



WRIGHT COUNTY

TRAIL AND BIKEWAY PLAN
Pathways to Active Living

July 19th, 2011



Wright County Minnesota



Hoisington Koegler Group Inc.



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PLAN SUMMARY

Wright County is growing rapidly and currently lacks a trail and bikeway system. Trails and bikeways are one of the most desired features for residents, visitors and businesses. Trails and bikeways contribute to the physical, community and economic health of the County. However, a plan and commitment to developing trails and bikeways is needed to begin to create this important component of quality of life.

This Trail and Bikeway Plan was developed with input from County residents, stakeholders, partners, staff and officials and establishes a long term (+20 year) vision and recommends initial priorities and actions.

The Plan is designed to connect the County with non-motorized trails and bikeways which will provide opportunities for residents to increase their physical activity and improve their health.

The Plan envisions the County creating a network of off-road trails and on-road bikeways that connect and complement city and township trails and bikeways.

Key recommendations include adding trails and bikeways along the Mississippi River, the Crow River and around area lakes; creating connections to nearby regional trails such as the Luce Line and the future extension of the Lake Wobegon Trail and adding hard surface trails in County parks.

While it will take time to create the trail and bikeway system, it will pay dividends in terms of increased property values, improved health and lower health care costs, enhanced safety, increased economic development and jobs and improved quality of life.

PRIORITY RECOMMENDATIONS ARE:

A. Wright County's commitment to creating a trails and bikeway system over time and with partners.

B. Creating trails and bikeways along the Mississippi and Crow Rivers and around area lakes.

C. Adding hard surface trails (bituminous or aggregate) in County parks.

D. Continuing to construct paved shoulders on any new roads and during reconstruction of County State Aid Highway and County Roads with +1,000 average daily vehicle traffic.

E. Adding trail and bikeway connections to the Luce Line Trail, the future Crow River Trail proposed by Three River Park District and a future connection to the Lake Wobegon Trail.

F. Designating a network of bike routes, creating trailheads at key locations and adding signage on routes and at trailheads.

This Plan was adopted by the Wright County Board on July 19th, 2011 as an element of the County Transportation Plan.

WRIGHT COUNTY

Trail and Bikeway Plan

Pathways to Active Living



CHAPTER 1

Introduction



DEFINITIONS:

Active living is a way of life that integrates physical activity into the daily routine, and is an important aspect of preventing obesity and improving health among children, individuals, families and communities. In order to facilitate and support opportunities for active living, a focus on the built environment - including pedestrian and bicycle connections, transportation systems, trails, buildings, parks and open space is essential. Actions to make these changes are important and can be implemented at all levels of government to create activity-friendly, healthy environments.

Bikeway -A trail, lane, or route for bicycle riders.

Bikeways include:

Shared-use trails for bicycle and pedestrian travel on a hard surface completely separated from any roadway.

Bike lanes are striped lanes for one-way travel on a roadway.

Bike routes provide for shared use with pedestrians and motor vehicle traffic and is typically identified with signage.

Paved shoulders of roadways are suitable for bicycle and other shared uses (pedestrians, parking, etc.).

Live Wright is a Wright County group that has formed to implement and develop initiatives that responds to Minnesota's Statewide Health Improvement Program.

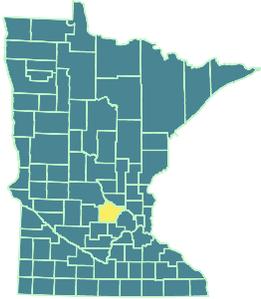
Trail -is a paved or unpaved pathway typically for use by walkers, hikers, bicyclists and others that is completely separate from a roadway.

Note: This Plan focuses on non-motorized trails

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INTRODUCTION

Location and Description



Wright County is a rapidly growing county of 124,700 people located just northwest of the Twin Cities. The County experienced the second largest growth rate of Minnesota counties with its population increasing by 39% between 2000 and 2010. Much of the recent growth occurred

in the eastern portion of the County.

Wright County lies in east central Minnesota, bordered on the north by the Mississippi River and the east by the Crow River. Farmland, rivers, lakes and small towns characterize the landscape of Wright County.

There are 17 cities and 18 townships in the County. About 69% of Wright County's 716 square mile land area is classified as agriculture.

The County has an extensive park system, with 29 units that include regional and county parks, park reserves, forests, wayside rests and lake accesses. The County's parks offer 31.5 miles of largely historic surface trails, including 17 miles of cross country ski trails.

Wright County has a 530 mile County Highway system. This system is split into 402 miles of County State Aid Highways (which are financed mostly by state and federal funds) and 128 miles of County Roads (which are financed only by local levy). Portions of several State and Interstate Highways (Interstate-94, Trunk Highway 12, and State Highways 24, 25, 55 and 241) are located within Wright County.

Plan Need

The County acknowledged the importance of wisely planning for trails and bikeways and received a grant from the Statewide Health Improvement Program and Live Wright to prepare this Trail and Bikeway Plan.

Currently Wright County has few trails outside of parks and no bike lanes or designated bike routes. Some roads provide adequately-sized paved shoulders which work well for bicycling, while other roads lack any shoulders and are not comfortable for bicycle riding or walking.

Trails are a highly desired feature for residents, visitors and businesses. Trails and bikeways should be a planned component of the recreation and transportation system of the County. Trails are a vital element of livability and as energy prices and health care costs continue to rise they will become even more important.

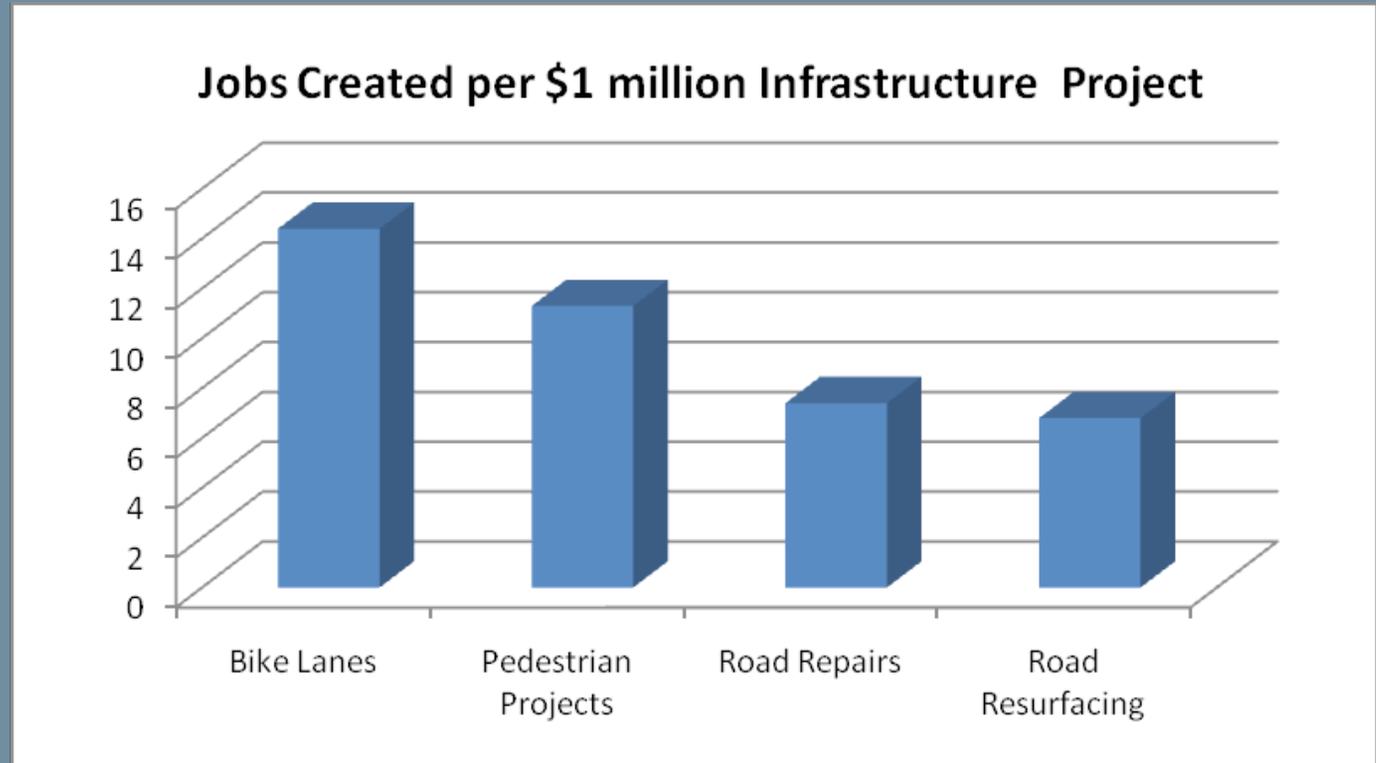
It is important to have a vision and planned approach to trail and bikeway development. This Plan will help define priorities, help access additional grant funding opportunities and assure a connected and efficient trail and bikeway system.

Commitment

It is important that the County have a plan for the future and take the steps to implement the Plan. It will take many years to create a trail and bikeway system in Wright County. Minneapolis has been building its trail and bikeway system since 1890. Decisions made now to reserve trail easements and to build new trails and bikeways will lay the groundwork for a trail and bikeway network that will serve County residents, visitors and business for decades to come. The failure to commit to trails (such as the decision to not pursue the abandoned Burlington Northern railroad corridor along the Mississippi River in the early

1980's) hampers creating a legacy and amenity for future generations. Obtaining trail easements or rights of way or constructing trails and bikeways in a particular location or corridor are opportunities that typically only come up once (i.e. during a land subdivision process or during roadway reconstruction). This Plan will help guide and encourage moving forward on trail and bikeway decisions that shape the future livability and attractiveness of the County. This Plan focuses on non-motorized trail use in order to encourage the health benefits of physical activity. Site specific planning, design and engineering actions will be needed to implement these County-wide recommendations.

JOB CREATION - A 2010 study by the University of Massachusetts showed that pedestrian and bicycle infrastructure projects create more jobs than road projects.



Source: *Estimating the Employment Impacts of Pedestrian, Bicycle and Road Infrastructure* University of Massachusetts, December 2010.
http://www.bikeleague.org/resources/reports/pdfs/baltimore_Dec20.pdf

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Benefits of Trails and Bikeways

The provision of trails and bikeways improve livability, mobility, health, property values, economic development and the environment. Some benefits of a connected trail and bikeway system to Wright County are listed below.



Popular and cost effective

Trails and sidewalks are usable by all ages and abilities. Trails are one of most desired recreation features in Wright County. Trails and sidewalks allow for self-directed recreation (no staff or programming required).



Promote healthy active living

Trails and sidewalks provide health benefits and exercise while going about daily activities. Trails and sidewalks improve individual and community health and reduce health care costs.

POPULARITY OF BICYCLING AND WALKING

In 2009 50% of Minnesotans, more than 2.6 million people, rode a bicycle.

Bicycling is big business in Minnesota and provides numerous benefits. Several reports on the bicycle industry, bicycle-related tourism and trail use by bicyclists show the economic impact to be in excess of \$1 billion per year, which is more revenue than hunting and snowmobiling combined.

Nationally, bicycling has more participation than hunting or fishing and has the same participation as golf, skiing, and tennis combined.

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HEALTH BENEFITS OF TRAILS

Minnesotans spent \$1.3 billion in 2004 on preventable diseases attributable to lack of physical activity (\$250/year/person).

63% of Minnesota adults are overweight and 25.3% of adults are obese.

Trails can help people be physically active and reduce health care costs.



Provide environmental benefits

Trails and bikeways allow people to connect with nature. Trail and bikeway users save energy and reduce emissions.



Encourage economic development

Trails and bikeways promote tourism, attract residents and businesses and increase property values. For example, once trail and biking facilities are in place along the Mississippi River Corridor, it is likely that the National Mississippi River Trail (MRT) route would include the Wright County side of the river, thus encouraging local and regional visitors to Wright County.



Enhance quality of life and community livability

Trails build sense of community, foster social interaction and connect people, cities and neighborhoods.



Increased transportation options and mobility

Trails and bikeways serve recreation and transportation users. They are used for commuting, errands, going to/from school, and provide crucial options for non-drivers (1/3rd of our population).

ECONOMIC BENEFITS OF TRAILS

A 2007 study by the University of Minnesota Tourism Center analyzed the economic benefits of trail use in Minnesota.

The study found that non motorized trail use (walk, hike, run, bike, ski, skate, and horse riding) in Minnesota accounts for \$2.1 billion a year in economic benefits.

The Trust for Public Land has done extensive research evaluating the economic benefits of open space (which includes trails along natural resource corridors). Benefits include higher housing stock value, property tax revenue, flood mitigation, water protection, air pollution removal, recreation activity and health cost savings.

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WRIGHT COUNTY

Trail and Bikeway Plan

Pathways to Active Living



CHAPTER 2

Planning Process and Community Input



PLANNING PROCESS AND COMMUNITY INPUT

The County prepared a Trails and Bikeway Plan in 2002 which formed a starting point for this Plan. The 2002 plan envisioned an extensive network (approximately 400 miles) of both off-road trails and on-road bikeways throughout the County. This 2011 updated Plan utilized a detailed evaluation of the County, including roadways, destinations, barriers and amenities, along with community and stakeholder input and application of best practices to develop trail and bikeways system recommendations.

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Wright County Trail and Bikeway Plan Questionnaire

Wright County is beginning work on a Trail and Bikeway Plan which will be a long term guide to trail and bikeway planning and construction. Please provide your ideas and suggestions about priorities for future trails and bikeways. This information will help shape the Trails and Bikeway Plan.

Please indicate your priorities for the following trail and bikeway options on a scale of 1-5 (with 1 being a low priority and 5 being a high priority).

Trail and Bikeway Route Options (check the box indicating your priority)

	Priority				
	Low 1	2	3	4	High 5
Regional trails - Trail routes across the County which connect to trails in adjoining counties to create a regional network	<input type="checkbox"/>				
City-to-park trails - Trails connecting area cities to County parks and to Lake Marie State Park	<input type="checkbox"/>				
Park-to-park trails - Trails that connect parks	<input type="checkbox"/>				
City-to-city trails - Trails that connect area cities	<input type="checkbox"/>				
Trails in parks - Trails within County park lands	<input type="checkbox"/>				
Trail along rivers - Linear trails along rivers or creeks	<input type="checkbox"/>				
Trails around lakes - Loop trails around lakes	<input type="checkbox"/>				

Trail and Bikeway Activities
Check the box indicating how important the following activities are for the future Wright County trail and bikeway system.

	Importance				
	Low 1	2	3	4	High 5
Walk or hike	<input type="checkbox"/>				
Ride a bicycle	<input type="checkbox"/>				
In-line skate	<input type="checkbox"/>				
Ride a horse	<input type="checkbox"/>				
Ride a snowmobile	<input type="checkbox"/>				
Ride an ATV	<input type="checkbox"/>				
Other - Please list: _____	<input type="checkbox"/>				

Trail and Bikeway Distances Check the box indicating your preferences for various distance options for future trail and bikeway routes in Wright County.

	Distance Preferences				
	Low 1	2	3	4	High 5
Short loops within county parks (under 1 mile)	<input type="checkbox"/>				
Medium loops (1-3 miles)	<input type="checkbox"/>				
Long loops (3-6 miles)	<input type="checkbox"/>				
Distance loops (6+ miles)	<input type="checkbox"/>				

Trail and Bikeway Use
How do you plan to use future Wright County trails and bikeways? (Check all that apply):

For recreation For commuting or errands

As an individual or with other adults With children or a family group

Not likely to use County trails

OVER ➔

Trail and Bikeway Surface Options
Please indicate your preferred surfaces for future County trails and bikeways by checking a box on the scale of 1 to 5 (1 being a low preference and 5 being a high preference)

	Surface Preferences				
	Low 1	2	3	4	High 5
Off-road bituminous trails	<input type="checkbox"/>				
Off-road gravel trails	<input type="checkbox"/>				
Off-road natural surface trails	<input type="checkbox"/>				
On-road bituminous shoulders	<input type="checkbox"/>				
On-road gravel shoulders	<input type="checkbox"/>				

Your location within the County
Please indicate if you live either in a: City Township
For business respondents indicate the location of your business within the County.

Name of City or Township: _____

Person completing survey (optional): _____

Phone number/e-mail of person completing survey (optional): _____

Specific Trail or Bikeway Locations:
Where should new trails or bikeways be located? Describe the desired locations below or mark on the attached map. Note the suggested trail or bikeway surface and or uses. Also note any difficult or unsafe County road crossing points for pedestrians, bicyclists and other trail users.

Please provide any other information or suggestions that will help shape the Wright County Trail and Bikeway Plan.

Thank you for your input. Please return the completed questionnaire to County staff or mail the questionnaire to:

Marc Mattice
Wright County Parks Administrator
1901 Highway 25 North
Buffalo, MN 55313

Wright County Trail and Bikeway Questionnaire

Community and Stakeholder Input

Approximately 200 people contributed input on Wright County trail and bikeway needs and priorities during open house meetings, a partner roundtable meeting (representatives from area cities, townships and the Minnesota Department of Natural Resources), Wright County Parks Commission meetings and using a trails and bikeway questionnaire during December 2010 – March 2011. The on-line and printed versions of the Wright County Trails and Bikeway Questionnaire were completed by 138 County residents (see the appendix for a copy of the questionnaire and the results).

Community open house meetings were held in February 2011 in Buffalo and Albertville to gather input on trail and bikeway needs and desires. These sessions were held in conjunction with the City of Buffalo and the City of Albertville's park and trail planning meetings. Approximately 45 people attended the open house sessions. Attendees provided input on trail and bikeway needs and trail priorities. Two open houses were held in June to review the draft master plan, one in Clearwater and one in Buffalo. Residents also were able to view and comment on the plan on the County's website in June 2011. A group of County staff representing the Parks, Highway, Planning and Zoning, Surveyor and Public Health departments provided detailed guidance on the Plan content and pro-



cess. The Wright County Board reviewed and adopted this plan on July 19, 2011.

The following is a summary of the major themes and directions that emerged from the community and stakeholder input.

