PATHWAY TO WELLNESS

FOREST COUNTY POTAWATOMI COMMUNITY

BICYCLE & PEDESTRIAN PLAN

WISDOT ID #1009-44-21

September 1, 2021







FCP Executive Building
Crandon, WI



Good Heart Playground
Carter, WI



FCP Community Center
Crandon, WI

FOREST COUNTY POTAWATOMI
Keeper of the Fire

KL Engineering
[A] Better Experience

NCWRPC



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Forest County Potawatomi Community Members

Forest County Potawatomi Land Use Committee Members

Forest County Potawatomi Staff Members

Forest County Staff

Town of Lincoln Staff

Town of Blackwell Staff

KL Engineering, Inc.

Wisconsin Department of Transportation

Thank you –

North Central Wisconsin Regional Planning Commission

EXECUTIVE SUMMARY

With assistance from a WisDOT planning grant, the Forest County Potawatomi Community (FCPC) was able to develop a comprehensive bicycle and pedestrian plan to enhance the viability of bicycling and walking as forms of transportation throughout the Forest County Potawatomi Community. The planning project occurred from October 2019 and continued into the Summer of 2021 with a significant delay resulting from the COVID-19 pandemic. The process included data analysis, conceptual planning, public outreach, development of a preferred routing, and detailed cost estimating.

The plan makes the case for walking and biking, and its demographic analysis indicates that the FCPC is growing. An extensive catalog of existing plans is reviewed for impacts on the FCPC including federal, state, county, local, and tribal documents. Roadway conditions are evaluated through a number of factors including suitability for bicycling, traffic counts, and crash data. Various facility type design and improvement guidelines are presented to help decision makers apply suitable treatments as conditions change. A recommended pathway system is laid out with facility cost estimates. Other non-infrastructure recommendations are provided to help establish policies and programs to support bicycling and walking.

Outreach for the development of the plan included 2 web-based community surveys, focus group sessions, a virtual public involvement meeting, and non-digital interactive kiosks. Much of the outreach plan had to be reconfigured due to the pandemic. The virtual public involvement meeting came out of the pandemic as an alternative to in person meetings. Approximately 145 people accessed the virtual public involvement meeting,

Generally, Tribal members who responded to the outreach were supportive of adding bicycle and pedestrian pathways throughout each of the areas of Stone Lake, Blackwell, and Carter, as well as linking each of the communities to Crandon.

With the adoption of this bicycle and pedestrian plan on September 1, 2021, next steps include working to establish Phase 1 of the Pathway to Wellness along US Highway 8 as the backbone for the overall bicycle and pedestrian system for the Forest County Potawatomi. Community. Then comes targeting future grant requests to build out other sections of the system and having discussions with potential partners.



Example of existing bike/ped accommodations in the City of Crandon for FCPC to create a link to.

CHAPTER 1: INTRODUCTION

Biking and walking are both important modes of transportation, whether used separately or in concert with other modes of transportation. In towns and rural communities, active transportation can be even more common than it is in urban areas, according to the Federal Highway Administration publication, Small Town and Rural Multimodal Networks (2016).

Since 1991, the federal government has recognized the role of walking and biking and their importance as part of a balanced transportation system, specifically as mentioned in the Inter-modal Surface Transportation Efficiency Act (ISTEA).

In 2018, the Forest County Potawatomi Community (FCPC) received a Transportation Alternatives Programs (TAP) grant from WisDOT for the purposes of developing plans to improve biking and walking conditions throughout the FCPC (**see Figure 1**). The grant project had 2 components: 1) creation of a design feasibility study for a "Pathway to Wellness" – an off-road shared use trail along US Highway 8 linking the FCPC main area of Stone Lake to the City of Crandon, and 2) development of a comprehensive bicycle and pedestrian plan for the greater Community, which is geographically spread out with 3 primary nodes: Stone Lake, Blackwell, and Carter. KL Engineering was contracted to complete the feasibility study and the North Central Wisconsin Regional Planning Commission (NCWRPC) was brought in to do the bike / ped plan in conjunction with KL Engineering.

Figure 1

FCPC Locational Reference



PROJECT PURPOSE

The purpose of the Forest County Potawatomi Community (FCPC) Bicycle and Pedestrian Plan project is to enhance the viability of bicycling and walking as forms of transportation throughout the FCPC. This plan recommends policies, programs, and facility treatments to improve the safety, convenience, and attractiveness of bicycling and walking. The plan also examines existing conditions for biking and walking and suggests routes and segments on which to prioritize bicycling and walking improvements.

This project also recognizes the importance of providing accommodations for everyone in the community regardless of their physical capabilities. Americans with Disabilities Act or ADA compliance is key to ensuring a safe and reliable system for all. In addition, the rich cultural history of the FCPC presents both an obligation and an opportunity. The obligation in developing and implementing this plan is to ensure protection of sensitive cultural, historical, and environmental sites while building out a functional pathway system for the community. The opportunity is to utilize the pathway system to help tell the story of the FCPC through interpretive signs and displays highlighting important cultural, historical and environmental features along the way where appropriate.

ADA COMPLIANCE

When pedestrian facilities are provided, they are typically required to be accessible to people with disabilities. It should be noted that as a sovereign nation, the FCPC does not have to adhere to these requirements, however, the FCPC does strive to provide maximum accessibility to the community.

There are ADA design guidelines and standards that

should be applied in roadway improvement projects with regards to pedestrian facilities within the public right-of-way such as the requirement for curb ramp improvements. A shared use path is a pedestrian facility and therefore should meet ADA guidelines. It should be noted that transportation funding (via WisDOT) generally requires a greater level of accessibility than recreational rail funding (via WDNR).

Newly constructed or altered facilities should be ADA-compliant. New construction is to provide the highest level of accessibility and meet current ADA accessibility standards. For altered facilities, there is some flexibility to work within existing conditions. The flexibility is provided to recognize that retrofits are different from new construction. When existing conditions alter portions of facilities and if it is technically infeasible to meet modernization design criteria, the facilities must meet current design criteria to the maximum extent feasible. Alterations should not decrease the accessibility of a facility.

To ensure that a project can meet accessibility requirements, evaluate the existing right-of-way adequacy for bike and pedestrian facilities, particularly for accommodating full ADA-compliant curb ramps. This may include working jointly with local units of governments to meet full curb ramp ADA requirements during a project.

Detailed guidance on ADA accessibility is extensive, but one of the primary resources in Wisconsin is the Facilities Development Manual or FDM. The FDM outlines the major elements of ADA design, as follows:

- Protruding Objects and Vertical Clearance
- Elevation Differences / Changes
- Cross Slope
- Driveway Crossing
- Crosswalk Layout
- Curb Ramps
- Detectable Warning Fields
- Grade Separation Warrants

PRESERVATION & ENHANCEMENT OF CULTURE, HISTORY & THE ENVIRONMENT

The Forest County Potawatomi have lived in Forest County, Wisconsin since the late 1800s when groups settled in areas near Blackwell and Wabeno and eventually expanded to the Carter and Stone Lake areas. Over time, a number of sites across this area have gained significant cultural, historic, and environmental importance to the Potawatomi.

The proposed pathway system will be designed and implemented to avoid any negative impacts on these sensitive sites. In fact, per the Tribe's Environmental and Cultural Review Policy any project on Tribal lands must undergo an assessment to determine the impacts of the project on the environmental quality of Tribal lands as well as any impacts to cultural resources/historic properties that may be directly or indirectly affected by the project. Any adverse effects must be mitigated through the standard operating procedures in the policy, or through negotiated special measures as required prior to the projects approval by the Executive Council.

However, the rich heritage of the FCPC can still be incorporated into the pathway system to help reinforce sense-of-place and contribute to community pride. One way to accomplish this is through the assigning of Potawatomi language names for pathway segments. As segments are developed, concept plans should be shared with Tribal elders responsible for guidance on naming.

The pathways themselves can become a tool for learning about the heritage of the Potawatomi. Through the use of interpretive signage, the pathways can present themes that enable users to more clearly understand the Tribal culture. The idea is to utilize the pathway system to help tell the story of the FCPC through interpretive signs and displays that highlight important cultural, historical, and environmental features along the way where appropriate.



The existing pathway in Crandon constructed as part of the Safe Routes to School program.

BICYCLING & WALKING AS TRANSPORTATION

Bicycling and walking are 2 of the most efficient ways to get around. Walking is ubiquitous; nearly everyone depends on walking for at least part of every trip, if only from the parking lot to the nearest building. Although some lament that "people just can't seem to walk anywhere anymore," the reality is that, given the opportunity, many people choose to walk from one place to another, particularly if they can do so safely and conveniently. During the past fifty years, however, there is no question that Americans have become increasingly auto-dependent. This is partially by choice and partly as the result of a development pattern where individual land uses (e.g. retail, fast food, and schools) exist on the periphery of communities. Not only are edge of town land uses a long walk from where people live, but they may be a half-mile or more from the nearest sidewalk. Conditions such as these not only discourage able-bodied pedestrians, they literally prevent access for pedestrians with special needs – a group that includes elderly, children, and people with disabilities.

In many parts of the world, walking and bicycling are major modes of travel and relied on for utilitarian purposes. Even in many western countries walking and bicycling constitute a major portion of all transportation trips and connections between these modes and transit are well developed. In the U.S. and Wisconsin, however, the opposite is true because cities have evolved around the automobile, making destinations and land uses so spread out that only driving can overcome such distances for many trip purposes.

In Wisconsin, a relatively small percentage of people walk or bike to work or for work-related purposes. This is primarily because so few people live within walking or bicycling distance of where they work. When other trip purposes are considered, walking and bicycling face the same challenges. Often trips to the store, school, or even a person's favorite restaurant are just too far for there to be much potential for bicycling or walking. Or if they are close-by, they are not served well with bikeways and/or sidewalks.

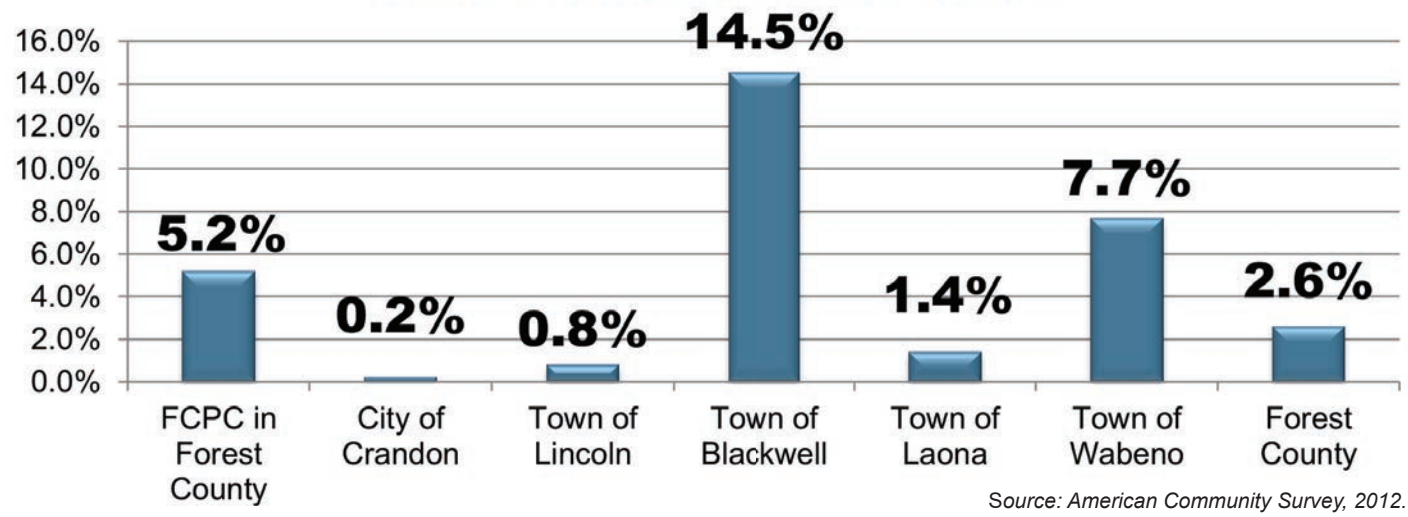
BICYCLING & WALKING IN FOREST COUNTY POTAWATOMI COMMUNITY

In rural places like Forest County, the challenges to biking and walking are exacerbated by distances between destinations, topography, lack of sidewalks and bike routes, and even weather conditions. One data indicator that is available is the US Census commuting data: Means of Transportation to Work. Within Forest County, as a whole, walking (about 2.6% of residents) is less popular than the state (about 3.3%) or nation (about 2.8%). However, in certain locations, walking can be a significant means of getting to work. This is the case with the Towns of Blackwell and Wabeno with relatively high percentages of residents who walk to work, within the area of the FCPC Walking can also be seen as an important mode of travel to work for up to 5.2% of FCPC residents (**see Figure 2**).

However, bicycling to work is less popular with residents in Forest County. According to the Census data, there are zero residents who bicycle to work in the County. By comparison, approximately 0.6% of the nation as a whole bicycle to work, while in Wisconsin, overall, its slightly higher at about 0.8%.

Of course, travel to work is only one piece of the transportation pie. Biking and walking also provide a means of transportation for other aspects of daily life including getting to school, taking care of tribal business, accessing goods and services, recreation, etc. Unfortunately data isn't available for these activities.

Figure 2



Source: American Community Survey, 2012.



An existing trail in Crandon that offers strong connection point for the FCPC.

DEFINING WHO RIDES BICYCLES

Not everyone who walks or bikes has the same ability or confidence riding. Age, experience, and bicycling ability dictate where and when individuals (or parents, in the case of children) feel comfortable to safely bicycle on roads.

TYPES OF CYCLISTS

The American population can be divided into 4 classes of bicyclists (**see Figure 3**):

- **1% describe themselves as "strong and fearless."** These riders are confident in their abilities and will ride regardless of roadway condition, amount of traffic, or inclement weather. This compares to 3.5% of the FCPC survey respondents
- **60% call themselves "enthusiastic and confident."** Riders are comfortable sharing the road with motor vehicles, but they prefer to ride on separate facilities like bike lanes. May or may not ride in inclement weather. This compares to 33% of the FCPC survey respondents
- **60% are "interested but concerned" about their vulnerability.** Very few of these people regularly ride a bicycle, but they like riding. They are concerned that their route is not safe to ride, so they don't ride very often, and they definitely do not ride when the weather is bad. This compares to 66% of the FCPC survey respondents
- **33% say "no way, no-how" to biking**. They are not interested in bicycling at all, not even for recreation. This compares to 3.5% of the FCPC survey respondents

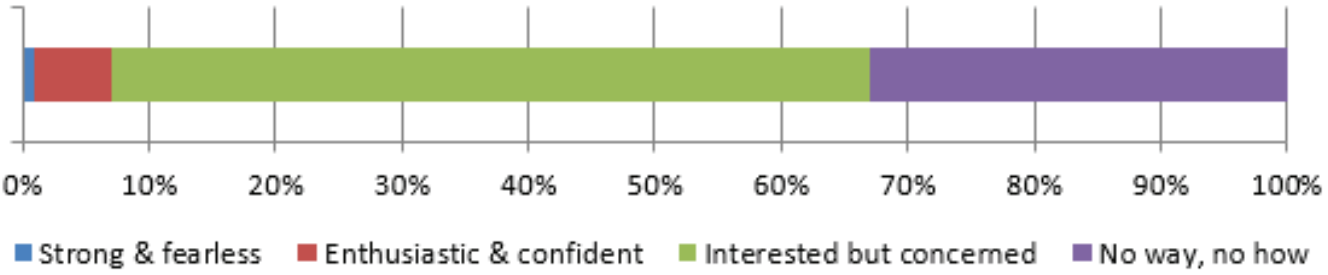
Based on survey results, the FCPC population appears to be more likely to bike than the national average if given adequate accommodations.

AGE DIFFERENCES

In general, young bicyclists are found in places where a park is within a mile from their home, and where development is clustered, like in a community's downtown. Some kids learn the basics of balance and control with their first bicycle by the age 4. By the time they turn 10 years old many children are allowed to ride to school if the route is safe, or to the store, or to visit

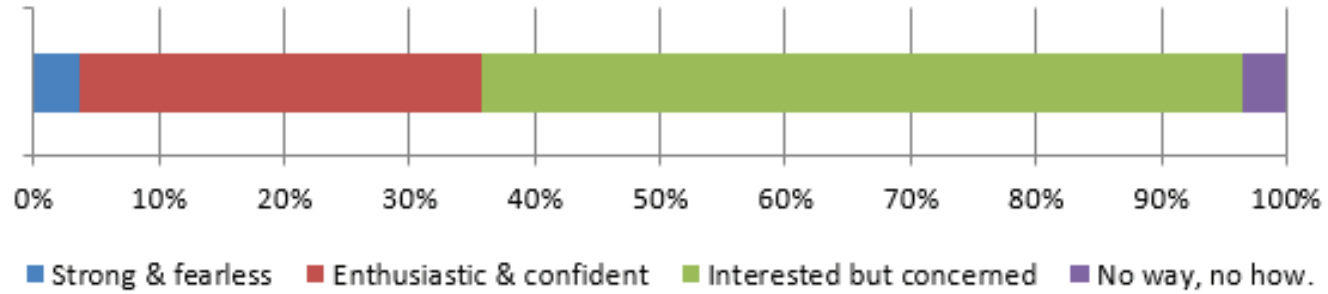
Figure 3

American Population (Types of Cyclists)



Source: Portland Office of Transportation

Forest County Potawatomi Community Population



Source: FCPC Bike / Ped Survey 2020

friends. By the time kids reach their junior high years (7th–9th grades), they often have good traffic safety skills. Bicycles are their primary means of independent mobility beyond walking.

Many high school students stop riding their bikes as infatuation with the car takes hold. But after high school, some people come back to bicycling, especially if they attend college. Beyond school, many people limit their bicycling to family outings, recreational trail riding, and within a few miles of their homes for low-impact exercise.

Some adults bicycle to work. The latest trend is that young adults are choosing where to live based upon how walkable or bikeable their commute is. Other adults may use bicycles for touring long distances. Bicycle clubs which tend to cater to people in the 25 to 50 age group often sponsor rides through rural areas.

By retirement age, many people who have not ridden for years take up bicycling again as a way to keep fit. For some older adults, the bicycle or adult tricycle may be their only means of independent travel. In many cases, these bicyclists will ride close to home or on local trails.

The challenge to increasing bicycling among the general population is making biking appeal to the big "interested but concerned" contingent.

By building a bicycle network that addresses the needs of the "interested but concerned" group, the more confident bike riders will also be served.

-Portland Office of Transportation

TYPES OF PEDESTRIANS

Everyone is a pedestrian at some point in their trip, whether it is from home to car, or walking to the bus stop. There are essentially 2 groups of pedestrians: 1) general pedestrians who walk, and 2) pedestrians with limitation that make walking difficult or impossible.

The general pedestrian is anyone who can walk along and across streets without being limited by physical, sensory, or cognitive impairments. Other pedestrians, such as the elderly, children, people with physical or mental disabilities, and the blind may have limitations that make walking more challenging.

Since there are people with different abilities, then understanding how they need to interact with pedestrian facilities is the first step for policy makers in creating accessible facilities. The needs of disabled people and other pedestrians should determine what kinds of accessible design everyone can use. ***WisDOT's Pedestrian Policy Plan 2020*** was used in this section to identify the types of pedestrians and their limitations for navigating the built environment.

CHILDREN

Facilities designed to separate and protect children will be welcomed by everyone else. General limitations of children include:

- One-third less peripheral vision than adults, making it difficult to see turning vehicles or those down the road;
- Less cognitive ability and experience to judge speed and distance, making safe crossings more difficult;
- Lower auditory development makes it difficult to localize the direction of vehicle sounds;
- Overconfidence in their judgments may result in poor decisions on crossing timing;
- Inability to read or comprehend warning signs, traffic signals, and directional aids;
- Inexperience dealing with complex traffic situations results in poor decisions; and
- No sense of fear.

Nearly one-fourth of Wisconsinites are younger than 15 years of age. Children do not develop adequate sign, thinking, and hearing abilities necessary to cross streets safely until age 10 or later.

– WisDOT | Pedestrian Policy Plan

MOBILITY IMPAIRMENTS

People with mobility impairments include those who use wheelchairs, crutches, canes, walkers, orthotics, and prosthetic limbs.

Characteristics common to mobility impaired individuals include:

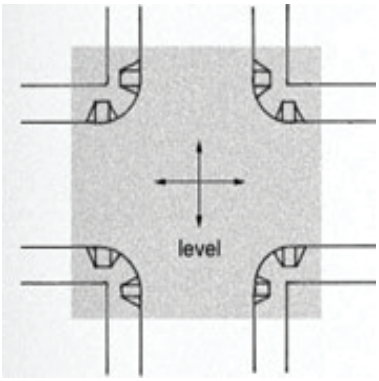
- Space requirements to accommodate their assistive device (for example, manual wheelchairs have an average turning radius of 5 feet and require a minimum sidewalk width of 3 feet); and
- Difficulty negotiating soft surfaces (e.g. grass, sand, or loose gravel).

SENSORY IMPAIRMENTS

Sensory impairments include problems with depth perception, deafness, tunnel vision, blindness, or color blindness. Assistive technologies may include hearing aids, corrective lenses, white canes, or guide dogs. For visually impaired users, intersections are easiest to navigate when the line of travel from the edge of the sidewalk to the opposite curb is straight and unimpeded by obstacles rather than skewed as at some irregularly shaped intersections. Designing curb ramps to face the line of travel across a road (**see Figure 4)** will greatly assist visually impaired users. Driveways pose a challenge because the hearing impaired pedestrian is unable to hear the vehicle especially when shrubs or fences block sound and view.

Figure 4

Curb Ramp Placement at Intersection



The preferred design is to have a separate curb ramp aligned with each crossing direction to allow all pedestrians to cross at the same location. At most intersections, a pair of perpendicular curb ramps placed at 90 degree angles to one another is the optimal design for meeting these criteria.

The shaded area represents the portion of the intersection that should be level for pedestrian travel.

Source: FHWA, Designing Sidewalks and Trails for Access

For visually impaired users, intersections are easiest to negotiate when the line of travel from the edge of the sidewalk to the opposite curb is straight and unimpeded by obstacles.

– WisDOT | Pedestrian Policy Plan

COGNITIVE IMPAIRMENTS

People with cognitive impairments have difficulty perceiving, recognizing, understanding, interpreting, and responding to information. Cognitive disabilities can hinder a person's ability to think, learn, and reason. Facility designers might consider that such a reduced capacity for sensory processing and problem solving may cause such people to experience more difficulties negotiating unfamiliar environments.

Overall, level sidewalks and well-designed ramps and crossings complement people with disabilities.

– WisDOT | Pedestrian Policy Plan

THE BENEFITS OF WALKING & BICYCLING

The benefits of walking and biking are significant and help to justify expenditures required to develop a comprehensive, safe, and attractive walking and biking network throughout the FCPC. There is public recognitions of the benefits of walking and biking beyond their recreational values on a national, state, regional, and local level. These benefits include the following factors:

- **Transportation:** General transportation benefits of walking and bicycling include a wider range of transportation choices, reduced congestion, decreased need for parking, and the implementation of safety improvements that benefit all roadway users. Walking and biking are among the most efficient modes of transportation in regards to operation, development of facilities, and maintenance.
- **Health & Fitness:** Walking and biking are among the best forms of exercise and can therefore effectively enhance the health of individuals and the greater community.
- **Recreation:** Paths developed for walking and bicycling provide recreation opportunities.
- **Economic:** Bicycling specifically translates into tourism. WisDOT has targeted bike touring and trail

riding as high potential tourism activities since the 1980s, and has recently added mountain biking to that list. The State annually distributes over 50,000 Wisconsin bike maps. Several State trail-related studies have been conducted showing expenditures ranging from $33 to $49 per person per day.

- **Social:** Walking and bicycling stimulates the social interaction of families and community. Trails and sidewalks can help provide a sense of place and a source of community pride.
- **Quality of Life:** The extent of walking and bicycling in a community has been described as a gauge of how well it is advancing its citizens' quality of life. Streets that are busy with pedestrians and bicyclists are considered environments that work at a more human scale and foster a heightened sense of place. These benefits are difficult to quantify, but when asked to identify sites that they are most proud of, residents often name spots where walking or bicycling are common, such as a popular bikeway, downtown, or riverfront project.
- **Environmental:** Walking and biking consume no fossil fuels and do not contribute to noise or air pollution. Further, careful development of off-road facilities can protect and enhance natural resources through appreciation of the environment.

Significant overlap exists between these benefits. One benefit can often build upon another. For example, quality of life is an increasingly important factor in attracting and retaining businesses in a community, and trails are important contributors to quality of life. By enhancing the community's quality of life through the development of shared use corridors, economic benefits may also be achieved. Another example of potential economic gain for a community would result from the health and fitness benefits of trails. The health improvement due to increased outdoor exercise can help control medical costs to the community.

PLANNING PROCESS & COMMUNITY INPUT

5-E APPROACH

Education, Encouragement, Engineering, Enforcement, and Evaluation are the "E's" that combine to provide a well-rounded and complete bicycle and pedestrian support network. As this Plan was developed, this approach was used to work through Advisory Group meetings. Each of the E's are briefly described below.

- **Education** – Includes teaching pedestrians, bicyclists, and drivers about traffic safety, and creating awareness of each other's use of the roadway; the signing of bike routes shows motorists that bicyclists may be present, and also provides wayfinding for bicyclists – just like highway signs for motorists.
- **Encouragement** – Strategies and programming that are about getting people walking and bicycling; such activities will help build support for creating more walkable places, decrease traffic congestion, and improve physical health.
- **Engineering** – Any physical change that improves conditions for walking or biking; some improvements include: building paths, creating safer crossings, and slowing down traffic. At the same time, engineering practices recognize the importance of a balanced roadway environment that can accommodate the needs of all modes of transportation, be it foot, bicycle, or motor vehicle.
- **Enforcement** – Strategies by law enforcement, engineers, and other partners are used to deter unsafe behaviors of drivers, pedestrians, and bicyclists; and to encourage all road users to obey traffic laws and share the road safely.
- **Evaluation** – Includes monitoring the outcomes and documenting the results of the implementation of the other E's. Data collection before and after infrastructure improvements are implemented, such as user surveys and bicycle and pedestrian counts, are critical to measuring the overall effectiveness of the network.

FCPC PLANNING OVERSIGHT COMMITTEE

The FCPC Bicycle and Pedestrian Planning Oversight Committee is a group of FCPC staff and officials selected by the FCPC to provide guidance to the NCWRPC throughout the bicycle and pedestrian planning process. The process involved a number of meetings of this Oversight group as outlined below:

Kick-off Meeting (October 23, 2019) – FCPC Planning Dept. | Stone Lake

KL Engineering and NCWRPC discussed the planning process with FCPC Staff and refined based on input from the group. Formation of an oversight committee was established. Data needs and availability were also reviewed. An overview of the feasibility study for the Pathway to Wellness trail project along US Highway 8 was also discussed.

FCPC Oversight Committee Meeting 1 (January 22, 2020) – FCPC Planning Dept. | Stone Lake

NCWRPC provided an overview of the planning process and committee roles were discussed. Bicycle and pedestrian issues in the FCPC area were identified. The draft public input survey was reviewed.

FCPC Oversight Committee Meeting 2 (September 17, 2020) – Virtual

The Committee was finally brought back together after an extended hiatus due to the pandemic. NCWRPC provided a project overview as a refresher. Preliminary route mapping by the NCWRPC was reviewed and issues related to routing were identified.

FCPC Oversight Committee Meeting 3 (March 22, 2021) – Virtual

NCWRPC presented the results of the public input processes that were conducted for the plan. The draft route mapping was reviewed and compared against the public input. Priority ranking of route projects was established.

"We need to put a healthy step toward changing our lives into more active productive members of our families and community. There aren't any sidewalks or walking trails here in Carter. My son, who is handicapped, would love a safer way to get out of the house alone."

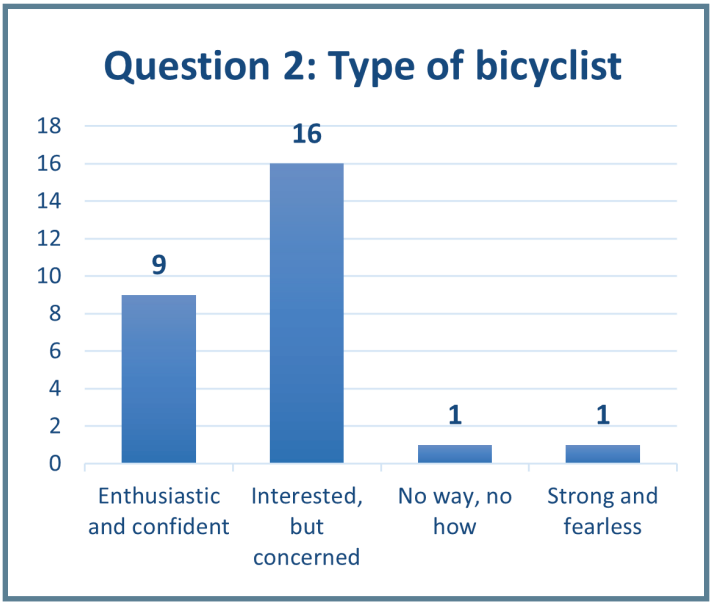
– Survey respondent

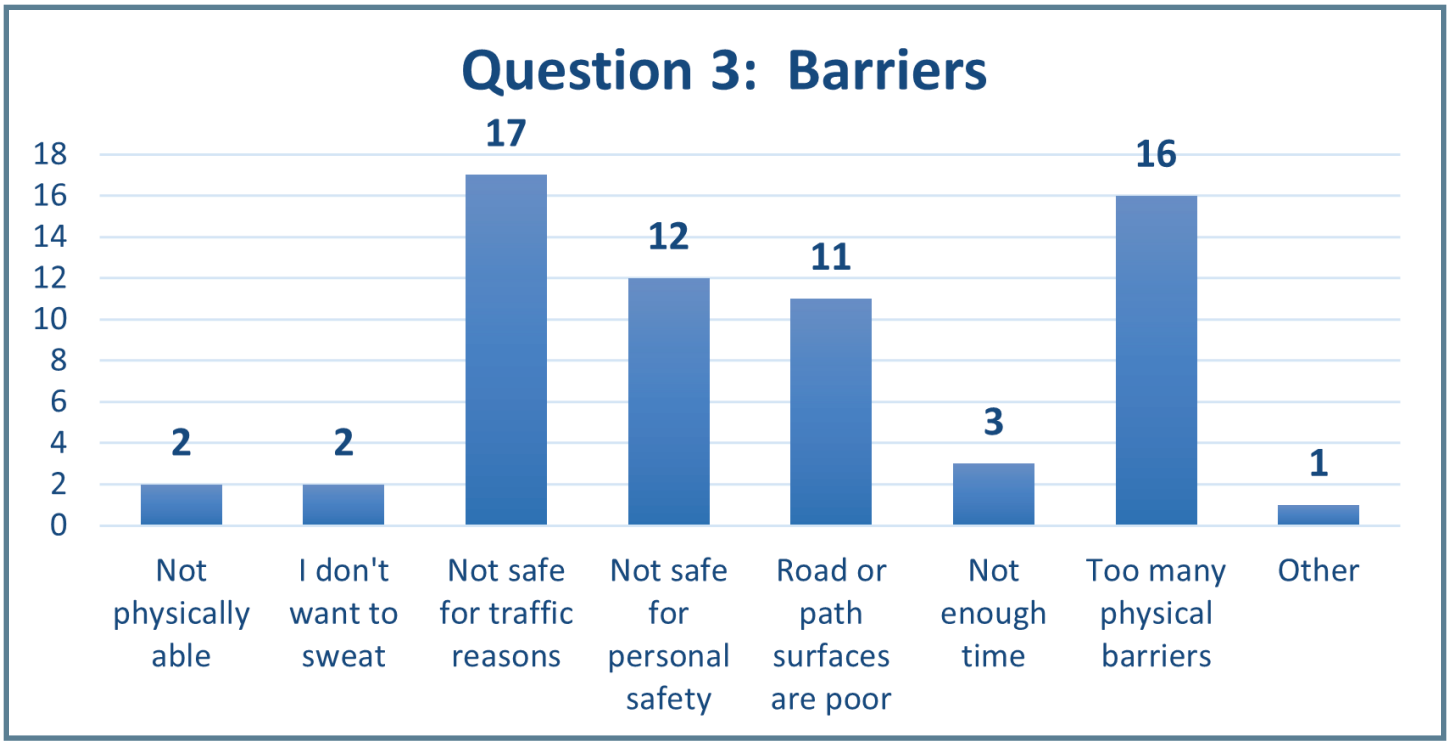
SURVEY RESULTS

Two different on-line surveys were utilized to gather public input as part of the planning process. The first survey was a more in-depth treatment and was open from early February through mid-March of 2020. Due to relatively low response rates on that initial survey, a second, shorter form was developed and made available from mid-August through early September. Response rate for this second survey was double the previous version. The surveys were promoted with postings on the Tribal Facebook page and by the Tribal Chairperson during their regular Facebook Live sessions. **See the Appendix, A-1 for compiled survey results.**

The Summer survey returned 27 responses, with overwhelming (100%) support for the concept that it is important for there to be areas for walking and biking in the Forest County Potawatomi Community. Comments provided on this question reflect many common themes within the Plan including needs in specific locations of the Community such as Blackwell and Carter and connections to places such as Crandon. Other themes highlighted include accommodations for children, shifting to more active, healthy lifestyles, and accommodations for disabled individuals (ADA accessibility).

Other interesting comments including one Tribal member pointing out how walking and biking trials could help support their business provide an opportunity for improving tourism. Tribal members utilize rollerblades / skates and skate boards for mobility, but need safe accommodations as well.





The second question asked respondents was what type of bicyclist they felt like. It was interesting that over one-third of Tribal members that responded indicated that they were confident bike riders, while another 60% were interested in bicycling but have some concerns. Only one person said they would never ride a bike. It appears likely that addressing community concerns can lead to increases in biking and walking within the community.

The third question looked to identify barriers that limit people from walking and biking more often. The top two responses were traffic and physical barriers. About 63% of FCPC bike/ped survey respondents say that biking and walking isn't safe due to traffic concerns. Just under 60% of respondents feel that there are too many physical barriers to walking and biking such as major highways or topography.

The question that asked about what concerns FCPC residents have about walking and biking in the community yielded an extensive list of comments.

Identified concerns include:

- Not enough paths, sidewalks, or shoulders
- ATVs
- Traffic speed
- Narrow roads
- "Children shouldn't be walking in the street."
- Dogs
- Wildlife
- Need more street lights

Respondents were also asked what might help them walk or bike more often. The top answers were: off-street paths on busy highways, paved shoulders, route maps, and some biking/walking encouragement programming.

"Would like to be more connected with safe paths to be able to commute to work safely either walking or bicycling. Kids able to bike around more with parents feeling they are safe."

– Survey respondent

FOCUS GROUP SESSIONS

In addition to broad public outreach, a number of focus groups were designed into the process to provide a more focused, deep dive into some key elements of any bicycle and pedestrian program for the FCPC. The groups identified were:

- **Surrounding Local Governments** – A portion of FCPC lands in Forest County are primarily spread across 3 towns and is heavily reliant on town and county roads for travel between parts of the community. Jurisdiction and maintenance issues need to be addressed to achieve a fully functioning bicycle and pedestrian system.
- **Tribal Land Use** – Use of land is of critical importance to the FCPC for the stewardship



An example of a bicyclist creating their own trails when formal developed ones aren't available.

and protection of its cultural, environmental, and historical resources. Land management is overseen by a committee comprised of tribal community representatives. FCPC Staff consulted with this group to review potential impacts of the proposed bicycle and pedestrian system on future land use plans and important resource areas.

- **Health and Wellness** – A key driver in the push to establish a bicycle and pedestrian program in the FCPC was the role of active lifestyles in improving community health and wellness. The intention was to bring Tribal health and wellness team members together for a foundational effort to integrate a bicycle and pedestrian program with FCPC health improvement programming.

The **Surrounding Local Governments Focus Group** took place virtually on February 3, 2021 due to the pandemic. The Towns of Lincoln and Blackwell were able to participate, but the Town of Wabeno was not. In addition, the County Highway Commissioner was not able to attend due to responsibilities for responding to inclement weather occurring that day. FCPC Staff were also on the call. The NCWRPC provided an overview of the project and then opened for general comments. Some of the notable comments received from the Towns include:

- Blackwell suggested blacktopping a separate path from the Nicolet State Trail for walking and biking on, since the Nicolet State Trail is heavily used for ATVs.
- All of Lincoln's town roads are open to ATVs and all are concerned about how to limit ATVs from using the bike and pedestrian trails.
- Blackwell suggested limiting ATVs from potential bike and pedestrian trails by using barriers such as boulders and gates.

At the close of the meeting, the Towns requested additional time to review and comment on the proposed routes, and a follow-up mailing was sent to all 3 Towns. The following questions, concerns and comments were submitted by the Town of Lincoln:

- Town of Lincoln is open to the use of the ROW on the roads proposed.
- We have concerns about speed and safety.
- Pathway (and surrounding area) maintenance. Will this always be provided by FCPC?
- There will be a need for proper policing of the trails. Will this be provided by FCPC?
- There will be a need for adequate signing.
- Is the pathway to be on the road ROW (right-of-way) – as a separate piece of infrastructure?
- If the Town needs to maintain the Town ROW – what will be the policy?
- Will there be painted markings on the trail surface, and will this be maintained by FCPC?
- What will the impact be for Town of Lincoln?
- Will the Town of Lincoln be responsible to bear any of the costs?

The **Tribal Land Use Focus Group** met on December 17, 2020. FCPC Staff handled this meeting. The following comments resulted from this focus group discussion:

- Protection of cultural and natural resources are a concern and prior to any development EA and THPO reviews will need to be conducted.
- Consider adding a path from Chief Wabeka to Kuffner along the cleared utility way.

- Prefer the path is located on the east side of County Highway H.
- Maybe consider a path from Kuffner to Indian Market Road.
- Consider connecting to the Nicolet State Trail from the end of Sugarbush Lane.
- The trail crossing at Torpee Creek should be directed to the east side of State Highway 32.
- Their main priority is safe crossing along the busy highways, i.e. US Highway 8 in Stone Lake and State Highway 32 in Carter. The proposed crossing points on the maps help to address this concern.
- Coordination with the surrounding municipalities is essential. There is a need to address maintenance.

The Health and Wellness Focus Group was actually not able to take place due to the heavy workload facing FCPC health officials as a result of the pandemic. However, health and wellness is a key element of this plan and recommendations were developed to integrate bicycle and pedestrian programming with health and wellness programming.

VIRTUAL PUBLIC INVOLVEMENT MEETING

The COVID-19 global pandemic began in the spring of 2020 and necessitated a shift in the public engagement strategy. In-person community meetings are typically held to encourage public comments and feedback. However, the lack of safe in-person meeting opportunities required a greater emphasis on virtual and remote public engagement strategies. Many planning processes across the state were rolling out Virtual Public Involvement Meeting (VPIM) processes to satisfy the need for public involvement while keeping the public safe from COVID-19. The NCWRPC took guidance from some of these other efforts to develop a VPIM for the FCPC Bicycle and Pedestrian Plan.

Information about the VPIM for the project was advertised on the FCPC Facebook page and posted at key locations throughout the community. The virtual public comment period ran from January 18, 2021 to February 21, 2021. The virtual public engagement strategy included several components and all were accessible on a central project webpage.

The first component included the ability to view a recorded 8-minute PowerPoint presentation that included a project overview and background, project timeline, project goals, maps, and information on how to make virtual comments, comment on maps, or vote for a preferred trail area.



This video was posted on the project webpage and was viewed 145 times on YouTube as of February 25, 2021. The remaining items were all presented within virtual collaborate whiteboard software. The first board included an opportunity to provide general comments. Three categories were outlined:

- General Thoughts on the Ideas Presented
- Tell Us About Your Experiences Biking and Walking Within the Forest County Potawatomi Community
- Other Suggestions About the Proposed Biking and Walking Trails

"This is wonderful! Would there be any way to go through Wabeno and run parallel to HWY 32 to CTY T then to Blackwell and catch CTY H to Laona? The Nicolet Trail is hard for regular bicycling so it would need to be an extension of that trail by width or new path. This would lend itself to a longer stretch for seasoned bikers and help visitors visit more Forest County communities."

- PIM Respondent

Comments received were limited. However, the comment that was received on this board was very informative and was posted under the heading “General Thoughts on the Ideas Presented”:



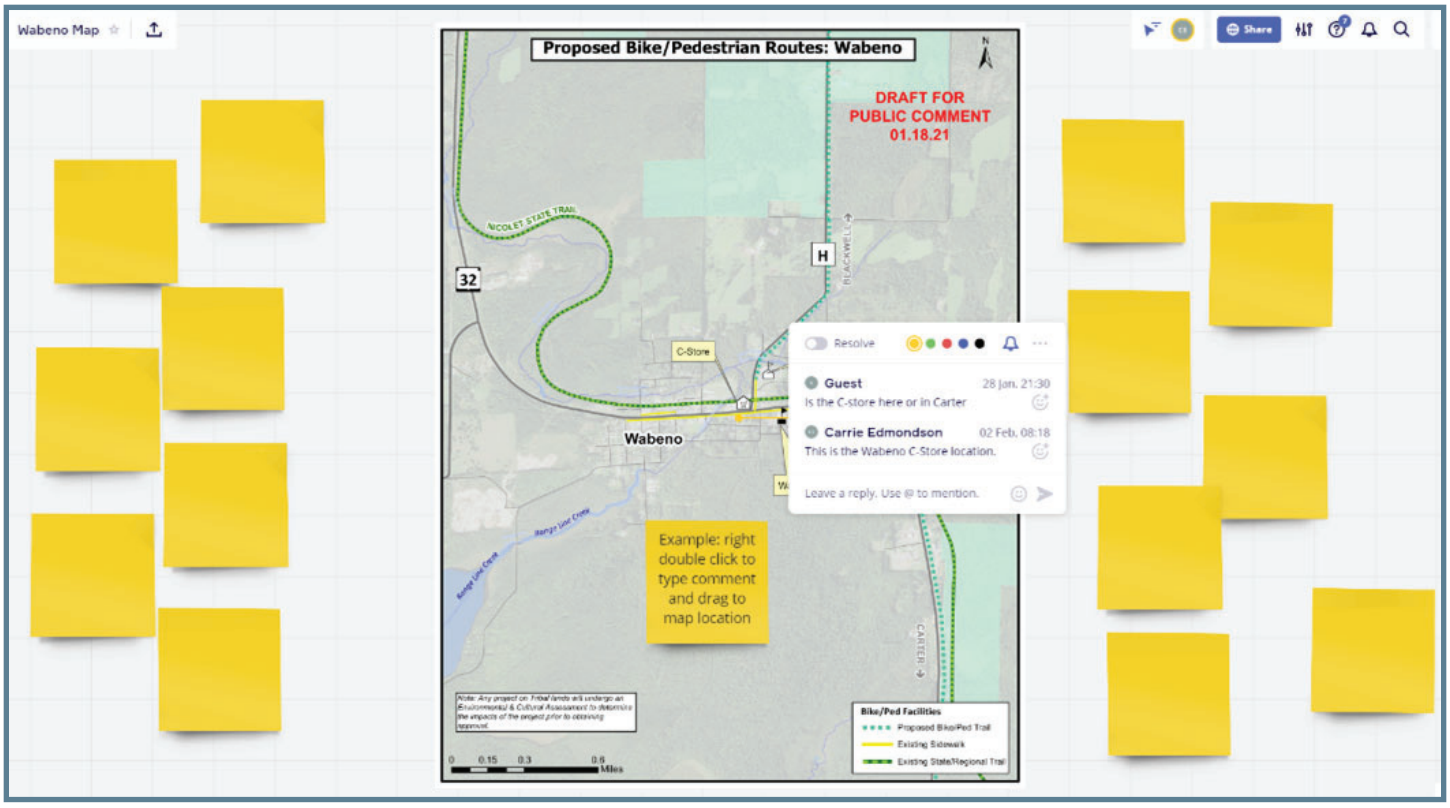
Additionally, links to an overview map and the 6 individual trail area maps were provided **(see Appendix A-2)**. Once the participant clicked on one of the individual map links, they had the opportunity to leave comments on a virtual sticky note and move the sticky note to a specific location. Comments in this section were also limited. However, there was one question posted on the Wabeno trail map clarifying the location of the C-Store. The interactive question and answer capability allowed staff to clarify the C-Store location.

“Kids biking/walking on the roadways, as there is no safe way for them to get from town to FCPC.”

– Survey respondent

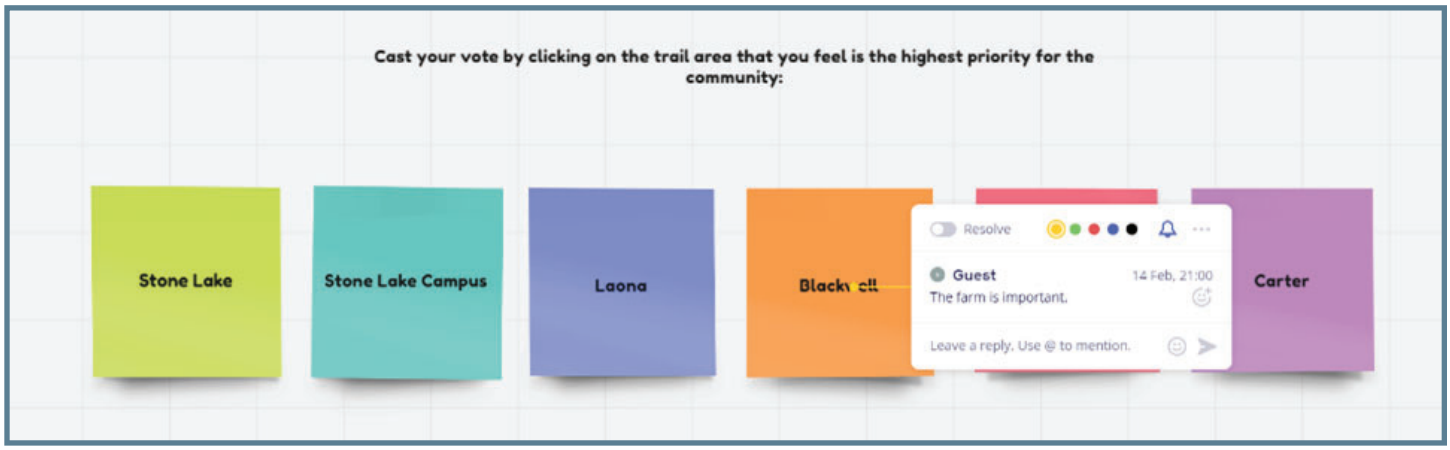


An aerial view of part of the Stone Lake Community.



The last component was a board that allowed each participant to vote for a trail area that they believed to be most significant to the project. The votes cast were minimal. However, one resident voted for the Town of Blackwell and noted that:

"The farm is important."



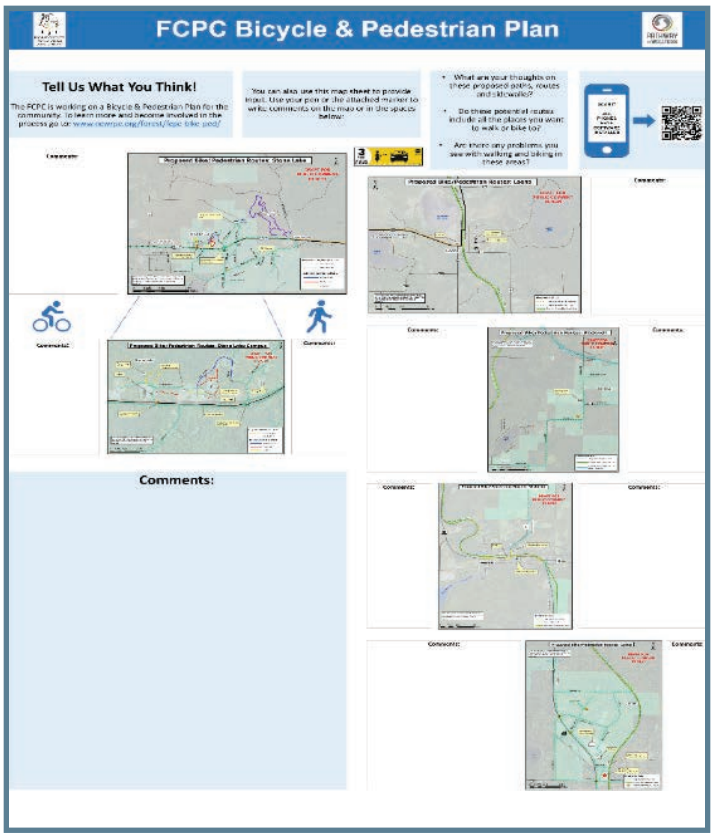
There were multiple benefits to this virtual, collaborative format including: 1) the ability to view an overview presentation, 2) the ability to make comments and ask questions about trail area maps, and 3) the ability to vote on a favorite trail area. Comments were limited but informed staff on some key information.

NTERACTIVE KIOSKS

In addition to virtual public engagement, an opportunity for remote public involvement was provided. This was done in the form of providing interactive kiosks (non-digital) at the following locations from January 22, 2021, to February 22, 2021:

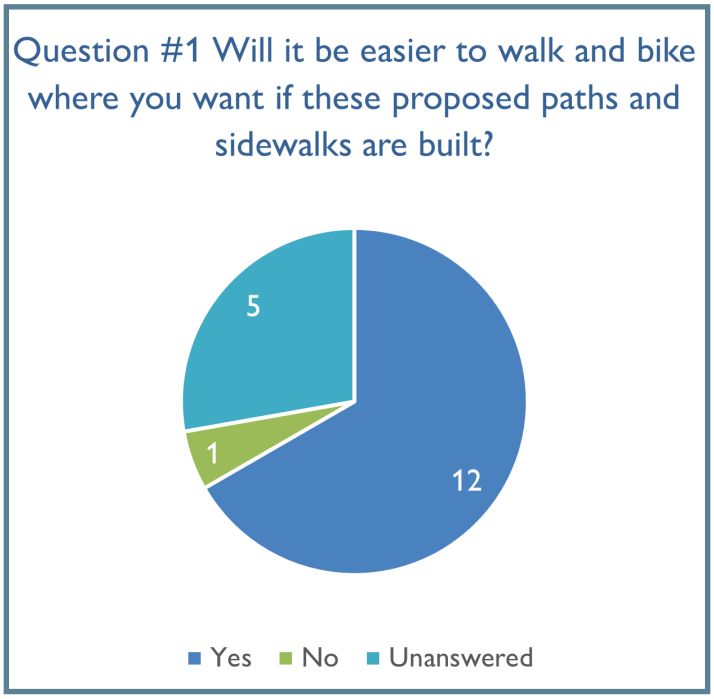
- Stone Lake C-Store
- Carter C-Store
- Bodwewadmi Ktegan (Farm Store)

Interactive kiosks contained posters that depicted all trail area maps. Residents were invited to provide comments on the trail area maps. In addition, they were invited to provide answers to the following 3 questions:



QUESTION #1

Will it be easier to walk or bike where you want if these proposed paths and sidewalks are built?



