GREAT RIVER TRAIL

CONCEPT PLAN

Galena, IL to Savanna, IL

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INTRODUCTION/ PROJECT SUMMARY

Introduction

The Great River Trail extension planning effort led by Blackhawk Hills Regional Council (BHRC), and supported by the National Park Service's Rivers, Trails, and Conservation Assistance (RTCA) program and Iowa State University's Community Design Lab (CDL), is one piece of a larger effort to actualize an approximately 30-mile trail connection between the cities of Savanna and Galena in northwestern Illinois. Many individuals and organizations have played critical roles in past planning efforts that have brought the Great River Trail to where it is today, and significant effort will be required in the future to see the continued success of the trail and eventual construction of the extension.

The idea for the Great River Trail coincided with initial planning by the Illinois Department of Natural Resources (IDNR) for the Grand Illinois Trail in the mid-1990s. The Grand Illinois Trail is a 535-mile loop in northern Illinois, 200 miles of which are on paved township and county roads. The Great River Trail was planned as an off-road trail section from Rock Island to Savanna. A northern connection to the City of Galena that would use low-volume roads was part of the original concept of the Grand Illinois Trail.

To date, approximately 66 miles of the Great River Trail from Sunset Park in Rock Island to the depot trailhead in Savanna have been completed. The trail parallels the Mississippi River and offers spectacular views, unique riverside geology, and attractions found in the many towns and points of interest along the way. To the north, the City of Galena offers the 8-mile Galena River Trail, which is popular among both residents and tourists for bicycling, walking, and cross-county skiing. The 30-mile gap between the two trails offers immense potential. Scenic views, opportunities for environmental and cultural education, wildlife viewing, and connections to additional communities are just a few of the benefits that a trail connection would bring.

The potential of the trail connection has been noted by many and has sparked several attempts to plan the extension. Although the area between Savanna and Galena has much to offer, it also presents challenges. Steep terrain, higher volume roads along the river, and contamination within areas of the Savanna Army Depot, which would be a logical host site for a trail connection, have all presented barriers that have hindered past planning efforts.

With the knowledge that planning for the trail extension had stalled and recognition of the significant value such a connection would bring to the area, BHRC staff applied for technical assistance from the National Park Service's RTCA program in March of 2021. The application was accepted in early spring, and the planning team was formed soon afterward.

Project Summary

The Midwest RTCA program assigned this community assistance project to a Community Planner in the team's Illinois Field Office based in Chicago, Illinois. A Landscape Architect from the U.S. Forest Service on a temporary detail assignment with the Midwest RTCA program also assisted with this project during the summer of 2021. In accepting the project request from Blackhawk Hills Regional Council, the RTCA program agreed to assist locally led efforts to accomplish three overall project objectives: 1. Build and strengthen a collaborative partnership team to support an ongoing planning process, 2. Identify a unified vision and clear goals for the trail among community partners and stakeholders, and 3. Produce design concepts for potential trail corridors that address project strengths, weaknesses, opportunities, and challenges.

At the beginning of the planning process, staff from the National Park Service developed a Project Work Plan in collaboration with Blackhawk Hills Regional Council. This work plan organized the overall project into sequential phases and identified roles and responsibilities for the planning team that would oversee the project work. Through a partnership agreement between the National Park Service and Iowa State University, a staff member and student from the university's Community Design Lab also joined the planning team to assist with site planning, conceptual renderings, and landscape architecture services for trail designs within potential trail corridors.

The work plan divided the project into four phases that each had distinct objectives, identified outcomes, and anticipated timelines to help advance the project. The phases included:

1. Build the Planning Team
   Objective: Establish a collaborative planning process with key partners to support ongoing plan implementation
   Outcome: Project Planning Team, Project Summary, Project Work Plan

2. Establish Vision and Goals
   Objective: Identify a project vision and goals for the extension of the Great River Trail
   Outcome: Strategic Planning Framework

3. Identify Opportunities and Constraints
   Objective: Compile and document critical design opportunities and constraints impacting trail planning and development
   Outcome: Existing Conditions / Trail Corridor Maps, Opportunities & Constraints Analysis

4. Produce Trail Extension Planning Document
   Objective: Produce final concept plan designs and recommendations
   Outcome: Planning Document for the Great River Trail Extension

This document serves as the final deliverable for the community assistance project. The planning document was developed jointly by the National Park Service RTCA program, Iowa State University's Community Design Lab, and Blackhawk Hills Regional Council to not only serve as a record of the planning process, but also as a resource for future planning efforts that continue to advance the trail extension towards implementation.

The Planning Process

The project began in Spring, 2021 with site visits, stakeholder discussions, planning team workshops, and substantive project work that continued through the end of the calendar year. On June 22, 2021 staff from Blackhawk Hills Regional Council, National Park Service, U.S. Forest Service, and Iowa State University conducted a site survey from Galena to Savanna along potential trail corridor routes. The purpose of this survey was to begin the process of conducting an existing conditions analysis to identify and map opportunities and challenges for the proposed trail extension. The site survey included visits to Depot Park in Galena, the Aiken Trailhead for the Galena River Trail, the base of Chestnut Mountain Resort, Black Oak Dune Overlook adjacent to the Savanna Army Depot, the Great River Trail trailhead in Savanna, and access points to Mississippi Palisades State Park. During site visits to some of these locations, the planning team observed terrain constraints and existing road infrastructure and discussed how these conditions would need to be incorporated into future planning considerations. At several locations on the site visit, the planning team met with local stakeholders to gain their perspective on potential opportunities and planning considerations. These stakeholders included elected officials and city administrators from Galena and Savanna, as well as representatives from the Jo-Carroll Local Redevelopment Authority.

After the site survey, members of the planning team conducted a S.W.O.T. Analysis to identity potential strengths, weaknesses, opportunities, and threats/ challenges aligned with the proposal to help guide future planning discussions for the trail extension and design considerations. Below is a summary of the S.W.O.T. Analysis:

Aiken Trailhead to Chestnut Mountain

Strengths:

-Low volume road location adjacent to the river with viewsheds
-Level terrain

Weaknesses:

-Limited adjacent land to expand roadway or provide off-road path

Opportunities:

-Great connector from Galena to Chestnut Resort
-May be able to separate trail from roadway in some areas
-Could be a good project to start with

Challenges:

-Narrow road

Chestnut Mountain to Blanding Landing

Strengths:

-Existing low volume roadways along river
-Low gradient for most of potential route
-Great location for views along the river

Weaknesses:

-Narrow road in places
-Lack of amenities near Blanding Landing

Opportunities:

-Connection through IDNR property (via utility corridors)
-Could widen Right-of-Way as needed and create pullouts and rest stops

Challenges:

-Railroad underpass may need additional overhead protections

Blanding Landing to Black Oak Dune Overlook (via Savanna Army Depot)

Strengths:

-Existing low-volume shared roadway
-Conservation and restoration landscape interpretation

Weaknesses:

-Shared roadway

Opportunities:

-Interpretation opportunities for Wildlife Refuge and Army Depot (e.g. historic buildings)
-Views of the Mississippi River from the bluff
-Loop / alternative route for either river views or historic areas of the Army Depot
-Could widen Right-of-Way and add rest stops

Challenges:

-Areas of no entry on the Army Depot due to unexploded ordinance
-Multiple federal and state government agencies with ownership and/or jurisdiction

Blanding Landing to Black Oak Dune Overlook (via Hanover)

Strengths:

-Avoids pinch-point north of Savanna
-Many amenities in and around Hanover

Weaknesses:

-Narrow roads and higher speed limits (safety concerns)
-Departs from "river trail" concept
-Loss of Army Depot history and interpretation opportunities
-Longer distance and steeper slopes

Opportunities:

-Connects Hanover and potential amenities within the town
-Open landscape along roadways offers potential for expanded shoulder or off-road trail
-Brings in Hanover residents and visitors to the trail

Challenges:

-Significant elevation gain up to the bluff
-Traffic and safety concerns

Black Oak Dune Overlook to Miller's Landing Marina

Strengths:

-Connects to marina in a fairly direct and lower cost route
-Utilizes existing infrastructure

Weaknesses:

-Road route
-Departs from river experience

Opportunities:

-Alternate route through wetland
-Connects to Blackhawk Road
-Could expand Right-of-Way to separate trail from road
-Education/interpretation of wetland areas – this route needs vetting
-Marina could be an additional trailhead in Savanna

Challenges:

-Higher volume of road traffic in this section

Miller's Landing Marina to Savanna

Strengths:

-Direct route from marina to Savanna
-Trail at riverfront park could revitalize area

Weaknesses:

-Cost is high for any elevated portion
-Section of trail on roadway
-Longer distance via roadway option and steeper slopes
-New switchback trails would be needed

Opportunities:

-World class trail/boardwalk elevated from the river
-Bicycle shuttle service

Challenges:

-Trail along the roadway, safety concerns
-Permitting for elevated trail
-Route is too steep for most users (overland route)

These notes reflected an initial existing conditions analysis performed to understand the broadest set of planning observations and potential opportunities, some of which came from partners who evaluated the potential of a trail extension for the first time. Subsequent conversations with community partners and stakeholders provided the planning team with additional context on past planning efforts as well as more detailed information on specific opportunities and challenges.

Summary of Stakeholder Discussions and Planning Guidance

From July – August, 2021, planning team members from Blackhawk Hills Regional Council and the National Park Service conducted six outreach conversations with stakeholders that represented government agencies and non-profit organizations that had an interest in the trail extension proposal or had been closely involved with past planning efforts. These conversations included several questions that focused on the organization's role in past planning efforts, potential untapped opportunities related to a trail extension, anticipated challenges, and how that organization would be willing to support future planning efforts. These outreach meetings were conducted with the following individuals or organizations:

- George Bellovics (former Illinois Department of Natural Resources project manager)
- Jo Daviess Conservation Foundation
- Bi-State Regional Commission
- Illinois Department of Natural Resources (IDNR)
- Illinois Department of Transportation (IDOT)
- United States Fish & Wildlife Service

During a project meeting with external partners, the planning team shared a summary of the considerations from past initiatives and current planning guidance. These significant planning considerations are as follows:

- The Lost Mound area in the Savanna Army Depot is the ideal solution for trail connectivity, but environmental challenges are likely too great to overcome in the near-term…there is value in looking at other opportunities for trail connections.
- Develop proposals for trail infrastructure that can be utilized by novices and tailor opportunities for children or new outdoor recreation enthusiasts.
- Identify partners that can be the local champion for the Great River Trail (in particular) and outdoor recreation based economic development (more broadly).
- Any conceptual designs for new trails in Mississippi Palisades State Park would ideally be located on existing public roadways or operations/maintenance roads.
- In past planning discussions IDOT has advocated that any new trail development north of the state park would require a separate bicycle bridge along Route 84 across the Rush Creek (e.g. new infrastructure rather than using existing bridge).
- Consider using Recreational Trails Program (RTP) grant funds as a potential resource in the future.
- Seek out partnerships with local trail groups such as the (formally active) Great River Trail Council.
- Existing national awareness of the Mississippi River Trail could help promote this opportunity and build community support.
- Elected officials and local tourism boards should be considered important stakeholders.

These considerations were utilized by the planning team in subsequent discussions that developed more specific trail planning recommendations and design renderings. The institutional knowledge from staff that participated in past planning efforts for the Great River Trail provided valuable context and perspectives for the current proposals to extend the trail. Current staff at BHRC and advisors from the National Park Service and Iowa State University also benefited from hearing the concerns of nearby landowners and regulatory agencies. The input of staff from the U.S. Fish & Wildlife Service was instrumental in the development of planning recommendations that avoided any near-term trail connections through some sections of the Savanna Army Depot to make the trail proposals more feasible for actual implementation.

Strategic Planning Framework for Connecting the Great River Trail Between Galena and Savanna

As part of the technical assistance provided by the National Park Service, staff from the Rivers, Trails, and Conservation Assistance program also facilitated a series of strategic planning workshops for BHRC. The intent of these workshops was to develop a broader strategic planning framework for the Great River Trail extension that would convey the long-term vision for the proposal and what it seeks to achieve. The workshops built off the existing conditions analysis and stakeholder discussions to articulate the purpose of this planning effort, a long-term vision, essential values that would govern the initiative, and specific goals and strategies related to the trail extension.

Vision

The Great River Trail is a recognized destination in the Midwest's Driftless Area that expands outdoor recreation opportunities and connections to local communities.

Values

Staff will make a concerted effort to incorporate values of accessibility, equity, and inclusivity within the planning discussions through the following ways:

1. Develop a public input process that includes voices and perspectives not typically heard during public planning initiatives.
2. Ensure that new trail development provides an amenity for people with a range of abilities.

Goals & Strategies

Goal 1 – Extend the Great River Trail to connect Galena and Savanna.

Strategy 1.1: Identify potential connections, describe attributes, pros/cons, and discuss opportunities for development with impacted landowners and other stakeholders.

Strategy 1.2: Develop a Capital Improvement and Management Plan (CIMP) that addresses land ownership, existing conditions, planning challenges, trail routing and design, accessibility, safety, cost estimates, and potential implementation phases.

Strategy 1.3: Collaborate with government and NGO partners to pass resolutions supporting trail connections.

Strategy 1.4: Establish an intergovernmental Upper Mississippi River Trails Commission responsible for developing and implementing strategies.

Goal 2 – Increase Great River Trail Connections to Destinations in Carroll and Jo Daviess Counties.

Strategy 2.1: Work with tourism agencies and chambers of commerce to support trail users and trail communities, developing strategies for recreation-based economic development (e.g., Trail Towns).

Strategy 2.2: Use the Northwest Illinois Trails Wayfinding Sign Guide to develop strong and consistent branding that promotes the trail and its connections to local businesses and communities.

Strategy 2.3: Create a monitoring plan that addresses trail use, maintenance, safety, and engages the public works and first responder communities.

TRAIL CORRIDOR OVERVIEW

Aiken, IL to Savanna, IL

Proposed Trail Routes

The proposed route for the Great River Trail linking trailheads in Savanna, IL and Aiken, IL was determined through multiple site visits, a S.W.O.T analysis, and conversations with a wide array of stakeholders. The primary route serves as the most direct and accessible route between the communities utilizing existing transportation corridors. Alternative trail segments are also indicated that provide access to Hanover, IL and additional amenities. These alternate routes and connections would encourage more trail use and add to the success of the trail.

The Great River Trail will provide safe and convenient access along the landscape of the Mississippi River valley. The trail will connect urban and rural areas and take trail users through a variety of landscape typologies including: prairies, savannas, woodlands, wetlands, and riparian areas.

Six nodes are indicated along the route. These nodes provide amenities, places to rest along the route, and opportunities to view and engage with the Mississippi River. The nodes serve as destination points and break up the route into shorter segments which provide pedestrians and less experienced cyclists with manageable trail distances. The largest gap exists between Blanding Landing and Miller's Landing Marina, with the node at Hanover as part of the alternative trail routes. Development of a minor node along the main route would help to break up the 18 mile stretch between them.

Trail Typologies

To make the connection between Aiken and Savanna, this proposed route of the Great River Trail will utilize a variety of trail typologies to accommodate access, including: shared rural roads, multi-use paths, and paved shoulder trails. Rails-with-trails is another strategy that may be considered in future planning efforts. Each typology was determined based on current infrastructure, daily traffic counts, availability of right-of-way, and stakeholder input.

Shared Rural Road

As the name implies trail users on this typology share the road with vehicular traffic. These roads must have a low daily traffic volume, reducing potential conflict between trail users and motorists. Many of the shared rural roads proposed in this study are narrow. Widening of the roadway or the addition of pull-off zones is encouraged.

Multi-Use Path

A multi-use path is independent from the roadway. Because of that, these trails can accommodate a greater variety of trail user types. Whenever possible a buffer between the trail and roadway is recommended to increase safety. These trails can be paved or gravel.

Paved Shoulder Trail

The shoulder of an existing roadway can also be used as a trail. For safety and accessibility the American Association of State Highway and Transportation Officials (AASHTO), requires a minimum shoulder width of four feet, but recommends six feet or more when possible. This gives cyclists room to maneuver and avoid conflicts with debris at the edge of the pavement or with adjacent traffic.

Rails-with-Trails

A few locations along the proposed trail route run immediately adjacent to the BNSF railroad. For the most part, the trail will utilize the existing roadway or run adjacent to it for access. There are some locations, however, where it would be more suitable to have a shared-use path located within the railroad right-of-way due to limited road right-of-way. This strategy for trail placement is referred to as rails-with-trails. In the rail-with-trail model, public use trails are located on or adjacent to the rights-of-way of an active railroad corridor or its access road. Utilizing these corridors can help to extend the reach of trails, providing safe, accessible routes and further enabling alternative transportation options and healthy lifetstyle choices.

Rails-with-trails have been increasing in popularity. 343 rails-with-trails were in use as of 2018, with Illinois ranked in the top three states for the most miles of rails-with-trails in the country completed. Though the popularity is gaining, the prominence of these trails along Class I freight lines is mixed, and some of these railroads do not allow trail development. Class I railroads do have the highest percentage of trails along them, but hesitation is common due to perceived safety risks to trail users and railroad workers and potential limitations to future rail operations. BNSF, which owns the route adjacent to the Great River Trail proposed route is among the railroad companies that do not currently permit the development of rails-with-trails. The *Rails With Trails Best Practices and Lessons Learned* publication from 2021, recommends that in planning for development of a trails project with a railroad, the team should start conversations with stakeholders early and meet often throughout the process, "to ensure that the trail continues to meet the needs of its users while addressing the safety and security requirements of the railroads." The planning discussions should include railroad staff involved in real estate, legal, operations, and maintenance departments.

Because use of the right-of-way is not preferred by the railroad, alternative routes should be considered and analyzed to show the need for the desired route over others. At this time no standards exist for trail design within the railroad right-of-way. Trail standards from other regulatory sources should be employed and specific designs should be considered unique to the route itself. As part of the design process trail developers will need to meet all regulatory requirements, maximize trail setback, address potential drainage issues, and include suggested forms of separation to increase safety and limit trespassing.

Perhaps following the publication of Rails With Trails Best Practices and Lessons Learned and the growing popularity of the rails-with-trails strategy will inspire more railroad companies to consider it as an option. Though this strategy will not be employable currently for the Great River Trail, it may be revisited in future planning considerations.

