The Great Northern Trail Master Plan

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THE GREAT NORTHERN TRAIL MASTER PLAN

AUGUST 2022

ACKNOWLEDGEMENTS

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THANK YOU TO THE COMMUNITY WHO TOOK THE TIME TO PROVIDE VALUABLE INPUT ON THIS PLAN!

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01 INTRODUCTION + CONTEXT

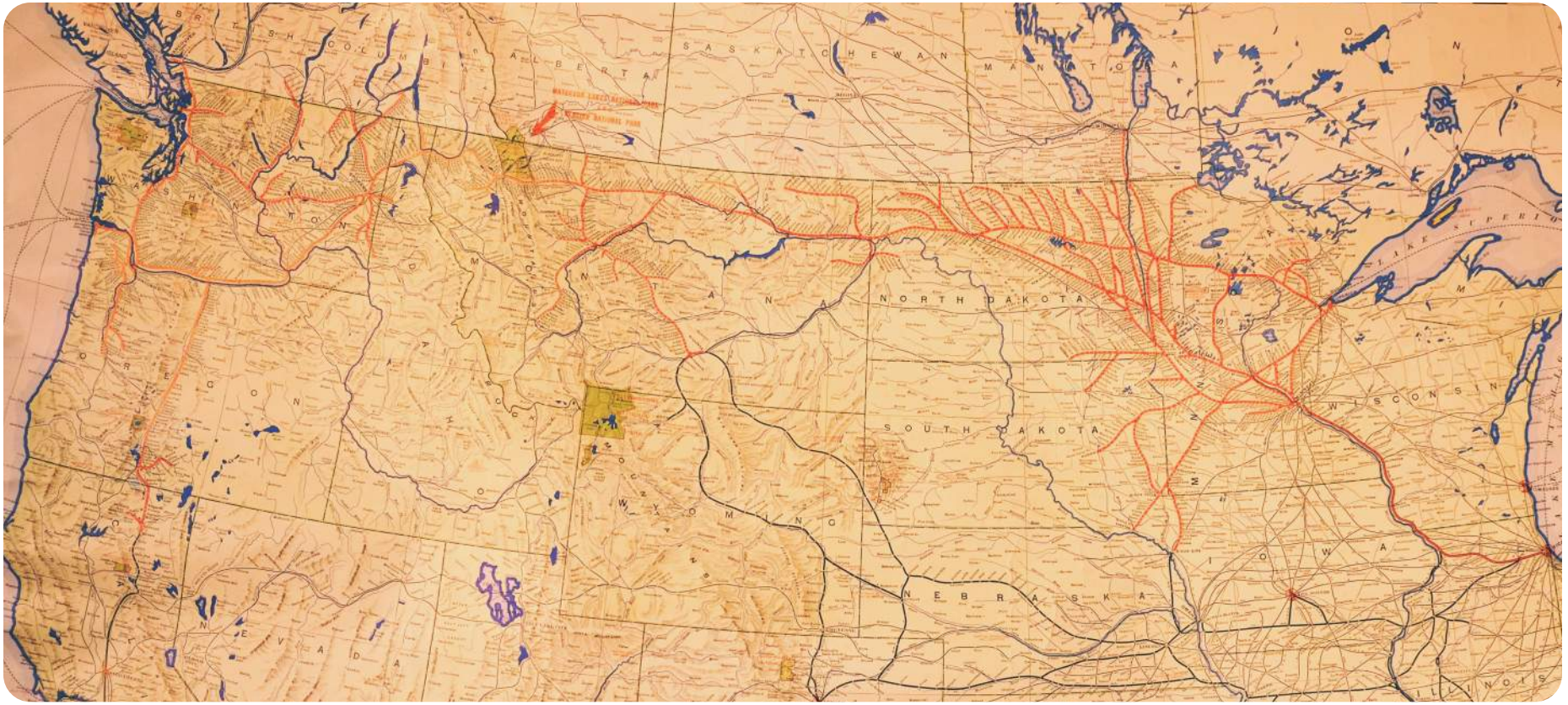
INTRODUCTION

Railways helped build America during the westward settlement of United States and connected people, commerce, and culture from coast to coast. Minnesota was once at the center of freight activity in the country, largely due the Mesabi Range, which was the largest deposit of iron ore in the world. Since the development of Interstate Highway System in the early 20th century many of the railway routes have fallen out of use. The Great Northern Railroad was in service from 1886 until the mid-1970's. Since then, sections of this rail system have been condensed as a result of this national trend .

In the 1990's and early 2000's a coalition of interested stakeholders began advocating for a rail to trail conversion of the corridor that would relink communities and provide residents with a place to walk, bike, and connect with nature.

Those early advocates helped pave the way for the current 8.5-mile trail that connects Elk River to Zimmerman. The early volunteer coalition has since evolved into a partnership of public agency leaders that are now poised to complete another segment of the trail.

Trails that offer a rich and continuous experience require thoughtful consideration of cultural and natural resources, physical constraints, and user preferences. The Great Northern Trail can become another asset for residents and visitors in the region and beyond, connecting communities with parks and open spaces. Along with bolstering city and township open space networks, the trail will provide safe routes to schools, improve access to nature, and become an economic driver for local businesses.



Great Northern Railroad Network

Princeton Depot

"Hustle Muscle" GNR Engine

Zimmerman Depot

Project Overview

PROJECT OVERVIEW

The Great Northern Trail (GNT) is a 30 mile rails to trails project located within the Great Northern Railroad alignment between Elk River and Milaca. The southern 8.5 miles of the trail are constructed as a paved bike and pedestrian trail from Elk River to Zimmerman, with a stand alone 2 mile segment within the City of Princeton. The extension project includes the remaining 19.5 undeveloped miles. The completed trail will provide an important regional connection between the Mississippi River Regional Trail and the planned Ports to Plains Trail, creating a 100+ mile loop between the cities of St. Cloud, Elk River, and Milaca. The trail will also connect visitors to important natural, recreational, and cultural resources along the corridor, such as the Milaca mountain bike trails, the Rum River Blue Trail, the Town of Brickton historic site, and the historic Princeton Railroad Depot.

MASTER PLANNING PROCESS

The development of the Great Northern Trail Master Plan was based in part on direct input from existing trail users, property owners in the corridor, agency stakeholders, and the community at large. Outreach included in-person meetings and direct phone calls to stakeholders and constituents, a county-managed website with frequent updates about the study, city council workshops, listening sessions, and open houses for the public. Using preference surveys and other feedback loops, the master plan is intended to reflect the goals and aspirations of a broad cross section of the study area and surrounding communities.

The master plan was developed as a collaborative effort between Sherburne and Mille Lacs Counties, the Cities of Elk River, Zimmerman, Princeton, and Milaca; herein referred to as the Partnership Group. The partnership group met with a trail planning consultant regularly between February and July of 2022 to develop the master plan. Three open houses were held in April and May with an online survey option for asynchronous input. A pop-up event was held in July along the existing trail to gather additional user input on proposed trail designs.

FREQUENTLY ASKED QUESTIONS

1. **What is the timeline for the plan?**

   This trail extension master plan is a long-term vision (25-30 years), requiring more detailed analysis, public improvements, and final design. Early phases of the trail are anticipated to begin within the next 3-5 years.

2. **Who will pay for the new trail?**

   The trail will be funded through grants from state and federal sources. Many funding programs require matching contributions from the local agencies which own the trail corridor and apply for the grants.

3. **What does this mean for private property owners in the area?**

   The master plan for the trail sets a vision for the area, defining alignment options, potential amenities, and safety improvements.

4. **Will it be safer for me to walk and bike in the area in the future?**

   Yes, the plan calls for intersection improvements on busy corridors to enhance connectivity and safety for pedestrians and bicyclists.

TRAIL CONTEXT

Legend

- Existing Trail
- Proposed Trail
- Local Bike Trail
- Existing Parks
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail

0 2 miles 4 miles 8 miles

N

REGIONAL SIGNIFICANCE STATEMENT

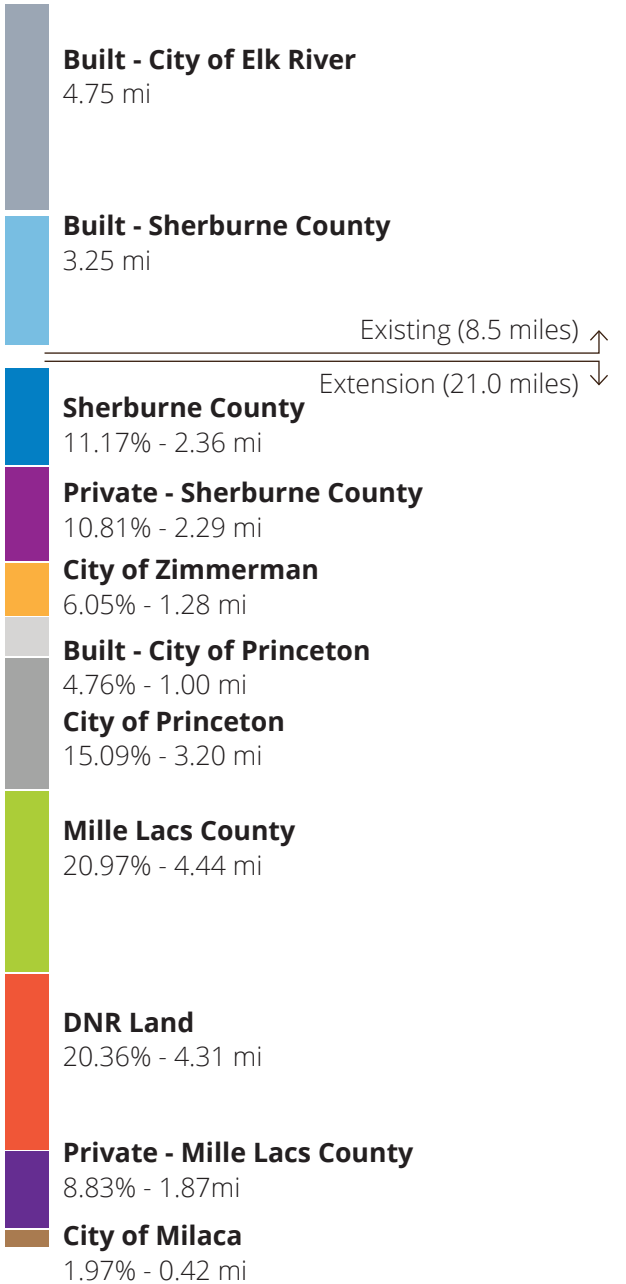
What makes this trail regionally significant is its connection to the trail segment from Elk River, the Plains to Port Trail, and connectivity to the proposed regional parks in Milaca and Princeton. As a multi-use trail, this trail will provide recreational enjoyment to many individuals throughout the region and state and will assist in boosting the tourism industry.

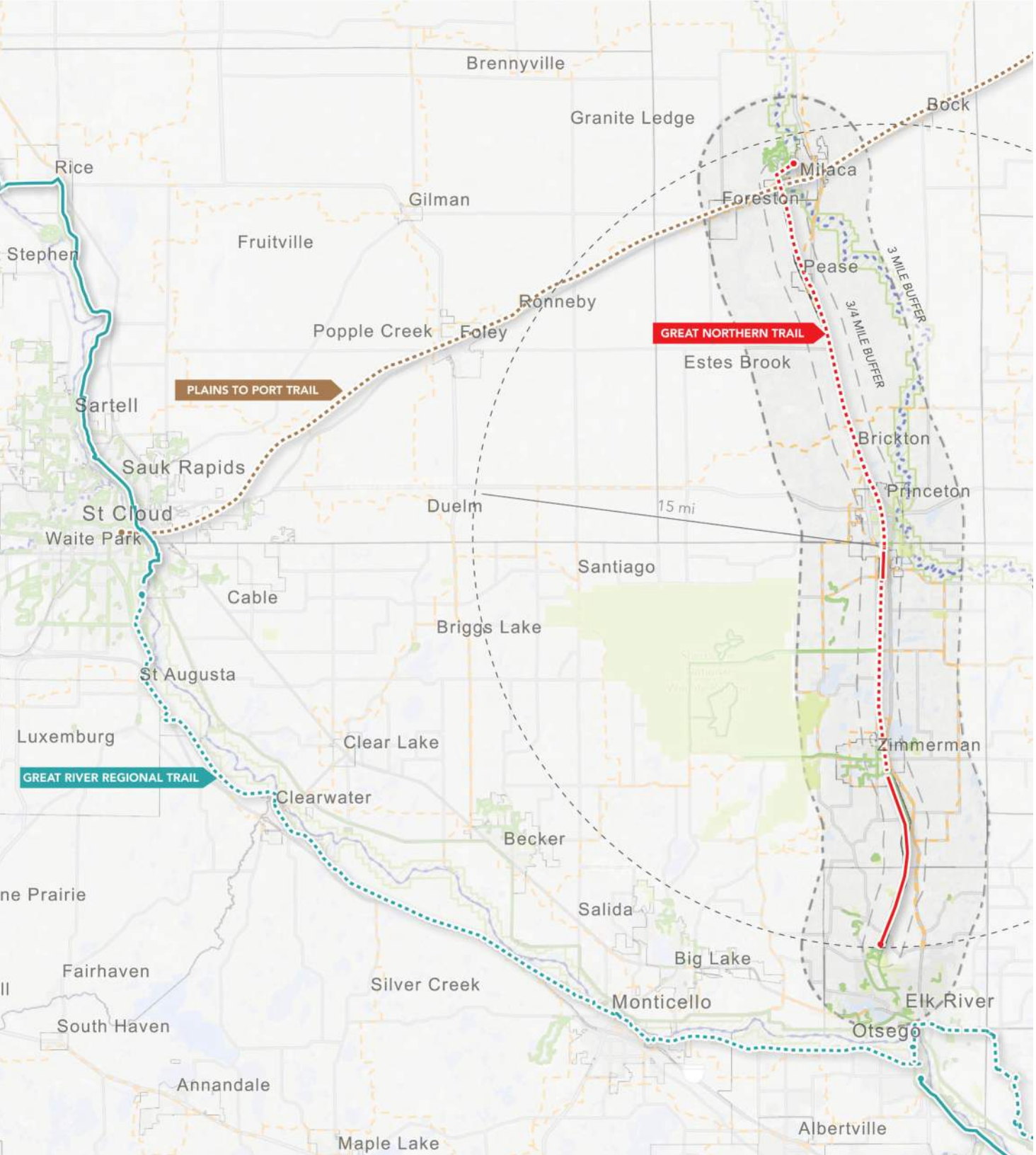
PROPOSER/IMPLEMENTING AGENCY

Sherburne and Mille Lacs Counties will be the principal owners of the trail. The construction and required acquisitions for trail development will be the responsibility of the principal owners. Operations and maintenance will be shared between all the agencies within the partnership group. Future programming along the trail is an opportunity for continued partnership among the group.

Partnership Committee Members

Trail Ownership along Railroad Alignment





REGIONAL TRAIL CONTEXT MAP

Legend

- Existing Trail
- Proposed Trail
- Local Bike Trail
- Existing Parks
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail

0 2 miles 4 miles 8 miles

N

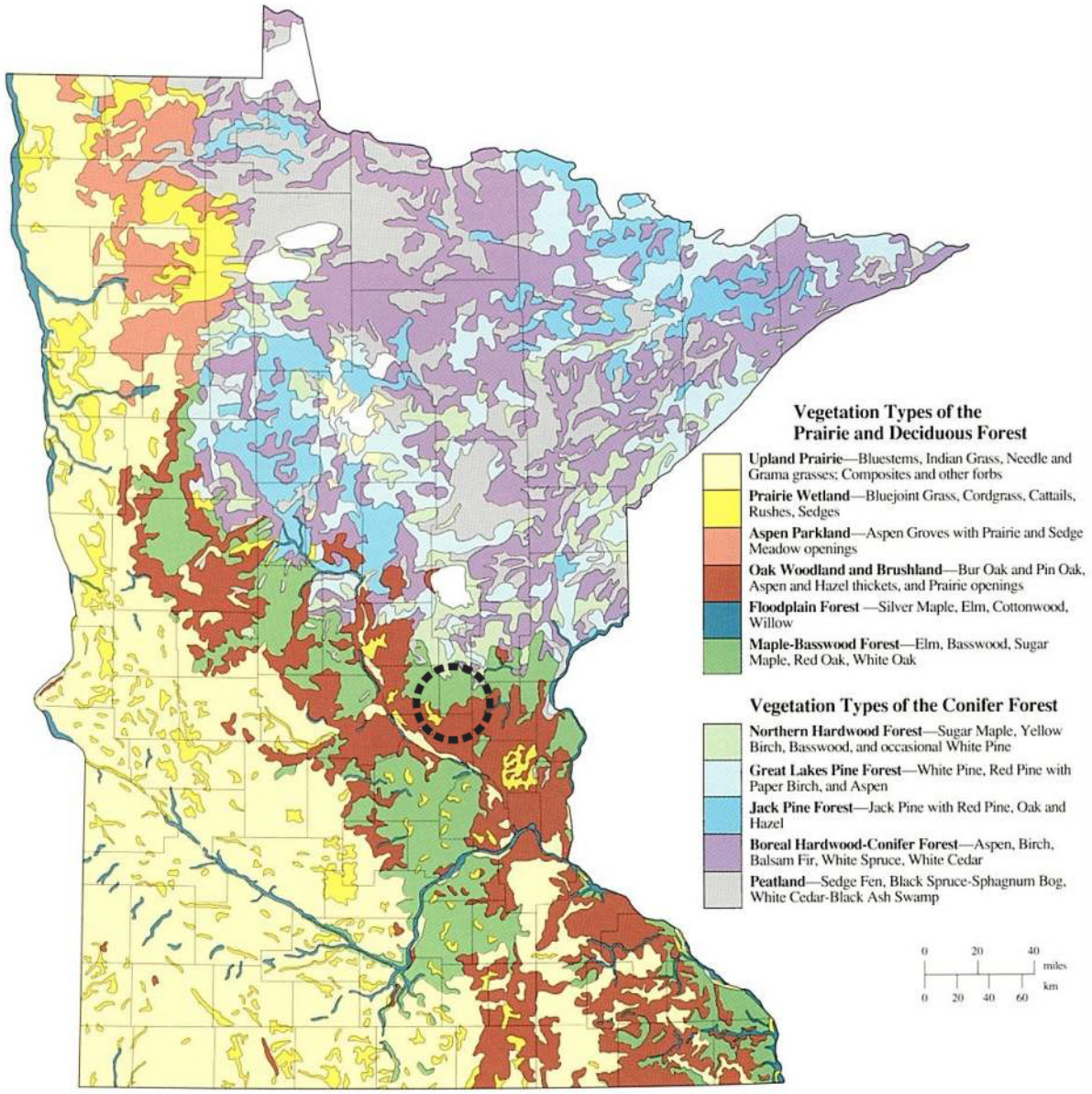
Existing Context

SETTING/REGIONAL CONTEXT

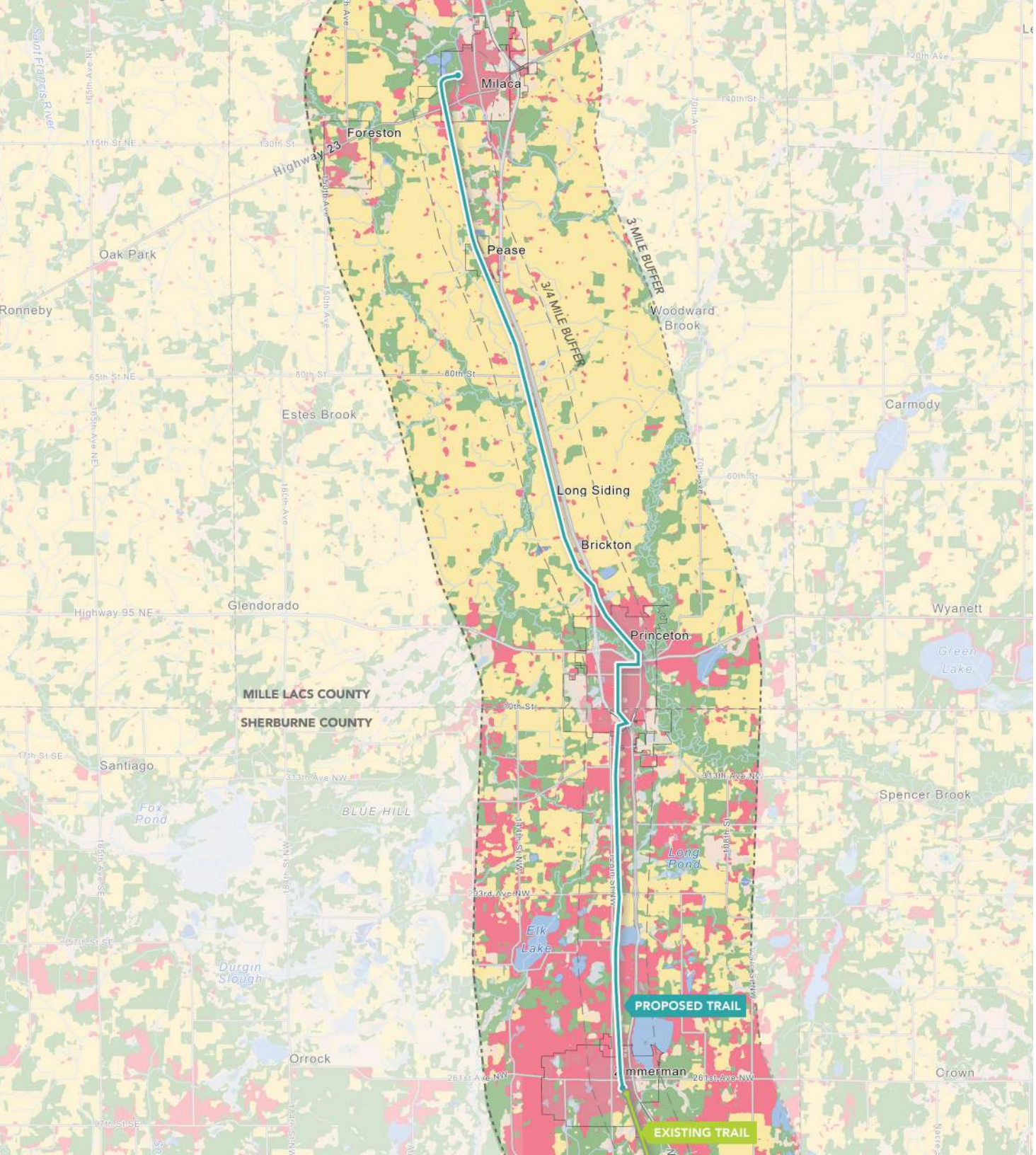
The Great Northern Trail straddles two of the three major biomes in Minnesota: deciduous and coniferous forests. The pre-settlement vegetation included Big Woods hardwoods with scatterings of coniferous bogs and swamps in the north, and oak openings and barrens with patches of aspen.

SITE INFORMATION

The Great Northern Trail is equally split between Sherburne and Mille Lacs County, passing through Elk River, Zimmerman, Princeton, the town of Pease, and Milaca. The southern half of the trail in Sherburne County is primarily wooded, located a few miles west and parallel to Hwy 169. The landscape is peppered with lakes that have been developed with single-family housing. This section of the trail has gaps in public ownership which will require land acquisition. The northern half of the trail passes through agricultural land and runs directly parallel to Hwy 169. The historic rail bed has significant vegetation that has grown up to provide a tunnel-like experience as well as a strong buffer from the highway. Remnant patches of wetlands in this section host a variety of native flora and fauna. Sections in Milaca and Princeton include views and access to the Rum River, providing an opportunity for a bike-paddle loop. An urban stretch of trail through Princeton will require protected bike lanes.



LANDCOVER



Legend

- Water
- Trees
- Flooded Vegetation
- Crops
- Built Area
- Bare Ground
- Snow/Ice
- Clouds
- Rangeland
- buffer_3mi

0 1 mile 2 miles 4 miles

N

Existing Site Photos Key Plan

Drone Photo Key Plan

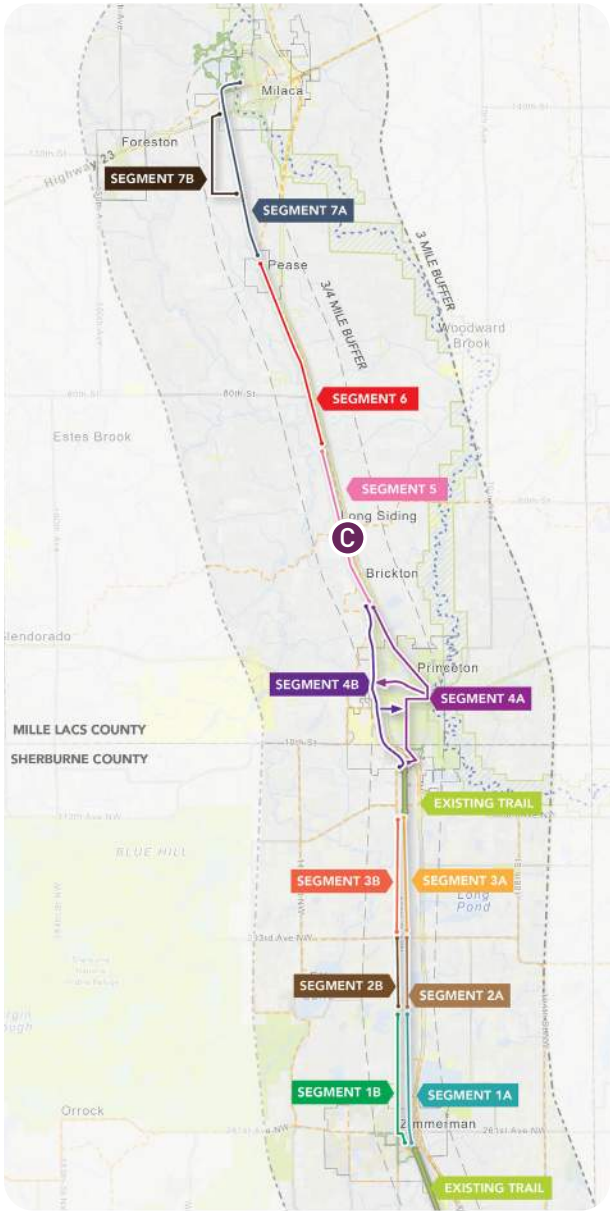
Looking North

Looking South

Key Plan

Looking North

Looking South



Key Plan

Looking North

Looking South

Key Plan

Looking South

Looking North

Key Plan

Looking South

Looking Southwest

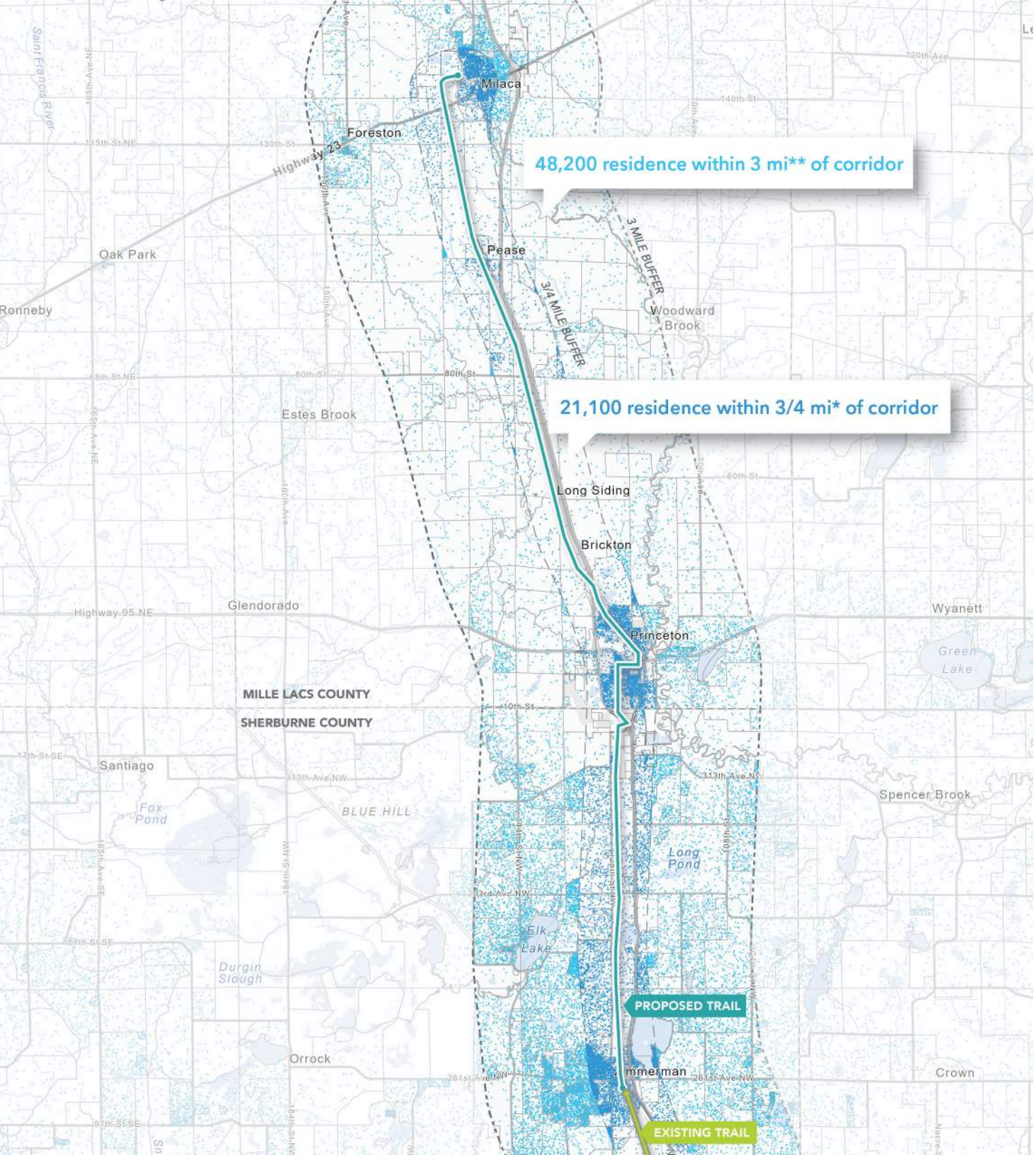
02 VISION + TRENDS

Overview

As the Great Northern Trail changes over time, the quality of the trail, natural areas, and programs must evolve. New opportunities will be revealed, along with new challenges. Sustaining a welcoming, comprehensive, and balanced trail system throughout this evolution will require a vision founded with a shared community mission statement and set of guiding principles.

A visioning workshop was held early in the master planning process to develop a vision statement, guiding principles, and identify emerging trends. The outcome of that vision workshop was then presented to the community, where the public was asked to rank their top priorities. A summary on public engagement and a ranking of guiding principles can be found in Chapter 3. The guiding principles were continually referenced during the master planning process to ensure the designs aligned with the vision.

POPULATION DENSITY



Legend

1 Dot = 1 Person

** 50% of trail users live within 3/4 mi of a trail*
*** 75% of trail users live within 3 mi of a trail*

0 1 mile 2 miles 4 miles

N

Guiding Principles

This set of Guiding Principles highlight the overarching goals for the Great Northern Trail. The principles are a means to convey the master plan's aspirations, provide a common language for discussion and oversight, and assist to validate the ability of the proposed plans to meet the vision. These principles should be re-evaluated periodically and refined as needed to ensure that the evolution of the trail is viable and meets community goals and aspirations for the area.

01 Elevate safety

02 Cultivate wellbeing

03 Establish regional significance

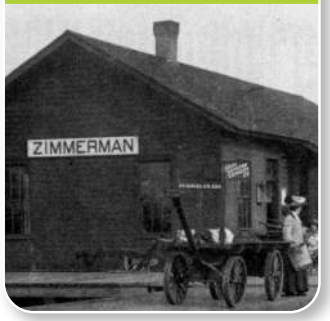
04 Embrace Inclusivity

05 Bridge urban and rural

06 Enhance connectivity to regional destinations

07 Encourage tourism

08 Celebrate place



09 Build responsibly for natural resources

10 Orientation towards the future

01 Elevate safety

- Prioritize bike and pedestrian safety at high volume roads and use grade separated crossings when feasible.

02 Cultivate wellbeing

- Promote community happiness and health by increasing access to nature and promoting more active lifestyles.

03 Establish regional significance

- Provide a high-quality trail experience that leverages existing assets and builds upon untapped resources

04 Embrace Inclusivity

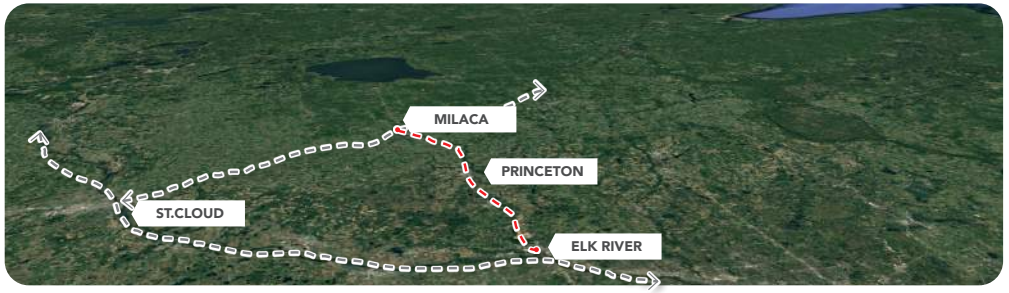
- Create a trail that is welcoming to all by engaging multigenerational and multicultural backgrounds.

05 Bridge urban and rural settings

- Expand public open space amenities into areas where they are currently lacking.

06 Enhance connectivity to regional destinations

- Complete a link within the regional trail network that will connect communities as far as Elk River, St. Cloud, and the Metro area.



07 Encourage tourism

- Promote the area as a recreational hub for biking, camping, and paddling the Rum River Blue Trail. Add economic value to communities by aligning the trail through existing business districts.

08 Celebrate place

- Interweave cultural heritage, ecology, and educational opportunities along the length of the corridor that will provide an experience unique to this region, unlike anywhere else in Minnesota.

09 Build responsibly for natural resources

- Protect and enhance ecological corridors that support habitat and environmental resiliency.

10 Orientation towards the future

- Anticipate changes in trail use trends and user groups.

Trends

OVERVIEW

The demands of a growing and changing population in Sherburne and Mille Lacs Counties will require staff and decision-makers to consider how the dynamic nature of demographics, technologies, trends and activities will affect trail user preferences and programming needs. The following section explores current trends and potential implications for trail development. Planning for change and building flexibility into the final design will position the Great Northern Trail to better adapt to future demands. The trends listed are in no particular order.

Sources

Minnesota Recreation and Park Association

National Recreation and Park Association

Minneapolis Park and Recreation Board

TREND 1 | INCREASING DEMAND FOR INFORMAL RECREATION

The demand for informal recreation such as running, hiking, bicycling and fitness programs are increasing in popularity. At the same time, participation in organized league activities have been decreasing since the mid-1990's in Minnesota.

TREND 2 | RESILIENCY TO CLIMATE CHANGE

The transportation sector is one of the largest contributors to U.S. greenhouse gas (GHG) emissions, with passenger cars accounting for 18% of emissions in the United States. Alternative modes of transportation such as walking and biking reduce dependence on automobile use and greenhouse gas emissions.

As climate change begins to impact wildlife and landscapes more directly, parks and protected natural areas are becoming increasingly important in mitigating the negative impacts of climate change.

TREND 3 | CHANGES CAUSED BY THE COVID-19 PANDEMIC

The pandemic caused communities across the nation to shut down, yet parks and open spaces became ever more popular. As people sought out places for distanced physical activity, parks, open spaces and trails became high-priority destinations.

TREND 4 | TRAILS SUPPORT ECONOMIC DEVELOPMENT

Trails not only improve the quality of life, but they contribute to the local economic development of a region.

A high-quality trail system can support tourism in the regional economy. Homes and properties located near trails tend to have higher values and generate more in tax revenues than those farther away.

People seek high-quality recreation amenities when they are choosing a place to live and work.

https://www.railstotrails.org/resourcehandler.ashx?id=4620

TREND 5 | HEALTH AND WELL-BEING

The National Recreation and Parks Association (NRPA) states one of the strongest emerging trends in 2021 is the focus on health and health equity. This movement toward health and well-being has been magnified by COVID-19 but will continue well beyond the pandemic with a greater focus on meeting the social needs of communities.

Implications for trails support active living, more walking, running and biking, social gathering and spaces designed for reflection.

03 PUBLIC INPUT + PARTICIPATION

Overview

An extensive community outreach effort was conducted in two phases, the first effort from February 2021 to July 2021 and then from April 2022 to June 2022. The first community effort identified initial route alternatives. The second effort was conducted to help identify and understand the values, needs, and preferences of the community related to improvements along the trail corridor. Public outreach methods included community pop-up events, stakeholder interviews, an online community survey, and listening sessions. Some engagement activities were targeted at under-represented stakeholders to create welcoming opportunities for participation in the planning process.

Public engagement activities were held throughout the planning effort and in conjunction with the following project milestones:

- Design Charrette
- Preliminary Vision Plan Concepts Review and Approval

Engagement events and activities are shown in the timeline

Engagement Summary

COMMUNITY EVENTS
(125+ participants)

Three community events were held from February 2021 to June 2022 at the Great Northern Depot in Princeton and at the Fire Department Station in Zimmerman. The purpose of these community events was to share project information, solicit community input on trail needs and opportunities, and review the Master Plan recommendations.

STAKEHOLDER ENGAGEMENT
(150+ participants)

The project team worked with the partnership committee to identify and reach out to stakeholders groups along the trail corridor. The purpose of this stakeholder engagement was to share project information, solicit stakeholder input on needs and opportunities, and to review Master Plan recommendations. These engagement activities included a pop-up event, stakeholder interviews, and listening sessions.

SURVEY
(225 participants)

Online Survey

An online survey, intended to gather public input and feedback on planning efforts from the broader community, solicited 225 responses from February 2021 until June 2022. The survey solicited input on Trail needs, concerns and opportunities.

PARTNERSHIP AGENCY ENGAGEMENT

Partnership Committee (PC) Meetings

The project team met regularly with PC members, consisting of city, county, and township staff representing various jurisdictions that own property in the corridor. The goal for these meetings was to identify key stakeholders and issues, review proposed findings, discuss alternative solutions, and establish plan recommendations and priorities.

City Council, County Commission, and Township Meetings

During the planning process, the project team attended City Council Work Sessions to introduce the team and planning process, present the results of community input, review the draft plan, and to gain final approval of the plan.

FIGURE 1: SUMMARY OF COMMUNITY ENGAGEMENT EFFORTS

ENGAGEMENT TIMELINE

Community engagement efforts spanned the timeframe February 2021 to July 2022. The process began by launching an online community survey on the project website and conducting stakeholder interviews. Targeted email blasts to stakeholder groups including a survey link and project information combined with in-person engagement opportunities occurred throughout the process. Mailers were sent to residents in the corridor prior to open house events.