QUESTION #2

What gaps still exist?

- Looks good
- Laona to Wabeno
- Connect through the woods in the Stone Lake subdivision
- Need more lighting along the path
- Crandon to Laona
- Across the road near
- Young's Lane has no streetlights or sidewalks.
- Laona
- Stone Lake in the community. Like in woods.
- Elliot Road to Industrial
- There are no bike paths to walk / run on. You don't feel safe walking or running along the road.
- Eagle Lane into the C-store
- Please add more lighting.
- We need more ATV trails.
- Old HWY 32 to Daycare Road
- All around the Carter area
- Sidewalk along Billy Daniels in Stone Lake

QUESTION #3

Any additional comments?

- Awesome
- It's a great idea and a step forward for our Tribe.
- Bring our playgrounds in subdivision
- Thank you.
- More people will be inclined to biking and walking if there were more paths and walkways.
- My whole family loves biking and running. (4 people)
- Do not put a path into the Sunnyside Church in Carter. This will increase traffic and promote ATV traffic in this area.
- Big enough sidewalks for social distancing
- 7 laws for design of sidewalks
- Bike lanes are a must!

These interactive kiosks allowed the public to safely comment on the maps while remaining socially distanced. It also provided a safe way for those that may have limited virtual access and / or comfort.

PLAN VISION, GOALS & OBJECTIVES

The primary intent of this plan was to document the activities and facilities needed to enhance bicycle & pedestrian facilities throughout the Forest County Potawatomi Community. To guide this process, a number of goals were identified that should be considered as the public and private sectors carry on activities that might affect the proposed pathway system. It is encouraged that these goals be reviewed and consulted when issues that affect the FCPC bicycle and pedestrian network arise; and attempt to resolve these matters in a way that the public's use of these systems are enhanced.

The following goals and objectives regarding the FCPC bicycle and pedestrian network are an essential part of this plan and should be considered by local, County, State, and Federal agencies when undertaking activities related to this network. These goals and objectives were crafted using input from the Oversight Committee on what the plan should address. In addition, the goals and objectives were tailored to reflect the priorities of the FCPC membership as expressed through the public input for the planning process.

Vision:

Promote a healthy lifestyle through walking and biking for daily tasks and recreation.

Goal 1 – Ensure that walking and biking is safe and convenient throughout the Forest County Potawatomi Community for all members, young and old.

Objective 1.1 – Encourage and Promote the development of a biking and walking pathway system throughout the Community.

Objective 1.2 – Make all sidewalks and paths ADA compliant.

Objective 1.3 – Appropriately mark and sign all pathways.

Objective 1.4 – Coordinate with area schools on Safe Routes to School Programming.

Objective 1.5 - Provide proper lighting with all existing and future bike/pedestrian facilities to improve safety for the users.

Goal 2 – Improve health and wellness levels of FCPC residents.

Objective 2.1 – Promote the health and wellness benefits of biking and walking.

Objective 2.2 – Incorporate biking and walking into FCPC health and wellness planning and programming.

Goal 3 – Encourage cooperation between the FCPC and the surrounding governmental entities within which FCPC areas reside.

Objective 3.1 – Promote the planning and development of a regional bicycle and pedestrian network for greater Forest County.

Objective 3.2 – Coordinate maintenance responsibilities on segments of the proposed FCPC bike/ped system that provide benefit to the surrounding local communities.

Goal 4 – Provide for opportunities to enhance knowledge of Tribal culture, history and environmentalism while protecting culturally sensitive sites.

Objective 4.1 – Develop FCPC cultural, historical and environmental interpretation elements along the pathway system.

Objective 4.2 – Design pathway segments in ways that ensure preservation and protection of cultural, historic, and environmentally sensitive areas.

Objective 4.3 – Consult with the Tribal Historic Preservation Office and Land & Natural Resources Division on all pathway designs.

Goal 5 – Improve driver confidence. The Wisconsin Statewide Tribal Transportation Safety Plan noted that the majority of crashes (74%) on roadways adjacent to or crossing FCPC lands were single vehicle crashes where the vehicle left the roadway and either struck a fixed object or overturned. The Safety Plan also noted that most of the crashes (66%) occurred during daylight hours. The highest number of crashes occurred during the winter months, from November through January, with another peak seen in July.

Objective 5.1 – Work with Forest County Highway Department to install additional speed limit signs at marked curves on County Highways C and H.

Objective 5.2 – Create Public Service Announcements that focus on driver safety.

Goal 6 – Improve confidence with biking on the road. Bicycles are legally classified as: vehicles on Wisconsin roadways. That means bicyclists must obey the rules of the road like any other vehicle and must be treated as equal users by all other vehicles.

Objective 6.1 – Partner with WisDOT, Wisconsin Bike Federation, surrounding communities, Forest County Highway Safety Committee, and community service groups to provide bicycle safety education to the full range of road users (e.g. motorists, driver education classes, families with children, moderately comfortable bicyclists, expert bicyclists, and bicycle group riders) through various departments and community service groups.

CHAPTER 2: BACKGROUND & INVENTORY

Knowing what currently exists provides a baseline for monitoring changes in facility use. An inventory of demographic data, roadway conditions, bicycling and walking facilities, and crash locations will build this baseline.

DEMOGRAPHIC ANALYSIS

Forest County is located in northern Wisconsin. The county is bordered to the north by the state of Michigan, to the east by Florence County and Marinette County, to the south by Oconto County and Langlade County, and to the west by Vilas County and Oneida County. The Forest County Potawatomi Community is located in the southern portion of the County, across 3 main areas: Stone Lake, Blackwell and Carter. The focus of this plan is on the segments of FCPC lands located in Forest County which are dispersed and located across multiple municipalities and jurisdictions such as: City of Crandon, Town of Lincoln, Town of Blackwell, Town of Laona, and Town of Wabeno. According to the American Community Survey, the FCPC had a total population of 704 residents in 2018. The NCWRPC estimated populations for each FCPC area based on the ACS data (**see Table 1a**).

The WI Department of Administration creates the state's official population projections for its municipalities. Collectively, the 5 municipalities with a FCPC presence are projected to experience an 11.4% increase by 2040, with these 5 municipalities projected to combine for a population of 6,220 residents by 2040. This is a slightly slower increase than what Forest County, overall, is projected to experience (14.5%) during this time (**see Table 1b**).

Walking and biking are often the only means of transportation for individuals under 16 years of age. According to estimations from the American Community Survey (ACS 2014-2018) (**see Figure 6**), roughly 33% of residents within the FCPC are 15 years old or younger. A survey conducted by the US Census has found that individuals most likely to walk or bike to work are in the 16 to 24 and the 55 and over age groups, with rates of walking or biking to work decreasing between

Table 1a: Forest County Potawatomi Community Population Breakdown

	2010	2015	2018	% Change 2015-'18
Forest County Total	665	689	704	2.2
Stone Lake Area	338	307	316	2.9
Blackwell Area	4	21	74	252.4
Carter Area	266	254	276	8.7
Unspecified Locations	57	107	38	n/a

Does not reflect total number of enrolled FCPC members. Source: US Census ACS and NCWRPC

Table 1b: Forest County Population Trends (2010-2040)

	2010	2015	2020	2025	2030	2035	2040	% Change
City of Crandon	1,920	1,900	1,975	2,075	2,160	2,175	2,120	10.4%
Town of Lincoln	955	980	1,060	1,155	1,250	1,310	1,330	39.3%
Town of Blackwell	332	305	305	300	295	280	255	-23.2%
Town of Laona	1,212	1,185	1,190	1,215	1,220	1,190	1,120	-7.6%
Town of Wabeno	1,166	1,170	1,235	1,315	1,385	1,410	1,395	19.6%
Municipalities w/ FCPC	5,585	5,540	5,765	6,060	6,310	6,365	6,220	11.4%
Forest County	9,304	9,275	9,695	10,245	10,710	10,855	10,655	14.5%

Source: U.S. Census, American Community Survey, WDOA

25 and 54 years of age. Approximately 28% of Forest County Potawatomi Community residents are likely to walk or use bicycles for their commuting needs due to their young age or being in age groups considered more likely to bicycle or walk to work.

The FCPC had a median age of 22.7 in 2018. **Table 2** displays age characteristics for the FCPC, Forest County, and municipalities where the FCPC has a presence. Approximately 31% of residents within the FCPC are between 25 and 54 years of age, while approximately 29% of residents within the County fall in age groups (16-24 and 55-65) considered as more likely to bike or walk to work. The population pyramid in **Figure 6** below shows the sex breakdown of each age group for the FCPC.

Table 2: Forest County Potawatomi Community Age Characteristics, 2018

	Median Age	% Under 15*	% 25-54**	% 16-24 | 55-64***
FCPC in Forest County	22.7	35%	31%	28%
City of Crandon	39.7	20%	41%	26%
Town of Lincoln	50.7	18%	24%	32%
Town of Blackwell	45.5	4%	19%	51%
Town of Laona	45.4	20%	31%	29%
Town of Wabeno	47.6	20%	25%	32%
Forest County	46.7	18%	32%	29%

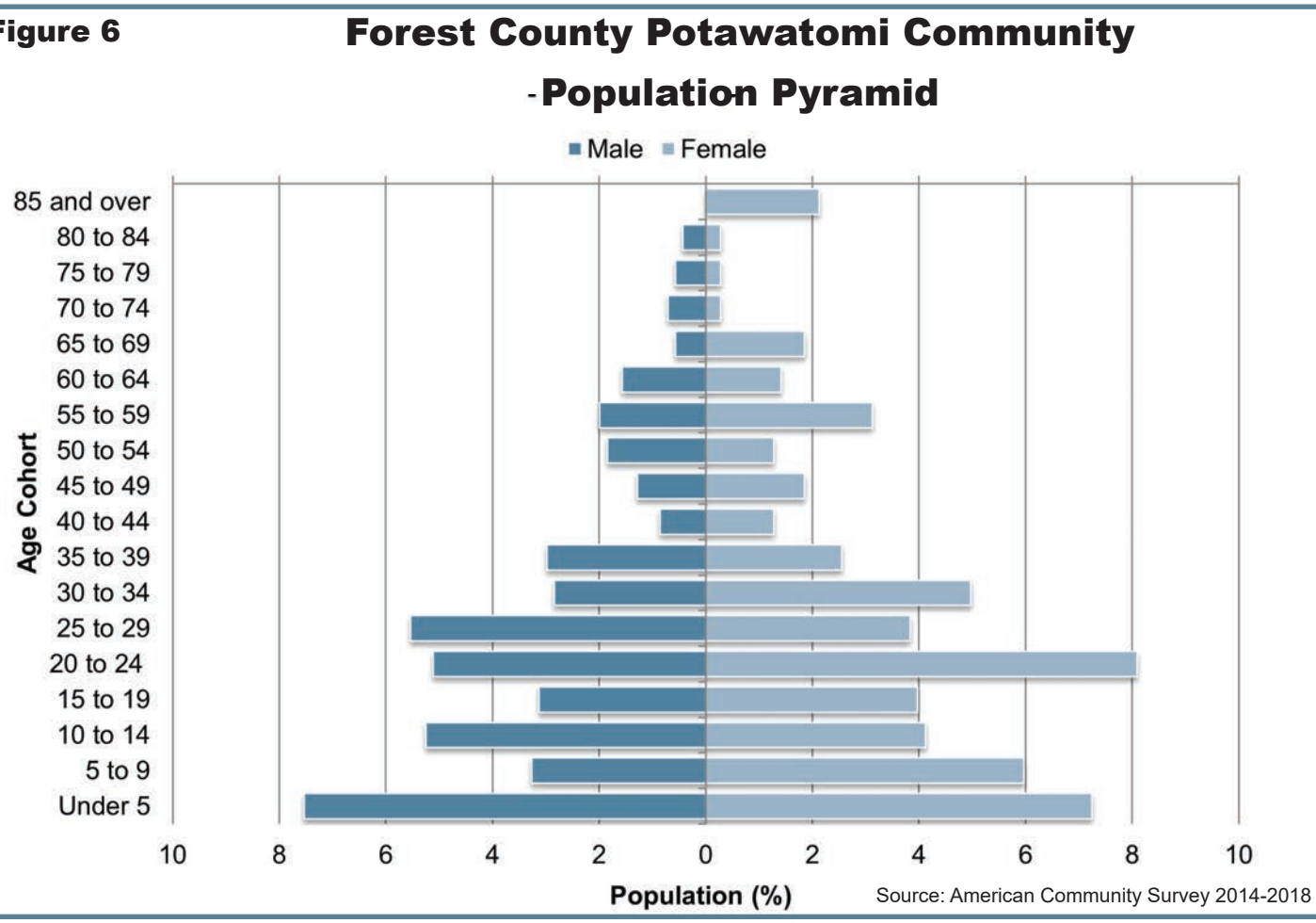
*: Percent of Individuals 15 years old or younger.

**: Percent of individuals between 25 and 54 years of age.

***: Percent of individuals in the 16-24 and 55-64 age groups.

Source: American Community Survey 2014-2018

Figure 6

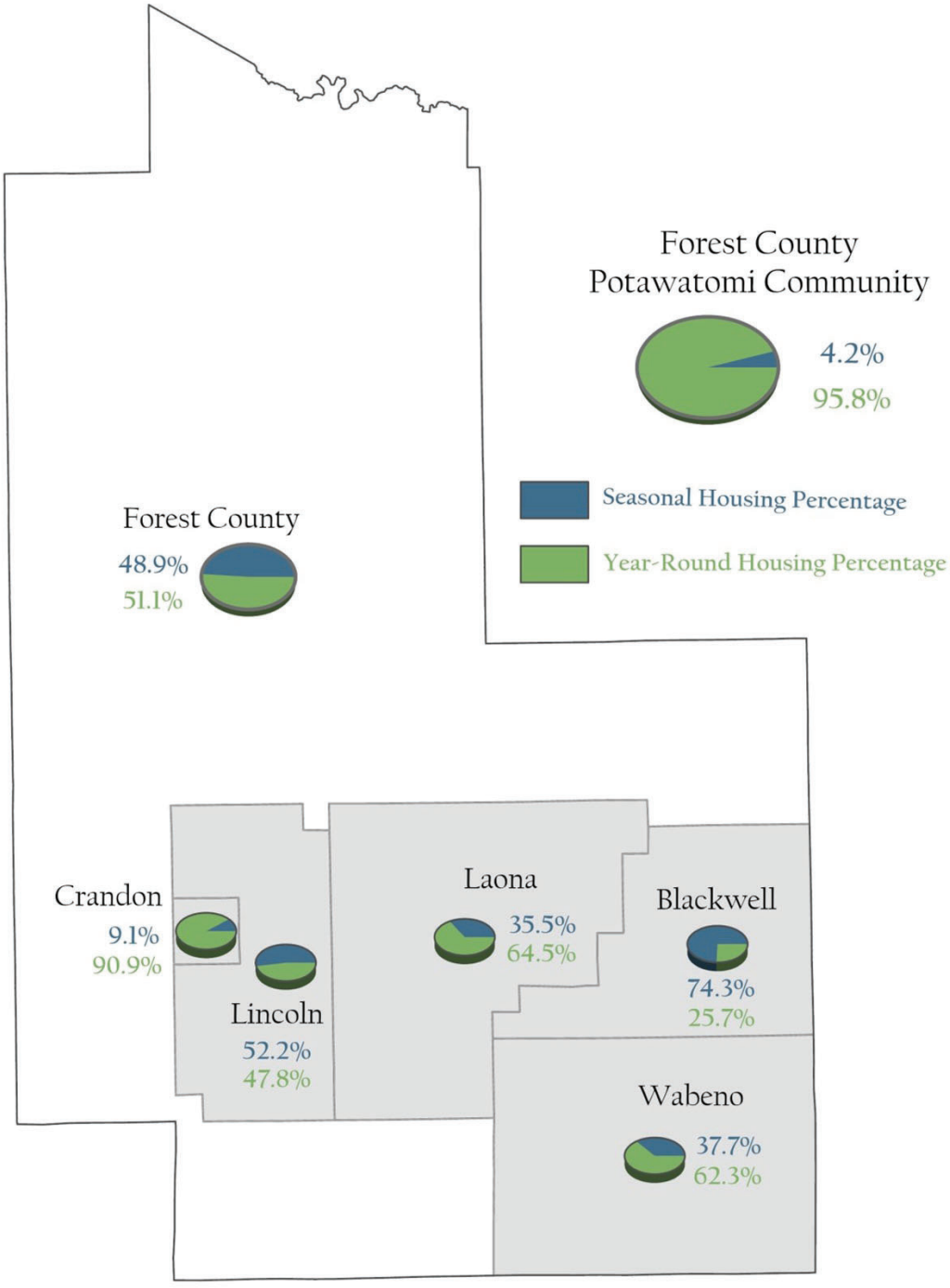


Source: American Community Survey 2014-2018

IMPACT OF SEASONAL HOUSING

Bicycling as a recreational activity is common among seasonal residents, especially when scenic trails are available. Seasonal residents often travel to an area just to enjoy the outdoors and this can include bicycling from place to place or on bicycle trails. **Figure 7** shows the percentage of seasonal housing units to total housing units in each of the municipalities where the FCPC has a presence. Seasonal housing rates vary from approximately 4.2% among FCPC members to 74.3% in the Town of Blackwell. Overall, Forest County had a seasonal housing rate of 48.9% in 2018. The trend over the last 20 years has been for seasonal home owners to retire to their seasonal home, thus becoming permanent residents in their former "cottages." New permanent and seasonal homes are being built as well. These trends are both projected to increase.

Figure 7 **Year Round & Seasonal Housing | 2018**



Source: American Community Survey 2014-2018

REVIEW OF EXISTING PLANS, POLICIES & REGULATIONS

This summary of existing plans, policies, and regulations influencing bicycling and walking in the FCPC area of Forest County starts with state and regional plans and policies and is then organized by municipality, concluding with some FCPC specific documents. Summaries include purpose, goals, recommendations, identification of bicycle and pedestrian facilities, and/or other key information provided.

The following plans, policies and regulations were reviewed for their relationship to walking and bicycling within the FCPC in Forest County:

- Wisconsin Bicycle Transportation Plan 2020
- State Trails Network Plan 2003
- USH 8 – Crandon to Laona, Forest County, Corridor Study Report, 2013
- Wisconsin State Statutes
- North Central Wisconsin Regional Bicycle & Pedestrian Plan, 2018
- Forest County Comprehensive Plan 2011
- Forest County Outdoor Recreation Plan 2017-2021
- City of Crandon Comprehensive Plan 2010
- Crandon Aera Multi-modal Trail Plan
- Town of Lincoln Comprehensive Plan 2020
- Town of Laona Comprehensive Plan 2011
- Town of Blackwell Comprehensive Plan 2010
- Town of Wabeno Comprehensive Plan 2010
- Wabeno School District Safe Routes to School Plan 2020
- FCPC Comprehensive Resources Plan 2016
- FCPC Future Land Use Plan 2016
- FCPC Long-range Transportation Plan 2017
- FCPC Transportation Safety Plan (including reference to Statewide Tribal Transportation Safety Plan) 2016
- FCPC Pathway to Wellness – Bicycle / Pedestrian Feasibility Study Along USH 8 2020
- Forest Country Potawatomi Community Health Assessment 2018

STATE OF WISCONSIN

WISCONSIN BICYCLE TRANSPORTATION PLAN 2020

The Wisconsin Bicycle Transportation Plan was adopted in December 1998. The intention of this plan is to serve as a blueprint for improving conditions for bicycling, clarify the role that Wisconsin Department of Transportation (WisDOT) plays in bicycling transportation, and to establish policies to further integrate bicycling into the current transportation system.

The following 2 points serve as the primary goals of the state bicycle plan:

- Increase levels of bicycling throughout Wisconsin, doubling the number of trips made by bicycles by the year 2010 (with additional increases achieved by 2020).
- Reduce crashes involving bicyclists and other motor vehicles by at least 10% by the year 2010 (with additional increases achieved by 2020).

Objectives of this plan include planning and designing new and improved transportation facilities to accommodate and encourage use by bicyclists, expanding and improving a statewide network of safe and convenient routes for bicycle transportation, expanding the range of bicycle education activities, improving enforcement of laws to prevent dangerous and illegal behavior by motorists and bicyclists, and encouraging more bicycle trips by promoting the acceptance and usefulness of bicycling.

The state bicycle plan generalizes the benefits of bicycling into the following 8 categories: health, transportation, safety, environmental, transportation choice, efficiency, economic, and quality of life. When weighing the health benefits of bicycling against the health risks (crash potential) of bicycling, the *National Bicycling and Walking Study* states that **"Once people are drawn to greater use of these modes, their numbers may reinforce their greater safety on the roadway as they become more fully accepted as legitimate users of the transportation system,"** meaning that increasing numbers of bicyclists could lower the likelihood of being involved in a bicycle crash, due to increased awareness and acceptance of bicyclists on the road.

This plan cites some interesting statistics from the 1987 study *Safety Effects of Cross-Section Design for Two-Lane Roads* that found that adding 4' wide paved shoulders on rural 2-lane highways reduces occurrences of bicycle-motor vehicle crashes by 29%, and the addition of 8' wide paved shoulders reduces these crashes by 40%.

STATE TRAILS NETWORK PLAN 2003

This 2003 document clarifies the Wisconsin Department of Natural Resources (WDNR) role and strategy in the provision of all types of trails. The plan identifies a series of potential trail corridors that would link existing trails, public lands, natural features, and communities. The preservation of transportation corridors, especially old rail lines, is discussed as a very important strategy for creating recreational corridors.

The closest corridor to the FCPC is Segment 2 – Forest Co. to Michigan, Nicolet State Trail (Northern Region). From this plan, WDNR has since fully developed the Nicolet State Trail, stretching over 89 miles of 19th century railroad corridor from Gillet in Oconto County, through Forest County to the Michigan State Line in Florence County. The trail passes through or near Carter, Wabeno, Blackwell and Laona.

At the time of the 2003 plan, Corridor 56 (Shawano to Crandon) was a rail corridor still under private ownership. Since then, the railroad has been abandoned and development as the Wolf River State Trail has been on-going.

USH 8 – CRANDON TO LAONA | FOREST COUNTY | CORRIDOR STUDY REPORT

In 2013, WisDOT completed a US Highway 8 corridor study through the use of the consulting firm, Bloom Companies. The study's purpose is to identify existing and future corridor needs and identify potential short term and long term solutions to satisfy the corridor's needs. The needs are generated from system linkage and route importance, shared use connections, and safety. Both corridor wide and intersection improvement recommendations were developed. The recommendations provide the starting point for future design projects. The conceptual improvements were developed without detail survey information so additional study is needed to determine the impacts of the proposed improvement options.

The study points out that, "although US Highway 8 itself is not a shared use facility, the US Highway 8 corridor accommodates many other modes of transportation outside of the main roadway. There are shared use paths that are located parallel and perpendicular to US Highway 8. A rails-to-trails corridor crosses US Highway 8 in Crandon. The need for shared use connections is increasing as there are an increasing number of users. In addition, WisDOT indicates many ATV users currently travel along US Highway 8 even though it is not legal and not safe."

The main shared use connections considered in the study include: Connecting the Wolf River State Trail in Crandon to the Nicolet State Trail in Laona; Connecting the FCPC to Crandon by both pedestrian / bicycle trails and ATV / snowmobile trails; and analyzing the existing US Highway 8 trail crossings and improving the visibility and safety of the crossings. In addition, a variety of corridor wide improvement options would improve shared use connections and safety throughout the corridor. One example includes off alignment options, discussed in the report as follows: "Within the Forest County Potawatomi Community, many trips are made between the residential area off Kwe Da Kik Lane and the commercial / community area off Everybody's Road. To improve safety between these locations, a

local road connection is suggested. The local road will allow for these short trips to be taken on a low-speed road without interfering with high-speed through traffic on US Highway 8." The study also suggested looking at options to build a pedestrian / bicycle trail to connect Everybody's Road to Crandon via Glen Street.

In summary, US Highway 8 provides many connections to state recreational trails, including snowmobile trails, ATV trails, and pedestrian / bicycle trails. Access to the trails is recommended to remain. Five-foot paved shoulders are proposed on US Highway 8 to provide bicycle accommodations. In the urban areas, sidewalks and bicycle lanes are proposed. The potential shared use connections identified in this study include: connecting the Forest County Potawatomi Community to Crandon by both pedestrian/bicycle and ATV / snowmobile trails and realigning trails as intersections are reconstructed. It is important to remember that any actual improvements require additional study to determine the impacts and the costs associated with them before they would be implemented.

WISCONSIN STATE STATUTES

The Wisconsin State Statutes serve as laws applicable throughout the State of Wisconsin.

It should be noted that as a sovereign nation, the FCPC does not have to adhere to these requirements, however, the FCPC does strive to provide a safe environment for the community.

An overview of the statutes that relate to safe bicycling and walking is provided below:

346.25: Crossing at Place other than Crosswalk
Under this statute, every pedestrian, bicyclist, or rider of any electric personal assistive mobility device crossing a roadway at any point other than within a marked or unmarked crosswalk shall yield the right-of-way to all vehicles upon the roadway.

346.28: Pedestrians to Walk on Left Side of Highway; drivers to yield on sidewalks
Under this statute, every pedestrian traveling along and upon a highway other than upon a sidewalk shall travel on and along the left side of the highway and upon meeting a vehicle shall, if practicable, move to the extreme outer limit of the traveled portion of the highway. Operators of vehicles shall yield the right-of-way to pedestrians, personal delivery devices, bicycles, and riders of electric personal assistive mobility devices on sidewalks as required by s. 346.47.

346.79: Special Rules Applicable to Bicycles
This statute refers to the special rules bicyclists must abide by whenever operating upon a highway, bicycle lane or bicycle
A person operating a bicycle shall not ride other than upon or astride a permanent and regular seat attached thereto • Except as provided, no bicycle may be used to carry or transport more persons at one time than the number for which it is designed. • In addition to the operator, a bicycle otherwise designed to carry only the operator may be used to carry or transport a child seated in an auxiliary child's seat or trailer designed for attachment to a bicycle if the seat or trailer is securely attached to the bicycle according to the directions of the manufacturer of the seat or trailer."
"No person operating a bicycle shall carry any package, bundle, or article which prevents the operator from keeping at least one hand upon the handle bars"
"No person riding a bicycle shall attach himself or herself or his or her bicycle to any vehicle upon a roadway"
"No person may ride a moped or motor bicycle with the power unit in operation upon a bicycle way"

346.80: Riding Bicycle or Electric Personal Assistive Mobility Device on Roadway
This statute refers to the rules that bicyclists must adhere to when riding upon a roadway.
"In this section, 'substandard width lane' means a lane that is too narrow for a bicycle or electric personal assistive mobility device and a motor vehicle to travel safely side-by-side within the lane"
"Any person operating a bicycle or electric personal assistive mobility device upon a roadway at less than the normal speed of traffic at the time and place under the conditions then existing shall ride as close as practicable to the right-hand edge or curb of the unobstructed traveled roadway, including operators who are riding two or more abreast where permitted, except when:" • "When overtaking and passing another vehicle proceeding in the same direction" • "When preparing for a left turn or U-turn at an intersection or a left turn into a private road or driveway" • "When reasonably necessary to avoid unsafe conditions, including fixed or moving objects, parked or moving vehicles, pedestrians, animals, surface hazards, or substandard width lanes that make it unsafe to ride along the right-hand edge or curb"
"Any person operating a bicycle or electric personal assistive mobility device upon a one-way highway having two or more lanes available for traffic may ride as near the left-hand edge or curb of the roadway as practicable"
"Any person operating a bicycle or electric personal assistive mobility device upon a roadway shall exercise due care when passing a standing or parked vehicle or a vehicle proceeding in the same direction and, when passing a standing or parked vehicle that is a school bus that is not displaying flashing red warning lights or a motor bus, shall allow a minimum of three feet between the bicycle or electric personal assistive mobility device and the vehicle"
"Persons riding bicycles or electric personal assistive mobility devices upon a roadway may ride two abreast if such operation does not impede the normal and reasonable movement of traffic. Bicycle or electric personal assistive mobility devices operators riding two abreast on a two-lane or more roadway shall ride within a single lane"
"Persons riding bicycles upon a roadway may not ride more than two abreast except upon any path, trail, lane or other way set aside for the exclusive use of bicycles and personal assistive mobility devices"
"No person may operate a bicycle, electric personal assistive mobility device, or moped upon a roadway where a sign is erected indicating that bicycle, electric personal assistive mobility device, or moped riding is prohibited."
"Every rider of a bicycle or electric personal assistive mobility device shall, upon entering a highway, yield, and every personal delivery device operator shall ensure that the personal delivery device, upon entering on a highway, yield the right-of-way to motor vehicles."

346.803: Riding Bicycle or Electric Personal Assistive Mobility Device on Bicycle Way
This statute refers to the rules that bicyclists must adhere to when riding upon a bicycle way.
"Every person operating a bicycle or electric personal assistive mobility device upon a bicycle way shall: • Exercise due care and give an audible signal when passing a bicycle or electric personal assistive mobility device rider or a pedestrian proceeding in the same direction. • Obey each traffic signal or sign facing a roadway which runs parallel and adjacent to bicycle way."
"Every person operating a bicycle or electric personal assistive mobility device upon a bicycle way open to two-way traffic shall ride on the right side of the bicycle way"
"Every operator of a bicycle or electric personal assistive mobility device entering a bicycle way shall yield the right-of-way to all bicycles and pedestrians in the bicycle way"

346.804: Riding Bicycle on a Sidewalk
When riding upon a sidewalk permitted for bicycle use by local authorities, this statute requires every person operating a bicycle upon a sidewalk shall yield the right-of-way to any pedestrian and shall exercise due care and give an audible signal when passing a bicycle or electric personal assistive mobility device rider or a pedestrian proceeding in the same direction.

347.489: Lamps & Other Equipment on Bicycles & Other Vehicles & Devices
This statute refers to bicycle equipment requires across the State of Wisconsin.
No person may operate a bicycle, motor bicycle, personal delivery device, or electric personal assistive mobility device upon a highway, sidewalk, bicycle lane, or bicycle way during hours of darkness unless the bicycle, motor bicycle, personal delivery device, or electric personal assistive mobility device is equipped with or, with respect to a bicycle or motor bicycle, the operator is wearing, a lamp emitting a white light visible from a distance of at least 500 feet to the front of the bicycle, motor bicycle, personal delivery device, or electric personal assistive mobility device. A bicycle, motor bicycle, personal delivery device, or electric personal assistive mobility device shall also be equipped with a red reflector that has a diameter of at least 2 inches of surface area or, with respect to an electric personal assistive mobility device, that is a strip of reflective tape that has at least 2 square inches of surface area, on the rear so mounted and maintained as to be visible from all distances from 50 to 500 feet to the rear when directly in front of lawful upper beams of headlamps on a motor vehicle. A lamp emitting a steady or flashing red light visible from a distance of 500 feet to the rear may be used in lieu of the red reflector.
No person may operate a bicycle, motor bicycle, or electric personal assistive mobility device upon a highway, bicycle lane, or bicycle way unless it is equipped with a braking system in good working condition, and can adequately control the movement of and to stop the bicycle, motor bicycle, or electric personal assistive mobility device whenever necessary.
No bicycle, motor bicycle, or electric personal assistive mobility device may be equipped with nor may any person riding upon a bicycle, motor bicycle, or electric personal assistive mobility device use any sire or compression whistle.



A sample muliti-modal bridge on a rural trail.

NORTH CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION

REGIONAL BICYCLE & PEDESTRIAN PLAN 2018

The North Central Wisconsin Regional Bicycle and Pedestrian Plan (NCWRBP) analyzes bicycle and pedestrian transportation throughout the North Central Region. The purpose of this plan is to "recommend policies, programs, and facilities to improve the safety, viability, convenience, and attractiveness of bicycling and walking for transportation." This plan also serves to "bridge the gap" between local community planning and State plans, as well as fill in gaps where improvements for bicycling and/or walking end in local community plans, to create a regional network of safe walking and bicycling.

The Federal Highway Administration defines the purpose of walking and bicycling networks in the following quote. "A complete network creates safe, comfortable, and accessible shared use routes for people walking and bicycling. The network may be comprised of varying facilities that appeal to a range of ages and abilities, such as shared use paths, sidewalks, and bike lanes. These facilities also provide equitable transportation for people of all income levels."

The Regional Bicycle and Pedestrian Plan contains the following 4 region-wide goals:

- **Mobility** – The Trail System must enhance bicyclists' ability to get around the Region including access to key destinations such as schools, parks, retail areas, and other public facilities.
- **Functionality** – New off-road routes, improved existing street routes, signage and marking, and route promotion must be combined to function as a system that is easy and desirable to use.
- **Safety** – Every bicyclist and pedestrian in the North Central Region deserves a system that is safe for travel. Improving bicyclist and pedestrian safety was a top priority of the 2004 North Central Wisconsin Regional Bicycle Facilities Plan, and is a continued priority.
- **Connectivity** – The Trail System must provide a seamless transportation system on multiple levels including; internally to all areas of a community; externally to outlying neighbors around the Region; and becoming a part of the bigger picture of a statewide trails network.

REGIONAL CORRIDORS

Regional corridors are used to link communities with other communities. Bicycle corridors form a conceptual network representing where people want to go on an inter-community or regional basis. Implementing such connections is not always accomplished in the most direct ways, however. Traffic volumes and other safety factors, physical barriers, and the location of previously existing facilities all play a role in the ultimate determination of routes. This recommended network was identified from existing local plans, local input, suitability mapping, and incorporates inventoried existing facilities. Regional corridors within the FCPC study area are described below*:

- **Crandon – Laona (12 miles) – Poor Bicycling Condition**

  The main bicycle corridor between Crandon & Laona follows US Highway 8, a high-volume, undesirable bicycling road with paved shoulders.

- **Crandon – Nelma (34 miles) – Good Bicycling Condition**

  Cyclists can conveniently follow State Highway 55 through the Chequamegon-Nicolet National Forest, a route marked as in best condition for bicycling in its entirety.

- **Laona – Wabeno (10-13 miles) – Good Bicycling Condition**

  Bicyclists have the choice of 2 direct routes between Laona and Wabeno: The Nicolet State Trail, or County Highway H, a road designated as best conditioned for bicycling.

**It is important to note that the FCPC Bicycle and Pedestrian Plan takes precedent over the NCWRBP in case of conflict over recommended or suggested routes.*

FOREST COUNTY

There are several plans at the Forest County level and at the local level that directly relate to walking and bicycling. The County also has numerous facilities that provide opportunities for walking and bicycling. Below is an overview of the walking and bicycling policies the County has in place.

FOREST COUNTY COMPREHENSIVE PLAN 2011

Bicycling and walking are covered in the Bicycle and Pedestrian Facilities section of the Transportation Element of the County Comprehensive Plan. All roads in Forest County are available for bicycle and pedestrian travel. Sidewalks exist in Crandon, Laona, Mole Lake, and Wabeno. Forest County and its local units have slowly expanded designated bike routes on highways and off-road trails over time.

At the county level there are two principal trails in the area. "The Nicolet State Trail" enters Forest County from the south and links with a number of closed circuit biking trails within the National Forest. Scenic forest roads may also make interesting bike routes. The "Wolf River Trail" was being developed by Forest County when the County Comprehensive Plan was adopted. The completed trail utilizes the abandoned rail line between Crandon and White Lake as a shared use trail in cooperation with the WDNR and both Forest and Langlade counties.

Transportation objectives and policies related to walking and bicycling in the Forest County Comprehensive plan include the following:

"Objective 2 – Encourage a balanced transportation network that provides a choice in the type of mode (i.e. car, bus, bike, walking, etc.) easy transfer between modes and transportation opportunities for those without use of an automobile."

- *"Policy 8 – Work with local governmental units to plan for a network of interconnected roads in planned development areas to control highway access, preserve rural character, and improve access to these areas.*
- *"Policy 12 – Encourage traditional neighborhood designs (TND) to support a range of transportation choices."*

FOREST COUNTY OUTDOOR RECREATION PLAN 2017–2021

The primary purpose of the County's Outdoor Recreation Plan (ORP) is to provide continued direction toward meeting the current and future outdoor recreation needs of the County. This is accomplished through an inventory and analysis of outdoor recreational facilities, and the establishment of recommendations to meet identified needs.

Recommendations and capital improvements in the ORP related to walking and bicycling for the area include:

COUNTY-WIDE RECOMMENDATIONS:

Wolf River State Trail Trailhead

Develop a trailhead for the Wolf River State Trail in the City of Crandon. The trail head would include a paved parking area, picnic area with tables and a shower/ restroom facility.

Biking / Hiking Trail Development

Develop a hiking-biking trail near the City of Crandon in 3 separate phases.

Phase 1 (completed) connects the Crandon School District to the City of Crandon by developing a surfaced trail adjacent to US Highway 8.

Phase 2 proceeds through the City of Crandon connecting to the Forest County Potawatomi Community Health and Wellness Center by developing a surfaced trail adjacent to US Highway 8. The FCPC is working on this connection and will complete part of it with TAP grant funds in 2024.

Phase 3 connects the City of Crandon to Mole Lake and the Mole Lake Casino Lodge and Conference Center by developing a surfaced trail adjacent to County Highway S and US Highway 55.





Informal trails along USH 8 near Stone Lake.

CAPITAL IMPROVEMENTS:

Mountain Bike Trails

Develop mountain bike trails in: Otter Springs Recreation Area and the Forest County Forest ATV Trail (between Lakes Metonga and Lucerne).

SURROUNDING MUNICIPALITIES

There are several plans at the local municipal level that relate to walking and bicycling in the study area. Below is an overview of the walking and bicycling policies the various municipalities have in place.

CITY OF CRANDON

The City of Crandon has various plans and policies in place directly relating to walking and bicycling in the City. As of 2020, the City has a marked bicycle route that connects the Crandon school complex with the City on a path; a route through the City; and an off-street path along several blocks of Pioneer Street

CITY OF CRANDON COMPREHENSIVE PLAN 2010 (UPDATE IN PROGRESS)

Bicycling and walking are covered in the Transportation Element of the City Comprehensive Plan. There is interest from the City to develop an internal trail system throughout the city and connect to existing trails systems within the county. The Plan discusses development of a pedestrian path from Westcott Avenue on US Highway 55 to the Beach Park on Lake Metonga. There is also discussion related to the Wolf River Trail that enters the City from the south along the former rail line that runs near Lakeview Street, including establishment of a trail head within the City limits.

Transportation objectives and policies related to walking and bicycling in Crandon's Comprehensive Plan include the following:

"Objective 3 – Promote the development of shared use trails, trail linkages, and wide shoulders on roads as part of new developments or road projects."

- *"Policy 1 – Cooperate with the county and the state on any project that affects the city."*
- *"Policy 5 – Support development of the Wolf River Trail Project."*
- *"Policy 6 – Explore the development of a trailhead at the former gas plant, with parking and restrooms to enhance the trail project."*

TOWNS

TOWN OF LINCOLN COMPREHENSIVE PLAN 2020

The Town of Lincoln recently updated its Comprehensive Plan. This update specifically acknowledges the development of the FCPC bicycle and pedestrian system.

The Plan discusses how the "shared use" concept

applies to most roads within the Town: "On rural town roads where traffic volumes are less than 1,000 vehicles per day, generally no special improvements are necessary to accommodate bicycles. Bicyclists and pedestrians commonly utilize these town roads. Electric personal assistive mobility devices such as wheelchairs, scooters and Segways can utilize many of the same trails and roadways as cyclists and pedestrians."

Transportation goals related to walking and bicycling in Lincoln's 2020 Comprehensive Plan include the following:

"Goal 2 – Increase and enhance recreational trail system."

TOWN OF LAONA COMPREHENSIVE PLAN 2011

All roads in the Town are available for bicycle and pedestrian travel. Sidewalks create the primary pedestrian network, however, much of the sidewalk that exists within the downtown area is showing signs of aging and in need of repair or rehabilitation. Only 1 east-west sidewalk exists.

Transportation goals and policies related to walking and bicycling in Laona's 2011 Comprehensive Plan include the following:

"Goal 3 – Support recreational trails and water access to promote tourism, and improve the quality of life in Laona."

- *"Policy 2 – Reconstruct or add sidewalks when downtown roads are reconstructed."*

TOWN OF BLACKWELL COMPREHENSIVE PLAN 2010

All roads are available for bicycle and pedestrian travel in Blackwell. No sidewalks exist. Roads that do not have sidewalks may not provide much gravel shoulder to walk on outside of the traffic lanes.

Transportation goals and policies related to walking and bicycling in Blackwell's 2010 Comprehensive Plan include the following:

"Goal 2 – Support and maintain a safe and efficient Town road system and recreational trail system."

"Objective 2 – Explore opportunities to develop integrated shared use trail systems and recreational facilities."

- *"Policy 3 – Consider connecting adjacent properties with road connections when reviewing development plans and proposals, then add those connections to the official Town map if those connections are Town roads."*
- *"Policy 4 – Support snowmobile, ATV, and non-motorized shared use trails within the Town."*

TOWN OF WABENO COMPREHENSIVE PLAN 2010 (UPDATE IN PROGRESS)

The Town of Wabeno is currently updating its Comprehensive Plan. The final draft of this update specifically acknowledges the development of the FCPC bicycle and pedestrian system and is expected to be adopted by the Town Board.

The Plan discussed how all roads are available for bicycle and pedestrian travel. Sidewalks create the primary pedestrian network. Limited sidewalks exist in downtown Wabeno; mainly on one side of State Highway 32. Issues of most concern to pedestrians are missing sidewalk sections, broken or uneven sections, and intersections without curb ramps. Roads that do not have sidewalks may not provide much gravel shoulder to walk on outside of the traffic lanes. Wabeno contains portions of the Nicolet State Trail that generally parallels State Highway 32.

Transportation goals and policies related to walking and bicycling in Wabeno's final draft 2021 Comprehensive Plan include the following:

"Goal 1 – Support and maintain a safe and efficient Town road system."

"Objective 4 – Improve downtown aesthetics while maintaining efficient travel for all motorized and non-motorized modes of transportation."

WABENO SCHOOL DISTRICT SAFE ROUTES TO SCHOOL PLAN 2020

The Wabeno Safe Routes to School (SRTS) Plan focuses on the 2-mile radius around the Wabeno elementary and high schools in downtown Wabeno. A number of recommendations are made to make the approach to the schools safer for children. This includes addressing State Highway 32 and the intersection of

State Highway 32 and County Highway H, which are integral to the FCPC system plan as well.

In addition, the SRTS Plan broader issues that extend beyond the 2-mile radius. These include the need for education on safe pedestrian and bicyclist practices and need to create awareness about the benefits of walking and biking.

FOREST COUNTY POTAWATOMI COMMUNITY

The FCP Community has several plans and policies in place with parts directly relating to walking and bicycling. Some sidewalks exist between FCPC campus facilities and various informal paths have been worn in place by residents. Some FCPC roads have wide lanes and/or shoulders. Below is an overview of the FCPC plans and documents that reference or relate to walking and bicycling:

NESH NABEK GE KEN DE JEK FCPC COMPREHENSIVE RESOURCES PLAN

In 2016, the FCPC completed a comprehensive resource management plan. Part of the process for the development of this plan was to utilize the results from a 2013 community survey of adult tribal members residing in Forest County to determine priorities for the management of the Tribe's natural resources. The survey results indicated a high level of support for bike/ped facilities, as follows:

Community Preferences

- *92% – Develop walking / biking routes on the reservation lands*
- *80% – Network of shared use trails*

The plan also explored "Physical Capacity Building". This section discussed how the principles identified for managing the physical assets of the FCPC should provide a "roadmap for more sustainable outcomes in planning, design, construction and operations wherever feasible". Strategies to implement the principles "should encourage a strong sense of place and community, improve quality of life, community connectivity, and be pedestrian oriented". The plan determined that investing in these types of strategies will increase the capacity of the FCPC "to deal with uncertainty and change while ensuring that the physical assets of the Tribe are maintained for future generations to come." Based on that approach, the plan identified a number of priorities. Many of these community priorities related to bicycling and walking, as follows:

Community Priorities

- *Create a healthy community*
- *Increase safe route of travel on the reservation by improving existing roads*
- *Create a network of shared use trails*
- *Create walking / biking trails*

The plan also set the following goal: "Establish walking trails and prohibit off-road vehicle use and development in wildlife refuge areas."

KE GE KEN DEK (LAND KNOWLEDGE) FCPC FUTURE LAND USE PLAN



Destinations to connect with in Wabeno.

Also in 2016, the FCPC developed a tribal land use plan. The process for this plan included use of results from a 2012 survey conducted by the FCPC Planning Department and a public workshop. The survey results again indicate strong support for bike/ped facilities. When asked how tribal members feel about land use planning, 94% favor developing walking and biking routes.

Land use workshop participants were asked to identify issues and opportunities related to land use for the FCPC, and several of the points outlined related to bicycle and pedestrian planning as follows:

Issues

- *Lack of connectivity between residential areas, natural areas, recreation sites, and community facilities*
- *Desire for economic development, local jobs and business activity*
- *Existing housing areas lack amenities, such as sidewalks and recreation sites*
- *Low density residential neighborhoods use a lot of land and are expensive to serve with utilities and sidewalks*
- *Limited land base for new housing development in proximity to services*

Opportunities

- *Tribal heritage and culture*
- *Untapped natural resources*
- *A more sustainable and healthy living environment*

Implementation of the land use plan encourages sustainable development and livability principles. The plan explains: "The next step for Plan implementation is to develop a Sustainable Development Code, as was recommended by the FCPC Mini-Charrette in 2015. The purpose of such a code is to encourage sustainable development with a focus on creating a livable and healthy community. This type of Code provides a format for future development which explains how building, structures, and circulation patterns relate to public space, natural features, and to each other while allowing flexibility in use over time. The intent of a Sustainable Development Code is to contribute to the unique and desirable character of the community by:

- Responding to existing conditions
- Preserving and encouraging Native traditions
- Providing public access to the natural environment
- Create land use patterns that encourages walking, bicycling, and transit use"

The plan goes on to catalog a number of livability and placemaking projects. Many, of which, have bicycle and/or pedestrian components as follows:

OLD JAEGER FARM

- Problem: Empty lot and unsafe road.
- Proposed Solution: Community park (basketball court, fence to keep animals out, lights, water fountain, splash pad, landscaping), safe connection for ATVs, walking, biking, paved roads, and sidewalks.
- Project Guide: Large park with theme water fountains/splash, relocate baseball field, new basketball court, larger gathering/rec area, and connecting N/S Stone Lake.

YOUNG EAGLES LANE TO USE US HIGHWAY 8

- Problem: Unsafe ATV trail, snowmobiles and lots of other use, speed issue for residents.
- Proposed Solutions: Improve safety-roughness and rocks, mud pits are okay, residents don't mind people going through otherwise.
- Project Guide: Well-made trails that let you know you are somewhere different, wayfinding signs.

YOUNGS LANE

- Problem: No lights, unsafe for walking, no playground, empty lot w/basement.
- Proposed Solutions: Playground in area, do something with basement.
- Project Guide: Connect neighborhood to central park location or designate area.

POTAWATOMI TRAIL

- Problem: No sidewalks, shared use safety issue (cars, ATVs, bikes, snowmobiles, dirt bikes, UTVs, buses), no lights, speeding.
- Proposed Solutions: Walking trail, ATV trail, softer lights.
- Project Guide: Pleasant walking/bike trail, soft lighting to match area, cross walks.



USH 8 near Stone Lake.

WEJ MO GEK COURT

- Problem: Unsafe ATV trail, erosion issues.
- Proposed Solutions: Landscaping...
- Project Guide: Trail connectivity, tunnel ATV underpass.

US HIGHWAY 8

- Problem: No safe crossing / limited sight distance, tunnel unsafe / height limitations, multiple ATV crossings, unsafe winter conditions, speeding trucks, few signs to identify buildings on Stone Lake Campus.
- Proposed Solutions: Transition zone, monument sign to mark arrival into FCPC, connecting trail system along trail segment planned along US Highway 8 out of Crandon, work with WisDOT to develop safe crossing.
- Project Guide: Cultural bridge connecting from museum, history/culture, art bridge design, regional landmark, celebrate views of highpoint overlook, historical marker, connect elder complex area to a central park location.

INDIAN DRIVE

- Problem: No sidewalks or pathways for ATVs, bikes, or pedestrians, no safe crossings, road is narrow.
- Proposed Solutions: Paint to designate high-visibility crossings.
- Project Guide: Reroute or re-purpose, residential calming, address parking.

MISH KO SWEN DRIVE

- Problem: No sidewalks or pathways for ATVs, bikes, or pedestrians, sight distance – members feel unsafe walking.
- Proposed Solutions: Pedestrian walkway, bike lanes, network walkways, and trails to connect to buildings.
- Project Guide: Cross walks – art designed, connectivity.

STONE LAKE CAMPUS

- Problem: Trails not connected to new facilities, trails created by ATV riders often result in both safety and environmental degradation, very few signs identify buildings or provide guidance.

- Proposed Solutions: Develop defined network of walking trails, ATV trails and bike paths, system of culturally appropriate wayfinding elements (common design).
- Project Guide: Region connectivity, wayfinding signage, cultural art opportunities.

FCPC LONG-RANGE TRANSPORTATION PLAN

The Forest County Potawatomi Community has a long-range transportation plan that addresses a range of transportation modes. The plan states that: "Providing for alternative transportation modes is quickly becoming a high priority goal. The use of ATVs, snowmobiles, and bikes has risen significantly in the last few years and so has the need to accommodate them within the transportation system."

The report goes on to state that: "Within the tribal communities, walking is a common activity and method of travel. Areas off the vehicle roadways will need to be developed to protect the lives and property of all users. In order to encourage the use of a trail system, those routes must be able to serve 2 separate needs. The first is transport from one location to another. The second is that these routes must be enjoyable to use."



USH 8 approaching the Stone Lake Community C-store.

