



Sarah B. Foulke Friendship Trails Draft Master Plan

for the Southern Palmertown Range

PREPARED FOR

Palmertown Guidance Committee

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Acknowledgements

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Palmertown Guidance Committee

Including representatives of the following organizations and agencies:

- Saratoga PLAN
- Open Space Institute
- Town of Corinth
- Town of Greenfield
- Town of Wilton
- Town of Moreau
- Village of Corinth
- City of Saratoga Springs
- NYS Department of Environmental Conservation
- NYS Office of Parks, Recreation & Historic Preservation
- Skidmore College



Preserving Land and Nature



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Community Consultants

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1. Background & Vision

This chapter lays the groundwork for the trail master plan, sharing the background and vision for the Sarah B. Foulke Friendship Trails for the Southern Palmertown Range. The Southern Palmertown Region (home to the Southern Palmertown Range and referred to herein as “the Palmertown Region”) has been identified as an important place for both people and nature due to its ecological integrity, habitat quality, resiliency to climate change, and proximity to expanding population centers. (ALTA, 2018)

1.1 Purpose

The Sarah B. Foulke Friendship Trails (the Friendship Trails) are envisioned as a network of interconnected and stand-alone trails traversing a mosaic of public and private lands dispersed throughout the Palmertown Region. The trails will be located on public land (Moreau Lake State Park, Lincoln Mountain State Forest, Daniels Road State Forest, Saratoga County Forests, and potentially town and county owned tracts), as well as on institutional lands (Skidmore College, Open Space Institute, Saratoga PLAN), and on private landowners’ properties protected by conservation easements that permit public access. The trails will consist of long-distance connector trails and shorter loop trails, multi-use, and, in aggregate, collectively accommodate the spectrum of trail users of all abilities, as feasible and appropriate. (Saratoga PLAN, 2020)

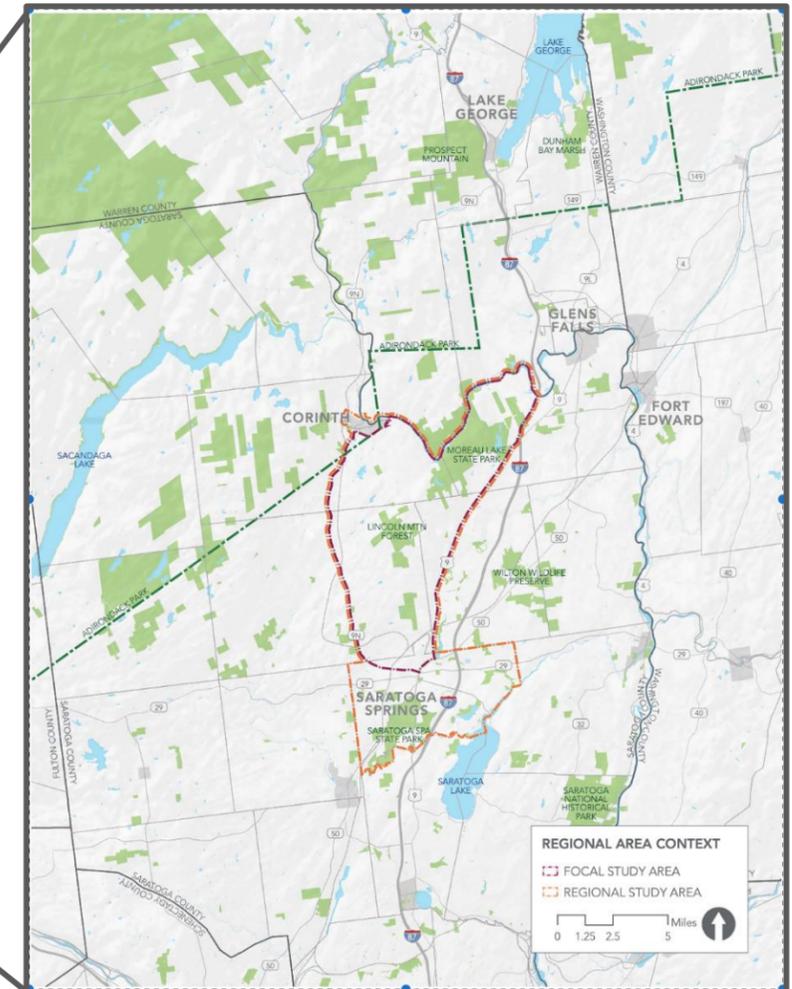
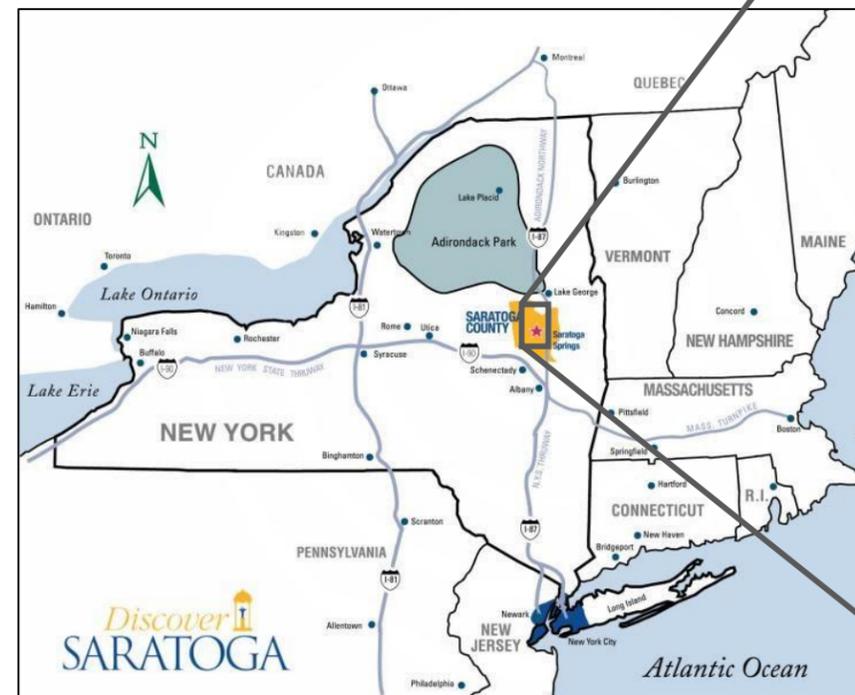
The trails will foster friendship, as well as opportunities for personal solitude and renewal. The Friendship Trails will provide enjoyment through an inclusive spectrum of outdoor activities, providing opportunities across the system for walking, running, wheel chairing, dog-walking, mountain-biking, horseback-riding, birdwatching, hunting, botanizing, forest-bathing, paddling, cross-country skiing, snowshoeing, snowmobiling, and learning about nature and local history. The Master Plan is a precursor to site-specific design and development of trail segments and trail networks for individual properties in the future. (Saratoga PLAN, 2020)

Left: Saratoga context maps from www.DiscoverSaratoga.org and Saratoga PLAN

1.2 About the Southern Palmertown Range

Located at the interface of rapidly expanding urban development and the natural landscape of the foothills of the Adirondack Mountains, the Palmertown Range presents a unique opportunity to shape a sustainable, natural-urban intersection. (Saratoga PLAN, 2020)

While the formal designation of the project area is the Southern Palmertown Region, for the purposes of this Master Plan, the project area is referred to throughout as the “Palmertown Region”. The Palmertown Region project area is located within Saratoga County between Route 9 and 9N – roughly a heart-shaped 63-square mile area between the City of Saratoga Springs, the Village of Corinth, and the Village of South Glens Falls. The area encompasses 40,500 acres within the southern portion of the Palmertown Mountain Range, which forms the southeasternmost extent of the Adirondack Mountains. The predominately forested zone contains approximately 8,000 acres of currently protected lands and three key recreation hubs: Moreau Lake State Park, Daniels Road State Forest, Lincoln Mountain State Forest, and lands of the Open Space Institute. (Saratoga PLAN, 2020)



1.3 Vision for the Palmertown Range

The vision for the Palmertown Range is to establish the area as a regional recreation destination and bolster its economic development while conserving critically important natural resources and increasing awareness of this unique landscape through education and outreach.

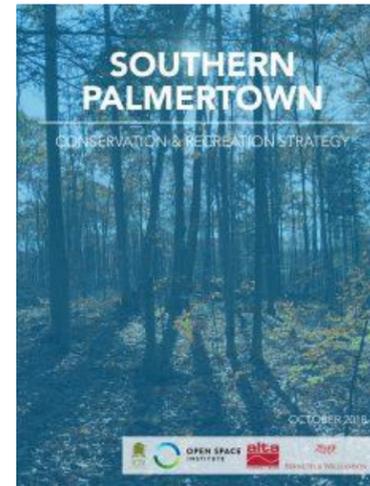
Development of a master trail plan emerged as the Palmertown Guidance Committee's top priority for implementing the recommendations in the Southern Palmertown Conservation and Recreation Strategy produced in October 2018, with the help of consultants Alta Planning and Design and Bernuth & Williamson.

1.4 Past Planning Efforts

Over the past several years Saratoga PLAN reached out to conservation and recreation groups including hikers, mountain bikers, equestrians, and birdwatchers to identify what types of trails and outdoor experiences would be of interest to their constituencies. The product of those meetings is compiled in the *Southern Palmertown Conservation and Recreation Strategy*.

1.4.1 Conservation & Recreation Strategy

The vision for the Palmertown Range Conservation and Recreation Strategy is to establish the area as a regional recreation destination and bolster its economic development while conserving critically important natural resources. You can read more about the Southern Palmertown Conservation and Recreation Strategy.

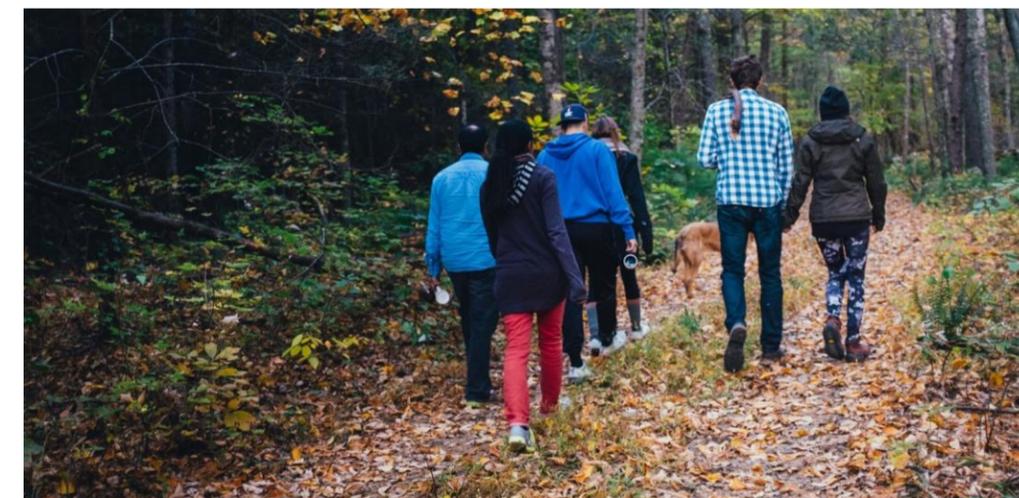


Completed in 2018 by ALTA, the vision of the Southern Palmertown Conservation & Recreation Strategy provides recommendations for conservation, recreation, and sustainable economic development. Key features included recommended conservation lands, a trail through the study area from Moreau Lake State Park to Daniels Road State Forest, with connections to the communities, businesses and managed landscapes in Corinth, Moreau, Greenfield, Saratoga Springs, and Wilton. (ALTA, 2018)

Two major recommendations from the plan were to:

- Facilitate trail-oriented development, eco-tourism, and recreation-based tourism businesses, including lodging, restaurants and cafes, rental shops, environmental education and guide services, camping, geocaching, and related businesses at appropriate locations along the trail system. (ALTA, 2018)
- Collaborate with local tourism organizations, municipalities, and the local chamber of commerce to encourage visitors to utilize the area's recreation opportunities. (ALTA, 2018)

Top: The Hudson River
Bottom: A group enjoying a casual walk in nature
Photos: Saratoga PLAN and Judy Anderson



1.5 Master Plan Goals

It is important to note that this Master Plan provides a mile-high view. While over 30 miles of trail alignment were scouted in the field and over 50 miles are defined as part of the proposed trails system, the corridor is conceptual in nature, and is subject to change as circumstances shift. Any number of factors could result in a realignment of the corridor as conceptual and detail design is undertaken for each trail segment and site. Land manager desires or capacity can shift, previously unknown environmental conditions can be discovered such as local soil or hydrologic conditions, a new parcel may be conserved, or additional trail access added. This Master Plan represents the best professional recommendations given the known present conditions.

Through the development of Trail Management Objectives (TMO's) and recommendations surrounding community use preferences, amenity standards, and physical trail parameters, this master plan strives to provide the tools to empower project partners to:

- Create relationships with new stakeholders to inform the direction and priorities of the Friendship Trails
- Visualize Core and Peripheral Trails that embody the vision of the Friendship Trails
- Prioritize trail development
- Guide fundraising
- Shape programming
- Respond to new challenges and opportunities as they arise in an informed and structured manner

1.5.1 Design Rooted in Community Feedback

The Friendship Trails are unique because of their emphasis on friendship, building community, connecting people from all walks of life to nature and to each other. To realize that vision, the master planning effort undertook an extensive process to hear from a wide variety of people in communities that are a part of the Southern Palmetown Range.

1.5.2 Inclusion through Engagement

Everyone deserves the opportunity to enjoy time outdoors, because the more people who connect with nature, the more the entire community benefits. When people have more meaningful experiences outdoors, their quality of life, health and social well-being improve and in turn their communities become stronger and more sustainable.

In a reflection of the Guidance Committee's insight from the first phase of the Palmetown Range master planning process, as well as the request for proposals for this phase of the Friendship Trails project, the master planning process worked to "ensure that vocal interests are not overrepresented, nor quiet interests underrepresented, by consulting demographic data and reaching out to others with an interest in the outdoors and how it might benefit the entire community (ALTA, 2018)." The strategy centered on gaining insights from, and continued engagement with, community groups.

1.5.3 Define the Trail System

The primary objective of this master plan is to define conceptual alignments to guide the prioritization of future on-the-ground trail projects and provide a framework for a concrete vision of where the trails will be located and what they will look like. Informed by the community feedback and desires of land managers, trail alignments can take shape.

What this master plan does and does not do

This master plan serves as a starting point for the design of the Friendship Trails system. Armed with a great depth and detail of community feedback, as well as proposed trail alignments based on land manager goals and capacity, the master plan lends a structure to the vision. From there, a phasing plan and fundraising goals can materialize, and individual sites can begin to undertake conceptual and detail design for each trail segment. This master plan seeks to empower members of the Guidance Committee, land managers, and other project partners to make evidence-based decisions for a successful and sustainable trail system that reflects the needs and desires of the community.

This master plan does not seek to provide solutions to every challenge that the Friendship Trails may face. Where such challenges are reasonably predictable, they are defined, and the Recommendations section attempts to outline possible solutions or next steps to better address them.

The authors encourage readers to view this master plan as a gap analysis, with suggested solutions that can be applied to trails and recreational areas that are not defined in this master plan, and that may even fall outside of the Palmetown Region. As such, this master plan should be approached as a toolbox for project prioritization and implementation, and a roadmap for designing trails that are authentic to the vision of the Friendship Trails.



Right: Children exploring outdoors
Photo: Karen Strong

1.6 Approach

The Friendship Trails Project has the potential to transform northern Saratoga County’s recreational amenities, connect large natural areas, and create a lasting legacy for future generations. Building on past stakeholder engagement and the partnership’s bold vision, this Master Plan seeks to use community engagement to fulfill the promise of a trail system with an inclusive spectrum of outdoor activities and experiences across the system. The diversity of sites from an urban to rural continuum provides an opportunity to serve a broad cross-section of the community. As a result, the trails could function as a place of community, building on a shared sense of place, a welcoming experience, and pride for the region and the people who both visit and call this place home.

For the Friendship Trails Master Plan, this approach focuses on a prioritization of meaningful community engagement and field-based trail design.

1.6.1 Meaningful Community Engagement

Though inclusive conservation is increasingly important within the conservation sector, conservation projects rarely invest enough in community engagement to get meaningful, well-rounded input. As a result, the same user groups are consulted each time and trail and public conservation projects miss critical opportunities to engage a broader spectrum of the community. By intentionally engaging with people from all walks of life, the Master Plan will better reflect the values and needs of the entire community.

Traditional community engagement for this kind of project asks existing trail users and those who self-identify as outdoor nature enthusiasts “what do you want to do?” and “where do you want to do it?” This approach often leaves out broad sections of the community who have not been engaged. As a result, the process - and the trails - are unlikely to reach new audiences. Working with the Guidance Committee, A process was developed with the guidance committee to reach “beyond the choir” of trail enthusiasts and make this project truly inclusive.

The stakeholder outreach was designed go beyond the traditional questions asked about trails, and sought to answer:

- What are community needs that could be met by this outdoor recreation opportunity?
- What kinds of experiences do different kinds of people want outdoors, why, and with whom?
- What are the personal or cultural barriers that prevent different people from using trail systems?
- What is the community readiness, particularly those who have not been identified as traditional trail users, to support and use this trail system either in whole, or in part?

1.6.2 Field-Based Trail Design

With a heavy emphasis on trail sustainability, the design team incorporated the community input as well as feedback from land managers and the Guidance Committee to develop detailed Trail Management Objectives (TMOs) and trail design parameters.

The trail design process began with the definition of a base set of TMOs that would provide trails that are both physically and culturally welcoming to the broadest range of visitors. This set of trail parameters are meant to provide user-friendly experiences for the broadest range of activities throughout the Palمرتон Range. In this way, the Core Trails represents a symbolic tool to unify the Friendship Trails and provide a variety of unique yet interconnected experiences.



Above: Collecting GPS data for the Friendship Trails Master Plan. Photo: Penn Trails LLC

To ensure the viability of the proposed trail alignments, this project involved an in-depth site-assessment process. During assessment, the trail design team worked with field acquired data to define over 30 miles of Core Trails. Other alignments for Core Trails and Peripheral Trails are based on a combination of field-verification and desktop analysis and are based on high-confidence that the specified alignments are conceptually viable. All trail segments are designated as Preferred, Alternate, or Possible to define their viability and importance to the overall system.

2. Community Input

National research indicates that Americans face a significant gap between their interests in spending time in nature and their opportunities to do so (S.R. Keller, 2017). Even in Saratoga County, not everyone has access to trails close to home, or in a manner that makes them accessible and welcoming. In addition, many of the existing trails are not accessible to a variety of people either due to their location or due to the character of the trail itself.

Lack of access to the outdoors and nature can impact a community's desire to conserve and protect the landscape over time. As Jane Goodall once stated, "Only if we understand, will we care. Only if we care, will we help. Only if we help, shall all be saved." Trails are an important way for people to have personally meaningful first-hand experiences in nature that are a foundation of understanding the need for and importance of the natural world and building a conservation ethic.

The Friendship Trails project is a step towards changing that situation and will be designed and implemented on the beliefs that:

- All people should have the opportunity to have positive experiences outdoors, regardless of where they live, their physical mobility, or their social or economic status, or access to transportation.
- When we make the benefits of outdoor experiences accessible to everyone, everywhere, we build stronger connections and communities.
- Trails help to build a lasting and personal relationship with the outdoors through day-to-day experiences and emotional connections better than educational programs that seek to tell or lecture facts about nature.
- The health and wellbeing of people and their communities are improved when people connect and thrive outdoors.
- Young people deserve opportunities to learn in, thrive in and appreciate the outdoors, so they can become informed and engaged champions for our natural resources.
- Time spent in nature positively contributes to human well-being, providing a respite from the stress of modern life.

To meet this project's overall goals and honor the intent of the Friendship Trail system, the approach was designed to meet community engagement expectations while suggesting options to deepen relationships to promote inclusion.

The community engagement strategy for the Friendship Trails Master Plan builds on the prior stakeholder engagement work. The process built on the following engagement recommendations from the *Southern Palmertown Conservation & Recreation Strategy* (ALTA, 2018):

- Ensure that vocal interests are not overrepresented, nor quiet interests underrepresented, by consulting demographic data and reaching out to others with an interest in the outdoors but no direct connection to Saratoga PLAN or the Open Space Institute (OSI).
- Continue to engage stakeholder groups, as well as local landowners, with a focus on going to them, rather than expecting them to come to you.
- Prioritize muscle-powered pursuits, and consider ways to accommodate different activities, as well as different interests and abilities, while improving access points throughout the study area.

The stakeholder engagement that informed the 2018 *Southern Palmertown Conservation and Recreation Strategy* reached approximately 200 people. In that first round of outreach, people overwhelmingly self-identified as recreational enthusiasts, conservationists, landowners/managers, or public officials. In this second phase of outreach and engagement, the goal was to build on that work and expand the audience of the trails in the Palmertown region by intentionally seeking out, and listening to, people who did not participate in the first round of meetings to ensure that their perspectives and needs are reflected in the design and development of the trail system.

Working with the Guidance Committee, a multi-faceted approach was used to identify non-conservation-oriented community organizations and individuals who could share their understanding of barriers to trail and conservation area use and turn challenges into opportunities. Representatives of these community organizations were interviewed, and an online survey was developed and shared with interviewees, their constituents, and the general public.



Above: An elderly couple enjoys a walk in nature.
Photo: Judy Anderson

2.1 Community Organization Interviews

The goal of the interview process was to listen to “quiet voices,” meaning those who have not been heard as clearly before, establish rapport and trust for the project, and to encourage the interviewees and their constituents to take the online survey.

The first step in the process was to work with the Palmertown Guidance Committee to identify more than 100 community groups that might see the value of outdoor experiences, including trails, to their constituents. Twenty organizations¹ were selected from the original list of 100, in consultation with Saratoga PLAN for interviews via Zoom or phone. The community organizations staff interviewed represented a diversity of organizational missions and people served. They were chosen to learn how their constituency uses, or might use, trails if they were designed with them in mind. Interviewees included people who work with the developmentally disabled, people who provide services to low-income neighbors, library directors, veterans’ groups, and leaders from two of the three school districts that serve the Palmertown region municipalities. Organizations were geographically spread across the region. When possible, the consultants worked with the Guidance Committee members to arrange initial introductions.

It was hoped that the community organizations would share the survey with their constituents directly. That didn’t happen for a variety of reasons (e.g., short turn-around time, the need to get board approval, constituents not having access to email, and the year-end season were possible factors). The engagement process anticipated this result and focused on in-depth conversations. These interview responses reflect the views of the community organization staff whose feedback provided valuable insights on the needs of people who have fewer trail options in the region and may feel less welcome when they do visit trails.

2.2 Online Survey

The goal of the online survey was to get feedback from as many people as possible, including those organizations and individuals who focused on conservation and outdoor recreation as well as the constituents of the community groups previously interviewed. The survey was designed to gather detailed information about respondent’s outdoor activities, the types of trails they value, barriers to trail access, and their ideas for making trails more welcoming.

The 22-question survey was developed with input from the Guidance Committee and shared online through SurveyMonkey. It was intended to reach as many people as possible via organizational and personal outreach. The results reflect this strategy. Guidance Committee members shared the survey link on their webpages and through their community emails. In addition, individuals shared the survey link on their personal Facebook pages. As part of this outreach, Saratoga PLAN sent personalized emails to conservation groups that were included in the 2018 outreach effort encouraging them to share the survey link with their constituents².

To facilitate the outreach and track where input was coming from, draft language for social media posts or email blasts was provided to the Guidance Committee and community organizations to make it easier for them to share the survey. Different links were shared with different types of organizations to help track where responses came from³. The general link was shared on the Saratoga PLAN website, e-news, and social media posts, and on some town websites. In all, 1,006 people responded to the survey. Half the responses were submitted after Saratoga PLAN’s second e-news announcement two weeks before the survey closed.



Above: A group explores in nature. Photos courtesy Judy Anderson

¹ To learn more about the organizations that participated in the interviews and the populations they serve, see the Appendix.

² This included Saratoga Backcountry Horsemen’s Association, Adirondack Mountain Club, Southern Adirondack Chapter of the Audubon Society, and the Saratoga Mountain Biking Association.

³ For information on the specific links and responses, see the Appendix.

2.3 Results

Community input via both the community interviews and the online survey surpassed expectations. Over the course of two months, despite taking place during a period of change and stress for many given COVID-19 and the holiday season, community leaders from 20 organizations volunteered their time to share their insights. These organizations serve thousands of people who are not typically considered outdoor enthusiasts and are often left out of the trail experience discussion. The broader community responded with enthusiasm as well: over 1,000 people completed the online survey.

The feedback people shared through the interviews and survey directly informed the Trail Master Plan and the design of the Friendship Trails System. In addition, information on what makes trails welcoming, inclusive, community-oriented, and geographically relevant is important for trail and conservation planning more broadly to create an overall message and approach that will build trust in the project and its commitment to community diversity.

The community interviews and online survey responses represent people with different opinions about and experience with trails. The key difference is that survey respondents are more physically mobile and have more access to transportation than people served by the community organizations. That said, despite the differences in the survey respondents and the interviewees, there were more similarities than not when it came to trail design characteristics and desired experiences. These findings note similarities and differences where appropriate.

The community engagement process confirmed the Friendship Trails’ goal to balance voices and needs of people who are comfortable with existing trails and with those who don’t feel welcome on trails and are often not well represented or heard. To honor the commitment to friendship and grow a diverse constituency who use and appreciate trails and nature, the Friendship Trails system will need to continue to build partnerships, listen to a diversity of needs, build upon this report’s findings and work to reduce the barriers that people from all walks of life face when it comes to finding meaningful, and welcoming, outdoor experiences⁴.

2.3.1 Key Findings

People are excited about the Friendship Trails concept because they saw a need for:

- **More trails:** There was a recognition that trails are getting more crowded, which showed a growing demand for trails. Many community groups are seeing an increased interest in trails.
- **Inclusive nature trails:** People recognized that trails aren’t accessible for a broad spectrum of the community. Those who are more mobility challenged want to experience nature too; a number of the community organizations are interested in the benefits that trails and nature-experiences might provide for their constituents and community members.
- **Social trails:** Covid-19 clarified that people are looking for trails where they can socialize with friends and family. These trails tend to allow people to walk/stroll side-by-side.

There is a need for more trail experiences and programs, for those with and without mobility challenges.

- People want walkable trails that also work for strollers and self-propelled or electric wheelchairs. Most interviewees expressed this and the survey showed most people visit trails to walk.
- People who have been left out include youth, elders, people with physical mobility challenges, and people without access to reliable transportation.
- More trail options are needed. People who are mobile have hundreds of options for trails in the region, and people who face different kinds of challenges have access to significantly fewer trails in nature. This means many people with challenges such as limited mobility or visual impairments do not have access to existing trails or may not feel comfortable or safe on them.
- Programming and interpretation are important in making people feel welcome on trails.
- Transportation is a challenge for many people. Trails and related conservation areas that are distributed throughout the region would be particularly helpful for those with mobility or transportation challenges. People who are more mobile and able-bodied also appreciate the convenience of local trails.

Safety, and a perception of safety, is paramount. When people do not feel safe, they do not visit trails.

- There are a wide range of issues that cause people to feel unsafe, and not all of them are addressed by trail design.
- To make a trail system more welcoming, focus on design features and amenities that expand the community of people using trails, rather than only focusing on current trail enthusiasts.

People don’t know where to find trails they want to use.

- Both interviewees and survey respondents said it is unclear what kinds of experiences, views, and amenities are provided by different trails before they go.
- There are many people in the region who are not yet using trails because they do not know where trails are that would be interesting and appropriate for them.

When taken within the context of the high level of development pressure facing Saratoga County, these findings reflect an urgency to capture opportunities to ensure inclusive and high-quality nature-based experiences throughout the region.

“If there is one thing that I wish all hikers knew, it’s that building accommodations and universal access into the community benefits everyone. There are many ways to create accessible and inclusive opportunities for outdoor recreation, and it starts with considering the way people approach disability and the outdoors. I am not advocating for paving over the wilderness. But I do ask non-disabled people to consider how they frame their outdoor experiences and think about who is being excluded. What does it mean if the epitome of outdoor recreation — extreme mountaineering or kayaking, for example — is something that few people can ever experience?”
- Syren Nagakyrie, the founder of Disabled Hikers.⁵

Insights from this process indicate a need and desire for establishing new opportunities for people to be outside in nature in a manner that is convenient and welcoming. This approach “rebalances” the number, proximity, availability, and onsite experiences of trails for those with mobility challenges as well as those looking for “social” trails in nature close to home and work when compared to trails accessible to more mobile or able-bodied members of the community.

⁴ The recommendations while addressed here within the context of the Friendship Trails initiative are transferable beyond the Palmertown Region’s project area. Demonstrating an authentic appreciation for inclusive conservation and engagement necessitates an organization-wide commitment to engagement and conservation area/trails

⁵ Disabled Hikers is an Affinity group. Affinity groups are voluntary groups of people who share a common purpose, identity, or interest. They play a vital role in creating inclusive environments where all are valued and empowered, and they serve to support recruitment, retention, and community building.

2.3.2 Who Provided Input

With the collective outreach efforts of the Guidance Committee, community organizations, and individuals, 22 people from 20 community organizations were interviewed and 1,006 people responded to the survey.

- The community interviews and online survey responses represent people with different access to trails as well as different expectations for trail experiences.
- The key difference is that survey respondents are more physically mobile and have greater access to transportation than people served by the community organizations.
- Despite the differences in the survey respondents and the interviewees, there were more similarities than not when it came to trail design and desired experiences.

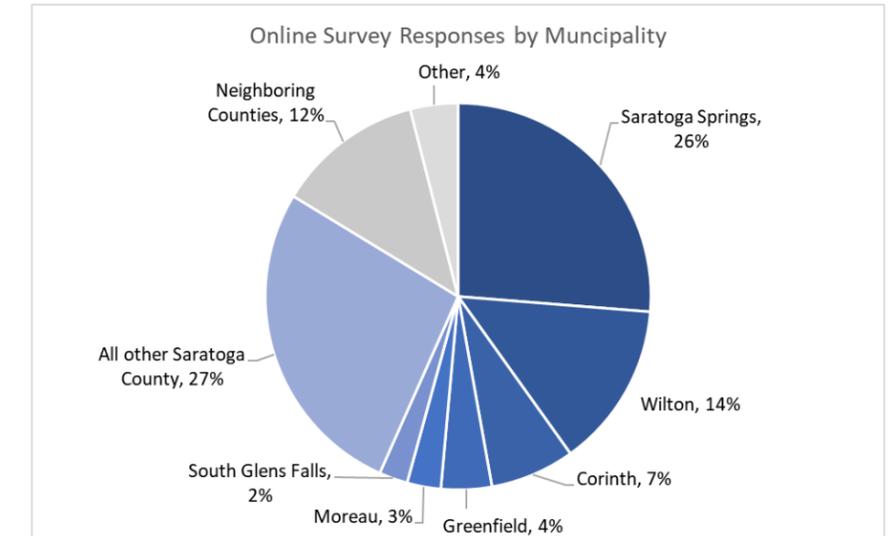
2.3.3 Community Organization Interviews

Talking with organizational staff was an intentional strategy of this community engagement process to get a variety of perspectives about trails from people with different kinds of challenges. Interviewees work for organizations that provided a wide range of services and support throughout the Saratoga region⁶:

- **Services to people with low incomes:** Bikeatoga (400⁷), Moreau Community Center, Saratoga County Economic Opportunity Council, now known as LifeWorks (45,000)
- **Services to people with developmental and intellectual disabilities:** Saratoga Bridges, Wildwood Programs (895)
- **Services to people experiencing addiction:** Transitional Services Association
- **Services to people experiencing domestic violence:** Wellspring (1,000/yr)
- **Anti-racism organization:** MLK Saratoga
- **Services to veterans:** Veterans and Community Housing Coalition
- **Public Schools:** Corinth Central School District (1,161 K-12 students), South Glens Falls High School (942 9-12 students)
- **Public Libraries:** Crandall Public Library (15,500 in SGF/Moreau), Corinth Free Library (6,531)
- **Recreation organizations:** Saratoga YMCA (30,000), Town of Greenfield Recreation Department
- **Faith Groups:** First Presbyterian Church of Corinth (60)
Contacts: Franklin Community Center (6,000), Saratoga County Public Health Services, Southern Adirondack Library System

2.3.4 Online Survey Respondents

A large majority of the respondents were from Saratoga County (84%), primarily from Palmettown Region municipalities (57%). This indicates online survey respondents live, work, or play in Saratoga County and are prime potential users of Friendship Trails if the system meets their needs.



Above: Online survey responses by municipality

⁶ To learn more about the organizations that participated in the interviews and the populations they serve, please see the Appendix.

⁷ Approximate number of people served as reported by the interviewees.

2.3.5 Survey Respondent Demographics

The ages of survey respondents do not fully represent the general population: The table below shows that compared to Census figures, people aged 45-64 were overrepresented in the survey and people 24 and younger were underrepresented in the survey.⁸

This is important to understand when designing a more inclusive trail and conservation system given that people between ages 45-64 generally have more wealth and mobility, as well as access to making their voices heard, than younger individuals. In addition, when overlaying the broader conservation and engagement goal to connect land and water to youth, it is important to learn from interview feedback for groups that represent younger people to equalize the feedback with those who have more representation.

Age Range	Survey Respondents	Saratoga County (2014-2019 ACS) ⁹
Under 18	0%	20%
18-24	1%	8%
25-44	26%	24%
45-64	51%	30%
65 and over	21%	18%

Online survey respondents are more mobile than community interview constituents: One of the more significant differences between the two groups was their relative mobility and resulting access to trails.

- The majority of those who took the online survey reported they didn't experience many barriers to accessing trails. Survey questions asked about 16 possible barriers to trail access and only a small minority (1-14%) said any of them were often a barrier.
- The survey results indicate that respondents have a high level of trail mobility and transportation access, which was different than the people served by community organizations. The only barrier that 10% or more of the group reported as often a problem was "There are too many people on the trails" (14%).
- Only 7% of online survey respondents said they wanted trails that people using wheelchairs, walkers, or strollers can use. And large majority of respondents (90%) said they are comfortable on trails in nature and feel they are designed for people like them.

- The vast majority of people who took the online survey (96%) said they would be very likely to visit unpaved trails in natural areas or state forests and parks (88%) rather than gravel trails in natural areas (43%), paved trails in natural areas (29%), or municipal parks (14%).
- Nearly all who took the online survey indicated that transportation to trails was never a problem (95%), which indicates they have reliable access to cars.
- Only 1% of the online survey respondents said they often lack transportation, which is less than the ~2.2% of households in Saratoga County that have no vehicles (2018 American Community Survey). This stands in contrast to people served by community groups: over half of the people interviewed noted that transportation is a major barrier to trail access for many of the people they serve.

Understanding these contrasting perspectives, and valuing them equally, will provide for a more inclusive trail strategy and experience – something desired by both trail enthusiasts and people who expressed an interest in using trails. The end result will help equalize the narrative so that the previously underrepresented voices and needs of those who are not regular trail visitors is a central part of the Friendship Trail design and approach.

Although it is tempting to weigh the 1,006 survey results more heavily than 20 interviews, it is important to remember that the people interviewed represent organizations that serve thousands.

While one might think that this difference between mobility challenges would separate out what people are looking for with trails, that was not the case. No matter how often they use trails, most people are looking for very similar elements of trail design, nature experiences, and community engagement. This report highlights responses from community organizations and survey respondents noting areas where they have common ground and where there are differences in needs or approaches.

2.3.6 Why Do People Use Trails?

There was an overall agreement that more trails would benefit the region, specifically trails in nature that are welcoming to more people. Both community organization interviewees and online survey respondents were asked how they, or their constituents, use trails or how they might use trails if they had the opportunity. Both groups saw the value of getting outside in nature, with the online survey respondents verbalizing how health and wellbeing was often linked to spending time outside in nature. The community organizations who represent those who currently have limited access to trails in nature expressed an interest in new trails that would allow them to bring people outside during their programming time—or permit them to experience trails in nature on their own time if the trails were located, and designed, in a manner that was welcoming and inclusive.

The community organization interviews showed that there is a growing demand for trail access. Rebecca Sewell, Greenfield's Recreation Director, said people are excited about local trails and that, "COVID has made the importance of trails and outdoor programs more evident. A great example is that people are using the town's golf course for its trails." Other groups were seeking trails for their programs because outdoor spaces are safer during the COVID-19 pandemic. One recreation program leader said, "For the foreseeable future - outdoor activities are just about it."

The Crandall Public Library (which serves Moreau and South Glens Falls), staff reported that Adirondack trail guides, have been and continued to be, in high demand after black fly season and before hunting season. They note that families are also looking for guides with hikes appropriate for children.

This increase interest in trails is likely not just because of COVID. Indeed, COVID has served as a "wake-up call" to what is widely recognized within the conservation and trail community: as populations increase in Saratoga County, and as more people become interested in the healing and community aspects of trails, trail usage and demand follows.

⁸ Refer to the long-term community engagement recommendations document for suggestions on reaching younger people.

⁹ U.S. Census Bureau; American Community Survey, 2015-2019 American Community Survey 5-Year Estimates, Table DP05; generated by Karen Strong; using data.census.gov; <<https://data.census.gov/cedsci/>>; (31 January 2021).

2.3.7 Comparing and Contrasting Interviews and Survey Responses

Similarities Between the Interviews and Survey

When asked what they were looking for in trail experiences, or how they might use trails, there was considerable overlap between the community organizations and survey respondents.

Trails for Casual Walking

- Most of the interviewees expressed a strong interest in walkable trails that also work for strollers and self-propelled or electric wheelchairs, in contrast with more rugged, or single-track, hiking trails.
- Although the online survey data show people engage in many different outdoor activities, walking is by far the most common activity.

Trails for Socializing

- Both interviewees and survey respondents reported they visit trails with other people. Including trails to accommodate two or more people, as well as small groups will be particularly important in the work to “rebalance” the trail and nature experiences across the region.
- Interviewees representing community organizations indicated that the people they work with usually visit trails with other people. They also relayed that people went with others for company, as a group for educational experience, to feel safe, or to aid in managing wheelchairs and/or walkers. One interviewee said, “Trail systems nearby are beneficial for connecting with new people, especially youth.”
- Sixty percent of survey respondents said they go outside to spend time with family and friends. More than two-thirds of survey respondents reported they usually spend time outdoors with other people (68%). Nearly half (47%) said they usually go with one other person, 21% said they go with a small group of people, and 13% said they go with a pet. Half of survey respondents also told us that they want trails where people can walk side by side.
- Some survey respondents prefer solitude, with 15% saying they often visit trails alone, and 20% sharing that they like going to their favorite outdoor places because it is quiet and there aren’t many people around.

Trails for Exercise

- Seventy percent of survey respondents cited keeping fit and healthy as the primary reason they spend time outdoors. When asked why they like to visit their favorite places in nature, 38% mentioned recreation and exercise (it was the most frequently mentioned reason).
- Physical and mental health was mentioned as a trail benefit by several of the community organizations interviewed, for example:
- “The most important benefits are mental well-being, fresh air, nature. Also exercise, and getting away from screens.”
- “I am a firm believer in outdoor recreation. I believe in the obvious benefits of exercise and fresh air. Many of our programs pre-covid involved recreation because there is evidence that anxiety and depression can be helped by exercise and being in nature.”

Trails for Connecting with Nature

- People are looking for a variety of nature-based experiences as well, with a strong preference for access to, or views of, water.
- Views of water were cited as a highly desired trail feature by 90% of the people who took the online survey and frequently mentioned in the community organization interviews.
- Most survey respondents reported spending time outside to enjoy scenery (69%) and connect with nature (64%).
- Those who worked with community members who do not regularly use trails noted that many of the nature-based trails in the region weren’t near where they lived or worked
- Constituents who were less mobile reported that accessible trails often didn’t feel like they were surrounded in nature.
- Trails that provide different experiences
- Shorter loops, places to rest along the trail, and views were also preferred in both the online survey interviews and the community organizations interviewed.
- Trails appropriate for different seasons and weather conditions was noted in both the online survey and the community organization interviews.
- Many people who filled out the survey said they participate in different activities in different seasons, for example: “I like walking on trails in the spring summer and fall and riding a snowmobile on them in the winter.” Others mentioned cross-country-skiing and snowshoeing. Interviewees said people they worked with appreciated trails they could use in all seasons and needed parking lots plowed in the winter.

Trails that are Close to Home

- A clear message became apparent in both the interviews and survey is the desire for trails close to where people already are, including home, work, schools, and community organizations where people gather. This is especially important for the people without reliable transportation described by people in the interviews.
- Survey respondents made it clear that even though they are more mobile, and have access to transportation, they prefer places closer to home, with 20% citing it as a reason they preferred their favorite outdoor places. An example of this sentiment is as follows:
- “There are better places (more remote, quiet) but these are conveniently located for my family and still provide opportunity to be outside without a lot of prep.” Other survey respondents don’t want to drive to trails, even if they have cars: “It is very important to have trails and walking areas connected to where people live so that you don’t always have to get in a car to get to a trail.”

These findings are consistent with other data surrounding trails and trail preferences. A recent report on disparities in access to nature cites the importance of experiences close to home for creating more equity: “Protect more close-to-home recreation areas and make them welcoming to all. While the conservation movement has traditionally focused on protecting remote wilderness areas, a growing number of urban projects—many with a focus on equity and community participation—are demonstrating that cities can restore and protect nature with all its health and climate benefits within their boundaries.” (Center for American Progress, 2020)

Lack of time is another factor when identifying the need for more trails and related conservation areas to be located close to where people live, work and gather. People reported that they don’t have enough time to travel to distant areas (meaning, those that are farther than a 10-15 minute drive). This finding is constant with research on Saratoga County trails by Skidmore College, lack of time was the 3rd highest barrier (21%) for trail access (Carames, Lightman, & Tuttle, 2021). Time was also a top constraint for Black, Indigenous and People of Color (BIPOC) who visit national forests (Winter, Equity in access to recreation opportunities: A synthesis of research and management implications, 2007). Interviewees told us that for people with limited means, there is a “luxury in being able to prioritize outdoor time. For families are just trying to scrape by, hiking or going on a walk is not at front of mind.” Survey respondents also commented on time constraints, “work prevents me from getting out as much as I would like” and “there are not enough hours in the day.”

Differences Between the Interviews and Survey

Although there was a strong interest in trails, they are not yet relevant to many. Community organizations sometimes found it challenging to convey how specific activities on or with trails would benefit their constituents because of the varied experience interviewees had with bringing people outside. Some groups currently seek appropriate, accessible trails that work for their constituents while others held occasional special events outdoors. There are community organizations who don't yet talk about outdoor recreation and trails with the people they work with in part because they haven't considered how it might be beneficial in achieving their primary mission. They also noted that suitable trails are hard to find or too far away.