Input Themes and Priorities

- Recreation is the primary desired trail and bikeway use – walking, hiking and bicycle riding.
- Off-road bituminous trails are preferred.
- People want trails and bikeways along and within natural resource areas/amenities:
 - Add loop trails within County parks,
 - Add loop trails and bikeways around lakes,
 - Add linear trails and bikeways along rivers.
- Create a better network of safe on-road bikeway loops.
- Create longer loops 3-6 miles and +6 miles, when possible.
- Connect cities to parks with off-road trails.
- Connect schools to residential areas.
- Connect County trails and bikeways to city and township trails and bikeways.
- Connect Wright County to the Luce Line Trail, the Lake Wobegon Trail and Lake Rebecca and Crow Hassen Parks with trails or bikeways.

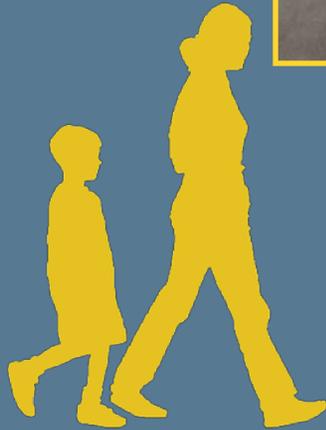
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WRIGHT COUNTY

Trail and Bikeway Plan

Pathways to Active Living



CHAPTER 3

Existing Conditions



EXISTING CONDITIONS

Biking and walking conditions within Wright County range from good (in some parks and in and around some cities) to poor and not safe/comfortable for many users. Because of the distances involved and the high average speed limits on most County roads, biking and walking are currently not viable options for most people outside of the developed cities. The presence of wide paved shoulders on some roads such as CSAH 3, 8, 35, 39, TH 25, etc. are exceptions. These wide shoulders are highly valued and used by some County residents for bicycling and some walking. However, due to the high traffic speeds (50-55 MPH) many people (particularly families with children and less frequent riders) are not comfortable riding or walking on those roadways.

There are no regional or State trails in Wright County. There are regional and State trails in adjacent counties, including the Luce Line State Trail in Carver County, Lake Wobegon Regional Trail in Stearns County and many regional trails in Hennepin County operated by the Three Rivers Park District. Proposed trails such as the extension of the Lake Wobegon to the City of Clearwater and the Crow River Trail proposal by Three River Park District are excellent opportunities to provide connections and link populations and amenities to Wright County.

Needs and Opportunities

Wright County does not have a significant trail or bikeway system outside of the trails within some County Parks. Wright County currently has nearly 39 miles of County trails (29 miles of those are within parks), no striped bike lanes on County roads and no designated bike routes. There are wide paved shoulders on County State Aid County Highways which work well for bicycle use for some users. This lack of trails and bikeways is in contrast to some adjacent counties such as Hennepin, Carver, and Stearns Counties which have regional trails and in the case of Hennepin County, a well developed trail and bikeway network.

The goal of this Plan is to establish a blueprint and process to create a trail and bikeway network in Wright County over time. Many cities and towns within the County have existing and planned trails and bikeways. An objective of this Plan is to integrate and connect future County trails and bikeways with the existing and planned city and township systems. As the County continues to grow there is the opportunity to add right of way and easements for trails as part of the subdivision review process, and to add bikeways and trails in existing roadways corridors and in County Parks.

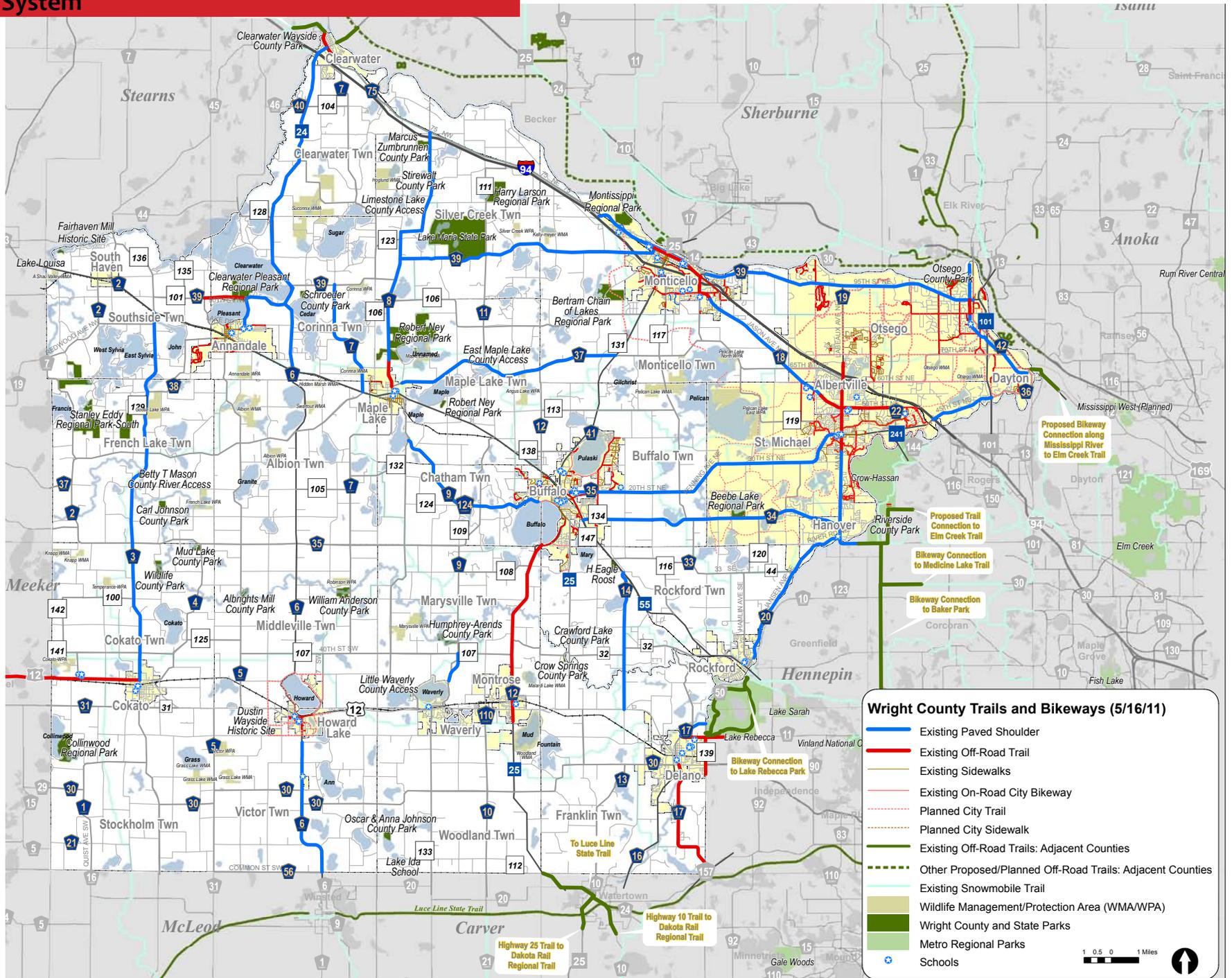
In addition to the community input themes the following needs emerged from an evaluation of the County, an analysis of trends and from best practices in trails and bikeway planning. There is a need for:

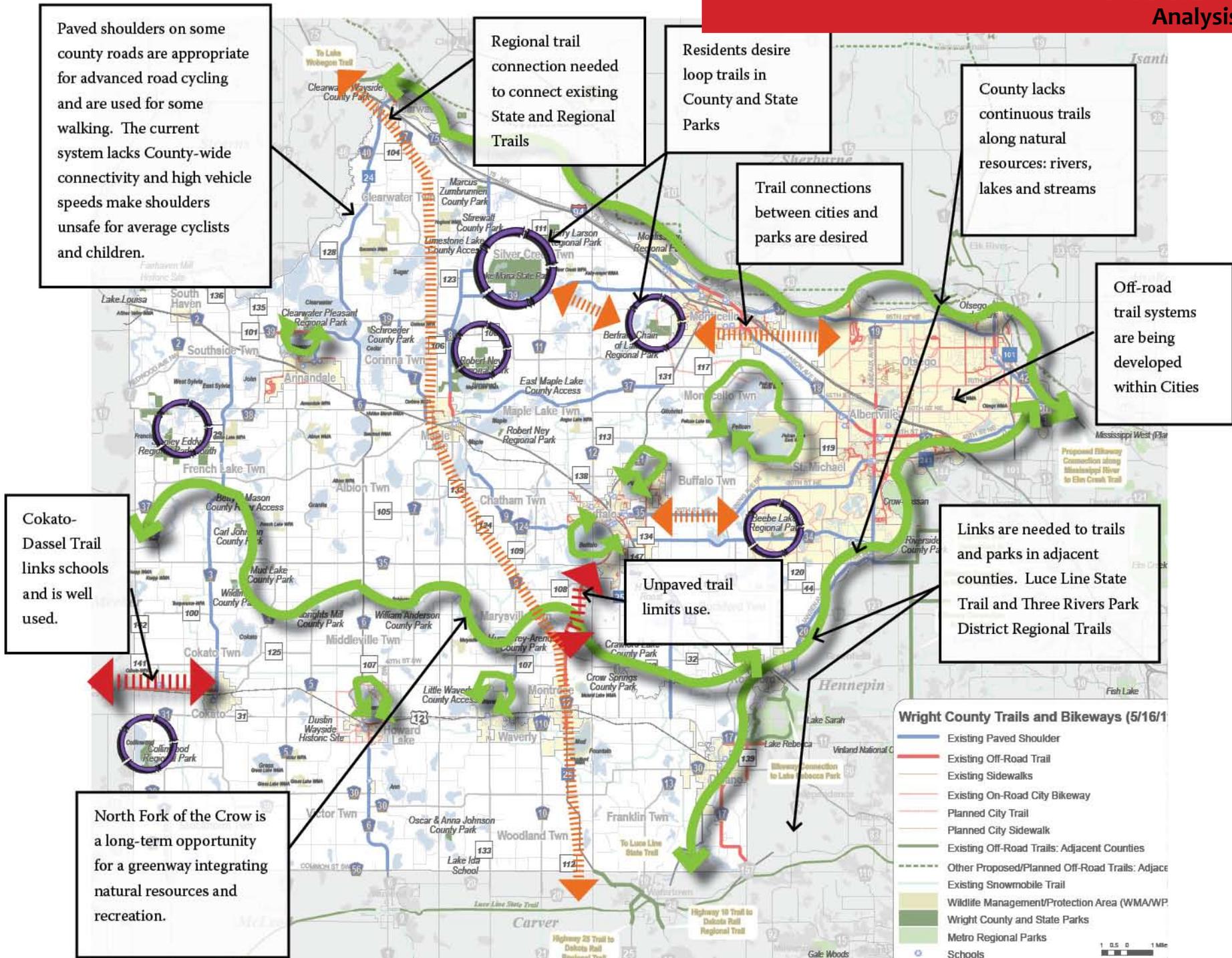
- A Plan to help prioritize and focus County investment in trails and bikeways.
- A broader view of transportation that extends beyond highways. The trend and transition is to think about complete streets (roadways that serve all users – vehicles, pedestrians, bicyclists, mobility-impaired users, etc.).
- Identify priority corridors for preservation of right of way and/or easements for future trails and bikeways. Preservation of right of way is a crucial and visionary step that allows flexibility for future generations.
- Coordination of new trails and bikeways with planned County highway, roadway and park improvements.
- Coordination of new trails and bikeways with planned Mn/DOT highway improvements.
- Coordination and cost sharing policy for trails and bikeways on County roadways.
- Position key County trail projects for potential Federal and State grant funding.
- Advancing trails and bikeways on the County “radar screen” to match resident’s desires and the future need.
- Continuing and reinforcing the County policy to build paved shoulders on all County State Aid Highways and County Roads with over 1,000 ADT (average daily vehicle traffic).
- Planning for cross County trails, bikeway routes and a potential greenway corridor.



TRAIL AND BIKEWAY PLAN
Existing System

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WRIGHT COUNTY

Trail and Bikeway Plan

Pathways to Active Living



CHAPTER 4

Trail and Bikeway Plans



TRAIL AND BIKEWAY PLANS

Goals and Objectives

Goal:

Create a long term vision and comprehensive plan for trails and bikeways that can guide future County trail development and road improvement projects and help foster opportunities for active living.

Objectives:

- Gather resident and stakeholder input on trail and bikeway needs to assure that the future trail and bikeway network is well used, safe, convenient and sustainable.
- Convey the benefits and opportunities of a comprehensive trail and bikeway network.
- Coordinate Wright County's trail and bikeway plans with County transportation and park plans, City and Township plans, State highway plans and trails and bikeways in adjacent counties.
- Plan for a trail and bikeway system which appeals to all ages and abilities. This translates into off-road trails that are attractive to family and individual use and longer trails and on-road bikeway routes that appeal to enthusiast bike riders.
- Create design standards for trails and bikeways.
- Include recommendations for trail and bikeway routes, surface materials, policies, development, implementation (priorities, cost estimates and funding options), operations and maintenance.



Bikeway and Trail Policies

Policy and Regulation Context

Current Federal and State laws and policies offer strong support for making improvements to multi-use trails and bicycle facilities throughout Wright County. Making investments to improve the county's on-road and off-road bicycle transportation and recreation network is consistent with policies and positions from state and federal planning and transportation agencies and bodies.

State laws and policies

Minnesota Law

Minnesota law recognizes the rights of cyclists to use roadways and related facilities for their travel. Under Minnesota Statute 169.222, cyclists “have all of the rights and duties applicable to the driver of any other vehicle,” and have the right to use roadways and the roadway shoulders for their travel.

Complete Streets laws and policies

On May 15 2010, then-Governor Tim Pawlenty signed the Minnesota transportation policy bill, which made Complete Streets part of Minnesota law. As defined under Minnesota Statute 175.74, Complete Streets is the “planning, scoping, design, implementation, operation, and maintenance of roads in order to reasonably address the safety and accessibility needs of users of all ages and abilities.” Complete streets laws and policies direct state transportation agencies to design and operate Minnesota roads to enable safe access for all users, including pedestrians, bicyclists and motorists.

Minnesota Department of Transportation

The Minnesota Department of Transportation (Mn/DOT) has over the last several years adopted policies that

strongly advocate for the provision of adequate facilities for bicyclists. Mn/DOT's official vision for the role of bicycle transportation in the state's overall transportation network states:

“Minnesota is a place where bicycling is a safe and attractive option in every community. Bicycling is accommodated both for daily transportation and for experiencing the natural resources of the state.”

Mn/DOT's role in making this vision reality is included in its mission statement regarding bicycle transportation:

“Mn/DOT will safely and effectively accommodate and encourage bicycling on its projects in Minnesota communities, plus in other areas where conditions warrant. Mn/DOT will exercise leadership with its partners to achieve similar results on their projects.”

Since 2008, Mn/DOT requires that all new construction projects over which they have jurisdiction include “safe and effective” bicycle accommodations. Only Interstate-highway construction projects are exempted from this requirement.

Federal laws and policies

AASHTO guidance

The American Association of State Highway and Transportation Officials (AASHTO) is a standards-setting body that publishes specifications and policies guiding highway design and construction practices throughout the United States. Its policies regarding provision of bicycle facilities strongly recommend providing bicycle facilities:

“All highways, except those where bicyclists are legally prohibited, should be designed and constructed under the assumption they will be used by cyclists. Therefore,

bicycles should be considered in all phases of transportation planning, new roadway design, roadway construction and capacity improvement projects, and transit projects.”

Federal agencies

The Federal Highway Administration (FHWA)’s Non-motorized Design Guidance, governing implementation of the Transportation Equity Act for the 21st Century (TEA-21) and subsequent authorizations, states:

“Bicycle and pedestrian ways shall be established in all new construction and reconstruction projects in urbanized areas (unless prohibited by law, excessive cost, or demonstrated absence of need).”

Federal law

SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users) authorized the Federal surface transportation programs for highways, highway safety, and transit for the period between fiscal years 2005 and 2010, and has been recently extended to 2011. It states:

“Bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation projects, except where bicycle and pedestrian use are not permitted.”

SAFETEA-LU further includes seven planning objectives that must be addressed in regional transportation plans. Four of these objectives are consistent with directing investments to bicycling and pedestrian facilities and infrastructure:

Objective 2: Increase the safety and security of the transportation system for motorized and non-motorized users

Objective 3: Increase the accessibility and mobility options available to people and for freight

Objective 4: Protect and enhance the environment, promote energy conservation and improve the quality of life

Objective 5: Enhance the integration of connectivity of the transportation system, across and between modes, for people and freight

Wright County Trail and Bikeway Policies

The following policies are recommended to guide the long term development of a safe, effective and comprehensive bikeway and trail network in Wright County. Many of these are existing County policies and the practices are reaffirmed here. Others are new policies to help guide future planning, funding and implementation actions.

1. Wright County may consider cost sharing on a project by project basis, for regional trails and bikeways on County State Aid Highways and County Roads. Priorities for potential cost sharing are to be based on the Implementation Plan, Priorities and Action Plan contained in Chapter 5 of this document, public good and availability of funds.

Guidance for potential consideration of a project includes:

a. Regional trails and regional bikeways as designated in the Wright County Trail and Bikeway Plan on County State Aid Highways and County Roads may be eligible for cost sharing. The County may also participate in cost sharing with the State or Federal government on regional trails or regional bikeways.

b. A cost sharing request can be initiated by the County, a City or other government entity. Requests for cost sharing, along with detailed plans and cost estimates, must be presented to the County Board of Commissioners for consideration 3 years prior to anticipated construction. After consideration, County Board of Commissioners may direct the Parks Administrator or County Engineer to assist in applying for grant funds or to budget within the County CIP any approved cost-share.

c. County participation in construction and maintenance will be determined on a case-by case basis and executed with a joint powers agreement to cover the specific arrangements for funding and operations.

General cost share guidelines are:

i. The County is not obligated to cost share.

ii. The city will be responsible for maintenance and upkeep of off-road regional trails within their jurisdictional boundary (except for regional trails located on County Park land). In cases where the County maintains a County Road or County State Aid Highway within a city, the County will be responsible for maintenance of any on-road regional bikeway associated with that County roadway/highway.

iii. Upon city annexation of land, the city assumes maintenance responsibility for existing off-road regional trails on County Roads/Highways within the annexation area.

2. All off-road regional trails are to be paved surface.

3. All on-road bikeways will be signed and include pavement markings (chevron/bike symbol). Shoulder width should meet minimum Mn/DOT standards, as provided in the Mn/DOT Bikeway Facility Design Manual. Creation of bikeways and designation of bicycle routes will enhance bicycle riding for recreation and commuting and will reduce County liability by focusing maintenance to designated routes.