H.U.M. TRAIL, MCHENRY COUNTY, IL

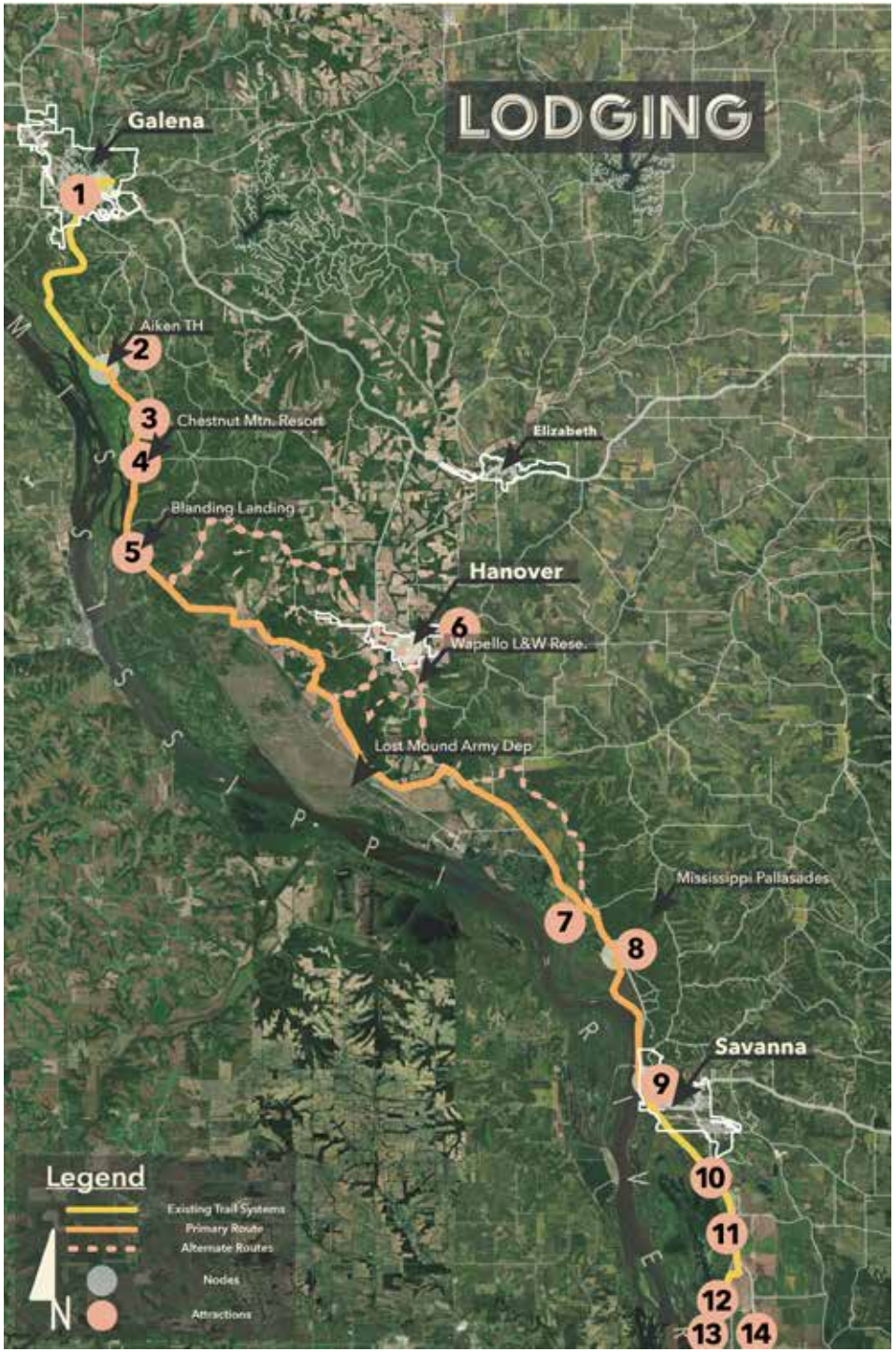
Regional Trail Connection

One of the major benefits of connecting Savanna to Aiken is that the route will close a gap of a much larger trail network that connects the Dubuque and Galena area to the Quad Cities and beyond. The primary value in that connection is the economic benefits that come from bicycle tourism in the region. The Quad Cities, Savanna, Galena and Dubuque all attract tourists to their communities. Providing safe and convenient access between them could extend the time that trail users spend in the area, and connect them to tourism opportunities in smaller towns along the route as well.

Economic Attractions

There are many amenities along the proposed route that will attract trail users to explore the region. Some of the larger places and venues are highlighted in the map. Other amenities are noted throughout the report. Galena and Savanna are great bookends to this trail segment as they already have a significant tourism draw and offer a wide assortment of amenities including: hotels, restaurants, bars, museums, historic sites, convenience stores and shopping opportunities.

1. City of Galena, IL
2. Galena Log Cabin Getaway
3. Goldmoor Inn/Riverview Ranch & Resort
4. Chestnut Mountain Resort
5. Orchard Landing Co.
6. Fergedaboudit Winery
7. Rocky Waters Winery, Fisherman's Cabin
8. Palisades Golf Course
9. City of Savanna, IL



Lodging Options

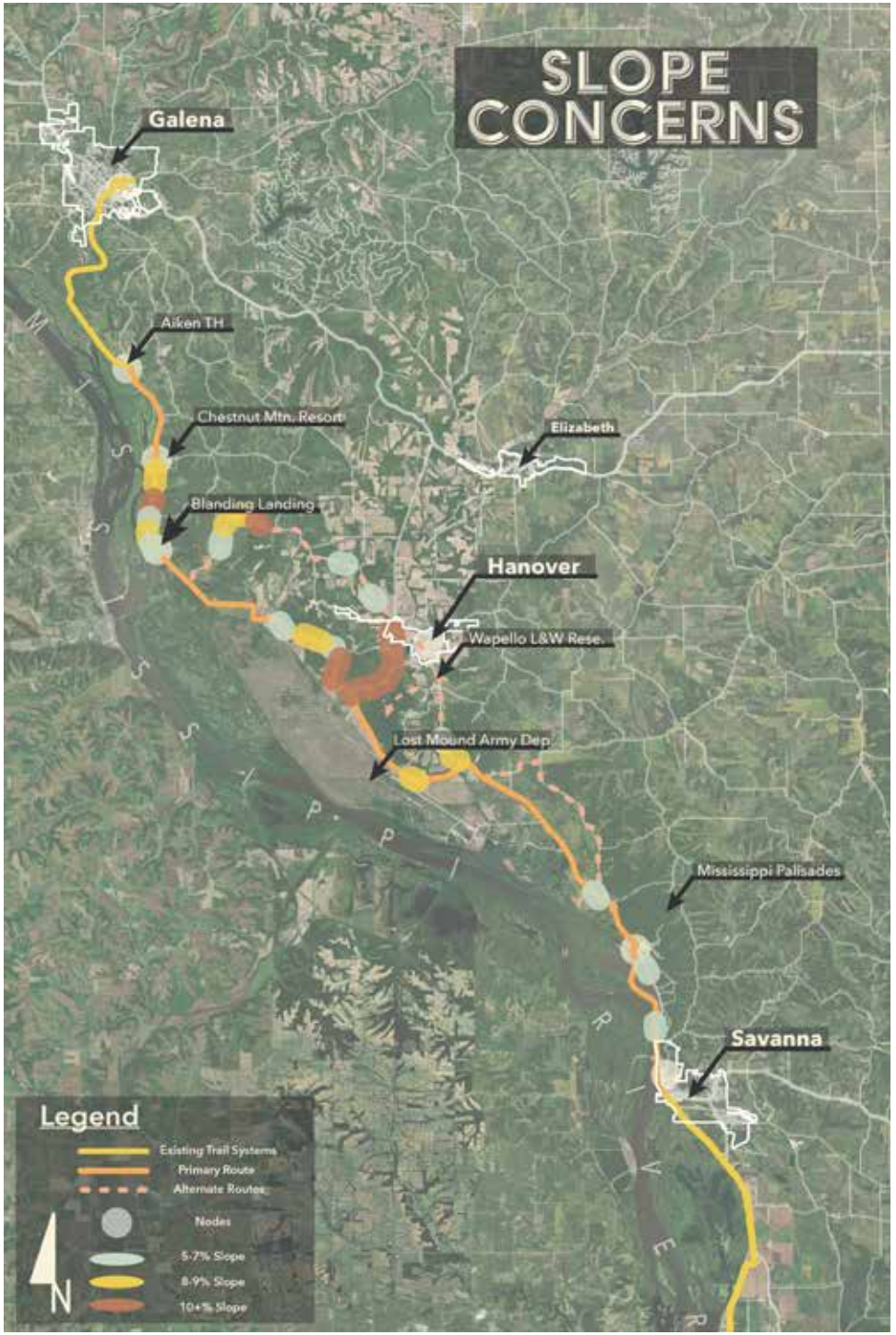
There is a wide array of lodging options along the trail route, in-town, and throughout the rural areas. The multiple trail nodes provide many great places from which to start an exploration of the Mississippi River valley. The nodes make for quick and easy connections for visitors to access the trail no matter where they might be staying along the route.

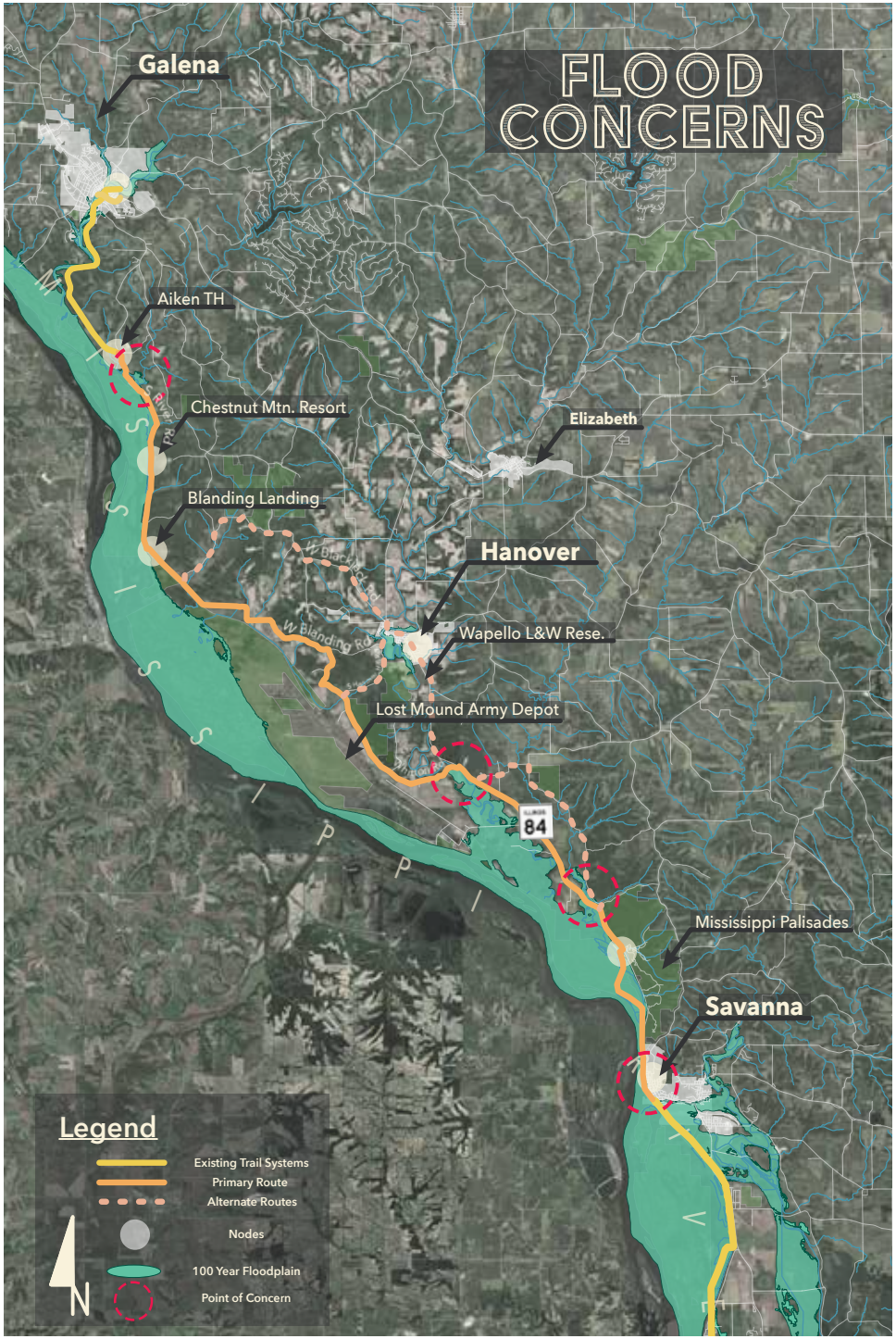
1. Galena
2. Galena Log Cabin Getaway
3. Goldmoor Inn/Riverview Ranch & Resort
4. Chestnut Mountain Resort
5. Blanding Landing Recreation Area
6. Rocky Waters Winery Fisherman's Cabin
7. Shaw Campground
8. Mississippi Palisades State Park
9. Savanna
10. Seven Eagles Resort & Camp
11. Spring Lake Campground
12. Fin & Feather Campground
13. Mississippi River Lodge
14. SureStay By Western / Sandburr Run & Resort

Slope Concerns

Changes in slope along a trail can provide a variety of experiences and views. However, steep inclines or even moderate inclines over a long stretch can create challenges, especially for less-experienced riders. For the most part, the primary trail route maintains a slope of less than 5%, with a few brief sections that range between 5-10%. The stretch between the Illinois Department of Natural Resources property south of Chestnut Mountain down to Blanding Landing has some of the most significant elevation change of the primary route. The alternate routes that connect into the Hanover area will have greater slopes for longer durations as they make the climb up through the Hanover Bluff area and to the higher elevation of the village.

A steeper slope is prevalent through the DNR property





Flood Concerns

Along the Mississippi River, potential risk of flooding is not uncommon. Impacts from flooding can undermine trail infrastructure and block trail routes during periods of seasonal flooding. Other small tributaries that feed into the Mississippi River from the east also have potential flood risks that may impact the trail route and conditions.

The map to the left shows the 100 year floodplain and points where it may impact the proposed trail route. The areas of biggest concern are highlighted with the red circles. These areas of concern include the following sections:

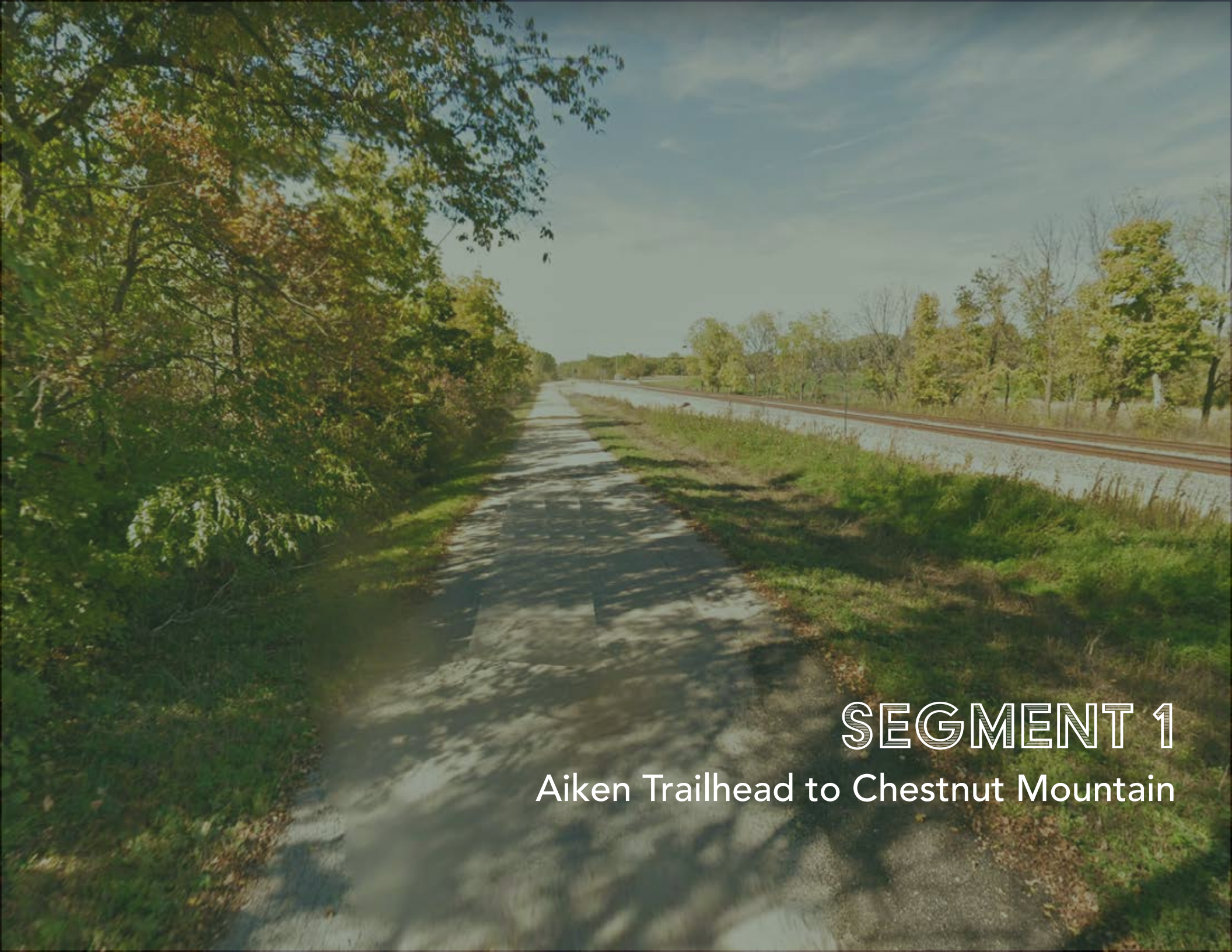
S. River Road and Smallpox Creek. This zone is just south of the Aiken trailhead. Erosion from flooding and saturated soils have impacted the roadway along here in the past. Reconstruction and reinforcement of S. River Road near here was completed recently.

The Apple River nears Highway 84 at its intersection with W. Whitton Road. It has been noted that this location is prone to flooding, and that flood waters can crest the bridge on W. Whitton Road.

Rush Creek and wetlands along the Mississippi River just north of Palisades State Park show potential larger areas of inundation from flooding. Highway 84 is elevated over the river, but the alternate route along Airhart Road may have points of concern. Planning for a multi-use path along the highway will need to account for the potential for flooding.

Areas of Savanna's riverfront also show potential for flooding. The proposed route through here is intended to use existing roads that are at a slightly higher elevation from the park areas.

This document proposes an elevated trail along the riverfront between Miller's Landing Marina and Savanna. This trail should be built above potential flood levels, while attempting to not obstruct views from the roadway, and satisfying safety concerns from the railroad.



SEGMENT 1

Aiken Trailhead to Chestnut Mountain

This route will utilize S. River Road as a shared rural road trail from the Aiken trailhead to the base of Chesnut Mountain near the resort's boat dock. This is a low volume road with an average daily traffic volume of 75-125 vehicles. The current road is paved and converts to gravel just north of Chestnut Mountain. Though an independent trail or shoulder would be desired, woodland vegetation, railroads, and steep ditches along the road create many limitations for that option.