Interviewees cited the following benefits for the people they worked with:

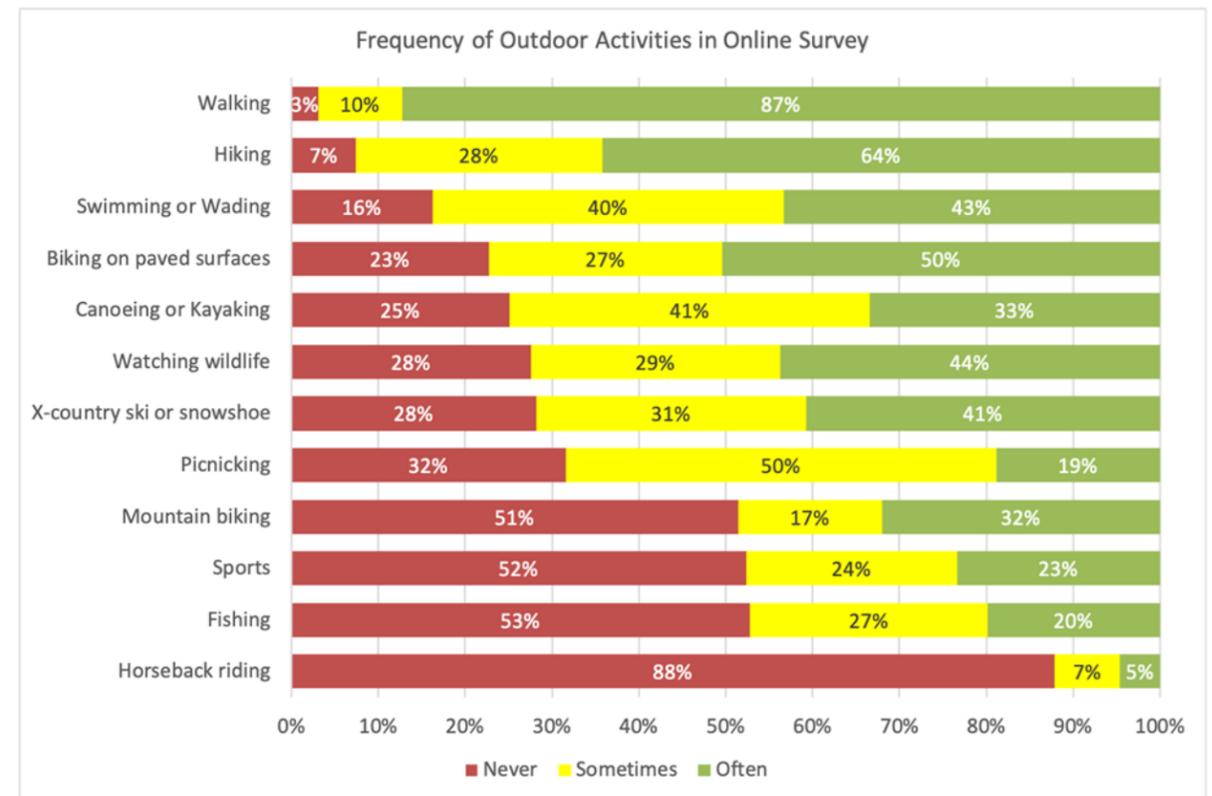
- **Trails are seen as economically inclusive:** Overall, the community organizations interviewed saw a strong need for more accessible natural areas close to where people live and work. A key benefit cited by organizational leaders was the potential for trails to provide a free activity people could enjoy with others.
- **Trails as transportation:** Several organizations mentioned the need for trails as transportation corridors as well as recreation, especially for people without cars. For example, bike trails that connect Saratoga, Corinth, South Glens Falls, and Greenfield, and could keep people safer by separating cyclists from cars.
- **Serving and connecting with youth:** Community organizations also mentioned how more suitable trails could be helpful for youth in particular: "This would give parents, schools, summer camps, etc. a way to bring the kids outdoors and connect/have fun." Several community groups and interviewees mentioned the possibility of youth groups or team sports looking for appropriate trails, including cross-country teams.
- **Youth need trails close to home because they cannot drive:** for those of modest economic means, their families may not have access to cars either. A South Glens Falls principal said: "The only natural areas that students can easily access are at Moreau Recreation Center where the cross-country team practice or the Warren County Bike Trail. Many of the students are forced to either walk in neighborhoods or main roads since there are not many trails around."

As mentioned previously, respondents participated in a wide range of activities on trails. The chart below shows the range of activities identified by survey respondents. Walking was the most popular trail activity among survey respondents, with 87% saying they walked outside once a month or more. Hiking was the next most common activity, with 64% of respondents reporting that they hiked at least once a month. There were six activities that people did less often: swimming/wading, biking on paved surfaces, canoeing/kayaking, cross country skiing or snowshoeing, and picnicking. Snowmobiling was mentioned in 86 comments (9%), which made it more popular than horseback riding. Trail running came up 16 times (2%)¹⁰.

There were four activities that most people who responded to the survey never do¹¹:

- mountain biking (51% never),
- outdoor sports like basketball, tennis, and golf (52% never),
- fishing (53% never), and
- horseback riding (81% never).

Below: Frequency of Outdoor Activities in Online Survey



¹⁰ Of the 1,006 people who filled out the online survey, 155 provided additional comments related to out-door activities beyond those listed.

¹¹ Some guidance committee members expressed that though most people never went mountain biking, people who do, do it often. Figure 6.2 shows 32% often go mountain biking, and while not insignificant, there are seven activities that people did more often. Note that these results don't suggest these trail activities aren't an important part of the total trail experience within the region. However, given the data showing what people are seeking to do, and the relative lack of trails that currently meet the most desired experiences in the region, it is suggested that part of the Friendship Trail strategy include establishing new trails that meet the interests reported by more people.

2.3.9 Who Uses Existing Trails?

To better understand trail options in the region, both community interviewees and online survey respondents were asked where they go to spend time outside. Interviewees were asked about the trails that work for the people they serve. The survey asked respondents about their three favorite outdoor places for relaxation or recreation.

- Based on the responses, it is clear there are many more trail options for people who are more mobile in terms of transportation and physical mobility, and options are significantly limited for people who are less mobile.
- There was strong recognition that while there are many trails in the area, there are not as many nature trails appropriate for mobility challenged walkers or strollers.
- This imbalance in the availability of trails suitable for people with mobility and other challenges suggests a need for “rebalancing” trail experiences so that more trails where people can experience nature and social connections near where they live and work.

Community Interviews helped to clarify why there are so few options:

Community organization interviewees mentioned about a dozen parks and trails in total that could work for the people they serve depending on their location, ability to provide access to and from their sites, and time constraints involved in getting there. Saratoga Spa State Park came up most often because it provides accessible trails with visibility, parking is easy and visible, and trails and outdoor gathering places are designed to provide shade and sun for different seasons. That said, there was an interest in more accessible nature experiences with people noting that Saratoga Spa State Parking provides is more “park-like”, rather than “nature-based.” This was confirmed several times with another interviewee remarking at how people appreciate the experience on Geyser Creek Trail at Saratoga Spa State Park because “It has a lovely short trail of stone dust and a bench to rest on. It’s shady, has views of water, and offers a good experience in a variety of seasons.” Community organization representatives noted that different places work for people different with different mobilities or comfort levels. Those who can walk and navigate uneven terrain liked Saratoga PLAN’s Henning Preserve.

Community interviewees described why most local trails aren’t suitable for the people they work with:

- “Quite a few trails around here that are rustic hiking trails – narrower paths up mountains – we want and need a recreational path that is wider and not as difficult.”
- “Most local trails are more rugged, have a big incline, or has other elements that are hard for many people.”
- “Hiking trails don’t really work – sometimes they are too muddy. Trails that are paved or have platforms are so much easier for them to navigate than going through mud and trenches. Hiking trails are too steep and too difficult, and not accessible even for sturdy off-road wheelchairs or people with walking sticks. We look for a variety of trails and find most are more difficult.”

Community organizations said that there weren’t enough places to bring the people they serve that are nearby and appropriate. One interviewee noted their increased use of trails during the COVID-19 pandemic showed them how few options there are: “Because of COVID, we are doing much more outdoors, which means we need to do lots of exploring to find places that work. We’ve had to go farther away because we couldn’t find a lot of places, especially when State Parks were closed.” Though the crisis of the pandemic appears to be waning, it has revealed the limitations of the current trail system and the need for more nature-based, accessible trails.

Many more options for online survey respondents: The survey invited people to share up to three outdoor places they enjoy to better understand the options and the types of experiences people preferred. Respondents shared 2,598 places they like to go, as shown in the table below¹². The results show that many people are already recreating in and near the Palmertown Region¹³. The responses once again illustrate the economic and physical mobility of those who participated in the online survey. It shows that people who might use the Friendship Trails seek outdoor recreation opportunities trails throughout Saratoga and Warren Counties, and the neighboring Adirondacks. These people have plenty of places to go – Friendship Trails is an opportunity to include different kinds of trail experiences for people who have been left out.

Places	Mentions	Notes
Moreau Lake State Park	314	Included any trails located within
Adirondacks	296	Combined all sites mentioned within the Adirondacks except Great Sacandaga Lake and Lake George
Saratoga Spa State Park	209	Included any places within that park, like Saratoga Performing Arts Center
Town Parks in Queensbury	100	63 of the mentions were Gurney Lane Recreation Park
Lake George	99	Included any mention of a location in and near Lake George
Daniels Road State Forest	96	
Home or camp	89	Included references to “backyards” or “my family property”
Wilton Wildlife Preserve	68	
Great Sacandaga Lake	62	
Saratoga PLAN Preserves	60	Included any mention of a specific PLAN preserve

Above: Top Outdoor Places Based on Survey Responses

¹² Some responded very generally (beach, woods) and others were very specific (Spier Falls Trail, Lake Bonita hiking path). To better understand the patterns, we grouped the responses by the park or preserve within the Palmertown Range and nearby areas, and by area outside of Saratoga County (e.g, Catskills, Adirondacks) where possible

¹³ Other places frequently mentioned in and near the Palmertown Range included Saratoga National Historic Park (54), Kalabus Perry Trails (52), Betar Byway (35), Zim Smith Trail (32), Skidmore North Woods (30), and Pitney Meadows Community Farm (10).

2.3.10 Why Don't People Use Trails?

To make trail access more equitable and inclusive, it is important to understand what keeps people from visiting them. Interestingly both the community interviews and the online survey respondents provided clear feedback on what they saw as barriers to visiting trails.

Addressing these concerns, even if they feel surprising or insignificant to an avid hiker or outdoors person, is going to be central in demonstrating that the Friendship Trail initiative is taking people's input seriously. It is important to demonstrate that other people's perception is reality for them, and to build relationships, it is necessary to meet people where they are.

These insights are further supported by other research. The research brief Promoting Active Living in Rural Communities (Hansen & Hartley, 2015) identified the unique barriers to physical activity for people living in rural areas that mirrored many of the comments we heard in the community organization interviews and the online survey:

"Important barriers to physical activity in rural communities may include isolation, lack of transportation options, lack of access to places with physical activity opportunities, climate and terrain, cost and safety fears such as high traffic speeds, the threat of loose dogs and wild animals, crime concerns, and lack of sidewalks and lighting."

Lack of access to reliable transportation was the primary barrier for people served by community organizations. Discussion with community organizations also clarified how fears and perceptions of safety play a key role in why people do not visit trails. Some of these concerns can be addressed with trail, parking area, and signage design as well as site specific amenities including benches and appropriate signage. Others will require different solutions, including programming and communication.

Fear and perceptions of safety

Both the online survey and community organization respondents shared the importance of feeling safe and welcome on trails. Not surprisingly, those who are more comfortable on trails have different perceptions of what makes for a safe and welcoming experience. Although there wasn't a specific question about safety in the survey, there were 209 comments that responded to the two survey questions asking about barriers for trail use. A plurality of the comments addressed safety (33%), including the fear of falling and not getting help, fear of being harassed, fear of being physically attacked, fear of unleashed and aggressive dogs, fear of getting hit by a car, and fear of hunters while on the trail. People are also concerned about ticks and tickborne diseases; an increasing challenge for trail users in the northeast given the rise of tick-borne diseases.

- **Fear of falling:** Both online survey respondents and those community organizations interviewed shared concerns about people falling on trails and how to get help if they fell if visiting trails alone.
- **Fear of unleashed or aggressive dogs:** Some people are terrified of dogs and they don't want to be on trails where they might encounter them. There are others who love dogs do not appreciate people who do not have control of their dogs. Just 13% of people reported usually visiting trails with their pet.
- **Fear of harassment:** Both online survey respondents and interviewees shared concerns about how other people might treat them on trails. Several female survey respondents said they felt unsafe when on trails alone. Interviewees mentioned wanting to be greeted by other people on the trail and feared that others might think they didn't belong there. People in both groups worried that harassment could escalate into a physical attack.
- **Concerns about getting to trails safely:** Both groups mentioned reported feeling unsafe walking or biking near busy roads.
- **Bathroom access:** Interviewees were concerned that their clients would not be able to find a public bathroom, and even if they could find one, that it wouldn't be accessible to them. Over 40% of survey respondents said that adding bathrooms would make their trail experience more welcoming.

Comments from the Interviews

- Is it safe getting there or do I have to walk along a busy road?
- Will the trail be too hard? Will I fall down? Will I get lost? Is there cell reception to reach someone if I fall or get lost? What if something happens?
- Will people be friendly? Will someone give me a hard time for being there? Will someone physically assault me?
- Where is the nearest public bathroom, does it allow for wheelchairs, and what is the address so I can find it?
- "People who are not avid hikers may be fearful of longer or wooded trails."
- "People will only ride (bicycles) where they feel safe, and they feel safe where they are separated from cars."
- "For seniors, safety or perception of safety on trails is extremely important and could also be a big barrier for this group."
- "Many veterans have mobility issues and would be nervous to go out alone to more remote trails."
- "Some people of color don't feel safe because they may be targeted by law enforcement or others on the trail as 'not belonging there' or 'up to no good.'"
- "There is concern surrounding very wooded areas, especially in areas with spotty cell service (which is common in that area)."

Comments from the Survey

- "I don't hike alone, because it is unsafe for women to do so. Which completely sucks."
- "As I've aged, I feel less safe hiking alone in case I fall."
- "Walking on trails that also allow bicycles is difficult for me because I am hard of hearing."
- "My dog and I feel unsafe when others do not leash their dogs and let them run wild and their dog does not listen to their command and charges me and my dog"
- "When I see hunters (with guns) sharing the trails with me, I really don't feel safe."
- "I need to feel safe. I often walk with someone else and prefer it to be lit so we can walk after work in the fall winter months."
- "Ticks keep me off grassy trails that are not mowed regularly"

2.3.11 Transportation

Community interviews highlighted transportation equity as a major barrier to park and trail access. More than half of the interviewees mentioned lack of reliable transportation as a major barrier for their constituents who want to access trails. Addressing transportation barriers via transportation mode and/or establishing accessible and welcoming trails within appropriate distance to where people live, work or gather will be important as part of the effort to be more inclusive.

Some representative quotes include:

- “Transportation is the main barrier. Many [people we serve] are without their own car and rely on public transportation or walking. A trailhead would need to be within a mile of a bus stop or have a shuttle/private transport option to trailheads.”
- “Most trail heads require a vehicle to get to. What options are available to people without cars?”
- “The obvious barrier is transportation to trails. People either don’t have vehicles or they are not reliable.”
- “A lot of students don’t have cars and would either need to bus, bike or walk to trail.”

This finding is consistent with local community needs surveys that regularly find affordable and accessible transportation as the highest need among the 45,000 people who struggle to make ends meet in Saratoga County (Jo Anne Hume, ED of LifeWorks, personal communication). National studies have also found that a lack of transportation to trails creates barriers to more diverse use (Hansen & Hartley, 2015). Recommendations for addressing transportation barriers include locating trails near where people live, work, and gather.

Transportation was not a barrier for most survey respondents:

Unlike the community organizations’ constituencies, 95% said that a lack of transportation is never a barrier to accessing trails. Only 1% of people said they often lack transportation to trails, which is less than the ~2% of households in Saratoga County that have no vehicles (2018 American Community Survey). Further, nearly 7 in 10 also said they would not take public transportation to trails; however, one-quarter of people who responded to the online survey said they would be open to taking public transport if it were convenient. While only 25% noted an interest in public transportation, 65% said it is sometimes or often difficult to find parking near trails. Several specifically mentioned using shuttles to address parking congestion:

- “I would take shuttles from the village to trailheads at the lake if they were offered for my children and I [in order] to cut down on parking and congestion in the neighborhoods.”
- “If I can be shuttled to a trail and walk home, I would use public transportation.”
- “I am too far away for public transportation, but I would love to be able to make use of it. Say, shuttles on certain days of the week, not just weekends, to avoid weekend congestion.”

2.4 Recommendations

The Friendship Trails project is strategically timed to make a lasting impact and address what has been a long-standing need within the larger Saratoga community (ALTA, 2018). The planned network of trails and their emphasis on celebrating friendship, building community, and connecting people from all walks of life to nature and to each other will both rebalance nature trail availability for those who have mobility or other challenges in addition to more fully serving the broader community.

It is notable that one of the goals of the Friendship Trails is to include a variety of outdoor activities designed to accommodate a range people and activities (ALTA, 2018). This inclusive approach involves trail and access design choices as well as geographic location of trails and related nature experiences.

The following sections provide recommendations for specific design improvements as well as overall strategies derived from the community interviews and the online survey.

2.4.1 Trailhead and Parking Design

Both those representing community organizations and the online survey respondents emphasized the importance of welcoming, safe, visible, well-marked and well-designed parking areas that reflect both the needs of the trail visitors and are of adequate size to be inclusive.

Community organization interviews stressed several elements that will be important to consider when evaluating existing trails and conservation areas as well as planning for new trailheads and parking areas for the Friendship Trail system and beyond.

Insights from those who participate in the online survey reflected their more mobile status as well as overall comfort and use of trails in the region. That said, there were a number of commonalities with the community organizations as well. 43% thought it was important that parking areas visible from the road would make their trail experience more enjoyable. While not a large number of responses, there was reference that lighting might be useful during winter months for additional sense safety. While there are land trusts employing motion activated cameras in parking areas, no one mentioned this in the online survey.

Concerns and suggestions for improvement often emphasized the following:

- **Visibility and Road Signage:** People feel unsafe if they can't be seen, or if they can't see others coming upon them quickly or in an inappropriate manner. Interviews and survey responses noted parking areas need to be visible from the road and not enclosed by vegetation. Adequate lighting in parking areas was also important to several community organizations.
 - "It's important to provide parking areas that are easy to see from the road (both for a sense of safety and for wayfinding)." For those who are less familiar with the area, or have visual constraints, establishing road-size signage for ease of locating a trail is important.
 - "I think visibility is big for people – when you feel unsafe or unsteady if something happens no one will see – reduces anxiety."
- **Signage that is welcoming and accessible:** Locating the trail signage and kiosk(s) near the parking area in a manner so people can understand what to expect was also referenced repeatedly (as noted elsewhere herein). Kiosks that are designed for people in wheelchairs, who may have visual or cognitive impairments, and provide information as to what the trail experiences are like was important. The primary concern around parking and trail heads for survey respondents was the need for clear signage with a map of the trails, with 90% of respondents requesting that feature. Many commented that they wanted trailhead information about the condition and length and level of difficulty and trail descriptions that detail steepness and skill levels required to complete.
- **Cell coverage:** Clarification at the parking area kiosk noting if cell coverage was available within the trail system and/or parking area was an important safety factor; there are those who are not comfortable going to new places without being able to call for help.
- **Places to rest or wait for people:** Benches designed and sited for those who are mobility challenged were requested to allow people to rest safely comfortably manner at the parking area/trail head. This would help the parking area feel more welcoming.
- **Space for larger vehicles and wheelchairs:** Parking areas will need to accommodate vans, small buses (for school trips, community service organizations, and individuals), and cars that include wheelchair access. Parking area design needs to ensure appropriate sightlines and ensure the parking areas aren't overcrowded. This was noted in both interviews and survey responses. This is particularly important given feedback from community organizations that would be interested in hosting programs and group experiences on trails if the trails, and parking areas, were designed to be welcoming to those they serve and close to where their constituents live, work or visit for services.
- **Bike racks:** While bike racks were not specifically noted in the interviews as a critical amenity, the need for them can be inferred from the observations that many people would need (or want) to bike to these trails, assuming they were within reasonable distance from their homes or place of employment.
- **Surface composition and maintenance:** The composition and maintenance of a parking area's surface materials, and the transition to the trails, was an important safety factor for people who need wheeled access to trails; people who experience walking challenges were also concerned about tripping on uneven surfaces. This is not to say that trails and parking areas need to be paved. A number of community organizations noted that unpaved trails in Saratoga Spa State Park, with compacted surfaces, work well for their constituents.
- **Maintenance:** Year-round care, including snowplowing, was mentioned often. Community organizations weren't aware of many places where they could take their constituents to experience winter activities in their region beyond state parks but would be interested in doing so.
- **Drinking water:** While the community interviews didn't expressly state an interest in drinking water access this did come up in the online survey responses. There may be sites where this is possible to provide; it would be wise to include whether there is drinking water available at each site, and if so, where.
- **Bathrooms, dog poop bags and trash cans:** Nearly half of survey respondents wanted bathrooms near trails, and several suggested these could be rustic accommodations (composting toilets or port-a-potties). People had strong feelings about trash cans too, with 42% saying they would be helpful. Comments indicated some worried about dumping, which a visible parking area would discourage. Requests for dog poop bags was also voiced.

2.4.2 Wayfinding Signage

Thoughtful and inclusive trail design, signage, and wayfinding will address many of the safety concerns cited previously, particularly the fear of getting lost, which came up in both the surveys and the interviews.

“Signage is important- I want to know the difficulty of the trail and the length before I start out, and if trails connect to other trails, then really good trail markers are very important.” – Survey respondent

Desire for better wayfinding signage was very clear. Both community organizations and those who responded to the online survey wanted visual signage designed to:

- Allow people to identify trails and conservation areas that are of interest to them or their social group/family, with key features and interesting things you might see in different seasons.
- Identify trails that are appropriate for their desired use; clarity regarding what trails were appropriate for different activities.
- “Internal” signage on trails (especially at intersections) to assess where people are on the trail, including distances not only in miles but in time estimates; where there are places to sit, how far away they are from the parking area.
- Signage that could be read from a wheelchair that is large enough to read along the trail, as well as on kiosks).
- A few organizations interviewed noted that trail signage in both English and Spanish would provide a strong statement of inclusion; many people come to the region from neighboring areas, as well. This would also be more cost effective if planned and designed from the beginning.

2.4.3 Programming

One key takeaway from the community interviews is that it is not just trail design that keeps people from using trails more. If people feel like they don’t belong or are afraid of being harassed on the trail, activities and programming can help them feel welcome. This is especially important for bringing in new trail users.

Some survey respondents said gatherings would help them too, for example: “[I am] Unsure about going alone to a trail I am unfamiliar with so need more information, guidance or a group to get started.”

Negative interactions with others, or fear of these interactions, can keep people from using trails even if they are designed in a manner that might be welcoming. People feel safer when they hear and see people like themselves out on the trails. Planned and inclusive programming, designed to meet the needs and interests of specific groups, can build a sense of community and comfort with a specific location or activity. Developing customized experiences in partnership with community organizations will be an important strategy to ensuring the trails are inclusive. National research supports this observation and has documented that recruiting groups of people who are already connected through common interests, identities, or lifestyles, can be more effective at welcoming new people to outdoor experiences by reducing the fears of isolation and not fitting in (Keller, Case, Escher, Is-Carrasco, & Seng, 2017).

2.4.4 Trail Location

Adding new trails and conservation areas close to where people live, work, and gather was cited as an important factor for trail access in both community interviews and the online survey. Providing inclusive trail experiences that people can walk or bike to is also a strategic approach to meet the needs of a broad range of community members and is an important way for land conservation organizations to address transportation challenges.

Notably, 74% of those who responded to the online survey think it is very important to have trails near villages and cities. In rural areas, creating trails close to home might mean evaluating opportunities for new trails within a 15-minute bike ride. Creating a distributed conservation and trail network in addition to the central “spine” of the Friendship Trail within the Palmertown region would also address concerns about future overuse of trails as the population of Saratoga County continues to grow.

The Transportation section of this Master Plan contains suggestions for working with the Capital District Transportation Authority (CDTA) that serves the southern half of Saratoga County and Greater Glens Falls Transportation (GGFT) that serves South Glens Falls and Moreau in Saratoga County. This option wouldn’t serve residents in the more rural areas. To increase access to trails in areas where public transport is limited, equitable solutions include:

- Locating trails and related conservation areas close enough to populated areas, or rural population areas, so that people can walk or bike to them (and adding bike racks to parking lots).
- Designing parking lots to accommodate vans and buses.
- Creating partnerships for shuttle service to popular trailheads.

Though survey results indicate most people will access trails by private automobile, nearly 70% of survey respondents indicated that lack of parking is sometimes or often a barrier to trail access. Better parking design will be important. Several expressed an interest in shuttles and they may be a solution worth exploring to help address parking area overcrowding and help people with fewer transportation options access trails. If the guidance committee pursues shuttles, Outreach and education about the need for and benefits of the service will increase the number of people enjoying trails.

Think about trails as transportation corridors as well as recreational amenities. Several community organizations mentioned the how trails make it easier and safer for people without cars to move around the region. For example, bike trails that connect Saratoga, Corinth, South Glens Falls, and Greenfield could keep people safer by separating cyclists from cars. The Railroad Run trail in Saratoga Springs, was shared as a good example because it has no cars and is considered by cyclists to be very safe compared to routes along shoulders of roads where people do not feel safe.

2.4.5 Connecting People to Trails

People of all kinds of abilities and comfort levels in nature want more information about trail experiences and uses before they get to trails. Yet many people in the community don't know how to find the right trails for them.

Though there are fewer barriers for trail access stated by survey respondents overall, there were a number of comments about the benefit of having more visual and text information about trails so they can understand the experience in advance. One survey respondent said, "The biggest barrier is information - where are trails and are they suitable for me or others?"

Both community organization representatives and online survey respondents said it is unclear what kinds of experiences, views, and amenities are provided by different trails—something that is important for many people to know prior to venturing out to experience a new trail.

Representatives of the community organizations interviewed clarified that those they served were not sure they, or people like them, were welcome at most trails; regardless, their constituents did not know how they could find out if they were. Instead, the places they go most often are based on personal experience and word of mouth. A common refrain was "Mobility issues are also a barrier. Knowing what the trail is like before going is important."

Many of those responding on the online survey suggested more information on websites about area trails and the experiences they offer, and perhaps a central resource for all local trails, would be helpful. To improve the information shared about trails, the following reflects overall community engagement input and related suggestions:

- **Make sure outreach materials are inclusive:** Materials in kiosks, websites and brochures should include pictures of the different uses and types of people who are welcome on the trails.
- **Use visuals to convey the character of the area, experiences, and who is welcome:** Trail outreach should include information, including visuals to explain type of access, experiences, and what kind of parking is provided. Maps need to be more visual to convey the landscape rather than relying on topographic maps which many people have not learned how to read.
- **Not all people have reliable internet access or are comfortable using online tools:** The community organizations suggest that in addition to internet communications, brochures or flier(s) are available with images that help people envision what the experience would be like for different trails, how long the trails are, who they are for, etc. It will help some organizations share information with others easily.
- **Include a map for each area showing trailheads and points of access:** Consider referencing parking and public transport stops as well.
- **Include a clearer understanding of how long it takes to walk/stroll a given trail:** Community interviewees preferred time rather than trail distances, or "difficulty levels" because some people don't have a sense of how long it takes to go two miles on different types of terrain. It was suggested to include different times for different speeds of trail travel; for example, how long it would take with a toddler in tow.
- **Look for models that work well:** For example, the Town of Queensbury Department of Parks and Recreation was cited in the online survey as a good example of signage and outreach. The Town's simple, clear website that shows how to access their trails, what uses are allowed, and even has a simple video that helps people know what to expect when they get to trails. It appears this outreach is effective too; Queensbury trails are clearly popular and were mentioned 100 times as favorite places in the survey, which made them the 4th most popular place in the region.

2.4.7 Supporting Inclusion by Building Trust

A central tenant of the Friendship Trails system is that everyone deserves the opportunity to enjoy time outdoors. Collectively, the following outreach and messaging strategies will support the goal of inclusive trails and grow the audience for trails overall.

Show me, don't tell me. After spending the time (and money) to reach out to new audiences, it's important to show that project partners have listened by starting with projects that serve a broader audience; specifically, those who have less options and have traditionally been underrepresented with trails in nature. It will be critical to remind both the community as a whole and land managers that making trails more inclusive is better for the entire community.

When people have meaningful experiences outdoors, their quality of life, health and social wellbeing improve, and in turn their communities become stronger and more sustainable. Everyone deserves the opportunity to enjoy time outdoors, because when people connect with nature, we all benefit¹⁴.

- **Address safety concerns as soon as possible:** Detailed recommendations for how to address the safety concerns and transportation barriers through trailhead and parking design, trail design, programming and trail locations have been provided. By inventorying current conservation areas and related trails, and systematically addressing the concerns, these areas will become more welcoming and inclusive.
- **Keep the conversation going:** Given the interest by community organizations interviewed, as well as the low level of direct participation by their constituencies in the survey it is suggested to continue to seek input into trail design, creating conservation areas and trails close to their constituencies and place of work, and strategies to increase overall comfort, and use, of being outside. Guidance Committee partners should continue to seek ways to engage directly with underrepresented people to reduce the barriers many face in using local trails.
- In the near term, Guidance Committee partners could **continue to build relationships with leaders of the organizations as well as hear directly from people they serve** by working through community groups who expressed strong interest in partnering during the community engagement. Examples include the Moreau Community Center, Wildwood Programs, Wellspring, and Town Recreation Program Directors.

- **Providing periodic updates, at least quarterly, on the progress of making trails more welcoming and inclusive,** per this Report, will allow people who took the online survey, as well as participated in the community interviews, to feel valued. Detailed suggestions are included in the separate long-term community engagement recommendations report.
- **Be adaptive and responsive:** The Friendship Trails initiative offers excellent insights into how community feedback, and needs, can cause conservation organizations to adapt in a way that is both strategic and responsive. Given the growing recognition that conservation needs to be welcoming and inclusive—both locally and at a national level—the insights provided by this Report offer tangible steps and approaches to accelerate that work. The key is to demonstrate that conservation groups are listening and to adjust, and expand, their vision of what conservation and trails should feel like, who they should serve, and where they should be located. That feedback can be unexpected or uncomfortable at times. Yet to be authentic in the effort to build trust, friendships, and an inclusive ethic of conservation such change is necessary.
- **Protect more land, create more trails:** While it may go without saying, it is important to note that there is a clear call to action within the conversations we had with the community organizations. They noted, repeatedly, the need for additional conservation areas and trails nearer them; places to enjoy nature for the myriad of reasons stated above. The messaging coming from the community-online survey conveyed a need for additional land protection; many realized the need to provide more trails for more people, in nature. With development rates continuing to increase, the pressure on existing trails will only increase.
- **Build the capacity to own and manage additional trails and lands:** There is no such thing as a no-maintenance trail. To better serve the needs within the Palmertown Region and beyond it will be necessary to build organizational capacity. Exploring cooperative trail maintenance structures and interviewing groups that maintain large trail systems with modest staffing is recommended, as we as working with funders and donors to cover the cost of a new position to facilitate this work.
- **Invest in messaging, outreach, and engagement.** Developing a commitment to talk the need for inclusive conservation, and how the need to “rebalance” the trails available for people who are not avid hikers or outdoors people, will be important. Likewise, creating a website and related outreach materials that is focused on conveying where inclusive trails are located, as well as more rugged and back-country trails, will assist more people to see the value of this work.
 - As part of the Friendship Trail initiative (and as organizations on our own), we have a shared responsibility to open the doors to all people, regardless of where they live or their backgrounds, and ensuring their experiences outdoors are positive and rewarding. The more people who connect in this way with nature, the more our communities are strengthened and the more we all benefit.
 - Partnering with area nonprofits and local businesses, including the Guidance Committee organizations, to cross promote and disseminate inclusive messaging, share materials, and develop a central place for trail information, will allow people to easily find the trails that are relevant to them.
- **Apply this work to other trails and outdoor experiences.** These kinds of conversations and analyses can be useful outside the Palmertown Range. One next step would be to assess the geographic distribution of trails in the region to determine what kinds of experiences are abundant and which are lacking.
 - Individual conservation organizations could partner with community organizations to conduct accessibility assessments of their existing conservation lands.

¹⁴ <https://www.wta.org/news/magazine/features/helping-disabled-people-find-belonging-outdoors>

3. Inventory & Analysis

This chapter summarizes the various features within the Palmertown Region that influence the corridor alignments for the Friendship Trails and represent key destinations that can complement the recreational and economic benefits of the trail system.

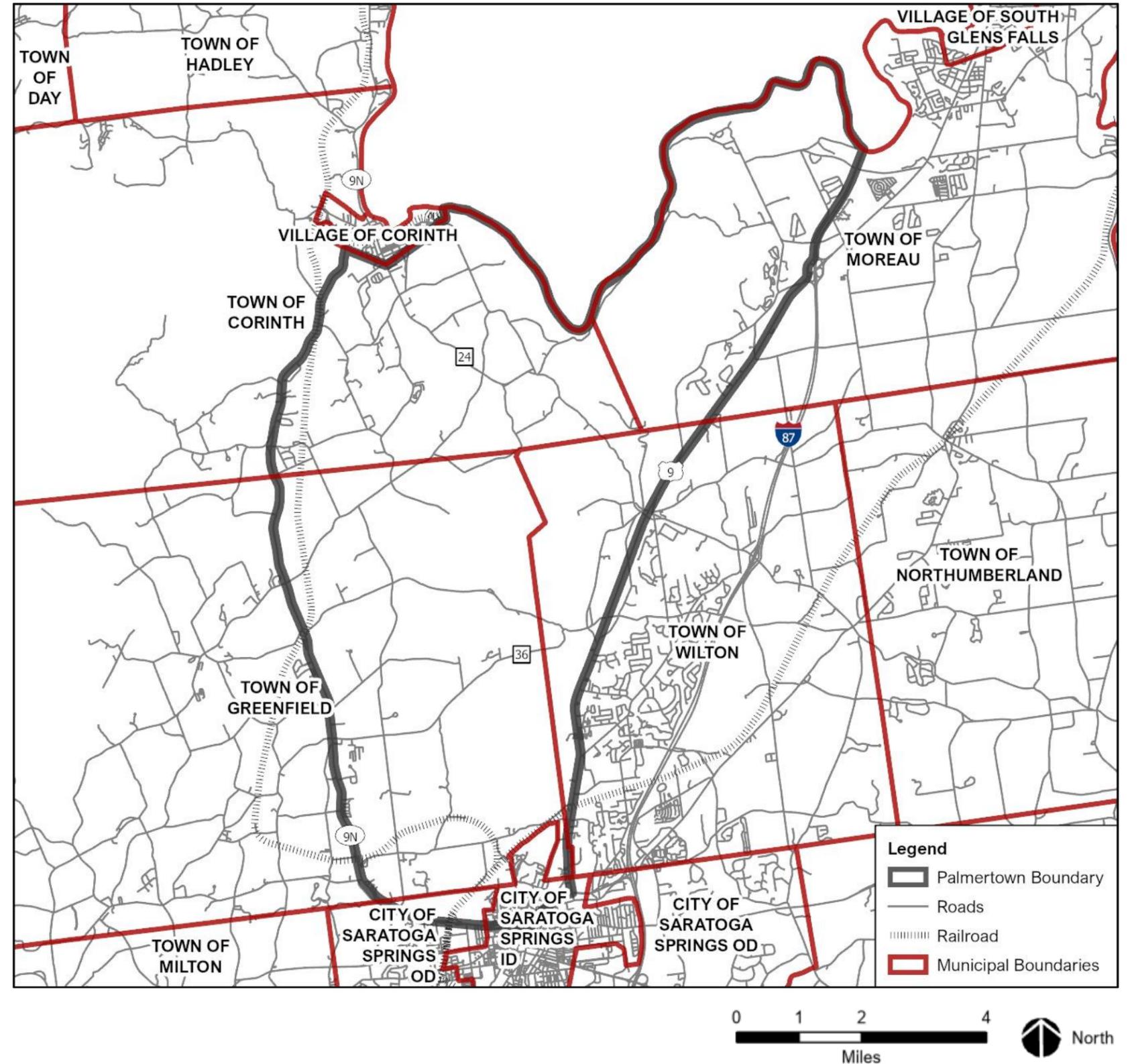
The inventory process itself seeks to identify various conditions, while analysis explores how those conditions will impact the trail system. It is useful to consider these conditions in a nuanced way and recognize that any given condition can impact the trail in both negative and positive ways. For this analysis, features are evaluated as either positive in the case of an opportunity, or negative in the case of a constraint. It is important to note that it is impossible to capture every factor influencing trail design, but that those noted in the following maps were most salient to the master planning process and form the basis for additional considerations at the detail design level, during which additional opportunities and constraints may be identified.

3.1 Places

These locations represent the various communities that are present within the Palmertown Region. With populous Saratoga Springs to the South, the rest of the region is made up of relatively smaller communities.

TOWN/CITY	POPULATION*	TOTAL AREA* (SQ MI)	AREA WITHIN SOUTHERN PALMERTOWN (SQ MI)
Town of Corinth	6,503	56.8	15.9
Town of Greenfield	7,791	67.4	24.9
Town of Moreau	15,058	41.6	13.7
Town of Wilton	16,561	35.8	6.9
City of Saratoga Springs	27,244	28.1	1.8

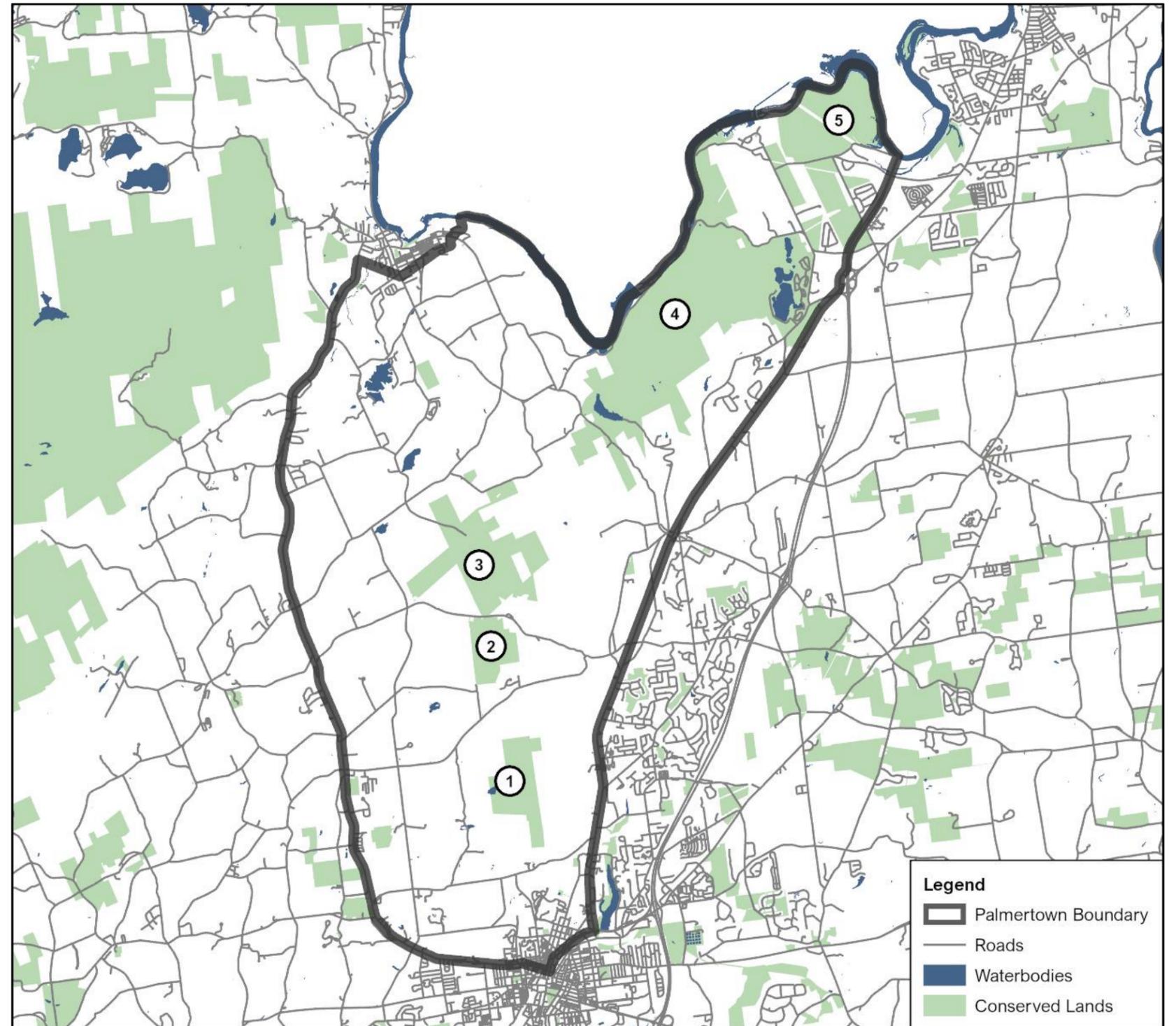
(ALTA, 2018)



3.2 Key Conserved Lands

Conserved Lands considered for the Friendship Trails system include both State-owned land that is publicly accessible, as well as privately conserved properties. Both types of sites contain existing trails.

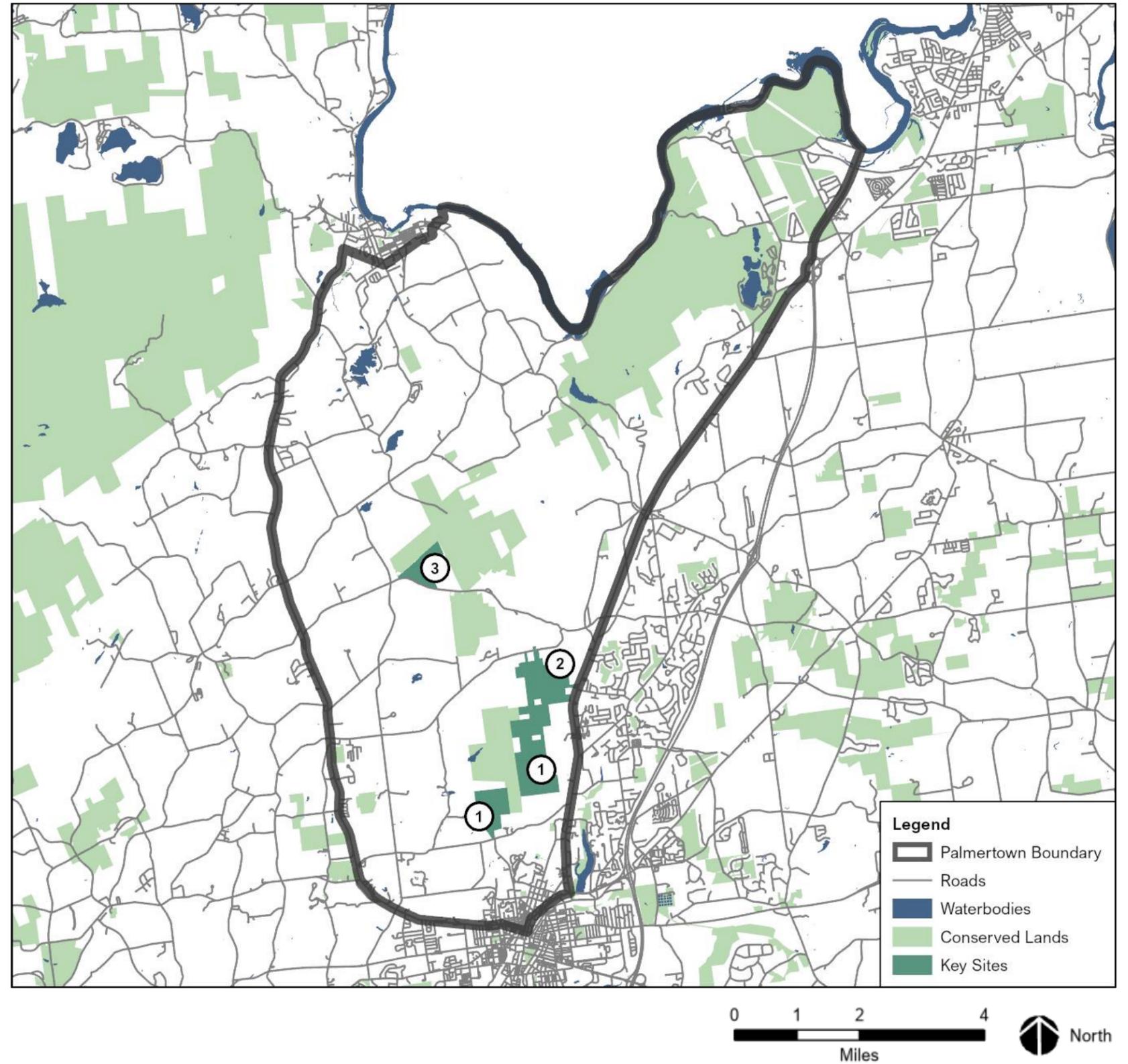
1. **Daniels Road State Forest:** This property consists primarily of mountain bike trails and is currently accessed by a deteriorating road that winds through private property to a secluded trailhead with limited parking and no amenities beyond basic signage and mapping. While some trails are marked, there is an abundance of unofficial mountain bike trails in various levels of development and maintenance that can be confusing for visitors who are unfamiliar.
2. **Greentree Lake:** This property is characterized by primarily gentle slopes, with some steeper areas leading down to an extensive wetland. With convenient access from the north and south, and many opportunities to experience water, this site is ideal for a higher level of development and pedestrian trails.
3. **Lincoln Mountain State Forest:** This site has a gentle rolling landform with a variety of forest maturity and has large wetland areas forming the headwaters of local streams. This property provides access to two roads that assist in forming the North/South orientation of the proposed trail system. This public land also allows access to the Aldrich Community Forest and Greentree Lake.
4. **Moreau Lake State Park:** The Moreau Lake State Park lands are wild in nature and show very little impact. The forest is mature, and the interior gives a feeling of remoteness that is not normally found in the surrounding area. The Lake Bonita area exhibits the greatest level of pedestrian use in the existing trail system, but that level of use dissipates dramatically on the northeast side of Lake Anne.
5. **Big Bend Property:** This property provides opportunity to develop low impact trails on well-drained soils in addition to having a gravel road-based infrastructure available for use. This relatively large property has ample river frontage, wildlife habitat and room to provide unique trail experiences. The size of the property will allow a trail system to be developed around the critical habitats present on the site.



