



Town of Pine Plains

Hike and Bike Trails Report

March 2016

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Funded in Part by a Grant from the Hudson River Valley Greenway.

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List of Acronyms Used

PDCTC – Poughkeepsie – Dutchess County Transportation Council
NND – New Neighborhood Development
NYSDEC – New York State Department of Environmental Conservation
LNE-NP – Lower New England/Northern Piedmont
MUA – Multiple Use Area
AADT – Annual Average Daily Traffic
SBR – State Bike Route
NYSDOT – New York State Department of Transportation
FOSL – Friends of Stissing Landmarks
AASHTO – American Association of State Highway and Transportation Officials
FHWA – Federal Highway Administration
NYS MUTCD – New York State Manual on Uniform Traffic Control Devices
SRTS – Safe Routes to School
TAP – Transportation Alternatives Program
TER – Transportation Enhancement Program
LWCF – Land and Water Conservation Fund
NTF – National Trails Fund
EPF – Environmental Protection Fund
CFA – Consolidated Funding Application
CHIPS – Consolidated Highway Improvement System

Pine Plains Hike and Bike Trail Report Executive Summary

Residents of Pine Plains have long expressed their support and desire for a well-developed trail system in the Town. Pine Plains recognizes that hike and bike paths play an important role in our community and will benefit our economy, health, recreational and transportation opportunities, and overall provide an amenity that will improve the quality of life in Pine Plains.



The 2004 Comprehensive Plan called for more recreational programs and facilities noting that there is a strong interest among residents for more access to open land and bike/hike paths. That Plan recommended exploration of more bike paths and hiking trails, enhanced public access to preserved open lands, and on-going maintenance of Stissing Mountain trails. More specifically, the Comprehensive Plan directed the Town to “Work with the Hudson River Valley Greenway, New York State Department of Transportation, and the County Highway Department to develop alternative transportation opportunities such as shared roadways and bike paths.

To that end, the Town has completed a bike, hike and trail study. With funding from the Hudson River Valley Greenway, and support of Dutchess County, Winnekee Land Trust, and the Pine Plains Sidewalk Committee, the study resulted in a “Hike and Bike Trails Report” and includes

- Information on the benefits of trails
- An inventory of existing and potential trails and pathways in Pine Plains
- Trail vision, goals, objectives and policies to implement
- Specific action steps the Town can take to make this trail system a reality
- Sample trail design and maintenance standards
- Model easements
- Information on landowner liability
- Potential funding sources

The Pine Plains Trail and Bikeway Network is envisioned to connect existing trails around Stissing Lake and Thompson Pond, Stissing Mountain, and Stissing Mountain Multiple Use Area more completely with the hamlet, adjacent recreational areas (State lands, The Nature Conservancy Lands, FOSL lands, Wilcox Memorial Park, Roeliff Jansen Kill Multiple Use Area, and the Lafayette Multiple Use Area) and other locations within Pine Plains. The map shows this concept. The system is envisioned as a series of improved bike lanes and road shoulders, unpaved hiking and mountain bike trails, and paved trails.

Vision for Pine Plains Trails

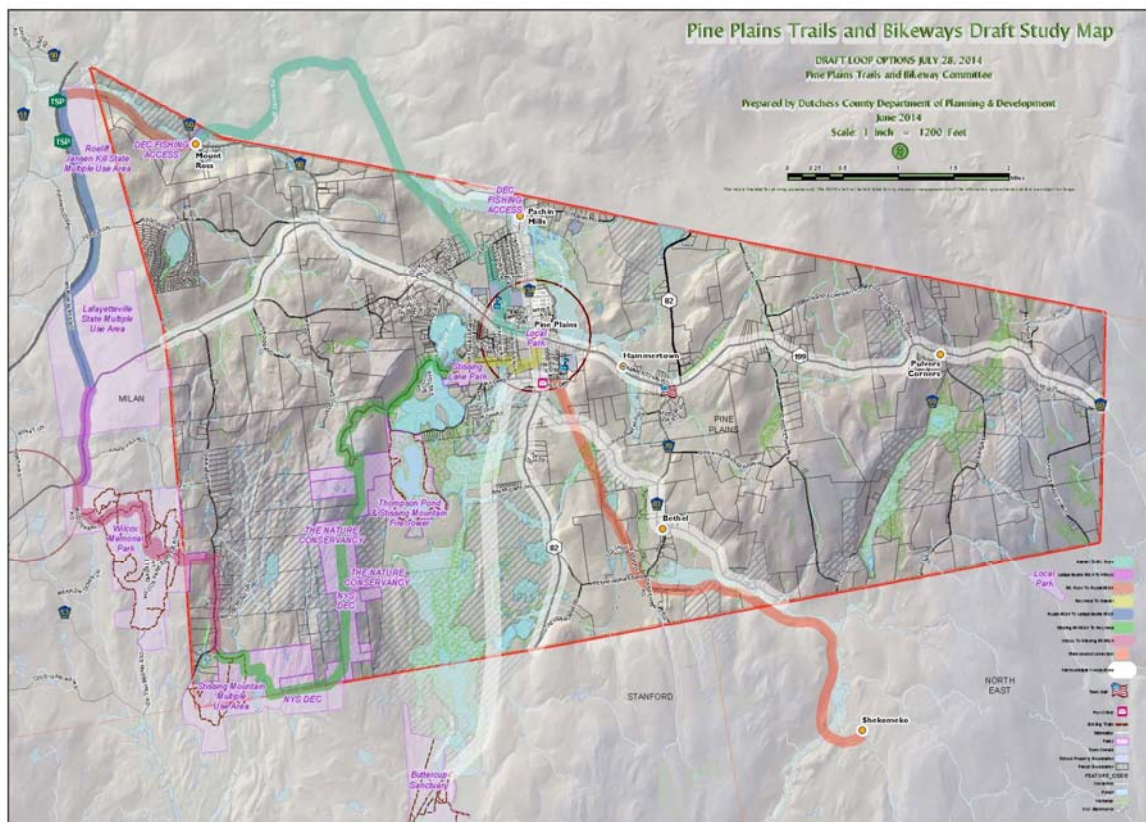
The transportation network in Pine Plains provides for easy and safe access to all areas in Pine Plains. Trails and bikeways in our town are connected to the hamlet center and provides linkages with existing and future regional trails and bikeways. Opportunities to enjoy the scenery, hills, and waterways here are increased. Residents have more opportunities to walk, hike, and bike, and Pine Plains’ network attracts visitors and has boosted tourism. Trails, streets, and bikeways are maintained to support the many people who use this network.

There are many existing resources that could be used to develop the bike and hike system. These include use of:

- Abandoned rail beds
- Local, County, State Highway roads and shoulders
- Existing paths and trails
- Sidewalks in hamlet

The Hike and Bike Report recommends that the Town of Pine Plains:

- Adopt the trail report as an Addendum to the Pine Plains Comprehensive Plan.
- Create a Friends of Pine Plains Trails Committee to begin implementation of the recommendations.
- Conduct outreach to route owners.
- Create a Hike Pine Plains brochure that can be printed and distributed
- Initiate the improvements to Lake Road
- Use the Concept Map and Matrix, along with goals and policies from this Plan during Planning Board review of development proposals to identify and plan for trails and pathways in the development consistent with this plan. The Planning Board and Zoning Board of Appeals should use a checklist for project review that includes evaluation of a project for inclusion of trails, paths and/or sidewalks.
- Identify and track funding opportunities.
- Work with the Poughkeepsie Dutchess County Transportation Council to support effort to implement the Pine Plains recommendations from the Walk Bike Dutchess Plan



Introduction

Pine Plains has long valued existing and desired additional opportunities for bike and hiking and other outdoor activities. The 2004 Comprehensive Planning included additional bike paths, hiking trails, and enhanced access to open lands, especially Stissing Mountain as among the top goals for the community to achieve. Public input gathered throughout that planning process was consistent about the importance residents of Pine Plains places on bike and hike paths.

To address this need, the Town applied for and received a grant from the Hudson Valley Greenway to conduct a bike and hike path study in Pine Plains. A Committee was formed to spearhead that effort. At the same time, the Town, through a separate sidewalk committee Pedestrian Taskforce worked closely with Dutchess County to inventory the condition of sidewalks in the hamlet of Pine Plains and outline plans to enhance them. The two committees worked closely together to ensure coordination and to identify possible links between sidewalks in the hamlet and other trails and pathways.

This report summarizes the work and recommendations of the Trails Committee. In addition to detailing the planning process for this work, it outlines the benefits of trails, includes an inventory of existing and potential trail network, and establishes vision, goals, objectives and policies to help Pine Plains implement the recommended trail system. This report also outlines action steps needed to make this a reality along with a compendium for design and maintenance standards. Information is provided to help the Town develop and construct trails in the future. Design standards, signage, operation and maintenance, model easements, information on landowner liability and potential funding sources are all included. This report was developed with the intent that it would be accepted and adopted by the Town Board as an addendum to the 2004 Town Comprehensive Plan.



Benefits of Trails in a Community

It is well recognized that increasing the number and quality of opportunities for walking and bicycling in communities and regions, can lead to a variety of positive outcomes for any community. These benefits are described below.

Economy

Experience with walking and bicycling trails from around the United States and internationally shows that these projects can boost economic activity. Direct spending locally by trail users can increase the economic health of an area and benefits small businesses¹. Trails can also lead to higher property values, more business spending, improved public health, and greater consumer spending on soft goods and durable items, such as bicycles. Studies of trails from around the country consistently show that no increased crime or vandalism results from having immediate or nearby proximity to a trail. A study in Delaware showed a 4% increase in property values. These studies also indicate that the highest increases in property values and acceptance by neighbors depend on the ability of the trail to be successfully integrated into the neighborhood and open spaces. See Appendix A: Citations.²

By creating new destinations and increasing connectivity of existing storefronts, trails and bicycling infrastructure can both attract new people from outside of Pine Plains (tourism) and make it easier for residents to get to existing destinations. The proportion of workers who telecommute is growing, and amenities like bike infrastructure, trails and walkable main streets can attract new businesses and connect a very distributed workforce that exists in a rural area like Pine Plains. In addition, by providing a cheaper, healthier alternative to the automobile, biking and walking means lower spending on transportation, making more dollars available for other spending.

The size of the impact on Pine Plains' local economy would depend upon the number of trail visits and—crucially—the percentage of those users coming from outside the area. Studies of direct economic effects show that spending per visit can vary from a few dollars to well over \$30.³ A recent analysis of the impact of eight greenway trails in New York State concluded that each visit generated an average of \$21.20 in spending by local and non-local users, noting that non-local spending tends to be much higher.⁴ In Dutchess County, the Walkway over the Hudson generates \$24 million per year in economic activity and attracts 350,000 visitors annually from outside the region.⁵

¹ Such spending is typically measured on a per visit basis.

² Home Sales Nationwide near Multi-Use Trails showed that 36% of 2,000 recent home buyers designated walking, jogging, or biking trails as either an “important” or “very important” community amenity. Trail availability outranked 16 other options, including security, ball fields, golf courses, parks, and access to shopping or business centers. Only highway access, at 44 percent, was specified as a top amenity by more of the home buyers surveyed.

³ NYS Office of Parks, Recreation & Historic Preservation, *Every Mile Counts: An Analysis of the 2008 Trail User Surveys* (Sept. 2010).

⁴ *Every Mile Counts*, p. 58.

⁵ Poughkeepsie-Dutchess County Transportation Council, *Walk Bike Dutchess* (2014), Ch. 1.

Health

The negative consequences of a sedentary lifestyle are well-documented, and increasing the opportunities for trail, walking, and bicycling allows people to make trips and recreate in ways that increase physical activity levels. These benefits are partially captured in both health and economic terms but are also related to quality of life. Walking or biking outdoors offers opportunities to experience new and changing environments, to feel spiritual renewal and to reduce stress. People are more likely to walk when sidewalks are in good repair, they have destinations to walk to, intersections are safe, cars travel at slow speeds, and walking routes are attractive. The history of urban park building as well as more recent scientific studies consistently demonstrate the positive health benefits of park and other green space. In Pine Plains, an overwhelming majority of surveyed residents indicated that they currently walk and bike to exercise and stay healthy. Better walking and bicycling options also increase safety.

Demographics

New York State's population of older adults is growing quickly. In Pine Plains, about 17% of the population is 65 and older, and across Dutchess County, the number of residents age 75 and older has grown from 13,000 in 1990 to nearly 19,000 today. Older adults increasingly want safe streets that promote walking. And, a goal of the Town is to provide for more outdoor recreation facilities for both youth and adults – a move that may make Pine Plains more attractive to families with young children and young adults – both of which desire those kinds of amenities.

Environment

Walking and bicycling provide easy, carbon-free alternatives to making trips by automobile, lowering emissions linked to rising global temperatures. Trails may also promote awareness of local natural history and, if carefully designed and implemented, are appropriate uses in many sensitive and important ecosystems and habitat types.

Recreation

Trails, greenways, and on-road facilities make it easier to walk and bike for fun. The survey conducted for this Plan shows that many Pine Plains residents walk and bike to access recreational areas as well as to be outside and enjoy the community.

Transportation

Walking and bicycling can provide attractive, low-cost, and convenient access to destinations, replacing automobile trips. By providing a network of trails and bicycling infrastructure,



mobility and accessibility for these modes is increased. Safety of all modes is also important. According to information on crashes involving pedestrians and bicyclists, two crashes occurred in Pine Plains between 2007 and 2011.⁶ Through proper design, those on foot and bikes can be more safely accommodated while using the Town's road network.

Planning Process for Pine Plains Trails and Bikeways

Public Input

The following public input activities were undertaken as part of this Plan:

- Pedestrian, Trails/Bikeway Committee established and open meetings (beginning November 2010)
- *Trails – Bikeway Forum* (Oct 22, 2011). About 55 people participated. There were presentations from area communities with successful trails projects, and participants brainstormed goals and actions in small groups.
- Pedestrian Task Force/PDCTC (Poughkeepsie-Dutchess County Transportation Council) *Pine Plains Sidewalk Study Town Workshop* (June 2014). This survey, distributed as part of a separate effort, included an insert developed by the Pedestrian, Trails/Bikeway committee. It generated 110 responses.
- *Pine Plains Trails & Bikeways Committee Survey Insert* (Part of Pedestrian Task Force's Sidewalks and Trails Survey) (July 2014)
- *Landowner Informational Meeting* (May 16, 2015)

Summary of Trails – Bikeway Forum Public Input

At this meeting, participants heard presentations from surrounding towns with successful trails projects. There was also a small group breakout session. The results are summarized in Table 1.



⁶ Poughkeepsie-Dutchess County Transportation Council, *Walk Bike Dutchess* (2014), Ch. 5.4.