FIGURE 2: ENGAGEMENT TIMELINE

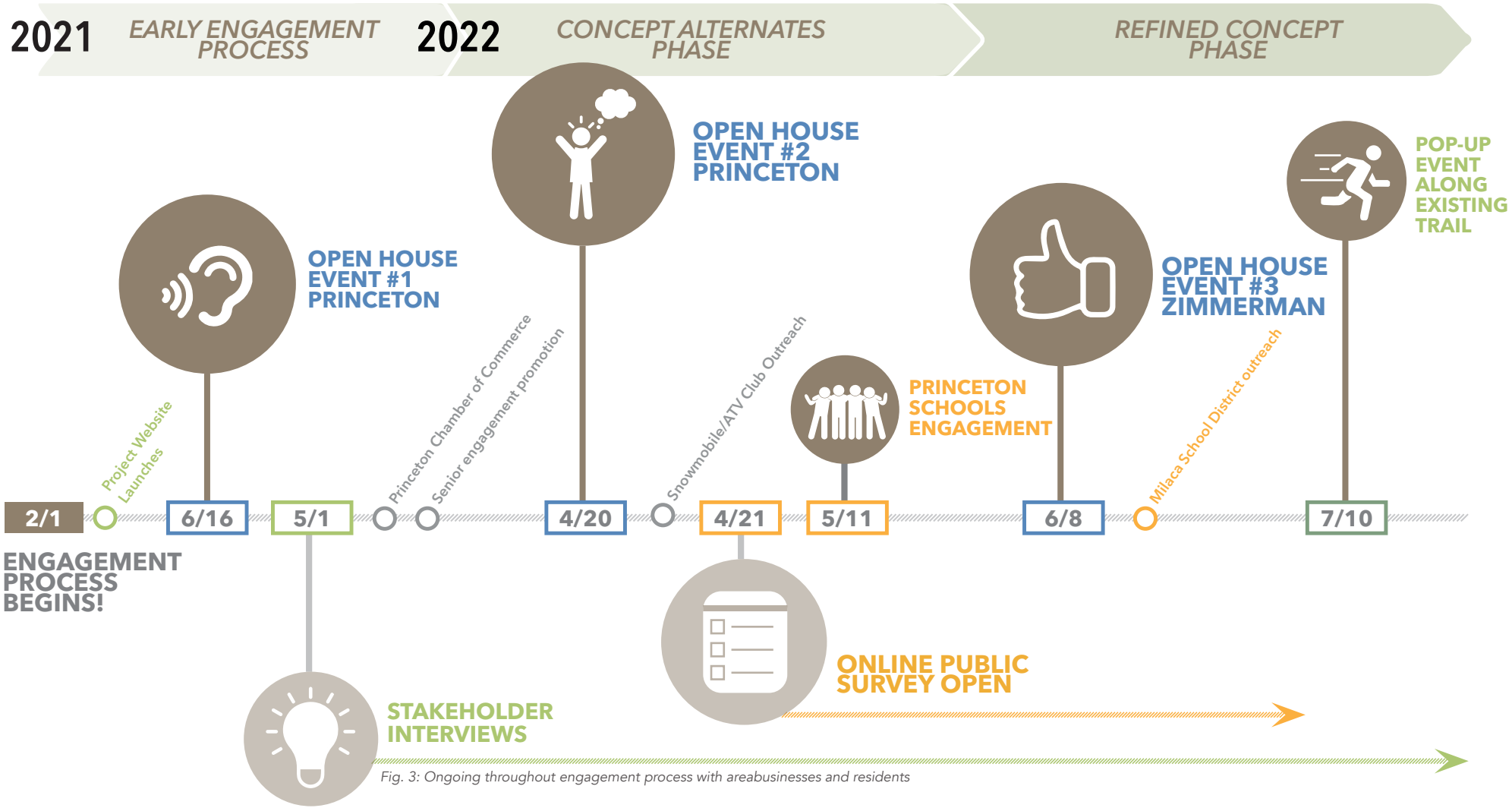


Fig. 3: Ongoing throughout engagement process with areabusinesses and residents

Community Events and Stakeholder Input

Over 100 participants provided input to the Great Northern Trail Master Plan at three public open houses.

Open House 1 – 110 Responses (50 attendees, 110 responses online). Gathered input on initial trail route alternatives

Open House 2 – 73 Responses (40 attendees, 22 responses in person, 51 online). Gathered input on refined trail route alternatives, trail use preferences, and amenities.

Open House 3 – 75 responses (17 attendees, 12 responses in person, 63 online). We used the input gathered from the second open house to generate trail development prototypes and conceptual trailhead designs.

Image boards were used to engage and familiarize people with the project and start conversations about what they envision for the future of the trail (see FIGURE XX). Using color coded stickers, participants selected their highest priorities for future trail development amenities. A portion of the exhibit was dedicated for additional written comments, suggestions, and concerns.

The voting board events complemented the online survey and were essential for reaching alternative audiences.

Outreach Efforts

The project team worked with the partnership committee to determine appropriate forums, methods and/or events to facilitate engagement with typically underrepresented community members, including BIPOC, senior, and youth communities. Listening session took place at Princeton High School, Zimmerman Track Team, and Milaca High School to engage the teenage/youth community. A walk and talk session was advertised and conducted near the Elk River multi-family and senior housing communities. A workshop was also conducted with indigenous families to gather their input on the trail.

Stakeholder Interviews

In addition, key informant interviews were conducted to gain a better understanding of potentially unmet needs, concerns, and aspirations related to the study area. These interviews included meetings with Snowmobile and ATV groups, including the Rum River Sno Riders based in Milaca, Mystic Riders out of Princeton, Elk Lake Easy Riders, and the Wrecking Crew ATV club.

FIGURE 4: IMAGE BOARDS AT PUBLIC OPEN HOUSE

Stakeholder Sample

- Milaca Trails Initiative
- Snowmobile Clubs -
- UTV Club
- Princeton Chamber of Commerce
- Student Athletes – Princeton Highschool, Zimmerman Track Team, Milaca Highschool
- Elk River Seniors
- Indigenous Families
- Townships
- Cities

Community Events And Listening Session

COMMUNITY EVENTS

SURVEY

STAKEHOLDER

Open House #2 - Princeton

March 20th, 2022

~73 engaged

Princeton/Milaca/Zimmerman High Schools + Indigenous Families

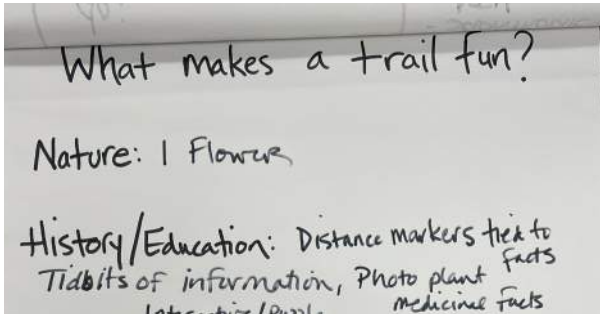
June 16th 2021- June 1st , 2011

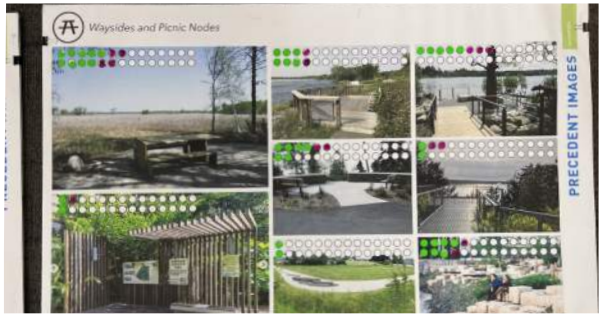
~100+ engaged

Community Feedback- Various Locations

Between Feburary 2022 - July 2022

~40 engaged

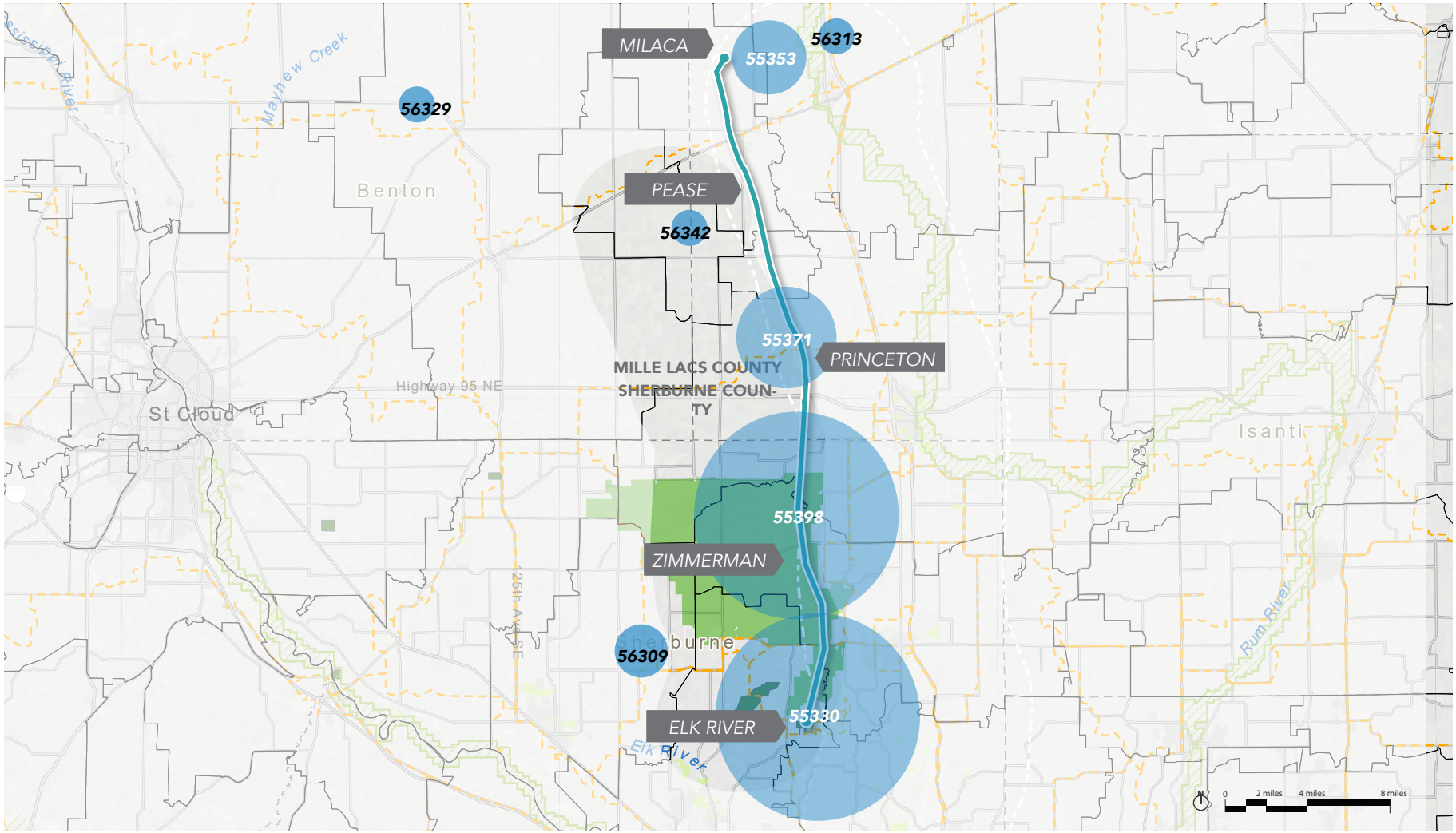




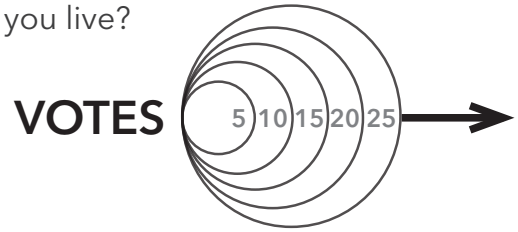
What We Have Heard

FIGURE 5: COMMUNITY FEEDBACK

Survey Demographics



Where do you live?



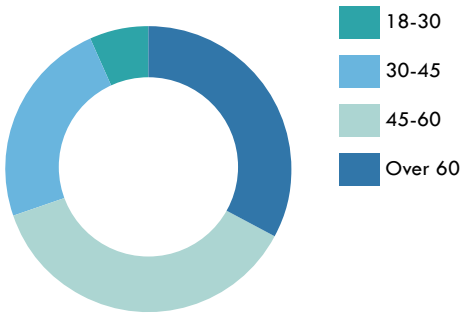
Location

3: 55309 Sherburne County
1: 55313 Wright County
32: 55330 Elk River County
13: 55371Mille Lacs County
31: 55398 Sherburne County
1: 55414 Hennepin County
1: 56329 Benton County
1: 56342 Mille Lacs County
6: 56353 Mille Lacs County

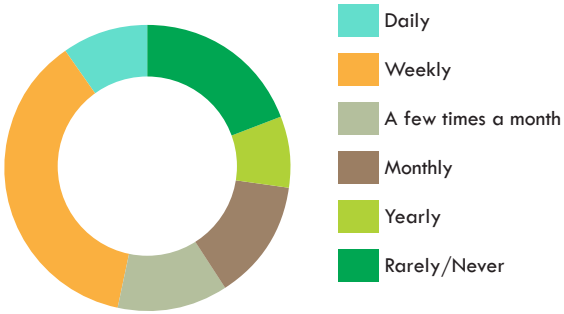
Online Survey

What is your gender?

What is your age?

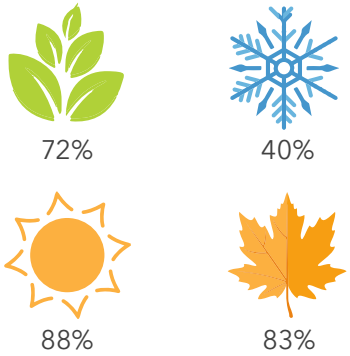


How often do you use the trail?

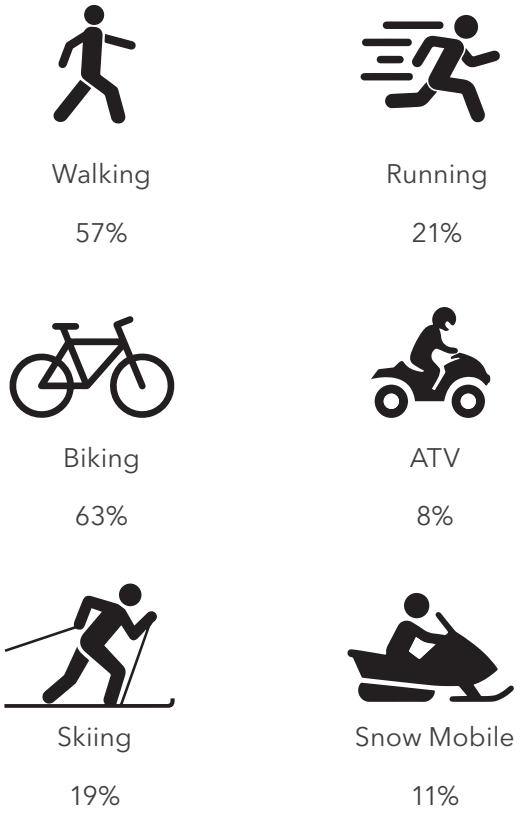


How do you get to the trail?

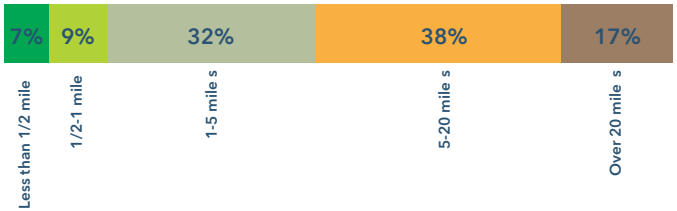
During which seasons do you use the trail?



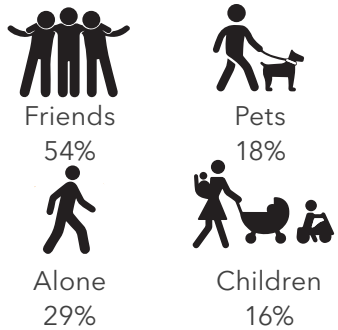
How do you use the trail today?



How do you go when using the trail?



Do you use the trail with others?



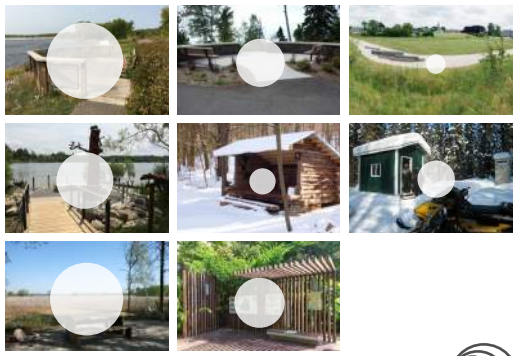
How important is this principle to you? n=63

most important → least important

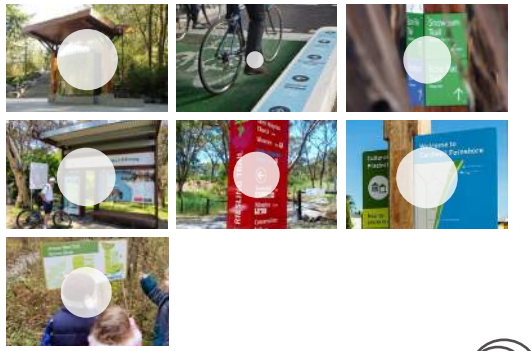
- Embrace Inclusivity, welcoming trail
- Build responsibility for nature
- Elevate safety: car, bike, and pedestrian
- Establish regional significance
- Bridge urban and rural settings
- Cultivate wellbeing
- Encourage tourism
- Celebrate place
- Orientation towards the future

Precedent Voting

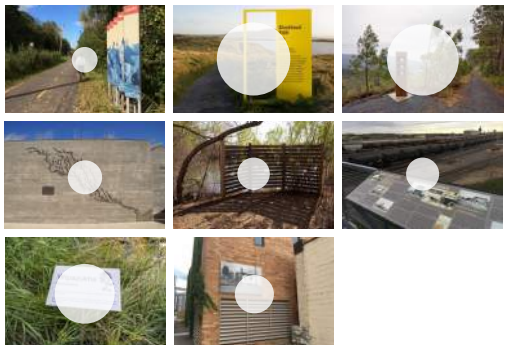
Waysides and Picnic Nodes



Wayfinding

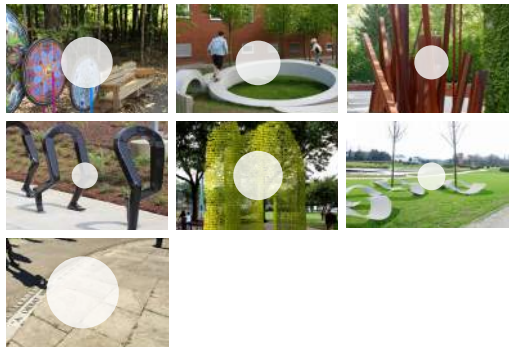


Interpretation Themes



Trailheads

Public Art

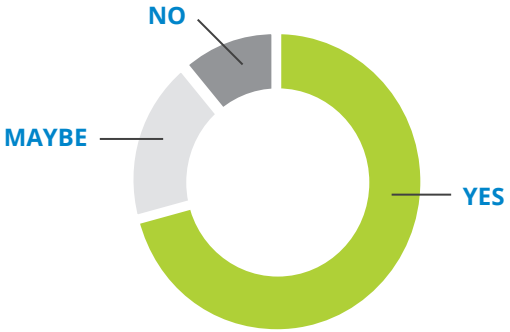


Trail Prototypes

Type 1
Railroad Alignment (100')

~35 engaged

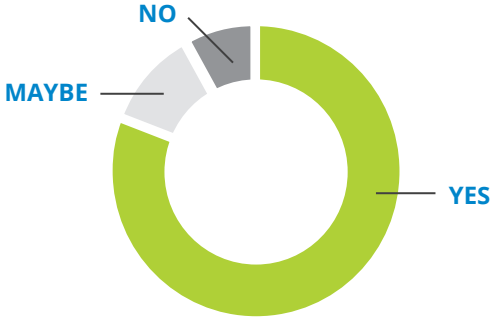
FIGURE 20: PROPOSED CONDITION



Type 2
Railroad Alignment (50')

~37 engaged

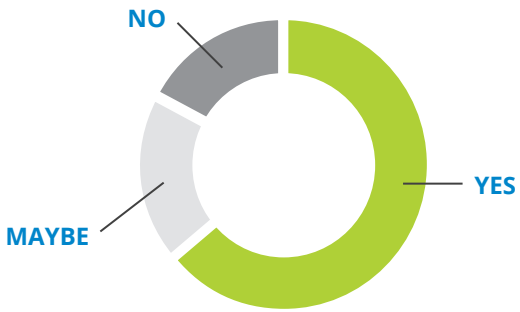
FIGURE 20: PROPOSED CONDITION



Type 3
HWY 45 Alignment

~41 engaged

FIGURE 20: PROPOSED CONDITION



SURVEY

FEEDBACK

"I like the options in the trees and not along the roads unless we have to"

"I prefer the paved trail ways so it can be used for biking."

"I like the idea of preserving as much natural tree growth as possible"

"The vegetation screening would be great if it provides coverage year round"

"Like adding more trees- privacy for homeowners and for people on the trails"

"In narrower right of way, having vegetation on both sides of path is preferable"

"Would prefer more separation from the roadway"

"Prefer larger buffer or larger foliage, for trail user and driver safety and sound comfort"

"Buffer is needed to create some space from high speed traffic"

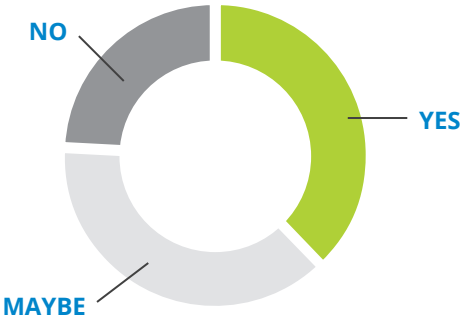
Trail Prototypes

Type 4

Protected Bike Lane

~34 engaged

FIGURE 20: PROPOSED CONDITION



SURVEY

FEEDBACK

"Prefer not attached to the road for family safety"

"The more room and visible markings between road and trail the better"

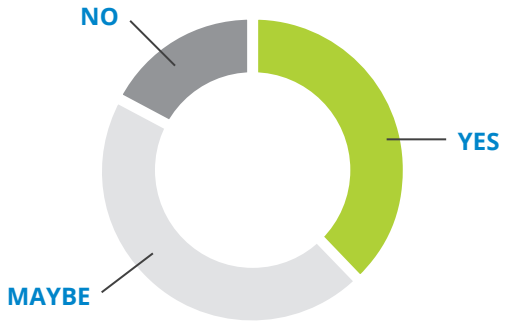
"More separation from vehicular traffic would be desired"

Type 5

On Street Bike Lane

~29 engaged

FIGURE 20: PROPOSED CONDITION



"This would be a tough section to trust with current biking culture in this area"

"Uncomfortable riding/using trail sections like this with kids and would likely divert around"

"This is far better than our current conditions"

Trail Prototypes

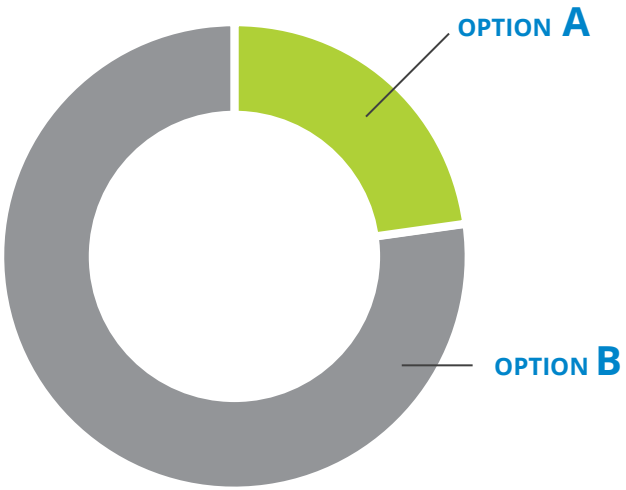
Type 6: Option A

Bike Path with Expanded Wetlnad Buffer

~69 engaged

FIGURE 20: PROPOSED CONDITION

SURVEY



Type 6: Option B

Bike Path with Parallel ATV Trail

~69 engaged

FIGURE 20: PROPOSED CONDITION

Option B is the Prefered Option

Bituminous Bike Path with Parallel Crushed Aggregate ATV Trail, Smaller HWY Buffer

Over 75% of respondents prefer this option

Trailheads

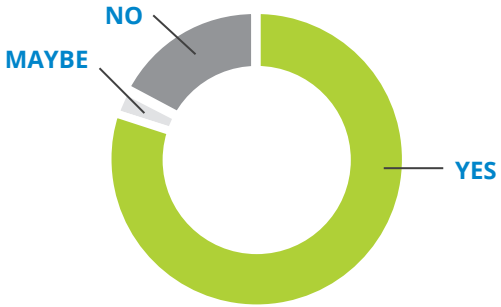
Trailhead 1: Zimmerman

Shade Structures, Trail Kiosk, Bike Parking, Drinking Fountain, Porta Potty with screen, Electrical Vehicle Charging Stations and Stormwater Areas.

~35 engaged

FIGURE 20: PROPOSED CONDITION

SURVEY



FEEDBACK

"This looks to be a great size and amount of amenities to put in place"

"Well conceived and very useful link to the Zimmerman Park"

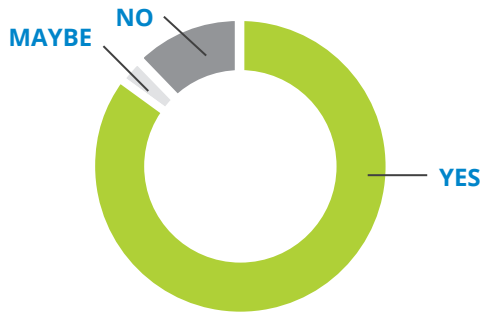
"Love the options of trail heads with bathrooms"

Trailhead 2: North Princeton

Warming Hut and Restrooms, Fire Pits, Electric Bike Charging Stations, Electrical Vehicle Charging Stations, Fencing, Trail Kiosk, and Trailer Parking

~35 engaged

FIGURE 20: PROPOSED CONDITION



"The trailer parking is a must here and I love the warming hut component"

"Could be very beneficial to Long Siding"

"The trailer parking is a must here and I love the warming hut component"

Trailheads

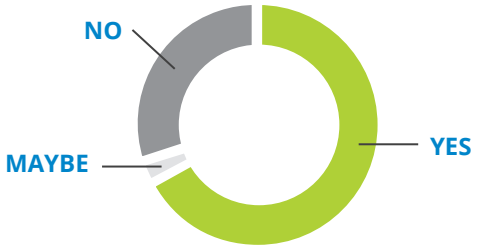
Trailhead 3: Milaca

Shade Structure, Trail Kiosk, Fire Pit, Porta Potty with Screen, Electric Vehicle Charging Stations, Wayfinding Signage, and Stormwater Area

~36 engaged

FIGURE 20: PROPOSED CONDITION

SURVEY



FEEDBACK

"Love the trail, but this trailhead design gives me pause. I would lament adding that much pavement in Rec Park"

"The proposal looks like a nice ending point to the trail"

"Very exciting to see how this will tie into the mountain bike trails, and will serve as an excellent hub for our park"

Trailhead 4: South Princeton

Shaded Picnic Area, Bike Parking, Trail Kiosk, Porta Potty with Screen, Drinking Fountain, Electric Vehicle Charging, Vegetated Buffer, Stormwater Area, Pedestrian Crossing

~No data was gathered due to ongoing agency coordination

FIGURE 20: PROPOSED CONDITION

Areas of Conflict

Using the information gathered from the listening sessions, community events, completion of the survey and interactive mapping, the most common feedback was grouped into three categories:

FIGURE 7: IDENTIFIED CONCERN CATEGORIES

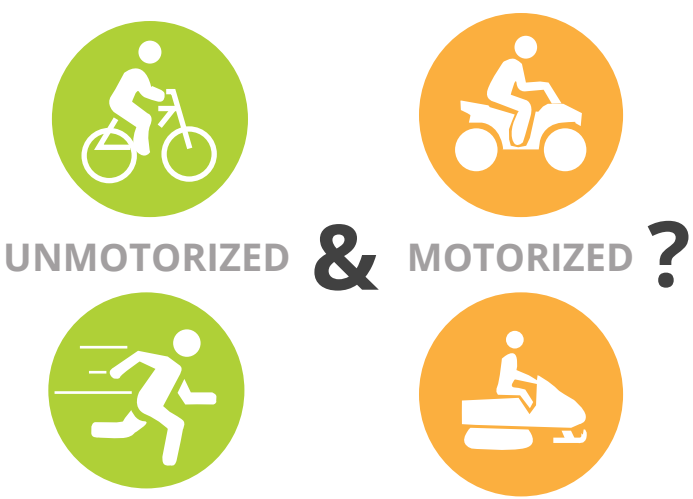
1. TRAIL DEVELOPMENT **WITHIN EXISTING PRIVATE PROPERTY,**
2. TRAIL DEVELOPMENT **ADJACENT TO PRIVATE PROPERTY,**
3. **MOTORIZED USE** WITHIN THE TRAIL CORRIDOR

There are currently 13 gaps in public ownership along the historic rail alignment. Most of these gaps occur between Princeton and Zimmerman. Some of the property owners have built structures on or near the rail bed that creates significant barriers to trail development. The public agencies implementing the trail made a commitment that eminent domain would not be used, and the long-term vision is to acquire these properties as they come up for sale.

There were also concerns from residences that own property adjacent to the rail corridor. Property owners were concerned with impacts due to trail construction, such as vegetation removal and opening views towards their homes.

There were also safety concerns with having motorized use along residential neighborhoods, particularly in the stretch south of Princeton. During the first round of public engagement, we heard an overwhelming opposition to motorized use within the corridor. As we began to reach out to snowmobile and ATV clubs we saw a shift in preference for accommodating ATV use within the north half of the trail. The existing trail corridor between Princeton and Milaca is an MN DNR grant in aid snowmobile trail. The route is an important connection for snowmobilers, providing a link between regional trails and destinations. The clubs also have a vested interest in the trail, having made infrastructure improvements for drainage.

FIGURE 8: OPNERSHIP GAPS



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04 MASTER PLAN

Overview

This chapter contains trail alignment plans and concepts that have been vetted through extensive community engagement. The plan is the result of collaborations between partnership committee members, stakeholder groups, community members, and design professionals. This is an ambitious plan that will require long-term commitment from agency staff as well as continued advocacy from community members. The master plan chapter is broken down into the following sections:

- Segment Plans
- Trail Development Typologies
- Trailhead Concepts
- Ecological /Natural Resources Plan

TRAIL CONTEXT

Legend

- Existing Trail
- Proposed Trail
- Local Bike Trail
- Existing Parks
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail

0 2 miles 4 miles 8 miles

N

Trail Segement Plans

OVERVIEW

For purposes of this plan, the Great Northern Trail corridor has been divided into seven planning segments, listed below, for ease of describing and discussing the unique resources and features along that portion of the trail. The seven planning segments are defined as the following:

Segment 1: Zimmerman to 273rd Ave

Segment 2: 273rd Ave to 293rd Ave (County Road 9)

Segment 3: 293rd Ave (County Road 9) to South Princeton

Segment 4: City of Princeton

Segment 5: North Princeton to 70th St

Segment 6: 70th St to City of Pease

Segment 7: City of Pease to City of Milaca

Multiple route alternates for each segment were vetted through community engagement. As many as five different alignments were studied for each segment and a summary of these can be found in the appendix. An overview of the 7 planning segments is illustrated on the next page, with corresponding segment maps following each detailed segment summary. Generally, the "A" segments are the preferred routes that follow the existing rail bed, and "B" segments are options that utilize publicly owned right of way.

There are currently 13 gaps in public ownership along the historic rail alignment. Some of the property owners have built structures on or near the rail bed that create significant barriers to trail development. Private property ownership and natural resource management will continue to evolve after the master plan is completed and implementing agencies should continue to improve the alignment as issues arise or change over time. Opportunities to reduce potential conflicts with landowners should be taken into consideration and pursued.

A PHASED APPROACH

The development of this trail has a history that extends back to the early 2000s. Several factors contributed to the delay in trail development, including private property owners unwilling to sell easements for the trail. Most of the gaps in public ownership occur in the southern half of the alignment, between Zimmerman and Princeton, or segments 1-3. As stated earlier in the plan, the public agencies implementing the trail made a commitment that eminent domain would not be used, and the long-term vision is to acquire these properties as they come onto the market. The master plan is recommending a phased approach that connects the trail corridor through existing right away along Hwy 45 in the short term, with a long vision of developing the trail along the historic rail corridor.

ACCESSIBILITY

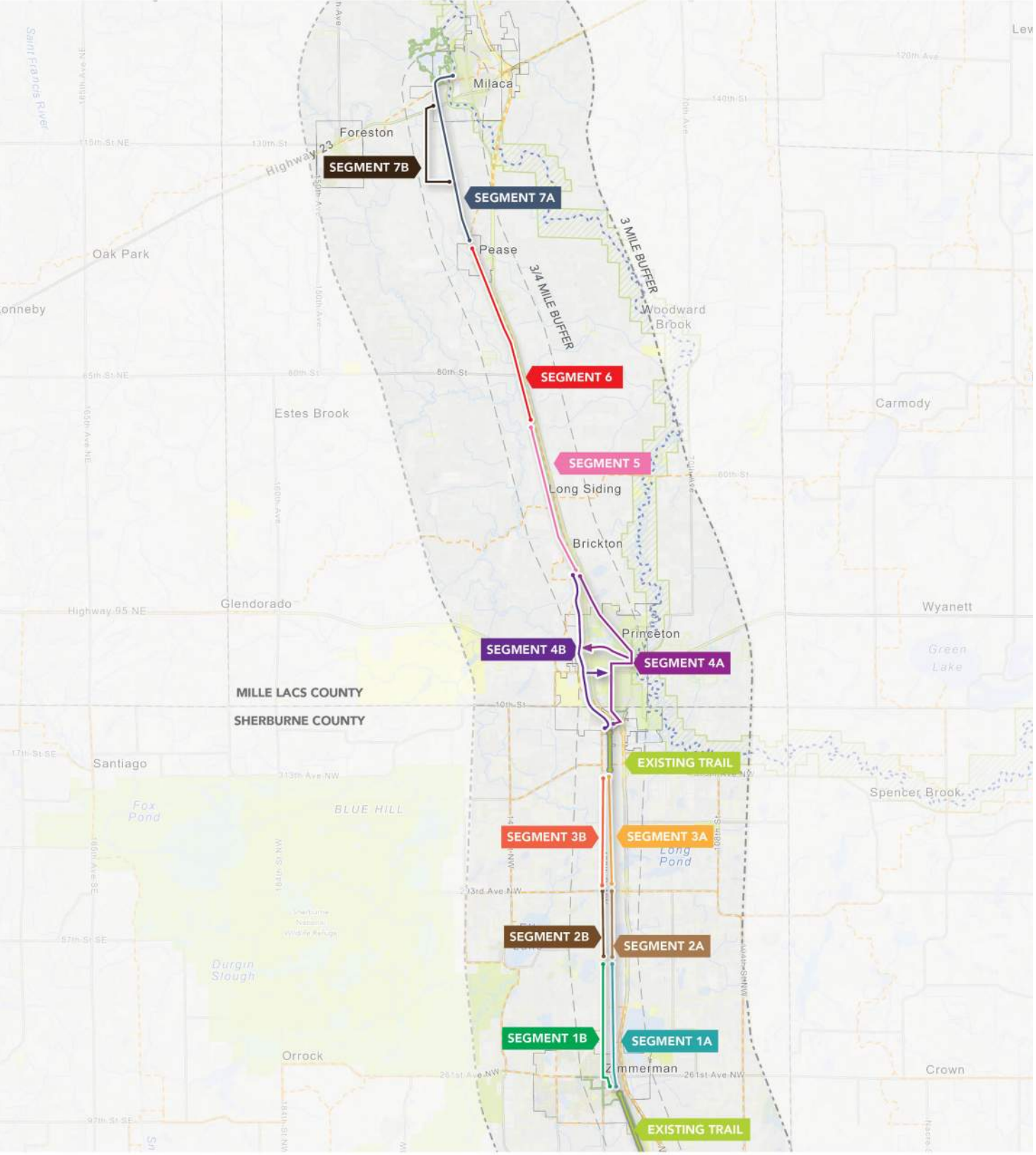
All components of the trail, including the trailheads, will meet current accessibility standards issued under the Americans with Disabilities Act (ADA). The corridor is relatively flat and there are no significant grade changes that will require slope flattening or ramping.

IMPROVED TRAIL CROSSINGS

Rapid flashing beacons are proposed at all major roaway crossing, as shown in the segement plans. A grade-separated crossing should be studied at State Highway 23; and at a minimum rapid flashing beacons should be installed.

PRECEDENT PHOTO: RAPID FLASHING BECONS

TRAIL SEGMENT KEY PLAN



Legend

- Public land or Right of Way
- Existing Parks
- Local Bike Trail
- Existing GNT Trail
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail

0 1 mile 2 miles 4 miles

N

Segment 1: Zimmerman

OVERVIEW

Segment 1 starts at Lions Park in Zimmerman, the terminus of the existing Great Northern Trail. Bike trails are planned to connect Lions Park to a larger trail network in Zimmerman, connecting the Great Northern Trail to nearby schools and neighborhoods. An overpass is being designed at Fremont Ave and Highway 169, providing a grade separated pedestrian connection from Zimmerman to Grams regional park and neighborhoods around Fremont Lake. This segment will provide access to historic downtown Zimmerman and amenities for trail users. A rapid flashing beacon crossing is proposed at 273rd Ave.

TRAILHEAD

A trailhead is planned in this location, concept designs for the trailhead can be found later in this chapter. The trailhead was sized to provide additional parking for future park and ride users.

SEGEMENT 1A

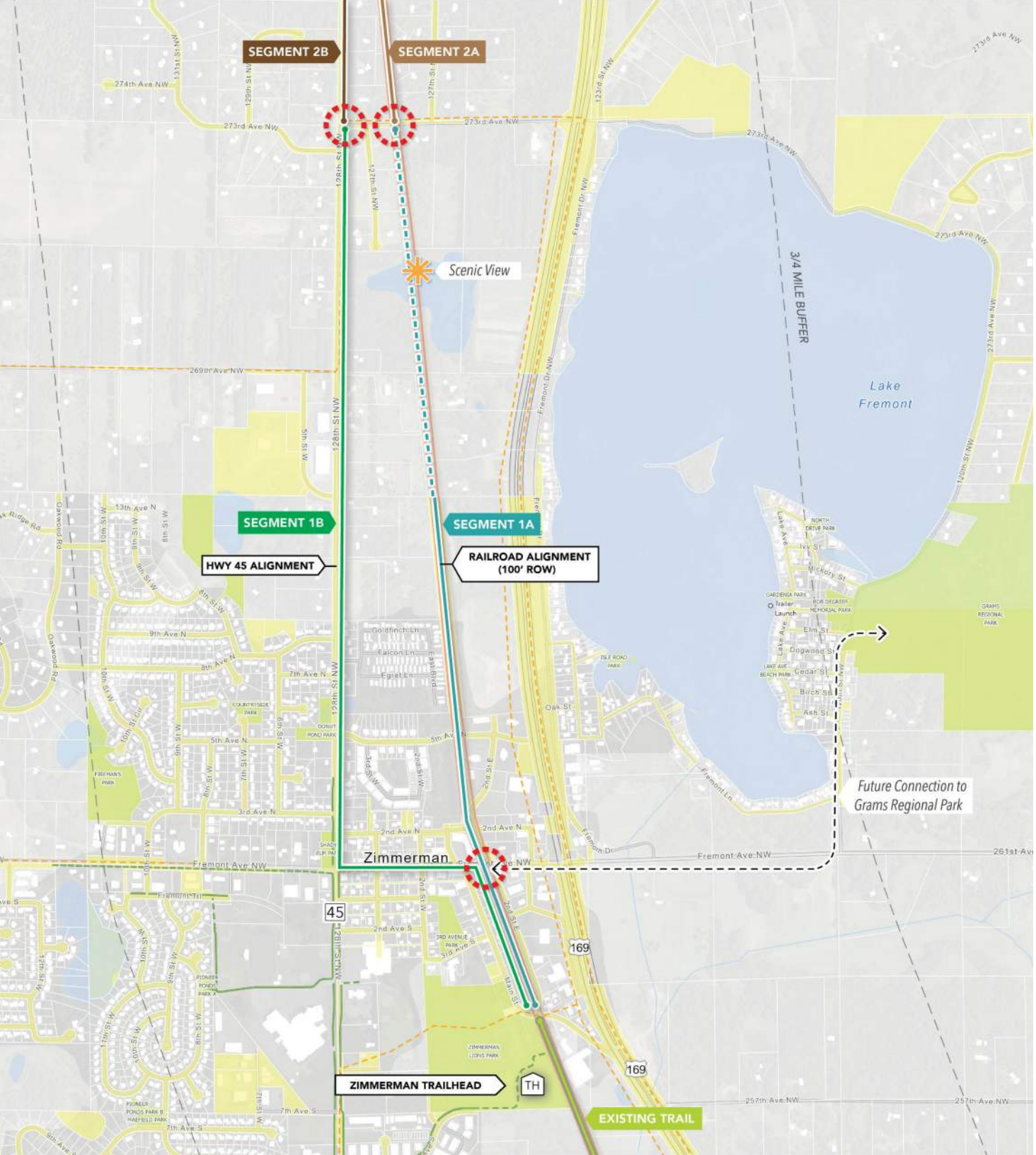
This route proposes to follow the former Great Northern rail grade north from Main Street into the downtown area using the 2nd Street East right of way. A crossing of County State Aid Highway (CSAH) 4 or Fremont Avenue is required at the 2nd Street East intersection to access city-owned former rail grade and continue north through the city. The route proposes to utilize existing Great Northern rail grade through a privately owned oak woodlot and wetland complex, crossing over the wetland on an existing railroad bridge and continuing northward on the former rail grade. This option would require easement purchase of private property from willing sellers.

HISTORIC PHOTO: ZIMMERMAN DEPOT, 1906

SEGEMENT 1B

This route proposes to follow the former Great Northern rail grade north from Main Street into the downtown area using 2nd Street East right of way. A crossing of CSAH 4 or Fremont Avenue is required at the 2nd Street East intersection and following Fremont Avenue to CH 45, then follows CH 45 northward along trail to be constructed along the east side of CH 45 right of way. This segment has a ¾ mile gap in public ownership that crosses five privately owned parcels. The largest parcel has an old RR crossing with dramatic sweeping views of a prairie clearing. The surrounding forest provides a natural setting with mature oaks and a high quality trail experience. Two property owners expressed concern with this trail alignment due to the proximity of their horse pasture and septic field.