3.3 Other Key Sites

Other key sites for inclusion in the Friendship Trails system consist of privately owned land where public trail development is underway or proposed. These sites were identified by the Palmertown Guidance Committee for inclusion in the Friendship Trails system. Both types of sites also include existing trails, though some are existing roadbeds for logging or other historic industrial purposes.

1. **Skidmore:** This property is large and forested with large swaths of heavily logged areas. A large wetland and other smaller wet areas on this property also create a challenge for trail alignment, but high-quality forested areas are ideal for trail development and connections through this property to adjoining properties would be beneficial.
2. **Wilton Partners:** These parcels have a steep east facing slope that extends from the level Saratoga Sandplains from Route 9 to the top of the south end of Palmertown Ridge, and a portion of the site has frontage on Wilton Road as well. A network of old forestry and mine access roads can guide trail design on this site, and a variety of unique natural and cultural features make the steep climb worth the effort.
3. **Aldrich Community Forest:** The Aldrich Community Forest encompasses a gentle rolling mature forest that borders two large wetland areas along the headwaters of the Snook Kill. This pie shaped property has a large amount of road frontage and currently one existing access route to the interior of the property. The North and East sides of the parcel border Lincoln Mountain State Forest, providing easy access to publicly owned lands. A biking and hiking trail system is currently being developed on this property.



3.4 Existing Trails

The Southern Palmertown Conservation & Recreation Strategy report identified 59 miles of trails within the Palmertown Region.

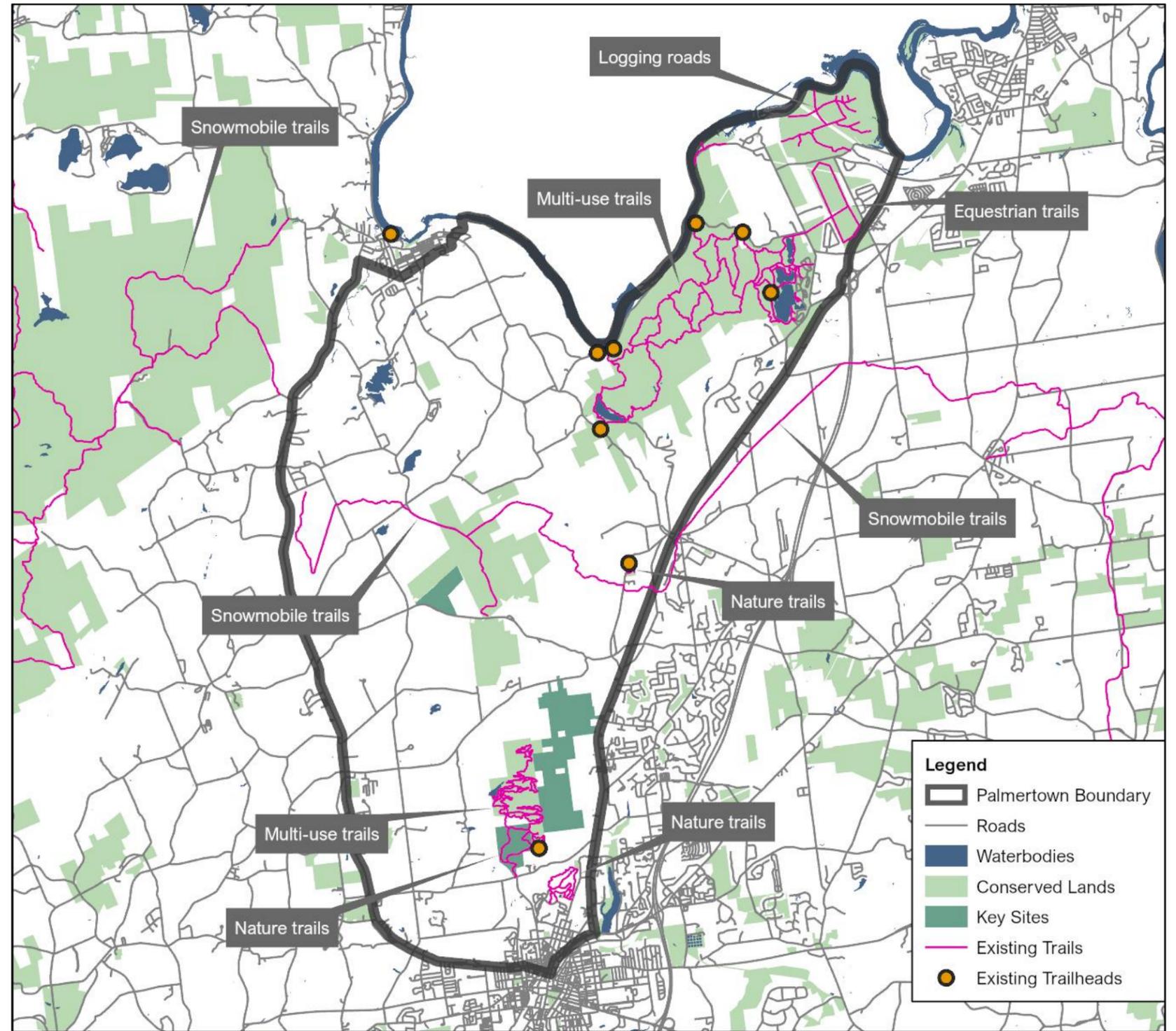
Existing trails fall into four major type categories:

- **Multi-use trails:** These trails serve many uses, from pedestrians, to hikers, to mountain bikers, to seasonal activities like snowshoeing and cross-country skiing. Equestrian use is also permitted on some of these trails.
- **Nature trails:** These trails are meant for passive pedestrian use, such as walking or hiking.
- **Snowmobile trails:** These trails are primarily for snowmobiles, though other types of activities (such as cross country skiing) also take advantage of the corridors.
- **Logging roads:** These are corridors that provide connectivity and could be utilized for recreation, but were primarily built and located for utilitarian forestry purposes and many have steep running grades.

While there is a significant quantity of existing trails, these tend to be concentrated in dense systems and lack connectivity. Additional trail opportunities could be used to connect desirable trail experiences and provide recreation opportunities in area not currently in close proximity to trails. The Southern Palmertown Conservation & Recreation Strategy report identified closing gaps to create a more cohesive and accessible trail network as a priority.

TRAIL SYSTEM	HIKING	MOUNTAIN BIKING	EQUESTRIAN	CROSS-COUNTRY SKI/SNOWSHOE	SNOWMOBILING
Daniels Rd State Forest	15.6 MI	15.6 MI	15.6 MI	15.6 MI	0.0 MI
Moreau Lake State Park	28.5 MI	28.5 MI	27.8 MI	28.5 MI	0.0 MI
Orra Phelps Nature Preserve	0.6 MI	0.0 MI	0.0 MI	0.6 MI	0.0 MI
Skidmore Trail Network	3.5 MI	0.0 MI	0.0 MI	3.5 MI	0.0 MI
Other	0.0 MI	0.0 MI	0.0 MI	0.0 MI	10.5 MI
TOTAL	48.2 MI	44.1 MI	43.4 MI	47.9 MI	10.5 MI

Table from the Southern Palmertown Conservation & Recreation Strategy report (ALTA, 2018).



3.5 Destinations

These locations represent the various communities that are present within the Palmertown Region. These sites were defined as part of the Palmertown Conservation and Recreation strategy and affirmed by the guidance committee as key sites to consider in terms of connections to the Friendship Trails system.

Education

1. Corinth Central School
2. Maple Avenue Middle School
3. Skidmore College
4. Saratoga Springs Central School

Recreation

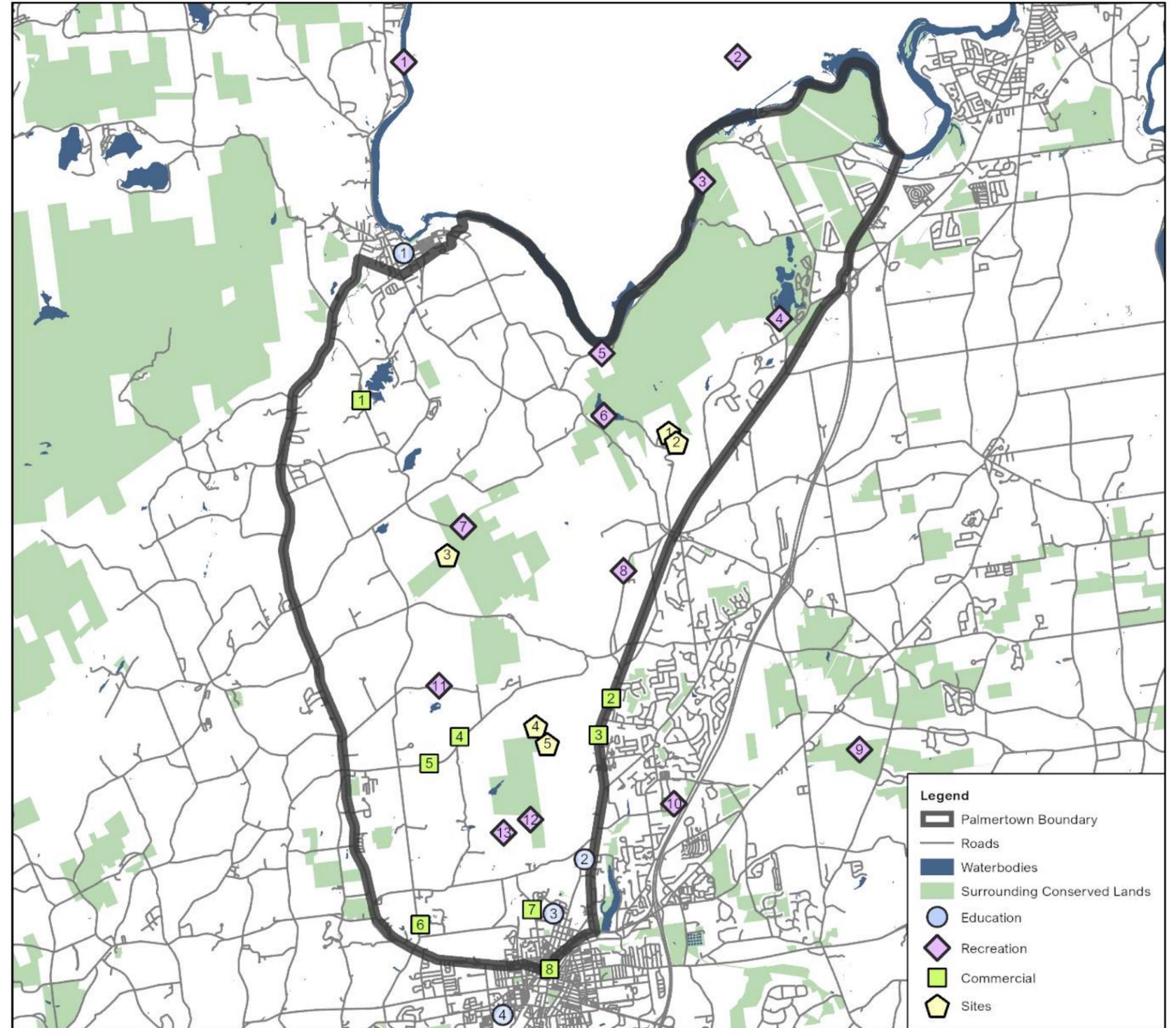
1. Hudson River Boat Launch
2. West Mountain
3. Sherman Island Boat Launch
4. Moreau Lake State Park
5. Spier Falls Boat Launch
6. Lake Bonita
7. Lincoln Mountain State Forest
8. Orra Phelps Nature Preserve
9. Wilton Wildlife Preserve
10. Wilton Town Gavin Park
11. Saratoga Escape Lodges & RV Resort
12. Daniels Road State Forest
13. SMBA Mountain Bike Trails

Commercial

1. Alpine Lake RV Resort
2. The Wishing Well
3. Nove
4. Greenfield's Forever Farm
5. Music Studio
6. Saratoga Farmstead B&B
7. Alpine Sport Shop
8. Downtown Saratoga Springs

Sites

1. ADK Lean To
2. Grant Cottage State Historic Site
3. Tupelo Trees
4. Devil's Den
5. Old Graphite Mine



3.6 Site Features

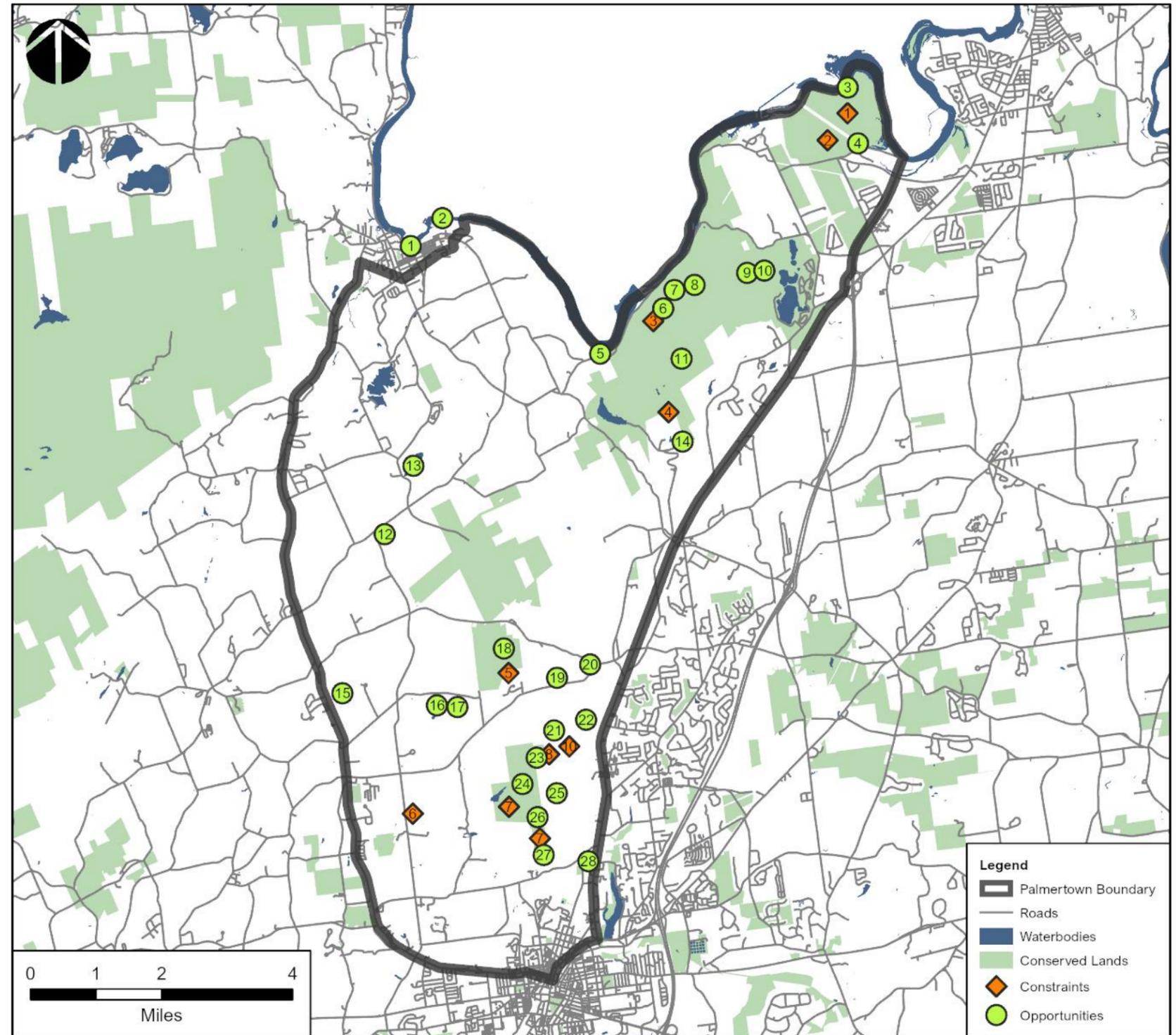
These selected features and destinations or limiting conditions within the landscape.

Site Feature Opportunities

1. Village of Corinth Picnic Park
2. Potential boat launch at former industrial facility
3. Potential riverfront walk
4. Historic cemetery
5. Boat Launch connection to water trail
6. Multiple popular lookouts along Western Ridge Trail
7. Existing overlook
8. Peripheral overlook loop
9. Existing trail largely meets running grade parameters
10. Native American Trail
11. Opportunity for lookout somewhere in this area
12. Potential connection to water
13. Potential connection to water
14. Potential Trailhead at Grant's Cottage or Balmoral/McGregor
15. Native American Trail
16. Saratoga Escape Lodges and RV Park
17. Potential water opportunity with flat terrain
18. Native American mortar
19. Native American Trail
20. Waterfall
21. High quality forest
22. Interesting industrial ruins
23. Devil's Den destination
24. Desire for novice mountain bike trail*
25. Skidmore desire for low-impact trails. Ecological research by students on site.
26. SMBA mountain biking trails (well-liked by community)
27. Native American mortar
28. Maple Avenue Middle School educational programming site

Site Feature Constraints

1. Floodplain
2. Intensive logging
3. Many existing MLSP trails do not meet parameters
4. Proximity to firing range
5. Extensive wetland requires boardwalk crossing
6. Extensive wetlands in region
7. Wet and difficult terrain
8. Daniels Road trails are confusing and poorly maintained
9. Limited buffer between adjacent properties
10. Extensive logging and slash



*Denotes a location-specific comment that was received either via community engagement interviews or surveys

3.7 Existing Infrastructure

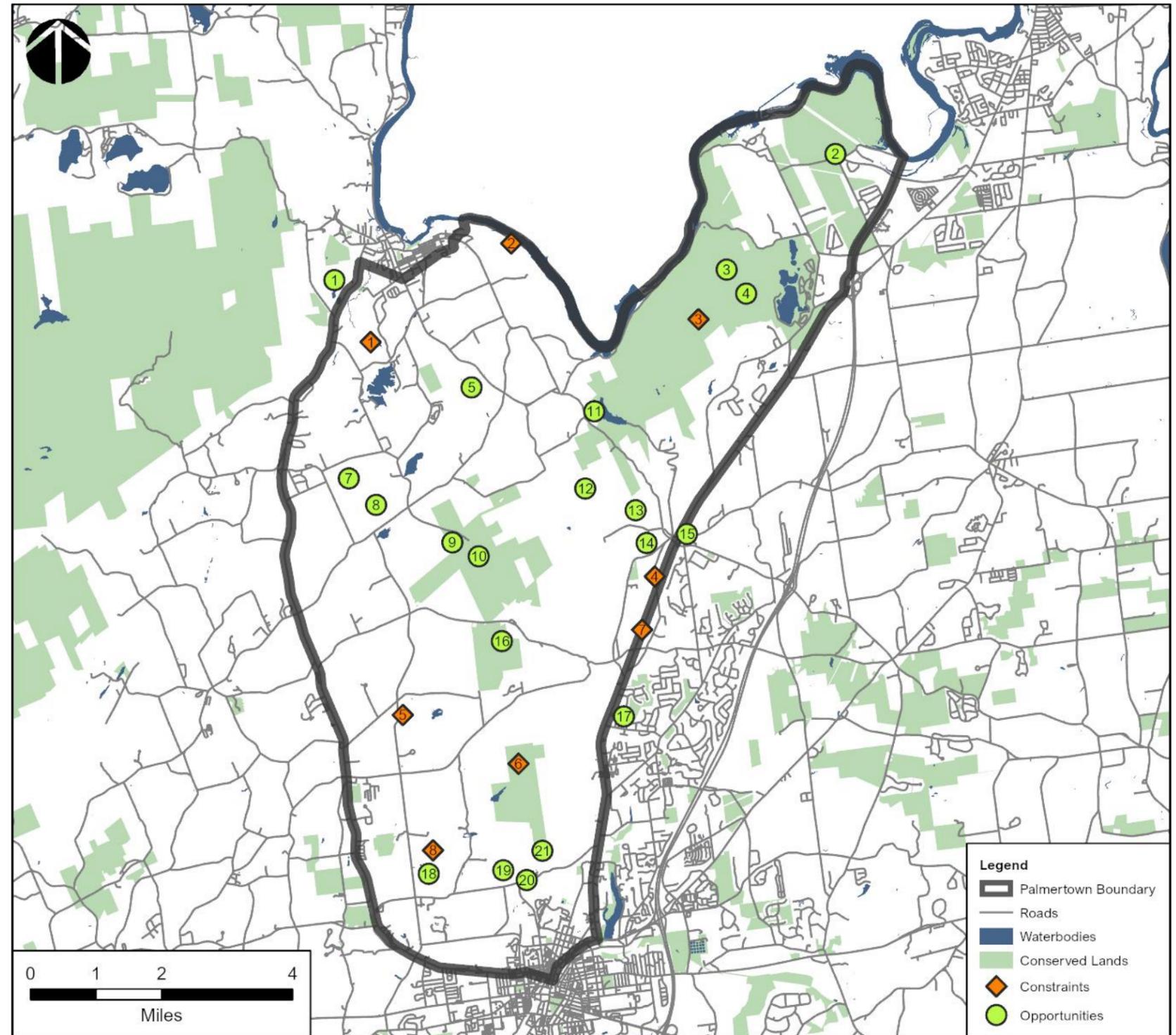
These selected features relate to infrastructure that specifically has implications for trail development.

Existing Infrastructure Opportunities

1. Potential raiiside corridor
2. Existing logging roads as basis for main trail creation
3. Baker Trail is old road and easiest way up and down the mountain
4. Most popular Moreau Overlook lookout with new sustainable trail to lake
5. Power line corridor
6. Power line corridor
7. Existing Saratoga County snowmobile trail corridor
8. Possible western connection via existing snowmobile path
9. Proposed trail on Old Cohen Road Ext.
10. Existing Trailhead
11. Potential right-of-way access for connection between Lincoln Mountain State Forest and Moreau Lake State Park
12. Existing snowmobile Trail
13. Extensive road connections outlined in Wilton Recreation Plan
14. Existing snowmobile trail
15. Existing corridor with potential for connections to desirable views
16. Existing trail in utility rights-of-way
17. Desire for rail trail on railroad corridor*
18. Potential decommissioning of rail line to the north
19. Connection to proposed Saratoga Greenbelt
20. Large parking lot in good condition with seasonal porta john and trailhead kiosk

Existing Infrastructure Constraints

1. Few conserved sites
2. Steep grades challenging for trail design and river access
3. Moreau Lake State Park trails are poorly marked and maintained*
4. Roads do not provide safe connectivity for pedestrians and cyclists*
5. No conserved sites limits access opportunities
6. Trails are poorly marked and maintained*
7. Rt. 9 corridor loud and unsafe
8. Few conserved lands

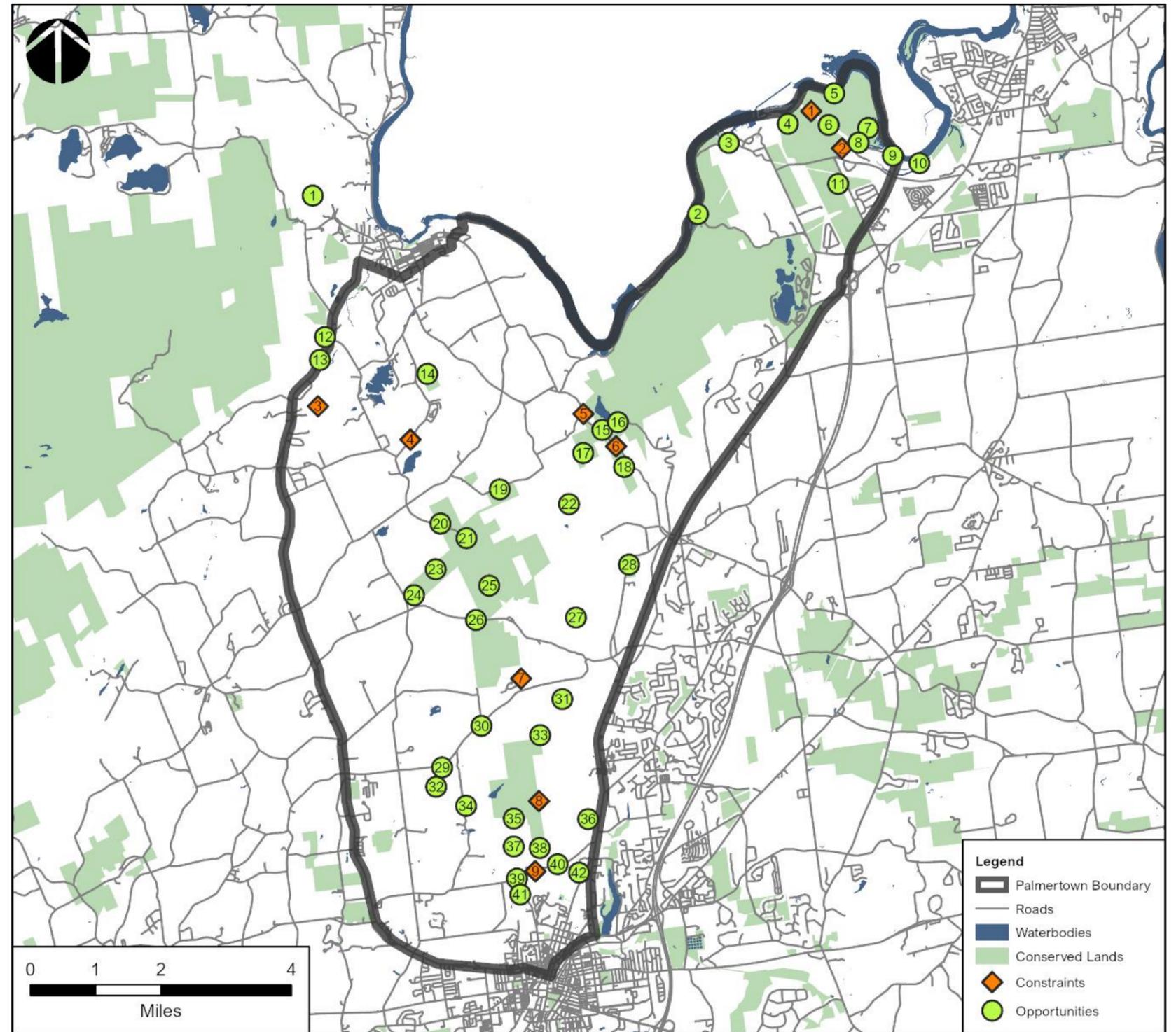


*Denotes a location-specific comment that was received either via community engagement interviews or surveys

3.5 Access

These features are specific to access, including gateways, connections, and possible or desired trail development opportunities.

See following page for corresponding list of access opportunities and constraints.



Access Opportunities

1. Potential connection to snowmobile trails through private land
2. Existing boat launch
3. Potential Trailhead
4. Desire for hiking, mountain biking, and nature trails at Big Bend property*
5. Water access point (two-track access)
6. Permission needed to cross natural gas right-of-way
7. Potential Trailhead (inadvisable due to environmental conditions)
8. Potential canoe launch
9. Connection to Big Bend Trail and Betar Bikeway
10. Proposed Big Boom Trail
11. Existing Trailhead
12. Potential Trailhead
13. Potential trailhead at Rustic Barn Campground
14. County Forest
15. Existing trailhead and parking, room for expanded parking
16. Desire by State to create more accessible route around lake
17. Trail connection through this parcel. Need to cross road or provide trailhead.
18. Potential trail connection between Moreau Lake State Park and Woodard Road (creating a loop to trailhead)
19. Space for parking area exists (roadside or 200 yards in)
20. Potential trailhead, avoid blocking access driveway
21. Approximate end of Public Forest Access Road. Potential for larger parking area (gates needed)
22. 100' wide easement for trail connection to be provided by landowner.
23. Potential accessible trail to unique wetland area
24. Potential Trailhead
25. Desire for for highly-developed trails in Lincoln Mountain State Forest*
26. Existing access potential trailhead
27. Conserved site (435 acres) with public trails. Accessible from north, east or west (not south).
28. Connection to Orra Phelps Nature Preserve
29. Potential Trailhead
30. Potential Trailhead
31. Access ROW
32. Potential land donation site
33. Possible ROW access to Greene Road
34. Potential Trailhead
35. Desire for trails to support more diverse uses in Daniels Road State Forest*

36. Potential trailhead at Artisanal Brew Works
37. Skidmore desire for "low-impact" trails in "Stables" parcels
38. Larger parking area needed. Use does not match capacity*
39. Potential trailhead/gateway
40. Connect to Greenbelt Trail along south side of Daniels Road
41. Desire for safe pedestrian/bicycle path along Clinton and Daniels Roads*
42. Potential Trailhead

Access Constraints

1. Permission needed to cross natural gas right-of-way
2. Residents opposed to parking lot off of Old Bend Road*
3. Railroad has historically not been viable for trail use
4. Limited access points
5. Unsafe crossing
6. Insufficient parking at Moreau Lake State Park*
7. Limited access
8. Limited access points for acreage and trail mileage
9. Access difficult to find and parking lot unwelcoming

*Denotes a location-specific comment that was received either via community engagement interviews or surveys

3.8 Topography

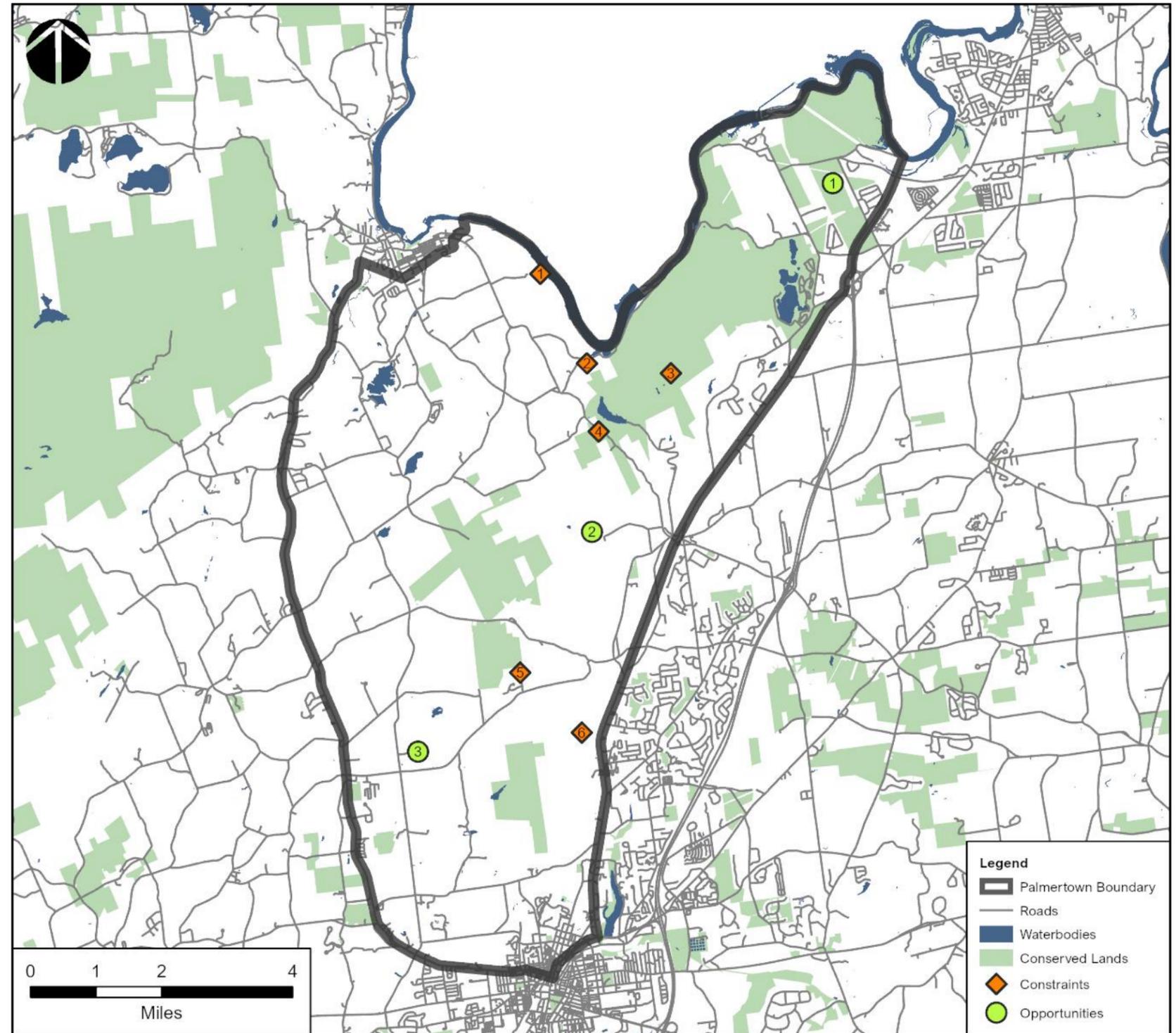
These locations represent selected points in the landscape where topography is more limiting or more conducive to trail design. It is important to note that each site will have its own unique opportunities and constraints related to topography, and these have been noted in terms of their impact to the overall trail system and the types of trails that are feasible.

Topography Opportunities

1. Flat terrain, many alignment options
2. Good terrain for Mountain Bike trails
3. Gentle slopes are suitable for many kinds of trails

Topography Constraints

1. Very steep grades limit possible riverside trail alignments
2. Power line corridor grade too steep for sustainable trail
3. Challenging terrain, many existing trails do not meet sustainability factors
4. Topography and ecology not suitable for trailhead parking
5. Existing trail running grade exceeds parameters
6. Challenging terrain



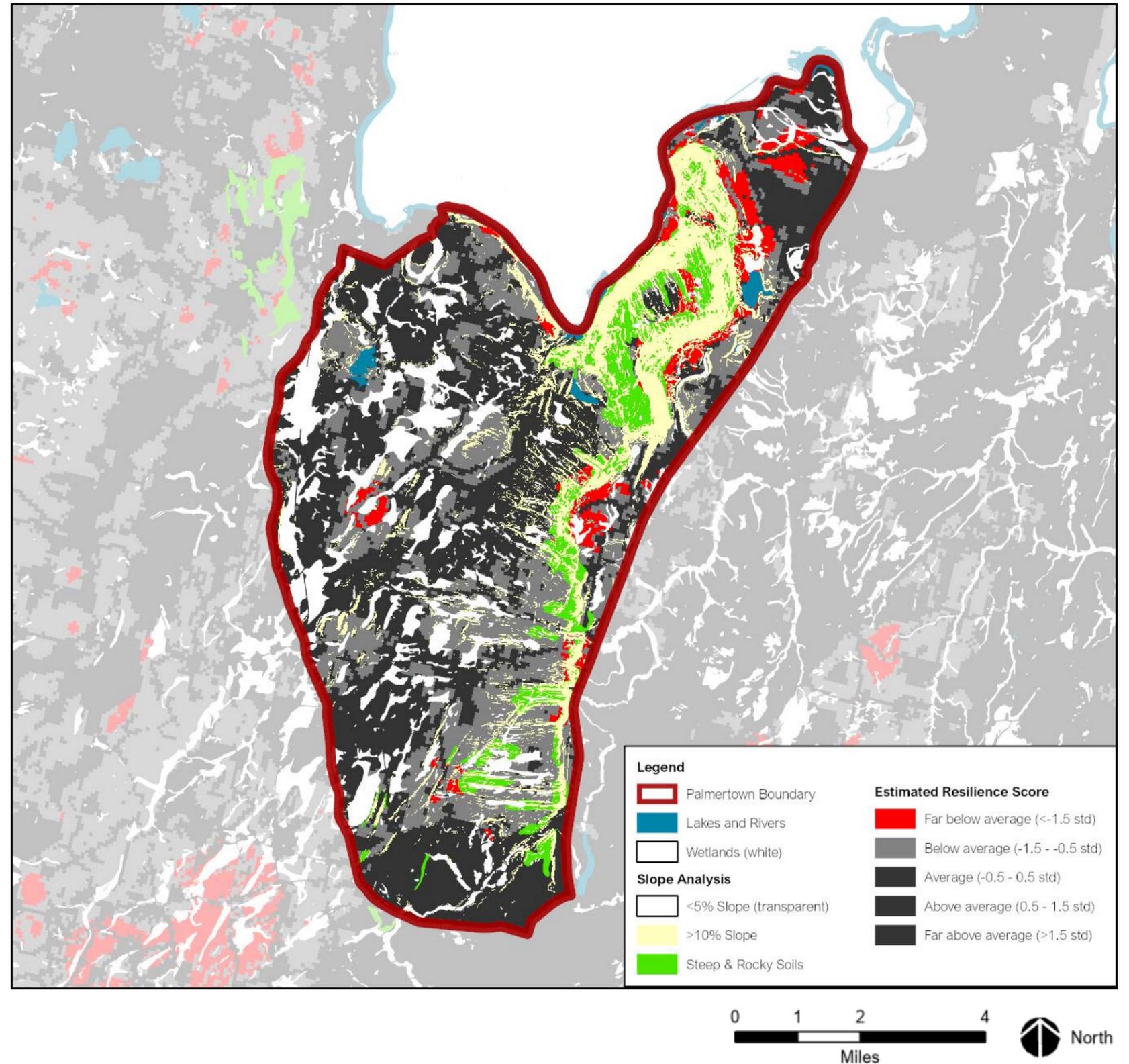
3.9 Trail Opportunity Analysis

The major geological and hydrological factors affecting trail development on the Palmertown Ridge are associated with wetlands, streams, rock outcrops and occasionally steep slopes.

While it is possible to build a trail anywhere given enough funding and fortitude, avoiding these areas results in trails that are less costly and cause less environmental impact over time. When analyzing areas for peripheral trail development, a simple mapping exercise was conducted to aid in identifying areas that are most conducive to low impact, low cost trail development.

In order to evaluate the entire project area for areas conducive to trail development, a Trail Opportunity Area Analysis was conducted. This analysis layered landscape features that typically limit or result in more costly trail development including steep slopes, steep and rocky soils, wetlands along with landscape resilience score data generated by The Nature Conservancy. This resilience score information was included at the request of the Guidance Committee to weight the sensitivity of the landscape environment, with areas of higher resilience thought to be able to better withstand trail impacts as well.

The map at right shows these features layered together within the project area.



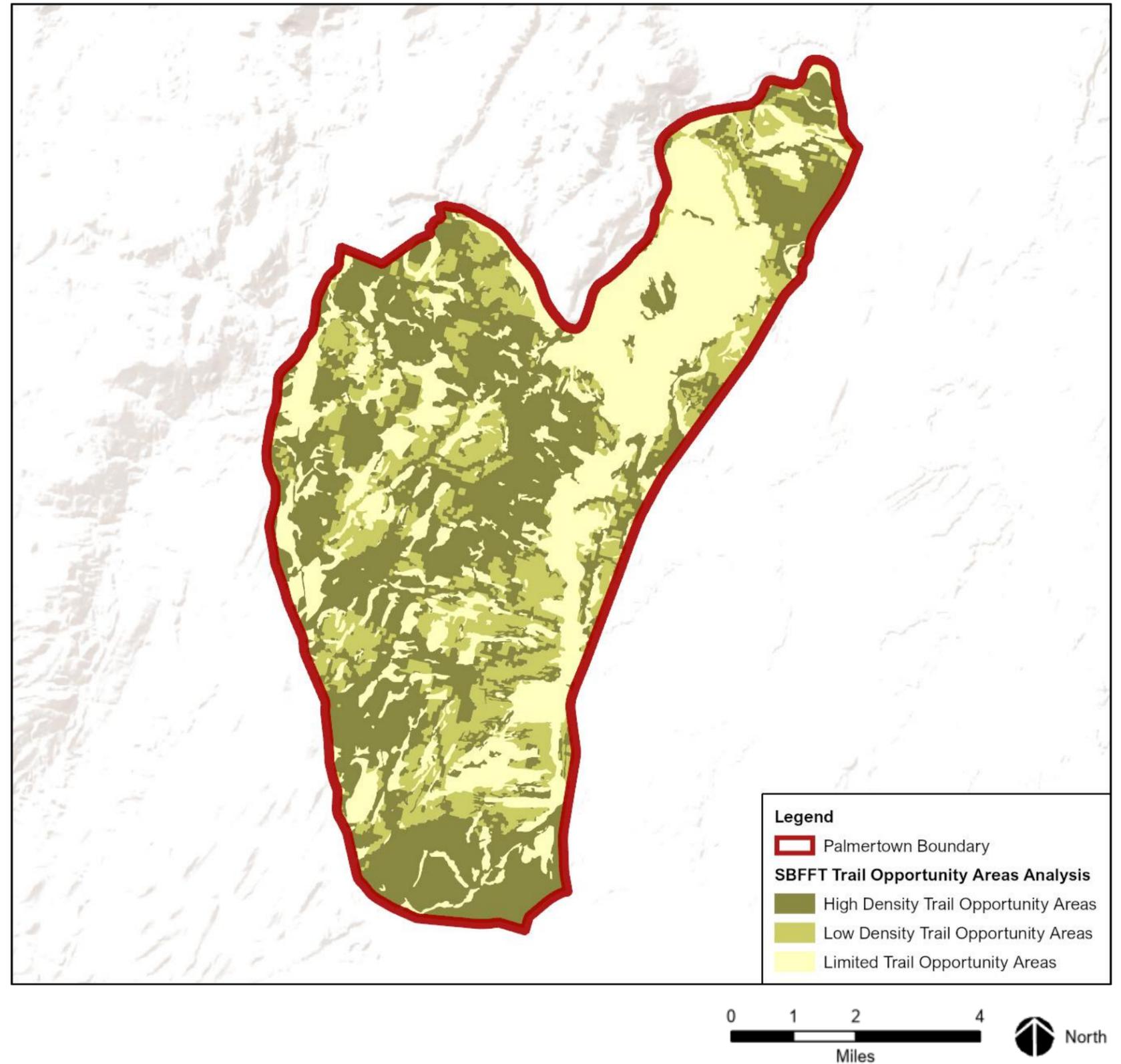
The map at right aggregates the constraining physical features, creating a “negative” to remove the areas of steep slopes, wet areas, and sensitive habitats from the project area.

By removing these constraints from consideration, areas conducive to trail development were defined. These areas were categorized as follows:

- Limited Trail Opportunities: Areas with a high incidence of physical constraints such as steep slopes and wetlands
- Low Density Trail Opportunities: Areas with some incidence of physical constraints, potentially suitable for connector trails
- High Density Trail Opportunities: Clusters of areas with low incidence of physical constraints, suitable for more intensive or dense trail development

Identification of trail opportunity areas is a step towards guiding future conservation and trail development efforts by identifying areas within the Palmerton Region that are conducive to trails where existing trails and conserved lands are not currently present.

It is important to note that Limited Trail Opportunity Areas may still contain trail opportunities, they may just be more constrained by site features, or more expensive to develop. Sometimes features that constrain trail development (like a wetland) are also features that make the trail experience more enjoyable, so this analysis must be balanced against other priorities when considering trail opportunities.



4. Transportation Routes

4.1 Transportation Connections

There are a number of considerations for linking transportation to the Palmertown Region, some of which are beyond analysis in this project. For this project, site specific needs were evaluated as they relate to trailheads and street crossings. Another consideration that is equally important is bringing visitors to the Palmertown Region by way of regional connections and public transport. In addition, managing congestion during peak hours, and during peak seasons, will need further comprehensive planning analysis. Recreation Area Transportation Planning of this scale is not typically conducted.

