Recreation Facilities and Walkable Community Design by Active Living Research)

Photo Courtesy: www.pedbikeimages.org/Dan Burden

Bicycling and walking are not only money savers; they can also be revenue generators. Regions investing in bicycling have seen positive economic impacts. Below are examples from around the country.

- *Bicycling has contributed a total of $1 billion to the State of Colorado's economy as of 2000. This includes bicycle manufacturing, retail, tourism and bicycle races (Colorado Department of Transportation).*
- *Bicycling has contributed $556 million and 3,418 jobs in the State of Wisconsin (Bicycle Federation of Wisconsin and Wisconsin Department of Transportation).*
- *The state of Maine benefits from bicycle tourism in the amount of an estimated $66 million each year (Maine Department of Transportation).*
- *The town of Outer Banks North Carolina invested $6.7 million on bicycle facilities and reports a nine to one return on their investment generating $60 million from bicycle tourism (North Carolina Department of Transportation Division of Bicycle and Pedestrian Transportation).*

** League of American Bicyclists and Alliance for Biking and Walking, The Economic Benefits of Bicycle Infrastructure Investments*

maintain, as there is less snow to remove and store in the winter. Traffic calming features added to a street such as landscaped medians have also been shown to increase property values, contribute to a sense of place and give streetscapes character.

Environmental

Bicycling and walking are the most environmentally friendly forms of transportation and could play a large role in helping Americans reduce their carbon footprint and auto dependence. According to the World Watch Institute, American cars emit nearly a pound of CO_2 per mile driven. A bicycle commuter who rides four miles to work, five days a week, avoids 2,000 miles of driving and about 2,000 pounds of CO_2 emissions each year.

The potential to replace driving with bicycling or walking for short trips is high. According to a U.S. Department of Transportation survey, half of all trips in the United States are three miles or less—a distance easily traversable by bicycle. However, 72 percent of those trips are made in cars and less than 2 percent are made by bicycle. Additionally, trips of a mile or less are reached by automobile 60 percent of the time. Switching to a more environmentally friendly mode choice like bicycling or walking for these short trips can make the most environmental impact, as short automobile trips cause the most pollution per mile driven.

Health

Bicycling and walking are healthy transportation options. Despite the U.S. Department of Health and Human Services' recommendation of at least 150 minutes of activity per week, inactivity among adults and youth remains high throughout the country.

Sprawling development patterns and overreliance on the automobile do not help this situation. However, a more complete and better connected bicycle and pedestrian network provides more opportunities for Red Wing residents and visitors to be active. The healthcare implications of inactive Americans are problematic not only for public health, but also for rising healthcare costs. The obesity rate in Goodhue County for adults over the age of 20 is 29 percent, which is higher than the obesity rate for the state of Minnesota at 26 percent (County Health Rankings). Making it easier for

"60 percent of the pollution created by automobile emissions happens in the first few minutes of operation, before pollution control devices can work efficiently. Since 'cold starts' create high levels of emissions, shorter car trips are more polluting on a per-mile basis than longer trips." (League of American Bicyclists)

Projected Healthcare Costs in Minnesota

"A 2008 study for the state of Minnesota shows that healthcare costs are 12 percent higher for overweight people and 37 percent higher for obese people, relative to those for people of normal weight. By 2020, the cost of treating an obese person will be 61 percent greater than that of treating an average-weight person, if current trends continue. The study also notes that nearly 31 percent of the overall increase in healthcare costs between 2005 and 2020 will be due to the projected increases in obesity and overweight. The two conditions are projected to add $3.7 billion to Minnesota's annual healthcare costs by 2020." World Watch Institute

residents to be active in their everyday lives is one important step in trying to reduce obesity rates.

Livability

Photo courtesy: www.pedbikeimages.org/Dan Burden

"By mapping real estate transactions, researchers have been able to show that bike facilities can have positive, statistically significant impacts on home values." (League of American Bicyclists and Alliance for Biking and Walking, The Economic Benefits of Bicycle Infrastructure Investments)

A well connected bicycle and pedestrian network adds to the livability of a community. It creates more transportation choice, encourages a healthy lifestyle, supports economic vitality, provides more recreational opportunities and can attract tourism. Bicycle and pedestrian facilities such as traffic calming measures on neighborhood streets can create a sense of place and add character to neighborhoods and have been shown to increase home values.

Demand for Alternative Transportation Options

The 2009 National Household Travel Survey indicates that biking and walking trips make up almost 12% of all trips made in the U.S., which is a 25 percent increase from 2001 at 9.5%. The potential for more biking and walking trips is large, as 28% of all trips are one mile or less, 40% of all trips are two miles or less and 50% of all trips are three miles or less.

Demand for alternative transportation options is increasing, not only for segments of the population who cannot drive, but also for those who choose not to drive or want to drive less. The reasons for driving less are varied, ranging from cost to health. Therefore, it is important Red Wing recognizes the automobile is not the only mode of transportation and many people are looking for an alternative to driving. This means having a transportation network that accommodates all users.

The national trends show that people are driving less, and local survey information reveals that Red Wing and Goodhue County residents would like to bike or walk more as a means of transportation. According to the Southeast Minnesota Statewide Health Improvement Program's (SHIP) 2011 Community Active Living Survey, about 69 percent of Goodhue County Residents responded that they are very interested or somewhat interested in increasing their use of non-motorized transportation for getting to work or school or running errands.

This statistic is in line with national trends; "In 2002, the National Highway Transportation Safety Administration surveyed Americans on their behaviors and attitudes towards bicycling and walking. Seven in ten said that they would like to bike more than they do now. But less than half of those surveyed were satisfied by how their communities were designed for bicycling. The most popular changes for bicyclists were additional bike lanes, paths, and trails, followed by improvements to existing facilities." (League of American Bicyclists and Alliance for Biking and Walking from NHTSA

National Survey of Bicyclist and Pedestrian Attitudes and Behavior)

Red Wing's Bicycle and Pedestrian Community Survey reveals that top rated choices from respondents for bicycle improvements were recreational bicycle facilities, such as off-street paths and trails followed by commuter bicycling facilities, such as on-street bicycle lanes, sharrows and traffic calming measures, as shown in Figure 1. Although recreational facilities were most preferred, commuter facilities were also preferred. Red Wing currently has a small, but avid group of residents who commute by bicycle or walking on a regular basis and this trend is expected to increase in number and frequency.

Figure 1.

Survey Response Table

Please rank your level of preference for each of the bicycle amenities. 1 being your most preferred and 5 being your least preferred. Give only one ranking per amenity.

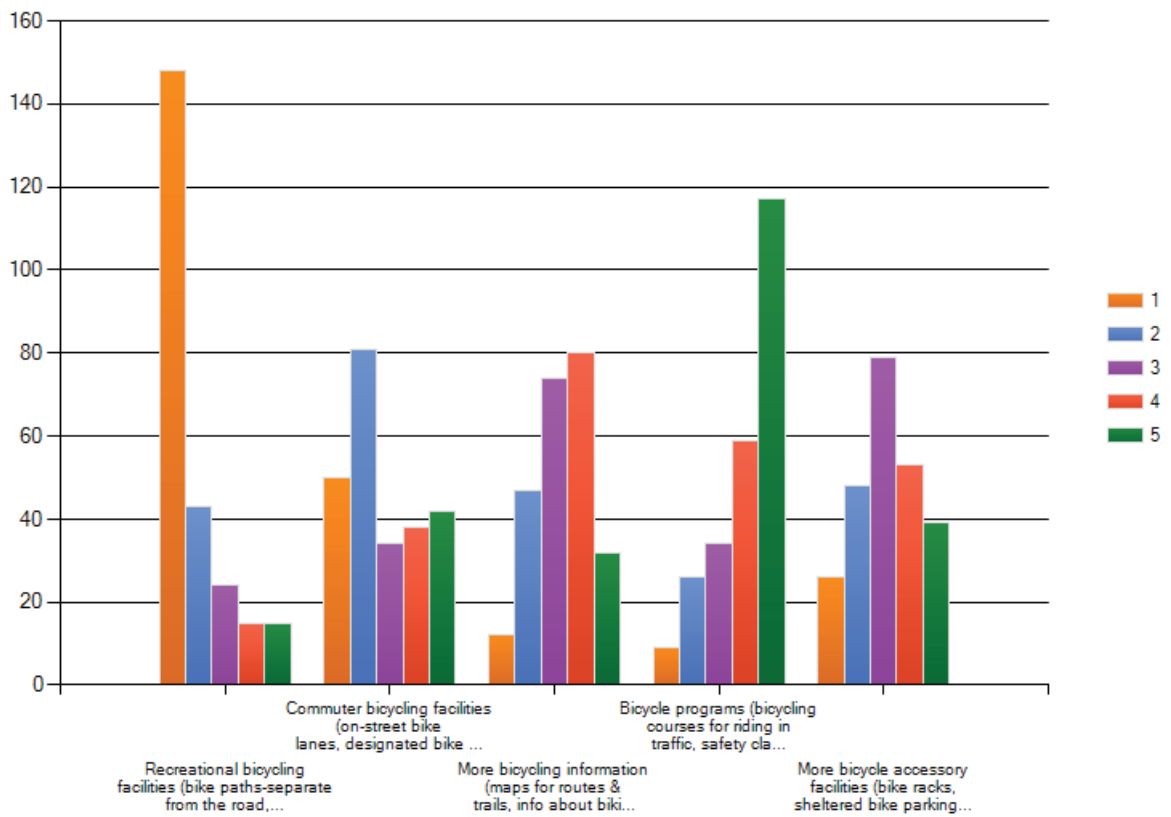


Photo courtesy: www.pedbikeimages.org/Dan Burden

"Between May and September 2008, with gas at $4 a gallon, Americans drove 57.8 billion fewer miles than they did during the same months in 2007. When average gas prices were under $2 in March 2009, Americans were still driving less. Americans drove more than a billion fewer miles in March 2009 than during that month in 2008 when the gas price was $3." (League of American Bicyclists and Alliance for Biking and Walking from the Federal Highway Administration's Traffic Volume Trends)

League of American Bicyclists Bicycle Friendly Communities:

Rochester, MN (102,437)
Rosemount, MN (21,874)
Minneapolis, MN (379,499)
Apple Valley, MN (49,084)
Edina, MN (47,941)
Mankato, MN (39,309)
Madison, WI (221,551)
Milwaukee, WI (554,965)
Eau Claire, WI (101,353)
La Crosse, WI (51,818)
Onalaska, WI (17,736)
Breckenridge, CO (3,493)
Houghton, MI (8,238)
Iowa City, IA (65,219)
Oxford, MS (16,727)
Juneau, AK (30,711)
Davidson, NC (10,300)

Photo Courtesy: www.pedbikeimages.org/Dan Burden

Bicycle and Pedestrian Friendly State Street in Madison, Wisconsin.

PEER CITIES

Many communities throughout the United States are realizing the benefits of expanding their bicycle and pedestrian networks and have started to proactively plan for bicycles and pedestrians. Communities large and small throughout the country have gained recognition from the League of American Bicyclists as Bicycle Friendly Communities. Red Wing should apply for Bicycle Friendly Community recognition.

PREVIOUS PLANNING EFFORTS

Previous planning efforts focus on positioning Red Wing as a vibrant, livable and sustainable community with a unique sense of place that continues to honor the past and celebrate the future. Bicycle and pedestrian planning complements previous planning efforts in that bicycle and pedestrian infrastructure and networks help to create lively places designed for people that build community, enhance recreational opportunities and boost tourism. Many previous planning efforts have addressed bicycle and pedestrian needs. The Downtown Action Plan identifies and provides design solutions for problematic intersection crossings such as Broad Street and Main Street. The Comprehensive Plan addresses issues of livability, walkability and sets a transportation goal to accommodate a variety of transportation modes including biking and walking.

The Red Wing Bicycle and Pedestrian Master Plan coordinates and builds upon previous planning efforts. It refines and furthers the implementation of the recently adopted Complete Streets Policy and informs future planning processes, engineering and construction projects for the City of Red Wing. The Bicycle and Pedestrian Master Plan creates action steps to achieve the goals addressed in these plans related to bicycle and pedestrian activity.

Previous Red Wing Plans:

2010 Complete Streets Policy Resolution
2009 Downtown Action Plan
2009 Hastings to Red Wing Trail Master Plan
2008 Sustainability Report
2007 Comprehensive Plan
2005 Riverfront Plan
Upper Harbor Master Plan

Planning in Process:

Mississippi River Trail
Trail to Lake City & Winona

2010 Complete Streets Policy Resolution:

The Complete Streets Policy Resolution (No. 6196) ensures that as Red Wing's roads and highways are built or rebuilt, planners and engineers will take into consideration the needs of all users—pedestrians, bicyclists, transit riders and drivers—and all abilities. The Complete Streets Policy was the catalyst for the Bicycle and Pedestrian Master Plan as it called for the creation of the Plan stating, "The

Planning Commission shall draft a biking and pedestrian network plan for City Council adoption by December 31, 2011."

2009 Hastings to Red Wing Trail Master Plan:

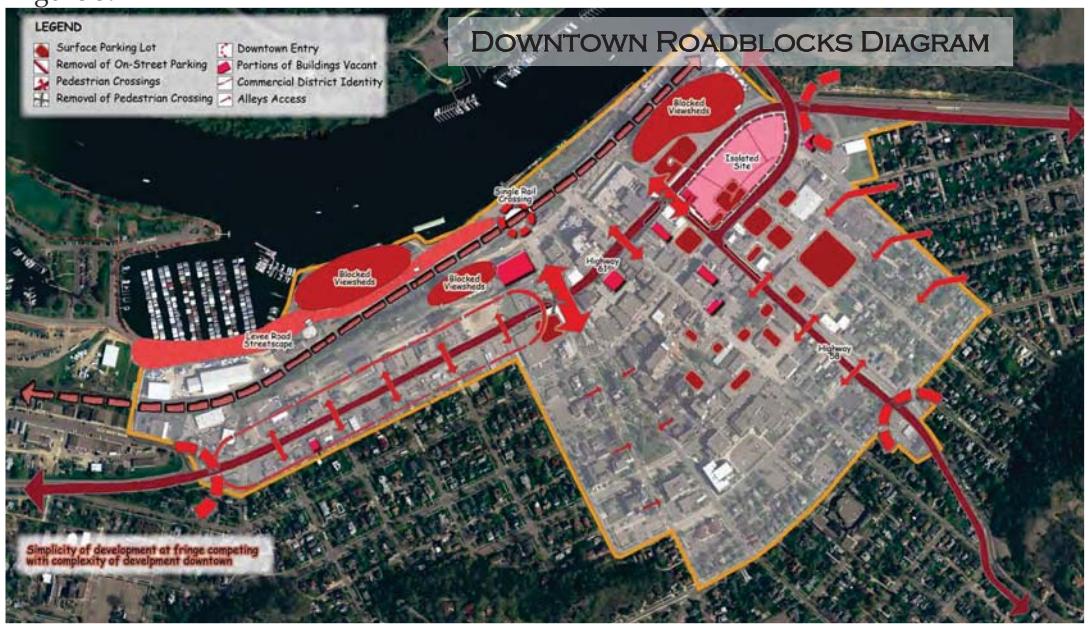
Provides a Master Plan for a regional trail from Hastings to Red Wing. The plan identifies routes and provides strategies for funding, land acquisition and development. Red Wing's Bicycle and Pedestrian Plan supports the work in the Hastings to Red Wing Trail Master Plan and recognizes a trail from Hastings to Red Wing as an important regional connection and opportunity to boost tourism in the region.

2009 Downtown Action Plan:

Sets out to establish downtown Red Wing as a premier riverfront destination by creating vibrant gathering places, attractive housing options, thriving storefronts and strong linkages that celebrate the experience and foster sustainability. The Downtown Action Plan recognizes the important role pedestrians play in creating a lively and vibrant downtown. The elements that create a walkable and bikeable downtown also make a thriving and vibrant downtown environment. The Downtown Action Plan identifies downtown assets and roadblocks featured in Figures 2 and 3 that are important to bicycle and pedestrian mobility as well as the health of downtown Red Wing.

Figure 2.