Table 1. Summary of Trails-Bikeway Forum Public Input

Trail Types Needed	Places to Connect	Issues to Address	Potential Barriers
<ul style="list-style-type: none"> • Multi-use with signage • Road sharing and bike lanes • Improvements around lake road for biking • Signage for Stissing Mountain 	<ul style="list-style-type: none"> • Stissing Mountain to Wilcox Park and State Forest lands • Town to Beach Road on abandoned rail beds • FOSL trail along Lake • Ridge trail to Millerton via Ancramdale • RR bed behind Bethel near back of Pulver property • Connect hamlets • Connect to Harlem Valley Rail Trail in Millerton • Connect to Amtrak in Rhinecliff • Connect to Metro North in Wassaic • Connect to trails along Hudson River, including in Hyde Park • Connect Bethel to Pine Plains and Millerton 	<ul style="list-style-type: none"> • No appropriate road shoulders • Unsafe along sr-82, sr-199, and cr-83 • Improvements around lake 	<ul style="list-style-type: none"> • Engaging private landowners • Expenses developing and maintaining trails • Traffic - no safe ways along highways

Summary of Pine Plains Sidewalk Study Town Workshop Public Input

The following figures summarize selected results of the sidewalks and trails survey as well as the results of the Trails and Bikeways Committee survey insert.

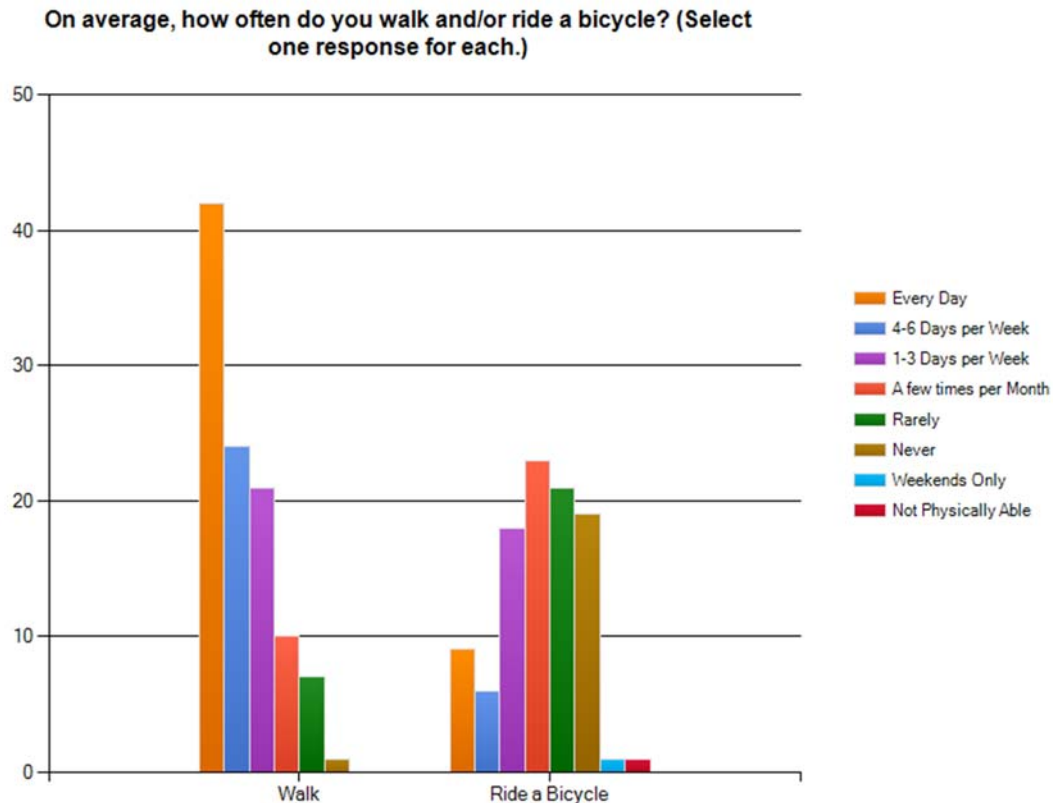


Figure 1. Question 1 results, 2014 walking, biking, and trails survey

For which of the following purposes do you usually walk or ride a bicycle? (Select all that apply)

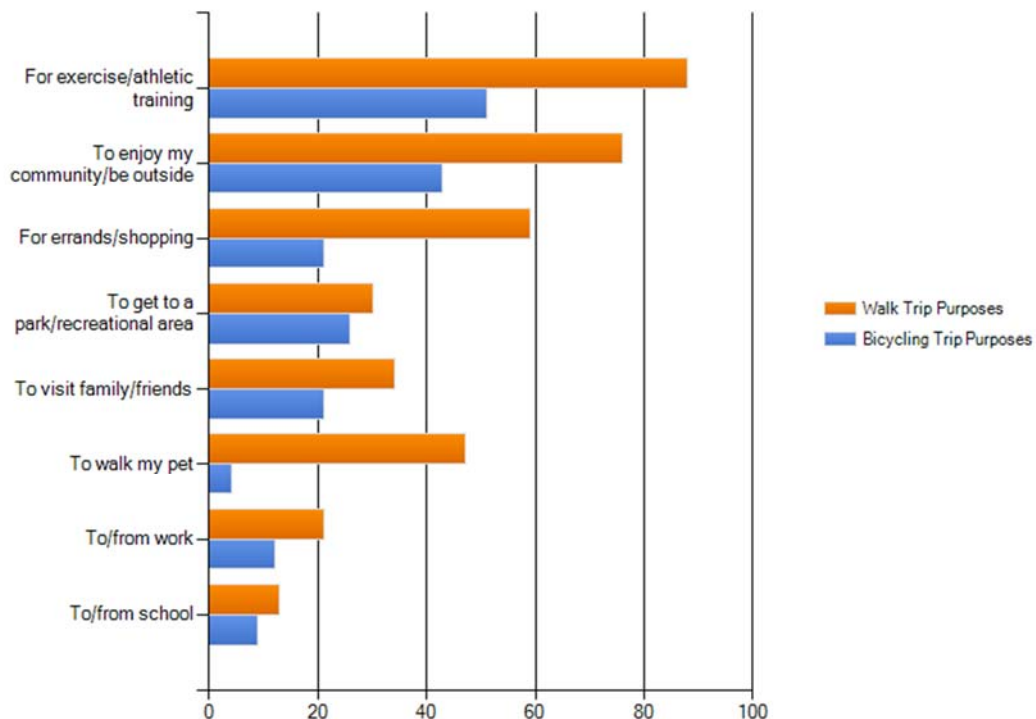


Figure 2. Question 2 results, 2014 walking, biking, and trails survey

What type of facility do you walk or bicycle on? (Select all that apply)

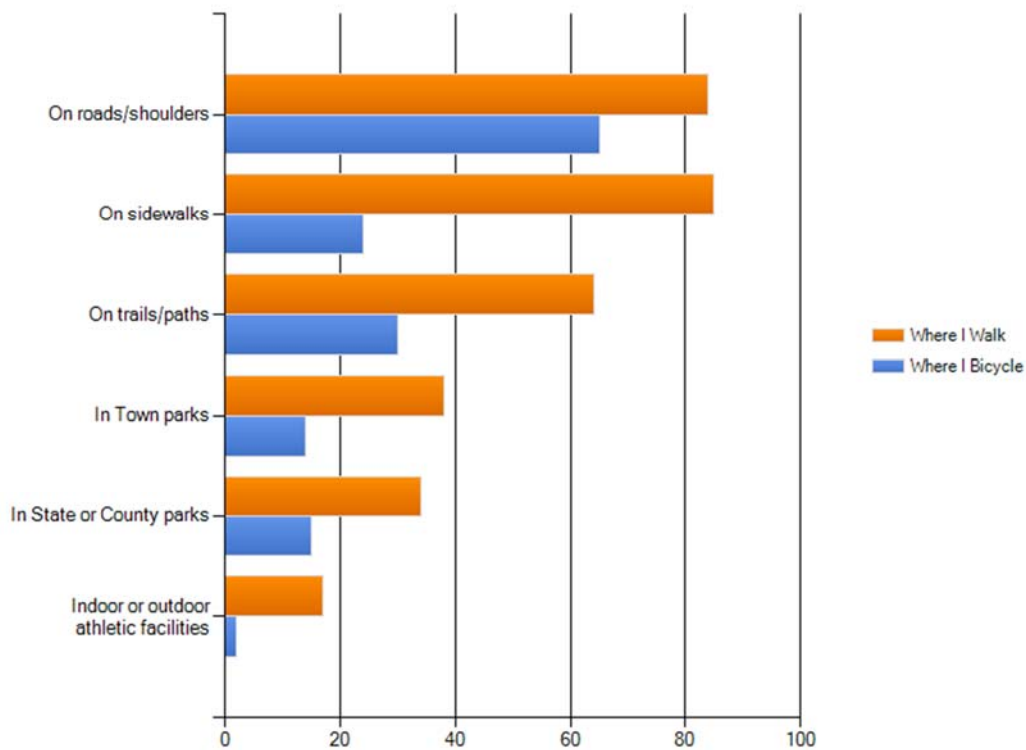


Figure 3. Question 4 results, 2014 walking, biking, and trails survey

Where have you hiked in the past year?