HISTORIC PHOTO: FREMONT STREET



SEGMENT 1

Legend

- Public land or Right of Way
- Existing Parks
- Local Bike Trail (existing)
- Local Bike Trail (future)
- Existing GNT Trail
- GNT RR Corridor
- Route Alternate on Public Land
- Route Alternate on Private Land
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail
- Boat Launch
- Proposed Trailhead
- Existing Campsite
- High Volume Crossing
- Point of Interest

0 1/4 mile 1/2 mile

N

Segment 2: North Zimmerman

OVERVIEW

Segment 2 starts at 273rd Ave and extends to 293rd Ave. There are two route alternates for this segment, one that follows the former Great Northern railroad bed, and the other aligned on the east side of Highway 45. The railroad alignment angles toward Highway 45, and runs parallel to the road for the northern half of the segment, which provides an option to build sections in public ownership closest to the highway to phase in properties as they are acquired. A rapid flashing beacon crossing is proposed at 293rd Ave.

SEGEMENT 2A

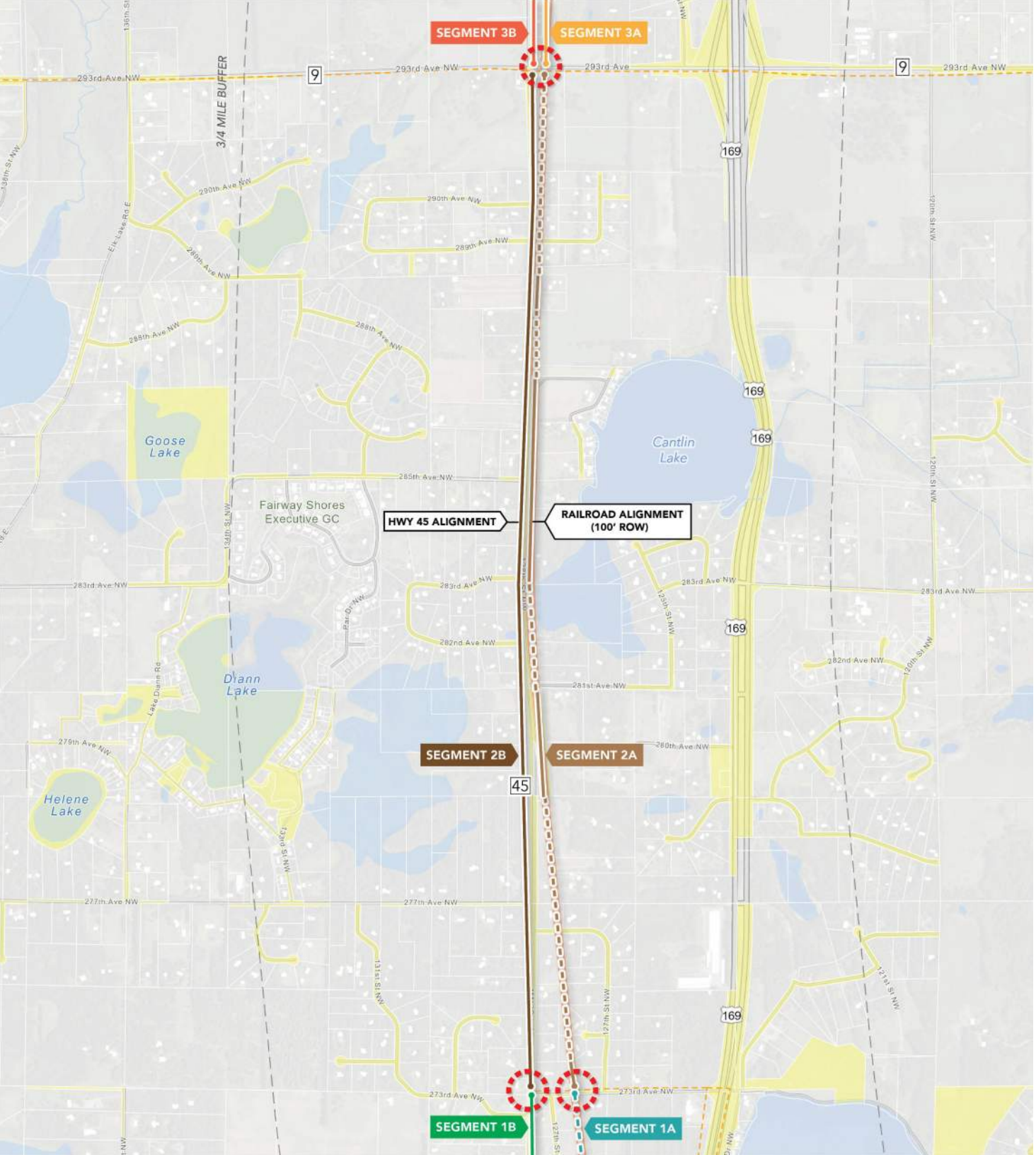
This route proposes to follow the former Great Northern rail grade north to 293rd Ave, or County Road 9. This segment has four gaps in public ownership and crosses 16 parcels of privately owned land. This option would require easement purchase of private property from willing sellers. A key issue for residents in this segment is trail safety and concern about motorized use on the trail.

SITE PHOTO: SEGMENT 2A NEAR HIGHWAY 45

SEGEMENT 2B

This route proposes to construct the trail along the east side of CH 45 right of way. The trail would be constructed with a vegetated buffer between the road and trail; see the trail typology section of this chapter for more information.

SITE PHOTO: SEGMENT 2B AT HIGHWAY 45



SEGMENT 2

Legend

- Public land or Right of Way
- Existing Parks
- Local Bike Trail (existing)
- Local Bike Trail (future)
- Existing GNT Trail
- GNT RR Corridor
- Route Alternate on Public Land
- Route Alternate on Private Land
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail
- Boat Launch
- Proposed Trailhead
- Existing Campsite
- High Volume Crossing
- Point of Interest

0 1/4 mile 1/2 mile

N

Segment 3: South Princeton

OVERVIEW

Segment 3 starts at 293rd Ave and extends to Rum River Drive in Princeton. This segment has a 1-mile section of the Great Northern Trail already constructed between Rum River Drive and 313th Ave. Route alternate 3c takes advantage of a constructed trail between 293rd Ave and 299th Ave. This section of trail begins near the Highway 169 southbound offramp and appears to have been built as part of the subdivision. Key issues for residents in this segment are the proximity of route alternates to their homes and any vegetation removal needed for trail construction.

SEGEMENT 3A

This route proposes to follow the former Great Northern rail grade north to 313th Ave where it meets a constructed portion of the Great Northern Trail and continues to South Zimmerman. This segment has three gaps in public ownership that cross a total of six parcels of privately owned land. This option would require easement purchase of private property from willing sellers. Some of these parcels have structures built on the historic railroad grade, such as a horse barn and a garage.

SEGEMENT 3B

This route proposes to construct the trail along the east side of CH 45 right of way. The trail would be constructed with a vegetated buffer between the road and trail; see the trail typology section of this chapter for more information.

SITE PHOTO: SEGMENT 3A NEAR 313TH AVE

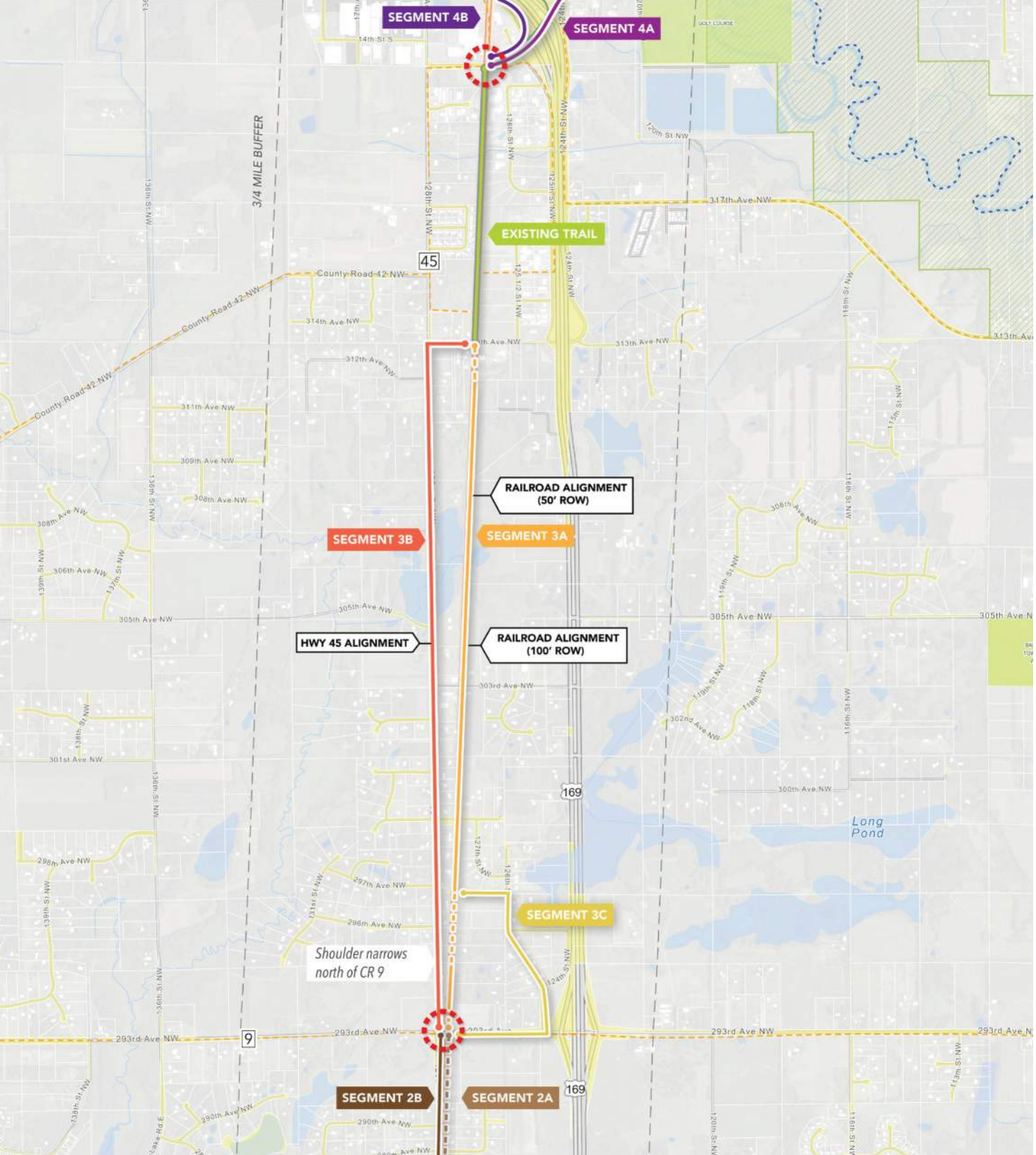
SITE PHOTO: SEGMENT 3C NEAR 126TH ST NW

SEGEMENT 3C

This option would construct a grade-separated trail along the north side of 293rd Avenue to 125th Street, where it would continue north on an existing trail through a residential neighborhood on the east side of 125th Street for approximately ¾ mile to the existing trail and then west back to original railroad grade on the publicly owned trail corridor.

SITE PHOTO: SEGMENT 3B AT HIGHWAY 45

SITE PHOTO: EXISTING TRAIL AT 303RD



SEGMENT 3

Legend

- Public land or Right of Way
- Existing Parks
- Local Bike Trail (existing)
- Local Bike Trail (future)
- Existing GNT Trail
- GNT RR Corridor
- Route Alternate on Public Land
- Route Alternate on Private Land
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail
- Boat Launch
- Proposed Trailhead
- Existing Campsite
- High Volume Crossing
- Point of Interest

0 1/4 mile 1/2 mile 1 mile

N

Segment 4: Princeton

OVERVIEW

Segment 4 starts at Rum River Drive and extends to 40th St north of Princeton. This segment is primarily urban and will take advantage of existing trails within Princeton, proposed on-street striped bike lanes, and proposed protected bike lanes within the public right of way. The city of Princeton provides dining and lodging amenities for trail users in downtown, as well as convenient access to the Great Northern Depot Museum. The Great Northern Depot is on the National Register of Historic Places and is the home of the Mille Lacs County Historical Society. The museum has regular guided tours that will connect trail users to the important history of the railroad, and how it organized and shaped the landscape as we know it today.

TRAILHEAD

A trailhead is planned on the south side of Rum River Drive on the west side of Highway 169. Concept designs were developed to address some of these issues and can be found later in this chapter.

BLUE TRAIL LOOP

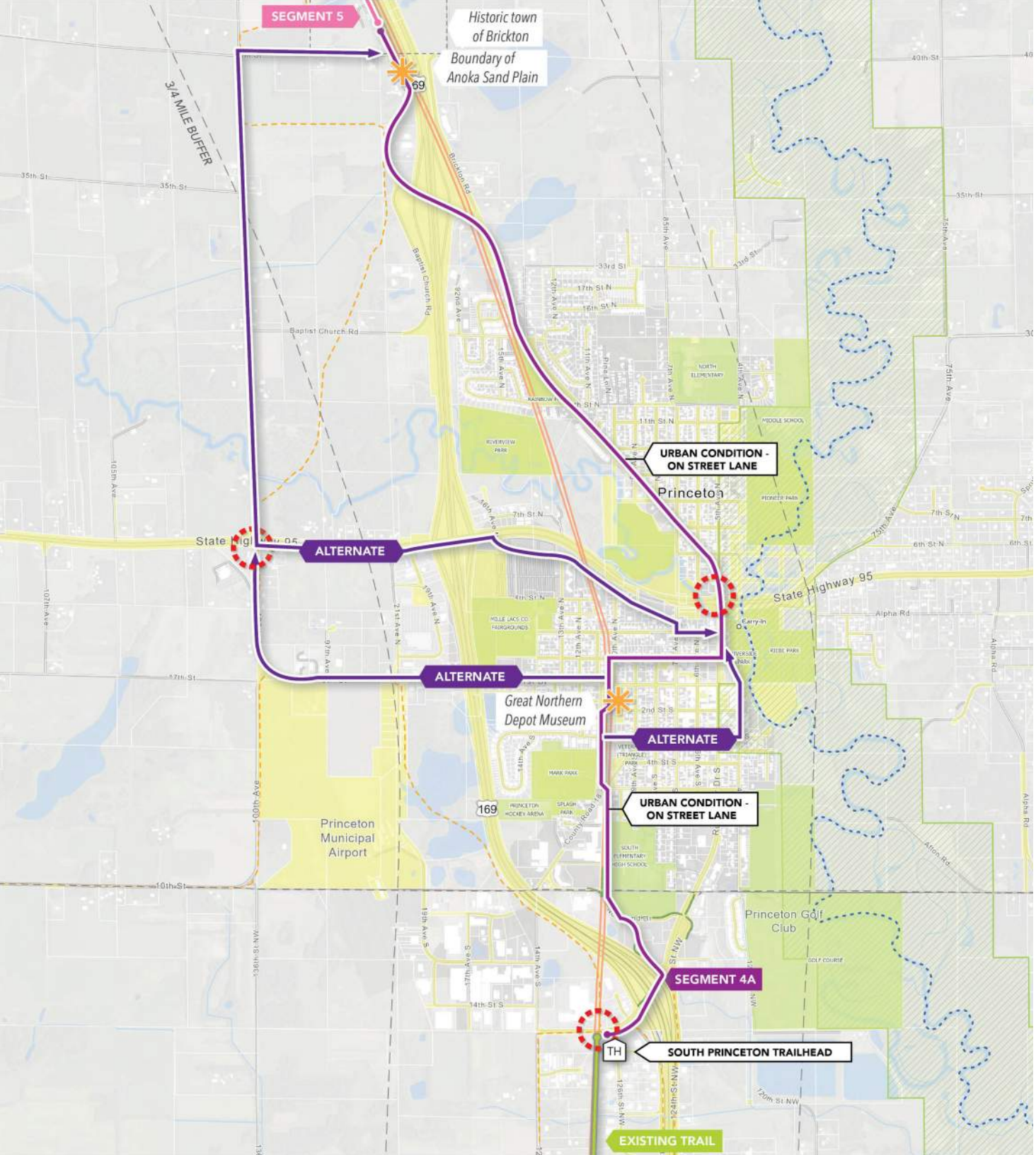
There is also an important connection to the Rum River at Riverside Park. The boat ramp at Riverside Park creates an opportunity for a blue trail loop utilizing the proposed Great Northern Trail via the boat launch in Milaca or east of Long Siding. For example, a trail user could drop their bikes off at Riverside Park, drive upstream to the launch east of Long Siding, or for a two-day float up to Milaca, and then float down to their bikes, where they could complete their loop on the Great Northern Trail. The Rum River is listed as a wild and scenic river and provides a truly natural scenic experience with two camping options between Princeton and Milaca.

ROUTE ALTERNATES

The plan also explored several alternative routes shown in dark purple that could be built in addition to the primary route. The alternates provide connections to additional amenities, such as restaurants in downtown Princeton, Walmart, and Coborn's grocery store.

SEGEMENT 4

This segment exits the existing paved trail on original railroad grade and follows along the south side of Rum River Drive on the existing trail to cross under the overpass and continue on the existing trail that follows along the east side of Northland Blvd, just past Princeton High School Track where it would then turn north to connect along 11th Avenue S, near Mark Park and continue north to 1st Street. This option would bring trail users to the Princeton Depot and Mille Lacs County History Museum before continuing north to 2nd Street North and heading east along 2nd Street to South Rum River Drive to then head north along Rum River Drive, through the roundabout at Hwy 95 to continue along North Rum River Drive. This option continues along North Rum River Drive under US Hwy 169 to follow along the east side of Baptist Church Road to connect back to the original railroad grade along the west side of US Hwy 169. We do not anticipate that this option would require easement purchase of private property from willing sellers.



SEGMENT 4

Legend

- Public land or Right of Way
- Existing Parks
- Local Bike Trail (existing)
- Local Bike Trail (future)
- Existing GNT Trail
- GNT RR Corridor
- Route Alternate on Public Land
- Route Alternate on Private Land
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail
- Boat Launch
- Proposed Trailhead
- Existing Campsite
- High Volume Crossing
- Point of Interest

0 1/4 mile 1/2 mile 1 mile

N

Segment 5: North Princeton

OVERVIEW

Segment 5 follows the former Great Northern rail grade north along the west side of highway 169, starting at 40th St and continuing north through the town of Long Siding to 70th St. There is an opportunity in Long Siding to connect a spur trail to the Rum River to facilitate a Blue Trail loop. Segments 5 and 6 both have a 30' wide vegetated buffer on either side of the trail that shields your view of the highway and provides a strong buffer from road noise. The mature trees provide deep shade in the summer and a pleasant "tunnel effect" along the trail. This segment is entirely in public ownership and does not require route alternates. A rapid flashing beacon crossing is proposed in Long Siding.

TRAILHEAD

The town of Long Siding was identified as a trailhead location due to the dining and lodging amenities nearby. Restaurants in Long Siding cater to ATV riders and snowmobilers by providing ample parking and accommodating larger groups; this makes it a natural destination motorized activities. A trailhead concept was developed that would accommodate both motorized and non-motorized user groups; reference the trailhead concept design section of this chapter for more information.

INTERPRETATION

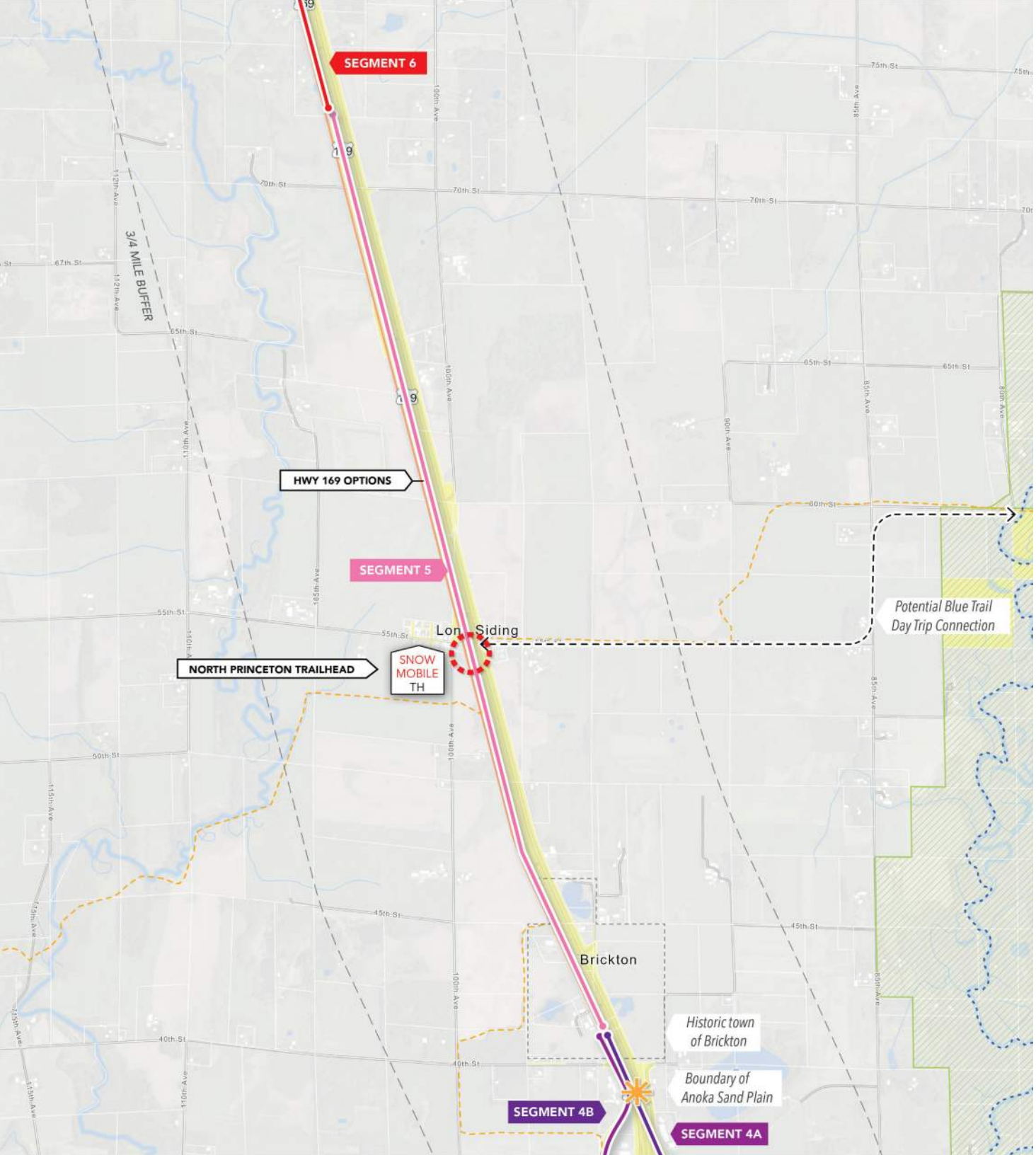
This segment contains the boundary of the Anoka Sandplain and an opportunity to interpret the geology of the area. There is also an opportunity to interpret the historic town of Brickton, which once contained one of the largest brick suppliers in the state, making more than 20 million bricks per year. The town had its own school, general store, and post office, but has since been demolished with only a small foundation remaining. There is a MnDOT historic interpretive plaque about Brickton located on the east side of Highway 169. However, Highway 169 presents a significant barrier to bikes and pedestrians, so the master plan includes an interpretive node which will be accessible to the trail.

MOTORIZED USE

This segment of the trail is currently a DNR grant in aid snowmobile route and is also used by ATV's in the summer. There is a desire to expand ATV/UTV use in the area. The master plan explores a trail typology that incorporates a dedicated motorized use trail, which would remove much of the existing vegetation on the east side, as well as trigger wetland mitigation. Reference the trail typology section of this chapter for more information.

SITE PHOTO: NORTH OF LONG SIDING

SITE PHOTO: NORTH OF LONG SIDING



SEGMENT 5

Legend

- Public land or Right of Way
- Existing Parks
- Local Bike Trail (existing)
- Local Bike Trail (future)
- Existing GNT Trail
- GNT RR Corridor
- Route Alternate on Public Land
- Route Alternate on Private Land
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail
- Boat Launch
- Proposed Trailhead
- Existing Campsite
- High Volume Crossing
- Point of Interest

0 1/4 mile 1/2 mile 1 mile

N

Segment 6: City of Pease

OVERVIEW

Segment 6 follows the former Great Northern rail grade north along the west side of Highway 169, starting at 70th St and continuing to the town of Pease. This segment has one gap in public ownership that crosses one private property. Snowmobile groups have an agreement with this property owner to connect their route, and at the time of this master plan, they have expressed an openness to selling an easement to allow trail development. A potential trailhead could be located at Dick Baas Memorial Park, but was not studied further in concept design. There is an opportunity in Pease to connect a spur trail east to the Rum River to facilitate a Blue Trail loop. Segments 5 and 6 both have a 30' wide vegetated buffer on either side of the trail that shields your view of the highway and provides a strong buffer from road noise. The mature trees provide deep shade in the summer and a pleasant "tunnel effect" along the trail. A rapid flashing beacon crossing is proposed at 89th St and in the town of Pease.

MOTORIZED USE

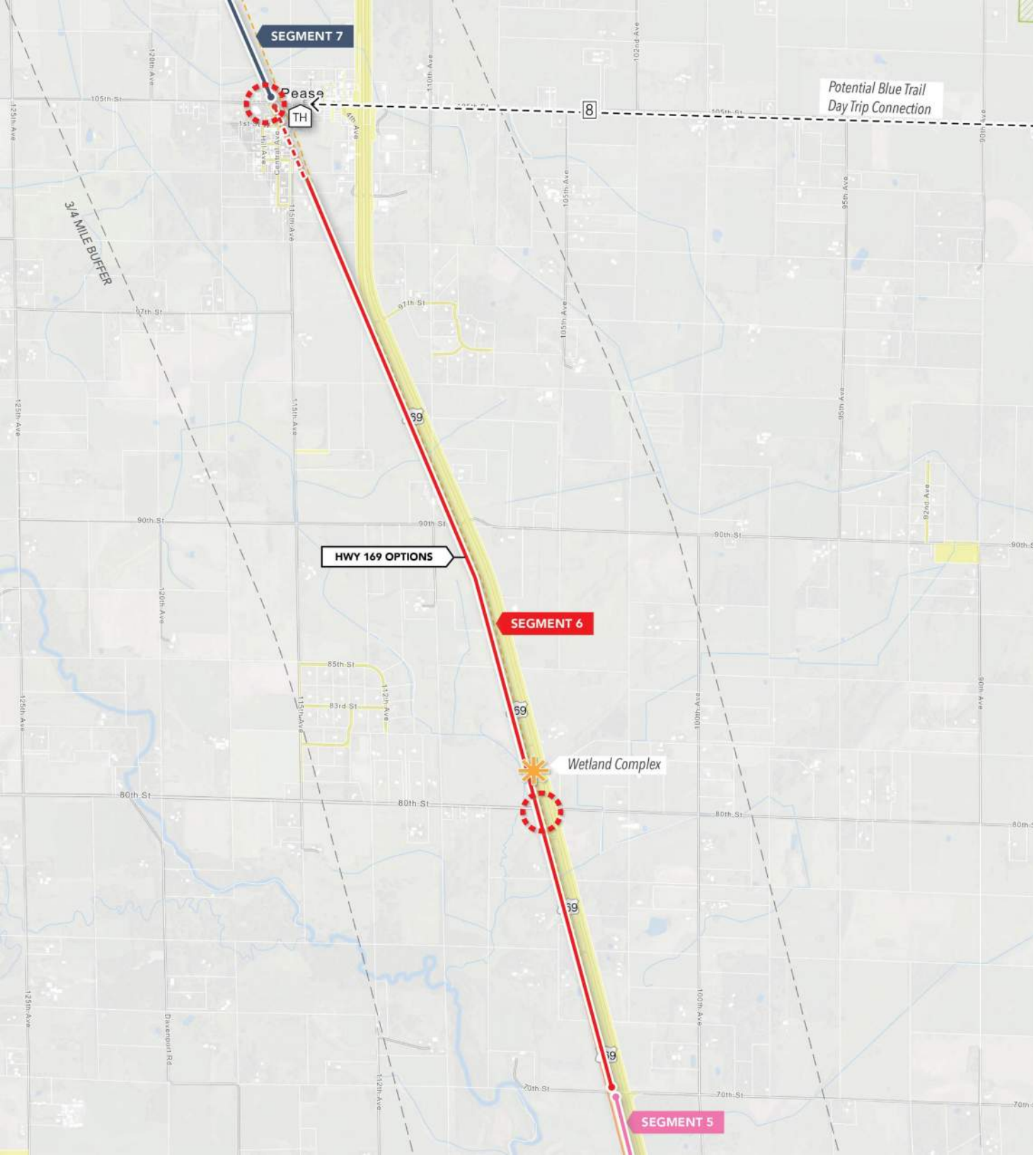
This segment of the trail is currently a DNR grant in aid snowmobile route and is also used by ATV's in the summer. There is a desire to expand ATV/UTV use in the area. The master plan explores a trail typology that incorporates a dedicated motorized use trail, which would remove much of the existing vegetation on the east side, and trigger a wetland mitigation requirement. Reference the trail typology section of this chapter for more information.

INTERPRETATION

This segment contains a large wetland complex that stems from a tributary of the Rum River. Wetlands help mitigate flooding in nearby agricultural fields and help recharge the aquifer, both sensitive issues in this area. Interpretive signage could highlight the important function of wetlands, as well as the wide variety of flora and fauna within these ecosystems.

SITE PHOTO: OWNERSHIP GAP IN PEASE

SITE PHOTO: SEGMENT 6 IN PEASE



SEGMENT 6

Legend

- Public land or Right of Way
- Existing Parks
- Local Bike Trail (existing)
- Local Bike Trail (future)
- Existing GNT Trail
- GNT RR Corridor
- Route Alternate on Public Land
- Route Alternate on Private Land
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail
- Boat Launch
- Proposed Trailhead
- Existing Campsite
- High Volume Crossing
- Point of Interest

0 1/4 mile 1/2 mile 1 mile

N

Segment 7: South Milaca

OVERVIEW

Segment 7 starts in the town of Pease and extends to Rec Park in the City of Milaca. Rec Park has a robust set of park amenities, including a splash pad, connections to mountain bike trails, a boat launch, frisbee golf, an amphitheater, and picnic shelters. The park also has regular programming, including movies in the park, and live music. An improved crossing should be studied at State Highway 23; at a minimum rapid flashing beacons should be installed, and a grade-separated crossing should be considered. This segment terminates at a new trailhead that is integrated into Rec Park.

SEGMENT 7A

This route proposes to follow the former Great Northern rail grade north to Rec Park in Milaca, which would be the terminus of the trail. This segment has two gaps in public ownership that cross a total of eight parcels of privately owned land. This option would require easement purchase of private property from willing sellers.

SEGMENT 7B

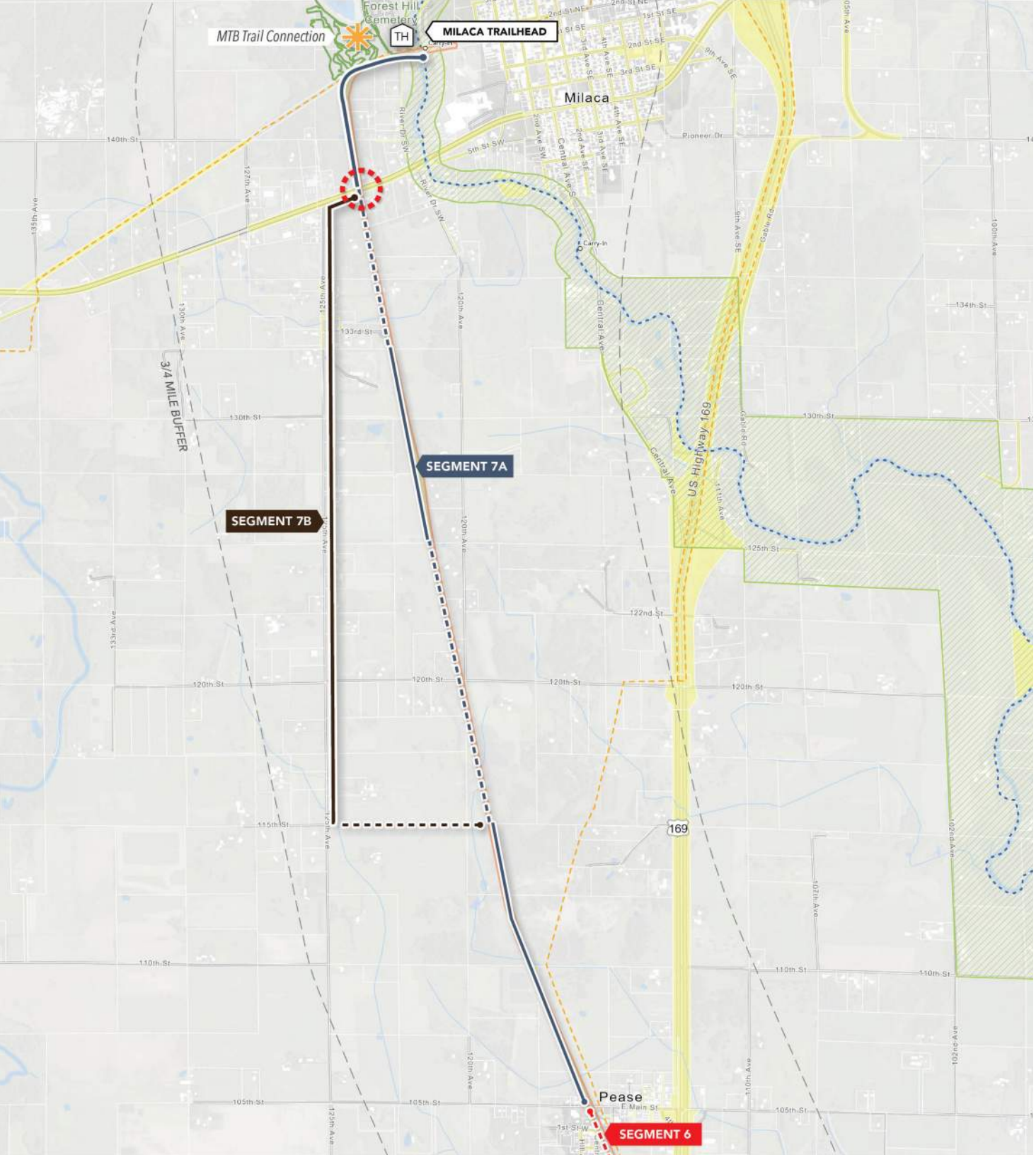
This route leaves the original railroad grades and heads west along the south boundary of a large rural property at 115th St, crosses 125th Ave and follows along the west side of 125th Ave to cross MN State Hwy 23 before heading east along the north side of MN State Hwy 23 and reconnecting to the original railroad grade that is public owned. This option would require easement purchase of private property from a willing seller.

TRAILHEAD

A trailhead is planned within Rec Park to provide trail amenities and parking facilities for trail users; concept designs for the trailhead can be found later in this chapter. This trailhead will also function as a starting point for the Rum River Blue Trail loop that ends in Princeton.

SITE PHOTO: NORTH OF PEASE

SITE PHOTO: EXISTING RR BRIDGE IN MILACA



SEGMENT 7

Legend

- Public land or Right of Way
- Existing Parks
- Local Bike Trail (existing)
- Local Bike Trail (future)
- Existing GNT Trail
- GNT RR Corridor
- Route Alternate on Public Land
- Route Alternate on Private Land
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail
- Boat Launch
- Proposed Trailhead
- Existing Campsite
- High Volume Crossing
- Point of Interest

0 1/4 mile 1/2 mile 1 mile

N

Trail Development Typologies and Trailhead Concepts

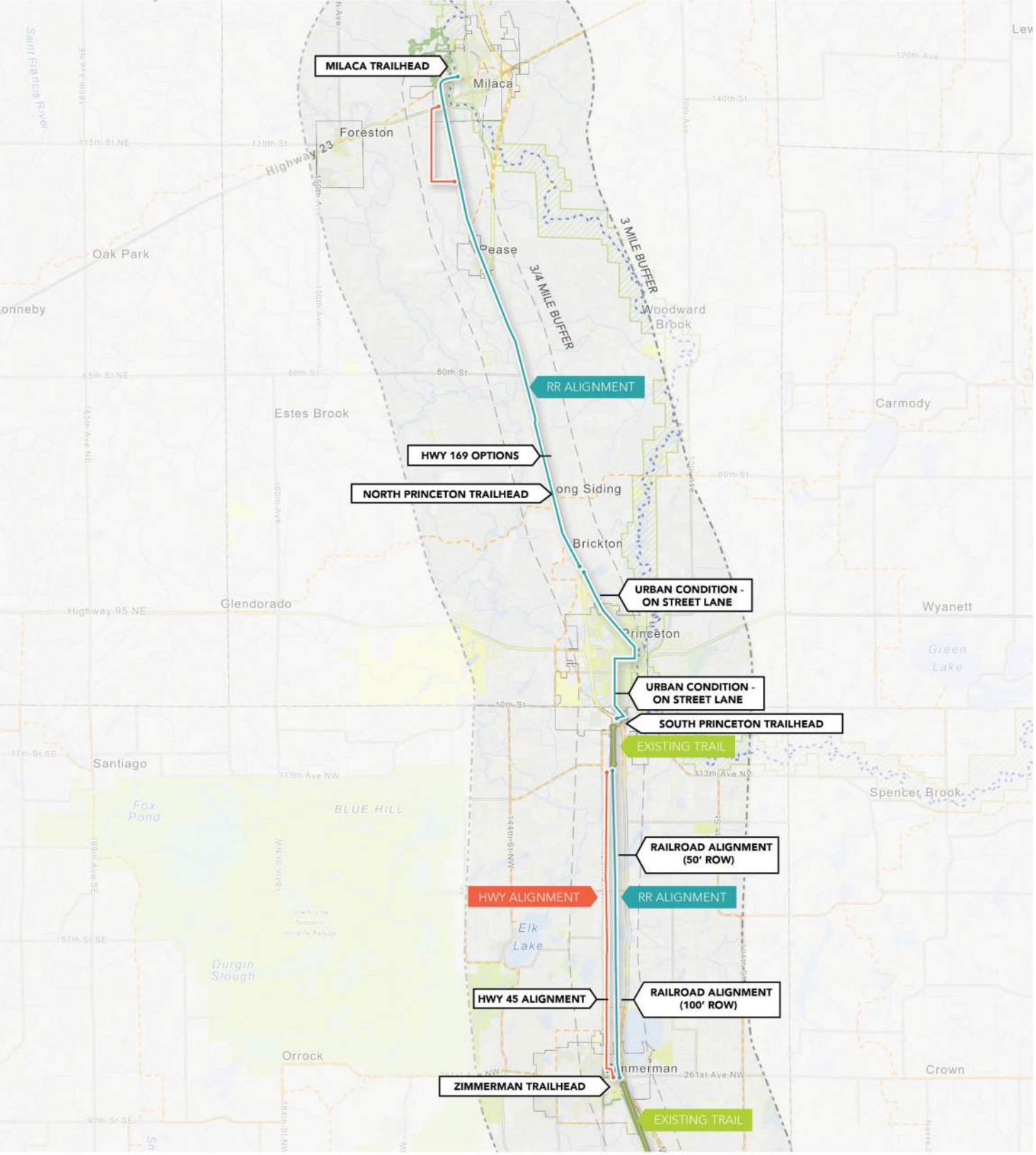
OVERVIEW

The Great Northern Trail crosses a variety of land uses and transportation systems that require a tailored approach to trail development. A set of trail typologies or prototypes were developed to address the complexity of existing conditions. These seven trail typologies illustrate a simplified version of how the trail might look after construction. More nuanced site conditions will require more detailed study during the next phase of design, such as trail intersections, the presence of wetlands, and interpretive opportunities.

TRAILHEADS

Five trailheads are proposed at roughly 5-mile intervals to provide trail users with amenities along the corridor. Amenities at each of the trailheads differ, but at a minimum include restroom facilities, bike parking, and wayfinding signage. Trailheads are located at convenient access points from adjacent neighborhoods and major roadways. The Long Siding trailhead provides amenities for motorized trail users as well as bike and pedestrians. Four of the five trailheads were advanced into concept design and can be found after the trail development typology section.

TRAIL DEVELOPMENT TYPOLOGIES KEY PLAN



Legend

- Public land or Right of Way
- Existing Parks
- Local Bike Trail
- Existing GNT Trail
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail

0 1 mile 2 miles 4 miles

N

Trail Typology: Railroad alignment (100')

OVERVIEW

This typology utilizes a 100' wide corridor, the typical condition between Zimmerman and Princeton. A priority is preserving existing vegetation for screening and buffering from adjacent properties. When there is inadequate existing vegetation for screening additional plantings may be required.