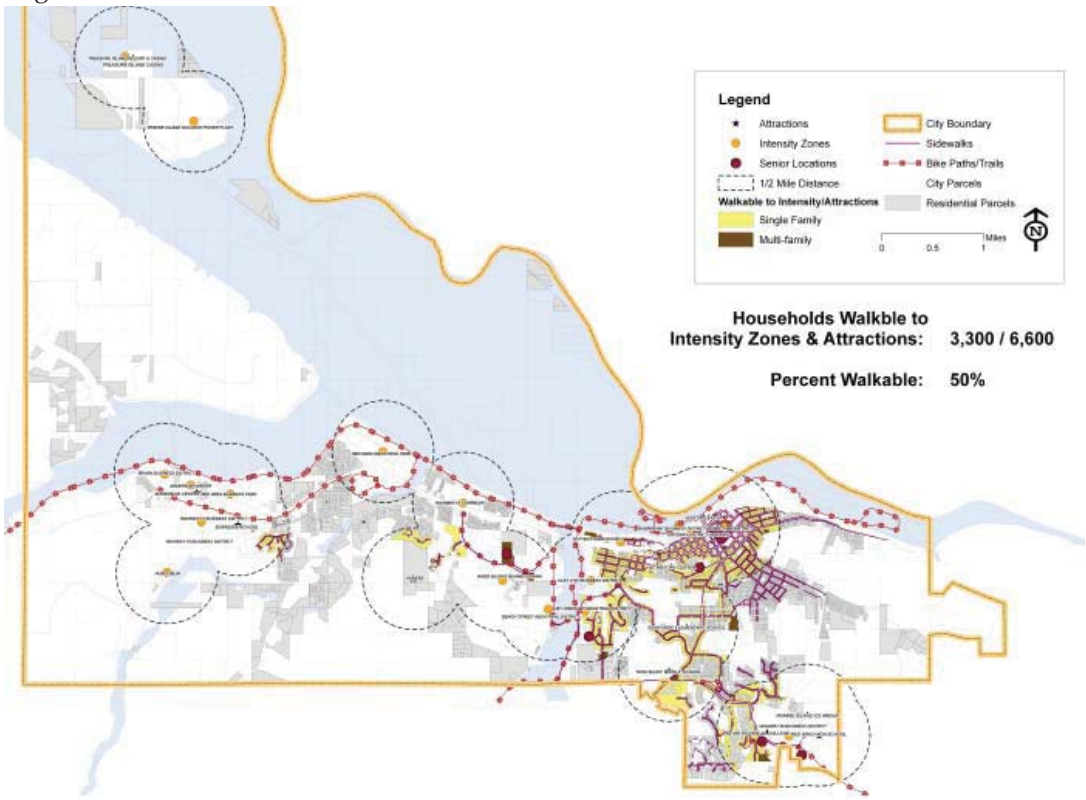
Figure 3.



2008 Sustainability Report:

The Sustainability report identifies indicators that contribute to a community's sustainability and evaluates whether Red Wing's indicators are moving toward or away from sustainability. Several indicators identified in this report were directly or indirectly related to bicycle and pedestrian activities including, travel time to work, modal split (or means of transportation to work), pedestrian and bicycle safety, bike lanes and paths, and sidewalk connectivity.

Figure 4.



Increased bicycling and walking would further Red Wing's sustainability efforts as they provide increased transportation options that are environmentally friendly and improve health. The report also addresses land use and community development patterns that contribute to a sustainable community. The same compact, mixed use community development patterns that contribute to a sustainable community support a bikeable and walkable community.

2007 Comprehensive Plan:

Red Wing's Comprehensive Plan identifies nine intensity zones or areas of concentrated commercial use that serve as good destination points when thinking about a bicycle and pedestrian transportation network. These are places people may want to bicycle or walk to and access by bicycle and walking should be provided. Other destinations for people to bike or walk to include schools and neighborhood parks. Figure 4 shows the households walkable to each destination.

The Bicycle and Pedestrian Master Plan uses the intensity zones and the percentage of households walkable to intensity zones identified in the Comprehensive Plan as baseline data to increase the percentages of households walkable to intensity zones as well as the number of people who actually walk or bike to these areas. The Bicycle and

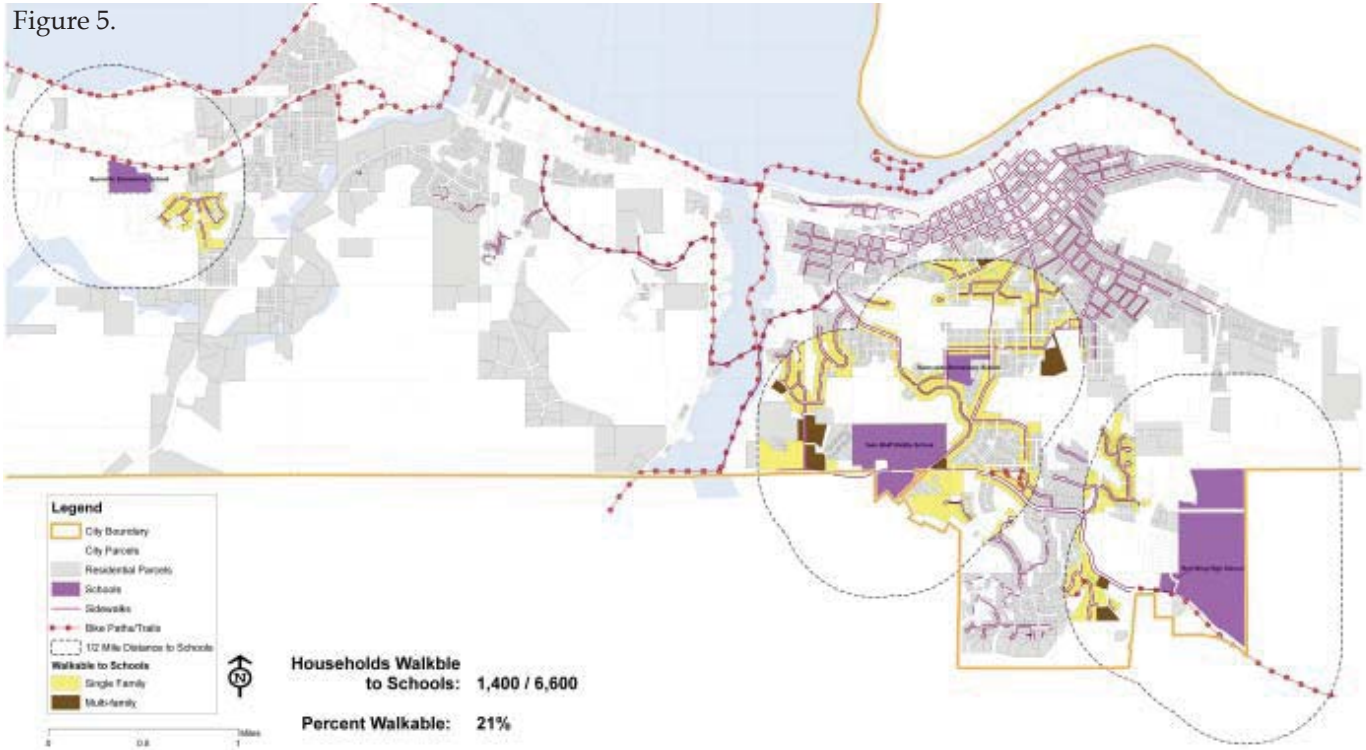
Pedestrian Plan aims to increase walkability and the number of people walking to intensity zones through infrastructure improvements, education and encouragement.

The Comprehensive Plan also identifies households walkable to schools shown in Figure 5. One of the goals of this Plan is to increase the number of students walking or biking to and from school. The households walkable to schools provides good information about how many neighborhoods are walkable to school and where efforts should be maximized.

2005 Riverfront Plan:

The Riverfront Plan recognizes the Mississippi River as a priceless asset to the community and visitors. It creates a plan to guide riverfront redevelopment in a way that maintains the river's ecological health, provides public access to and along the riverfront, promotes economic sustainability and connects the riverfront with the downtown. Bringing residents and visitors to the riverfront is the overarching goal of the plan; therefore a riverfront that is accessible to pedestrians and bicyclists is essential.

Figure 5.



Households Walkable to Schools

An estimated 1,400 out of 6,000 households are within a convenient walking distance to schools: however, not all areas are well connected by pedestrian friendly walking systems.

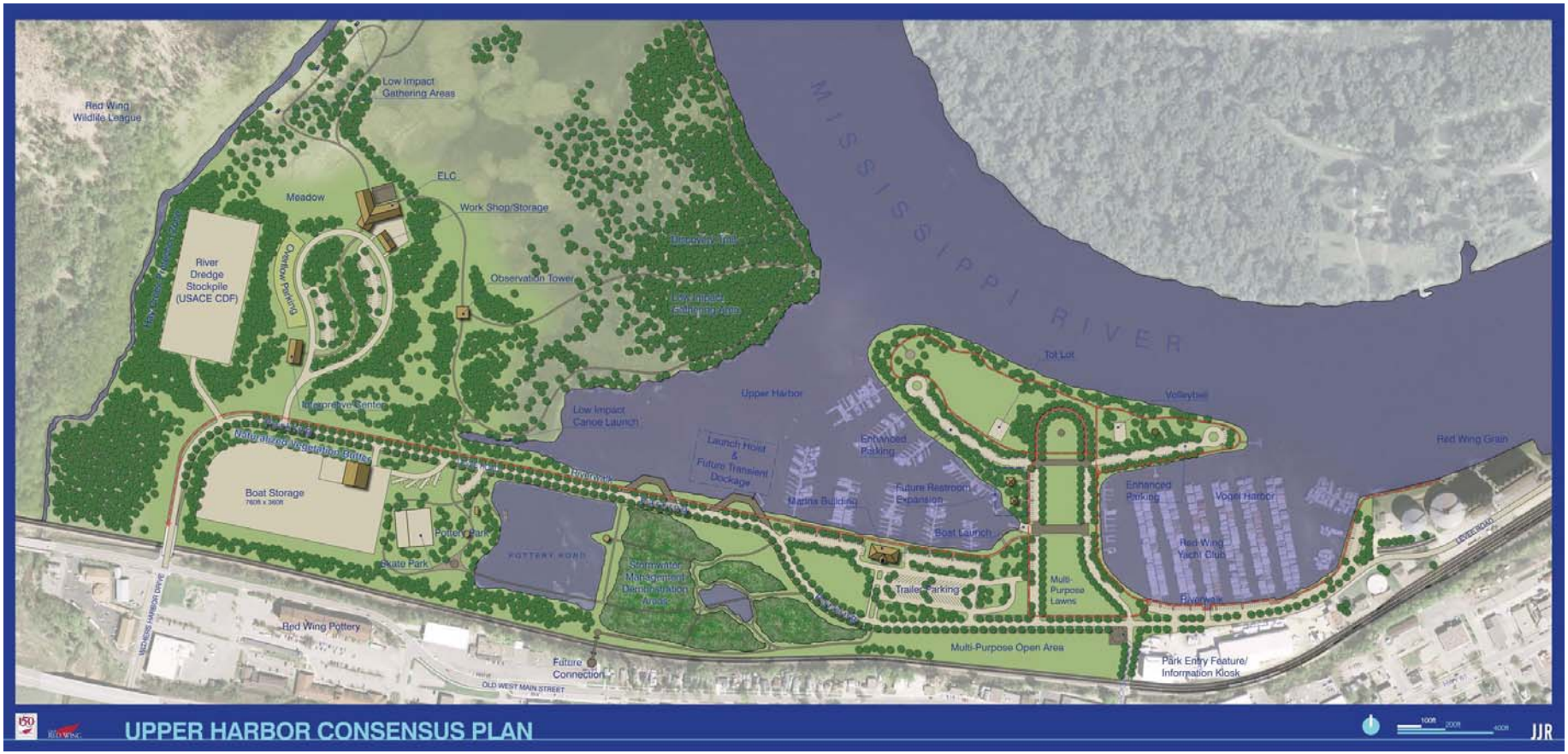
Upper Harbor Master Plan:

The Upper Harbor Master Plan creates a vision for the northwestern portion of Red Wing's riverfront. It provides recreational opportunities for residents and visitors to enjoy the river while preserving the riverfront's environmentally sensitive landscape. Figure 6 shows an illustration of the plan that includes trails and other infrastructure to support the bicycle and pedestrian environment.

PLANNING PROCESS

The planning process began when the City of Red Wing secured funding for the Bicycle and Pedestrian Master Plan through a grant from the Statewide Health Improvement Program (SHIP) aimed to improve the health of Minnesotans. However, City staff had previously been working with organizations such as Live Healthy Red Wing to improve the bicycle and pedestrian environment

Figure 6.



throughout the City. The Complete Streets Policy was another catalyst for the Bicycle and Pedestrian Master Plan, as it called for a bicycle and pedestrian network plan to be created.

Public participation was important to the bicycle and pedestrian planning process. Public participation included an Advisory Committee, a community survey, stakeholder interviews, bicycle and pedestrian counts, neighborhood bike and walkabouts, and a public open house to review and comment on the draft document. Partnering between City departments was also important to create a successful plan and to make the plan a reality.

An Advisory Committee was formed to help guide the planning process. Advisory Committee members assisted with the vision and goals as well as prioritizing bicycle and pedestrian improvements throughout the City. The Advisory Committee met four times throughout the planning process, June 29th, July 13th, August 3rd and September 14th.

A Bicycle and Pedestrian Community Survey and stakeholder interviews were administered during the planning process to gauge bicycle and pedestrian activity as well as interest and preferences in Red Wing. The Survey, not scientific, but to gather community input, was available online and as a paper copy at various locations such as the YMCA, the library and Wheelhouse Cycles, Inc. The survey yielded 418 responses from a wide variety of community members and ten interviews were conducted to gather more in-depth information about bicycling and walking in Red Wing. See Appendix A and B to view the Bicycle and Pedestrian Community Survey and results and Appendix C to view a summary of stakeholder interviews.

In addition, bicycle and pedestrian counts were conducted at key intersections to determine bicycle and pedestrian activity throughout the City and create baseline data that can be compared in the future. See Appendix E to view count results.

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Police Captain

Advisory Committee Members

Dan Bender, Advisory Committee Chair—*City Council/Live Healthy Red Wing*
Andrew Petersen—*Wheelhouse Cycles, Inc./Walk-Bike Committee*
Ashlyn Christianson—*Goodhue County Public Health Service/Live Healthy Red Wing*
Chuck Richardson—*Chairman, Cannon Valley Trail Joint Powers Board*
Dave Borgen—*Community Recreation/Live Healthy Red Wing*
David Anderson—*Red Wing YMCA/Live Healthy Red Wing*
Sean Dowse—*Sheldon Theatre/Visitor Convention Bureau*
Emily Croswell—*Statewide Health Improvement Program Coordinator*
Randal Hemmerlin—*Red Wing HRA/Walk-Bike Committee*
Renee Lorence—*Red Wing HRA*
Meg Walch—*GWP United Way Director/Live Healthy Red Wing*
Michelle Leise—*Live Healthy Red Wing Coordinator*
Pam Horlitz—*Fairview Red Wing Medical Center/Live Healthy Red Wing*
Scott Safe—*Red Wing Planning Commission*
Dawn Bennett Nordin—*Downtown Business/Walk-Bike Committee*
Dennis Koenig—*Red Wing Seniors/Live Healthy Red Wing*

Quotes from Survey Respondents

"Spend the money on more worthy things like upgraded first responder equipment. [W]e have enough sidewalks and benches. Get serious about what the public needs. More concrete is not the answer."

"Every child within walking distance of their school should have sidewalks and safe intersection crossings."

"Educate drivers on laws related to bicyclists."

"[T]he plans to build sidewalks in the Hallquist area should be abandoned. [T]here are too many other less intrusive, less costly options to use than wide pavement that should be seriously considered, especially in these tight economical times."

"Make the sidewalks a priority. I know trees will be lost, but 30 mph speeds in a residential neighborhood make walking on the street very dangerous. I've simply given up walking in the Hallquist neighborhood."

"Do not cut down more trees to make sidewalks."

"Please continue to pursue private funding to further biking and walking facilities and consider how these facilities work with the future of commuter travel."

"Good Maintenance of roads and paths is the most important thing we can do right now."

"More connected sidewalks to downtown from Hallstrom area. Keep the trees trimmed and the weeds from overtaking the walk area on the sidewalks."