4. In some cases it will be appropriate to use on-road regional bikeways as a temporary or interim measure (such as providing a connection between existing paved regional trail segments) on regional trail corridors identified in the Trail and Bikeway Plan.

5. Continue the eight foot wide paved shoulder policy for County State Aid Highways and County Roads with 1,000 average daily trips or more. Current policy is justified for flexibility and safety for biking and walking, driver safety, ease of maintenance, use of agricultural equipment use for parking or as an emergency breakdown lane for vehicles, and cost effectiveness (much less costly to construct shoulders initially than add them later).

6. Actions and approvals pertaining to the land-use plan, zoning, subdivision regulations and transportation plan should include dedication of appropriate right of way or easements for the trails and bikeways contained in this Plan.

7. Funding for trails and bikeways could be part of the County CIP. These funds could be supplemented with cost share funds, grant funds and other funds for use on trail and bikeway land/easement acquisition, construction, improvements and repair. The CIP funds can also be used in matching grants. Beside allocation of funding inclusion in the CIP this is important for coordination between departments, allocating matching funds for and applying for grants in advance of need, etc.

8. The Trail and Bikeway Plan is part of the County Transportation Plan.

9. New paved trails, where feasible, should comply with ADA requirements and utilize universal design principles. Where slope or other impediments prevent creation of an ADA accessible trail, a similar and like experience should be provided within an accessible segment of the trail or nearby. Natural surface trails should be designed for ADA access where feasible. The County should prepare an ADA (Americans with Disabilities Act) transition plan to outline the process for creating ADA accessibility

to existing non-accessible trails.

10. The County should continue to create complete streets/highways through provision of shoulders, bike-ways and trails in addition to vehicle lanes on designated roadways as outlined in this Plan.

11. Paved loop trails shall be provided where possible in regionally significant County parks.

Trail and Bikeway Plan

The Trail and Bikeway Plan for Wright County is based on:

- an evaluation of the County's existing roadway network, location of key destinations (cities, parks, schools, etc.), biking and walking barriers,
- natural resource amenities (lakes, rivers and streams), location of existing local and regional trails and paved shoulders, and
- community and stakeholder input solicited and received as part of this planning process.

The Wright County Trail and Bikeway Plan is designed to meet family and individual user needs with a system of off-road trails in parks, along rivers and cross-County trails.

The Plan is also designed to provide for advanced bicycle riders with a system of longer trails and on-road bike-ways.

The Plan is flexible and adaptable to future needs by continuing the policy of having paved shoulders on all County State Aid Highway and CR > 1,000 ADT.

The Plan focuses on connecting people to nature and the scenic amenities in the County.



Families, children and individuals



Advanced trail users



(25)



Trail visitors



Trail and Bikeway User Profiles

There is no one type of trail or bikeway user, but users can be grouped into broad categories because trails and bikeways appeal to a large proportion of the population.

Group	Needs	Facilities	Distance
Families, children and individuals	<p>Off-road trails in nature or with scenic views.</p> <p>Recreation as the primary trail use. Bicycling, walking, hiking in-line skating cross country ski and other similar uses.</p> <p>Not comfortable using roadways with high speed traffic.</p>	<p>Paved trails- suitable for all users.</p> <p>Soft surface trails – suitable for hikers, walkers, cross country skiers, horse riders and mountain bike use.</p>	<p>Short to medium length loops (1-3 miles),</p> <p>Connections to longer regional trails.</p>
Advanced bicyclists	<p>Off-road trails or on-road bikeways.</p> <p>Recreation, exercise and commuting.</p> <p>Advanced riders have more comfort with sharing roadways where there are paved shoulders or low traffic volumes.</p>	<p>Longer paved off-road trails and paved bike routes/paved shoulders.</p>	<p>Longer loops and connections to regional and state trails.</p> <p>10-40 mile loops/route being most popular.</p>
Trail visitors	<p>People who come to Wright County to use trails for recreation, exercise and a social experience.</p> <p>Typically small group use (2-8 people) with the potential for larger event walks or rides (100-2,000 people)</p>	<p>Primarily attracted to paved trails in scenic and natural resource setting and locations with natural surface trails for hiking or mountain biking.</p> <p>Event rides or walks will utilize trails and low volume/closed roadways.</p>	<p>Medium to long loops (3-10 miles),</p> <p>Connections to longer regional trails.</p>

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Proposed Trail and Bikeway Network

The proposed Wright County Trail and Bikeway network is shown on pages 30- 33. The network recommendations include six categories of trails and bikeways plus trailheads and other support facilities described below and on maps on pages 30-37.

Wright County Trail and Bikeway Categories

Park Trails – Paved and natural surface trails within County Parks. Provide loop trails where possible and paved loop trails or paved connections to and in larger more regionally significant parks. Recommended park trail locations include, but are not limited to: Beebe Lake, Bertram, Clearwater Pleasant Lake, Collinwood, Ney (portions), Otsego and Montissippi.

Regional Trails – Major trail corridors connecting Wright County to the surrounding region and to existing and planned regional and State trails. Paved off-road regional trails are recommended along the Mississippi River and Crow River, along TH 55, TH 12 and TH 25 and between Lake Maria State Park, Buffalo and Hanover (portions of CSAH 8, 9, 35 and 34 linking the Mississippi and Crow Rivers). Regional trails are eligible for State Legacy funding and trails associated with Mn/DOT highways are typically funded as part of the highway expansion/reconstruction. The trail along the Mississippi River has potential to be designated as part of the Mississippi River Trail (MRT), which extends miles from the headwaters of the Mississippi to the Gulf of Mexico, once bikeways and trails are in place. Signed and striped bikeways using paved roadway shoulders may need to be used where sufficient off road space is not available or as interim facility connecting sections of off road regional trail. See map of recommended regional trails on page 34.

Loops Trails - Recreation trails and bikeway loops located along scenic amenities - lakes, woods, and streams, where

possible. Loops are the most popular recreational configuration. Loop are recommended at: Pleasant Lake, Stanley-Eddy, Ney/Lake Maria, Howard Lake, Waverly Lake, Buffalo Lake / Pulaski Lake Bertram and Pelican Lake. The trail loops vary in length from one to six miles. Paved off-road trails are the preferred, but many loops are likely to be a combination of off-road trails and designated and signed bikeways on paved shoulders. See map of recommended loop trails on page 35.

North Fork Greenway - Linear green space for conservation and trails along the North Fork of the Crow River. The North Fork Greenway is envisioned as a long term (+100 year) project to create a signature legacy feature in Wright County. The Greenway would be a preserved natural resource corridor along the river with paved and natural surface trails. The greenway can build on the location of existing County Park land, State Wildlife Areas and the State canoe route. Use on-road bike lanes or bike routes as temporary measures or where off road trails are not possible. See map of recommended greenway on page 36.

County-wide Bikeways – County bikeways would link people to regional trails and make connections between loop and regional trails. Designated bikeways are recommended along selected County Roads, County State Aid Highways and State Highways. Many recommended bikeways are on County State Aid Highways with existing paved shoulders. Where possible, County bikeways should include route signage and painted bicycle symbols on paved shoulders. See map of recommended bikeways on page 37.

Paved Shoulders - Paved shoulders suitable for bicycle use, but not signed or designated as bikeways. In accordance with current County policy paved shoulders should adhere to Mn/DOT Bikeway Facility Design guidelines are recommended along County State Aid Highways and County Roads with traffic volumes of 1,000 ADT and greater. Paved shoulders bring additional benefits beyond safer bicycle and walking conditions. They are also beneficial for driver safety and convenience, ease of maintenance, parking, and for emergency breakdown space for vehicles.

(27)

Trail and Bikeway Categories

See the Trail and Bikeway Map on pages 30 -33 for locations and a view of the recommended trail and bikeway system. Pages 34-37 are maps of the recommended Regional Trails, Loop Trails, Greenway and Bikeways. Chapter 7 -Trail and Bikeway Standards contains more detail, standards and illustrations of trail and bikeway treatments (bike routes, bike lanes and wide shoulders).

(28)

	Category	Description	Location	Facilities
Family and Recreation Use	Park Trails	Trails within County Parks	Loop trails within County Parks. Create paved multi-use trail loops in larger parks where possible.	Off street paved and natural surface trails.
	Regional Trails	Major trails connecting Wright County with State and regional trails	Along the Mississippi River and Crow River and along TH 12 and TH 25 and between Lake Maria and Hanover	Paved off road multi-use trails where possible. On-road bike lanes as a temporary measure.
	Loop Trails	Recreation trails and bikeway loops serving County residents. Located along scenic amenities - lakes, woods, and streams, where possible.	Loops: Pleasant Lake, Stanley/Eddy, Ney/Lake Maria, Howard Lake, Lake Waverly, Buffalo Lake, Pulaski Lake, Bertram, and Pelican Lake. Connector trails linking loop and regional trails.	Combination of off road trails and designated and signed bikeways on paved shoulders. Use designated and signed bike routes as a temporary measure where there are space constraints.
	North Fork Greenway	Linear green space for conservation and trails	Along the North Fork of the Crow River	Natural resource corridor with paved and natural surface trails. State canoe route. Use on-road bike lane or bike route as temporary measures or where off road trails are not possible.
Advanced Bicyclists	County-wide Bikeways	Bikeways on lower volumes roads providing recreational routes and links to existing and planned trails	Designated bikeways along selected County State Aid Highways and State Highways	Designated bikeways with signage and painted symbols on paved shoulders in accordance with Mn/DOT standards
	Paved Shoulders	Paved shoulders suitable for bicycle use but not designated as bikeways	Along County State Aid Highways and County Road with +1,000 ADT	Paved shoulders in accordance with Mn/DOT standards

PAGE 30



TRAIL AND BIKE PLAN
COUNTY WIDE

PAGE 31



TRAIL AND BIKE PLAN
NORTH WEST QUADRANT

PAGE 32



TRAIL AND BIKE PLAN
NORTH EAST QUADRANT

PAGE 33



TRAIL AND BIKE PLAN
HIGHWAY 12 CORRIDOR

PAGE 34



REGIONAL TRAILS

PAGE 35



LOOP TRAILS

PAGE 36



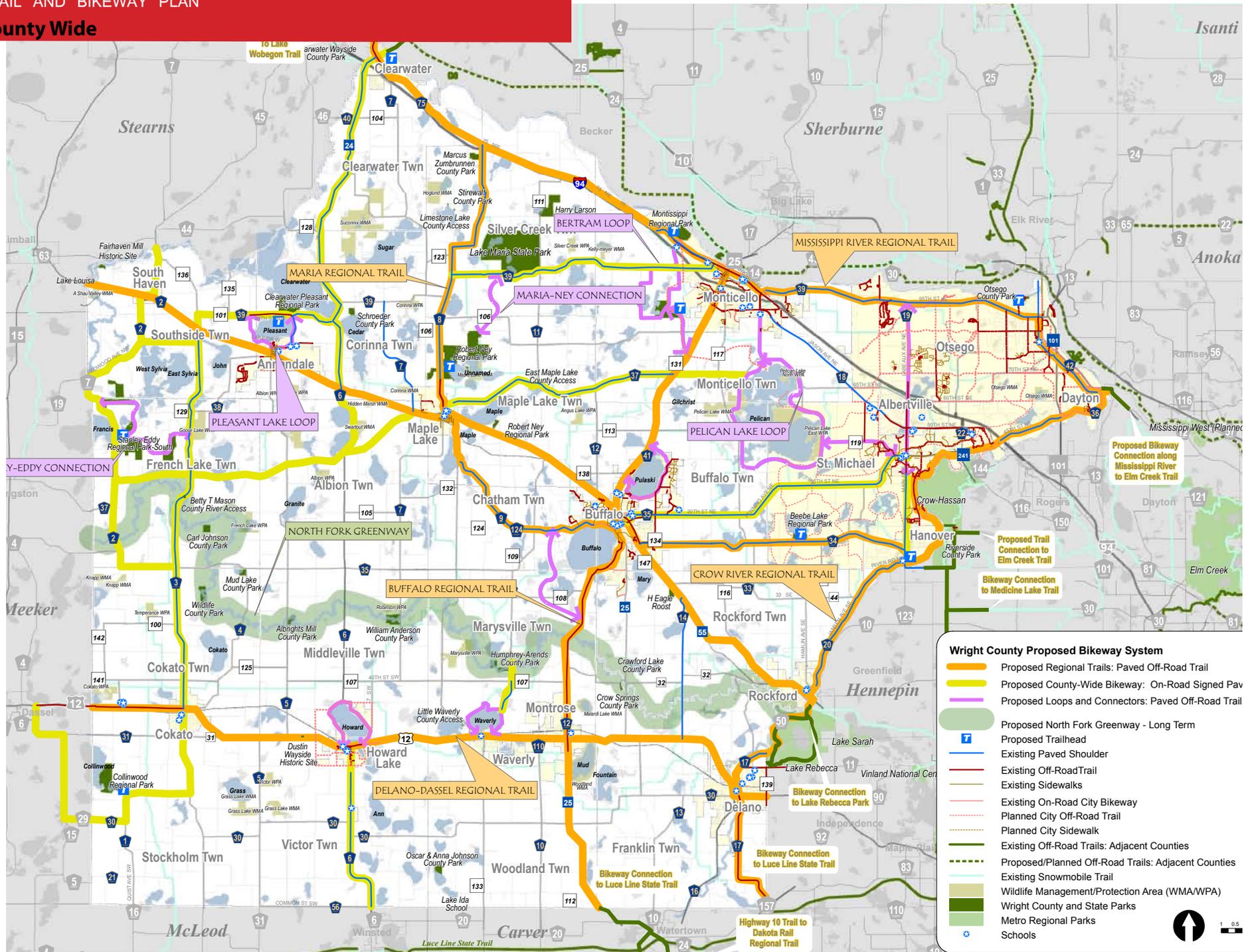
NORTH FORK GREENWAY TRAIL

PAGE 37

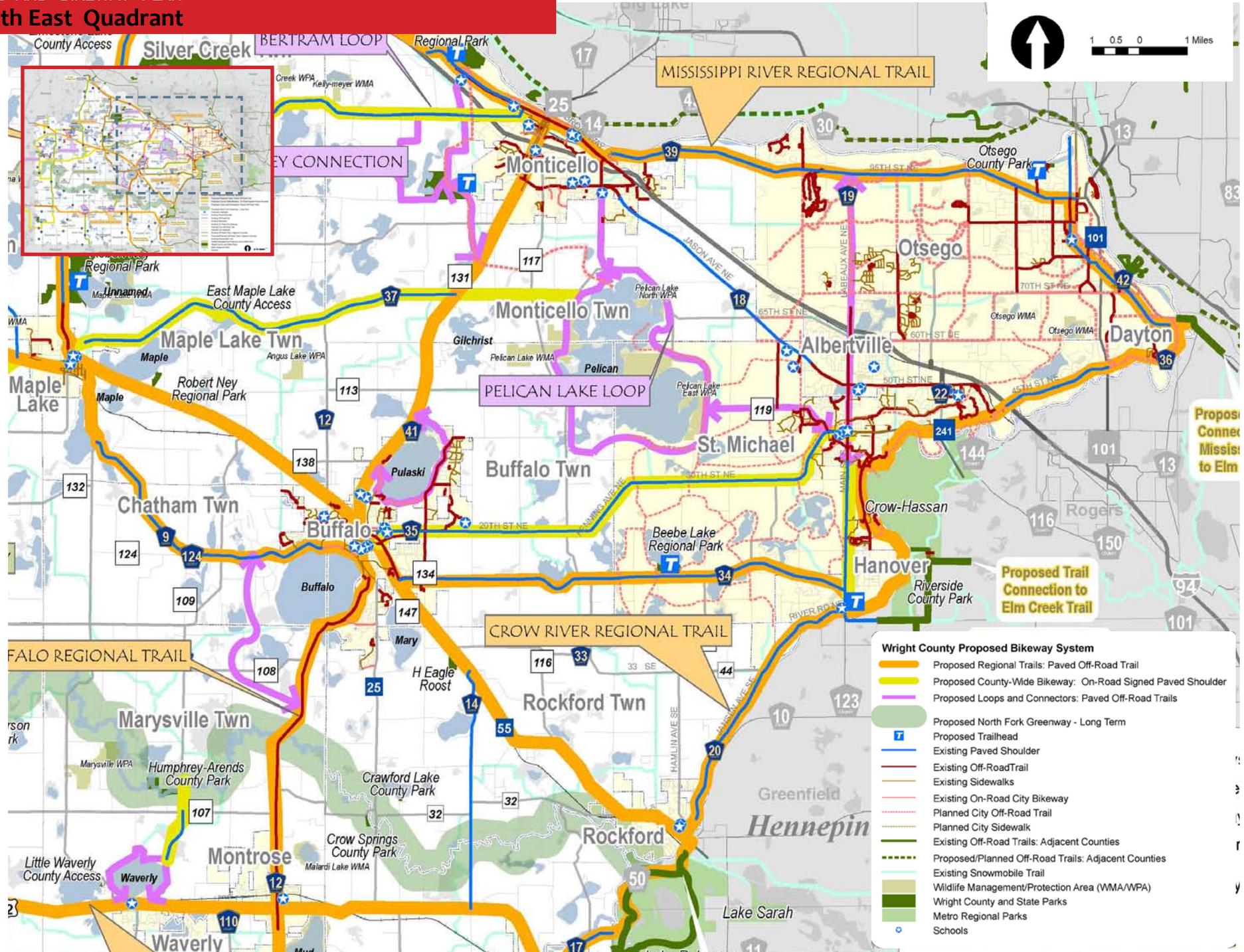


COUNTY WIDE BIKEWAYS

(30)