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FCPC TRANSPORTATION SAFETY PLAN

In addition to the long-range transportation plan, the FCPC also has a Transportation Safety Plan which was completed in 2016. That plan is organized around areas of emphasis. One of these emphasis areas is "Provide safe pedestrian and bicycle travel". The plan goal for this area of emphasis is as follows:

Provide pedestrian and bicycle travel facilities to decrease the number of collisions with motor vehicles and increase safe pathways.

To achieve this goal, a number of potential strategies are recommended as follows:

- Develop a network of pedestrian walkways, bike lanes, and trails to connect existing buildings in Stone Lake. (National Charrette Institute and Local Government Commission)
- Connect the Forest County Potawatomi Community to Crandon by both pedestrian/bicycle trails and ATV/snowmobile trails. (Bloom Companies, LLC.)
- Pursue the possibility of connecting the trail system with the trail segment currently planned along US Highway 8 out of Crandon. (National Charrette Institute and Local Government Commission)
- Create a pedestrian walkway along the south side of Mish ko swen Drive. (National Charrette Institute and Local Government Commission)
- Create a pedestrian trail linking the Executive Administration Center to the insurance building and the Health and Wellness Center.
- Work with WisDOT to develop safe crossing points along the segment of US Highway 8 that divides the Stone Lake area. (National Charrette Institute and Local Government Commission)
- Incorporate LED lighting along the trail and crossings to increase safety.
- Use paint to designate high-visibility crossings

along the roads and in the parking lots. Crossings contribute to safety by reminding motorists to look out for pedestrians and clearly define paths. (National Charrette Institute and Local Government Commission)

- Install or widen paved shoulders to a minimum of 4' for use by pedestrians and bicyclists.
- Provide well-marked crosswalks to help guide pedestrians and slow motorists for safety.
- Provide sidewalks for pedestrians and bicyclists.
- Explore the option of a pedestrian overpass across US Highway 8.
- Complete a walking assessment on FCPC roadways.

The FCPC also participated in a statewide effort with WisDOT and the other Tribes across the state to address tribal transportation safety by compiling a Statewide Tribal Transportation Safety Plan. This effort was also organized around areas of emphasis. All of the areas identified have at least some broad relationship to bicycle and pedestrian planning for the FCPC. For example, improving intersection safety would certainly aid bicycling and walking. This also applies to reducing run-off the road crashes and addressing emergency service issues. More detail is provided on the more directly related safety emphasis areas, as follows:

Emphasis Area 2: Improve Shared use Trails

- Currently no accommodations for pedestrians and bikes other than US Highway 8 shoulder; development of recreation center on Mish Ko Swen Drive will likely increase pedestrian / bike numbers.
- There are no pedestrian accommodations in Carter or Blackwell areas.
- Pedestrians and bicycles need to be separated from roadways throughout the Tribal lands.
- No marked ATV crossings along US Highway 8.
- ATV trails are mostly informal trails.



Goals / Strategies for Emphasis Area 2:

- Add shared use path along north side of US Highway 8 from Crandon to Otter Creek Road.
- Add pedestrian accommodations to connect Tribal members to each other and to Tribal facilities, including along Mish Ko Swen Drive.
- Address lack of pedestrian/bicycle accommodations along WIS 32 in Carter and County Highway H in Blackwell.
- Add pedestrian underpass of US Highway 8 just west of Kwe da kik Lane to provide grade separated crossing.
- Improve informal ATV trails and maintain trails after improvement; follow guidance from Wisconsin Department of Natural Resources (WDNR) document ***So You Want to Build an ATV Trail: A Practical Guide for Evaluating Potential for Trail Grant Sponsors for trail construction***.
- Provide marked ATV crossing locations on US Highway 8.

Emphasis Area 3: Improve Local Road Network

- There are currently several dead end roads with no outlet that have limited access for emergency services and residents to the housing area north of Mish Ko Swen Drive.
- Limited local roadway connections in areas with potential for future development.
- There are worn or missing signs throughout the Tribal lands.

Goals / Strategies for Emphasis Area 3:

- Connect Kwe Da Kik Lane and Wej Mo Gek Court to provide better access to housing area; also provide connection to Bug Lake Road.
- Provide additional local roadway connections

in Blackwell, Carter, and Crandon areas as development warrants.

- Replace worn or missing signs.

Emphasis Area 6 Increase Safety Awareness

- Using educational outreach campaigns and enforcement campaigns provides opportunities to increase safety awareness among Tribal members.

Goals / Strategies for Emphasis Area 6:

- Run educational campaigns on safety issues such as seat belt usage and impaired driving.

In addition to the 6 main emphasis areas discussed above, some general strategies were identified to increase safety on the Tribal transportation network:

- Expanded clear zones to increase sight distance and allow more room for vehicle recovery
- Add additional way finding signs for Tribal buildings and facilities
- Add dual language signs on non US/State roadways

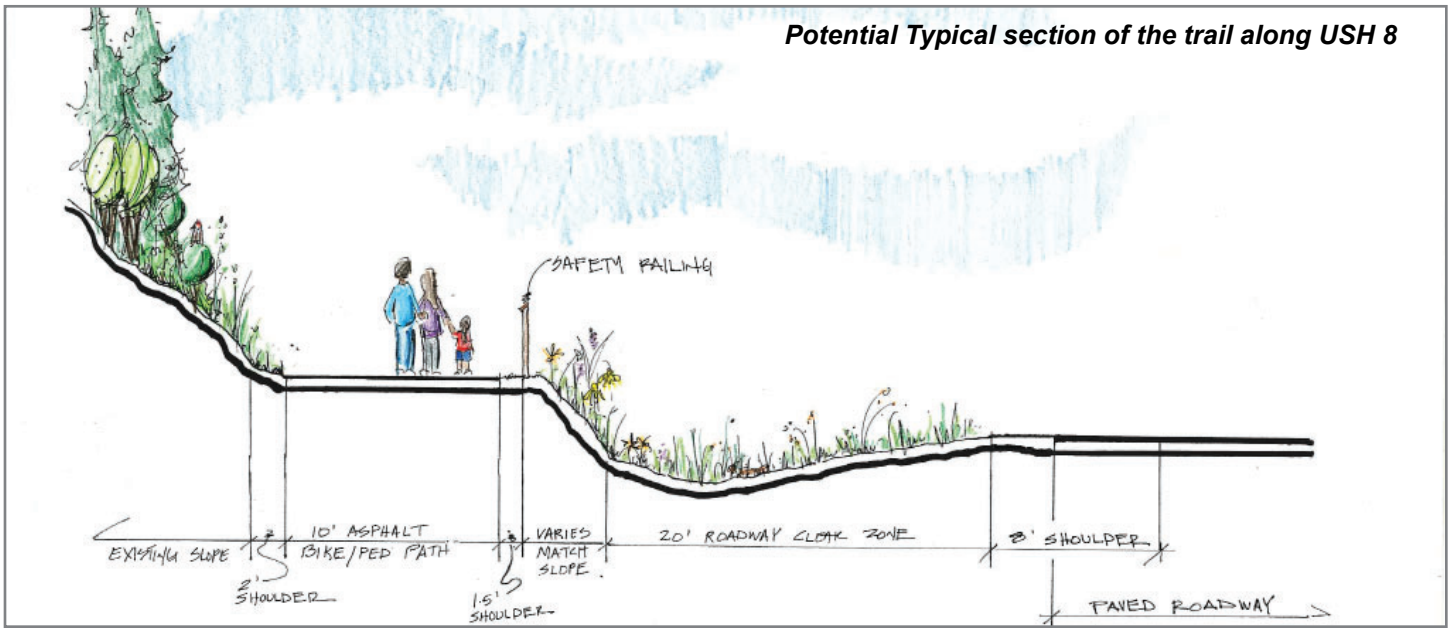
The potential improvement strategies and emphasis areas were prioritized by the Tribal working group. There were 4 priority groupings identified, based on importance to the Tribe. Each of the priority groupings contains strategies to address 1 or more of the emphasis areas. A prioritization matrix was developed.

PATHWAY TO WELLNESS
BICYCLE / PEDESTRIAN FEASIBILITY STUDY ALONG US HIGHWAY 8

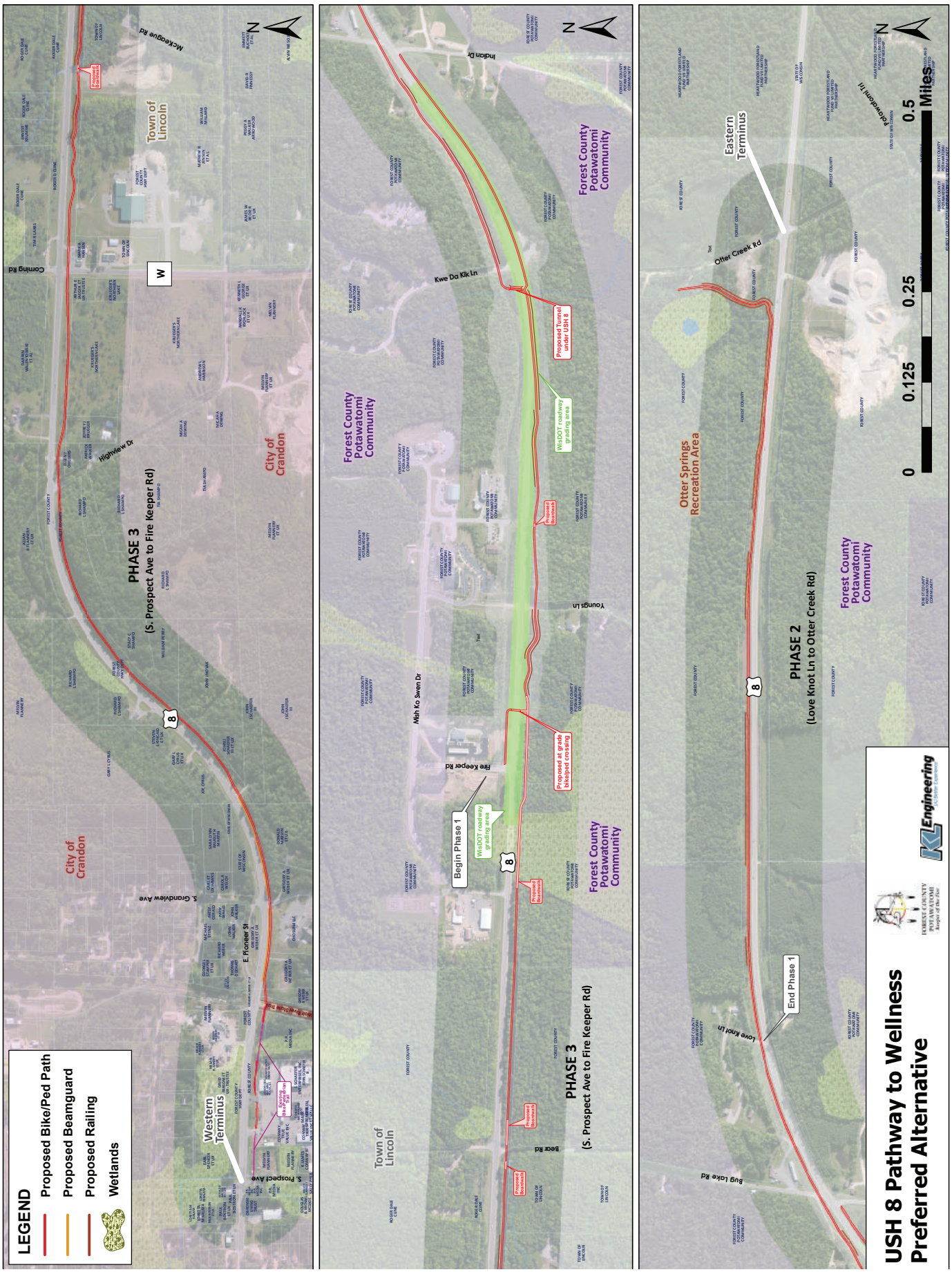
With assistance from a WisDOT planning grant, FCPC contracted with the consulting firm, KL Engineering, to develop a feasibility study on the addition of bicycle and pedestrian facilities along US Highway 8 from S. Prospect Avenue to Otter Creek Road (~ 4.5 miles). This study was a precursor and foundational element for this comprehensive, area-wide bicycle and pedestrian plan for the Forest County Potawatomi Community, developed in partnership between KL Engineering and the NCWRPC.

The feasibility study occurred from October 2019 to January 2020 and included data analysis, conceptual planning, public outreach, development of a preferred alternative, and detailed cost estimating. The impetus behind planning for a new bicycle / pedestrian facility that would provide a direct, accessible, safe off-road transportation option for bicyclists and pedestrians along US Highway 8. The alignments themselves were

Potential Typical section of the trail along USH 8



MAP 1 – US HIGHWAY 8 PATHWAY TO WELLNESS MAP



developed with the following goals for the routes:

- Minimize the impact to the natural environment (waterways, wetlands, endangered resources, grading, cultural resources, etc.).
- Include a grade-separated crossing.
- Tie in with already-established destinations along the corridor (FCPC campus, Crandon, commercial and recreational facilities, residences).
- Incorporate a sustainable design.
- Minimize private real estate purchases and partners with other government entities with the use of their land if necessary.
- Partner with other roadway projects in planning and potentially in construction.
- Minimize construction costs to the greatest extent.
- Acknowledge recreational vehicle routes when planning the bicycle / pedestrian trail.
- Respect adjacent land uses.

Concurrent conceptual planning for US Highway 8 roadway improvements within this corridor added challenges with the conceptual design. Three separate alignments were developed for review by staff, WisDOT, and the public.

Outreach in the development of the alignments largely included FCPC, WisDOT, the public, adjacent local governments, and the North Central Wisconsin Regional Planning Commission. In addition to staff meetings and other communication, 2 separate Public Involvement Meetings (PIM) were held on November 18, 2019. Feedback from those meetings assisted in the development of a preferred alternative.

The preferred final alternative is a combination of elements from each of the alignments. Ultimately, a phased implementation of the 4.5 mile trail is suggested based on the concurrent roadway improvements, grant funding timelines, total project cost, environmental, physical constraints, and real estate impacts. The proposed Phase 1 of the project (~ 2.3 miles) is located in the central area, which reaches from Fire Keeper Road to Bug Lake Road.

With the development of a detailed cost estimate, next steps for the plan include grant requests, discussions with potential partners of the project, inclusion in long-range planning documents, and implementation in future budgets.

FOREST COUNTY POTAWATOMI COMMUNITY HEALTH ASSESSMENT 2018

The purpose of the Health Assessment is to collect data regarding the FCPC's health status to identify and prioritize the health needs of the community. The findings of the assessment will provide the background for the development of a Community Health Improvement Program for the community.

The Health Assessment identified Obesity Prevention as one of its 3 primary areas of focus for the Community Health Improvement Plan. The report points out that obesity is a factor in heart disease and diabetes. Nationwide both of these chronic diseases are leading



Steep slopes and climbing topography of USH 8

EXISTING FACILITIES INVENTORY

As part of the planning process, it is important to take stock of what currently exists in the community. Existing facilities in the area of the proposed pathway system for this Plan are described below and generally shown on the Proposed Bike/Pedestrian Routes Maps in Chapter 3 of this report, but **Map 2 – FCPC Overview Map** on the next page shows an overview of the area with the communities, highways, and regional trails highlighted. .Of course, every public road is essentially open for walking and biking, with the exception of limited access divided highways such as an Interstate.

CITY OF CRANDON

The City of Crandon has a limted network of sidewalks primarily along Lake Avenue & STH 32/ USH 8 that connect some key destinations throughout the city. Sometimes 3' paved shoulders exist along some highways at the edges of Crandon, which provide some space to occasionally walk or bike to locations that are not primary walking or bicycling destinations.



Crandon SRTS path

Shared use Path – In an effort to provide pedestrian and bicycle access to the Crandon School District (K-12) building, a shared use path parallels US Highway 8 on the northwest side of the City. Another shared use path on Pioneer Street connects Boulevard Avenue through the City to the grocery store.

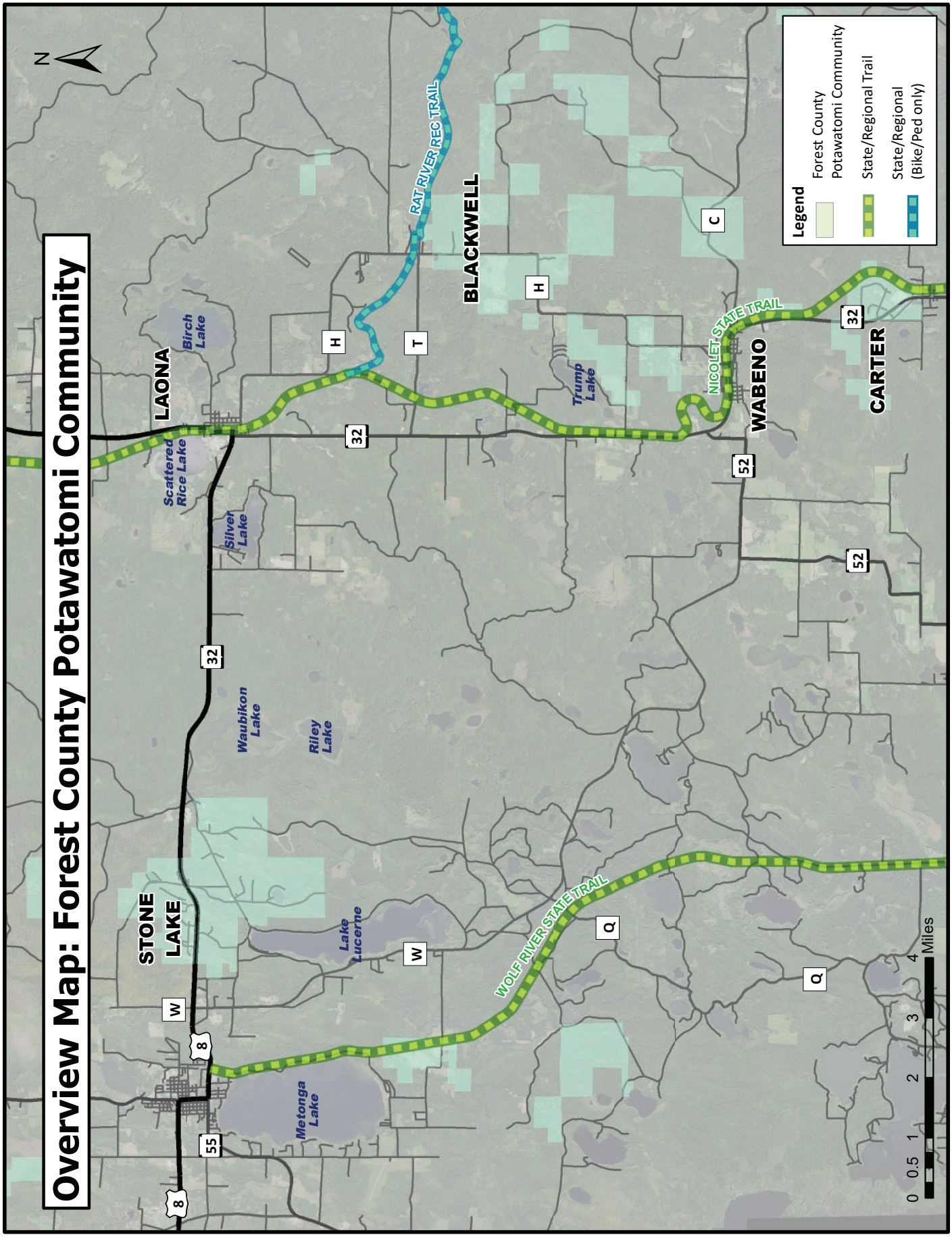
The **Wolf River State Trail** starts in Crandon and travels south. See this trail's description under its own heading in this chapter.

STONE LAKE CAMPUS

The Stone Lake campus has many of the FCPC buildings on it. There are sidewalks that connect some of the buildings to each other. The roads that connect all the buildings to each other have wide shoulders on them; 35' wide curb and gutter roads. Some FCPC buildings are about 1/2 mile from the main campus. Those buildings are connected to the main campus via 24' wide asphalt roads with gravel shoulders and ditches.


Aerial of Stone Lake Campus

MAP 2 – FCPC OVERVIEW MAP



DOWNTOWN LAONA



Downtown Laona, in the Town of Laona, has a sidewalk along USH 8. Most other roads connect to each other generally in a grid pattern and are about 24' wide with gravel or grass shoulders.

The **Nicolet State Trail** passes through downtown Laona. See this trail's description under its own heading in this chapter.

DOWNTOWN WABENO

Downtown Wabeno, in the Town of Wabeno, has a sidewalk along the south side of State Highway 32 with only a small segment on the north. Most other roads connect to each other generally in a grid pattern, and are about 24' wide with gravel or grass shoulders.

The **Nicolet State Trail** passes through downtown Wabeno. See this trail's description under its own heading in this chapter.



CARTER

Carter, in the Town of Wabeno, has 24 foot wide asphalt and gravel roads that connect with each other.

The **Nicolet State Trail** connects Carter to downtown Wabeno. Access to the trail is only accessible to half the houses by local roads, with the other half needing to use STH 32 to access other local roads that connect to the trail. See this trail's description under its own heading in this chapter.

BLACKWELL, LAONA & WABENO TOWN ROADS

Many town roads in Blackwell, Laona, and Wabeno are about 24' wide, asphalt paved, with gravel or grass shoulders. All of these town roads provide a durable, dust-free surface for bicycling and walking where traffic volumes are low. Most road mileage in these 3 towns consists of either county or state highways.





WOLF RIVER STATE TRAIL

The Wolf River State Trail is open from White Lake in Langlade County north 33 miles to Crandon in Forest County. Four additional miles of trail are currently under development south of White Lake to the Menominee/Langlade county line. Once complete, the Wolf River State Trail will total 37 miles.

The Wolf River State Trail runs adjacent to the Nicolet National Forest where camping, hunting, fishing, hiking, mountain biking, and cross-country skiing opportunities are plentiful. The trail in Forest County is open to walking and bicycling as well as ATVs, OHMs, horseback riding, and snowmobiling. The trail may be rough or soft in many sections, therefore more suitable for off-road bikes. The trail is not developed in Langlade County but walkers and bicyclists may use the trail tread.



NICOLET STATE TRAIL

Established in 1979, this county-operated trail meanders for more than 89 miles through the Nicolet National Forest. Crushed rock on the former railroad bed is best suited to all the various uses allowed on the Forest County segment – ATVs, OHMs, walking, bicycling, horseback riding, and snowmobiling. Wild, free-flowing rivers and streams abound in this part of Wisconsin, adding to an area already rich in natural resources.





RAT RIVER TAIL

Rat River Recreation Trail – Located in the town of Blackwell the trail follows the route of the old Flanner Railroad parallel to the Rat River and connects the Bear Lake Campground/Recreation Area to the Nicolet State Trail. The trail is a US Forest Service facility approximately 8-miles in length designated for all season, non-motorized use. The surface is noted as easy and enjoyable flat terrain.

ROADWAY SUITABILITY EVALUATION

WisDOT has developed a road evaluation method based on the needs of rural bicyclists as part of their Rural Bicycle Planning Guide in 2006. The method is quantifiable and cyclists, stakeholders, and other agencies can practice the method which contains the following steps:

1. Identify Annual Daily Traffic or ADT.
2. Determining how much of a road segment has a solid yellow centerline (no-passing zones) — roads with more solid yellow centerlines are less suitable for cycling because of limited sightlines. The more curves or hills along a stretch of roadway, the more solid yellow centerline that stretch of roadway will have.
3. Identifying percentage of ADT that is truck traffic (if unknown, the guide suggests assuming 10% of ADT).
4. Determine Pavement width.

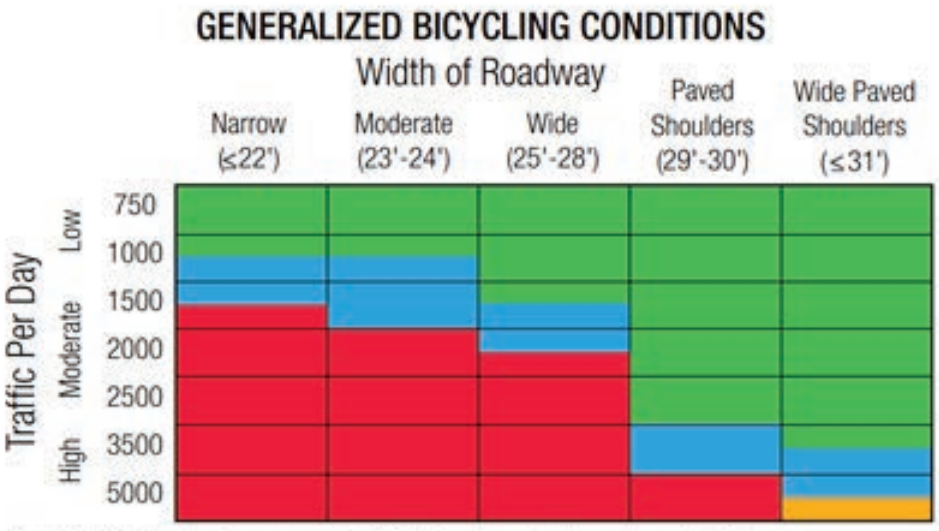
The guide then provides an intuitive reference table to determine bicycling conditions for rural roads. The tables are separated based on common road widths. A summary table of varying rural bicycling conditions is included in **Figure 8**.

The WisDOT Bicycle Suitability Map provides a visual catalog of roads (mostly state and county highways) for counties by their suitability for bicycling based on the current conditions and space available along the roads. WisDOT and the Wisconsin Bicycle Federation (Bike Fed) re-evaluated the State's roadways in 2015, **Map 3 – Bike Suitability Overview,** summarizes the bicycle suitability for roads. Individual community maps are also included in the **Appendix, A-3**. The roads are categorized in the following ways:

- Local Roads – Generally considered as "best condition" due to low traffic.
- Best Conditions for Bicycling
- Moderate Conditions for Bicycling
- Higher Volume, Wider Paved Shoulders
- Higher Volume, Undesirable Conditions
- Bicyclists Prohibited

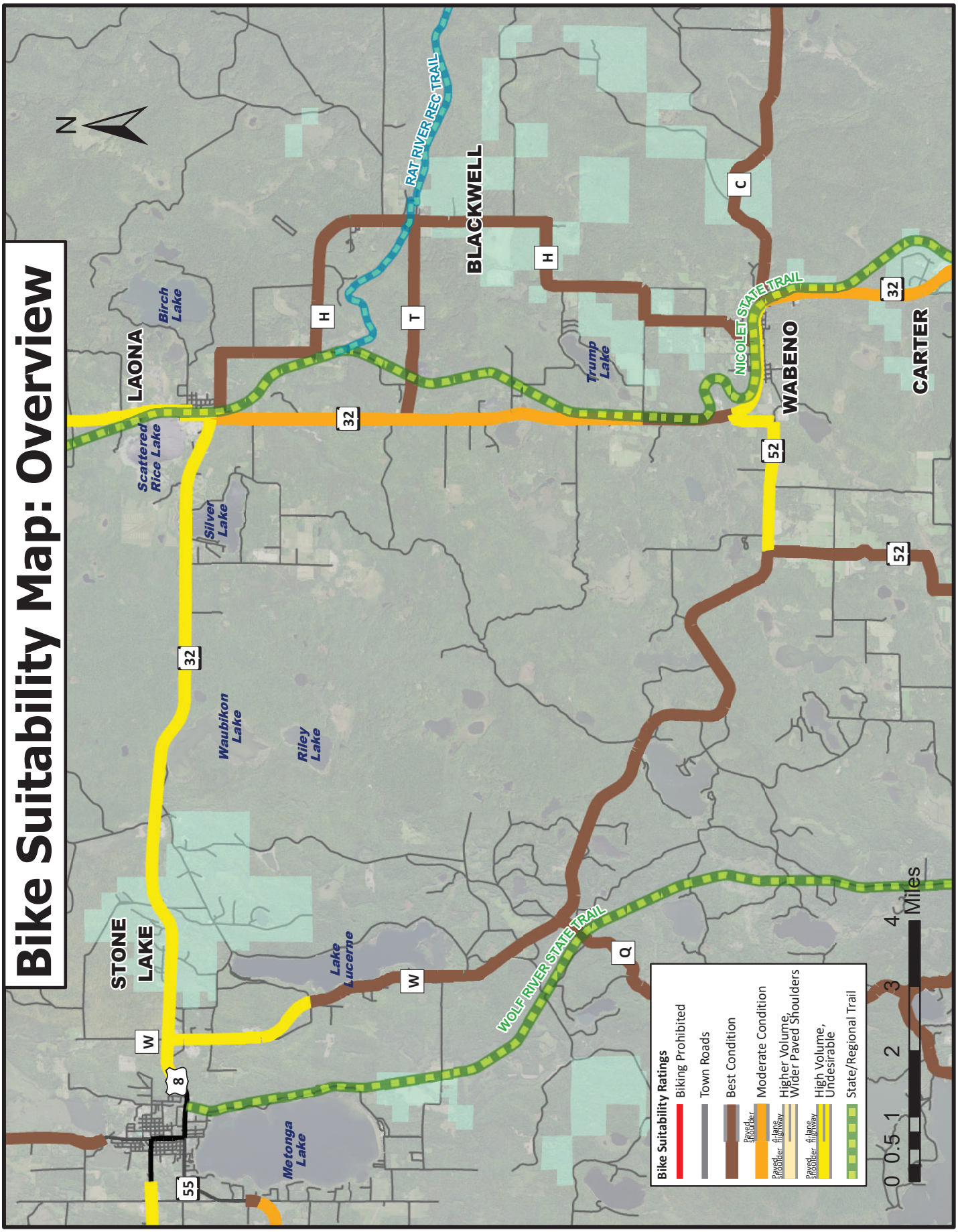
Figure 8

Generalized Bicycling Conditions for Rural Roadways



The table illustrates, in a generalized fashion, how state and county highways were classified by their conditions for bicycling. Traffic and width of roadways are the two primary variables affecting bicycling conditions. Green – Best conditions; Blue – Moderate conditions; Yellow – Higher Volumes, Wider Paved Shoulders; Red – Undesirable Conditions

MAP 3 – BIKE SUITABILITY OVERVIEW



While these categorizations do not constitute a plan or strategy, they do provide a detailed and relatively user-friendly inventory of current bicycling conditions throughout the FCPC area, while taking into account road types, conditions, and general desirability. The Suitability Map is used to evaluate bicycle corridors throughout the FCPC. It is recommended that communities re-assess the bicycle suitability of a road segment when considering improvements to that specific roadway. The roadway's latest traffic and truck count data should be used in that analysis.

The basic premise of the road suitability methodology is to make adjustments to the traffic volume (ADT) and pavement width (in feet) for the roadway being evaluated based on the other factors listed such as percent yellow line or percent truck traffic. However, data used in the evaluation is not as readily available for rural roads as it is for county and state highways. Although traffic count studies are not available, general observation indicates that traffic volumes are sufficiently low, usually below 500, on most rural roads.

In and around a built-up area, main arterials and collector streets must be evaluated carefully when being considered as designated bike routes. On roads with lower speeds, slightly higher traffic volumes may be suitable for bicyclists. In areas where traffic is dangerously fast, many communities are turning more to traffic calming techniques. Neighborhood streets generally need not be individually evaluated because traffic volumes on these streets are typically low enough that they are well suited to bicycling activities without any physical improvements.

It is often desirable to provide shared use paths along rural roads with higher speeds (45 mph or greater). This is especially true for locations that attract larger volumes of bicyclists due to scenic views or for routes that serve as key bicycle connections between destinations. Paths are also an important consideration for families and children making connections in rural areas.

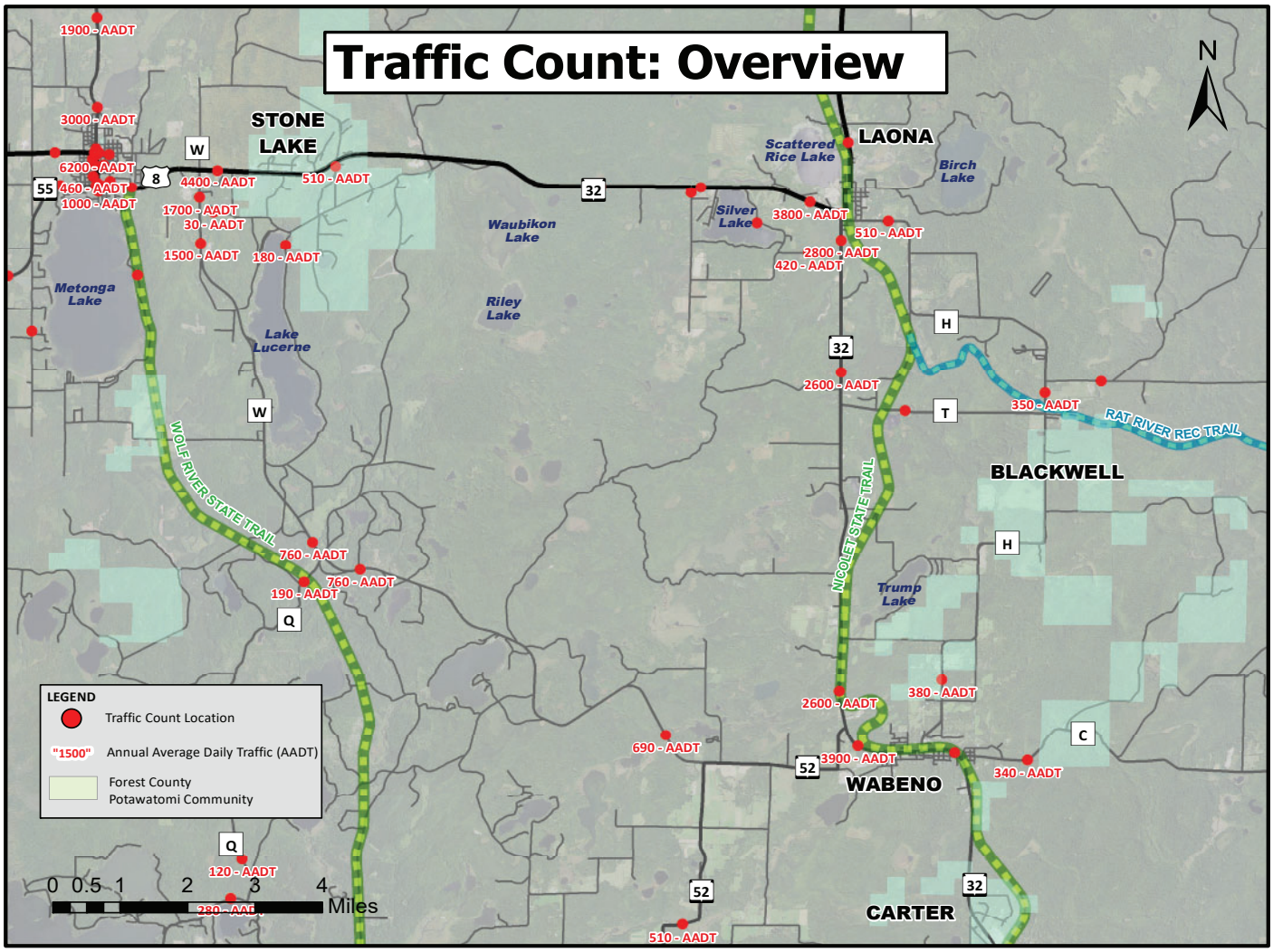
TRAFFIC COUNTS

Traffic counts identify how many motor vehicles pass a point during an average day. WisDOT monitors traffic volumes at various locations around the state on a rotating basis. Some counters are calibrated to also identify bicycles, but WisDOT does not use that type of counter at this time. WisDOT's counts are taken Monday through Thursday. Friday through Sunday traffic is not counted except if needed for an improvement project.

Map 4 – Traffic Counts Overview, summarizes the bicycle suitability for roads. Individual community maps are also included in the **Appendix, A-4**. These maps show the average daily traffic at count locations around the FCPC.

These counts are the most recent taken by WisDOT at those locations. Traffic counts are an indicator for selecting bike / ped routes or determining what types of bike / ped accommodations might be needed. Counts at less than 500 AADT (Annual Average Daily Traffic) usually indicate "best conditions" for bicycling if a road is paved. Gravel roads often have more adverse circumstances that must also be evaluated.

MAP 4 – TRAFFIC COUNTS OVERVIEW



NOTE: The Overview Map shows limited counts. The detailed area maps within the Appendix show additional counts on local roadways.

CRASH ANALYSIS

Safety is often cited as the primary reason people do not bike or walk more. Creating a safer environment for these activities is an important focus that requires an understanding of safety issues and proven actions that can be taken to improve safety. Crashes involving motor vehicles that result in injuries or fatalities to bicyclists and pedestrians have been recorded at the state and federal levels for many years.

Over the past few decades, traffic safety experts have been moving away from the term "accident" in favor of the term "crash" to describe a collision. An accident is defined as an unforeseen and unplanned event or circumstance. WisDOT made this change in 1990 because traffic crashes are not accidents, but avoidable events caused by a single variable or chain of variables.

1. Crash data are reported universally for Wisconsin on Form MV400. However, it is important to highlight some shortcomings:
   - Some studies indicate that as few as 10% of all bicycle crashes are reported;
   - Some roads with a higher frequency of bicycle crashes may have higher bicycle use;
   - Very likely that there will be no detectable pattern of bicycle crashes because of the small number reported in rural areas and small cities.

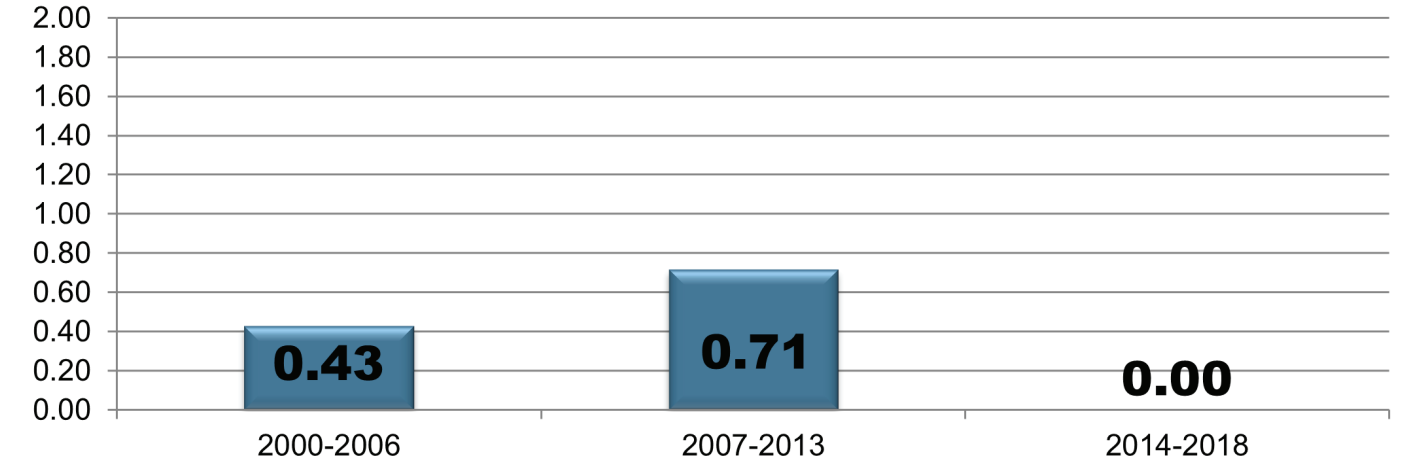
Reported bicycle or pedestrian crashes around the FCPC between 2000 and 2018 are analyzed.

BICYCLE CRASHES

Forest County had 8 reported bicycle crashes from 2000 to 2018, with 6 of the crashes coming in communities surrounding the Forest County Potawatomi Community. The county averaged 0.42 bicycle crashes per year from 2000 to 2018. The amount of bicycle crashes per year has recently dropped off, as Forest County has not had a reported bicycle crash since 2013. Forest County averaged 0.43 bicycle crashes from 2000-2006, 0.71 bicycle crashes from 2007-2013, and 0.00 crashes from 2014-2018, as shown in **Figure 9**. When including all drivers, pedestrians, and bicyclists involved in a reported crash, 5 of the 8 (63%) bicycle crashes involved an individual 16 years old or younger, 7 of the 8 (88%) bicycle crashes involved an individual between 17 and 64 years old, and 1 of the 8 (12.5%) bicycle crashes involved an individual 65 years old or older. Of the 8 reported bicycle crashes in Forest County during this time, all 8 resulted in an injury with 1 resulting in fatality.

The City of Crandon had the most bicycle crashes with 4, the Town of Nashville had 2 bicycle crashes, and the Towns of Lincoln and Wabeno each had 1.

Figure 9

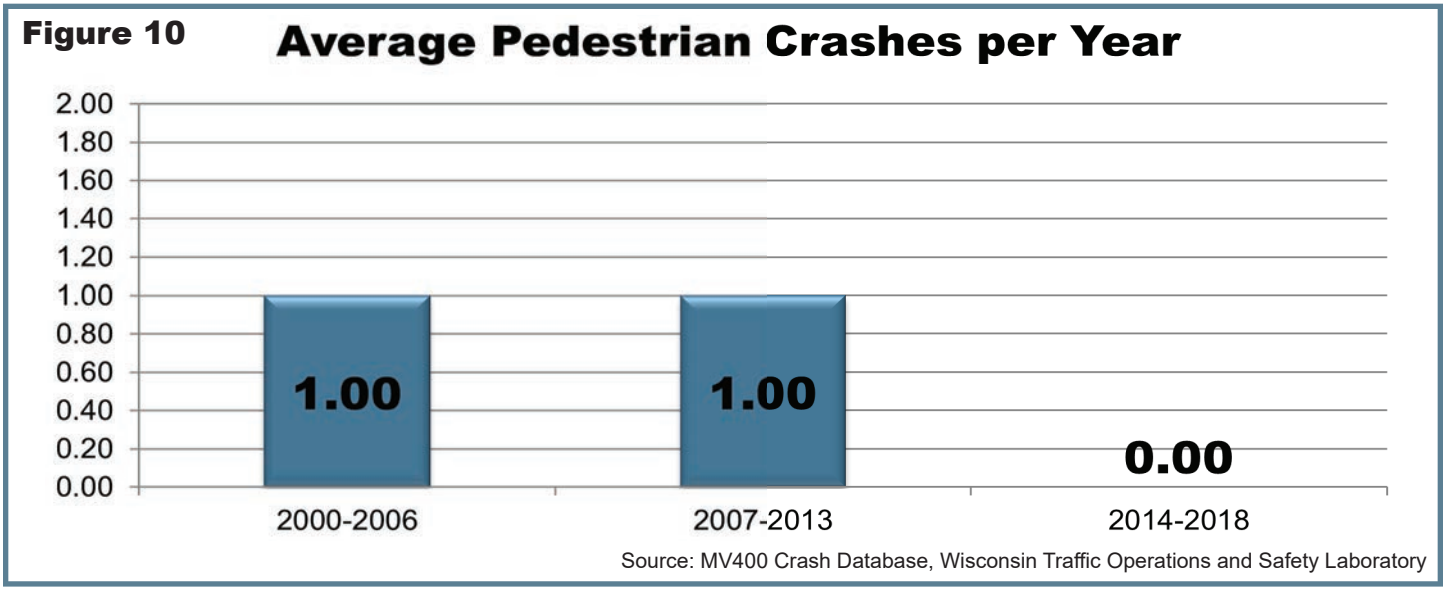


Source: MV400 Crash Database, Wisconsin Traffic Operations and Safety Laboratory

PEDESTRIAN CRASHES

Forest County had a total of 14 reported pedestrian crashes from 2000 to 2018 with 12 of the crashes coming in communities surrounding the Forest County Potawatomi Community. The county averaged 0.74 pedestrian crashes reported per year during this time. Pedestrian crashes have decreased dramatically however, as Forest County averaged 1 pedestrian crash from 2000-2006, 1 pedestrian crash from 2007-2013, and 0 crashes from 2014-2018. It should be noted that there has been only one reported pedestrian crash within Forest County since 2009. When including all drivers, pedestrians, and bicyclists involved in a reported crash, 43% of pedestrian crashes involved an individual 16 years old or younger, 93% of reported pedestrian crashes involved an individual between 17 and 64 years old, and 0% of reported pedestrian crashes involved an individual 65 years old or older. Of the 14 total pedestrian crashes in the county, 12 resulted in an injury, with one crash.

Figure 10

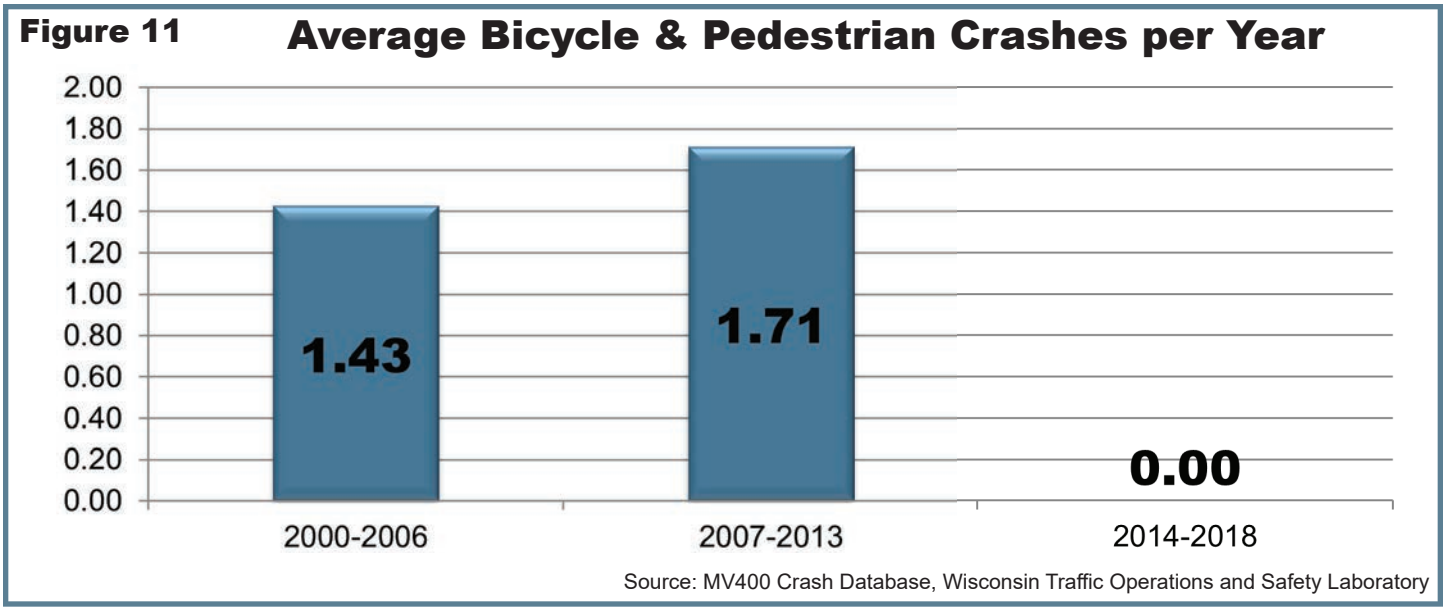


Source: MV400 Crash Database, Wisconsin Traffic Operations and Safety Laboratory

OVERALL BICYCLE & PEDESTRIAN CRASH CONCLUSION

Over the course of a 19 year period (2000-2018), Forest County had a total of 22 crashes that involved either a bicyclist or a pedestrian, averaging 1.16 crashes involving either a bicyclist or pedestrian per year. The average number of crashes per year has decreased dramatically, as the county averaged 1.43 crashes between 2000 and 2006, 1.79 crashes between 2007 and 2013, and 0.00 crashes between 2014 and 2018, as shown in **Figure 11**.

Figure 11



Source: MV400 Crash Database, Wisconsin Traffic Operations and Safety Laboratory

Table 3: Number of Bicycle and Pedestrian Crashes by Municipality | 2000-2018			
	# of Bicycle Crashes	# of Pedestrian Crashes	Total Crashes
City of Crandon	4	3	7
Town of Lincoln	1	2	3
Town of Blackwell	0	0	0
Town of Laona	0	1	1
Town of Wabeno	1	3	4
Town of Argonne	0	1	1
Town of Crandon	0	2	2
Town of Nashville	2	2	4
Forest County	8	14	22
Source: MV400 Crash Database, Wisconsin Traffic Operations and Safety Laboratory			

PROBLEM ROADS

Identifying the roads where the most bicycle and pedestrian crashes have taken place helps to prioritize where improvements to the bicycling and pedestrian network should be made. **Table 4** provides a listing of the roads where the most bicycle and pedestrian crashes have taken place within Forest County. The number of crashes that occurred along the area's major highways indicate that improving bicycle and pedestrian access along these major highways (US Highway 8, and State Highways 32 and 55) should be a main priority. Additionally, based on the number of crashes that occurred along Sokagoan Drive, North Central Avenue, North Wildwood Avenue and Cecil Avenue, priority should be given to improving bicycling and pedestrian conditions on these roads as well.

Table 4: Forest County Roads with the Most Bicycle & Pedestrian Crashes | 2000-2018			
	# of Bicycle Crashes	# of Pedestrian Crashes	Total Crashes
US Highway 8	0	4	4
State Highway 32	2	2	4
State Highway 55	3	0	3
Sokagoan Drive	1	1	2
North Central Avenue	1	1	2
North Wildwood Avenue	2	0	2
Cecil Avenue	1	1	2
. Source: MV400 Crash Database, Wisconsin Traffic Operations and Safety Laboratory			

CHAPTER 3: BICYCLE & PEDESTRIAN CORRIDOR RECOMMENDATIONS

ROUTING CRITERIA

NCWRPC, with guidance and input from the FCPC bicycle and pedestrian plan oversight committee and the public involvement efforts for this plan, identified the following factors and considerations in selecting routes for the proposed pathway system:

- Safety, particularly for children and families
- Separation of bicycle and pedestrian traffic from motor vehicle traffic to the extent possible
- Develop connections to schools in Crandon and Wabeno for FCPC children
- Linking residential areas with key activity areas, including employment, across the community
- Increase routing that provides for a wide range of trip purposes, including school, work, shopping & other needs, and recreation
- Interconnecting sections of the community: Stone Lake, Blackwell, and Carter
- Connection to Crandon
- Americans with Disabilities Act (ADA) compliance
- Health and Wellness for Tribal members
- Preservation of cultural, historic, and environmental sites
- Need for the connection and level of impact
- Availability and levels of funding
- Timing in relation to other planned projects
- Degree of challenges to implementing connection

FACILITY TYPES & DESIGN GUIDANCE

This plan makes facilities and policy recommendations intended to improve cycling and walking conditions in the Forest County Potawatomi Community. The following facility treatments may be appropriate for the community and were considered in the development of corridor recommendations for this plan. For more detailed guidance in designing pedestrian and bicycle facilities, consult the following resources:

- WisDOT's Guide to Pedestrian Best Practices
- The WisDOT's Wisconsin Bicycle Facility Design Handbook
- The American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities
- The Wisconsin Manual on Uniform Traffic Control Devices (WMUTCD)

The facility types addressed here fall into 3 basic categories, as follows:

- **Mixed Traffic Facilities**
  - Shared-Use Roadway
- **Visually Separated Facilities**
  - Bike Lanes
  - Climbing Bike Lane
  - Paved/Urban Shoulders
- **Physically Separated Facilities**
  - Shared-Use Path
  - Sidepath
  - Sidewalk

MIXED TRAFFIC FACILITIES

These facilities are most appropriate for accommodating shared use transportation and motorized vehicles in the same road space. In general, these facility types are most appropriate for low speed, low volume traffic and tend to require generally lower levels of investment.