Themes from the Bicycle and Pedestrian Community Survey and interviews:

- *Highway 61 is a barrier to bicycle and pedestrian use. Alternative routes and safe crossings are essential.*
- *Connections for walkers and bicyclists from neighborhoods to trails, parks, schools and to downtown should be a priority.*
- *A commuter or on-street bicycle network should be developed.*
- *Bicycling and walking for recreational purposes are popular and there is a desire to expand neighborhood trails and a regional trail network to connect to nearby cities and destinations such as the Mississippi River Trail, Prairie Island, Hastings, Lake City as well as trails connecting to the local park system.*
- *Enforcement as well as education for both drivers and bicyclists is needed to create a more tolerant environment for bicycling and walking in Red Wing.*
- *Sidewalks remain a highly contested issue; many residents view them essential for pedestrian and automobile safety, while others maintain they are not needed. Determining criteria for when sidewalks are needed or not should be a priority of the plan.*
- *Maintenance of existing facilities is important.*
- *Spending money on bicycle and pedestrian improvements is valued by some, but not all Red Wing Residents. Many view it unnecessary during tough economic times, while others see a need for increased transportation options now more than ever.*

During the planning process, several neighborhood or activity area walkabouts and bikeabouts were conducted with community members to inventory the bicycle and pedestrian environment throughout the City. The groups noted street crossing conditions, sidewalk width and condition, traffic levels and driver behavior, the street environment and other factors as they walked or bicycled along the route. See Appendix D to view the walkabout and bikeabout routes and findings.

Walkabouts and Bikeabouts:

- Downtown Walkabout
- Riverfront Walkabout
- Old West Main Street Walkabout
- Hallquist/Sunny Meadow Neighborhood Walkabout
- East Side Neighborhood Walkabout
- Twin Bluff/Sunnyside Neighborhood Walkabout
- Upper Bluff Street Neighborhood Walkabout
- Lower Burnside/Tyler Road Neighborhood Walkabout
- Upper Burnside Neighborhood Walkabout
- Recreational Bikeabout
- Commuter Bikeabout

An open house was held toward the end of the planning process on September 7th, 2011, to allow the public to provide input on bicycle routes, Plan priorities and the draft Plan itself. Over 30 people attended the open house and provided valuable feedback on the bicycle and pedestrian networks as well as the draft Plan.

Commuter Bikeabout

Recreational Bikeabout

Downtown Walkabout

Draft Plan Open House

Photo Courtesy: www.pedbikeimages.org/Dan Burden

Photo Courtesy: www.pedbikeimages.org/Dan Burden

Photo Courtesy: www.pedbikeimages.org/Dan Burden

Input from the public and the Advisory Committee shaped the Vision and Goals presented in this section of the Plan.

Vision: to create an environment—physical and social—that provides for safe, convenient and enjoyable travel by bicyclists and pedestrians throughout the City making bicycling and walking viable transportation options and enjoyable recreational activities in Red Wing. To enhance the bicycle and pedestrian environment in the community so Red Wing will be known as an active, fitness-friendly, bicycle-friendly and walkable community throughout the region and state of Minnesota.

Goals:

1. *Improve bicycle and pedestrian safety*

   - Create a complete and connected network of bicycle and pedestrian-friendly infrastructure for all abilities and user types
   - Identify and address problem intersections with bicycle or pedestrian and automobile conflicts
   - Improve crossings and connections between and among existing bicycle and pedestrian infrastructure
   - Improve safety around schools and among school children
   - Reduce the number of crashes involving bicyclists or pedestrians

Benchmarks: Mn/DOT crash data, infrastructure tracking and educational programs

Photo Courtesy: www.pedbikeimages.org/Mike Cynecki

2. *Increase levels of biking and walking in Red Wing*

   - Complete gaps in the pedestrian and bicycle network
   - Create an on-street bicycle network that will move bicycle traffic safely and efficiently throughout the city
   - Increase commuter transportation via walking or bicycling
   - Increase the percentage of households walkable to activity centers identified in the Comprehensive Plan

- Increase regional connectivity by expanding the regional trail system
- Attract and connect tourists to bikeable/ walkable areas and city attractions
- Increase the number of children who walk or bike to school
- Increase the number of employees who walk or bike to work

Benchmarks: Census travel data, continued bicycle and pedestrian counts throughout the City, and continued counts for children walking or bicycling to school.

Photo Courtesy: www.pedbikeimages.org/Dan Burden

3. Reduce negative impacts of driving regarding health and the environment

- Reduce Vehicle Miles Traveled
- Reduce the number of workers commuting to work alone
- Increase bicycling and walking levels among youth and adults

Benchmarks: Census travel data, survey information and County Health Ranking

Photo Courtesy: www.pedbikeimages.org/Dan Burden

Photo Courtesy: www.pedbikeimages.org/Dan Burden

Photo Courtesy: www.pedbikeimages.org/Dan Burden

Photo Courtesy: www.pedbikeimages.org/Dan Burden

Red Wing's Walkable Downtown

Wide and confusing Broad and Main Street Intersection

Difficult crossing at Highway 58 and Upper Bush Street

Existing Conditions

Red Wing's traditional downtown with grid patterned streets makes the downtown business area and many surrounding neighborhoods compact and incredibly walkable. However, with the topography forcing development through the valleys and more recent suburban style development patterns becoming the norm, not all areas of the City are as compact and walkable. Since the consolidation with Burnside Township, the area of the City has become quite large, stretching over 10 miles from east to west forcing development in a linear fashion. The size coupled with the many bluffs in the area make it difficult to develop in a compact and connected way.

Downtown Red Wing is the most walkable part of the City however, it is not as bicycle friendly. On-street angled parking and narrow streets pose safety problems for bicyclist and drivers. Another problem downtown is bicyclists riding on the sidewalk. This behavior is problematic because at intersections automobiles are less likely to see a bicyclist on the sidewalk than they are a bicyclist riding on the street and because Red Wing's sidewalks are fairly narrow and heavily traveled during summer months, it creates a conflict between pedestrians and bicyclists.

Existing Travel Characteristics

According to the U.S. Census Bureau, most Red Wing residents travel to work by automobile alone (79%) or carpool (14%) and very few bike (1%) or walk (3%) to work. Figure 7 shows a comparison of transportation to work for Red Wing residents from 2000 to 2009. Looking at distance to work alone, there is great potential for Red Wing residents to commute to work by walking or bicycling as Census data

Figure 7.

Means of Transportation to Work Change: 2000-2009

	2000		2009		
	Estimate	Percent	Estimate	Percent	Percent Change
Drove alone	6,515	81%	6,120	79%	-6%
Carpooled	816	10%	1,064	14%	30%
Public transportation	128	2%	43	1%	-66%
Bicycle	13	0%	42	1%	223%
Walked	294	4%	253	3%	-14%
Other Means	49	1%	65	1%	33%
Worked at home	240	3%	183	2%	-24%
Total	8,055	100%	7,770	100%	

Source: U.S. Census Bureau, Census 2000 and 2005-2009 American Community Survey

indicates 81% of Red Wing residents work in the City of Red Wing and 32% of Red Wing residents' commute to work is less than 10 minutes, by any mode of transportation.

Distance is clearly not the only factor considered when selecting mode choice. According to Red Wing's Bicycle and Pedestrian Community Survey, although 42% of respondents live within 3 miles of work, few people choose to commute by walking or bicycling. Safety, weather, workplace attire and lack of changing facilities, having to be multiple places throughout the day and bringing children to school or day care were commonly cited reasons Red Wing residents chose not to bicycle or walk to work. Therefore, encouraging Red Wing residents to walk or bike for other trips such as running errands or to attend events will be as or more important to increasing biking and walking trips as encouraging residents to walk or bike to work.

Although most Red Wing residents rarely or never bike or walk to run errands or to get to work, there is interest to do so, or do so more. According to the Southeast Minnesota Statewide Health Improvement Program (SHIP) Community Active Living Survey administered in 2011, about 69% of survey respondents are very or somewhat interested in walking or biking more for those purposes. There is great potential to get people who rarely or never bike or walk for transportation to do so and for those that do, to bike or walk more frequently.

Efforts have been made by groups such as Live Healthy Red Wing to increase the number of children biking and walking to and from school. Live Healthy Red Wing in partnership with the school have established a Sunnyside Sneakers program to get more children walking and/or biking to and from Sunnyside Elementary School. Additionally, Safe Routes to School initiatives will begin at Twin Bluff Middle School later this year.

Bay Point Park—a popular place to walk

Levee Park—a pedestrian-friendly space with benches and an informational kiosk

Hazardous railroad tracks on Levee Road

Mid-block crossing on Twin Bluff Road

Figure 8.

2010 Red Wing Population

	Number	%
Under 5 years	1,040	6%
5 to 9 years	1,015	6%
10 to 14 years	990	6%
15 to 19 years	1,031	6%
20 to 24 years	902	5%
25 to 29 years	1,042	6%
30 to 34 years	964	6%
35 to 39 years	916	6%
40 to 44 years	1,004	6%
45 to 49 years	1,172	7%
50 to 54 years	1,232	7%
55 to 59 years	1,187	7%
60 to 64 years	976	6%
65 to 69 years	728	4%
70 to 74 years	653	4%
75 to 79 years	527	3%
80 to 84 years	494	3%
85 & over	586	4%
Total Population	**16,459**	**100%**

Source: U.S. Census Bureau, 2010 Census

Demographics

While some residents would like to choose to drive less, there is a large segment of the population who cannot drive and Red Wing's demographics indicate that there is a need for alternative transportation options. About 41% of the total population are either 17 or under or 65 and over; both groups benefit greatly from increased transportation options.

- About 23% of Red Wing's population is 17 or under, making safe routes for walking and bicycling to school, parks, the library and other community attractions a necessity.
- About 18% of the population is 65 or over. Nationally, 21% of people over 65 do not drive, so providing safe routes for walking and bicycling to shopping, entertainment and medical destinations and activity centers are important.

Safety

From 1996 to 2010 there have been 49 reported bicycle-vehicle crashes and 63 reported pedestrian-vehicle crashes in the City of Red Wing, as shown in Figure 10. While these numbers may seem modest, pedestrian-vehicle and bicycle-vehicle crashes tend to be only reported when severe injury occurs and therefore are under reported. In addition, perceived safety is just as important as actual safety. If people do not feel safe, they will not walk or bike.

Red Wing's Bicycle and Pedestrian Community Survey responses indicate that safety concerns impact route and mode choice, especially for school children. *Heavy traffic volumes* and *poor traffic conditions or unsafe driver behavior* were most frequently selected as *very important* or *important* factors for why respondents do not commute to work or school by bicycle.

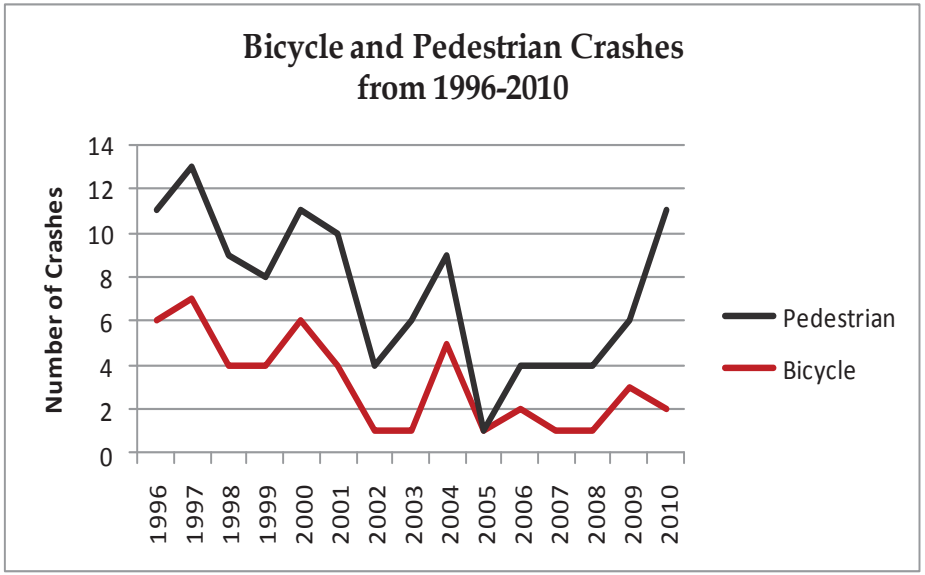
Heavy traffic volumes and poor traffic conditions or unsafe driver behavior are conditions that make Red Wing residents not want to commute by bicycle or walking, but vehicle speed is another important factor when it comes to safety. Figure 9 below shows that the pedestrian survival rates are much higher for vehicle/pedestrian crashes when vehicle speeds are lower.

Figure 9.

Vehicle Speed	Pedestrian Survival Rate
20	95%
30	55%
40	15%

Figure 10 shows the bicycle and pedestrian crashes in the City of Red Wing since 1996. Bicycle and pedestrian crashes in Red Wing are relatively low each year with the fewest crashes taking place in 2005.

Figure 10.



Existing Infrastructure

Currently, Red Wing is home to several regional and recreational trails that are highly utilized including the Cannon Valley Trail, the Hay Creek Trail and the Goodhue Pioneer Trail. These trails provide regional connectivity and draw thousands of users annually. Despite the regional and local trail system, there are gaps in the network and the City is lacking an on-street bicycle network altogether. Figure 11 to the right shows current levels of bicycle and pedestrian facilities, including sidewalks, on-street bicycle lanes, sharrows or bicycle boulevards, trails and bicycle racks.

Figure 12, on the next page, shows a map of current bicycle and pedestrian facilities throughout the City of Red Wing.

Figure 11.

Current Bicycle and Pedestrian Facilities

Facility Type	2011 Number/Miles
Roads	174 miles
Sidewalks	69 miles
On-Street Bicycle Lanes	0 miles
Sharrows or Bicycle Boulevards	0.46 miles
Trails (Bike/Walk)	36 miles
Bluff Trails	13 miles
Bicycle Racks*	37

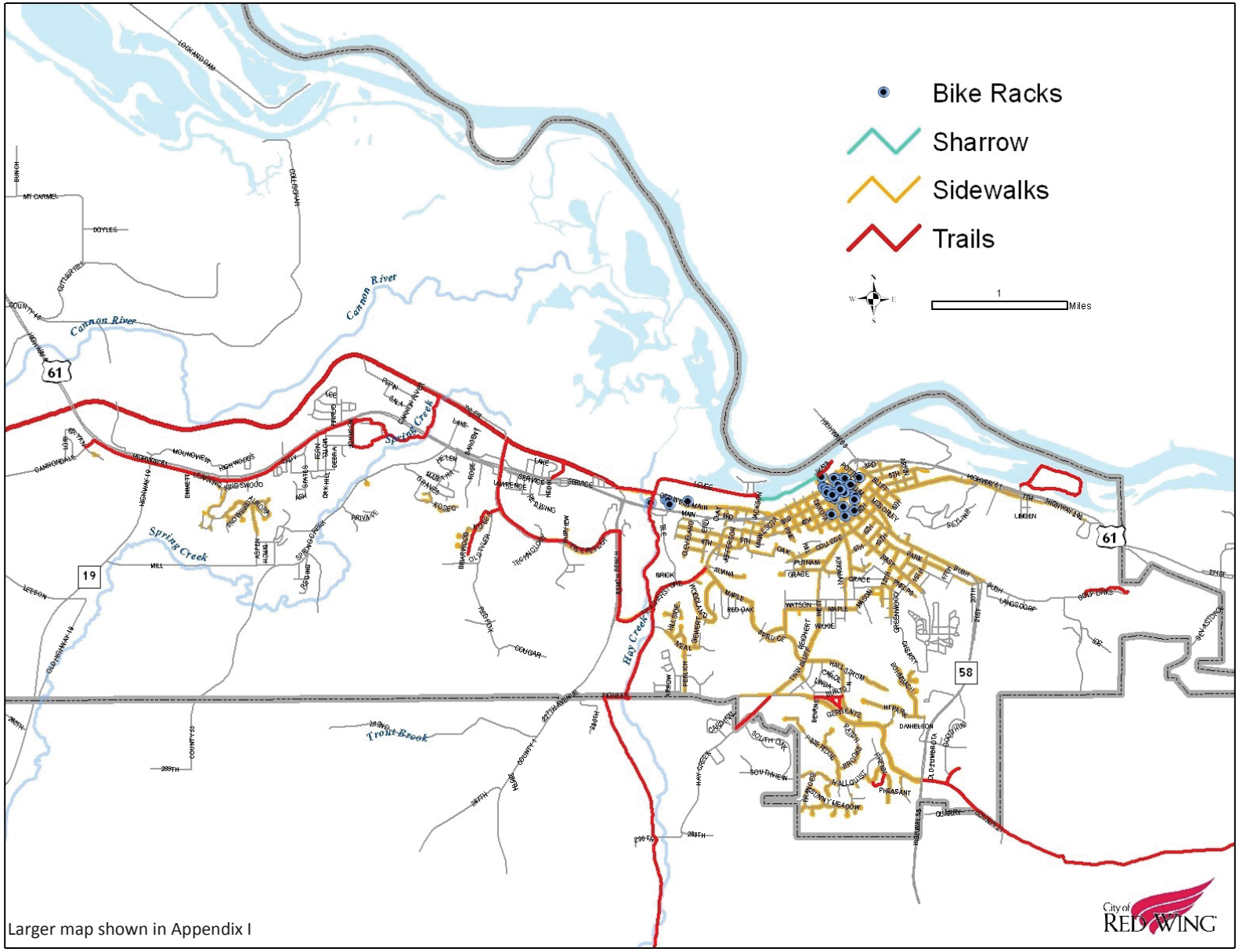
*Permanent, public racks

Activity Centers

- *Downtown: Jobs, Civic, Housing, Entertainment/ Cultural*
- *Old West Main: Jobs, Retail, Entertainment, Live/Work*
- *Anderson Center/ Gateway: Jobs, Cultural Attraction, Institutional*
- *Midtown: Jobs and Retail Center*
- *Business Park: Jobs, Retail, Manufacturing*
- *Southtown (Hi Park): Retail, Institutional, Housing*
- *East End: Institutional, Retail*
- *Prairie Island: Retail, Entertainment, Cultural, Residential, Employment, Natural Resource Preservation*
- *Airport: Commercial/ Industrial*

Figure 12.