4.2 Mobility and Equity

While survey respondents did not indicate a strong interest in using public transport to access trails, those who responded to the survey represent older individuals primarily from the more urban communities within the project area. We can infer from this information that survey responses represent perspectives from a more affluent demographic and likely do not share the same transportation concerns as those from lower income groups. Interviewees did note a desire for trails accessible by public transportation or with trailheads near where their constituents live.

4.3 Regional Transportation Connections

The Palmertown Region is situated between two major summer tourist and recreation destinations, the City of Saratoga Springs and the Lake George region. There is great access to the project sites from the major regional highway, Interstate 87 (The Northway), which parallels the range to the east where exits 14 through 17 provide access to key Palmertown entry points. It is likely many travelers to the Lake George-Saratoga region will be interested in visiting Palmertown due to this proximity to their main travel route (I-87).

The project area can also be reached by rail, Amtrak in Saratoga (The Ethan Allen) which stops at the Saratoga Station near Church Street in Saratoga Springs. A small recreational and commercial railroad the Saratoga and North Creek Railroad (SNRR) which included stops in Saratoga (Saratoga Amtrak) and Corinth ceased operations in 2018. Portions of the track near North Creek are used for rail-bike excursions. Amtrak's Ethan Allen offers carry-on bicycle service for an additional fee.

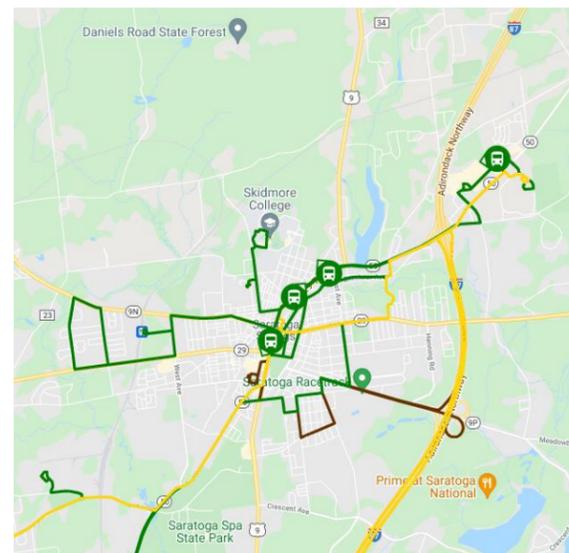
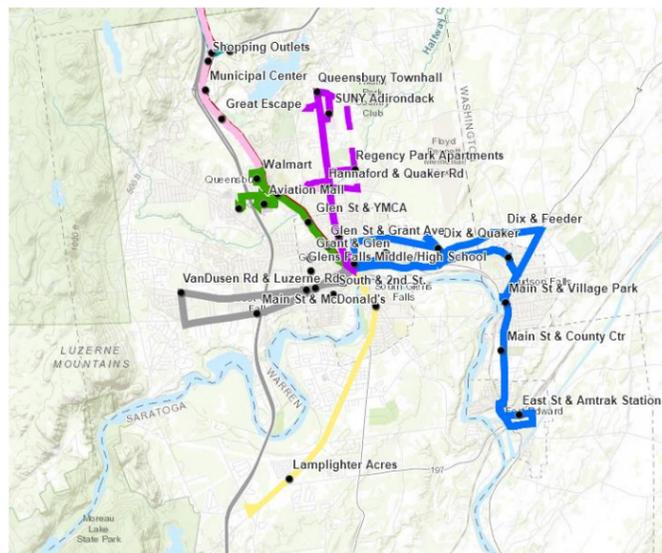
The project area is served by two existing regional public transportation systems, the Capital District Transportation Authority (CDTA) which serves the southern half of Saratoga County and Greater Glens Falls Transportation (GGFT) which operates bus transit in Warren County and South Glens Falls and Moreau in Saratoga County. Both operate routes that are near the project area, however none of the current routes travel through the Palmertown Region.

Capital District Transportation Authority (CDTA) Routes: Four regular CDTA Bus Routes operate in and around the City of Saratoga Springs. One of the routes connects Skidmore students to the Wilton Mall via Route 50, a second route operates primarily along Route 50 connecting the City to Schenectady, with a special service for event days at the Saratoga Performing Arts Center (SPAC). CDTA also operates Route 875 during the summer tourism season which is a rubber-tired trolley within the City of Saratoga Springs only. The Northway Express (NX) operated by CDTA includes a stop at the Exit 15 Park and Ride lot in Saratoga and is an express route to Albany. Notably, there is no bus service on NYS Route 9 north of the City of Saratoga Springs in the area of the Palmertown Range.

Greater Glens Falls Transit Routes (GGFT): One route (5) serves Saratoga County along Route 9, with stops for some large campgrounds off Route 9 finally terminating near Northway Exit 17 in the Town of Moreau. A second route (7) serves the State park lands north of the Hudson River in Warren County. GGFT also operates a trolley service between the Village of Lake George and Glens Falls during the summer tourism season.

Private Transit: Larger private campgrounds provide bus service for their campers including Alpine Village in Corinth. Hotels throughout the area also offer shuttle services which might offer pickup and drop-off in the Palmertown area.

Uber and Lyft: These ride-sharing services are legally available throughout Saratoga County and generally cost effective compared to taxis.



Left: GGFT Bus Routes from www.gftransit.org
 Right: Saratoga Springs CDTA bus routes from www.cdta.org

4.5 Local Multi-Use Trails

In the southern portion of the Palmertown Region near Saratoga Springs, the planned local Saratoga Greenbelt Trail will utilize the Daniels Road right-of-way following the county water line, providing a bike connection between the City and Daniels Road State Forest. Further south the regional Zim Smith Trail provides a connection between the City of Mechanicville and Ballston Spa, with plans for eventually extend northward to the Saratoga Spa State Park in Saratoga Springs. Together with the Railroad Run Trail, a narrow gap exists between the project area and much of southeastern Saratoga County accessible by the Zim Smith Trail and parts of central Saratoga County by way of the Geyser Road Trail.

The northeastern portion of the Palmertown Region will be served by the Big Boom Trail which, after crossing below the Northway, is expected to provide a direct connection to Glens Falls via a connection to the Betar Trail.

Several potential regional connections are in the planning stage including extensions of the Greenbelt Trail along Daniels Road, a multi-use path paralleling Route 9 connects Saratoga Springs to Moreau Lake State Park, and a planned multi-Use Path along Ballard Road could connect the Friendship Trails to the Exit 16 Park and Ride as well as the connecting the Saratoga Sand Plains Wildlife Management Area east of the Northway off Ballard Road.

4.6 Informal Park & Ride

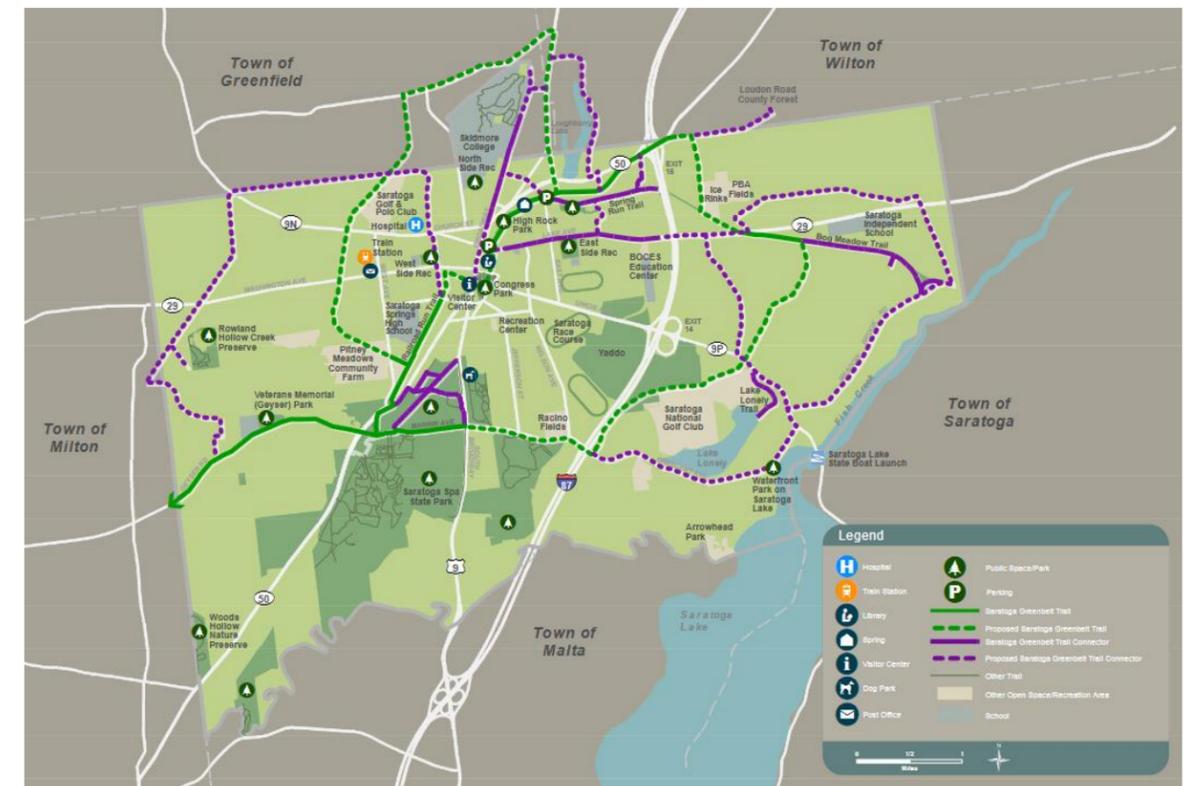
There is an informal park-and-ride lot in Wilton at Exit 16 used as a terminus for the Northway Express that is commonly used by others as a carpooling meeting place. At present there are no formal facilities and parking is not entirely paved or marked.

4.7 Linking to Regional Transportation

Some gaps in access to the Palmertown Range may be easily addressed. The list of items below could be evaluated in a future comprehensive transportation study:

- Provide a dedicated bicycle and pedestrian link from the Saratoga Amtrak station to the Daniels Road State Forest trailhead.
- CDTA routes that serve the Northway Park and Ride at Exit 15 and the regional route that serves Skidmore College could be extended along Route 9, potentially to Moreau Lake State Park.
- Greater Glens Falls Transit Route 5 could be extended to serve Moreau Lake State Park and a loop created to serve the OSI property near Big Bend.
- Construction of the multi-use path along Ballard Road and extending that path into the Palmertown Range project area which would create links to the informal park and ride at exit 16 as well as the Saratoga Sand Plains Wildlife Management Area.
- Extension of seasonal trolley shuttle services from Saratoga Springs and Lake George to key destinations in the Palmertown Range.

Below: Saratoga Greenbelt map from from www.saratoga-springs.org



5. Designing the Trail System

This chapter illustrates how the Friendship Trails will take shape on the ground. While the alignment guides the placement of the trail, technical guidelines called trail parameters guide the design and physical characteristics of each trail segment. These guidelines define how the trail looks and feels, as well as how challenging the trail is in terms of how steep it is and how smooth the trail tread is, and the design of structures like steps, bridges, and boardwalks.



The Master Plan team meeting with Guidance Committee representatives during a site visit in August 2020. (White, 2020)



A wetland encountered during site work in Daniels Road State Forest. Photo: Penn Trails LLC

5.1 Methods

This Master Plan used a multi-faceted approach to define trial alignments for the Friendship Trails utilizing both existing trails and proposed new trail alignments.

5.1.1 Desktop Inventory and Analysis

Early in the process, an in-depth desktop analysis was undertaken to understand the landscape and features of the Palmertown Range. This analysis included compilation of GIS data and review of the following existing documents guiding recreation and conservation actions in the project area:

- Southern Palmertown Conservation and Recreation Strategy (2018)
- Capital District Trails Plan (2019)
- Town of Moreau Big Boom Trail Concept Plan (2015)
- Moreau Lake State Park Master Plan (2006)
- Town of Wilton Open Space, Recreation and Pathways 2021 Update
- City of Saratoga Springs Natural Resources Inventory (2020)
- Saratoga Greenbelt Trail Feasibility Study (2014)
- Green Infrastructure Plan for Saratoga County (2006)
- Saratoga County Economic Opportunity Council 2016 Comprehensive Needs Assessment
- Saratoga County Community Health Assessment and Community Health Improvement Plan (2020)

GIS mapping of natural features and existing trails helped guide field scouting efforts and outline a general concept of where the Core Trails could be located.

5.1.2 Ground-Truthing

An in-depth ground-truthing process was undertaken for the Core Trails to ensure that the trail corridor met the specifications to accommodate the broadest possible range of trail activities across the trail system.

Four members of the trail design team spent a combined 130 hours scouting in the Southern Palmertown Range assessing existing trail conditions and identifying potential segment alignments to meet the specifications for a trail corridor that can accommodate a wide range of trail types and activities. These alignments were recorded using a variety of GPS devices. Along with the base alignment points, ground condition information was also recorded to identify wet or steep areas where trail structures will be required. This information is used to inform the trail cost estimations.



A Trimble GPS unit was used to record GPS data during site work. Photo: Penn Trails LLC

5.3 Considerations and Guidelines

The Friendship Trails System responds to the need for a cohesive trails system that provides high quality recreational experiences for a wide variety of activities. When designing a trail, there are many considerations that impact final alignment and design. Detail on the nuances of these many considerations is provided in this section to provide a base understanding of the factors that were considered as part of the trail system design process.

- **Who are the trails for?** Trails that are purpose-built for the intended activity are more enjoyable and more sustainable.
- **Trail Management Objectives** provide a framework for basic information about the level of development of a trail and how it is built.
- **Trail Design and Sustainability** focuses on balancing sustainability priorities and how those impact trail design.
- **Principles of Universal Design** describes how accessibility is a spectrum that can be integrated into the trail in whatever way is most feasible or practical.
- **Progressive Access** describes how trails and trail systems can and should support various types of experience and levels of difficulty.
- **Accessibility and Sustainability** are not mutual exclusive considerations. Trails that are built sustainably tend to also be more sustainable and vice versa.
- **ADA Requirements** sometimes apply to trail design and it is important to understand where that is the case.

5.3.1 Who are the trails for?

Before a trail is designed, it is important to identify who is going to be using the trail and what types of activities they will be doing. This is referred to as the Managed Use.

The diversity of landscapes and activities accommodated by the Friendship Trails necessitates a wide variety of designed trail experiences. Since different people have very different ideas as to what a trail experience should consist of, trail planners must understand who will be visiting and using a particular trail. (Goldstein & Knutson, 2014)

For this master plan, trail parameters have been categorized based on managed use. It is important to note that while these parameters may be sufficient for the proposed use on a given segment, maintenance methods (such as a pedestrian trail that will be maintained with a light utility vehicle) must be taken into account when refining parameters during the detail design process.

5.3.2 Trail Management Objectives

The Trail Management Objectives (TMOs) process was developed by the U.S. Forest Service¹⁵ and is a framework utilized during this master planning process to synthesize the management intention of a proposed or existing trail and provide a means of recording basic information for future trail planning, management, and reporting. The cornerstones of TMOs are known as the trail fundamentals, five concepts that are the cornerstones of solid trail management. Trail fundamentals provide an excellent approach to undertaking the planning, design, construction, management, and ongoing maintenance of any trail. Whether for pedestrian trails, or equestrian, mountain biking, or other trail uses, these best management practices provide a modern, integrated means to consistently determine, record, and communicate the intended design and management guidelines for sustainable trails. (Goldstein & Knutson, 2014)

The five fundamentals for any type of trail are:

- **Trail Type:** A category that reflects the predominant trail surface and general mode of travel accommodated by a trail.
- **Trail Class:** Trail classes broadly organize trails by desired management characteristics and level of development. Trail classes consider what user preferences are for a particular trail, its setting, protection of sensitive resources, and the land manager's trail management intent. Trail classifications range from Class 1 trails, which appear little different from a deer path and may disappear intermittently, to Class 5 trails, which are wide paths - frequently paved - associated with highly developed environments.
- **Managed Use:** The mode (or modes) of travel that is actively managed and appropriate on a trail, based on its design and management.
- **Designed Use:** The Managed Use of a trail that requires the most demanding design, construction, and maintenance parameters and that, in conjunction with the applicable trail class, determines which design parameters will apply to the trail.
- **Design Parameters:** Technical guidelines for the survey, design, construction, maintenance, and assessment of a trail, based on its Designed Use and trail class.

Together, these five fundamentals help planners objectively site trails in the appropriate areas with the most sustainable use and design parameters determined, thereby delivering better performance, more public satisfaction, and less maintenance over the long term. (Goldstein & Knutson, 2014)

5.3.3 Trail Design and Sustainability

All the Friendship Trails are envisioned as sharing a common goal: to meet the recreational needs of the present generation without compromising the ability of future generations to meet their own recreational needs. This places sustainability at the core of the trail system.

The importance of planning, constructing, and maintaining sustainable trails cannot be overstated. Regardless of the type of use(s) any particular trail may be intentionally managed for, the following four Sustainability Factors apply:

- **Physical Sustainability:** Designing trails to retain their structure and form over years of use and under human and natural forces is a key factor in sustainability. The more a trail is utilized, the more it is susceptible to wear and tear. Thus, a trail must be designed with anticipated usage in mind to ensure that it remains physically stable with appropriate maintenance and management.
- **Ecological Sustainability:** Minimizing the ecological impacts of trails and protecting sensitive natural and cultural resources is fundamental in sustainable trail design and development.
- **Economic Sustainability:** The implementing agency or advocacy group must have the capacity to economically support the trail over its life cycle. Developing and committing to a long-term maintenance strategy is a critical aspect of a successful trail program.
- **Experiential Sustainability:** Experiential sustainability refers to the impact on the land of the trail traffic and how that impacts other visitors' enjoyment of the trails. (Goldstein & Knutson, 2014)

¹⁵ <https://www.fs.usda.gov/managing-land/trails/trail-management-tools/trail-fundamentals>

5.3.4 Principles of Universal Design

Planning trails by applying the following principles of universal design highlights the accessibility best management practices for trails and helps incorporate the sustainability factors into the design process. For example, habitat conditions such as wetlands present as much a challenge to designing and building an environmentally sustainable trail as they do in planning and creating a wet environment trail for a diverse range of activities. Defined as the design of an environment so that it might be accessed and used in the widest possible range of situations without the need for adaptation, Universal Design consists of principles that can be applied to many aspects of the constructed trail and related structures regardless of whether the trails are intended to be accessible to visitors with disabilities or not.

1. **Equitable Use:** The design is useful and marketable to any group of visitors.
2. **Flexibility in Use:** The design accommodates a wide range of individual preferences and abilities.
3. **Simple and Intuitive Use:** Use of the design is easy to understand, regardless of the visitor's experience, knowledge, language skills, or current concentration level.
4. **Perceptible Information:** The design communicates necessary information effectively to the visitor, regardless of ambient conditions or the visitor's sensory abilities.
5. **Tolerance for Error:** The design minimizes hazards and the adverse consequences of accidental or unintended actions.
6. **Low Physical Effort:** The design can be used efficiently and comfortably and with a minimum of fatigue.
7. **Size and Space for Approach and Use:** Appropriate size and space is provided for approach, reach, manipulation, and use regardless of an individual's body size, posture, or mobility. (Goldstein & Knutson, 2014)

5.3.5 Progressive Access

Similar to Universal Design, Progressive Access provides important management and planning principles for trails.

The Progressive Access pedestrian trail rating system makes finer distinctions between different levels of difficulty, especially for beginning hikers. Progressive Access extends existing standards for accessibility to capture increasing levels of difficulty in ways that are meaningful and useful to hikers, hiking partners, and hiking planners. By classifying hikes differently, progressive access helps in several ways:

- Identifying a baseline hike
- Building the capacity of beginning hikers
- Extending the capacity of more adventurous hikers

Progressive Access recognizes that no single set of standards will be appropriate for all activities. Hikers vary significantly with respect to physical, cognitive, and social difficulties, and so a hiking planner will have to set goals for each hiker individually. Progressive Access offers guidelines regarding which dimensions to consider, and the points at which a different kind of hike presents a meaningful increase in difficulty level.

The ways in which Progressive Access can assist hike planners and hikers, can also benefit trail planners and managers. By establishing a baseline for an “easy” trail that fully meets accessibility Best Management Practices (BMPs), one can then develop trails that increase challenges for a wider range of visitors, including those with physical and cognitive disabilities.

The Federal Highway Administration notes that because “people are naturally most comfortable with their own needs, designers should attempt to create a connection between themselves and the intended visitors of the facilities they create. If done successfully, this understanding will result in more accessible facilities and higher quality experiences on trails.”

The Guidance Committee has already taken the step of soliciting meaningful community input related to barriers and desired use, and a detailed design process that considers progressive access will strengthen the Friendship Trails system.

Right: Progressive access is about building varying levels of challenge into your trail system to accommodate a wide range of activities and abilities. (Goldstein & Knutson, 2014)

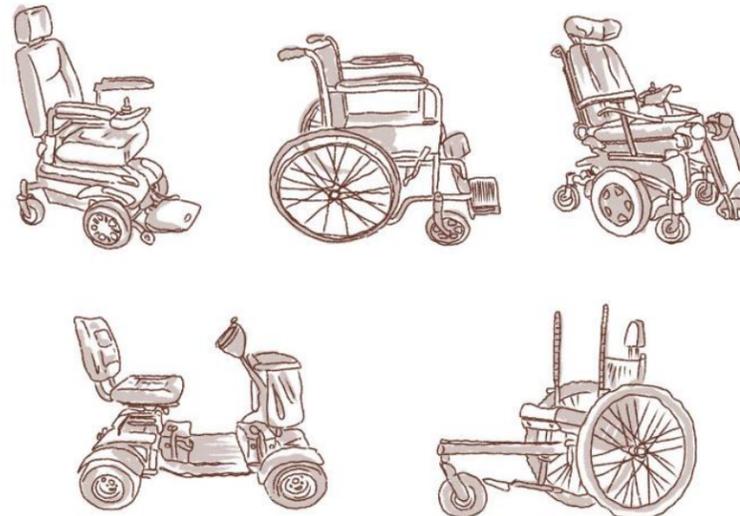


5.3.6 Accessibility and Sustainability

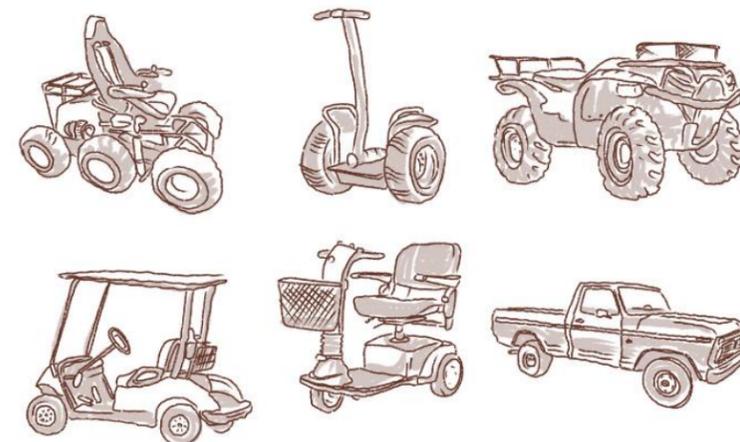
Trails that incorporate principles of universal design tend to be highly sustainable as well. While it is not appropriate for every trail segment to be designed to the highest accessibility standard due to the variety of uses and landscapes traversed by the trail system, alignments were selected with the intention of building in universal design principles, resulting in trails that are sustainable and can be built to be accessible to a broader range of visitors if so desired.

Examples of sustainable trail features that also increase accessibility:

- **Paths that traverse along the side slope:** Trails should traverse side slopes instead of travelling down the fall line. The result is far less susceptibility to erosion and a more accessible path of travel.
- **Sustainable grades:** Reducing running (linear) grades of trails decreases erosion as well as creating greater access for a broader range of abilities. For new trails, running grade should not exceed 10% on the majority of any trail, as steeper running grades contribute to channelization of water which causes tread erosion. This type of trail minimizes the construction of water bars and other physical trail tread barriers and culverts that are prone to failure.
- **Erosion resistance:** Firm and stable trail tread surfaces (as opposed to loose granular or soft soil surfaces) offer more sustainability.
- **Outsloped tread:** This practice encourages sheet flow of runoff at low velocities, away from the trail, rather than down the trail. Drier, firmer trail treads provide comfortable, stable experiences for all people.
- **Frequent linear grade reversals:** This minimizes erosion by slowing the velocity of water (and the materials it carries) along the trail, thereby increasing sustainability of the trail's tread surface. Because linear grade reversals are meant to be gradual, they easily accommodate guidelines for accessibility.
- **Positive experiences:** Trail structures incorporated into the trail not only protect natural resources (for example, boardwalks over wetlands), but also provide more inclusive access to people who would prefer to navigate over wet areas rather than through them.
- **Lower maintenance needs:** One example is the use of rolling grade dips and grade reversals (rather than water bars and check dams) to control water and limit erosion of the trail tread. The former require little if any maintenance, whereas the latter require ongoing maintenance. In addition, they can be navigated by many more people, as stepping over or around them is not necessary. (Goldstein & Knutson, 2014)



State, local, and private land managers cannot restrict wheelchair use on public trails. (We Conserve PA, 2020)



State, local, and private land managers can restrict OPDMDs if they create a policy that prohibits their use in accordance with certain factors. (We Conserve PA, 2020)

5.3.7 ADA Requirements for Trails

The 2010 ADA Design Standards provide guidance on how certain developed recreation facilities should be made accessible but do not address trails or shared use paths. Many of the technical standards appropriate for elements in developed areas would be inappropriate if applied to outdoor elements in parks and other natural settings. (Goldstein & Knutson, 2014)

In most cases for trails, ADA requirements apply from the parking area to the trailhead. Exceptions occur when public programming is offered on trails. In these cases, land managers are responsible for providing accessibility accommodations. Federal entities are subject to a set of guidelines called the Outdoor Developed Areas Accessibility Guidelines (ODAAG) defined by the US Access Board. These guidelines outline standards for Outdoor Recreation Access Routes (ORAR), and are useful for applying on state, federal, and privately owned properties where recreational programming is offered to the public.

Additionally, any trail or other area open to the public for pedestrian use and owned or operated by a public or private entity covered by the Americans with Disabilities Act (ADA) is subject to ADA regulations regarding Other Power-Driven Mobility Devices (OPDMDs). These rules mandate - in the absence of properly established policies to the contrary - that motorized vehicles of any type used by persons with mobility disabilities be allowed on trails and other areas open to the public for pedestrian use.

Unless private nonprofit organizations and local, county, and state government agencies create specific written policies governing the use of motorized vehicles on their lands open to the public for pedestrian use, all such vehicles must be allowed without restriction.

To prohibit certain or all types of OPDMDs on a trail or other area, an entity needs to:

- Create a written policy on OPDMD use that establishes adequate reasons for banning or limiting the vehicles based on the U.S. Department of Justice's five assessment factors; and
- Inform the public in advance about its OPDMD policy.

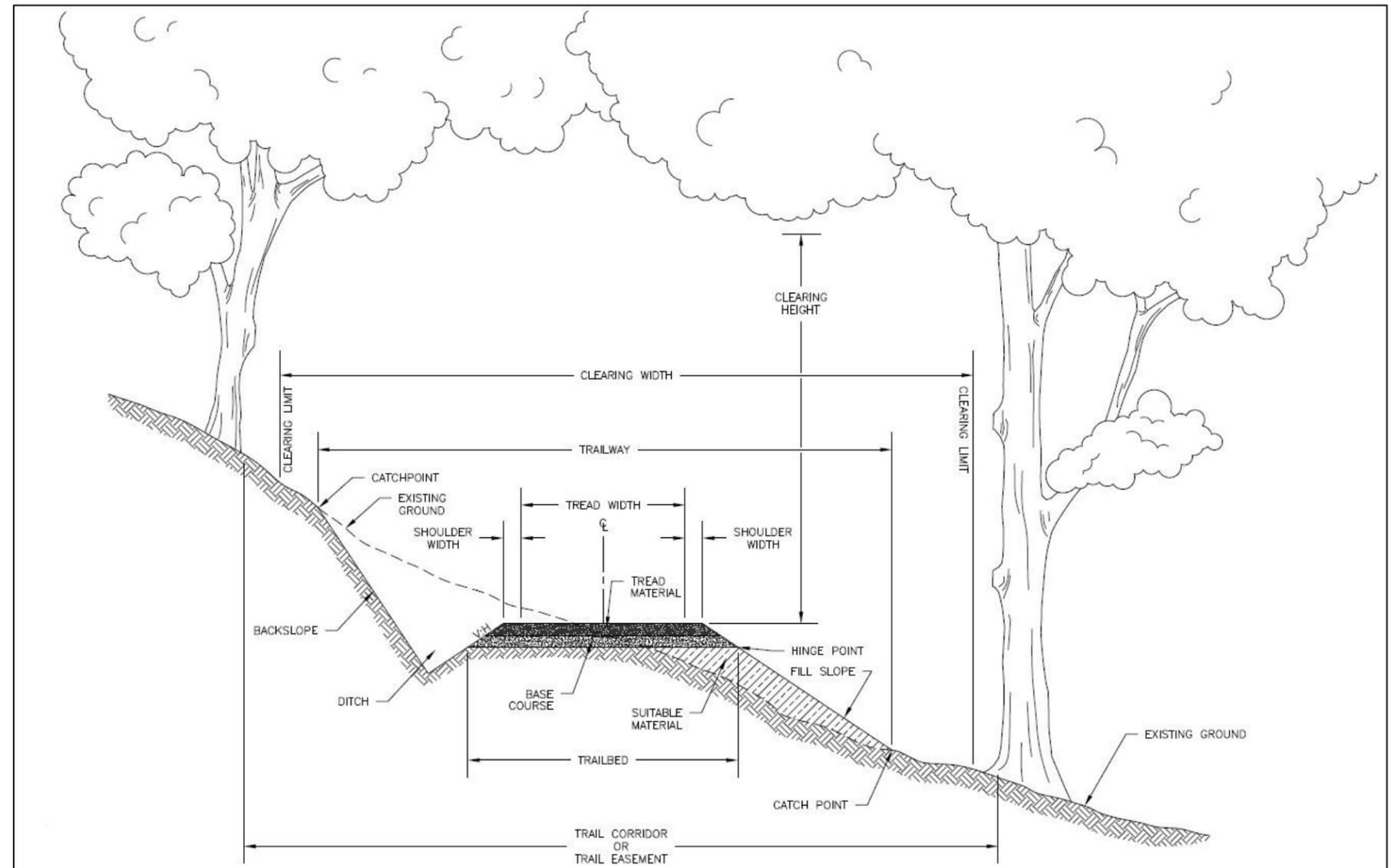
The U.S. Department of Justice issued the OPDMD regulations in March 2011. (As of October 2020, there appears to be no on-point case law or subsequent government guidance to aid in interpreting these rules.) (We Conserve PA, 2020)

5.5 Trail Parameters

Trail parameters represent the physical manifestation of Trail Management Objectives. They define the way the trail looks and feels and the way it is aligned within the landscape. Using trail design parameters, a trail designer can evaluate whether a desired use type is appropriate in each location.

Additional resources:

- **US Forest Service Standard Trail Plans and Specifications:** This website is an outstanding resource for reference details for trail structures and amenities used by trail professionals around the country. <https://www.fs.usda.gov/managing-land/trails/trail-management-tools/trailplans> Selected trail details relevant to this project are linked below and included in this section.
 - [Standard surfacing section](#)
 - [Drain Dip](#)
 - [Turnpike](#)
 - [Puncheon](#)
 - [Boardwalk](#)
 - [Rock Steps](#)
 - [Timber Steps](#)
 - [Signs and Markers](#)



Above: Typical trail terms defined in a set of trail design parameters that control the look and feel of the trail and are based on the types of activities that are desired on the trail. (USDA Forest Service, 2021)

5.5.1 Recommended Trail Types

For this master plan, trail parameters have been developed to align with existing trail types present within the Palmertown Region and are adapted from the NY Parks Trail Development Standards (NYS Office of Parks, Recreation and Historic Preservation, 2021). In aggregate, these trail types can accommodate all the use types defined by the Guidance Committee. It is important to note that during conceptual and detail design, these parameters should be refined based on the specific activity types and site that is being considered.

Pedestrian-Only Trail like the existing “Nature Trails” within the Palmertown Region. These trails are for pedestrians.

- **Primitive:** Rugged, challenging trails. These trails represent the typical backcountry trail experience with wet crossings and few formal structures.
- **Developed:** Rugged trails with more formal structures such as boardwalk, puncheon, and steps.
- **Highly-Developed:** Also described as front-country trail. Formal structures facilitate crossings and steps are minimized to create a more highly accessible experience.

Mixed-Use Trail is analogous to the existing “Multi-use trails” within the Palmertown Region. These trails are designed to support a range of concurrent and seasonal uses, but not at the same time (bikers and hikers can use the same trail, but the trail is narrow so visitors must step aside to allow others to pass).

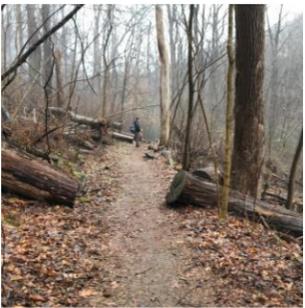
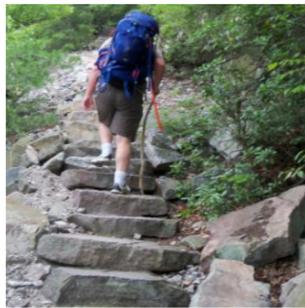
- **Primitive:** Rugged, challenging trails. These trails represent the typical backcountry trail experience with wet crossings and few formal structures.
- **Developed:** Rugged trails with more formal structures such as boardwalk, puncheon, and steps.
- **Highly-Developed:** Also described as front-country trail. Formal structures facilitate crossings and steps are minimized to create a more highly accessible experience. These trails are wider than their pedestrian-only counterparts.

Shared-Use Paths Shared-Use Paths, also known as multi-use paths, can be built within a highway right-of-way or within an independent right-of-way (examples below), and typically follow a defined standard that meets or exceeds accessibility requirements as per the Americans with Disabilities Act (ADA). In this context, a Shared-Use Path may be used by bicyclists, pedestrians, skaters, wheelchairs, joggers and other non-motorized uses and should be designed to accommodate all desired uses as appropriate.

- **Primitive:** These trails are like a logging road, with an informal experience, wet crossings and few structures.
- **Developed:** Also described as front-country trail. Formal structures facilitate crossings and a wide tread width allows different uses to take place simultaneously.
- **On-Road Route:** In addition to the trail options, “On-Road Routes” are specified in some locations. See Shared-Use Path table for more information.



5.5.2 Pedestrian-Only Trails¹⁶

Pedestrian-Only Trails are defined in this context as trails that are limited to pedestrian use. These trails may represent short, easy loops, or rugged backcountry trails. Adapted from NY Parks Trail Development Standards for Hiking Trails.			Types of Use (depending on land manager desires): Pedestrian-only		
Trail Type	Thumbnail 1	Thumbnail 2	Thumbnail 3	Trail Physical Parameters	
Primitive Pedestrian-Only Trail				Tread Width	1 to 2 feet
				Built Structures in Tread	2 to 3 feet
				Design Surface Type	Bare soil or rocks.
				Max. Protrusion Height	14"
				Avg. Target Grade	1-5%, up to 15% sustained
				Max. Grade	40-50% for up to 50 yards
				Max. Cross Slope	5-7%
				Corridor Clearing Height	8 to 10 feet
				Corridor Clearing Width	4 to 6 feet
				Turn Radius	No minimum
Sight Distance	No minimum				
Developed Pedestrian-Only Trail				Tread Width	3 to 5 feet
				Built Structures in Tread	4 to 6 feet
				Design Surface Type	Bare soil, rocks, or crushed stone.
				Max. Protrusion Height	2"
				Avg. Target Grade	1-5%, up to 15% sustained
				Max. Grade	40-50% for up to 50 yards
				Max. Cross Slope	4%
				Corridor Clearing Height	8 to 10 feet
				Corridor Clearing Width	4 to 8 feet
				Turn Radius	2 to 10 feet
Sight Distance	No minimum				
Highly Developed Pedestrian-Only Trail*				Tread Width	3 to 8 feet
				Built Structures in Tread	3 to 8 feet
				Design Surface Type	Native soil or crushed stone. May have hardened surface (concrete, asphalt, wood) in desired areas, such as boardwalks, bridges, tumpikes, etc.
				Max. Protrusion Height	1"
				Avg. Target Grade	5%
				Max. Grade	Up to 12.5% for no more than 10 feet
				Max. Cross Slope	5% maximum
				Corridor Clearing Height	8 to 10 feet
				Corridor Clearing Width	4 to 8 avg
				Turn Radius	Not critical
Sight Distance	Not critical barrier on reverse curves may be used				

¹⁶ Note that the primary difference between Highly Developed Pedestrian-Only Trail and Highly Developed Mixed-Use Trail is trail tread and grades to provide for NY DEC Trail Accessibility on Pedestrian Only trails. See Trails Technical Document #1 Standards and Guidelines for Trails in NYS Parks, Rev. March 2014, prepared by NYS Office of Parks, Recreation and Historic Preservation Planning Bureau <https://www.parks.ny.gov/documents/recreation/trails/TrailsTechnicalStandardsandGuidelines.pdf>

5.5.3 Mixed-Use Trails¹⁷

<p>Mixed-Use Trails are defined in this context as trails where multiple uses are accommodated on the same trail, but not simultaneously. Types of use may vary seasonally. Adapted from NY Parks Trail Development Standards for Mountain Biking Trails and Hiking Trails.</p>			<p>Types of Use (depending on land manager desires): Pedestrian, Bicycle, Snowshoe, Cross-Country Ski, Equestrian</p>		
Trail Type	Thumbnail 1	Thumbnail 2	Thumbnail 3	Trail Physical Parameters	
<p>Primitive Mixed-Use Trail</p>				Tread Width	2 to 3 feet
				Built Structures in Tread	3 to 4 feet
				Design Surface Type	Native soil or rocks.
				Max. Protrusion Height	4"
				Avg. Target Grade	8%
				Max. Grade	Over all grade not to exceed 10%. Climbing turns not to exceed 7-12%.
				Max. Cross Slope	3-5%
				Corridor Clearing Height	8 to 10 feet
				Corridor Clearing Width	2 to 6 feet
Turn Radius	NA				
Sight Distance	Min. of 100 ft. up to 150 ft. on downhill curves or road crossings				
<p>Developed Mixed-Use Trail</p>				Tread Width	4 to 6 feet
				Built Structures in Tread	4 feet
				Design Surface Type	Native soil or crushed stone
				Max. Protrusion Height	1"
				Avg. Target Grade	5%
				Max. Grade	Up to 15% for no more than 200 feet
				Max. Cross Slope	5-7%
				Corridor Clearing Height	10 feet
				Corridor Clearing Width	6 to 8 feet
Turn Radius	NA				
Sight Distance	Minimum 75 feet before downhill turns, trail junctions and road crossings				
<p>Highly Developed Mixed-Use Trail*</p>				Tread Width	4 to 6 feet
				Built Structures in Tread	5 to 7 feet
				Design Surface Type	Native soil or crushed stone. May have hardened surface (concrete, asphalt or wood) in desired areas.
				Max. Protrusion Height	1"
				Avg. Target Grade	5-10%
				Max. Grade	Up to 15% for no more than 200 feet
				Max. Cross Slope	5-7%
				Corridor Clearing Height	10 to 12 feet
				Corridor Clearing Width	10 to 12 feet
Turn Radius	14 feet				
Sight Distance	100 feet				

¹⁷ Note that the primary difference between Highly Developed Pedestrian-Only Trail and Highly Developed Mixed-Use Trail is tread surfaces and turning radius.