SHARED USE ROADWAY



Definition: On a shared roadway, bicyclists and pedestrians are accommodated in the same travel lane with no special accommodations for bikes.

Appropriate Setting: Low speed, residential areas

Benefits: Affordable to construct and maintain. Meshes well with traditional neighborhood quality. Design can easily support on-street parking and minimize storm water runoff.



Design Guidelines

- Where traffic volumes are generally less than 500 ADT cyclist and motorists can share roadways with lane widths ranging from 9 to 12 feet (with or without shoulders) with no additional improvements necessary.
- Signage can help alert motorists to the potential presence of bicyclists or pedestrians as a safety feature.

VISUALLY SEPARATED FACILITIES

These facilities are most appropriate for designating specific spaces for shared use transportation in the same road space as vehicular traffic. These facility types are generally suited to higher traffic-volume roads.

BIKE LANES

Definition: An exclusively designated lane for bicyclists on a roadway.

Appropriate Setting: Highly versatile to many settings, but most appropriate on roadways with moderate traffic going moderate speeds.

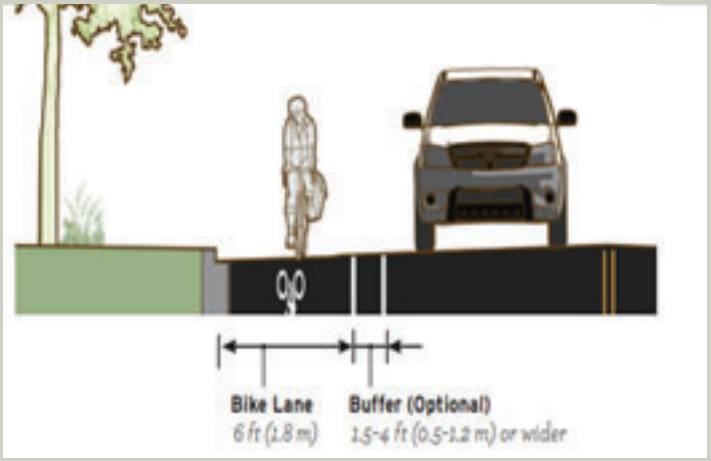
Benefits: Highly versatile to road types and traffic levels. Sends very clear visual cue to drivers. Ideal connector of local bike routes to larger corridors. Widely recognized facility type.

Limitations: May provide stress to bicyclists in high traffic situations. Special care needs to be given when bicycle lanes encounter intersections.

Design Guidelines

- Width
  - Preferred width: 5 to 7 feet, absolute minimum of 4 feet (45 mph or less) or 5 feet (greater than 45 mph).
  - Bike lanes greater than 7 feet wide should be accompanied with a buffer zone to discourage motor vehicle use of bike lane for parking or driving.
  - Buffers should be between 1.5 and 4 feet in width.
- It is essential that bike lanes be marked with consistently solid lines.
- Pavement marking are essential and signage optional but encouraged.







CLIMBING BIKE LANE

Definition: A specially designed set of bike lanes on uphill roads or roads too narrow to accommodate bi-directional bicycle lanes

Appropriate Setting: Narrow or hilly road segments

Benefits: Provides for bi-directional bike traffic in special circumstances, while minimally interfering with vehicular traffic

Limitations: Facility treatment for very specific circumstances



Design Guidelines

- One dedicated bike lane travels in the uphill direction
- Downhill lane is shared by cars and cyclists.
- "Sharrow" markings can be used on downhill lane

PAVED SHOULDERS & URBAN SHOULDERS

- **Definition: A** clearly designated space reserved for bicyclists or pedestrians along a roadway when sidewalks or other facility treatments are for whatever reason unattainable. White edge lines provide visual separation between travel lanes and paved shoulders. Urban shoulders are provided along roadways with curbs.
- **Appropriate Setting:** Collector and arterial roads and highways with moderate to high traffic and truck volumes. Additionally, appropriate for longer travels on rural routes. In urban settings, can be used as an alternative to bike lanes. Unlike bike lanes, allowed in areas with minimal, occasional parking.
- **Benefits:** Provides achievable facility to host routes when sidewalks, shared use paths, bike lanes, and other facility types are not possible. Especially useful in accommodating multi-modal transportation with higher speeds.
- **Limitations:** Requires wider roadways
- **Design Guidelines:**
  - *Widths*
    - Minimum width: three to five feet (depending on ADT, bicycle use, trucks, & double yellow lines)
    - Desirable width, collector Routes: 3 to 5 feet
    - Desirable width, arterial routes: five to eight feet for rural; five to seven for urban
  - Optional but recommended buffer should be between 1.5 to 4 feet.
  - Other proven safety measures in the buffer include striping and rumble strips





PHYSICALLY SEPARATED FACILITIES

These facilities operate separately and at times completely independently of roadways. These facility types are exclusively for shared use transportation, and interact only indirectly or occasionally with motor vehicles.

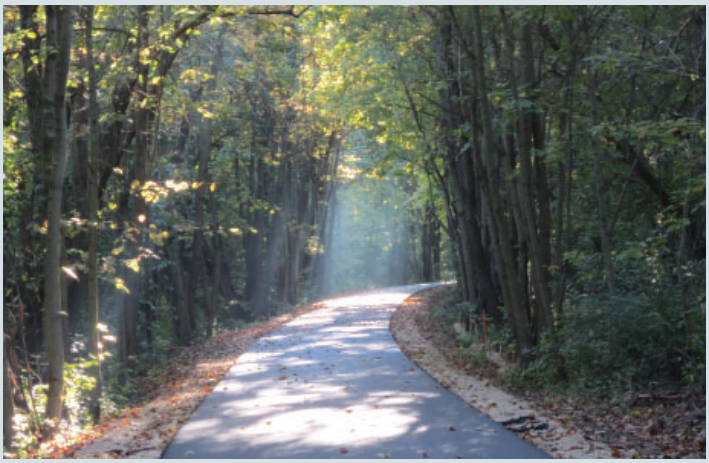
SHARED USE PATHS

Definition: A bi-directional, off-road facility separated from the roadway, that offers low-stress and exclusive experiences for all forms of active transportation.

Appropriate Setting: Outside of built-up areas; connector between communities, neighborhoods, etc.

Benefits: Completely independent of motor vehicle transportation network; displays rural character; low stress; attractive for tourism and economic development.

Limitations: Sometimes requires more public resources, community investment; requires major real estate if within new right-of-way, intersections with roadways require special attention.





Design Guidelines

- Width of path itself should be between 10 and 12 feet, depending on volume of user traffic.
- Gravel shoulders should be 2 feet in width.
- Asphalt is most common surface material, although gravel and concrete are also acceptable.

SIDEPATHS

Definition: A bidirectional, off-road facility exclusively reserved for shared use transportation that still runs parallel to the roadway.

Appropriate Setting: Alongside collector and arterial roads and highways; can be suitable for rural and built-up areas alike; should only be placed along roadways with limited number of driveway/ roadway access points.

Benefits: Extremely versatile; maintains rural and small-town character; a widely preferred facility to a paved shoulder for long and short connections.

Limitations: Sometimes requires more public resources, community investment; intersections with roadways require special attention.





Design Guidelines

- Width of path itself should be between 8 and 12 feet, depending on volume of user traffic.
- A minimum of a 2’ clearance should be present to signposts or related features.
- Asphalt is most common surface material, although gravel and concrete are also acceptable.
- Sidepaths should be at least 5 feet removed from the roadway unless a physical barrier is present.

SIDEWALK

Definition: A separated facility dedicated to pedestrians that almost always run parallel to roadways

Appropriate Setting: Built up areas / campus settings, close-in to buildings.

Benefits: Applicable and appropriate to all but the very lowest speed roadways; widely recognized facility type; versatile connector to a wide variety of destinations

Limitations: Can be costly; may be difficult in especially dense areas lacking space





Design Guidelines

- Width of sidewalk should be 5 to 8 feet (depending on location). Six feet is necessary for sidewalks at curb with no terrace area.
- Sidewalks require a frontage zone (space between buildings and sidewalk) and terrace area (space between sidewalk and roadway)
- Frontage zone should be between 1 and 2 feet.
- Terrace area should be between 4 and 6 feet.

OTHER FACILITY IMPROVEMENT GUIDELINES

BRIDGES

Bridges without proper accommodations for active transportation can be significant barriers for bicyclists and pedestrians hoping to reach from point A to point B, either forcing detours or making routes altogether impossible. Federal policy from the United States Department of Transportation highly encourages the accommodation of bicycle and pedestrian needs on bridges during bridge construction and rehabilitation. Title 23 United States Code §217 states the following:

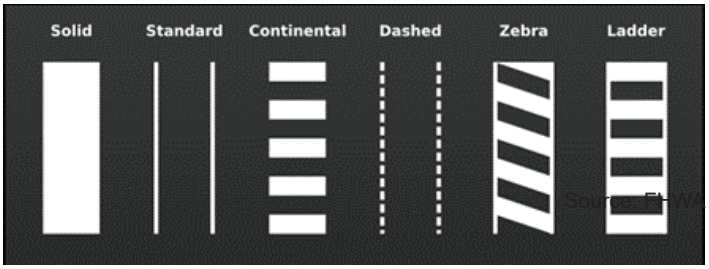
> **"In any case where a highway bridge deck being replaced or rehabilitated with Federal financial participation is located on a highway on which bicycle are permitted to operate at each end of such bridge, and the Secretary determines that the safe accommodation of bicycles can be provided at reasonable cost as part of such replacement or rehabilitation, then such bridge shall be so replaced or rehabilitated as to provide such safe accommodations."**
>
> **– United States Department of Transportation**

Providing bicycle and pedestrian accommodations on bridges leads to 2 direct benefits: 1) connectivity – bridges are often pinch-points in the road network, so well-designed, interconnected bicycle and pedestrian facilities allow all users to safely and conveniently get where they want to go, and 2) safety – implementation of bicycle and pedestrian facilities on bridges often improves the safety of these modes, decreasing the likelihood of collisions or conflicts with other road users. In addition to the direct benefits of safety and connectivity, an infrastructure improvement often leads to increases in bicycling and walking, called induced demand. As a result of this induced demand, community-wide indirect benefits may occur, including health, sustainability, and social equity. Further, accommodating bicycle and pedestrian modes of transportation in bridge replacement or rehabilitation has been proven to result in cost savings versus separate, standalone bicycle and pedestrian facilities.

HIGH VISIBILITY TREATMENTS

PAINT

Painting clear bicycle lanes as well as shared-lane arrows ("sharrows") on roads provides clear routes for both cyclists and motorists. Additionally, there are multiple designs for painting a high visibility crosswalk that bring increased visibility and awareness of proper pedestrian pathways. These relatively cost-effective methods can bring a sense of clarity and safety to both drivers and bicyclists utilizing the roads. These crosswalk markings are illustrated, below:



PEDESTRIAN HYBRID BEACON

A pedestrian hybrid beacon (PHB), also called a High intensity Activated crosswalk (HAWK), is a pedestrian controlled light that stops traffic to allow for walking across the road. The PHB is often considered for installation at locations where pedestrians need to cross and vehicle speeds or volumes are high, but traffic signal warrants are not met.



Source: Michigan Complete Streets Coalition

RECTANGULAR RAPID FLASH BEACON

A rectangular rapid flash beacon (RRFB) is a device used in combination with pedestrian warning signs to provide a high-visibility strobe-like warning to drivers when pedestrians use a crosswalk. This is an effective alternative to a 24-hour flashing beacon, because it provides drivers a warning at the time that pedestrians are ready to use the crosswalk.



SIGNAGE & WAYFINDING

Bicycle and pedestrian wayfinding systems consist of comprehensive signing and/or pavement markings to guide users to their destinations along preferred routes. Signs are typically placed at decisions points along the routes – typically at the intersection of 2 or more pathways and at other key locations leading to and along routes. Signage can indicate distance and/or time estimates for destinations. Wayfinding signage particularly benefits infrequent users by reducing the barrier to entry of figuring out a route. It also serves to remind motorists that they are likely to encounter bicycle or pedestrian traffic. See **Appendix, A-8 f**or additional signing and wayfinding resources.

BIKE PARKING

For bikes to be used more often for transportation, everyday destinations like work, school, stores, offices, government buildings, and restaurants must have places to park a bicycle securely. Installing bike racks by each employer (both rural and urban) or conveniently located in a commercial district, would provide secure parking for residents and visitors. Installing bike racks in each park, especially near spectator sports facilities, would provide secure parking for residents and visitors. Some guidelines for bike parking are illustrated in the **Appendix, A-7.**

General parking recommendations include the following:

1. Use the Bike Parking Guidelines in when purchasing a bike rack, so that it allows a bicyclist to use a U-lock to secure their front tire and bike frame to a rack and keeps the bike upright while locked.
2. Provide bicycle parking guidance to all employers that want to become more bicycle friendly.
3. Consider installing bicycle parking at administration and other public buildings (e.g. community center, museum/library, casino, C-stores, etc.) and all parks.

FACILITY COST ESTIMATES

Estimates for shared use facilities do vary based on locale, accessibility for construction, time-of year bidding, project saturation of the construction field, and other factors.

On the following page is a table which details typical construction costs for items used in the development of these facilities. After the completion of a planning document such as this, many communities then use this to develop a more detailed 5 or 10-year Capital Improvement Plan.

However, detailed cost estimates will need to look at the proposed facility from more than just the basic geometry and unit cost. Unique challenges with sensitive environments, presence of endangered species, required offsets from road R/W, water crossings, and extreme topography are just a few of the items that will add to the cost of a project by derailing the “easy”alignment that looks good in concept.

Techniques for cost-effective construction projects that can be considered include the following:

- Seeking the input of local contractors on draft plans and specifications to identify potential cost savings
- Grouping similar projects together to get more favorable bids based on larger quantities
- Flexibility in timing of the work in the field
- Typically bidding the project out in December-February
- Utilizing internal staff for some of the preliminary work if possible (e.g. clearing & grubbing)
- Owner-purchased material - if owner can get better bulk pricing and then contractor pays to install

Item	Unit	Unit price	Comments
Mobilization	LS	$20,000.00	Varies significantly based on scope of project and if specialty equipment is required, access to site, etc. Many times I do not include as contractors assign large #s here arbitrarily at times.
Traffic Control	LS	$10,000.00	Varies significantly based on scope of project. Can do as lump sum or per individual sign.
Construction Staking	LS	$10,000.00	Varies significantly based on scope of project, but strong recommendation to have as responsibility of contractor vs. hire separately as it forces the contractor to protect staking and assure proper scheduling. $5-$10,000 is a good general number.
Field Office Type B	EA	$5,000.00	If you are having full-time construction oversight, m this is helpful to have and can also help reduce the cost of construction observation.
Common Excavation Main Corridor	CY	$24.00	Based on access, can be higher unit cost, but generally good for trail prices. Some people have been switching to LS--advise against , but you can have the specification as "PPQ" which is Pay Per Plan Quantity and then any additional areas identified have the given unit price.
Fill (borrow)	CY	$20.00	Cost will vary based on proximity to source and if it is required to be structural or not.
1 1/4 Base Agg Stone (6")	TON	$24.00	Specific to trail projects and more difficult access than roadways. Can increase if supplier is far away = higher trucking costs.
Asphaltic Surface (4")	TON	$120.00	Asphaltic surface vs. HMA. Significantly higher cost than roadway based on single-lane access (back-up and pull out). Some bid prices are coming in as high as $150/Ton (12/20).
Sawing pavement	LF	$6.00	Use for any roadway or other trail connections to get clean transitions.
Removing pavement	SY	$40.00	Small quantity unit price.
Screened Topsoil	CY	$30.00	Assuming 4" for 3' either side applied with a shouldering machine.
Seed	LBS	$10.00	Calculated at 6 lbs./ 1,000 SF
Mulching	SY	$1.25	Assumes hydromulching vs. blown straw.
Fertilizer	CWT	$90.00	Calculated at 7lbs/1000 SF.
Railing	LF	$35.00	Can vary significantly based on design. Cost noted is a modified 3-rail split rail that is 42" high and meets bike standards.
Signing for Roadway Crossings (per crossing)	EA	$1,560.00	Stop, Stop Ahead, Roadway Crossings, Crosswalks.
Marking Crosswalk Epoxy Ladder Pattern 24-Inch	LF	$21.00	10-ft wide ladder bars, 6 bars per crossing.
Detectable Warning Fields (DWFs)	SF	$50.00	10' wide each side at all crossings (does not include the concrete these sit in).
5" concrete sidewalk curb ramps (intersections)	SF	$8.00	For large concrete projects, you may see $5.00/SF. Very small may be up to $15/SF.
Curb & gutter	LF	$40.00	Will vary based on quantity and type.
Clearing & grubbing	STA	$1,200.00	Varies significantly based on access and density. STA = 100 LF(both sides).
Geotextile fabric for low areas	SY	$3.50	
Marsh Excavation	CY	$50.00	If able to distribute on-site may be slightly less expensive. Access and equipment play a major role in costs.
3" stone for marsh excavation	TON	$22.00	Typically utilize in a minimum of 1' lift.
Wattles	LF	$9.00	Use in environmentally sensitive areas in lieu of silt fence.
Silt Fence	LF	$3.25	
Tracking pads	EA	$1,500.00	
Inlet protection (EC)	EA	$100.00	

Other - specific to projects

Storm sewer elements (culverts, storm sewer pipes, manholes, etc.)

Bridges

Retaining walls

Utility relocation costs (if not in R/W)

PATHWAY RECOMMENDATIONS

The following pathways were identified for development as part of a Forest County Potawatomi Community walking and biking system utilizing the established Routing Criteria and the facility types and design guidance. The conceptual pathway network for the Forest County Potawatomi Community is illustrated in the following pages.

These proposed pathways are outlined around a variety of factors including:

- Route Justification
- Cultural Considerations
- Estimated Costs
- On or Off-road
- Surface Types
- Key Connections
- Suitability (of adjacent roads for bicycles and pedestrians)
- Potential Accommodations & Improvements
- Time Frame:
    - Short-term: 1-5 years
    - Mid-term: 6-10 years
    - Long-term: 10+ year

Cultural Considerations reference limitations on where construction of any walking and biking facilities can occur. Any project on Tribal lands will undergo an Environmental and Cultural Assessment by the Tribal Historic Preservation Office to determine the impacts of the project prior to obtaining approval.

Time frames identified in the plan are based on project prioritization discussion and ranking by the Plan Oversight Committee.

PATHWAY PRIORITIES

As a comprehensive system plan for the community, this FCPC Bicycle and Pedestrian Plan contains recommendations for a significant number of pathway projects to be implemented over a 20+ year plan horizon. In order to focus early implementation efforts, the projects that are the highest priority for the community are identified and ranked.

These higher priority projects have more detailed cost estimates developed to facilitate moving to construction in the short-term. Of course, the system will evolve overtime as the community grows and changes. Project priorities may change as the community does. As system build-out occurs over time, expansion to other areas/destinations can be considered.

The top priority pathway segments identified and ranked by the Plan Oversight Committee are as follows:

PRIORITY PATHWAY ESTIMATED COSTS OF CONSTRUCTION

FCPC Rank	Segment	Area	Est. Construction Cost
In progress	Pathway to Wellness Phase ` (Fire Keeper Rd to Love Knot Ln)	Stone Lake	$1,152,800
In progress	Sidewalk: Kwe da Kik Ln	Stone Lake	
1	8' Sidewalk: Mish Ko Swen Dr	Stone Lake	$185,000
2	Wis 32 Crossing (Maple Sugar Ln/ Dry Creek Ln)	Carter	$4,000 - $20,000
3	New Trail: Sugar Bush to Good Heart Ln	Carter	$95,000
4	ADA Trail connection w/ new bridge: Gather Grounds to Wee Care	Carter	$330,000
5	Wis 32 Crossing (Industrial/ Old 32 & Elliot/ Ranch)	Carter	$4,000 - $20,000
6	New Trail: Wis 32 Pathway (Maple Sugar Ln to Elliot Rd)	Carter	$336,000
7	Pathway to Wellness Phase 3 (S Prospect Avenue to Fire Keeper Rd)	Stone Lake	$1,630,000
8	New Trail: County Highway H - Phase 1 (Rat River Trail to Neighborhood Park)	Blackwell	$855,000
9	New Trail: County Highway H- Phase 2 (Neighborhood Park to Wabeno)	Blackwell	$1,620,000
10	Wis 32 Pathway (Maple Sugar Ln to Wabeno)	Wabeno	$941,000
11	Pathway to Wellness Phase 2 (Love Knot Ln to Otter Creek Rd)	Stone Lake	$1,340,000
12	Trail Extension: Jaeger Rd (Potawatomi Trail - USH 8)	Stone Lake	$400,000

Notes:

#1. Asphalt trail vs. concrete could reduce costs (estimated 3,100 LF)
#2 Cost noted ranges for four basic signs and crosswalk to more extensive Rapid Flashing Beacons (assumed solar)
#3: 10' wide asphalt trail with signage and crossings (estimated 1,250 LF)
#4 Assumes a pre-fabricated bridge (70' wide) and 10' wide asphalt trail (estimated 1,000 LF). Additional grading is anticipated based on grade changes
#5: Cost noted ranges for four basic signs and crosswalk to more extensive Rapid Flashing Beacons (assumed solar)
#6: 10' wide asphalt trail with signage and multiple crossings (estimated 3,400 LF)
#7 10' wide asphalt trail with boardwalk into Crandon
#8 Cost assumes that Spencer Creek can be crossed within the road R/W and will not require a new crossing (estimated 2.25 miles) .
#9 Cost assumes that N. Branch of Oconto River can be crossed within the road R/W and will not require a new crossing. (estimated 4.5 miles)
#10 Cost assumes that Torpee Creek can be crossed within the road R/W and will not require a new crossing (estimated 3,900 LF) .
These are general estimates, but detailed estimating should be completed when the full scope of each project is known and site survey has been completed.

The next section contains the full, detailed pathway segment recommendations by area for the FCPC Bicycle and Pedestrian system.

AREA 1: PATHWAY TO WELLNESS – CRANDON TO OTTER CREEK ROAD

Map:5

Description & Justification: Cornerstone to full FCPC bicycle and pedestrian system. The proposed facility is an off-road shared use path within the US Highway 8 right-of-way or on adjacent Tribal lands between Crandon and Otter Lake Recreation Area. Feasibility Study has been completed with a WisDOT grant awarded for Phase 1 – Firekeeper Road to Love Knot Lane and a TTPSF grant awarded for the shared use underpass within Phase 1 as well.

Cultural Considerations: THPO identified a number of areas that will need to be evaluated during the detailed design

Responsible Parties: FCPC, WisDOT , and TTPSF (and potential others with future grants)

Estimated Costs (2021 dollars)- design & construction :

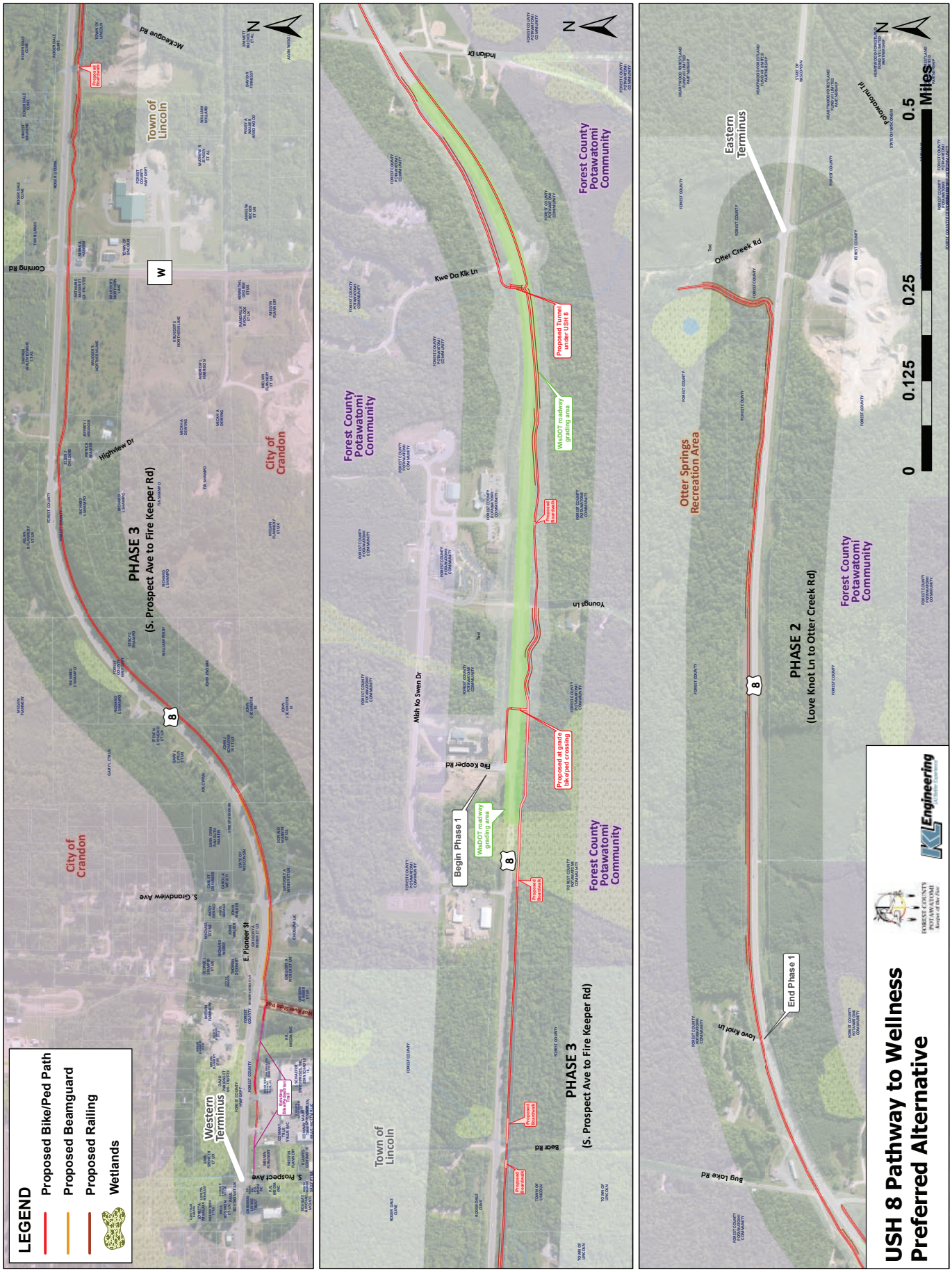
Phase 1: $1,152,800*
Phase 2: $1,340,000
Phase 3: $1,630,000

*FCPC has already secured a WisDOT grant for this phase and a TTSF grant for the underpass



Existing or Proposed?	On- / Off-Road?	Surface Types & Seasons	Key Connections	Current Suitability	Accommodations or Improvements	Time Frame
PROPOSED	Off-Road	Asphalt with Boardwalks	Crandon, Stone Lake, FCPC Campus, Wolf River Trail, Otter Lake Recreation Area	US Highway 8 – Undesirable (Currently 3-foot shoulders)	10' wide shared - use path along US Highway 8 with an at-grade crossing near Firekeeper Road and an underpass at Kwe da kik Lane	<u>Short-term</u> **Phase 1:** Firekeeper to Love Knot Lane <u>Mid-term</u> **Phase 2:** Love Knot Lane to Otter Creek Road **Phase 3:** Crandon to Firekeeper Road

MAP 5 – US HIGHWAY 8 PATHWAY TO WELLNESS MAP



AREA 2: STONE LAKE

Map: 6 & 7

Description & Justification: Stone Lake is the main center for concentration of Tribal operations and services as well as residential developments.

The proposed facilities are off-road, shared use side paths along Tribal and Town roads. Tribal roads are recommended for 8' concrete consistent with the current cross section many Tribal roads are being upgraded to at this time. Town Roads are recommended for 10' asphalt typical of shared use paths.

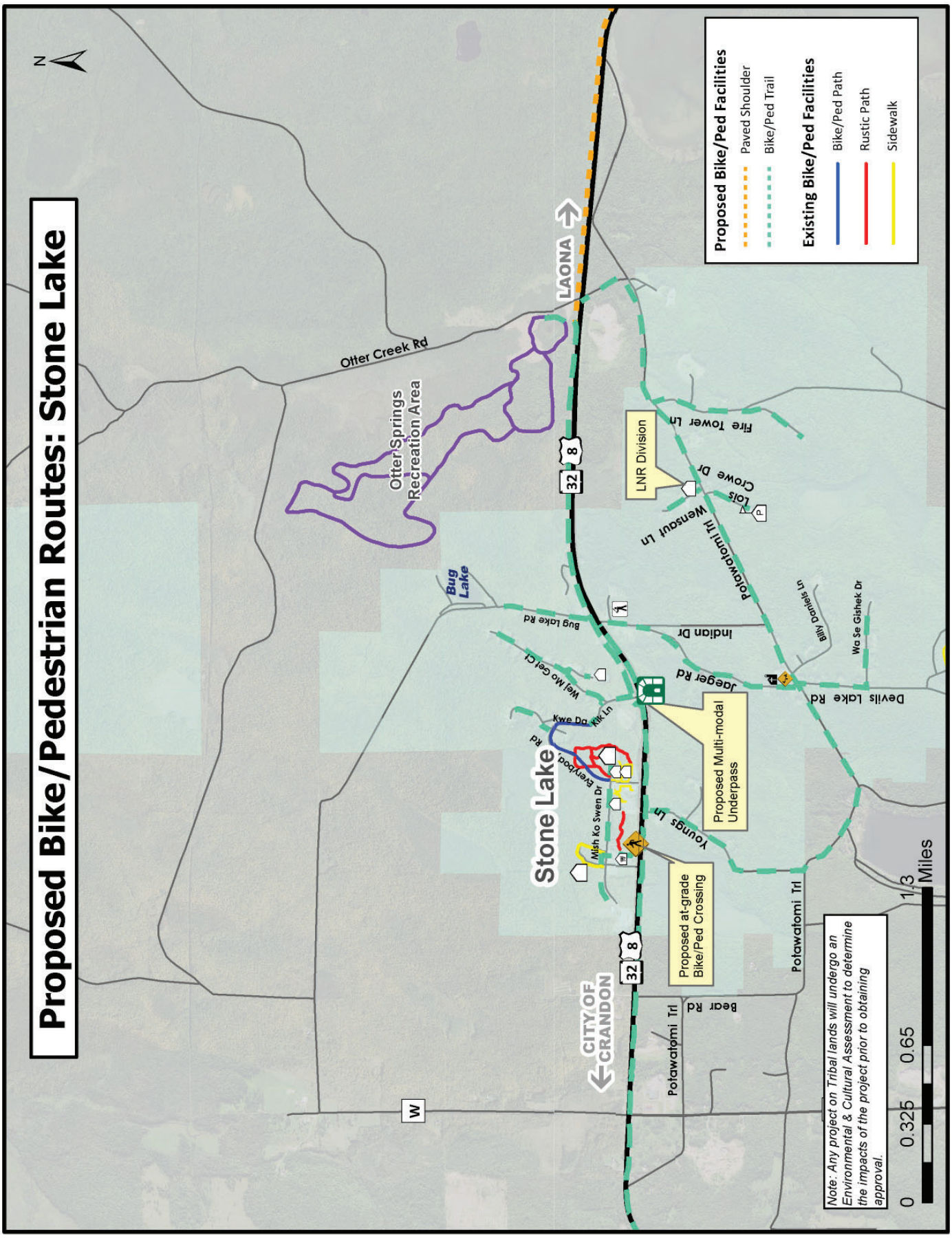
Responsible Parties: FCPC & Town of Lincoln



Existing or Proposed or ?	On- / Off-Road?	Surface Types & Seasons	Key Connections	Current Suitability	Accommodations or Improvements	Time Frame
PROPOSED	Off-Road	Asphalt / Concrete	Tribal Administrative & Service Buildings & Residential Areas	**Best*** (All streets are low volume traffic.)	<u>Tribal Roads</u> Mish Ko Swen Drive**, Kwe Da Kik Lane, Kwe Da Kik Court, Wej Mo Gek Court, Kak Yot Lane, Wa Se Gishek Drive, & Lois Crowe Drive <u>Town Roads</u> Youngs Lane, Potawatomi Trail, Jaeger Road, Devils Lake Road, Wensaut Lane & Fire Tower Lane	<u>Short-term</u> Mish Ko Swen Drive & Kwe Da Kik Lane <u>Mid-term</u> Jaeger Road <u>Long-term</u> *Remaining List*

*This represents NCWRPC staff analysis and not an official rating from WisDOT.
** See Figure # 12 on page 69

MAP 6 – PROPOSED BIKE / PEDESTRIAN ROUTES: STONE LAKE



MAP 7 – PROPOSED BIKE / PEDESTRIAN ROUTES: STONE LAKE CAMPUS

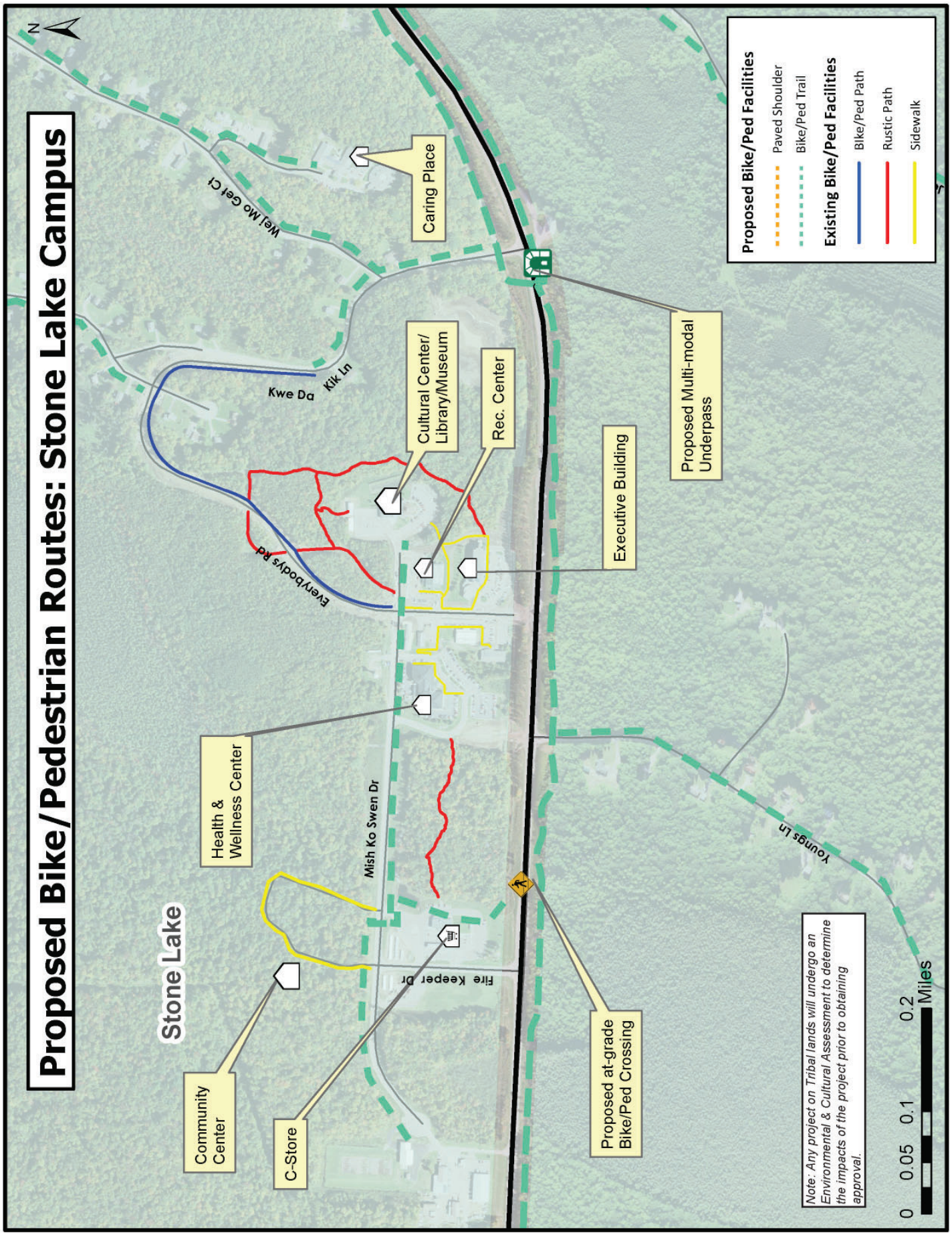
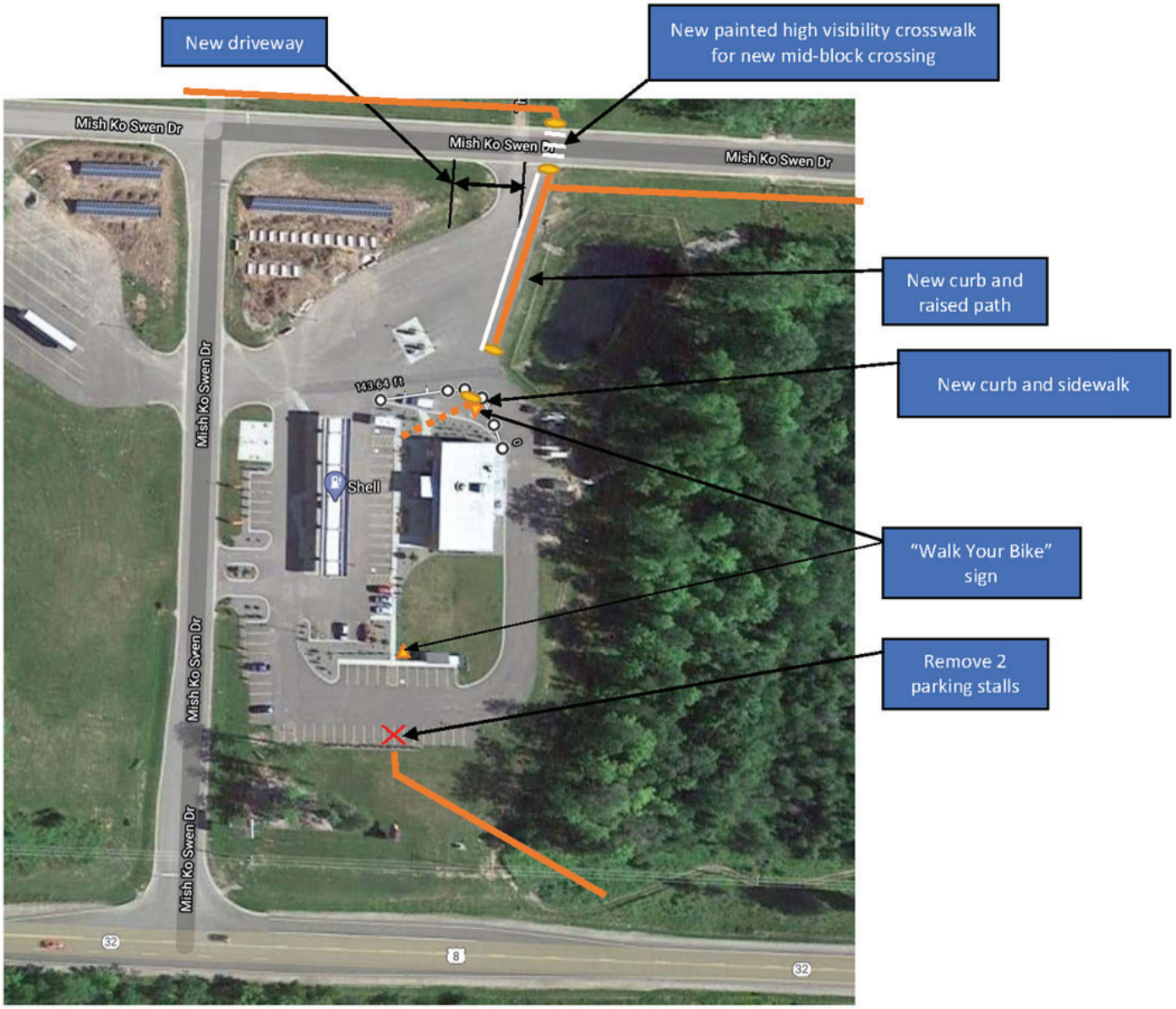


Figure 12

Stone Lake C-Store
Potential Bike Path & Sidewalk Layout



NOTE: All dimensions and graphics shown are approximations.

= Potential sidewalk ramp

= Potential sidewalk

= Potential 10-foot wide path

AREA 3: STONE LAKE TO BLACKWELL

Map: 8

Description & Justification: Serves to close the gap and connect the Stone Lake and Blackwell parts of the FCPC.



The recommendation is to begin with wider paved shoulders on US Highway 8 from Otter Creek Road to Laona / Nicolet State Trail. However, WisDOT currently plans a resurface for this section of the highway in 2026, and the Department has indicated they cannot accommodate shoulder widening with that project. It will be some time before WisDOT needs to revisit this segment with a substantial project that could incorporate wider shoulders.

The Nicolet State Trail would be utilized to connect with the Rat River Rec Trail to get to Highway H at Blackwell. The Rat River Trail is suitable for biking and walking.

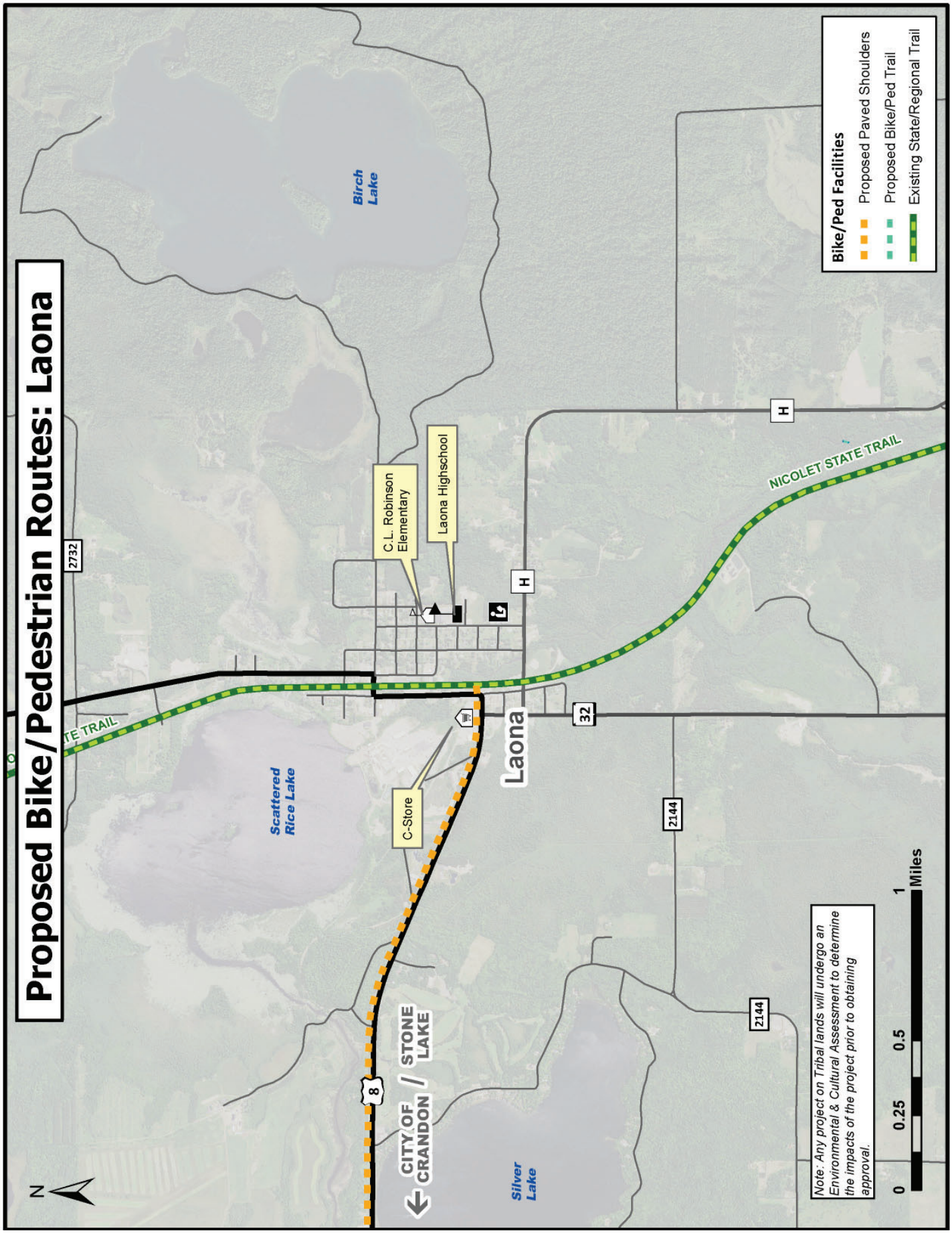
The Nicolet State Trail, however, is rougher with extensive motorized use. We recommend parallel but separated accommodations for bike / ped. WDNR and WisDOT are currently working on similar parallel arrangements in other parts of the state, such as the abandoned rail corridor between Woodruff and Lake Tomahawk where they are looking to link 2 segments of bike trail via the corridor heavily used by ATVs. This approach should be feasible over the relatively short segment between Laona and the Rat River Trail.

A long-term goal to consider would be the extension of the Pathway to Wellness out to Laona.

Responsible Parties: WisDOT & WDNR

Existing or Proposed?	On- / Off-Road?	Surface Types & Seasons	Key Connections	Current Suitability	Accommodations or Improvements	Time Frame
PROPOSED	On-road US Highway 8 Off-road: Nicolet	Asphalt	Stone Lake to Blackwell	US Highway 8 – Undesirable Nicolet State Trail – Open, but Not Recommended	6' wide asphalt paved shoulders on both sides of US Highway 8 Separated, 10' wide asphalt shared use trail on Nicolet State Trail	Long-term

MAP 8 – PROPOSED BIKE / PEDESTRIAN ROUTES: LAONA



AREA 4: BLACKWELL

Map: 9

Description & Justification: Provides access to Blackwell area Tribal residents, and key locations identified in the public outreach efforts like the playground and Farm Store.

The proposed facilities are off-road, shared use side paths along Tribal and Town / County roads. Tribal roads are recommended for 8' concrete consistent with the current cross section many Tribal Roads are being upgraded to at this time. Town Roads and County Highway H are recommended for 10' asphalt typical of shared use paths.

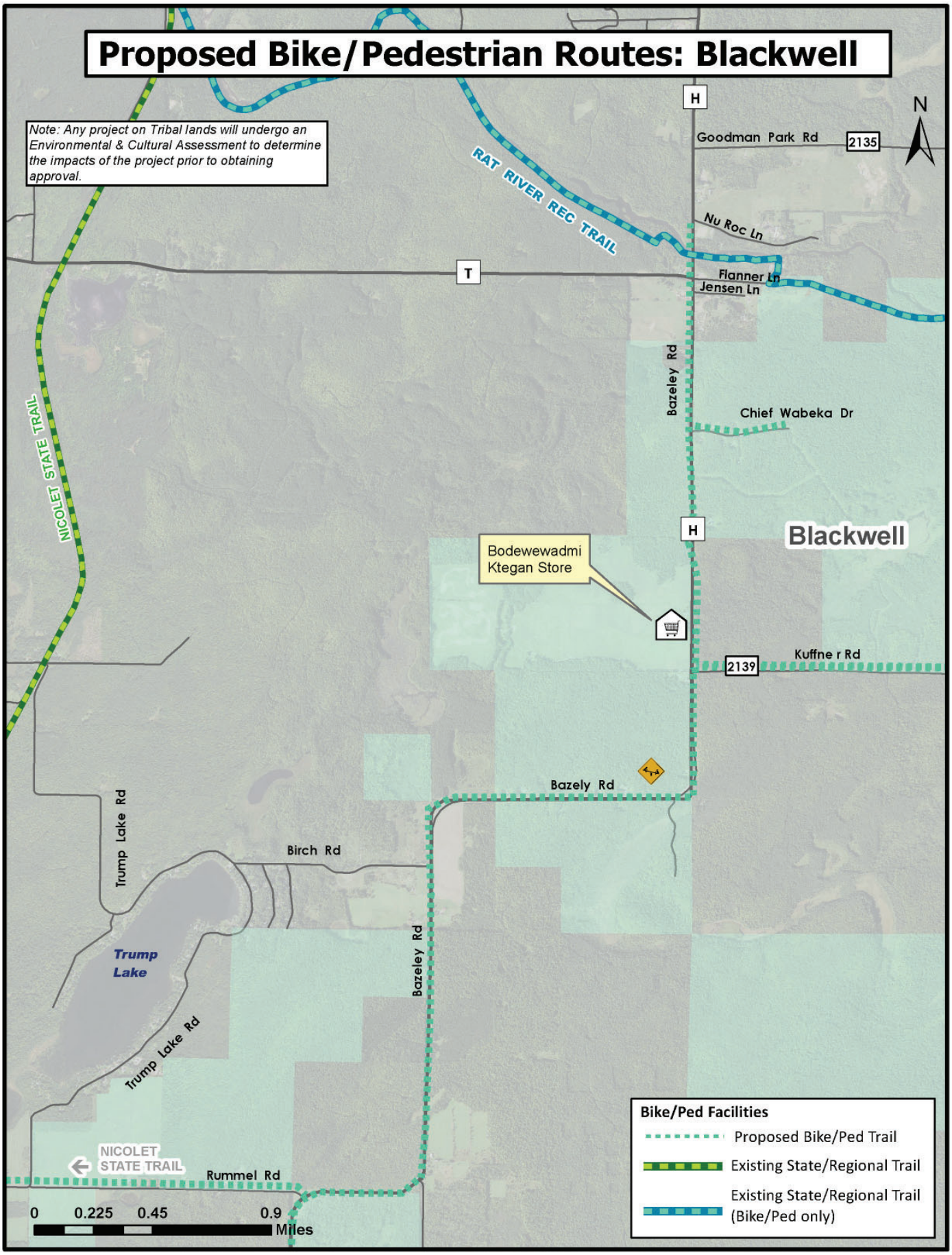
Responsible Parties: FCPC, Forest County & Town of Blackwell



Existing or Proposed?	On- / Off-Road?	Surface Types & Seasons	Key Connections	Current Suitability	Accommodations or Improvements	Time Frame
PROPOSED	Off-road	Asphalt / Concrete	Tribal Residential Areas, Tribal Farm Store, & Tribal Playground	**Best*** (All streets are low volume residential traffic.)	<u>Tribal Roads</u> Chief Wabeka Drive (Based on anticipated future residential expansion along this road / area) <u>Town Roads</u> Kuffner Road & Rummel Road County Highway H	<u>Mid-term</u> County Highway H <u>Long-term</u> *Remaining List*

*County Highway H has a WisDOT rating, but the local roads represent NCWRPC staff analysis and not an official rating.