PROPOSED CONDITION

EXISTING CONDITION

Trail Typology: Railroad alignment (50')

OVERVIEW

This typology utilizes a 50' wide corridor. The railroad initially had a 100' wide corridor and in some instances, half of it has been sold into private ownership. A 50' wide corridor is still ample space to fit a 10' wide trail. All the 50' wide sections are between Zimmerman and Princeton.

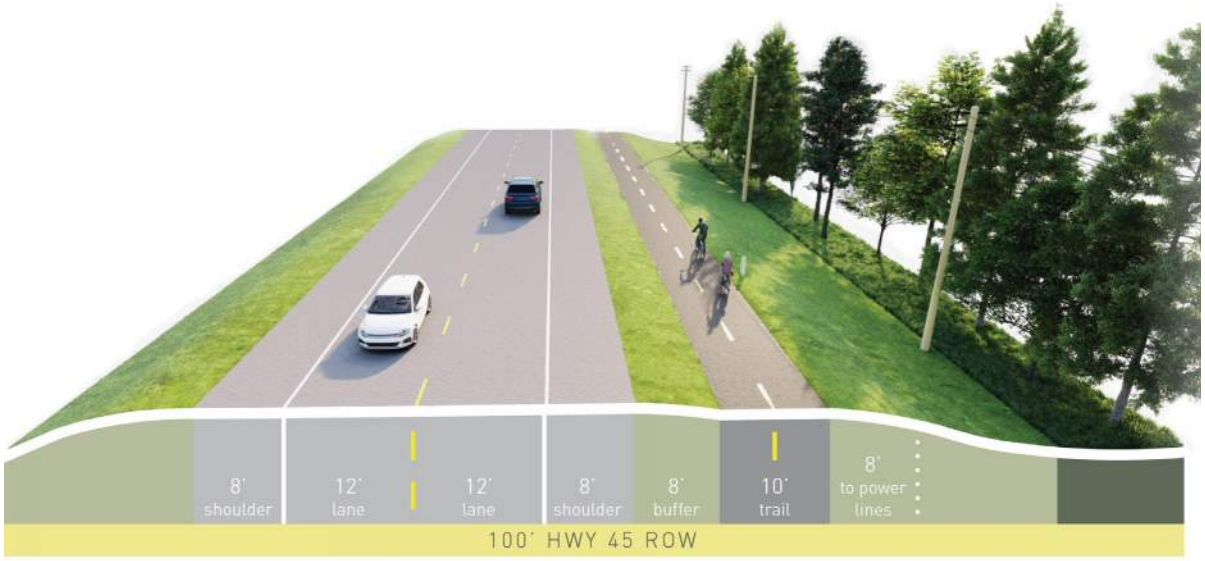
PROPOSED CONDITION

EXISTING CONDITION

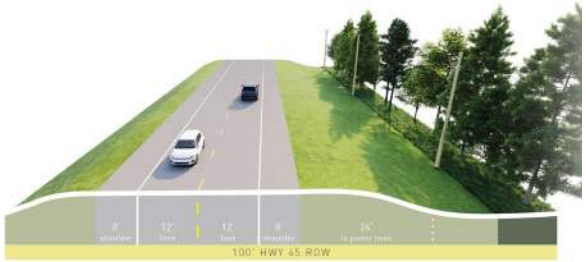
Trail Typology: Hwy 45 alignment

OVERVIEW

This typology utilizes existing public right of way along Highway 45. The goal of the plan is to maximize use of the historic railroad alignment, however, gaps in public ownership will require alignments to relocate within the public right of way. Planting buffers between the trail and roadway should be maximized when feasible.



PROPOSED CONDITION



EXISTING CONDITION

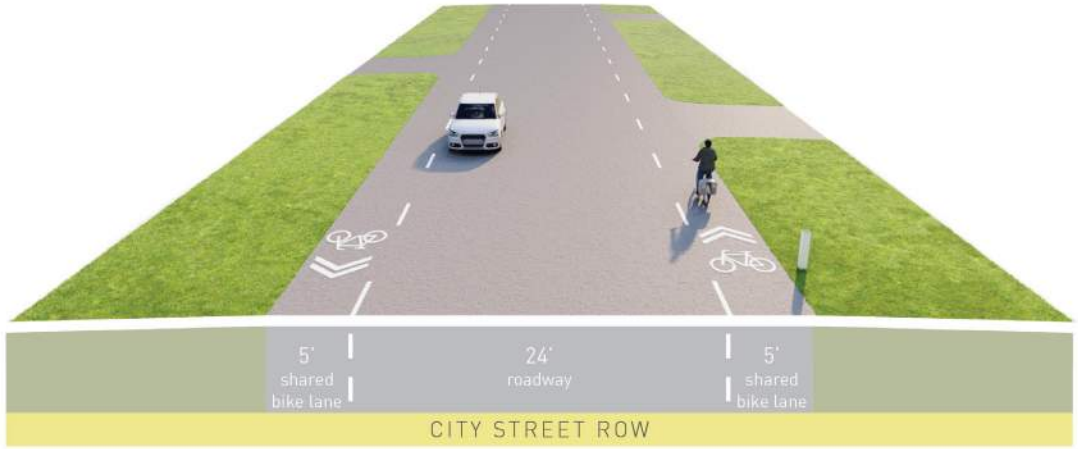
Trail Typology: On-street bike lane

OVERVIEW

This typology adds a designated bike lane to the existing paved roadways in Princeton. The existing 34' street has adequate width for residential traffic, parking, and bike lanes. A typical residential street is 24' wide with parking on both sides.

SITE PHOTO: PRINCETON RESIDENTIAL STREET

PRECEDENT PHOTO: "SHARROW" MARKING



PROPOSED CONDITION

EXISTING CONDITION

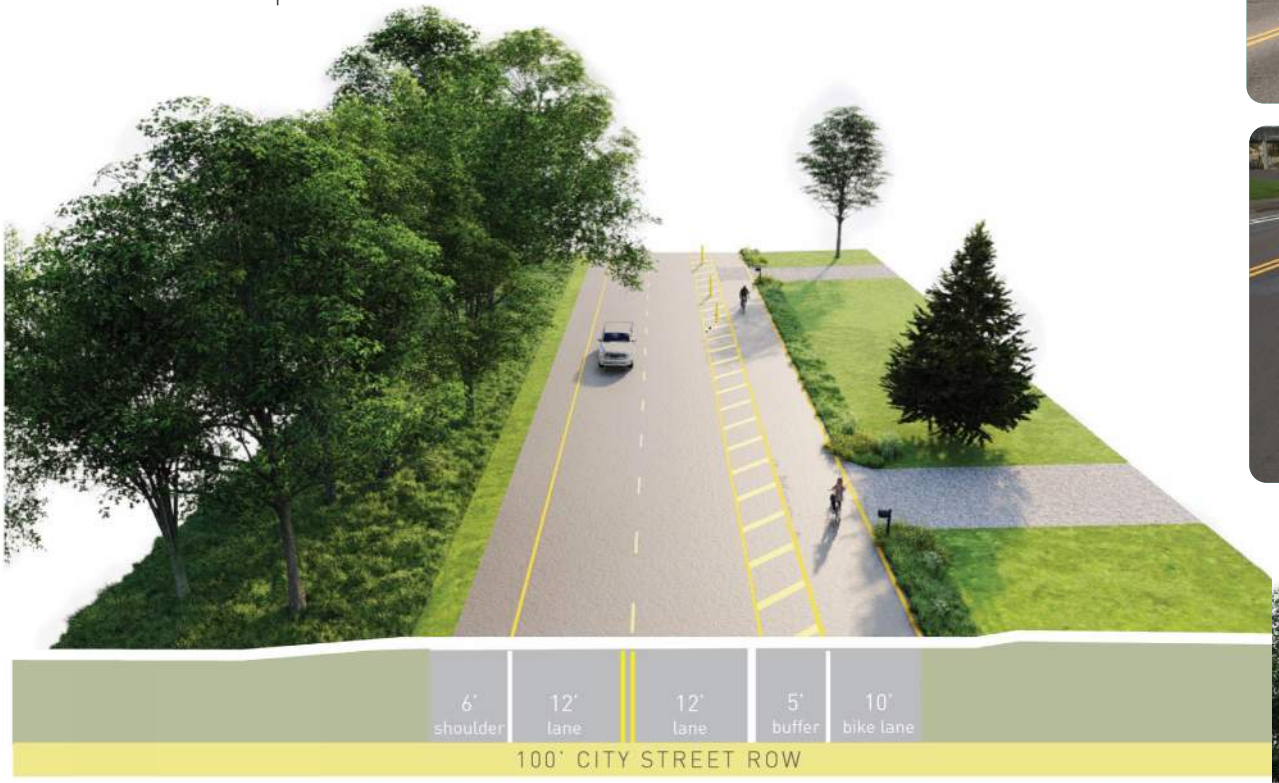
Trail Typology: Protected bike lane

OVERVIEW

This typology adds a two-way protected bike lane along Rum River Drive in Princeton. Rum River Drive transitions from a 30 mph to a 55 mph roadway, supporting the need for a protected bike lane. The plan proposes widening the road by 9' to accommodate a shoulder on the southbound side of the road and the buffer strip.

SITE PHOTO: ALONG RUM RIVER DRIVE, NORTH OF PRINCETON

PRECEDENT PHOTO: BUFFERED BIKE LANE



PROPOSED CONDITION

EXISTING CONDITION

Trail Typology: Hwy 169 non-motorized

OVERVIEW

This typology utilizes the 100' wide railroad corridor along the west side of highway 169. The existing railroad bed would be paved as a 10' wide bicycle and pedestrian trail, and snowmobiles would use the same trail in the winter. This typology preserves the existing woodland edge between the highway and trail.

SITE PHOTO: ALONG HWY 169

PROPOSED CONDITION: OPTION 2

EXISTING CONDITION

Trail Typology: Hwy 169 motorized

OVERVIEW

This typology utilizes the 100' wide railroad corridor along the west side of highway 169. The existing railroad bed would be paved as a 10' wide bicycle and pedestrian trail, with a dedicated motorized use trail constructed adjacent to the main trail. The two trails would be separated by a grade change, and vegetated buffer and the motorized use trail would be limited to a 25-mph speed limit. This typology

PROPOSED CONDITION: OPTION 1

EXISTING CONDITION

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Trailhead Concept: Zimmerman

OVERVIEW

The Zimmerman trailhead replaces an existing park-and-ride lot in Lions Park. The parking lot was designed to accommodate trail users as well as additional stalls for the park and ride. Lions Park has two baseball fields, two softball fields, a community building, concessions, and a picnic shelter. There are planned bike trails through the park that will connect the Great Northern Trail to the nearby high school and surrounding neighborhoods. There is also an opportunity to include interpretive signage on Zimmerman's historic downtown in this location.

AMENITIES

Given the urban context, this trailhead includes an enhanced level of amenities. There are EV charging stations for cars and bicycles, LED lighting, a picnic shelter, wayfinding signage, and restrooms. A small gathering area with seating provides a spot to eat lunch and accommodates passive use. The trail arcs around the outside edge of the parking lot to reduce circulation conflicts, and a separate sidewalk creates a reaction zone between the trail and the parking lot. Stormwater runoff from the parking lot is treated within the parking island. The parking lot is well-shaded with canopy trees to create a more welcoming experience and cooler microclimate.

SITE PHOTO: ALONG HWY 169

SITE PHOTO: ALONG HWY 169

key
1 SHADE STRUCTURE
2 TRAIL KIOSK
3 BIKE PARKING
4 DRINKING FOUNTAIN
5 PORTA POTTY WITH SCREEN
6 ELECTRIC VEHICLE CHARGING
7 STORMWATER INFILTRATION
GREAT NORTHERN TRAIL
MAIN STREET
GARDEN CENTER

1

2

3

existing

Trailhead Concept: South Princeton

OVERVIEW

The South Princeton trailhead replaces a paved park and ride lot owned and operated by MnDOT. The parking lot currently has several social issues, specifically loitering and overnight use. The parking lot was sized to accommodate trail users as well as additional stalls for the park and ride. There are existing trails that connect to downtown, the nearby hospital, and surrounding neighborhoods. The associated roundabout is missing a pedestrian crossing that should be added to provide a clear connection to the north.

AMENITIES

This trailhead includes enhancements to improve public safety and amenities for trail users. There are EV charging stations for cars, LED lighting, a picnic shelter, wayfinding signage, and a portable toilet. A small gathering area with a seat wall provides a spot to eat lunch and accommodates passive use. Stormwater runoff from the parking lot is treated within the median. Canopy trees buffer road noise from Highway 169 and shade the parking lot, creating a cooler microclimate and a more inviting space.

key
1 SHELTER AND PORTA POTTY SCREEN
2 TRAIL KIOSK
3 BIKE PARKING
4 DRINKING FOUNTAIN
5 VEGETATED BUFFER
6 ELECTRIC VEHICLE CHARGING
7 STORMWATER INFILTRATION
8 ADDED PEDESTRIAN CROSSING
9 LED LIGHTING
169 NORTH
169 SOUTH
SOUTH FORK RIVER DRIVE
125TH STREET
GREAT NORTHERN TRAIL

1

2

4

existing

Trailhead Concept: North Princeton

OVERVIEW

The North Princeton trailhead is located on a triangular green space along Highway 169 in the community of Long Siding. This trailhead accommodates both motorized and non-motorized trail users and includes dedicated parking for ATVs and Snowmobiles, as well as larger stalls for trailers. The Long Siding Bar and Grill borders the site on the west side and provides convenient dining and entertainment.

AMENITIES

This trailhead includes amenities for motorized and non-motorized trail users. There are heated restrooms, firepits, and open-air warming huts for winter use. A small plaza with picnic tables provides gathering space for small groups. Stormwater runoff from the parking lot is treated within the median. Canopy trees shade the parking lot and buffer road noise from Highway 169.

key
1 WARMING HUT AND RESTROOMS
2 FIRE PITS
3 ELECTRIC BIKE CHARGING
4 ELECTRIC VEHICLE CHARGING
5 FENCING
6 TRAIL KIOSK
7 TRAILER PARKING
8 SNOWMOBILE PARKING
169 NORTH
169 SOUTH
LONG SIDING GRILL
55TH STREET
STORMWATER INFILTRATION
GREAT NORTHERN TRAIL

1

2

3

existing

Trailhead Concept: Milaca

OVERVIEW

The Milaca trailhead is located within Rec Park in the city of Milaca. This trailhead functions as the northern terminus of the trail and starting point for the Rum River Blue Trail loop. Within Rec Park there are connections to a growing mountain bike trail network, a boat ramp, splash pad, and picnic shelters. The new trailhead is sited against an existing wood line outside of the floodplain that will shade the parking and provide a comfortable sense of enclosure. Downtown Milaca is a short bike ride down 2nd St NW where trail users can access dining and lodging.

AMENITIES

This trailhead includes basic amenities for trail users due to the rich resources present in Rec Park. There are EV charging stations for cars, LED lighting, a picnic shelter, wayfinding signage, and a porta potty. A small plaza with picnic tables provides a spot for passive use. Stormwater runoff from the parking lot is treated within the parking islands. Canopy trees shade the parking lot and create a more inviting space.

GREAT NORTHERN TRAIL
RUM RIVER
BOAT RAMP
AMPHITHEATER
2ND STREET NW
key
1 SHADE STRUCTURE
2 TRAIL KIOSK
3 FIRE PIT
4 PORTA POTTY WITH SCREEN
5 ELECTRIC VEHICLE CHARGING
6 WAYFINDING SIGNAGE
7 STORMWATER INFILTRATION

2

4

5
EVgo

existing

Ecological and Natural Resource Plan

OVERVIEW

Significant portions of the trail corridor have been urbanized or developed for agriculture, however, there are segments that include hardwood forest communities, non-forested wetlands & emergent communities, and upland prairie communities. An analysis of the Minnesota Biological Survey GIS layers did not identify any portions of the trail that cross sites with a biodiversity score. That said, the trail intersects publicly owned forests and associated streams, rivers, and wetlands that support a diversity of wildlife.

RESTORATION ACTIONS

During trail development, restoration actions to support native plant communities should be tailored to the specific plant communities adjacent to the trail. Restoration actions will involve invasive species removal, seeding & planting to enhance and expand native populations. Restoring impacted areas have both biological and functional benefits. For instance, native prairies increase habitat value while also providing visual interest for trail users and help retain snow cover on the trail. In addition, the permanent vegetative cover would slow wind speeds and filter runoff, reducing erosion. Restorative actions should also support soil health and include long-term monitoring and management activities.

MINNESOTA BIOLOGICAL SURVEY

As mentioned above, the Minnesota Biological Survey did not uncover any sites with a biodiversity score along the trail. This data identifies Native Plant Communities that intersect with the Minnesota Biological Survey Sites of Biodiversity Significance. It was developed by the Minnesota Department of Natural Resources and contains information from the Minnesota Biological Survey, State Park land cover data, MN DNR Forestry native plant community data, and Wildlife Management Areas land cover data. It includes areas representing the highest quality native plant communities remaining in surveyed areas. These areas are a focus of conservation efforts.

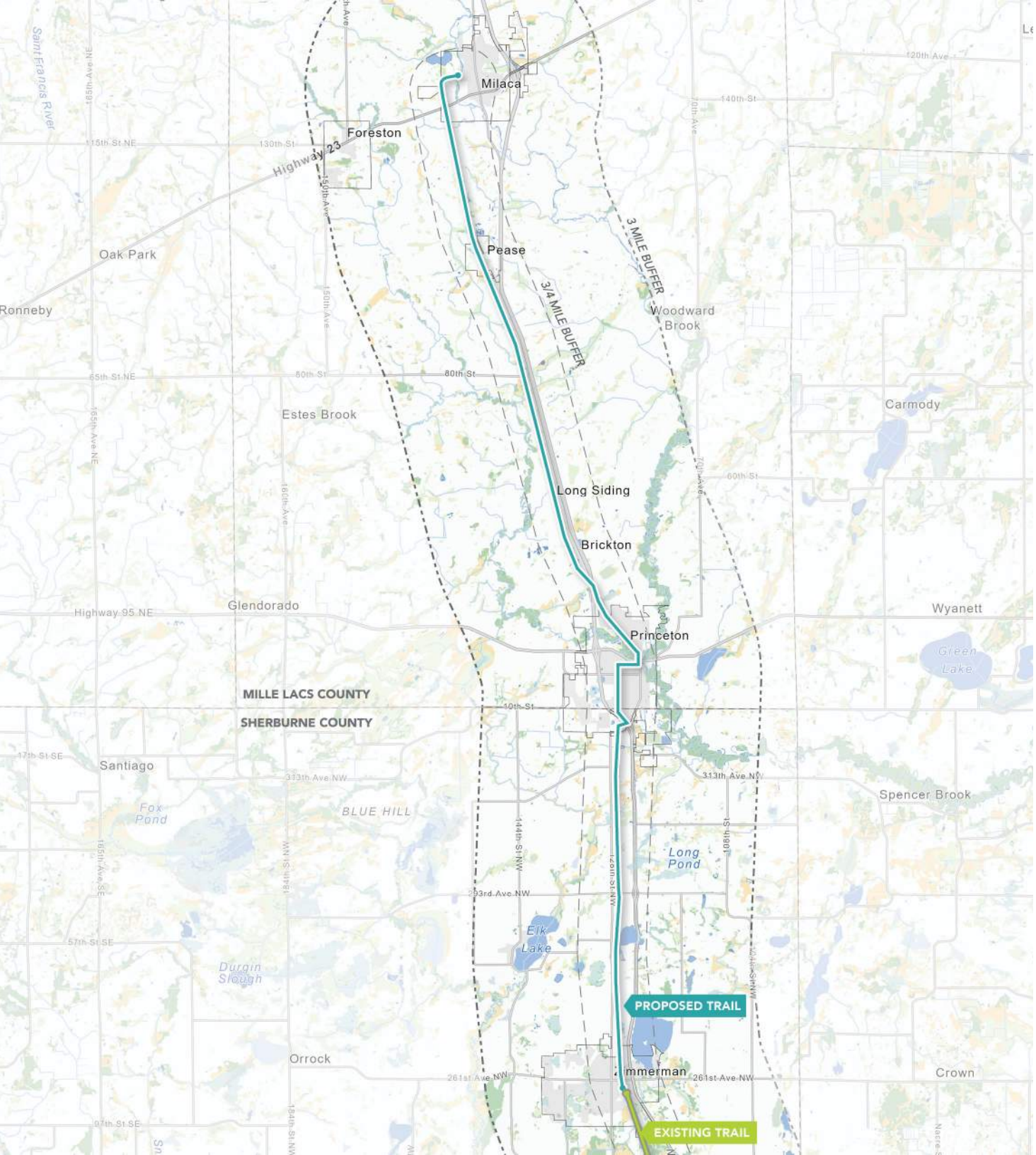
WETLAND MAPPING

A study of the National Wetlands Inventory (NWI) data identified several wetlands that intersect the trail alignment. The built-up railroad grade within these sections will keep future trail development out of the wetland. In areas where the trail would need to be widened to accommodate motorized use, displaced wetlands would require agency approval and mitigation, such as wetland banking. Wetlands are governed by the Wetland Conservation Act (WCA) and regulated by local government jurisdictions. WCA provides a no-net loss protection rule to MN's wetlands. WCA requires that, "anyone who proposes to fill, drain or excavate a wetland must first try to avoid wetland impacts at all cost. If avoidance is impossible, the second step is to minimize those impacts and, finally, replacement is required for any unavoidable wetland excavations, fills, or drainage." Any activities in the wetland must undergo an application and review process prior to obtaining a permit.

WETLAND BANKING

Wetland banking is the process of restoring or creating wetlands to offset impacted wetland and contribute to the WCA's requirement of no-net loss in MN's wetlands. A wetland must be restored or created under a wetland banking plan approved in advance by the LGU before it can be deposited in the state wetland bank to provide wetland banking credits. Banking credits can be sold to entities & applicants as a replacement towards no-net loss efforts where other projects cannot avoid wetland impact. Replacement ratios, wetland types, and locations are factors in replacement requirements & suitable banking credits. For more information: https://bwsr.state.mn.us/sites/default/files/2019-04/WETLAND_General_Wetlands_Regulation_in_Minnesota_v2.1_March_2019.pdf

WETLANDS


Milaca
Foreston
Highway 23
Pease
3 MILE BUFFER
3/4 MILE BUFFER
Oak Park
Ronneby
Woodward Brook
Carmody
Estes Brook
Long Siding
Brickton
Glendorado
Highway 95 NE
Princeton
Wyanett
Green Lake
MILLE LACS COUNTY
SHERBURNE COUNTY
Santiago
Fox Pond
BLUE HILL
Spencer Brook
Long Pond
Elk Lake
Durgin Slough
PROPOSED TRAIL
Orrock
Crown
EXISTING TRAIL
Legend
Emergent
Scrub-Shrub
Unconsolidated Bottom (Open Water)
Unconsolidated Shore (Banks & Sandbars)
0
1 mile
2 miles
4 miles
N

Programming, Marketing, and Research Plans

PROGRAMMING PLAN

There are several programming efforts ongoing within the existing trail corridor that would be expanded as part of the master plan. In the winter, the southern section of trail from Elk River to Zimmerman is groomed for cross-country skiing and would be expanded with the trail extension. The existing snowmobile trail between Princeton and Pease is maintained by a snowmobile group that provides fire rings and firewood along their groomed trails. Fire rings are planned at trailheads and at trail waysides in segments north of Princeton. Existing programming efforts within the City of Princeton and Milaca parks could be utilized by trail users, such as movies in the park and live music in Rec Park. A variety of interpretive themes were explored during community engagement that would provide opportunities for self directed tours.

MARKETING PLAN

The long-term vision is for the trail to become an economic driver for the area and establish the cities of Elk River, Princeton, and Milaca as recreational destinations for road biking, paddling, and mountain biking. This will require a concerted effort by the chambers of commerce, county, and stakeholders to market the area through a robust branding campaign. In the short term, marketing the trail will primarily occur through a coordinated social media effort between the partnership committee members. Sherburne County has a parks department webpage with information on their parks and trails that gets regularly updated, as well as a strong social media presence. The county's Facebook page has 4,000 followers and regularly highlights various parks in the park system. The trail is already listed on AllTrails and Trip Advisor, which will need updating after construction.

RESEARCH PLAN

This project is uniquely poised to examine how motorized and non-motorized uses can co-exist within a 100' wide right of way. Post occupancy evaluation of the trail could help future designs where multiple uses are desired. With the rising popularity of e-bikes, there is also an opportunity to study changing preferences and needs of trail users. During the master plan process, we heard from a few e-bike users, but over time that population of trail users will only continue to rise.

The partnership committee members will work with the Greater Minnesota Regional Parks and Trails Commission on research initiatives such as visitation counts, recreation trends, and intercept surveys as requested.

Sherburne County's Facebook page highlighting a local park

Branded water bottle developed for a Pop Up Event

Interpretive themes explored during a community workshop

Cultural Heritage

Native Heritage

Natural Resources

Experiential (Bird blind)

Geography

Hydrology

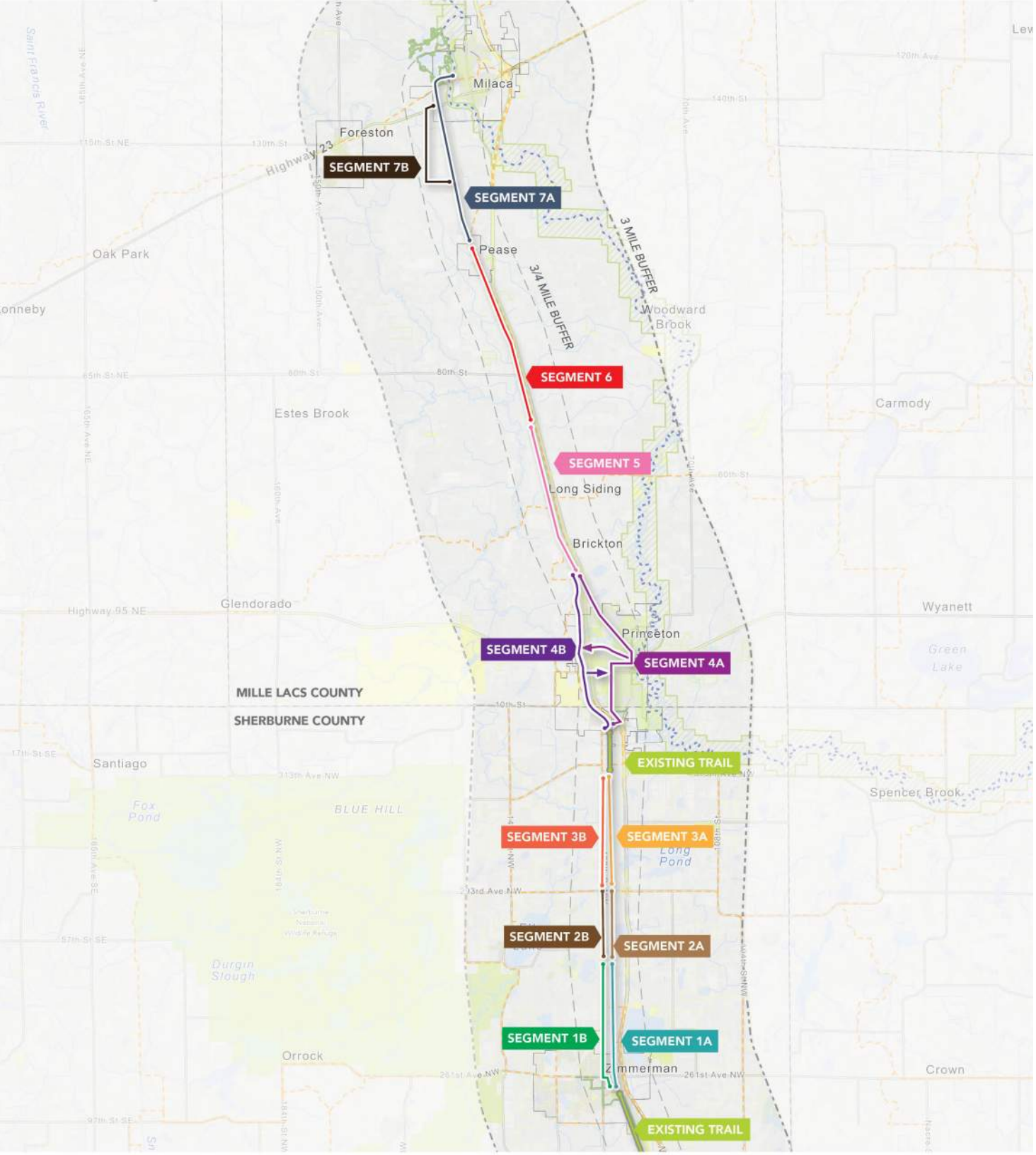
Historic Photography

Industrial History

05 IMPLEMENTATION

Introduction

Construction of the Great Northern Trail will be phased as funding sources and acquisition opportunities become available. The public agencies involved have made a commitment that they will not use eminent domain to obtain properties in the trail corridor. Under this approach, it could take 10-20 years for the properties needed to complete the trail to come up for sale. To complete a continuous trail system the plan recommends a phased approach that avoids gaps in public ownership. As properties come up for sale additional segments along the railroad corridor could be brought online.



DEVELOPMENT COSTS SUMMARY

Segment 1A: Zimmerman Railroad Alignment	
Distance (miles)	1.82
Cost	$2,560,000
Segment 1B: Zimmerman Highway Alignment	
Distance (miles)	1.80
Cost	$1,750,800
Segment 2A: North Zimmerman Railroad Alignment	
Distance (miles)	2.44
Cost	$3,640,500
Segment 2B: North Zimmerman Highway Alignment	
Distance (miles)	2.56
Cost	$2,103,300
Segment 3A: South Princeton Railroad Alignment	
Distance (miles)	2.45
Cost	$2,672,400
Segment 3B: South Princeton Highway Alignment	
Distance (miles)	2.46
Cost	$2,214,800
Segment 4: Princeton	
Distance (miles)	3.03
Cost	$1,184,800
Segment 5: North Princeton	
Distance (miles)	3.30
Cost	$3,166,650
Segment 6: City of Pease	
Distance (miles)	3.76
Cost	$3,312,700
Segment 7A: Milaca Railroad Alignment	
Distance (miles)	4.20
Cost	$5,291,150
Segment 7B: Milaca Highway Alignment	
Distance (miles)	4.25
Cost	$4,266,350

Costs & Funding

FUNDING & REVENUE

There are multiple funding streams available for trail construction projects, including state and federal grant programs. Not all of the funds will be able to be sourced through grants, and matching dollars will need to be contributed locally through general funds, bonding, and capital improvement programs. Partnerships with local trail groups could contribute to maintenance and operations costs through DNR grant in aid funding.

COST ESTIMATES

The following cost estimates cover the construction of the new trail, trailheads, and trail amenities. Existing trail and trailhead renovations are excluded from the estimate. The estimates represent a rough order of magnitude costs in 2022 dollars. Unit costs include design and construction contingencies (10%), owner contingency (10%), and should be adjusted for inflation when planning beyond 2022.

Trail Segment	Cost	Bituminous Trail (LF)	Acquisition (LF)	Trailheads	Enhanced Crossings	Bike Lane Striping (LF)	Protected Bike Lane (LF)
Segment 1A: Zimmerman Railroad Alignment	$2,560,000	9,588	3,980	1	2		
Segment 1B: Zimmerman Highway Alignment	$1,750,800	9,500		1	2		
Segment 2A: North Zimmerman Railroad Alignment	$3,640,500	12,884	8,148		1		
Segment 2B: North Zimmerman Highway Alignment	$2,103,300	13,500			1		
Segment 3A: South Princeton Railroad Alignment	$2,672,400	12,920	2,348	1	1		
Segment 3B: South Princeton Highway Alignment	$2,214,800	13,000		1	1		
Segment 4: Princeton	$1,184,800				1	4,000	12,000
Segment 5: North Princeton	$3,166,650	17,439		1	1		
Segment 6: City of Pease	$3,312,700	19,846	1,408	1	1		
Segment 7A: Milaca Railroad Alignment	$5,291,150	22,185	8,413		2		
Segment 7B: Milaca Highway Alignment	$4,266,350	22,437	3,100	1	2		

Alignment Comparision	Total Cost (2022)	Total Length (Miles)	Total Length (Feet)
Railroad Alignment	$21,828,200	21.00	110,862
Highway Alignment	$17,999,400	21.75	114,822

Cost Estimate: Segment 1

Segment 1A: Zimmerman Railroad Alignment

Item	Quantity	Unit	Unit Price	Total	Notes
10' Wide Bituminous Trail	9,588	LF	$150	$1,438,200	removals, mass grading, compacted base, paving, restoration
Acquisition or Easement Purchase	3,980	LF	$200	$796,000	25' wide easement
Trailhead (standard)	1	LS	$200,000	$200,000	see trailhead concepts in chapter 4
Enhanced crossing	2	EA	$25,000	$50,000	Rapid flashing beacon, tactile paving, striping
Wayfinding Signage	4	EA	$1,200	$4,800	mile markers and directional signage
Interpretation Allowance	1	LS	$5,000	$5,000	interpretative signage or experiential design element
Native Seeding / Restoration	10	AC	$4,500	$45,000	native restoration beyond grading limits of the trail
Bike Parking	20	EA	$750	$15,000	furnished and installed, with concrete pad and footing
Trash Receptacle	3	EA	$500	$1,500	furnished and installed, with concrete pad and footing
Bench	6	EA	$750	$4,500	furnished and installed, with concrete pad and footing
			Total	**$2,560,000**	

Segment 1B: Zimmerman Highway Alignment

Item	Quantity	Unit	Unit Price	Total	Notes
10' wide bituminous trail	9,500	LF	$150	$1,425,000	removals, mass grading, compacted base, paving, restoration
Acquisition or Easement Purchase		LF	$200	$0	25' wide easement
Trailhead (standard)	1	LS	$200,000	$200,000	see trailhead concepts in chapter 4
Enhanced crossing	2	EA	$25,000	$50,000	Rapid flashing beacon, tactile paving, striping
Wayfinding Signage	4	EA	$1,200	$4,800	mile markers and directional signage
Interpretation Allowance	1	LS	$5,000	$5,000	interpretative signage or experiential design element
Native Seeding / Restoration	10	AC	$4,500	$45,000	native restoration beyond grading limits of the trail
Bike Parking	20	EA	$750	$15,000	furnished and installed, with concrete pad and footing
Trash Receptacle	3	EA	$500	$1,500	furnished and installed, with concrete pad and footing
Bench	6	EA	$750	$4,500	furnished and installed, with concrete pad and footing
			Total	**$1,750,800**	

Cost Estimate: Segment 2

Segment 2A: North Zimmerman Railroad Alignment					
Item	**Quantity**	**Unit**	**Unit Price**	**Total**	**Notes**
10' Wide Bituminous Trail	12,884	LF	$150	$1,932,600	removals, mass grading, compacted base, paving, restoration
Acquisition or Easement Purchase	8,148	LF	$200	$1,629,600	25' wide easement
Trailhead (standard)		LS	$200,000	$0	see trailhead concepts in chapter 4
Enhanced crossing	1	EA	$25,000	$25,000	Rapid flashing beacon, tactile paving, striping
Wayfinding Signage	4	EA	$1,200	$4,800	mile markers and directional signage
Interpretation Allowance	1	LS	$5,000	$5,000	interpretative signage or experiential design element
Native Seeding / Restoration	5	AC	$4,500	$22,500	native restoration beyond grading limits of the trail
Bike Parking	20	EA	$750	$15,000	furnished and installed, with concrete pad and footing
Trash Receptacle	3	EA	$500	$1,500	furnished and installed, with concrete pad and footing
Bench	6	EA	$750	$4,500	furnished and installed, with concrete pad and footing
			Total	**$3,640,500**	

Segment 2B: North Zimmerman Highway Alignment					
Item	**Quantity**	**Unit**	**Unit Price**	**Total**	**Notes**
10' wide bituminous trail	13,500	LF	$150	$2,025,000	removals, mass grading, compacted base, paving, restoration
Acquisition or Easement Purchase		LF	$200	$0	25' wide easement
Trailhead (standard)		LS	$200,000	$0	see trailhead concepts in chapter 4
Enhanced crossing	1	EA	$25,000	$25,000	Rapid flashing beacon, tactile paving, striping
Wayfinding Signage	4	EA	$1,200	$4,800	mile markers and directional signage
Interpretation Allowance	1	LS	$5,000	$5,000	interpretative signage or experiential design element
Native Seeding / Restoration	5	AC	$4,500	$22,500	native restoration beyond grading limits of the trail
Bike Parking	20	EA	$750	$15,000	furnished and installed, with concrete pad and footing
Trash Receptacle	3	EA	$500	$1,500	furnished and installed, with concrete pad and footing
Bench	6	EA	$750	$4,500	furnished and installed, with concrete pad and footing
			Total	**$2,103,300**	

Cost Estimate: Segment 3

Segment 3A: South Princeton Railroad Alignment

Item	Quantity	Unit	Unit Price	Total	Notes
10' Wide Bituminous Trail	12,920	LF	$150	$1,938,000	removals, mass grading, compacted base, paving, restoration
Acquisition or Easement Purchase	2,348	LF	$200	$469,600	25' wide easement
Trailhead (standard)	1	LS	$200,000	$200,000	see trailhead concepts in chapter 4
Enhanced crossing	1	EA	$25,000	$25,000	Rapid flashing beacon, tactile paving, striping
Wayfinding Signage	4	EA	$1,200	$4,800	mile markers and directional signage
Interpretation Allowance	1	LS	$5,000	$5,000	interpretative signage or experiential design element
Native Seeding / Restoration	2	AC	$4,500	$9,000	native restoration beyond grading limits of the trai
Bike Parking	20	EA	$750	$15,000	furnished and installed, with concrete pad and footing
Trash Receptacle	3	EA	$500	$1,500	furnished and installed, with concrete pad and footing
Bench	6	EA	$750	$4,500	furnished and installed, with concrete pad and footing
			Total	$2,672,400	

Segment 3B: South Princeton Highway Alignment

Item	Quantity	Unit	Unit Price	Total	Notes
10' wide bituminous trail	13,000	LF	$150	$1,950,000	removals, mass grading, compacted base, paving, restoration
Acquisition or Easement Purchase		LF	$200	$0	25' wide easement
Trailhead (standard)	1	LS	$200,000	$200,000	see trailhead concepts in chapter 4
Enhanced crossing	1	EA	$25,000	$25,000	Rapid flashing beacon, tactile paving, striping
Wayfinding Signage	4	EA	$1,200	$4,800	mile markers and directional signage
Interpretation Allowance	1	LS	$5,000	$5,000	interpretative signage or experiential design element
Native Seeding / Restoration	2	AC	$4,500	$9,000	native restoration beyond grading limits of the trai
Bike Parking	20	EA	$750	$15,000	furnished and installed, with concrete pad and footing
Trash Receptacle	3	EA	$500	$1,500	furnished and installed, with concrete pad and footing
Bench	6	EA	$750	$4,500	furnished and installed, with concrete pad and footing
			Total	$2,214,800	

Cost Estimate: Segment 4

Segment 4: Princeton					
Item	**Quantity**	**Unit**	**Unit Price**	**Total**	**Notes**
Protected Bike Lane	12,000	LF	$85	$1,020,000	removals, mass grading, compacted base, paving, restoration
On Street Bike Lane Striping	4,000	LF	$25	$100,000	within existing right of way
Trailhead (standard)		LS	$200,000	$0	see trailhead concepts in chapter 4
Enhanced crossing	1	EA	$25,000	$25,000	Rapid flashing beacon, tactile paving, striping
Wayfinding Signage	4	EA	$1,200	$4,800	mile markers and directional signage
Interpretation Allowance	1	LS	$5,000	$5,000	interpretative signage or experiential design element
Native Seeding / Restoration	2	AC	$4,500	$9,000	native restoration beyond grading limits of the trail
Bike Parking	20	EA	$750	$15,000	furnished and installed, with concrete pad and footing
Trash Receptacle	3	EA	$500	$1,500	furnished and installed, with concrete pad and footing
Bench	6	EA	$750	$4,500	furnished and installed, with concrete pad and footing
			Total	**$1,184,800**	