Existing Bicycle and Pedestrian Infrastructure



Larger map shown in Appendix I

NEEDS

After completing an inventory of Red Wing's existing conditions, many needs emerged to create a cohesive bicycle and pedestrian network. Red Wing's Bicycle and Pedestrian needs are categorized into the 5 E's of bicycle and pedestrian planning (Engineering, Education, Encouragement, Enforcement, and Evaluation) so as to cover all aspects of creating a successful bicycle and pedestrian network. Figure 13 below shows Red Wing's existing conditions and needs related to each of the five E's .

Bicycle and pedestrian needs were determined through biking and walking tours, a Bicycle and Pedestrian Community Survey, interviews, the

Right turn lanes cut into the wide shoulder on Bench Street

	EXISTING CONDITIONS	NEEDS
ENGINEERING	• Sidewalks: 69 miles • On-Street Bicycle Lanes: 0 miles • Sharrows or Bicycle Boulevards: .46 miles • Trails (Bike/Walk): 36 miles • Bluff Trails: 13 miles • Bicycle Racks: 37	• Improve safety at crossings • Improve system connectivity • Develop an on-street bicycle network • Expand bicycle and pedestrian amenities
EDUCATION	• Community Officers bicycle training in schools • Bike Rodeo held by Police Department • Limited maps of biking and walking facilities	• Formal Education (classes, trainings, etc.) • Informal Education (flyers, pamphlets, etc.) • Marketing Campaign
ENFORCEMENT	• Bicycle patrol units • General traffic enforcement	• Enforcement by Police and local officials • Community Enforcement Approaches
ENCOURAGEMENT	• Encouragement for Red Wing residents to be active and healthy from a wide variety of organizations	• Events • Strategic encouragement to organizations • Marketing Campaign
EVALUATION	• Miles of roads • Miles of sidewalks • Miles of trails • Number of bicycle racks • Crash data • Bicycle and pedestrian counts	• Tracking of facilities • Tracking of behavior and attitudes • Tracking of broader community performance measures

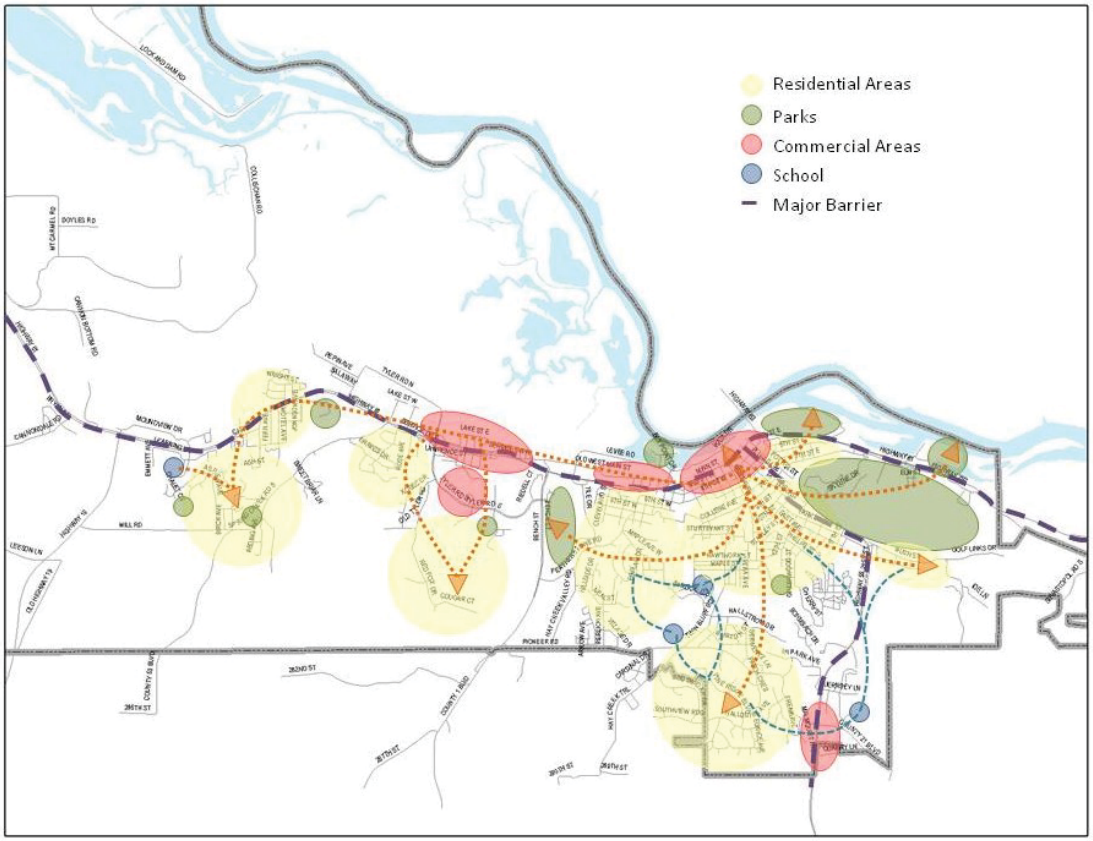
Cannon Valley Trailhead

Signage along Levee Road

Bicycle and Pedestrian Advisory Committee and bicycle and pedestrian counts and observations.

Creating physical connections from different areas of the City emerged as a major need to create a better and more useful bicycle and pedestrian network. The map below in Figure 14 provides a conceptual understanding of where better connections are needed throughout the City.

Figure 14. Conceptual Connections Map



General safety concerns emerged as an area of need. Many Red Wing residents had concerns about safety in their neighborhood due to speeding automobile traffic, lack of sidewalks, number of children in the area and other factors. Below is a list of areas identified by residents for safety concerns:

- Downtown Core (Hwy 61 and 58)
- South Oak Neighborhood
- Hallquist Neighborhood
- Bench Street Area
- Neighborhoods Around a School

These areas should continue to be monitored and evaluated for safety improvements such as traffic calming measures, sidewalks or improved crossings.

Twin Bluff Middle School Neighborhood Area

SWOT Analysis for bicycling and walking in Red Wing:

Red Wing has many attributes that make it a great place to bike and walk such as its historic downtown and scenic beauty, however, there are other factors that hinder biking and walking in Red Wing such as the spread out nature of the city and the auto culture. Before creating a bicycle and pedestrian plan, it is important to understand Red Wing's strengths and weaknesses related to bicycle and pedestrian activity as well as outside factors that could affect bicycling and walking in Red Wing.

A SWOT or strengths, weaknesses, opportunities and threats analysis shown in Figure 15 is used to identify barriers and challenges as well as successful bicycle and pedestrian efforts and areas with potential for walking and biking. This analysis is helpful to examine and understand the bicycle and pedestrian environment on a broad level and to determine areas of need as well as areas of opportunity.

Bicyclists on downtown sidewalks

Wide intersection to cross—Pioneer Rd. and Highway 58

A sidewalkless North Service Drive

Photo Courtesy: www.pedbikeimages.org/Dan Burden

Winter maintenance and snow removal are important in Minnesota

Figure 15.

SWOT Analysis Table

	Strengths	Weaknesses
Internal	• Many existing trails in Red Wing • Dense, grid patterned and well connected core city • Many attractions to draw bicyclists and pedestrians to Red Wing • A number of people are already bicycling and walking in Red Wing	• Local Budget •Lack of a unified bicycle and pedestrian network • Some hostility between drivers, bicyclists and pedestrians •Large, spread out nature of the City •Competing infrastructure needs •Acquiring land for right of way
	Opportunities	**Threats**
External	• Scenic beauty • Nearby communities are expanding bicycle and pedestrian amenities • Potential for grant funding opportunities • Potential for partnerships to advance bicycling and walking in Red Wing	• Topography • The economy • Social norms and attitudes towards driving (auto culture), bicycling and walking

Bicycle Path/Trail

Photo courtesy: www.pedbikeimages.org/Laura

Bicycle Lane

Photo courtesy: www.pedbikeimages.org/Elly Blue

Contraflow Bike Lane

Photo courtesy: www.pedbikeimages.org/Dan Burden

Colored Bike Lane

Photo courtesy: www.pedbikeimages.org/Shawn Turner

Bicycle and Pedestrian Infrastructure and Facility Types:

This section of the Plan provides a brief overview with illustrations of common, but not all, bicycle and pedestrian facilities that the City of Red Wing may wish to consider to carry out the goals of the Bicycle and Pedestrian Master Plan. These facility types are tools the City can use to create a safer and more bicycle and pedestrian friendly environment. However, this Plan does not specify which facility type should be implemented where. It does establish a hierarchy of facility types to guide the decision making process when an opportunity arises.

Bicycle Path or Trail: a paved path physically separated from motor vehicle traffic. It is often shared with pedestrians and other non-motorized users. Typical widths are at least ten to twelve feet.

Bicycle Lane: one-way on-street lanes that are marked and signed to designate the space occupied by cyclists on the roadway, typically in the direction of traffic. Common widths for bicycle lanes range from five to six feet.

Contraflow Bike Lane: bicycle lanes in the opposite direction of motor vehicles on a one-way street. They are usually separated by delineators and marked with signage. Contraflow lanes are not preferred, but are a good choice when it is the most direct route or provides access to a popular destination.

Colored Bicycle Lane: bicycle lanes that are striped and painted with a solid color of paint. They increase the visibility of the bike lane for drivers and are particularly helpful in conflict areas such as turning lanes.

Bike Boxes: an intersection safety treatment designed to prevent bicycle/car collisions. The box creates space between motor vehicles and the crosswalk that allows bicyclists to position themselves ahead of motor vehicle traffic at the intersection. They are especially helpful for bicyclists wanting to make a left turn.

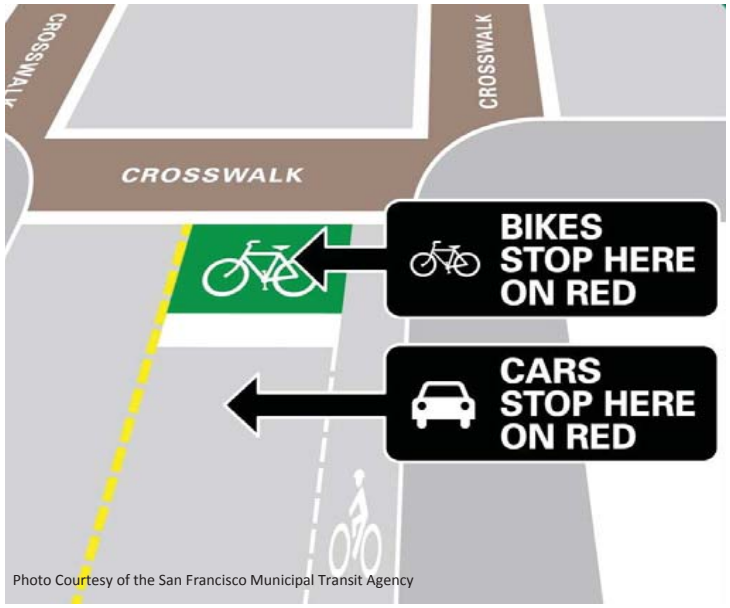


Photo Courtesy of the San Francisco Municipal Transit Agency

Cycletrack or Median Separated Bicycle Lane: bicycle lane or lanes in one or two directions that are physically separated by a curb or median from motor vehicle lanes.

Buffered Bike Lane: bicycle lanes that are buffered from motor vehicle lanes with extra width from striping or cross-hatching.

Sharrow or Shared Roadway: marked and signed roads where cyclists and motor vehicles share the roadway. Sharrows are a bicycle-friendly solution when road widths do not accommodate a bicycle lane. Unlike bicycle lanes, sharrows do not designate a particular part of the road for the exclusive use of bicyclists. They are simply a marking to guide bicyclists to the best place to ride and help motorists expect to see and share the lane with bicyclists.

Photo courtesy: www.pedbikeimages.org/Lyubov Zuyeva

Bicycle Boulevard: low-volume and low-speed streets that have been optimized for bicycle travel through treatments such as traffic calming, traffic reduction, signage, pavement markings and intersection crossing treatments. Bicycle boulevards often restrict through traffic, forcing automobiles to turn left or right while bicyclists and pedestrians can make through movements. Traffic calming measures can be as many or as few as needed to achieve the desired level of automobile traffic on the bicycle boulevard.

Woonerf or Living Street: popular in the Netherlands, these are streets where pedestrians and cyclists have legal priority over motorists. The techniques of shared spaces, traffic calming and low speed limits are intended to improve pedestrian, bicycle and automobile safety.

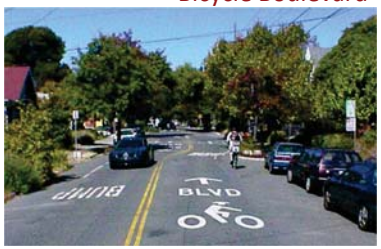
Cycletrack

Photo courtesy: www.pedbikeimages.org/Shawn Turner

Buffered Bike Lane

Photo courtesy: www.pedbikeimages.org/Steven Faust

Bicycle Boulevard

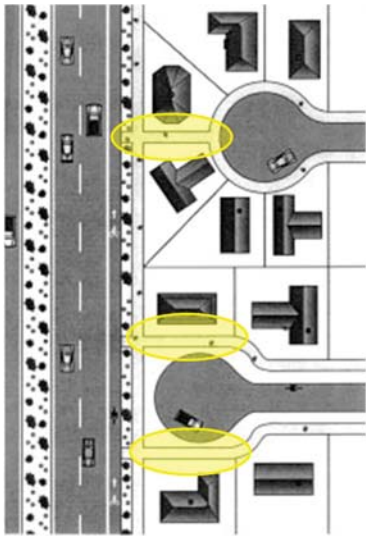


Woonerf/Living Street

Photo courtesy: www.pedbikeimages.org/Laura Sandt

Bike Dots

Pedestrian Linkages



Median or Refuge Island

Photo Courtesy: www.pedbikeimages.org/Dan Burden

Bike Dots or Wayfinding Pavement Markings: in Seattle, bike dots are used as a tool to provide wayfinding. They are pavement markings for signed bicycle routes. Unlike sharrows, bicycle dots are not intended to provide guidance on bicycle positioning, rather to mark designated bike routes.