MAP 9 – PROPOSED BIKE / PEDESTRIAN ROUTES: BLACKWELL



AREA 5: WABENO TO CARTER

Map: 10

Description & Justification: This Connects the Blackwell and Carter parts of the FCPC. Also links to Wabeno Schools where a significant number of FCPC children attend.

The recommendation is for the continuation of the shared use path along County Highway H to Wabeno. The connection between Wabeno and Carter would be via an off-road, shared use path adjacent to State Highway 32 similar to the Pathway to Wellness.

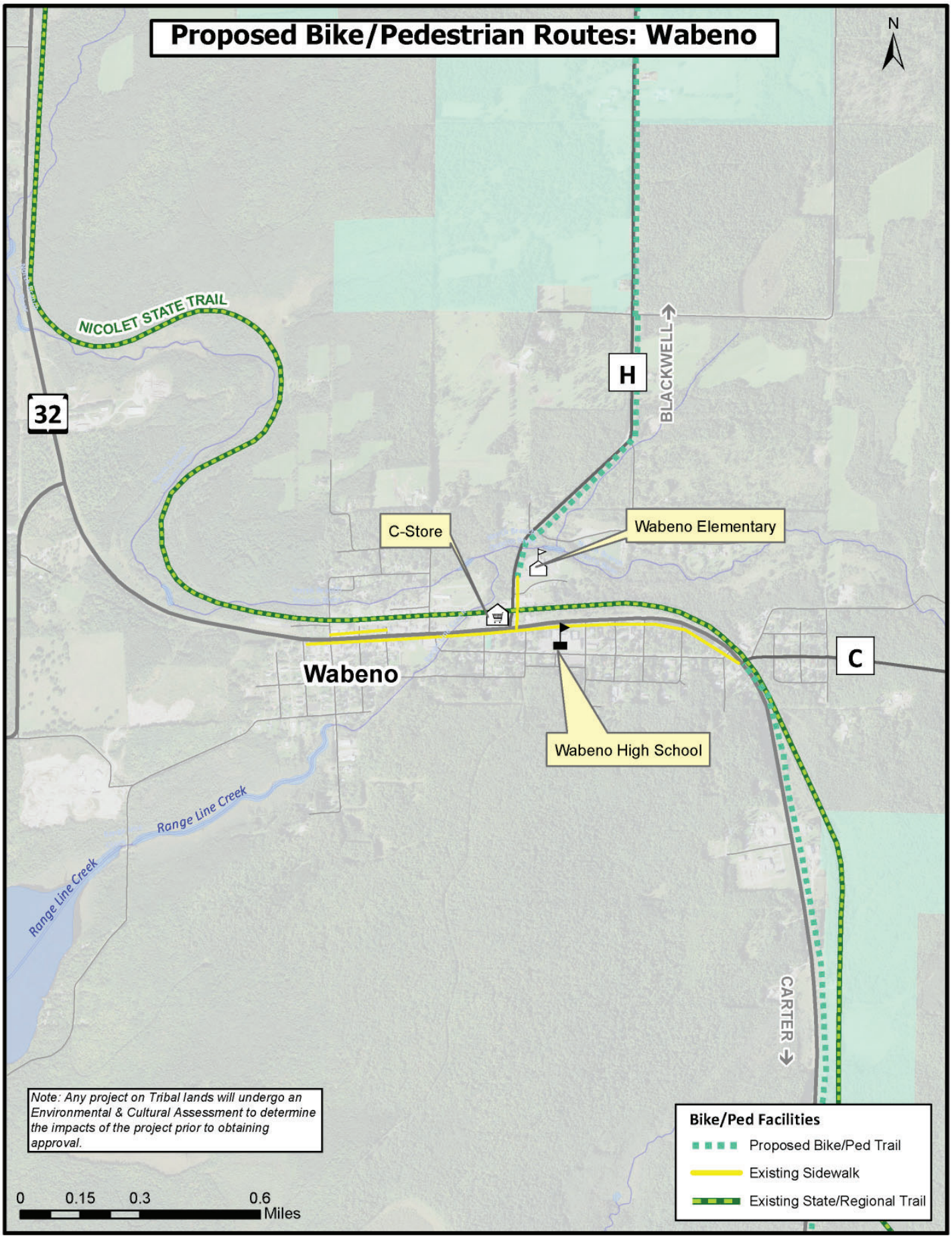
A possible alternative to this State Highway 32 section would be to pursue the parallel but separate concept for the Nicolet State Trail between Wabeno and Carter.

Responsible Parties: WisDOT, Forest County, Town of Wabeno & FCPC



Existing or Proposed?	On- / Off-Road?	Surface Types & Seasons	Key Connections	Current Suitability	Accommodations or Improvements	Time Frame
PROPOSED	Off-road	Asphalt	Blackwell, Carter, Downtown Wabeno, & Wabeno Schools	County Highway H – **Best** State Highway 32 – Moderate (Undesirable through Downtown Wabeno)	10' wide shared use path along County Highway H and State Highway 32	Mid-term

MAP 10 – PROPOSED BIKE / PEDESTRIAN ROUTES: WABENO



AREA 6: CARTER

Map: 11

Description & Justification: Carter is the location of a number of major FCPC facilities including the casino, a C-store, We Care Community Center, and the Ka Kew Se Gathering Grounds.



The proposed facilities are off-road, shared use side paths along Tribal and Town roads and State Highway 32. Tribal roads are recommended for 8' concrete consistent with the current cross section many Tribal roads are being upgraded to at this time. Town roads are recommended for 10' asphalt typical of shared use paths. Adjacent to State Highway 32 would be an off-road, shared use path to similar to the Pathway to Wellness from Elliot Road to Sugarbush Lane.

A few off-road, shared use trail connectors not parallel to a road are also needed (10' asphalt shared use). One is actually a needed replacement for an aging non-ADA path with a bridge between the Wee Care and Gathering Grounds parking lots. In addition to upgrading to an ADA compliant shared use path (8' to 10'), the existing stream crossing needs to be replaced with a larger ADA compliant bridge.

State Highway 32 Crossing: Similar to the way the Pathway to Wellness addresses the concern over safe crossing of US Highway 8, safe crossing of State Highway 32 must also be addressed. Although grade separation may not be warranted, it should be evaluated. Three crossing locations have been identified: Elliot Road, Maple Sugar Lane, and Industrial Park Road. WisDOT has indicated that Elliot Road can easily be retrofitted with crossing safety enhancements. However, the other 2 would need to have the reduced speed zone moved further to the north. Bike/ped crossings are not encouraged in 55 mph zones. Speed needs to be under 45 mph and 40 mph or less for a crosswalk. The Tribe would have to work with WisDOT to get the speed limit moved to the north of Industrial Park Road. WisDOT indicated the Maple Sugar Lane location "makes sense" based on the proposed trail connection. The speed limit would have to be lowered, crosswalk marked, detectable warning fields installed just outside the existing shoulder area, and crossing warning signs installed. Related, in order to lower the speed limit, the Tribe would need to work with WisDOT's Traffic Section. The Traffic Section may want to do a speed study in the location.

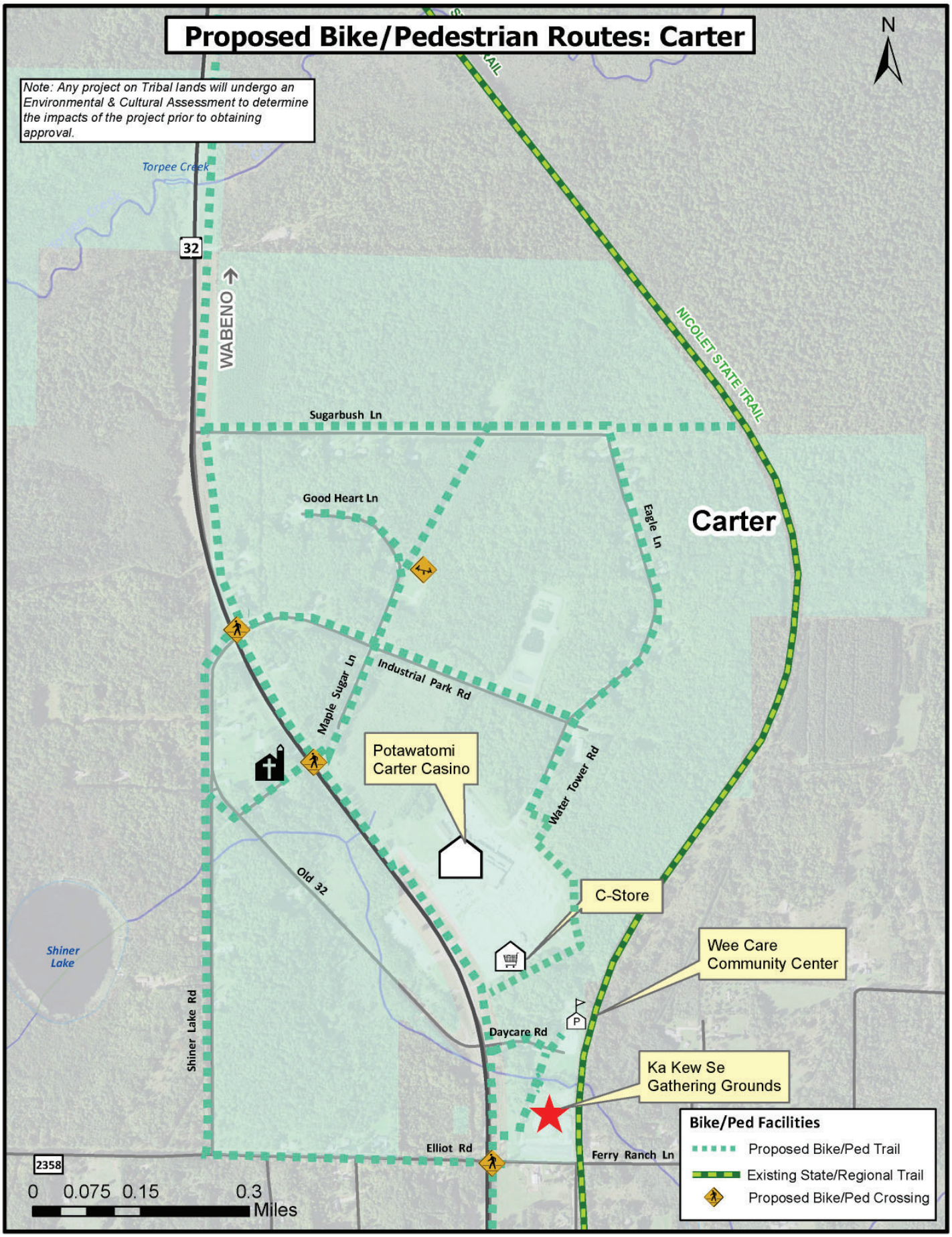
Responsible Parties: FCPC, WisDOT & Town of Wabeno

AREA 6: CARTER (CONTINUED)

Existing or Proposed?	On- / Off-Road?	Surface Types & Seasons	Key Connections	Current Suitability	Accommodations or Improvements	Time Frame
PROPOSED	Off-road	Asphalt / Concrete	Tribal Facilities: Casino, C-Store, Wee Care, Gathering Grounds, Goodheart Lane Playground, Sunnyside Church, & Residential Development throughout	**Best*** (All streets are low volume residential traffic.)	<u>Tribal Roads</u> Good Heart Lane, Eagle Lane, Industrial Park Road, Maple Sugar Lane, Water Tower Road, Daycare Road, Dry Creek Lane <u>Town Roads</u> Sugarbush Lane, Shiner Lake Road, Old 32, Elliot Road <u>Off-road Connectors</u> Sugarbush Lane to Goodheart Lane, Sugarbush Lane to Nicolet, Water Tower Road to 32 Path, Wee Care to Ka Kew Se, Maple Sugar Lane Extension, & Dry Creek Lane Extension State Highway 32	<u>Short-term</u> STH 32 Sugarbush to Goodheart (Connector) Wee Care to Ka Kew Se (Connector) <u>Long-term</u> Remaining list

*This represents NCWRPC staff analysis and not an official rating from WisDOT.

MAP 11 – PROPOSED BIKE / PEDESTRIAN ROUTES: CARTER



OTHER INFRASTRUCTURE & NON INFRASTRUCTURE RECOMMENDATIONS

A primary purpose of the Forest County Potawatomi Community Bicycle and Pedestrian Plan is to create an interconnected, usable, and safe bicycling network for FCPC residents and visitors. Survey results for the plan demonstrate that both the lack of safety and the lack of perception of safe conditions, are major barriers to more bicycling and walking throughout the Community.

This section contains a variety of recommendations for additional non-infrastructure projects and activities designed to address these concerns as well as to support and encourage increased biking and walking in the Forest County Potawatomi Community and surrounding areas.

FCPC HEALTH & WELLNESS

The Forest County Potawatomi Community Health Department should embrace biking and walking as a key pillar of its effort to improve community health through increased walking and biking. Increased physical activity has strong positive effects on many of the primary health issues affecting the Community including diabetes, obesity, emotional well being, and others. The Health Department should incorporate biking and walking into its Health Improvement Plan and coordinate with other FCPC departments and groups to develop and promote increased walking and biking trail opportunities. Many of the other recommendations in this section can be integral parts of this effort.

EDUCATIONAL PROGRAMMING TO PROMOTE BICYCLE RIDERSHIP / WALKING & SAFETY

Education is critical to the success of a bicycle and pedestrian network within a community. There is often a mentality that “if you build it, they will come” when considering pathway facilities. However, this is not always the case; people should be educated about new bicycle and pedestrian facilities. Most Americans do not receive any formal training on how to ride their bikes on a street, how bicycles work, or the rules of the road. Educational activities and strategies attempt to fill that knowledge gap.

Provide bicycle education events such as bicycle rodeos and other activities targeted at children. Bicycle Rodeos are clinics to teach children skills and precautions about riding a bicycle and are a great way to direct and deliver bicycle related curricula to children. Topics discussed typically include the parts of a bicycle, how a bike works, how to fix a flat tire, proper helmet fitting, rules of the road, road positioning, and on-bike skills. These rodeos are often facilitated by local police department or cycling clubs and model programs are available through the League of American Bicyclists website.

Including bicycle and pedestrian related educational pieces in newsletters or other tribal mail-outs is an easy way to reach a large group of people. Simple communications can cover a seasonal topic such as rules of the road, local bicycling ordinances, back-to-school safety information, and using lights as fall approaches.

Provide biking education and safety guidance on the FCPC website. Agencies such as WisDOT’s Bureau of Transportation Safety and advocacy groups such as the Wisconsin Bicycle Federation have made bicycle and pedestrian safety and legal guidance accessible to readers of all skill levels. Making these resources available in public venues of information – particularly websites and public libraries – would be an effective and affordable method of distributing vital information to interested bikers.

COORDINATE WITH AREA SCHOOL DISTRICTS ON SAFE ROUTES TO SCHOOL PROGRAMMING

The FCPC should coordinate with area school districts on Safe Routes to School (SRTS) Programming and curriculum development to instill the benefits of biking and walking and promote safe practices. Safe Routes to School programs are an opportunity to make walking and bicycling to school safer for children in grades K-8, and to increase the number of families who encourage their children to walk and bike.

The City of Crandon has implemented a number of SRTS projects within the City. Wabeno School District has already developed a SRTS plan (Spring 2020) and other districts in Forest County are expected to consider SRTS efforts in coming grant cycles.

The intent is to connect the tribal community to these non-tribal elements in order to also provide FCPC children with safe access to the schools they attend.

BICYCLE & PEDESTRIAN CITIZEN'S ADVISORY COMMITTEE

Creating a permanent Bicycle and Pedestrian Advisory Committee (BPAC) within the Tribal structure emphasizes the FCPC's commitment to make biking and walking safer and more appealing to residents and visitors. A BPAC typically focuses on non-motorized transportation in the public right-of-way which includes shared use paths. Potential committee responsibilities include:

- Championing development of the pathway system and implementation of the bicycle and pedestrian plan;
- Review and input on capital project planning and design as it affects bicycling and walking;
- Review and comment on changes to long-term planning and policy documents that relate to bicycling and walking facilities or programs;
- Participation in the development, implementation, and evaluation of bicycle and pedestrian related plans and programs;
- Provision of a formal liaison between tribal government and staff and the public;
- Development and monitoring of goals and indices related to bicycling and walking; and
- Promotion of bicycling and walking, including mapping, safety, and education.

The committee should be created formally and documentation developed that defines the committee's charge, responsibilities, member composition, how members are chosen/appointed, what the decision-making structure is, and how often the committee meets.

BIKE & WALK EVENTS

Bicycling to work or to other destinations is a great way to get exercise, save money, reduce pollution, and have some fun. Bike to Work Week and Bike and Walk to School Day are national activities and are easily organized with help from the League of American Bicyclists website (http://www.bikeleague.org/). Information on the website includes national and local events, promotional materials, and a handbook. The Wisconsin Bike Fed (http://www.wisconsinbikefed.org/) also provides support for Wisconsin communities that wish to participate in Bike to Work Week. Bike and Walk to School Day is an important component of Safe Routes to School as it both encourages and educates students on how to get to school via bike or their feet.

Family friendly events can be a great way to capture the "Interested but Concerned" portion of the cycling population, as well as a great way to introduce kids to bicycling as part of everyday life. These events are often community oriented and can be as simple as a group ride organized on a Sunday afternoon.

BICYCLE & PEDESTRIAN FRIENDLY DESIGNATION

The League of American Bicyclists ranks applicant communities on their level of "bicycle friendliness" on a scale from "Honorable Mention" through "Diamond." The Bicycle Friendly Community program provides a roadmap to improve conditions for bicycling and the guidance to make the FCPC a more bikeable community. The application process will help the FCPC recognize its strengths and weaknesses regarding bicycling and the response from the League of American Bicyclists will help guide bicycle improvements. A bicycle friendly ranking can drive tourism and events to communities and can represent health savings for the community. Finally, a bicycle friendly ranking is something the FCPC could be proud of.

Walk Friendly Communities (WFC) awards communities that improve and prioritize pedestrian safety, access, mobility, and comfort with either a bronze, silver or gold designation. WFC, which is a partnership supported by the Federal Highway Administration, provides a community assessment tool to evaluate existing pedestrian conditions and programs largely based on the "5 E's:" engineering,

encouragement, education, enforcement, and evaluation. This walk audit can also be used in planning for future improvements and filling in the gaps in the other E's.

A goal of a FCPC BPAC could be to work toward Bicycle Friendly and Walk Friendly Community recognition.

BICYCLIST FRIENDLY PARKING

For bikes to be used more often for transportation, everyday destinations like work, school, stores, offices, government buildings, restaurants, etc must have places to park a bicycle securely. Installing bike racks by each facility or conveniently located in a common area, would provide secure parking for residents and visitors alike.

A set of bicycle parking guidelines from the Association of Pedestrian and Bicycle Professionals (APBP) is included in the **Appendix, A-7** The amount of space needed for a bike rack and how to determine good bike rack designs are included in those guidelines.

Recommendations:

1. **Use the Bike Parking Guidelines when purchasing a bike rack, so that it allows a bicyclist to use a U-lock to secure their front tire and bike frame to a rack and keeps the bike upright while locked.**
2. **Provide bicycle parking guidance to all employers that want to become more bicycle friendly.**
3. **Consider installing bicycle parking at all tribal facilities, other public buildings, and every park.**

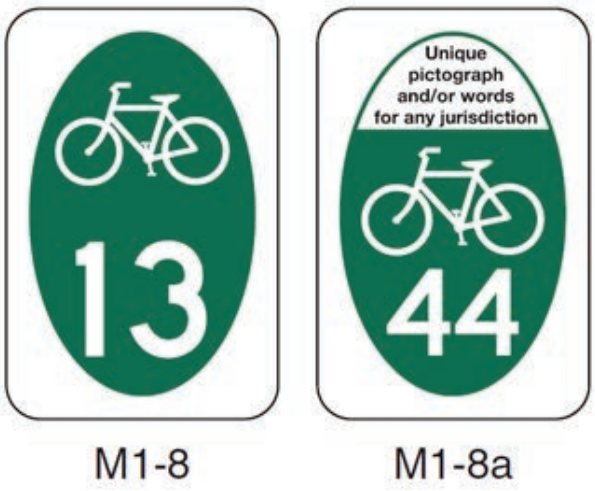
ROUTE MAPS

Develop a bicycle user map that displays bicycle facilities as well as a bicycle suitability rating for area streets. The map should be available online and in print format. People who are not familiar with bicycling in a specific area often have a difficult time determining what their route to a specific location should be. Streets that they might use to drive to a destination may not be streets they are comfortable bicycling on. Providing maps of bicycle facilities and streets that are suitable for bicycling is a good way to encourage people to bicycle more and to raise awareness about bicycle facilities.

ROUTE SIGNAGE

Pathway routes should be clearly signed, not only for safety and wayfinding, but also to propagate awareness of the system and give identity. Pathway identity signage can come in several forms, such as the M1-8 type sign from the Manual on Uniform Traffic Control Devices or MUTCD. This signage can be used with or without customization (M1-8a) for community or pathway identity. Identity can help build awareness of the system and encourage use. The MUTCD is the national standard for signage and should be followed in implementing a sign program for the bike route system

Signage placed in a road right-of-way may also need permission/permits from that roadway's jurisdiction.



There are several types of signs that need to be utilized in developing the pathway system. These include location and directional signs, which will identify the pathway and provide some indication of where people are relative to other elements of the system; warning signs, which will identify steep areas, curves, steep slopes, and other areas where a higher level of caution should be exercised; regulatory signs where people will be informed not to walk animals on the pathway or to dismount from a bicycle in a particular area; and information/education signs which will be part of an interpretative program along the pathway. The different types of signs need to be carefully designed and located to maintain the aesthetics desired along the pathway yet still provide the information needed to make the pathway a safe, enjoyable facility. See the **Appendix, A-8** for additional guidance on sign usage and placement.

ROUTE SIGNING

Use of standard Bicycle Route signs on higher volume, rural roadways is not recommended. This is because the presence of these signs might encourage less experienced bicyclists to ride under conditions that exceed their level of skill. However, it may be appropriate on certain tribal roads where traffic volumes and speeds are low. Route maps with the appropriate disclaimer regarding the skill levels required to ride the routes are the recommended method for identifying routes.



MUTCD # D11-1

24" X18"

It may be necessary to provide directional signage at the more confusing decision points to inform riders of less obvious route direction changes to ensure that they can follow the route.

WARNING SIGNS

In some locations along the pathway, warning signs should be posted to alert motorists to the possible presence of bicyclists or pedestrians and to advise riders to use caution. These include areas of higher traffic volumes or narrow lanes. This sign could also be useful in providing cyclists with confirmation of route direction by placing them just after decision points.

The standard yellow bicycle warning sign (W11-1) is recommended.

Another option is to use the "Share the Road" subplate with the standard warning sign. These signs are intended to increase the visibility of cyclists to motorists particularly in potentially hazardous areas such as blind curves or hills.

When routes must cross a busier highway, the yellow diamond bicycle crossing sign should be used and supplemented with plates that read "Xing" or "Next X Miles" as appropriate. According to the MUTCD, these signs should be placed 750' before intersections in rural areas and 250' in urbanized places.







MUTCD # W11-1

24" X 18"

CHAPTER 4: PLAN IMPLEMENTATION & CONCLUSION

IMPLEMENTATION ACTIONS

Throughout this document, a number of goals, objectives and recommendations have been identified. In order to help manage all of these components, action items are provided to facilitate the successful implementation of a bicycle and pedestrian system for the Forest County Potawatomi Community. These suggested actions are summarized below:

- **Maintain the existing bicycle & pedestrian network to ensure safe travel.**
  - Create an annual sidewalk/trail field review protocol to evaluate condition and safety hazards.
  - Establish a 5-year Sidewalk/Trail Pavement Improvement Plan similar to the tribal roadway plan.
  - Establish an annual sidewalk/trail maintenance budget.
- **Continue to remove gaps in the bicycle & pedestrian network.**
  - Continue to annually evaluate opportunities to improve connectivity with roadway improvements.
  - As new areas are developed, include the appropriate bike/ped facilities.
- **Expand the bike/ped network within the FCP Community and in connecting with adjacent communities.**
  - Participate in future local, county or regional bike/ped planning efforts.
  - Investigate collaboration and cost-share opportunities for future projects.
  - Further evaluate concentrated land use areas for key future development of pedestrian and bicycle facilities.
  - Develop utility corridors that will allow for dual-use as shared-use pathways.
  - Identify and apply for grant funds as applicable.
- **Increase awareness of bicycle and pedestrian facilities within the FCP Community.**
  - Add way-finding signage and kiosks as appropriate.
  - Investigate the use of sharrows for added connectivity.
  - Create on-line mapping for Tribal public use.
  - Provide educational materials for the public for the use of the facilities.
  - Partner with other organizations to cross-promote facilities and educate the public.
  - Sponsor bicycle and pedestrian events to promote shared use transportation.

PLAN USE & UPDATES

NEXT STEPS

With the adoption of the Plan, the next steps would be the following:

1. Assign staff to coordinate a bike/pedestrian committee.
2. Invite community members to participate with the committee.
3. Determine priority of the goals and associated objectives for the committee to focus on. Note: the project priorities list in Chapter 3 is a good place to start.
4. Create a 5-year action plan with detailed action items for committee members and appropriate FCPC staff.
5. Assign individual staff to action items.
6. Begin work on 2021 actions.

MONITORING & REPORTING

It is recommended that quarterly meetings occur with staff to report on progress of goals, objectives, and action items.

The Bicycle and Pedestrian Committee will report annually to the Executive Council on progress in implementing the Plan. This will include identification of action items that have been initiated and the results of those actions. The Committee Report will also include a discussion of any barriers to implementation that have been encountered.

Annually, the plan should be revisited and modified as necessary.

PLAN LONGEVITY

This Plan's time horizon is intended to be twenty years; however, every 10 years this Plan should be completely reviewed and updated.

As part of the Plan updates, the Bicycle and Pedestrian Committee will review and evaluate the success of implementing the Plan. This review will then shape modifications of policies and plans for the update.

Any amendments to the Plan should then undergo a review process and be adopted by the Council in the same manner as the original Plan.

ENFORCEMENT

As noted at the outset of this plan report, the bicycle and pedestrian planning process revolves around the 5-E Approach. Again, the 5 E's are education, encouragement, engineering, evaluation, and enforcement. This Plan fully addresses the first 4 E's, however, enforcement resources are significantly lacking in this area. To compensate, any pathway design should put in place appropriate notification/ warning signs along with barriers (boulders, gates, etc.) to control / direct non-motorized and motorized traffic to the appropriate areas. The FCPC Bicycle and Pedestrian Committee will have to address safety and enforcement issue as they arise and should periodically review enforcement options.

FUNDING SOURCES

It is important to note that implementation, as with many public works projects, is heavily contingent on right-of-way and accessibility of funding sources. Funding assistance for major projects would most likely come from WisDOT or the Wisconsin Department of Natural Resources (WDNR). Relevant programs to fund the recommendations illustrated in this plan are listed below. It is important to note that bicycle and pedestrian improvements cannot be funded through grants alone.

TRIBAL

Tribal Transportation Program - Safety Fund

The Tribal Transportation Program Safety Fund is a competitively selected annual grant for infrastructure improvement, safety planning, and the analysis and collection of safety data. Under the FAST Act the fund is about $9 Million per year, a two percent set-aside from the Tribal Transportation Program.

Tribal Transportation Program – Tribal Allocation

Each federally recognized Tribe participating in the Tribal Transportation Program is provided with an annual allocation of funding. This funding can be used for a wide range of transportation needs including the implementation of infrastructure safety projects.

BIA Indian Highway Safety Program (IHSP)

The Highway Safety Act of 1966, 23 U.S.C. 402, provides Department of Transportation (DOT) funding to assist federally recognized Tribes with implementation of traffic safety projects. The program is administered by the BIA Indian Highway Safety Program under an agreement with NHTSA.

FEDERAL

Transportation Alternatives Program (TAP)

WisDOT manages the TAP program, which is funded through the Federal Surface Transportation Block Grant Program. The Transportation Alternative Program (TAP) includes (Safe Routes to School (SRTS) as a separate subcategory. Transportation Enhancement (TE) and Bicycles & Pedestrian Facilities Program (BPFP) grants were combined into the overall TAP category.

Eligible projects include planning, design, and construction of bicycle and pedestrian facilities; recreational trails; safe routes to school projects; community improvements such as historic

preservation and vegetation management; and environmental mitigation related to stormwater and habitat connectivity. This program is highly competitive and is available to all government units throughout the state.

Funding is broken out with part of it being distributed directly to the Transportation Management Areas (urbanized areas with populations of 200,000 or greater) to award and then the residual being distributed throughout the state.

The grant program applications are typically released in late fall of the odd years and due in January of the even years. Grant awards are typically between $50,000 and $1.2 million. The program is a reimbursement program and federal funds will match 80% of the project budget up to the project's cap amount. The design process related to these projects take 1.5 to 2.5 years based on the project's complexity.

Community Development Block Grants (CDBG)

The Community Development Block Grant (CDBG) Program provides annual grants on a formula basis to states, cities, counties and tribes to develop viable urban communities by providing decent housing and a suitable living environment, and by expanding economic opportunities, principally for low- and moderate-income persons. Block grants have been a part of the American federal system since 1966, and are one of three general types of grant-in-aid programs: categorical grants, block grants, and general revenue sharing. CDBG funds can be utilized for specific outdoor recreation or transportation facilities if they meet the requirements of the program.

Stimulus Funding

The surge in Federal funding for economic stimulus in the wake of the COVID-19 Pandemic is providing significant opportunity for infrastructure projects. The FCPC should work with BIA and WisDOT to monitor stimulus developments and apply for funding as appropriate.

Rebuilding American Infrastructure with Sustainability and Equity (RAISE)

The Rebuilding American Infrastructure with Sustainability and Equity (RAISE) discretionary grant program includes $1 billion in Fiscal Year (FY) 2021 funding. RAISE, formerly known as BUILD and TIGER, has awarded over $8.935 billion in grants to projects in all 50 states, the District of Columbia and Puerto Rico since 2009.

Projects for RAISE funding will be evaluated based on merit criteria that include safety, environmental sustainability, quality of life, economic competitiveness, state of good repair, innovation, and partnership. Within these criteria, the US DOT will prioritize projects that can demonstrate improvements to racial equity, reduce impacts of climate change and create good-paying jobs.

For this round of RAISE grants, the maximum grant award is $25 million, and no more than $100 million can be awarded to a single State, as specified in the appropriations act. Up to $30 million will be awarded to planning grants, including at least $10 million to Areas of Persistent Poverty.

STATE

Knowles-Nelson Stewardship Program Grants

The Knowles-Nelson Stewardship is managed by the Wisconsin DNR and will provide up to 50% of the cost of land acquisition and or trail development projects that provide public access for outdoor recreation purposes. These funds can help pay for the land acquisition for future trail development, trail construction costs, and other recreational items like construction of shelters and restrooms at trailheads. These are annual grants that are typically due in May of each year.

Recreational Trails Aids (RTA) Program

This program is administered through the DNR and is included within the Stewardship grant application process. This program allocates federal Recreational Trails Program (RTP) funding for trails. RTP funds may only be used on trails that have been identified in or further a goal of a plan that has been included or referenced in a statewide comprehensive outdoor recreation plan. Eligible activities (in order of priority) are: maintenance or restoration of existing trails; development or rehabilitation of trailside/trailhead facilities and trail linkages; construction of new trails; and property acquisition for trails.

The grant program applications are typically released in November of each year and then due on May

1st of the following year. Any grant requests over $500,000 require additional state review and approval by legislature. This program is highly competitive and if the funds are not used, the state then loses their funding, so there is a strong need for projects without potential barriers that would delay the planned completion.

LOCAL

Redevelopment Authorities

Many municipalities have public/private partnerships that focus on redeveloping areas within the City. Many of these allow for new shared use facilities within the redeveloped area to be an eligible expenses.

Private Foundations

Foundations such as the Greater Milwaukee Foundation have been established to help fund projects which promote their mission statement. These are typically very competitive and very specific, so finding foundation grants that match your project is key. Shared use projects can appeal to mission statements for outdoor activity, health, shared use opportunity expansion, connectivity with the outdoors, safety, and economic justice.

Corporate Foundations

Corporate foundations are typically most successful when your project is within the same community that the corporate headquarters is located. However, if your project has very strong ties to the foundation's mission statement, there is still potential for funding. As mentioned above, shared use projects can appeal to mission statements for outdoor activity, health, shared use opportunity expansion, connectivity with the outdoors, safety, and economic justice.

PROJECT TIMING

The development of the Plan then sets the priorities for the system-wide development, but it should be noted that the timing of the construction of the project is dependent on a number of factors and should be accounted for with the development of FCPC's Capital Improvement Plan and long-range forecasting.The main components for developing a project's timeline pre-construction include funding, project complexity, and bidding. Each of these are then discussed in further detail below.

FUNDING

When 100% locally-funded, a project can typically move faster than ones with outside funding. This is based on reduced requirements for the actual delivery (reporting & plan development) and not having to wait for the grant application decisions. Listed below are three of the main grant sources that can help fund bicycle/ pedestrian projects and their associated timelines.

The US Department of Transportation's RAISE grant:

- This is a nationally competitive grant.
- For 2021, the applications are due on July 21st and awarded by November 22nd .
- These are for larger projects and must follow USDOT requirements for design selection, design, and construction standards.
- For the 2021 cycle, a project's construction would then be planned for 2025.
- The grant is a reimbursement, so awardees must plan for cyclical expenditures and reimbursements.

Wisconsin Department of Transportation's Transportation Alternatives Program (TAP) grant:

- Applications are every two years and are competitive state-wide
- Applications are available in October and then due January 24th. Selections typically occur in August.
- Grant agreements typically are signed 2- 3 months after award notification.
- The WisDOT process with three-party design, reporting, and approvals typically ranges from 2- 3 years, depending on the complexity of the project.
- The grant is a reimbursement, so awardees must plan for cyclical expenditures and reimbursements.

Wisconsin Department of Natural Resources' Stewardship Program

- The grants are awarded annually.
- Application materials are posted in January and due on May 1st .
- Tentative award notifications occur in September.
- Based on award amount, grant agreements are typically signed in January to April of the following year.

Grant awards can help tremendously with the project's viability based on the alternate funding source. But, it is

important to recognize the added time grants add to a project's overall timeline. These timelines vary based on the specific grant, but are compromised of the following elements:

- Grant preparation by the project sponsor (3-5 months)
- Application review by the granting agency (4- 7 months)
- Execution of grant agreement (1-7 months)

Added time pre- design (if design costs are part of the grant application): 8-19 months

PROJECT DESIGN

The complexity of a project and the funding sources largely develop the timeline for design.

As noted above, certain grant programs require a more extensive plan and report development than when a project is 100% locally funded. Typically, when utilizing WisDOT grant funds, the design for a bike/ped project is slated for two years, even with a relatively simple design based on the reporting and required approvals.

When evaluating a project, the following preliminary investigations and coordination are typical and should be accounted for in the required field time for a project:

- Geotech
- Endangered resources
- Wetland delineations
- Cultural resources
- Survey

Then, the complexity of a project is typically increased when the following elements are present:

- Structures
- Challenging soils
- Real estate purchases
- Endangered resources
- Cultural resources
- Sensitive environmental areas – e.g. wetlands, floodplains, rivers, lakes
- Multi-jurisdictional permitting
- Utility relocations
- Inter-governmental collaborations

A general rule of thumb would be to allow 2 years for design for projects of medium complexity.

BIDDING

Once the design is completed and all permits have been acquired, the project will be competitively bid out for contractors. From the time the project is advertised for bids to when it is awarded is typically 2 months. The timing of the bidding is also important with typically the most desirable bidding times being from December – February. When bidding outside this timeframe, bid prices are typically higher. This is important to note for developing your proposed project's timeline and accounting for favorable bidding and construction timeframes.

SUMMARY

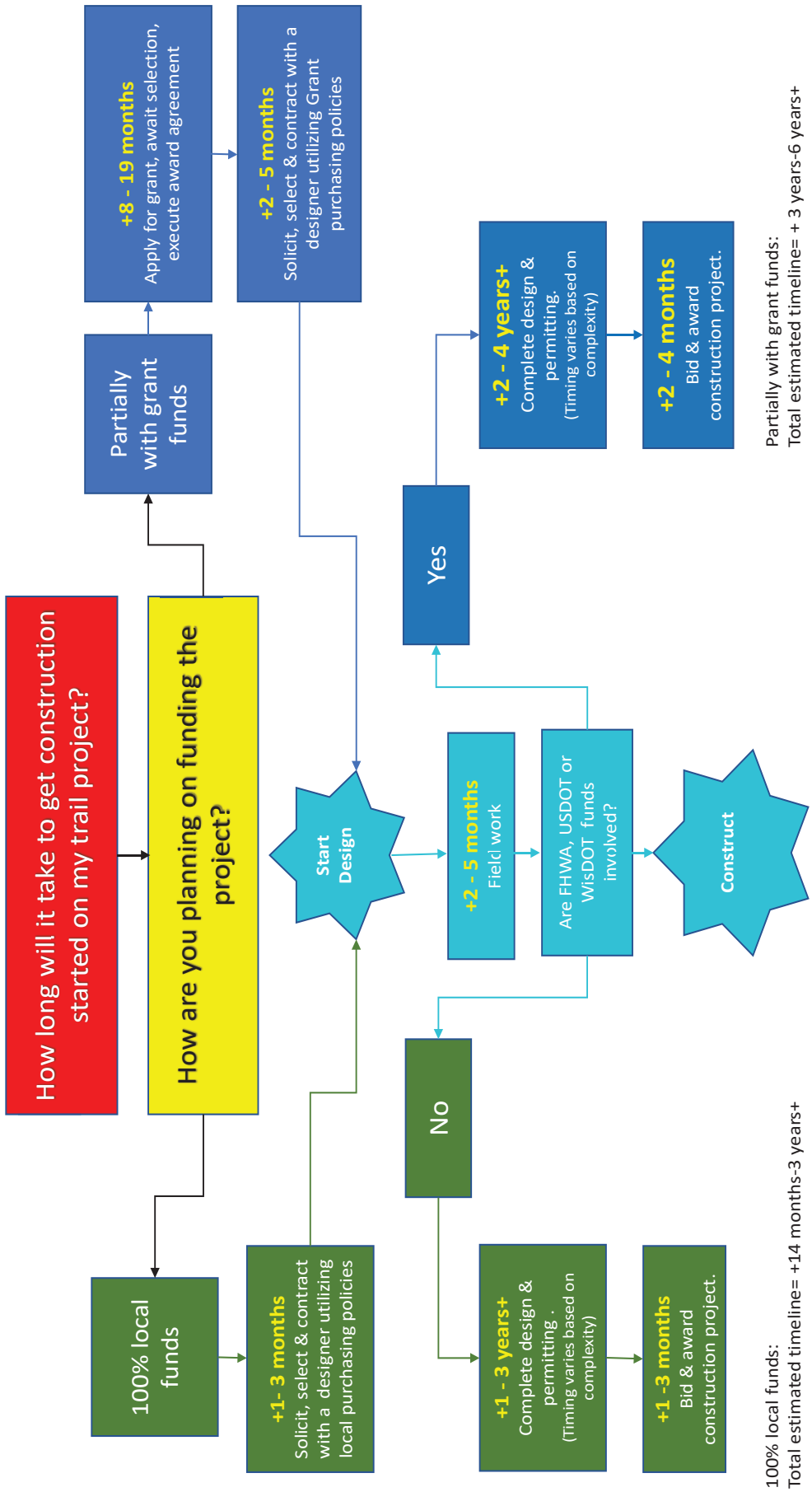
When developing your Capital Improvement Plans, it is beneficial to review each project and identify the potential funding sources first and foremost. If applying for grant funding, that will then drive the initial timeline. Evaluating design challenges conceptually will also help shape a realistic amount of time to set aside for design. Finally, timing the release of the project for bidding is also an important element to consider for the project timeline.

CONCLUSION

The FCPC Bicycle and Pedestrian Plan is intended to address a long-term period and plan for a bicycle and pedestrian network in the Forest County Potawatomi Community for the next 20 years. However, planning for the future does not end upon the adoption of this plan. Circumstances and user needs change frequently. Therefore, this plan should be closely monitored and analyzed to ensure that it continues to meet the changing needs of the FCPC and its member residents.

Additionally, as communities do with their other formal plans, the FCPC should consider a formal update of the plan in 10 years to update goals, objectives, and recommendations to ensure planning and implementation of bicycle and pedestrian planning in Forest County Potawatomi Community remains timely and relevant.

PROJECT TIMELINE FLOWCHART



APPENDIX

A-1: FCPC Bike / Ped Survey Results (Page 86)

A-2: FCPC Bike / Ped Survey Maps for Review (page 102)

A-3: Bike Suitability Maps (page 109)

A-4: Traffic Counts Maps (page 115)

A-5: Proposed Bike / Pedestrian Routes (page 121)

A-6: Bike Parking Guidelines (page 128)

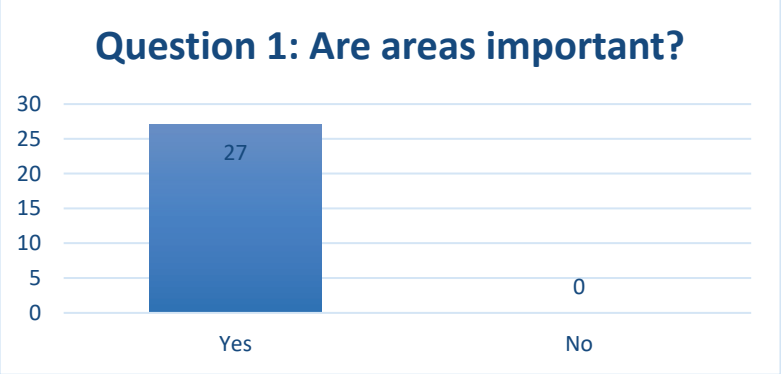
A-7: Signing & Wayfinding (page 129)

A-1 – FCPC BIKE / PED SURVEY RESULTS

Summer 2020, FCPC Walking and Biking Survey
Results Summary

A short survey form was launched for FCPC Tribal members in Summer 2020 in an attempt to increase response rates. Twenty-seven responses were received. The full results are compiled below.

1. Do you feel that it is important to have areas for walking and biking in the community?

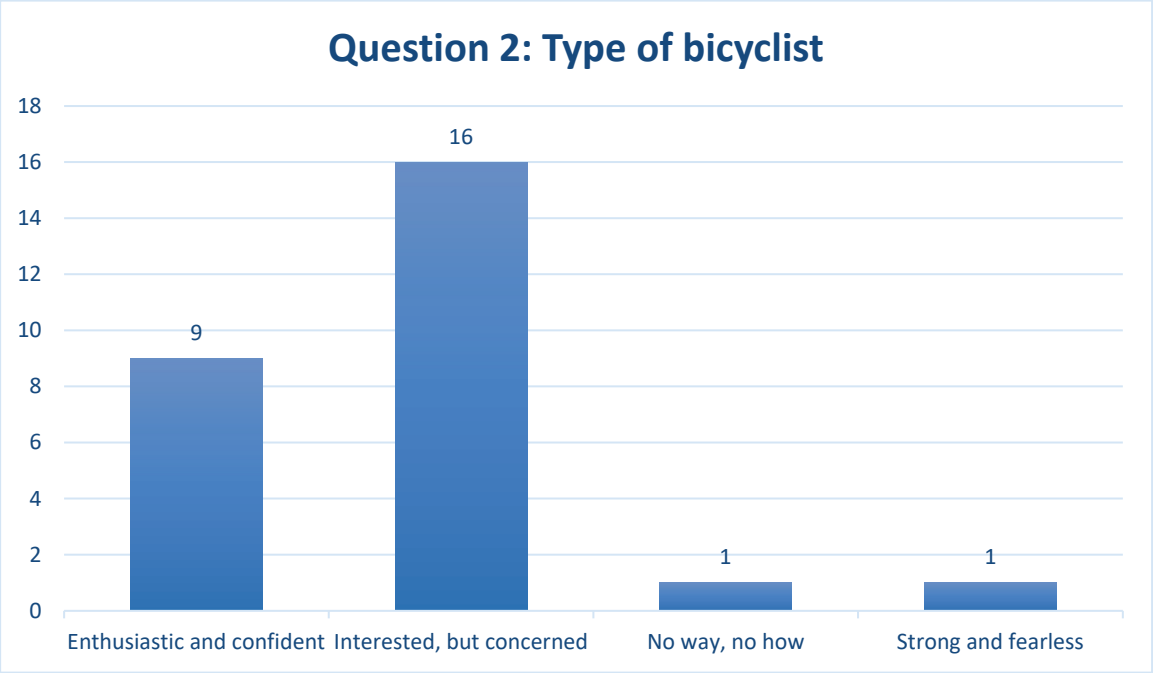


Comments:

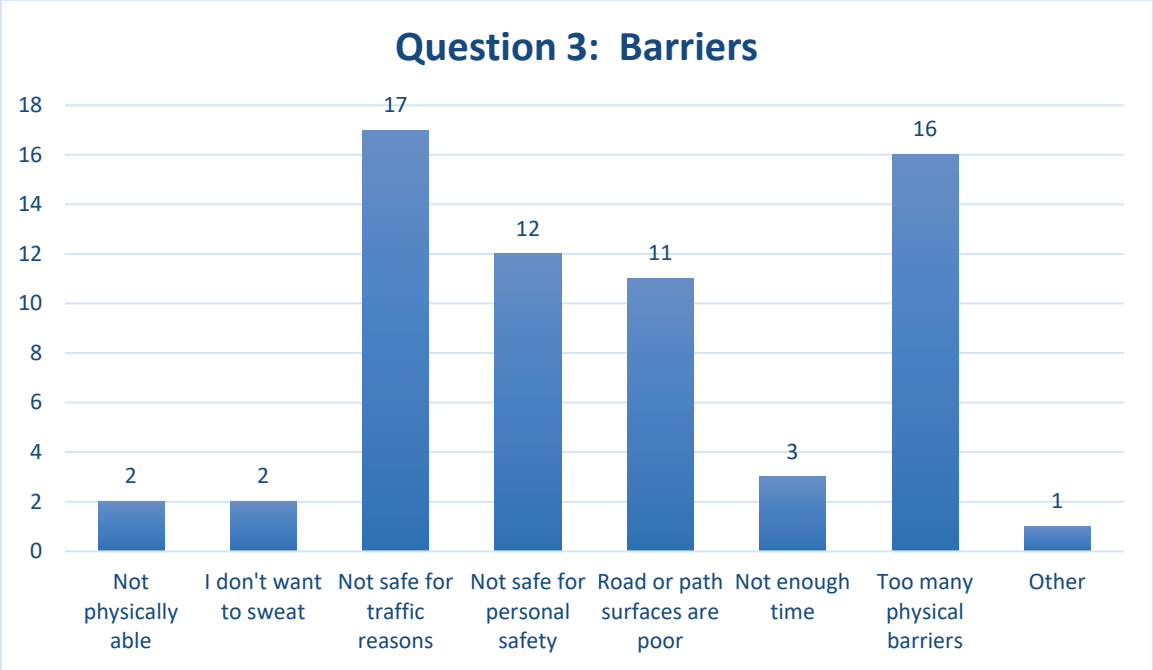
- **Definitely bike trail to town Crandon from old tribal hall would be nice.**
- **"Our cabin guests continue to ask for walking and bicycling routes in the county.... particularly routes not accessible by ATV's. They are gravel bikers, family bikers and mountain bikers. I think enhanced trails and good promotion would improve the county's "draw" for tourism. "**
- **Do it now.**
- **Yes, in Carter we could use some.**
- **Blackwell is growing we have almost 20 kids on Chief Wabeka alone.**
- **I also roller skate so having a safe place to do this is important to me as well.**

- **Yes, we need to put a healthy step in changing or lives into more active productive members of our families and lives. There aren't any sidewalks or walking trails here in Carter. My son is handicapped and would love a saver way to get out of the house alone.**
- **It'd be nice to have a walking/hiking trail in the area like all of the trails Antigo has.**

2. What type of bicyclist are you?



3. What barriers exist that limit you from walking and biking more often? (Choose all that apply.)



Other: "Not enough time in the day or a lack of safe routes to travel along where my child can ride independently of me without worrying about him getting hit by a car."