Cost Estimate: Segment 5

Segment 5: North Princeton					
Item	**Quantity**	**Unit**	**Unit Price**	**Total**	**Notes**
10' wide bituminous trail	17,439	LF	$150	$2,615,850	removals, mass grading, compacted base, paving, restoration
Acquisition or Easement Purchase		LF	$200	$0	25' wide easement
Trailhead (enhanced)	1	LS	$450,000	$450,000	see trailhead concepts in chapter 4
Enhanced crossing	1	EA	$25,000	$25,000	Rapid flashing beacon, tactile paving, striping
Wayfinding Signage	4	EA	$1,200	$4,800	mile markers and directional signage
Interpretation Allowance	1	LS	$5,000	$5,000	interpretative signage or experiential design element
Native Seeding / Restoration	10	AC	$4,500	$45,000	native restoration beyond grading limits of the trai
Bike Parking	20	EA	$750	$15,000	furnished and installed, with concrete pad and footing
Trash Receptacle	3	EA	$500	$1,500	furnished and installed, with concrete pad and footing
Bench	6	EA	$750	$4,500	furnished and installed, with concrete pad and footing
			Total	**$3,166,650**	

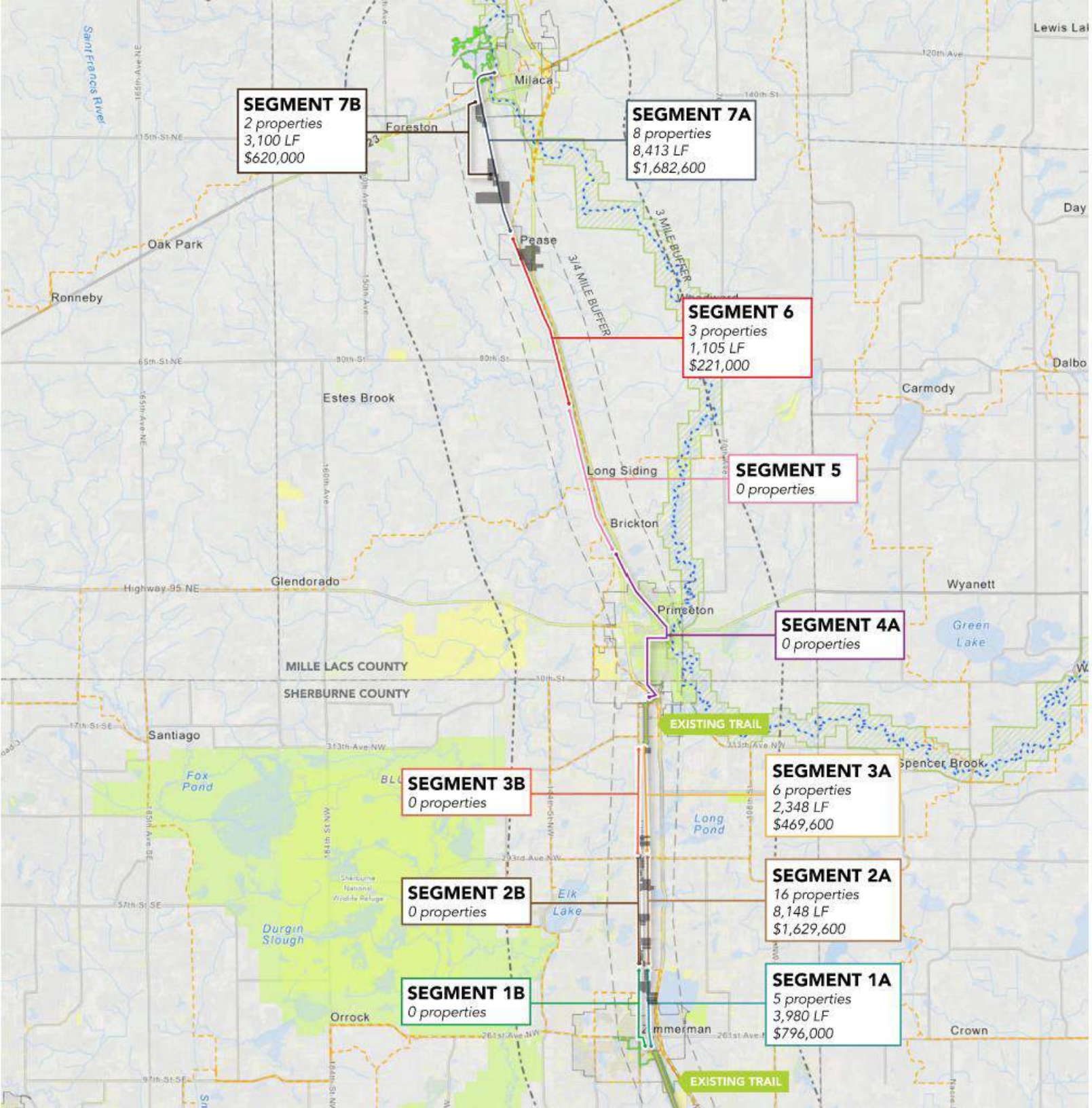
Cost Estimate: Segment 6

Segment 6: City of Pease					
Item	**Quantity**	**Unit**	**Unit Price**	**Total**	**Notes**
10' Wide Bituminous Trail	19,846	LF	$150	$2,976,900	removals, mass grading, compacted base, paving, restoration
Acquisition or Easement Purchase	1,105	LF	$200	$221,000	25' wide easement
Trailhead (improvements)	1	LS	$50,000	$50,000	see trailhead concepts in chapter 4
Enhanced crossing	1	EA	$25,000	$25,000	Rapid flashing beacon, tactile paving, striping
Wayfinding Signage	4	EA	$1,200	$4,800	mile markers and directional signage
Interpretation Allowance	1	LS	$5,000	$5,000	interpretative signage or experiential design element
Native Seeding / Restoration	2	AC	$4,500	$9,000	native restoration beyond grading limits of the trail
Bike Parking	20	EA	$750	$15,000	furnished and installed, with concrete pad and footing
Trash Receptacle	3	EA	$500	$1,500	furnished and installed, with concrete pad and footing
Bench	6	EA	$750	$4,500	furnished and installed, with concrete pad and footing
			Total	**$3,312,700**	

Cost Estimate: Segment 7

Segment 7A: Milaca Railroad Alignment					
Item	**Quantity**	**Unit**	**Unit Price**	**Total**	**Notes**
10' wide bituminous trail	22,185	LF	$150	$3,327,750	removals, mass grading, compacted base, paving, restoration
Acquisition or Easement Purchase	8,413	LF	$200	$1,682,600	25' wide easement
Trailhead (standard)	1	LS	$200,000	$200,000	see trailhead concepts in chapter 4
Enhanced crossing	2	EA	$25,000	$50,000	Rapid flashing beacon, tactile paving, striping
Wayfinding Signage	4	EA	$1,200	$4,800	mile markers and directional signage
Interpretation Allowance	1	LS	$5,000	$5,000	interpretative signage or experiential design element
Native Seeding / Restoration		AC	$4,500	$0	native restoration beyond grading limits of the trail
Bike Parking	20	EA	$750	$15,000	furnished and installed, with concrete pad and footing
Trash Receptacle	3	EA	$500	$1,500	furnished and installed, with concrete pad and footing
Bench	6	EA	$750	$4,500	furnished and installed, with concrete pad and footing
			Total	**$5,291,150**	

Segment 7B: Milaca Highway Alignment					
Item	**Quantity**	**Unit**	**Unit Price**	**Total**	**Notes**
10' wide bituminous trail	22,437	LF	$150	$3,365,550	removals, mass grading, compacted base, paving, restoration
Acquisition or Easement Purchase	3,100	LF	$200	$620,000	25' wide easement
Trailhead (standard)	1	LS	$200,000	$200,000	see trailhead concepts in chapter 4
Enhanced crossing	2	EA	$25,000	$50,000	Rapid flashing beacon, tactile paving, striping
Wayfinding Signage	4	EA	$1,200	$4,800	mile markers and directional signage
Interpretation Allowance	1	LS	$5,000	$5,000	interpretative signage or experiential design element
Native Seeding / Restoration		AC	$4,500	$0	native restoration beyond grading limits of the trail
Bike Parking	20	EA	$750	$15,000	furnished and installed, with concrete pad and footing
Trash Receptacle	3	EA	$500	$1,500	furnished and installed, with concrete pad and footing
Bench	6	EA	$750	$4,500	furnished and installed, with concrete pad and footing
			Total	**$4,266,350**	



GREAT NORTHERN TRAIL

AQUISITION PLAN

Legend

- Existing GNT Trail
- Proposed GNT Trail Segment
- Impacted Private Property
- Public land or Right of Way
- Existing Parks
- Local Bike Trail
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail

***See enlargement segment acquisition plans for additional information**

0 1 mile 2 miles 4 miles

N

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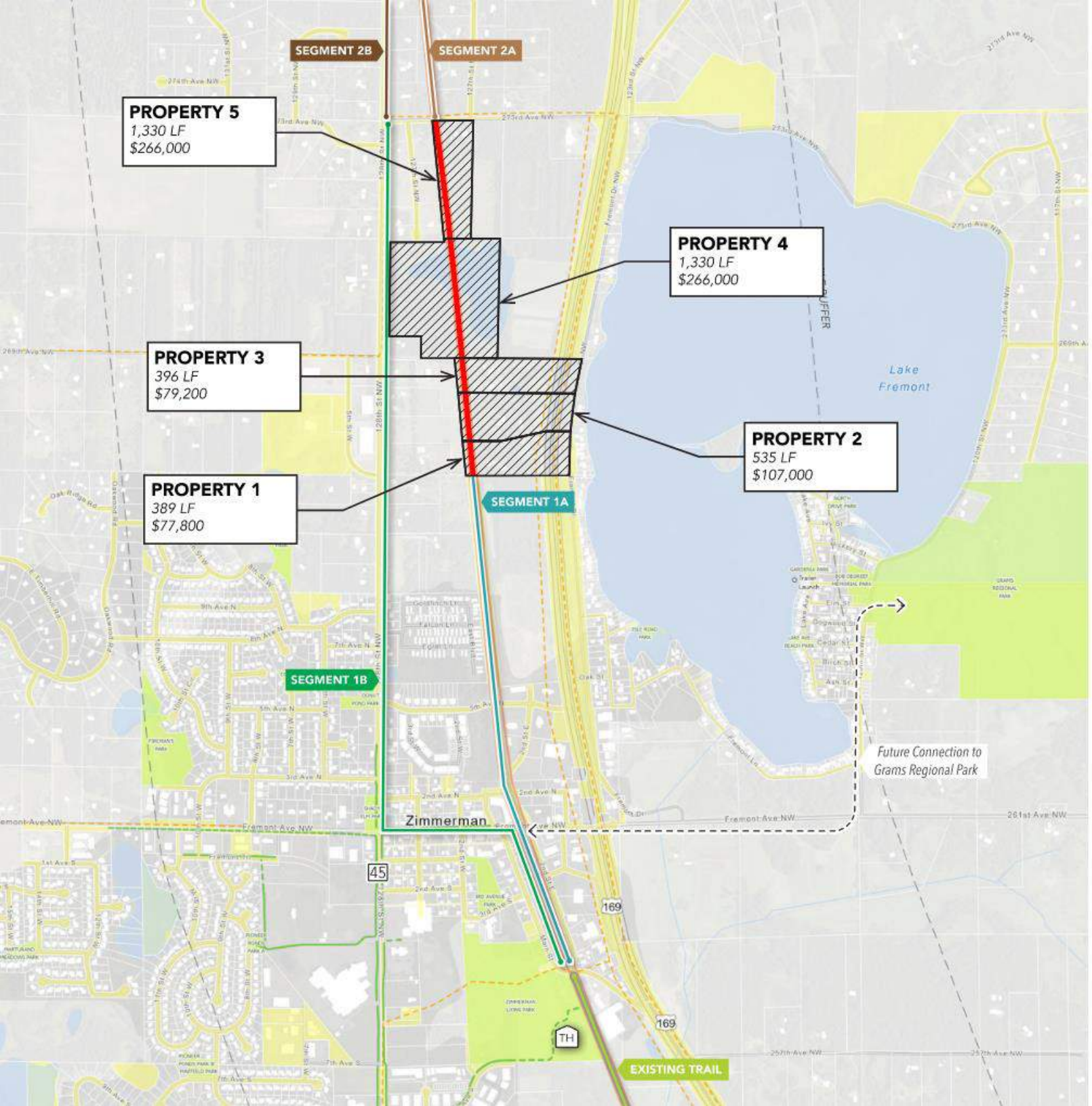

GREAT NORTHERN TRAIL

ACQUISITION PLAN ENLARGEMENT

SEGMENTS 1A & 1B

Legend

- Impacted Private Property
- Linear Acquisition or Easement
- Public land or Right of Way
- Existing Parks
- Local Bike Trail (existing)
- Local Bike Trail (future)
- Existing GNT Trail
- GNT RR Corridor
- Route Alternate on Public Land
- Route Alternate on Private Land
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail
- Boat Launch
- Proposed Trailhead

0 1/4 mile 1/2 mile

N

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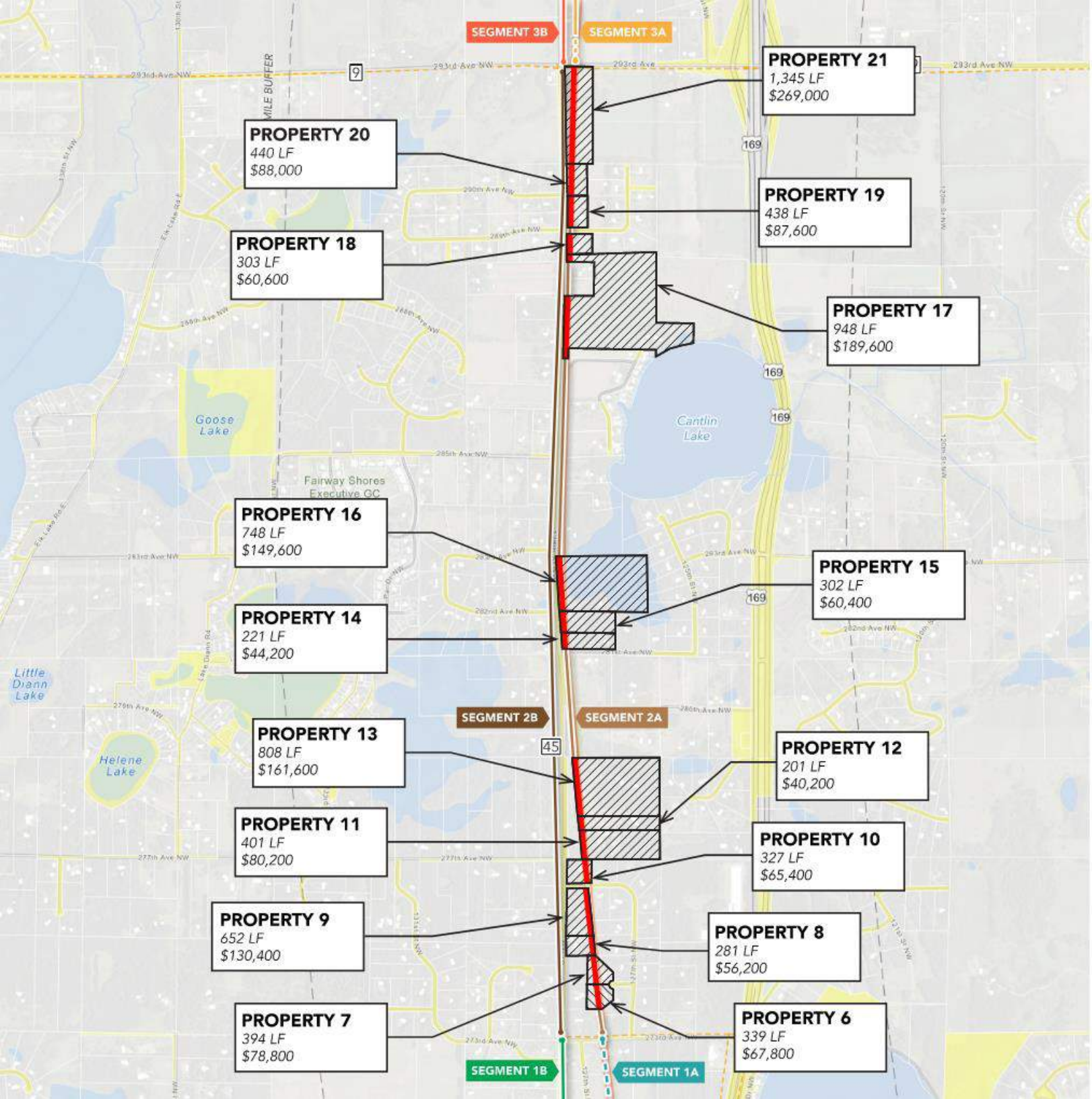

GREAT NORTHERN TRAIL

ACQUISITION PLAN ENLARGEMENT

SEGMENTS 2A & 2B

Legend

- Impacted Private Property
- Linear Acquisition or Easement
- Public land or Right of Way
- Existing Parks
- Local Bike Trail (existing)
- Local Bike Trail (future)
- Existing GNT Trail
- GNT RR Corridor
- Route Alternate on Public Land
- Route Alternate on Private Land
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail
- Boat Launch
- Proposed Trailhead

0 1/4 mile 1/2 mile

N

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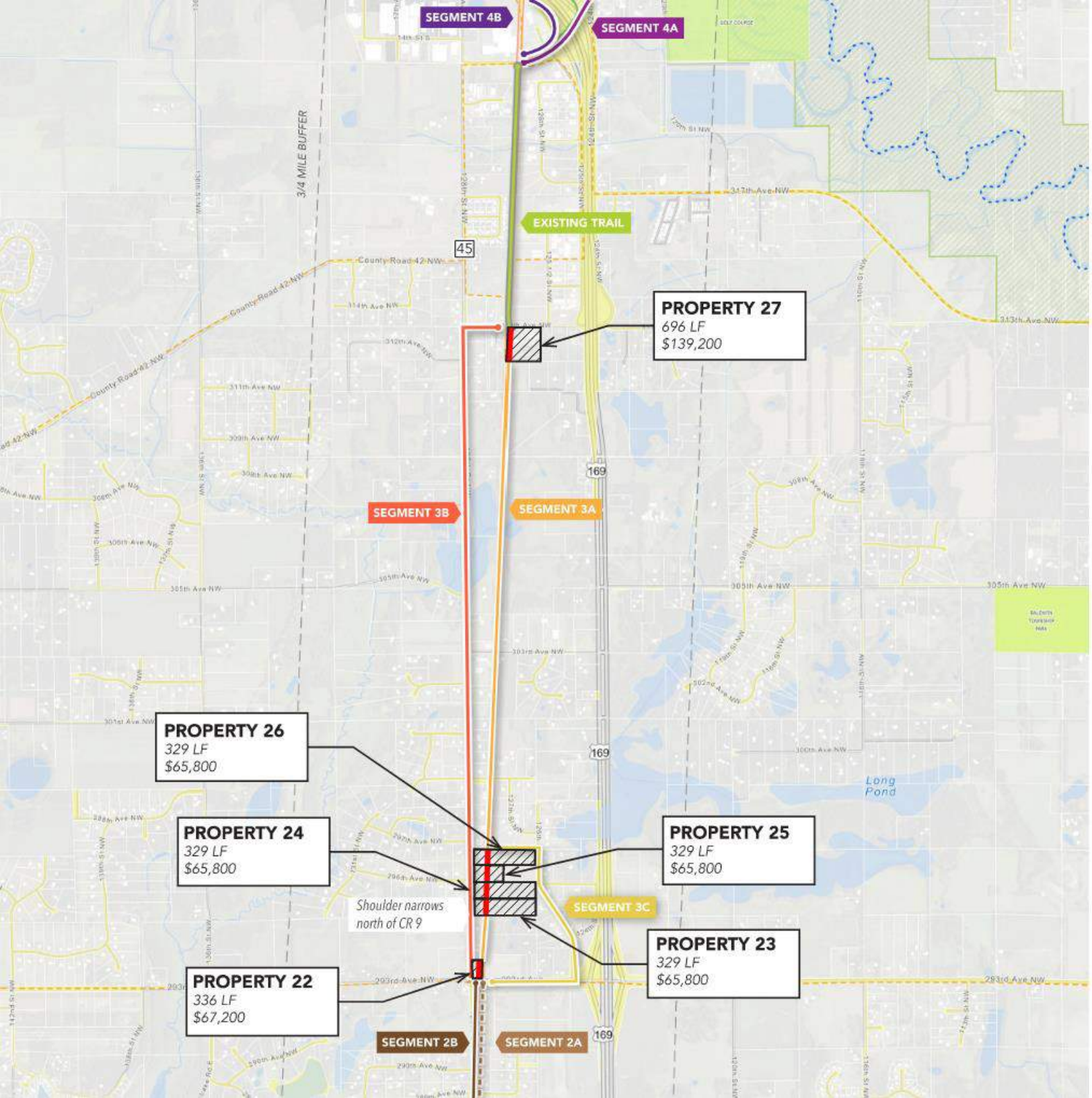

GREAT NORTHERN TRAIL

ACQUISITION PLAN ENLARGEMENT

SEGMENTS 3A & 3B

Legend

- Impacted Private Property
- Linear Acquisition or Easement
- Public land or Right of Way
- Existing Parks
- Local Bike Trail (existing)
- Local Bike Trail (future)
- Existing GNT Trail
- GNT RR Corridor
- Route Alternate on Public Land
- Route Alternate on Private Land
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail
- Boat Launch
- Proposed Trailhead

0 1/4 mile 1/2 mile 1 mile

N

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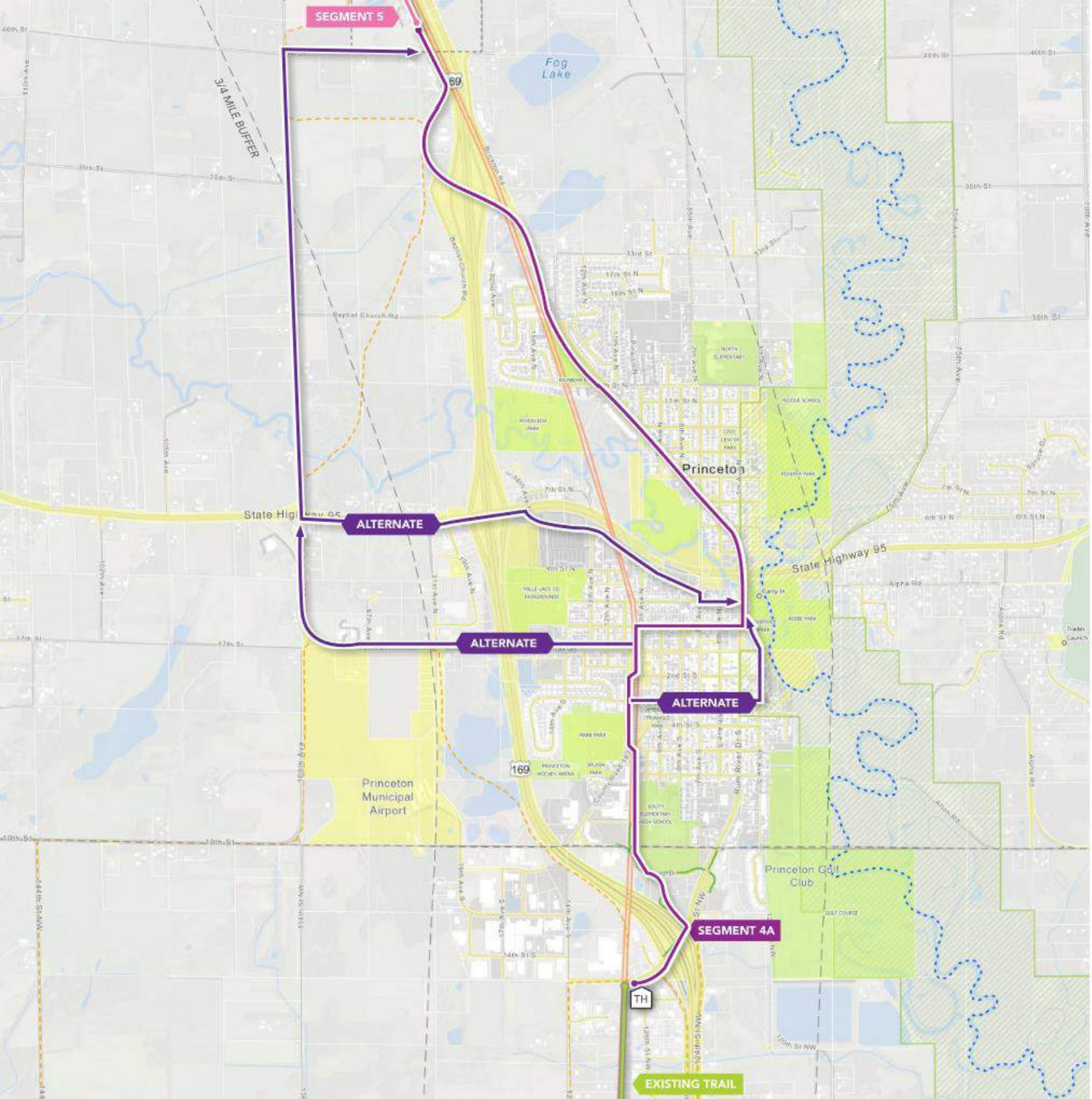

GREAT NORTHERN TRAIL

ACQUISITION PLAN ENLARGEMENT

SEGMENT 4A

Legend

- Impacted Private Property
- Linear Acquisition or Easement
- Public land or Right of Way
- Existing Parks
- Local Bike Trail (existing)
- Local Bike Trail (future)
- Existing GNT Trail
- GNT RR Corridor
- Route Alternate on Public Land
- Route Alternate on Private Land
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail
- Boat Launch
- Proposed Trailhead

0 1/4 mile 1/2 mile 1 mile

N

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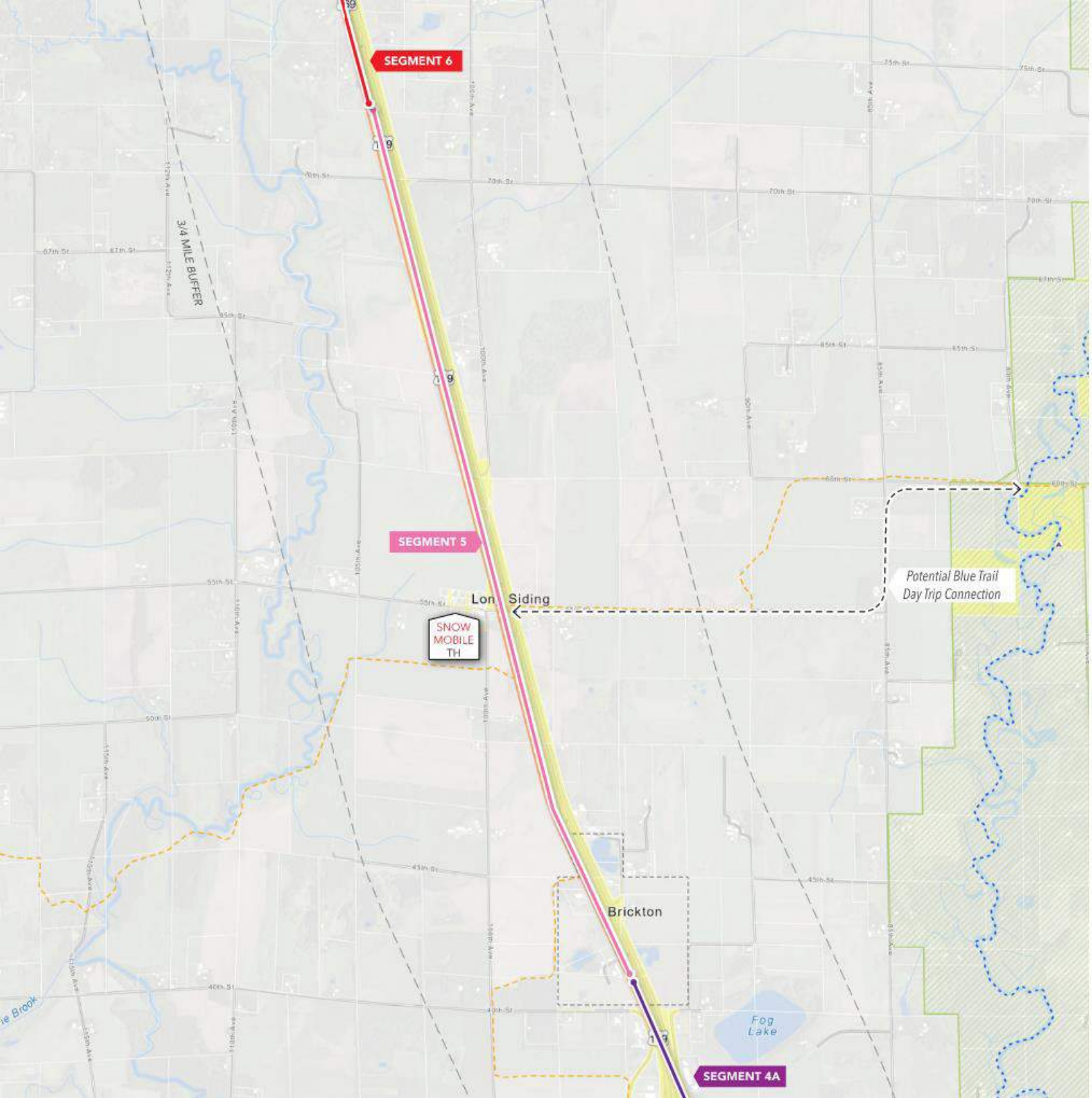


GREAT NORTHERN TRAIL

ACQUISITION PLAN ENLARGEMENT

SEGMENT 5

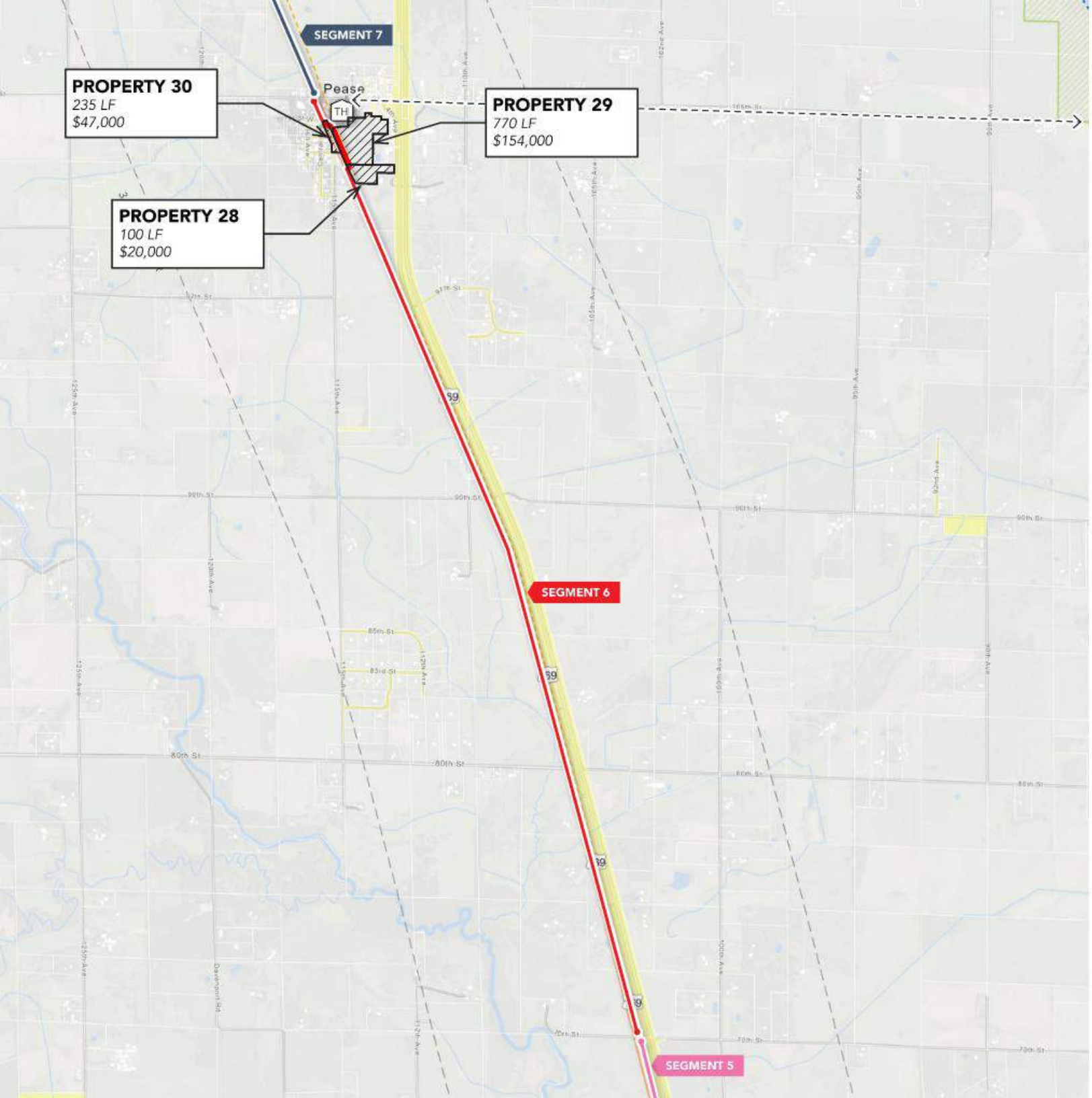
Legend

- Impacted Private Property
- Linear Acquisition or Easement
- Public land or Right of Way
- Existing Parks
- Local Bike Trail (existing)
- Local Bike Trail (future)
- Existing GNT Trail
- GNT RR Corridor
- Route Alternate on Public Land
- Route Alternate on Private Land
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail
- Boat Launch
- Proposed Trailhead

0 1/4 mile 1/2 mile 1 mile

N

12.29.2022 DF/ DAMON FARBER



GREAT NORTHERN TRAIL

ACQUISITION PLAN ENLARGEMENT

SEGMENT 6

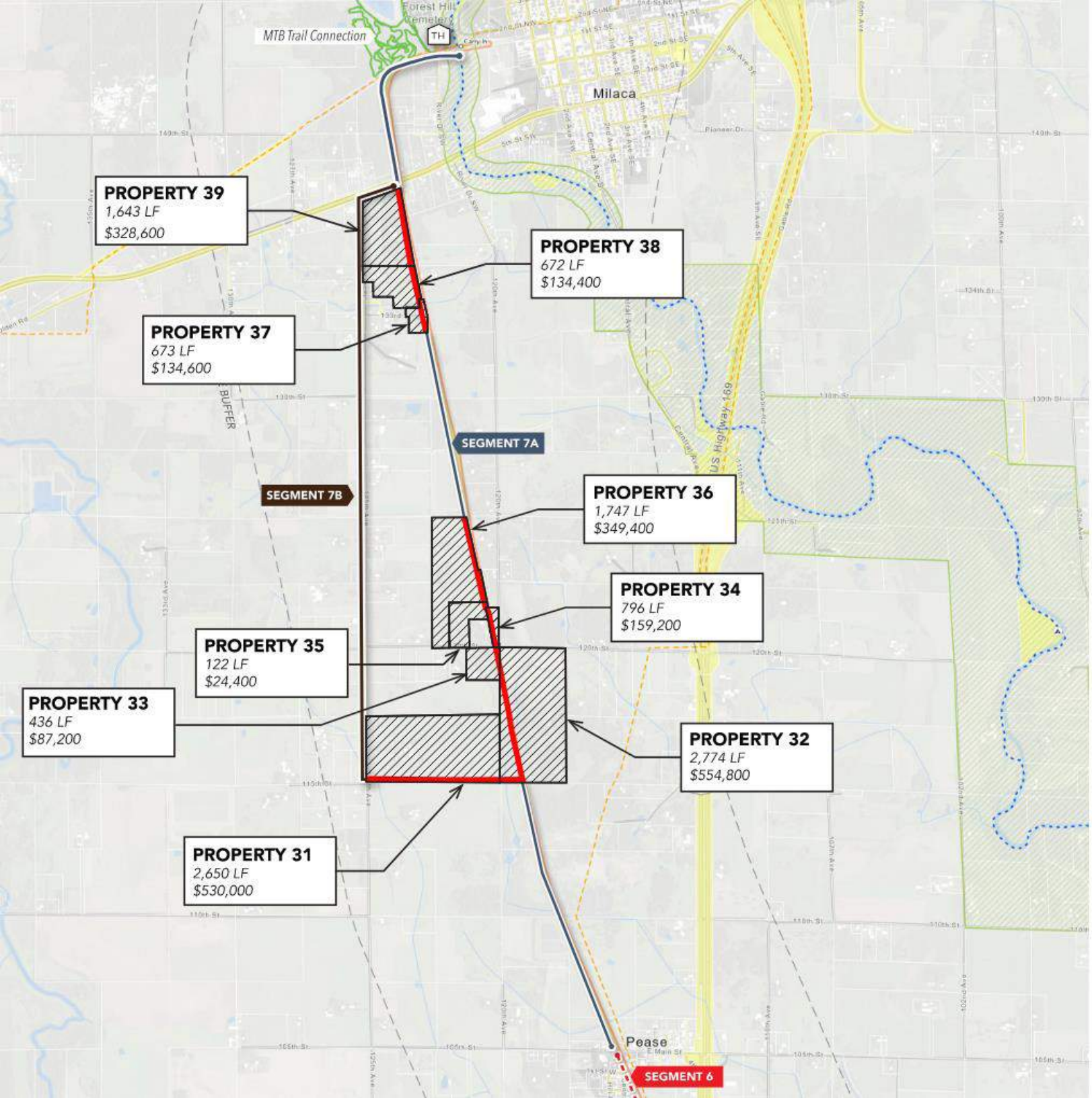
Legend

- Impacted Private Property
- Linear Acquisition or Easement
- Public land or Right of Way
- Existing Parks
- Local Bike Trail (existing)
- Local Bike Trail (future)
- Existing GNT Trail
- GNT RR Corridor
- Route Alternate on Public Land
- Route Alternate on Private Land
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail
- Boat Launch
- Proposed Trailhead

0 1/4 mile 1/2 mile 1 mile

N

12.29.2022 DF/ DAMON FARBER



GREAT NORTHERN TRAIL

ACQUISITION PLAN ENLARGEMENT

SEGMENTS 7A & 7B

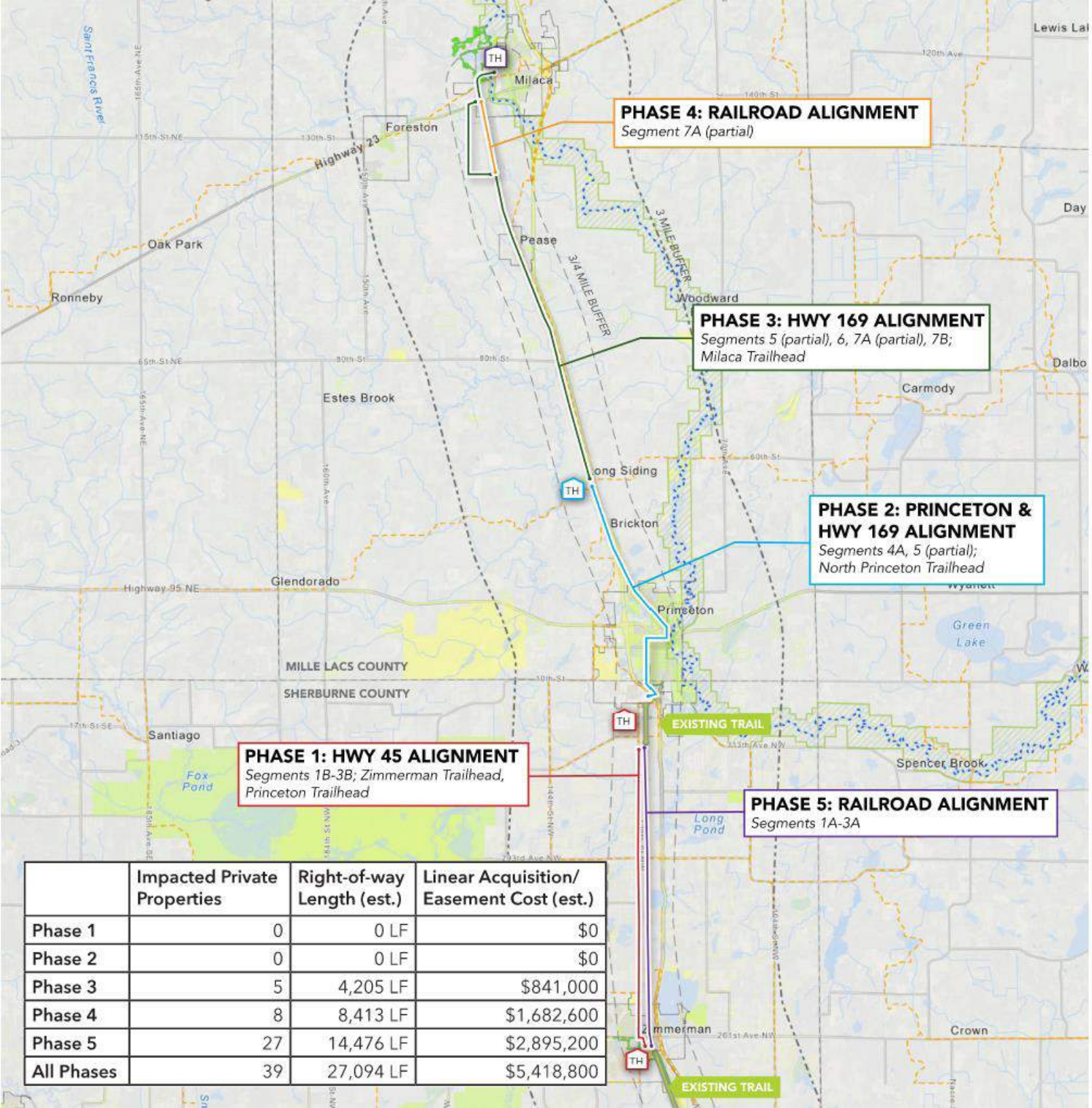
Legend

- Impacted Private Property
- Linear Acquisition or Easement
- Public land or Right of Way
- Existing Parks
- Local Bike Trail (existing)
- Local Bike Trail (future)
- Existing GNT Trail
- GNT RR Corridor
- Route Alternate on Public Land
- Route Alternate on Private Land
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail
- Boat Launch
- Proposed Trailhead

0 1/4 mile 1/2 mile 1 mile

N

12.29.2022 DF/ DAMON FARBER



	Impacted Private Properties	Right-of-way Length (est.)	Linear Acquisition/ Easement Cost (est.)
Phase 1	0	0 LF	$0
Phase 2	0	0 LF	$0
Phase 3	5	4,205 LF	$841,000
Phase 4	8	8,413 LF	$1,682,600
Phase 5	27	14,476 LF	$2,895,200
All Phases	39	27,094 LF	$5,418,800

GREAT NORTHERN TRAIL

IMPLEMENTATION PLAN

Legend

- Existing GNT Trail
- Proposed GNT Trail Phase
- TH — Proposed Trailhead
- Public land or Right of Way
- Existing Parks
- Local Bike Trail
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail

0 1 mile 2 miles 4 miles

N

12.29.2022 DF/ DAMON FARBER

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Operations & Maintenance

OVERVIEW

The members of the partnership committee will enter into a maintenance agreement that will define the level of care and responsibilities for maintenance on their portion of trail. General maintenance items include but not limited to:

- Tree and brush trimming to keep the trail clear
- Pothole patching and crack sealing
- Bituminous overlays as required
- Sign maintenance and replacement
- Drainage structure repair
- Erosion control as needed
- Annual Inspections
- Enforcement and security staffing

INVASIVE SPECIES

Invasive non-native species are known to exist along the existing trail corridor, but specific sites and species were not inventoried. The spread of invasive non-native plant species is a concern for any activity that results in soil disturbance. Trail users could contribute to the spread of invasive species. To minimize the potential of spreading invasive species, the trail should be monitored for invasive species during summer uses, especially during the first year after a new use is added or expanded. Where OHV use is occurring, partnerships with ATV clubs should be established to assist with invasive species monitoring along the trail.