5.5.4 Shared-Use Paths¹⁸

<p>Shared-Use Paths, also known as multi-use paths, can be built within a highway right-of-way or within an independent right-of-way (examples below), and typically follow a defined standard that meets or exceeds accessibility requirements as per the Americans with Disabilities Act (ADA). In this context, a Shared-Use Path may be used by bicyclists, pedestrians, skaters, wheelchair users, joggers and other non-motorized uses and should be designed to accommodate all desired uses as appropriate.</p>			<p>Types of Use (depending on land manager desires): Pedestrian, Bicycle, Snowshoe, Cross-Country Ski, Snowmobile, ATV, Equestrian</p>		
Trail Type	Thumbnail 1	Thumbnail 2	Thumbnail 3	Trail Physical Parameters	
<p>Primitive Shared-Use Path</p>				Tread Width	6 to 8 feet (or width of maintenance/grooming equipment)
				Built Structures in Tread	6 to 10 feet
				Design Surface Type	Firm natural surface including soil, rocks, wood; hardened surface for wet areas.
				Max. Protrusion Height	6" (not continuous)
				Avg. Target Grade	10% or less
				Max. Grade	25%
				Max. Cross Slope	5-7%
				Corridor Clearing Height	8 to 10 feet
				Corridor Clearing Width	8 to 12 feet
				Turn Radius	10 to 50 feet
Sight Distance	50-100 ft., 100-200 ft. at motorized road crossings				
<p>Developed Shared-Use Path</p>				Tread Width	8 to 12 feet (or width of maintenance/grooming equipment)
				Built Structures in Tread	10 to 12 feet
				Design Surface Type	Crushed stone, asphalt, concrete and wood..
				Max. Protrusion Height	1"
				Avg. Target Grade	5% or less
				Max. Grade	8.3 percent for a maximum of 200 ft 10 percent for a maximum of 30 ft 12.5 percent for a maximum of 10 ft
				Max. Cross Slope	0-5% non-paved, 2% paved
				Corridor Clearing Height	8 ft +
				Corridor Clearing Width	8 ft +
				Turn Radius	see NY DOT and FHWA
Sight Distance	see NY DOT and FHWA				

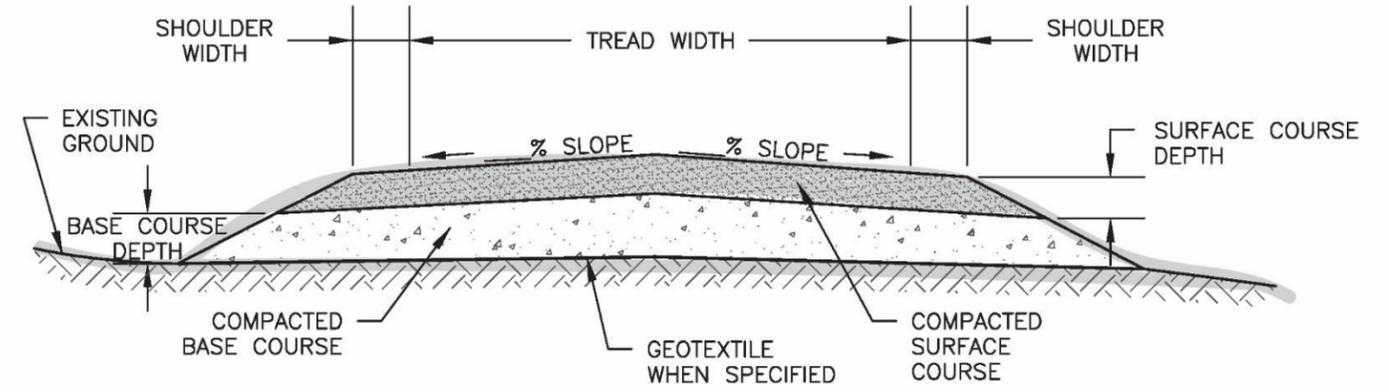
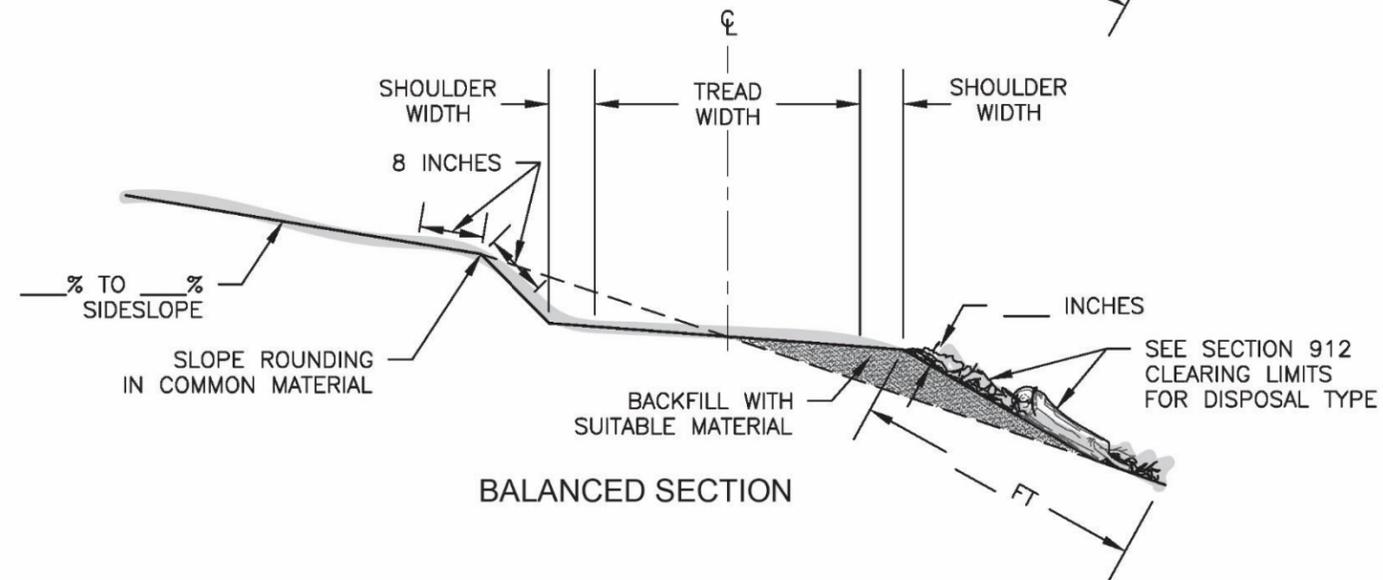
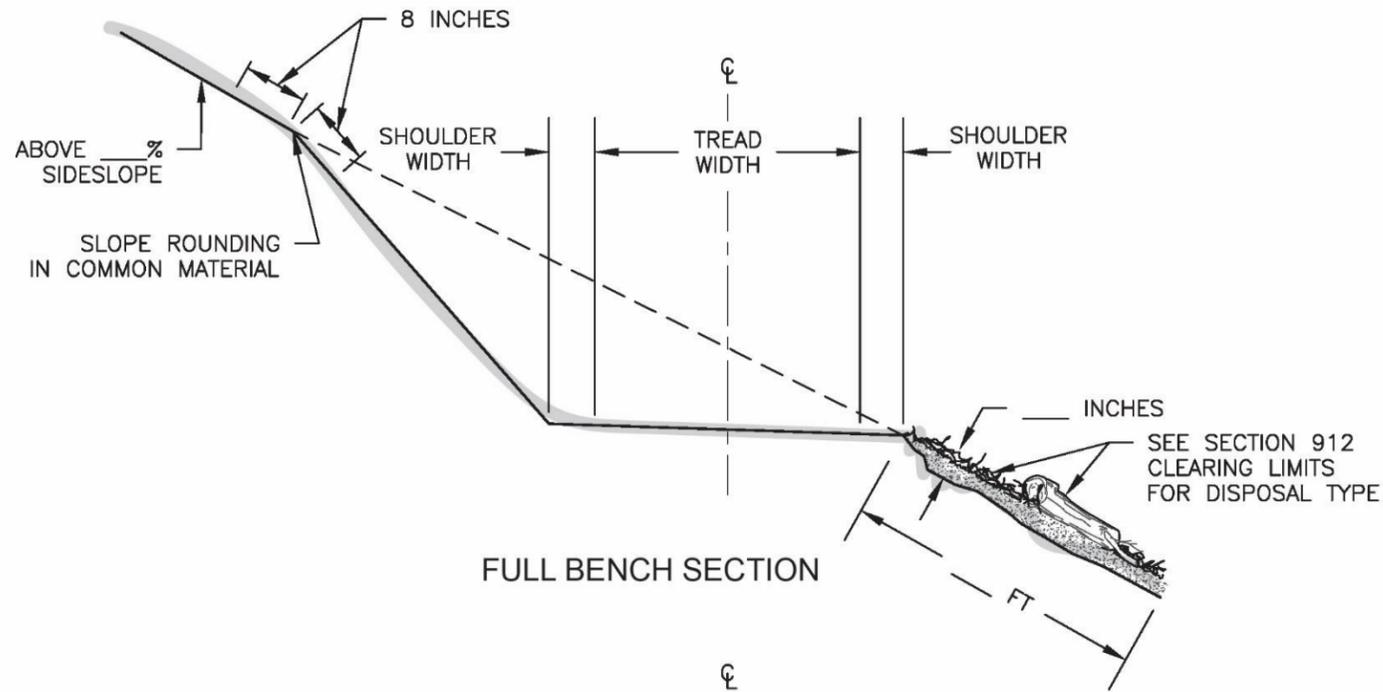
¹⁸ 1. See NY DOT reference <https://www.dot.ny.gov/display/programs/bicycle/planning/shared-use>

2. See FHWA reference https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/sidewalk2/sidewalks214.cfm

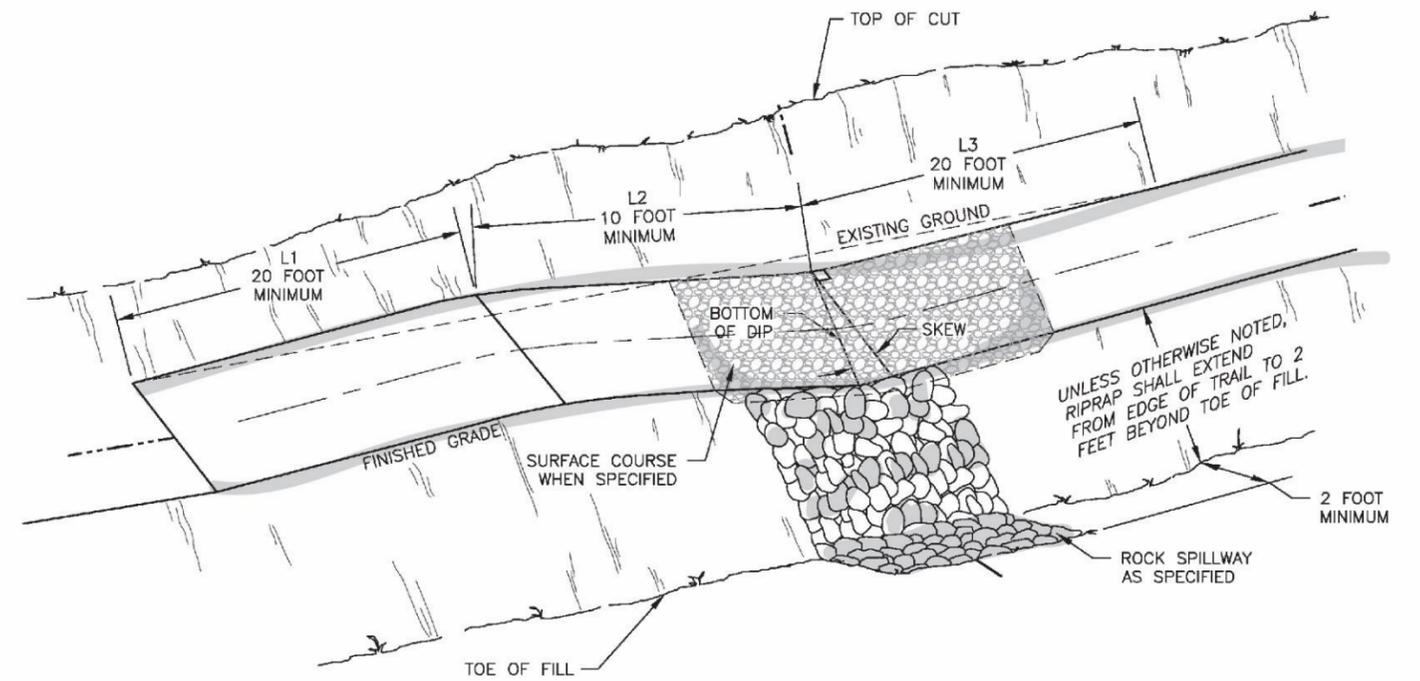
3. On-Road Routes are specified in some locations. These routes should meet AASHTO Guidelines for the Development of Bicycle Facilities at all times and Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way where possible. For more information, see Goldstein, D. W., & Knutson, L. (2014, November 4). Universal Access Trails and Shared Use Paths: Design, Management, Ethical, and Legal Considerations. Retrieved from ConservationTools.org: https://conservationtools.org/library_items/1345/files/1242 (Table 4, page 47)

5.5.5 Typical Trail Elements and Structures

5.5.5.1 Standard Trail

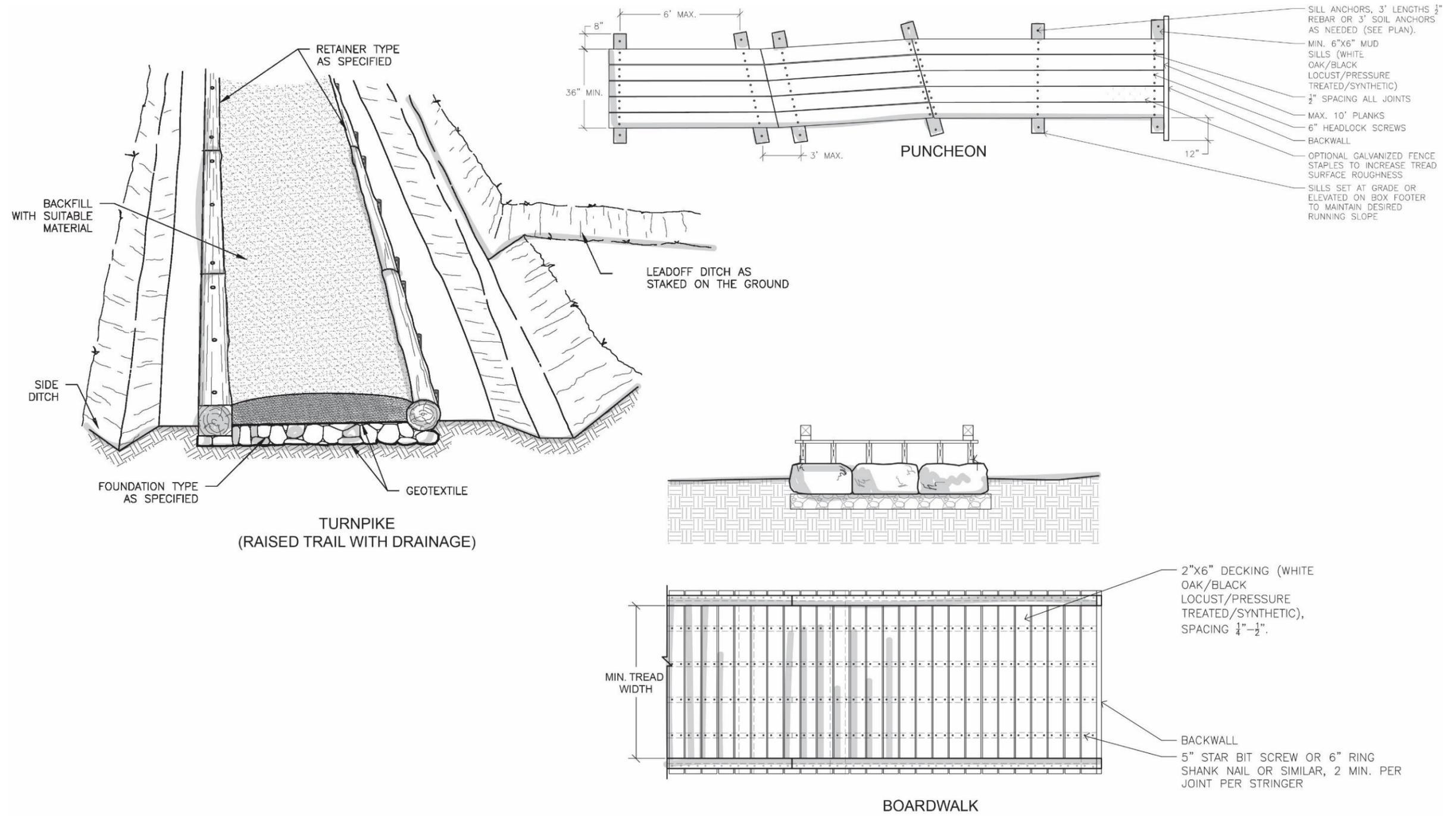


SURFACED SECTION (CROWNED)

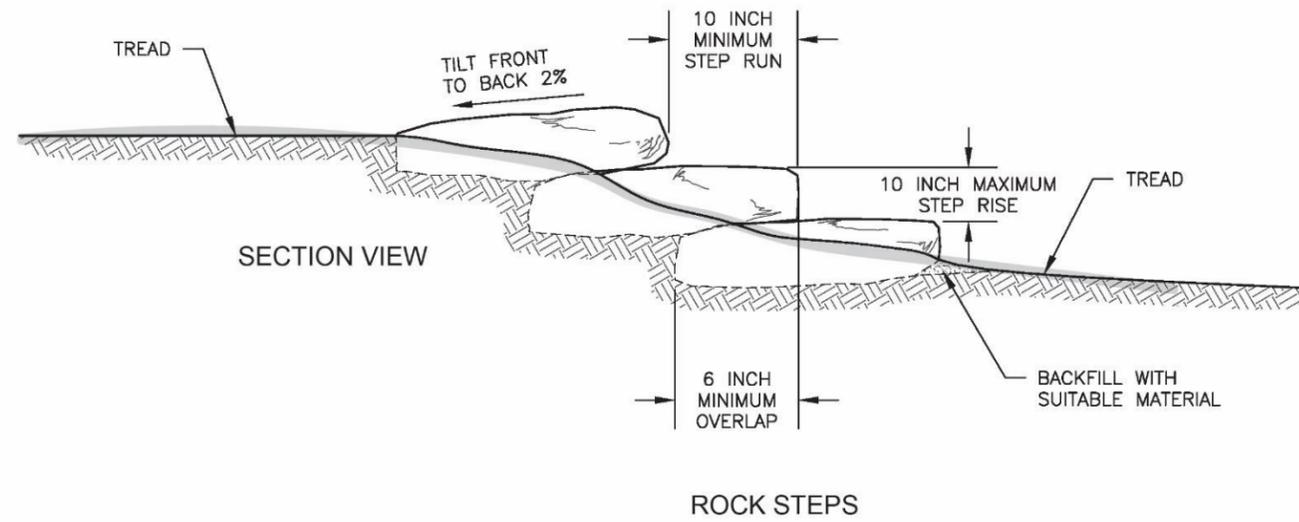
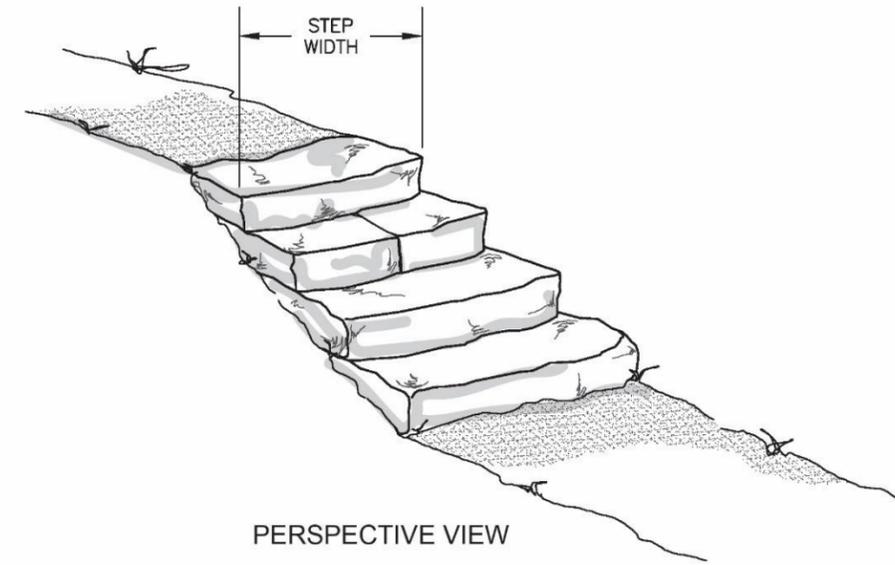
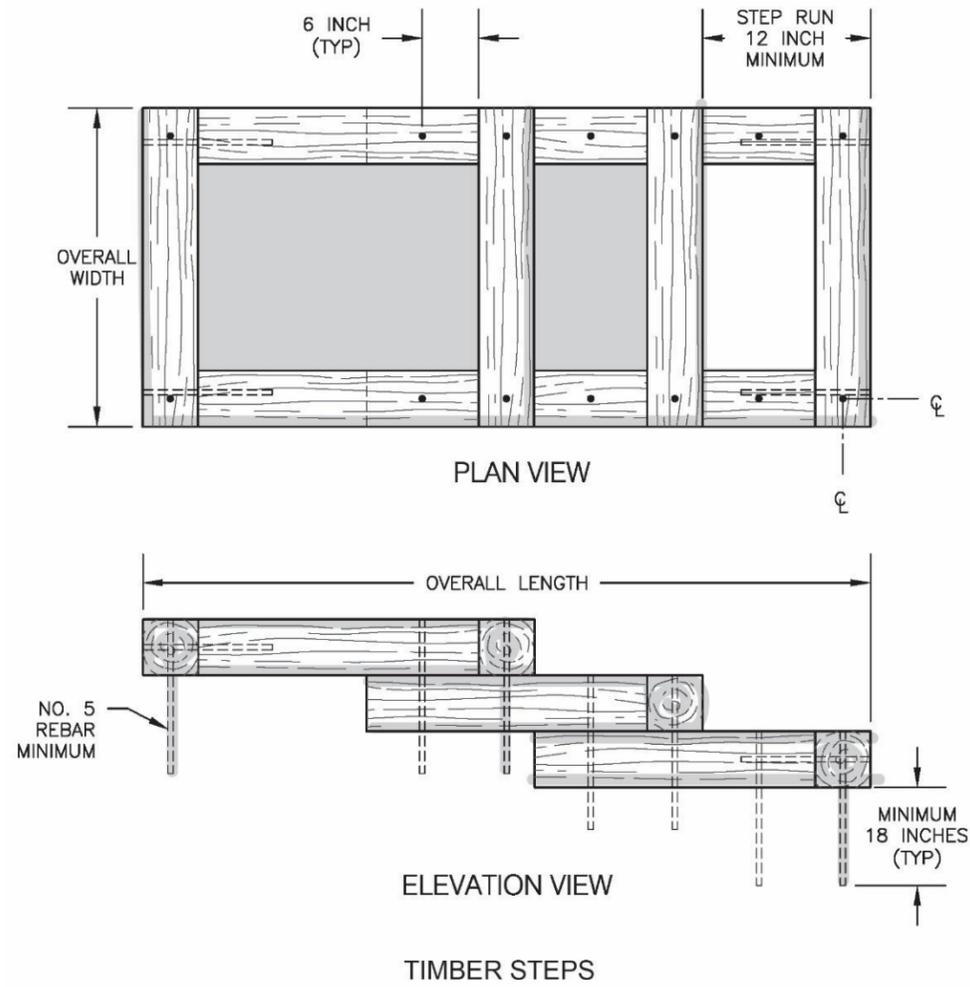


DRAINAGE DIP

5.5.5.2 Structures for Crossing Wet Areas



5.5.5.3 Steps



6. The Friendship Trails System

This chapter introduces in detail the proposed trail alignments for the Friendship Trails system.

While many segments within this system are interconnected, it is not recommended that they all be built to the same standard. Each trail segment should be built to accommodate the desired activity types and respond to the site conditions.

Generally, it is recommended that trails within 0.5-1 miles of trailheads be designed and managed to a Developed or Highly-Developed design standard. This will create a welcoming experience for novice trail users and create a diverse system of accessible trails within the larger system itself. It also allows for opportunities for progressive access, introducing visitors to less developed and more rugged trails as they gain confidence in their recreation experience. This will also concentrate management and trail development work closer to road access, which can reduce overall costs.

6.1 Trail Hierarchy

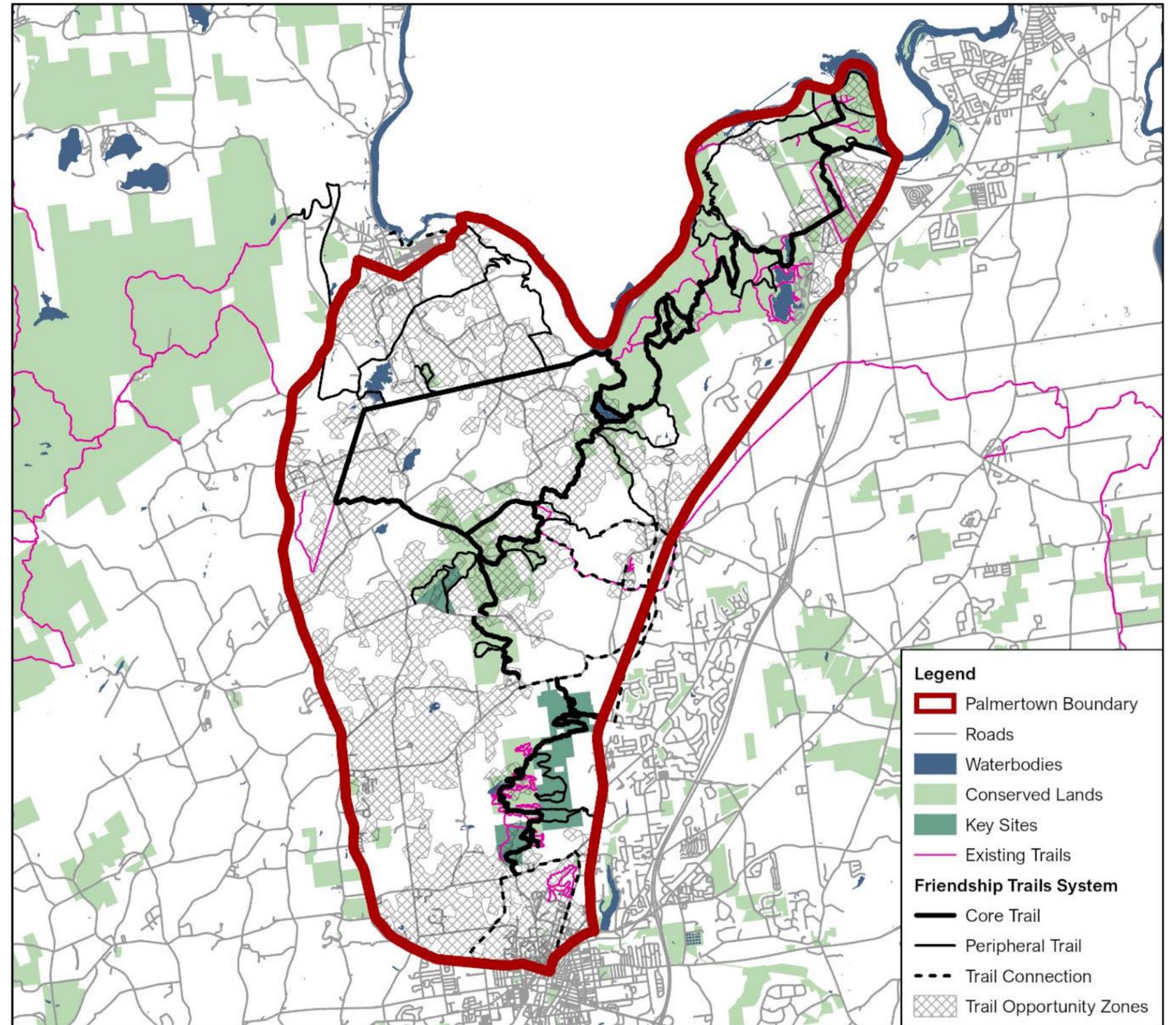
Trail systems without hierarchy tend to resemble plates of spaghetti. To give structure to the trail system, trail alignments have been defined as either Core Trails or Peripheral Trails. This will help visitors visualize and understand the trail system and will assist land managers in making decisions about how to build and manage individual trail segments.

Trail Types

- Core Trail
- Peripheral Trails
- Trail Connections

Trail Opportunity Zones

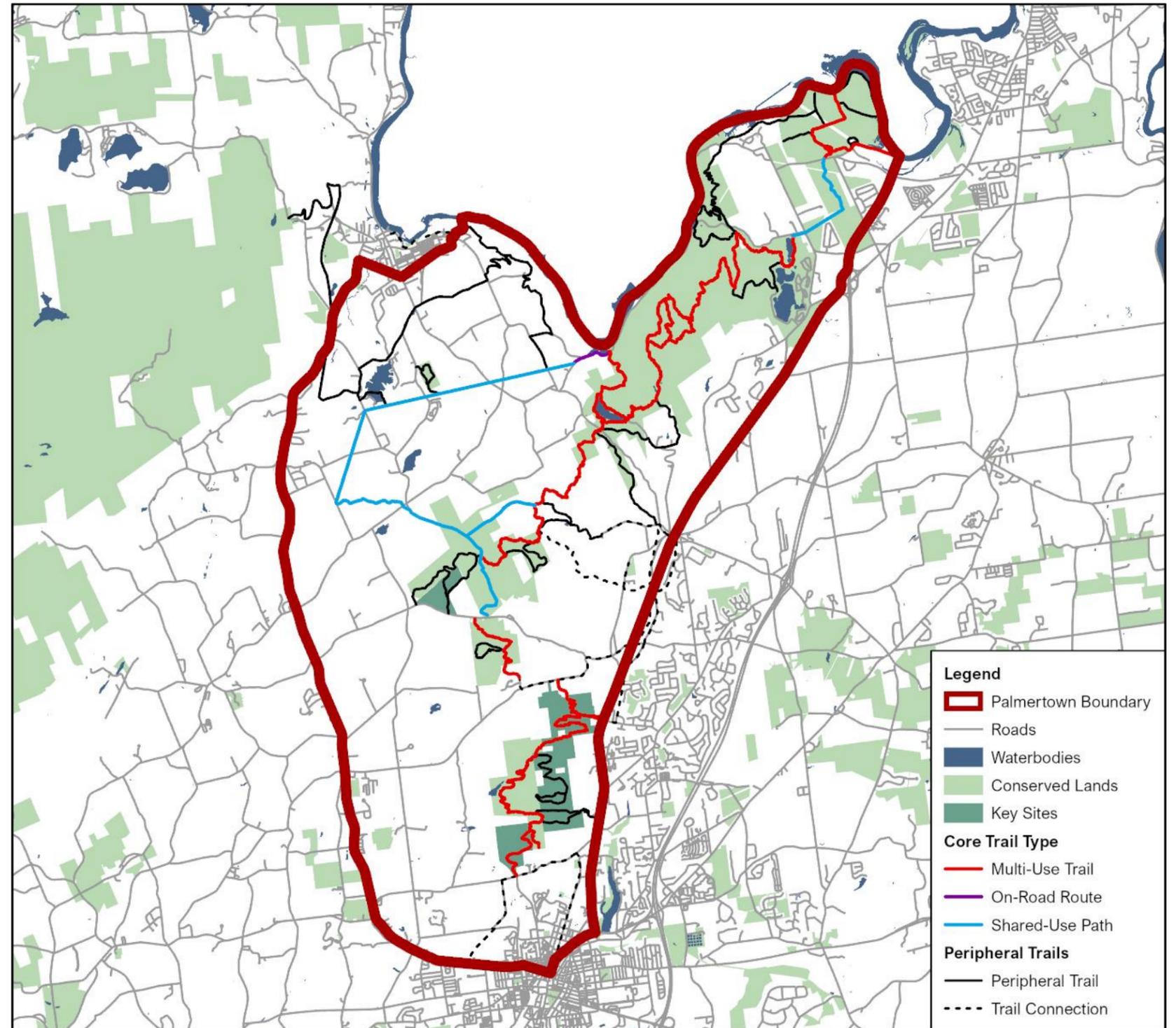
Trail opportunity zones have been defined based on the Trail Opportunity Analysis. These zones represent concentrations of high-density trail opportunity areas, that have been digitally generated from the Trail Opportunity Areas layer. They designate areas that are likely conducive to future trail development because they avoid steep, rocky areas, areas with high densities of wetland, and areas with sensitive habitats. These areas are meant to provide guidance to target future conservation and trail development efforts.



6.1.1 Core Trails

Core Trails represent the primary corridors spanning the extent of the Palmertown Range. Ideally, residents will be able to access this network of continuous trails within a 15-minute drive of anywhere within the Palmertown Range. It is important to note that not everyone is able to access trailheads by car, so considerations for trailhead accessible from bicycle and bus routes should also be a factor in locating trails and trailheads during conceptual and detail design.

Core Trails represent the cohesive “spine” of the trail system, linking conserved lands and key sites together in a network.



Daniels Road State Forest to Wilton Partners Property

Two trailhead options exist at the southern terminus of the Core Trail. The first (1) is the existing parking lot at Daniels Road State Forest, and the second (2) would be a new trailhead at the Skidmore property directly to the West. It is important to note that the existing Daniels Road lot is difficult to access, has very limited parking capacity, and is unwelcoming for novice trail users because of its seclusion and lack of amenities. If a new trailhead were created on the Skidmore land, it should have ample capacity and well-developed trail amenities.

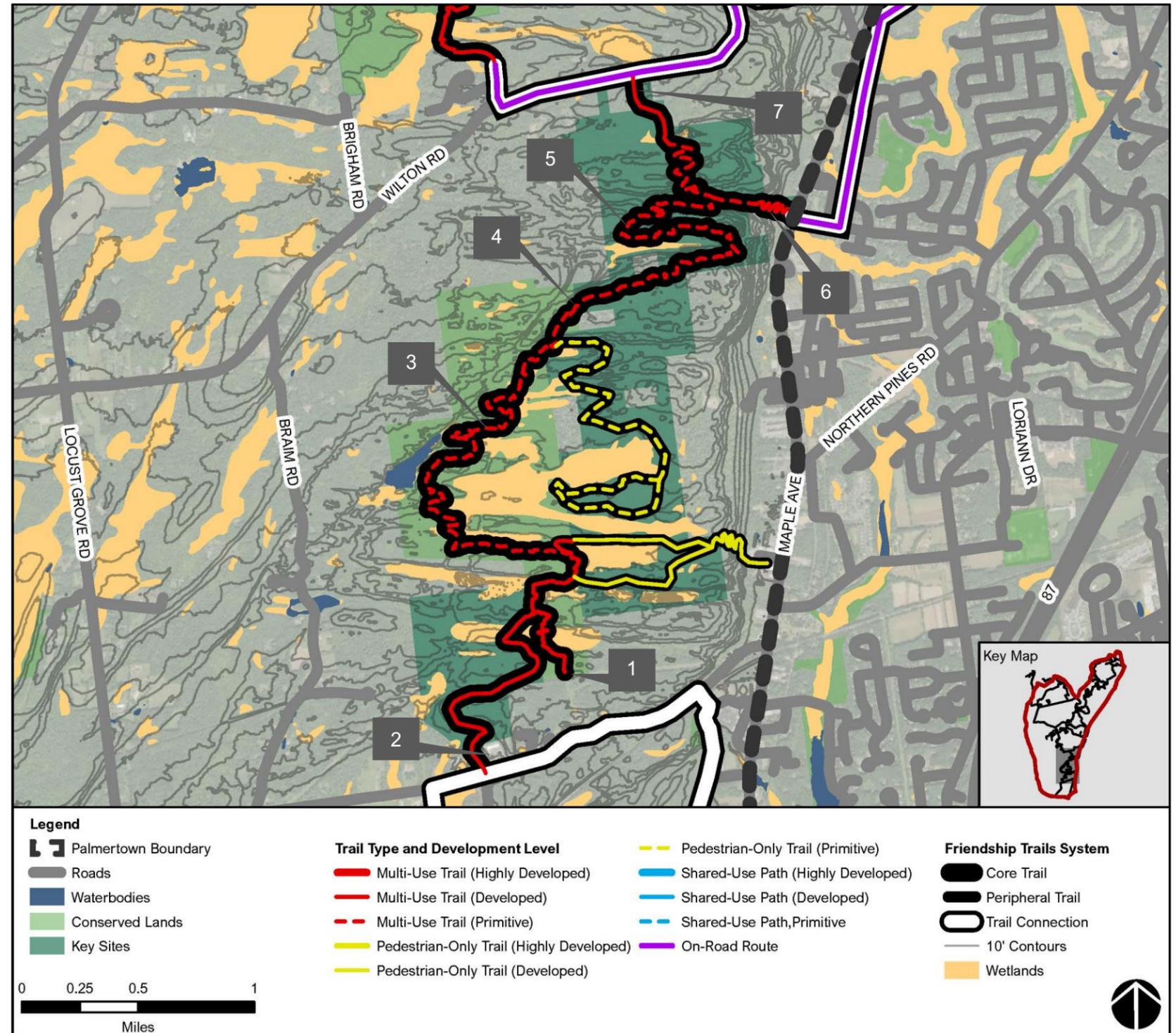
From either location, the trail alignment can utilize existing corridors to make its way north through Daniels Road State Forest. While Daniels Road State Forest has extensive existing trails, the selected alignment is best able to meet sustainability parameters and avoids excessive structures to traverse multiple large wetlands.

This portion of the trail (3) represents a long segment with few access points, and so it is recommended that if possible future access be enabled through a connection to Braim Road to the west.

Once the corridor reaches the northeast corner of Daniels Road State Forest, it crosses onto property owned by Skidmore College (4). While the property is large and contains some high-quality forest environments, portions of it have been heavily logged. Coupled with the challenging terrain and a large wetland, this results in a trail alignment for new trail that is quite circuitous to find its way through the various physical constraints in a way that would still facilitate broad access. This trail segment will have a high incidence of trail structures such as stairs, boardwalks, and a short span bridge to facilitate stream crossing and negotiate across the challenging landscape.

The trail corridor then crosses onto the Wilton Partners property (5), where it makes its way down the steep slope via a combination of new trails and existing roadbed. This site is notable for the beautiful stream and historic structures present on site which create a unique interpretive opportunity.

Here the alignment splits, and one trail climbs down the hill through a series of switchbacks to a trailhead on Route 9 (6). One potential alignment from this location follows the utility corridor to the East. An alternate alignment follows a right-of-way through the neighboring property to the northwest to a proposed trailhead at Wilton Road (7).

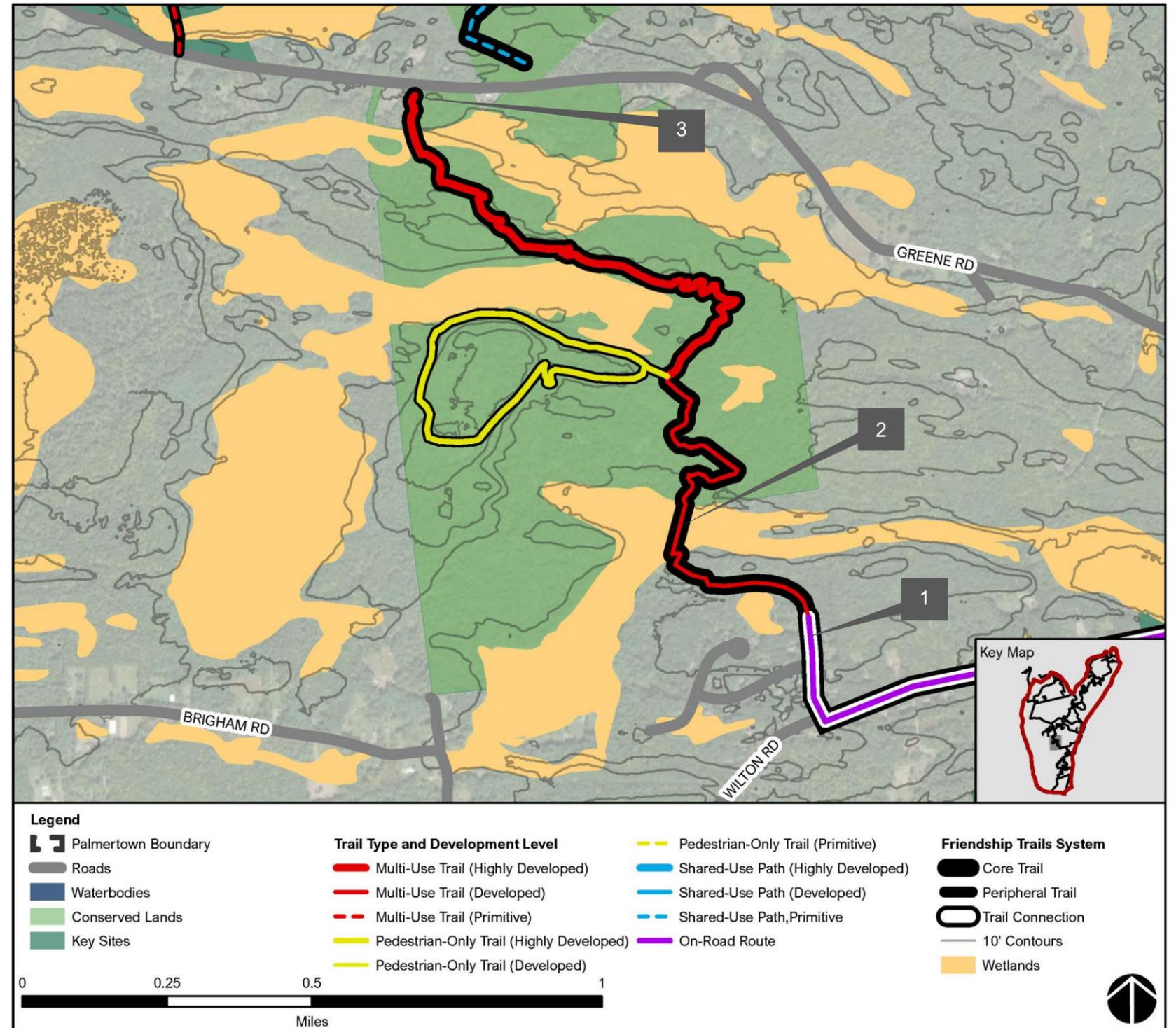


Greentree Lake Property to Lincoln Mountain State Forest

The corridor alignment continues from Brookstone Drive (1). This is a residential access drive, and it is important to note that a basic trailhead would need to be developed in the vicinity to allow access from this end of the segment without causing a conflict with adjacent residents.

From Brookstone Drive, the corridor follows an existing roadbed, before climbing around the toe of a small ridge and crossing an extensive wetland (2). Due to field conditions, this portion was not able to be field-verified and an exact crossing location will need to be solidified as part of the site design process. This crossing is likely to be one of the more expensive segments of trail due to the extensive boardwalk that will probably be needed to cross the wetland.

Once across, a new trail climbs the slope and intersects with primarily existing trail, moving in a northwesterly direction to a proposed trailhead at Greene Road (3). This trailhead should be moderately developed.

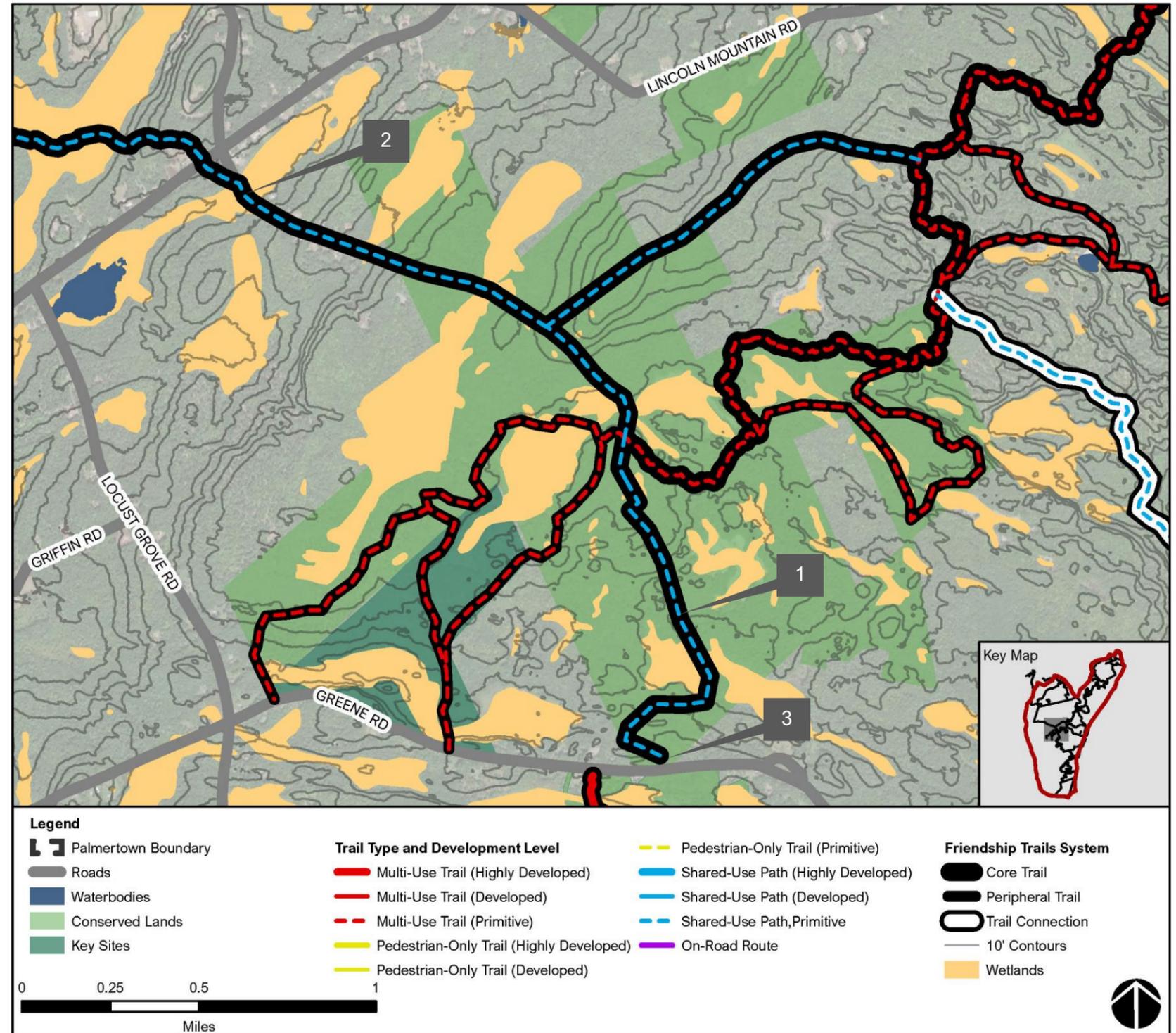


Lincoln Mountain State Forest to Private Land

The Core Trail corridor that traverses through Lincoln Mountain State Forest (LMSF) will present recreationists with the opportunity for a true backcountry experience. The forest has been managed in the past, but signs of tree cutting are difficult to discern in some places, leaving the impression of a first-growth forest. The proposed route connects multiple scenic ponds and streams that enhance the wild character of this section of the Core Trail. Solitude and wildlife viewing possibilities abound. Overall, trail grades are gentle due to the existing topography which consists of rolling terrain. Several sections of existing forestry roads that meet the established trail standards are utilized in the proposed trail alignment (1), although the majority of this trail section will require the development of new tread. Soils appear well drained throughout lending to a sustainable tread surface without extensive treatment or amending. Bridges will be necessary at the stream crossings mentioned above. Currently, the only way to drive into LMSF is from the north on Cohen Road (2) which turns into an unimproved dirt road. This unimproved dirt road extends south through LMSF towards Greene Road (3), but is only passable by high clearance four-wheel drive vehicles and is discouraged by the DEC through posted signage. A parking area should be established at Greene Road that would provide an access point at the south end of LMSF.

Trail design, layout and construction addressing the following will be critical to the success of a sustainable mixed-use trail through Lincoln State Forest:

- Making trails compatible with periodic logging and forest management operations.
- Accommodating other activities such as hunting.
- Maintaining trail grades that are sustainable and nonrestrictive to a large cross section of visitors and activities.
- Maintaining and reinforcing the wilderness character that exists in this state land parcel.
- Providing reliable parking and restroom facilities at access points to the SBF Friendship Trail.
- Common trail design techniques to address the above critical issues are:
 - Surfacing the trail tread with a durable material when suitable soils do not exist.
 - Laying out the trail in areas with adequate soil wherever possible and avoiding bedrock where it creates large obstacle heights or out-slopes and exceeds pitch grades.
 - Narrow and reduce sight lines in the most remote section of the trail.
 - Low profile, unobtrusive bridges over stream crossings.