Earlier plans for this portion of the Great River Trail developed by WHKS, an engineering consultant out of East Dubuque, note similar concerns. It is also noted that the American Association of State Highway and Transportation Officials (AASHTO) recommends road widths of 18 feet or more for rural roads serving as trails. S. River Road has a varying road width of 17-20 feet with no shoulder, but generally meets the recommendations. However, from a trail user experience, especially those less experienced, meeting vehicles on narrow roadways can be intimidating. To increase safety and comfort for the trail route, expansion of the roadway with a clearly defined shoulder or through a series of pull-offs is proposed.

The majority of this segment utilizes or is adjacent to Rice Township road easements. The township is not endorsing trail development and currently will not permit signage or on-road trail infrastructure due to liability concerns. There is a risk that the township will release/ abandon its easement (or sections of it), in which case the road reverts to ownership by adjacent land owners. This is an issue that will need to be explored further. Alternative options such as municipality or non-profit purchase of property along sections of road here may be needed as a long-term strategy.

Considerations for Segment 1 include:

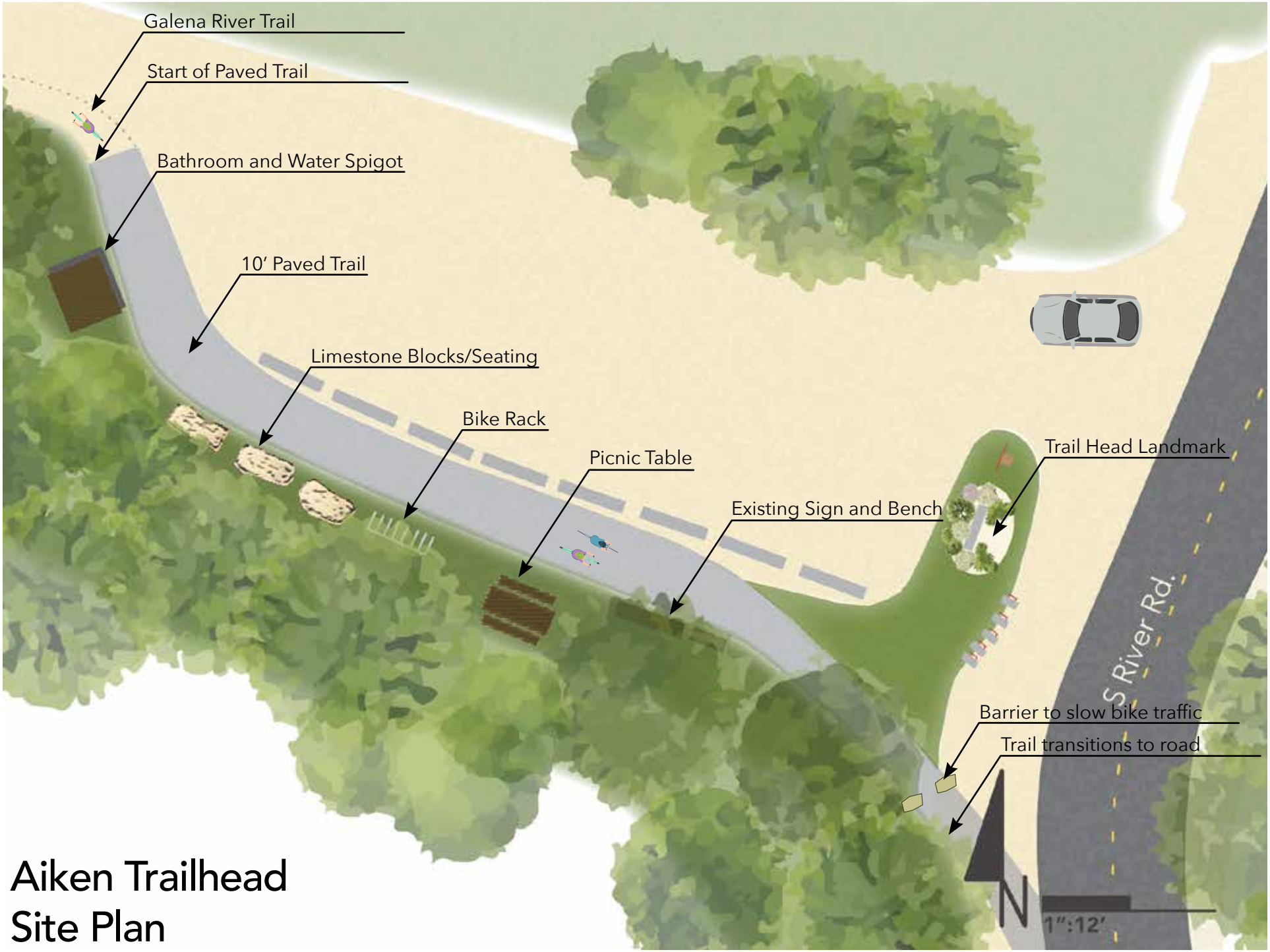
- Aiken Trailhead updates
- Shared rural road trail section with extensions
- Railroad crossings and alternative routes
- Chestnut Mountain node development

A Denotes general location where trail typology sections were created. The sections are intended to highlight typical design considerations along the route as site and infrastructure conditions change.

1. Riverview Ranch and Resort
2. Goldmoor Inn
3. Winston Tunnel
4. Chestnut Mountain

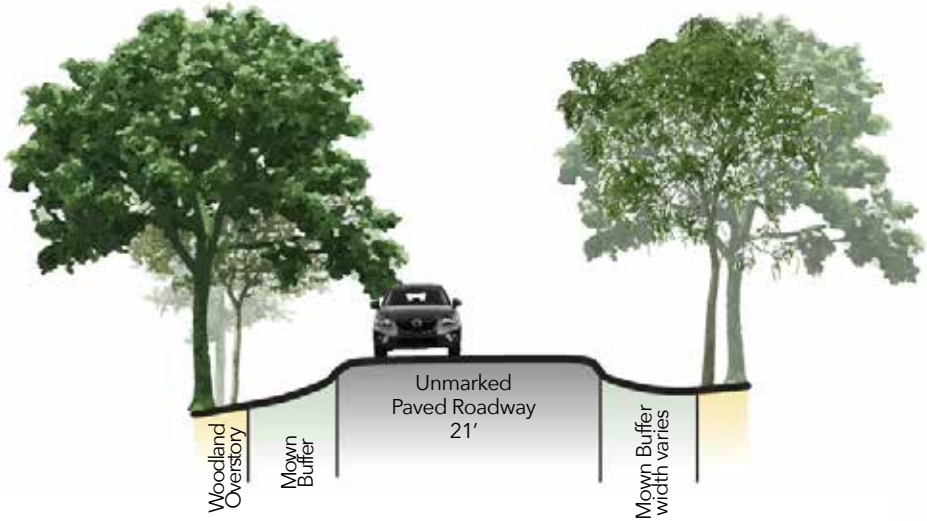
Aiken Trailhead

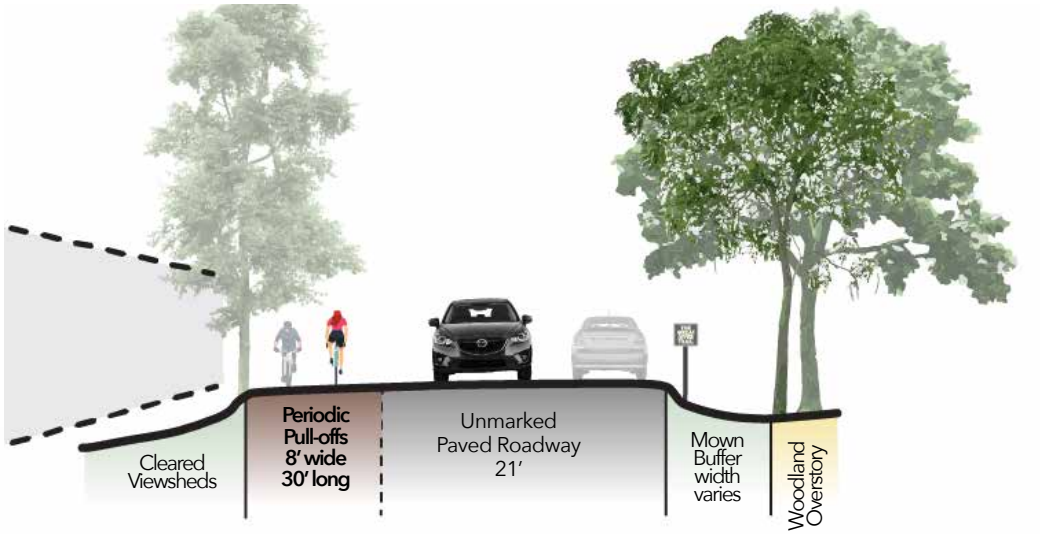
The trailhead at Aiken marks the southern end of the Galena River Trail. The current site lacks clear identification as a trailhead. The ambiguity of this site can make it easy to overlook when traveling by vehicle along S. River Road and may have negative safety implications as drivers are not expecting cyclists to be in the area. Making a safe connection through the parking lot and directing cyclists onto S. River Road could be accomplished by a defined trail on the west side of the parking area. A minimal amount of the woodland edge would need to be removed to accommodate the improvements. The trailhead could easily be enhanced with some seating and plantings to make it more substantial and help draw attention to it. Improvements to the restroom and wayfinding/signage are also recommended to establish the trailhead as a more significant node for the Great River Trail. Signage updates would include information related to bike safety, especially as it pertains to riding on-road with traffic. Cyclists entering S. River Road without yielding to traffic was a concern raised by members of the township. This could be deterred through the use of physical barriers at the point of intersection that cause cyclists to slow down or even walk their bikes through before merging onto the roadway.



Aiken Trailhead
Site Plan

Section A
Shared Rural Road



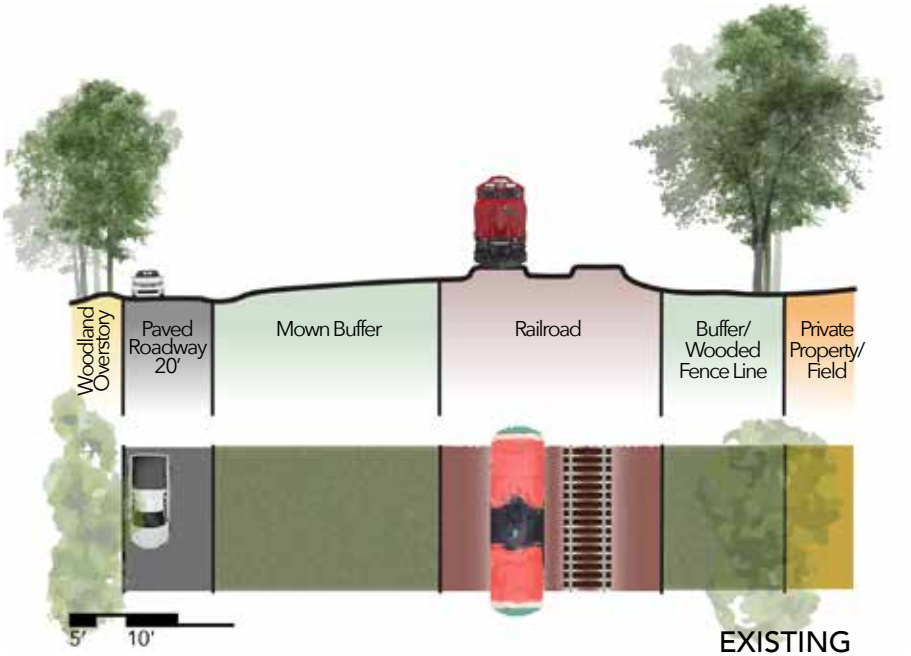


Section A provides an example of the proposed pull-off zone. This widening of the roadway is recommended to create a safer shared road experience for trail users and motorists. These pull-off zones would accommodate passing traffic and double as overlooks for taking in views of the river valley and passing trains. These sites could also host interpretive and wayfinding signage to create awareness of the trail and give trail users information about distances to the trail nodes and nearby amenities. The extensions could be paved in asphalt, like the roadway, or in gravel. A change in surface would help to differentiate them from the road and make them more bike-friendly zones. Pull-off areas would need to be planned in conjunction with private landowners.

Railroad Crossing Considerations

There are two railroad crossings within this segment that need to be considered. Both crossings are marked, but only the south crossing has a gate arm and warning light. The crossing distance is approximately 25 feet and spans two rail lines.

Stakeholders raised concerns about the safety of the crossings and the need for surface repairs and safety enhancements if the number of trail users were to significantly increase bicycle traffic along S. River Road.



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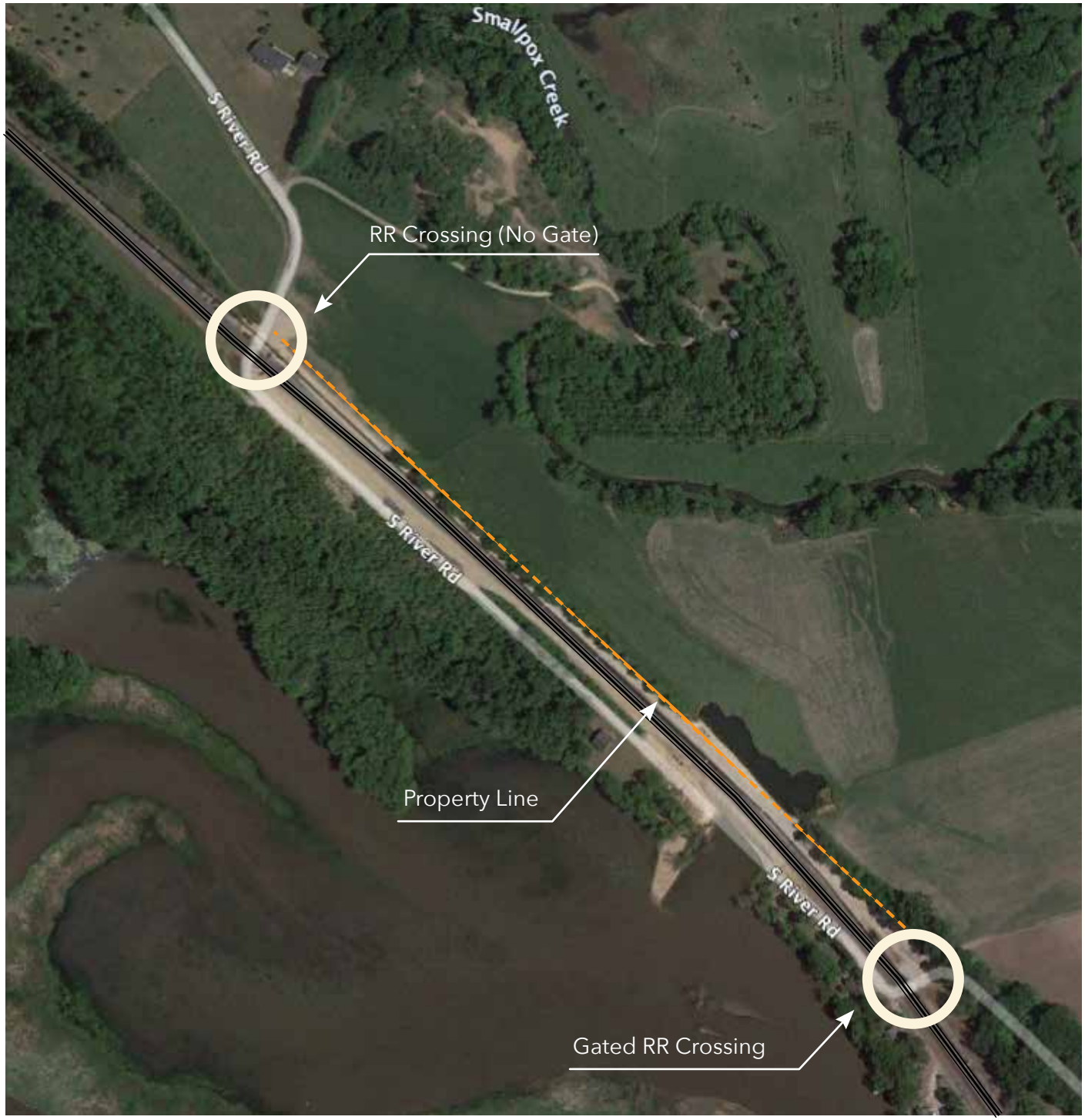
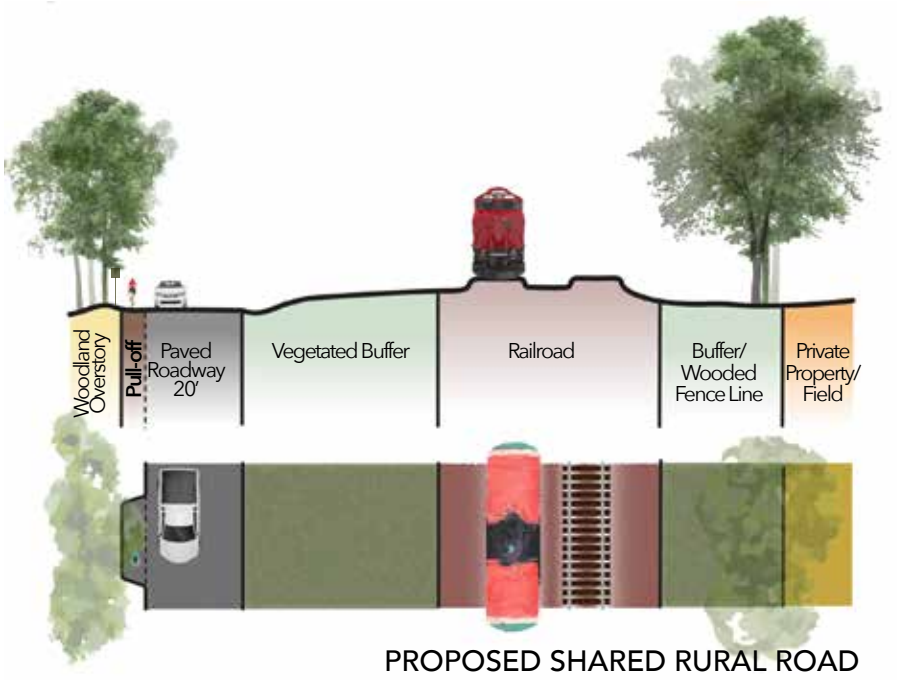

Smallpox Creek
S River Rd
RR Crossing (No Gate)
S River Rd
Property Line
S River Rd
Gated RR Crossing

Section B
Shared Rural Road

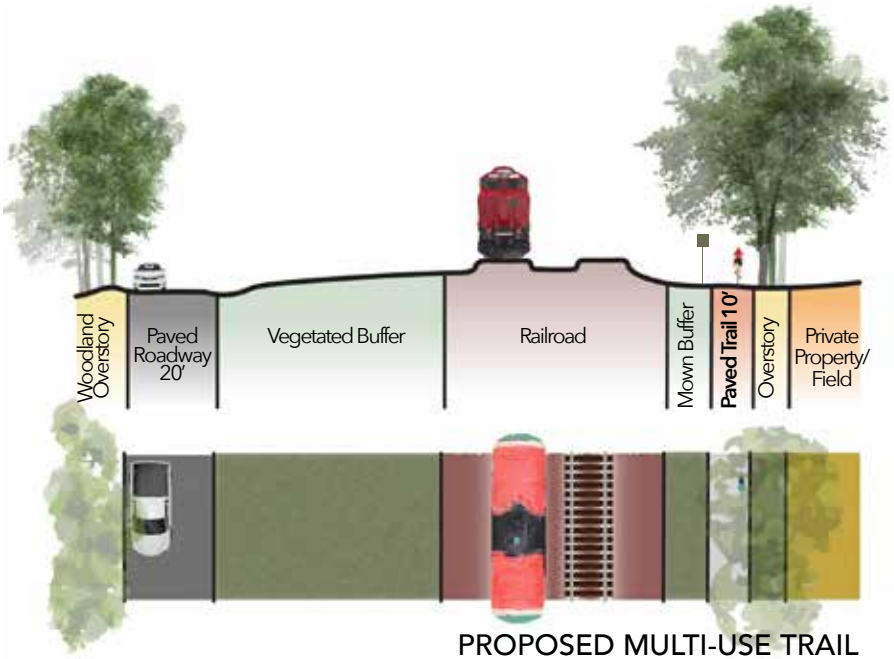
For a more immediate development of the trail, utilizing S. River Road as a shared road experience is the most logical step. This low-volume road is paved and the width of the road can easily support vehicular and bike traffic. However, this type of path is less conducive for pedestrians.