4. What concerns do you have about walking and biking in the community?

- **My concerns are that there isn't any sidewalk or shoulder to walk on. I also enjoy skateboarding, it would be nice to have a bike path or walk way to pull over to when cars approach.**
- **Not enough paths.**
- **ATVs on same path.**
- **Build it now.**

- **Cars driving fast and not knowing the correct side to walk on for the children.**
- **Children shouldn't be walking on the street to go from friend's house to friend's house. The way people drive on the roads around there and all the blind corners we need something for the children to walk on and be safe.**
- **Definitely safety as far as animals and secluded areas are concerned. Because I do like to roller skate I would also love to see smooth paved paths - but at least a smooth path for walking/biking. Hills do worry me when I'm biking.**
- **Dogs and don't know trails that well.**
- **Dogs and four wheelers driving too fast.**
- **Dogs not on leash, highway nearby.**
- **Dogs unchained coming up to me, wildlife, and people driving too fast or not paying attention.**
- **Highway 8 travel.**
- **Highway, on-coming traffic, bike trail would be great to Crandon**
- **I would love to walk/ride bike but i have the highway on one side and ATV/snowmobile trail on the other side of me. Don't want to drive any kind of distance to have to enjoy nature walking or biking.**
- **I have concerns now - the only place to bike that for any decent distance ride from town is around lake Metonga. A portion of this route is a 55 mph highway and does not feel safe at all. And really bright is the lake road with all the summer traffic. A more secluded trail would be nice, not only for locals but for tourists.**
- **Just dogs.**

- **Kids biking/walking on the roadways, as there is no safe way for them to get from town to FCPC**
- **Motorists speeding.**
- **My comments revolve mainly around tourism needs which will enhance our communities through revenue.**
- **No walkways or bike paths. Could use more street lights too. I live on Shiner Lake Road and it's always a dark street to walk down.**
- **Not enough / no room to ride a bike/ walk without stopping every two minutes to move over or stop for on coming vehicles.**
- **Not enough bike routes.**
- **Road is busy and not enough room to bike or walk.**
- **Speed limit on roads. Bear Road & Potawatomi trail.**
- **there aren't any street lights here on shiner lake road. I would like to walk later at night. The neighbors do not slow down. You feel like a target and not a pedestrian.**
- **Traffic & DOGS.**
- **Traffic.**
- **Would love to take the granddaughter but it’s nerve racking that loose dogs will chase us because we like to walk our dogs too with us!!**

5. What would you like to see in your community that would help you to walk and bike more often? (Choose all that apply.)

Programs or information:

5 **Various walking / biking education.**
10 **Some way of constant encouragement (e.g. pedometer, token gifts for miles walked/biked)**
7 **Motorists sharing the road better.**
18 **Walking route map**
15 **Biking route map**

Infrastructure:

14 **Paved shoulders on busy highways**
21 **Off-street path on busy highways**
9 **Sidewalks in downtowns**

2 Other (please specify) _____

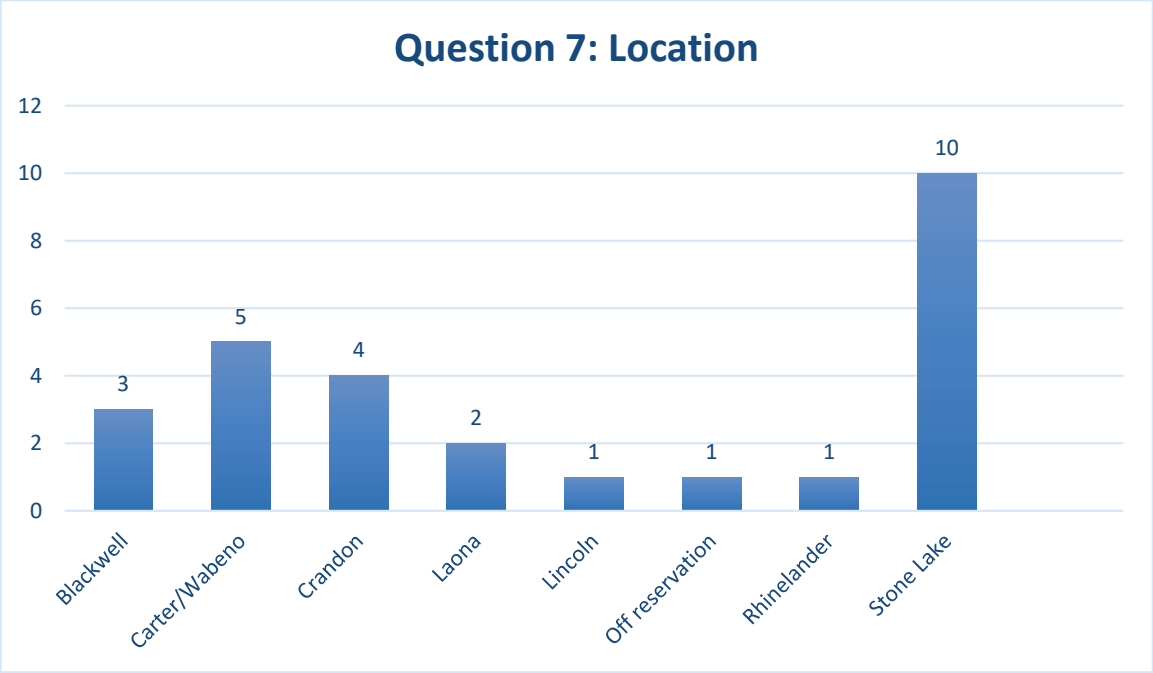
- **Biking events. With social distancing, have people track their distance or time they bike.**
- **A neat little walking trail that goes through portions of the woods vs. simply walking alongside a boring/busy highway.**

6. What locations in the community would you like to be able to walk and bike to?

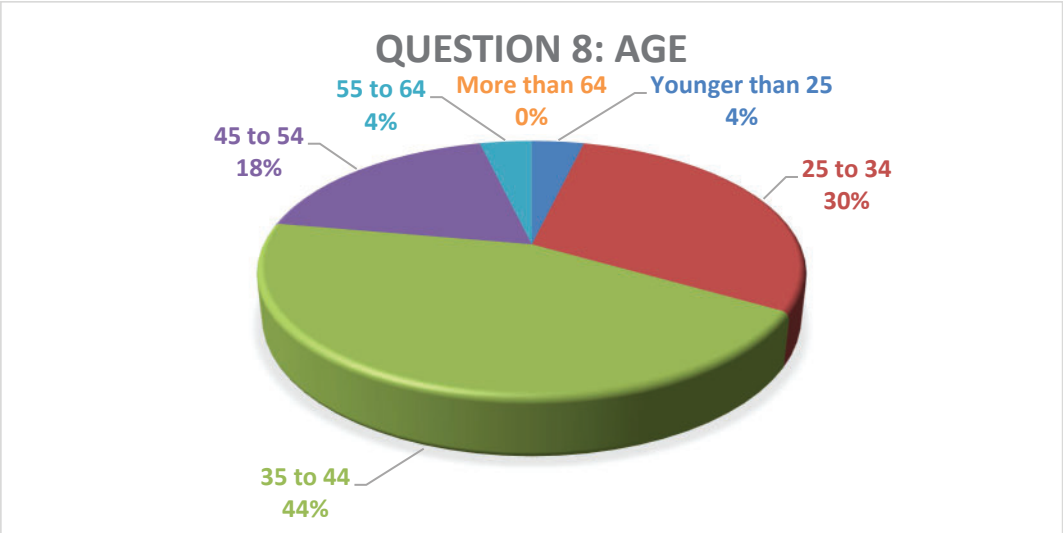
- **Blackwell down to the Farm. All residential areas in carter, ideally some trails to the C-store and parks. Maybe, educational signs about nature in Potawatomi.**

Demographic information will be used to compile a picture of respondents and will NOT be used to identify you in any way. Respondents will be kept anonymous.

7. What area do you live in? (Example: Stone Lake, Carter, Blackwell, etc.)



8. What is your age?



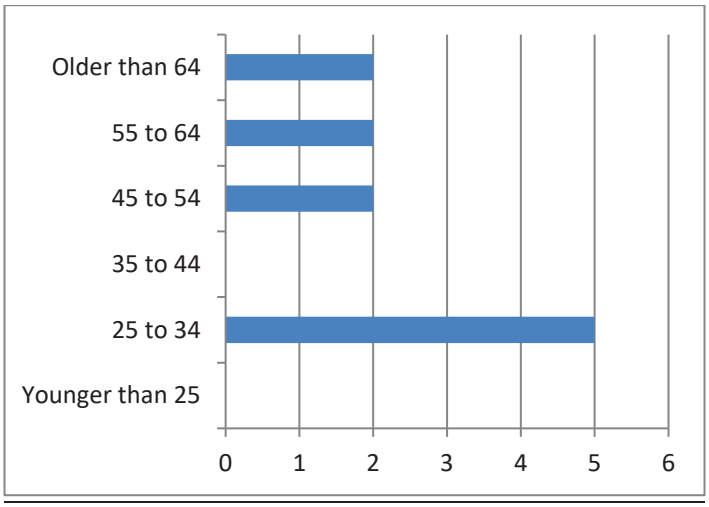
Spring 2020, FCPC Walking and Biking Survey
Results Summary

A long form survey was launched for FCPC Tribal members in Spring 2020. Thirteen responses were received. The full results are compiled below.

Q1 – Please indicate the area(s) where you live and work

	Live	Work	Live & Work
Stone Lake	1	3	3
Blackwell			
Carter	3	1	
City of Crandon			1
Town of Lincoln	1		
Town of Laona			
Town of Wabeno	4		
Other: 1-Rhinelander, 1-About a mile south of Wabeno			

Q2 – What is your age?

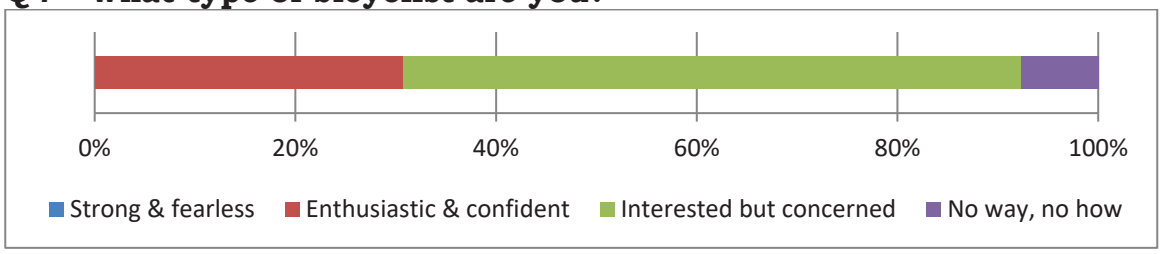


Q3 – FCPC tribal members:

Yes - 85% of respondents.

One FCPC affiliated or a descendent respondent.

Q4 – What type of bicyclist are you?



Strong & fearless. (I am confident in my abilities and will ride regardless of roadway conditions, amount of traffic, or inclement weather.)

Enthusiastic & confident. (I feel comfortable sharing the road with motor vehicles, but I prefer to ride on separate facilities like bike lanes. I may or may not ride in inclement weather.)

Interested but concerned. (I like riding, but don't do it regularly. I'm generally concerned that my route is not safe to ride, so I don't ride often. I definitely do not ride when the weather is bad.)

No way, no how. (I'm not interested in biking at all, not even for recreation.)

Q5 – What is your primary mode of transportation for the following types of trips? If you don't typically make a particular trip select "Not Applicable"

	Not Applicable	Walking	Bicycling	FCPC Transit	Drive Yourself	Carpool	Other
To Work	2				9		
Education/School	4				6		1
Shopping & Personal Bus.	1		1		11		
Leisure & Rec.		5			7		

Other:

- I love walking, bicycling, and roller skating. There are no good places for roller skating closer than St. Germain.
- I'd love to walk/ride but I live next to the highway and am afraid of the divers now days. Not safe.

Q6 – Do you own a bicycle? 11 Yes, 2 No

Q7 – Is your bicycle in working condition? 10 Yes, 1 No, 1 NA

Q8 – Please describe how frequently (when weather permits) you walk and bicycle for the following types of trips:

	Daily	Weekly	Monthly	Rarely	Never
Walk for fun		6	3	4	
Walk for exercise	1	7	2	3	
Walk for transportation				7	6
Bike for fun		2	2	7	2
Bike for exercise		2	2	7	2
Bike for transportation			1	7	4

Q9 – If a system of sidewalks, pathways, crosswalks, bike lanes, etc. is constructed, how do you think that would change your walking and bicycling habits (when weather permits)?

	Daily	Weekly	Monthly	Rarely	Never
Walk for fun	8	3	2		
Walk for exercise	9	3	1		
Walk for transportation	3	2	3	4	1
Bike for fun	4	6	1	1	1
Bike for exercise	4	6	1	1	1
Bike for transportation	3	2	3	3	2

Q10 – Which of the following programs or information would help you bike/walk more often? (Choose all that apply.)

***** Nothing more regarding programming or information.

2 Various biking in traffic education for myself.

3 Bike education for my children, so we can ride more often together.

6 Bike/Walk to Work/School events (e.g. annual or semi-annual encouragement events).

7 Some way of constant encouragement (e.g. fitness tracker, pedometer, incentive programs).

5 Motorists sharing the road better.

10 Signed/marked routes.

10 Route maps.

1 Other: *A safe place to bike a long distance without having to share the road with vehicles. We don't have any nice paved bike trails in the area, so nobody goes. I personally drive to other counties to use their bike trails.*

* One person marked all responses.

Q11 – For the following locations, please indicate if you currently walk to the destination OR if you would be interested in doing so in the future (when weather permits) if there was a network of sidewalks, pathways, crosswalks, etc.

	Currently WALK	Would Like to WALK	Would Not WALK
FCPC Executive Building	2	5	4
FCPC Cultural Center/Library/Museum	1	7	3
FCPC Health & Wellness Center	1	8	2
FCPC Recreation Center	1	8	2
FCPC Stone Lake C-Store	1	7	3
Family Resource Center	1	5	5
Arlyn Alloway Memorial Ballpark	0	6	5
Lake Lucerne Gospel Chapel	1	4	6
Caring Place	1	6	4
Rising Sun Daycare	0	7	4
Downtown Crandon	1	7	3
Bodwewadmi Ktegan Store	0	5	7
Blackwell Park	0	4	6
Downtown Laona	0	4	6
Potawatomi Carter Casino Hotel	3	4	4
Ka Kew Se Gathering Grounds	3	4	4
Carter C-Store	3	4	5
Sunnyside Community Church	2	2	7
We Care Community Center	3	4	5
Downtown Wabeno	1	6	6

Other: There is no safe way to walk in our area, Wabeno/Carter.

Q12 – For the following locations, please indicate if you currently bike to the destination OR if you would be interested in doing so in the future (when weather permits) if there was a network of sidewalks, pathways, crosswalks, etc.

	Currently BIKE	Would Like to BIKE	Would Not BIKE
FCPC Executive Building	1	5	6
FCPC Cultural Center/Library/Museum	1	6	4
FCPC Health & Wellness Center	1	6	5
FCPC Recreation Center	1	6	5
FCPC Stone Lake C-Store	1	8	3
Family Resource Center	1	5	6
Arlyn Alloway Memorial Ballpark	0	8	4
Lake Lucerne Gospel Chapel	0	6	6
Caring Place	1	6	5
Rising Sun Daycare	1	6	5
Downtown Crandon	1	8	3
Bodwewadmi Ktegan Store	1	5	7
Blackwell Park	0	7	6
Downtown Laona	0	6	6
Potawatomi Carter Casino Hotel	1	8	3
Ka Kew Se Gathering Grounds	1	7	4
Carter C-Store	1	8	3
Sunnyside Community Church	1	6	5
We Care Community Center	1	7	4
Downtown Wabeno	2	7	4

Other: Not safe..

Q13 – For those destinations that you have indicated that you would like to walk or bicycle to in the future, please indicate the importance of the following items in making that trip actually happen in the future.

	Very Important	Somewhat Important	Not Very Important	Not Important
Bicycle parking	**4**	**5**	**2**	**1**
Complete sidewalk / roadside pathway system	**10**	**2**		**1**
Complete bike lane system	**8**	**3**	**1**	**1**
Hands-on training on safe and effective bicycling	**3**	**5**	**3**	**2**
Lighting along sidewalks and pathways	**7**	**3**		**3**
Map of available pedestrian and bicycle facilities	**11**		**1**	**1**
On-line customized walking and bicycling routes	**8**	**3**	**1**	**1**
Snow and ice removal from sidewalks and pathways	**10**	**2**		**1**
Wayfinding signs for suggested bicycle and pedestrian routes to key destinations	**10**	**2**		**1**

Other:
- Materials that would work for not only mountain bike tires but road or hybrid tires as well
- Solar lighting
- Potawatomi language on the signage

Q14 – Are you the parent of a school age child or a student yourself? An answer to this question is required as it determines if you are presented with some additional questions specific to school age children.

7 Yes 6 No

Q15 – Which school do you or your children attend and how do you typically get to school?

	Walk	Bike	Bus	Driven
Crandon Elementary / Middle / H.S.				6
C.L. Robinson Elementary / Laona H.S.				1
Gte Ga Nes Preschool			2	2
Wabeno Elementary			1	2
Wabeno H.S.			1	

Q16 – How likely are you or your child to walk or bike to school in the future if there is a network of sidewalks, pathways, crosswalks, bike lanes, etc.?

2 Already walk or bike

__ Likely to walk or bike most of the time

1 Likely to walk or bike some of the time

6 Not likely to start walking or biking

Q17 – What concerns do you have about walking or bicycling to school?

	Major Concern	Somewhat of a Concern	Minor Concern	Not a Concern	Not Applicable
Lack of sidewalks in the neighborhoods	4	1		2	1
Lack of sidewalks or pathways along the main roads	6		1	1	1
Existing crosswalks too far out of way	5			1	2
Signalized intersections too busy	6		1	1	1
Too far to walk or bike	5	1		2	
No bike racks at school	4		1	2	
Steep hills / inclines	2	1		5	
Weather	3	2	3		
Poor lighting along route	5		1	2	
Personal security concerns	2	1	2	2	1

Other: human trafficking

Q18 – What are your concerns when walking or bicycling on a roadside pathway?

	Major Concern	Somewhat of a Concern	Minor Concern	Not a Concern	Not Applicable
Overhanging vegetation	2	4	2	4	1
Condition of pavement	8	1	0	4	0
Rough pavement transitions at intersecting driveways and roadways	6	4	1	0	1
Conflicts with pedestrians	3	1	4	2	3
Conflicts with bicyclists	1	1	4	4	3
Being hit by motor vehicles at intersecting driveways and roadways	9	2	0	1	1
Snow and ice	5	3	1	1	3
Puddles	2	1	3	3	3
Lighting	6	3	0	2	2
Gaps in the system	6	2	1	1	2

Other: I consider most of these huge concerns when roller skating. I love to trail skate but I never know if there will be gaps or unmaintained portions that I won't be able to skate over safely.

Q19 – What is your comfort level using a roadside pathway in the following contexts:

	Uncomfortable	Somewhat Uncomfortable	Somewhat Comfortable	Comfortable	Not Applicable or Not Sure
With frequent intersecting driveways and/or roadways	4	2	2	3	2
When the pathway is right next to the roadway	4	2	3	2	2
When there is a strip of grass between the road and pathway	2	2	3	4	2
When there is a strip of grass and trees between the road and pathway	3	0	2	6	2

Q20 – What are your concerns when using or contemplating using a bike lane?

	Major Concern	Somewhat of a Concern	Minor Concern	Not a Concern	Not Applicable or Not Sure
Debris	4	2	4	1	1
Condition of the pavement	6	2	4	1	0
Being hit by motor vehicles turning into or out of driveways or local roadways	7	1	5	0	0
Making left turns on busy roadways	5	4	3	0	0
Being hit from behind by a motor vehicle	8	2	2	1	0
Snow and ice	7	3	0	3	0
Puddles	2	4	4	3	0
Lighting	7	3	1	2	0
Gaps in the system	4	4	2	2	0

Other: Bikes and riders should be required to wear reflective gear on themselves and their bikes.

Q21 – What is or would be your comfort level in using a bike lane in the following contexts:

	Uncomfortable	Somewhat Uncomfortable	Somewhat Comfortable	Comfortable	Not Applicable or Not Sure
On a local road	0	5	2	4	2
On a highway	6	3	0	2	2

Q22 – Desired Project Outcomes: Visualize the impact of this plan. Think ten or so years into the future and visualize the Forest County Potawatomi Community as you would like it to be. How have walking, bicycling and other non-motorized trips changed in the area? What are you, your neighbors, visitors, or government doing differently? Tell us your priorities. Please concisely list your top three desired outcomes of the Bicycle and Pedestrian Plan based on your vision of the future. Try to focus on general ideas.

1. It would be nice to see sidewalks on Billy Daniels lane to the tribal hall, to the head start and NRD, to the ballfield and to the subdivision. Also to Devils and Bug Lakes would be nice. Taking walks or riding bikes would be nice to do if we didn't have to worry so much of the speeding cars that don't pay attention like they should especially for children.

2. Roller skating access is important to me and so something I try to advocate for any chance I get.

3. We never had any walking/biking trails in our area. It would be nice to have something in our areas for a change, we seem to be constantly left out. It would be nice to be able to take kids/grandkids on a walk or to teach them how to ride their bike in a safe place. It would be nice to show them there is something more than electronics, teach them the importance of taking care of nature while being able to walk in nature. Yes I do see our younger generation utilizing these paths in the future with their own children.

4. more fitness, less video usage out of all ages, related activities.

5. It impacts people's well-being, health, and relationships going forward and give them healthy options. Obesity diabetes and a whole list of health conditions we could curb with more walking and biking paths. We used to roam and walk everywhere at one time. Sometimes 40-50 miles a day. We had no diseases like we have nowadays. Everyone was healthier from 80,90,100 year-olds down to the babies. I see a healthy people in 10 years after we defeat the drugs and other bumps in our road. We can do this together. FCPC PRIDE……

6. Would like to be more connected with safe paths to be able to commute to work safely either walking or bicycling. Kids able to bike around more with parents feeling they are safe.

Q23 – Needed improvements: Recall the streets and trails that you frequent. Now think of those places at different times of the day, weather conditions and seasons. In these places that you are familiar with, please tell us about specific areas that this project should address. These issue areas may be an off-road trail opportunity, a challenging intersection, a difficult road to cross, or a hard stretch of road to walk or bicycle along. Please note the location and concisely describe the issue.

1. 1.) Should have some lighting, promoting a safe feel at dusk or at night.

2. We have none……

3. large vehicle traffic not slowing for bicycle or pedestrian and the disrespect and usage of motor vehicles of young drivers and middle age adults.

4. Speed limits on highways that go thru reservation lands. 35-45 limits. Signage and education.Trails system in the woods. For advanced bicyclists. Wood chip trails like they did at devils lake. Very low cost to the tribe and better for Mother Earth.

5. The side roads are not wide enough , I would be concerned if they would notice a bicycle on the road especially if there is a hill.

Q24 – Would you like to make any additional comments?

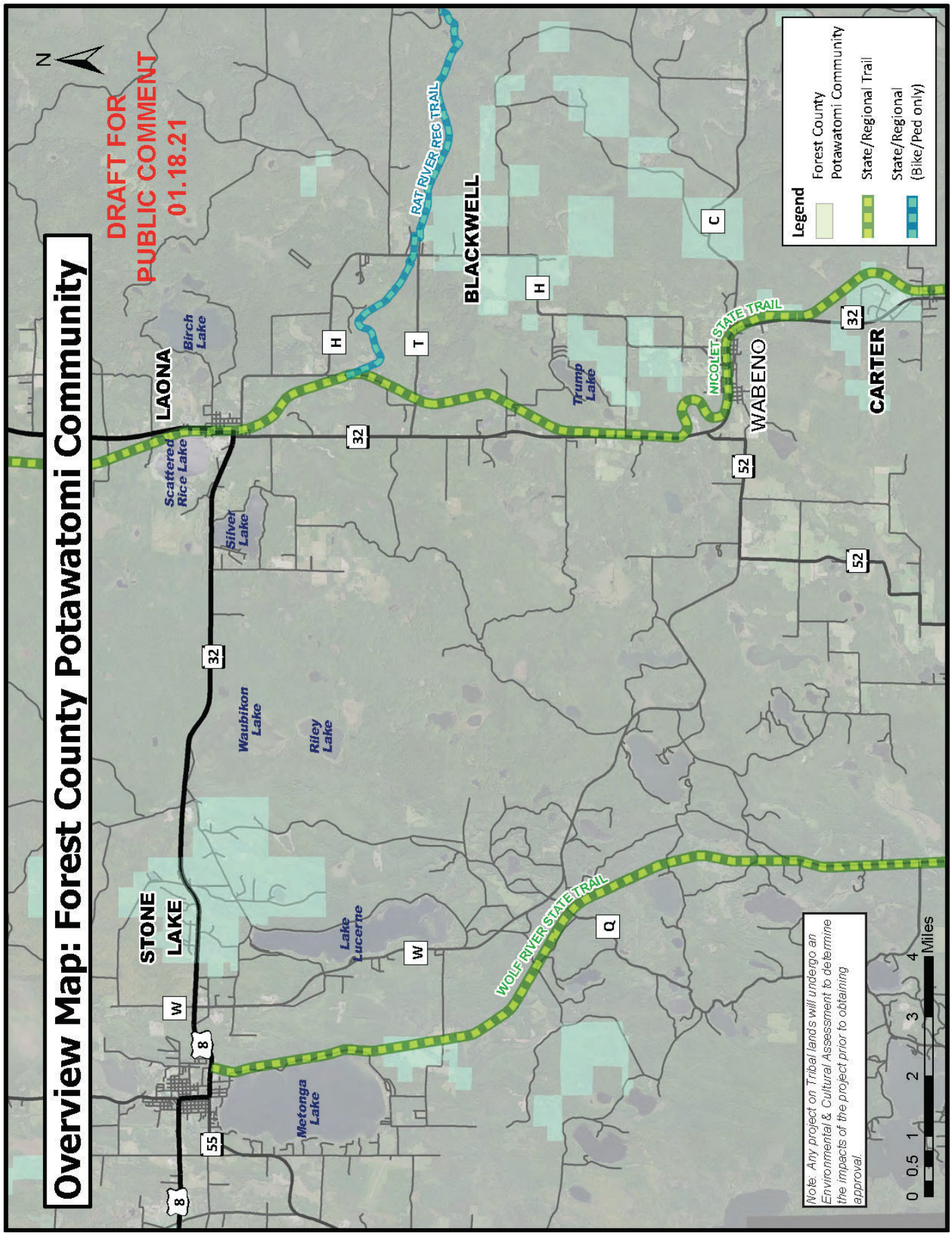
1. Keeping in mind wheelchairs and/or roller skating when designing the walking paths would be great.

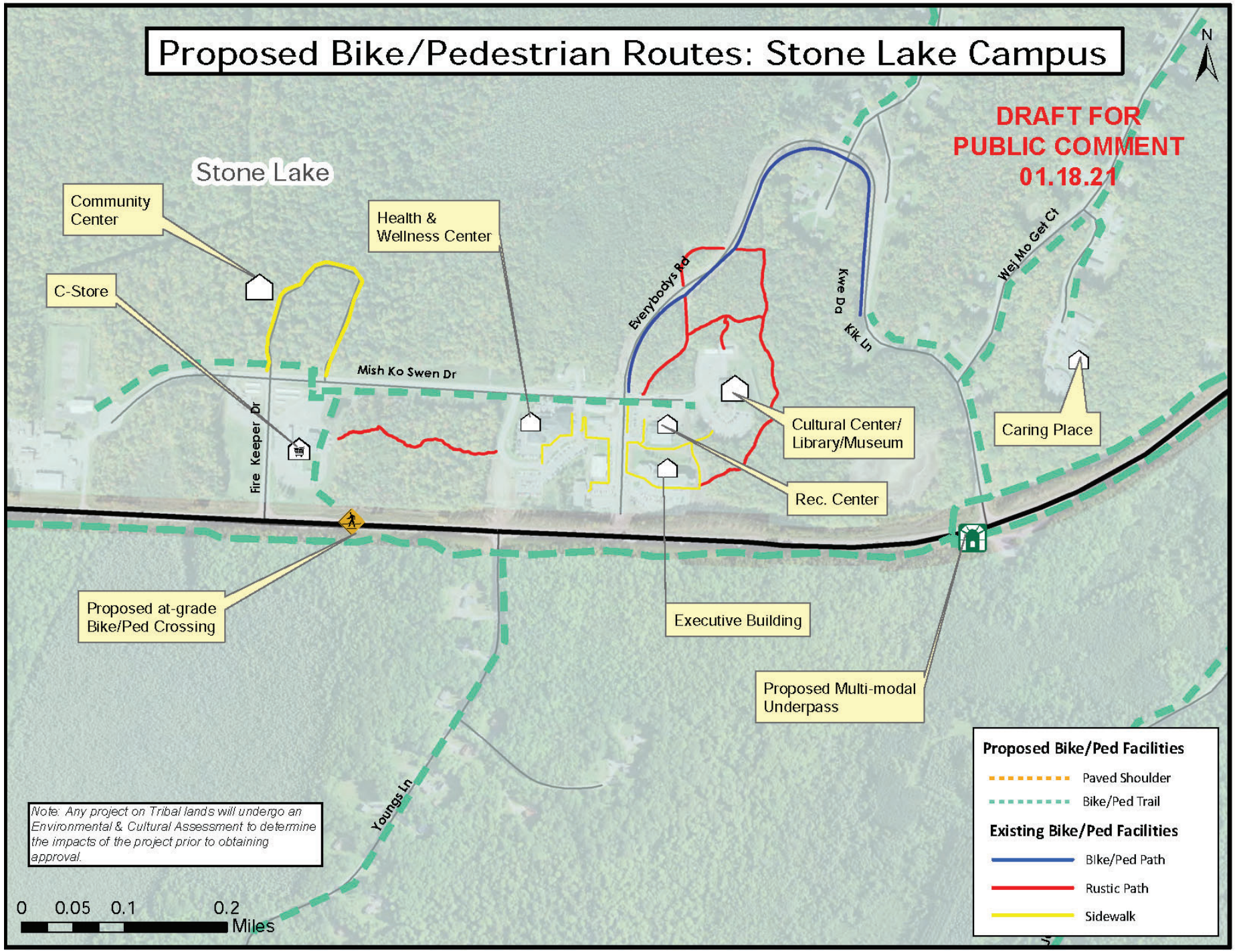
2. make it safe from the roadway.

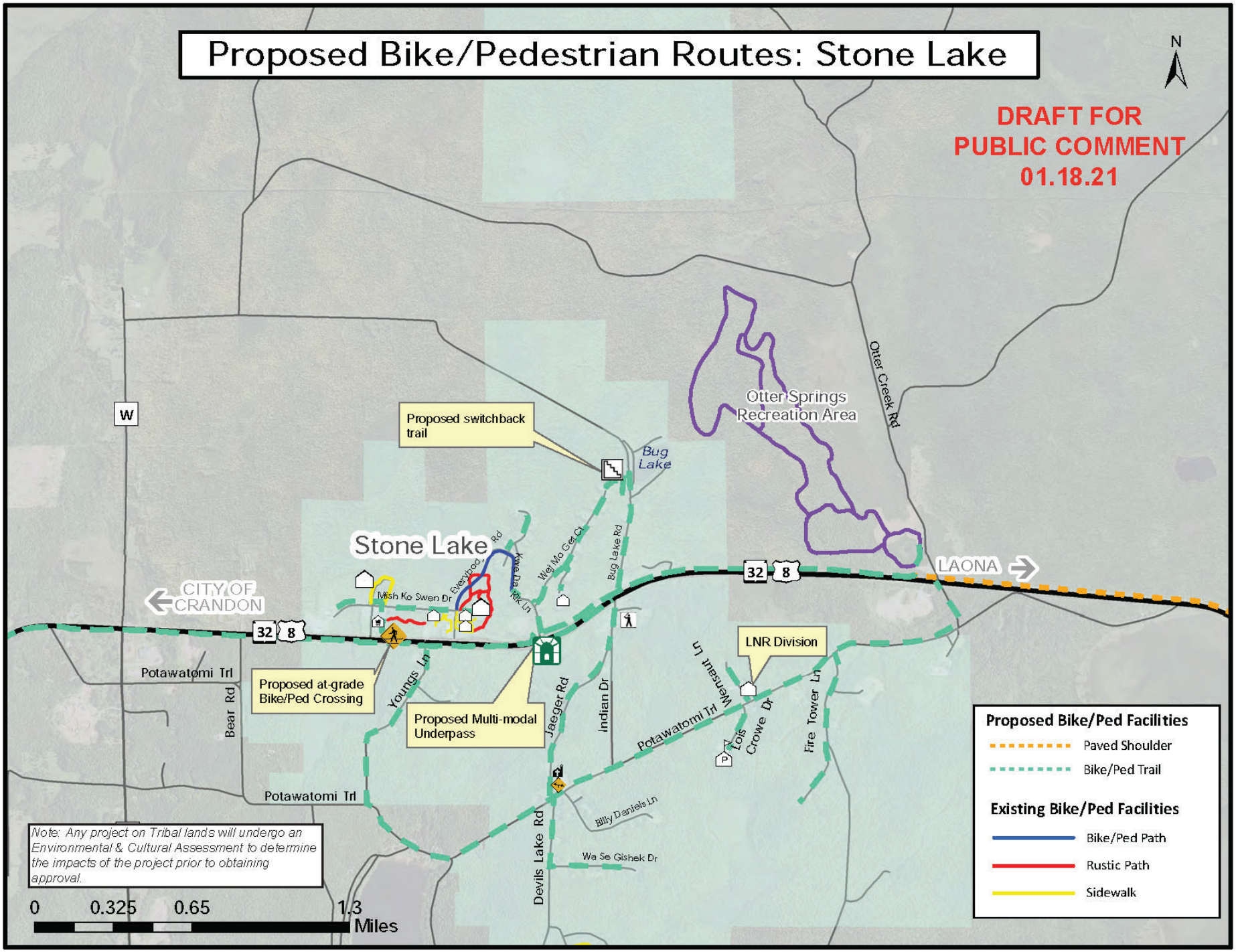
3. This is an exciting project as are all our projects going on because they address all the issues and needs of our people today. I am very proud where our tribe with help from all of our hard working employees I would like to add. Because without certain departments and people in those departments some of these projects would not even be thought of. Their hard work is appreciated very much. Ktthe migwetth from all of us today and our children and their children not born yet.

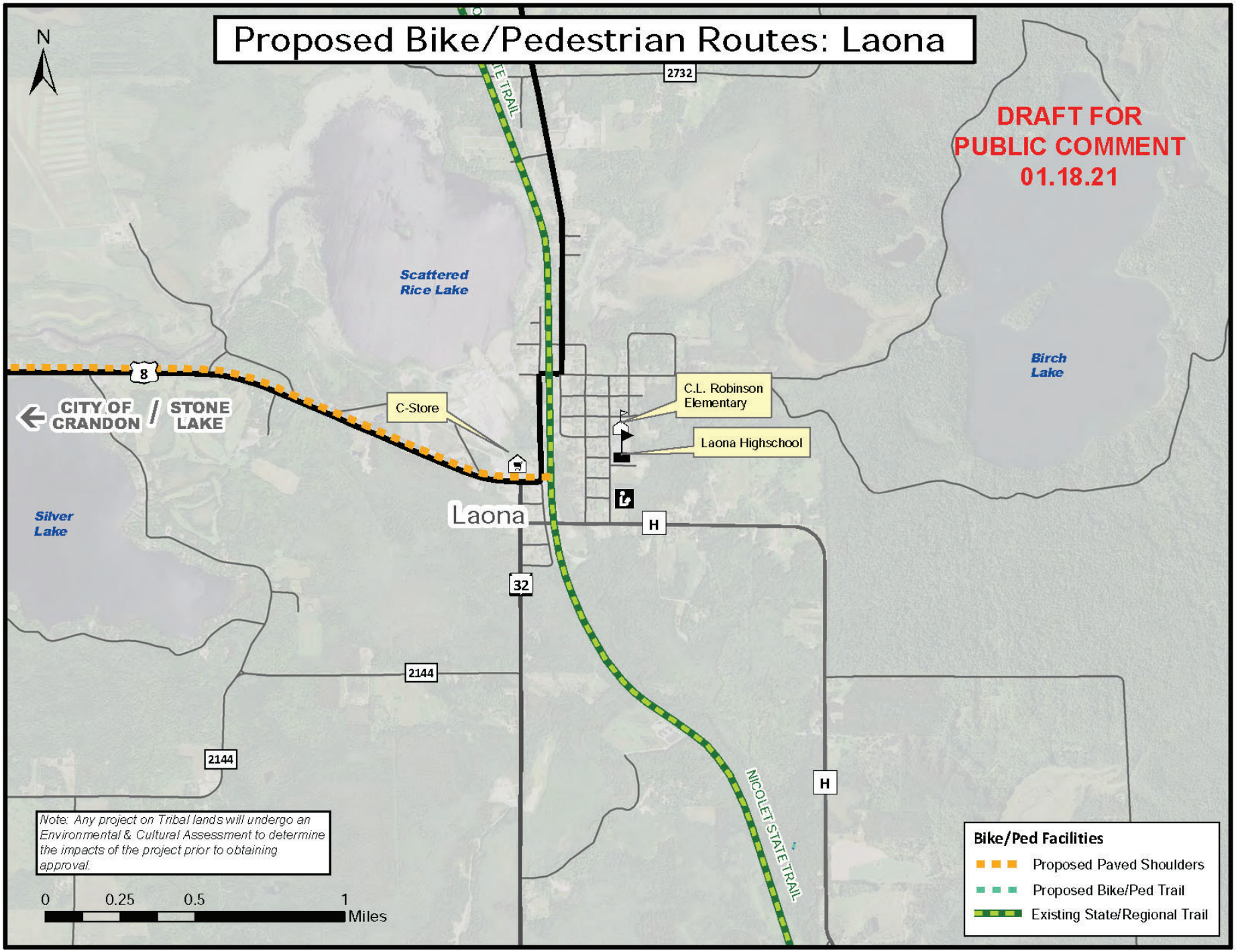
4. Would use these walking/Bike paths however in the stone lake area my main concern would be dogs.

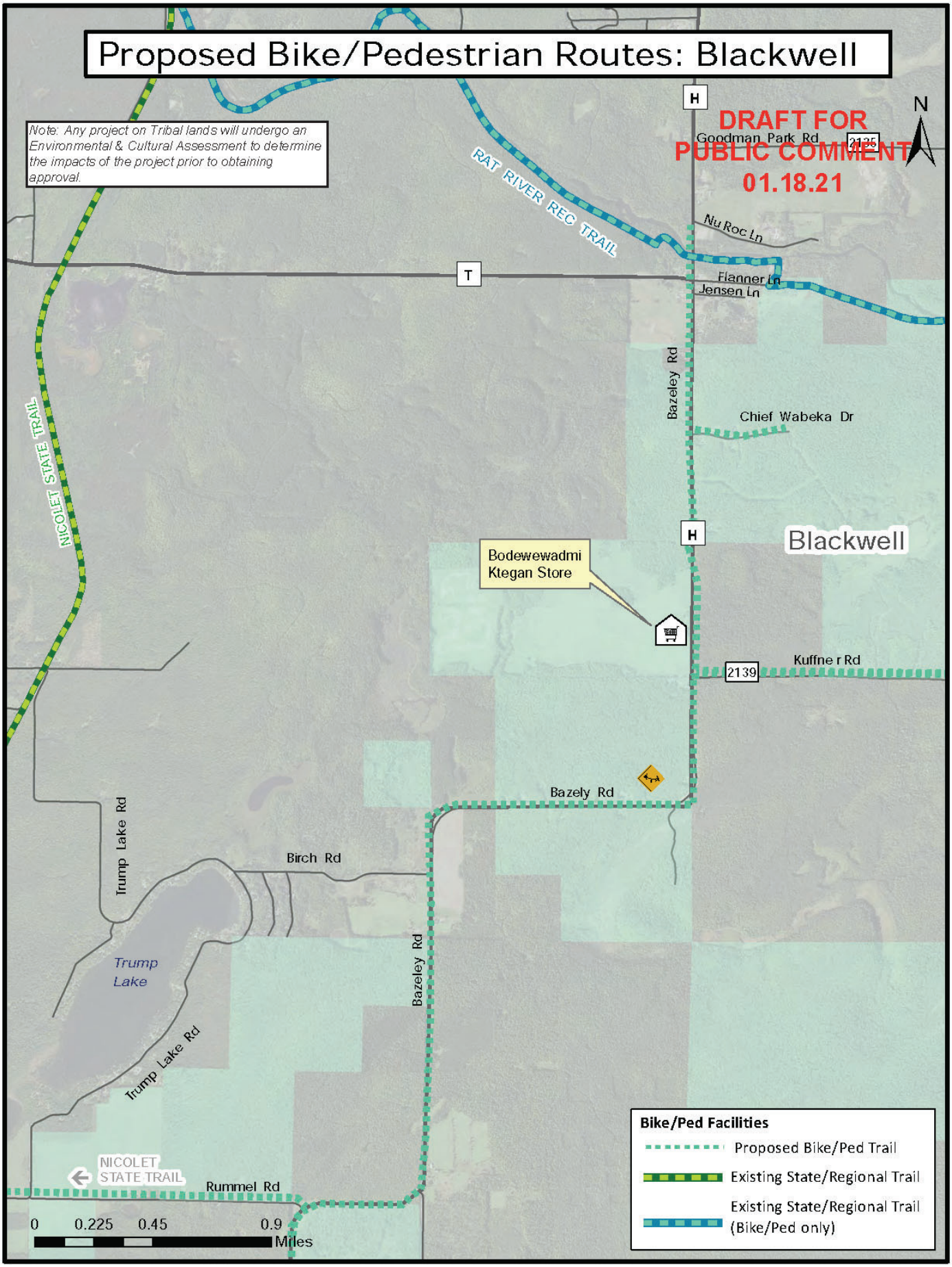
A-2 – FCPC BIKE / PED SURVEY MAPS FOR PUBLIC REVIEW

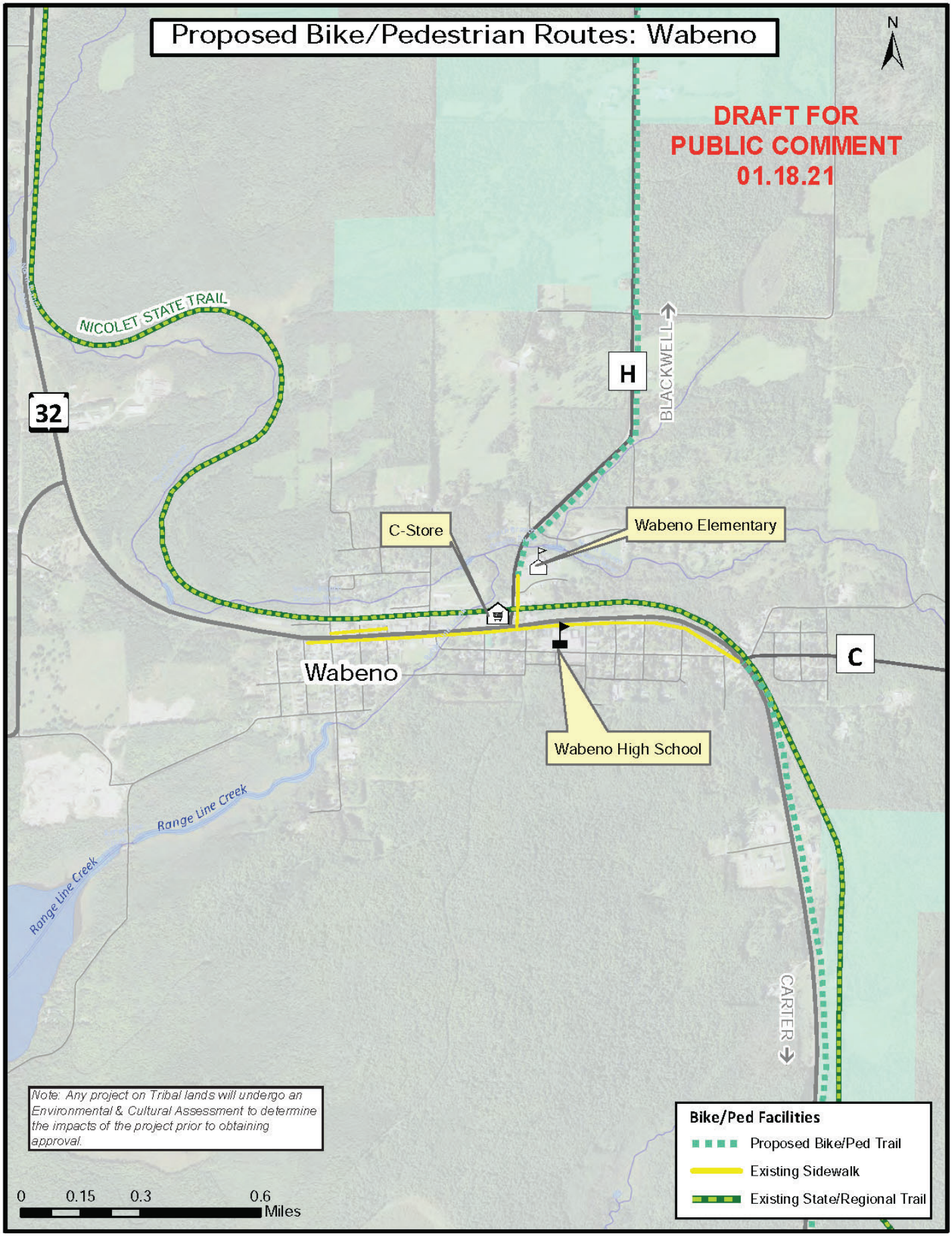


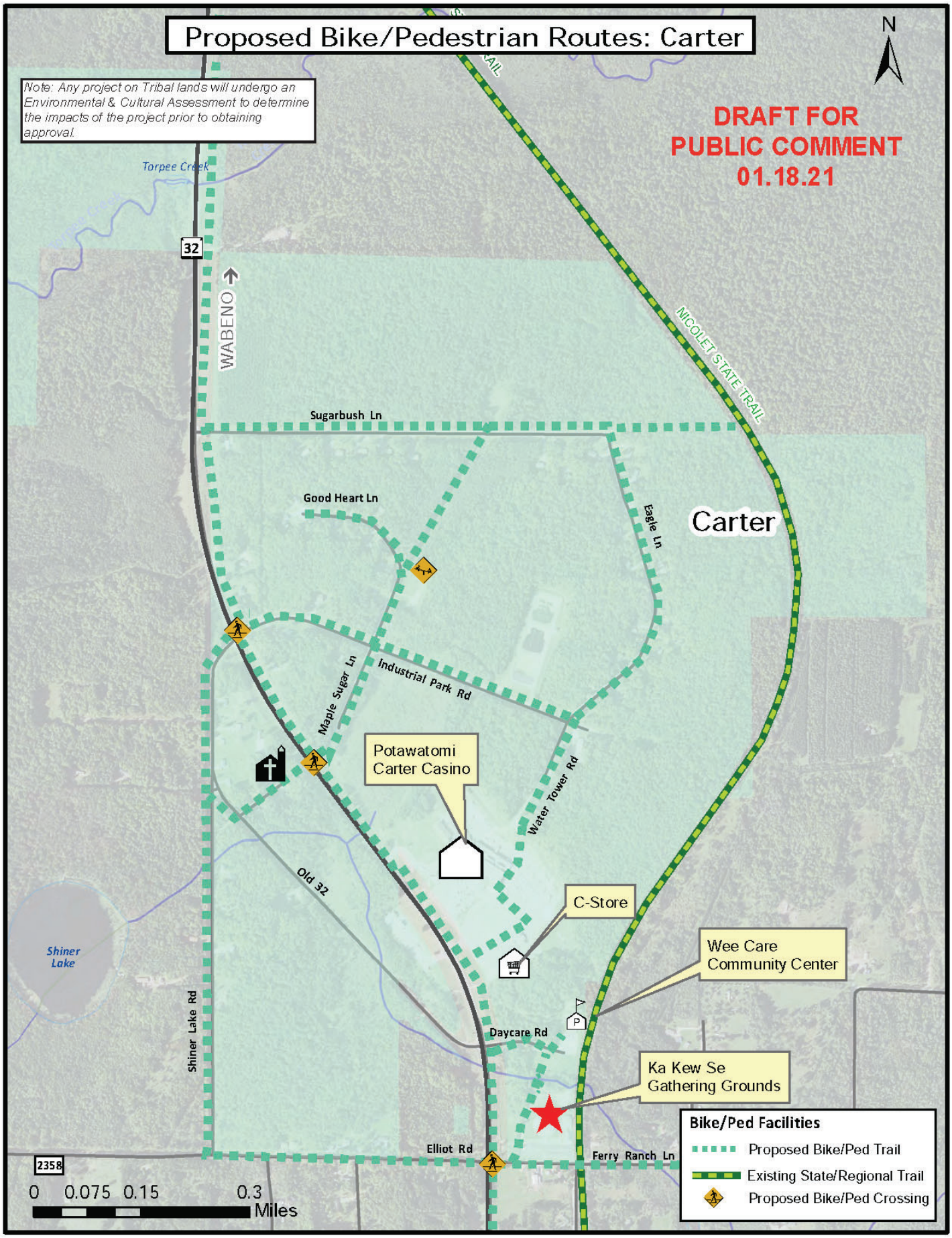

Proposed Bike/Pedestrian Routes: Stone Lake Campus
DRAFT FOR PUBLIC COMMENT 01.18.21
N
Stone Lake
Community Center
Health & Wellness Center
C-Store
Everybodys Rd
Kwe Da Kik Ln
Wej Mo Get Ct
Mish Ko Swen Dr
Fire Keeper Dr
Cultural Center/ Library/Museum
Caring Place
Rec. Center
Proposed at-grade Bike/Ped Crossing
Executive Building
Proposed Multi-modal Underpass
Youngs Ln
Note: Any project on Tribal lands will undergo an Environmental & Cultural Assessment to determine the impacts of the project prior to obtaining approval.
0 0.05 0.1 0.2 Miles
Proposed Bike/Ped Facilities
Paved Shoulder
Bike/Ped Trail
Existing Bike/Ped Facilities
Bike/Ped Path
Rustic Path
Sidewalk


Proposed Bike/Pedestrian Routes: Stone Lake
N
DRAFT FOR PUBLIC COMMENT 01.18.21
Otter Springs Recreation Area
Otter Creek Rd
Proposed switchback trail
Bug Lake
Stone Lake
Mish Ko Swen Dr
Everybody Rd
Wej Ma Ger Ct
Bug Lake Rd
CITY OF CRANDON
LAONA
32
8
W
Potawatomi Trl
Bear Rd
Proposed at-grade Bike/Ped Crossing
Youngs Ln
Proposed Multi-modal Underpass
Jaeger Rd
Indian Dr
LNR Division
Wensaut Ln
Lois Crowe Dr
Fire Tower Ln
Billy Daniels Ln
Devils Lake Rd
Wa Se Gishek Dr
Note: Any project on Tribal lands will undergo an Environmental & Cultural Assessment to determine the impacts of the project prior to obtaining approval.
0
0.325
0.65
1.3
Miles
Proposed Bike/Ped Facilities
Paved Shoulder
Bike/Ped Trail
Existing Bike/Ped Facilities
Bike/Ped Path
Rustic Path
Sidewalk