Private Land to Moreau Lake State Park

The proposed Core Trail route between Lincoln Mountain State Forest and Moreau Lake State Park (MLSP) traverses over private land. Parcel 1774 (1), which borders LMSF, presents trail development challenges primarily due to the prevalence of shallow soils, exposed bedrock and steep grades. Parcel 62, which borders MLSP, presents more opportunities for easier trail development with better soils, more gentle grades and existing ATV/UTV trail infrastructure.

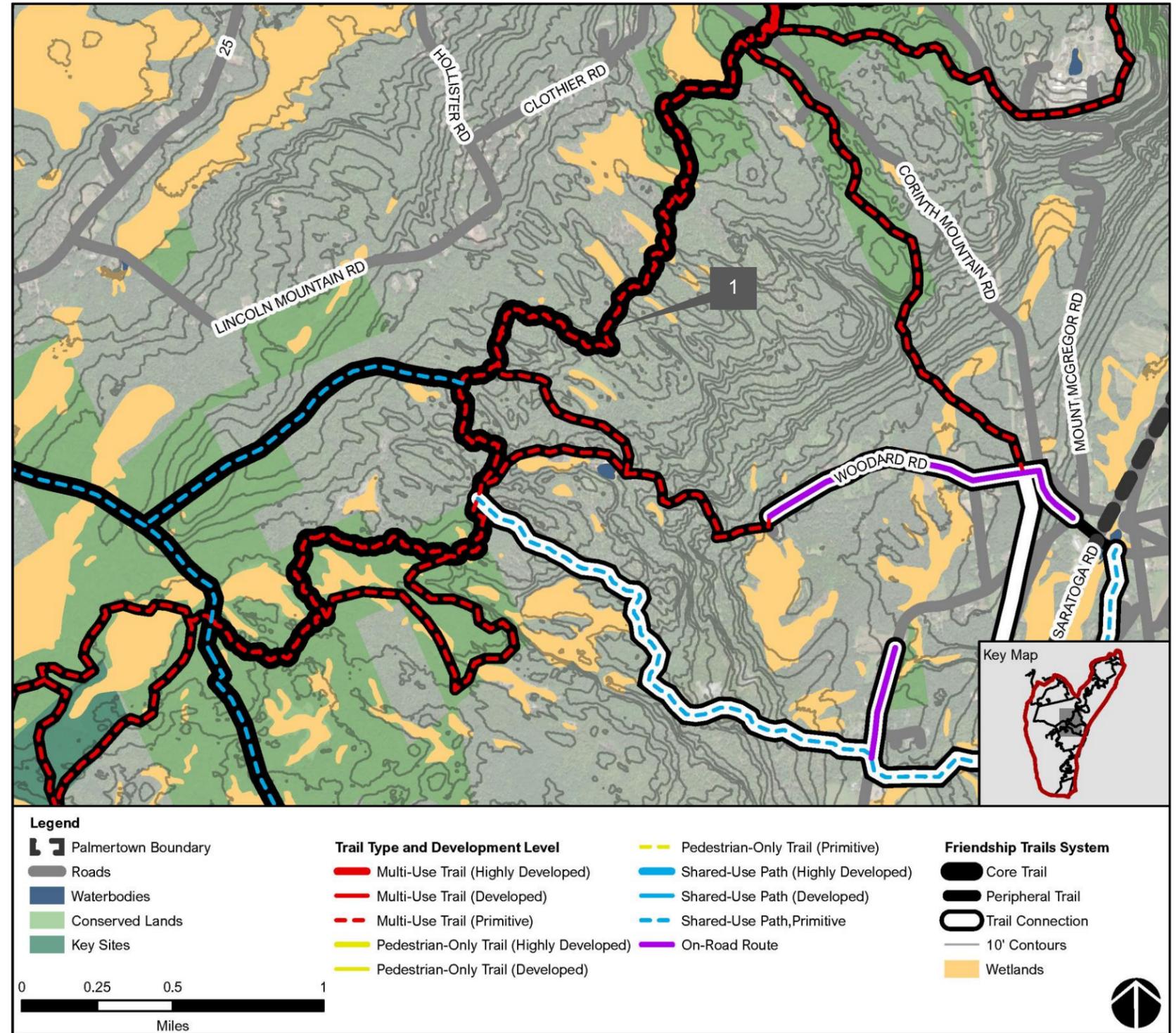
Both parcels have been harvested for timber recently, nearly clear cut, diminishing the wilderness characteristics that are present in LSF and MLSP. Compounding the lack of an intact forest is the prevalence of a skid road network that crosses both parcels. The combination of aggressive timber harvesting, rutted skid roads and ATV/UTV activity will most likely categorize this section of the SBF trail as merely a connector, in the short term, as the forest recovers.

Depending upon the landowner’s future management goals (i.e. future timber harvesting) and protection of the trail corridor, it is recommended that a minimum amount of investment is made to improve a sustainable trail through these private parcels. If, however, a protected trail corridor can be secured with the landowner, it would be possible and worth the investment to design and develop a sustainable path.

It is worth noting that an existing snowmobile trail bisects the two parcels, which could provide good access for trail building tools, equipment and materials.

Trail design, layout and construction addressing the following will be critical to the success of a sustainable multi use trail through private land parcels 1774 and 62:

- Maintaining trail grades that are sustainable and nonrestrictive to a large cross section of visitors and activities.
- Utilizing existing ATV/UTV trails and skid roads to minimize investment of resources, especially if the SBF corridor is not protected.
- Common trail design techniques to address the above critical issues are:
- Surfacing the trail tread with a durable material when suitable soils do not exist.
- Laying out the trail in areas with adequate soil wherever possible and avoiding bedrock where it creates large obstacle heights or out-slopes and exceeds pitch grades.



Moreau Lake State Park to Spier Falls Road

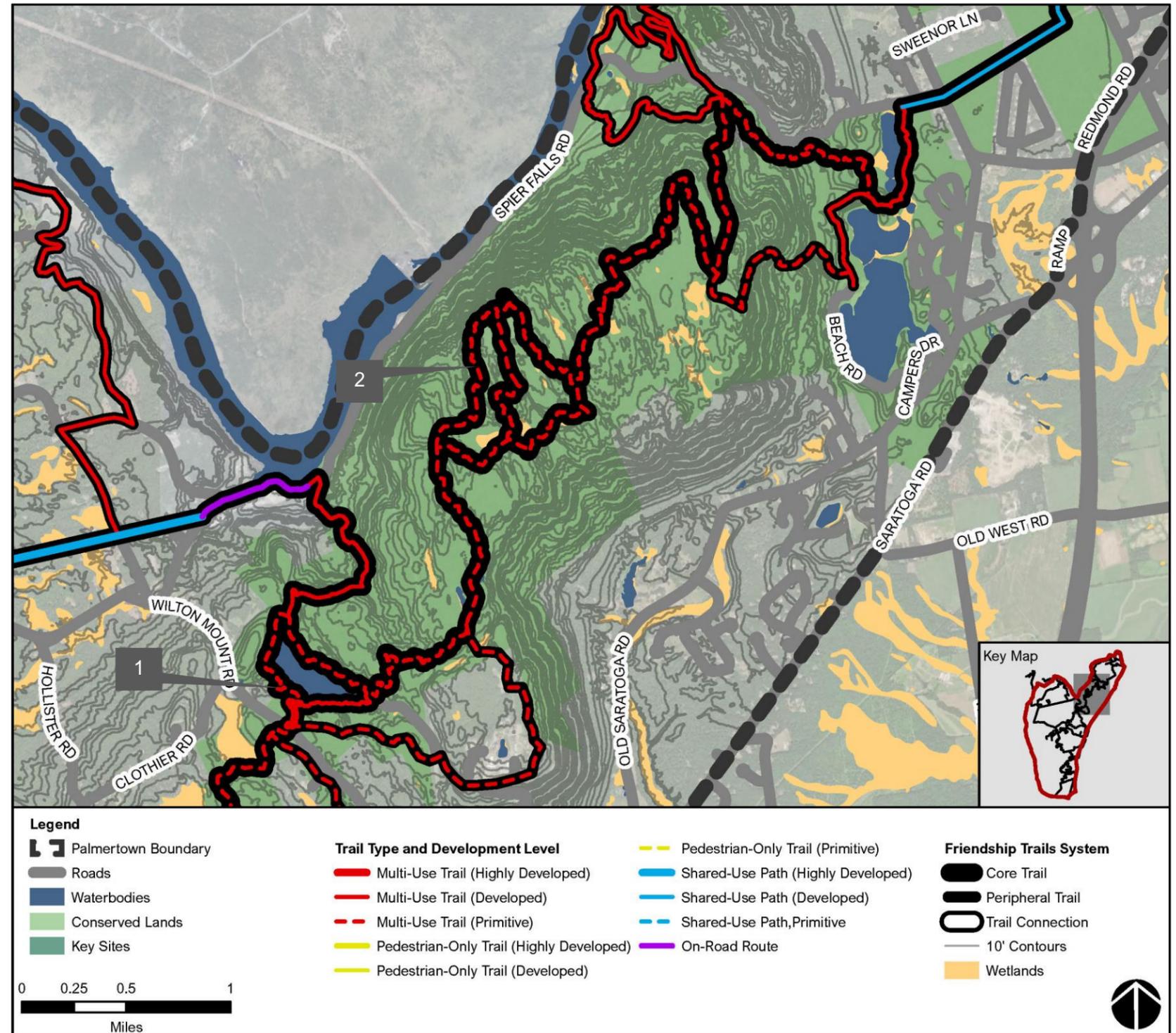
The Core Trail corridor through the heart of Moreau State Park will likely be the most remote and undisturbed natural portion of the trail connecting Saratoga to the Hudson River at the Big Bend Property, also known as the Smith Farm. The trail northeast of Lake Bonita (1) will exhibit the truest wilderness type of experience and intrinsic that will be found in the length of the SBF Friendship Trail. The steep rocky slopes to the North and East (2) provide limited opportunities to create a sustainable and recreationally sound experience for the majority of outdoor recreationists. These same slopes also provide a wonderful view of the Hudson River and have protected the interior of the park and plateau from man-made disturbance for hundreds of years.

The trail corridor through Moreau Lake State Park is dominated by an uninterrupted forest environment and lack of human disturbance within the trail corridor and its surroundings. From the Spier Falls Rd. to Lake Bonita the only human disturbance to be seen is the trail itself. Steep rocky slopes protect the plateau top on three sides making access to the interior of the park and the trail difficult from the North, East and South. The ridgeline access from the southwest around Lake Bonita is the only gentle approach to the interior and plateau top known as Grant Mountain.

The gentle approach from the Lake Bonita area (1) will allow a sustainable, primary corridor providing for a multi-use trail that is available to a large cross section of outdoor enthusiasts. This primary corridor can be further designed and constructed within the trail standards established for the SBF Friendship Trail Master Plan. A trail meeting the above standard could very reasonably be extended beyond Lake Anne to a Hudson River Overlook and beyond. The corridor designated for the SBF Friendship Trail in the SBF Master Plan can maintain those standards throughout with only exceeding pitch grades in the area very close to the Spier Falls Road.

Trail Design, Layout and Construction addressing the following will be critical to the success of a sustainable single track multi use trail across Moreau Lake State Park:

- Addressing high trail usage in the Lake Bonita/Lake Anne area.
- Managing bedrock impacts on obstacle and protrusion height in the trail tread.
- Maintaining trail grades that are sustainable and non-restrictive to a large cross section of activities.
- Maintaining and reinforcing the wilderness intrinsic found at the heart of the park.



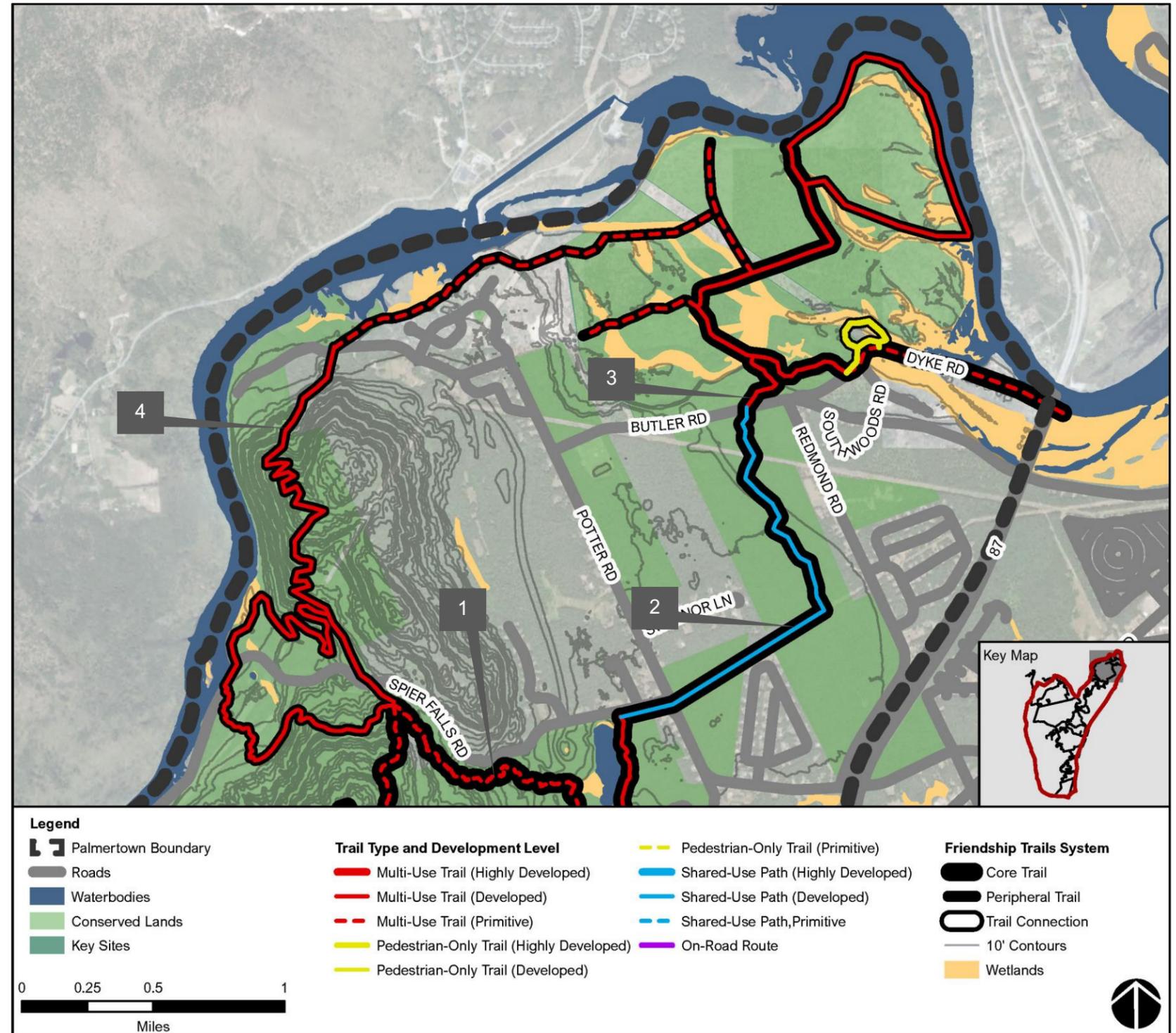
Spier Falls Road to the Hudson River

From Spier Falls Road (1) the corridor follows roads and existing utility corridors to the County Forest land (2). This property is characterized by very mild slopes, sandy soils, and extremely dense vegetation (a high incidence of ticks was noted during scouting).

Trails developed on this property should be moderately wide and well-developed, and due to the gentle slopes, many options exist for a potential alignment that would satisfy accessibility specifications from Spier Falls Road to Butler Road.

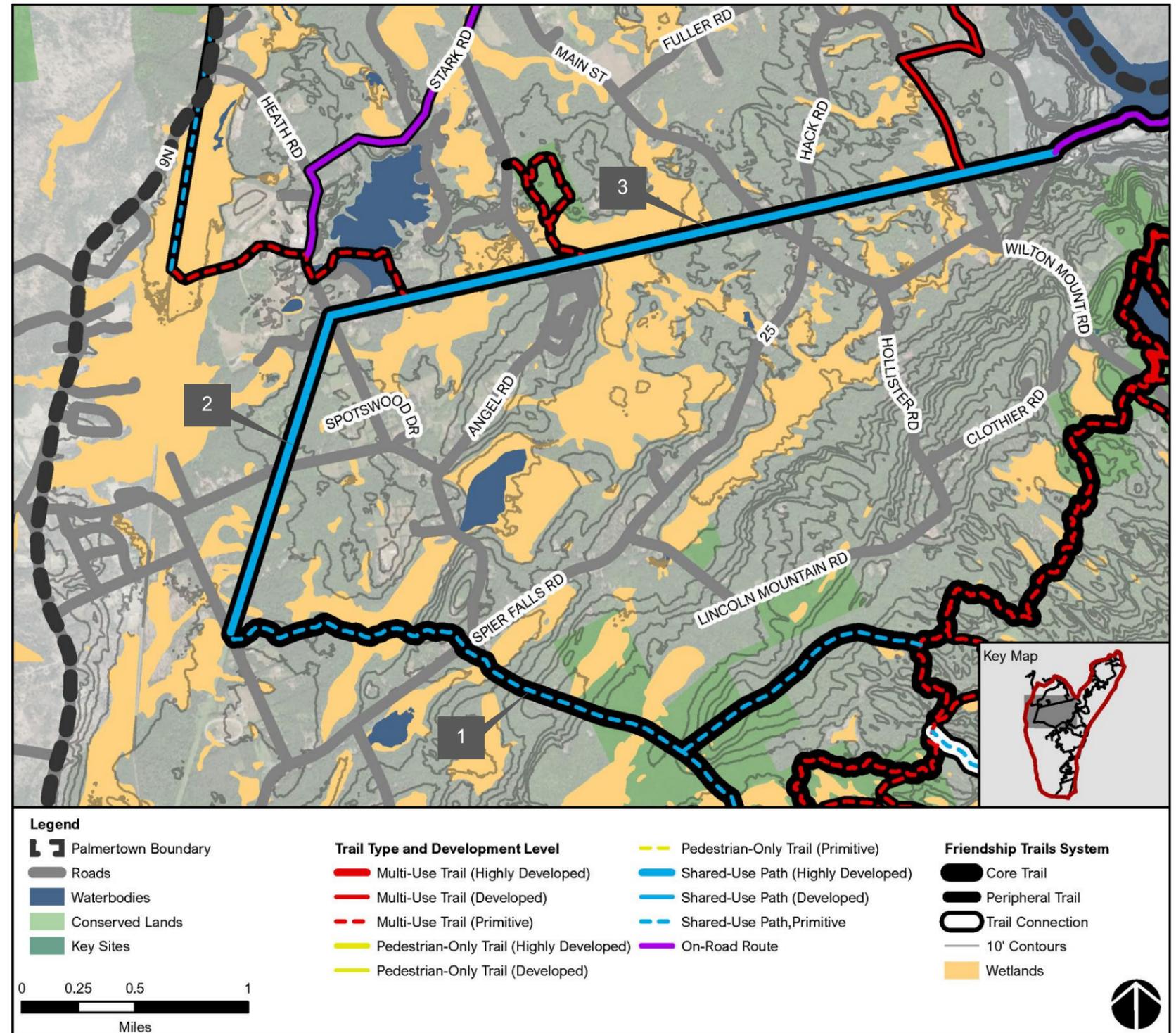
From Butler Road, the corridor enters the Big Bend property (3), which has been heavily logged. Gentle slopes on this property leave a lot of options for an alignment to the Hudson River. It is recommended that detail design consider an alignment that can connect to peripheral trails for specific uses, and connect to a proposed trailhead off of Old Bend Road.

An additional potential route exists along the Hudson river, connecting MLSP to the Big Bend property (4).



Lincoln Mountain State Forest to the Utility ROW to Moreau Lake State Park

This route continues northwest along the access road in Lincoln Mountain State Forest, following the existing snowmobile corridor (1) after crossing Spier Falls Road. It continues along the snowmobile trail until it intersects the powerline Utility ROW (2), travelling north before turning to the east at Heath Road. This alignment then continues east to Moreau Lake State Park (3), utilizing an existing trail corridor to connect to the Moreau Lake State Park to Spier Falls Road segment.

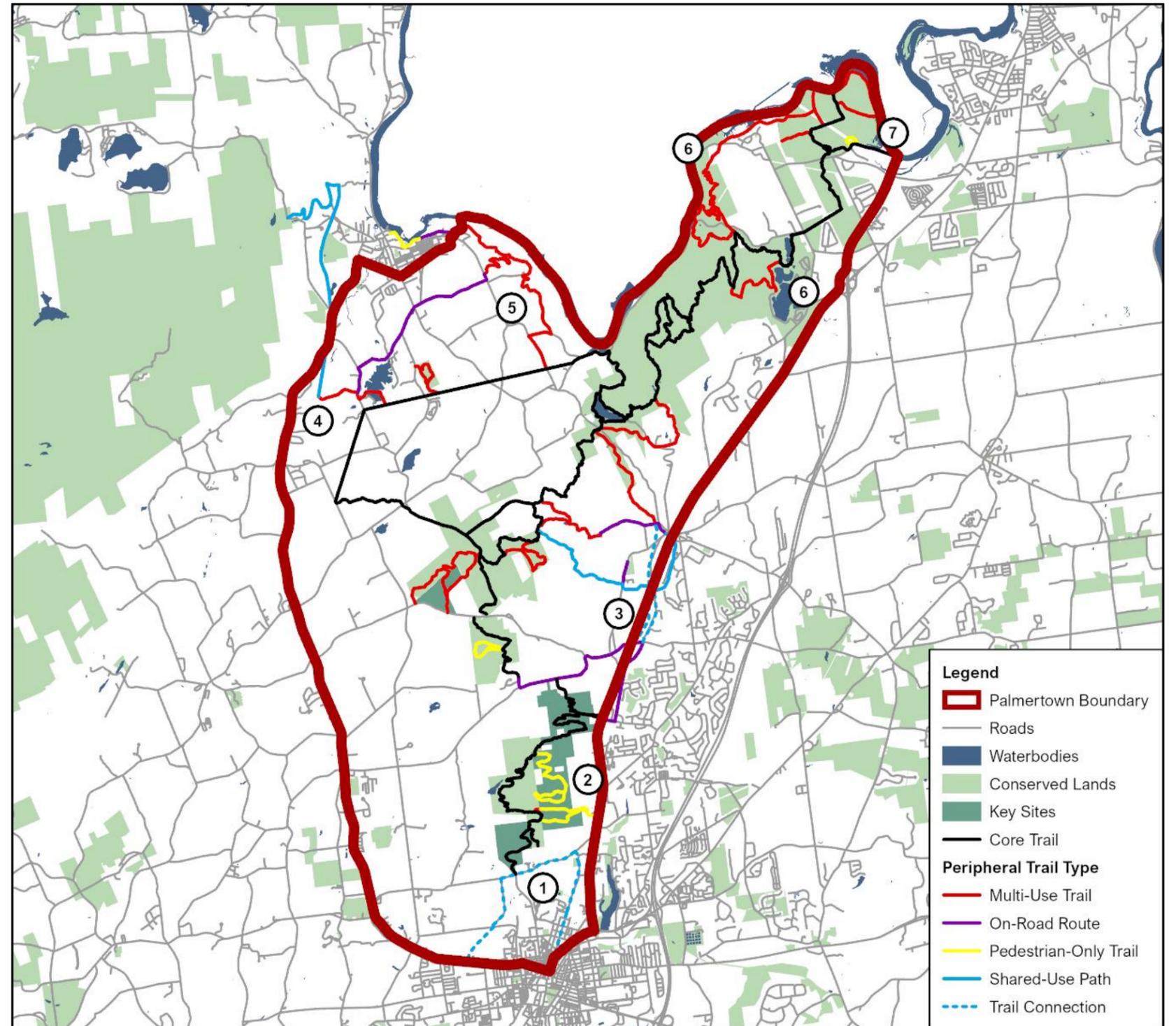


6.1.2 Peripheral Trails

Peripheral Trails represent auxiliary corridors meant to accommodate specific uses or to connect to specific access points, high priority existing trails, or other key sites or features.

Key peripheral trails:

1. **Saratoga Greenbelt**
2. **Skidmore Trails**
3. **Town of Wilton Road Trail Network:** including connection to Orra Phelps Preserve
4. **Railroad ROW to Northwest Snowmobile Trails:** This alignment is theoretical, and utilizes the railroad corridor to facilitate a connection to the existing snowmobile system that is located in the Lyme Adirondack Timberland to the northwest of the Palmertown Range.
5. **Ridge Trail to Corinth Picnic Park:** This alignment was included because of its high desirability, despite a myriad of implementation and sustainability challenges. The steep gorge walls and private parcel ownership makes a connection to Corinth that provides views to the Hudson River difficult to design and implement. Regardless, the concept of this type of trail is important to note in the master plan to assist in guiding future trail design efforts.
6. **Moreau Lake State Park Access:** While many existing trails within Moreau Lake State Park could be included as peripheral trails if so desired, these provide access from the main park area and a connection to the Hudson River.
7. **Big Bend Trails:** These existing trails follow logging roads and allow access directly to the Hudson River. Detail site design will determine if these alignments are ideal or if alternate trail alignments should be considered. These alignments could also support Shared-Use Paths.



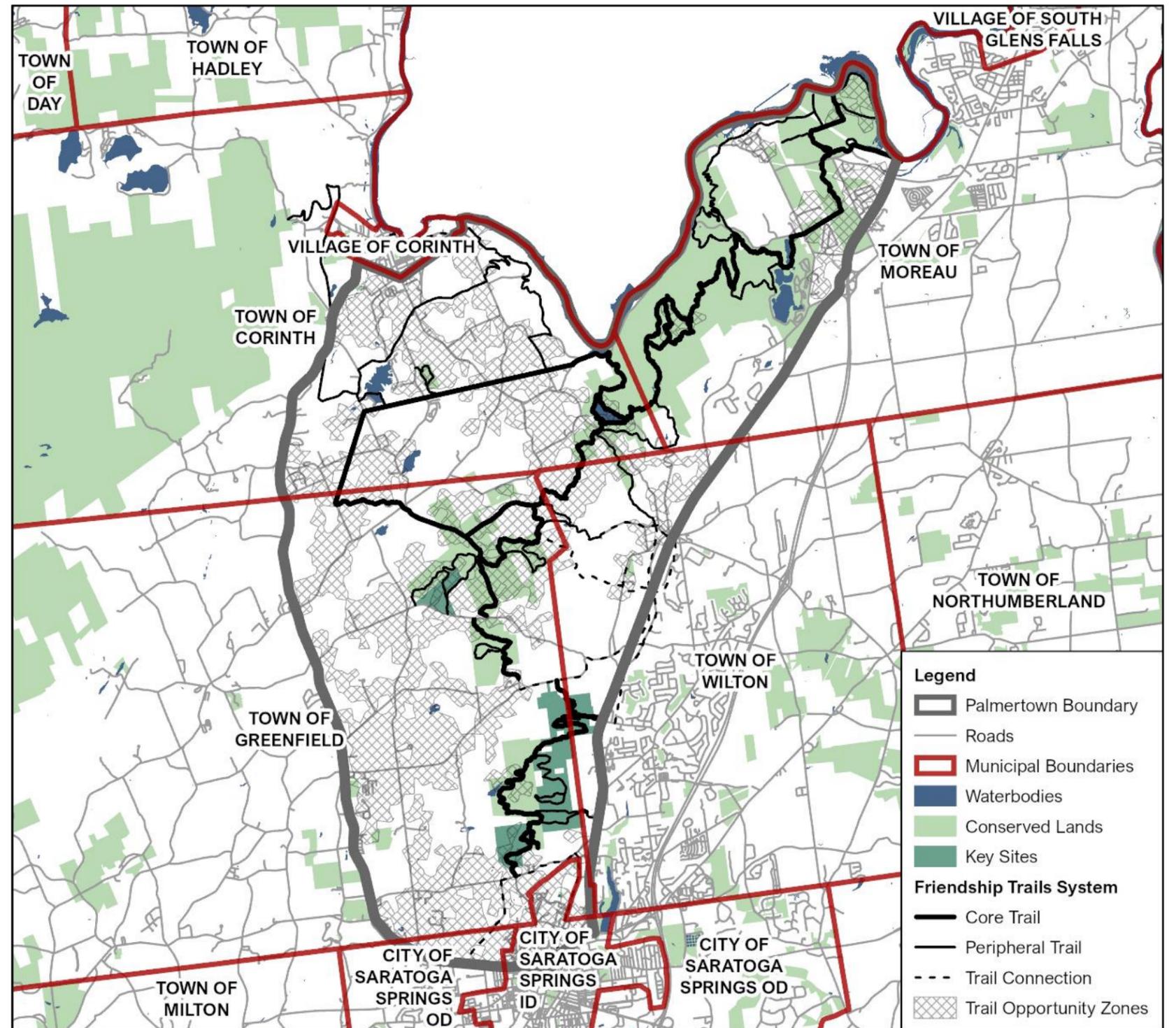
6.1.3 Other Peripheral Trails

One aim of the Friendship Trails system is to provide connectivity and broad recreational opportunities to residents of the Palmertown Region. While trails in some areas are dense and in close proximity to densely populated areas (such as Daniels Road State Forest and Moreau Lake State Park), trails are sparser in areas without large tracts of conserved lands.

This is especially evident in the areas of Greenfield and Corinth, which represent more rural and less populous areas within the Palmertown Region.

To guide future conservation and trail development, Trail Opportunity Zones designate areas that are likely conducive to future trail development because they avoid steep, rocky areas, areas with high densities of wetland, and areas with sensitive habitats. These zones could be used to identify properties that would be ideal for peripheral trail systems, and even to visualize where connections to the Core System could be located.

It is recommended that Trail Opportunity Zones be used to work with public officials in Corinth and Greenfield to identify potential trail development sites.



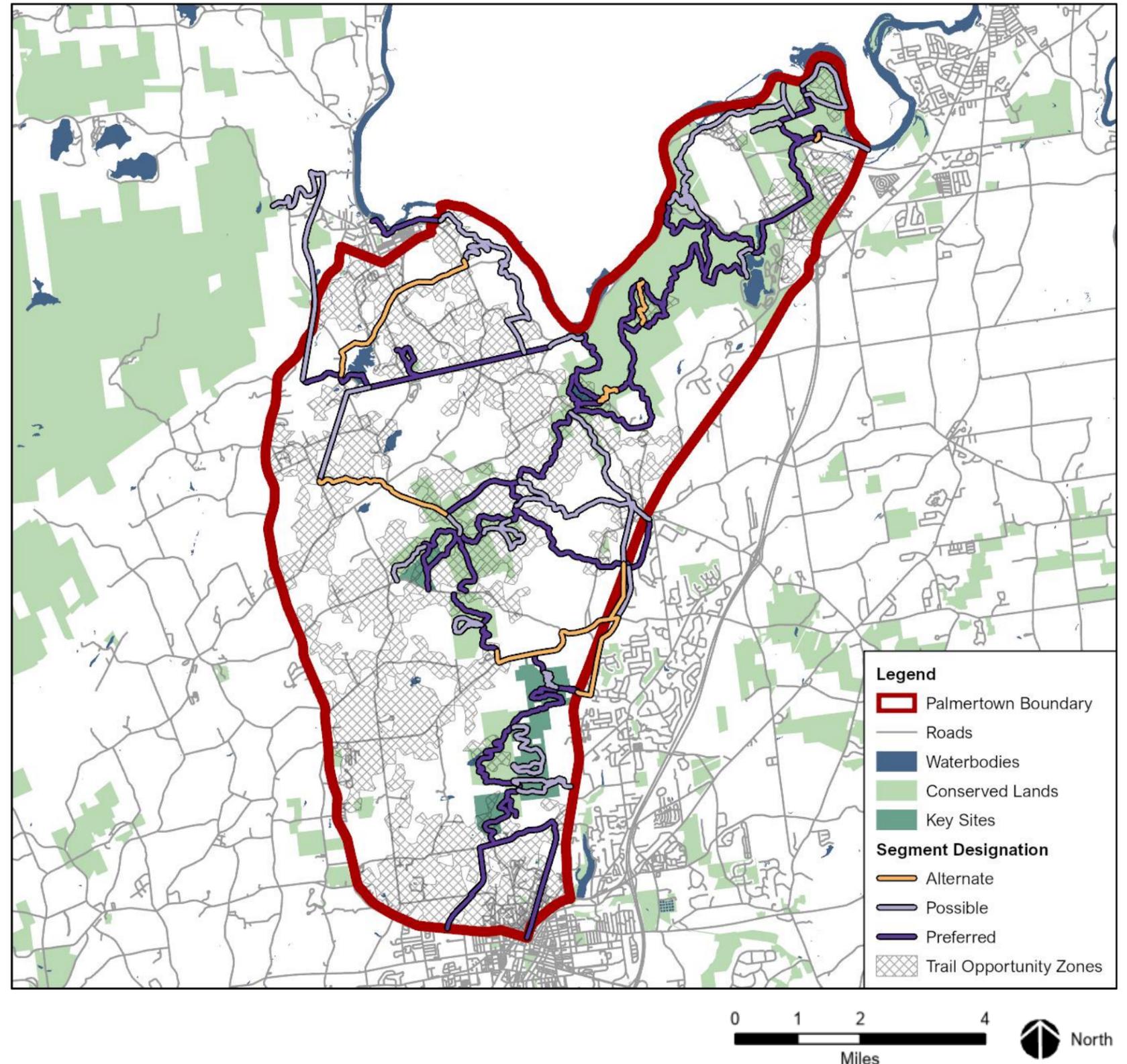
6.1.4 Trail Designations

Because this is a master plan that seeks to build in flexibility, each trail segment has also been assigned a designation describing its viability and the precision of the alignment design itself.

Trail Designations

- **Preferred:** These corridors have either been field-verified or are based on existing trails or routes reasonably shown to be viable within the trail design specifications. It is recommended that all segments undergo a detail site design process, even if the alignment was field-acquired during the master planning phase.
- **Alternate:** Existing trails or transportation network connections reasonably shown to be viable within the trail design specifications. These segments may be selected as true alternate alignments, or they can be developed alongside Preferred segments to extend the trail system.
- **Possible:** Potential corridors that are largely speculative in nature. Based on desktop analysis or feedback from stakeholders indicating a desire for a trail or an alignment that may be viable in the future. It is recommended that these be shown in all published maps as broad swaths or gestural arrows showing desired connections. Avoid showing lines intersecting private parcels. All Possible connections need to be field-verified and may present unforeseen constraints (or opportunities!) on the ground.

Because of the size of the trail system, trail designations are meant to assist readers of this plan in understanding the level of precision of each proposed trail segment and its perceived viability within the larger trail system. These designations also can assist land managers in prioritizing trail planning and implementation efforts across the system.



6.2 Trailheads and Amenities

Trailheads are proposed at convenient access points throughout the trail system. It is recommended that detail site design should examine trailhead locations and specifications for each site and take into consideration trailhead updates or expansion where appropriate.

Community input identified a need for more welcoming trailheads, with an emphasis on clear wayfinding and safety.

While it is important for the Friendship Trail system to have unified branding and for trails to share a hierarchy and set of design standards, trailheads are envisioned as points to define a unique character for each trail segment. This could be created by defining a variety of regional themes, and having a set of material standards for installations like structures and kiosks to suit each theme, while maintaining consistent graphics and level of development. Like the trail system, trailhead amenities are proposed to follow a hierarchy based on the anticipated level of use and available space at each site. The proposed hierarchy below includes a collection of amenities, all of which may not be appropriate at any given trailhead. This list is meant to be used during detail site design considerations as a base for trailhead design.

Additional resources:

- **US Forest Service Trailhead Design Guidelines:** While the linked document was created for the Continental Divide Trail, it provides an excellent overview of issues impacting trailheads and the amenities that should be present at different trailhead sites. https://www.fs.usda.gov/sites/default/files/fs_media/fs_document/CDT_trailhead_guidelines_0.pdf

Small Trailhead (Single Mode)

For low-use trailheads or trailhead with limited space. This type of trailhead only accommodates motor vehicle parking.

- Advance-warning signage on road
- Pedestrian crossing signage and striping
- Timber entrance gate
- Minimum 18' wide gravel entrance drive up to 200' in length
- Parking for 8 cars, one ADA parking space
- Small entrance sign
- Single sided kiosk with trailhead information map
- Small directional 'finger' signage

Medium Trailhead (Dual Mode)

For medium-use trailheads to accommodate access via motor vehicles and bicycles. Requires more space at trailhead area.

- Advance dual mode warning signage on road
- Dual mode crossing signage and striping
- Timber entrance gate
- Minimum 20' wide gravel entrance drive up to 500' in length
- Gravel parking for 20 cars, four ADA parking spaces
- Large entrance sign
- Two-sided kiosk with trailhead information map and interpretive information
- Two benches or equivalent seating areas
- Single 400 square foot open pre-engineered shelter with a gravel floor
- Bicycle rack for 8 bikes
- Bicycle repair station
- Small directional 'finger' signage

Large Trailhead (Multiple Mode)

For popular trailheads. Accommodates motor vehicles, bicycles, and hand-boat launch. Boat launch may not be appropriate in all instances where a larger parking area and trailhead is appropriate.

- Advance multiple mode warning signage on road
- Multiple mode crossing signage and striping
- Two timber entrance gates
- Two Minimum 20 wide' gravel entrance drives up to 500' in length
- Two to three gravel parking areas for a total of 50 cars plus 8 cars with trailers, and 8 total ADA parking spaces
- Two large entrance signs
- Two double sided kiosks with trailhead information map and interpretive information
- Eight picnic tables
- Eight seating benches or equivalent seating areas
- Two eight bicycle capacity racks
- Bicycle repair station
- Car top boat launching site
- Two small 400 square foot pre-engineered shelters with gravel floors
- Design for installation of a pre-engineered dual composting toilet facility
- Invasive species removal station for boaters
- Small directional 'finger' signage

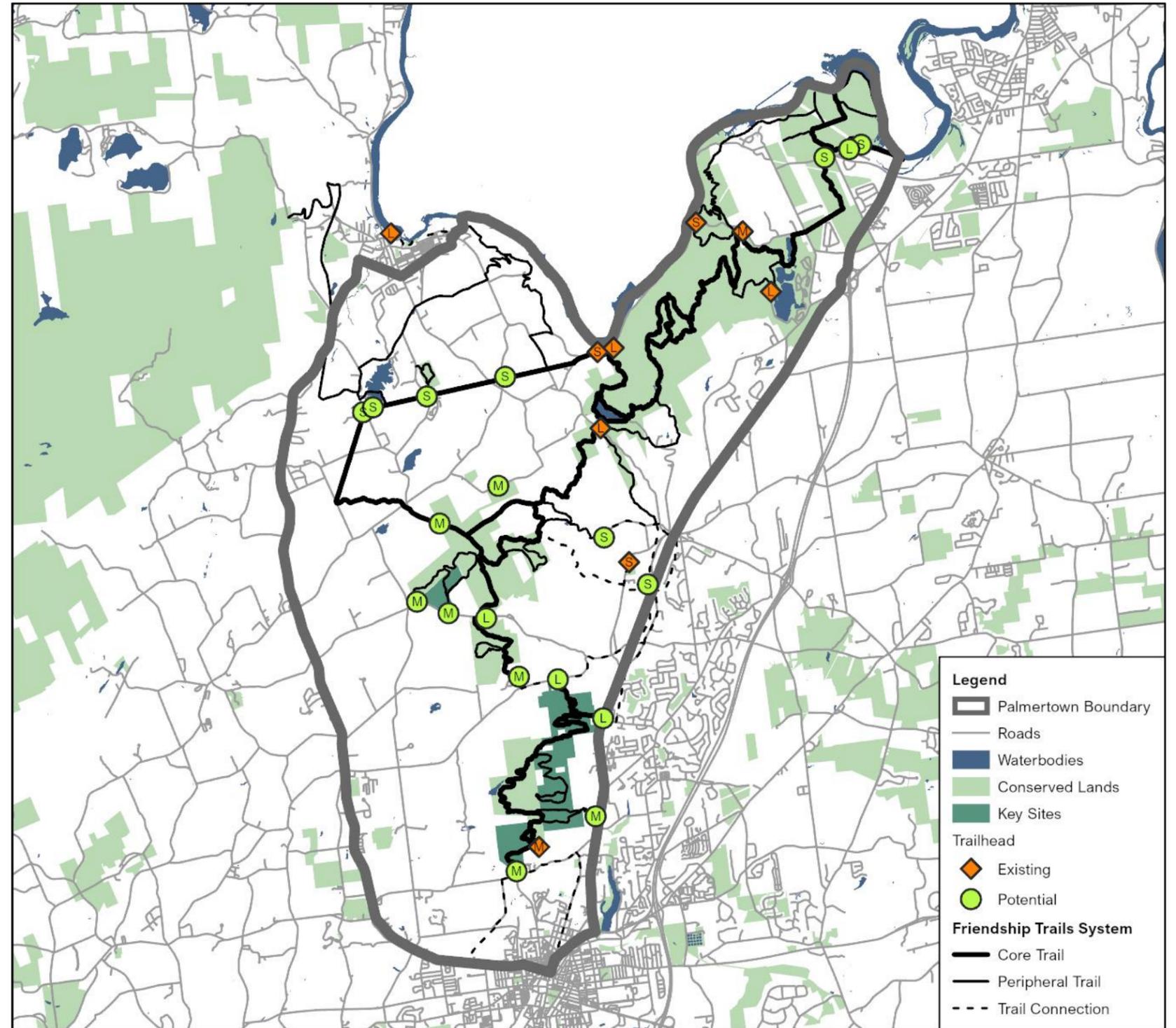
Right: An example of a simple trailhead with restroom structure, small parking lot, and signage. From www.americantrails.org



6.2.1 Existing and Proposed Trailheads

This map shows existing and proposed trailheads within the Palmettown Region. Trailheads have been proposed at logical roadway access points, with the goal of spreading out access pressure throughout the system and accommodating visitors at the most popular trailheads (whether existing or anticipated).

- S = Small Trailhead
- M = Medium Trailhead
- L = Large Trailhead



6.3 Interpretive Themes

Community input identified a strong desire for interpretation along the trails to educate trail visitors about their surroundings. Possible interpretive themes have been identified regionally across the trails system and include:

- **Indigenous and Cultural History:** Relevant in areas with historic Native American activity and the presence of early colonial settlers.
- **Industrial History:** The railroad corridor and Hudson River regions are ideal for interpretation related to local industrial history such as paper production, logging, and hydroelectric power. These themes can be related to present day industrial activities as well.
- **Ecology and Biology:** Appropriate in areas with sensitive landscapes such as wetlands, or where habitat restoration is taking place.
- **Hydrology and Geology:** The unique geology of the area is simultaneously very obvious in terms of the steep topography in places, and obscured in terms of the underlying soils and sandplains. While the Hudson River is perhaps the most iconic waterbody, the Palmertown Range has many opportunities for interpretation related to hydrology. From wetlands to steep creeks, these are excellent opportunities to educate visitors about their surroundings.

Sample routes have been provided to guide interpretation of these themes across the Friendship Trails System, creating a curated experience for visitors to learn about these specific themes as they enjoy the trails.

6.3.1 Interpretation and Branding

The identified interpretive themes also provide opportunities to create branding across the trail system through the materials and design of trail amenities like signage and other trailhead features. Intentional design of these types of amenities can create a cohesive identity throughout the Friendship Trails, enriching the experience and reinforcing the character of this unique regional experience.