Prevention strategies include the following (from the DNR's Operational Order 113):

• Identify and map invasive plants on the trail and adjacent lands;

• Minimize vegetation and soil disturbance during maintenance and construction;

• If working in an area with invasive species, prevent spreading viable roots and seeds by cleaning equipment;

• Use weed free surface hardening materials on the constructed treadway;

• Re-vegetate disturbances with temporary non-invasive cover crops to avoid erosion and allow native vegetation to re-populate the disturbance;

• Monitor disturbed sites particularly during the time vegetation is reestablished, and periodically thereafter; and

• The use of fill material (soils) from borrow sites could create an opportunity for invasive species to be moved or introduced into new areas. Top organic layers would be removed prior to excavating fill materials so that only mineral soils would be distributed along the treadway.

Great Northern Trail Annual Budget
Updated 12/30/2022

Item	Quantity	Unit	Unit Price	Total	Notes
Mowing and Clearing	21	LM	$3,000	$63,000	*Estimated using Sherburne County's 2021 budget numbers
Snow Removal	21	LM	$1,000	$21,000	*Estimated using Sherburne County's 2021 budget numbers
Patching	21	LM	$1,000	$21,000	*Estimated using Sherburne County's 2021 budget numbers
Culvert Repair and Erosion Control	21	LM	$200	$4,200	*Estimated using Sherburne County's 2021 budget numbers
Annual Inspecting	1	LS	$5,000	$5,000	Inspecting trailhead and trail facilities
Enforcement	4	LS	$10,000	$40,000	County and City sheriff time
Restroom Facility Maintenance	5	EA	$5,000	$25,000	Porta-potty weekly maintenance and restroom building cleaning
Utilities	1	LS	$25,000	$25,000	Electrical, water, and sewer at trailheads
Sign Maintenance and Replacement	1	LS	$5,000	$5,000	Due to vandalism or storm damage
			Total	**$209,200**	

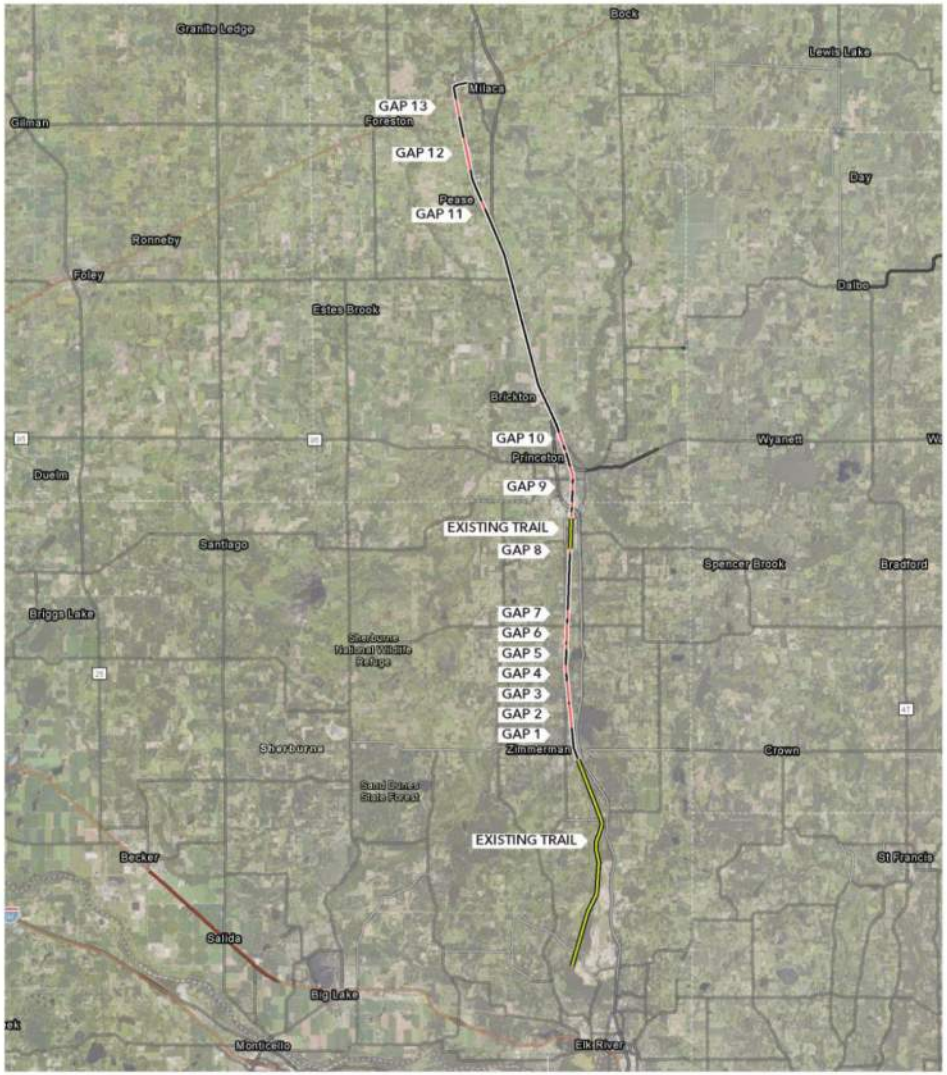
No fees will be collected for trail use

06 APPENDIX

Table of Contents

The appendix contains supporting documentation for the master plan and is broken up into the following sections.

- Route alternates study and results
- Analysis diagrams
- Resolutions of Support
- Letters of Support



CONTEXT MAP

Description

The 30 mile Great Northern Trail corridor takes advantage of an old RR grade between Milaca and Elk River. Most of the land needed for the trail is owned by public agencies, but several (7-8) private properties interrupt the current railroad corridor. The southmost 9 miles of the trail are paved from Elk River to Zimmerman, as well as a 2 mile segment through the City of Princeton.

Legend

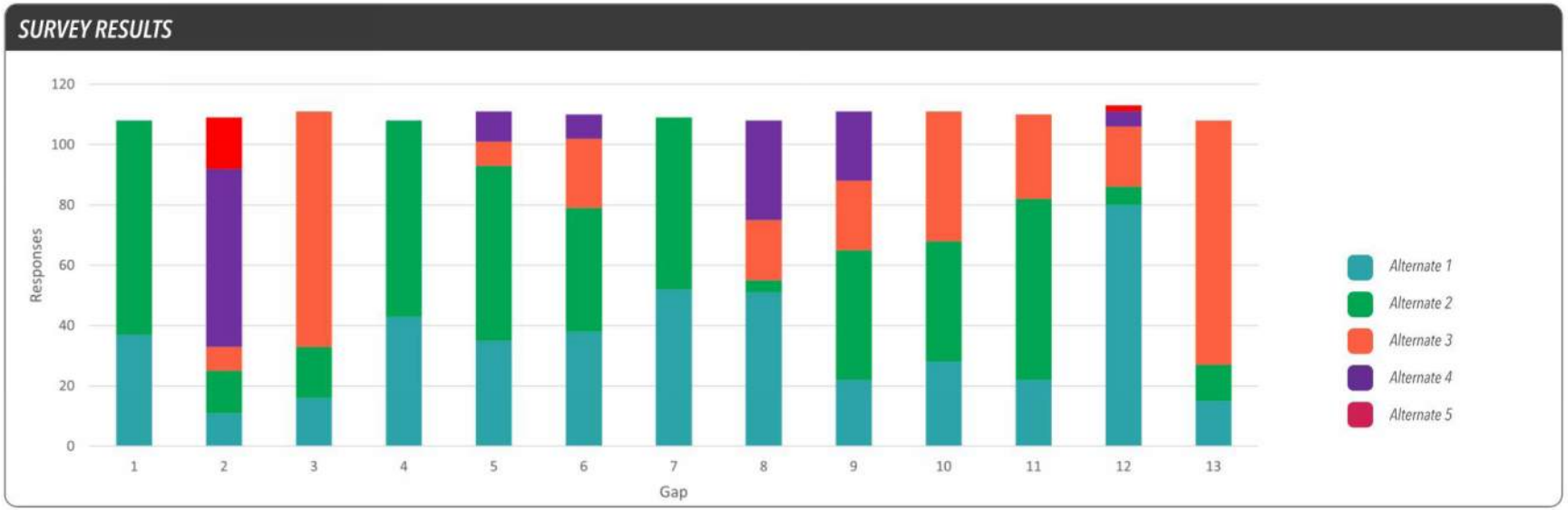
- Proposed trail alignment on public land
- RR grade on private land
- Existing Trail

0 2 miles 4 miles 8 miles N

07.22.2021 DF/ DAMON FARBER

GREAT NORTHERN TRAIL / GAP ANALYSIS / PUBLIC ENGAGEMENT SUMMARY

SURVEY RESULTS



SURVEY COMMENTS

1. Some of the early gaps solution involve getting private land but do not indicate that - what is the plan if those land owners are not interested in selling? why would the trail not just move to parallel county 45 whenever the private lands are not available or in some cases where they are but are land locked by private land not available?

2. I feel very strongly about this trail not being a motorized vehicle trail as the majority of it that's built already is not motorized.

3. I selected motorized use prohibited, but if the motorized use were on a separate trail adjacent to the bike trail, I would be okay with it.

4. Having served on the rails to trails task force myself for several years in the mid 90s it is amazing to me that this hasnt been accomplished yet. Excellent idea establishing gaps and requesting public comment on trail options. However, we well know that any of the trail options with a willing seller is the route that should be taken to make this trail ultimately possibly. Unwilling sellers is why we dont have this trail today. Thank you for continuing to plug away at this.

5. Based on the information I have seen to date, I am 100% opposed to developing this trail. Seems like such a waste of money, when there are already so many options for recreation. My property taxes go up double the rate my income does, but I have seen marginal improvement to the road past my property. The roads we all drive on should be improved long before a trail is built.

6. Thoughts to use to make decision:
1. Trail has trees for shade. 100% sun may limit use. 2. Easy navigation. 3. Least amount traffic crossings. Build pedestrian bridges over or under roads. 4. I would like to see option for snowmobile use in winter, but no ATV use in summer. Trail may have less pedestrian traffic in winter so share, but ATV traffic too dangerous for increased traffic in summer. 5. Concerned easements need to be written in a way to reduce losing them in the future -- see this with other trails (more hiking)

7. Good luck! We enjoy walking the trail and love the fact that it is now paved. Saw our first and only barred owl! Spied a doe and her baby fawn yesterday. Thanks again.

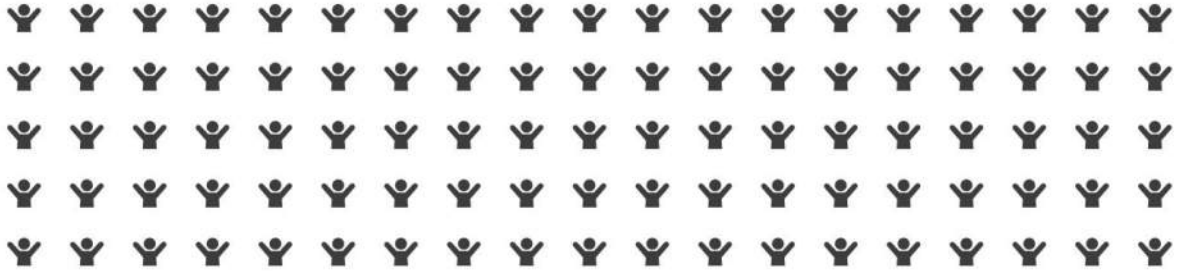
8. If you spend the money, snowmobiles and atv should be allowed

9. The reason for choosing no motorized use on the trail north of Princeton is because there is already heavily used ATV trails through the ditches on the East side of 169. I don't think it would be necessary to have ATV trails available on both sides of 169.

10. Option choices are made with the assumption of property owner willingness to sell or grant easement. My priority is to make the trail happen. Motorized vehicles along with non motorized use severely degrades the experience of non motorized users and is a safely concern for those on foot. I strongly prefer non motorized use where possible.

SURVEY COMMENTS (CONT'D)

OVER 100 UNIQUE RESPONSES



11. Please do not allow motorized use on any portion of the trial. We own land next to current rail bed owned by Mille Lacs County and trespassing by motorized vehicles is a significant problem.

12. I think it would be amazing to have a road bike trail. I dont feel safe riding around Milaca or Princeton and also wouldnt want to get hit by an ATV on the trail. Maybe it could be like the trail in Onamia and the trails are side by side?

13. The entire thing is a horrible idea.

14. From Zimmerman all the way to Milaca should be motorized use!!! Also, hope this is coming from the legacy fund. Will work actively against this, have more important issues our country should be using tax payers funds!

15. Id like to see the trail closer to 169 and away from private properties. We have a 10 acre hobby farm, and the proposed routes run very close to our home. My family chose our property for privacy, hunting, raising horses, and other recreational activities. Allowing the public to pass through our property infringes on our privacy and our ability to continue with our own recreational activities.

16. Please keep the trail within railroad ROW wherever feasible. If its easier to develop the trail along CR 45, e.g. between Zimmerman and 293rd, thats not a dealbreaker. I just really want a trail from Elk River to Milaca. And if youre working with the city of Milaca, yall might as well talk with them about developing the Brook Park to Saint Cloud corridor into a bike trail.

17. It is often hard to get folks to travel in anything other than the shortest way between two points.

18. This is a great project. I hope that the cities will also be adding more trails in the city limits for greater access to the GNT, and I do think this should be discussed in detail with Zimmerman, Princeton, and Milaca. More access to the trail will mean more riders. I would love to Load up my kids and drop them off and have them bike back home without me having to pick them up on the other side of town.

19. Love the current trail from Elk River to Zimmerman, hopeful it can be extended to Milaca, preferably on railroad bed w/out ATVs.

20. This will be a great trail. We're excited to see it come together!

21. Would it be possible to keep trail away from Hwy 169.I would like to see the trail go north out of Princeton pass the schools and follow county rd 4 too Milaca away from hwy 169 noise.Would it be possible to do the same to if trail were further west of Hwy 169 to get to Milaca following a county road.I really wish to keep the trail away from a busy hwy.We have that issue with the trail between Albany and Sauk Center.Would it be possible to somehow get a trail to include the Sherburne Wildlife Refuge.Again keep up the good work on planning,much anticipated!!!!

22. Need to extend motorized vehicle use on full trail

23. I would recommend the trail alignment follow the west side of county road 45 north of county road 4 all the way through Zimmerman instead of jogging to the east as the option describes. There was no option to choose from for this proposal.

24. I love riding my bicycle on old railroad bed trails. Please try to retain as much of the original straight lines as possible without riding on roads. This could become a gem destination trail equal to others in Minnesota.

25. As an avid cyclist (4500 miles in the last 9 months) I know completing this trail will increase tourism and business will pop up along the route that support the bikers. Bikers will travel to the new trail and support the many businesses along the route. It would be great to stay as close to the original RR line if financially possible.

26. Within existing coordidor, crossing County Road 19 - traffic from east is traveling very fast and site line is too short to cross safely. From the west is good - visibility is far enough to see traffic coming from an adequate distance.

PUBLIC OPEN HOUSE FACILITATOR COMMENTS

Stephanie Hillesheim

Community Development Manager - Princeton

I received very positive feedback from people who came to the Princeton area paths from County Road 9 to the north end of Princeton. A lot of "we don't care what route as long as it is completed." There were some concerns regarding the route currently in place having to go through the roundabout on the Rum River Drive and the 169 interchange and many people mentioned that it would be preferred to have a spur to downtown to encourage economic development. Overall the theme was positive.

Chris Berg

Director of Land Services - Mille Lacs County

The main takeaways that I gained from the event:

1. Nearly everyone would prefer a bike trail only.
2. Connectivity is more important than the route.
3. Do not attempt to cross parcel 12-012-0600

a. Head west to Co Rd 5?

b. Head east to Fireside Rd and around up to 120th Street?

c. It's a tough area - lots of wetlands.

4. Milaca did not engage with property owners in city limits, and their input is needed for that northern most gap.
5. City of Pease and area property owners are super supportive of the proposed bike trail.

Gina Hugo

Parks Coordinator - Sherburne County

I heard 2 main themes:

1. Positive energy for the vision of a non-motorized recreational trail along the corridor - this theme carried less concern about exact placement of final alignment
2. Concerns about trail running across the back of private property, coupled with concerns from other landowners about losing privacy along County Road 45 and safety concerns about home/property security.

GAP 1

Legend

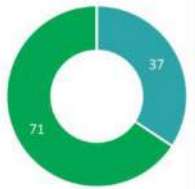
- Publicly owned land and ROW
- Proposed trail alignment on public land
- RR grade on private land
- Existing Trail
- Route Alternate 1

This route proposes to bisect the City of Zimmerman Lion's Park and Zimmerman Elementary properties to shift the trail west to intersect CH 45. Route would continue north approximately ¼ mile on an existing bituminous trail on the west side of CH 45, cross CSAH 4 or Fremont Avenue at a signalized intersection, then continue north to the intersection of 5th Avenue North. The route crosses CH 45 to the east and continues along the north side of 5th Avenue North on an existing bituminous trail approximately ¼ mile to intersect existing rail grade, with trail proposed to continue north in the grade.

- Route Alternate 2

This route proposes to follow the former Great Northern rail grade north from Main Street into the downtown area using 2nd Street East right of way. A crossing of CSAH 4 or Fremont Avenue is required at the 2nd Street East intersection to access city-owned former rail grade, and continuing north through the city.

SURVEY RESULTS



COMMENTS

- *Amenities located in town for trail users.*
- *Too much traffic and conflict in town.*
- *Consider signage*
- *Donor sponsorship rides/events to help fund trail maintenance.*

07.22.2021 DF/ DAMON FARBER

GREAT NORTHERN TRAIL / GAP ANALYSIS / PUBLIC ENGAGEMENT SUMMARY

GAP 2

Legend

- Publicly owned land and ROW
- Proposed trail alignment on public land
- RR grade on private land
- Existing Trail
- Route Alternate 1

This route proposes to deviate westward from the existing Great Northern rail grade across privately owned property along the south side of the Christ Our Light Cemetery, then northward along trail to be constructed along the west side of CH 45 right of way.

- Route Alternate 2

This route proposes to deviate westward from the existing Great Northern rail grade across privately owned property at the south side of the Christ Our Light Cemetery, then northward along trail to be constructed along the east side of CH 45 right of way.

- Route Alternate 3

This route proposes to utilize the existing Great Northern rail grade to a point where it intersects a privately owned oak woodlot and wetland, then turning west to intersect CH 45 at the 269th Avenue intersection. This east-west routing could very likely also be a future route for street and utility extension of 269th Avenue eastward, providing service to currently undeveloped properties along TH 169

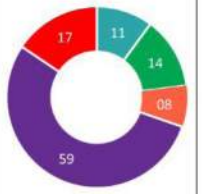
- Route Alternate 4

This route proposes to utilize existing Great Northern rail grade through a privately owned oak woodlot and wetland complex, crossing over the wetland on an existing railroad bridge and continuing northward on the former rail grade.

- Route Alternate 5

This route proposes to utilize existing Great Northern rail grade to a point approximately ¼ mile north of Zimmerman city limits, then deviate to the east on private property around a wetland complex and rejoining the existing rail grade. The route would provide trail access for and into possible future

SURVEY RESULTS



- Alternate 1
- Alternate 2
- Alternate 3
- Alternate 4
- Alternate 5

COMMENTS

- *Water filling stations desired at trailheads/ parking lots*

GREAT NORTHERN TRAIL / GAP ANALYSIS / PUBLIC ENGAGEMENT SUMMARY

07.22.2021 DF / DAMON FARBER

GAP 3

Legend

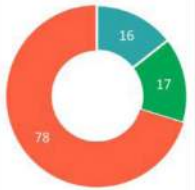
- Publicly owned land and ROW
- Proposed trail alignment on public land
- RR grade on private land
- Existing Trail
- Route Alternate 1

  This route proposes to construct the trail along the west side of CH 45 right of way.
- Route Alternate 2

  This route proposes to construct the trail along the east side of CH 45 right of way.
- Route Alternate 3

  This route proposes to utilize the existing Great Northern rail grade to a point where it intersects 273rd Avenue, then turning west along the north side of the Avenue to intersect CH 45. The route would continue northward on the east side of CH 45 until the trail is adjacent to publicly owned former rail grade, then continuing north on the public grade.

SURVEY RESULTS



COMMENTS

- *Minimize driveway crossings when possible to improve bicycle safety.*

GREAT NORTHERN TRAIL / GAP ANALYSIS / PUBLIC ENGAGEMENT SUMMARY

0 1/16 mile 1/8 mile 1/4 mile N

07.22.2021 DF/ DAMON FARBER

GAP 4

Legend

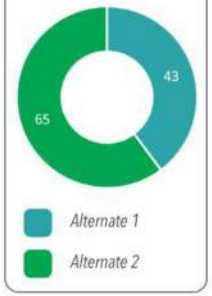
- Publicly owned land and ROW
- Proposed trail alignment on public land
- RR grade on private land
- Existing Trail
- Route Alternate 1

This option would construct a grade separated trail along the east side of 128th Street (County Road 45) from Zimmerman to 313th Ave in Princeton in public owned ROW. We do not anticipate that this option would require easement purchase.

- Route Alternate 2

This option would leave original railroad grade after crossing 281st Ave to a grade separated trail along the side of 128th Street (County Road 45) for approximately ¼ mile before returning to original railroad grade on publicly owned trail corridor.

SURVEY RESULTS



GREAT NORTHERN TRAIL / GAP ANALYSIS / PUBLIC ENGAGEMENT SUMMARY

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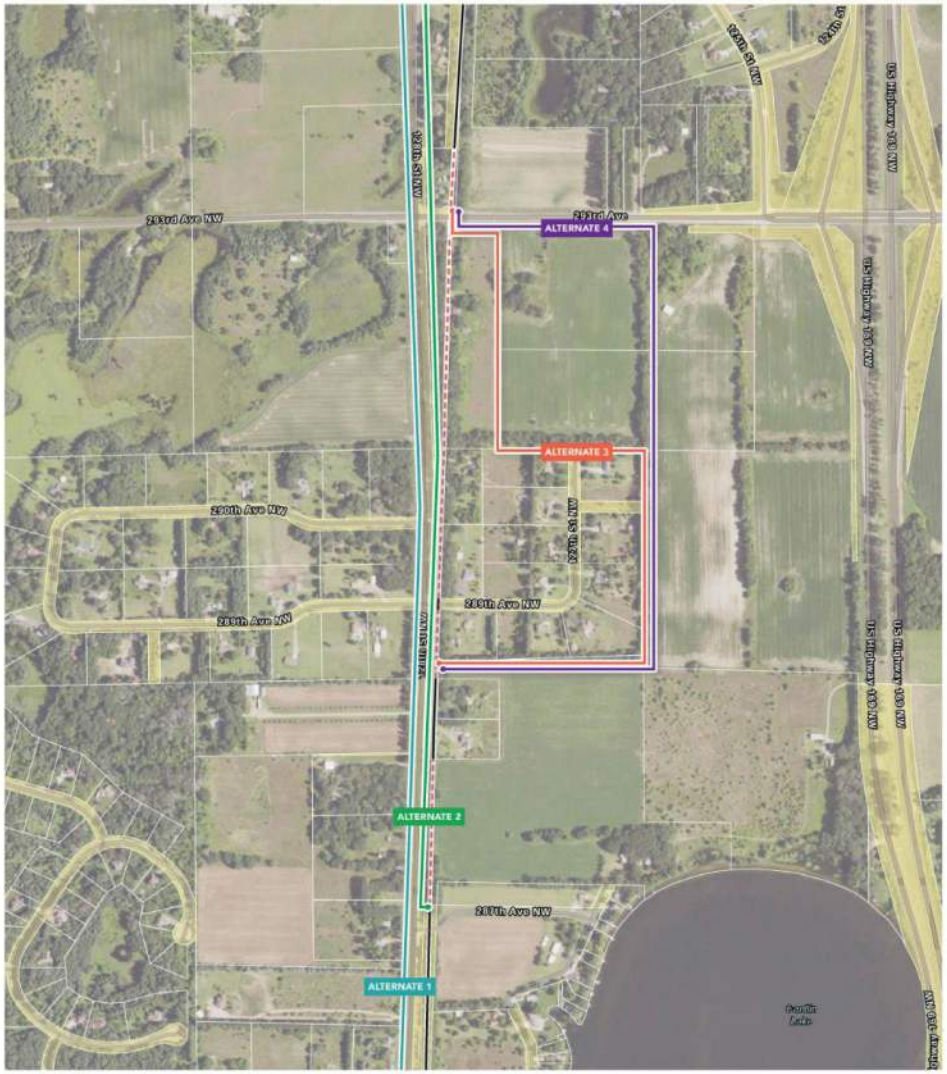


GAP 5

Legend

- Publicly owned land and ROW
- Proposed trail alignment on public land
- RR grade on private land
- Existing Trail
- Route Alternate 1

This option would construct a grade separated trail along the east side of 128th Street (County Road 45) from Zimmerman to 313th Ave in Princeton in public owned ROW. We do not anticipate that this option would require easement purchase.

- Route Alternate 2

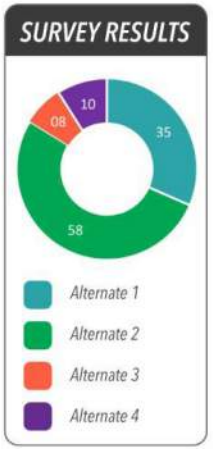
This option would leave original railroad grade at 287th Avenue to grade separated trail along the east side of 128th Street (County Road 45) for approximately 1 ¼ miles to 297th Ave to return to original railroad grade on publicly owned trail corridor.

- Route Alternate 3

This option would leave original railroad grade to skirt around residential properties on the south, east and north property edges before heading straight north to 293rd to return to original railroad grade on publicly owned trail corridor. This would require easement purchase of private property from willing sellers.

- Route Alternate 4

This option would leave original railroad grade to skirt around residential properties on the south and east property edge, then continue straight north along property boundary non residential private rural land to 293th Avenue then west on north side of 293rd to return to original railroad grade on publicly owned trail corridor. This would require easement purchase of private property from willing sellers.



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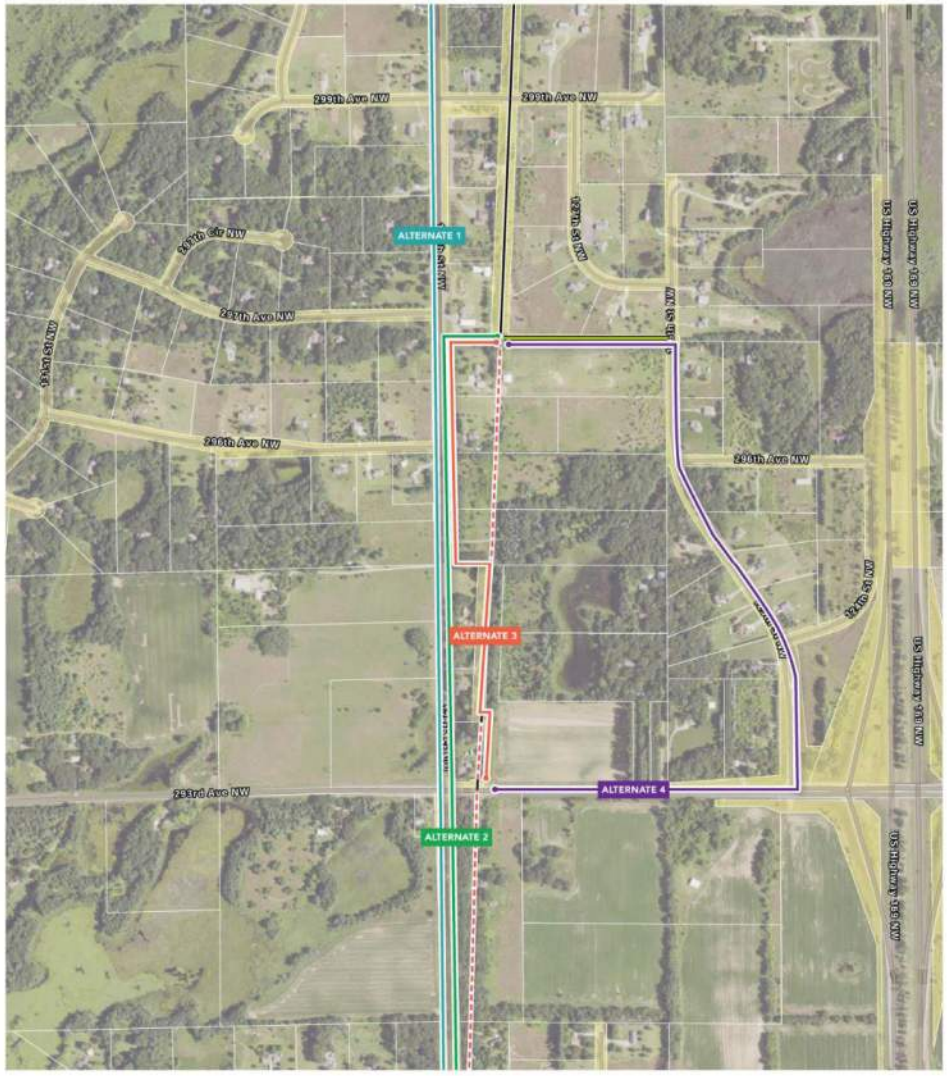
GREAT NORTHERN TRAIL / GAP ANALYSIS / PUBLIC ENGAGEMENT SUMMARY



GAP 6

Legend

- Publicly owned land and ROW
- Proposed trail alignment on public land
- RR grade on private land
- Existing Trail
- Route Alternate 1

This option would construct a grade separated trail along the east side of 128th Street (County Road 45) from Zimmerman to 313th Ave in Princeton in public owned ROW. We do not anticipate that this option would require easement purchase.

- Route Alternate 2

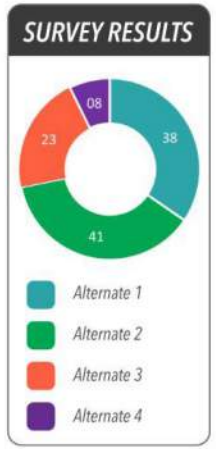
This option would construct a grade separated trail along the east side of 128th Street (County Road 45) from 287th Avenue to 297th Avenue to return to original railroad grade on publicly owned trail corridor.

- Route Alternate 3

This option would construct trail on original railroad grade on publicly owned corridor for approximately ¼ mile where public ownership of corridor ends. Form there it would head west to a grade separated trail on the east side of 128th Street (County Road 45) on publicly owned ROW for another ¼ mile before again heading east to return original railroad grade on publicly owned trail corridor. This would require easement purchase of private property from willing seller.

- Route Alternate 4

This option would construct a grade separated trail along the north side of 293rd Avenue to head east to 125th Street, here it would continue north on existing trail through residential neighborhood on the east side of 125th Street for approximately ¾ mile to existing trial to go west back to original railroad grade on publicly owned trail corridor.



07.22.2021 DF / DAMON FARBER

GREAT NORTHERN TRAIL / GAP ANALYSIS / PUBLIC ENGAGEMENT SUMMARY

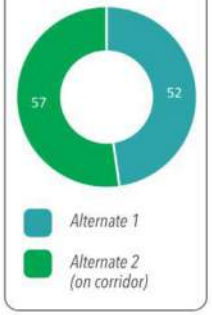
GAP 7

Legend

- Publicly owned land and ROW
- Proposed trail alignment on public land
- RR grade on private land
- Existing Trail
- Route Alternate 1

This option would construct a grade separated trail along the east side of 128th Street (County Road 45) from Zimmerman to 313th Ave in Princeton in public owned ROW. We do not anticipate that this option would require easement purchase.

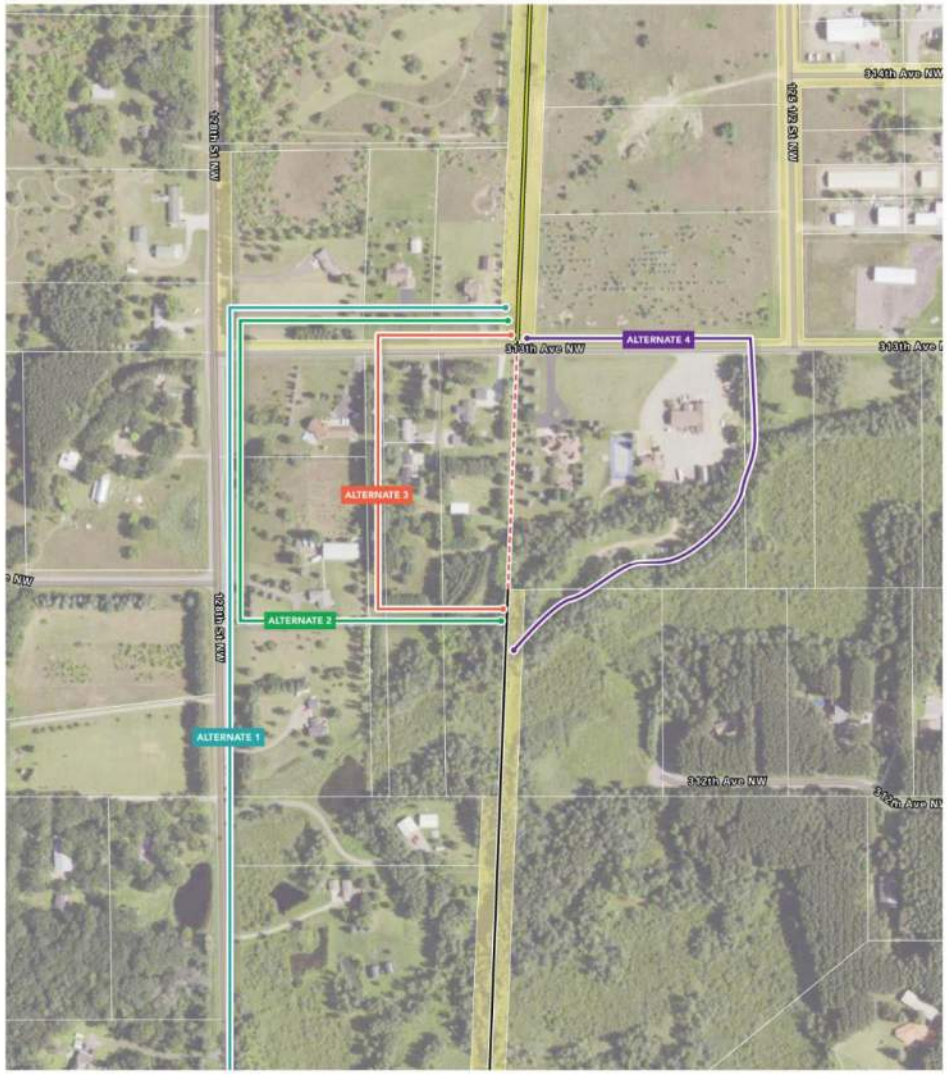
SURVEY RESULTS



GREAT NORTHERN TRAIL / GAP ANALYSIS / PUBLIC ENGAGEMENT SUMMARY

0 1/16 mile 1/8 mile N

07.22.2021 DF/ DAMON FARBER



GAP 8

Legend

- Publicly owned land and ROW
- Proposed trail alignment on public land
- RR grade on private land
- Existing Trail
- Route Alternate 1

This option would construct a grade separated trail along the east side of 128th Street (County Road 45) from Zimmerman to 313th Ave in Princeton in public owned ROW. We do not anticipate that this option would require easement purchase.

- Route Alternate 2

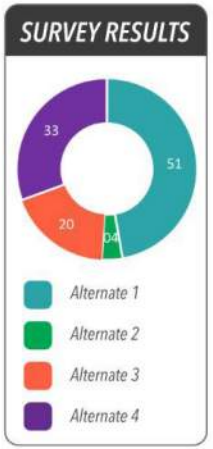
This option leaves original grade to head west for approximately 900' on privately owned land that would require easement purchase of private property from willing sellers. At 128th Street (County Road 45) it would then head north on a grade separated trail along the east side of 128th Street (County Road 45) to 313th Avenue to cross over to north side of 313th Ave and head east on grade separated trail in publicly owned ROW to return to completed trial on original railroad grade on publicly owned trail corridor.

- Route Alternate 3

This option leaves original grade to head west for approximately 350' on privately owned land that would require easement purchase of private property from willing sellers; it would then head north on a through land that would also require easement purchase of private property from willing seller, to 313th Avenue to cross over to north side of 313th Ave and head east on grade separated trail in publicly owned ROW to return to completed trail on original railroad grade on publicly owned trail corridor.

- Route Alternate 4

This option sleaves original grade to veer east, skirting large wetland in a northeasterly direction to connect to 313th east of original railroad grade. This would require easement purchase of private property from willing sellers. After crossing 313th at the point a grade separated trail would be constructed along the north edge of 313th Avenue to the west to connect to original railroad grade on publicly owned trail corridor.