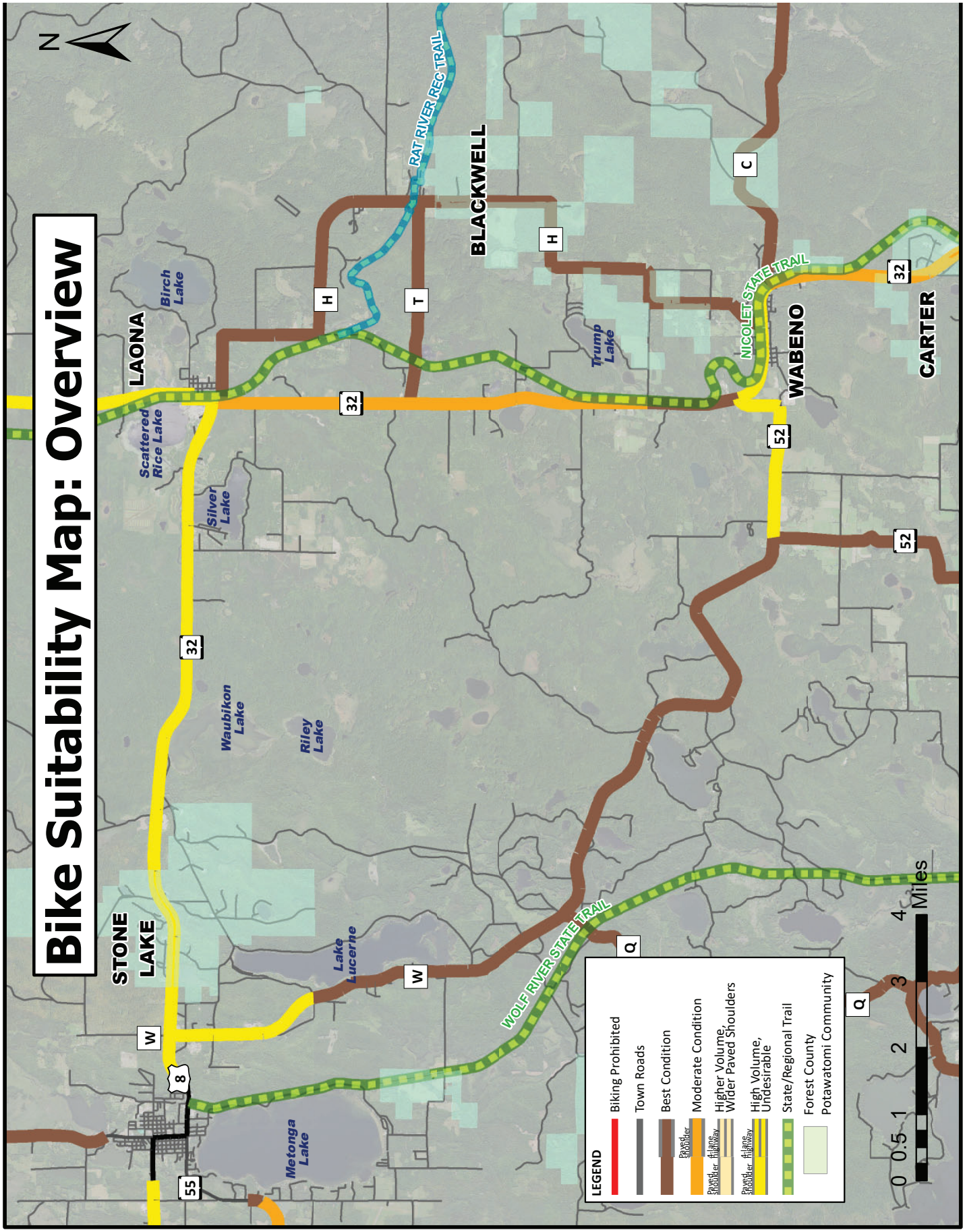

Proposed Bike/Pedestrian Routes: Laona
N
DRAFT FOR PUBLIC COMMENT 01.18.21
2732
Scattered Rice Lake
Birch Lake
8
CITY OF CRANDON / STONE LAKE
C-Store
C.L. Robinson Elementary
Laona Highschool
Laona
Silver Lake
H
32
2144
2144
H
NICOLET STATE TRAIL
Note: Any project on Tribal lands will undergo an Environmental & Cultural Assessment to determine the impacts of the project prior to obtaining approval.
0
0.25
0.5
1
Miles
Bike/Ped Facilities
Proposed Paved Shoulders
Proposed Bike/Ped Trail
Existing State/Regional Trail

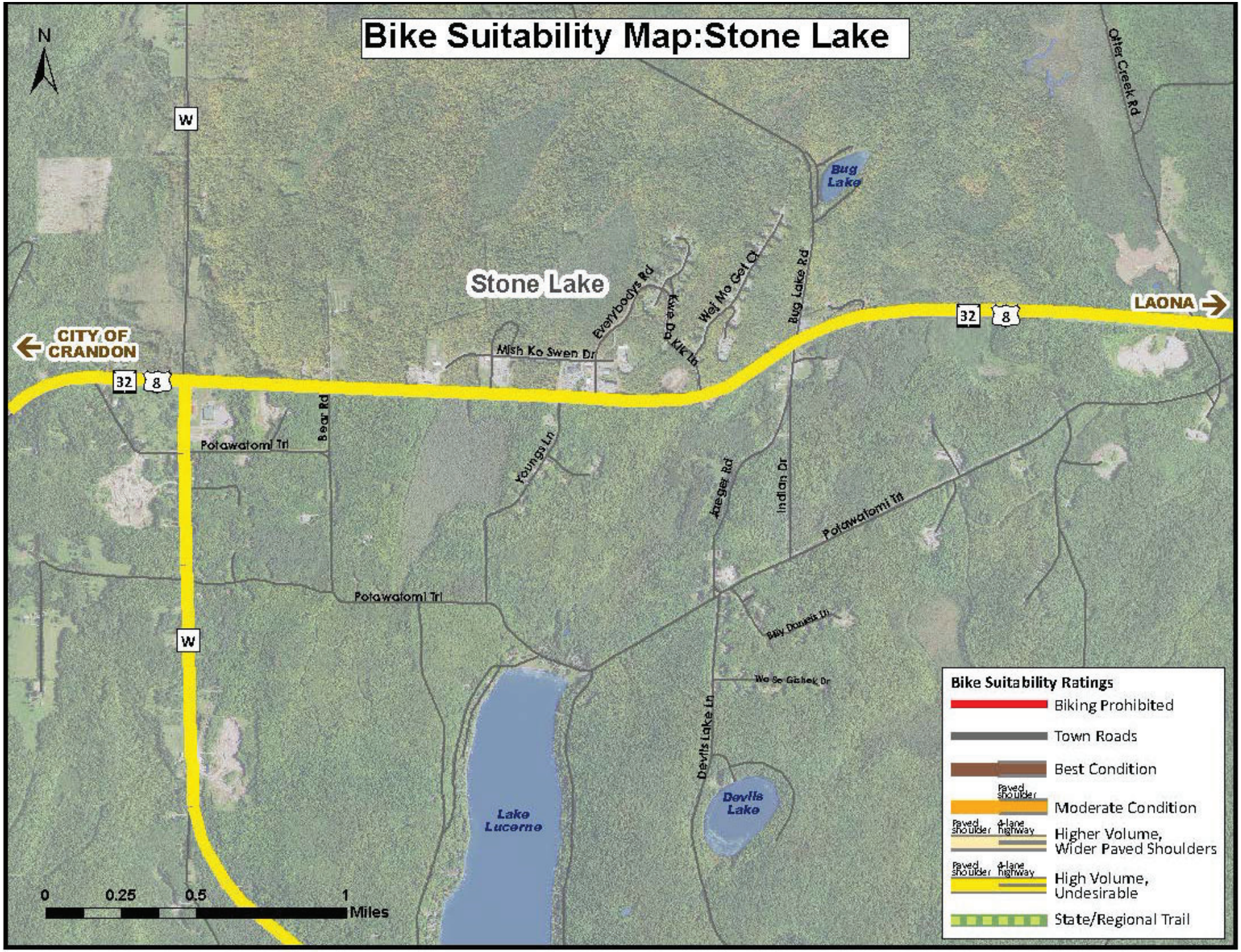

Proposed Bike/Pedestrian Routes: Blackwell
Note: Any project on Tribal lands will undergo an Environmental & Cultural Assessment to determine the impacts of the project prior to obtaining approval.
DRAFT FOR PUBLIC COMMENT 01.18.21
N
RAT RIVER REC TRAIL
Goodman Park Rd
2135
Nu Roc Ln
Flanner Ln
Jensen Ln
H
T
Bazeley Rd
Chief Wabeka Dr
NICOLET STATE TRAIL
Blackwell
Bodewewadmi Ktegan Store
Kuffne r Rd
2139
Bazely Rd
Trump Lake Rd
Birch Rd
Trump Lake
Bazeley Rd
Trump Lake Rd
NICOLET STATE TRAIL
Rummel Rd
0 0.225 0.45 0.9 Miles
Bike/Ped Facilities
Proposed Bike/Ped Trail
Existing State/Regional Trail
Existing State/Regional Trail (Bike/Ped only)

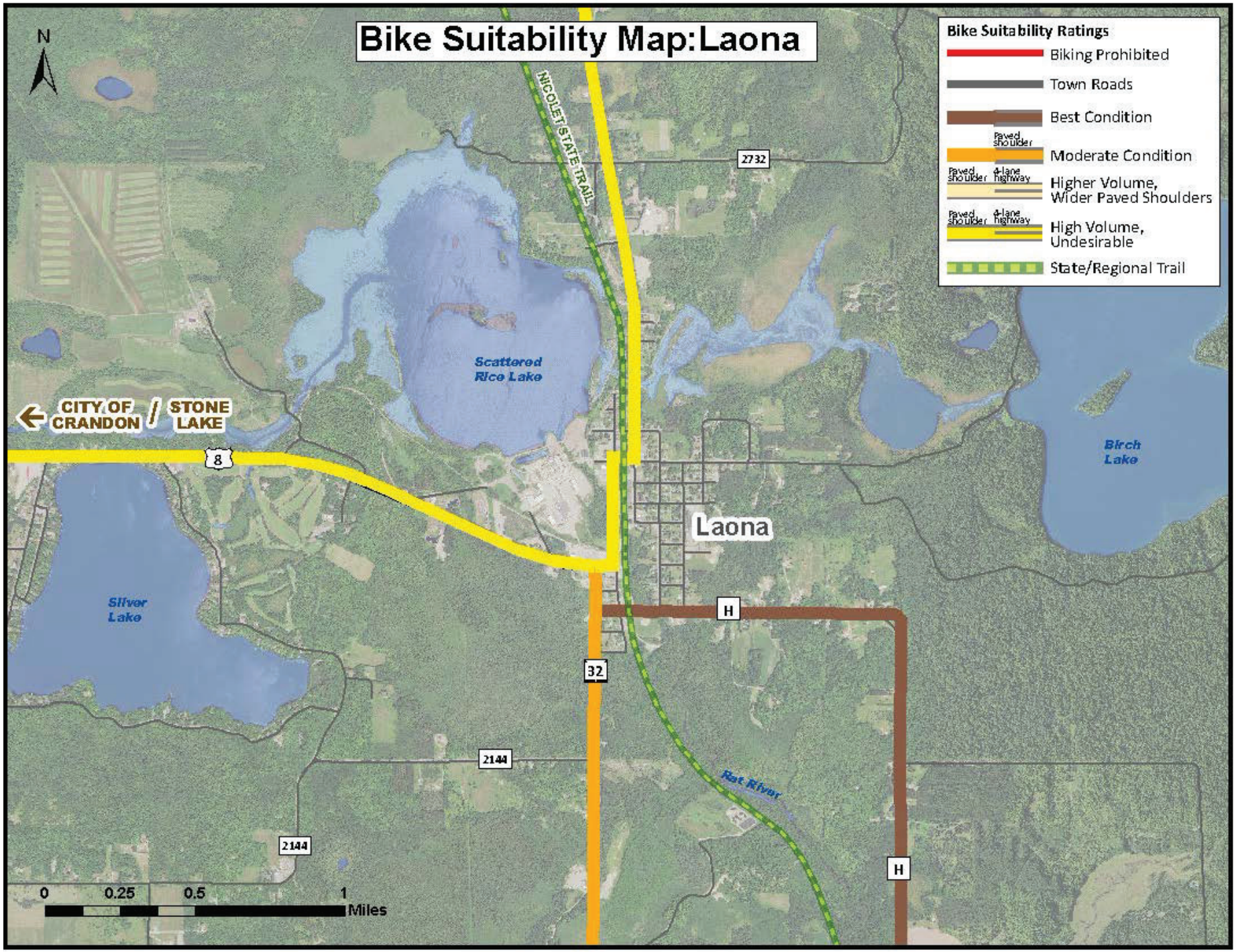

Proposed Bike/Pedestrian Routes: Wabeno
N
DRAFT FOR PUBLIC COMMENT 01.18.21
NICOLET STATE TRAIL
32
H
BLACKWELL
C-Store
Wabeno Elementary
Wabeno
C
Wabeno High School
Range Line Creek
Range Line Creek
CARTER
Note: Any project on Tribal lands will undergo an Environmental & Cultural Assessment to determine the impacts of the project prior to obtaining approval.
0 0.15 0.3 0.6 Miles
Bike/Ped Facilities
Proposed Bike/Ped Trail
Existing Sidewalk
Existing State/Regional Trail

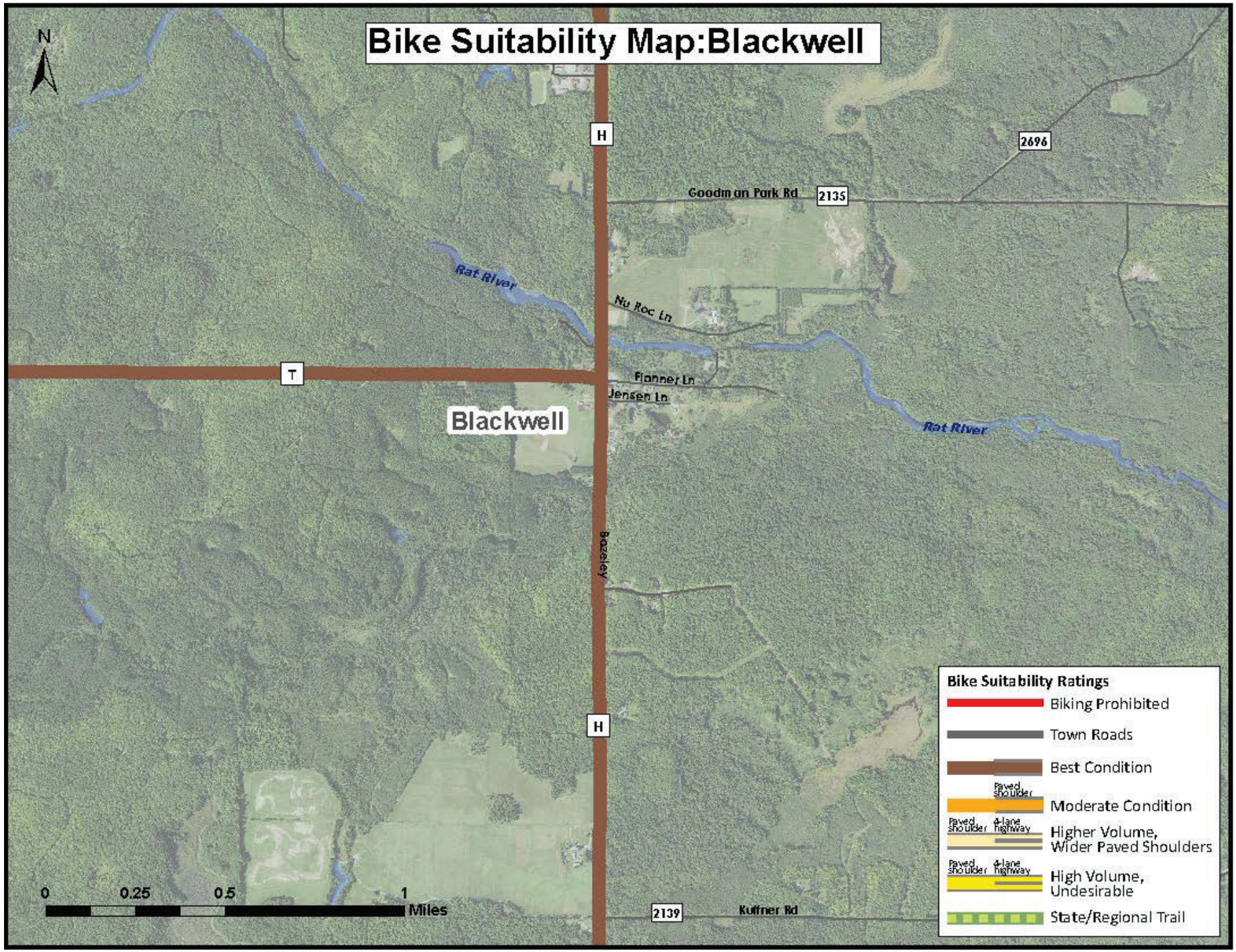

Proposed Bike/Pedestrian Routes: Carter
N
Note: Any project on Tribal lands will undergo an Environmental & Cultural Assessment to determine the impacts of the project prior to obtaining approval.
DRAFT FOR PUBLIC COMMENT 01.18.21
Torpee Creek
32
WABENO
MCOLET STATE TRAIL
Sugarbush Ln
Good Heart Ln
Eagle Ln
Carter
Industrial Park Rd
Maple Sugar Ln
Potawatomi Carter Casino
Water Tower Rd
Old 32
C-Store
Wee Care Community Center
Shiner Lake
Shiner Lake Rd
Daycare Rd
Ka Kew Se Gathering Grounds
Elliot Rd
Ferry Ranch Ln
2358
0 0.075 0.15 0.3 Miles
Bike/Ped Facilities
Proposed Bike/Ped Trail
Existing State/Regional Trail
Proposed Bike/Ped Crossing

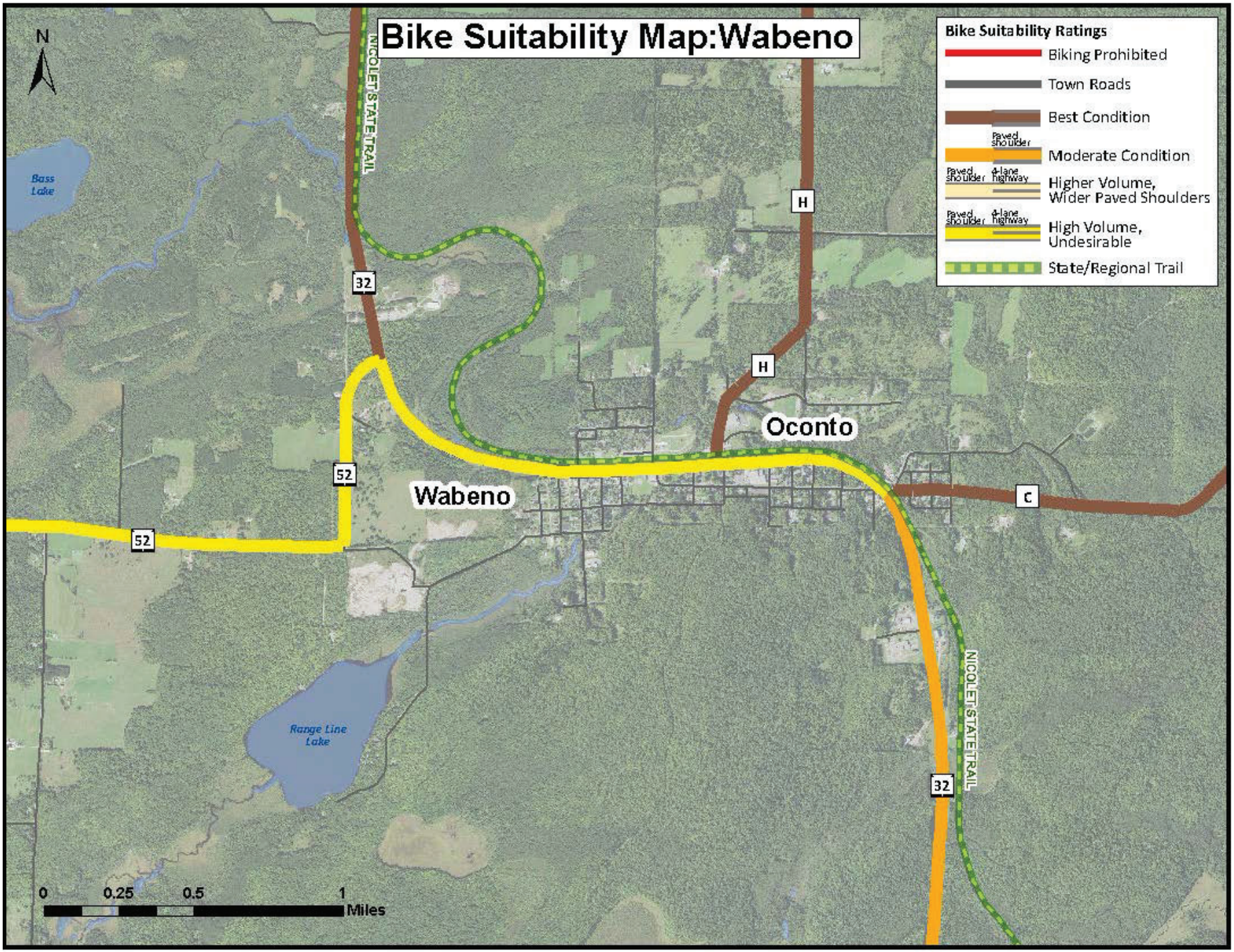
A-3 – BIKE SUITABILITY MAPS

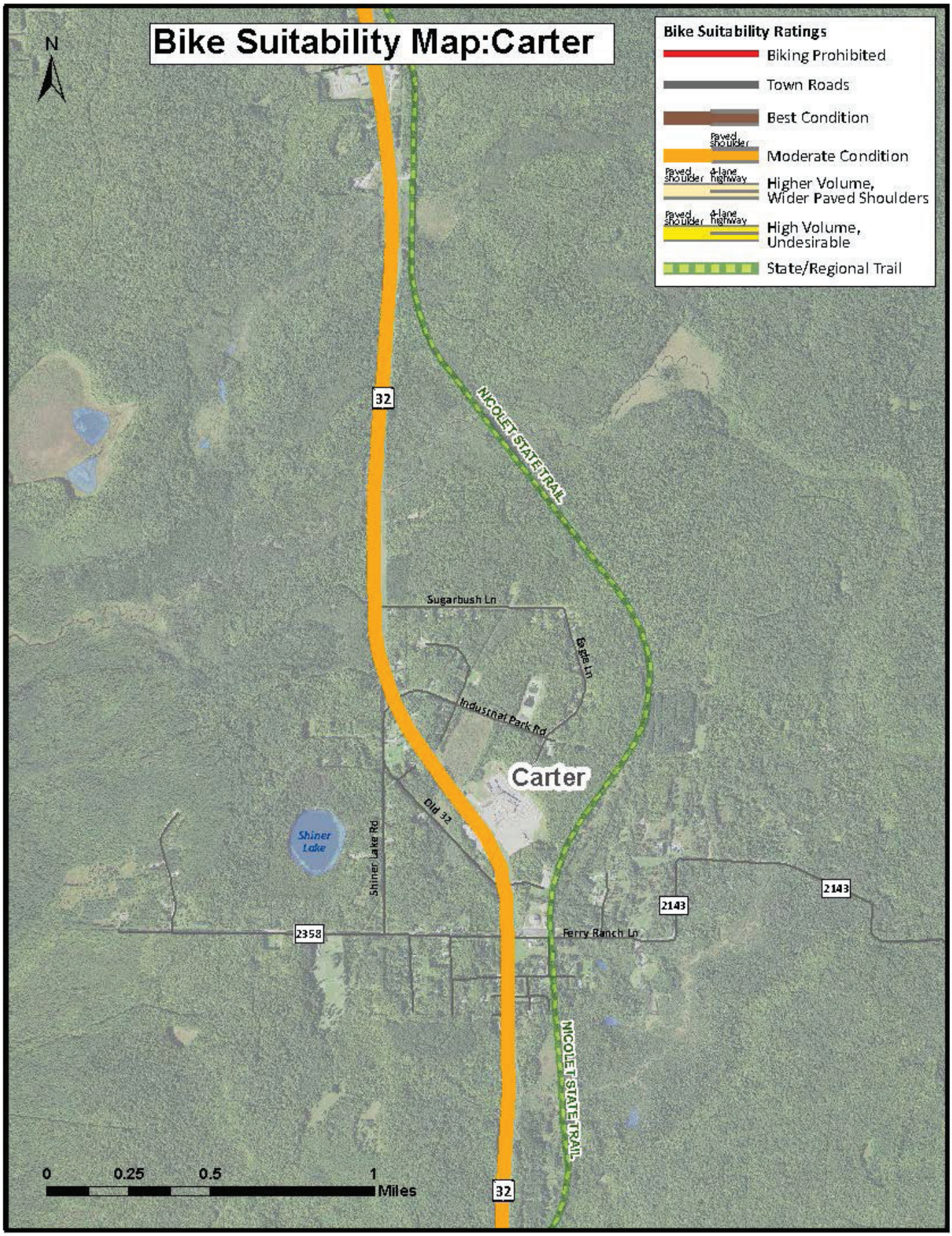



Bike Suitability Map:Stone Lake
N
Stone Lake
CITY OF CRANDON
LAONA
32
8
W
Bug Lake
Otter Creek Rd
Bug Lake Rd
Everybodys Rd
Kwe Da Kik Th
Wej Mo Get Ct
Mish Ko Swen Dr
Bear Rd
Potawatomi Trl
Youngs Ln
Jaeger Rd
Indian Dr
Billy Dennis Ln
Wo Se Gishek Dr
Devils Lake Ln
Lake Lucerne
Devils Lake
0
0.25
0.5
1
Miles
Bike Suitability Ratings
Biking Prohibited
Town Roads
Best Condition
Paved shoulder
Moderate Condition
Paved shoulder
4-lane highway
Higher Volume, Wider Paved Shoulders
High Volume, Undesirable
State/Regional Trail

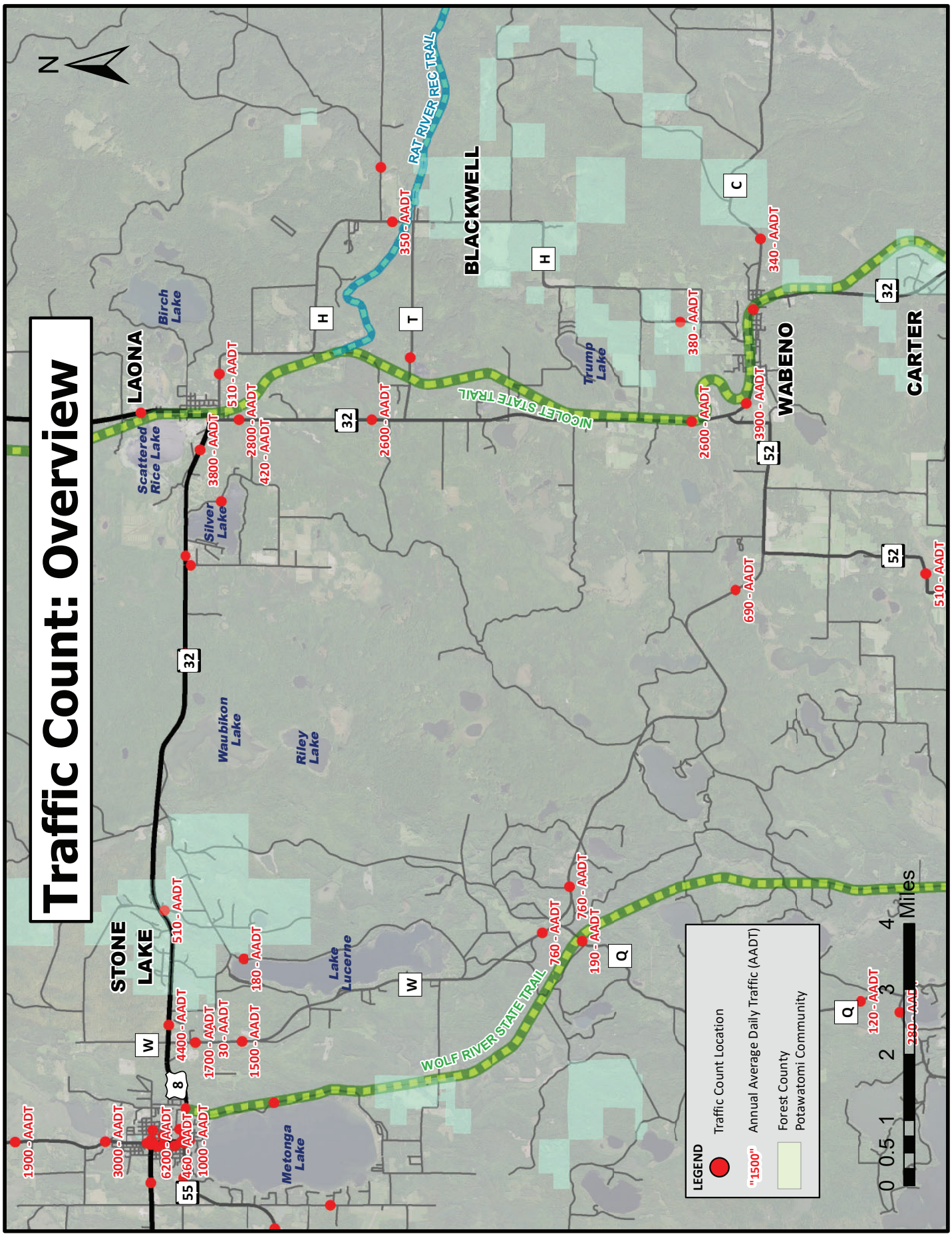

Bike Suitability Map:Laona
N
Bike Suitability Ratings
Biking Prohibited
Town Roads
Best Condition
Paved shoulder
Moderate Condition
Paved shoulder
4-lane highway
Higher Volume, Wider Paved Shoulders
Paved shoulder
4-lane highway
High Volume, Undesirable
State/Regional Trail
NICOLET STATE TRAIL
2732
Scattered Rice Lake
CITY OF CRANDON / STONE LAKE
8
Birch Lake
Laona
Silver Lake
H
32
2144
Rat River
2144
H
0
0.25
0.5
1
Miles

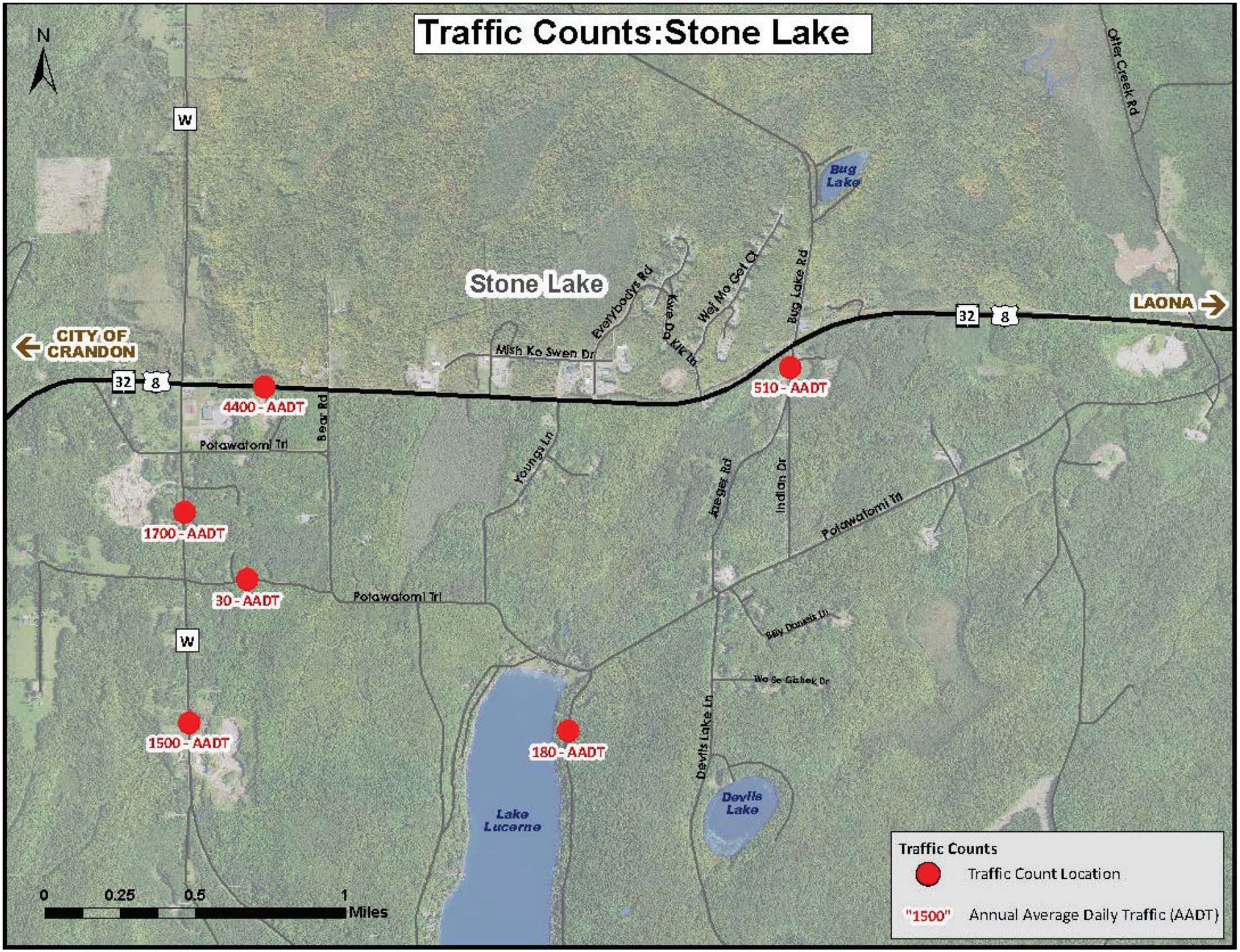

Bike Suitability Map:Blackwell
N
H
2696
Goodman Park Rd
2135
Rat River
Nu Roc Ln
T
Flanner Ln
Jensen Ln
Blackwell
Rat River
Bazzeley
H
0
0.25
0.5
1
Miles
2139
Kuffner Rd
Bike Suitability Ratings
Biking Prohibited
Town Roads
Best Condition
Paved shoulder
Moderate Condition
Paved shoulder
4-lane highway
Higher Volume, Wider Paved Shoulders
Paved shoulder
4-lane highway
High Volume, Undesirable
State/Regional Trail

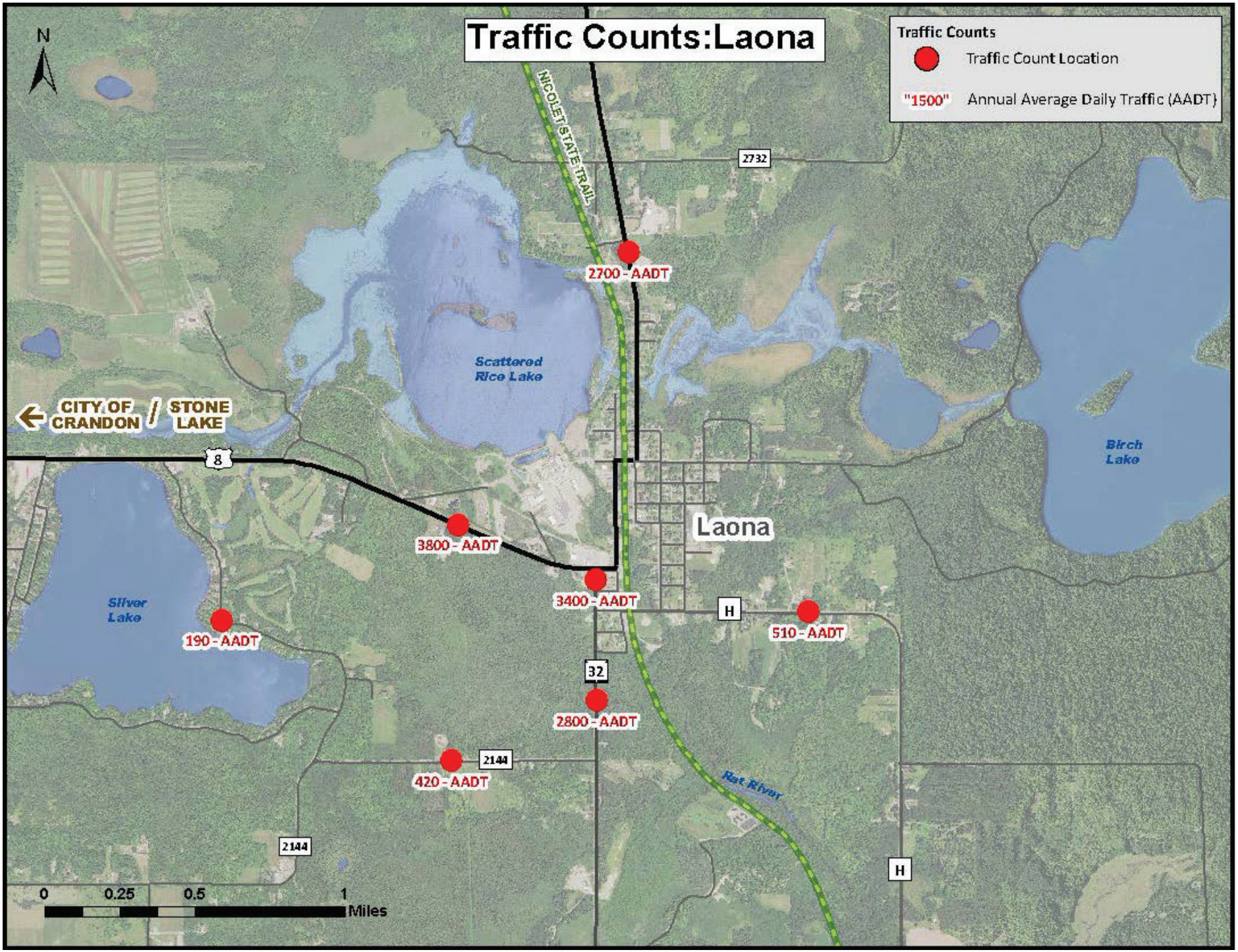

Bike Suitability Map:Wabeno
N
Bike Suitability Ratings
Biking Prohibited
Town Roads
Best Condition
Paved shoulder
Moderate Condition
Paved shoulder
4-lane highway
Higher Volume, Wider Paved Shoulders
Paved shoulder
4-lane highway
High Volume, Undesirable
State/Regional Trail
NICOLET STATE TRAIL
Bass Lake
32
H
H
Oconto
52
Wabeno
C
52
Range Line Lake
NICOLET STATE TRAIL
32
0
0.25
0.5
1
Miles

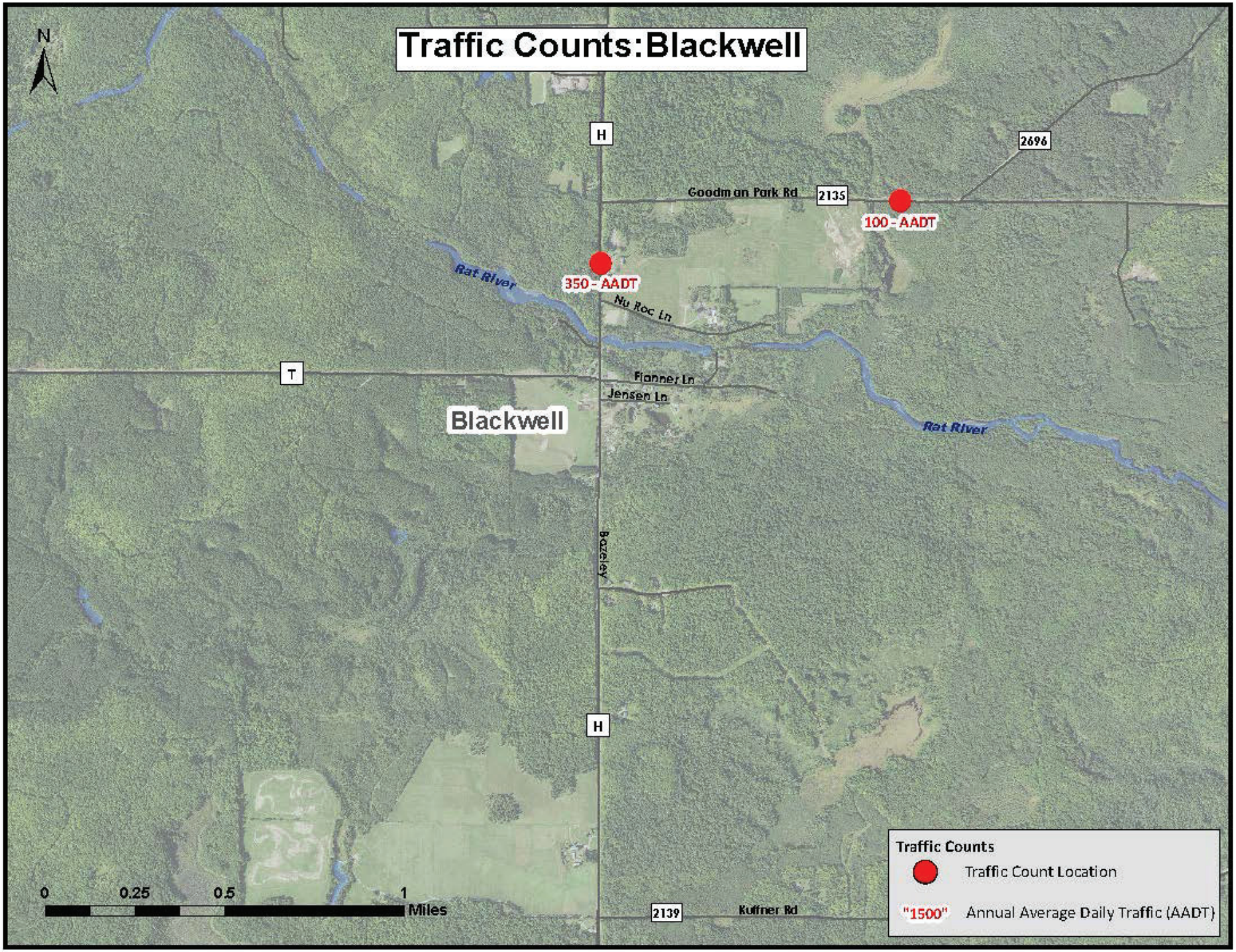

Bike Suitability Map:Carter
N
Bike Suitability Ratings
Biking Prohibited
Town Roads
Best Condition
Paved shoulder
Moderate Condition
Paved shoulder 4-lane highway
Higher Volume, Wider Paved Shoulders
Paved shoulder 4-lane highway
High Volume, Undesirable
State/Regional Trail
32
NICOLET STATE TRAIL
Sugarbush Ln
Eagle Ln
Industrial Park Rd
Carter
Old 32
Shiner Lake
Shiner Lake Rd
2358
2143
2143
Ferry Ranch Ln
NICOLET STATE TRAIL
32
0
0.25
0.5
1
Miles

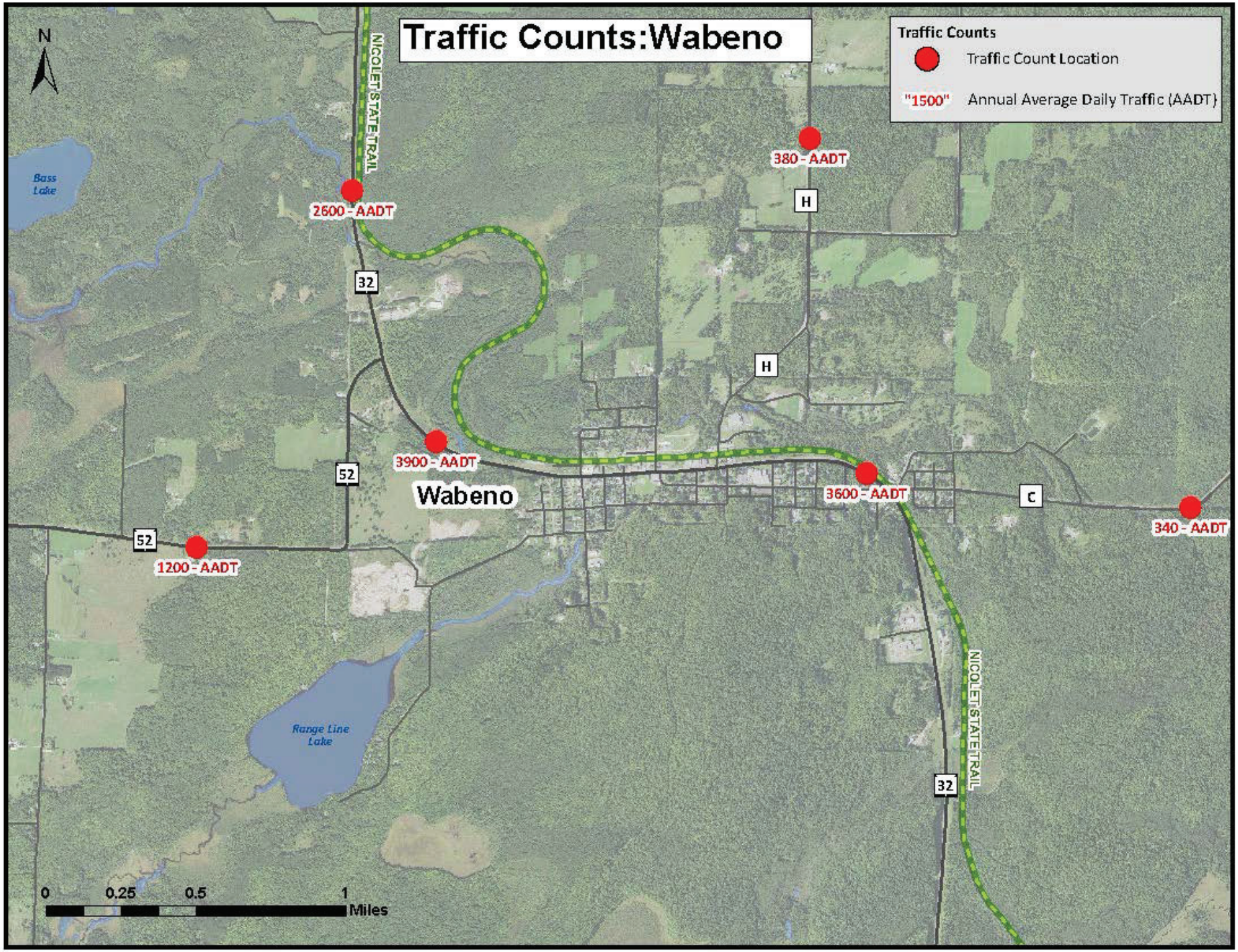
A-4 – TRAFFIC COUNTS MAPS

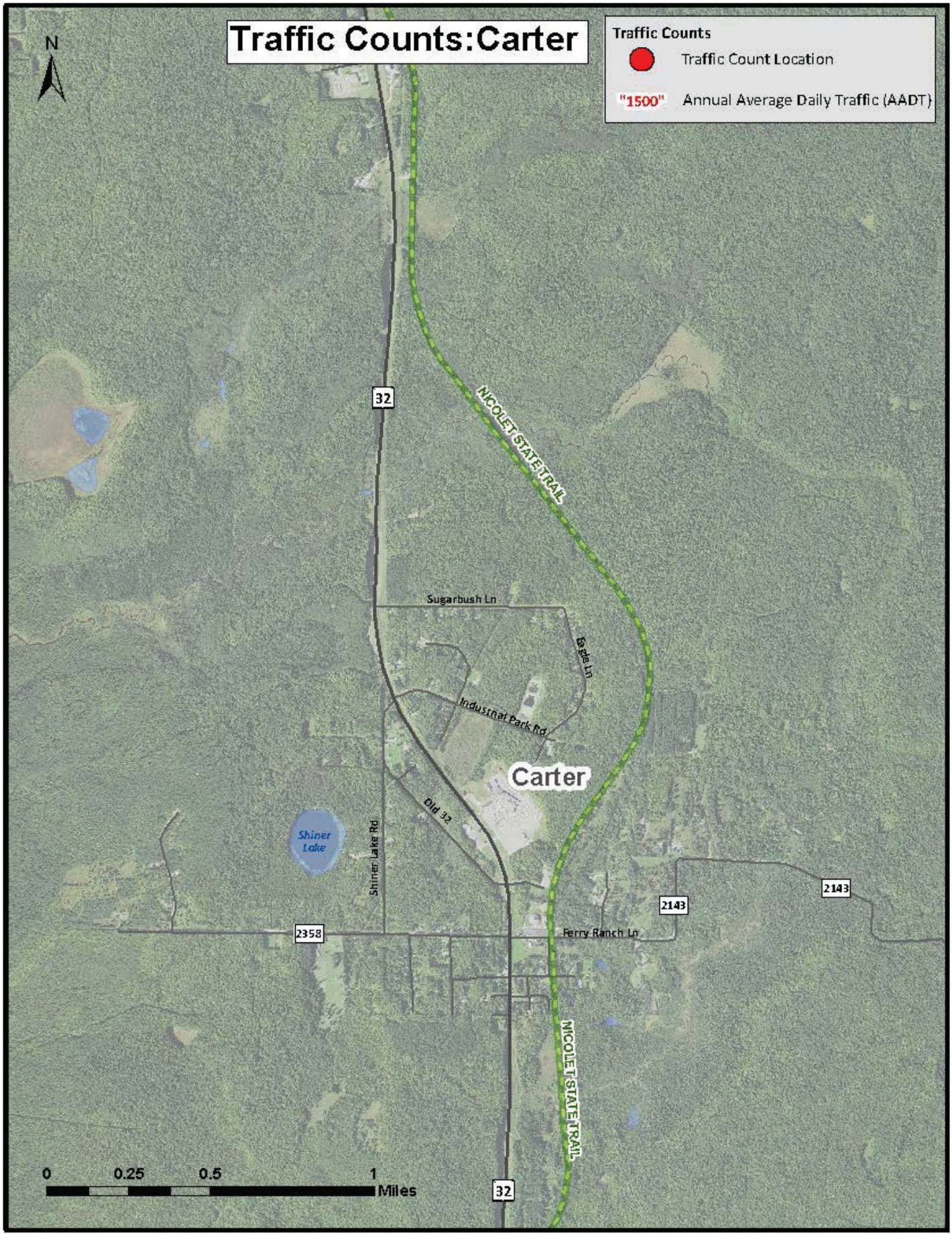



Traffic Counts:Stone Lake
N
W
Stone Lake
CITY OF CRANDON
LAONA
32
8
4400 - AADT
510 - AADT
1700 - AADT
30 - AADT
1500 - AADT
180 - AADT
Potawatomi Trl
Bear Rd
Mish Ko Swen Dr
Everybodys Rd
Kwe Da Kik Dr
Wej Mo Get Ct
Bug Lake Rd
Otter Creek Rd
Youngs Ln
Jaeger Rd
Indian Dr
Billy Dennis Dr
Wo Se Gishek Dr
Devils Lake Ln
Bug Lake
Lake Lucerne
Devils Lake
0
0.25
0.5
1
Miles
Traffic Counts
Traffic Count Location
"1500"
Annual Average Daily Traffic (AADT)