Pedestrian Linkages: when a grid or other dense street network is not available, pedestrian linkages should be provided to maintain walking continuity. Cul-de-sacs, loop roads and similar treatments that disrupt pedestrian continuity should incorporate pedestrian linkages such as 'cut-throughs' to adjoining developments. These shortcuts enable pedestrians to travel by the most direct route between destinations. In most cases, routes will have fewer vehicular conflicts since the pedestrian does not have to use an arterial street to get from one local street to another.

High Intensity Activated Cross Walk (HAWK): a treatment to make midblock crosswalks on busy streets safer. The HAWK consists of red and yellow signals for motorists to stop for pedestrians crossing the street. The signals remain off until a pedestrian activates the system by pressing a button. Drivers are allowed to proceed during the flashing red after coming to a complete stop and making sure there is no danger to pedestrians.

Photo courtesy: www.pedbikeimages.org/Mike Cynecki.

Medians or Refuge Islands: raised islands placed in the street at an intersection or midblock to separate crossing pedestrians from motor vehicles. They are typically used when the street is very wide, or at a crossing where no light exists to provide a safe midpoint resting spot for pedestrians crossing the street.

Curb Extensions or Neckdowns: areas at intersections where the sidewalk extends to reduce the roadway width from curb to curb. They increase pedestrian crossing safety as they shorten crossing distances and draw attention to the crosswalks. They also tighten the radii at corners, reducing the speed of turning vehicles.

Traffic Circles: raised islands placed in the center of intersections around which traffic circulates. They are good for calming intersections especially within

neighborhoods where large vehicle traffic is not a major concern, but speeds, volumes and safety are problems.

Speed Humps: round, raised areas placed across the roadway. They are good for locations where very low speeds are desired.

Speed Tables and Raised Crosswalks: flat-topped speed humps often constructed with brick or other textured materials on the flat section. Raised crosswalks are speed tables with crosswalk markings and signage. They raise the level of the crossing, making pedestrians and the crosswalk area more visible to motorists.

Photo courtesy: www.pedbikeimages.org/Tom Harned.

Road Diet: the reconfiguring of a roadway to reduce the number of travel lanes or the effective width to improve safety or provide space for other users. In a study conducted for Mn/DOT, it was found that the highest urban corridor accident rates are found on four-lane undivided roads. The collision rate was 35 percent higher than on urban three-lane roads.

Photo from HSIS Report No. FHWA-HRT-10-053, courtesy of FHWA

Reverse Angle Parking: improves visibility so motorists are able to see oncoming traffic and bicyclists when leaving a parking space. It also creates a safer environment for pedestrians and children exiting a vehicle as doors open in a way that directs them toward the sidewalk rather than the street. Additionally, it improves loading and unloading conditions as the trunk is located adjacent to the sidewalk rather than the street.

Photo Courtesy: www.pedbikeimages.org/Dan Burden

Color Contrast Crosswalks: create a more visible crosswalk by differentiating the color and/or texture of the crosswalk from the roadway.

Curb Extension/Neckdown

Photo Courtesy: www.pedbikeimages.org/Dan Burden

Traffic Circle

Photo Courtesy: www.pedbikeimages.org/Carl Sundstrom

Speed Hump

Photo Courtesy: www.pedbikeimages.org/Dan Burden

Color Contrast Crosswalk

Photo Courtesy: www.pedbikeimages.org/Tom Harned

According to the Minnesota State Statute governing pedestrian safety (chapter 169.21), "all intersections are legal crosswalks and drivers must yield the right-of-way to a pedestrian crossing the roadway within a marked crosswalk or at an intersection with no marked crosswalk in the absence of traffic control signals."

ACTION PLAN

Implementation of the Bicycle and Pedestrian Master Plan will rely heavily on using existing resources in new and innovative ways. While some improvements can be easily retrofitted to existing infrastructure without exorbitant cost or effort, others will require a complete overhaul and a longer timeline. Implementation of the Bicycle and Pedestrian Master Plan, as with Red Wing's Complete Streets Policy, will focus on making large infrastructure improvements at the most opportune time, such as construction, reconstruction or redevelopment. In this way, it is important to have a Bicycle and Pedestrian Master Plan to guide the decisions of when and where bicycle and pedestrian infrastructure will be implemented. This Plan allows the City to be strategic with redevelopment opportunities and to build facilities at the most expedient and economically viable point in time.

Implementation Priorities

It will not be feasible to address all of the needs identified in the Plan right away or at once; the plan identifies long-range needs to make Red Wing a more bikeable and walkable city over time. Therefore, project and program prioritization is an important aspect of this Plan. Although projects and programs are prioritized, bicycle and pedestrian treatments, specific amenities or programs or end solutions were not determined in this Plan. Solutions

Figure 16.

Project and Program Priorities

Projects	Programs
Projects that have a high number of users (current and/or potential)	Programs that promote bicycling and walking to the widest variety of users
Projects that address safety concerns	Programs that promote bicycling and pedestrian safety
Projects that provide important connections and create greater access throughout the City	Programs that have demonstrated community support
Projects that protect natural areas	Programs that have limited cost compared to impact or reach
Projects that have demonstrated community support	Programs that have the best potential for grant or non-city funding
Projects that have the best potential for grant or non-city funding	
Projects that are feasible, politically, economically and practically	
Projects that have limited cost compared to impact	

to problem areas identified in the Plan shall be determined by the City at the time of need to ensure flexibility and so the best solution for the conditions can be selected. Projects and programs are prioritized according to the criteria listed in Figure 16.

IMPLEMENTATION

To thoroughly address all aspects of bicycle and pedestrian planning, the Plan organizes the implementation of projects and programs according to the 5 E's of Bicycle and Pedestrian Planning: Engineering, Education, Encouragement, Enforcement and Evaluation. The items below expand upon the categories identified in the Needs section of the Plan, describing in more detail specific projects and programs and possible solutions.

Engineering

The *Engineering* section describes physical projects to enhance biking and walking throughout the City of Red Wing. Physical projects are categorized into projects that make the bicycle and pedestrian environment *Safer, Better Connected and More Enjoyable.*

Safer:

A top priority of the Bicycle and Pedestrian Master Plan is to create a safer bicycle and pedestrian environment for Red Wing residents and visitors of all ages. Improving safety at crossings and for children getting to and from school are the top safety concerns identified in this section.

Safer Crossings: Safer crossings are needed for greater pedestrian and bicycle system connectivity. Busy highways such as Highway 61 and 58 create barriers and hinder system connectivity. Ensuring bicyclists and pedestrians can safely and easily cross the street in Red Wing will lessen the impact of barriers such as highways and improve system connectivity. Figure 17 on the next page lists crossings in need of safety improvements and provides possible solutions to create a safer crossing environment for pedestrians, bicyclist and automobiles.

Although the Bicycle and Pedestrian Facility Types section of the Plan provides ideas to improve bicycle and pedestrian safety, the Plan does not prescribe the final solution to make the identified intersections safer. Further and more detailed studies of each intersection must be conducted to determine the best plan of action for each crossing. The City of Red Wing should continue to conduct intersection studies to develop plans to address safety concerns for the identified intersections.

Highway 58 and Upper Bush St.

Broad and Main Streets

Pioneer and Twin Bluff Roads

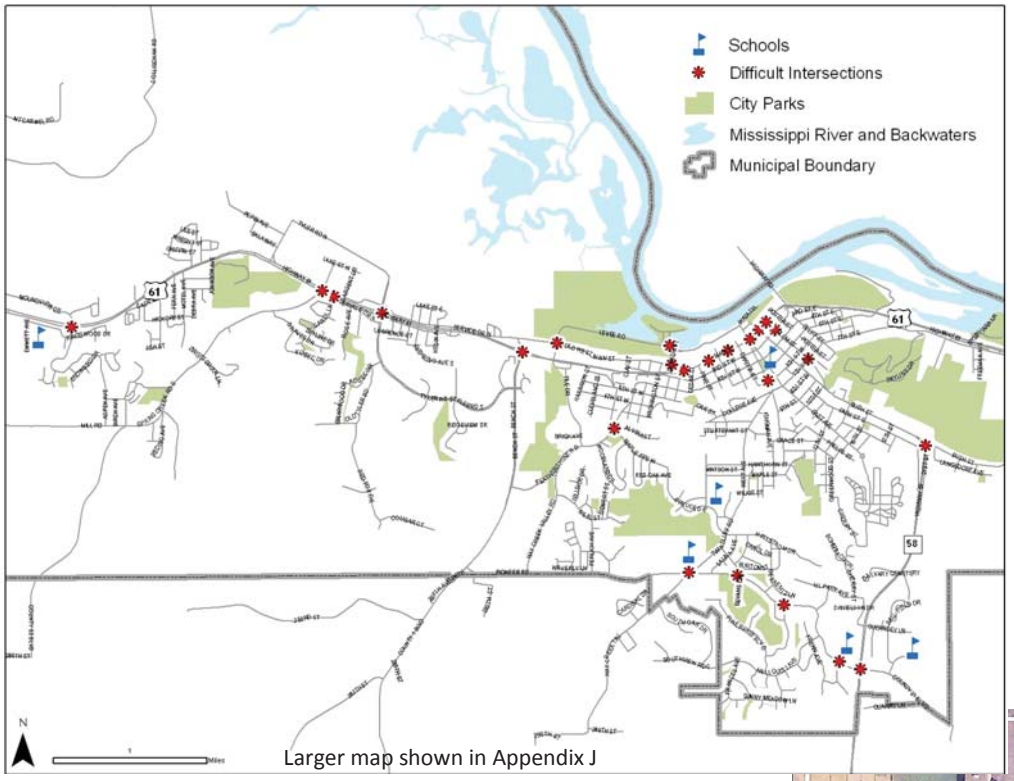
Intersection improvement possibility for Pioneer Road

Figure 17.

Safer Crossings Matrix			
Area/Type	Crossing	Problems	Possible Solutions
Downtown	• Broad and Main Streets • Bush and Main Streets • Plum and Main Streets • Plum and Third Streets	• Wide intersections • Pedestrians do not have enough time to cross • High volumes automobile traffic • Automobiles turning into pedestrians	• Curb extensions to shorten the distance of the street and calm traffic • Countdown timers on signals • More visible crosswalks • Protected turns • Medians/refuge islands
Gateway to Downtown	• Fulton and Main Streets • Hill and Main Streets	• Difficult to cross the street in these locations • 5 lanes of automobile traffic • Speeding automobiles • Unfriendly streetscapes	• Pedestrian activated crosswalks • Pedestrian refuge island • Streetscaping
Core City	• 7th Street and West Avenue • 7th and Plum Streets	• Wide intersections • High volumes of automobile traffic • Difficult to cross at times, even with the stop signs • Drivers roll through the stop signs	• More visible crosswalks • Curb extensions to shorten the distance of the street and calm traffic
Old West Main Area	• Old West Main and Jackson Streets	• Extremely wide roadway • Parked cars block pedestrian's view of traffic • Speeding automobiles • No good places to cross the street • Unfriendly streetscape	• Narrow the roadway • Highly visible crosswalks • Streetscaping • Crosswalk signs • Other traffic calming measures
Neighborhoods	• Twin Bluff and Pioneer Roads • Pioneer Road and Burton Fork • Pioneer Road and Brooks Avenue • Pioneer Road and Malmquist Avenue	• Speeding automobiles • Safety concerns around the school • Blind intersections • Drivers roll through the stop signs • Long crossing distances	• Pedestrian refuge islands and/or curb extensions • Highly visible crosswalks • Narrowing the roadway • Crosswalk signs • Other traffic calming measures
Signaled Intersections	• Hwy 61 and Moundview Drive • Hwy 61 and Tyler Road • Hwy 58 and Pioneer Road • Old West Main and Main Streets • Bench Street and Hwy 61	• Wide intersections with many lanes of traffic • Turning lanes create conflicts for bicyclists wishing to go straight • High volumes of automobile traffic • High speeds	• Pedestrian refuge islands • Narrowing the roadway • Highly visible crosswalks • Share the road signs • Bicycle lane markings at turns
Non-Signaled Highway	• Hwy 61 and Spring Creek Road • Hwy 61 and Carol Lane	• High speeds • High volume of automobile traffic • Difficult to find an opening to cross	• Pedestrian refuge island • Traffic control device • Narrowing the roadway
Miscellaneous	• Hwy 58 and 21st Street	• Blind intersection • High speeds • Long crossing distance • Difficult to find an opening to cross	• Pedestrian refuge island • Reduced speed limit • Highly visible crosswalks • Narrowing the road • Traffic control device • Pedestrian activated crosswalk

Figure 18.

Difficult Crossings Map



Larger map shown in Appendix J

Proposed Intersection Improvements for Bush and Main Streets

Proposed Intersection Improvements for Broad and Main Streets

Winter maintenance and snow removal are important

Safe Routes to School Program: Safety for children walking and biking to school is a top priority. Safe Routes to School (SR2S) is a national program teaching education, enforcement, engineering, and encouragement strategies to make walking and biking to school safe. Developing a Safe Routes to School Program is essential to understanding and addressing the safety concerns for children walking to and from school and to encourage more children to walk or bike to and from school. The City of Red Wing should partner with the school district, school children, parents and other groups interested in promoting and making it safer for children to walk or bike to and from school.

Safe Routes to School

Starting a Safe Routes to School (SRTS) program is an opportunity to make walking and bicycling to school safer and more accessible for children, including those with disabilities, and to increase the number of children who choose to walk and bicycle. On a broader level, SRTS programs can enhance children's health and well-being, ease traffic congestion near the school and improve air quality and improve community member's overall quality of life.
–www.saferoutesinfo.org

Steps to Creating a Safe Routes to School Program

1. Bring together the right people
2. Hold a kick-off meeting
3. Gather information and identify issues
4. Identify solutions
5. Make a plan
6. Fund the plan
7. Act on the plan
8. Evaluate, make improvements and keep moving

Children running across Pioneer Road from Twin Bluff Middle School

General Safety Measures: Safety is a top priority of the Bicycle and Pedestrian Master Plan. This section covers general safety issues not covered in the Crossings or Safe Routes to School sections of the Plan.

- Maintenance: of roadways, trails and sidewalks has safety implications for bicyclists, pedestrians as well as motorists. Keeping roadways, trails and sidewalks free of debris is important. Winter maintenance and snow removal is also important. Currently, the City does not provide snow removal outside of the downtown area; it is handled by the landowner. The City should research how other communities handle snow removal and winter maintenance.
- Reverse angle parking: is a concept that improves safety for motorists, bicyclists and pedestrians as it increases visibility for motorists exiting a parking space. Reverse angle parking is an idea to consider in several areas throughout the City of Red Wing such as Old West Main Street, Fifth Street by the Government Center and possibly in the Downtown Core. Further study and consideration must be given to this idea before implementation.
- Roadway design speed: speed limits and the design speed of a road often differ. It is important to design roads for the intended speed rather than relying on a speed limit to dictate speed. Road width and turning radii are factors that affect speed.

Better Connected

A well connected bicycle and pedestrian network is essential to increasing biking and walking in Red Wing. If residents cannot get to the places they want to go by biking or walking, they will choose another mode of transportation. However, if it is easy to bike and walk to destinations, more people may do so. The connections identified in this section refer to *filling in the gaps* in the existing system, creating an *on-street bicycle network* and expanding *regional connections*.

Fill in the Gaps: Red Wing currently has a fairly extensive trail and sidewalk network; however there are gaps in the network that make the system unreliable and inaccessible from all areas of the City. Linking the gaps in the system will allow for greater connectivity and connections from neighborhoods to and among activity centers that will increase access for residents and tourists alike.

Currently the City of Red Wing requires sidewalks to be installed with development; however this was not always the case. From the late 1960s until 1986 the installation of sidewalks was not required which has created gaps in Red Wing's sidewalk network. Sidewalks do not need to be retrofitted along every street that does not have them, however. Rural residential areas with very low densities or roads with very low average daily traffic, for example, do not warrant sidewalks.