TRAIL AND BIKEWAY PLAN
North East Quadrant

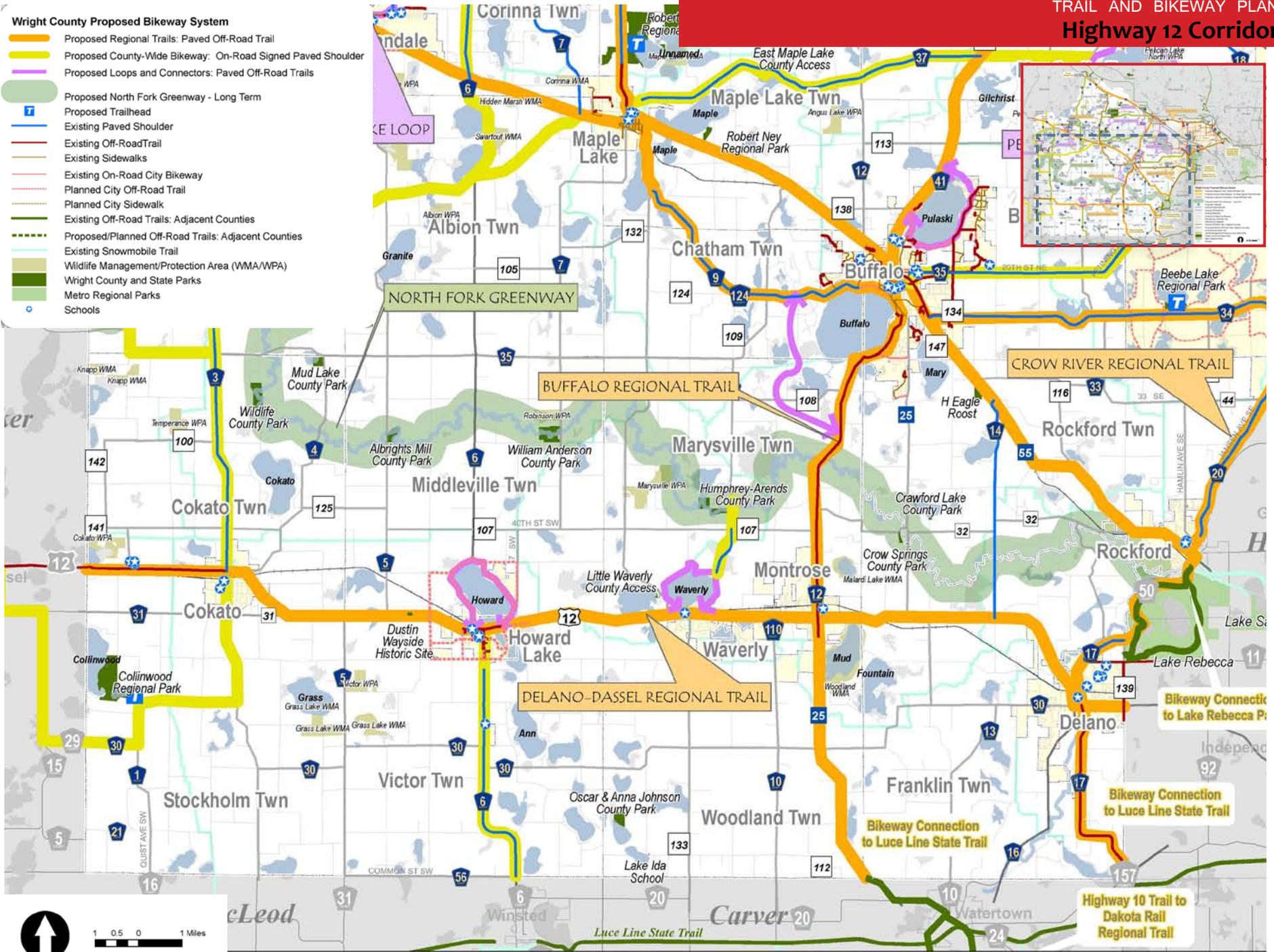


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TRAIL AND BIKEWAY PLAN Highway 12 Corridor

Wright County Proposed Bikeway System

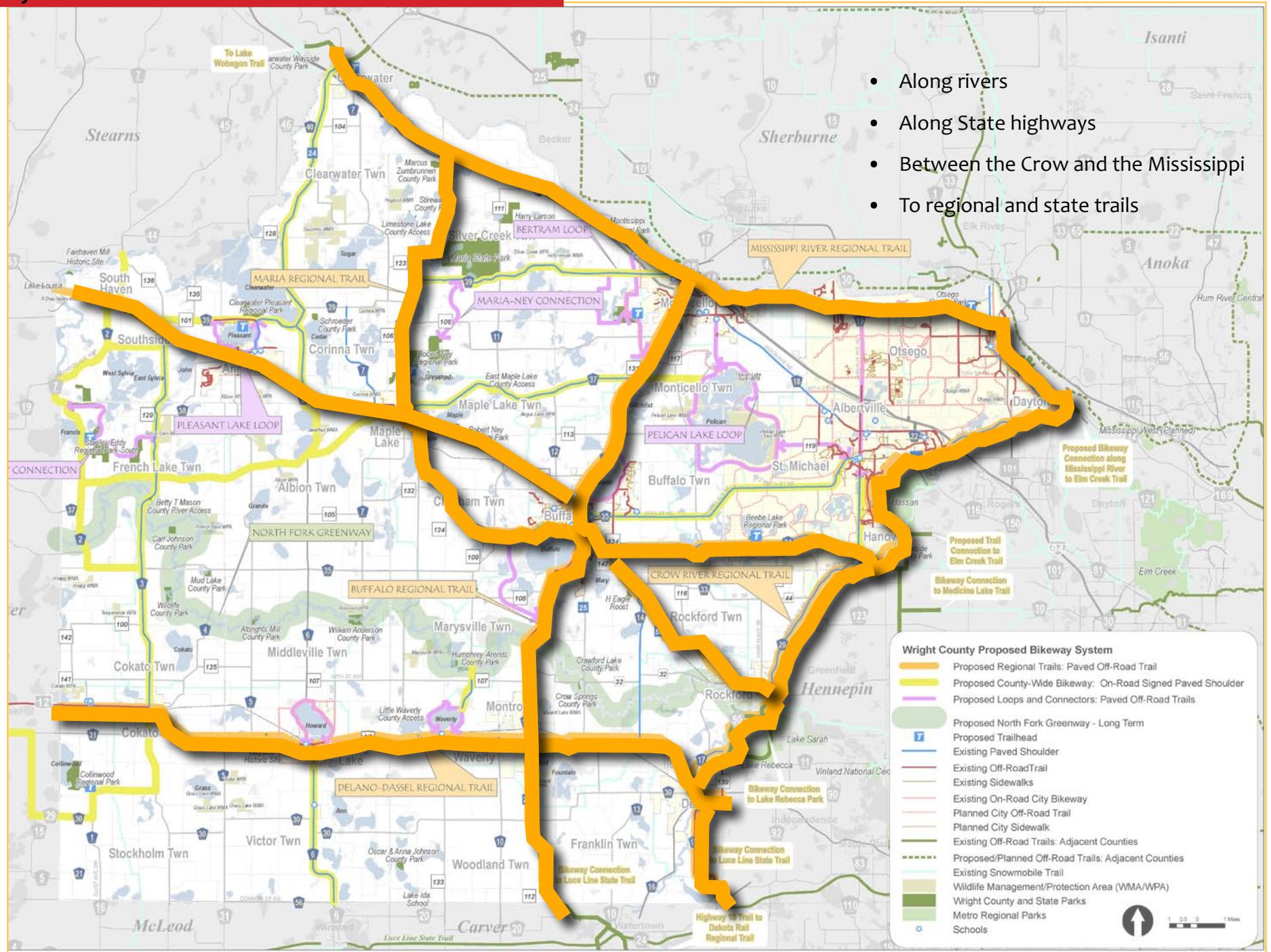
- Proposed Regional Trails: Paved Off-Road Trail
- Proposed County-Wide Bikeway: On-Road Signed Paved Shoulder
- Proposed Loops and Connectors: Paved Off-Road Trails
- Proposed North Fork Greenway - Long Term
- Proposed Trailhead
- Existing Paved Shoulder
- Existing Off-Road Trail
- Existing Sidewalks
- Existing On-Road City Bikeway
- Planned City Off-Road Trail
- Planned City Sidewalk
- Existing Off-Road Trails: Adjacent Counties
- Proposed/Planned Off-Road Trails: Adjacent Counties
- Existing Snowmobile Trail
- Wildlife Management/Protection Area (WMA/WPA)
- Wright County and State Parks
- Metro Regional Parks
- Schools



(33)

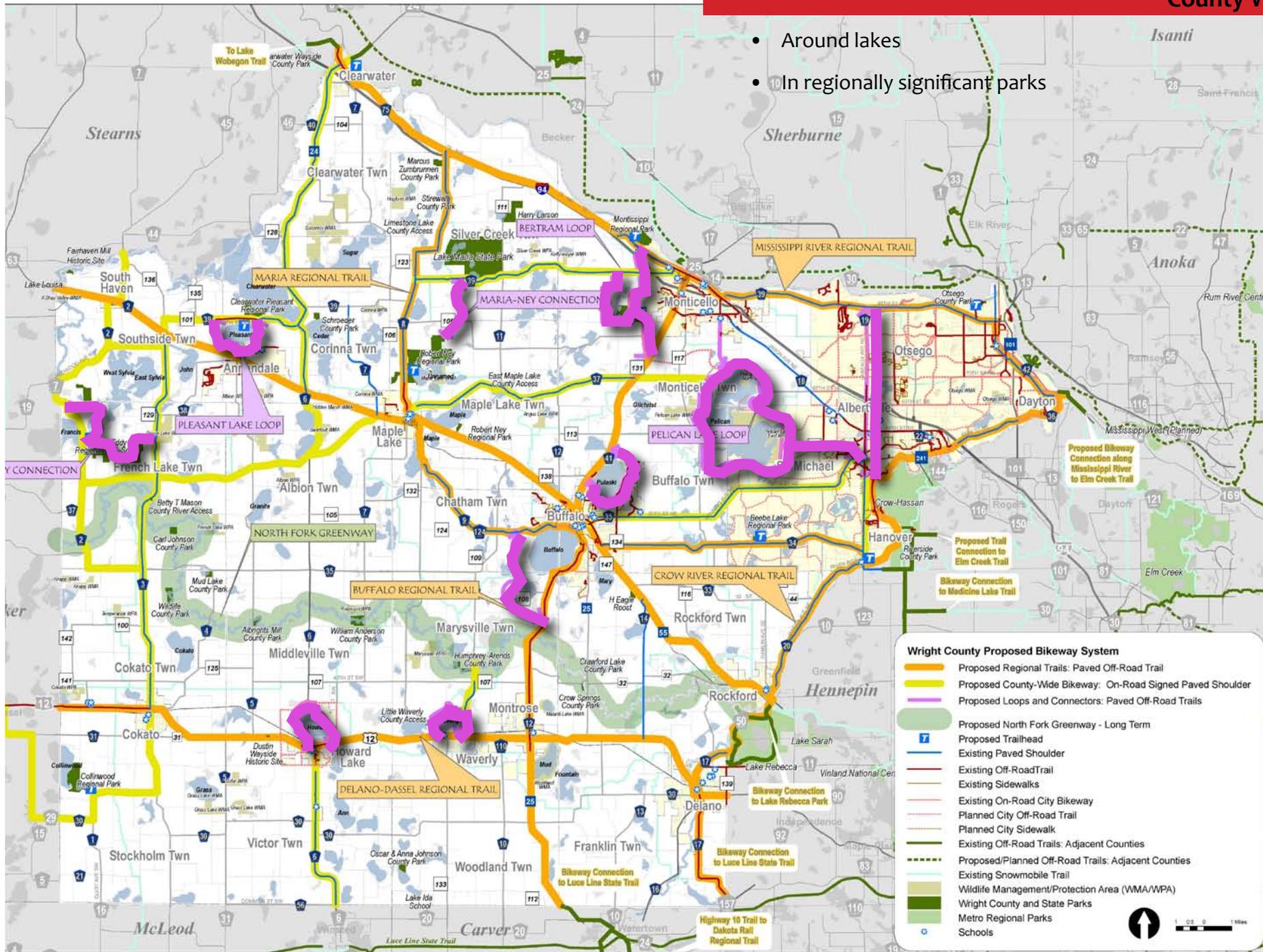
(34)

- Along rivers
- Along State highways
- Between the Crow and the Mississippi
- To regional and state trails



Wright County Trail and Bikeway Plan

- Around lakes
- In regionally significant parks

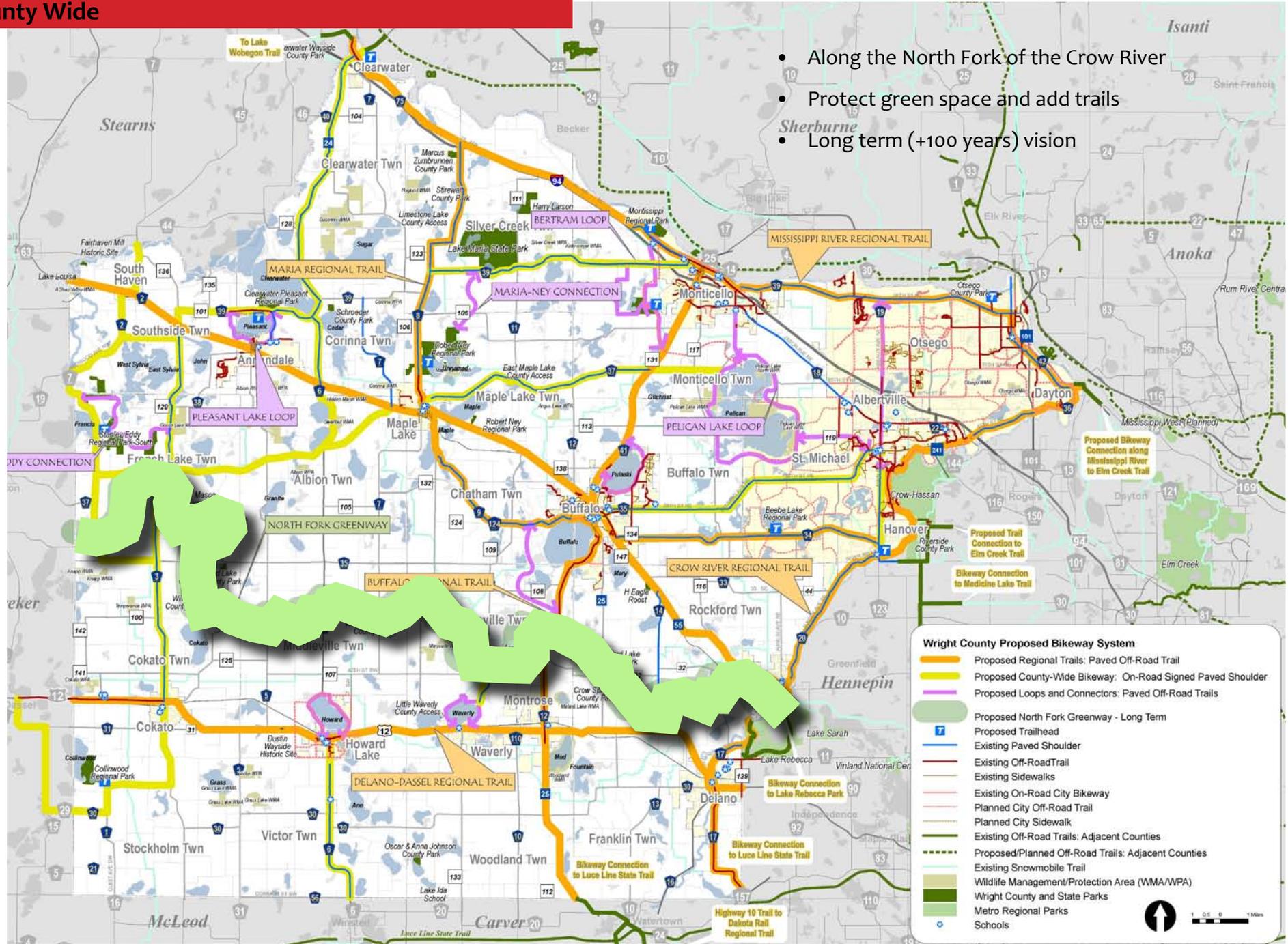


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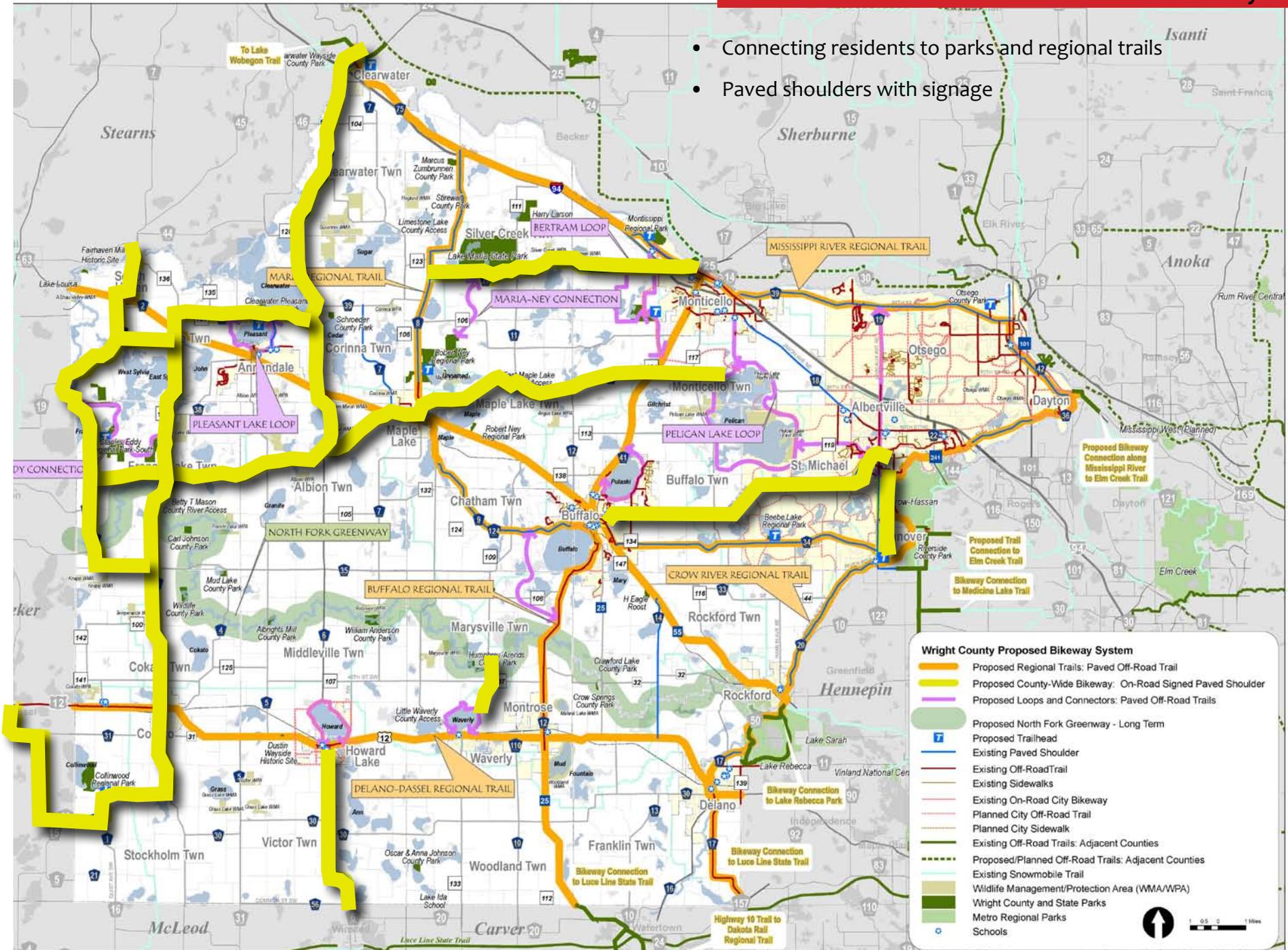
County Wide

- Along the North Fork of the Crow River
- Protect green space and add trails
- Long term (+100 years) vision

(36)



- Connecting residents to parks and regional trails
- Paved shoulders with signage



(37)

Specialty Trails

Mountain Bike Trails - The County understands the unique needs and facilities necessary to ensure a high quality recreational outing for users of these trails. Mountain bike trails will be established on a case by case basis after an evaluation of natural resources, trail potential and possible impacts to a park’s landscape and resources. These trails are best developed within a park boundary. Mountain bike trails should meet IMBA (International Mountain Bike Association) standards for sustainable trails.