PROPOSED SHARED RURAL ROAD

Section C (Alternate)
Multi-Use Path

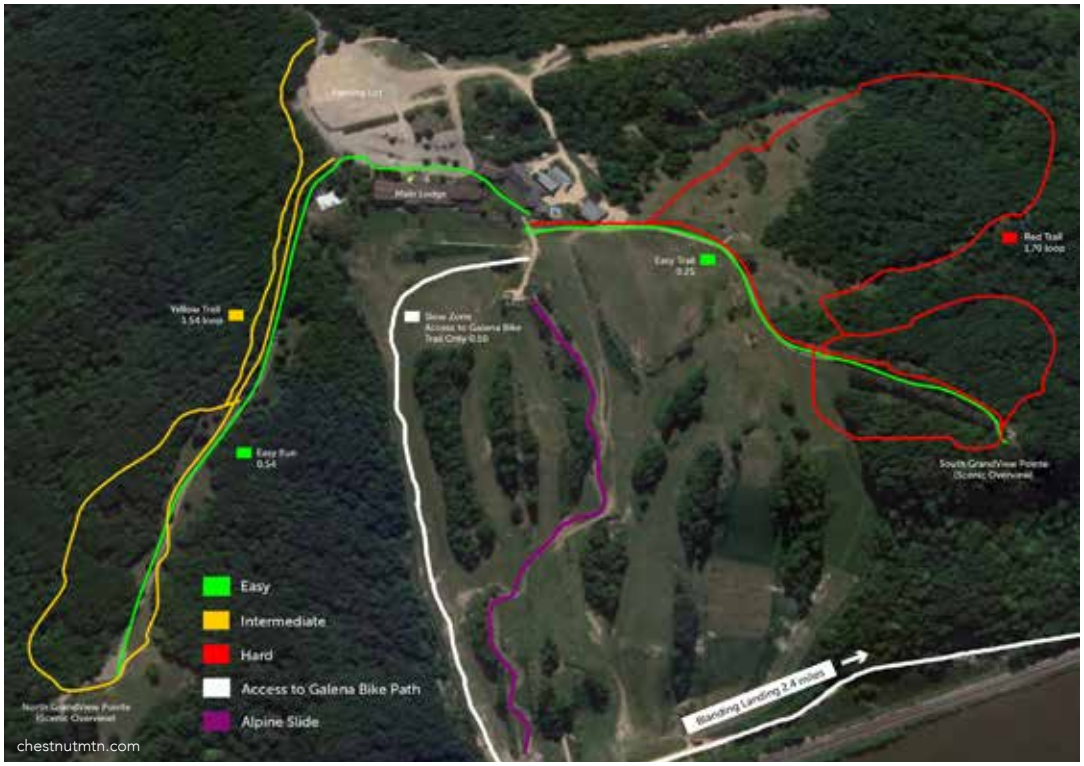
If desired in the future, there may be an opportunity to route an off-road trail along the east side of the railroad tracks utilizing easements in the railroad right-of-way as a "rails-with-trails" strategy. A second option would be to work with private landowners to purchase an easement of the property adjacent to the railroad right-of-way. The private parcels to the east appear to be under a single owner. The property boundary is marked by the tree line. The multi-use path trail would create a safer trail experience for all, and would be more inclusive to pedestrian use.

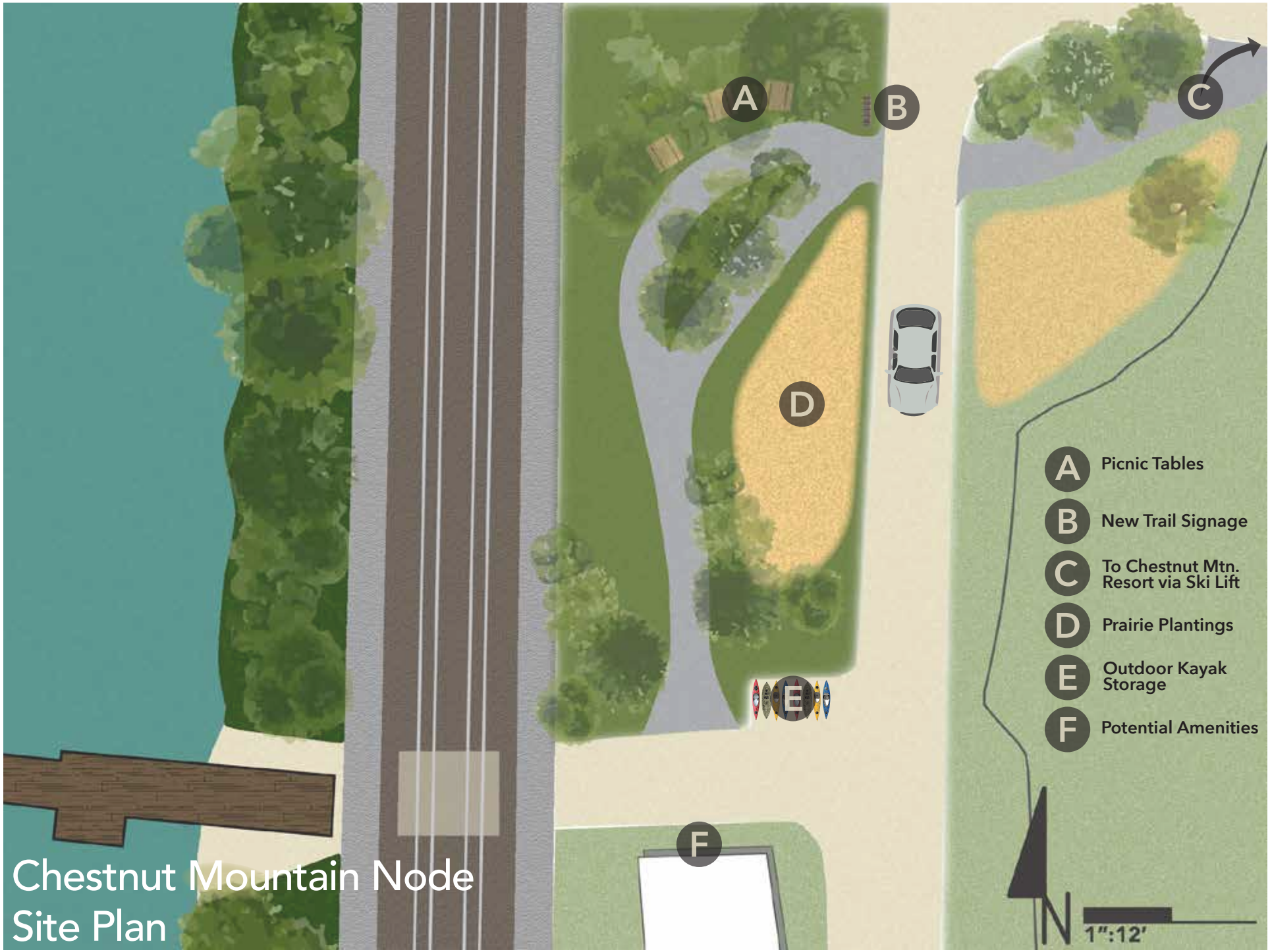


PROPOSED MULTI-USE TRAIL

Chestnut Mountain Node

Chestnut Mountain is a significant node along the Great River Trail route. The ski lodge provides many amenities and activities that could appeal to trail users including a system of mountain bike trails pictured in the map below. The lodge may also be the starting point for trail users that are staying there. Most of the amenities and activities that are provided by Chestnut Mountain are located at the top of the hill over a hundred feet up and almost a half mile from where the trail intersects the property down along the river. At the point of intersection there is little sense of arrival and no immediate connections to the amenities. Updating the landscape in this area through plantings, wayfinding signage and places to rest and eat would help to enhance the sense of arrival not only for trail users, but also for visitors using the tour boats that dock at this location. From here visitors would be directed about how to utilize the ski lifts to access the lodge area and the other features throughout the property.





Chestnut Mountain Node
Site Plan

SEGMENT 2

Chestnut Mountain to Blanding Landing

This route will utilize S. River Road as a shared rural road trail. Around the midpoint of this segment there is a three quarter mile stretch of IDNR property where the road dead-ends due to a washout. The trail will become solely a bike and pedestrian route through this property.

This segment provides many opportunities where the trail could be elevated above the riverfront and incorporate views to the river. Currently however, the density of the woodland on the west side of the route limits views. Selective tree clearing at pull-offs will help to frame views toward key features in the river valley.

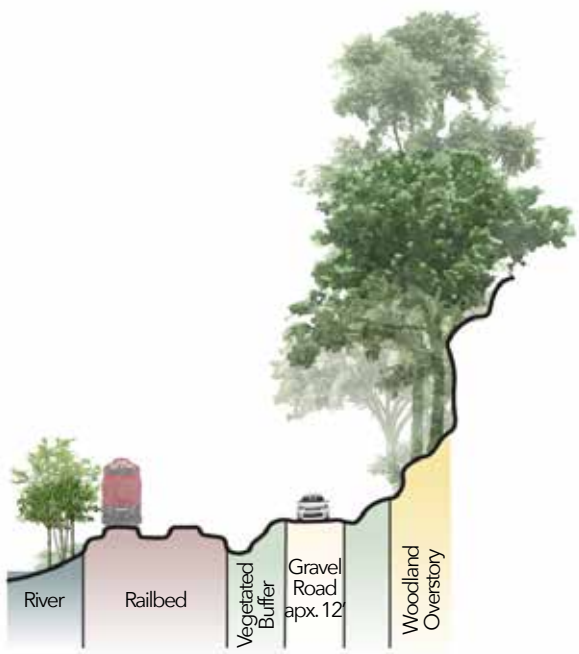
Though drainage issues were not noted through this study, it should be taken into consideration that the WHKS report did identify that there were drainage concerns through the steeper portions of this segment.

Considerations for Segment 2 include:

- Shared rural road trail sections with extensions
- IDNR property updates and trail development
- Trail overlook
- Blanding Landing node considerations

Section D
Shared Rural Road

The road connecting Chestnut Mountain to Blanding Landing is typically quite narrow at 12-14 feet wide. As mentioned with Segment 1, AASHTO recommends road widths of 18 feet, but due to very limited road use, this dimension is allowable. However, the limited roadway width along with bluffs and associated drop-offs makes for precarious driving conditions, especially when meeting on-coming traffic. The limited roadway width means that drivers and cyclists along this stretch need to be extra cautious of each other. The addition of pull-offs would create zones that could make sharing the road safer for trail users and vehicles. Limited use and maintenance of this road over time has led to fairly poor conditions for the road surface.



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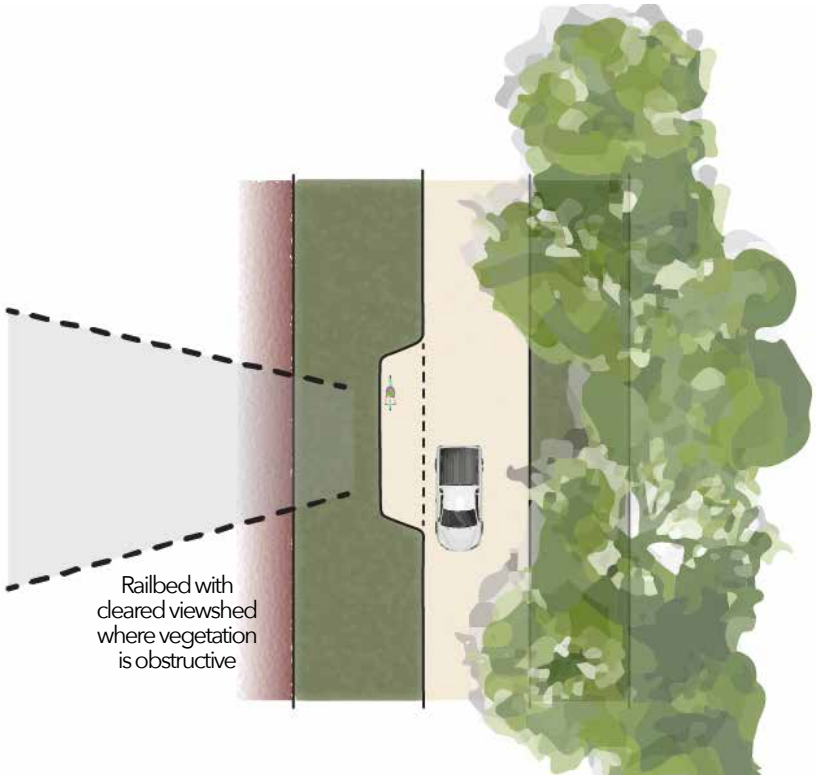
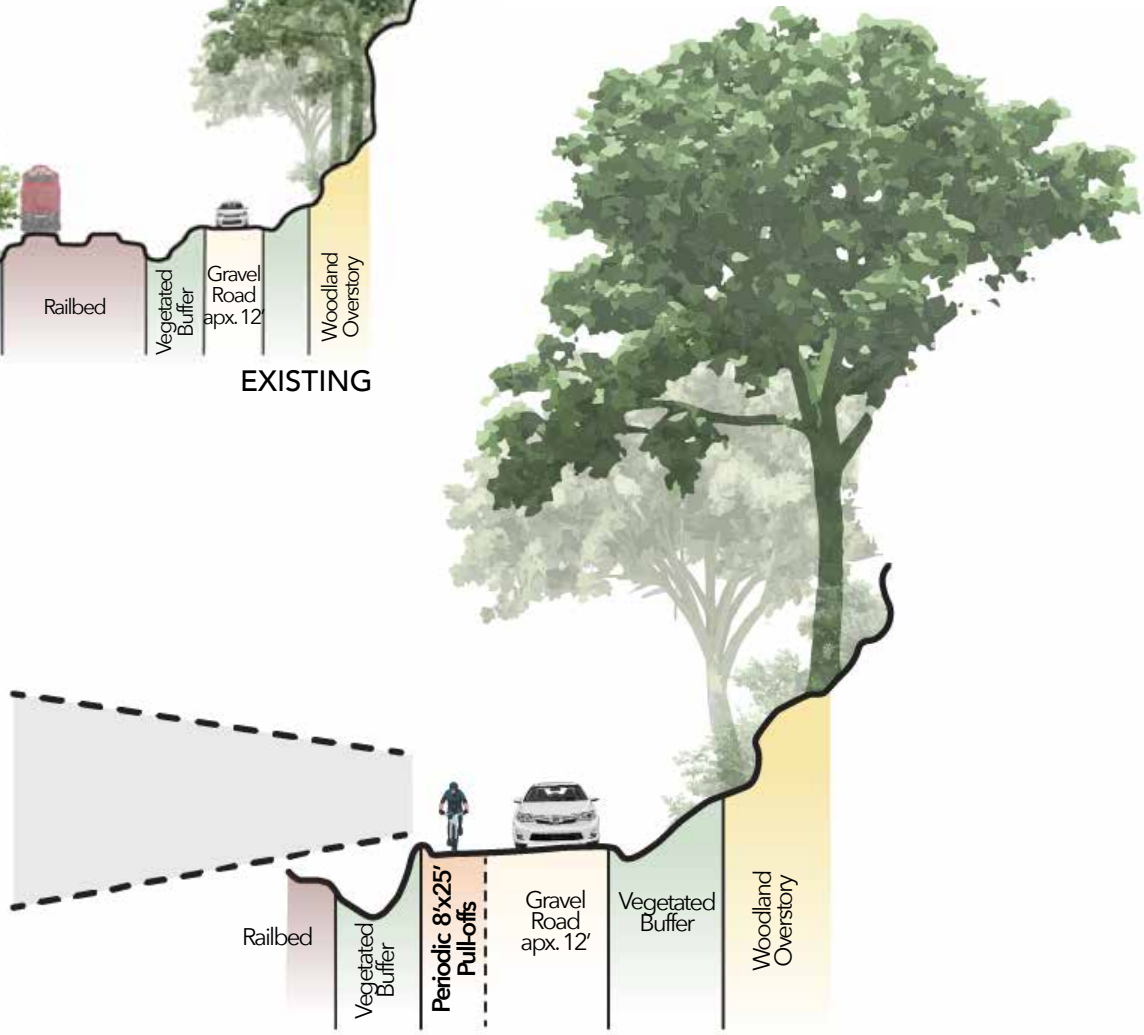