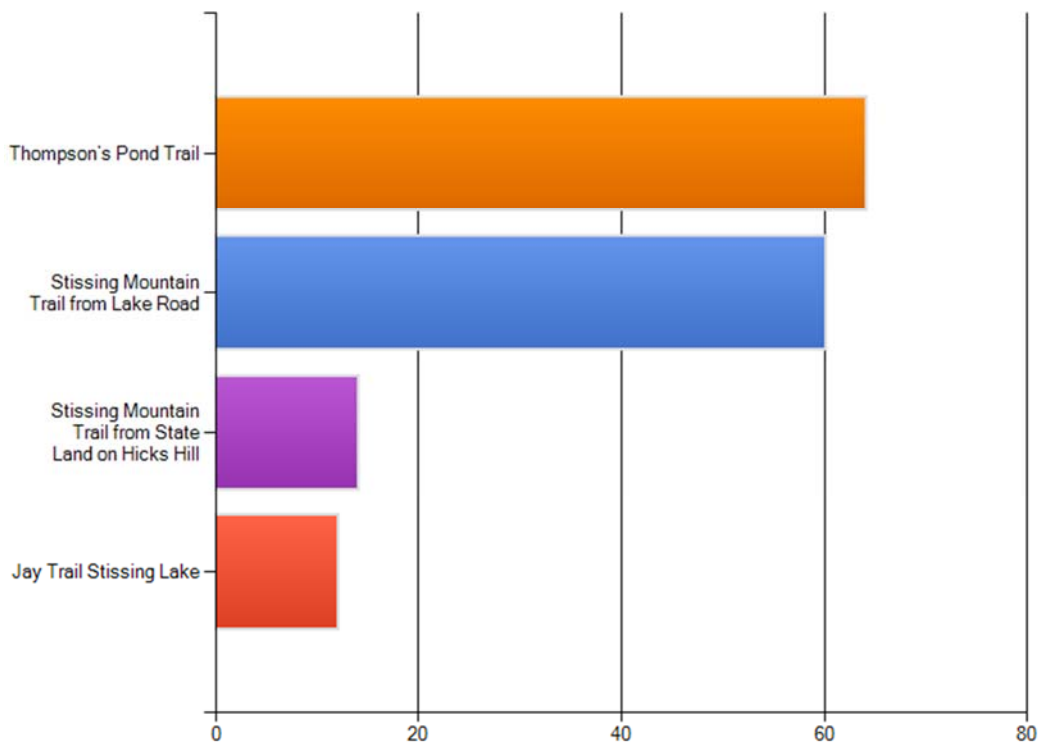


Figure 4. Question 16 results, 2014 walking, biking, and trails survey

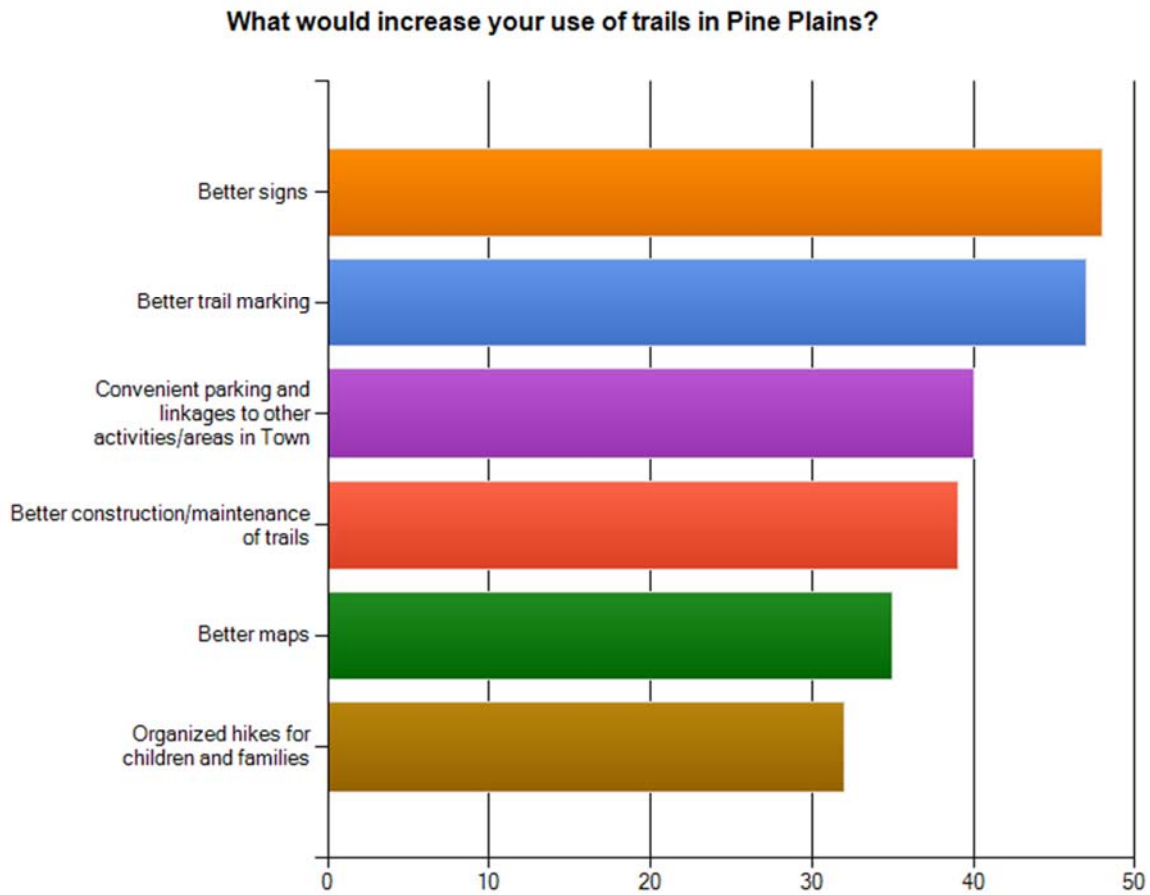


Figure 5. Question 17 results, 2014 walking, biking, and trails survey

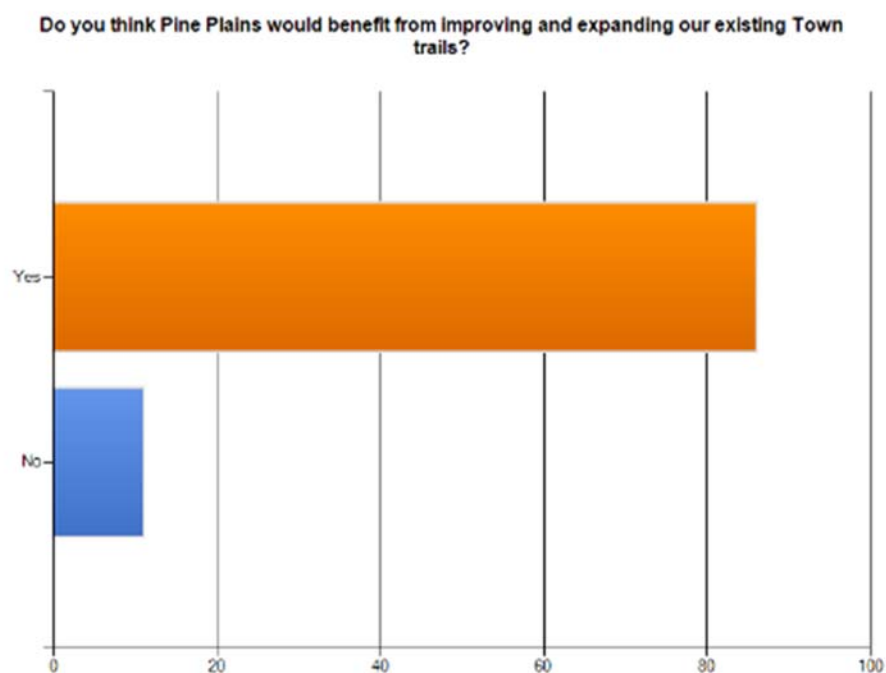


Figure 6. Question 18 results, 2014 walking, biking, and trails survey

In addition, 58 people answered “Yes” to the question, “Are there roads in Pine Plains that you use that could be made more bicycle-friendly?” When asked to specify locations, 48 people provided the responses summarized by

Table 2.

Table 2. Summary of responses to Question 15, 2014 walking, biking, and trails survey

Response and/or Location	Count
All major and side roads would benefit from improvement in the way of trails and or sidewalk improvement	7
Any roads to and from the schools	2
SR-199	15
SR-82	11
CR-83	2
Larger shoulders on side roads	3
Lake Rd and roads around the lake	12
Meusel Road, Britton Street, Willow Street, Woodside Street, Jackson Road, Ryan Road	1
East and West Church Street.	2
North Main Street.	6
Stissing Ave to Beach Road	1
The roads seem fine- drivers need to be more bicycle friendly!	1

Related Planning Efforts and Local Laws in Pine Plains

2004 Town of Pine Plains Comprehensive Plan

The Comprehensive Plan provides the supporting framework for this Plan Addendum. Among the issues facing Pine Plains when the Comprehensive Plan was written are several that relate to trails and bikeways:

- Issue 5: There is a need for more recreational programs and facilities...There is a desire for more access to open land and bike/hike paths. Continued access to hiking on Stissing Mountain was the most important recreational opportunity mentioned in the survey.” (p. 32)
- Issue 6: sidewalks in town center (p. 32)

Among the relevant goals and strategies identified by the Comprehensive Plan are:

- Future Growth is Consistent with Rural Character (Goal 2), Strategy 9: “Encourage low-intensity tourism that takes advantage of and is compatible with the town’s rural character.” (p. 56)
- Recreation (Goal 7), Strategy 1, “Of special interest in exploring should be more bike paths, hiking trails, enhanced public access to preserved open lands, and on-going maintenance of Stissing Mountain trails.” (p. 68)

- Transportation Goal, Strategy. #5: “Work with the Hudson River Valley Greenway, New York State Department of Transportation, and the County Highway Department to develop alternative transportation opportunities such as shared roadways and bike paths. A bikeway plan should designate roads and new trails that offer safe and convenient bicycle access between residential areas, the downtown in Pine Plains and recreational areas. These bikeways should be actively promoted in all future road improvement plans.” (p. 70)

Local Laws

Pine Plains enacted land use regulations supportive of walking and bicycling based upon recommendations contained in the Comprehensive Plan. These regulations will help ensure that any new development in the Town consider the needs of bicyclists and pedestrians and provide certain facilities to accommodate these groups’ recreational and transportation needs.

Town of Pine Plains Subdivision Regulations

All subdivisions in Pine Plains are subject to these regulations, which facilitate development of non-motorized transportation systems within new developments as well as, in some cases, require that an applicant provide links to surrounding trails, sidewalks, and other resources. Among the provisions are:

- The Planning Board may require the reservation of a twenty-foot wide easement to accommodate pedestrian and/or bicycle traffic and utilities. A circular turnaround shall be provided at the end of a permanent dead-end street. (A61-24, (E)(6))
- Sidewalk requirements, including pedestrian and bicycle easements to connect destinations, such as schools and playgrounds (A61-25)
- Requirements that conservation subdivisions provide pedestrian and/or trail systems and, for Traditional Neighborhood Hamlet designs, the creation of links to destinations (Appendix A, Sec. 3, B).

Town Zoning Law

The zoning code provides the following for bicycle and pedestrian accommodation:

- Hamlet Design Standards include 4-6 foot wide sidewalks
- Encourages use of County Greenway Guides
- Seeks to minimize conflicts between pedestrians and vehicles
- Encourages slower speeds through traffic calming
- New Neighborhood Development (NND) and Conservation Subdivision review criteria include bicycle and pedestrian facilities, including creation of trails and connections to existing networks
- Permits trails in areas designated as open space
- Encourages creation of trails via density bonus
- Encourages provision of bicycle facilities
 - On-street bicycle lanes (separate, striped 4 foot lanes)
 - Off-street trails (multi-use)

Town Highway Standards (2005 revision)

This document provides engineering specifications applicable to all new roads and all other highway related construction, whether constructed as part of a subdivision or site plan approved by the Planning Board or constructed otherwise. It also applies to all roads that are not proposed as a town road, but which could become a town road, shall be designed and built in accordance with this chapter.

Specifications for roadway cross sections, drainage structures, and other design elements can impact bicyclists. The Highway Standards specify the use of bicycle tire-friendly reticulate grates, and the standard cross section for "Major/Through Highways" specifies 6' paved shoulders. However, specifications for "Local Street," the type applicable to most rural and subdivision roads, specifies 4' compacted gravel shoulders, a width and surface treatment that may be less conducive to bicycling.

Significant Habitats in the Town of Pine Plains Report

This report provides an inventory and map of habitat types, describing their ecological attributes, some of the species of conservation concern they may support, and their sensitivities to human disturbance. It addresses conservation issues associated with these habitats, provides specific conservation recommendations, and delineates eight areas in Pine Plains that may serve as suitable units for conservation and planning.

The habitat map is intended to help the Town of Pine Plains identify the areas of greatest ecological significance, develop conservation goals, and establish conservation policies and practices that will help to protect biodiversity resources while serving the social, cultural, and economic needs of the human community. It contains certain provisions for buffers where trails are constructed in areas inventoried as significant habitat.

Poughkeepsie-Dutchess County Transportation Council (PDCTC) Pine Plains Sidewalk Inventory & Improvement Plan

The Town established a local pedestrian task force and is working with the PDCTC, the Dutchess County Metropolitan Transportation Organization, to complete research and studies, a sidewalk inventory, and develop recommendations to address pedestrian and bicycling in the hamlet center. This effort is being coordinated with this Plan.

The PDCTC study and recommendations will include a prioritized list of projects for sidewalk repair and replacement, new sidewalks to fill gaps or connect important pedestrian destinations, pedestrian-related infrastructure improvements (e.g. striping, signage, curb extensions, street trees, etc.). A set of cost estimates will be developed. While not aimed specifically at bicycling, this plan will include streetscape recommendations and improvements that will benefit bicyclists

PDCTC Walk Bike Dutchess

The PDCTC finalized Walk Bike Dutchess in March 2014. It is a comprehensive plan to promote bicycling and walking that considers education, enforcement, and

engineering strategies at scales from local to regional. It also contains specific recommendations for Pine Plains as part of the Upper Taconic planning area, which is defined as the north-central communities along the Taconic State Parkway: the Towns of Milan, Pine Plains, Stanford, Washington, Pleasant Valley, and Clinton, and the Village of Millbrook. That plan identified top issues of concern in the area related to trails and included lack of sidewalks and paths and inadequate road shoulders. Necessary improvements identified were increasing the width of shoulders, more rail trail/shared use paths, bike lanes and shared lane markings.

Walk Bike Dutchess contains recommendations specific to Pine Plains, a chapter about design of bicycle and pedestrian facilities, and a set of implementation steps. In addition, it contains walking and bicycling infrastructure cost estimates to facilitate estimating funding needs. The following recommendations specific to Pine Plains are included in the Walk Bike Dutchess Plan:

UT-6. Pine Plains Trails & Bikeways [T/Pine Plains; Medium-Term]

Issue: The [Town of Pine Plains' Comprehensive Plan](#) calls for a bikeway plan to designate streets and trails that offer safe and convenient bicycle access between residential areas, the Town center, and recreational areas. The Town's Trails/Bikeway Committee is developing a trails and bikeway plan to improve conditions for bicycling in the Town.

Improvement:

- Improve trails and develop a network of bicycle facilities in Pine Plains, based on the Town's Trails and Bikeway Concept Plan (under development). This may include on road facilities as well as rail trails.

UT-13. Stanford – Pine Plains Rail Trail [Towns, Dutchess County; Long-Term]

Issue: There are unused railroad lines between Stanford and Pine Plains which could be acquired and converted to a shared-use trail, as recommended in [Moving Dutchess](#). This would be a major project that would require substantial funding.

Improvement:

- Explore the feasibility of constructing a rail trail between Stanford and Pine Plains using railroad right of ways (about 9 miles).



Figure 7: Walk Bike Dutchess Project Recommendations for Pine Plains (see table below for detail)

Planning Area	Project Code	Location	Project Name	Timeframe ¹	Lead	Other Partners
Upper Taconic	UT-5	T/Pine Plains	Pine Plains Town Center Sidewalks	Medium	T/Pine Plains, NYSDOT	
Upper Taconic	UT-6	T/Pine Plains	Pine Plains Trails & Bikeways	Medium	T/Pine Plains	
Upper Taconic	UT-13	T/Stanford; T/Pine Plains	Stanford - Pine Plains Rail Trail	Long	Towns, Dutchess County	
Upper Hudson	UH-33	T/Rhinebeck; V/Rhinebeck; T/Red Hook; V/Red Hook; T/Milan; T/Pine Plains; T/North East; V/Millerton	Hucklebush Rail Trail	Long	Towns, Dutchess County	Rail owner

New York State Strategic Plan for State Forest Management (NYSDEC)

For forest management planning purposes, Pine Plains lies in the Lower New England/Northern Piedmont (LNE-NP) ecoregion as defined by the Nature Conservancy. This document provides a framework for consideration of recreational trails development on State Forest lands. The NYSDEC (New York State Department of Environmental Conservation) will consider proposals for development of additional trails or the use of undesignated trails to accommodate local use of State Forests on a case-by-case basis.

According to the Strategic Plan, one way the NYSDEC will establish new trails is through the Adopt-A-Natural Resource Stewardship Program. The partnerships entered into as part of this program are one way that the NYSDEC will work with recreation groups, including municipalities, on trail construction projects. These partnerships between recreation groups and NYSDEC are formalized through the NYSDEC's Adopt a Natural Resource Program. The program is authorized by Section 9-0113 of the Environmental Conservation Law, which authorizes NYSDEC to enter into stewardship agreements for approved activities for the preservation, maintenance, or enhancement of state-owned natural resources. These agreements are generally written for a three to five year term. This program contains an approval procedure and specifies that, once constructed, the sponsor must maintain the trails to NYSDEC standards.



Inventory of Existing Walking and Bicycling Options

The land use and population pattern in Pine Plains is characterized by a higher density, mixed-use village center surrounded by low density, primarily residential and open space uses. This settlement pattern results in three primary types of opportunities for bicycling, walking, and hiking: Trails on private, County lands, and State lands; sidewalks and roadways in the hamlet; and rural roads outside the hamlet.



Figure 8: Map of Hamlet from Walk Bike Dutchess showing sidewalks (yellow), narrow road shoulders (orange) and wider road shoulders (blue)

Trails

A number of well-used hiking trails are found at Town and County parks, on State lands, and on other conserved lands. These trails provide opportunities for a variety of abilities and interests, from hiking to mountain biking, casual walking, and bird watching. Some, such as Stissing Mountain and Thompson Pond, draw visitors from around the region.

An inventory of trails are listed in the table below.

Table 3. Existing trails in Pine Plains⁷

Resource Name	Description	Uses	Trail Description	Trail Type
Stissing Mountain Multiple Use Area	590 acres; NYSDEC State Forest; parking on Hicks Hill road	hiking, running, snowshoeing; hunting and trapping; mountain biking; equestrian; X-C skiing	several loops of X-C skiing and hiking trails (6.0 miles)	natural surface path
Stissing Mountain Fire Tower	1 acre at Fire Tower owned by FOSL; otherwise, trail crosses private lands	hiking, running, snowshoeing	1.5 mile trail crossing TNC and private lands; access from Lake Road (4.2 miles)	natural surface path
Thompson Pond Preserve	530 acres; owned by TNC	nature viewing, walking	loop trail of 2.5 miles and shorter 1.2 mile trail	natural surface path
Lafayetteville Multiple Use Area	715 acres; NYSDEC State forest in Town of Milan; parking along Wilbur Flats Road and Rte 199	hiking, running, snowshoeing; car-top boating; fishing, hunting and trapping; mountain biking; equestrian; X-C skiing	none designated	n/a
Roeliff Jansen Kill Multiple Use Area	128 acres; NYSDEC State Forest in the Town of Milan	nature viewing; fishing; hunting and trapping	none designated	n/a
Wilcox Memorial Park	615 acres; Dutchess County park in the Town of Milan	hiking, nature watching, X-C skiing, fishing, group activities	5+ miles of hiking trails	natural surface path
Buttercup Farm Audubon Sanctuary	1,039 acre sanctuary; Town of Stanfordville, Dutchess County; user fee	hiking, bird watching	6 miles of walking/hiking trails	natural surface path
Lake Road	Lake Road is a paved roadway	Walking and biking	It is a roadway, not a dedicated trail	Paved road surface

⁷ Bicycle parking is available at the elementary, middle and high schools in Pine Plains.