Cross Country Ski Trails - The County currently grooms



trails for traditional and skate ski usage. These trails are best developed within a park boundary. Currently the county grooms ski trails in Collinwood, Ney, Stanley Eddy, Harry Larson, and Otsego Park. In addition to cross country ski trails, a short ski-jouring (dogs pulling skiers) trail is offered at Ney and snowshoe trails are offered at Stanley Eddy, Zumbrunnen, and Bill Anderson parks.

Snowmobile Trails - The County will continue to be the Local Government sponsor for the Wright County Snowmobile Association. The County will work closely with the association to determine usage of the county trail system to assist in providing connections and access routes.

Support Facilities

A trail and bikeway network includes elements in addition to trails or bikeway routes. A complete trail and bikeway network includes trailheads, wayfinding signage and trail and bikeway maps which allow people to:

- Be aware of trail/bikeway opportunities – Digital and paper route maps, and route maps at trailheads.
- Access the trails and bikeways – Trailheads with vehicle parking.
- Have basic facilities at trailheads - Bathrooms or portable toilets, access to drinking water, shade, seating/picnic tables and bicycle parking.
- Easily follow the trail and bikeway routes – Route and way-finding signage.
- Ensure safe operations – Traffic control signs, intersection crossings or grade separated crossings.

This Plan envisions trailheads at key locations, providing digital route maps on-line and access to paper maps and route maps at trailheads, wayfinding signage and proper intersection and crossing treatments.

Trailheads

Locate trailheads within City or County parks or at an alternate location within cities or towns. Most developed parks typically have the core components needed for a trailhead – parking, water, bathrooms, shade and seating. Frequently the only addition needed to create a trailhead is the addition of a trail/bikeway route map and signage. Trails use and etiquette signage is also typically displayed at the trailhead. Trailheads within a city or towns can create economic benefits as trail users are more likely to

frequent local shops and restaurants near the trailhead. Proposed County Park trailhead locations are shown on pages 30 - 33.

Proposed County Park Trailheads:

- Bertram Park
- Clearwater Park
- Clearwater Pleasant Lake Park
- Collinwood Park
- Ney Park
- Montissippi Park
- Stanley Eddy Park
- Riverside Park

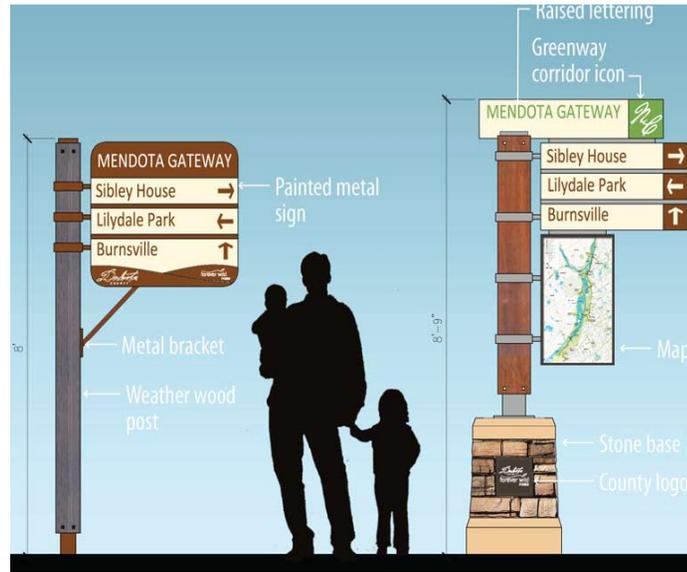
It is likely that City trailheads in parks or downtown areas will also be located in Albertville, Buffalo, Delano, Howard Lake, Monticello, Montrose, Otsego, Rockford, and Waverly.

Trail Maps and Wayfinding Signage

Maps of the County trail and bikeway system are a cost effective means to foster walking, hiking and biking. Trail maps should be readily accessible on the County web site with links on City and township web sites and as printed maps at County offices, in City facilities and at prominent location across the County. The map of existing and planned trails and bikeways should also be displayed at trailheads and at County Parks.

Wayfinding signage is intended to help walkers, hikers, bicyclists, skaters and others easily navigate the trail and bikeway system. Wayfinding signage typically consists of an overall trail and bikeway system map, more detailed map of trails and bikeways in the immediate area or within the park and route marking and directional signs.

Suggested types for the Wright County Wayfinding signage are shown in following table.



Wayfinding

Wayfinding is the way in which people orient themselves and navigate from place to place and is a vital component of an effective bicycle and walkway system. People need to be able to easily understand and navigate bikeways and walkways in order to conveniently and safely get to their destination.

Wayfinding signs for pedestrians and bicyclists typically show destination, direction and distance. Signs are placed where routes change or there is a change of direction and periodically along the route. For cyclists, pavement markings can be easier to see and can be used to supplement signage and alert motorists to the presence of cyclists.

(39)

Wayfinding Examples

(40)

SIGN EXAMPLE	SIGN TYPE	ROLE	PLACEMENT
	Trail Kiosk	Route maps and additional information about destinations such as nearby businesses or history.	At trailheads
	Directional Sign	Identify turns, route destination choices and distance.	Route intersections and decision points along trail and bikeway.
	Route Sign	Identify route name and major destination.	Every 1/2 mile along on-road bike routes and at major intersections.
	Bike lane pavement markings	Identify on-road bike routes, sharrows or climbing lanes in addition to route signs.	Pavement

Intersections and Grade Separated Crossings

It is important to provide safe crossing points where trails cross highways and roadways. The most common crossing method is to have trails and bikeways cross roads at signalized or stop sign controlled intersections. Having trails cross roads at an uncontrolled intersection is generally not recommended. Trail, sidewalk and bikeway approaches and crossings at intersections should meet Mn/DOT standards. Where trails need to cross a high-volume road or highway at a location without an intersection an underpass or overpass may be preferred over an on-grade crossing. Controlled access highways like Interstate 94 are the biggest barrier to trail access to and from the Mississippi River. It may be possible to utilize highway interchanges for trail and bikeway crossings, but traffic levels and turning movements can make interchanges a hostile environment for pedestrian and bicyclists. Non-interchange roads under or over I-94 such as CSAH 8, CR111, CSAH 39, etc. are preferred connections for trails and bikeways.

Education, Awareness and Encouragement

Improvements to the physical environment are most effective if coupled with on-going marketing, promotion and awareness efforts. Walk-bike information should be provided in digital format on the City's website. If people are aware of the amenities already in Wright County, they will use them more. The City should also create and widely distribute walk-bike maps with existing routes, safety information and events.

- Programs and events to generate local enthusiasm and support and can be an important component attracting visitors. Work with city rec/school community eds to of-

fer above in their communities

Ideas for potential programs and activities include:

- Hold walk/bike with the County Commissioner day.
- School and community education classes.
- Classes for bike safety, bike commuting, bike maintenance and bike purchasing.
- Hold weekly/monthly rides through local walk and bike clubs.
- Coordinate events with non-profit groups.
- Hold quarterly bike events. Events could include; National Bike Month, International Walk to School day.
- Hold walk/bike rodeos/carnivals – theme contests, art/costumed bikes, tricycle racing, bike light/pedometer giveaways, bike parade, walking parade, dog walking parade.
- Promote walking and biking to local businesses with a “live local-work local” campaign.



photo credit: www.pedbikgeimages.org dan burden



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WRIGHT COUNTY

Trail and Bikeway Plan

Pathways to Active Living



CHAPTER 5

Design Guidelines



TRAIL AND BIKEWAY STANDARDS

This chapter provides an overview of standards, best practices and recommendations applying to the design, implementation and maintenance of trails and bikeways in Wright County.

Purpose and references; Mn/DOT Design Manual to govern

Materials included in this chapter are meant to provide general guidance and to inform policy decisions relating to the design and maintenance of bicycle facilities in Wright County.

Detailed guidance for design and maintenance shall be in accordance with the most current Minnesota Department of Transportation's Bikeway Facility Design Manual, which is hereby incorporated into this Plan by reference. The complete document may be obtained in hardcopy format from Mn/DOT, and may also be downloaded in its entirety at no cost by visiting this link: <http://www.dot.state.mn.us/bike/pdfs/manual/manual.pdf>

Additional guidance is provided by AASHTO's Guide for the Development of Bicycle Facilities (1999), and supplemented by design and maintenance recommendations obtained from other state and city bicycle plans and manuals.

Trails shall also be designed to meet accessibility regulations and best practices such as the Americans with Disability Act (ADA) and Draft Proposed Right-of-Way Accessibility Guidelines (PROWAG).

Types of bicycle facilities

Facilities intended to safely and legally accommodate bicyclists are identified as "bikeways" and as "bicycle facilities" in this document.

Bicycle facilities can be categorized as either on-road or off-road facilities:

On-road facilities are those where bicycles use a portion of the roadway, with or without specific designation, for their travel. On-road facilities include paved shoulders, bike lanes, wide outside/curb lanes, and shared lanes.

Off-road facilities are those where bicycles travel in facilities which are separated from a roadway. Off-road facilities include sidepaths and shared-use paths.

Choosing the appropriate type of bicycle facility

Choosing the appropriate facility for a given context and set of conditions is a necessary first step for improving a location's orientation to bicycle travel.

The Minnesota Department of Transportation has prepared a set of tables to determine minimum cross-sections for a given setting (urban or rural), number of motor-vehicle travel lanes, ADT, and motor vehicle speed (these tables are found in Chapter 4 of Mn/DOT's Bikeway Facility Design Manual).

FOR A RURAL SECTION:

Design recommendations are based on local conditions. For example, for a rural two-lane road with ADT of 8,700 vehicles and traffic speeds of 55 mph, the minimum recommended width of paved shoulder (noted as “PS” in the chart) is 8 ft. Please note that the dimensions included in the chart are recommended minimums, and that other factors (e.g., percentage of heavy trucks in traffic composition, presence of rumble strips, etc.) may require increasing the dimensions indicated.

Table 4-2: Bikeway Design Selection for Rural (Shoulder and Ditch) Cross Section – English Units							
Motor Vehicle ADT (2 Lane)		<500	500-1,000	1,000-2,000	2,000-5,000	5,000-10,000	>10,000
Motor Vehicle ADT (4 Lane)		N/A	N/A	2,000-4,000	4,000-10,000	10,000-20,000	>20,000
Motor Vehicle Speed	25 mph	PS = 4 ft* or SL	PS = 4 ft* or SL	PS = 4 ft* or WOL	PS = 4 ft*	PS = 4 ft*	Not Applicable
	30 mph	PS = 4 ft* or SL	PS = 4 ft* or WOL	PS = 4 ft*	PS = 4 ft*	PS = 6 ft	PS = 6 ft
	35 - 40 mph	PS = 4 ft* or SL	PS = 4 ft* or WOL	PS = 6 ft	PS = 6 ft	PS = 6 ft	PS = 8 ft
	45 mph and greater	PS = 4 ft*	PS = 4 ft*	PS = 6 ft	PS = 8 ft	PS = 8 ft	SUP or PS= 10 ft

* See discussion in Section 4-3.1 regarding rumble strips on 4-foot shoulders.
 PS = Paved Shoulder, SL = Shared Lane, SUP = Shared-Use Path, WOL = Wide Outside Lane

(45)

Source: Mn/DOT Bicycle Facility Design Manual



(46)

Overview: On-road bicycle facilities

Under Minnesota law, bicycles have the legal right to travel on all roadways except those from which they are explicitly prohibited, like Interstate freeways. Therefore, on-road bicycle facilities already exist on all non-Interstate roads, regardless of whether a specific designation or a preferential space is provided or not.

Specific designation, which allocates roadway space for the preferential use of cyclists through the use of pavement markings and signage, is sometimes provided in order to:

- Improve safety for cyclists and motorists,
- Improve user comfort and convenience,
- Maximize access to bicycle transportation and recreation assets.

Designated on-road facilities (paved shoulders and bike lanes) enable bicyclists to ride at their preferred speed without receiving or causing interference to prevailing

traffic conditions, and facilitate predictable behavior and movements between bicyclists and motorists.

Two principal types of on-road facilities (paved shoulders and bike lanes) are discussed in this section. For additional types, and supplemental design information, please consult Chapter 4 of the Mn/DOT Bikeway Facility Design Manual.

Paved shoulders

The shoulder is the edge or border of a roadway that is contiguous with, and on the same level as, the regularly traveled lanes. Bicycles can be accommodated on paved shoulders of appropriate width. By Minnesota law, bicyclists may use roadway shoulders for their travel, except for the shoulders or travel lanes of the Interstate freeway system and certain other restricted-access expressways. The appropriate width of the shoulder is determined by design speed, ADT, bicyclist needs, and other factors such as traffic composition and interaction with rumble strips described below.

Traffic Composition

The regular presence of heavy vehicles (trucks, buses, and/or recreation vehicles) may decrease safety and comfort for bicyclists unless special design treatments are provided. When the percentage of trucks or other large vehicles is greater than 10 percent or greater than 250 vehicles per peak-hour, a higher level of bikeway accommodation should be used on designated bike routes by increasing the bike facility's width, providing an off-road bikeway (shared-use path) or increasing the separation between the roadway and bikeway. At speeds greater than 45 mph the windblast from large vehicles may create a serious risk for bicyclists.

Many bicyclists will choose a different route or not ride at all where there is a regular presence of large-vehicle traffic unless there is sufficient space is provided.

Interaction with Rumble Strips

Shoulder rumble strips, typically 1 ft wide, are placed on the right shoulder beginning 0.5 ft to 1 ft from the edge of the travel lane. For compatibility with bicycle transportation, rumble strips on the right shoulder should be no wider than 1.33 ft, should be installed within 0.5 ft of the edge of travel lane or fog line, and leave a minimum of 4 ft width of smooth pavement between the outside edge of the rumble strip and the outside edge of the paved shoulder, and a minimum distance of 5 ft from the outside edge of the rumble strip to a guardrail, curb or other obstacle adjacent to the shoulder. All rumble strips should be placed using an intermittent pattern, alternating on and off in 10 ft lengths, to allow movement of bicyclists in and out of the shoulder area. Chapter 4 of the Mn/DOT Road Design Manual offers additional design specifications for rumble strips.





Bike lane

Bike lanes

Bike lanes designate a preferential space for bicyclists through the use of pavement markings and signage. Bike lanes are typically provided in urban settings, and are located adjacent to motor vehicle travel lanes. They flow in the same direction as motor vehicle traffic and are typically on the right side of the road, between the adjacent travel lane and curb, road edge, or parking lane.

Transitions

Designs for intersections with bike lanes should reduce conflicts between bicyclists and vehicles by increasing cyclist visibility and clearly marking the right-of-way. Level of treatment will depend on the numbers of cyclists, vehicle traffic volumes, speed, and complexity of the intersection. Chapter 4, Section 4.4 of the Mn/Dot Bikeway Facility Design Manual and the National Association of City Transportation Officials (NACTO) Urban Bicycle Design Guide (<http://nacto.org/cities-for-cycling/design-guide>) offer design specifications and guidelines for intersections. Potential intersection treatments include:

- Through bike lanes - help bicyclists position themselves at intersections to correctly position themselves to avoid conflicts with turning vehicles.
- Bike box- a designated area at the head of a traffic lane at a signalized intersection that provides bicyclists with a safe and visible way to get ahead of queuing traffic during the red signal phase
- Intersection crossing markings - pavement markings through intersections indicate the intended path of bicyclists through an intersection or across a driveway or ramp.
- Two stage turn que boxes - offer bicyclists a safe way make left turns at multi-lane signalized intersections from a right side bike lane.

- Median refuge Islands -protected spaces placed in the center of the street to facilitate bicycle and pedestrian crossings.
- Combined bike lane/turn lane -denotes a suggested bike lane within the inside portion of a dedicated motor vehicle turn lane.