Additional Resources:

- **American Trails** is an outstanding resource with articles and webinars regularly posted pertaining to interpretation, signage, and branding. Visit www.AmericanTrails.org for more information.
- **The New York Department of Parks, Recreation, and Historic Preservation** has a set of comprehensive guidelines for signage, and it is recommended that this document be used to guide signage, wayfinding, and interpretation design throughout the Friendship Trails system. See <https://parks.ny.gov/documents/recreation/trails/TrailsTechnicalSignageGuidelines.pdf> for more information. (NYS Office of Parks, Recreation and Historic Preservation, 2021)



Examples of how signage displays can reinforce the identity of a trail system and help tell the story of place. (Macdonald, 2019)

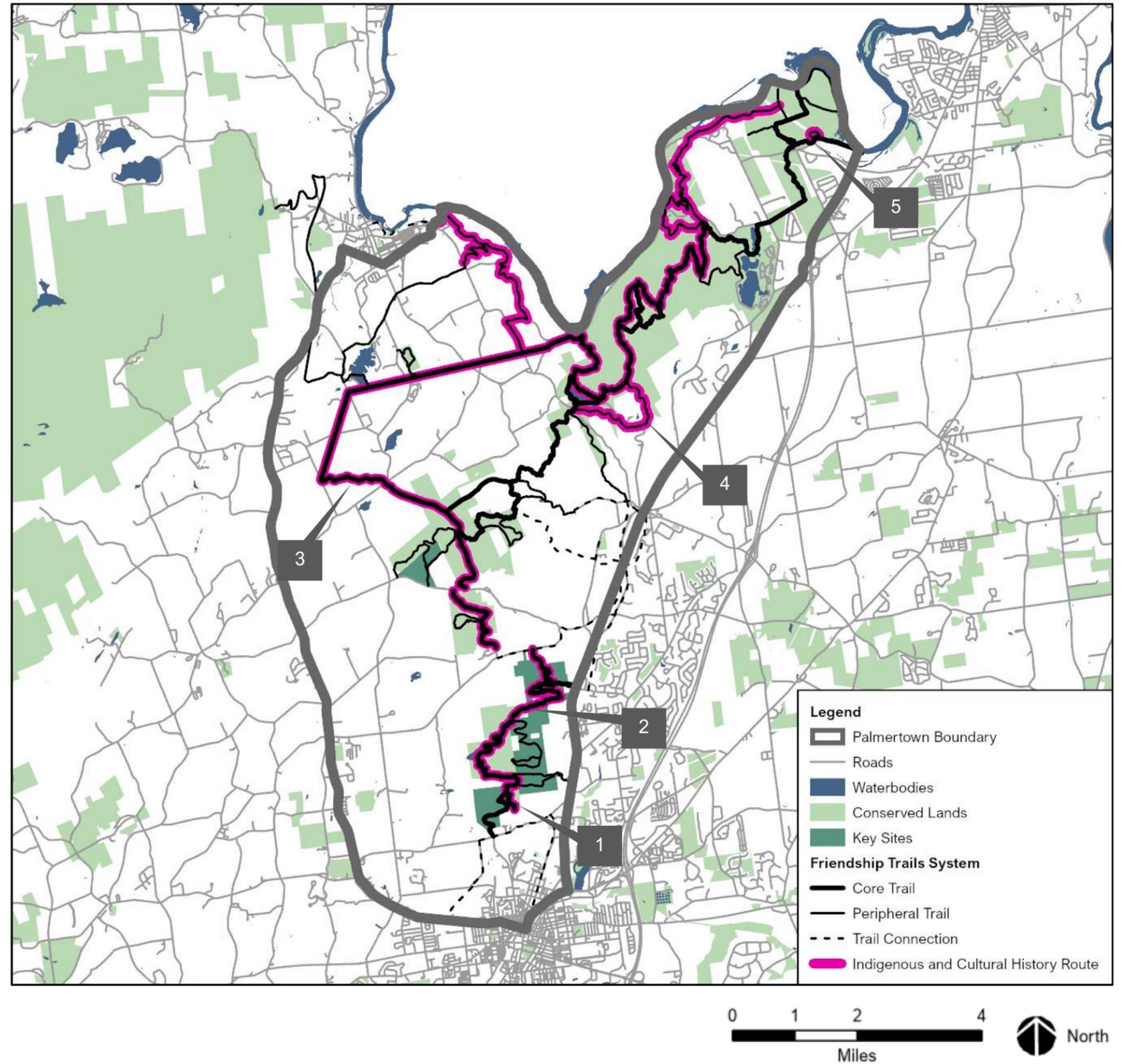
6.3.2 Indigenous and Cultural History

This sample route explores some indigenous and cultural history destinations throughout the Palmertown Region.

1. Native American Mortar
2. Native American Kayaderosseras Trail
3. Native American Trail (unnamed)
4. Grant Cottage
5. Historic Cemetery

Additional Resources:

- Indigenous history in the Palmertown Range by Charlie Burgess (Burgess, 2021)
- Saratoga County Communities: An Historic Perspective (Johnstone, 1980)



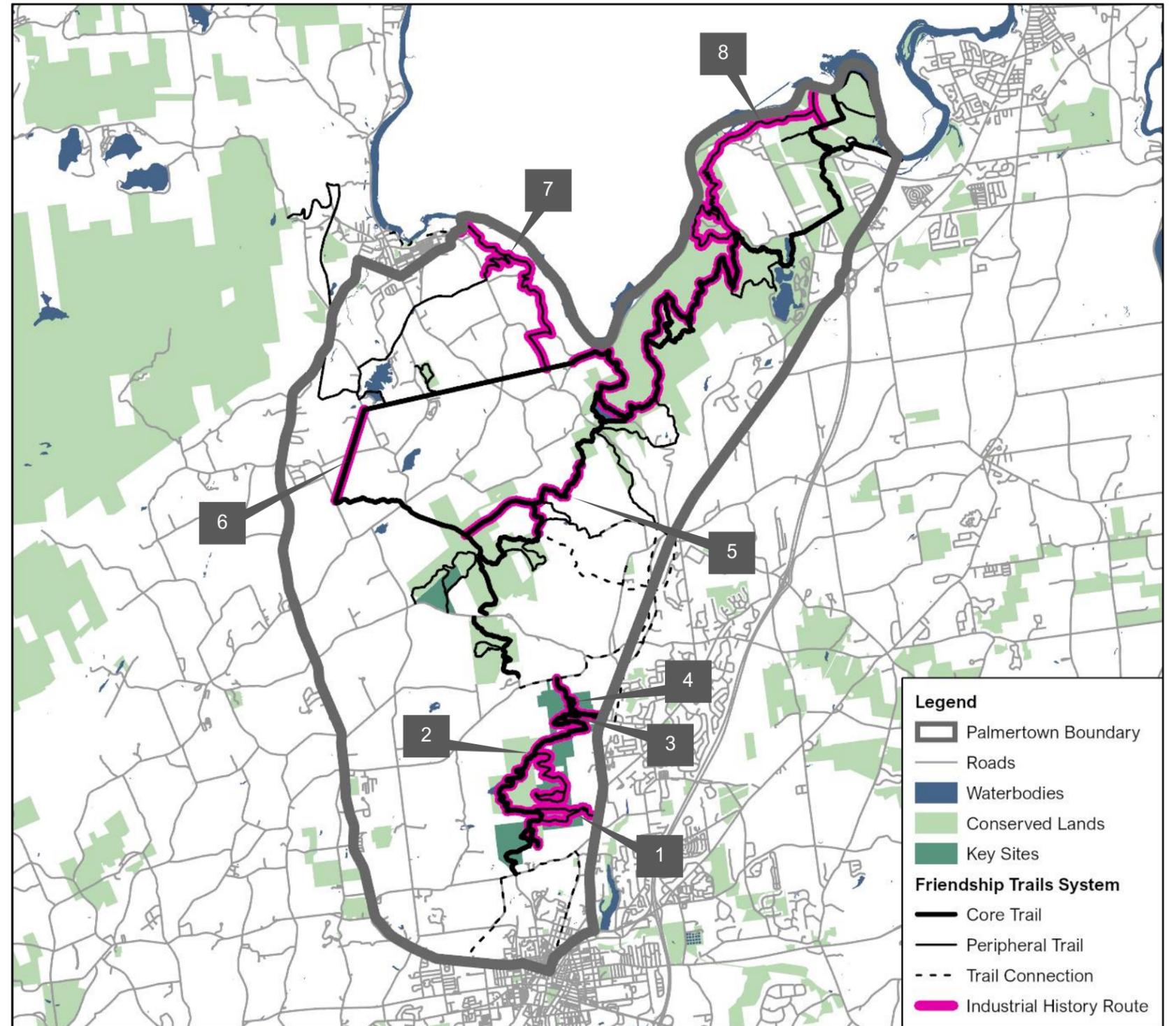
6.3.3 Industrial Past and Present

This sample route explores industrial destinations, including historic mines and mining encampments as well as modern industrial features in the landscape such as hydroelectric dams and forest stewardship sites.

1. Skidmore forestry
2. Devil's Den (former mine site)
3. Former mine encampment
4. Former graphite mine site
5. Forest stewardship
6. Railroad
7. Hudson river and dam
8. Hudson river and dam

Additional Resources:

- <https://wildadironacks.org/adirondack-wilderness.html>



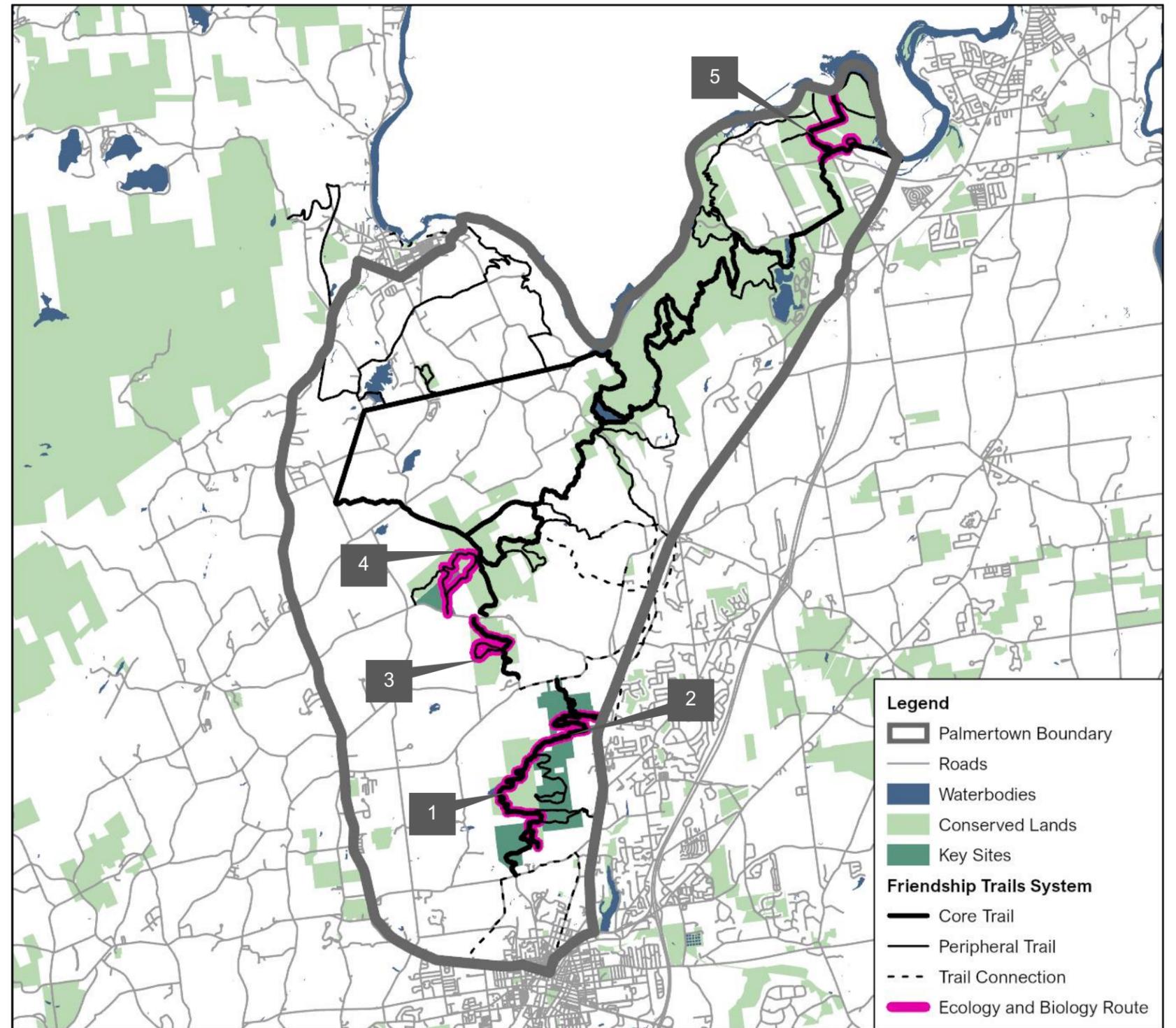
6.3.4 Ecology and Biology

This sample route explores trails that traverse unique landscapes within the Palmertown Region. These trails offer opportunities for viewing of unique plant and animal communities, and would be ideal for birders and native plant enthusiasts.

1. Wetlands and wildlife
2. Ridge ecosystem and unique plant communities
3. Large wetland
4. Large wetland and Tupelo Trees
5. Sand plains and Karner blue butterfly management

Additional Resources:

- <https://wildadironacks.org/adirondack-habitats.html>



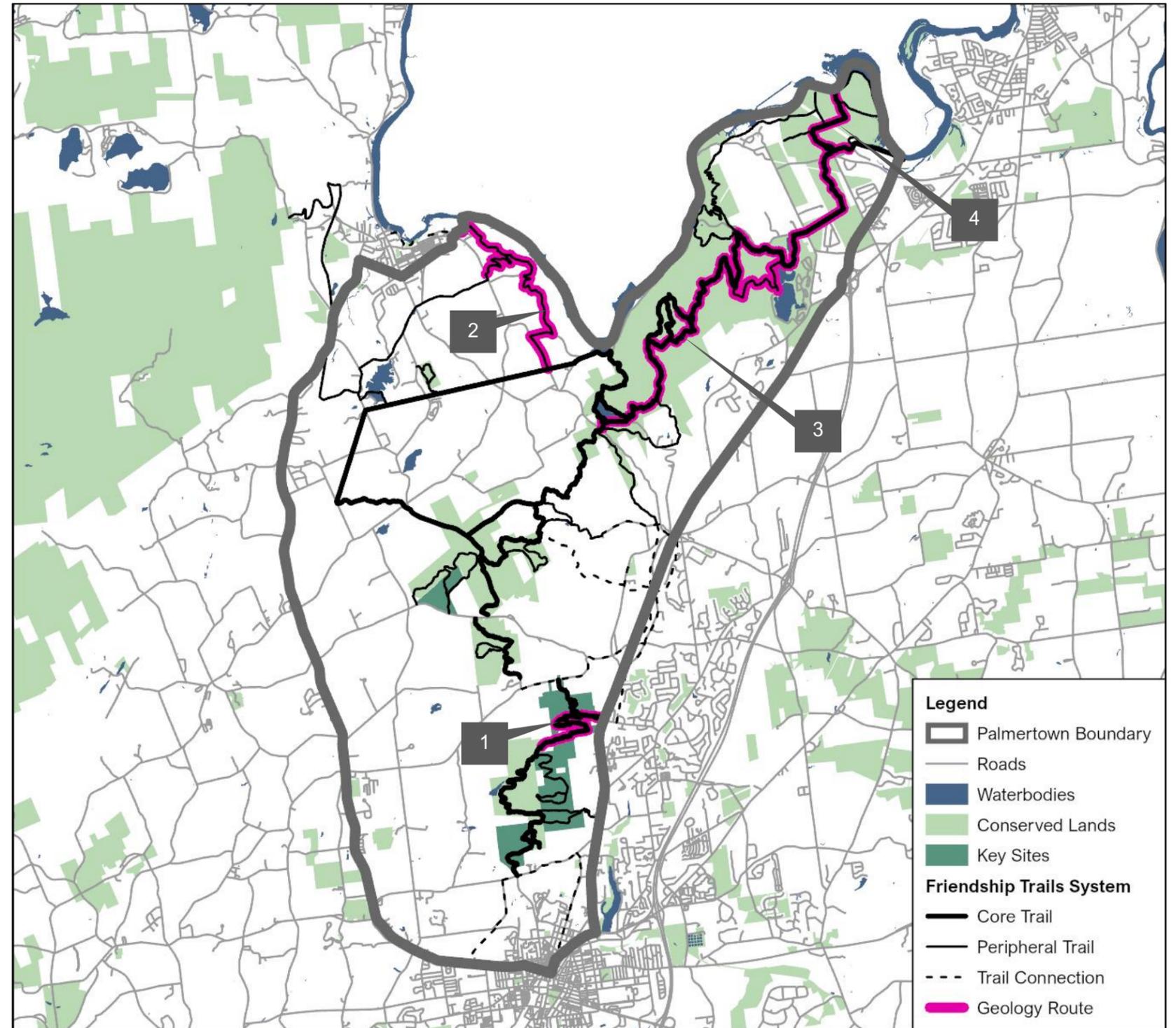
6.3.5 Hydrology and Geology

This sample route explores trails that traverse notable geologic features within the Palmertown Region. These trails offer opportunities for experiencing the drastic topography contrasts caused by differing geology. The Friendship Trails system also has trails located in every minor watershed within the Palmertown Region, and it is recommended that this theme be incorporated into the overall interpretive strategy.

1. Ridge climb and traverse
2. Hudson ridge traverse
3. Moreau Lake State Park ridge traverse
4. Saratoga sand plains

Additional Resources:

- <https://wildadirondacks.org/adirondack-geology.html>



7. Trail Costs

This chapter estimates the costs to build each segment of the Sarah B. Foulke Friendship Trail, and provides some potential funding sources including auxiliary economic activities that may be utilized to support trail implementation and maintenance.

7.1 Estimating Trail Costs

On a trail network as large as the Friendship Trails system, it is difficult to accurately estimate costs due to variance in topography, construction access, construction methods, and many other factors. However, it is possible to outline a range that can be expected in the Palmertown Region based on the known conditions and defined Trail Parameters to calculate general figures that can be adjusted based on each individual site. The ranges below are based on anticipated 2021-2022 pricing for privately bid and constructed projects built by Professional Trail Builder Association member companies (not subject to prevailing wage). They can be viewed as a starting point for estimating total project costs and from there estimating conceptual and detail design costs.

- **Primitive Trail Types:** \$6-7 per linear foot
- **Developed Trail Types:** \$15-20 per linear foot
- **Highly-Developed Trail Types:** \$20-100 per linear foot

Factors that affect whether an individual trail will fall on the high or low end of the spectrum include:

- **Total quantity of trail**
- **Type of terrain:** wet or steep areas increase costs, whereas areas with gentle topography are easier to operate machinery on and require fewer structures.
- **Type of soils:** Loamy soils are more conducive to trail building, while clay, sand, and rock are somewhat more challenging. Boggy or wet areas make construction access more difficult and may require more expensive structures to be built.
- **Construction access:** Proximity to roads and topography impact how difficult it is to transport material and equipment to the site.
- **Character of Vegetation:** Dense, brushy sites are difficult to lay out trail in and require heavier brushing at the beginning of trail construction. Open sites are easier to maneuver equipment. Certain tree species such as birch have surface roots that can impede trail construction.
- **Type of materials:** Native soil surfaced trails don't require additional materials to be brought in, though stonework for retention or steps can increase costs. Importing aggregate or timber for tread and structure can increase costs. Other types of structures like boardwalks and bridges can increase costs exponentially.

While estimating trail construction costs is the first step, it is important to also consider additional costs that are part of the trail design and construction process.

Conceptual Design is the process of laying out a given segment of trail and defining the various structures and elements that will make up the trail. This is done to be able to provide a more accurate cost estimate and understand the extent of trail construction and what permitting may apply. While this step adds another level of cost, the result is a "rough" design and high confidence cost estimate that can be easily modified. Wetland delineation and other types of environmental investigations should be done as part of this project phase. Conceptual design costs can typically be estimated at about 5% of the total expected construction cost.

Detail Design and Construction Documentation is the process of taking a conceptual design and converting it into a detailed plan set for permitting, bidding, and construction purposes. Detail design costs can typically be estimated at about 15% of the total expected construction cost.

Pre-Construction and Permitting is the process of applying for approval from applicable agencies based on the amount of earth disturbance and other types of impacts. While the conceptual design phase identifies which permits may be required, a completed plan set is typically required to outline exact types and quantities of impacts. Permitting costs vary widely depending on the nature of the trail and the site and cannot be accurately estimated as part of a Master Plan process.

Construction Management is the process of overseeing trail construction to ensure that it adheres to the plan set. For Primitive and Developed trail types, this may not result in added cost, but for more complex trails in sensitive environments or with many structures, construction management costs can add up to 20% to the total trail construction cost.

7.2 Funding Sources

Competitive state and federal grant funding opportunities can be considered a form of "legalized gambling." Grant programs inherently include a host of unknowns ranging from undisclosed agency preferences to the mood of the application reviewer. As such, it is difficult to pinpoint a percentage likelihood of funding of a project for particular programs. There is usually more than one major funding program that will fund a particular kind of project as well there are a number of small funding programs that can fund parts of a large project.

Keys to Success

The odds of receiving a grant award greatly increase when an application clearly communicates that:

- The community targets a program in advance and takes steps in advance of the announcement of funding availability
- The project fits the priorities of the granting agency
- The project fills a need in the community and will clearly benefit the community and beyond
- The project is supported by the community members and is listed as a project in local plans
- The project needs the funding to be successfully completed
- The project is ready to progress as soon as funding is provided, meaning any permits, approvals, property acquisitions have been completed
- The community has a track record that demonstrates they have the capacity to manage the project to completion:
- The applicant demonstrates a commitment to funding the required local match

Creative Grants Management

The local match for a large project can involve significant sums of money. “Piggybacking” or using one grant award as the local match for another has to be in accordance with the applicable program regulations.

Another important source of local match is ‘in-kind’ services performed by municipal forces, also called force account. Portions of the work or the entire project can be constructed by force account using grant funds to purchase materials and supplies. Most programs will reimburse for wages and benefits of work force that provides the services at their current pay rate. Equipment costs are also eligible, fuel costs, administrative costs, construction inspection, maintenance and protection of traffic and other construction related costs. Volunteer labor is also eligible to offset the local match, however, it is usually an insignificant factor on large trail projects.

Some programs include the value of recently purchased land to be used as a portion of the local match. In the case where municipal land is a former utility or other land use converted to recreational use, the value of that land can also be used as part of the local match.

7.2.1 Federal Grant Programs

Transportation Alternatives (TAP): This program helps communities deliver safe, transformative and innovative projects of value to the public that contribute to the revitalization of local and regional economies by funding programs and projects defined as transportation alternatives. Projects are expected to improve mobility, accessibility, and the community’s transportation character such that the street network is more vibrant, walkable and safer for all transportation mode users, in particular pedestrians, bicyclists, transit users and drivers. Originally established under MAP-21, TAP now includes funding for what previously comprised three separate programs (Transportation Enhancements, Safe Routes to School, and Recreational Trails). Projects require a 20 percent local match and the minimum grant amount is \$250,000. Competitive Grants are available every 2 years administered by NYS DOT. Eligible activities include:

- On and off Road bicycle and pedestrian facilities
- Safety related infrastructure projects for improving non-driver access to public transportation and enhanced mobility
- Conversion and use of abandoned railroad corridors for trails for non-motorized transportation users
- Safe routes to school projects
- Projects for planning, designing or constructing boulevards or other roadways largely in the right of way of former divided highways
- Eligible secondary project activities include community improvement and environmental mitigation
- Construction of turnouts, overlooks and viewing areas

Recreational Trails Program: Funded under the Transportation Alternatives umbrella, is administered separately by the NYS Office of Parks, Recreation and Historic Preservation. Funds may be used for all kinds of trail projects. Of the funds apportioned to a state, 30 percent must be used for motorized trail uses, 30 percent for non-motorized trail uses, and 40 percent for diverse trail uses (any combination). Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, cross-country skiing, snowmobiling, off-road motorcycling, all-terrain vehicle riding, four-wheel driving, or using other off-road motorized vehicles.

Conservation Fund (LWCF) Grants: This federal funding source was established in 1965 to provide “close-to-home” parks and recreation opportunities to residents throughout the United States. Money for the fund comes from the sale or lease of nonrenewable resources, primarily federal offshore oil and gas leases, and surplus federal land sales. LWCF grants can be used by communities to build a variety of parks and recreation facilities, including trails and greenways. LWCF funds are distributed by the National Park Service to the states annually. Communities must match LWCF grants with 50 percent of the local project costs through in-kind services or cash. All projects funded by LWCF grants must be used exclusively for recreation purposes, in perpetuity. Projects must be in accordance with each State’s Comprehensive Outdoor Recreation Plan. In the past the NYS Office of Parks, Recreation and Historic Preservation has administered LWCF grants in New York State.

7.2.2 State and Regional Funding Sources

Statewide Transportation Improvements Plan (STIP): This is the Five Year plan that Metropolitan Planning Organizations use to plan their transportation spending. Any project funded by federal or state funded grants is listed on the STIP. It is regularly updated to add, remove or change the scheduling of projects. A project can also be added by preparing an Initial Project Proposal and submitting a request to amend the STIP to include the project. Once the amendment is accepted there is no competition for funds. Any DOT or Federal Highway funded project will be put on the STIP including a CMAQ, TAP, Recreational Trails Program, Scenic Byways Grant. In the past discretionary or 'pork barrel' projects including trails that were unsuccessful in obtaining other funding were funded under various 'Multimodal' programs from the STIP. In addition, programs listed on the STIP will be given priority for special funding such as Stimulus Funding that might be created to re-energize the economy.

CHIPS (Consolidated Local, State, and Highway Improvement Program): Funds are administered by NYSDOT for local infrastructure projects. Eligible project activities include bike lanes and wide curb lanes (highway resurfacing category); sidewalks, shared use paths, and bike paths within highway right-of-way (highway reconstruction category), and traffic calming installations (traffic control devices category). CHIPS funds can be used for TAP grant program local match requirements.

Regional Economic Development Councils (REDC) CFA Program: New York State's Consolidated Funding Application (CFA) is a streamlined resource through which applicants can access multiple financial assistance programs made available through various state agencies. The CFA provides the opportunity for local governments (and other eligible applicants) to submit a single grant application to state agencies that may have resources available to help finance a given proposal. All submitted CFAs are also reviewed by the applicant's Regional Economic Development Council, which may elect to endorse the proposal as a regional priority project. Several grant resources have been made available that may be appropriate funding opportunities for implementation of active transportation efforts, including several of the programs identified below.

CFA-Office of Parks, Recreation and Historic Preservation Program: EPF Parks, Preservation and Heritage grant funding is available for the acquisition, planning, development, and improvement of parks, historic properties, and heritage areas located within the physical boundaries of the State of New York. Grants can fund up to 50% of the total eligible project cost; up to 75% if the project is located in a high-poverty area as defined below. Grant awards are capped at \$500,000. <https://parks.ny.gov/grants/consolidated-funding-app.aspx>

CFA-Department of State's Local Waterfront Revitalization Program: Local Waterfront Revitalization Program (EPF LWRP) from eligible villages, towns, cities located along New York's coasts or designated inland waterways or counties (with the consent and acting on behalf of one or more eligible villages, towns, cities) to advance the preparation or implementation of strategies for community and waterfront revitalization through the following grant categories:

- Preparing or Updating a Local Waterfront Revitalization Program (LWRP)
- Preparing an LWRP Component, including a Watershed Management Plan
- Updating an LWRP to Mitigate Future Physical Climate Risks
- Implementing a Local Waterfront Revitalization Program or a completed LWRP Component

State assistance awarded and paid shall not exceed 75% of the total eligible project costs set forth in the application and as approved by the Department, except where the proposed project is located in an environmental justice community, in which case state assistance awarded and paid shall not exceed 85% of the total eligible project costs set forth in the application and as approved by the Department. <https://dos.ny.gov/funding-bid-opportunities>
CFA-NYS DEC Climate Smart Communities (CSC) – This NYS Department of Environmental Conservation Climate Smart Communities Program grant application is funded through the Regional Economic Development Councils Consolidated Funding Application (CFA). The program funds a variety of climate smart projects including trails. The project would be eligible for planning and implementation funding under the Mitigation Implementation – Reduction of Vehicle Miles Traveled project category. CSC Grants can fund up to up to 50% of the project costs and grant awards are typically up to a maximum of \$2,000,000. <https://www.dec.ny.gov/energy/109181.html>

7.2.3 Private Funding Sources

Hudson River Valley Greenway Grants: The Hudson River Valley Greenway and Greenway Conservancy offers grants four times per year under a variety of programs for communities that have joined the Greenway or have a County Greenway Compact. Saratoga Springs, Moreau and Wilton are all members of the Greenway and eligible for various grants. Specific trails grants are available once per year with a maximum grant award of \$40,000. Smaller grants of up to \$10,000 are available for everything from planning to interpretive signage. Greenway grants generally require a local match equal to the grant award. <https://hudsongreenway.ny.gov/grants-funding>

PeopleForBikes: The PeopleForBikes Community Grant Program strives to put more people on bicycles more often by funding important and influential projects that leverage federal funding and build momentum for bicycling in communities across the U.S. Most of the grants awarded to government agencies are for trail projects. The program encourages government agencies to team with a local bicycle advocacy group for the application. Applications for accepted bi-annually for grants of up to \$10,000 each (with potential local matches). <http://www.peopleforbikes.org/pages/community-grants>

American Hiking Society National Trails Fund: The American Hiking Society's National Trails Fund is the only privately funded national grants program dedicated solely to hiking trails. National Trails Fund grants have been used for land acquisition, constituency building campaigns, and traditional trail work projects. Since the late 1990s, the American Hiking Society has granted nearly \$200,000 to 42 different organizations across the US. Applications are accepted annually with a summer deadline. <http://www.americanhiking.org/NTF.aspx>

The Global ReLeaf Program: The Global ReLeaf Forest Program is American Forests' education and action program that helps individuals, organizations, agencies, and corporations improve the local and global environment by planting and caring for trees. The program provides funding for planting tree seedlings on public lands, including trail sides. Emphasis is placed on diversifying species, regenerating the optimal ecosystem for the site and implementing the best forest management practices. This grant is for planting tree seedlings on public lands, including along trail rights-of-way. http://www.americanforests.org/global_releaf/grants/

The Robert Wood Johnson Foundation: The Robert Wood Johnson Foundation seeks to improve the health and health care of all Americans. One of the primary goals of the Foundation is to "promote healthy communities and lifestyles." Specifically, the Foundation has an ongoing "Active Living by Design" grant program that promotes the principles of active living, including non-motorized transportation. Other related calls for grant proposals are issued as developed, and multiple communities nationwide have received grants related to promotion of trails and other non-motorized facilities.

<http://www.rwjf.org/grants/>

Conservation Alliance: The Conservation Alliance is a group of outdoor businesses that supports efforts to protect specific wild places for their habitat and recreation values. Before applying for funding, an organization must first be nominated by a member company. Members nominate organizations by completing and submitting a nomination form. Each nominated organization is then sent a request for proposal (RFP) instructing them how to submit a full request. Proposals from organizations that are not first nominated will not be accepted. The Conservation Alliance conducts two funding cycles annually. Grant requests should not exceed \$35,000 annually.

<http://www.conservationalliance.com/>

Surdna Foundation: The Surdna Foundation seeks to foster just and sustainable communities in the United States, communities guided by principles of social justice and distinguished by healthy environments, strong local economies and thriving cultures.

<http://www.surdna.org>

8. Other Recommendations

This Master Plan is one of the first steps toward implementing the Friendship Trails for the Southern Palmertown Range. While a large amount of data gathering and analysis was undertaken to create the conceptual trail alignments, more study is needed in order to further refine the design and better understand how each trail segment may take shape. The following list includes items to be aware of as each project is undertaken, next steps in the trail design process, and areas recommended for further study in the future.

8.1 Permitting

Several agencies are likely to have approval authority over aspects of the project on several levels including federal (Army Corps of Engineers, US Coast Guard); state (State Environmental Quality Review/NYS Department of Environmental Conservation, NYS Office of Parks, Recreation and Historic Preservation/State Historic Preservation Office, NYS Department of Transportation); county (Highway Department); and local municipalities (Towns of Corinth, Greenfield, Moreau and Wilton). Many of the federal and state permits requirements will be satisfied fully or in part during the State Environmental Quality Review Act (SEQRA) compliance process, including wetlands, historic preservation, archeology and threatened and endangered species. Local zoning laws, wetlands laws, grading permits and flood hazard permits may also need to be addressed during SEQRA review. Other permits are considered ministerial including grading permits, building permits, highway work permits and other similar permits that are not discretionary. In addition, memorandums of agreement will be needed to outline the agreements between the various project parties for how approvals, permits, construction, operation and maintenance will be accomplished. See the Appendix for more in-depth detail regarding permitting and the applicability of SEQRA to the Friendship Trails project.

8.2 Constructability

The remote nature of some of the trail segments is an obvious challenge facing the implementation of the Friendship Trails. Access is limited and some of the ecosystems are sensitive and dynamic. Difficult access will result in increased construction costs. These increased construction costs should be factored into cost estimates for individual segments and taken into consideration as trail segments are prioritized for designs and constructions. Aside from some bridges and boardwalks that will be necessary, the vast majority of the Core Trail is basic in terms of trail construction if executed by an experienced contractor. In addition, it is possible that supervised and trained volunteers or organization staff could be utilized to reduce the cost of portions of the trail installation.

General construction recommendations for all Friendship Trails:

- New and existing trail will have trees and brush less than three inches DBH (diameter at breast height) removed within one foot of the edge of the trail tread. Trees greater than three inches DBH may be left in the trail corridor if they are more than one foot from the edge of the trail tread. See Trail Management Objectives for overhead clearance. Brush will be taken away from the trail corridor and placed discreetly with cut ends facing away from the trail.
- Excess soil (overburden) from constructing the trail tread will be placed in a discreet manner along the trail. Exposed roots will be cut at surface level on the backslope (uphill side) and edges of the trail. Minimal backslope cutting will be done to reduce soil and root disturbance and the volume of overburden. In severe bench cut areas on steep side slopes the backslope will be done in a fashion that prevents the trail tread from being encroached upon by sluffing from the uphill side of the trail.
- Trail sustainability and environmental soundness directly reflects the size and frequency of grade fluctuations and the amount of rock or mineral soil in the trail tread. The use of machinery in addition to trail labor dramatically increases these most important trail elements and the long-term success of a trail.

- Excavators allow soil and rock to be discreetly mined adjacent to the trail for placement in the trail tread and generally distribute overburden farther from the trail than hand labor. The Adirondack environment is generally best suited to the use of rubber tracked excavators for trail construction due to the large amount of rock and the variability of the geography.
- Where the natural soil surface of the trail is saturated by moisture and unable to support trail activities for a large portion of the year hardening with a stone material or structures such as turnpikes boardwalks, or bog bridging should be considered.

8.3 Phasing

The proposed Core Trails can easily be phased to facilitate decision-making and potential phasing of the project. Due to the large project size and various site management structures, phasing will be necessary.

It is recommended that various phasing scenarios be explored to determine a phasing plan that allows for fast implementation of key project segments while leveraging available funding sources. Some factors that may influence the phasing plan include but are not limited to:

- Guidance Committee members and Palmertown Partners currently have relationships with a variety of private landowners with properties well-suited to highly accessible and purpose-built recreational trails. Due to the nature of private ownership, trail implementation decisions could be expedited on these properties, with construction offering excellent opportunities for hybrid work crews consisting of trained trail professionals and volunteers from the local recreational community.

Some of the southern segments of the trail system are particularly suited to early implementation because much of it traverses Daniels Road State Forest, Skidmore property, and Wilton Partners, a private landowner that is eager to continue the trail design process. It is recommended that this segment be prioritized for conceptual and detail design phases due to location, visibility, land manager intentions, and opportunities to create a diverse blend of accessible and purpose-built trails.

- Community input identified a strong desire for trails that prioritize safety and accessibility. Prioritization of short, accessible loops with water features would increase public support and visibility. It is recommended that this desire for short, easily accessible loops with views of water be reflected as much as possible in all selected conceptual and details designs.

- The proposed trail system includes many miles of existing trail that would require minimal improvement to meet design specifications. Prioritizing these sections could leverage funding to complete the most mileage within the trail system for the least cost. It is recommended that land managers consider existing trail segments that are identified as part of the Friendship Trails system and prioritize maintenance of those trails to facilitate greater access.
- There is significant overlap between the Friendship Trails system and other proposed trail networks (for example, the Saratoga Greenbelt). Prioritization of these segments could build municipal support and achieve mutual goals. It is recommended that Guidance Committee members, Palmertown Partners and land managers consider how to support adjacent trail efforts.

8.4 Usage & Safety

Much of the Core Trail is remote and difficult to access for emergency personnel. It is important that impacts of increased user access and resulting rise in demand for emergency access be considered. It is recommended that land managers engage emergency response personnel in the design process, to ensure emergency access is sufficient given the remote nature of portions of the trail alignment. It is also recommended that land managers explore safety best practices, such as civilian trail stewards, security patrols, trail cleanup volunteers, and hazard signage as appropriate.

Regarding signage and wayfinding, it is important that the selected trail design consider placement and type of signage to create a trail experience that is attractive, educational, reassuring, and structured. In addition to selecting signage that is consistent with signage on connecting trails and surrounding areas, it is recommended that the Friendship Trail signage take deliberate steps to outline trail restrictions and assist visitors with wayfinding to increase awareness of adjacent trail connections. Signage can make trails more appealing, provide interpretive educational information, ensure that visitors do not get lost, and control trail usage to make it safer and more environmentally friendly.

8.5 Carrying Capacity

As has been discussed throughout this plan, a well-designed trail balances the demands of the desired activities with other characteristics and goals of the project, such as environmental impact concerns and land manager capacity (Rails to Trails Conservancy, 2021). Trail carrying capacity is determined by a number of factors, and many of those are determined during more detailed design phases. It is possible to conduct rudimentary analysis based on sight distances and length of trail to determine the maximum number of individuals that can use a trail in a day before overcrowding occurs, but this does not take into account the sensitivity of the landscape, available amenities, or construction or difficulty of the trail. These factors are also separate from the setting of the trail itself – a poorly-constructed trail placed in a highly desirable location will likely receive use beyond its carrying capacity, and in this case land managers need to determine whether to limit use in some way, or upgrade carrying capacity by improving the trail.

Specific decisions, such as trail tread width, trail tread surface, and the size and types of amenities available at the trailhead greatly impact the carrying capacity of the trail and can be thought of as lines of defense against overuse or crowding. While creating a more highly developed trail is more expensive and can involve more initial site impacts, temporary construction impacts to the site are more desirable than long term environmental impacts to the site from trail overuse.

Carrying capacity for the Friendship Trails system has been addressed through the proposed trail development levels and types of trailheads, anticipating which sections of trail and sites will be most popular. For segment proposed to be “Developed” or “Highly Developed,” or trails adjacent to Medium or Large trailheads, it is important that land managers consider the anticipated popularity of a site when completing conceptual and detail design to ensure that the selected parameters and development level are appropriate, especially on mixed-use trails or shared-use paths. In many cases this means selecting parameters such as tread width, clearing width, and the sight distance on the more generous end of the provided ranges, and considering if aggregate surfacing is necessary in high traffic areas.

8.6 Community Engagement

Given the interest by community organizations interviewed, as well as the low level of direct participation by their constituencies in the survey it is suggested to continue to seek input into trail design, creating conservation areas and trails close to their constituencies and place of work, and strategies to increase overall comfort, and use, of being outside. Guidance Committee partners should continue to seek ways to engage directly with underrepresented people to reduce the barriers many face in using local trails.

In the near term, Guidance Committee partners could continue to build relationships with leaders of the organizations as well as hear directly from people they serve by working through community groups who expressed strong interest in partnering during the community engagement. Examples include the Moreau Community Center, Wildwood Programs, Wellspring, and Town Recreation Program Directors. Here are some ways to build on this process to continue to elevate quiet/unrepresented voices to include their perspective and experience:

- Provide opportunities for direct input on trail design features, including benches, signage, parking areas, and kiosks. Community groups could assess existing trails in the area and suggest how they might be improved to be more welcoming and inclusive. The Guidance Committee could develop a form, so groups provide the most needed information and they could complete it on their own.
- Consider hosting workshops where Guidance Committee representatives invite community groups to specific sites to share feedback on what works and doesn't work for them on trails and explore different possibilities.
- Explore how the Sarah B. Foulke Friendship Trail developers could work with some of the organizations we interviewed to survey their constituents. For example, you could work with food pantries to develop shorter paper surveys that could be distributed in food distribution boxes.
- Brainstorm together about trail-based programming: Not only is this a way to bring new audiences to trails, but it also builds relationships that will help Guidance Committee partners to get to know both organizational leaders, program providers, and participants.

8.7 Maintenance

Sustainable trail management includes scheduled, organized, annual maintenance practices. The goal of trails maintenance is to enable long term sustainable and safe use of trails, accessed by the intended users, at the level of service that was intentionally planned, designed, constructed and budgeted for.

In meeting that goal, the objectives of trail maintenance include both sustaining the trail and protecting adjacent resources beyond the trail corridor. A well-maintained trail is a physically, environmentally, and economically self-perpetuating asset – for those who use the trail and for those who live and work nearby. Contemporary trail maintenance execution should utilize the recognized sustainable best management practices reviewed in this section. By maintaining trails within their intended managed and designed uses, all trails should receive the requisite attention that land managers have assigned to them. Trail maintenance should not alter or change the Trail Management Objectives for a specific trail. With all trail maintenance activities focused on supporting the identified Trail Management Objectives, both basic seasonal tasks and long-term maintenance planning can be better executed in terms of labor, materials, and budget.

The Six Basic Trail Maintenance Tasks

Basic trail maintenance can be performed with hand-tools, power tools and a small-scale mini-excavator or skid steer (72" or narrower track tread) for minor grading and materials hauling.

Optimally, these tasks should be executed on an annual basis and are considered standard best management practices. (USDA Forest Service, 2021)

Scheduled, organized trail maintenance practices should include the following six basic tasks:

1. De-berming trail tread and corridor to maintain drainage off of the trail and beyond the trail corridor.
2. Tread drainage management includes maintaining the following to encourage sheet flow off the trail;
 - grade reversals
 - grade dips
 - nicks
 - water-bars
3. Maintaining drainage structures by cleaning out swales, culvert pipes and related erosion control structures of debris. Minor trail tread repair (no excavation) maintaining soil surface tread by utilizing mineral soils from local borrow pits on site.
4. Clearing, brushing, pruning, grubbing, mowing and minor chainsaw (tree falls only) to maintain height and width clearances for trail corridors and drainages.
5. Maintaining signage and blazing.
6. Invasive plants removal.

Maintenance Scheduling and Documentation

Trail maintenance tasks, including those six basic maintenance tasks, are incorporated into the following five Primary Maintenance Categories.

1. Trail Corridor Maintenance
 - Vegetation: Brushing/clearing areas Remove fallen trees/branches
 - Hazard tree removal
 - Slope revegetation
 - Vista maintenance
2. Trail Tread Maintenance
 - Grading tread
 - Berm removal
 - filling erosion
 - grubbing rocks/ roots/stumps
 - Back-slope shaping/grooming
 - Surface replacement according to TMOs
 - Surface repair according to TMOs
 - Remove obstructions and protrusions according to the trail's TMOs
3. Structure Maintenance:
 - Cribbing/retaining wall repair
 - Barrier/guardrail repair
 - Fence/gate/bollard repair
 - Trailhead and kiosk repair
4. Sign Maintenance:
 - Sign repair/rehabilitation
 - Sign replacement
 - Blaze repainting and maintenance
5. Drainage Maintenance:
 - culverts
 - swales, dips and nicks
 - waterbars
 - drainage ditches
 - Replace or newly install components for drainage structures
 - cleaning/repairing structures

It is vital to the longevity of this project that all partners collectively work to organize and implement a yearly maintenance schedule. As stated in the USDA USFS Trail Construction and Maintenance Notebook:

“Because there will always be more work to do than people or time to do it, how do you decide what to do?”

It is critical that partners work together to:

- Monitor trail conditions closely.
- Decide what can be accomplished as basic maintenance.
- Determine what can be deferred.
- Identify the areas that will need major work.

Whatever the priority, maintain the trail when the need is first noticed to prevent more severe and costly damage later.

Given that the Friendship Trails system contains over 50 linear miles of various trail types and uses, this Master Plan recommends a Five Year Maintenance Cycle be established. Its goal ought to be to fully execute the six Primary Maintenance Categories for the entire trail system over that time period. Each year of the Maintenance Cycle will require an Annual Trail Management Plan. An Annual Trail Management Plan should list the total requirements for maintaining the trail system to the desired TMOs, per the Master Plan.