Resource Name	Description	Uses	Trail Description	Trail Type
FOSL Stissing Lake Property	43 acre parcel containing southwest cove of Stissing Lake and adjoining wetlands	Hiking, birdwatching	Jay Trail is mostly unimproved marked trail 0.4 miles	Natural surface path

Hamlet “Main Street”

The compact development pattern and higher density of the hamlet center creates a unique set of opportunities for bicycling and walking. Destinations are more closely spaced, making utilitarian trips on foot and by bike possible for people with a range of abilities. Speeds on streets are generally lower than outside of the hamlet and there are approximately 2.9 miles of sidewalks. A recent survey found most of the sidewalk network to be in good condition.⁸ However, there is a pronounced lack of sidewalks in the southwestern section of the Town Center, and a variety of other gaps exist, including crosswalks, sidewalks on only one side of streets, and street ramps in poor condition.

Local Roads and State Highways outside the Hamlet

Most of the Town’s 63.3 mile road network is located outside the hamlet. It is primarily rural in character and accommodates pedestrians and bicyclists as de facto shared roadways. While some roads may have shoulders and low traffic volumes suitable for bicycling and walking (i.e. 4’ minimum paved shoulders), high speeds, limited sight distance, and challenging terrain may make many roads unsafe, uncomfortable, and unattractive to users.

The road network Bicycling opportunities include:

- **NYS Route 199.** This rural minor arterial (functional class 6) state highway runs east-west through the northerly portion of the town. Annual Average Daily Traffic (AADT) ranges from about 3,500 in the hamlet; to 2,036 to the west; and 1,700 to the east. Some segments, especially west of the hamlet, have narrow shoulders. Right-of-way and topographic conditions are also challenging. Portions of RT 199 west of Pine Plains are currently designated as State Bike Routes (SBR) by NYSDOT (New York State Department of Transportation, and NYSDOT has proposed an extension of SBR 199 along Route

What is the difference between a shared use path and a trail?

- A shared use path is a trail that is readily usable for transportation.
- A recreational trail is primarily for recreation, but may provide a transportation link.

Source: FHWA (2014), Designing for Non-motorists Recreation: Where Engineering and Art Meet

⁸ Poughkeepsie-Dutchess County Transportation Council, *Pine Plains Sidewalk Study* (June 25, 2014; PPT slides presented at Town Workshop).

199, between Route 308 on the western border of Milan and a proposed SBR 22 in the Town of Northeast.

- NYS Route 82. This rural major collector (functional class 7) state highway runs generally north-south through the Town. AADT measurements range from 4,380 immediately south of the hamlet; to 2900 from the hamlet to the Stanford town line; and 720 to the north of the hamlet. While not currently an SBR, NYSDOT has proposed SBR 82, along Route 82 between the proposed SBR 199 in Pine Plains and a proposed SBR 52 in Fishkill.
- Local roads. The local road network is made up of County and Town roadways varying from hamlet streets to rural highways. The predominant type is low-volume rural. According to NYSDOT inventory data, most have shoulders of between 4' and 6'; AADT's are generally lower than 1,000.

Proposed Pine Plains Trail and Bikeway Network

This section presents the proposed trails and bikeways network. It is based upon public input, coordination with other planning efforts, and committee input. The Concept Map illustrates the location of each proposed trail segment as well as major connections. This information is provided at a general level and is intended to show approximate trail and bikeway link locations for planning purposes.

The accompanying Proposed Trails Matrix breaks down, for each proposed segment, existing conditions, segments that are important to be included in the town-wide trail system, alternative routes and links, and appropriate trail types. For certain segments, there are multiple options provided. Trail types and surface treatments are related to the design guidelines presented below. Finally, the matrix also indicates whether a particular segment should be coordinated with the trails or pathways that may result from the Pine Plains Sidewalk Study.



There are many opportunities to develop or augment trails in Pine Plains. There are already many trails in the Town, especially along the lakes and the Stissing area. The Town should take advantage of these existing trails and use them to make more connections to each other, to the hamlet, and to new trails.

The Town should incorporate the following into its overall trail system:

- Abandoned rail bed
- Hamlet streets and shoulders
- County and State Highway roads and shoulders (CR 83, NY 82 and NY 199)
- Seasonal stone and dirt roads
- Town roads and shoulders
- Existing paths and trails

The Town should work to develop the following pathway types into its trail system:

- Shared use paths
- Shared roadways using improved shoulders
- Improved bike lanes
- Sidewalks in hamlet
- Develop bike path through private properties of willing landowners or as incorporated into subdivision or other development proposal approvals
- Hiking/mountain biking trail

Pathways can be designed in a variety of ways. A range of path types from unimproved foot paths to paved surfaces should be included. Path design should be dictated by location, use, and funding. See Appendix for recommended design and maintenance standards. The Town should work towards including the following surfaces:

- 10' hard surface
- 4'-6' paved shoulder
- 5-6' on-street pathway created from striping and signage
- Stone/dirt road surface
- 4-6' paved hard surface
- 3-6' natural surface



A horizontal scale bar with a black background and white markings. The markings are at intervals of 0.25 miles, labeled from 0 to 2. The label 'Miles' is at the right end.



Pine Plains Trails and Bikeways Draft Study Map

HAMLET FOCUS AREA OPTIONS - JULY, 2015
Pine Plains Trails and Bikeway Committee

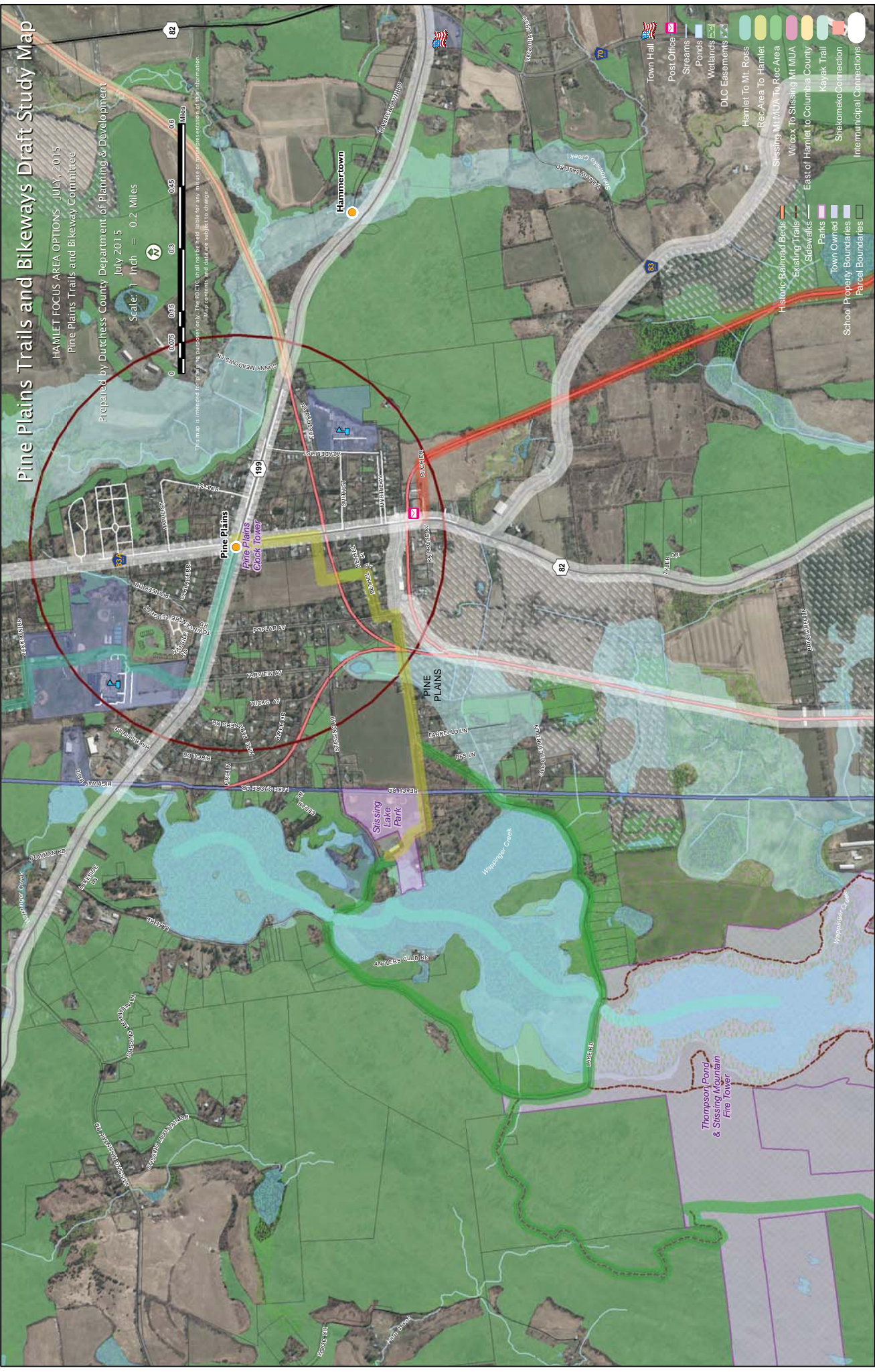
Prepared by Dutchess County Department of Planning & Development

July 2015

Scale: 1 inch = 0.2 Miles



This map is intended for planning purposes only. The DUTC shall not be held liable for any misuse or misrepresentation of this information. Map elements and data are subject to change.



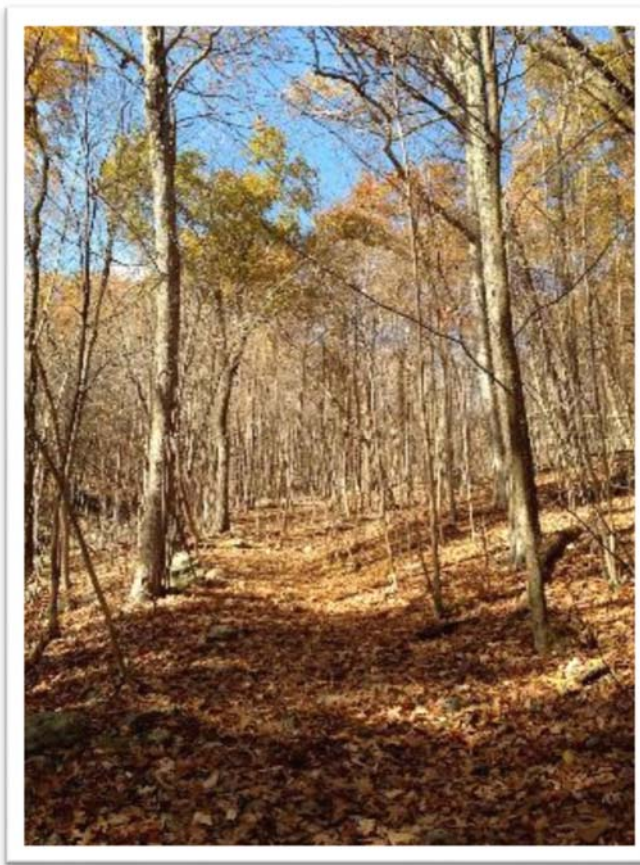
- Town Hall
- Post Office
- Streams
- Ponds
- Wetlands
- DLC Easements
- Hamlet To Mt. Ross
- Rec Area To Hamlet
- Sissing Mt MUA To Rec Area
- Wlcox To Sissing Mt MUA
- East of Hamlet To Columbia County
- Kayak Trail
- Skeomeko Connection
- Intermunicipal Connections
- Historic Railroad Beds
- Existing Trails
- Sidewalks
- Parks
- Town Owned
- School Property Boundaries
- Parcel Boundaries

Concept Map		Existing Trail or Linkage Opportunity	Proposed or Potential Linkage or Trail Opportunity		Coordinate with Sidewalk Study
Trail Segment Name	Map Color		Trail type	Surface	
"Hamlet to Mt Ross"		Abandoned rail bed	Shared use path	10' hard surface	
		Two-lane village street (NY 199) in Hamlet	On-road, Signed shared roadway	4'-6' paved shoulder	Yes
		Town park	Shared use path	10' hard surface	Yes
		Two-lane village street	Bike lanes/sidewalks	5-6' on-street striped & signed/5' concrete	Yes
		Route 199 State Highway with unimproved shoulders	Shared roadway using improved shoulders for bikes or a pathway along the shoulder improved for bikes.	As per NYS DOT design criteria for shared roadways	
Develop bike path through private properties of willing landowners or as incorporated into subdivision or other development proposal approvals	4-6' paved hard surface				
"Mt Ross to RoJan" Multiple Use Area		Abandoned rail bed	Shared use path	10' hard surface	
"RoJan Multiple Use Area To Lafayetteville Multiple Use Area"		Wooded	Shared use path	10' hard surface	
		Seasonal stone/dirt road	On-road, Signed shared roadway	Stone/dirt road surface	
		New Alternative	Develop bike path through private properties of willing landowners or as incorporated into subdivision or other development proposal approvals	4-6' paved hard surface	
"Lafayetteville Multiple Use Area To Wilcox"		Two-lane state highway	On-road, Signed shared roadway	4'-6' paved shoulder	
"Wilcox To Stissing Mt Multiple Use Area"		Paved park access road	On-road, Signed shared roadway	4'-6' paved shoulder	
		Hiking trail	Hiking/mountain biking trail	3-6' natural surface	
		Two-lane town street	On-road, Signed shared roadway	4'-6' paved shoulder	
"Stissing Mt Multiple Use Area To Rec Area"		Hiking trail	Hiking/mountain biking trail	3-6' natural surface	
		Wooded	Hiking/mountain biking trail	3-6' natural surface	
		Hiking trail	Hiking/mountain biking trail	3-6' natural surface	
		Two-lane town street	Opt. #1: bike lanes/sidewalks	5-6' on-street striped & signed/concrete	

Concept Map		Existing Trail or Linkage Opportunity	Proposed or Potential Linkage or Trail Opportunity		Coordinate with Sidewalk Study
Trail Segment Name	Map Color		Trail type	Surface	
"Rec Area To Hamlet" including connection through Race Track Lot		Two-lane village street	Opt. #2: Side path (shared use path)	10' hard surface	
"Shekomoko Connection"		Abandoned rail bed	Bike lanes/sidewalks	5-6' on-street striped & signed/5' concrete	Yes
"Intermunicipal Connection"	(white)	Two-lane state highway NY 199 (rural road)	Shared use path	10' hard surface?	
		Two-lane state highway NY 199 (village main street)	On-road, Signed shared roadway	4'-6' paved shoulder	
		Two-lane state highway NY 82 (rural road)	Bike lanes/sidewalks	5-6' on-street striped & signed/5' concrete	Yes
		Two-lane state highway NY 82 (village main street)	Bike lanes/sidewalks	5-6' on-street striped & signed/5' concrete	
		Two-lane local road (CR 83)	On-road, Signed shared roadway	4'-6' paved shoulder	Yes
Northwest quadrant connectivity between existing trails and recreation areas.	Not included on map	Rural County and local two-lane town roads and properties that in time as development occurs, could be linked in a unified trail system that can be connected to those segments proposed above.	On-road, Signed shared roadway	4'-6' paved shoulder	
			Development in that area should be planned to connect trails and shared roadways. Concept is for East – West connection between hamlet and Mt. Ross and west to Lafayette MUA and Wilcox Park. Link north/south between Mt. Ross to Stissing Mountain with connections between Stissing and Thompson Ponds. Ultimately, a loop within Pine Plains should be developed linking all those significant resources.	To be determined via planning process, but a combination of natural surfaces, hard surfaces and paved shoulders will likely be needed	

Vision for Pine Plains Trails

The transportation network in Pine Plains provides for easy and safe access to all areas in Pine Plains. Trails and bikeways in our town are connected to the hamlet center and provides linkages with existing and future regional trails and bikeways. Opportunities to enjoy the scenery, hills, and waterways here are increased. Residents have more opportunities to walk, hike, and bike, and Pine Plains' network attracts visitors and has boosted tourism. Trails, streets, and bikeways are maintained to support the many people who use this network.