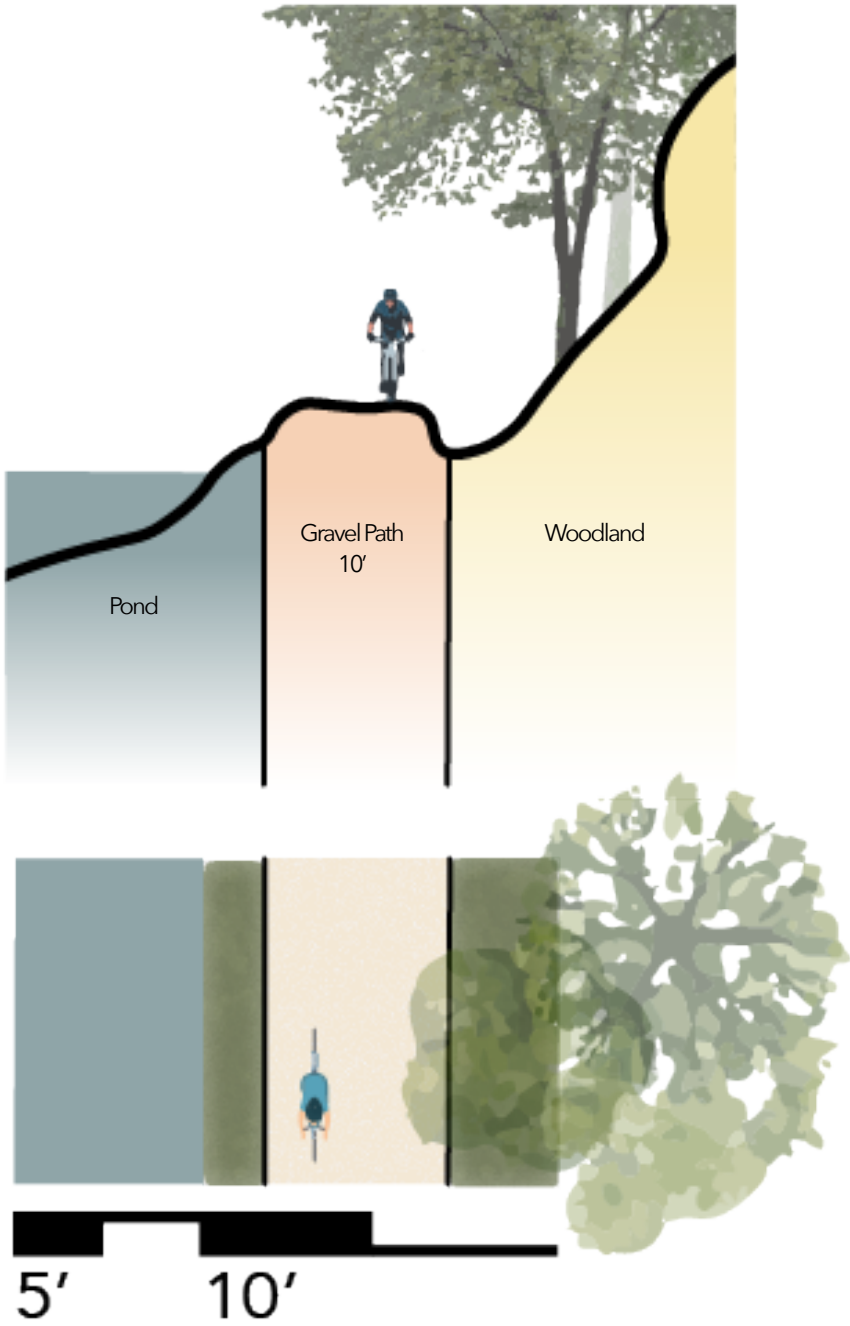
PROPOSED SHARED RURAL ROAD

IDNR Property

Within the IDNR property there are many unique geologic features and wetland areas that would benefit from interpretive signage and make this area a special find along the trail. Openings in the bluff face reveal a link to the region's lead mining past. The slope through this zone exceeds 10% at the south end, while the north end is relatively flat. The elevation gain on the south end could limit accessibility to some trail users.

Section E
Multi-use Path

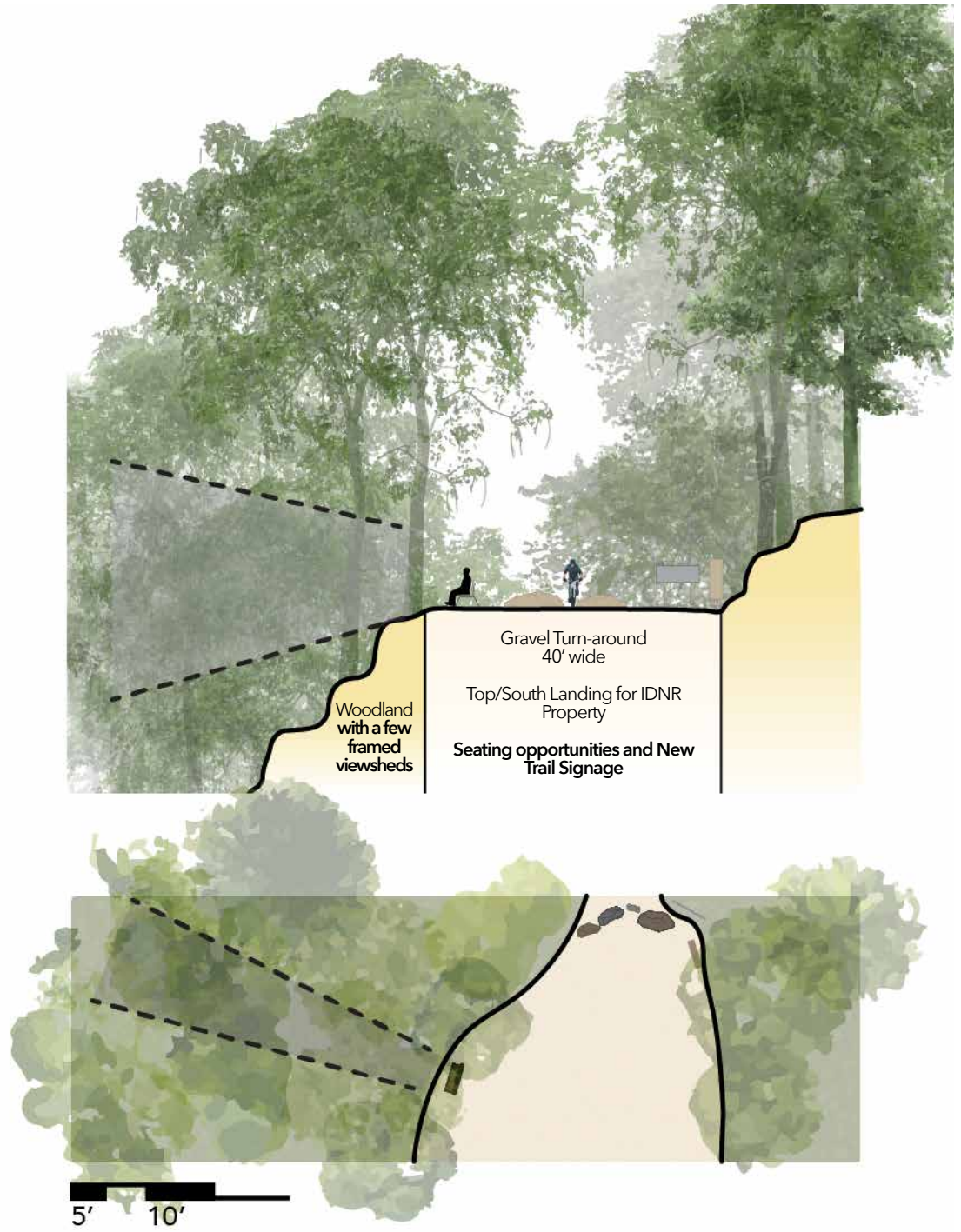
Erosion and encroaching vegetation into the trail zone and surface will need to be addressed to create a safe and accessible trail. A new 10-foot-wide shared-use path is proposed for this stretch. Regrading of this section and managing water concerns will be necessary to stabilize the slope from further landslides. The Roadway Improvements Conceptual Design Analysis and Report for South River Road created by WHKS in 2012 provides a more in-depth review of landslide and water concerns and some strategies for mitigation.

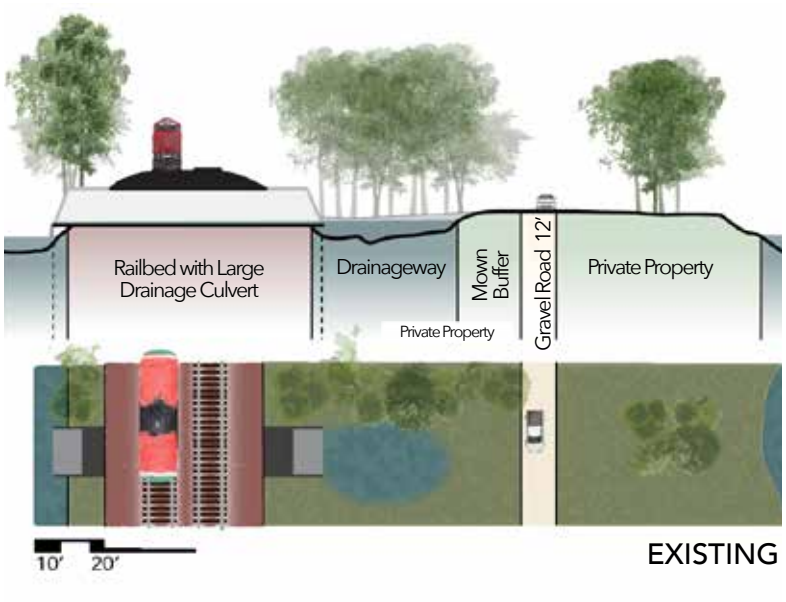


PROPOSED MULTI-USE PATH

Trail Overlook

The south end of the IDNR property marks the highest point along the proposed trail route. The road forms a wide circle at the dead end, so as to provide space for vehicles to turn around. This location could serve as an overlook with an observation deck with seating and a place for bicycle parking. A resting point at the top of this would be beneficial since the climb up to it will be fairly steep. With minimal vegetation removal and trimming, great views could be offered of the Mississippi River valley and distant landscape features such as Pilot Mound.

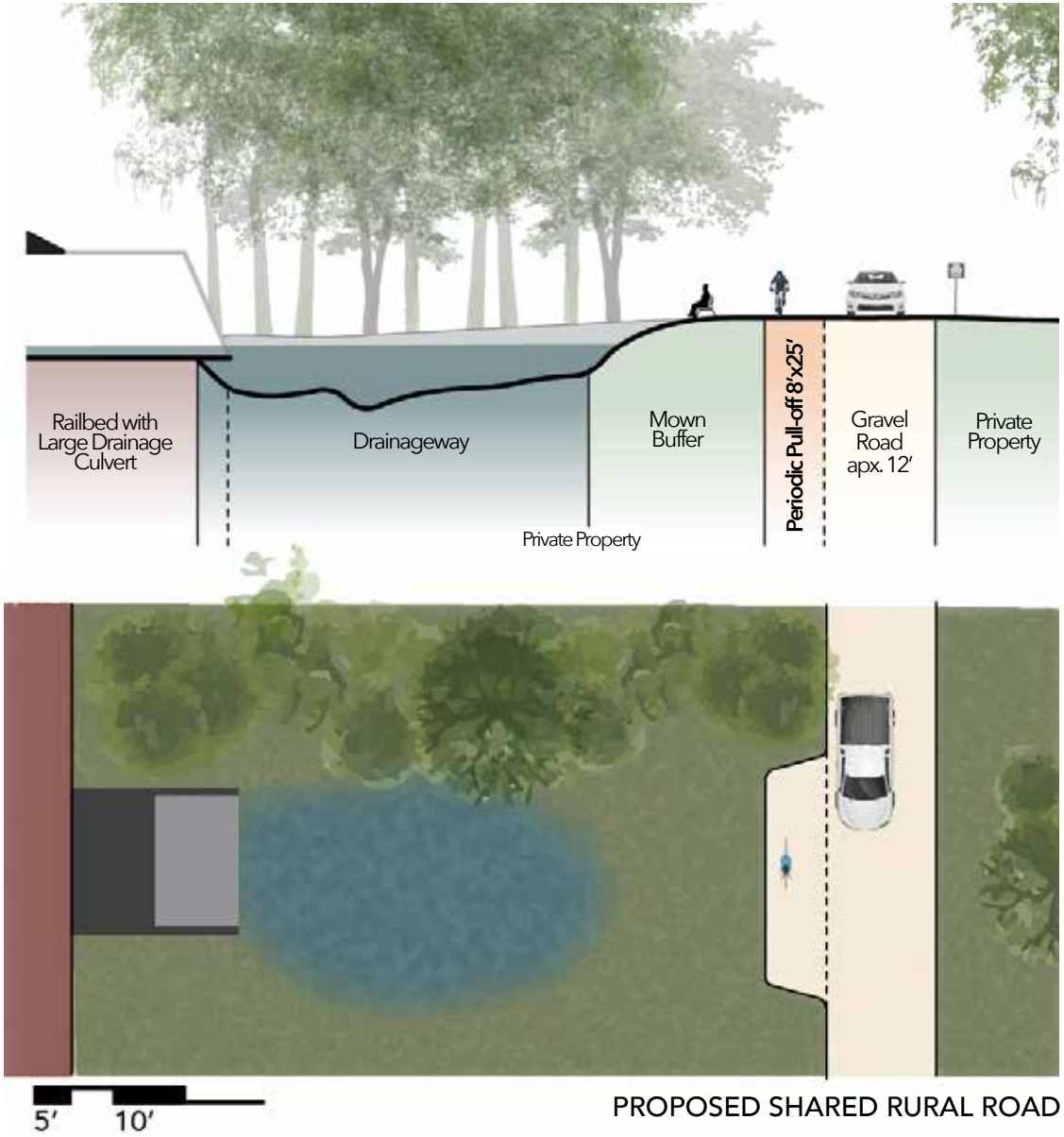




EXISTING

Section F
Shared Rural Road

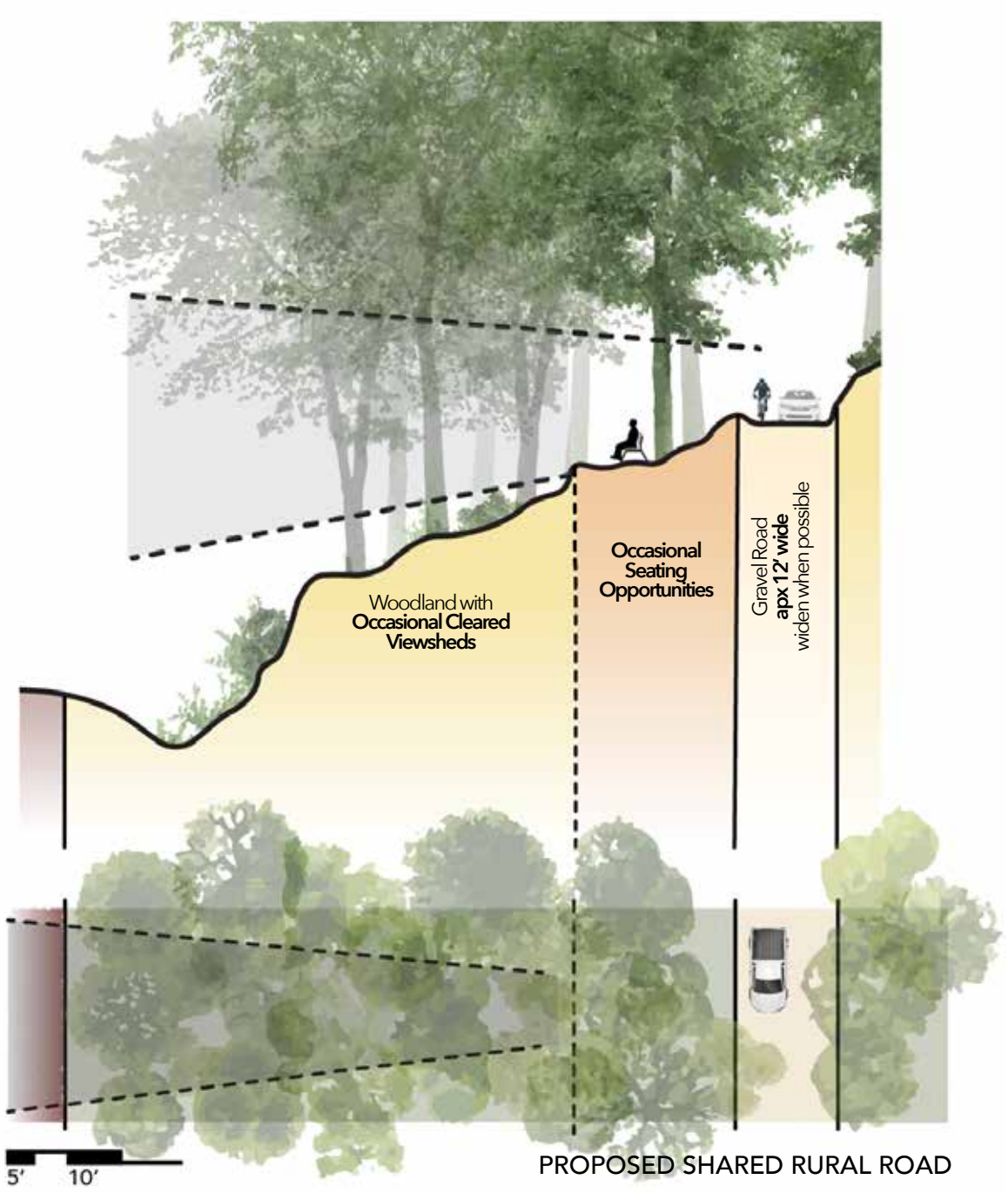
Further south the roadway and the adjacent landscape level out and there are more opportunities for widening the road. When possible these pull-off zones should offer moments to view unique features in the landscape, whether natural or developed. For instance, there is a pond and drainage way that pass under the railroad berm and feed the Mississippi River. This feature can be seen in the following section.



PROPOSED SHARED RURAL ROAD

Section G
Shared Rural Road

South of the IDNR property the road continues to be narrow at around 14 feet wide. The road does serve a few homes along the route, but other than the residents, this route should be mostly free of vehicles. However, passing another vehicle would be problematic. Steep, wooded slopes uphill to the east and downhill to the west make widening the road nearly impossible. Finding key locations for extensions would not only increase trail safety but would increase road safety for vehicles as well.



PROPOSED SHARED RURAL ROAD

Blanding Landing

This site is already a great node for fishing, boating and camping. Blanding Landing is managed by the U.S. Army Corps of Engineers and features a boat launch, restrooms, water fountain, picnic shelters, RV campground, and playground. The site provides a great place for trail users to stop and rest and experience the river. To increase the benefits of the site as a node, simple additions such as vending machines would support both trail users and those utilizing the campground facility. The property is well maintained and Army Corp staff are frequently on site. The adjacent town of Blanding does not have any businesses or amenities that currently support trail users, so the landing site is crucial. The next location that would have food, water and restrooms is 6 miles away in Hanover or back 3.5 miles to Chestnut Mountain. Perhaps the popularity of the trail will be a catalyst for future businesses in the area.