Two stage turn que box



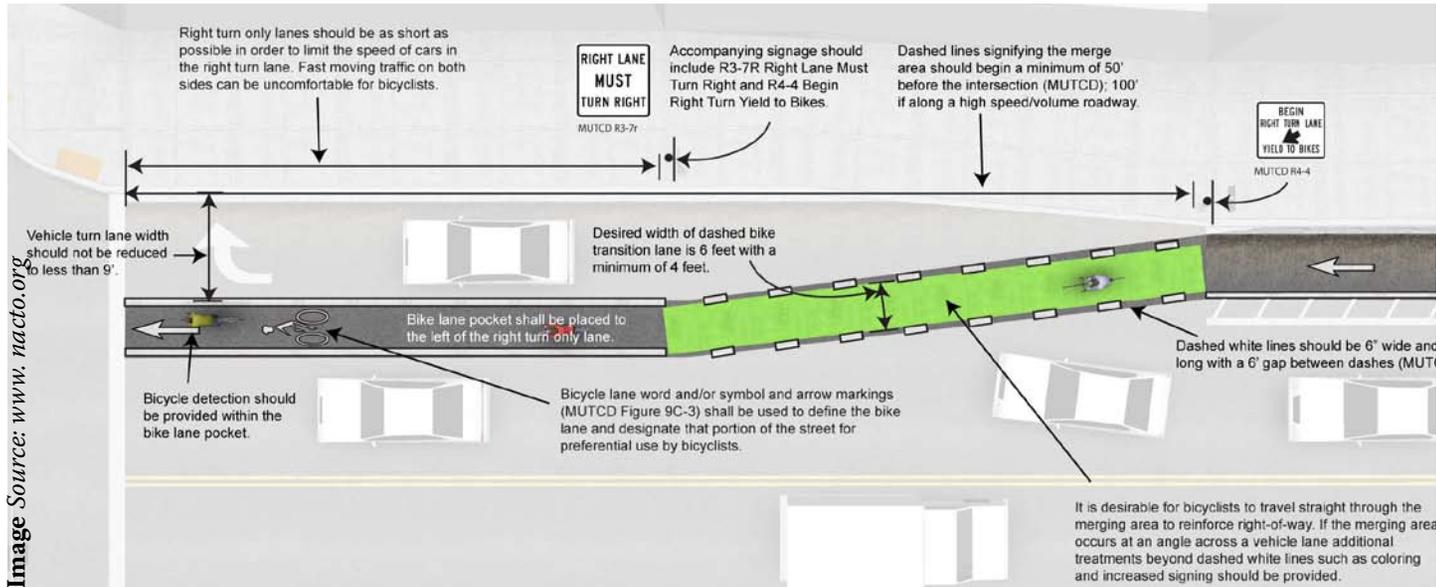
Median refuge island



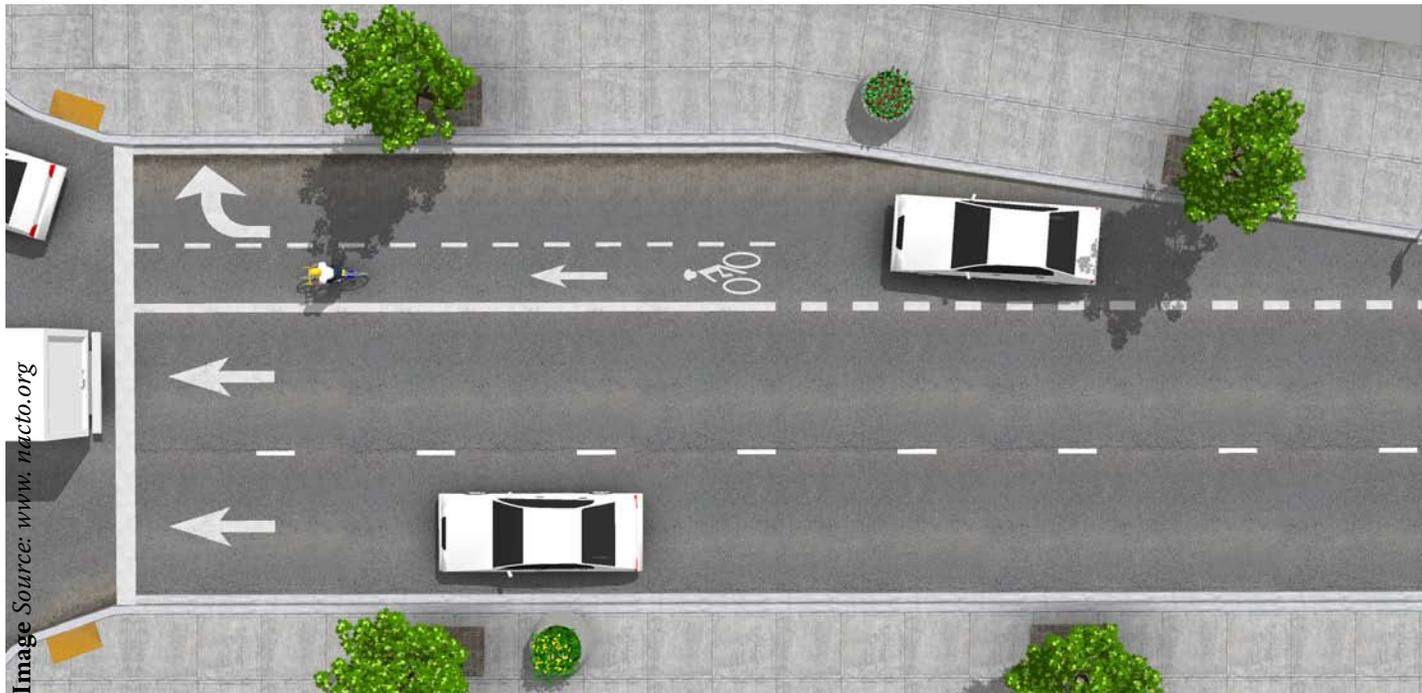
Bike Box



Intersection crossing markings

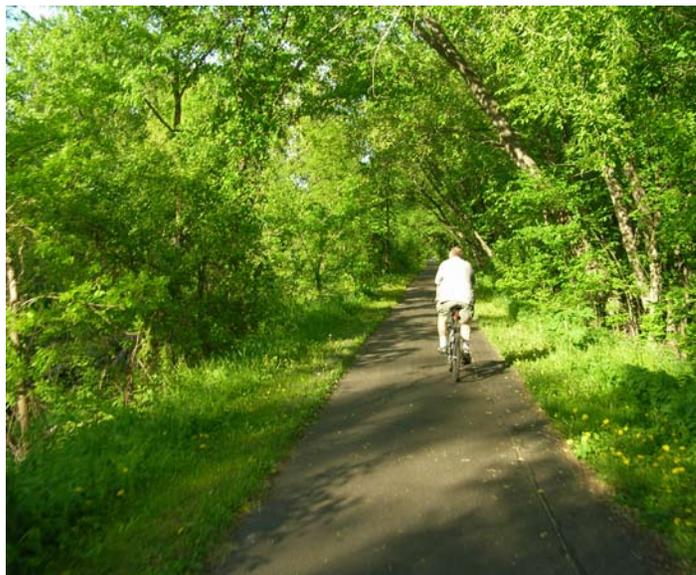


Through Bike Lane



Combined Bike Lane/ Turn Lane





Because shared-use paths are off-road facilities where users are separated from motor-vehicle traffic, they greatly increase a user’s perception of safety in comparison to similar on-road facilities, and typically generate significant increases in bicycle use and other non-motorized use.

Because shared-use paths are designed independently of motor-vehicle roadways, various geometric design considerations (horizontal curvature, sight distance, design speed, grades) should be included in their planning. Please consult Chapter 5 of the Mn/DOT Bikeway Facility Design Manual for additional details and design guidance, including intersections.

Separation Between Shared-Use Paths and Roadways

A minimum separation between a shared-use path and a motor-vehicle roadway is required in order to minimize discomfort and potential safety issues to cyclists and other users of the shared-used path.

A traffic barrier may be desirable for bicyclist safety if the distance between the edge of the roadway and the shared-use path is less than indicated in the adjacent table (for sections with no curb). The type of traffic barrier that is appropriate will depend primarily upon motor vehicle speed. Where a concrete traffic barrier is adjacent to a shared-use path, provide clearance or extra pavement width of 1 ft (minimum) to 3 ft (desirable). For guard-rail supported on posts, 3 ft or greater clearance from the edge of the shared-use path pavement is recommended because of the greater risk of injury to a bicyclist striking a post. Railings on bridges must meet Mn/DOT design guidelines.

(50)

(English)	
Speed Limit - mph	Separation (b)
40 mph or less	20 ft (desirable) 10 ft (minimum)
45 mph or greater	24 ft - 35 ft
Freeway	50 ft (minimum)

Recommended path separation from roadway with no curb

Source: Mn/DOT Bicycle Facility Design Manual

Overview: Shared-use paths

Shared-use paths (sometimes also called bike trails) are off-road bicycle facilities that are separated from motor vehicle traffic by an open space or by a barrier, either within the roadway right-of-way or within an independent right-of-way. Recreational trails, waterfront greenways, and sidepaths and sidewalks are all examples of shared-use paths.

Shared-use paths are so named in recognition that the roadway space they provide is typically shared by pedestrians, joggers, skaters and bicyclists.

Shared-use paths are a valuable element of bicycle networks and extend a jurisdiction’s roadway system to accommodate bicycle travel for transportation and recreational use. They also expand access to destinations not otherwise available to bicyclists on the street and roadway system.

Shared-Use Paths adjacent to Roadways

When two-way shared use paths are located immediately adjacent to a roadway, some operational problems are likely to occur. In some cases, paths along highways for short sections are necessary (for instance, to join a roadway in order to cross a stream along a bridge), and can be provided if given an appropriate means of separation between facilities (concrete barrier or similar). If this separation is not provided, significant liability issues are created as the facility would be requiring one direction of bicycle traffic to ride against motor vehicle traffic, contrary to normal rules of the road, and against Minnesota Law (M.S.169.222 Subd. 4. (3b)) and Mn/DOT and AASHTO design guidance.

Factors affecting the usability and use of bicycle facilities

Many factors affect the usefulness and usability of a system of bicycle facilities. Some of these factors are facility-related, and have to do with the type, location and connectivity of the facilities that are provided. Other factors are most related to the experiences and perceptions of the system's users, including their perceptions of safety and the comfort (or lack of comfort) they experience when they make use of these facilities.

Facility-Related Factors

Facility-related factors include:

- Number of existing routes, and connections between them;
- Proximity and access to key destinations;
- Existence of biking and walking barriers; and
- Access to natural resource amenities (like lakes, rivers and streams).

User Safety and User Comfort-Related Factors

User safety and user comfort-related factors must be taken into account if an infrastructure investment is to be successful in attracting a greater number of bicyclists.

Bicyclists are vulnerable users of our transportation system. Unlike motor-vehicle occupants, cyclists are not protected by 2,000+ lbs of steel crumple zones, supplemental restraint systems, or other advanced collision mitigation features. They are also, unlike motor-vehicle occupants, in intimate awareness and immediate contact with their surrounding environment - noise, wind, road texture, vibration, and surrounding traffic.

What this means is two things:

A. That infrastructure decisions that do not properly address the need for safe and adequate facilities for cyclists (and that result in poorly designed facilities, or in no facilities being provided where a need exists) increase the probability that cyclist injuries and fatalities will occur, and

B. That factors such as proximity to motor vehicle traffic, traffic speed, and overall quality of accommodations will greatly influence cyclists' sense of safety, and will directly affect the rate of utilization of the facilities provided.

Part of improving conditions for cyclists in Wright County includes addressing cyclists' safety and sense of safety as part of the decision-making process for guiding infrastructure investments.



Bikeway liability concerns

Policy makers and design professionals are sometimes hesitant to designate specific routes in a jurisdiction's transportation network as "bicycle routes" or "bikeways" due to concerns about increasing their jurisdiction's exposure to potential liability claims for potential crashes and injuries sustained by cyclists using those facilities. This concern is not supported by legal precedent, and is counterproductive as it may in fact lead to increased liability risk for the jurisdiction.

Under Minnesota Statute 169.222, cyclists "have all of the rights and duties applicable to the driver of any other vehicle," and have the right to use roadways and the roadway shoulders for their travel.

Among the rights enjoyed by "drivers of any other vehicle" (including by drivers of automobiles), is the right to travel on roadways designed for the specific characteristics of their vehicles, free of dangerous conditions which may lead to crashes, maintained to a reasonable standard of care, and designed according to accepted guidelines and standards.

A jurisdiction that does not designate any specific components of its roadway network as "bicycle facilities" is not freed from its obligation to provide adequate facilities, or to maintain them to a reasonable standard of care. What it does is miss an opportunity to select the most apt components of a system (those with wider shoulders, lower traffic volumes, etc.) and "channel" cyclists to these facilities where they will have safer opportunities for travel and lower probabilities for crashes and other incidents.

WRIGHT COUNTY

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CHAPTER 6

Maintenance





GENERAL MAINTENANCE PRACTICES AND RECOMMENDATIONS

Maintenance of facilities and lands are essential to protect public investment, enhance natural resource qualities, and achieve the County's goals of providing recreational and transportation users clean, safe, enjoyable year round experiences. Regular maintenance activities for trails and bikeways includes mowing, sign maintenance, trash collection, sweeping, trail repair, bridge repair, trailhead facility (restrooms, parking lot, picnic shelter) repair and maintenance, tree trimming, natural resource management, and winter plowing.

General Maintenance Considerations

This chapter provides an overview of maintenance recommendations for trails and bikeways in Wright County. For additional guidance and information please consult Chapter 9 (Maintenance) of the Minnesota Department of Transportation Bikeway Facility Design Manual, which is incorporated into this Plan by reference.

Maintenance budget

Preventive maintenance reduces hazards and future repair costs. Maintenance costs and responsibility for maintenance should be assigned when projects are planned and budgets developed; typical annual maintenance costs range from 3 to 5 percent of infrastructure replacement costs - for example, a \$100,000 facility should include a \$5,000 annual maintenance budget. Life-cycle cost analysis is recommended to determine the net value of using longer-lasting higher quality materials during construction if they reduce yearly maintenance expenditures.

Management plans

A management plan is a tool to identify maintenance needs and responsible parties. A management plan that includes the maintenance component for a proposed facility should be in place before construction. Additionally, a management plan should include a means for users of the system to report maintenance and related issues and to promptly address them.

A facility's management plans answers basic operational and staffing questions such as: How frequently are preventive maintenance tasks performed? Who fills potholes? Who removes downed or dangerous trees? Responds to vandalism and trespassing? Removes litter? Replaces stolen or damaged signs?

User-initiated maintenance requests

The users of Wright County's trail and bikeway network will likely be the first parties to notice hazards, maintenance issues, or opportunities to bring improvement to the system. Establishing a formal mechanism by phone and e-mail/County website for receiving requests for maintenance can help avert deterioration of the County's infrastructure investments while reinforcing citizen-ownership of and providing effective management for Wright County's facility assets.

Routine maintenance

Snow and ice removal

Snow removal is a critical component of trail and bikeway safety on non-ski and non-snowmobile trails. Winter walking, running and hiking on plowed trails is an increasing popular activity and many people ride bicycles throughout the winter. The County should determine which off-road trails should be priorities for snow removal. Designated on-road bike route shoulders should be plowed when the road lanes are plowed.

Sweeping

Loose sand and debris on the surface of designated bicycle lanes, paved shoulders, and paved sections of shared use paths should be removed at least once a year, normally in the spring. Sand and debris will tend to accumulate on bicycle lanes because automobile traffic will sweep these materials from the automobile portions of the roadway. This is especially true for bicycle lanes that are located directly adjacent to a curb, where debris collects already.

Surface repairs

A smooth surface, free of potholes and other major surface irregularities, should be provided and maintained on off-road trails and on-road bikeways. Care should be taken to eliminate other physical problems.

Resurfacing / pavement overlays

Street resurfacing projects provide ideal opportunities to greatly improve conditions for cyclists and pedestrians. Items to consider on resurfacing projects that will help improve conditions for bicyclists and pedestrians include:

- Gravel driveways should be paved back 5 to 10 feet from the edge of pavement or right-of-way to prevent gravel from spilling onto the trail, shoulders or bike lanes.
- Using chip seals to surface or resurface shoulders should be avoided, as they will render the shoulder area unusable to most bicyclists.
- Avoid leaving a ridge in the paved shoulder. If possible, the overlay should be extended over the entire surface of the roadway and shoulder to avoid leaving an abrupt edge.

Many overlay projects offer a chance to widen the roadway for greater shoulder space, or to re-stripe the roadway with bike lanes or to add an off-road trail. The County should review each paving project and add the appropriate trails or bikeway facilities to the roadways identified in this Plan.

Signs and pavement markings

Signs and pavement markings are important features of bikeways and roadways, and help ensure continued safe and convenient use of these facilities. It is critical that bikeway signs, striping, and legends be kept in a readable condition. Some recommendations to address these infrastructure elements include:

- Regular inspection of bikeway signs and legends, including an inventory of signs to account for missing or damaged signs.
- Replacement of defective or obsolete signs as soon as possible.
- Regular inspection of striping, and prompt reapplication as needed.
- Durable cold plastic should be used for skip-striping bike lanes across right turn lanes.

Vegetation

Vegetation encroaching into and under the trail or bike-way can create a nuisance and a hazard for users. The management of vegetation is generally considered the responsibility of maintenance staff. To provide long-term control of vegetation, the management of vegetation should be considered during design and construction. Vegetation management helps to maintain smooth pavement surface, as well as clear zones, sightlines, and sight corners to promote trail and bikeway safety.

Pavement Management

Pavement deteriorates as it ages. Regular pavement maintenance can prolong the life-span of the trails in a cost effective manner. Below is an outline of recommended activities.

Bikeway Liability and Maintenance

By not having any designated bikeways in the County as of 2010, the County's liability for maintenance of roads and roadway shoulders for bicycle use is spread across the entire County roadway system. In the past there has been a concern that designation of bikeway routes heightens maintenance liability. Designating a core system of bikeways and mapping/signing those routes as per this plan can allow the County to focus its maintenance on those roadways and correspondingly lessening its liability to those designated routes. Designating a bikeway route system also allows the County to choose their best existing facilities (those with wider shoulders, lower traffic volumes, etc.) and channel cyclists to these safer locations.

YEAR	MAINTENANCE ACTIVITY
0	Original construction of the paved trail
3	Seal coating
7	Routine maintenance – crack filling, minor patching, minor curb repairs
11	Routine maintenance – crack filling, minor patching, minor curb repairs
13	Seal coating
16	Routine maintenance – crack filling, minor patching, minor curb repairs
20	Total reconstruction

WRIGHT COUNTY

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CHAPTER 7

Implementation Plan



IMPLEMENTATION PLAN

This section is the strategic plan for trail and bikeway development, funding, operations and promotion.

Priorities and Action Plan

The recommended initial priorities and action are based on input from County residents, County staff and officials.

1. Adopt the Trail and Bikeway Plan as part of the County Transportation Plan and as a feature of the County parks and trail system. *Adopted July 19th, 2011.*
2. Allocate capital improvement funding, as appropriate, for trails and bikeways as part of the County CIP (Capital Improvement Plan) budget.
3. Seek grants for trail and bikeway projects.
4. Add paved loop trails in regionally significant County parks.
5. Focus on adding off road trails (and/or on-road bike-ways as temporary measures) along the Mississippi River and Crow River Regional Trail routes identified in this Plan.
6. Working with local partners, create loop trail routes as identified in this Plan.
7. Add/update planning, transportation, zoning and subdivision policies and regulations as needed to implement trail, bikeway and greenway easement/right of way acquisition at the time of land development/subdivision.
8. Add/expand paved shoulders in conjunction with road reconstruction on County State Aid Highways and County Roads with + 1,000 average daily vehicle traffic.
9. Improve connections to nearby regional trails such as the Luce Line and Three Rivers trails/parks.
10. Work on the greenway on the North Fork of the Crow River.