Goals, Objectives, and Policies

As noted above, the Comprehensive Plan provides the Pine Plains Trails and Bikeways framework. Accordingly, this Addendum builds from the Comprehensive Plan's existing goals explicitly related to walking and biking.

Goal 1 A variety of cultural, recreational, and educational programs, facilities and opportunities exist for all ages.

Objective 1.1 Increase the quantity of hiking and walking trails.

Policy 1.1.1 Develop new hiking trails in accordance with the Pine Plains Bikeways and Trails Concept Map.

Objective 1.2 Maintain or enhance existing trails as appropriate.

Policy 1.2.1 Upgrade Stissing Mountain, Thomson Pond, Twin Island Lake, and Stissing Lake trail systems using design and signage guidelines contained in this Plan.

Objective 1.3 Coordinate trails development and maintenance activities.

Policy 1.3.1 Work with NYSDEC to establish an Adopt-A-Natural-Resource Agreement. This could be between the Town and NYSDEC or a Friends of Pine Plains Trails Committee. Get involved in any future management plan process affecting State Forests in Pine Plains.

Goal 2 A safe and efficient transportation infrastructure will exist and provide transportation alternatives.

Objective 2.1 Develop a network of multi-use trails and bikeways in Pine Plains to encourage non-automobile travel and allows easy and safe access to all areas in Pine Plains and to trails and bikeways in adjoining communities.

Policy 2.1.1 Identify specific improvements on the proposed bikeway and trails network and work with route owners and abutters to implement them.

Policy 2.1.2 Support creation of a "Friends of Pine Plains Trails" or similar committee to continue momentum, identify opportunities, champion projects, and coordinate implementation.

Policy 2.1.3 Use concept map to specify in detail for each element of the trail system: potential user groups, surface types, typical sections, lengths, elevation change, access issues, land ownership, cost estimates, etc.

Policy 2.1.4 Develop a consistent signage and/or wayfinding system to announce the trail and bikeway system, and assist users in navigation along the trails. This can be done with the help of a consulting designer, and in coordination with Town and County economic development and marketing efforts.

Policy 2.1.5 Evaluate abandoned rail beds for potential shared use path development and coordinate with Poughkeepsie Dutchess County Transportation Council, regional land trusts, the Hudson River Valley Greenway, and other stakeholders.



Policy 2.1.6 Update Town subdivision regulations and zoning including the New Neighborhood Development (NND) provisions to strengthen establishment of trails when development is proposed. Ensure that sidewalk and paths in the hamlet of Pine Plains are connected to the core of new NND development. Specify in zoning that major pathways through NND areas and other proposed developments should be publically accessible. Ensure that trails and pathways created in an NND connect to the broader trail system in Town. Zoning updates should clarify to require that NND public trails connect denser areas of new development with the Pine Plains hamlet.

Policy 2.1.7 The northwest quadrant of Pine Plains offers multiple opportunities for connectivity between existing trails and recreation areas. Development in that area should be planned to link north/south between Mt. Ross to Stissing Mountain with connections between Stissing and Thompson Ponds. Planning there should also include links east/west between the hamlet of Pine Plains, Mt. Ross, and west to LaFayette Multiple Use Area (MUA) and Wilcox Park. Ultimately, a loop within Pine Plains should be developed linking all those significant resources.

Objective 2.2 The Pine Plains trail and bikeway network links destinations.

Policy 2.2.1 Work to identify new types of businesses and other activity generators that might be enabled or facilitated by the new network.

Policy 2.2.2 Provide bicycle parking at destinations, such as trail heads and in hamlet main street areas.

Objective 2.3 Accommodate bicycling and walking on the Town's existing road network.

- Policy 2.3.1 Work with Town, County, and State transportation officials to ensure that when road reconstruction occurs or other improvements are made adequate shoulders are included as part of the design.
- Policy 2.3.2 Work with NYS Department of Transportation and Poughkeepsie Dutchess County Transportation Council to finalize designation of future state bike routes in Pine Plains.
- Policy 2.3.3 Work with NYS Department of Transportation to improve road shoulders for shared use, especially along Route 199.
- Policy 2.3.4 A priority of the Town should be to make improvements to Lake Road to increase safety of walkers and bikers. This is a highly valued route but needs improvements. Lake Road needs to be connected to existing or future hamlet sidewalks and the Town Recreation Area. "Share the Road" signage is a critical first step: signage identifying shared use of the road, caution signs, or high pedestrian use signs should be installed. The Town could also consider painting shared roadway/bike symbols on the road. Long-term, the Town should work to widen the road, improve shoulders or create separate walk/bike paths along Lake Road to increase pedestrian safety.
- Policy 2.3.5 Take advantage of the potential connection across the parcel known as the Race Track lot (tax parcel ID 6872-00-161019) for trails. This area provides an important opportunity to connect Lake and Beach roads. The Planning Board should take this into consideration if that parcel were to be developed.
- Policy 2.3.6 Ensure that trails link with the school.
- Policy 2.3.7 Work with Friends of Stissing Lake (FOSL) to improve the FOSL trail along Stissing Lake.

Objective 2.4 Ensure that road maintenance activities are planned and carried out in accordance standards most supportive of bicycling.

- Policy 2.4.1 Survey the Town Highway Department about its maintenance activities and work to implement locally the recommendations contained in, and referenced by, this Plan.
- Policy 2.4.2 Coordinate with County and State highway departments and improve operations and maintenance activities in accordance with the Design Standards contained in this Plan.

Objective 2.5 Coordinate development of trails, shared use paths, and bikeways with landowners, county, neighboring towns, land trusts, and other organizations with existing or planned trails and shared use paths.

Policy 2.5.1 Work with sidewalk study effort, including identification of strategies for intersections of trails and bikeways and sidewalks.

Policy 2.5.2 Work with area land trusts, including those active in neighboring towns and counties, to identify potential linkages and partnerships.

Policy 2.5.3 Identify landowners who be willing to permit trail use on their land, donate and easement, or donate land and conduct outreach. Coordinate this outreach with Dutchess Land Trust and other partners.

Policy 2.5.4 Work with Milan to promote joint efforts for trail development at LaFayette Multiple Use Area and Wilcox Park. Consider developing a joint application for funding through the Consolidated Funding Application process for New York State.

Policy 2.5.5 Many of the linkages are in the Town of Milan. Ensure that the Town works to take advantage of all opportunities that may become available to connect trails and multiple use areas through Pine Plains.

Objective 2.6 Implement the design guidelines for trails and bikeways contained in this Plan.

Policy 2.6.1 Review Town highway design standards for conformity with State and national bike and pedestrian standards. Identify changes necessary to support walking and bicycling, such as 4' minimum paved shoulders.

Policy 2.6.2 Coordinate with local, Dutchess County, and NYS Department of Transportation maintenance and capital construction efforts to ensure that bicycle and pedestrian guidelines are followed.

Policy 2.6.3 Hire a graphic artist or similar design professional to develop a brand and logo strategy to visually unify network links using the guidelines contained in this plan. Use this logo as appropriate on local bike route signage, at kiosks, and on brochures.

Objective 2.7 Work with Poughkeepsie Dutchess County Transportation Council to implement recommendations for Pine Plains in outlined in Walk Bike Dutchess.

Policy 2.7.1 Partner with Towns, Dutchess County, and other partners to develop the Stanford- Pine Plains Rail Trail and Hucklebush Rail Trail.

Policy 2.7.2 Participate in County-wide maintenance tracking system and capital improvement program.

Policy 2.7.3 Support County education and encouragement strategies, such as Bike to Work Day. Develop local brochure to promote the hiking trails in Town that already exist.

Goal 3 The town's natural beauty and rural character will be protected.

Objective 3.1 Ensure that when development takes place, opportunities for trails linkages are considered.

Policy 3.1.1 Using the concept map and design standards contained in this Plan as a guide, implement the bicycle and pedestrian portions of Pine Plains' Land Use Law and ensure that bicycle and pedestrian links are provided with new development. Use site specific planning materials that may be submitted with a subdivision, site plan or special use permit application to identify resources that should be included in a trail system or excluded due to environmental sensitivity.

Action Steps to Implement Trail Development

1. Adopt this document and the Concept Map as an **Addendum to the Pine Plains Comprehensive Plan**.
2. **Create a Friends of Pine Plains Trails Committee**. The Trails Committee membership could provide the foundation for this committee.
3. **Conduct outreach to route owners and abutters** and their maintenance staffs and the Pine Plains Highway Department.
4. Use the **Concept Map and Matrix, along with goals and policies from this Plan during Planning Board review of development proposals** to identify and plan for trails and pathways in the development review process that is consistent with this plan. The Planning Board and Zoning Board of Appeals should use a checklist for project review that includes evaluation of a project for inclusion of trails, paths and/or sidewalks.
5. **Initiate priority projects**. Connecting hamlet center sidewalks to the Lake Road/Stissing Lake recreation area, along with initiating the recommended improvements to Lake Road is a priority project.
6. **Create a Hike Pine Plains brochure** that can be printed and distributed to Dutchess Tourism and other venues to promote the trails in Town. Ensure that this brochure has a map of the trails and place it online with links, as this will provide momentum for the bikeways and trails effort. An “early win” can be an important catalyst for implementing additional segments.
7. **Identify and track funding opportunities**. Timeframes and deadlines vary by funding source. The Town should commit to work with adjacent towns and organizations to create a regional effort that could apply for New York State grant funds through the Consolidated Funding Application process and other funding sources identified in this plan.
8. **Work with the Poughkeepsie Dutchess County Transportation Council to support effort to implement the Pine Plains recommendations from the Walk Bike Dutchess Plan**. This could include:
 - Attending quarterly Bicycle and Pedestrian Advisory Committee meetings;
 - Advancing Pine Plains trails within the Walk Bike Dutchess trails and bikeways framework; and
 - Continuing to coordinate with the Sidewalk Inventory effort.

Design and Maintenance Guidelines

This section provides a summary of general guidelines for the design and maintenance of walking and bicycling facility types proposed as part of this plan. It is drawn from a variety of sources, including the American Association of State Highway and Transportation Officials *Guide for the Development of Bicycle Facilities*, 4th Edition (2012) (“AASHTO Bike Guide”), the New York State supplement to the Manual of Uniform Traffic Control Devices (NYSMUTCD), and other standards. The Walk Bike Dutchess 2014 Plan also includes pathway design standards.

Natural Surface Hiking Trails⁹

Hiking trails are primarily intended for recreational use. Considerations should be made for either a single or multiple treadway, tread width and surface, corridor and vertical clearance, sight distance, grades, and turning radius to provide an appropriate trail experience for expected users and levels of use. Example design standards are outlined in the table below. While a trail may be used by multiple user groups, designing to standards for a particular user group (e.g. for cross-country skiing) will ensure that this group will be accommodated.

Accessibility may be a concern, especially if trail activities are funded with State or Federal funds. The Draft Final Accessibility Guidelines for Outdoor Developed Areas (AGODA), published in 2009 by the federal Architectural and Transportation Barriers Compliance Board (“Access Board”), are the most recent standards used to design and construct pedestrian trails to be accessible, and to assess accessibility. Although the accessibility guidelines only applies to federal agencies or for trails that are designed or constructed using federal funds, other agencies follow the proposed guidelines as closely as practicable.

New trail construction in Pine Plains should also avoid impacting sensitive habitats as described in the report “Significant Habitats in the Town of Pine Plains.” Where new trails are constructed, impacts can be mitigated through the use of buffers and other strategies outlined in this document.

NYSDEC Standards for Foot Trails on State Forest Lands¹⁰

The New York State Strategic Plan for State Forest Management outlines standards for several trail types, including hiking, mountain biking, and cross-country skiing. Where it is not possible or appropriate to construct using the most current design guidelines available at the time of construction, the following technical specifications will be used.

⁹ This section adapted from NYS Office of Parks, Recreation and Historic Preservation, *Trails Technical Document #1, Standards and Guidelines for Trails in NYS Parks* (2010) and NYS Office of Parks, Recreation and Historic Preservation, *Trails Technical Document #2 Trail Signage Guidelines for the NYS Park System* (2010).

¹⁰ NYS Department of Environmental Conservation, *New York State Strategic Plan for State Forest Management* (2011), p. 164.

- Trail tread width: 3 ft.
- Trail clearance: 8-10 ft.
- Trail tread surface: Trail surface will be native soils where trail is on moderately well- to well-drained ground. Those portions of trail on poorly drained ground will have a hardened surface or improved trail drainage to prevent muddy conditions.
- If a section of a trail must cross a small area of wet or soft soil that section will be hardened, or bog bridging (puncheons) will be installed.
- Trail signs: Trail markers will be placed such that they are inter-visible
- Some trails will be laid out on existing roads, skid trails or other partially cleared areas
- Erosion control measures shall be installed on slopes where expected use has potential for significant erosion
- Erosion control measures shall consist of water bars, broad based dips and water diversion ditches

Bicycle Facilities¹¹

Shared Use Path

Shared use paths are facilities for walking and bicycling that are physically separated from motorized vehicular traffic by an open space or barrier. They can be either within the road right-of-way or along a separate right-of-way. Users are typically diverse and not limited to biking and walking.

These paths frequently serve a transportation—as opposed to a purely recreational—function and link destinations when trips are made by bike or on foot. They complement other accommodations, such as sidewalks, shoulders, and bike lanes that together comprise a bicycling network. In addition, shared use paths should meet accessibility requirements; the design typically must meet such requirements when funded by federal or state programs.