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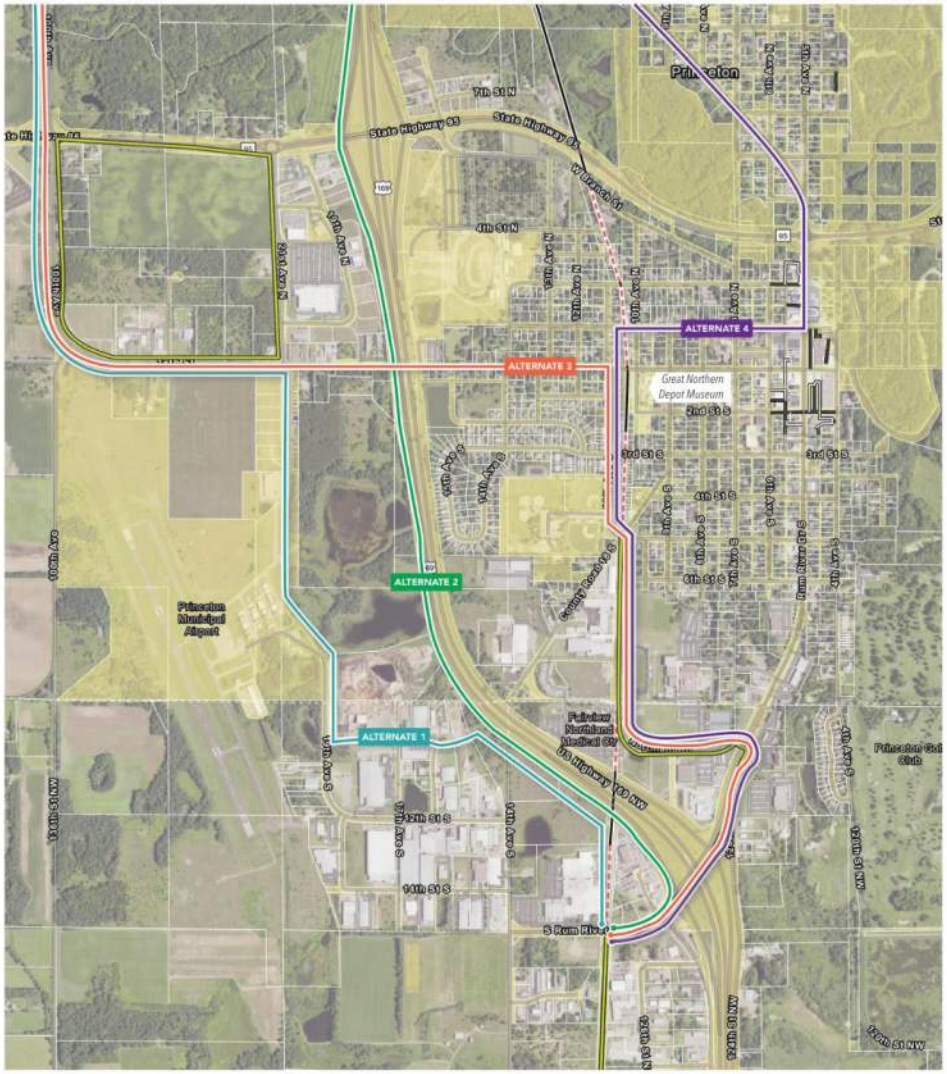
GREAT NORTHERN TRAIL / GAP ANALYSIS / PUBLIC ENGAGEMENT SUMMARY



GAP 9

Legend

- Publicly owned land and ROW
- Proposed trail alignment on public land
- RR grade on private land
- Existing Trail
- Route Alternate 1

Exits existing paved trail on original railroad grade to continue straight north along the east property boundary of private business, then veers northwest through privately owned property to then follow along 12th Street to 19th Avenue(Airport Road). At 19th Avenue it would head north along east side 19th Avenue (Airport Road). It would continue north to connect along 21st Avenue to then connect to existing trail and head west along the north side of 1st Street; then continuing north to cross MN State Hwy 95. This option would require easement purchase of private property from willing sellers.

- Route Alternate 2

Exits existing paved trail on original railroad grade and follows along north side of Rum River Drive to then parallel US I Hwy 169 on a grade separated trail on the west side of the Highway in publicly owned ROW.

- Route Alternate 3

Exits existing paved trail on original railroad grade and follows along south side of Rum River Drive on existing trail to cross under the over pass and continue on existing trail that follows along the east side of Northland Blvd, just past Princeton Highschool Track where it would then cut north to connect along 11th Avenue S, near Mark Park and continue north to 1st Street. This options would bring trail users to the Princeton Depot and Mille Lacs County History Museum, before heading west along 1st Street to cross Hwy 169. Continuing along 1st Street and curving north along 100th Avenue to cross MN State Hwy 95. This option would also require easement purchase of private property from willing sellers.

- Route Alternate 4

Exits existing paved trail on original railroad grade and follows along south side of Rum River Drive on existing trail to cross under the over pass and continue on existing trail that follows along the east side of Northland Blvd, just past Princeton Highschool Track where it would then cut north to connect along 11th Avenue S, near Mark Park and continue north to 1st Street. This options would bring trail users to the Princeton Depot and Mille Lacs County History Museum before continuing north to 2nd Street North and heading east along 2nd Street to South Rum River Drive to then head north along Rum River Drive, through round about to cross Hwy 95 to continue along North Rum River Drive. This option could require easement purchase of private property from willing sellers.

SURVEY RESULTS

- Alternate 1
- Alternate 2
- Alternate 3
- Alternate 4

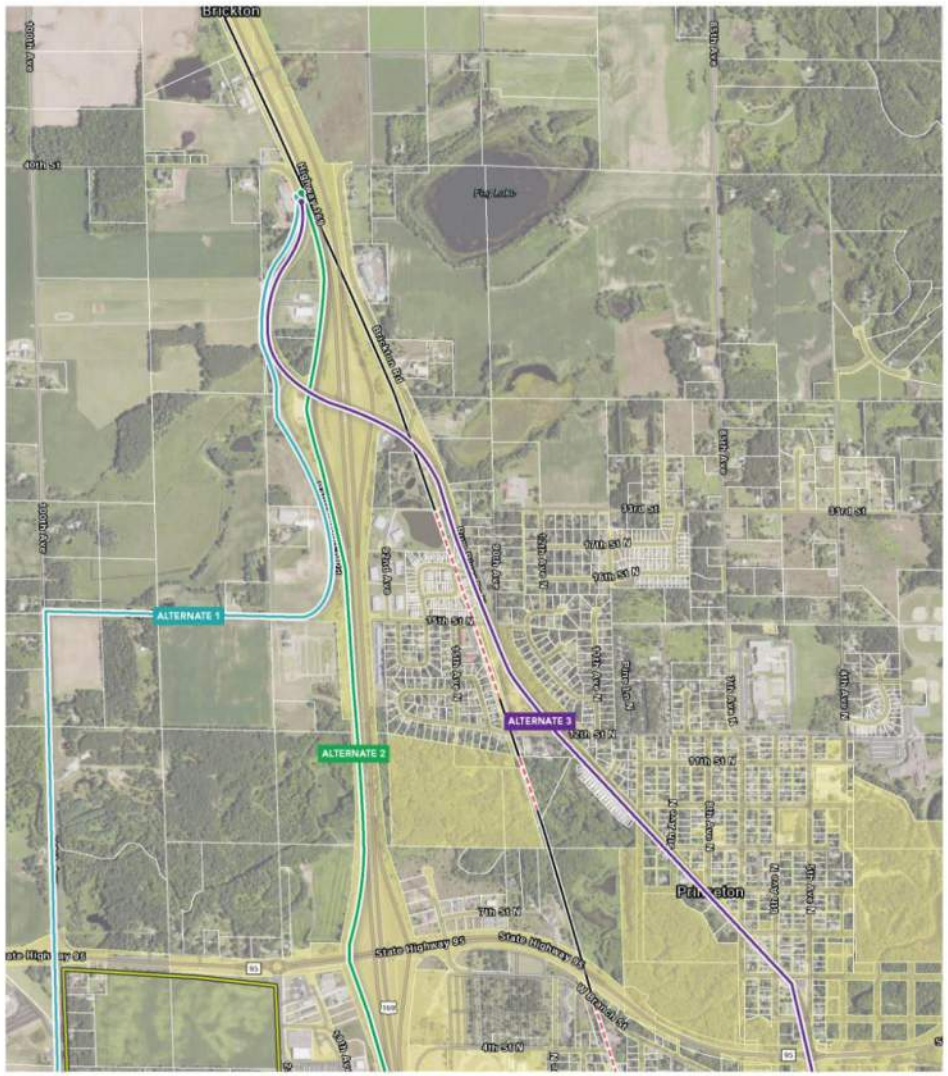
COMMENTS

- *Prefer to see grade separated road crossings when possible to eliminate pedestrian vs car conflicts.*
- *Another route alternate: on the east of 169 go through Princeton and cross 95 under the Bridge to connect to Mille Lacs County 4 – use this road for grade separated trail.*

0 1/8 mile 1/4 mile 1/2 mile N

07.22.2021 DF/ DAMON FARBER

GREAT NORTHERN TRAIL / GAP ANALYSIS / PUBLIC ENGAGEMENT SUMMARY



GAP 10

Legend

- Publicly owned land and ROW
- Proposed trail alignment on public land
- RR grade on private land
- Existing Trail
- Route Alternate 1

This option would continue north on grade separated trail along 100th Avenue to Baptist church road and would follow along south side of this road on grade separated trail to connect back to original railroad grade along the west side of US Hwy 169. This option could require easement purchase of private property from willing sellers.

- Route Alternate 2

This option would parallel US Hwy 169 on a grade separated trail on the west side of the Highway in publicly owned ROW to connect back to original railroad grade along the west side of US Hwy 169. We do not anticipate that this option could require easement purchase of private property from willing sellers.

- Route Alternate 3

This option continues along North Rum River Drive to cross US Hwy 169 and follow along the east side of Baptist Church Road to connect back to original railroad grade along the west side of US Hwy 169. We do not anticipate that this option could require easement purchase of private property from willing sellers.

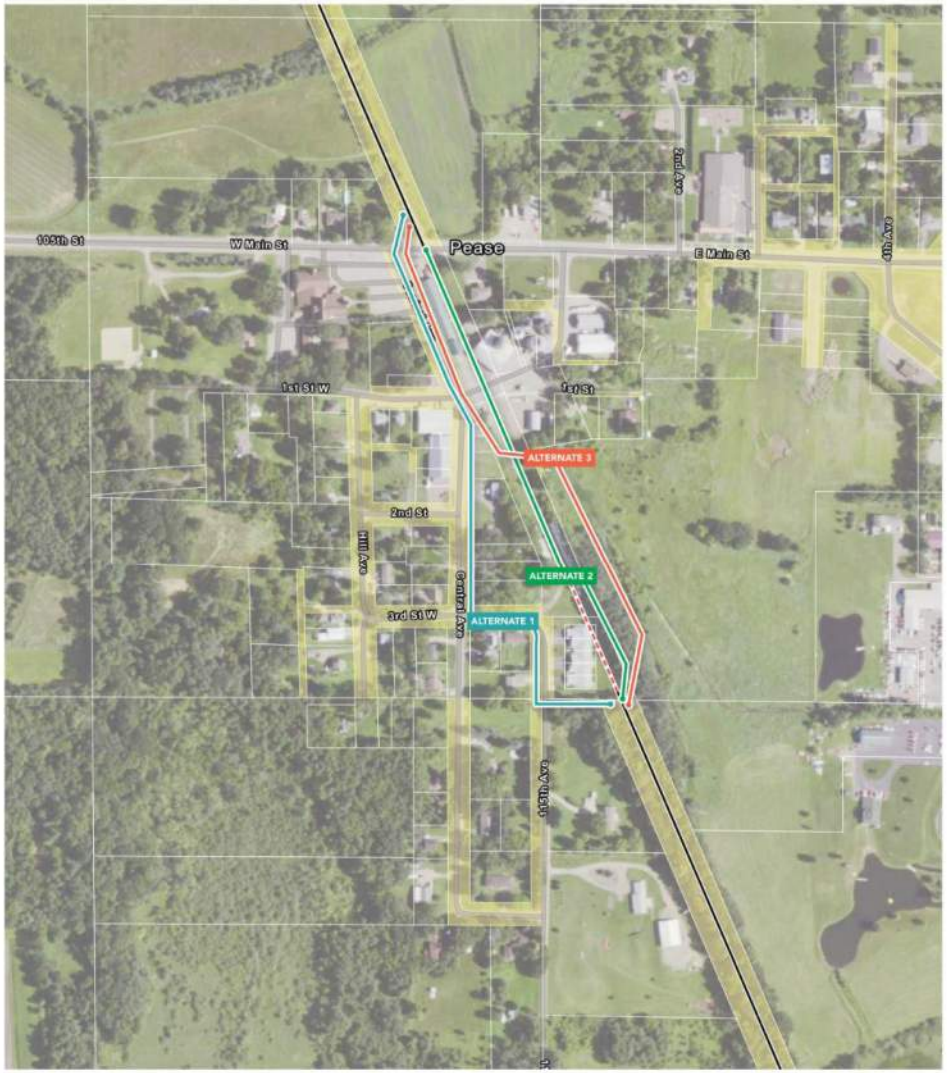
SURVEY RESULTS

COMMENTS

- *Prefer to see grade separated road crossings when possible to eliminate pedestrian vs car conflicts.*
- *Another route alternate: Coming out of Princeton to the west stay on 100th Ave – which turns into Mille Lacs County Road 102 – this comes right into long siding. At County Road 13 (55 street) head west follow around bend – where it becomes 125th or County Road 5 – us this all the way to Milaca to cross 23 and proceed to Milaca City Park*

GREAT NORTHERN TRAIL / GAP ANALYSIS / PUBLIC ENGAGEMENT SUMMARY

07.22.2021 DF / DAMON FARBER



GAP 11

Legend

Publicly owned land and ROW

Proposed trail alignment on public land

RR grade on private land

Existing Trail

Route Alternate 1

Route alternate 1 would have the trail entering the City of Pease from the south on publicly owned land. There would then need to be an easement purchased from willing landowners in order for the trail to then head west to 115th Ave. The trail or sidewalk would then head north on 115th Ave. until hitting Central Ave. The trail or sidewalk would then travel alongside Central Ave. and head north all the way to West Main St. where it would then enter the publicly owned grade and then continue north out of the City of Pease.

Route Alternate 2

Alternate 2 would have the trail entering the City of Pease from the south on publicly owned land. There would then need to be easements purchased from willing landowners in order for the trail to head N/NE around the existing townhouses and then back to the northwest onto the privately owned original grade and then heading north on the original grade to just past W Main St. where it would then go back on the publicly owned portion of the grade and head north from the City of Pease.

Route Alternate 3

Route alternate 3 would have the trail entering the City of Pease from the south on publicly owned land. There would then need to be easements purchased from willing landowners in order for the trail to head further NE than route alternate 2, then would head north, still utilizing easements purchased from willing landowners, and then just south of 1st St, the trail would head back NW to join Central Ave and then would run along Central until joining the existing publicly owned grade north of Main St. and then continue north from the City of Pease.

SURVEY RESULTS

COMMENTS

- *Would prefer most rural trail option heading into Pease.*

0 1/16 mile 1/8 mile 1/4 mile N

07.22.2021 DF/ DAMON FARBER

GREAT NORTHERN TRAIL / GAP ANALYSIS / PUBLIC ENGAGEMENT SUMMARY

GAP 13
Legend

- Publicly owned land and ROW
- Proposed trail alignment on public land
- RR grade on private land
- Existing Trail
- Route Alternate 1

Leaves original railroad grades and heads west along south boundary of large rural property, crosses 125th Ave and follows along the west side of 125th Ave to cross MN State Hwy 23 before heading east along the north side of MN State Hwy 23 before reconnecting to original railroad grade that is public owned. This option would require easement purchase of private property from willing seller.

- Route Alternate 2

Leaves original railroad grades and heads west along north boundary of large rural property and the south boarder of rurual residential properties, crosses 125th Ave and follows along the east side of 125th Ave to cross MN State Hwy 23 before heading east along the north side of MN State Hwy 23 before reconnecting to original railroad grade that is public owned. This option would require easement purchase of private property from willing sellers.

- Route Alternate 3

This option keeps the trail on the original railroad grade to cross MN State Hwy 23 and would require easement purchase of private property from willing sellers.

SURVEY RESULTS

- Alternate 1
- Alternate 2
- Alternate 3

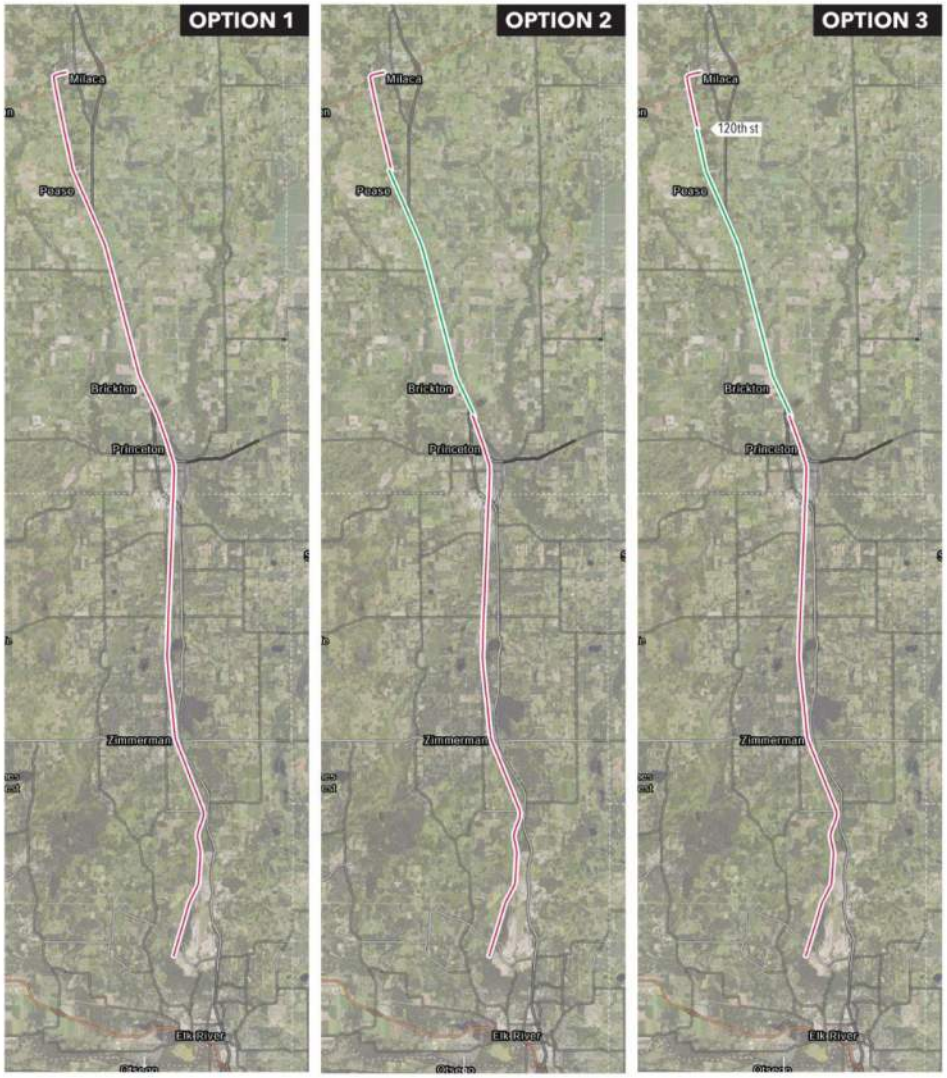
COMMENTS

- *Consider grade separated crossing at highway 23.*
- *There are existing bike facilities north of highway 23.*

0 1/16 mile 1/8 mile 1/4 mile N

07.22.2021 DF / DAMON FARBER

GREAT NORTHERN TRAIL / GAP ANALYSIS / PUBLIC ENGAGEMENT SUMMARY



MOTORIZED USE

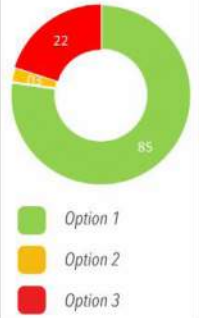
Description

The 30 mile Great Northern Trail corridor takes advantage of an old RR grade between Milaca and Elk River. Most of the land needed for the trail is owned by public agencies, but several (7-8) private properties interrupt the current railroad corridor. The southmost 9 miles of the trail are paved from Elk River to Zimmerman, as well as a 2 mile segment through the City of Princeton.

Legend

- Multi-Use trail with Motorized Use
- Multi-Use trail without Motorized Use

SURVEY RESULTS



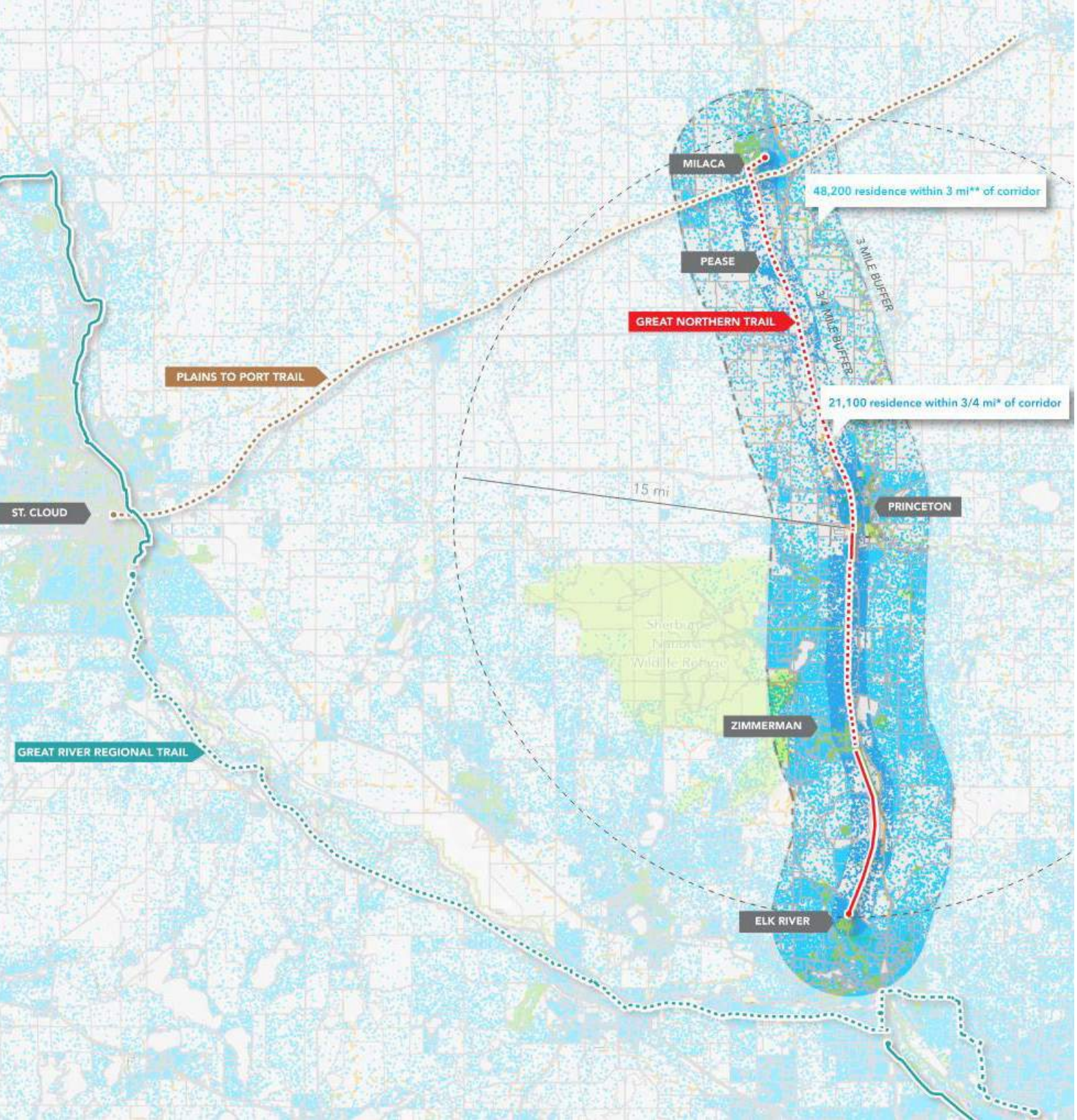
COMMENTS

- *Consider an option with horse/equestrian trail adjacent to multi use trail.*

GREAT NORTHERN TRAIL / GAP ANALYSIS / PUBLIC ENGAGEMENT SUMMARY

0 2 miles 4 miles 8 miles N

07.22.2021 DF/ DAMON FARBER



REGIONAL DEMOGRAPHICS

Legend

Population Density
(2020 census tract data)

· 1 Dot = Person

Existing Trail

Proposed Trail

Local Bike Trail

Existing Parks

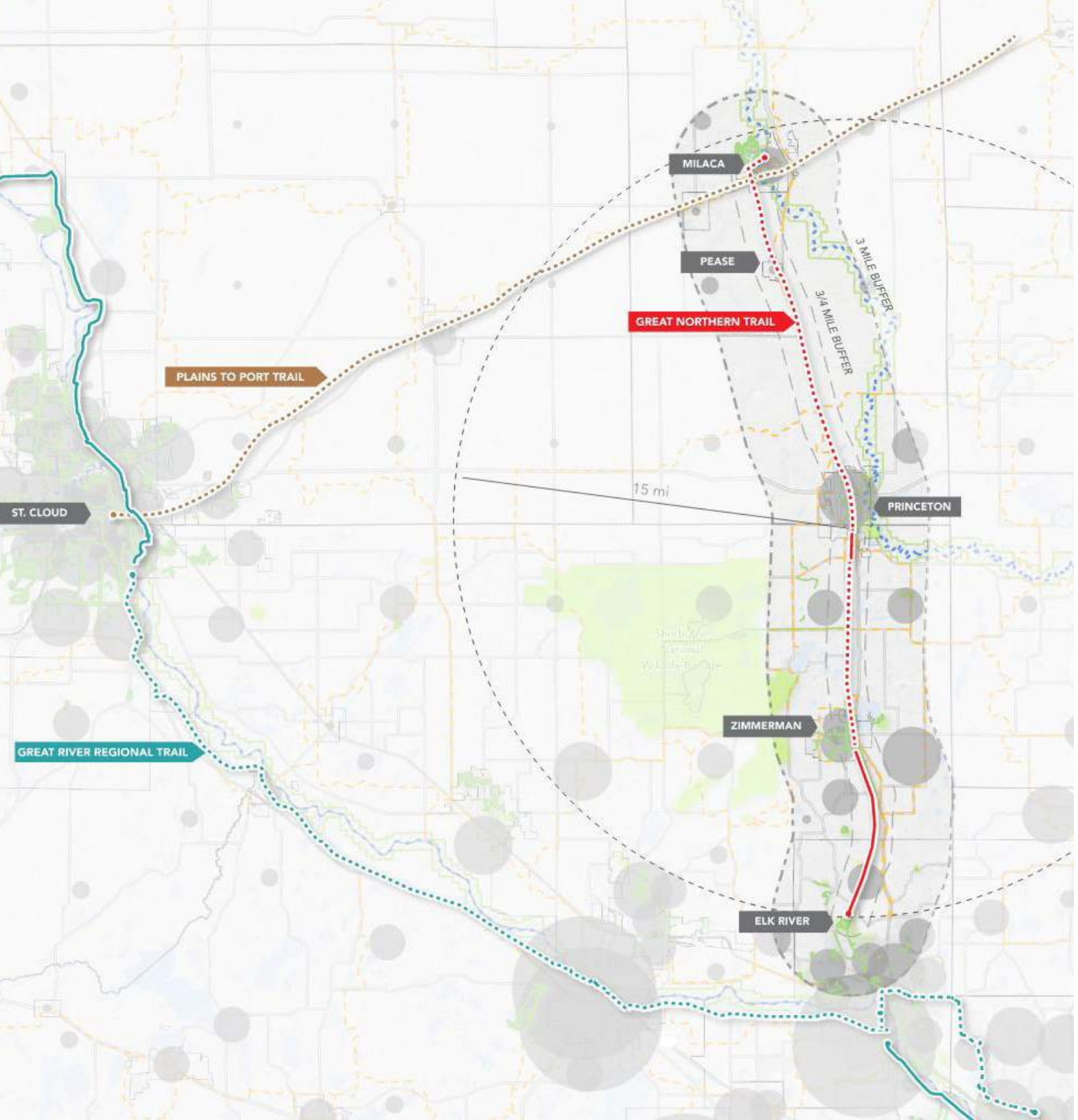
Designated Snowmobile Route

Scenic Riverway

Designated Water Trail

** 50% of trail users live within 3/4 mi of a trail*
*** 75% of trail users live within 3 mi of a trail*

0 2 miles 4 miles 8 miles



REGIONAL DEMOGRAPHICS

Legend

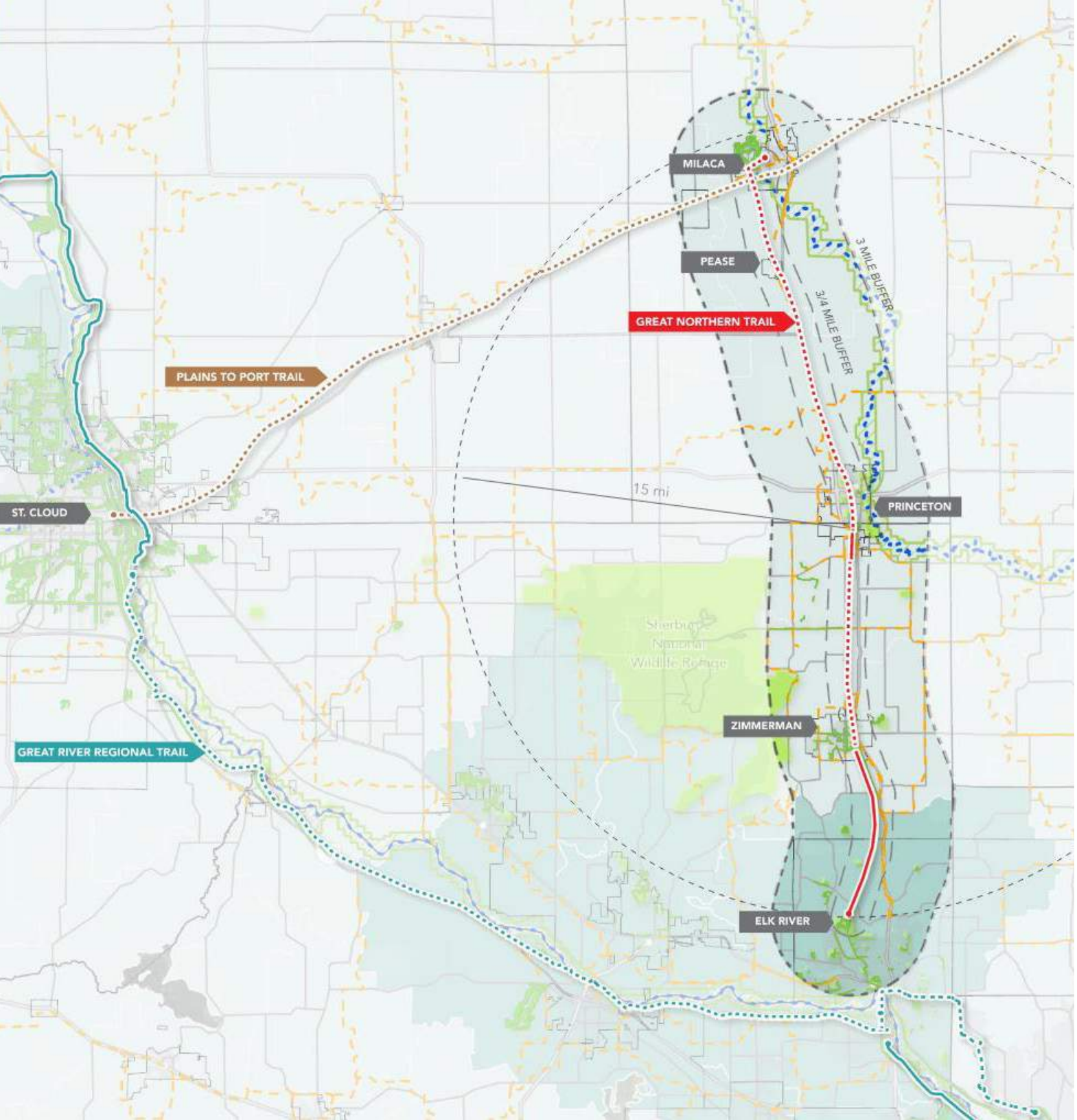
Population Density
(2020 census, voting distric boundaries)

- 1,000 people or less
- 1,000-2,000 people
- 2,000-5,000 people
- 5,000-10,000 people
- 10,000+ people

Existing Trail

Proposed Trail

0 2 miles 4 miles 8 miles



REGIONAL DEMOGRAPHICS

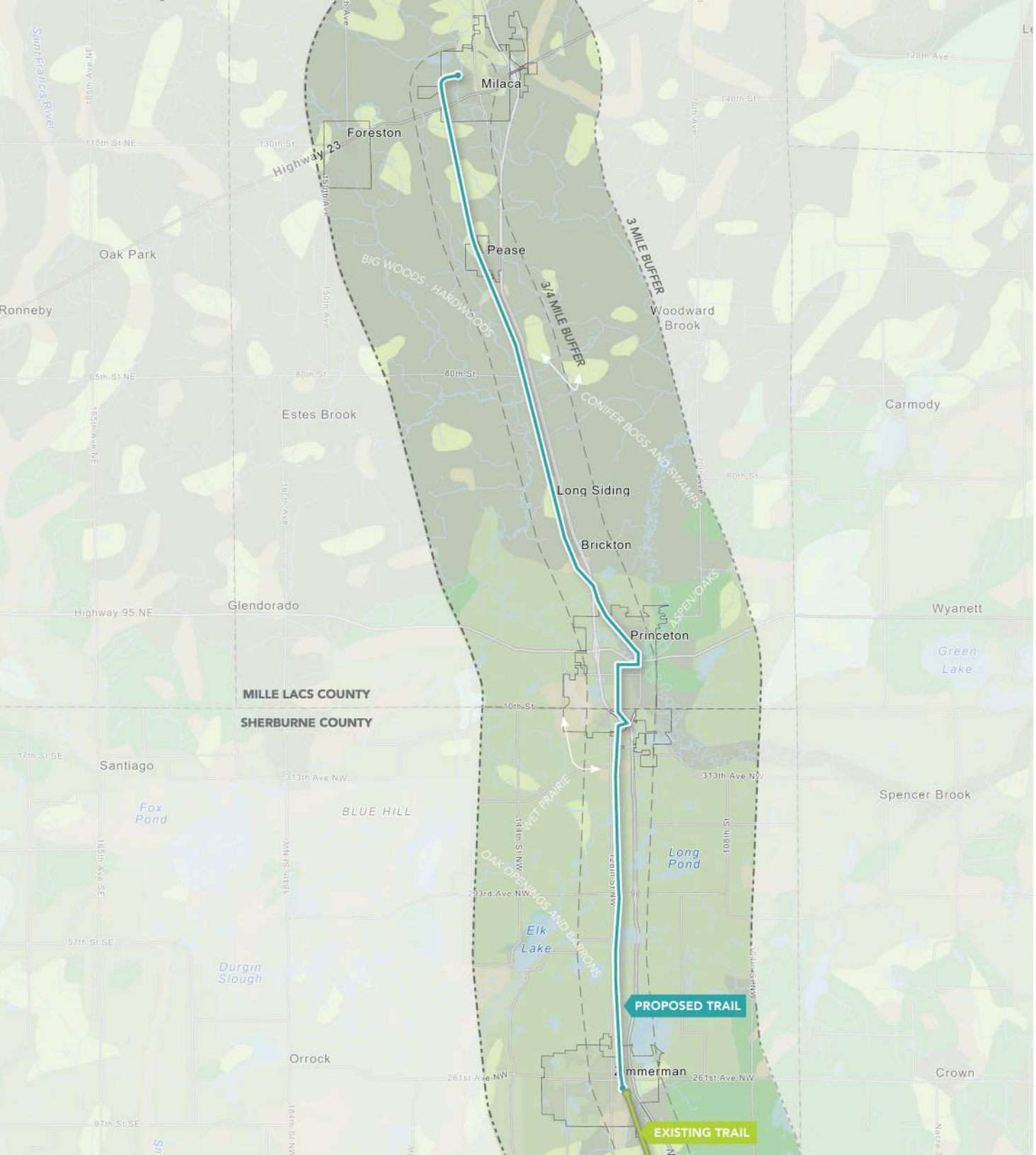
Legend

Population Change by Zip Code
(2021-2026 Projected Population Growth, ESRI)

- 0% - 1.25%
- 1.25% - 1.9%
- 1.9% plus
- Existing Trail
- Proposed Trail
- Local Bike Trail
- Existing Parks
- Designated Snowmobile Route
- Scenic Riverway
- Designated Water Trail

All the communities along the trail have positive population growth over the next 5 years

0 2 miles 4 miles 8 miles



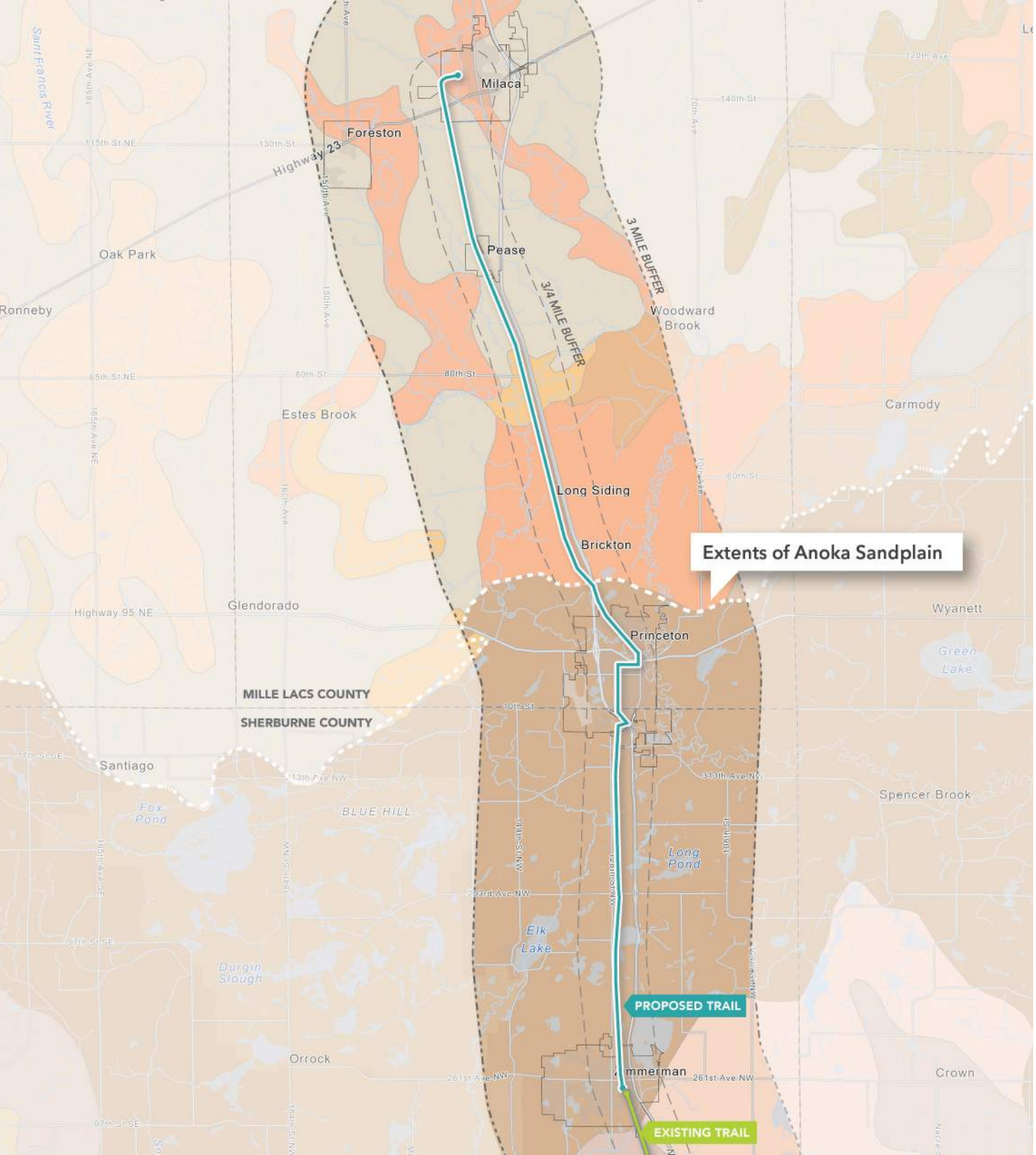
PRESETTLEMENT VEGETATION

Legend

- Aspen-Birch (trending to Conifers)
- Aspen-Birch (trending to hardwoods)
- Aspen-Oak Land
- Big Woods - Hardwoods (oak, maple, basswood, hickory)
- Brush Prairie
- Conifer Bogs and Swamps
- Jack Pine Barrens and Openings
- Lakes (open water)
- Mixed Hardwood and Pine (Maple, White Pine, Basswood, etc)
- Mixed White Pine and Red Pine
- Oak openings and barrens
- Open Muskeg
- Pine Flats (Hemlock, Spruce, Fir, White Pine, Aspen)
- Prairie
- River Bottom Forest
- Undefined
- Wet Prairie
- White Pine
- <all other values>