SEGMENT 3

Blanding Landing to Hanover Area

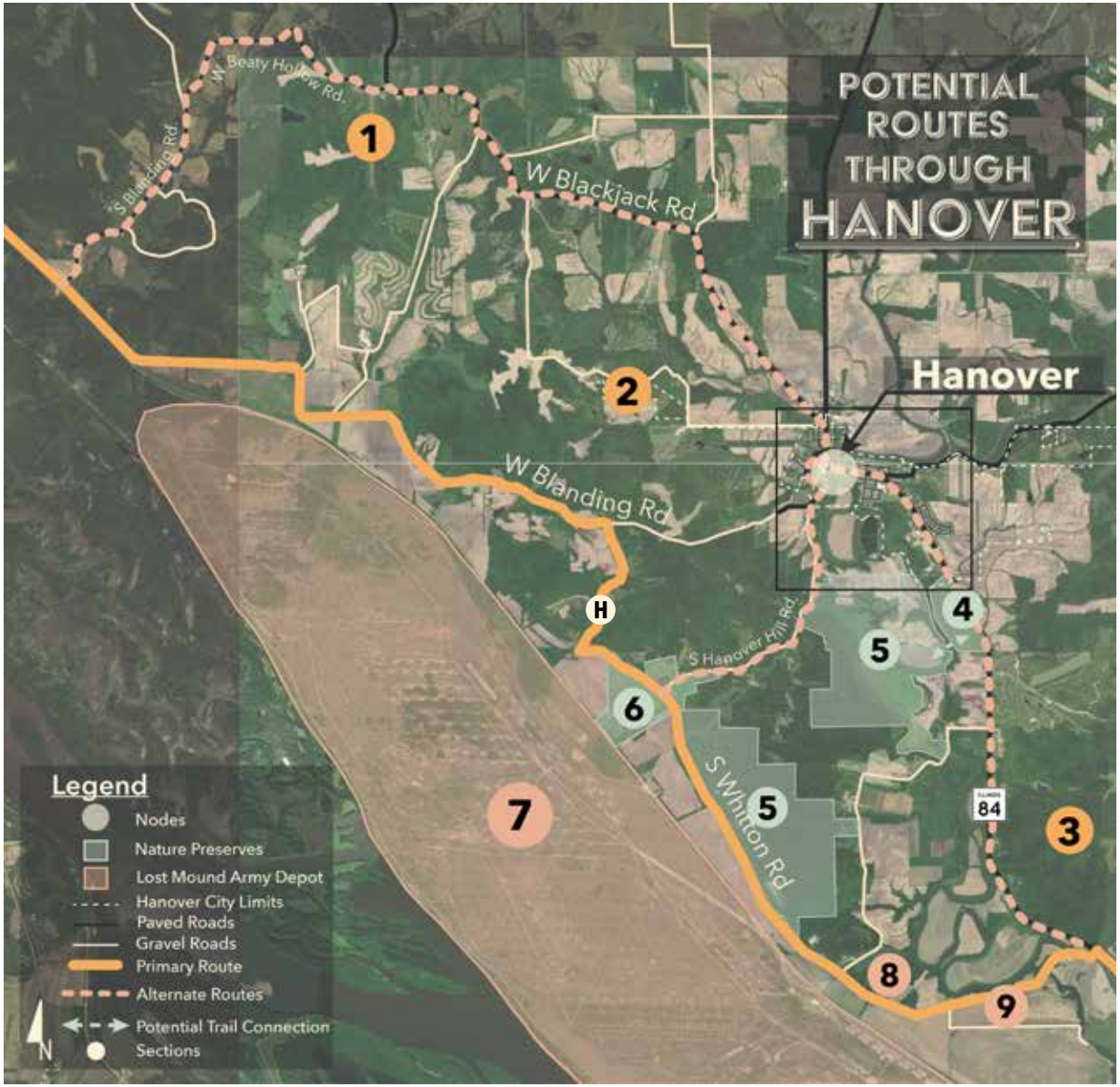
Google Earth

Through conversations with stakeholders it was determined that the trail should utilize the most direct route between Aiken and Savanna, IL when possible and connect trail users to the landscape of the Driftless Region and the Mississippi River. Current lack of access through the Lost Mound Army Depot means that the route must run along its eastern edge. The terrain on this route varies in slope which may pose some added challenges for less-experienced cyclists.

There are multiple routes that could be beneficial in connecting south to the Hanover area depending on the type of recreation experience trail users are looking for. One route would lead into town connecting to sites and amenities such as local wineries, the dam, and in-town businesses and would continue on to the Wapello Land and Water Reserve just south of town. In-town routes would provide access to food and water, which would not otherwise be available until reaching Savanna, approximately 14 miles south. The primary proposed route would continue in the countryside and connect to natural and historic areas, like the Hanley Savanna and Hanover Bluff with views to the historic Army Depot.

Considerations for Segment 3 include:

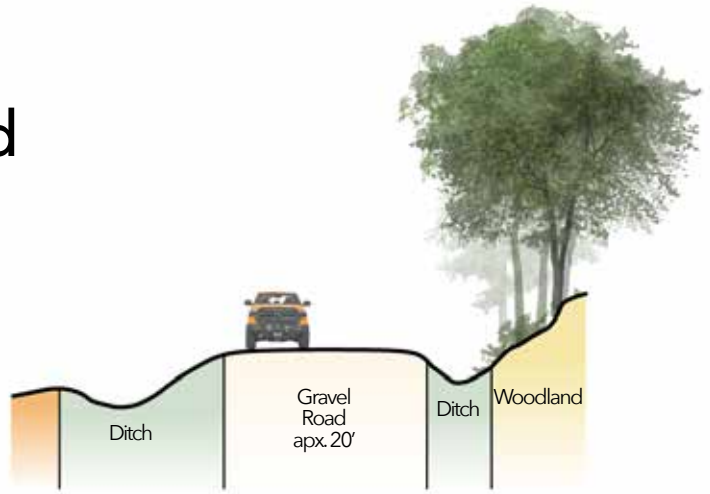
- Shared rural road trail sections
- Multi-use path sections
- Hanover attractions and amenities
- Wapello Land and Water Reserve



1. Orchard Landing Co.
2. Fergedaboudit Vineyard and Winery
3. Rall Woods State Natural Area
4. Wapello Land and Water Reserve
5. Hanover Bluff Nature Preserve
6. Lost Mound/Savanna Army Depot
7. Lost Mound (Geologic Feature)
8. Lost Mound Cemetery

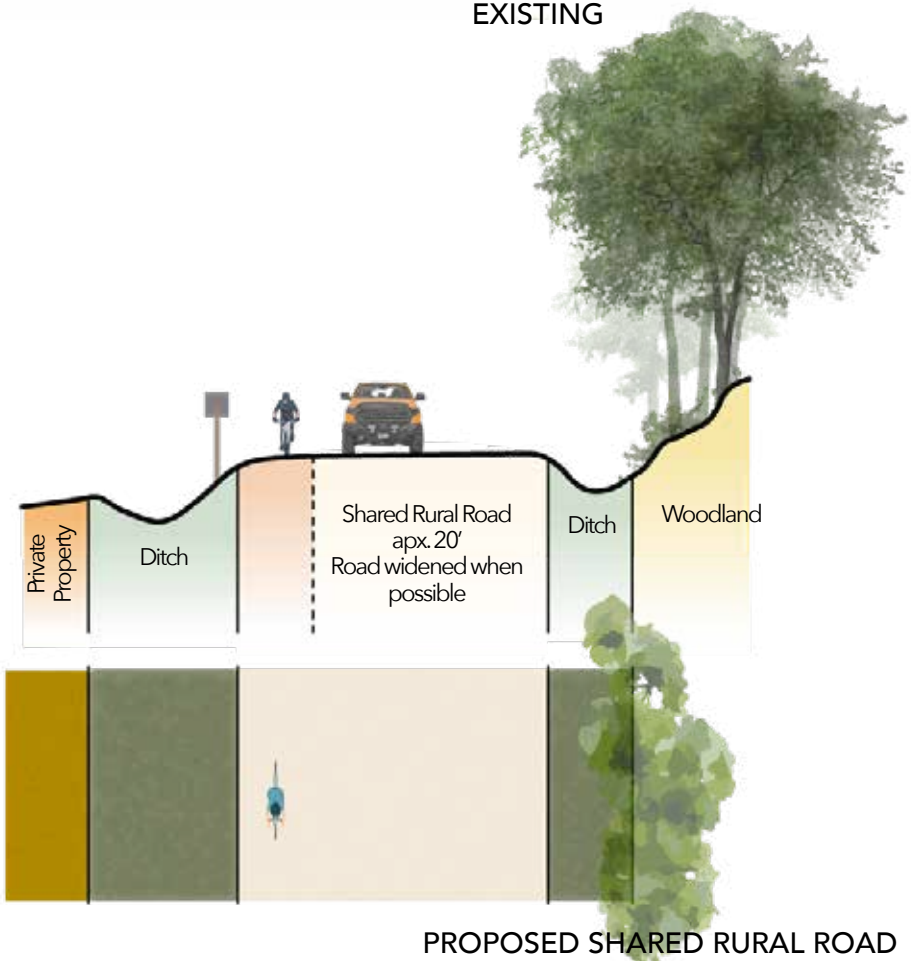
Section H
Multi-use Path vs Shared Rural Road

The most desirable trail option would be to have an off-road shared use path running in the right-of-way, between the roadway and the fence-line of adjacent properties. Although not ideal, a shared rural road trail would allow for the trail connection to be made with little investment.



EXISTING

PROPOSED MULTI-USE PATH



PROPOSED SHARED RURAL ROAD

Hanover

Hanover offers an array of amenities to support trail users, including: restaurants, bars, convenience stores, and repair shops which may offer support to cyclists. The village offers some of the historic river town charm found in the region, making the community a nice place to explore for trail users. Trail typologies were not determined for the alternate routes leading through Hanover. Within the town, Highway 84 is approximately 34 feet wide and, in places, has a designated shoulder, which could support cyclists. Through the downtown area the road supports on-street parallel parking which can limit the road width and pose obstacles for cyclists. Daily traffic counts along this stretch total more than 2,500 vehicles.

Hanover Area
Amenities and Attractions

1. Concave Dam
2. Wapello Land and Water Reserve
3. Hanover Tap
4. Great River Market
5. Hanover Mini Mart
6. Viking Inn
7. Charlie's Place
8. L&J Bootlegger Saloon
9. River Valley Collision Center
10. Elizabeth Tire
11. Jo Daviess County Highway Dept.

Wapello Land & Water Reserve and Hanover Bluff

The Wapello Land and Water Reserve could serve as an alternate node for a place to relax or have a picnic along the Hanover area route. It could also serve as a trailhead since the site does have a parking lot and is about midway along the route. There are opportunities to connect to hiking trails and future plans to link to the Hanover Bluff area would extend the hiking options. The route that utilizes S Whitton Road would not make a direct connection to this site.

SEGMENT 4

Hanover Area to Miller's Landing Marina

The primary connection between the Hanover area and Miller's Landing Marina would be via Highway 84. Riding along a highway can be intimidating even for experienced cyclists and limits pedestrian trail use. The goal for this segment would be to have an off-road shared use path running in the right-of-way adjacent to the highway. A temporary solution would be to expand and pave the highway shoulder to accommodate trail users. This option would benefit from signage along the route or marking on the pavement to increase safety and awareness for cyclists and motorists.

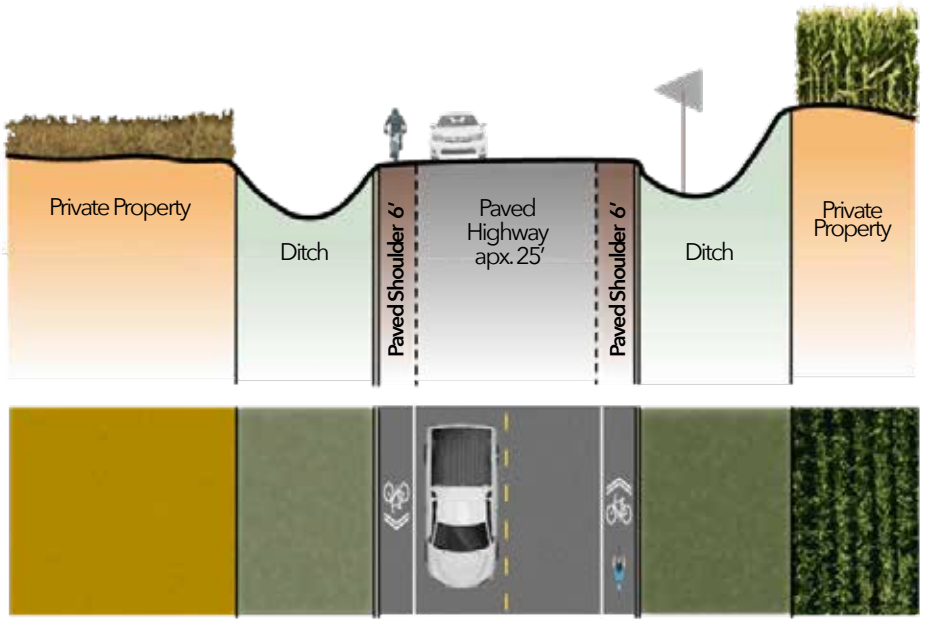
Considerations for Segment 4 include

- Shared-use path sections
- Shoulder trail section
- Alternate shared rural road to the east
- Miller's Landing Marina assessment

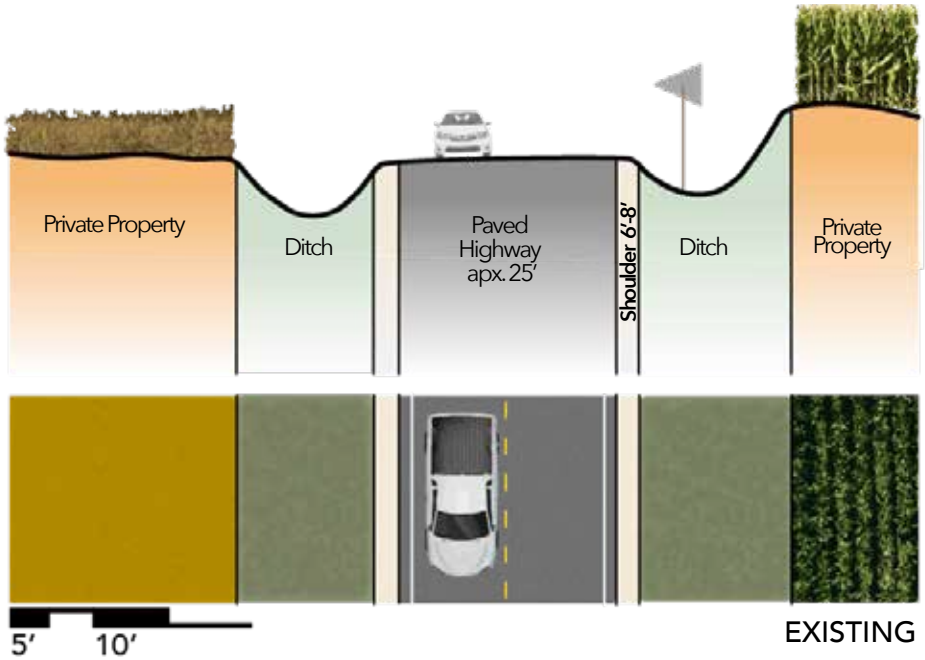
Section I
Multi-use Path vs Marked Shoulder

Highway 84 currently has a 6-8 foot gravel shoulder running along this stretch of the road. If that shoulder was to be paved it could serve as a bike route. Shoulder paths are typically reserved for cyclists, but could be used by pedestrians as well. A minimum of six feet is recommended for the shoulder width on both sides of the highway.

The larger goal would be to have an off-road multi-use path with a vegetated buffer separating the trail from the road. This increases safety for both trail users and motorists. A minimum trail width of 10 feet is recommended with a minimum buffer of three feet from the edge of the roadway and any other vertical elements in the landscape such as signage or fencing.



PROPOSED SHOULDER TRAIL



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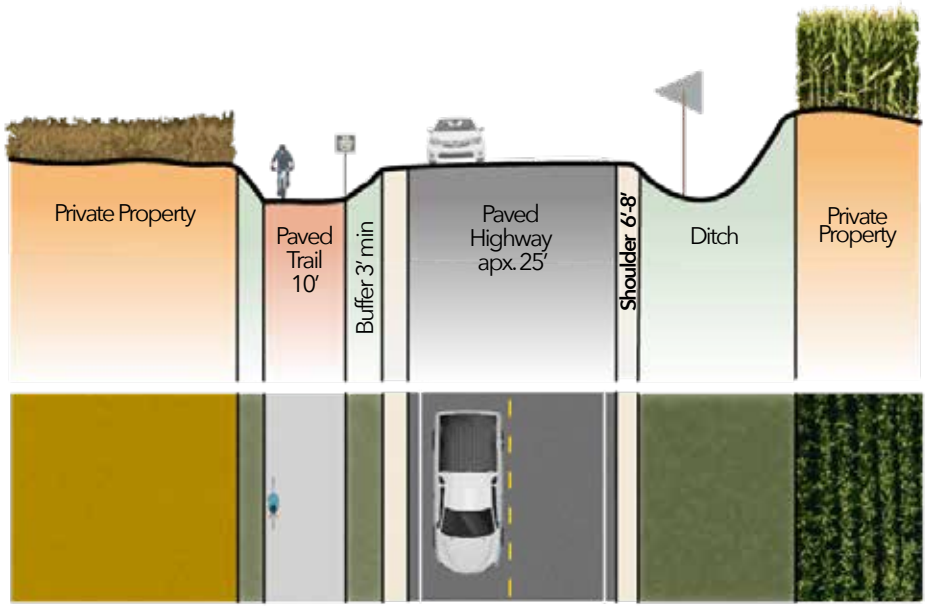