The sidewalk installation criteria listed below helps determine when sidewalks should be installed and when they are not needed. The City of Red Wing should develop a policy that includes criteria for sidewalk installation. Gaps also exist in Red Wing's trail network. Filling in the gaps identified in the

Sidewalk Installation Criteria:

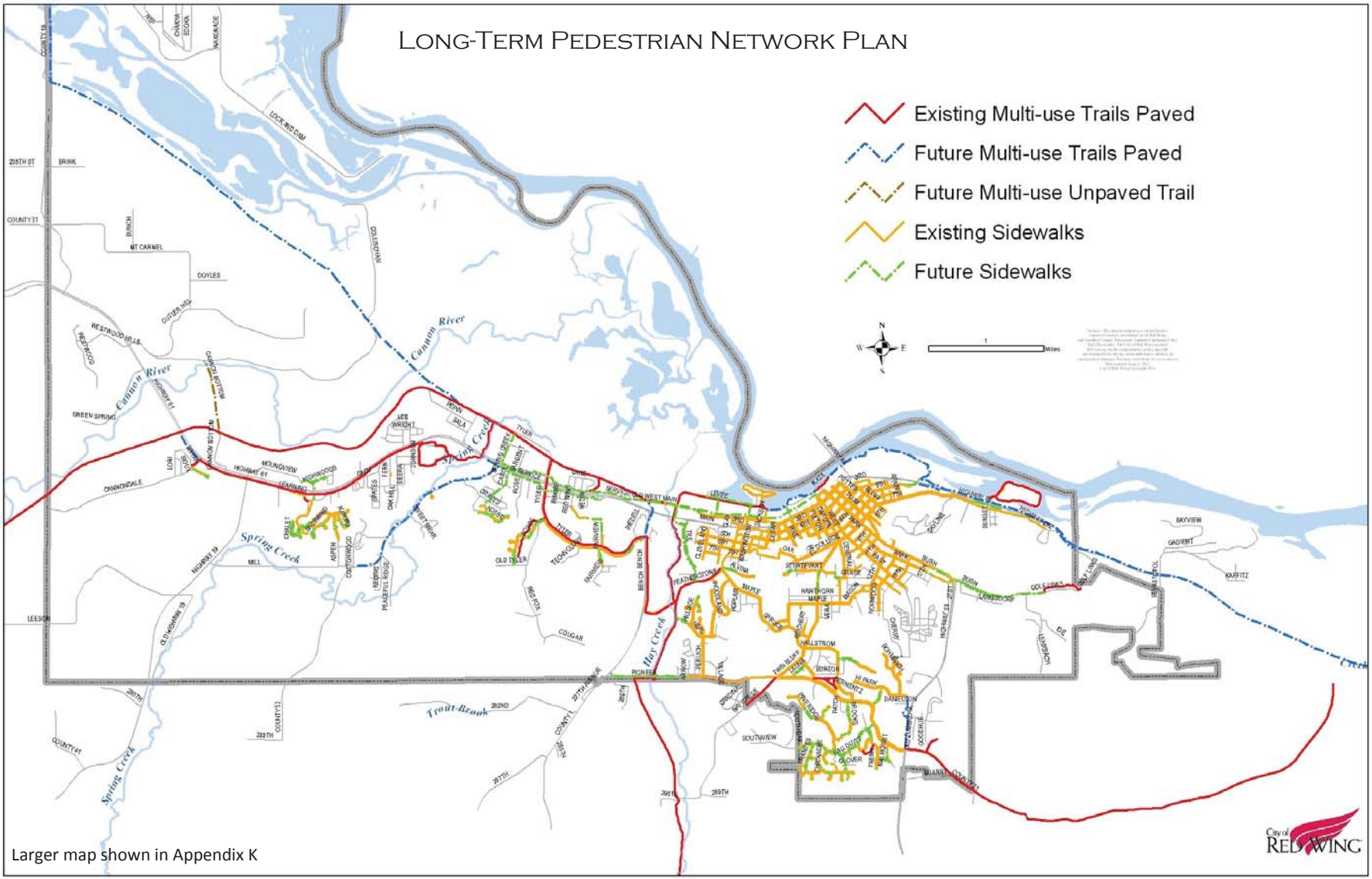
The installation of sidewalks has been a controversial issue in Red Wing for many years. Sidewalks reduce conflicts between pedestrians and automobiles however, that does not mean they should automatically be installed on every street. Sidewalks should be installed in places where they provide a safety solution. Below are criteria to consider when it comes to sidewalk installation:

- Existing Road/New Road/Road Reconstruction
- Average Daily Traffic
- Density
- Posted Speeds
- Actual Speeds
- Proximity to Schools or Other Public Buildings
- Street Type (Cul-de-sac versus arterial)
- Site Conditions (slope, trees, etc.)
- Street Width
- Bicycle and Pedestrian Volumes
- Visibility

Sidewalk abruptly ends

Using the above criteria, the City should develop a standard system to determine where sidewalks should be installed throughout the City and where they are not needed. It is important to note that for new roads, several of these criteria would have to be projected numbers and not all criteria are weighted equally. City staff should determine weighted importance of criteria.

Figure 19.



Larger map shown in Appendix K

listing below and shown in Figure 19, will create a safe and well connected network.

This Plan upholds the previous recommendations made by the Sidewalk Advisory Committee to the City Council. For the Sidewalk Advisory Committee's full report, see Appendix G. It also identifies several new locations for sidewalk connections listed below and shown in Figure 19.

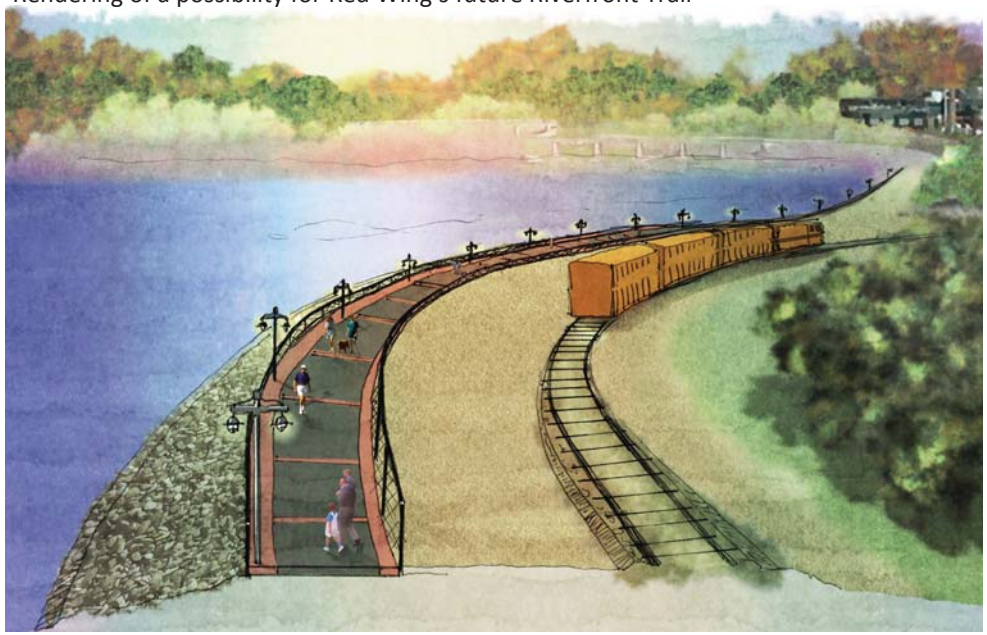
Sidewalk Connections Needed:

- Neal Street
- South Park Street
- Bush Street
- Hennings Avenue
- Old West Main Street
- Withers Harbor Drive
- North and South Service Drive
- Pioneer Road to Hay Creek Trail
- Future Highway 63 River Crossing

Identified Trail Connections Needed:

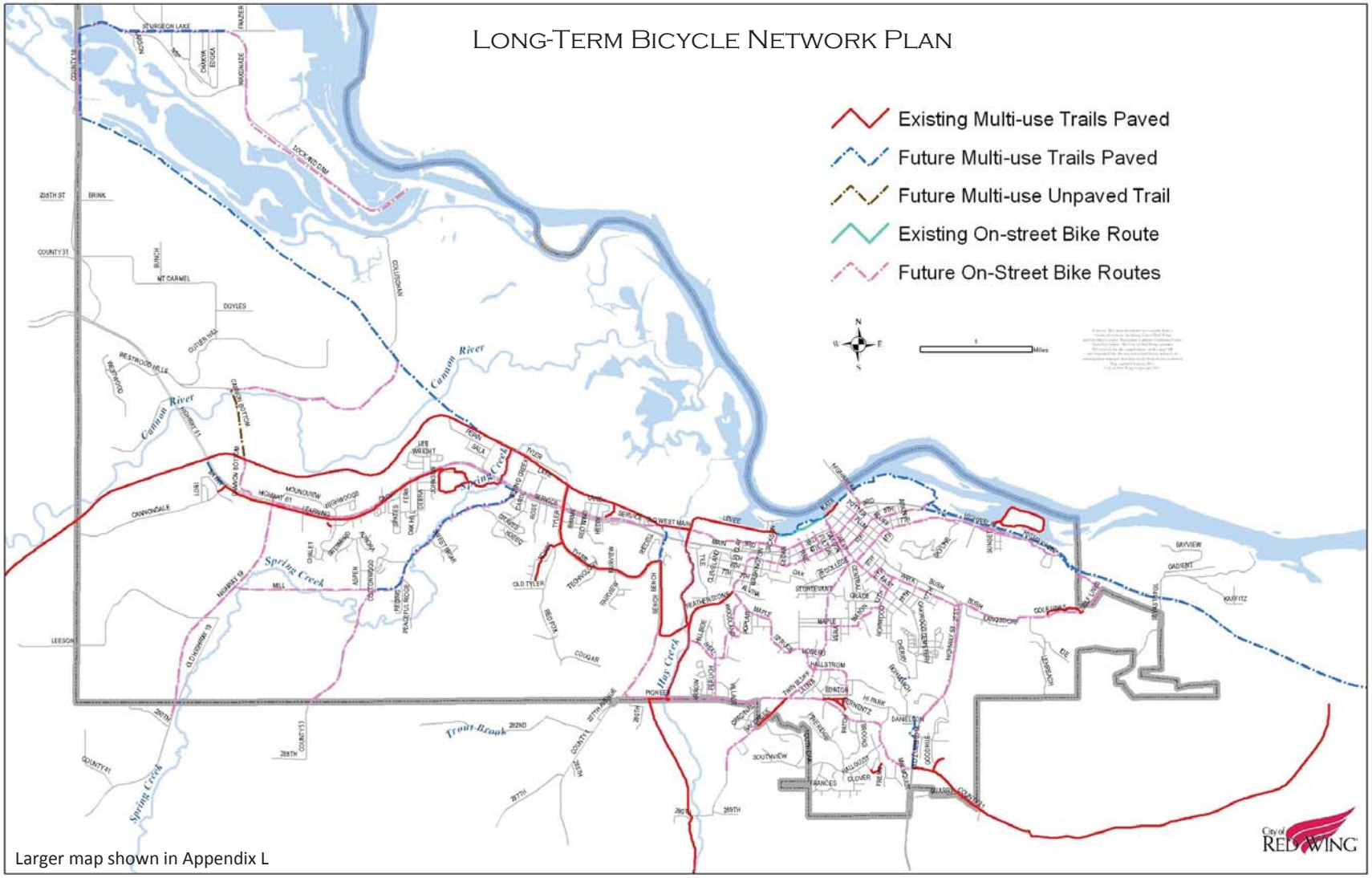
- Trail along the Riverfront from Bay Point Park to Colvill Park
- Bench Street Trail to Goodhue Pioneer Trail and to the Cannon Valley Trail
- From Highway 61 to the Cannon Valley Trail
- Parking Lot on Pioneer Road at entrance to Pioneer Trail

Rendering of a possibility for Red Wing's future Riverfront Trail



Develop an on-street bicycle network: The City of Red Wing lacks an on-street bicycle network. To date, there is only one on-street bicycle facility in the City of Red Wing—the sharrow that extends about one half mile along Levee Road. To create a complete bicycle and pedestrian system it is important to develop an on-street bicycle network, as installing new trails to connect the core City to outer areas and

Figure 20.



Larger map shown in Appendix L

trails at the City's edge is infeasible due to space and resources. The map in Figure 20 identifies on-street bicycle routes that move bicycle traffic efficiently throughout the City. The map can be viewed at a larger scale in Appendix N.

Although bicycles are allowed on all city streets, the identified bicycle routes will cater more to bicyclists as they may provide wayfinding signage, traffic calming features, flatter terrain, signage alerting motor vehicles to bicyclists or other features to optimize bicycle travel. The Plan identifies bicycle routes rather than specific bicycle treatments such as a bike lane or a sharrow. Further analysis of each route will need to be conducted to determine the desired treatment.

The implementation of bicycle facilities should be done incrementally following the priorities listed in Figure 21. Bicycle routes were prioritized based on how well they connect the City, how much the route would increase safety, how many people would use it and its feasibility (politically and economically). However, there are other factors that may shift a route's priority including, but not limited to, funding, road construction, redevelopment, partnerships, environmental concerns and community support or lack thereof. These factors may cause the priorities listed in Figure 21 to change.

Over time, other improvements beyond a designated bicycle route will improve the success of the system. Traffic calming measures or traffic controls that allow bicyclists through movements and other bicycle friendly design features will play an important role in creating an efficient and effective bicycle system.

Figure 21.

On-Street Bicycle Routes

High Priority	Future Priority
4th Street/Buchanan	Highway 19
7th Street	Mill Road
12th/Mason/Maple/Twin Bluff Road	Spring Creek Road
East and West Avenues	Maple/Spruce/Hallstrom
Pioneer Road	Perlich/Siewert/Woodland
Old West Main Street	Cannon Bottom/Collishan
South Park Street/Hwy 58/Upper Bush	5th Street
Future Highway 63 River Crossing	Sturgeon Lake/Wakondale/Lock & Dam

Regional Connections: Bicycling and walking have gained national and statewide attention. Expanding regional connections are important to promote the state of Minnesota's goal to increase bicycling and walking as a percentage of all trips. The success of expanding regional connections will hinge on Red Wing's ability to partner and collaborate with other cities and counties to expand the bicycle network throughout Goodhue County, the state of Minnesota and even the Midwest. The Cannon Valley Trail is an excellent example of an existing regional connection and it is highly successful, attracting nearly 100,000 users annually from all over Minnesota and the country. Regional connections are important to

expand recreational opportunities for residents of Red Wing, but regional connections also boost tourism and attract bicycle events that have positive impacts on Red Wing's economy.

Bicycle Tourism

Many communities and states including Vermont, Wisconsin, Maine, New York and more recently, Minnesota, are embracing bicycle tourism as they realize the economic benefits of a wider tourism market. The tourism industry in general plays a major role in Minnesota's economy and its economic recovery. According to Explore Minnesota, tourism brought in $11,013,765,143 in gross sales, $699,132,081 in state sales tax and 238,130 jobs to Minnesota's economy in 2009. For Goodhue County alone, tourism brought in $64,976,150 in gross sales, $4,337,594 in state sales tax and 1,826 jobs to the local economy in 2009.

The state of Maine has been tracking the economic impacts of bicycle tourism throughout the state. The study, *Bicycle Tourism in Maine—Economic Impacts and Marketing Recommendations,* found that, "in 1999, direct spending in Maine by over 2 million bicycle tourists is estimated to have totaled $36.3 million."

Characteristics of Bicycle Tourists:

- Primarily age 30-55
- Professional-white collar jobs with an annual income over $60,000
- Enjoy eating out, canoeing, camping, hiking, theatre, shopping, museums, historic sites, water sports, swimming, beaches

What will attract them:

- Bicycle friendly streets and paths
- Access to scenic roads, natural areas, waterfront, cultural and historic attractions
- Good restaurants
- Accommodation (campsites, bed & breakfasts, inns) with a hearty breakfast provided or nearby
- Bicycle repair shops and other interesting stores (prefer local stores and restaurants over chain)
- Adequate and secure bicycle parking
- Theatre, music and arts festivals
- Route maps and effective advertising

**Reprinted courtesy of Bike ONTours, Ontario Canada, Route Guides for Bicycle Touring-Consulting, http://www.bikeontours.on.ca*

Bicycle tourism is a niche market that would be a good fit for Red Wing with the beautiful scenery, riverfront, cultural and historical attractions, farmers market, and unique shopping opportunities. The City of Red Wing should partner with the Chamber of Commerce and other parties interested in promoting tourism to explore different ways to market and promote bicycle tourism in Red Wing. Minnesota's tourism bureau holds a Bicycle Tourism Summit each year to help communities learn how to attract bicycle tourists.