Broadly, two-way shared use paths should be a minimum of 10' wide and have a hard surface, or "tread." Widths commonly can be 14' or greater, though shared use paths can also have a reduced 8' width where physical constraints exist. Vertical clearance should be minimum 10', though it should be higher where emergency vehicles are anticipated. The AASHTO Bike Guide recommends a maximum grade of 5%.

Much else will depend upon context. Appropriate grading, separation barriers, safety considerations, intersection and crossing treatments, alignments, design speeds, surface structure, signage, and other detailed design standards and considerations are provided in the AASHTO Bike Guide.

¹¹ This section is adapted from the *AASHTO Bike Guide*, which is also the source of federal guidelines and, under federal regulations, is the primary national resource for planning, designing, and operating bicycle and pedestrian facilities.

Sidepath

Sidepaths are shared use paths adjacent to a roadway that carry two-way traffic. While similar to sidewalks, according to AASHTO, sidepaths should be used where the design of a facility calls for a sidewalk that is to be used by bicyclists, as bicycling on sidewalks is generally undesirable. For sidepaths, a minimum five foot buffer is recommended to separate path users from traffic. This can be a landscaped area, drainage swale, or other buffer. A wider buffer may be appropriate based on adjacent roadway speeds and other conditions. In areas where a five foot buffer is not possible, a physical barrier is recommended. Sidepaths are appropriate for short distances, or where driveways and roadway intersections present few conflicts with motorized traffic over longer distances.

On-Road Facilities

Accommodating bicyclists on roads and streets in Pine Plains will require a context-sensitive approach, as not all treatments will be appropriate for all links in the network. In general, bicyclists' preferred operating width is 5', and the following facilities begin from this premise.

Paved Shoulders

On Pine Plains rural state and local road network, the most appropriate treatment is paved shoulders, which can accommodate both bicyclists and pedestrians. Moreover, paved shoulders extend pavement service life and provide temporary storage of disabled vehicles. Paved shoulders can be designated as bicycle lanes with appropriate on-road striping to indicate the proper position to bicyclists and encourage appropriate riding location for optimal visibility. NYSDOT standards allow for the provision of wider shoulders than NYSDOT repaving standards would otherwise allow based upon the importance of a road for bicycling.¹²

Paved shoulders should be at least 4' wide. Shoulder width of 5' is desirable where guiderails and other obstructions are adjacent to the roadway; wider shoulders are also desirable where travel speeds reach 50 mph or above and where higher bicycle usage is anticipated. Paved shoulders are ideally provided on both sides of two-way roads. However, in hilly terrain, it may be preferable to provide paved shoulders on only the uphill direction to accommodate greater speed differentials between automobile and bicycle traffic.

Bike Lane

Bicycle lanes provide a dedicated on-street space for bicycling and, as such, are the preferred on-road facility for bicycling. They provide a range of benefits. The New York State Vehicle and Traffic Law stipulates that, with exceptions for avoidance of debris and other obstructions, bicyclists must use bike lanes when provided. In the hamlet main street area of Pine Plains, bicycle lanes encourage bicyclists to avoid riding on the sidewalk, which is undesirable, unsafe, and, in certain places, illegal.

¹² NYSDOT, *Highway Design Manual* (Rev. March 3, 2006), 17.4.5.

Specification and configuration of bike lanes in Pine Plains should be dictated by the type of roadway, on-street parking arrangements (if any), intersections, level of bicycle traffic, one-way travel, truck traffic levels per hour, among other criteria.

Bicycle lanes should be minimum 4' wide with 5' as recommended. The bicycle lane should be widened to between 5'-7' if placed adjacent to curbing and on-street parking, especially parking with high turnover. The AASHTO Bike Guide provides design guidelines for providing two-way bicycle traffic along a one-way road or street (See Figure 9). General guidance for pavement marking of bicycle lanes is contained in the NYS Manual on Uniform Traffic Control Devices.

Shared Lanes

Article 34 of the Vehicle and Traffic Law treats bicycles as vehicles on roads where bicycling is not specifically excluded. On roads with sufficient width, bicycle lanes are the preferred on-road option. But on hamlet streets where it is infeasible to provide bike lanes, signage and pavement markings (i.e. "sharrows") can provide a range of benefits, including announcing the proper riding location, proper riding direction (i.e. with traffic), and provide motorists visual cues as to the need to change lanes. "Share the Road" signage can be provided to alert motorists that they may encounter bicyclists.

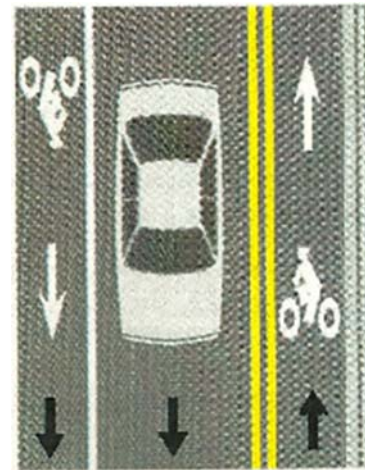


Figure 9. Typical pavement markings for two-way bicycle traffic on a one-way street

Bicycle Parking Facilities

Convenient, secure places for bicycles to park their equipment are important supplemental facilities.

People are much more likely to ride to a destination when bike parking facilities exist. They should be durable; offer protection from theft, damage and weather; and be consistent with the maintaining entity's standard designs. In Pine Plains, bike parking should be provided at destinations in the hamlet main street area and at trailheads.

While there are a wide variety of approaches, the AASHTO Bike Guide recommends certain minimum standards, identifying the inverted "U" type rack as a standard for short-term parking. Features of a good bicycle rack include:

- Stable structure and permanent foundation that is
- Securely anchored in the ground.
- Supports the bicycle at two points above its center of gravity.
- Design that prevents the bicycle from tipping over.
- Ability to support a variety of bicycle sizes and frame shapes
- Accommodates high-security U-shaped bike locks
- Space to secure the frame and one or both wheels to the rack
- Keeps bicycle wheels on the ground

- Contains no sharp edges or protruding elements¹³

For long-term parking, a secure, sheltered facility is desirable. A simple type is a covered bike rack. Secure, indoor facilities with access control and bicycle lockers are another option.

Retrofitting Existing Roadways to Accommodate Walking and Biking

Resurfacing and reconstruction projects bring the opportunity to increase bicycle accommodations in two ways. Pavement widening and right-of-way acquisition can be a part of such projects, and where these options are available and possible, a greater range of facility types, such as wide shoulders and side paths, can be considered.

Alternatively, where the road is not widened, there are several options. Considerations include repair of rough surfaces; installing bicycle-compatible drainage grates; raising or lowering manholes and other utility structures to be flush with the pavement; and selective widening. In addition, there may be opportunities to re-allocate space to those walking and biking by reducing the width of the automobile travel lanes; reducing the number of lanes ("road diet"); and/or adjusting on-street parking.

National roadway design standards, like AASHTO's *A Policy on the Geometric Design of Highways and Streets*, contain flexibility and allow travel lane widths of as little as 10'. Factors to be considered include: operating speeds, volumes, traffic mix, horizontal curvature, use of on-street parking, and street context, among others. Where appropriate, a road diet can be implemented to reduce the number of lanes to provide a variety of options for bicycle and pedestrian accommodations.

Finally, maintenance activities, such as culvert repair and other utility work, should not negatively impact the paved surface. Bicyclists are sensitive to debris as well as joints that can lead to discomfort and create hazards.

¹³ See Poughkeepsie-Dutchess County Transportation Council, *Walk Bike Dutchess* (2014), Chapter 3, p. 53; *AASHTO Bike Guide*, p. 6-1 through 6-5.

Signage and Wayfinding Guidelines

A wayfinding system will help pedestrians and bicyclists (see Trails section, above, for trail marking guidelines) locate themselves on local and regional networks, announce destinations, and provide other user information. It therefore supplements other encouragement efforts. Design of Pine Plains' wayfinding system should be based upon the network identified in this Plan, and take into account an analysis of destinations, consideration of preferred routes, and regional and State bike route contexts.

Trail Signage

The objectives of trail signing are to:

- improve the trail user experience;
- enhance the safety of people, vehicles, and property;
- improve travel within and between trail systems;
- increase comfort and confidence in navigating the statewide trail system;
- promote recreational trail use;
- protect the environment by directing visitors onto designated trails, thereby helping to avoid trampling of fragile trailside vegetation and prevent erosion.



Figure 10. Information kiosk examples Source: *Preservation and Trail Signage Guidelines for the NY State Park System, NYSOPRHP*

Kiosks, interpretive signage, and blazing should be applied to inform users about the trail and surrounding environment and for orientation and wayfinding. Trail

information kiosks provide a central location, typically near trailheads or adjacent to parking areas, to welcome visitors to one or more trails and to prevent sign clutter by consolidating visitor information in one place.

The trail information kiosk may also include brochures and maps, provide a location for a trail register, and provide additional information such as trail conditions and amenities, trail etiquette, area characteristics, local history, trail organizations, degree of accessibility, rules and regulations, interpretive programs, and upcoming events. Emergency contact information should be clearly posted on kiosks and should include contact information for relevant local and State authorities.

Signs should be located where they can easily be seen by trail users and should present information in a format that is easy to understand by all users. The text should be limited to what is necessary and should be supplemented by graphics that are universally understood. Signage should also be coordinated with the wayfinding guidance for bikes outlined below. Signage on State Forest lands will need to be coordinated with NYSDEC.

Wayfinding for Bicyclists

There are two types of bicycle wayfinding signs:

- Confirmation: provided along a route to confirm that a user is on a route;
- Destination: provided at route intersections to provide bicyclists information, such as turns to take, approximate distances, and travel times, needed to access destinations.

The design standards for bicycle guide and wayfinding signage specify a green background with white retroreflective “Bike Route” lettering, legend, and border (so-called “D11 Series Bicycle Route Signs”). The preferred option is to replace “Bike Route” with a destination (e.g. “To Stissing Mountain”). The NYS Manual of Uniform Traffic Control Devices (NYSMUTCD) provides standards for signage of local bicycle routes (NYM6-2 NYM6-3 signs, below). Auxiliary destination “D-1” series signs can be added to announce distances and turns.



Figure 11. Local bike route signage types from the NYSMUTCD

Planning and design of a wayfinding system in Pine Plains also presents an opportunity to visually unify Pine Plains' bike route network and destinations, such as trailheads and hamlet businesses. It can also be a way to "brand" the Pine Plains network. Wayfinding signage (e.g. use of logos on signs such as NYM6-2, depicted above) will need to comply with the NYSMUTCD, especially Chapter 9, and should be coordinated with NYSDOT. It should also be coordinated with other stakeholders, such as the Nature Conservancy, NYSDEC, and Poughkeepsie Dutchess County Transportation Council.

In addition to wayfinding, traffic warning and regulatory signs, such as at intersections and along the roadside, should be applied following State and national standards, such as NYSMUTCD, AASHTO Bike Guide, among others. Regular maintenance activities undertaken by the Dutchess County Highway Department and NYSDOT can provide opportunities to apply intersection striping, warning signs, and other treatments.

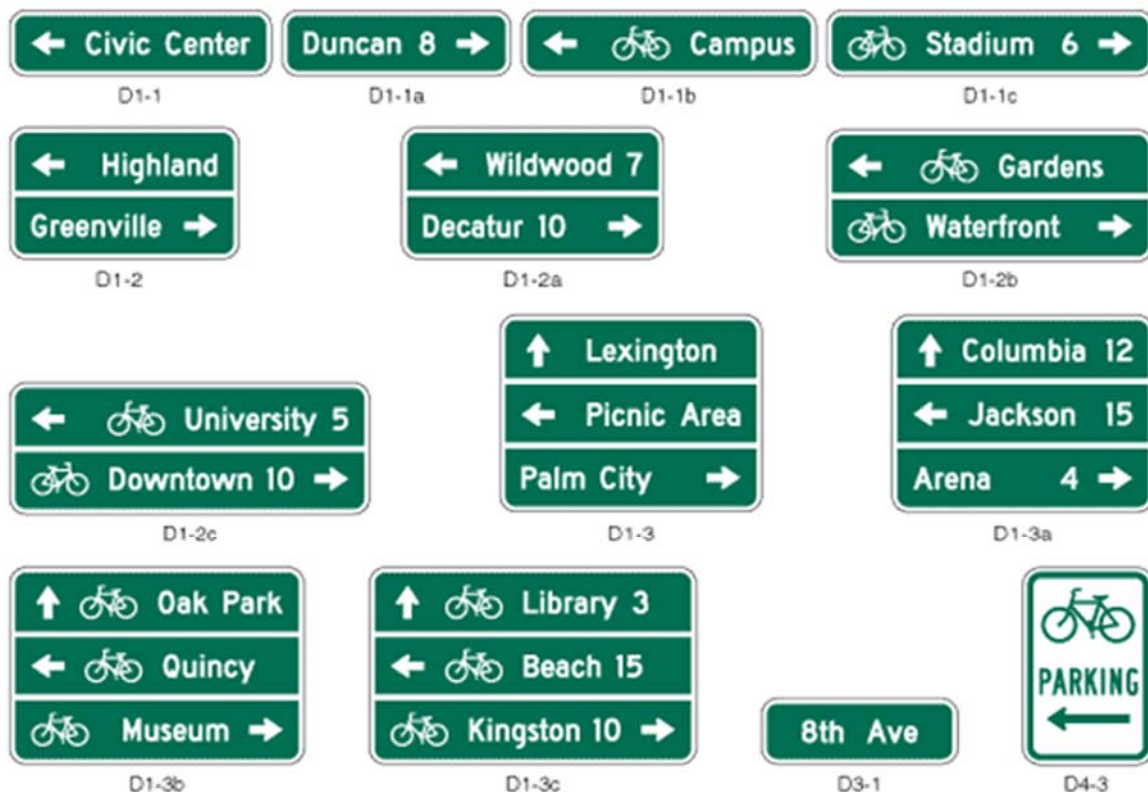


Figure 12. Guide signs and plaques for bicycle facilities *Source: MUTCD*

Operation and Maintenance Considerations

Just as important as planning and construction of bicycle and hiking facilities is their operation and maintenance. This section is divided into information specific to trails as well as bikeways.

Trails¹⁴

The principal problems that maintainers will face in keeping the treadway in good condition are: soil compaction from overuse, leading to cupping of the trail and consequent water erosion; deterioration of sidehill trails from natural sliding and wearing of the outer edges; and widening of routes through swampy areas and around obstacles, as hikers choose the path of least resistance. The treadway should be 24 to 30 inches wide, firm and dry. Ideally, hikers should find a path cleared to a width of 4 feet and a height of 8 feet. They should be able to walk with backpacks without touching surrounding growth. This width allows side growth of approximately 1 foot before needing re-cutting.

Trail blazing, whether cut into the bark of or tags nailed to trees, cairns, and signs should also be maintained. Regular trail patrols can also provide opportunities to identify other potential issues, such as encroachment, impermissible vehicle use, tree poaching, and unauthorized trails. Finally, maintenance activities should be performed in a way that minimizes environmental impacts to wildlife, vulnerable areas (e.g. steep slopes, wetlands, and streams), and historical structures.