Volunteer Trail Maintenance

Trail maintenance is critical to provide and sustain the experience trail people expect and appreciate. The primary maintenance of the entire trail system will require keeping:

- the trail corridor trimmed of brush and vegetation,
- the trail tread de-bermed and clear of fallen debris,
- the water control measures cleared of leaves and organic debris.

Volunteer training and participation in execution of the six basic trail maintenance tasks is an extremely important aspect of user group involvement. It will provide much needed support in the overall municipal management and maintenance of the trail system by executing simple tasks that have major, positive impact upon the trail system’s physical, environmental, and economic sustainability.

SBFFT partners’ staff and Contracted Maintenance

For larger scale tasks, such as trail rehabilitation, construction, and forestry, one option is to contract experienced trail contractors, such as Professional Trail Builder Association (PTBA) member companies. At the very least, it is recommended that trail maintenance training for both staff and volunteers be scheduled with experienced trail contractors who offer such workshops and services. For example, a course on the basics of trails management and maintenance, usually two days in length, will provide participants with the necessary language, understanding and skills that can be shared with one another and other trail participants following the course. In addition, specialized trainings such as trail grading excavation and using properly selected equipment would be invaluable for the long-term management of the trail system. Similarly, chainsaw training that insures both safety and proper techniques to removing both standing and fallen timber would be extremely helpful.

Cooperative Maintenance Coordination

One option for structuring cooperative maintenance is through the creation of a third-party organization to centralize trail maintenance planning, volunteer coordination, and fundraising. One example of this type of organization is the White Mountain Trail Collective, a non-profit founded to coordinate trail planning and maintenance efforts across private and public lands in the White Mountain in New Hampshire.



This model centralizes the most challenging tasks, allowing for a cohesive maintenance plan to be implemented and streamlining fundraising for trail maintenance and construction. (White Mountain Trail Collective, 2021) (American Trails, 2021)

Another option to explore are groups like the Jolly Rovers, a volunteer group that specializes in improving sustainable access to public parks throughout the Hudson Valley. Learn more at: <https://www.jollyrovers.org/vision-and-mission>

Appendix

9.1 About the Palmertown Guidance Committee and Palmertown Partners

The Palmertown Guidance Committee consists of a team of public and private partners working together to implement the recommendations in the *Southern Palmertown Conservation & Recreation Strategy* completed in 2018. Seven municipalities, 2 state agencies, and 3 not-for-profit organizations form the heart of the Palmertown Guidance Committee. A half-time Palmertown Coordinator serves as the group's staff person. The Guidance Committee consists of representatives from: Saratoga County, the towns of Corinth, Greenfield, Moreau and Wilton, the Village of Corinth, the City of Saratoga Springs, NYS Department of Environmental Conservation, NYS Office of Parks, Recreation and Historic Preservation, Skidmore College, and conservation organizations the Open Space Institute and Saratoga PLAN.

Other community organizations interested in furthering the recommendations in the Strategy serve on committees (Conservation, Recreation, Economic Development, Education and Outreach, Financing), along with the Guidance Committee members. The extended group is referred to as the Palmertown Partners in this master plan, they are currently represented by such groups as: Adirondack Mountain Club, Saratoga Mountain Biking Association, Shredders, Saratoga Backcountry Horsemen, Friends of Grant's Cottage, Friends of Moreau Lake State Park, Saratoga County Snowmobile Association, Lincoln Mountain / Mulleyville Snowmobile Club, unaffiliated individuals, and others. Membership in the Palmertown Partners is expected to broaden even further in the future.

A generous donation of \$500,000 from the Sarah B. Foulke Charitable Trust is funding the trail Master Plan, including the community engagement work. The construction of the trails and trail improvements, as well as acquiring land and easements for the trails, will require additional fundraising from grants and community members.

Saratoga PLAN accepted the donation of the planning grant on behalf of the Palmertown Guidance Committee and is providing staff support to administer the grant and the contract for the master plan, in close conference with the Guidance Committee and the Palmertown Coordinator.

Saratoga PLAN (preserving land and nature) is dedicated to preserving the rural character, natural habitats, and scenic beauty of Saratoga County so that these irreplaceable assets are accessible to all and survive for future generations. Saratoga PLAN acknowledges that the lands it conserves are the ancestral homelands of Mohican, Mohawk, and Abenaki people. Saratoga PLAN helps communities create plans that balance growth with conservation to sustain the Saratoga Region as a great place to live, work, visit and farm. Since formation in 2003, Saratoga PLAN has conserved more than 7,000 acres of land to date. Saratoga PLAN provides staff support for the Countywide Trails Committee which serves as a clearinghouse and coordination forum for trail user groups and municipalities collaborating on building a regional trail network in Saratoga County, into which the Sarah B. Foulke Friendship Trails will connect. The organization can be reached through the website www.Saratogaplan.org, emailing info@saratogaplan.org, or by calling 518-587-5554.

9.2 About the Authors

This Master Plan was undertaken by an exceptional team of companies with decades of combined team experience in trail planning and design. Utilizing an approach centered on meaningful community engagement and field-based design and ground-truthing, the team worked to outline the structure of the Friendship Trails while providing a toolbox to empower the Palmertown Guidance Committee to lead the trail planning effort. This unique approach aimed to provide the Sarah B. Foulke Friendship Trail Master Plan with a level of precision and depth to facilitate seamless trail design and implementation. Full descriptions and contact information for the consulting team who worked with the Palmertown Guidance Committee on this master plan are contained in Appendix.

Project Team Lead Consultant:

Penn Trails

Founded in 2007, Penn Trails is an industry leader in sustainable trail design. Penn Trails specializes in trail assessment, design, construction, and maintenance, with extensive experience with universal access trails. With diverse staff experience in trail planning and design, Penn Trails has a unique approach that focuses on maximizing trail sustainability. From trail rehabilitation to design and master planning, Penn Trails focuses on providing guidance and direction that addresses each unique site, focuses on designing trails to accommodate desired use activities, and supports ongoing sustainable management of each site as an integrated element of the existing natural resource assets. Penn Trails has helped to assess, conceptualize, plan and construct hundreds of miles of trails and pathways throughout the United States.

Project Team Members:

Wilderness Property Management

WPM provides outdoor recreation consulting and trail construction services to public and private landowners and managers. WPM develops concepts, plans, designs and constructs trails and bridges for biking, hiking, walking and skiing that are sustainable, environmentally sound and provide exceptional recreational experiences. Low impact wilderness techniques and a design that works with the natural features of the site are utilized to create a natural and efficient skiing, hiking or biking experience.

WPM has 35 years of experience in the professional outdoor recreation and environmental fields and has received the Adirondack Wild Stewardship Award for fostering wilderness stewardship and creating trails and bridges compatible with wild outdoor settings. WPM trails provide extraordinary experiences that can only be created with a lifetime of professional outdoor recreation experience.

Tahawus Trails

Tahawus Trails offers a full range of trail-related services. Tahawus works directly with land and stewardship organizations, parks, municipalities, schools, resorts, developers, land trusts, and private landowners to develop, design and improve appropriate access to natural areas. Tahawus has completed a range of mountain bike projects. Tahawus' consulting services include trail design, master plan development, trail and trail system assessments, and construction management services. Tahawus was awarded the PTBA 2010 Trail Project of the Year Award for the Bear Mountain Trails Project on the Appalachian Trail in Bear Mountain State Park, NY and the 2013 Trail Project of the Year for the Whirlpool Steps in Niagara Falls NY.

Barton & Loguidice

Barton & Loguidice, D.P.C. (B&L) provides a multidisciplinary approach and technical expertise that comes from many years of trail planning, design, and construction throughout Upstate NY. To date, B&L has completed feasibility studies, development plans and construction oversight on more than 50 miles of trails in the Hudson Valley alone.

As enthusiasts, B&L appreciates the challenges and amenities that can make or break the level of function and success of public trail corridors. This sound experience in transportation engineering and landscape design is crucial to the Master Plan and is shaped by B&L's personal experience as users, advocates, planners, and designers of numerous successful trails and greenways.

Strong Outcomes

Karen Strong is a conservation professional who is deeply committed to science-based decision-making and evaluation, yet believes that conservation will have limited success unless social and cultural concerns are considered. In 2018, she founded Strong Outcomes LLC, a consulting company that helps environmental organizations reach their goals by focusing on outcomes, community engagement, and plain language. Over the past two decades, she built capacity to conserve natural resources in dozens of communities and organizations. Karen has a BS in Biology and an MS in Biodiversity, Conservation and Policy from the University at Albany, as well as certificates in Change Leadership from Cornell University and Training, Facilitation, and Consulting from Marlboro College. She is also a Senior Fellow of the Environmental Leadership Program. She is also an active community volunteer and has 15 years of non-profit and municipal board experience. Karen is a lifelong resident of NY's Hudson Valley and currently lives in Albany, NY with her husband and two children.

Community Consultants

Judy Anderson of Community Consultants, LLC has worked in the land trust sector for over 30 years. Her focus is on building greater community relevance to ensure conservation connects and serves more people and strengthens land trusts' ability to withstand the test of time. She currently assists nonprofit organizations on practical strategic conservation initiatives incorporating local communities, inclusive conservation, community engagement, and community-based fundraising and communication strategies.

Judy also provides coaching on climate change messaging, easement drafting, and landowner relationships. She is a regular presenter at national and regional land trust conferences as well as specialized trainings throughout the country. Prior to her work as a consultant, Judy served as the Executive Director of the Columbia Land Conservancy. During that time the organization grew from three to a staff of 18 with 1,700 members and 20,000 acres of conserved land. She holds an undergraduate degree in agriculture and ecology and a master's degree in landscape architecture with an emphasis on community and landscape planning.

9.3 Organizations Interviewed

Organizations listed in alphabetical order.

Bikeatoga (Saratoga Springs): Bikeatoga is dedicated to pushing for a better future by making functional cycling more convenient, accessible, and safer in and around Saratoga Springs, NY. Our volunteer members work to emphasize the environmental, economic, and health-related benefits of everyday cycling. By working together, we believe that we can create a healthier, more vibrant, and more sustainable community.

Interviewed: Will Ryan, President

Population served: 400

Corinth Central School District: The mission of the Corinth Central School District is to spark lifelong curiosity in every student through inspired teaching that builds on the strengths of each student and creative partnerships so that our graduates excel in a rapidly changing world.

Interviewed: Mark Stratton, Superintendent

Population served: Serves 1,161 K-12 students, 53% economically disadvantaged

Corinth Free Library: To provide material that will meet the day to day educational, cultural, and recreational interests and needs of the community.

Interviewed: Rebecca Fasulo, Executive Director

Population served: Our library is chartered to serve the Town and Village of Corinth - 6,531.

Franklin Community Center (Saratoga Springs): Our mission is to work collaboratively with individuals and other agencies to provide services that will improve the quality of life and foster a sense of neighborhood, community and family for all people.

Interviewed: Kari Cushing, Executive Director

Population served: Serves more than 6,000 people annually

Crandall Public Library: In the Palmertown Area, the Town of Moreau and the Village of South Glens Falls

Interviewed: Kathy Naftely, Executive Director

Population served: 15,459

MLK Saratoga: MLK Saratoga shares Dr. King's vision of peace and justice for all. We work toward peace by promoting racial, social, economic and climate justice. We use Performance, the Arts, and Dialogue to create new ways of understanding and to build a more unified, thriving community that is safe and just for all.

Interviewed: Leslie Dana, Co-Director

Moreau Community Center (South Glens Falls): The mission of the Moreau Community Center is to meet the multi-generational needs of the community in a compassionate and inclusive environment.

Interviewed: Donna Nichols, Executive Director

Town of Greenfield: Town of Greenfield Recreation Department offers a wide variety of programs to the Greenfield Community and their families. We provide a safe and fun environment where friendships can be made and a strong community spirit built.

Interviewed: Rebecca Sewell, Recreation Director

Saratoga Area YMCA: The Saratoga Regional YMCA is a charitable association that is dedicated to building a healthy spirit, mind, and body for all.

Interviewed: Scott Clark, Interim CEO

Population served: Total served in 2020 was around 30,000 including staff, program participants, and members

Saratoga Bridges (Ballston Spa): To empower individuals with intellectual disabilities and their families to identify and pursue their life goals through knowledge, collaboration and experience.

Interviewed: Greg Cuda, Executive Director

Saratoga County Public Health Services (Saratoga Springs): Assess, improve, and monitor the health status of our community

Interviewed: Meg O'Leary, Public Health Planner

Saratoga County Economic Opportunity Center (now Lifeworks

Community Action): EOC is the designated anti-poverty agency for Saratoga County, dedicated to providing and promoting opportunities for individuals and families to achieve self-sufficiency.

Interviewed: Jo Anne Hume, Executive Director

Southern Adirondack Library System: The Southern Adirondack Library System (SALS) is a voluntary association of 34 public libraries in Hamilton, Saratoga, Warren and Washington Counties. We work together to provide the best possible library services to residents of our region.

Interviewed: Sara Dallas, Executive Director

South Glens Falls High School: Through collective partnerships develop self-motivated, confident, and competent citizens, capable of making life decisions that reflect responsibility and a respectful appreciation of a heritage rich in cultural diversity and supportive of individual and collective opportunities for achievement.

Interviewed: Peter Mody, Principal, and Matthew Greip, Director of Physical Education, Health and Athletics

Population served: District

Transitional Services Association (also known as RISE) (Saratoga Springs): Our mission at Transitional Services Association is to assist

people living with mental illness, addictions, and chronic medical issues to achieve their highest level of stability through housing and supportive services.

Interviewed: Rik Jordan, Residential Director

Veterans and Community Housing Coalition (Saratoga Springs): To provide housing and support services to all homeless military veterans and their families and to advocate on behalf of all military veterans and their families and to provide housing opportunities for low income households.

Interviewed: Leigha Rosenberger, Associate Executive Director

Wellspring (Saratoga Springs): For nearly 40 years, Wellspring has been committed to helping survivors of relationship abuse (domestic violence) and sexual assault. What started as a small organization to provide basic shelter and crisis services now has a vision of ending relationship and sexual abuse in our community.

Interviewed: Maggie Fronk, Executive Director

Population served: Our staff assists over 1,000 adults and children each year to attain increased safety.

Wildwood Programs (Latham): Wildwood's mission is to work collaboratively with the community and families to empower and enable children and adults with neurological impairments, learning disabilities, autism, and other developmental disabilities to lead independent, productive, and fulfilling lives. The purpose of Wildwood Programs is to provide supports and services to people of all ages with conditions described as developmental disabilities, complex learning disabilities and autism spectrum disorders. At Wildwood, we value understanding each individual as a whole and unique person.

Interviewed: Bridget Chiramonte, Business Development Liaison, and Lisa Liopris, Director of Recreation and Respite

Population served: 895 ppl served in 2019-2020.

9.4 Online survey Responses by Link

Survey Links	How link shared	Number of Responses
Military and Veterans Groups	With interviewees from two organizations with sharing language	0
Diversity, Equity, and Inclusion	With interviewees from one organization with sharing language	0
Faith Community	With interviewee from one group	1
Schools and YMCA	With interviewees from three organizations with sharing language	5
People with mobility challenges	With interviewees from two groups with sharing language	7
Social Service Organizations	With interviewees from five organizations with sharing language	8
Guidance Committee and Palmertown Partners	With all guidance committee members and Palmertown Partners, who were encouraged to share in their networks	40
Conservation and Recreation Groups	Individual email to leaders from six groups with sharing language	138
Main Link	Via social media, on PLAN website, with eight interviewees	807
TOTAL		1,006

9.5 Applicability of SEQRA to the Project

If this Master Plan was undertaken by a government agency at any level rather than a not-for-profit organization, a SEQRA review would be required before the agency could adopt the Master Plan. Since this will be a plan developed by a collaboration of public and private entities under the auspices of a private nonprofit organization that will decide to use the plan to guide its actions, it is exempt from such a review. The actions to implement the Master Plan will require SEQRA review, regardless of the managing agency. Any actions by the agencies involved in this project including NYS Department of Environmental Conservation (NYSDEC) and the NYS Office of Parks, Recreation and Historic Preservation, Saratoga County, or the municipalities will also require SEQRA reviews. Likewise any work by other not-for-profit organizations, such as the Open Space Institute, that implements recommendations of the Master Plan will be subject to SEQRA review¹⁹.

It is important to note that while NYSDEC issues the statewide SEQRA regulations, including resolution of lead agency disputes, as an involved agency in this project NYSDEC has limited authority to review the implementation of SEQR by other agencies. Also of note, NYSDEC can advise on the SEQRA, but cannot provide legal interpretations of the law (6 NYCRR Part 617).²⁰

SEQRA and Project Segmentation

For this project it is entirely possible that other involved state or local agencies could undertake SEQRA review for various portions of the project. Under SEQRA, the entirety of the project is expected to be reviewed, projects cannot generally be segmented. Under certain circumstances separate SEQRA reviews are not considered segmentation.²¹

New York State Environmental Quality Review Act (SEQRA) Compliance Process

The proposed Friendship Trails and associated development projects (“proposed action”) will require a number of local, County, and state permits and approvals prior to construction. Therefore, the action will be subject to review under the State Environmental Quality Review Act (SEQRA). The project is expected to be classified as a Type I Action under SEQRA (6 NYCRR Part 617.4), which requires a coordinated review with potential involved and interested agencies. The project is expected to qualify as a Type I Action because it will likely result in the physical alteration of 10 or more acres of land (6 NYCRR Part 617.4(b)(6)(i)); and is likely to result in the physical alteration of 2.5 or more acres of land located within or substantially contiguous to public parkland (6 NYCRR Part 617.4(b)(10)).

The project is located in the Towns of Moreau, Corinth, Greenfield, and Wilton in Saratoga County. A plausible scenario for the project’s SEQRA review is that one of the Towns or Saratoga County assumes the role of Lead Agency. The other municipalities, along with other local and State agencies that are funding, permitting, or otherwise approving any aspect of the project, would participate in the SEQRA process as Involved Agencies. The Lead Agency would be responsible for making a SEQRA determination of significance (positive or negative declaration) based on the potential environmental impacts identified during the review, and steps taken to avoid, minimize, and/or mitigate such potential impacts.

A negative declaration indicates that the proposed action will not have a significant adverse environmental impact. A negative declaration must include an analysis of potential environmental concerns that were analyzed and an explanation of why they will not be significant. A positive declaration indicates that the proposed action may have a significant adverse environmental impact and requires the preparation of an Environmental Impact Statement (EIS). A Generic Environmental Impact Statement (GEIS) may be appropriate for the proposed action. A GEIS can be used to review related groups of actions, or actions that are proposed by multiple project sponsors, and is more conceptual than a typical EIS. A GEIS would include an evaluation of reasonable alternatives that may be considered as part of the project and would set thresholds for the proposed action that would trigger additional SEQRA review if these conditions were to be exceeded. A GEIS may be suitable for the project if site plans and specific impacts are only conceptual at the time of the project’s SEQRA review. The general

steps for negative and positive declarations under SEQRA, with anticipated timelines, are presented below.

Impacts on the environment that are unavoidable and cannot be mitigated can trigger a positive declaration indicating that an Environmental Impact Statement must be prepared to fully assess the impacts. According to the NYSDEC’s SEQR Handbook, the magnitude and importance of potential environmental impacts should be considered when determining significance. Magnitude includes the size, extent, and severity of an impact. Importance includes the number of people that may be affected by the project, the project’s geographic scope, duration, the likelihood that an impact will occur. In addition, importance includes consideration of any social or environmental consequences likely to result if the project proceeds (or if it does not proceed). Generally, larger impacts require a more detailed analysis. For example, sedimentation of high-quality wetlands or streams may be viewed as a more important impact than sedimentation of a naturally turbid stream or wetland that provides fewer habitat functions and values.

All reasonably foreseeable and probable potential direct, indirect, and cumulative impacts of the project should be considered. For phased projects, the scope of the SEQR review should include the full build-out of all phases to ensure that all probable environmental impacts are considered.

¹⁹ The SEQR Handbook, NYS Department of Environmental Conservation, 4th Edition, 2020, Ch. 1.A “Who is Subject to SEQR”, p8-10.

²⁰ Ibid, p10.

²¹ The SEQR Handbook, Chapter 2, p.53-55.

Potential SEQRA Compliance Pathways

The steps and timelines for the project’s potential SEQR pathways are presented in the tables below.

Scenario 1. Coordinated review (Type I Action) with Negative Declaration	
Step	Timeline
1. Completion of Full Environmental Assessment Form Part 1; Lead Agency reviews Part 1 at Board Meeting #1	1 month
2a. Coordinated Review	30 days
2b. Completion of Full Environmental Assessment Form Parts 2 and 3	
3. Lead Agency issues Negative Declaration at Board Meeting #2	1 week
4. Negative Declaration Notice published on NYSDEC Environmental Notice Bulletin and sent to all involved agencies	2 weeks
Total Time: Approx. 2-3 months	

Scenario 2. Coordinated review (Type I Action) with Positive Declaration	
Step	Timeline
1. Completion of Full Environmental Assessment Form Part 1; Lead Agency reviews Part 1 at Board Meeting #1	1 month
2a. Coordinated Review	30 days
2b. Completion of Full Environmental Assessment Form Parts 2 and 3	
3. Lead Agency issues Positive Declaration at Board Meeting #2	1 week
4. Scope the Draft EIS/GEIS*; review Draft Scope at Board Meeting #3 and file Notice of Draft Scope; Request public comment	1 month
5. Prepare Final Scope; review at Board Meeting #4 and file Notice of Final Scope	2 months
6. Prepare Draft EIS/GEIS; review at Board Meeting #5 and file Notice of Completion of Draft EIS/GEIS; Request public comment; SEQR Hearing(s) is optional	6 months
7. Public Comment on Draft EIS/GEIS	30 days
8. Prepare Final EIS/GEIS	2 months
9. Review Final EIS/GEIS at Board Meeting #6; prepare SEQR Findings Statement	30 days
10. File Notice of Completion of Final EIS/GEIS	
Total Time: Approx. 15 months	
*Starting the EIS/GEIS process is contingent upon the amount of data and design information available for the proposed action.	

Avoidance and Mitigation Measures

In many cases, potential environmental impacts can be avoided altogether or effectively mitigated in order to reduce overall environmental impacts. Such measures should be considered and described for each potential environmental impact in order to support the Lead Agency’s determination of significance. For example, a proposed trail segment that intersects a wetland may be re-routed to an upland area, or a boardwalk crossing may be implemented for that location to reduce the amount of wetland disturbance.

Project Modifications

Multiple alternatives can be included in the project’s SEQR review in order to limit the need for a future SEQR amendment. If modifications to the project arise before the SEQR process is completed (for example, after coordinated review is initiated but before a Determination of Significance is issued), the SEQR documents should be updated to reflect the change. The general SEQR amendment process to be followed is outlined below.

- Revise FEAF Part 1 and re-circulate to Interested and Involved Agencies, allowing adequate time for review.
 - The Coordinated Review process does not need to be re-completed unless new Involved Agencies are added as a result of the project changes.
- Incorporate revised project elements into FEAF Part 2 and 3 analysis, and associated supporting information.
- Proceed with remaining SEQR review steps.

The general SEQR amendment process to be followed in the event that changes to the project are made after the Lead Agency issues a Determination of Significance is outlined below.

- Revise FEAF Part 1 and re-circulate to Interested and Involved Agencies, allowing adequate time for review.
 - The Coordinated Review process does not need to be re-completed unless new Involved Agencies are added as a result of the project changes.
- Revise FEAF Part 2 and 3, and associated supporting information.
- Re-issue Determination of Significance
 - If the Lead Agency’s Determination of Significance will not change, then a resolution is issued to acknowledge the modified project and re-affirm the prior determination.
 - Negative Declaration:
 - Publish updated Negative Declaration Notice in NYSDEC Environmental Notice Bulletin and send to all Involved Agencies.

- Positive Declaration (if original determination was a Negative Declaration):
 - Follow process outlined in Scenario 2 table above, beginning at Step 4.
- Positive Declaration (if original determination was a Positive Declaration):
 - Draft a Supplemental EIS/GEIS to address additional impacts or impacts that were not adequately addressed in the original EIS/GEIS; follow process outlined in Scenario 2 table above, beginning with Step 1.
 - Due to the amount of detail required for an EIS/GEIS and the timeline required for this project, the project elements and environmental impacts are well defined by the end of the SEQR process. Therefore, the need for an amendment to the SEQR review in this scenario is uncommon. Supplemental EIS/GEIS efforts are typically completed many years after the original document is issued.

Stormwater Permits for Construction Activities

Projects that result in the disturbance of one or more acres of soil require coverage under the NYS Department of Environmental Conservation’s (NYDDEC) SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001). In order to obtain coverage under the permit, the owner or operator of a construction activity must prepare a Stormwater Pollution Prevention Plan (SWPPP) and file a Notice of Intent (NOI) with the NYSDEC.

Each project- or site-specific SWPPP must meet certain general requirements and contain a number of components. Additionally, depending on the project type, SWPPPs must either contain erosion and sediment controls only or erosion and sediment controls and post-construction stormwater management practices. These two different types of SWPPPs are often referred to as “basic” and “full” SWPPPs, respectively.

The proposed Sarah B. Foulke Friendship Trail project will likely require a number of site-specific SWPPPs depending on implementation phasing. Non-motorized trail and path projects that are not part of residential, commercial, or institutional development only require the preparation of a basic SWPPP. A full SWPPP, with post-construction stormwater management controls, would be required for any roadways, driveways, parking lots, campgrounds, playgrounds, etc. that meet the one acre soil disturbance threshold. For a full listing of various construction activities, refer to GP-0-20-001, Appendix B.

In addition to the requirements above, regulated construction activities that are within a regulated, traditional land use control Municipal Separate Storm Sewer System (MS4) must submit each site-specific SWPPP to the local stormwater management officer for review prior to submitting the NOI to the NYSDEC. The local stormwater management officer must complete an “MS4 SWPPP Acceptance” form that will accompany the NOI submission. The Friendship Trails have the potential to pass through four MS4 communities – Saratoga Springs, Wilton, Greenfield, and Moreau.

Based on a review of GP-0-20-001 and project components it is recommended that the development of the trail system be guided by a single basic SWPPP with erosion and sediment controls only and that any trailhead, gateway, or other access sites with a limit of disturbance exceeding one acre obtain permit coverage under individual, site-specific SWPPPs.

National Grid Trail Project Permits

The design team has recognized the great potential to fill significant gaps in the Sarah B Foulke Friendship Trail through the use and occupancy of trail segments on utility corridors currently owned by National Grid or one of its subsidiaries. National Grid has adopted a permit review and approval process where adjacent land owners seek to cross or occupy the power company utility corridors. The process involves completion of a Property Transaction Review (PTR) application; a Letter of Intent clarifying the nature and scope of the project, as well as obligations of the involved parties; and supporting narratives and design mapping showing the desired layout and construction of the trail.

National Grid requires a permit fee of \$2,000 for projects less than 100’ in length, and determines a fee for larger projects on a case by case basis. The fee will offset the cost to National Grid of the more detailed review, project management and construction supervision associated with the project. We recommend maintaining a dialog with the permitting staff throughout the development of alternative routing of trails on National Grid lands. This will give the power company a clearer understanding of the overall objectives, public benefits, and overall positive impacts of the project. Once the review is complete, a revocable agreement is prepared between the trail builder/management entities and National Grid.

Zoning, Land Use and Other Local Permits and Approvals

The trail corridor passes through the City of Saratoga Springs, the Towns of Greenfield, Wilton, Moreau and Town and Village of Corinth. Segments in Greenfield and Wilton are on commercial zoned parcels, segments in Saratoga Springs are on Institutional lots, while the remainder are all on residentially zones. In the residential zones of all the communities, parks, recreation and trail use is allowed only by special use permit, thus trail construction may trigger the need for a special use permit from the local planning board. Typically, the applicant will need to prepare a permit application, project description narrative and drawings illustrating the proposed improvements.

Sarah B. Foulke Friendship Trail – Trail Development Only Trail Corridor Zoning Districts		
Municipality	Zones	SUP May Be Required for District
Greenfield	LDR	Yes
Wilton	C-2, C-3, CR-2, CR-3, R-2, R-3	No
Moreau	R-1, R-2, R-4, RP	Yes
Corinth (Town)	R-2	No
Corinth (Village)	IND, VR-1,VR-2	Yes
Saratoga Springs	INST-ED, INST-PR, SR-1, UR-4, RR	No

Municipal Requirements

Each of the municipalities may also have special local laws that would trigger permitting including local storm water pollution prevention permits, wetland permits, grading permits, floodplain development permits and other local laws. These permits, as well as other county, state and federal regulatory permits related to trail construction, are outlined in the following tables.

Sarah B. Foulke Friendship Trail – Trail Development Only Anticipated Permits and Approvals: Town of Moreau				
Agency	Permit(s)	Description	Agency Submittal	Approximate Issuance Timeframe
Town of Moreau	Local Floodplain Development Permit	100-year floodplain of Moreau Lake State Park crossing on Spier Falls Road	Moreau Building Department	1 month
	Local Freshwater Wetlands Permit (Ch. 82)	Disturbance to any NYSDEC mapped freshwater wetlands	Moreau Town Board	4 months
	Local Stormwater Management and Erosion (Ch. 120)	Development activity of between 1 and 5 acres requires post construction BMP's	Moreau Storm Water Management Officer	1 month
	Local Flood Hazard Permit	Required for development activity in a local flood hazard area	Moreau Building Department	1 month
	Special Use Permit	For recreational use in residential/agricultural zones	Moreau Planning Board	2 months
Saratoga County Department of Public Works	Highway Work Permit	County Route 24 crossing	Saratoga County Department of Public Works	2 months
NYS DOT	Highway Work Permit	U.S. Route 9 crossing	NYS DOT Region 1	2 months
USACE	Section 404 – Nationwide Permit	Disturbance to wetlands or surface waters that qualify for protection as Waters of the U.S.	USACE New York District	4 months
NYSDEC	Article 24 – Freshwater Wetlands	Disturbance to NYSDEC-regulated wetlands and/or their 100-foot regulated adjacent area	NYSDEC Region 5	4 months
	Article 15 – Stream Disturbance	Disturbance to the bed or banks of state-regulated Class A or B streams, or Class C with a C(T) or better standard		
	Section 401 Water Quality Certification	Disturbance to federally-regulated wetlands or surface waters		
	SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001)	1 acre or more of ground disturbance associated with project	NYSDEC Albany Central Office	30 days
NYSOPRHP	Easement	Project partially located within Moreau Lake State Park	NYSOPRHP Saratoga/Capital District	12 months

Sarah B. Foulke Friendship Trails – Trail Development Only Anticipated Permits and Approvals: Town of Corinth				
Agency	Permit(s)	Description	Agency Submittal	Approximate Issuance Timeframe
Town of Corinth	Flood Damage Prevention Development Permit (Ch. 79)	Disturbance and development in special flood hazard zone; special design standards apply	Corinth Building Department	1 month
	Special Use Permit	For recreational use in certain residential, conservation or agricultural zones	Corinth Planning Board	2 months
USACE	Section 404 – Nationwide Permit	Disturbance to wetlands or surface waters that qualify for protection as Waters of the U.S.	USACE New York District	4 months
NYSDEC	Article 24 – Freshwater Wetlands	Disturbance to NYSDEC-regulated wetlands and/or their 100-foot regulated adjacent area	NYSDEC Region 5	4 months
	Article 15 – Stream Disturbance	Disturbance to the bed or banks of state-regulated Class A or B streams, or Class C with a C(T) or better standard		
	Section 401 Water Quality Certification	Disturbance to federally-regulated wetlands or surface waters		
	SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001)	1 acre or more of ground disturbance associated with project	NYSDEC Albany Central Office	30 days
NYSOPRHP	Easement	Trail partially located within Moreau Lake State Park	NYSOPRHP Saratoga/Capital District	12 months

Sarah B. Foulke Friendship Trails – Trail Development Only Anticipated Permits and Approvals: Village of Corinth				
Agency	Permit(s)	Description	Agency Submittal	Approximate Issuance Timeframe
Village of Corinth	Flood Damage Prevention Development Permit (Ch. 265)	Disturbance and development in special flood hazard zone; special design standards apply	Village of Corinth Building Inspector	1 month
	Special Use Permit and Site Plan Approval	May be required for any development in an industrial zone	Village of Corinth Planning Board	2 months
USACE	Section 404 – Nationwide Permit	Disturbance to wetlands or surface waters that qualify for protection as Waters of the U.S.	USACE New York District	4 months
NYSDEC	Article 24 – Freshwater Wetlands	Disturbance to NYSDEC-regulated wetlands and/or their 100-foot regulated adjacent area	NYSDEC Region 5	4 months
	Article 15 – Stream Disturbance	Disturbance to the bed or banks of state-regulated Class A or B streams, or Class C with a C(T) or better standard		
	ONR-3 Temporary Revocable Permit (State Forests)	Coverage for Articles 15, 24, 25, construction activities near protected streams or wetlands and temporary easements		
	Section 401 Water Quality Certification	Disturbance to federally-regulated wetlands or surface waters	NYSDEC Albany Central Office	30 days
	SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001)	1 acre or more of ground disturbance associated with project		
NYSOPRHP	Easement	Trail partially located within Moreau Lake State Park	NYSOPRHP Saratoga/Capital District	12 months
National Grid	Temporary Revocable Permit and Permanent Easement	Trail partially located within National Grid right-of-way (overhead electric, underground gas)	National Grid	8-12 months

Sarah B. Foulke Friendship Trails – Trail Development Only Anticipated Permits and Approvals: Town of Greenfield				
Agency	Permit(s)	Description	Agency Submittal	Approximate Issuance Timeframe
Town of Greenfield	Special Use Permit	Construction of Recreational Use in Residential	Greenfield Planning Board	2 months
	Grading Permit	Disturbance of greater than 5.0 acres coordination with GP-02-02	Greenfield Building Department	1 month
	Floodplain Development Permit	Disturbance and construction in a special flood hazard area	Greenfield Building Department	1 month
Saratoga County Department of Public Works	Highway Work Permit	Proposed trail segment along Wilton Road (County Route 36)	Saratoga County Department of Public Works	2 months
USACE	Section 404 – Nationwide Permit	Disturbance to wetlands or surface waters that qualify for protection as Waters of the U.S.	USACE New York District	4 months
NYSDEC	Article 24 – Freshwater Wetlands	Disturbance to NYSDEC-regulated wetlands and/or their 100-foot regulated adjacent area	NYSDEC Region 5	4 months
	Article 15 – Stream Disturbance	Disturbance to the bed or banks of state-regulated Class A or B streams, or Class C with a C(T) or better standard		
	Section 401 Water Quality Certification	Disturbance to federally-regulated wetlands or surface waters		
	Temporary Revocable Permit (TRP) and Permanent Easement	Trail partially located within Lincoln Mountain State Forest and Daniels Road State Forest	NYSDEC Region 5	6 months (TRP) 12 months (easement)
	SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001)	1 acre or more of ground disturbance associated with project	NYSDEC Albany Central Office	30 days

Sarah B. Foulke Friendship Trails – Trail Development Only Anticipated Permits and Approvals: Town of Wilton				
Agency	Permit(s)	Description	Agency Submittal	Approximate Issuance Timeframe
Town of Wilton	Special Use Permit	May be required for Recreational Use in Residential Zones	Wilton Planning Board	2 months
	Soil and Woodland Permit (Ch. 129)	Disturbance between one and five acres, requires SWPPP per GP-02-02	Wilton Building Department	1 month
Saratoga County Department of Public Works	Highway Work Permit	Proposed trail segment along Wilton Greenfield Road (County Route 36)	Saratoga County Department of Public Works	2 months
NYSDOT	Highway Work Permit	Saratoga Road (U.S. Highway 9) crossing	NYSDOT Region 1	2 months
USACE	Section 404 – Nationwide Permit	Disturbance to wetlands or surface waters that qualify for protection as Waters of the U.S.	USACE New York District	4 months
NYSDEC	Article 24 – Freshwater Wetlands	Disturbance to NYSDEC-regulated wetlands and/or their 100-foot regulated adjacent area	NYSDEC Region 5	4 months
	Article 15 – Stream Disturbance	Disturbance to the bed or banks of state-regulated Class A or B streams, or Class C with a C(T) or better standard		
	Section 401 Water Quality Certification	Disturbance to federally-regulated wetlands or surface waters		
	SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001)	1 acre or more of ground disturbance associated with project	NYSDEC Albany Central Office	30 days
NYSOPRHP	Easement	Trail partially located within Moreau Lake State Park	NYSOPRHP Saratoga/Capital District	12 months
National Grid	Temporary Revocable Permit and Permanent Easement	Trail partially located within National Grid right-of-way (overhead electric, underground gas)	National Grid	8-12 months

Sarah B. Foulke Friendship Trails – Trail Development Only Anticipated Permits and Approvals: City of Saratoga Springs				
Agency	Permit(s)	Description	Agency Submittal	Approximate Issuance Timeframe
City of Saratoga Springs	Special Use Permit	May be required for Recreational Use in Residential Zones	Saratoga Springs Planning Board	2 months
	Floodplain Development Permit (Ch. 120)	May be required for construction in a flood hazard zone	Saratoga Springs City Building Inspector	1 month
NYSDOT	Highway Work Permit	Saratoga Road (U.S. Highway 9/9N) crossing or ROW use and occupancy	NYSDOT Region 1	2 months
USACE	Section 404 – Nationwide Permit	Disturbance to wetlands or surface waters that qualify for protection as Waters of the U.S.	USACE New York District	4 months
NYSDEC	Article 24 – Freshwater Wetlands	Disturbance to NYSDEC-regulated wetlands and/or their 100-foot regulated adjacent area	NYSDEC Region 5	4 months
	Article 15 – Stream Disturbance	Disturbance to the bed or banks of state-regulated Class A or B streams, or Class C with a C(T) or better standard		
	Section 401 Water Quality Certification	Disturbance to federally-regulated wetlands or surface waters		
	SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001)	1 acre or more of ground disturbance associated with project	NYSDEC Albany Central Office	30 days
National Grid	Temporary Revocable Permit and Permanent Easement	Trail partially located within National Grid right-of-way (overhead electric, underground gas)	National Grid	8-12 months

Glossary

Bench Cut: A bench is a section of tread cut across the side, or contour, of a hill. A full bench trail is constructed by cutting the full width of the tread into the hillside. The entire tread is dug down to compacted mineral soil.

Boardwalk: An elevated footpath, walkway, or causeway built with wooden planks that enables pedestrians to cross wet, fragile, or marshy land.

Box Steps: A step with a wooden riser frame, filled with compacted aggregate or native soil.

Catwalk: An elevated structure that may be attached to the side of another structure or natural feature such as a cliff face.

Clearing Limit: The area over and beside the trail tread that is cleared of trees, limbs, and other obstructions.

Clearing Height: The height of the clearing limit measured vertically from the trail tread.

Clearing Width: The width of the clearing limit measured perpendicular to the trail.

Cross Slope: The percentage of rise to length when measuring the trail tread from edge to edge perpendicular to the direction of travel.

Grade (Percent Grade): Grade can be expressed as a percent or an angle. Percent is easier to understand. Percent grade equals the rise (elevation change) divided by the run (horizontal distance) multiplied by 100.

Clearing: The clearing limit determined to be appropriate to accommodate the Managed Uses of a trail.

Clearing Height: The minimum clearing height determined to be appropriate to accommodate the Managed Uses of a trail.

Clearing Width: The minimum clearing width determined to be appropriate to accommodate the Managed Uses of a trail.

Cross Slope: The cross slope determined to be appropriate to accommodate the Managed Uses of a trail. Target cross slope that is determined to be appropriate over most of a trail to accommodate its Managed Uses.

Cross Slope Maximum: The steepest cross slope that is determined to be appropriate based on the Managed Uses of a trail and that exceeds the target cross slope of the trail.

Design Grade: The trail grade determined to be appropriate to accommodate the Managed Uses of a trail.

Design Surface: See tread material.

Target Grade: The trail grade that is determined to be appropriate over most of a trail to accommodate its Managed Uses.

Inslope: An outsloped trail is a trail with a cross slope that tips toward the uphill side.

Junction: An intersection of multiple trails. While it may contain seating or wayfinding signage, a junction is not as developed as a trailhead.

Landing: A transition area from trail to structure.

Other Powered Mobility Device (OPDMD): Federal regulations distinguish between wheelchairs and “Other Power-Driven Mobility Devices” (OPDMD). Wheelchairs—devices specifically designed for use by people with mobility impairments—must be permitted in all areas open to pedestrian use. On the other hand, OPDMDs—devices not designed for disabled individuals, but which can be used by mobility-impaired people for mobility purposes—also are to be permitted in all areas open to pedestrians unless the trail provider establishes that their use would change the provider’s programs or activities or create a safety hazard or threat. (Goldstein & Knutson, 2014) See the New York DEC bulletin “Motor Vehicle Access for People with Disabilities for the Use of State Land” for more information. (New York Department of Environmental Conservation, 2015)

Outslope: An outsloped trail is a trail with a cross slope that tips downhill allowing water to flow off the trail.

Passing Space: Where the clear tread width of a trail is less than 60 inches, passing spaces allow for users traveling in opposite directions or at different speeds to bypass on another.

Trail: From section 206 of the FHWA Recreational trails program:

The term “recreational trail” means a thoroughfare or track across land or snow, used for recreational purposes such as:

- pedestrian activities, including wheelchair use;
- skating or skateboarding;
- equestrian activities, including carriage driving;
- nonmotorized snow trail activities, including skiing;
- bicycling or use of other human powered vehicles;
- aquatic or water activities; and
- motorized vehicular activities, including all terrain vehicle riding, motorcycling, snowmobiling, use of off-road light trucks, or use of other off road motorized vehicles.

Shared-Use Path: Defined as “a route providing on off-road means of transportation and recreation for multiple types of users, such as pedestrian and bicyclists.” The generally recognized Pennsylvania authority for designing and constructing a universally accessible Trail, used by Penn Trails, is Universal Access Trails and Shared Use Paths Design, Management, Ethical, and Legal Considerations, November, 2014 PADCNR

Short Pitch Maximum: The steepest grade that is determined to be appropriate based on the Managed Uses of a trail, that generally occurs for a distance of no more than 200 feet, and that does not exceed the maximum pitch density.

Shoulder Clearance: The minimum horizontal and vertical clearance of obstructions (for example, removal of bicycle pedal bumpers) immediately adjacent to the trail tread that is determined to be appropriate to accommodate the Managed Uses of a trail.

Pitch Density Maximum: The maximum percentage of a trail with grades that exceed the Target Grade and that are less than or equal to the short pitch maximum, which is determined to be appropriate based on the Managed Uses of the trail

Surface Type: A characteristic of the design surface expressed in terms of material type, grading, compaction, and roughness of the trail tread.

- **Native:** A surface composed of soil, rock or other naturally occurring materials found on or near the trail.
- **Firm:** A surface that is not noticeably distorted or compressed during the seasons for which it is managed, under normally occurring weather conditions, by the passage of a device that simulates a trail user in a wheelchair.
- **Stable:** A surface that is not permanently affected by normally occurring weather conditions and able to sustain normal wear and tear caused by the uses for which the trail is managed between planned maintenance cycles.

Surface Protrusions: Trail tread imperfections, such as rock, roots, holes, stumps, steps, and structures, that are within the acceptable range of tread roughness and challenge level for the trail and that do not obstruct the Managed Uses of the trail.

Surface Obstacles: Trail tread imperfections, such as rocks, roots, holes, stumps, steps, downed logs, and structures, that are beyond the acceptable range of tread roughness and challenge level for the trail and that obstruct one or more Managed Uses of the trail

Tread Material: The trail tread surface, defined in terms of surface type, surface protrusions, and surface obstacles, that is determined to be appropriate to accommodate the Managed Uses of a trail

Tread Width: The tread width determined to be appropriate to accommodate the Managed Uses of a trail.

Turnpike: Turnpikes are used to elevate the trail above wet ground. The technique uses fill material from parallel side ditches and other areas to build the trail base higher than the surrounding water table. Turnpike construction is used to provide a stable trail base in areas with a high water table and fair- to well-drained soils.

Turn Radius: The minimum horizontal radius required for a Managed Use to negotiate a curve or turn in a single maneuver.

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