0 1 mile 2 miles 4 miles

N



GEOLOGY

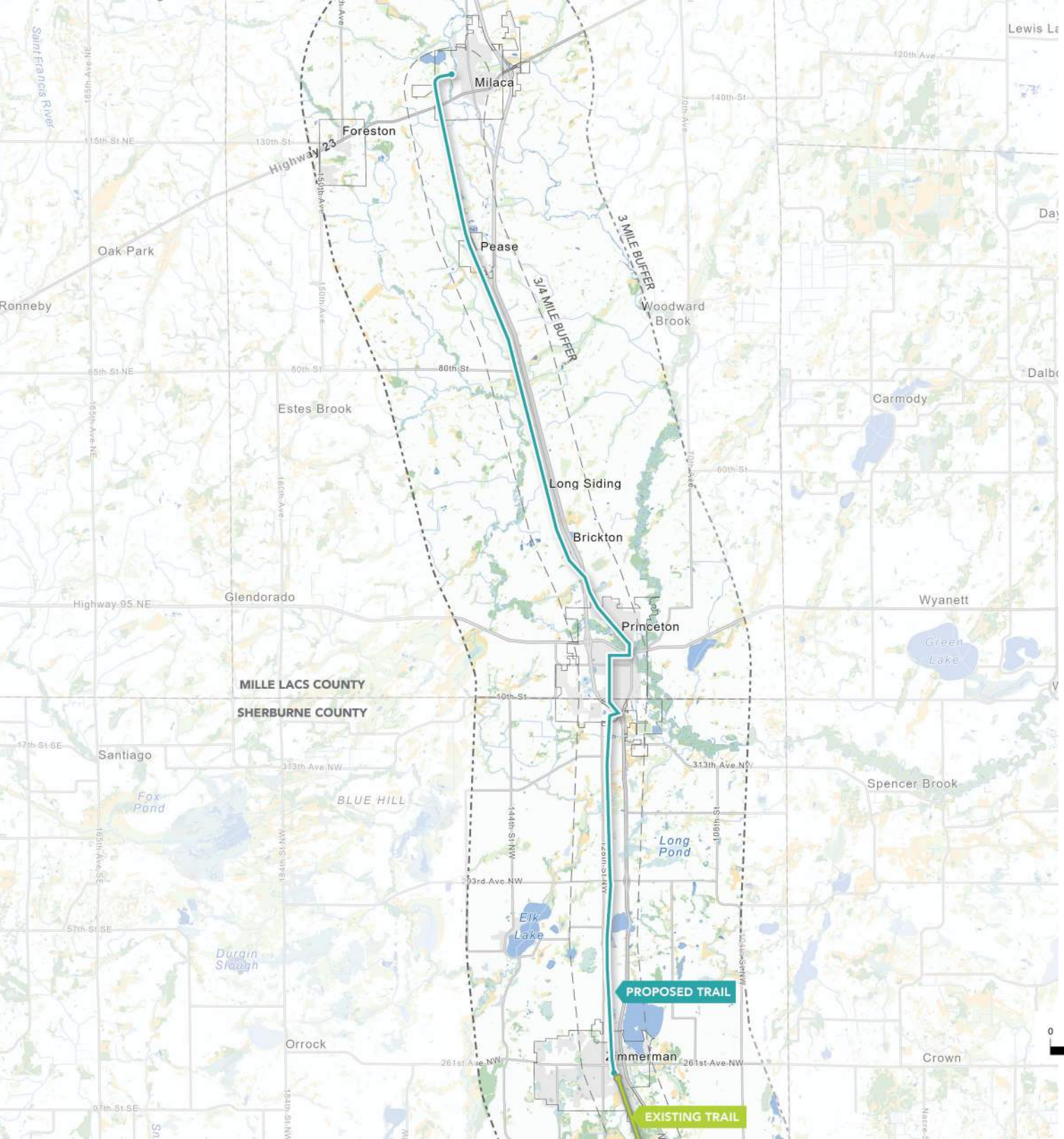
Legend

- Cushing-Alstad (s3718)
- Dalbo-Brickton (s3664)
- Isan-Hubbard-Duelm (s3496)
- Lester-Hamel (s3504)
- Mahtomedi-Chetek-Burkhardt (s3610)
- Mora-Loxley-Beseman (s3662)
- Muskego-Lester-Hayden (s3505)
- Nessel-Hayden-Dundas-Cordova (s3609)
- Nessel-Hayden-Hamel-Cordova (s3587)
- Rifle-Greenwood (s3720)
- Rifle-Nymore (s3613)
- Rifle-Prebish-Kingsley-Heyder (s3602)
- Ronneby-Mora-Freer (s3470)
- Ronneby-Parent-Mora (s3502)
- Ronneby-Prebish-Parent-Mora (s3615)
- Rosholt-Ogilvie (s3663)
- Sartell-Cushing-Braham (s3665)
- Sartell-Rifle-Lino-Isanti (s3614)
- Tacoosh-Seelyeville-Rifle (s3490)
- Wabedo-Nokay-Brainerd (s3464)

0 1 mile 2 miles 4 miles

N

WETLANDS

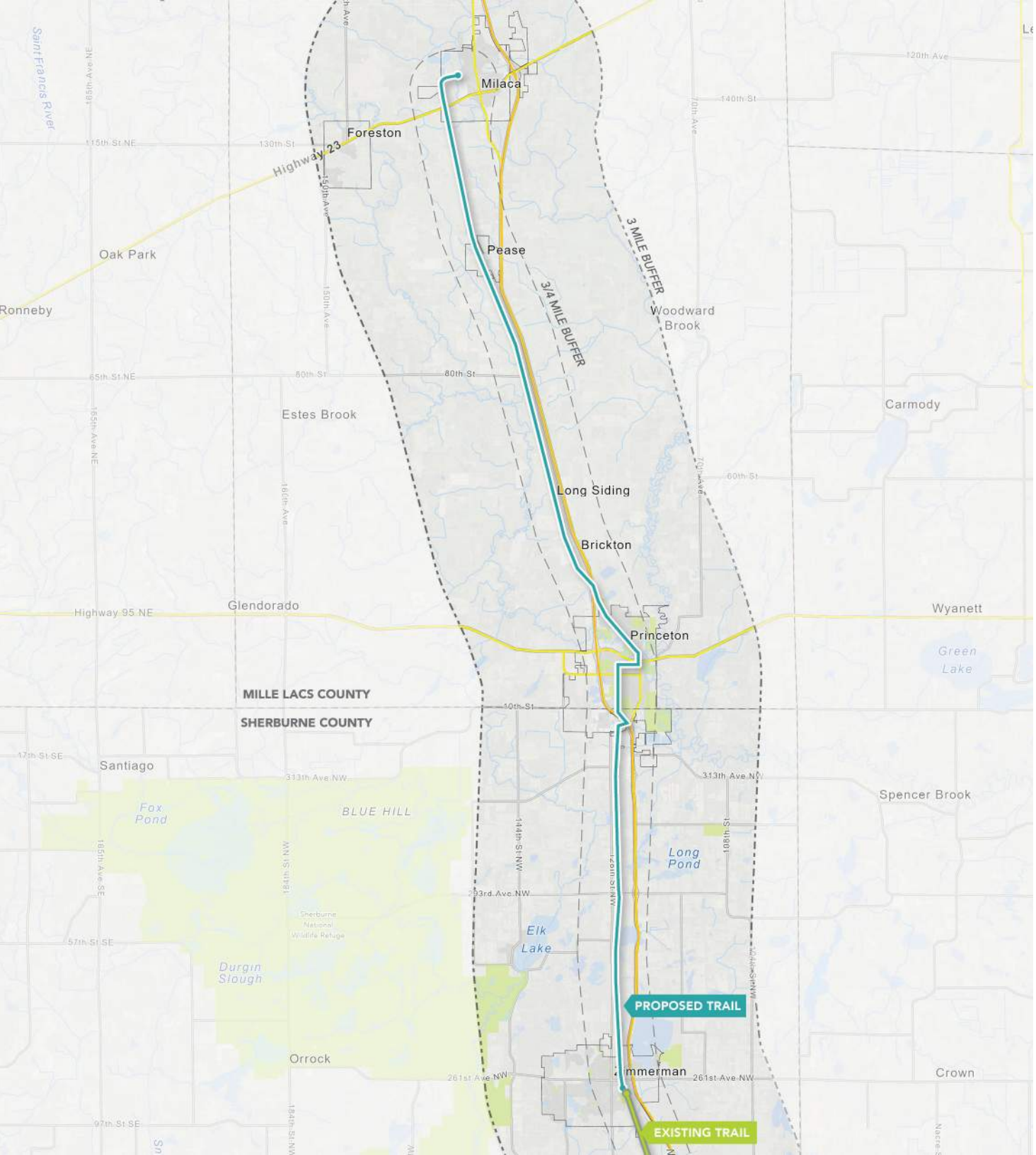


Legend

- Conceptual Trail
- Existing Sidewalk/Trail
- Campsites
- Boat Launches
- Mississippi Regional Trail
- Grant in Aid Snow Mobile Trails
- Water Trails
- Wild and Sceni Riverways

0 1 mile 2 miles 4 miles

N



TRANSPORTATION

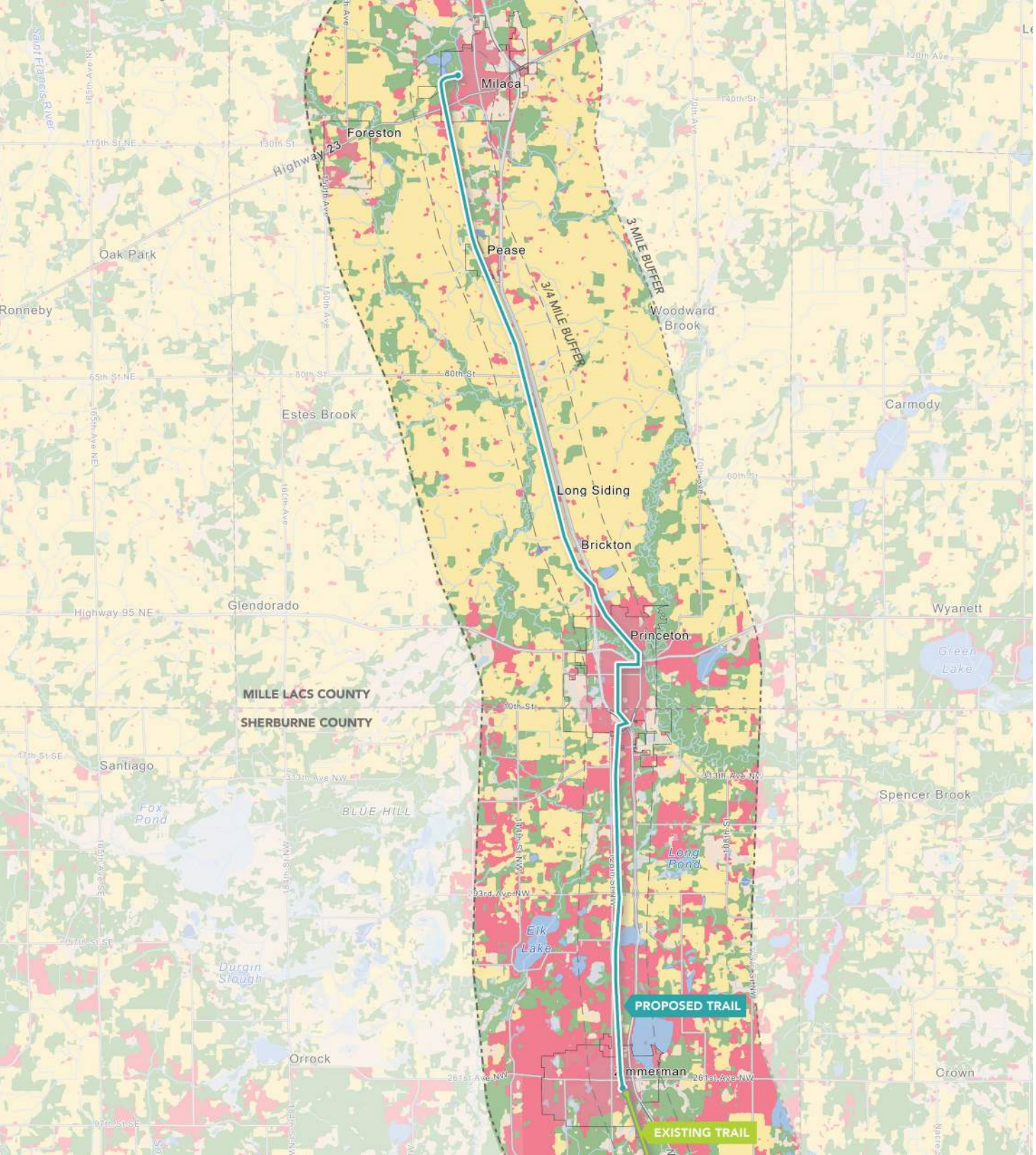
Legend

- HPMS Interstates
- HPMS_US_Highway_Routes
- Freight Analysis Framework Network

0 1 mile 2 miles 4 miles

N

LANDCOVER

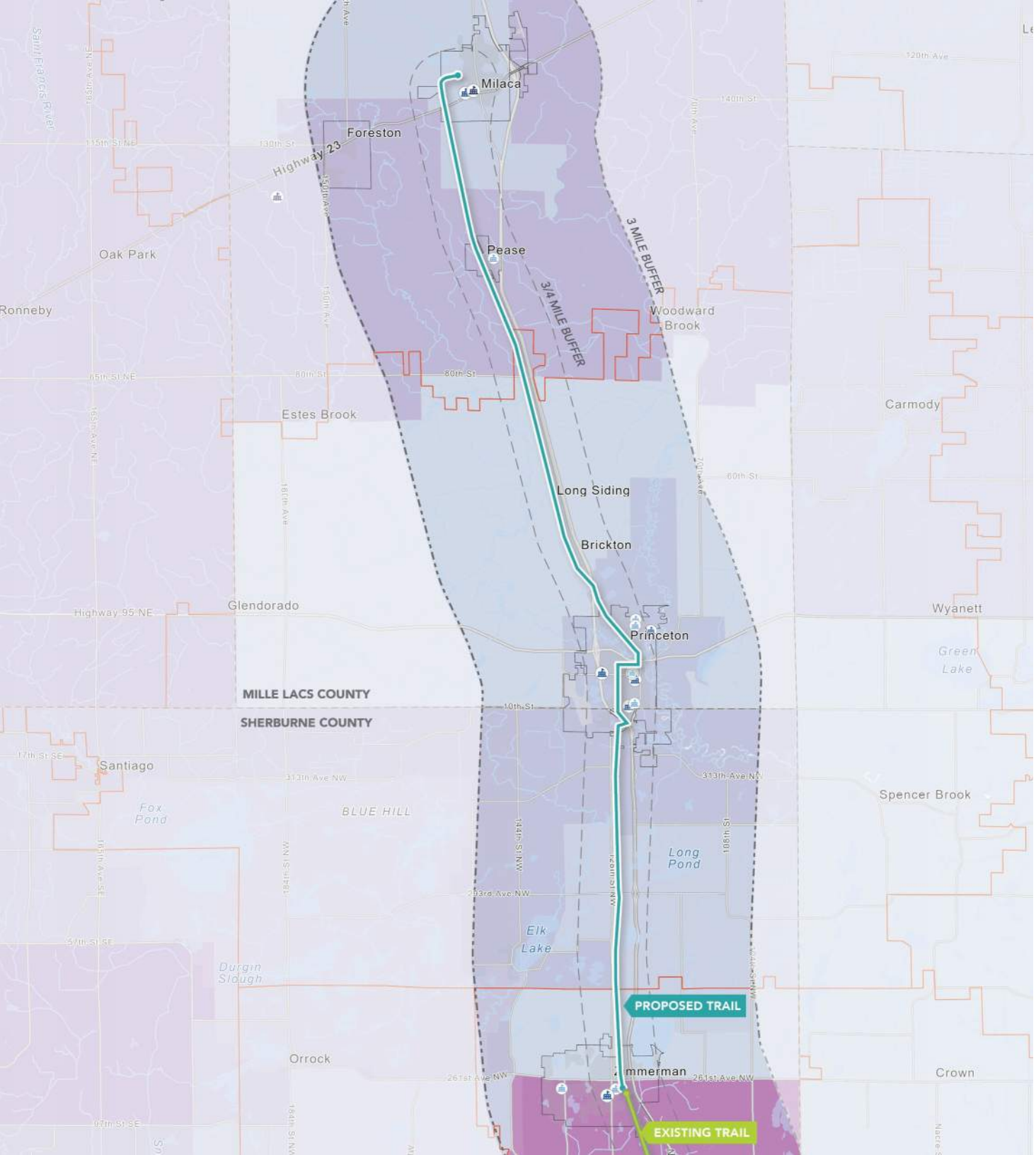


Legend

- Water
- Trees
- Flooded Vegetation
- Crops
- Built Area
- Bare Ground
- Snow/Ice
- Clouds
- Rangeland
- buffer_3mi

0 1 mile 2 miles 4 miles

N



DEMOGRAPHICS

Legend

Population enrolled in grades K to 12

1,700

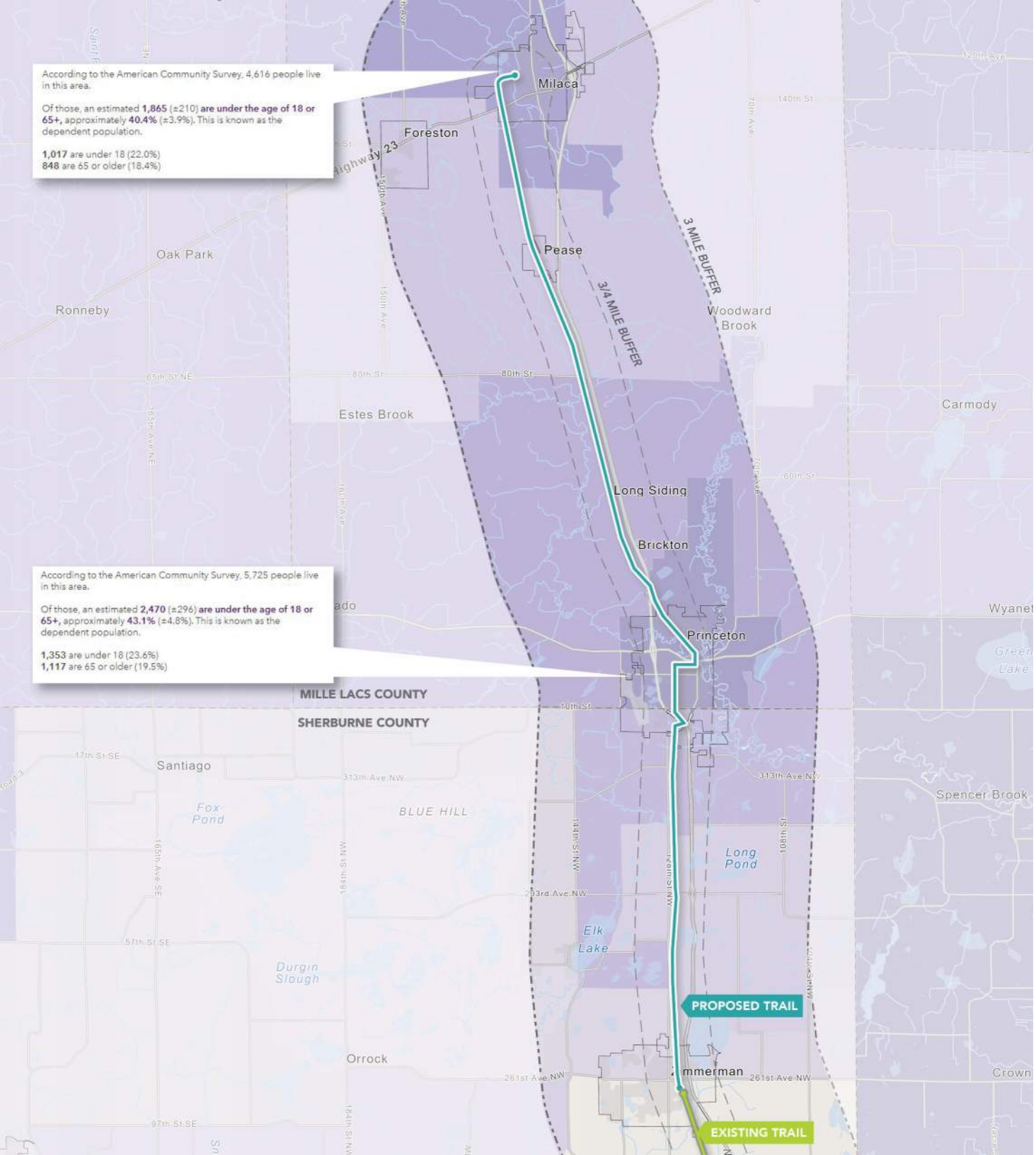
270

- Elementary - Highschool
- Highschool
- Middle School
- Elementary School
- Early Childhood
- school_attendance_areas

0 1 mile 2 miles 4 miles

N

DEMOGRAPHICS



DEMOGRAPHICS

Legend

Percent of Population that is 65 Years and Over

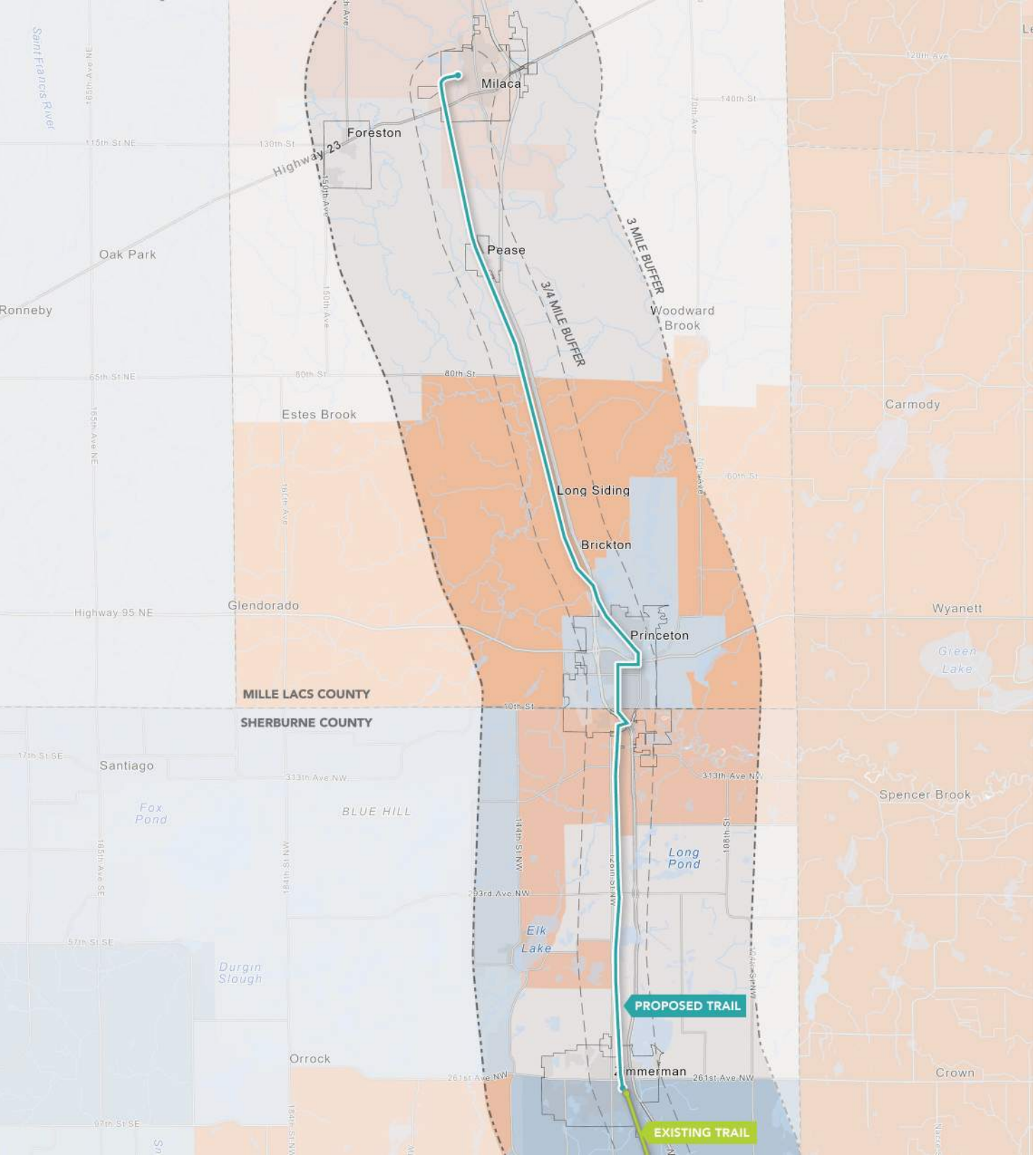
26

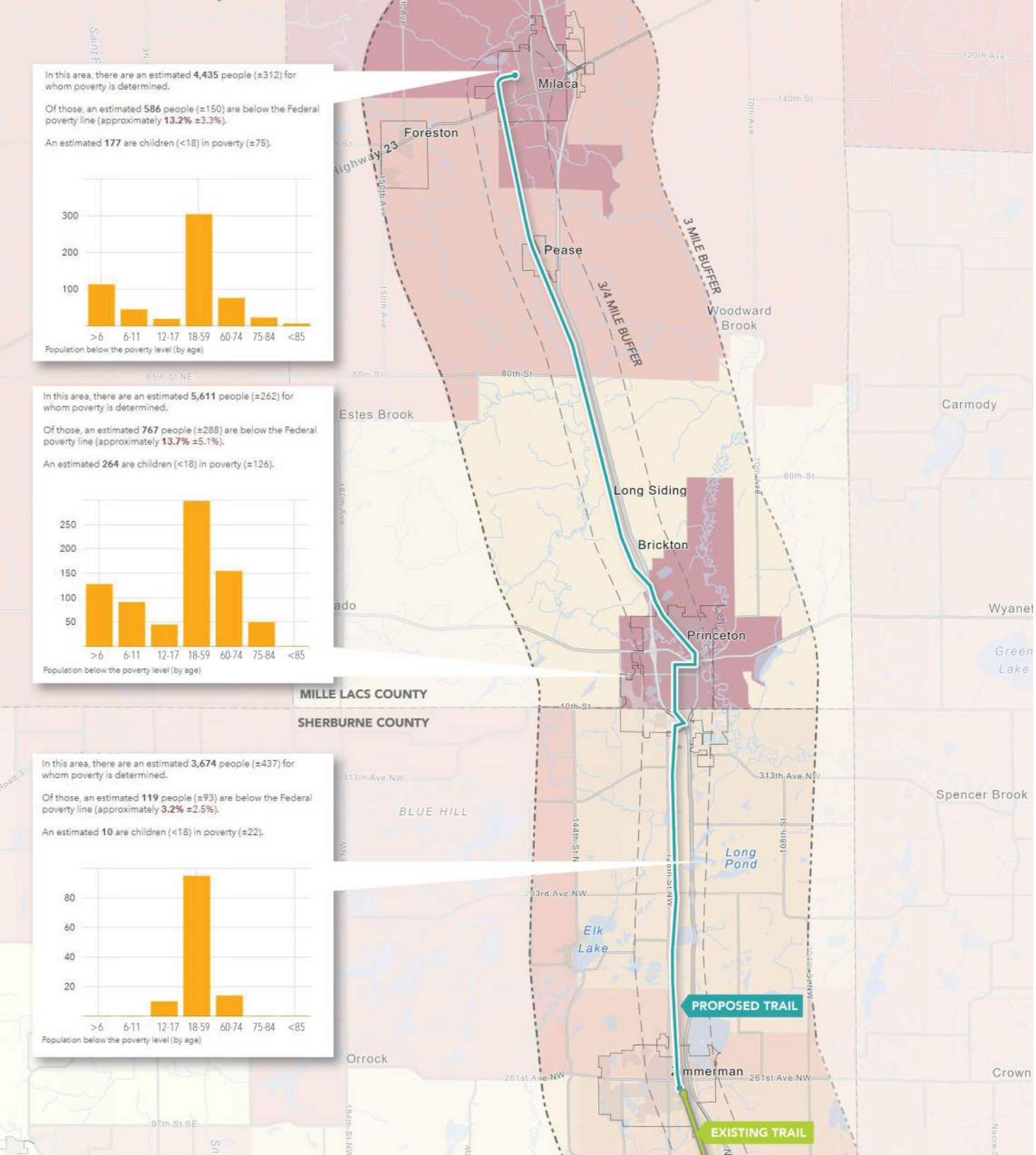
3.4

0 1 mile 2 miles 4 miles

N

DEMOGRAPHICS





DEMOGRAPHICS

Legend

Percent of Population whose income in the past 12 months is below poverty level

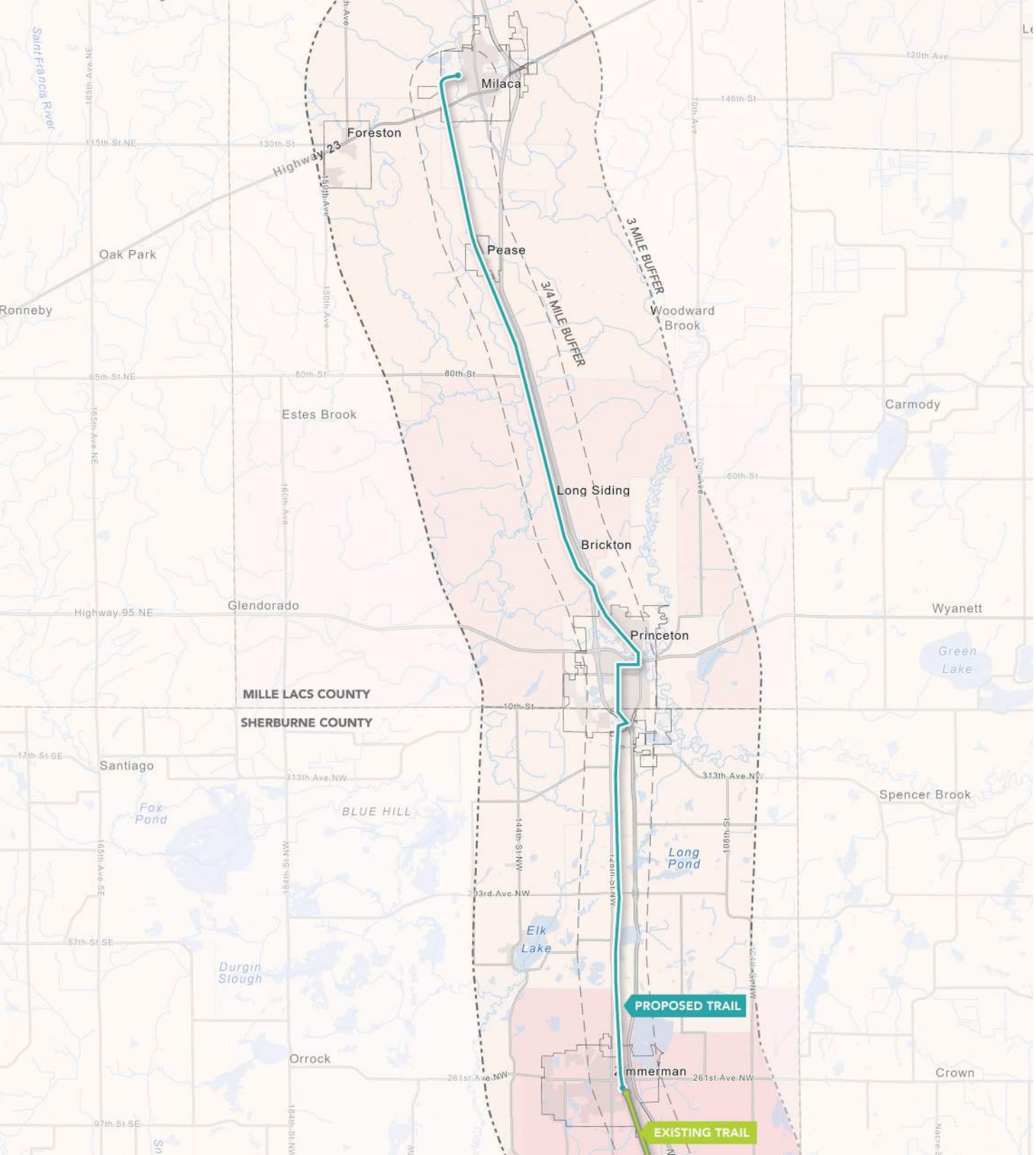
> 20%

< 1%

0 1 mile 2 miles 4 miles

N

DEMOGRAPHICS



SHERBURNE COUNTY
RESOLUTION NO. 090622-AD-3034

RESOLUTION SUPPORTING REGIONAL PARK OR TRAIL DESIGNATION APPLICATION IN GREATER MINNESOTA:

Park or trail name: The Great Northern Trail
Location: Sherburne and Mille Lacs Counties **Date of Resolution: September 6, 2022**

Check below as identified on application:
- Lead Applicant (City or County) X
- Joint Applicant/Partner (City or County)

BE IT RESOLVED that Sherburne County, as lead applicant, has the authority to act as legal public sponsor for the application described in the *Request for Designation as a Regional Park or Trail in Greater Minnesota.*

BE IT FURTHER RESOLVED that as lead applicant and joint applicant(s)/partner(s) we are fully aware of the information provided in the application and associated responsibilities, including long-term commitments as defined in the application and related master plan and supporting information as submitted.

BE IT FURTHER RESOLVED that, should receive formal designation as a Regional park or trail in Greater Minnesota by the Commission, that as the lead applicant we have the legal authority to enter into formal designation and funding agreements with the Commission for the referenced park or trail.

BE IT FURTHER RESOLVED that listed applicant and joint applicant(s)/partner(s) certify they will comply with all applicable laws and regulations associated with regional designation and any future grant funding for their respective portions of any project.

I CERTIFY THAT the above resolution was adopted by the listed lead applicant Board.

By B.G. Mensel, County Administrator
[Authorized representative's name and title]

Date 9/08/22

Witnessed:
Velma Enderson, Secretary of the Board of Commissioners
[Witness name and title]

Date 9/8/22

SHERBURNE COUNTY ADMINISTRATOR OFFICIAL SEAL

Board of County Commissioners
Mille Lacs County, Minnesota

Resolution No.: 09-20-22-01

RESOLUTION SUPPORTING REGIONAL PARK OR TRAIL DESIGNATION APPLICATION IN GREATER MINNESOTA

BE IT RESOLVED that the County of Mille Lacs, as a joint applicant/partner, fully supports the application described in the Request for Designation as a Regional Park or Trail in Greater Minnesota and authorizes the applicant's submission on behalf of the partnership for the Great Northern Trail located in Sherburne and Mille Lacs Counties.

BE IT FURTHER RESOLVED that as a joint applicant/partner we are fully aware of the information provided in the application and associated responsibilities, including long-term commitments as defined in the application and related master plan and supporting information as submitted.

BE IT FURTHER RESOLVED that, should receive formal designation as a regional park or trail in Greater Minnesota by the Commission, that as the joint applicant we have the legal authority to enter into formal designation and funding agreements with the Commission for the referenced park or trail.

BE IT FURTHER RESOLVED that listed applicant and joint applicant/partner certify they will comply with all applicable laws and regulations associated with regional designation and any future grant funding for their respective portions of any project.

Adopted this 20th day of September, 2022.

Genny Reynolds
Genny Reynolds
County Board Chair

The foregoing resolution was introduced by County Board Member OLSON and duly seconded by County Board Member WILHELM.

The following voted in favor of the Resolution: All
The following voted against the Resolution: —
The following were absent: —

CERTIFICATION

State of Minnesota
County of Mille Lacs

I do hereby certify that the foregoing resolution is a true and correct copy of a resolution presented to and adopted by the County of Mille Lacs at a duly authorized meeting thereof held on the 20th day of September, 2022.

Dillon Hayes
Dillon Hayes
County Administrator

City of Elk River

City of Elk River
City Council

Resolution 22-54

A Resolution of the City Council of the City of Elk River Supporting Regional Trail Designation Application for Great Northern Trail in Greater Minnesota:

Trail name: The Great Northern Trail
Location: Sherburne and Mille Lacs Counties **Date of Resolution:** September 12, 2022

WHEREAS, the City of Elk River, as a joint applicant/partner, fully supports the application described in the *Request for Designation as a Regional Trail in Greater Minnesota* and authorizes the applicant's submission on half of the partnership.

WHEREAS, as a joint applicant/partner we are fully aware of the information provided in the application and associated responsibilities, including long-term commitments as defined in the application and related master plan and supporting information as submitted.

WHEREAS, that the Great Northern Trail receive formal designation as a Regional Trail in Greater Minnesota by the City Council, that as the joint applicant we have the legal authority to enter into formal designation and funding agreements with the City Council for the referenced trail.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Elk River, Minnesota, as follows**:** listed applicant and joint applicant/partner certify they will comply with all applicable laws and regulations associated with regional designation and any future grant funding for their respective portions of any project.

Passed and adopted this 19th day of September 2022.

John J. Dietz, Mayor

ATTEST:

Tina Allard, City Clerk

POWERED BY NATURE

CITY OF ZIMMERMAN
RESOLUTION NO. 2022-09-02

RESOLUTION SUPPORTING REGIONAL PARK OR TRAIL DESIGNATION APPLICATION IN GREATER MINNESOTA:

Park or trail name: The Great Northern Trail
Location: Sherburne and Mille Lacs Counties
Date of Resolution: September 12 , 2022

Check below as identified on application:
- ○ Lead Applicant (City or County)
- ● Joint Applicant/Partner (City or County)

BE IT RESOLVED that the City of Zimmerman, as a joint applicant/partner, fully supports the application described in the *Request for Designation as a Regional Park or Trail in Greater Minnesota* and authorizes the applicant's submission on behalf of the partnership.

BE IT FURTHER RESOLVED that as a joint applicant/partner we are fully aware of the information provided in the application and associated responsibilities, including long-term commitments as defined in the application and related master plan and supporting information as submitted.

BE IT FURTHER RESOLVED that, should receive formal designation as a Regional park or trail in Greater Minnesota by the Commission, that as the joint applicant we have the legal authority to enter into formal designation and funding agreements with the Commission for the referenced park or trail.

BE IT FURTHER RESOLVED that listed applicant and joint applicant/partner certify they will comply with all applicable laws and regulations associated with regional designation and any future grant funding for their respective portions of any project.

I CERTIFY THAT the above resolution was adopted by the listed joint applicant Board.

By _____
Nick Stay, Mayor

Date 9/12/2022

Witnessed:
Mary Tillmann
Kary Tillmann, Clerk/Treasurer

Date 9/12/2022

RESOLUTION #22-50

RESOLUTION SUPPORTING REGIONAL PARK OR TRAIL DESIGNATION APPLICATION IN GREATER MINNESOTA:

Trail Name: The Great Northern Trail
Location: Sherburne and Mille Lacs Counties

BE IT RESOLVED that the City of Princeton, as a joint applicant/partner, fully supports the application described in the *Request for Designation as a Regional Park or Trail in Greater Minnesota* and authorizes the applicant's submission on behalf of the partnership.

BE IT FURTHER RESOLVED that as a joint applicant/partner we are fully aware of the information provided in the application and associated responsibilities, including long-term commitments as defined in the application and related master plan and supporting information as submitted.

BE IT FURTHER RESOLVED that, should The Great Northern Trail receive formal designation as a Regional trail in Greater Minnesota by the Commission, that as the joint applicant we have the legal authority to enter into formal designation and funding agreements with the Commission for the referenced trail.

BE IT FURTHER RESOLVED that the listed applicant and joint applicant/partner certify they will comply with all applicable laws and regulations associated with regional designation and any future grant funding for their respective portions of any project.

ADOPTED this 8th day of September, 2022.

Thom Walker, Mayor
City of Princeton

I CERTIFY THAT the above resolution was adopted by the listed joint applicant Board.

ATTEST:
Shawna Jenkins Tadych
City Clerk

BALDWIN TOWNSHIP

30239 128TH STREET NW, BALDWIN TOWNSHIP, MN 55371
TELEPHONE: (763) 389-8931 FAX: (763) 389-2751

December 21, 2022

Subject: Support for the Great Northern trail Regional Designation Application

This letter is to indicate Baldwin Township's strong support for the Great Northern Trail Request for Designation as a Regional Trail in Greater Minnesota to the Greater Minnesota Parks and Trails Commission.

Sherburne County is the leading applicate for this request and has assembled an impressive partnership that involves Mille Lacs County, the City of Elk River, City of Zimmerman, City of Princeton, and the City of Milaca. The County has also engaged some of the largest stakeholders throughout the community including our Baldwin Township Board and our residents. The Great Northern Trail will link together communities and serve as an economic catalyst for improving the quality of life of those within the region. We recognize that furthering funding, creating universal access, and fostering healthy lifestyles for families is how to best include all people. It has been demonstrated multiple times that further funding for universally designed recreational spaces is needed to fully engage all of our Community.

Thank you for your consideration of this truly transformative project, helping to secure investments that will positively impact residents along the trail route. If you have any questions, lease feel free to contact Jay Swanson, Chairman.

On Behalf of Baldwin Township Board,

Sincerely,

Jay Swanson, Chairman

Mission Statement
To make Baldwin Township a proud place to live by safeguarding property rights, encouraging agriculture, commercial communities and residential growth.