Funding and Grant Opportunities

The quality of a county's trail and bikeway system is a reflection of the community's ability to strategically leverage existing internal and external resources. Similar to roads, a long-term funding strategy that is updated annually is needed to design, build and maintain the pedestrian and bicycle system. Creating a multi-year funding strategy can be useful in identifying when funding should be solicited so it is available at the anticipated time for a project's implementation. As most grant awards are made more than four months after the date of application, it is too late to seek funding if one is already in the construction year or must be actively conducting engineering for it. For example, if the County is envisioning a trail improvement project that is tied to a road reconstruction, then one would want to apply for grant funding a year in advance of the construction commencing to have the funds in place in time. Most grant programs will not allow costs expended prior to the grant award to be considered for either reimbursement or part of the needed match.

Selecting appropriate trail and bikeway projects for each funding source is one of the factors that contribute to a success in securing non-county funding. In linking projects to funding consideration should be given not only to the types of projects the funder seeks, but being aware of the maximum grant award, amount of match required, and preferred project size. For example, one grant may seek to fund trails as part of a park experience getting people connected to nature rather than trails that connect people from place to place. That same grant may have a maximum grant award of \$200,000 with a 50% match. Since many funders are concerned if there is a significant gap in funding that the County must contribute, it would be more appropriate to select a project with a cost ranging

from \$400,000 to \$500,000 than one costing \$1 million if no other funds are available. However, if the County is able to secure other funding to reduce the gap, then the \$1 million may be an appropriate fit for the grant.

When exploring funding sources it is also important to consider grant program requirements. Some grants, particularly ones with federal funds, have specific design or reporting requirements that can raise project costs or add extra administrative costs. Care should be taken in selecting projects where the extra design requirements are not an issue or the extra reporting requirements are reasonable because of the large piece of funding the grant program provides. For example, in considering an application for a state grant with federal funds, it may make more sense to submit a grant for a \$1 million overpass than a \$300,000 trail project.

Another key to success in securing non-county funding for trail systems is developing a persuasive statement of need that fits the characteristics of the funding program. For some funders, the project should address a significant safety issue such as getting children across a busy road to school. For others, it is about connecting those users to shopping, or employment. Demonstrating the public need for the project is one of the most important components of any grant application. Where possible, this need should be demonstrated through letters of support and community partnerships.

Appendix B contains a summary and resource links for potential trail and bikeway funding and grant sources.

Measuring Progress

It will take Wright County decades to create the comprehensive and connected network of trails and bikeways envisioned in this Plan. Indeed, it is likely to take even longer to create amenities such as the North Fork Greenway. Like the County highway system, the trail and bikeway network will be built as discrete projects forming a connected network. It takes the commitment of County officials, staff, the public and partners to realize this vision. A key is to be thinking and acting to continuously create positive bike and walk connections and experiences when the opportunities arise. Actions now and over time will create an important legacy and amenities for countless generations to come.

While available resources will vary over time, some reasonable accomplishment to create progress in implementing this Plan and building a trail and bikeway network between 2011 and 2015 are:

- Allocate capital improvement funding for trails and bikeways as part of the 2012 through 2016 County CIP (Capital Improvement Plan) budget.
- Add paved loop trails in two regionally significant County parks.
- Add two miles of paved trail per year on average focusing on the Regional Trail routes identified in the Plan.
- Add two miles of striped and signed bikeways per year on average focusing on the County-Wide Bikeway and Loop routes identified in this Plan.

- In 2011-12 add/update planning, transportation, zoning and subdivision policies and regulations as needed to implement trail, bikeway and greenway easement/right of way acquisition upon land development/subdivision.
- Create a trail and bikeway advocacy group to assist with grants, promotion and advocacy of trail and bikeway projects in the County.

WRIGHT COUNTY

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APPENDIX A

Wright County Trail and Bikeway Questionnaire and Results



Wright County Trail and Bikeway Questionnaire and Results

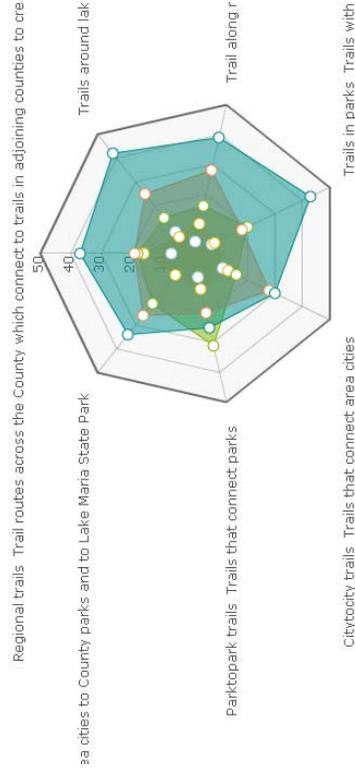
SHARE THIS REPORT:  

Survey Report : Wright County Trail and Bikeway Plan

	Viewed	Started	Completed	Completion Rate	Drop Outs (After Starting)	Average Time to Complete
	418	205	138	67.32%	67	11 minutes

Overall Matrix Scorecard : Trail and Bikeway Route Options(Please check the box indicating your priority for € option below)

Question	Count	Score	1 - Low priority	2	3	4	5 - High priority
1. Regional trails - Trail routes across the County which connect to trails in adjoining counties to create a regional network	142	3,620	<input type="checkbox"/>				
2. City-to-park trails - Trails connecting area cities to County parks and to Lake Maria State Park	142	3,676	<input type="checkbox"/>				
3. Park-to-park trails - Trails that connect parks	139	3,424	<input type="checkbox"/>				
4. City-to-city trails - Trails that connect area cities	142	3,535	<input type="checkbox"/>				
5. Trails in parks - Trails within County park lands	139	3,820	<input type="checkbox"/>				
6. Trail along rivers - Linear trails along rivers or creeks	141	3,872	<input type="checkbox"/>				
7. Trails around lakes - Loop trails around lakes	144	3,840	<input type="checkbox"/>				
Average		3,684					



Regional trails - Trail routes across the County which connect to trails in adjoining counties to create a regional network

Answer	Count	Percent	20%	40%	60%	80%
1. 1 - Low priority	11	7.75%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	24	16.90%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	26	18.31%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	28	19.72%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. 5 - High priority	53	37.32%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total	142	100%				
Mean : 3,620		Confidence Interval @ 95% : [3,399 - 3,840]	Standard Deviation : 1,341		Standard Error : 0:	

City-to-park trails - Trails connecting area cities to County parks and to Lake Maria State Park

Answer	Count	Percent	20%	40%	60%	80%
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1. 1 - Low priority	13	9.15%	
2. 2	13	9.15%	
3. 3	30	21.13%	
4. 4	37	26.06%	
5. 5 - High priority	49	34.51%	
Total	142	100%	
Mean : 3.676		Confidence Interval @ 95% : [3.465 - 3.888]	Standard Deviation : 1.286
			Standard Error : 0.1

Park-to-park trails - Trails that connect parks

Answer	Count	Percent	20%	40%	60%	80%
1. 1 - Low priority	12	8.63%				
2. 2	18	12.95%				
3. 3	44	31.65%				
4. 4	29	20.86%				
5. 5 - High priority	36	25.90%				
Total	139	100%				
Mean : 3.424		Confidence Interval @ 95% : [3.217 - 3.631]	Standard Deviation : 1.245			
					Standard Error : 0.1	

City-to-city trails - Trails that connect area cities

Answer	Count	Percent	20%	40%	60%	80%
1. 1 - Low priority	16	11.27%				
2. 2	19	13.38%				
3. 3	23	16.20%				
4. 4	41	28.87%				
5. 5 - High priority	43	30.28%				
Total	142	100%				
Mean : 3.535		Confidence Interval @ 95% : [3.314 - 3.757]	Standard Deviation : 1.346			
					Standard Error : 0.1	

Trails in parks - Trails within County park lands

Answer	Count	Percent	20%	40%	60%	80%
1. 1 - Low priority	11	7.91%				
2. 2	12	8.63%				
3. 3	29	20.86%				
4. 4	26	18.71%				
5. 5 - High priority	61	43.88%				
Total	139	100%				
Mean : 3.520		Confidence Interval @ 95% : [3.304 - 4.036]	Standard Deviation : 1.298			
					Standard Error : 0.1	

Trail along rivers - Linear trails along rivers or creeks

Answer	Count	Percent	20%	40%	60%	80%
1. 1 - Low priority	7	4.96%				
2. 2	15	10.64%				
3. 3	23	16.31%				
4. 4	40	28.37%				
5. 5 - High priority	56	39.72%				
Total	141	100%				
Mean : 3.672		Confidence Interval @ 95% : [3.675 - 4.069]	Standard Deviation : 1.194			
					Standard Error : 0.1	

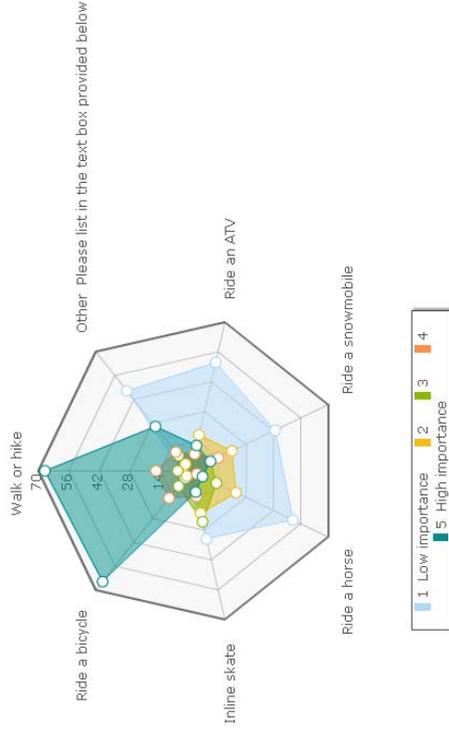
Trails around lakes - Loop trails around lakes

Answer	Count	Percent	20%	40%	60%	80%

1. 1 - Low priority	13	9.03%				
2. 2	11	7.64%				
3. 3	23	15.97%				
4. 4	36	25.00%				
5. 5 - High priority	61	42.36%				
Total	144	100%				
Mean : 3.840		Confidence Interval @ 95% : [3.628 - 4.052]		Standard Deviation : 1.299		Standard Error : 0.1

Overall Matrix Scorecard : Trail and Bikeway Activities(Please check the box indicating how important the following activities are for the future Wright County trail and bikeway system)

Question	Count	Score	1 - Low importance	2	3	4	5 - High
1. Walk or hike	143	4.399					
2. Ride a bicycle	143	4.336					
3. In-line skate	139	2.468					
4. Ride a horse	138	1.877					
5. Ride a snowmobile	140	2.271					
6. Ride an ATV	137	2.124					
7. Other - Please list in the text box provided below	42	2.643					
Average		2.874					



Walk or hike

Answer	Count	Percent	20%	40%	60%	80%
1. 1 - Low importance	6	4.20%				
2. 2	6	4.20%				
3. 3	10	6.98%				
4. 4	24	16.76%				
5. 5 - High importance	97	67.83%				
Total	143	100%				
Mean : 4.399		Confidence Interval @ 95% : [4.223 - 4.574]		Standard Deviation : 1.069		Standard Error : 0.1

Ride a bicycle

Answer	Count	Percent	20%	40%	60%	80%
1. 1 - Low importance	7	4.90%				
2. 2	5	3.50%				
3. 3	14	9.79%				
4. 4	24	16.76%				
5. 5 - High importance	93	65.03%				

Total		143	100%		
Mean :	4.336	Confidence Interval @ 95% : [4.154 - 4.517]		Standard Deviation :	1.107
				Standard Error :	0.1

In-line skate

Answer	Count	Percent	20%	40%	60%	80%	
1. 1 - Low importance	45	32.37%					
2. 2	29	20.86%					
3. 3	34	24.46%					
4. 4	17	12.23%					
5. 5 - High importance	14	10.07%					
Total	139	100%					
Mean :	2.468	Confidence Interval @ 95% : [2.247 - 2.688]		Standard Deviation :	1.326	Standard Error :	0.1

Ride a horse

Answer	Count	Percent	20%	40%	60%	80%	
1. 1 - Low importance	73	52.90%					
2. 2	32	23.19%					
3. 3	19	13.77%					
4. 4	5	3.62%					
5. 5 - High importance	9	6.52%					
Total	138	100%					
Mean :	1.877	Confidence Interval @ 95% : [1.680 - 2.074]		Standard Deviation :	1.180	Standard Error :	0.1

Ride a snowmobile

Answer	Count	Percent	20%	40%	60%	80%	
1. 1 - Low importance	61	43.57%					
2. 2	30	21.43%					
3. 3	14	10.00%					
4. 4	20	14.29%					
5. 5 - High importance	15	10.71%					
Total	140	100%					
Mean :	2.271	Confidence Interval @ 95% : [2.036 - 2.506]		Standard Deviation :	1.418	Standard Error :	0.1

Ride an ATV

Answer	Count	Percent	20%	40%	60%	80%	
1. 1 - Low importance	71	51.82%					
2. 2	24	17.52%					
3. 3	13	9.49%					
4. 4	12	8.76%					
5. 5 - High importance	17	12.41%					
Total	137	100%					
Mean :	2.124	Confidence Interval @ 95% : [1.883 - 2.366]		Standard Deviation :	1.442	Standard Error :	0.1

Other - Please list in the text box provided below:

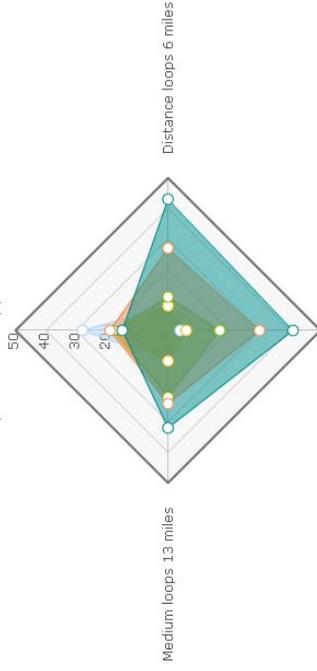
Answer	Count	Percent	20%	40%	60%	80%
1. 1 - Low importance	20	47.62%				
2. 2	2	4.76%				
3. 3	4	9.52%				
4. 4	5	11.90%				
5. 5 - High importance	11	26.19%				

Total	42	100%		
Mean : 2.643	Confidence Interval @ 95% : [2.113 - 3.172]	Standard Deviation : 1.761	Standard Error : 0.1	

Overall Matrix Scorecard : Trail and Bikeway Distances(Please check the box indicating your preferences for various distance options for future trail and bikeway routes in Wright County)

Question	Count	Score	1 - Low preference	2	3	4	5 - High
1. Short loops within county parks (under 1 mile)	138	2,754	<input type="checkbox"/>				
2. Medium loops (1-3 miles)	139	3,583	<input type="checkbox"/>				
3. Long loops (3-6 miles)	140	3,979	<input type="checkbox"/>				
4. Distance loops (6+ miles)	143	3,895	<input type="checkbox"/>				
Average		3,563					

Short loops within county parks under 1 mile



Long loops 36 miles

Short loops within county parks (under 1 mile)

Answer	Count	Percent	20%	40%	60%	80%
1. 1 - Low preference	39	28.26%	<input type="checkbox"/>			
2. 2	25	18.12%	<input type="checkbox"/>			
3. 3	26	18.84%	<input type="checkbox"/>			
4. 4	27	19.57%	<input type="checkbox"/>			
5. 5 - High preference	21	15.22%	<input type="checkbox"/>			
Total	138	100%				
Mean : 2.754	Confidence Interval @ 95% : [2.514 - 2.994]	Standard Deviation : 1.439	Standard Error : 0.1			

Medium loops (1-3 miles)

Answer	Count	Percent	20%	40%	60%	80%
1. 1 - Low preference	14	10.07%	<input type="checkbox"/>			
2. 2	15	10.79%	<input type="checkbox"/>			
3. 3	31	22.30%	<input type="checkbox"/>			
4. 4	34	24.46%	<input type="checkbox"/>			
5. 5 - High preference	45	32.37%	<input type="checkbox"/>			
Total	139	100%				
Mean : 3.583	Confidence Interval @ 95% : [3.365 - 3.801]	Standard Deviation : 1.313	Standard Error : 0.1			

Long loops (3-6 miles)

Answer	Count	Percent	20%	40%	60%	80%
			<input type="checkbox"/>			

1.	1 - Low preference	6	4.29%	
2.	2	9	6.43%	
3.	3	25	17.86%	
4.	4	42	30.00%	
5.	5 - High preference	58	41.43%	
Total		140	100%	
Mean : 3.979		Confidence Interval @ 95% : [3.794 - 4.163]		Standard Deviation : 1.115
				Standard Error : 0.1

Distance loops (6+ miles)

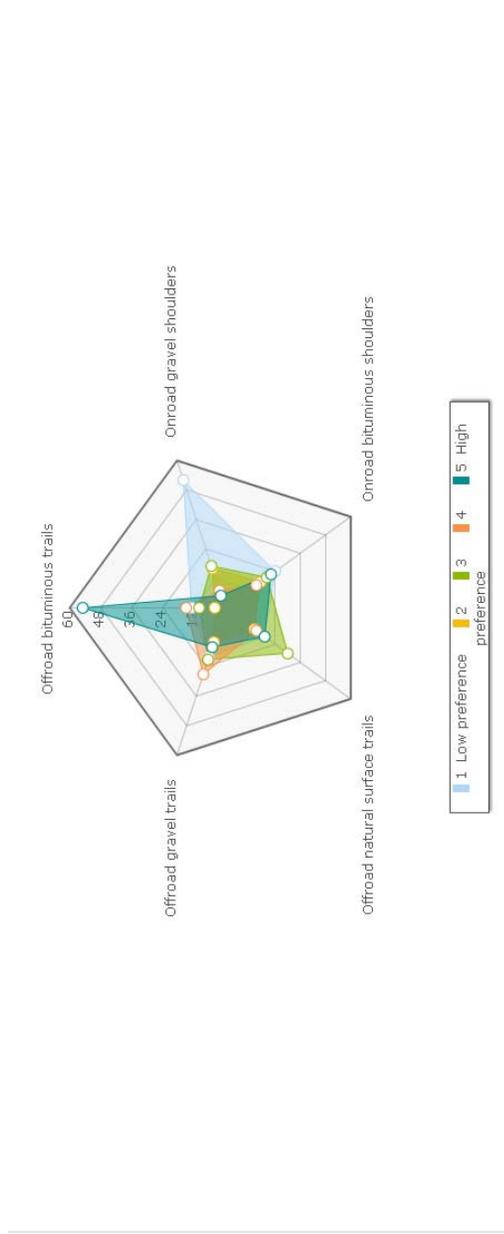
Answer	Count	Percent	20%	40%	60%	80%
1. 1 - Low preference	12	8.39%				
2. 2	12	8.39%				
3. 3	17	11.89%				
4. 4	40	27.97%				
5. 5 - High preference	62	43.36%				
Total	143	100%				
Mean : 3.895		Confidence Interval @ 95% : [3.685 - 4.105]		Standard Deviation : 1.282	Standard Error : 0.1	