PROPOSED MULTI-USE PATH

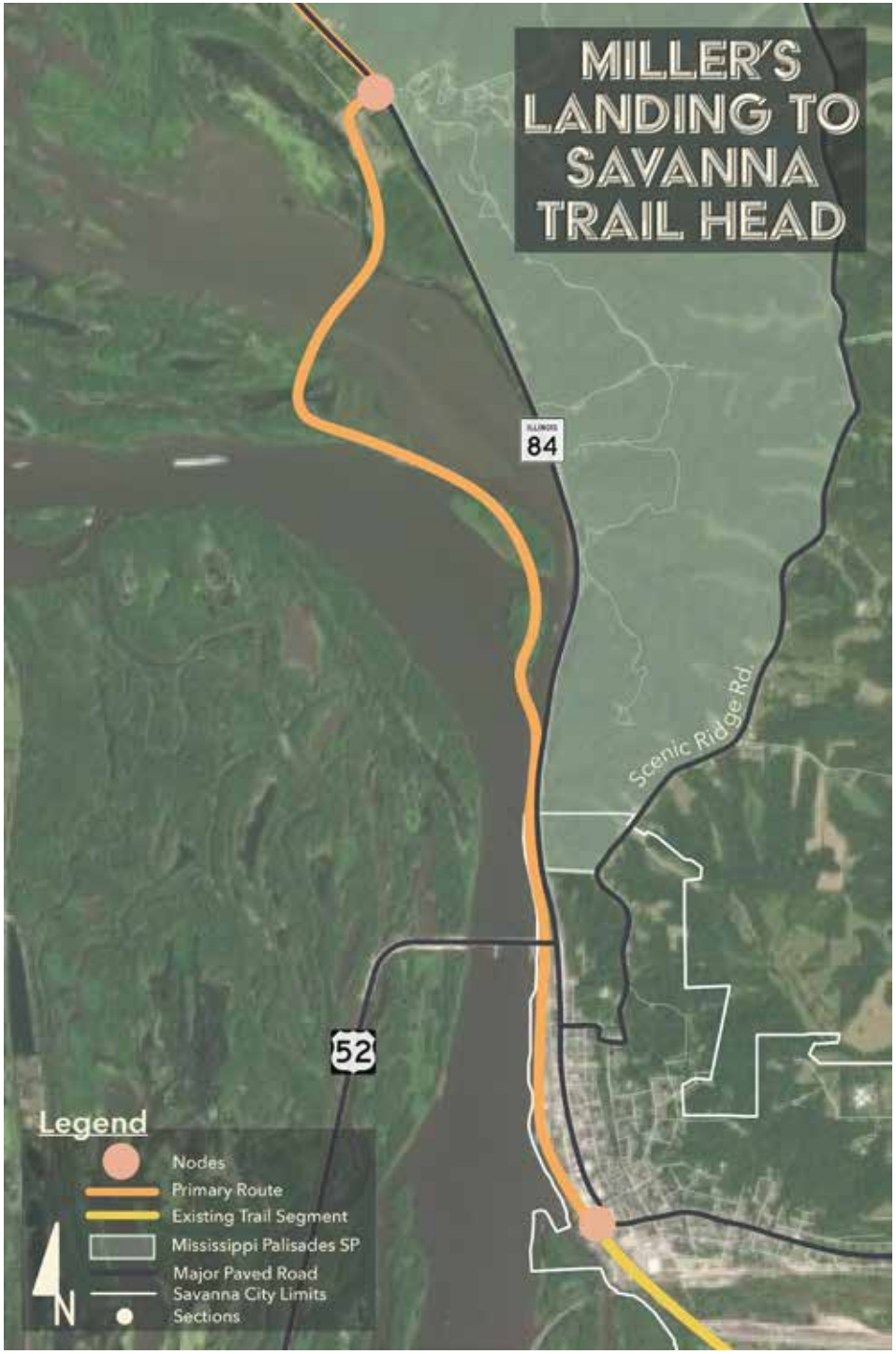
Miller's Landing Marina

The marina, also sometimes referred to as Miller's Hollow, is a boat landing adjacent to Mississippi Palisades State Park. The marina is owned by the U.S Army Corp of Engineers, with portions of the land leased to IDNR and USFWS. The site has a large parking lot to accommodate boat traffic during peak boating season. The site also has a restroom and benches. Due to limited options for connecting into Savanna, the marina could serve as a trailhead for connecting to the north. From this point trail users could utilize the Great River Trail or explore Mississippi Palisades State Park. Because Savanna is still a few miles to the south, additional amenities such as a bike fix-it station, vending machines and a water fountain would be beneficial.

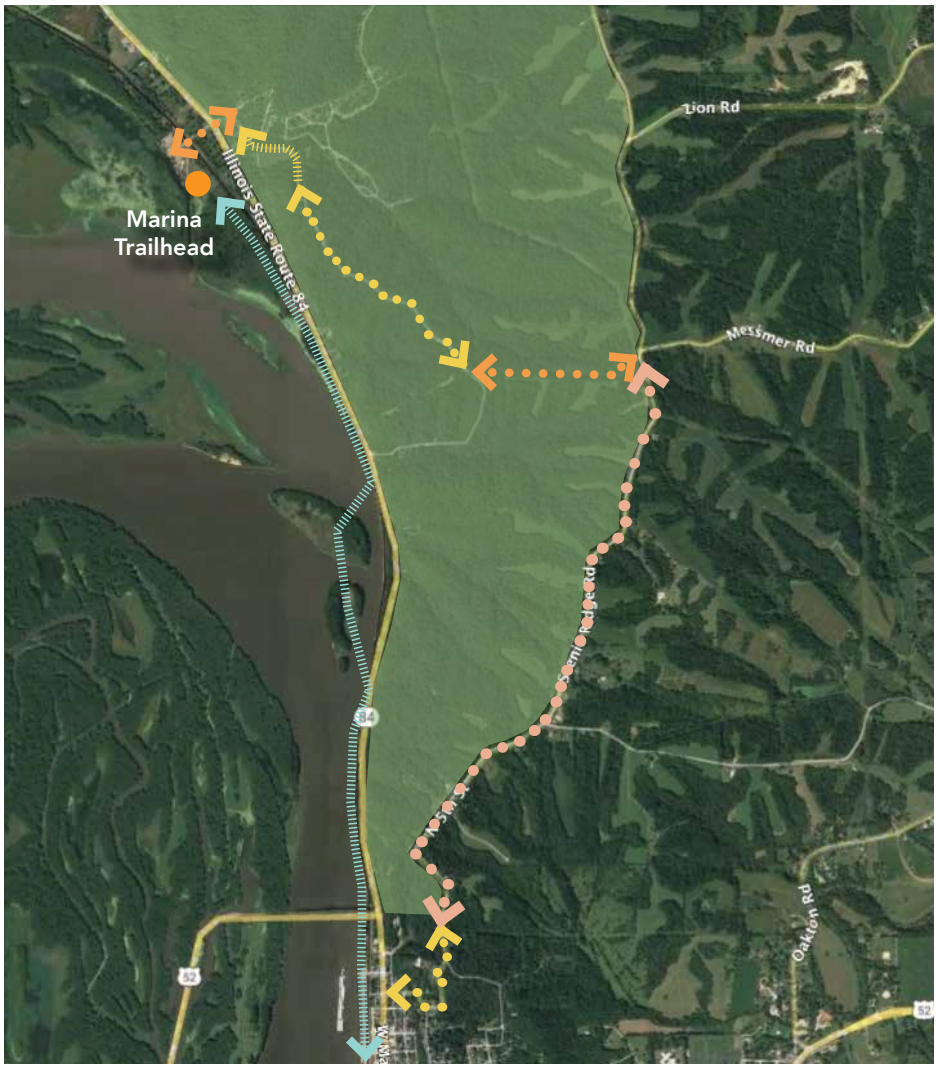

SAVANNA
Route Options
Google Earth

Options for Savanna trail extension and enhancements

One of the biggest challenges for the Great River Trail is creating a safe and accessible route that connects trail users between the established GRT trail leading south from the Savanna trailhead at Broderick Drive and Main Street north to Miller's Landing Marina. Topography, traffic, narrow shoulder, and lack of available right-of-way (R.O.W.) due to the proximity of the railroad and steep bluffs all pose obstacles that limit access north. Continuing to follow highway 84 from the north would be a logical route, but there is not ample road shoulder or level, usable right-of-way to accommodate it. In conversation with stakeholders from Savanna, a variety of strategies were presented for creating that connection. To complete the link a series of these concepts would be necessary, using routes that would follow the riverfront, Main Street, or connect through Mississippi Palisades State Park. Through the meeting it was shared that the City of Savanna was already considering updates to its riverfront, which would include park and trail updates, validating the strategy for a route along the riverfront as the most logical for in-town access. Heading north out of town the options are to go out along the riverfront on an elevated trail, or tackle a series of roads to get around and through Mississippi Palisades. The elevated trail was a popular choice, not only for the ability to create an accessible and convenient route, but for the potential of the structure to provide a unique experience for trail users that could be an additional tourist draw for Savanna and the surrounding region.



Sharrow/Shoulder Route to Palisades



Sharrow

Shoulder

Shared-use path

Elevated riverfront trail

Steep inclines and lack of direct access to and through Mississippi Palisades State Park via an independent, off-road trail make this option less desirable. The simplest solution would involve using sharrows and road shoulders to get up to the park from the south. These roads are narrow, residential roads and contain well-used on-street parking. The roads are also fairly steep, which would pose challenges for less-experienced cyclists. The sidewalks along the potential routes are intermittent and narrow further reducing accessibility. Within the park cyclists would share existing roads with vehicles. The park is a popular destination and the roads could be quite busy with car traffic during peak times. New paved routes within the park are not currently allowed due to the discovery of Native American artifacts.

Sharrows indicate roads where motorized vehicles and bikes are given equal importance on the roadway. Markings on the pavement alert drivers that bikes may be present and let cyclists know that the road is a designated cycle route. Sharrows work best on streets with lower traffic volumes.

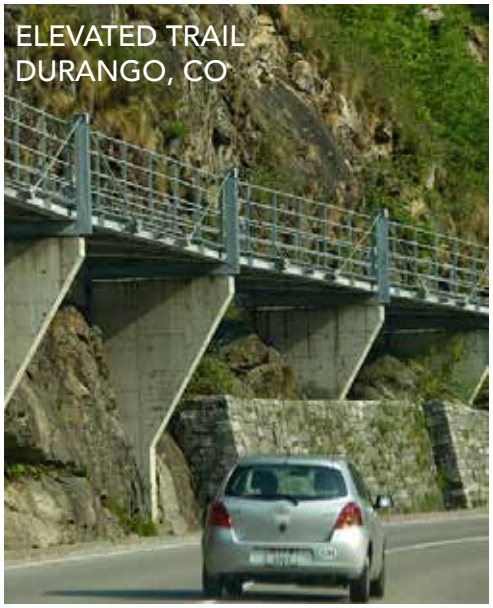
The various options for trail access through Savanna presented to the stakeholders included the following:

1. Riverfront Park Trail
2. Main Street Alleyway/Parking Lot Trail
3. Main Street Bike Bus to Marina Trailhead
4. Sharrow/Shoulder Trail to Palisades
5. Elevated River Trail

The following images provide a visual example of the proposed trail options, including: an iconic, elevated trail, riverfront enhancements, bike bus, and designated bike lanes through parking lots.

Elevated River Trail

- Trail access north from Savanna for pedestrians and the average cyclist is limited due to slope, minimal right-of-way, and heavy traffic
- An elevated trail over the water or connected to the bluff would allow the trail to be routed in places that provide safe and convenient access
- The elevated trail would allow for an extension of a riverfront trail and provide further experiences and connection with the river
- The route of the elevated trail could follow the shoreline or connect out to some of the small islands within the river further connecting trail users with the landscape of the Mississippi.
- This design of the trail could make it a landmark and a sought after destination along the Mississippi River for both trail and non-trail users as well


ELEVATED TRAIL
DURANGO, CO

HIGH TRESTLE TRAIL BRIDGE
MADRID, IA

RIVERVIEW BRIDGE
CHICAGO, IL

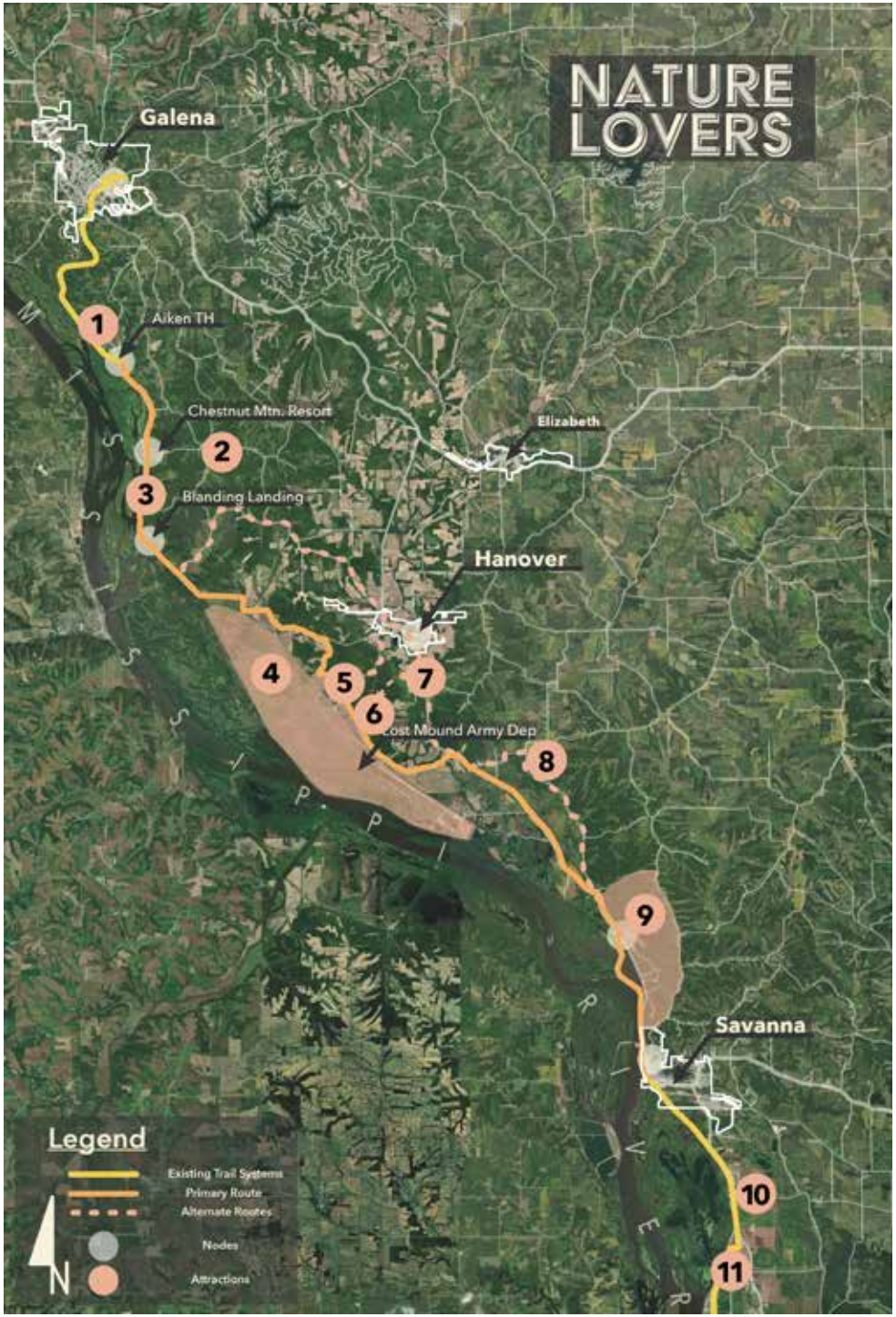
TRAIL BRIDGE
WITH OVERLOOK

Existing Great River Trail to Thomson

Additional ideas for updates to the existing trail, bridge, and riverfront landscapes were also suggested in the planning process. These considerations included creating a more welcoming and iconic entrance into Savanna from the south, including bridge enhancements and vegetated buffers instead of chain-link and barbed wire fencing. Utilizing the vegetation and other site updates around the trailhead could help to create a focus towards Main Street and encourage exploration of the downtown.

TRAIL USER GROUPS

The following pages explore the trail through the experience of different hypothetical trail user groups. These studies show the great potential of the trail to provide a continuous sequence of stops that might appeal to various user groups along the route. These stops will enhance the ride experience, but may also become the draw for bringing people out onto the trail and exploring the region.



Nature Lover

The Great River Trail route will meander through the scenic Mississippi River valley in the Driftless region of Illinois. It is impossible not to be surrounded by the beauty of nature on this trail. The route provides an ecological education, connecting trail users with many landscape typologies such as prairies, savannas, wetlands and woodlands. Bluffs and wooded hillsides mark the eastern side of the trail while to the west views open out to the wide floodplain of the river valley. Along the way trail users can connect to many preserves and parks including:

1. Casper Bluff Land and Water Reserve/ Thunderbird Effigy Mound
2. Winston Tunnel
3. IDNR Property
4. Upper Mississippi River National Wildlife and Fish Refuge - Lost Mound Unit (currently limited access)
5. Hanley Savanna (owned by the Prairie Enthusiats)
6. Hanover Bluff Nature Preserve
7. Wapello Land and Water Reserve
8. Rall Woods State Natural Area
9. Mississippi Palisades State Park
10. Ayers Sand Prairie State Nature Preserve
11. Upper Mississippi River National Wildlife and Fish Refuge, Savanna Dist. Station

Family Outing

The proposed route for the Great River Trail seeks to provide a safe manageable experience for a wide array of trail user types and abilities. When possible the route will utilize off-road trails or share very low-volume roads with minimal slope variation. This will create a more conducive trail experience for families. The route also connects trail users to many places that provide an enjoyable spot to rest, have a picnic, and explore.

1. City of Galena, IL
2. Riverview Ranch & Resort
3. Chestnut Mountain Resort
4. Blanding Landing
5. Orchard Landing Co.
6. Wapello Land and Water Reserve
7. Mississippi Palisades State Park
8. City of Savanna, IL
9. Ayers Sand Prairie State Nature Preserve

History Buff

The trail offers many experiences for users seeking to connect with the region's cultural and natural history. The trail route links multiple sites recognized for their historical value, but there are also smaller moments along the route for trail users to discover.

1. City of Galena, IL
2. Casper Bluff Land and Water Reserve/ Thunderbird Effigy Mound
3. IDNR Property
4. Wapello Land and Water Reserve
5. Lost Mound Army Depot (currently limited access)
6. Hanover Bluff Nature Preserve
7. Mississippi Palisades State Park
8. Ayers Sand Prairie State Nature Preserve

Commuter Route

Trails are great recreational opportunities, but they also serve as alternative transportation routes for those who wish to commute by bicycle. In this portion of the Great River Trail would link the towns of Galena, Hanover, and Savanna and the many rural residents in between. The map to the left highlights the average bicycle commute time between the proposed nodes along the primary and alternative routes identified in this study.

1. Galena to Aiken Trailhead - 25 mins
2. Aiken TH to Chestnut Mtn. - 10 mins
3. Chestnut Mtn. to Blanding Ldg - 10 mins
4. Blanding Landing to Hanover - 45 mins
5. Blanding Ldg to Hanover Bluff corner - 25 mins
6. Hanover Bluff corner to Hanover - 15 mins
7. Hanover Bluff corner to Lost Mound corner - 20 mins
8. Hanover to Lost Mound corner - 15 mins
9. Lost Mound to Miller's Landing Marina - 25 mins
10. Miller's Landing Marina to Savanna - 12 mins

Quickest route from Galena to Savanna - 2 hrs 45 mins

FUTURE LONG-TERM PLANNING CONSIDERATIONS

The following pages present an exploratory look at the future potential for a route through the Lost Mound/Savanna Army Depot. If support, long-term funding, and environmental remediation efforts over the following decades allow, there is a great opportunity to share the history and natural features of this site with future generations. Additional research and conversations with stakeholders from the U.S. Army, U.S. Fish and Wildlife and the Environmental Protection Agency would need to be undertaken before creating any proposals for this area.