In addition to these guidelines, trails maintenance may also need to be coordinated with NYSDEC, the Nature Conservancy, Dutchess County, area land trusts, among other interested groups.

Bicycle Facilities¹⁵

A smooth surface free of snow and debris is critical to encouraging safe bicycling and increasing numbers of bike trips along the Pine Plains network. This section is adapted from Walk Bike Dutchess and the AASHTO Bike Guide. The following maintenance provisions for bicycle facilities are recommended:

- Maintain walking and bicycling facilities to be free of debris and have a smooth surface. This requires regular, scheduled sweeping and surface repairs, as well as vegetation mowing, trimming and root control. Sweeping should also be performed following construction and maintenance activities

Local Highway Department Survey Questions

- What is the process used to identify and fix failing sidewalks?
- Do crews trim vegetation that obstructs sidewalks?
- Is snow removed from sidewalks? What happens when it is not?
- Are street edges and road shoulders swept regularly?
- What are other typical maintenance practices?
- How effective are these practices?
- What adjustments could be made?
- What equipment is needed to better maintain walking and bicycling facilities?
- Is there a simple way for residents to submit maintenance requests for local streets? How are these requests tracked and responded to?

Source: Walk Bike Dutchess

¹⁴ This section adapted from New York-New Jersey Trail Conference *Trail Maintenance Manual* (2007).

¹⁵ This section adapted from the *AASHTO Bike Guide*, p. 7-1 through 7-6 and *Walk Bike Dutchess*, p. 65.

- as well as immediately following overlay paving to ensure that debris do not permanently adhere to the new surface.
- Clear snow and ice from sidewalks and road shoulders. Do not store snow in bike facilities.
 - Extend pavement overlays over the entire roadway, including the full width of the shoulder, to avoid creating an edge.
 - Pave unpaved public roads and driveways back from the road (30 feet and 10 feet are recommended, respectively) to prevent gravel from spilling onto the roadway.
 - Ensure proper drainage at potential ponding locations, and regularly clear leaves and other debris from drainage inlets.
 - Raise or lower to utility structures like manholes to keep them flush with the pavement grade during resurfacing and utility maintenance and construction activities.

The AASHTO Bike Guide, Walk Bike Dutchess, and State and County agencies should be consulted for further details.

A Note on NYSDOT Maintenance of Shared Use Paths

According to the Highway Design Manual, NYSDOT generally does not maintain bike paths, bicycle parking facilities, recreational walkways, or shared-use paths. Therefore, if these facilities are to be built, they usually must be approved by the municipality or agency that will be responsible for their maintenance. The governmental entity that will assume the maintenance responsibility for these facilities must pass a resolution and enter into a Memorandum of Understanding or other agreement with the State. This should be discussed with the involved entity during the project scoping phase or as early in the design phase as possible.

An original signed resolution or other appropriate agreement must be received by the Design Quality Assurance Bureau, PS&E Section, by Phase VI of the design, for bicycle paths, bicycle parking facilities, recreational walkways, or shared-use paths to be included in the project. Chapter 14 of the Highway Design Manual for an example municipal resolution. Delays in the receipt of the necessary resolutions may result in a delayed project construction.

Design Guidance and Resources

The following is a list of resources for additional guidance:

- Manual of Uniform Traffic Control Devices (MUTCD)
- AASHTO, Guide for the Planning, Design, and Operation of Pedestrian Facilities, July 2004
- New York State Department of Transportation Highway Design Manual, Chapter 17 Bicycle Facility Design and Chapter 18 Pedestrian Facility Design
- Poughkeepsie-Dutchess County Transportation Council, Walk Bike Dutchess, Chapter 3 Design Guidelines
- Federal Highway Administration (FHWA) Design Guidance – Bicycle & Pedestrian Program

- http://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/design_guidance/
- Trail Planning, Design, and Development Guidelines, by Minnesota Department of Natural Resources, Section of Trails & Waterways Division, 2007
http://www.dnr.state.mn.us/publications/trails_waterways/index.html
 - Institute of Transportation Engineers, Designing Walkable Urban Thoroughfares: A Context Sensitive Approach
<http://www.ite.org/css/online/>
 - Trails Technical Assistance
<http://nysparks.com/recreation/trails/technical-assistance.aspx>
 - NYNJTC Trail Maintenance Manual, 7th Edition,
http://www.nynjtc.org/files/Trail%20Maintenance%20Manual7threvised_0.pdf
 - NYSDEC, New York State Strategic Plan for State Forest Management
http://www.dec.ny.gov/docs/lands_forests_pdf/spsfmfinal.pdf
 - Standards and Guidelines for Trails in NYS Parks
<http://nysparks.com/recreation/trails/documents/TrailsTechnicalStandardandGuidelines.pdf>

Model Easement Language

The following three types of easements are reproduced from Greenway Conservancy for the Hudson Valley and Parks & Trails New York, *Getting Involved: A Community Trail Handbook for Landowners* (2002).

Revocable Trail Access Agreement

[Date]

[Grantor of Access / Landowner] [Address]

[City, NY Zip]

Dear _____:

Thanks in large part to the cooperation and support we have received from you, [Grantor / Landowner of Access], the [name of newly established trail] has now become a reality. The [name of local trail group, municipality, or land trust] is truly appreciative of the level of trust and cooperation you have given us.

The trail corridor now being created will follow the designated flagged path previously agreed to, taking care to not disturb any wetlands or other vital habitats in any manner or otherwise interfere in your operations or use of the property. Any changes that may be required will be cleared with you first, and if parking areas seem necessary, they will be built with your approval and direction. The route will be marked by the agreed to trail markers in a way that will not harm the tree, and all signs will be submitted for your approval. The path will be checked by [list organization, land trust, individual who will take on maintenance of the trail] on a regular basis to assure that it remains clean and in good condition.

This letter will serve as a revocable agreement that can be modified or terminated at your request. This agreement also recognizes that both you and we are relying on the protections afforded under the New York State General Obligation law § 9-103.

We look forward to a long and mutually beneficial partnership in the true sense of the word. Our continued thanks for your help. Should you decide to amend or suspend the agreement you agree to give our group 30 days' notice so that appropriate provisions for trail continuity and accommodation of trail users can be made.

Most sincerely,

[Name of representative of local trail group, municipality, or land trust]

Trail Right of Way Easement

This right of way easement is made and entered into this ____ day of _____, 200_, by and between [Grantor] a [describe Grantor's legal status (i.e.: a limited partnership)] having an address at (or whose principal office is at) [address] shall be referred to as the "Grantor," and

[Grantee]

a [describe Grantor's legal status (i.e.: a limited partnership)] having an address at (or whose principal office is at) [address] shall be referred to as the "Grantee," and

RECITALS

Whereas Grantor is the sole owner in fee of certain real property consisting of approximately ____ acres in the [describe municipality], County, State of New York, known at the time of this grant as ____, Tax Parcel #_____, and more particularly described in SCHEDULE A.

Whereas Grantee is [describe grantee's organizational connection in accepting the easement]

Whereas Grantor desires to grant to Grantee a right-of-way easement across those portions of the Servient Estate (the "Trail") and more particularly described in SCHEDULE B to create a trail (the "Trail"), the Grantee desires to accept said easement.

Whereas the Trail is intended to provide Grantee and the general public with physical and visual access to the economic, cultural, scenic, historic and natural resources of the Hudson River Valley and also to enhance local and regional hiking and recreational opportunities through enjoyment of the [local trail name] as part of the Hudson River Valley Greenway Trail System.

Now, Therefore, The grantor, in consideration of \$10.00 and other good and valuable consideration, given by the grantee to the grantor, receipt of which is acknowledged does agree:

1. Grant of Easement. Grantor hereby grants, transfers and conveys to Grantee, for the benefit of the Grantee, [name associated parties/partners], and the public, a non-exclusive easement and right-of-way (the "easement") for ingress, egress and access by Grantee and the public over and across the parking area of the servient estate for the purpose of gaining access to adjoining properties.

2. Purposes, Conditions, Restrictions, Reserved Rights.

(A) The Easement is established for the sole purpose of right of through access for pedestrian users of the [local trail name] for quiet, non- motorized passive recreational trail purposes by the general public, including but not limited to such activities as hiking, walking, jogging, running, skiing, bird watching, and snowshoeing. Permitted uses shall not include [determined in agreement with landowner] Grantee shall have the right to regulate or restrict uses (including but not limited to those specific uses listed above), which Grantee determines to be

unsafe or otherwise detrimental to the continued use, vitality, or condition of the Trail.

(B) The location of the Trail on the Servient Estate may be changed from time to time, with the written consent of both parties. Any such change shall be recorded in the official records of the Office of the Clerk of _____ County, New York State. All costs in connection with such change shall be borne by the party that initiates the change.

(C) The easement does not convey any right for the general public to use parking spaces on the servient estate in order to access to the trail.

3. Term. The easement shall be perpetual in term.

4. Reliance upon State Law. Grantor and Grantee agree that in creating this easement for public access that each party is relying on the protection against liability contained in section 9-103 of the New York General Obligation Law (the recreational use statute), as the same may be amended from time to time, and that for such purposes both the Grantor and the Grantee shall be deemed "occupants" of the area of the easement as designated above. Notwithstanding the foregoing, any repeal or amendment of that section 9-103 which may diminish its protective effect shall not affect the validity of the easement of way herein granted

5. Construction & Maintenance. If and when the Public Access Area shall be opened for public use,

(A) Grantee or its designee(s) in cooperation with the [local designated maintainer] shall at all times be responsible for marking or signing the Trail, at its sole cost and expense, in a manner approved with the written consent of both parties.

(B) Grantee's regulations for the use of same will prohibit [determined in agreement with landowner]

(C) Grantee or its designee, in its sole discretion, shall have the right to suspend public use of the Trail Easement from time to time.

6. Assignment of Duties. Upon written notice to Grantor, Grantee shall have the right to assign its responsibilities for management, maintenance, insurance, and other duties under this agreement to an agency of government or a qualified not-for-profit entity, as the Grantee may determine in its sole discretion, or to another person, association, or organization reasonably acceptable to Grantor. The person(s) or entity accepting such an assignment shall be deemed to have assumed all of Grantee's obligations pursuant to this agreement throughout the period that assignment remains in effect.

7. Insurance and Liability. Grantee agrees to maintain at all times during which the Trail Easement Areas is open for public use a standard policy of general commercial liability insurance with respect to the Trail Easement Areas having a coverage limit not less than

\$ __,000,000, adjusted upon request of the Grantor, not more frequently than every five years, to an amount equivalent to that sum in 200__ Dollars. Grantee shall cause Grantor to be named as an additional insured on its said policy of municipal insurance for the purpose of the Trail.

8. Amendment, Variance, and Waiver. This agreement may be amended from time-to-time upon the written consent of Grantee and Grantor. Consent to any amendment, variance or waiver shall be in the discretion of the Grantee, shall be consistent with the Right of way Easement referred to above; any amendment, variance or waiver which does not comply with these statutes shall be void and shall have no force or effect. 9. Enforcement. The parties may enforce this agreement in law or equity, against any or all persons responsible for any violation thereof. Failure to enforce any provision herein contained shall in no event be deemed a waiver of a right to do so thereafter as to the same violation or breach or as to any violation occurring prior or subsequent thereto.

10. Severability. Invalidation of any provision of this Easement of Way by court order, judgment, statute, or otherwise shall not affect the validity of any other provisions of this agreement, which shall remain in full force and effect.

11. Easement Runs with the Land; Binding Effect on Successors and Assigns. The provisions of this easement shall run with the servient tenement in perpetuity and shall bind and be enforceable by and against the parties and all subsequent owners, successors and assigns of the servient tenement or any portion thereof. As used in this agreement, the term, "owner," includes the owner of any legal or beneficial equitable interest in the subject property or any other portion thereof; the terms, "Grantor," shall include the original Grantor and the heirs, successors, and assigns of the partners, and all future owners of all or any portion of the subject property; and the term "Grantee," includes the original Grantee and its successors and assigns. Notwithstanding the foregoing, no party shall be liable for a breach of this agreement resulting from acts or conditions occurring prior to or after the period of his or her ownership.

12. Governing Law. This Right of way Easement shall be governed by and construed in accordance with the laws of the State of New York.

Conservation Easement with Trail Access

This trail access conservation easement is made and entered into this ____ day of _____, 20____, by and between[name of Grantor; donor of the easement] a [describe Grantor's legal status (i.e.: a limited partnership)] having an address at (or whose principal office is at) [address] shall be referred to as the "Grantor," and Greenway Conservancy for the Hudson River Valley, Inc. a public benefit corporation created under section 44-0101 of the New York State Environmental Conservation Law which were established under the Laws of 1991, c. 748, having an address at Capitol Building, Capitol Station, Room 254, Albany, New York 12224, shall be referred to as the "Grantee".

RECITALS

Whereas Grantor is the owner of certain real property commonly known as [name of property if relevant] located at [address including the county], and more particularly described as [set forth legal description including reference to recorded map].

Whereas Grantee is [description of the public body or not-for-profit conservation organization as well as purpose of the organization if relevant]

Whereas Grantor desires to grant to Grantee an easement across that portion of the Servient Estate (the "Trail Easement Area") to create a trail (the "Trail"), the Grantee desires to accept said easement.

Whereas the Trail is intended to provide Grantee, [list any other relevant party] and the general public with visual access to the Hudson River and also to enhance local hiking and recreational opportunities. [or whatever else may be appropriate]

Now, Therefore, in consideration of \$_____, the foregoing recitals, the covenants herein set forth and other good and valuable consideration, the recipient and sufficiency of which are hereby acknowledged, the parties agree as follows.

1. Recitals. Each and every recital and representation of the respective parties set forth above, including those contained in the conservation easement, is relied upon by the parties as part of the consideration for the grant of rights and restriction of uses hereinafter contained and are incorporated herein with the same effect as if restated in their entirety.

2. Grant of Easement. Grantor hereby grants, transfers and conveys to Grantee, for the benefit of the Grantee and the public, a non-exclusive easement and right-of-way (the "easement") for ingress, egress and access by Grantee and the public over and across the trail easement area. 3. Purposes. The Easement is established for [specify permitted activities]. Such permitted uses shall not include [specify]. Grantee shall have the right to regulate or restrict uses (including but not limited to those specific uses listed above) which Grantee determines to be unsafe or otherwise detrimental to the continued use and vitality of the trail or the condition of the Trail Easement area.

4. Definitions.

a.) conservation easement - shall mean a voluntary agreement between parties to restrict the use of real property by providing public access trails. This statutorily created device is meant to encompass the entire area being conveyed by the grantor, which incorporates any trail corridor, or public access area, buffer area, or public education facility that may exist.

b.) public access area - shall mean any area of the conservation easement that is open to the public such as the trail corridor, public education facility or parking facility.

c.) trail corridor - shall mean a narrow tract of land forming a passageway that shall be used for specified recreational trail activities.