Several other regional connections are in the planning phases and should continue to be supported, including a trail connection to Hastings and to Lake City. Other regional connections should be explored including connections to Zumbrota, Dakota County that link to the Twin Cities Metro Area, and western Wisconsin including the Highway 63 Bridge, Highway 35 along the Mississippi River which is the regional route around Lake Pepin, and possibly to Ellsworth and Prescott. In addition, the Mississippi River Trail Project is constantly evolving so staying attuned to and involved with the Mississippi River Trail planning process is another opportunity for Red Wing to expand its regional connections.

More Enjoyable:

Creating an enjoyable and pleasant bicycle and pedestrian environment is crucial to the success of the Bicycle and Pedestrian Master Plan and increasing levels of biking and walking in Red Wing. Bicycle and pedestrian amenities such as benches, shade trees, bicycle racks, public art and drinking fountains enhance the pedestrian experience and draw people to these spaces. Investing in the public realm has big pay offs for bicyclists and pedestrians, but also for business owners, attracting tourists, reducing crime and creating a vibrant and attractive community. It is important that the City focus on creating a more enjoyable bicycle and pedestrian environment by increasing *bicycle and pedestrian amenities*, enhancing *streetscaping* and improving *wayfinding*.

Bicycle and Pedestrian Amenities: Bicycle and pedestrian amenities help to create a more pleasant bicycle and pedestrian environment making it easier for residents and visitors to choose to bike or walk. With many institutional, cultural and physical barriers to bicycling and walking for transportation, it is important for cities to create an environment that supports biking and walking—providing adequate bicycle and pedestrian amenities helps create a supportive bicycle and pedestrian environment.

Examples of Bicycle and Pedestrian Amenities:

- Benches
- Bike Racks (covered and open)
- Waste receptacles
- Informational kiosks
- Drinking fountains
- Lighting
- Public restrooms

In 1987 The City of Red Wing had a Downtown District Sidewalk Plan created that established where benches, shade trees and other pedestrian amenities would be located. The City of Red Wing should develop a Plan that builds on the past Plan for the location and number of bicycle and pedestrian amenities throughout the entire city.

Streetscapes: Streetscaping is another way to create a more enjoyable and pleasant bicycle and pedestrian environment. If the City of Red Wing wants to encourage walking and biking as viable modes of transportation, it must create outdoor and public spaces designed for humans—not automobiles. The importance of a pedestrian friendly public realm has gained a lot of attention in recent years, as it builds community, reduces crime with eyes on the street and makes for a more aesthetically pleasing and livable community. Streetscaping efforts such as human-scale buildings, lighting and street design, banners, benches, waste receptacles, shade trees and other landscaping can all help to create a strong

Photo Credit: www.pedbikeimages.org/Dan Burden

Photo Credit: www.pedbikeimages.org/Dan Burden

Photo Credit: www.pedbikeimages.org/Erica Geddes

Photo Credit: www.pedbikeimages.org/Laura Sandt

sense of place that will attract bicyclist and pedestrians.

Wayfinding: Ensuring Red Wing residents and visitors can navigate throughout the City is crucial to increasing biking and walking levels in Red Wing. Providing maps, informational kiosks, directional signage and pavement markings are all important wayfinding elements for visitors as well as residents, as bicycle and pedestrian routes are often different than automobile routes.

The City of Red Wing has created a wayfinding plan shown in Figure 22 for the Riverfront Trail to show where directional signage, pavement markings and map kiosks should go. The next step for wayfinding should be to develop a wayfinding plan for the City showing bicycle and pedestrian routes with placement of directional signage, route signs, pavement markings and informational kiosks similar to the wayfinding plan for the Riverfront Trail.

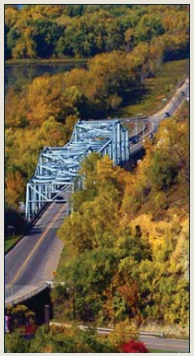
Figure 22. Conceptual Riverfront Wayfinding Plan

Implementation of Bicycle and Pedestrian Improvements

In order to be most cost effective and least disruptive to the transportation system, the projects proposed in the Engineering section of the Plan should be implemented in conjunction with road construction or reconstruction and development or redevelopment. Integrating bicycle and pedestrian needs with road projects and development requires coordination with other agencies and parties such as Mn/DOT, Goodhue County or developers. It is crucial to integrate bicycle and pedestrian needs early in the project, especially if the project is coordinated through an agency other than the City such as Mn/DOT. It is important City staff stay attuned to upcoming state and regional transportation projects to ensure the needs of all transportation modes are considered.

Examples of Construction or Development Projects:

- Reconstruction of Highway 61/Main Street—Mn/DOT
- Reconstruction of West Avenue—City project
- New Highway 63 Bridge—Mn/DOT, Wi/DOT
- Reconstruction of Levee Road—City project
- Redevelopment along Old West Main Street—local business owners, developers and others



Many respondents of the Bicycle and Pedestrian Community survey expressed an interest in more recreational and hiking trails such as those on Barn Bluff and Memorial Park. Recreational hiking trails are an important asset to Red Wing and contribute to the City's livability and tourism base however, they are outside the scope of the Bicycle and Pedestrian Master Plan. Many groups including the City and Live Healthy Red Wing are currently working to expand hiking trail options, increase trail maintenance and provide better connections from the neighborhoods to these amenities. In the future, the City should create a Master Plan for Parks and Open Spaces including recreational hiking trails that can be integrated with the bicycle and pedestrian network.

Future Highway 63 Opportunity

The Highway 63 bridge is a major regional connection not only for automobiles but also for bicycle and pedestrian traffic. Currently the bridge is difficult to cross by means of transportation other than an automobile, creating a barrier to bicyclists and pedestrians. However with the reconstruction of the bridge in the near future, it presents an excellent opportunity to accommodate bicyclists and pedestrians on the bridge as well as the connections to the bridge. It is important that the City of Red Wing plans ahead for bicycle and pedestrian routes so when traditional transportation projects, such as the reconstruction of the Highway 63 Bridge, arise, bicycle and pedestrian accommodations can be incorporated into those existing projects.

Photo Courtesy: www.pedbikeimages.org/Mike Cynecki

Photo Credit: www.pedbikeimages.org/Dan Burden

Photo Credit: www.pedbikeimages.org/Austin Brown

Photo Credit: www.pedbikeimages.org/Laura Sandt

Education

The *Education* section describes programs and efforts to inform and educate Red Wing residents and visitors of the bicycle and pedestrian system, safety, rules of the road and the many benefits of bicycling and walking. Both *formal* and *informal* education and marketing about bicycle and pedestrian safety, amenities and activities are important to the success of a bicycle and pedestrian system. Formal education can take the form of community classes or trainings, community officers speaking to school children, or hands-on events for children. Informal education can take the form of maps, fact sheets or pamphlets. Formal education provides in-depth and targeted learning while informal education can reach masses of people and spread information quickly. The City of Red Wing will rely heavily on its bicycle and pedestrian partners throughout the city to help with the education component of the Plan.

Formal Education

- Continue the spring Bike Rodeo hosted by the Red Wing Police Department. The Bike Rodeo provides hands-on learning for youth about bicycle safety and the rules of the road.
- Safe Routes to School training for City Staff, School Staff, Goodhue County Public Health Service Staff, Live Healthy Red Wing Staff and others interested in working on the Safe Routes to School Program.
- Incorporate bicycle education for motorists into Driver's Education and Safety classes. The Minnesota Bike Alliance offers a Motorist Education class that is meant to be taught as part of Driver's Safety classes.
- Bicycle education and safety classes for adults. The Minnesota Bike Alliance offers many bicycle classes for adults ranging in topics from beginners safety and training to commuting by bicycle and nighttime bicycle safety.
- Someone in Red Wing should go through Minnesota Bicycle Alliance training and certification to be able to teach bicycle education and safety courses in Red Wing.
- Bicycle Ambassador Program
- Presentations to groups about bicycle and pedestrian issues
- Programs to work with at-risk youth such as a bicycle repair class

Informal Education

- Create maps that show bicycle and pedestrian infrastructure with distances (trails, sidewalks, and on-street bike routes), bicycle and pedestrian amenities like bike racks, public restrooms, drinking fountains and destination locations.
- Bicycle Safety Pamphlet
- Pedestrian Safety Pamphlet

- Fact Sheet on the Benefits of Biking and Walking
- Utility Bill Inserts related to Bicycle and Pedestrian issues
- Newspaper column
- Blog

Encouragement

The *Encouragement* section describes programs and efforts to keep residents excited about and interested in biking and walking in Red Wing. Encouragement will focus on biking and walking *events* and strategic encouragement to *organizations* such as schools, businesses and government agencies.

Events

Biking and walking events draw attention to biking and walking, build a biking and walking community, inform people of paths or trails they may not have known about, make biking and walking more common place or popular and keep people interested in walking and biking.

Event Ideas:

- Bike Races
- Bike Tours
- Triathlons
- Marathons
- Fundraiser Walk/Runs
- Mountain Bike Races
- BMX Bike Shows
- Other Stunt Shows
- Regional Bike Tours
- Mayor or Council Led Rides
- Commuter Breakfasts
- Trail Construction or Maintenance Day
- Summer Streets/Ciclovia
- Many More

Bike Event Case Study: Iowa's RAGBRAI Bike Tour

The Register's Annual Great Bicycle Ride Across Iowa is an annual seven-day bicycle ride across the state of Iowa. The Register's bicycling tradition began in 1973 with an idea between Des Moines Register feature writer/copy editor John Karras, an avid bicyclist, and Don Kaul, author of The Des Moines Register's "Over The Coffee" column. Karras suggested to Kaul that he ride his bicycle across Iowa and write columns about what he saw from that perspective. Kaul liked the idea but issued the challenge that he would ride across Iowa if Karras rode with him. Karras agreed and the plan was approved by the managing editor. Coordination of the ride was assigned to Don Benson, public relations director, and the RAGBRAI trio was formed. The RAGBRAI started when a few friends got together for a bike ride across Iowa in 1973 and now is the oldest, largest and longest bicycle tour event in the world. Since its inception, more than 275,650 people rode at least some part of the 38 RAGBRAIs. Nobody knows how many people have been touched in some way along the 16,907 total miles covered by RAGBRAI since 1973.

Encouragement to Organizations

Targeted encouragement to schools (children and faculty), local businesses/employers and government agencies to encourage people to bike or walk to work and to increase their trips by biking and walking in general—to run errands, to a concert in the park, to the farmer's market for recreation, and more.

Marketing Campaign

Marketing is another important education and encouragement piece. It will be important to develop a marketing campaign to increase visibility and acceptability of walking and bicycling as viable modes of transportation in Red Wing. Marketing considerations include:

- Painted bike racks downtown: painted bike racks serve several functions. They call attention to the bike rack letting passersby know that it is for bicycle parking as many Red Wing Residents do not know that there are in fact bicycle racks located throughout downtown and they can serve as an education piece promoting the benefits of bicycling with fun facts and statistics.
- Create a brand identity for all Bike/Walk materials (logo, color scheme, fonts, etc.).
- Online Presence: online presence goes beyond creating a website to promote biking and walking in Red Wing. It should be a hub of information about events, routes, promotional materials and more. Red Wing's Bike/Walk online presence should extend to other online outlets such as facebook, twitter, youtube and others to reach the most people.

Website as an information hub:

- The Bicycle and Pedestrian Master Plan
- Maps of bicycle and pedestrian infrastructure and amenities
- Upcoming events
- Bike/Walk blog and informational links
- Safe Routes to School information
- Benefits of biking and walking information
- All marketing materials produced

Additional Media Presence

- Facebook
- Twitter
- Youtube
- Blog Page
- Channel 6
- Republican Eagle

- Marketing for Bike/Walk events (triathlons, Relay for Life, Marathons, Mountain Bike Races, other bike races)
- Printed materials (brochures/pamphlets/etc.)
  - Marketing brochure about the benefits of biking and walking
  - Marketing brochure for sharing the road and what drivers should expect with new bike lanes on the road. Best practices of a Guide to Cycling is from New York City: www.nyc.gov/bikesmart.
  - Marketing brochure for distances and times walking

Ways to encourage biking and walking to strategic organizations:

- Subsidize (the business/organization or the Cannon Valley Joint Powers Organization) the cost of the Cannon Valley Trail Pass
- Encourage businesses and organizations to provide bike racks (covered or uncovered), lockers, showers or changing facilities for their employees
- Health insurance discounts for employees who bike or walk to work
- Incentives/prizes for biking or walking to work
- Time card allotments for employees walking or biking to work
- Begin a campaign to get organizations to sign a pledge to not drive anywhere under a ½ mile away
- Develop a Commuter Challenge with incentives and scorekeeping

Currently, there are many groups in Red Wing working to promote a healthy lifestyle and increased physical activity including walking and biking, however, Red Wing is currently lacking a unified program to encourage bicycle and pedestrian activity. While many groups promote these activities, a coordinated and concentrated effort by all groups in promoting biking and walking not only for exercise, but also as a viable means of transportation, is necessary. The coordinated effort to encourage bicycling and walking should be paired with events and programs to get people excited about biking and walking.

Enforcement

The *enforcement* section describes ways *local officials* and the *community* can educate themselves on and enforce existing traffic and safety laws to create a more friendly bicycle and pedestrian environment.

Enforcement by Police and Local Officials

It is important to work with the Red Wing Police Department to ensure officers are up-to-date on laws relating to bicyclists and pedestrians. Additionally, concentrated and strategic enforcement for bicyclists, pedestrians and motorists disobeying traffic rules is needed to create an environment that is more tolerant of bicycle and pedestrian transportation. The City of Red Wing should consider providing specialized police training on pedestrian and bicycling safety and enforcement so that officers are reminded of laws related to pedestrians and bicyclists as well as motorists.
– *www.walkinginfo.org*

Community Enforcement Approaches

(from www.walkinginfo.org)

Enforcement should not only be left to local officials who often have many demands placed on their time and resources. Community enforcement approaches can be an effective way to provide a safe

Many law enforcement officers have misconceptions about pedestrian- and bicyclist-related laws, particularly regarding mid-block crossings and unmarked crosswalks, bikes in crosswalks and on sidewalks, due care laws, etc. Having an effective training program in place will ensure that law enforcement officers are knowledgeable of the state laws and local ordinances that apply to pedestrians and bicyclists. For example, Wisconsin has a pedestrian and bicycle law enforcement training course, called Enforcement for Bicycle Safety (EBS). This course teaches law enforcement officers various aspects of bicycle safety, which laws to emphasize with child and adult bicyclists and with motorists to reduce crashes, how to begin bicycle crash cause identification, and the importance of officers as front line, on-traffic-duty educators.

- from www.walkinginfo.org

and comfortable bicycle and pedestrian environment. There are many community enforcement approaches including several ideas mentioned below taken from www.walkinginfo.org.

An evaluation of a slow-down yard sign campaign by the Safe Community Coalition of Madison and Dane County concluded that the signs are noticed and people do slow down when the signs are up, especially when speed boards are used to show drivers their approaching speed.
-www.walkinginfo.org

Photo Credit: www.pedbikeimages.org/Dan Burden

Neighborhood speed watch: In this approach, a radar speed unit is loaned to residents who are trained by police on how to collect speed data and vehicle descriptions. Residents send the information to the police who obtain the motorists' addresses from the recorded license plate numbers. Then the vehicle owner will be sent a letter asking for voluntary compliance. This measure often has limited long-term effectiveness in changing the problem but can be useful in other ways. It can educate neighbors about the issue (e.g., most speeders live in the neighborhood) and help boost support for long-term solutions, such as traffic calming.

Slow down yard sign campaigns: Slow down yard sign campaigns allow residents of neighborhoods with speeding problems to participate in reminding drivers to slow down. Neighborhood leaders, safety advocates and law enforcement officials work in partnership to identify problem areas, recruit residents to post yard signs, organize distribution of yard signs, garner media attention, and evaluate the effectiveness of the campaign. Slow down yard sign campaigns may be conducted along with other speed enforcement efforts such as pace car campaigns and the use of speed radar trailers.