Trail and Bikeway Use How do you plan to use future Wright County trails and bikeways? *(Please check all that apply)*

Answer	Count	Percent	20%	40%	60%	80%
1. For recreation	135	36.00%				
2. For commuting or errands	41	10.93%				
3. As an individual or with other adults	102	27.20%				
4. With children or a family group	93	24.80%				
5. Not likely to use County trails	4	1.07%				
Total	375	100%				
Mean : 2.440		Confidence Interval @ 95% : [2.315 - 2.565]		Standard Deviation : 1.237	Standard Error : 0.1	

Overall Matrix Scorecard : Trail and Bikeway Surface OptionsPlease indicate your preferred surfaces for future County trails and bikeways by checking a box on the scale of 1 to 5 (1 being a low preference and 5 being a high preference)

Question	Count	Score	1 - Low preference	2	3	4	5 - High preference
1. Off-road bituminous trails	138	3.971					
2. Off-road gravel trails	137	3.036					
3. Off-road natural surface trails	134	3.007					
4. On-road bituminous shoulders	135	2.956					
5. On-road gravel shoulders	134	1.970					
Average		2.988					



Off-road bituminous trails

Answer	Count	Percent	20%	40%	60%	80%
1. 1 - Low preference	18	13.04%				
2. 2	6	4.35%				
3. 3	15	10.87%				
4. 4	22	15.94%				
5. 5 - High preference	77	55.80%				
Total	138	100%				
Mean : 3.971	Confidence Interval @ 95% : [3.733 - 4.209]		Standard Deviation : 1.424		Standard Error : 0.117	

Off-road gravel trails

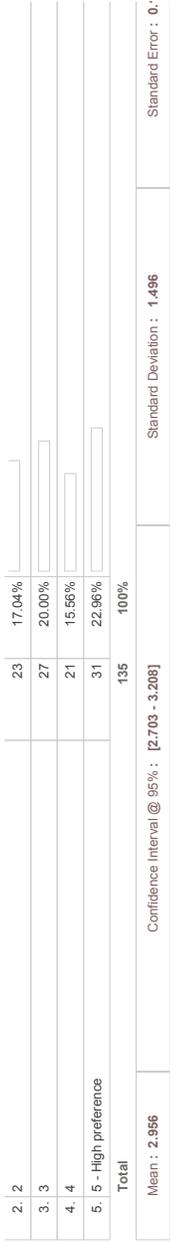
Answer	Count	Percent	20%	40%	60%	80%
1. 1 - Low preference	28	20.44%				
2. 2	20	14.60%				
3. 3	30	21.90%				
4. 4	37	27.01%				
5. 5 - High preference	22	16.06%				
Total	137	100%				
Mean : 3.036	Confidence Interval @ 95% : [2.806 - 3.267]		Standard Deviation : 1.374		Standard Error : 0.117	

Off-road natural surface trails

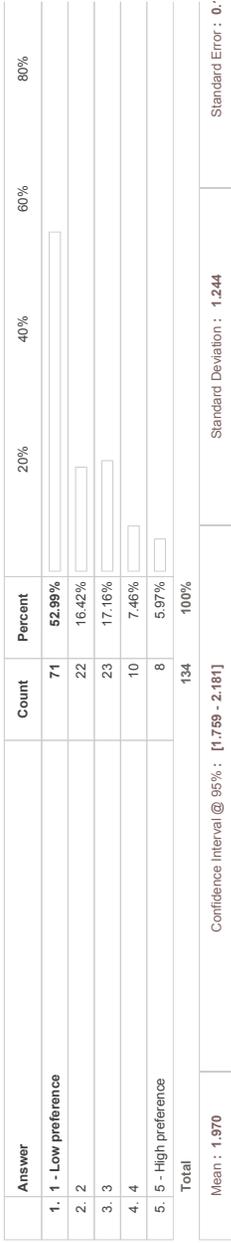
Answer	Count	Percent	20%	40%	60%	80%
1. 1 - Low preference	26	19.40%				
2. 2	20	14.93%				
3. 3	41	30.60%				
4. 4	21	15.67%				
5. 5 - High preference	26	19.40%				
Total	134	100%				
Mean : 3.007	Confidence Interval @ 95% : [2.776 - 3.239]		Standard Deviation : 1.368		Standard Error : 0.117	

On-road bituminous shoulders

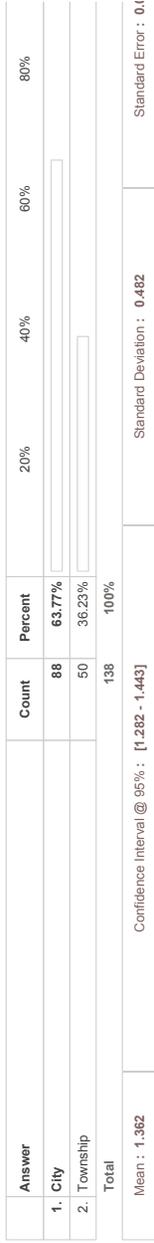
Answer	Count	Percent	20%	40%	60%	80%
1. 1 - Low preference	33	24.44%				



On-road gravel shoulders



Your location within the County Please indicate if you live either in a: *(For business respondents indicate the location of your business within the County)*



WSPRICE BY

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Wright County Trail and Bikeway Plan

WRIGHT COUNTY

Trail and Bikeway Plan

Pathways to Active Living



APPENDIX B

Potential Funding and Grant Sources



Potential Funding and Grant Sources

The following are funding and grant sources that Wright County can use to construct trails and bikeways.

General Funds

General funds can and should be used to develop the trail and bicycle system. These funds are best used for smaller projects such as completing trail gaps that may not be eligible for grants. General funds are the primary funding source for on-going trail and bikeway maintenance costs such as striping, seal coating, mowing, snowplowing and street/trail sweeping.

Capital Improvement Funds

Trail and bikeway projects should be part of Wright County's Capital Improvement Project fund (CIP) just like road and highway improvements. A general rule of thumb is that walking and biking accounts for 5-10% of trips so transportation funding for trails and bikeways should roughly follow that proportion. The transportation role and funding for trails should be in addition to and complement the recreation role of trails and bikeways.

State Aid Funds

State aid funds are available for pedestrian and bicycle improvements on County State aid highway. This funding source is particularly useful at the time of street construction or re-construction.

Trails and bikeways built along with development

Developers can be required to provide trails, bikeways and sidewalks at the time of development. This requirement can be negotiated during the site review process or formalized through the County's land use, subdivision and zoning code.

Park and trail dedication

Minnesota Statutes allow local governments to require dedication of land or cash in-lieu of land for parks and trails from new subdivisions. The dedication must be reasonable and rationally related to the recreation demand created by the development. Cities and counties can also require dedication of right-of-way or easements for bikeways or trails. Park and trail dedication is a frequently used tool to help pay for recreation facilities. Some cities, such as Chanhassen, MN, have adopted a separate trail fee or dedication requirement.

Partnerships

Partnerships with both public and private organizations are an essential component to achieve individual projects outlined in the plan. Organizations with partner funding can also provide assistance with design, outreach and maintenance. Local trail clubs can be recruited to help maintain trails. Partnerships and relationships with private businesses can also result in easements and use agreements for trails across private land. Cities and townships are the primary government partner for Wright County. The County should participate in cooperative partnerships for provisions of trails, trailheads and bikeways.

Donations

Private donations are another potential funding source. These may be financial donations from individuals or area corporations or donations of labor from recreation clubs or use agreements or trail easements from landowners. Programs such as "adopt-a-trail" by an organization, business, or individuals have successfully been used in many communities to help with maintenance tasks and raise awareness.

Grants

Grants are a way to make the County's dollars go further. Below is a sample of some grant opportunities that may be available along with websites to visit for more information.

Minnesota DNR

Website: www.dnr.state.mn.us/grants/index.html

The Minnesota DNR is one of the most comprehensive resources when it comes to state funding for trail programs. They offer a variety of grant programs and technical assistance. Current programs provide assistance for cross country skiing trails, all-terrain vehicle trails, snowmobile trails, mountain biking trails, horseback riding trails and recreational trails. Some programs also offer assistance for the development of parks or for trail amenities such as restrooms, lightning, benches, etc. It is important to note that none of the current programs covers sidewalk construction. Any program with the word "Legacy" in its title is funded through the Clean Water, Land and Legacy Amendment.

Each of the Minnesota DNR grant programs is unique. While many have an annual application window in the first quarter, some are available more frequently and others only once every few years. The DNR should be consulted before pursuing a grant to clarify funding availability and qualifications.

Minnesota DOT

Website: <http://www.dot.state.mn.us/grants/>

Most trail or sidewalk improvement projects funded through Minnesota DOT also have a portion which is federal dollars. Since June 9, 1998 we have seen three federal bills (TEA-21, ISTEA & SAFETEA-LU) enacted to fund the bulk of our transportation improvements. The current program in place today, SAFETEA-LU expired on September 30, 2009. The reauthorization of this bill will

likely occur in some form and fashion and will fund transportation improvements across the United States for the next six years. Examples of programs typically funding trail or sidewalk improvement projects include Transportation Enhancements or Safe Routes to Schools. While the essence of these bills has primarily supported roadway and safety improvements, roadway projects that have integrated trails have fared better than others during the solicitation process. The County should begin collaborating with other roadway jurisdictions to prioritize projects for the next round of federal transportation dollars. Building early support across multiple jurisdictions will better position the County in obtaining federal dollars.

State Health Improvement Project (SHIP)

The State Health Improvement Program (SHIP) provides funds to reduce the burden of chronic diseases through increasing physical activity, improving nutrition, and reducing tobacco use. The current SHIP program will be ending June 30, 2011 unless the State of Minnesota extends it. These funds are administered by the Wright County Public Health Department. Local units of government including cities and the County have access to them through participation in Live Wright, the County Active Living group. Grant requests associated with increasing physical activity are most closely related to this funding source and must focus on policy (laws or regulations), system (organizations or institutions operation) or environmental (land use, zoning or community design) changes. Examples of related projects funded through SHIP include pedestrian/bike master plans, wayfinding signs, bike racks, and trail master plans, as well as Safe Routes to School (SRTS) comprehensive plans for local schools and funds for events to promote walking and biking to school.

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Clean Water, Land and Legacy Amendment

On Nov. 4 2008, Minnesota voters approved the Clean Water, Land and Legacy Amendment to the Minnesota State Constitution which increased the general sales and use tax rate by three-eighths of one percentage point (0.375%) to 6.875% and dedicated the additional proceeds as follows:

14.25% to a newly created Parks and Trails Fund to support parks and trails of regional or statewide significance.

33% to a newly created Outdoor Heritage Fund to be spent only to restore, protect, and enhance wetlands, prairies, forests and habitat for game, fish and wildlife.

33% to a newly-created Clean Water Fund to be spent only to protect, enhance, and restore water quality in lakes, rivers, streams and groundwater, with at least 5% of the fund spent to protect drinking water sources.

19.75% to a newly created Arts and Cultural Heritage Fund to be spent only for arts, arts education, and arts access, and to preserve Minnesota's history and cultural heritage.

Funding from the Legacy Amendment is administered by a variety of agencies such as the Department of Natural Resources, Pollution Control Agency, Department of Health, Historical Society, and regional art councils. A number of new grant programs were created, including the Parks and Trail Legacy Grant Programs, Solar Energy Legacy Grant Program, Lessard-Sams Conservation Partners Legacy Program and Minnesota Historical and Cultural Grants. Information about grant opportunities can be found on individual state department and organization websites.

NPS Rivers, Trails, and Conservation Assistance Program

Website: www.nps.gov/ncrc/programs/rtca/

The National Parks Service's (NPS) "Rivers, Trails and Conservation Assistance Program" (RTCA) is designed to provide communities technical assistance to conserve rivers, preserve open space, and develop trails and greenways. The RTCA program also implements the natural resource conservation and outdoor recreation mission of the National Park Service in communities across America. The NPS highly encourages communities to contact them before submitting an application for assistance.

Recovery and Reinvestment Act

Website: www.recovery.gov

The Recovery and Reinvestment Act was signed on February 17, 2009 and infused our government with a number of new grants and technical assistance programs. These programs and others are a great opportunity for local governments to fulfill the funding gaps they've seen with the economic downturn. These funding sources have a small window of opportunity and require quick action. These opportunities are focused heavily on energy efficiencies and job growth, but trail projects may also be eligible.

Safe Routes To School

website: www.dot.state.mn.us/safe_routes/

The Safe Routes to School (SRTS) program was created in Section 1404 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users Act (SAFETEA-LU). The legislation was signed into law on August 10, 2005 providing State DOTs with five federal fiscal years (FY2005-FY2009) of funding for the SRTS program. In 2010 a Continuing Resolution provided more funds for the program.

The Safe Routes to School program provides communi-

ties with the opportunity to improve the built environment and promote bicycling and walking to school with infrastructure and non-infrastructure projects.

Legislative Citizen Commission on Minnesota Resources (LCCMR)

Website: www.lccmr.leg.mn/

The LCCMR provides funding for special environment and natural resource projects, primarily from the Environment and Natural Resources Trust Fund. Since 1963, over \$650 million has been appropriated to more than 1,650 projects recommended by the Commission to protect and enhance Minnesota's environment and natural resources. LCCMR grants are funded by proceeds from the Minnesota State Lottery. The LCCMR funds projects and programs in the following categories: Agriculture and Forestry, Children's Environmental Health, Critical Lands and Fish/Wildlife Habitat Protection, Environmental Education/Outreach, Natural Resource Information and Planning, Parks, Trails, and Natural Areas, Renewable Energy and Water Resources.

Foundations & Non-Profits

There are foundations and non-profits throughout the State and country that are interested in fulfilling their missions by supporting local projects. Identifying these sources can be an overwhelming task. There are a number of on-line tools that can assist with this process. The Minnesota Council of Foundations is a great starting point for identifying local foundations. Another good starting point is to consider the businesses within your community and using their websites to see if they have a foundation or charitable giving department. In addition to retailers and manufacturers, be sure to consider businesses such as the railroad, energy providers and communications companies.

Before pursuing a foundation, it is important to recognize that each one operates differently. An applicant should be cognizant of the foundation's mission and be sure the proposed project aligns with the foundation's priorities. It is important to contact a foundation early on in the solicitation process to clarify whether a project would be considered.

It is also important to recognize that most funders do not want to be the sole source of funding for a project. Rather they want to see that community members, businesses and organization are actively supporting the project and have committed some of their own funds, however small.

A funding strategy for an individual trail project would be to engage the community and foster some small amounts of financial support and then start writing funding requests to foundations and non-profits.

One challenge for local governments in pursuing foundation and non-profit funding is that many require the applicant to be non-profit with federal 501(c) designation. Opportunities to partner with local non-profits should be considered and relationships built so these partnerships are ready when there is a funding opportunity to pursue.

Starting a new nonprofit, such as a "Friends of Wright County Parks and Trails" may be an option. However, starting a nonprofit is neither easy nor quick. The Minnesota Council on Foundations provides a 15 step process on their website, www.mncn.org, that includes steps such as determining the organization's mission, recruiting board members, adopting articles of incorporation and bylaws and state and federal filings and registrations.

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Wright County Trail and Bikeway Plan

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APPENDICES C

C. Rules of the Road for Minnesota Cyclists



(A-18)



Wright County Trail and Bikeway Plan

Rules of the Road for Minnesota Cyclists

This is a summary of Minnesota laws describing cyclists' rights and responsibilities (from M.S. 169.222, and M.S. 169.18). Sharing this information as part of education campaigns for children, seniors and other adults will help improve safety on Wright County's roads and trails.

1. Ride on the right with traffic; obey all traffic signs and signals; bicyclists have all the rights and duties of any other vehicle driver. (subd. 1)
2. Legal lights and reflectors are required at night. (subd. 6a)
3. Arm signals required during last 100' prior to turning (unless arm is needed for control) and while stopped waiting to turn. (subd. 8)
4. Cyclists may ride two abreast on roadways as long as it does not impede normal and reasonable movement of traffic. (subd. 4c)
5. When passing a bicycle or pedestrian, motor vehicles shall leave at least 3 feet clearance until safely past the bicycle or pedestrian (169.18 subd. 3)
6. Ride as close as practicable to the right hand curb or edge of roadway except;
 - a) When overtaking a vehicle
 - b) When preparing for a left turn
 - c) When necessary to avoid conditions that make it unsafe, e.g. fixed or moving objects, such as hazards, or narrow-width lanes. (subd. 4a)

7. Yield to pedestrians on sidewalks and in crosswalks; give audible signal when necessary before overtaking. (subd. 4d)
8. Riding on sidewalks within business districts is prohibited unless locally permitted. (subd. 4d)
9. It is illegal to hitch rides on other vehicles. (subd. 3)
10. Only one person on a bike unless it's equipped for more, or a legal baby seat is used. (subd. 2)
11. It is illegal to carry anything that prevents keeping one hand on handlebars or proper operation of brakes. (subd. 6)
12. Bicycle size must allow safe operation. Also, handlebars must not be above shoulder level. (subd. 6c & 6d)
13. Unless locally restricted, parking on the sidewalk is legal as long as it does not impede normal movement of pedestrian or other traffic. (subd. 9a)
14. Legal parking on a roadway, that does not obstruct legally parked motor vehicles, is allowed. (subd. 9b)

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