5. Reliance upon State Law. Grantor and Grantee agree that in creating this easement for public access that each party is relying on the protection against liability contained in section 9-103 of the New York General Obligation Law (the recreational use statute), as the same may be amended from time to time, and that for such purposes both the Grantor and the Grantee shall be deemed "occupants" of the area of the easement as designated above. Notwithstanding the foregoing, any repeal or amendment of that section 9-103 which may diminish its protective effect shall not affect the validity of the easement of way herein granted

6. Maintenance. If and when the Public Access Area shall be opened for public use,

(A) Grantee shall at all times be responsible for maintaining the Public Access Area, including [specify specific areas], at its sole cost and expense;

(B) The easement of way and path shall be kept in a substantially natural state, used only for passage by pedestrians and will never be improved without Grantor's prior consent; and

(C) Grantee's regulations for the use of same will prohibit [specify activity such as motorized vehicle use with a stipulation allowing maintenance vehicles.]

7..Assignment of Duties. Upon written notice to Grantor, Grantee shall have the right to assign its responsibilities for maintenance, insurance, and other duties under this agreement to an agency of government or a qualified not-for-profit entity, as the Grantee may determine in its sole discretion, or to another person , association, or organization reasonable acceptable to Grantor. The person(s) or entity accepting such an assignment shall be deemed to have assumed all of Grantee's obligations pursuant to this agreement throughout the period that assignment remains in effect.

8. Insurance and Liability.

(A) Grantee agrees to maintain at all times during which the trail easement area is open for public use a standard policy of general

commercial liability insurance with respect to the Trail Easement Area having a coverage limit not less than \$ ___,000,000, adjusted upon request of the Grantor, not more frequently than every five years, to an amount equivalent to that sum in 199__ Dollars. Grantee shall cause Grantor to be named as an additional insured on said policy of insurance.

9. Term. The easement shall be perpetual in term. [or whatever the parties agree upon]

10. Amendment, Variance, and Waiver. This agreement may be amended from time-to-time upon the written consent of Grantee and Grantor. Consent to any amendment, variance or waiver shall be in the discretion of the Grantee, shall be consistent with the Trail Access Conservation Easement referred to above, and shall comply with [list various statutes that may be appropriate such as tax or conservation statutes]; any amendment, variance or waiver which does not comply with these statutes shall be void and shall have no force or effect.

11. Taxes and Assessments. Grantor shall remain fully liable for the payment of all taxes and assessments thereon and shall, upon request of Grantee, provide to Grantee copies of any current tax bill and receipts for payment thereof. Grantee shall have no obligation whatsoever to pay any taxes, assessments, levies, or other charges of any kind assessed against the property subject to this pedestrian easement of way, any portion thereof, or any owner thereof.

12. Enforcement. The parties may enforce this agreement in law or equity, including, without limitation, Grantee's authority pursuant to [cite statutory authority], against any or all persons responsible for any violation thereof. Failure to enforce any provision herein contained shall in no event be deemed a waiver of a right to do so thereafter as to the same violation or breach or as to any violation occurring prior or subsequent thereto.

13. Severability. Invalidation of any provision of this Easement of Way by court order, judgment, statute, or otherwise shall not affect the validity of any other provisions of this agreement, which shall remain in full force and effect.

14. Easement Runs with the Land; Binding Effect on Successors and Assigns. The provisions of this easement shall run with the servient tenement in perpetuity and shall bind and be enforceable by and against the parties and all subsequent owners, successors and assigns of the servient tenement or any portion thereof. As used in this agreement, the term, "owner," includes the owner of any legal or beneficial equitable interest in the subject property or any other portion thereof; the terms, "Grantor," shall include the original Grantor and the heirs, successors, and assigns of the partners, and all future owners of all or any portion of the subject property; and the term "Grantee," includes the original Grantee and its successors and assigns. Notwithstanding the foregoing, no party shall be liable for a breach of this agreement resulting from acts or conditions occurring prior to or after the period of his or her ownership.

15. Governing Law. This Trail Access Conservation Easement shall be governed by and construed in accordance with the laws of the State of New York.

Landowner Liability Information¹⁶

Landowner outreach is vital to trail project success. The most common areas for concern among landowners are property value, liability, vandalism, litter, privacy, access to farm fields, and safety. Experience and numerous studies have shown these issues to be more perceived problems than actual problems. Nevertheless, landowners' concerns must be taken seriously and respected.

Studies documenting actual experiences from around the nation and New York State demonstrate that well-planned and designed trails can be good neighbors and that living with trails can be highly rewarding. In a survey of residents along the Mohawk-Hudson Bike-Hike Trail in New York's Capital Region, the majority of adjacent landowners reported being satisfied with the trail as a neighbor.

Neighbors and landowners often have concerns about liability. Trail committee members can address the issue of liability by providing factual information about protection afforded by New York State law and through insurance. Very few trail-related lawsuits have occurred in New York. The NY-NJ Trail Conference and the Fingers Lakes Trail Conference together manage over 1700 miles of trail. Neither has ever experienced a trail-related lawsuit.

Statutory Protection

New York's Recreational Use Statute (NYS General Obligations Law subsection 9-103) limits the liability of landowners who voluntarily allow access to their land for certain recreational activities. These recreational activities include the most common trail activities such as hiking, bicycle riding, horseback riding, and cross-country skiing. Although no law is perfect, the Recreational Use Statute offers an important measure of protection.

The law applies to landowners whether or not they grant permission for use of their property, as long as the following two conditions exist: they do not charge a fee and do not maliciously fail to guard against hazards. If these conditions exist, the liability of landowners who allow access is no greater than landowners who post their property against trespass.

Insurance Protection

While the Recreational Use Statute provides protection from liability, nothing can prevent a suit from being brought against a landowner, even if it turns out to be groundless. Fortunately, homeowner insurance usually provides coverage to the owner if someone is injured on the property whether or not the person has permission to be there. If someone is hurt and makes a claim, the insurance company has a duty to "defend" the insured owner, which means that the company will select an attorney and handle any litigation. The concept of "residence" is usually interpreted broadly and includes surrounding grounds, other structures,

¹⁶ This section adapted from Parks & Trails New York and Hudson River Valley Greenway (2004), *Getting Started: A Guide to Planning Trails in New York State*, Chapter 6.

and vacant land, as long as it is not actively farmed or used for timbering purposes. Landowners conducting active farming or timbering operations usually have special liability insurance.

Municipalities and land trusts often maintain their own liability coverage. The New York-New Jersey Trail Conference (NYNJTC) provides supplementary insurance coverage to volunteers under its insurance policy. All volunteer designated maintainers working on behalf of the NYNJTC are provided indemnity against, and legal representation for, tort/liability claims (bodily and property injury to others) from third parties when volunteers are within the scope of their work (i.e., maintaining trails).

The Hudson River Valley Greenway also makes available liability coverage to private landowners within the 13-county Greenway Area who want to work with community trail groups and local governments to allow public access to trails on their land. The primary purpose of the insurance is to provide an immediate tool to help local trail groups increase landowner comfort and allow trail planning and implementation to move forward. Once a local municipality or land trust is ready to play a more active role, they are encouraged to adopt these trails under their own liability coverage.

The combination of the recreational use statute and coverages available to landowners through their own insurance policies provides a solid shield against the risk of litigation. In addition, landowners may be able to be named as "additional insured" parties on the policy of any public or private organization responsible for managing the trail.

Potential Partners and Funding Sources

List of Potential Partners

- Hudson River Valley Greenway
- Parks & Trails New York
- Poughkeepsie-Dutchess County Transportation Committee
- Town of Pine Plains Highway Department
- Winnikee Land Trust
- New York-New Jersey Trails Conference
- Dutchess County Highway Department
- Adjacent municipalities
- New York State Department of State
- New York State Department of Transportation
- New York State Department of Environmental Conservation
 - Adopt-A-Natural Resource Stewardship Program:
<http://www.dec.ny.gov/regulations/2568.html>
- New York State Department of Health
- New York State Office of Parks, Recreation, & Historic Preservation
- New York State Council on the Arts
- Columbia Land Conservancy
- Dutchess Land Conservancy

List of Funding Opportunities

There are a variety of public and private funding options. Most federal and state sources will require a 20% local match. An important source of state funding is the Consolidated Funding Application process administered at by the NYS economic development councils, and many of the sources listed below are found here. The Poughkeepsie Dutchess County Transportation Council can also provide funding guidance.

Local Sources

It is possible to create a local trails fund through a combination of municipal budgeting processes, donations, bonds, and grants. The Consolidated Local Street and Highway Improvement Program administered by NYS Department of Transportation, can be a source of funding for biking and walking infrastructure projects. Finally, local approval for developments can be conditioned upon providing biking and walking infrastructure, including linkages to the proposed town-wide network.

County Sources

The Poughkeepsie Dutchess County Transportation Council (PDCTC) disburses federal transportation funds. Projects, including planning assistance and specific local projects, will appear on PDCTC's annual Unified Planning Work Program. The Dutchess County planning department also provides planning and technical

assistance. Finally, the County DPW can also incorporate projects into its work program. (See *Walk Bike Dutchess*, Ch. 7, p. 293-300 for a comprehensive discussion of County and many other funding sources.)

State and Federal Sources

New York State Congestion Mitigation and Air Quality program: A federal reimbursement program for surface transportation and other related projects that contribute to air-quality improvements and reduced congestion. Program funds may be used to construct bicycle and pedestrian facilities intended to reduce automobile travel and/or emissions in areas that have failed to meet air-quality standards for ozone, carbon monoxide and small particulate. Source of funds: Federal Highway Administration.

Safe Routes to School Program (SRTS): This is a State-administered Federal assistance program to encourage children to adopt a healthier and more active lifestyle by making bicycling and walking to school a safer and more appealing transportation alternative. The funds also will help schools and other local municipalities to plan, develop and implement transportation projects that improve safety while reducing traffic, fuel consumption and air pollution near schools.

The Transportation Alternatives Program (TAP) has changed the federal funding share for SRTS projects. The federal government will only reimburses up to 80 percent of a project's cost. This represents a change from the previous Federal requirement that provided a 100 percent reimbursement for this program. Source of funds: Federal Highway Administration.

Transportation Enhancement Program (TEP): This is a State administered Federal assistance program to expand transportation choices and enhance the transportation experience through the building of pedestrian and bicycle infrastructure. Under MAP-21, only projects that directly pertain to the design, planning and construction of facilities for walking, bicycling and other non-motorized forms of transportation, including sidewalks, shared-use pathways, traffic-calming techniques, safety-related infrastructure, or the conversion and use of abandoned railroad corridors for trails, remain eligible. Funds for this program remains a federal-aid (80/20) reimbursement program. Source of funds: Federal Highway Administration.

Environmental Protection Fund (EPF) Municipal Grant program: This program, administered by The New York State Office of Parks, Recreation, and Historic Preservation (OPRHP), funds the acquisition, planning, development, and improvement of parks, historic properties, and heritage areas.

Recreational Trails Program This program is a State administered Federal assistance program to provide funds for the construction of recreational trails and trail related facilities for both motorized and non-motorized recreational trail users. This is a Federal-aid (80/20) reimbursement program. This program is administered by the New York State Department of Parks, Recreation & Historic Preservation (OPRHP) via the Consolidated Funding Application (CFA) process. Source of funds: Federal Highway Administration.

Consolidated Local Street and Highway Improvement Program (CHIPS): A formula driven New York State-funded program administered through the NYSDOT to assist localities in financing the construction, reconstruction or improvement of local highways, bridges, highway-railroad crossings and other local facilities. Source of funds: New York State.

Local Waterfront Revitalization Programs This is a locally prepared, comprehensive land and water use program for a community's natural, public, working waterfront, and developed costal area. It provides a comprehensive structure within which critical coastal issues can be addressed. This program is administered by the Department of State via the Consolidated Funding Application (CFA) process and provides 50/50 matching grants to local communities from the New York State Environmental Protection Fund's.

New York Main Street Program The preceding external link opens a new browser window: The Office of Community Renewal administers this program which provides financial resources and technical assistance to communities to strengthen the economic vitality of the state's traditional main streets and neighborhoods. This program provides funds to local governments, business improvement districts and other not-for-profit organizations that are committed to revitalizing historic downtowns, mixed-use neighborhood commercial districts and hamlet centers.

Additional Funding Resources

- **Parks & Trails New York** maintains an extensive list of funding types and opportunities. See <http://www.ptny.org/greenways/funding/>
- **National Trails Fund** American Hiking's National Trails Fund (NTF) is the only privately supported national grants program for hiking trails.
- **The Land and Water Conservation Fund** has been a cornerstone of conservation and recreation for more than 30 years. The LWCF Program provides matching grants to States and local governments for the acquisition and development of public outdoor recreation areas and facilities (as well as funding for shared federal land acquisition and conservation strategies). The program is intended to create and maintain a nationwide legacy of high quality recreation areas and facilities and to stimulate non-federal investments in the protection and maintenance of recreation resources across the United States.
- **The Conservation Alliance** engages outdoor business to help protect and conserve threatened wild places for their habitat and recreation values and makes grants to nonprofit organizations working to protect the special wild lands and waters.
- **American Trails** maintains a comprehensive list of funding and other resources for trails and bicycling facilities.
- **The National Park Service Rivers, Trails, and Conservation Assistance Program** provides funding to projects that advance conservation and recreation goals. <http://www.nps.gov/orgs/rtca/index.htm>

Appendix 1: Citations

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Omaha Recreational Trails: Their Effect on Property Values and Public Safety. 2000. D.C. Greer. University of Nebraska, Omaha Recreation and Leisure Studies Program. School of Health, Physical Education and Recreation.

Property Value/Desirability Effects of Bike Paths Adjacent to Residential Areas. Racca, D.P and A. Dhanju. 2006. Delaware Center for Trasportation and the State of Delaware Department of Transportation. Center for Applied Demography and Survey Research, College of Human Services, Education and Public Policy. University of Delaware.

Walking the Walk: How Walkability Raises Home Values in US Cities. Joe Cortright for CEOs for Cities. August, 2009.

Other Sources of Information on Property Values and Trail Effects Include:

National Association of Realtors & National Association of Home Builders, 2000. National Association of Homebuilders, 2001

http://www.nahb.org/assets/docs/publication/fft2001_8142002101506AM.pdf

National Association of Realtors, 2008. Home sales near bike trails in Massachusetts, Colorado, & Oregon

The Wall Street Journal, 2008. Home sales nationwide near bike

National Association of Home Builders, 2000. Top 10 amenities favored by home buyers over age 55.

US Department of the Interior, National Park Service, 1995. Multiple trails nationwide. http://www.nps.gov/pwro/rtca/econ_index.htm