Pace car campaigns: Neighborhood pace car programs aim to make neighborhoods safer for pedestrians, bicyclists and drivers. Resident pace car drivers agree to drive courteously, at or below the speed limit, and follow other traffic laws. Programs usually require interested residents to register as a pace car driver, sign a pledge to abide by the rules, and display a sticker on their vehicle.

Neighborhood fight back programs: Neighborhood fight back programs are collaborative efforts between local governments and concerned residents to address crime, blight and other issues negatively impacting their neighborhoods. Though traditionally used to address illegal drug activity, traffic and pedestrian safety may be one area of concern. The local government provides multi-agency support over a limited period of time to concentrate enforcement activities in specific neighborhoods.

Radar speed trailers and active speed monitors: Fixed motorist feedback signs or movable radar speed trailers can be used as part of a community education program. Radar trailers are moved to different locations and are occasionally supplemented with motor officer enforcement for those motorists who do not believe that there is any reason to pay

attention to the speed trailers. Some radar speed trailers can record speed data and traffic counts by 15-minute or hourly intervals throughout the day, which will help in targeting future police enforcement. As with neighborhood speed watch programs, these have limited long-term effectiveness in changing the problem but can be useful in educating people and helping to boost support for long-term solutions.

Adult school crossing guards: Adult school crossing guards can play a key role in promoting safe driver and pedestrian behaviors at crosswalks near schools. They help children safely cross the street and remind drivers of the presence of pedestrians. A guard helps children develop the skills to cross streets safely at all times. Adult school crossing guards can be parent volunteers, school staff or paid personnel. Annual classroom and field training for adult school crossing guards as well as special uniforms or equipment to increase visibility are recommended, and in some locations required. The presence of guards can lead to more parents feeling comfortable about their child walking or bicycling to school.

Evaluation

The Evaluation section highlights the importance of tracking *bicycle and pedestrian facilities*, *behavior and attitudes* and *broad community performance measures* to evaluate the success of the Bicycle and Pedestrian Master Plan and the value of the bicycle and pedestrian network. Evaluation of the plan is often an overlooked step in any planning process, but evaluation and tracking improvements is essential to long-range planning. For this Bicycle and Pedestrian Master Plan, tracking facilities, usage, perceptions and so forth enables the City to know how well changes to the system have worked and to tweak the plan if and when the need should arise.

Photo Credit: www.pedbikeimages.org/Laura Sandt

The City already tracks and should continue to track many of the below performance measures to create trend line data and to see how bicycling and walking trends change over time. As technology evolves and other evaluation methods emerge, the City should update and review its evaluation criteria. The City should take advantage of opportunities to use volunteers to collect the data identified in this section.

Photo Credit: www.pedbikeimages.org/Dan Burden

Bicycle and Pedestrian Facilities

Bicycle and pedestrian facilities are the easiest to measure, but they do provide useful information about the infrastructure that provides people with biking and walking opportunities.

- Miles of: multi-use trails, sidewalks, bike lanes, sharrows, bike boulevards, etc.
- Number of bike racks, benches, waste receptacles, drinking fountains, informational kiosks, etc.

Photo Credit: www.pedbikeimages.org/Mike Cynecki

Photo Credit: www.pedbikeimages.org/Dan Burden

- Number of Improved Intersections identified under Implementation in the Engineering section
- Number of traffic calming measures installed
- Number of road construction/reconstruction projects that have included bicycle and pedestrian needs
- Track whether or not the Plan's recommendations for bike lanes, trails and sidewalks are implemented

Behavior and Attitudes

Tracking behavior and attitudes is important to know if people are walking and biking more, if safety improvements have reduced crashes and overall to know if behaviors and attitudes are changing after implementing projects and programs. Measurements to track behavior and attitudes include, but are not limited to the following:

- Deaths and injuries by mode
- Crashes by mode and type, including 'doorings,' pedestrians accessing transit, etc.
- Mode shift: tracking bike, walk and transit trips over time (we would have to gather this data for the most comprehensive information—beyond work commute)
- Percentage of children walking and biking to school
- Vehicle Miles Traveled (VMT) or Single Occupancy Vehicle (SOV) trip reduction
- Multi-modal level of service versus only automobile level of service
- Bike and pedestrian count numbers
- Number of participants at events
- Number of participants at bicycle education classes
- Survey responses
- Groups participating in the maintenance of trails
- Volunteer hours for all bicycle and pedestrian activities
- Bicycle organization membership

Broader Community Performance Measures

While broader community performance measures may be harder to quantify and gather, they may show that bicycling and walking have wide reaching positive impacts on communities where biking and walking are prevalent. Broader community performance measures could include, but are not limited to the following:

- Air quality improvement (ground-level ozone, particulate matter, carbon monoxide, sulfur dioxide and nitrogen dioxide)
- Health indicators (obesity, chronic disease, diabetes, physical activity)
- Economic impact (new jobs created/businesses opening in proximity of multi-modal streets, dollars spent from bicycling events, etc.)

- After bike events, survey participants about how much money they spent in Red Wing while in town—gas/food/lodging/recreation/etc.

Although the City of Red Wing already tracks and monitors some of these performance measures, it is important that the City stores all information related to the Bicycle and Pedestrian Plan evaluation in one location so that the information is easily accessible for all groups working on bicycle and pedestrian related issues.

Other ways to support bicycling and walking in Red Wing:

Land use component

Land use and development patterns play a large role in whether or not a community is walkable and bikeable. Compact, mixed use development, well connected street systems such as a grid network and human-scale development with buildings that face the street all encourage bicycling and walking. Spread out development with separated uses, a hierarchical road system with multi-lane arterials carrying large volumes of fast moving traffic and buildings and signs designed to be viewed at automobile speeds discourage bicycling and walking. Below are policies taken from the Comprehensive Plan that address issues related to land use and development patterns to encourage more compact and mixed use development that supports bicycling and walking.

Downtown:

- Support infill and redevelopment on underutilized parcels that is consistent with historic character of downtown.
- Encourage further development of higher density housing within the Downtown as a component of redevelopment and mixed use projects.
- Encourage vertical mixed use projects with residential or office units above street level retail or cultural uses.
- Encourage sidewalk retail and restaurants at appropriate locations within the core areas of downtown and allow for areas to be used as sidewalk cafes. This generally requires a wider sidewalk space to maintain a walkable space.

Photo Credit: www.pedbikeimages.org/Dan Burden

Activity Centers:

- Require redevelopment projects to illustrate pedestrian circulation systems in redevelopment proposal.
- Buildings should be arranged in clusters related to the street front and to the district parking.
- Parking in the rear of buildings helps promote a stronger presence of the commercial uses on primary streets.

Photo Credit: www.pedbikeimages.org/Dan Burden

- An even more prominent system of sidewalks and trails should be emphasized within the activity center to encourage the concept of activity centers being "park once" districts.

Residential Neighborhoods:

- Neighborhood commercial nodes should be developed at key intersections to support surrounding adjacent residential uses.
- Front residential streets with the primary entrance to the residence, porches, stoops and windows and not excessive garage doors.
- Find a way to have a neighborhood store located within close proximity (10-minute walk) to every residence within the community. Neighborhood stores should be located at crossroads of community collector or arterial streets with residential collector streets.
- Encourage and support the re-establishment of elementary schools within neighborhoods. Schools within neighborhoods should be planned as an integral part of the greenway network with shared open space and park systems. Schools should also be well served by residential collector roads, trails and sidewalks.

Photo Credit: www.pedbikeimages.org/Dan Burden

Photo Credit: www.pedbikeimages.org/Dan Burden

Additional Considerations:

- Subdivision plans should demonstrate connectivity between developments for pedestrians and bicyclists to minimize short-distance trips by motor vehicles.
- Subdivision plans should include an internal circulation plan for traffic including bicycles and pedestrians, ensuring subdivision reviews include an analysis of bicycle and pedestrian facilities as part of the traffic analysis process.
- Lower minimum parking requirements for businesses locating adjacent to a bike route or trail when they provide bicycle parking and other bicycle and pedestrian amenities.
- Expand landscaping requirements that support walking and bicycling to zoned areas currently not covered by the existing ordinance such as B2 and Industrial fronting Highway 61.
- Review engineering standards for sidewalk width in the Complete Streets Policy to provide for wider sidewalk minimums that are different for different parts of the City. Sidewalks in commercial areas should be wider than those in residential areas, for example.
- Apply for Bicycle Friendly City designation from the League of American Bicyclists.

Bicycle sharing program:

Bicycle sharing programs have gained popularity recently. Cities large and small from Portland to Boston and locally, the Twin Cities and Wabasha, are rolling out new bicycle sharing programs. There are many types of bicycle sharing programs ranging from long-term rental to short term check out. Figure 23 describes different bicycle

sharing programs that Red Wing could model to expand bicycling throughout the city.

Red Wing should encourage and support other organizations interested in developing a bicycle sharing program. Bicycle sharing programs have the most success when there is collaboration among several parties such as a bicycle industry partner, nonprofit or business partner and City support. Red Wing's tourism industry could benefit from a bicycle sharing program, especially from downtown to the Old West Main and Pottery Districts. Check out stations could have daily, weekly and seasonal rates.

Madison's Red Bike Program is run by a local bicycle shop, Budget Bicycle. People can rent a bicycle for the season (as soon as the snow melts through November 20th) then the bicycles are returned for the winter where they can undergo repairs and maintenance. To get a red bike, a $60 deposit is required, but returned when the bicycle is returned.

Nice Ride bicycle sharing program in Minneapolis

Figure 23. Bicycle Sharing Program Types

Type	Description	Positives	Negatives
Unregulated	Bicycles are located throughout the city or a specific area and are available free of charge and for use by anyone. Bicycles remain unlocked after a user is finished riding to his or her destination.	No cost to users High number of users and usage frequency	Loss of fleet due to vandalism and theft Low bicycle availability because they are free and available to everyone May leave users stranded if bicycle is not available
Deposit	Requires a small deposit to release a bicycle from a locked terminal	Minimal fee to users High number of users Slightly more accountability for the bicycle than an unregulated system	Loss of fleet due to vandalism and theft remains high because there is no accountability for returning the bicycle
Membership: Nice Ride in Minneapolis & St. Paul, B-Cycle in Madison, etc.	Bicycles are kept at volunteer-run hubs or at self-service terminals. Users register with their membership cards so they are identified once they use a bicycle. Users are then responsible for the bicycle and any damage.	Greater accountability for bicycles and reduced vandalism and theft Minimal cost to users High number of users and usage frequency	Higher capital costs than a deposit or unregulated system Not usually feasible for small towns
Public-Private Partnership	Many membership programs are operated through public-private partnerships to lessen the operating burden on a singular party. The private party or parties are allowed to advertise on the bicycles and/or other locations throughout the city.	Greater accountability for bicycles and reduced vandalism and theft Minimal cost to users Shared capital and operating costs High number of users and usage frequency	Not usually feasible for small towns
Long-Term Check Out	Bicycles are lent to users for a small fee or refundable charge. Users keep the bicycles for several months and are solely responsible for the bicycle during the rental period.	Fewer repair costs because the bicycle has only one user for the rental period	Lower usage frequency

FUNDING SOURCES AND PARTNERS

Accomplishing the goals of this Plan will require a variety of funding sources as well as partnerships between groups and organizations that have common interests in promoting bicycling and walking. Partnerships and collaboration maximize efforts by individuals, but they are also important for securing funding. This section outlines potential funding sources as well as partnerships that will be crucial to making the Bicycle and Pedestrian Plan a reality.

FUNDING SOURCES

Adequate and ongoing funding is essential to create and sustain a well connected and reliable bicycle and pedestrian network. Securing funding for bicycle and pedestrian projects and programs is more likely if it can be leveraged and combined with a variety of federal, state, regional, county, local and private sources. Below is a list of potential funding sources for creating a better bicycle and pedestrian environment in Red Wing.

1. Transportation Enhancement Activities: http://www.fhwa.dot.gov/environment/te/
2. Safe Routes to School Program: http://safety.fhwa.dot.gov/saferoutes/
3. Recreational Trails Program: http://www.fhwa.dot.gov/environment/rectrails/
4. National Scenic Byways Program: http://www.bywaysonline.org/
5. Federal Lands Highway Program: http://flh.fhwa.dot.gov/
6. Transportation Enhancement Program: http://www.enhancements.org/profile/MNprofile.php
7. Federal Recreational Trail Program (DNR): http://www.dnr.state.mn.us/grants/recreation/trails_federal.html
8. Congestion Mitigation and Air Quality Improvement (CMAQ) Program: http://www.fhwa.dot.gov/environment/air_quality/cmaq/
9. Energy Efficient & Conservation Block Grants Program: http://www1.eere.energy.gov/wip/eecbg.html
10. Bikes Belong: http://www.bikesbelong.org/grants/
11. Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU): www.dot.state.mn.us/safetealu/
12. FHWA and FTA Funds for bicycle and pedestrian plans: www.fhwa.dot.gov/help/bkepedtble.htm
13. Grants.gov: www.grants.gov

14. Funding Sources for Bicycle and Pedestrian Projects: www.fhwa.dot.gov/environment/bikeped/bp-broch.htm#funding
15. Smart Growth Funding: www.epa.gov/smartgrowth/funding.htm
16. FTA Grant Programs: www.fta.dot.gov/funding/grants_financing_263.html
17. Highway Bridge Program: http://www.fhwa.dot.gov/safetealu/factsheets/bridge.htm (funding through 2009, but SAFETEA-LU was extended)
18. Highway Safety Improvement Program (HSIP): http://www.fhwa.dot.gov/safetealu/factsheets/hsip.htm
19. Railway-Highway Crossings: http://www.fhwa.dot.gov/safetealu/factsheets/railcrossings.htm
20. State and Community Highway Safety Grant Program (Section 402): http://safety.fhwa.dot.gov/state_program/section402/
21. Development Impact Fees
22. General Funds
23. Revenue and General Obligation Bonds
24. Local Improvement Districts
25. Local Option Sales Tax
26. Park and Trail Dedication Fees
27. Sidewalk user fees versus assessments

The City should constantly be looking for additional funding sources as the plan grows and evolves.

PARTNERS

Forming partnerships will be a crucial part of the Bicycle and Pedestrian Master Plan's success, not only to secure funding, but in promotion, fostering a climate of acceptance for bicyclists and pedestrians, encouragement and education. The City of Red Wing should constantly seek out new partners to promote bicycling and walking throughout the City. Below is a list that includes, but is not limited to possible biking and walking partners.

1. YMCA
2. Live Healthy Red Wing
3. Fairview Medical Center
4. Red Wing School District/Community Recreation Program
5. Goodhue County
6. Philanthropic Community
7. Civic Organizations
8. Bicyclists and the Bicycle Community
9. Local Businesses and Employers
10. Mountain Bikers Group
11. The Public

12. Environmental Learning Center
13. The State of Minnesota (Mn/DOT)
14. Red Wing Housing and Redevelopment Authority
15. More as the network grows and evolves

The City of Red Wing cannot implement the Bicycle and Pedestrian Plan alone. It must rely on citywide partnerships to make the Plan a reality.

CONCLUSION

Red Wing's Bicycle and Pedestrian Master Plan lays the groundwork for a successful bicycle and pedestrian system. It identifies projects and programs to address engineering, education, encouragement, enforcement and evaluation related to bicyclists and pedestrians. The Plan emphasizes the importance of non-city funding and forming partnerships with other interested parties to implement the Plan's recommendations as well as implementing bicycle and pedestrian facilities at the same time as road construction and development to be most cost effective.

The Plan is a living document meant to guide the development of bicycle and pedestrian infrastructure by defining a broad vision and goals for bicycling and walking in Red Wing, establishing bicycling and walking as important components of the transportation network as well as popular recreational activities.

The development of bicycle and pedestrian routes, projects and priorities allows the bicycle and pedestrian infrastructure to be implemented at opportune times and in conjunction with road construction projects providing Red Wing with valuable bicycle and pedestrian amenities that increase transportation options and contribute to a more livable community with little additional cost or construction inconvenience.

In addition, a well thought out plan that involves public participation and input from multiple stakeholders will put Red Wing in a better position to receive grant funding for bicycle and pedestrian projects and programs.

Implementation of the Bicycle and Pedestrian Master Plan will provide Red Wing residents and visitors with more transportation options and contribute in making Red Wing a more vibrant and livable community.

Photo Courtesy: www.pedbikeimages.org/Dan Burden