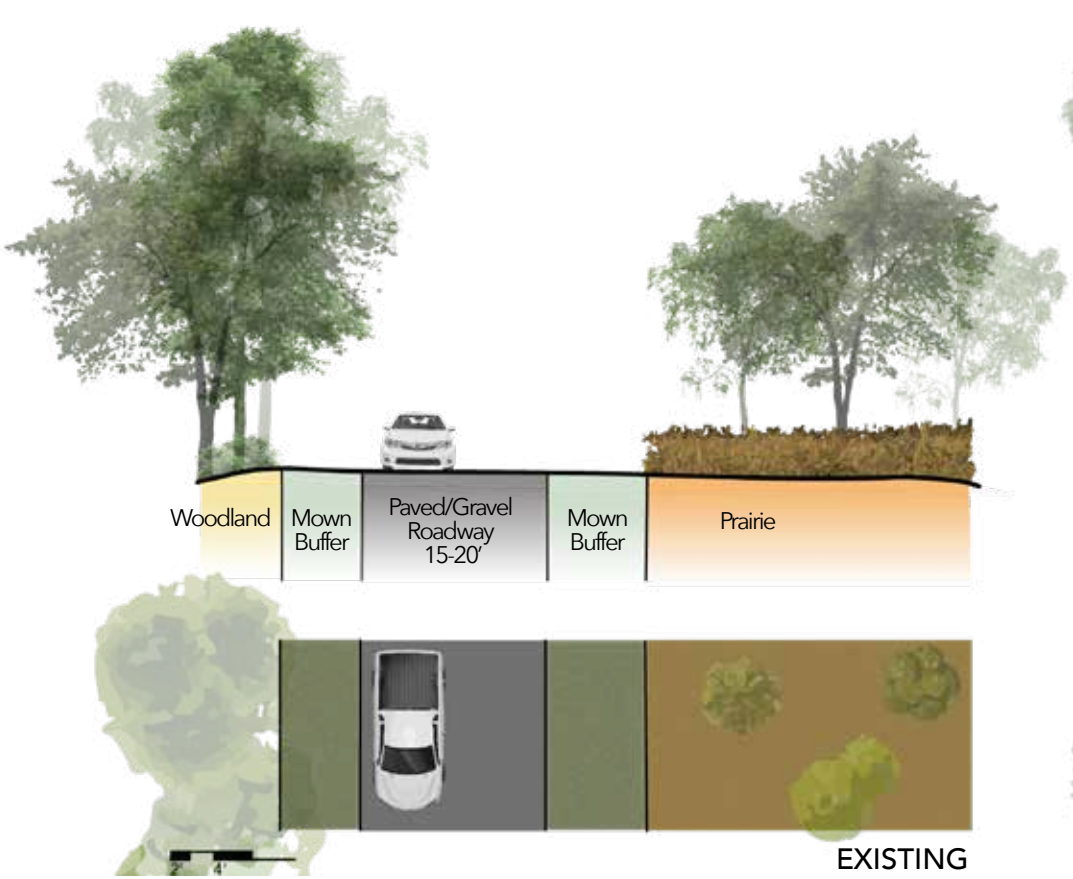
A focus of the Great River Trail is to provide safe convenient access through the Mississippi River valley region. One impediment for creating the most direct and convenient route between Aiken and Savanna is the Savanna Army Depot, also referred to as Lost Mound, which closed in 2000. The site was actively used for almost a hundred years for ammunitions testing, recycling and storage. Various efforts toward environmental clean up have been implemented but the site still has potentially live ammunitions and high toxicity levels due to these practices.

Five different agencies are involved in ownership and management of the 13,000 acre site: the U.S. Fish and Wildlife Service; the Local Redevelopment Authority; the U.S. Army Corps of Engineers; the Illinois Department of Natural Resources; and the Upper Mississippi River International Port District. 9,400 acres of the site are to become part of the Lost Mound Unit of the Upper Mississippi River National Wildlife and Fish Refuge. 3,000 acres were transfered to U.S. Fish and Wildlife Service in 2003. The overall site contains the region's largest preserved sand prairies.

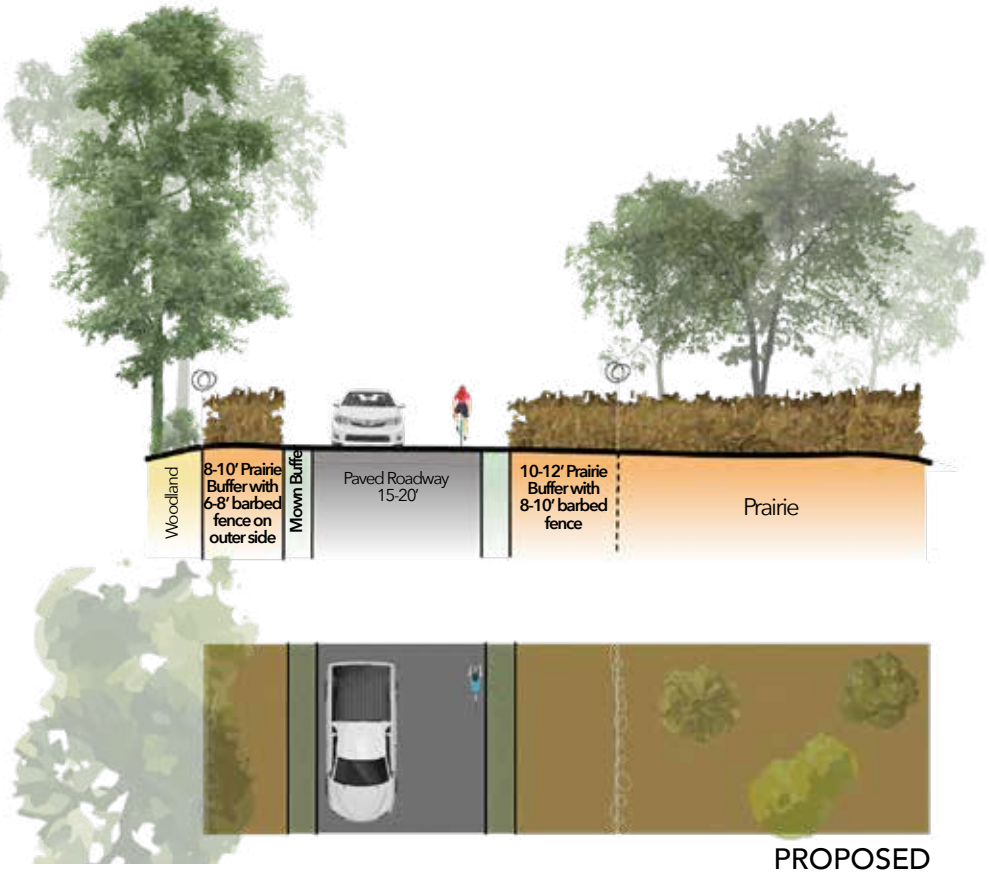
Currently there is limited public access via a road that runs along the riverside and connects to two scenic overlooks. A trail through the depot and Lost Mound area would provide a route with minimal elevation changes along a very low traffic access/service road. The proposed Great River Trail route presented in this plan supports ecological education, connecting trail users to many diverse landscapes of the Driftless region including woodlands, savannas, and wetlands. Connecting through Lost Mound would add a true prairie experience to the trail. The route would also provide people a look into the country's military history as they pass by some of the remaining structures that defined this hundred-year-old base. However, due to safety concerns mentioned above, trail planning efforts have been limited. Though the stakeholders who have been involved in the planning process see the benefit of this route, the U.S. Army has not been involved at this point. For that reason this section is presented separately as a future consideration.

Lost Mound Multi-use Path Section

A route through the base and prairie area would utilize existing access roads to the overlooks along the river and then onto service roads that are currently closed. Service vehicles and trail users would share the path through this area. The road width varies from 15-20 feet and changes from paved to gravel at the north end. Through the section that is currently closed, the landscape adjacent to the path is grass covered and appears to be mowed at approximately 10 feet. Beyond the mown buffer are woodlands, grasslands and prairies. For increased safety, this design proposes a fence at approximately 8-12 feet from the trail on both sides. Along with the fence, prairie vegetation would be allowed to fill in that zone, with just a 2-3 foot mow strip along the road/trail. The prairie vegetation would act as a deterrent from entering the adjacent landscape and extend the natural qualities of the site to the trail experience.



EXISTING



PROPOSED

TRAILS AND ECONOMIC DEVELOPMENT OPPORTUNITIES

https://www.youtube.com/watch?v=dLDGxPwKgXk

Opportunities for Economic Development Benefits: Case Study of the Trail Town Model

Trails have numerous benefits to users and nearby communities. An analysis of any investment's benefits often looks at what is called the triple bottom line: economy, environment, and health. Looking at trails through these lenses highlights the diversity of benefits they can offer.

One of the most obvious benefits of trails, positive impact to health, is frequently seen where health improvement is needed most. A 2016 study conducted by Headwaters Economics showed that gains in physical activity that trails provide are often seen most in rural areas where few parks and narrow road shoulders limit opportunities for safe physical activity. Furthermore, the increase in physical activity is often seen most in populations at high risk of inactivity including people with low income, low education attainment, and the elderly. Research has also shown that the benefits of reduced healthcare costs associated with increased physical activity far outweigh the costs of trail construction.[1]

In addition to health benefits, time spent in nature is also positively correlated with interest in environmental stewardship. A 2012 study of six regional trails in Illinois found that over 30 percent of trail users surveyed used the trail 21 or more times during spring, summer, and fall in the past year.[2] Frequent trail use is an encouraging indicator that suggests additional trail opportunities in the state would serve as a much needed start in connecting and re-connecting youth and adults to the natural world.

Outdoor recreation has played an ever-growing role in the nation's economy. In 2019, outdoor recreation generated $788 billion in economic output and supported 5.2 million jobs, many of which were in rural communities.[3] Although the COVID-19 pandemic took an economic toll on virtually all industries, an incredible increase in demand for outdoor recreation opportunities was seen nation-wide as people

sought out ways to safely exercise, de-stress, and socialize. Despite a lower overall economic output for outdoor recreation in 2020, industry segments including bicycling, boating/fishing, and camping saw record sales and unprecedented growth.[4]

The economic benefits of trails have been recorded in the state of Illinois as well. The 2012 study of six regional trails in the state found that trail survey respondents spent an average of about $30 per trail visit on expenditures such as restaurants, gas, gear, and groceries.[2]

Studies have also linked recreation offerings with economic resiliency for communities. People have been moving to recreation-based communities much more quickly since the end of the Great Recession. These communities have been successful in attracting new residents and businesses.[5]

1 Headwaters Economics. Measuring Trail Benefits: Public Health. Spring 2016. https://headwaterseconomics.org/wp-content/uploads/trails-library-publichealth-overview.pdf

2 Buchtel, S., J. Robinett, J. Scheunemann, and E. Oberg. 2013. Making Trails Count for Illinois. Trails for Illinois, University of Illinois at Urbana-Champaign Office of Recreation and Park Resources, and Rails-to-Trails Conservancy.

3 United States. Bureau of Economic Analysis (BEA). Outdoor Recreation Satellite Account, U.S. and States, 2019. 10 November 2020. 11 Jan. 2022 <https://www.bea.gov/news/2020/outdoor-recreation-satellite-account-us-and-states-2019

4 United States. Bureau of Economic Analysis (BEA). Outdoor Recreation Satellite Account, U.S. and States, 2020. 9 November 2021. 11 Jan. 2022 <https://www.bea.gov/news/2020/outdoor-recreation-satellite-account-us-and-states-2020

5 Headwaters Economics. Recreation Counties Attracting New Residents and Higher Incomes. Jan. 2019. https://headwaterseconomics.org/wpcontent/uploads/recreation-counties-attract-report.pdf

Strategies to maximize a trail's economic potential can be used to stimulate local economies and ensure that communities reap the financial benefits of their investment. Trail Town programs are one model to consider for capitalizing on a trail's economic potential.

"A Trail Town is a community through which [a trail] passes that supports [trail users] with services, promotes the Trail to its citizens and embraces the Trail as a resource to be protected and celebrated. Trail Towns are built on a relationship between a town, the Trail, and its volunteers."

-Adapted from the North Country Trail Association [6]

Successful strategies for Trail Town programs have included focusing on creating a network of trail-friendly communities, tracking efforts and outcomes, and paying attention to amenities that will attract overnight visitors, who on average will spend six times more than day trippers.[6] Galena and Savanna already have many of the amenities found in successful Trail Towns. By organizing and fostering more community around the trail, these cities may be able to further bolster their local recreation economies. Communities on the outskirts of the trail or connected by route alternatives may also stand to benefit from the Trail Town model. Hanover and even Elizabeth and Mt. Carroll could capitalize on the trail extension and an increased focus on recreation in the area.

6 Rails-to-Trails Conservancy Trail Towns. 11 Jan. 2022. https:www.rails-to-trails.org/build-trails/trail-building-toolbox/planning/trail-towns/

RECOMMENDATIONS AND NEXT STEPS

Recommendations and Next Steps

Community-led groups that advocate for local parks and outdoor recreation initiatives can be an important catalyst and stakeholder for a planning initiative. While the strategic planning framework for this project calls for establishing an intergovernmental group responsible for developing and implementing strategies, there would also be a worthwhile benefit to creating an independent community organization similar to a "Friends Group" that could advise government agencies and planners on behalf of trail users and area residents. These community groups can be an important partner for advocacy and outside fundraising. A community organization that advocates for the Great River Trail could serve as an umbrella organization for the government, non-profit organizations, trail users, and neighbors that have a vested interest in the development and successful operation of the trail. Friends groups typically support public lands, local parks, or trail systems by organizing volunteers for clean-up events or stewardship, raising funds for endowments to complement public-sector funding, or leading programming events for the public.

While Blackhawk Hills Regional Council and its government partners are the logical stakeholders for advancing the planning discussions and eventual design and construction, their efforts could be accompanied by a community-led Friends Group or Trail Council with a mission to continue to support the trail once it is built. In addition to organizing community-led support, it will be important to plan for resources to aid in continued planning efforts and eventual construction of the trail. Listed below are just a few of the many planning assistance and funding opportunities currently available for trails and alternative transportation projects.

Planning and funding resources

Planning & Funding Resources	Administrating org.	Funding available & match requirements	Eligible project categories
Statewide Planning and Research (SPR) Funds	IDOT	Recommended minimum request is $20,000; no maximum project cost; 20% local match required	Trail planning up to a Planning and Environmental Linkages (PEL) study
Recreation Economy for Rural Communities (RERC) Program	U.S. Environmental Protection Agency (EPA)	This is a technical assistance and planning program, no funds are provided	Planning support for development of the local recreation economy
Rivers, Trails, and Conservation Assistance (RTCA) Program	National Park Service	This is a technical assistance and planning program, no funds are provided	Continued support for project planning and community engagement
Federal Lands Access Program (FLAP)	U.S. Department of Transportation Federal Highway Administration (FHWA) Administered by IDOT at the state level	No local match requirement following in the Infrastructure Investments and Jobs Act	Planning activities including engineering feasibility studies and bike/ped plans Constructions of trails, trailheads, provisions for pedestrians and bicyclists, interpretive signage, kiosks, viewpoints, and acquisition of scenic easements
Illinois Transportation Enhancement Program (ITEP)	Illinois Department of Transportation (IDOT)	Up to $2,000,000; check program website for details on match requirements	Construction of bike/ped facilities, turnouts, overlooks, and viewing areas
Bike Path Program	Illinois Department of Natural Resources (IDNR)	Up to $200,000 50% local match requirement	Acquisition of land for bike paths and directly related support facilities Construction of public bike paths, support facilities and/or amenities
Federal Recreational Trails Program (RTP)	IDNR	20% local match requirement	Construction of trails and related support facilities and amenities Acquisition from willing sellers of trail corridors through easements or fee simple title
Rails-to-Trails Trails Grants Program	Rails-to-Trails Conservancy	Varies	Various trail and trail amenity construction grants are available annually Sign up for the Trail Expert Network to keep informed about upcoming opportunities
PeopleForBikes Community Grant Program	PeopleForBikes	Up to $10,000 >50% local match required	Bicycle infrastructure projects and some advocacy projects such as campaigns to increase investment in bicycle infrastructure
The Trail Fund	American Trails	Check website for updates on eligibility, available funds, and match requirements	New annual grant opportunity expected to open early 2022


APPENDIX

Appendix A: Municipal Liability

Concern regarding liability for injuries incurred by bicyclists is a factor that needs to be addressed if any on-road (sharrow) or bike lane sections of the trail are to be successfully implemented. Some Illinois municipalities, particularly townships, have shied away from incorporating bike route signage, lanes, or other infrastructure indicating bicycling as an intended use of the roadway. This apprehension stems from fear of liability and associated increased cost of insurance and is fairly unique to the State of Illinois. The Jon P. Boub v. Township of Wayne case created the disincentive for on-road bikeways in 1998 when the Illinois Supreme Court ruled that a local government is liable only to "intended" users of public facilities.[1] This case had the effect of discouraging municipalities from constructing and maintaining on-road bicycle infrastructure that would suggest bicyclists are intended users of the roadway. The fear of increased insurance premiums following the court case ruling discouraged municipalities further from implementing bike route signage and on-road infrastructure.

1 Bruce Epperson, Permitted But Not Intended: Boub v. Township Of Wayne, Municipal Tort Immunity In Illinois, And The Right To Local Travel, 38 J. Marshall L. Rev. 545 (2004). https://repository.law.uic.edu/cgi/viewcontent.cgi?article=1356&context=lawreview

Several attempts since the 1998 court ruling have been made to reexamine the disincentive, many of which have focused on the weight of the risk incurred by municipalities with on-road bicycle infrastructure. The level of risk exposure can be judged as minimal considering there have been few lawsuits associated with bike route signs or bike lanes before or after 1998 in state or out of state where cyclists are granted "all of the rights and duties applicable to the driver of a vehicle."[2]

Perceived risk remains a significant barrier for the implementation of on-road bikeways that would make up sections of the Great River Trail between Savanna and Galena. Initial steps towards change include identifying organizations capable of drafting a bill that would eliminate the disincentive. Illinois Environmental Council and Openlands may be organizations with such capacity. Developing a liability taskforce that would be able to bring insurance agencies and concerned municipalities into the conversation is another important step in moving forward towards a solution for on-road bikeways.

2 Ed Barsotti, On-road Bicycle Routes and Illinois' Liability Disincentive. League of Illinois Bicyclists. Last revised 10/25/2013. https://secureservercdn.net/160.153.137.14/iv7.741.myftpupload.com/wp-content/uploads/2015/10/BoubDisincentiveRiskExposure.pdf

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