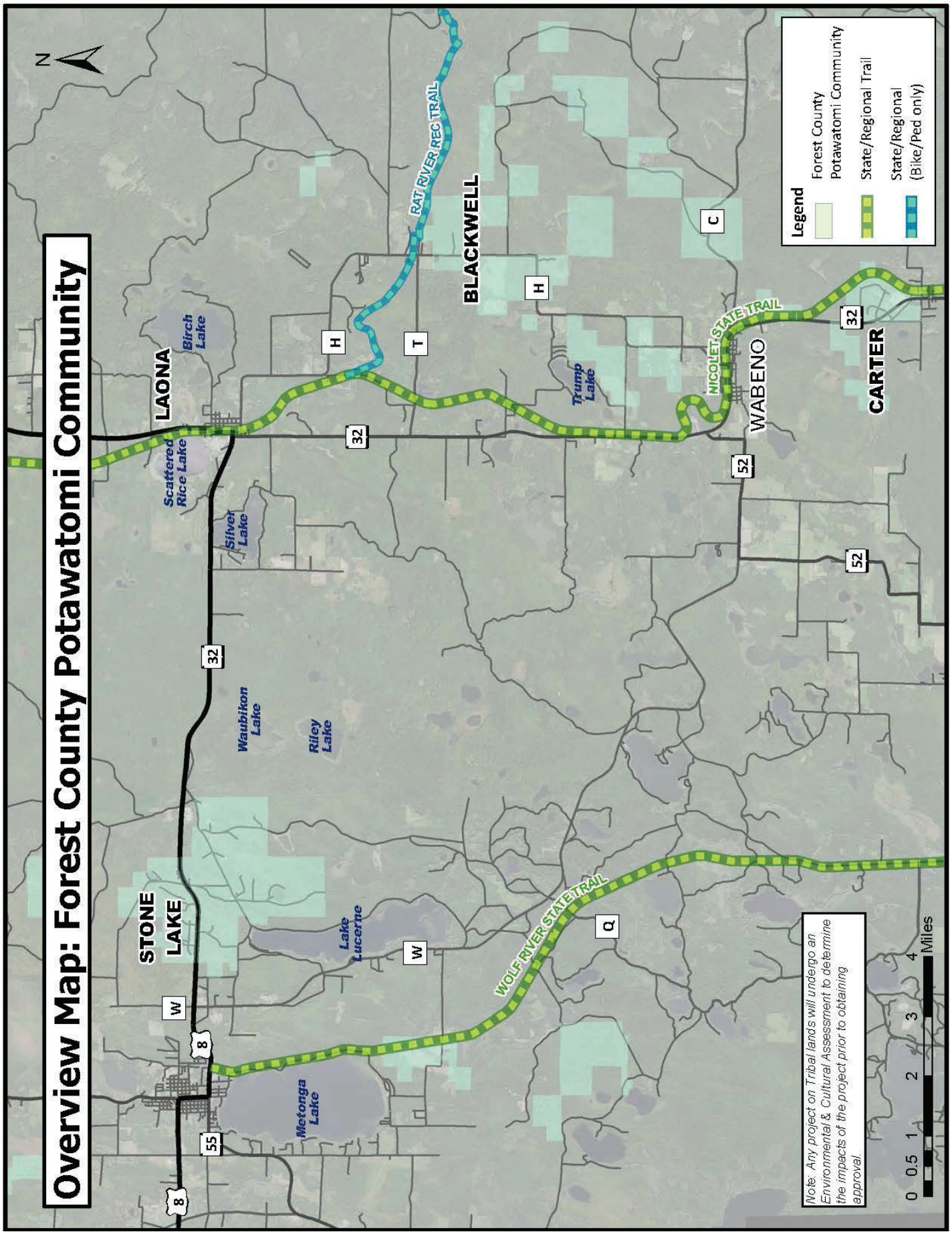

Traffic Counts:Laona
Traffic Counts
Traffic Count Location
"1500" Annual Average Daily Traffic (AADT)
N
NICOLET STATE TRAIL
2732
2700 - AADT
Scattered Rice Lake
CITY OF CRANDON / STONE LAKE
8
Birch Lake
Laona
3800 - AADT
3400 - AADT
H
510 - AADT
Silver Lake
190 - AADT
32
2800 - AADT
2144
420 - AADT
Rat River
2144
H
0 0.25 0.5 1 Miles

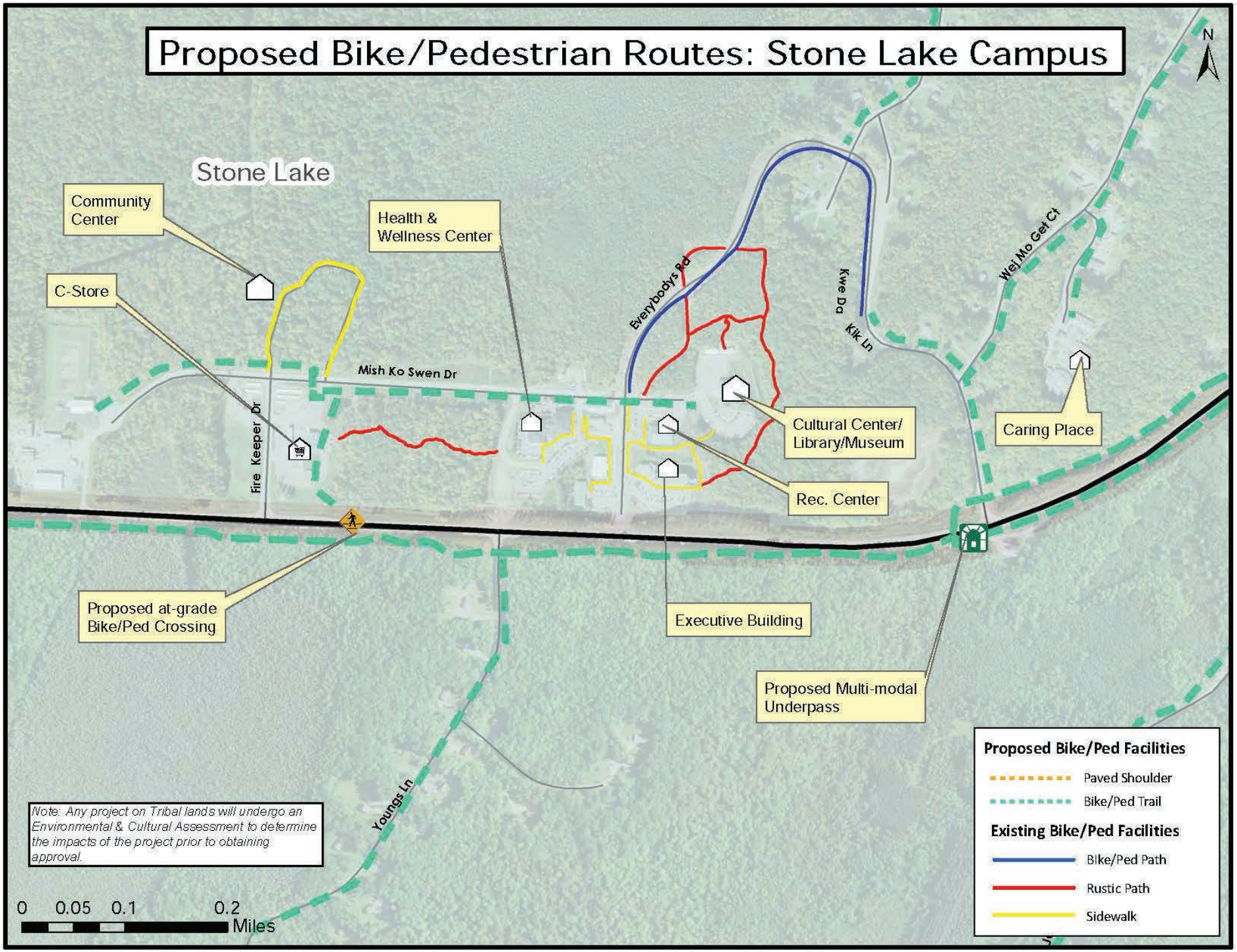

Traffic Counts:Blackwell
N
H
2696
Goodman Park Rd
2135
100 - AADT
350 - AADT
Rat River
Nu Roc Ln
T
Fianner Ln
Jensen Ln
Blackwell
Rat River
Bazeley
H
0
0.25
0.5
1
Miles
2139
Kuffner Rd
Traffic Counts
Traffic Count Location
"1500"
Annual Average Daily Traffic (AADT)

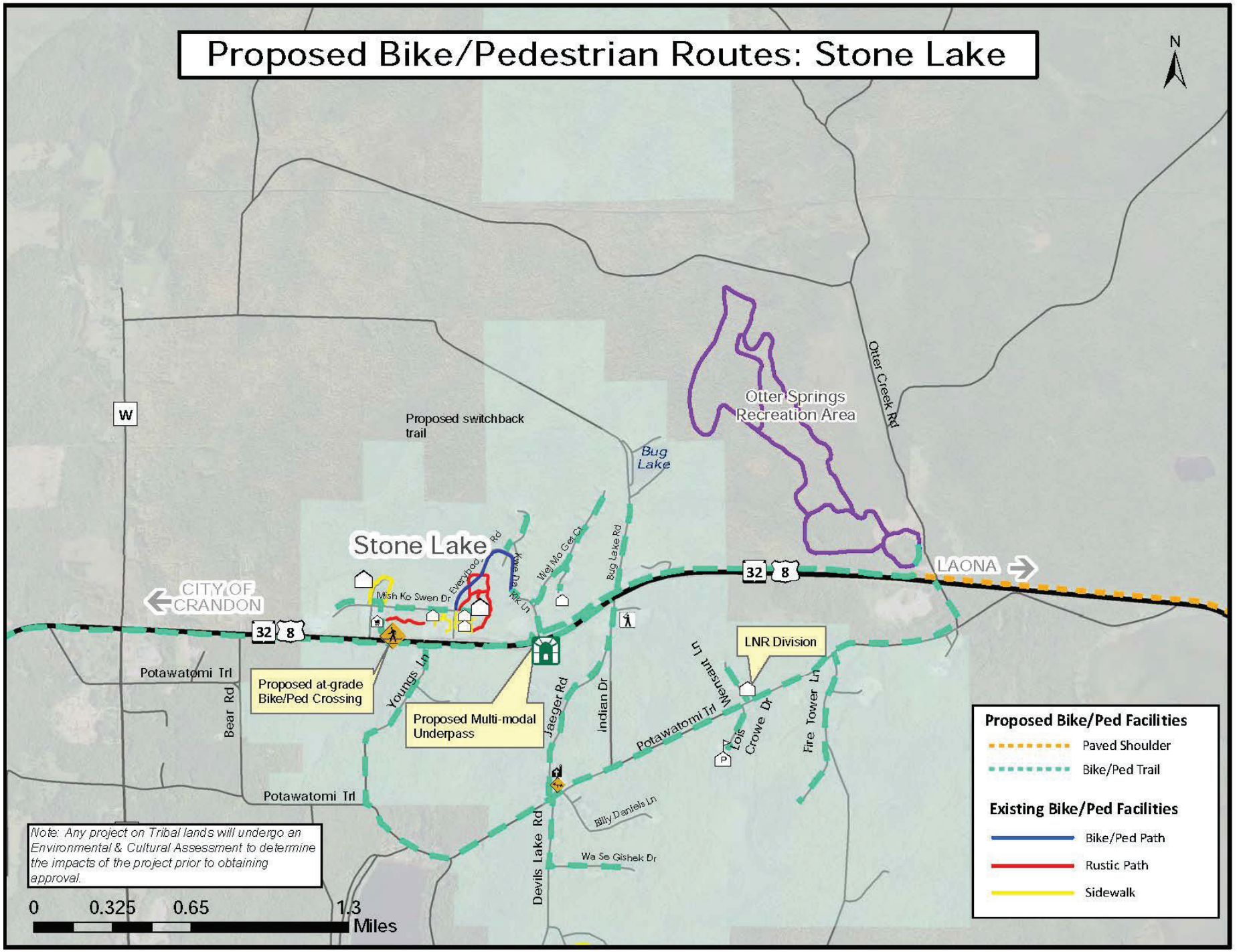

Traffic Counts:Wabeno
Traffic Counts
Traffic Count Location
"1500" Annual Average Daily Traffic (AADT)
N
NICOLET STATE TRAIL
Bass Lake
2600 - AADT
380 - AADT
H
32
H
3900 - AADT
52
Wabeno
3600 - AADT
C
340 - AADT
52
1200 - AADT
Range Line Lake
NICOLET STATE TRAIL
32
0
0.25
0.5
1
Miles

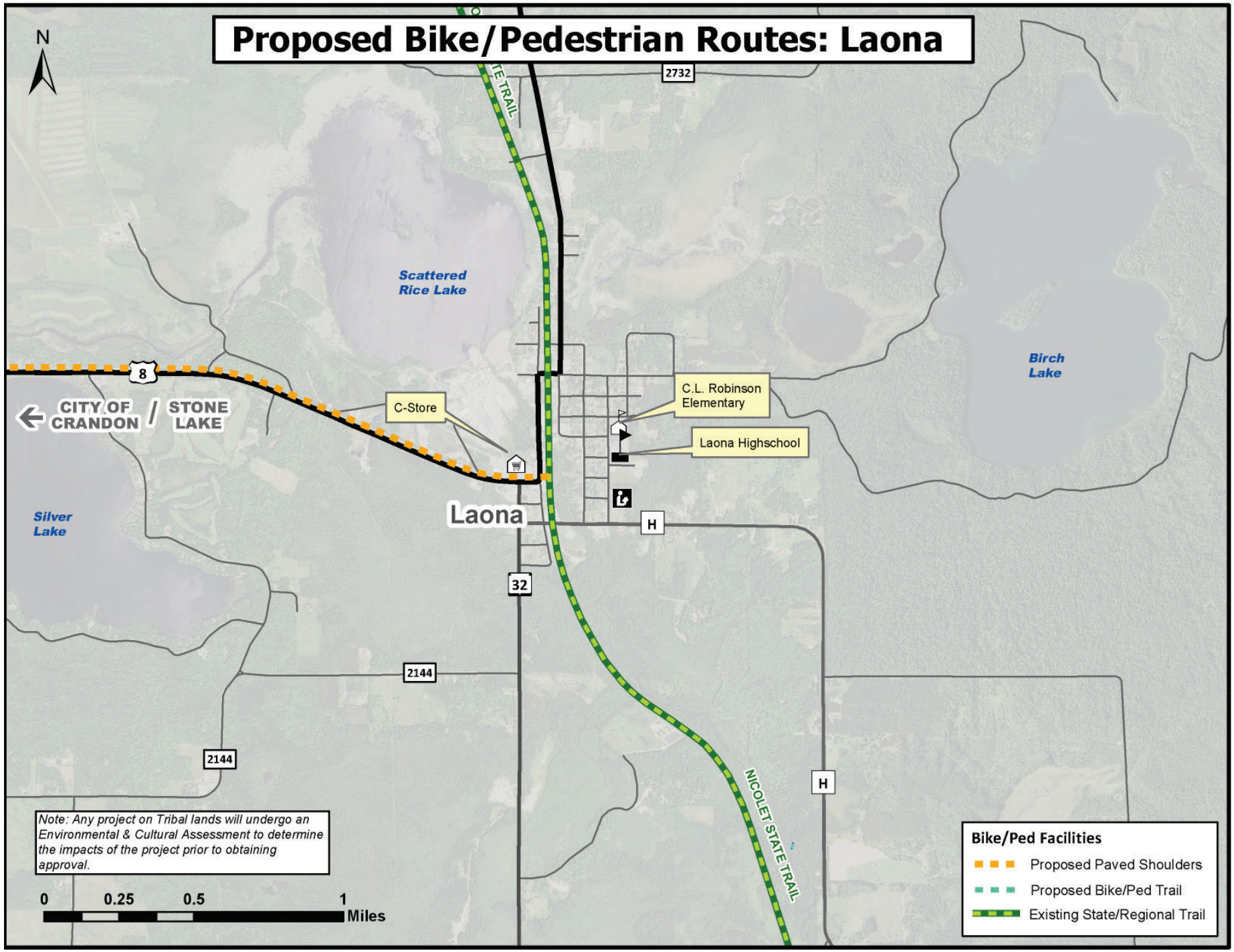

Traffic Counts:Carter
N
Traffic Counts
Traffic Count Location
"1500"
Annual Average Daily Traffic (AADT)
32
NICOLET STATE TRAIL
Sugarbush Ln
Eagle Ln
Industrial Park Rd
Carter
Old 32
Shiner Lake
Shiner Lake Rd
2143
2143
2358
Ferry Ranch Ln
NICOLET STATE TRAIL
32
0
0.25
0.5
1
Miles

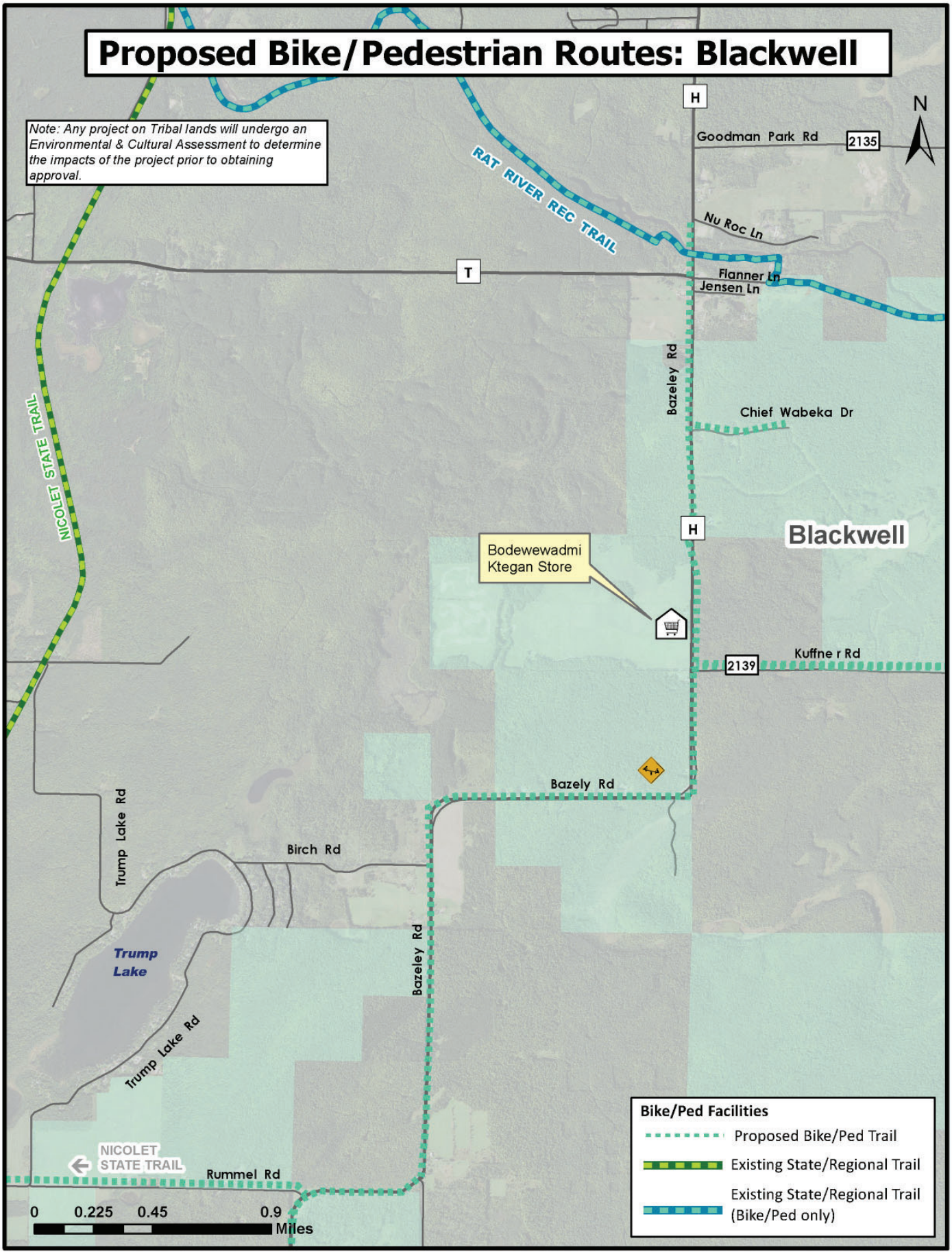
A-5 – PROPOSED BIKE / PEDESTRIAN ROUTES

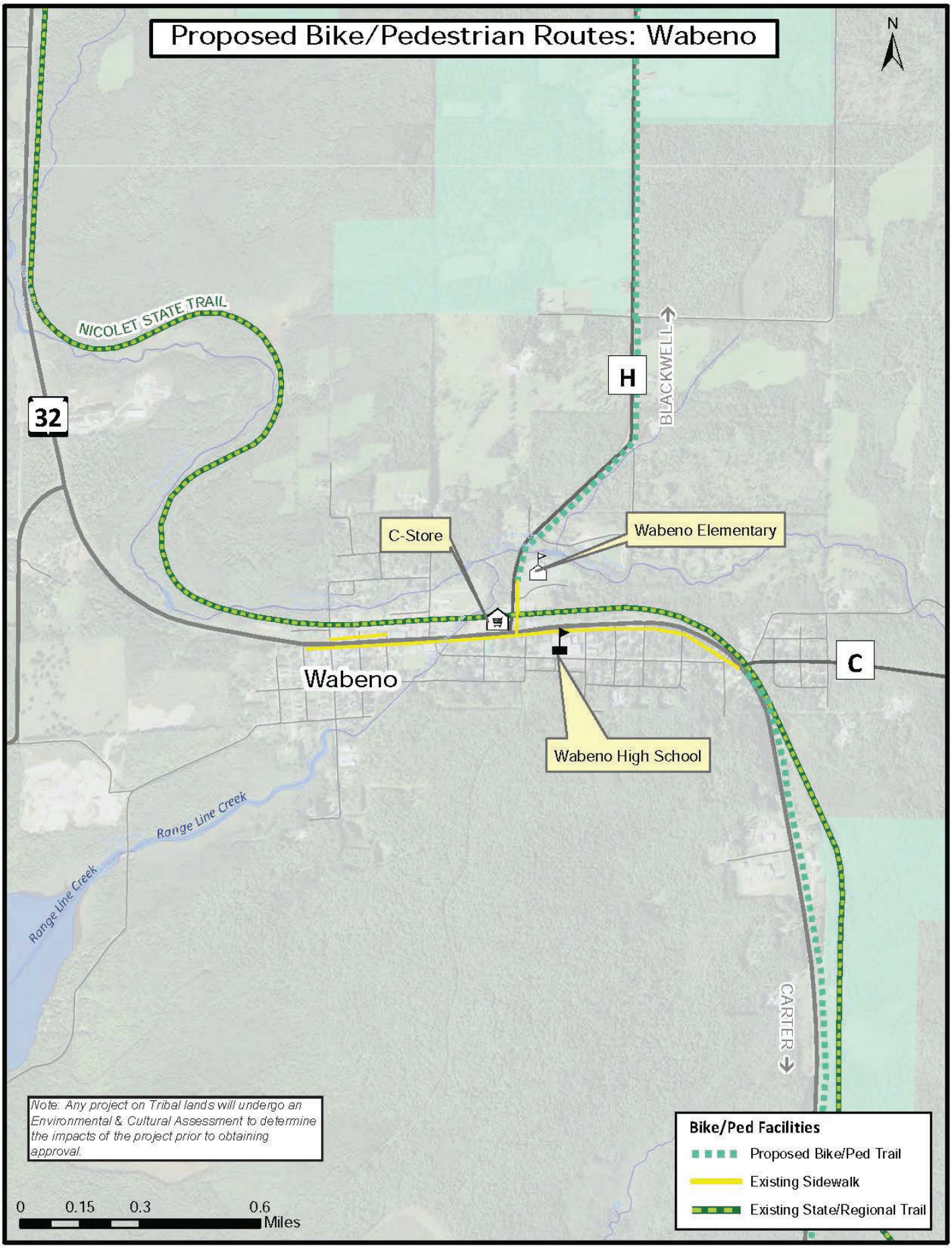


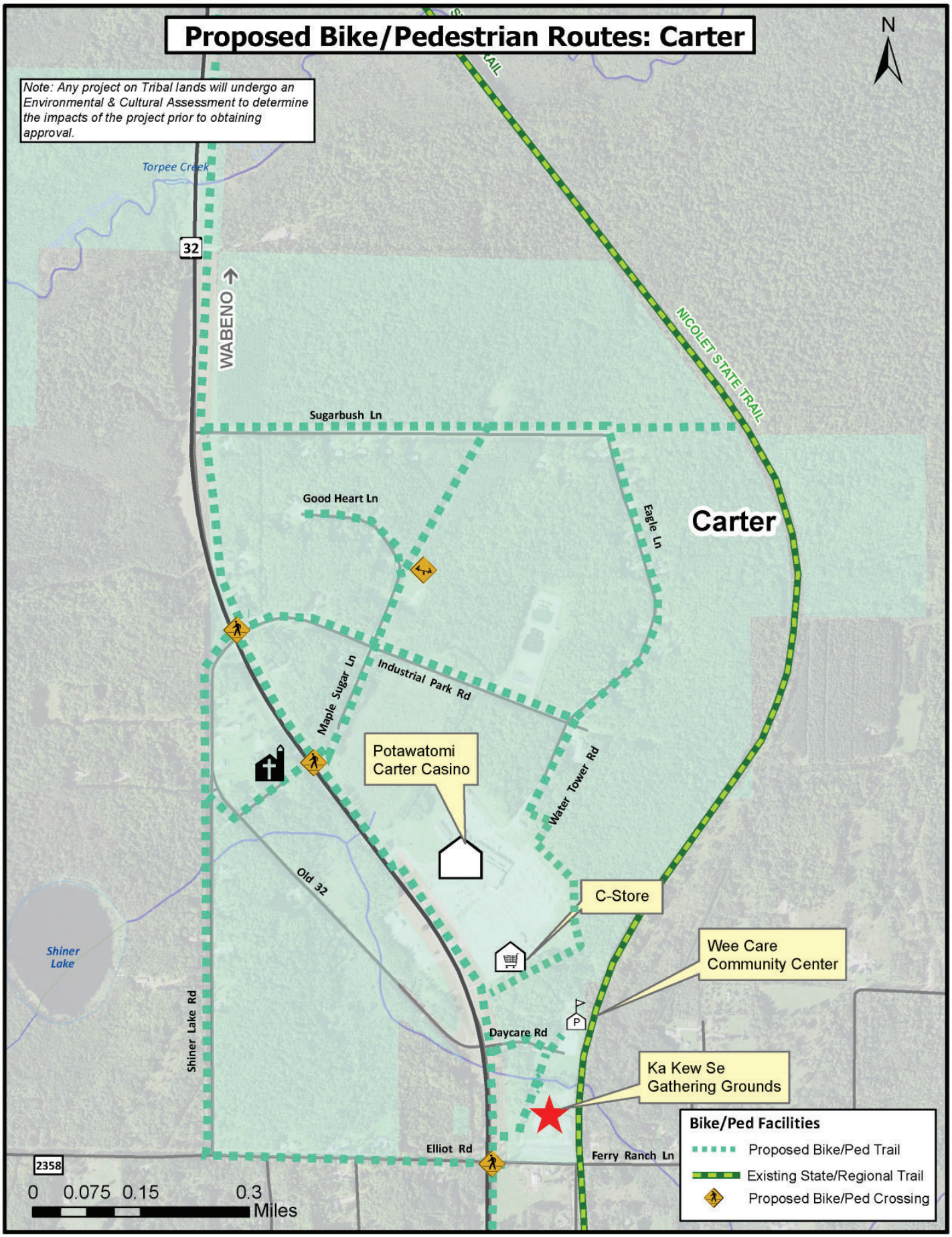

Proposed Bike/Pedestrian Routes: Stone Lake Campus
N
Stone Lake
Community Center
Health & Wellness Center
C-Store
Mish Ko Swen Dr
Fire Keeper Dr
Everybodys Rd
Kwe Da Kik Ln
Wej Mo Get Ct
Cultural Center/ Library/Museum
Caring Place
Rec. Center
Proposed at-grade Bike/Ped Crossing
Executive Building
Proposed Multi-modal Underpass
Youngs Ln
Note: Any project on Tribal lands will undergo an Environmental & Cultural Assessment to determine the impacts of the project prior to obtaining approval.
0 0.05 0.1 0.2 Miles
Proposed Bike/Ped Facilities
Paved Shoulder
Bike/Ped Trail
Existing Bike/Ped Facilities
Bike/Ped Path
Rustic Path
Sidewalk


Proposed Bike/Pedestrian Routes: Stone Lake
N
W
Proposed switchback trail
Otter Springs Recreation Area
Otter Creek Rd
Bug Lake
Stone Lake
Everybody Rd
Kwe De Kik Ln
Wej Mo Gee Dr
Bug Lake Rd
Mish Ko Swen Dr
CITY OF CRANDON
LAONA
32
8
Potawatomi Trl
Bear Rd
Proposed at-grade Bike/Ped Crossing
Youngs Ln
Proposed Multi-modal Underpass
Jaeger Rd
Indian Dr
Mensaw Ln
LNR Division
Lois Crowe Dr
Fire Tower Ln
Billy Daniels Ln
Devils Lake Rd
Wa Se Gishek Dr
Note: Any project on Tribal lands will undergo an Environmental & Cultural Assessment to determine the impacts of the project prior to obtaining approval.
0
0.325
0.65
1.3
Miles
Proposed Bike/Ped Facilities
Paved Shoulder
Bike/Ped Trail
Existing Bike/Ped Facilities
Bike/Ped Path
Rustic Path
Sidewalk


Proposed Bike/Pedestrian Routes: Laona
N
2732
Scattered Rice Lake
Birch Lake
Silver Lake
8
CITY OF CRANDON / STONE LAKE
C-Store
C.L. Robinson Elementary
Laona Highschool
Laona
H
32
2144
2144
NICOLET STATE TRAIL
H
Note: Any project on Tribal lands will undergo an Environmental & Cultural Assessment to determine the impacts of the project prior to obtaining approval.
0
0.25
0.5
1
Miles
Bike/Ped Facilities
Proposed Paved Shoulders
Proposed Bike/Ped Trail
Existing State/Regional Trail


Proposed Bike/Pedestrian Routes: Blackwell
Note: Any project on Tribal lands will undergo an Environmental & Cultural Assessment to determine the impacts of the project prior to obtaining approval.
N
H
Goodman Park Rd
2135
RAT RIVER REC TRAIL
Nu Roc Ln
T
Flanner Ln
Jensen Ln
Bazeley Rd
Chief Wabeka Dr
NICOLET STATE TRAIL
H
Blackwell
Bodewewadmi Ktegan Store
Kuffne r Rd
2139
Bazely Rd
Trump Lake Rd
Birch Rd
Trump Lake
Bazeley Rd
Trump Lake Rd
NICOLET STATE TRAIL
Rummel Rd
0 0.225 0.45 0.9 Miles
Bike/Ped Facilities
Proposed Bike/Ped Trail
Existing State/Regional Trail
Existing State/Regional Trail (Bike/Ped only)


Proposed Bike/Pedestrian Routes: Wabeno
N
NICOLET STATE TRAIL
32
H
BLACKWELL
C-Store
Wabeno Elementary
Wabeno
C
Wabeno High School
Range Line Creek
Range Line Creek
CARTER
Note: Any project on Tribal lands will undergo an Environmental & Cultural Assessment to determine the impacts of the project prior to obtaining approval.
0 0.15 0.3 0.6
Miles
Bike/Ped Facilities
Proposed Bike/Ped Trail
Existing Sidewalk
Existing State/Regional Trail


Proposed Bike/Pedestrian Routes: Carter
N
Note: Any project on Tribal lands will undergo an Environmental & Cultural Assessment to determine the impacts of the project prior to obtaining approval.
Torpee Creek
32
WABENO
NICOLET STATE TRAIL
Sugarbush Ln
Good Heart Ln
Carter
Eagle Ln
Industrial Park Rd
Maple Sugar Ln
Potawatomi Carter Casino
Water Tower Rd
Old 32
C-Store
Wee Care Community Center
Shiner Lake
Shiner Lake Rd
Daycare Rd
Ka Kew Se Gathering Grounds
Elliot Rd
Ferry Ranch Ln
2358
0 0.075 0.15 0.3 Miles
Bike/Ped Facilities
Proposed Bike/Ped Trail
Existing State/Regional Trail
Proposed Bike/Ped Crossing

Bicycle Parking Guidelines

A summary of recommendations from the Association of Pedestrian and Bicycle Professionals

Bicycle Parking Design

- Required spaces shall be at least 2 feet by 6 feet.
- An access aisle of at least 5 feet shall be provided in each facility.
- Racks shall be situated to allow a minimum of 2 feet between adjacent bike parking stalls.
- Spaces shall have a vertical clearance of at least 80 inches.

Bicycle Rack Design

Structures that require a user-supplied locking device:

- must accommodate U-shaped locking devices;
- support the bike frame at two points;
- be securely anchored to the ground or the building structure; and
- be designed and maintained to be mud and dust free.

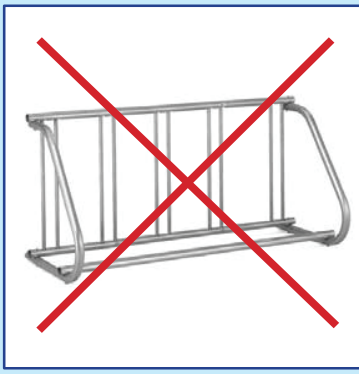
Bicycle Rack Location

- Racks should be located in a clearly designated safe and convenient location.
- Racks should be designed and located to be harmonious with the surrounding environment.
- Racks should be at least as convenient as the majority of auto parking spaces provided.

To learn more about bicycle parking guidelines, visit the Association of Pedestrian and Bicycle Professionals at: www.apbp.org.

These bicycle racks do NOT meet the design guidelines:

Grid or Fence Style Racks



Wave or Ribbon Style Racks



These bicycle racks DO meet the design guidelines:

Inverted-U Style Racks



Angled Wave Style Racks



Freestanding Style Racks



The above images are examples only. NCWRPC does not endorse any particular bicycle rack manufacturers.

If you have questions about whether a particular bicycle parking rack you are considering using meets these requirements, please contact NCWRPC planner **Fred Heider**, AICP at **fheider@ncwrpc.org**.

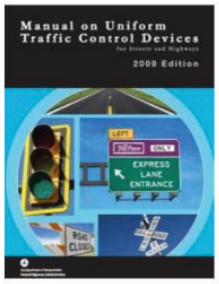
A-7 – SIGNING & WAYFINDING

The *Manual for Uniform Traffic Control Devices* (MUTCD) is the required manual to use when determining what sign is needed along a road or on private property that is open to the public. Other guides also exist such as NATCO's *Urban Bikeway Design Guide*, and WisDOT's *Wisconsin Bicycle Facility Design Manual*.

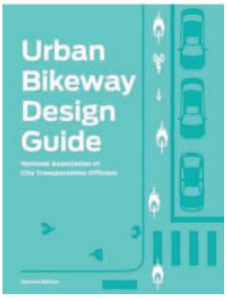
Bike Route Signs

Recommendations:

- Determine if a logo will be used or not (M1-8a is the logo sign). Signs going into other counties may not want to have logos on them (similar to county highways that are named the same in adjacent counties).
- Determine what numbers will be used for each route.
- Coordinate ordering and sign installation per MUTCD requirements with the Forest County Highway Department.



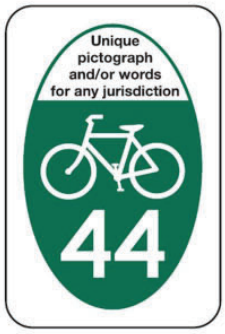
Sources:







M1-8



M1-8a

Wayfinding Throwback

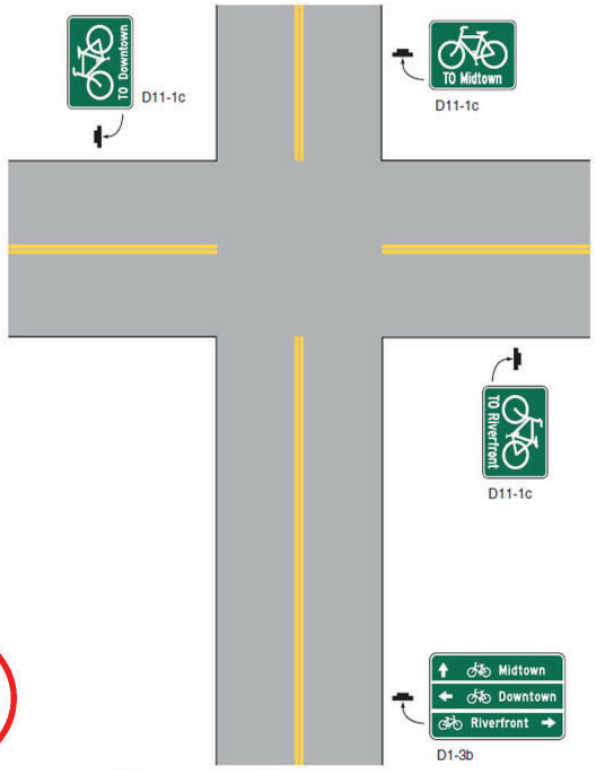
- 1911, a centerline is painted on a Michigan road.
- 1914, the first electric traffic signal is installed in Cleveland.
- 1915, the first STOP sign appears in Detroit.
- 1918, Wisconsin is the first state to erect official route signs as part of its maintenance functions.
- 1920, the first 3-color traffic signal is installed in Detroit.

Possible Bike Loop Route Signs

Recommendations:

- Determine if a Bike Loop Route is temporary (less than 2 years) or long term (2 years or longer). If it is a temporary route, then consider not signing it.
- For long term loop routes, consider using "D1-3b" signs to show each route turn before an intersection (see Figure 9B-6).
- Coordinate ordering and sign installation per MUTCD

Figure 9B-6. Example of Bicycle Guide Signing



Note: Bicycles are allowed on most streets, so don't use "Begin" or "End" signs above a bike route sign. Motorists may interpret their use as bicycles are **only** allowed on bike routes.







This "M1-8" sign may be used instead of the "D11-1" sign if route numbers are used.





This "D1-3" sign may be used for park wayfinding.

See MUCTD for guidance.







In situations where there is a need to warn motorists to watch for bicyclists traveling along the highway, the SHARE THE ROAD (W16-1P) plaque may be used in conjunction with the W11-1 sign.

Place this sign assembly (below) on:

- Roads that enter a community. Consult WisDOT for state highways, or the Highway Commissioner for county highways.



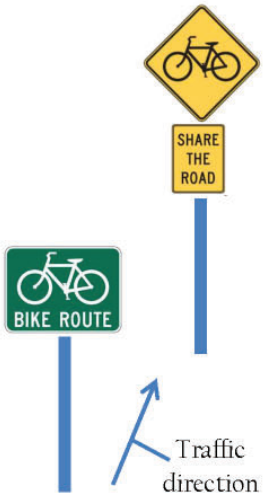
Place this sign assembly (below) in line with painted sharrows on:

- Roads where on-street parking is used.
- Business districts.



After the last block where a ***Bike Route*** sign is installed, place the ***Share The Road*** assembly at the start of the next block/road intersection.

If bike route ends at a 4-way intersection, then 3 ***Share The Road*** assemblies should be used – similar to how county highways are signed.



Mount this sign assembly first

Section 2A.04 Excessive Use of Signs (From MUTCD 2009)

Guidance:

- *Regulatory and warning signs should be used conservatively because these signs, if used to excess, tend to lose their effectiveness. If used, route signs and directional guide signs should be used frequently because their use promotes efficient operations by keeping road users informed of their location.*

NCWRPC Note: Since the green bike route signs (D11-1, and m series) below are guide signs, then frequent use is justified per the above guidance (2A.04). Frequent use is defined below in the NACTO text.

- "...every 2 to 3 blocks along bicycle facilities, unless another type of sign is used (e.g., within 150 ft of a turn or decision sign). Should be placed soon after turns to confirm destination(s). **Pavement markings can also act as confirmation that a bicyclist is on a preferred route."** (From NACTO Urban Bikeway Design Guide)

Rural Roads

On quiet country roads, little improvement is necessary to create excellent bicycling routes (fig. 2-9). Examples include town roads and many county trunk highways. State trunk highways and some county trunk highways, however, tend to have more traffic and a higher percentage of trucks. As a result, they are often improved with the addition of paved shoulders (sec. 2.6).



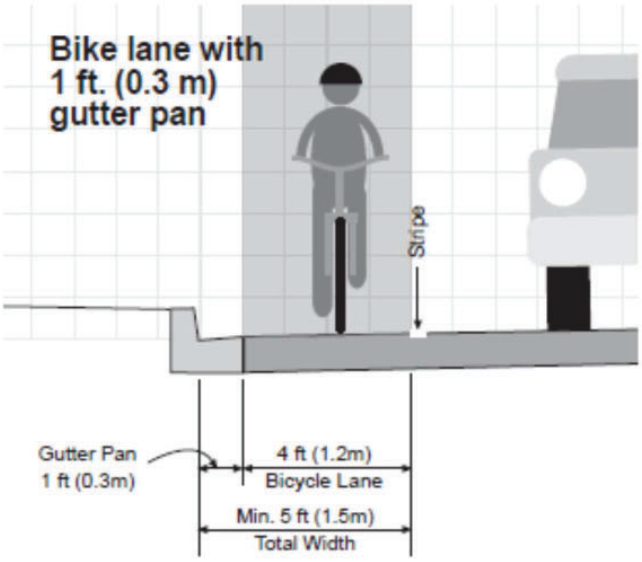
Figure 2-9: Many low-volume country roads need few improvements in order to serve bicyclists well.

No improvements beyond a bike route sign are needed on asphalt paved or seal coated rural roads with traffic volumes less than 500 AADT (annual average daily traffic).

Dust should be controlled on gravel rural roads that are signed as bicycle routes.

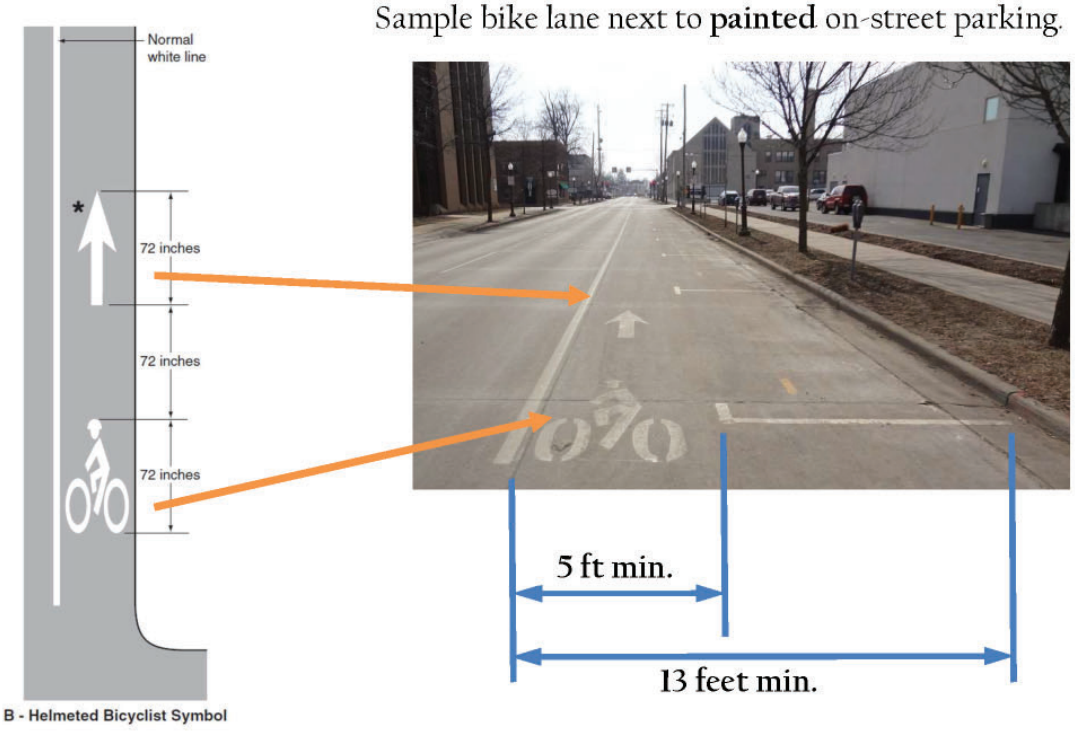
Asphalt Road with curb

On a curbed asphalt street without parking, the standard clear width of a bicycle lane is 4 feet, as measured from the inside of the stripe to the joint line with the gutter pan. Depending on whether a 1 foot or 2 foot gutter pan is used, the total width from curb fact to the inside of the bike lane stripe would either be 5 or 6 feet total.



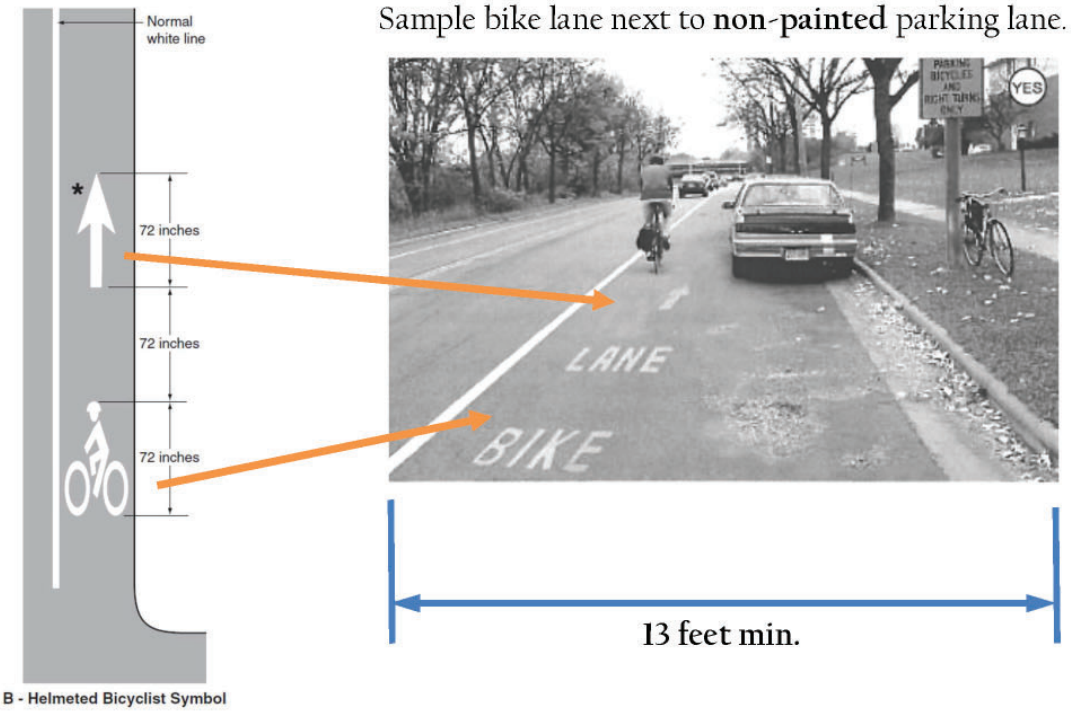
Road with parking and curb

Sample bike lane next to **painted** on-street parking.



B - Helmeted Bicyclist Symbol

Sample bike lane next to **non-painted** parking lane.



B - Helmeted Bicyclist Symbol

Urban or Paved Shoulder

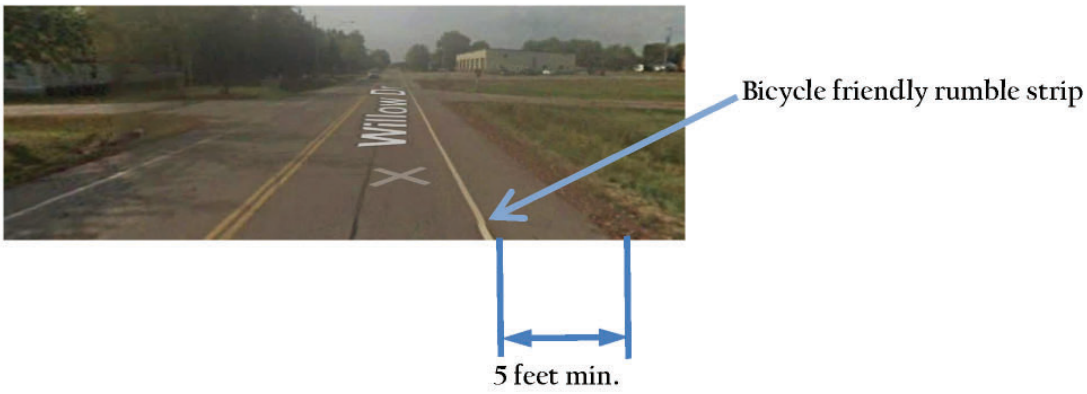
Where on-street parking is necessary to keep, but where that parking may not be used consistently, an ***urban shoulder*** is suggested to be painted to encompass up to 7 feet of the whole parking lane. This area may be used to park cars and ride a bike in when cars are not there.

NOTE: Do not paint bike lane markings on the shoulder.

Sample ***urban shoulder*** where parking is allowed:



Sample ***paved shoulder*** where parking is allowed:



Recommendations:

- Along higher volume roads, a 5-foot or wider paved shoulder provides safe space for bicyclists. A bicycle friendly rumble strip on the white line helps remind motorists to stay in their lane, and provides an audible que to bicyclists when motorists are not paying attention. Also, trucks and cars can pull off the road to adjust their vehicles.
- If traffic is riding over the white line, then install bicycle safe rumble strips on the white lines.
- Contact your WisDOT Bicycle Coordinator to verify what size shoulder a specific road should have based upon expected bicycle and pedestrian traffic.