

TRAILS AND PATHWAYS PLAN

for

Township of Morris
County of Morris



Compiled by



Morris Land Conservancy
a nonprofit land trust

with the



Township of Morris
Open Space & Trails Committees

March 2008 - DRAFT

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Produced by:

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Acknowledgements

Morris Land Conservancy wishes to acknowledge the following individuals and organizations for their help in providing information, guidance, and materials for the *Township of Morris Trails and Pathways Plan*. Their contributions have been instrumental in the creation of the Plan.

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We would also like to extend a special “thank you” to the residents of the Township of Morris who participated in the public meetings held during the development of this Trails and Pathways Plan.

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EXECUTIVE SUMMARY



Trails and pathways are conduits to the natural world. They are invitations to step out of our everyday surroundings and experience the larger outdoor environment that supports and sustains us. Residents of Morris Township appreciate the outdoor environment in their community – local parks and existing trails are among the most commonly visited places in the Township. To improve their enjoyment of existing recreational and outdoor resources, the Township is seeking to develop a network of municipal trails and pathways that 1) enhances existing recreational opportunities, 2) ensures the safety of local residents, and 3) promotes health and fitness among Township residents. The *Morris Township Trails and Pathways Plan* has been produced to support and guide this effort.

Trails and pathways are continuous outdoor pedestrian rights-of-way. Trails generally refer to routes that are “designed, constructed, or designated specifically for recreational pedestrian use or are created as pedestrian alternatives to vehicular routes within a transportation system”. (*U.S. Forest Service*) Trails often connect spatially distant or distinct areas, such as the Jockey Hollow and Fort Nonsense Units of Morristown National Historic Park. Pathways, also referred to as Outdoor Recreation Access Routes (ORAR’s), generally refer to connections that link amenities within an individual site, such as the paved routes between the various fields at Frelinghuysen Middle School. Contrary to common belief, the surface used to establish a pedestrian route does not determine its status as a trail or pathway. Both types of pedestrian rights-of-way exist in Morris Township, and are rarely differentiated by local trail users.

Morris Township contains a variety of existing trails and recreation areas that its residents currently enjoy. Three regional trails systems – Patriots’ Path, Traction Line, and the Loantaka Brook Reservation trails – cross the Township. Many individual recreation facilities, including Frelinghuysen Arboretum and the John Ginty Recreational Complex, have pathways on-site. There are more than 40 miles of existing trails and pathways in Morris Township. In addition to these trail facilities, Morris Township contains many popular attractions, or “destination points”, that local residents commonly enjoy, such as parks, schools, civic areas, business/office centers, and transit stops. These destination points serve as the focal points for local trails development.

The *Morris Township Trails and Pathways Plan* proposes the development of a Morris Township Trails Network that will address the needs of the Township’s various trail users. More than 50 new miles of trails and pathways will be added to the existing system. The Morris Township Trails Network will encompass pedestrian access improvements (pathways) to individual recreational facilities and other destination points throughout the Township. Specific attention is given to the following destination points.

Burnham Park (Morristown)
Cornine Field/Streeter Recreation Complex
Fosterfields Living Historical Farm
Frelinghuysen Arboretum
Frelinghuysen Park
Greystone Park County Recreation Facility
Saunders Park
Jones Woods
Kiwanis Field
Alfred Vail School
Morristown Beard School

Patriots' Path
Traction Line Recreation Trail
Loantaka Brook Reservation Trails
Ginty Field Pathways
Borough of Madison Bikeways
Morris Museum
Morris Twp. Municipal Building
Morristown Green
Woodland Avenue School
Frelinghuysen Middle School

Linked to one another, access improvements to these individual destination points will form regional trail connections that encircle Morris Township and connect it to the natural areas, trails, and destinations in nearby municipalities. The *Morris Township Trails and Pathways Plan* outlines the following regional trail routes.

Eastern Route (Frelinghuysen Arboretum to Loantaka Brook Reservation)
Northern Route (Washington Valley to Frelinghuysen Arboretum)
Western Walking Route (Greystone Park to Jockey Hollow)
Madison Avenue Bicycle Route (Morristown to Madison)
Southern Bicycle Route (Jockey Hollow to Loantaka Brook Reservation)
Washington Valley Bicycle Connector (Washington Valley to James Andrews Park)

VISION STATEMENT, GOALS AND OBJECTIVES



Vision Statement

Morris Township supports a comprehensive, interconnected network of trails and pathways featuring connections between local and regional parks, schools, neighborhoods, and other destinations that:

- 1) enhance the recreational opportunities available to Township residents,
- 2) allow Township residents to safely access these areas by foot and bicycle, and
- 3) promote health and fitness among Township residents through outdoor exercise.

Goals and Objectives

Enhance the recreational opportunities available to Township residents

- Identify the existing system of local parks, recreation areas, and trails
- Plan for and provide non-motorized access to these places
- Establish connections between local parks, neighborhoods, and other destinations that form a regional network of trails and pathways
- Create a variety of trail routes that satisfy the requirements of many different recreational trail users including hikers, walkers, cyclists, horseback riders, and cross-country skiers

Allow residents to safely access the Township's many parks and destination areas

- Assess safety concerns associated with pedestrian and non-motorized vehicle access to local parks and destinations
- Plan for and implement safe pedestrian street crossings
- Establish signage and road markings that safeguard pedestrians and cyclists along identified routes
- Educate local residents on how to safely use the Township's trails, pathways, and roadways for recreation and transportation

Promote health and fitness among Township residents through outdoor exercise

- Plan for and create a trail or pathway within safe walking distance of every residence in Morris Township
- Create trail routes that are attractive and accessible to various trail users
- Establish trails and pathways that are viable alternatives to motorized vehicles
- Sponsor and promote events that encourage use of local trails

THE LANDSCAPE OF MORRIS TOWNSHIP



Morris Township is a place where a diverse array of natural areas, historic districts, neighborhoods, and offices meld to create a pleasant place in which to live, work and play. It is a community where there is an abundance of natural areas to explore, including unspoiled hillsides, lush river valleys, and active farms. Parts of the Township possess a unique historic character with buildings and streetscapes reminiscent of the Revolutionary War era. Other sections of Morris Township have come to support thriving residential areas, commercial districts, and office parks. Today, over 21,000 residents and 400 businesses call Morris Township home. This chapter discusses the features of Morris Township's landscape that influence the development of local and regional trails.

Natural Geography

The geography of Morris Township presents both valuable assets and challenging obstacles to implementing an effective local trails network. Parts of the Township are characterized by a combination of thick forests, lush wetlands, and steep slopes – a landscape that creates both desirable pedestrian locations and natural barriers to non-vehicular circulation. Other areas in Morris Township support a diverse urban environment, where residential neighborhoods, thriving commercial districts, and busy office complexes are located. Here, potential pedestrian routes are numerous, but are often hazardous due to high volumes of automobile traffic.

Morris Township is split by the Ramapo Fault, which roughly follows Speedwell Avenue north of Morristown and Mount Kemble Avenue south of Morristown. (*County of Morris, 1998; NRCS, 2007*) The Highlands Province lies to the west of this line and is characterized by thickly forested hillsides with moderately sloping topography and narrow river valleys – a landscape that is attractive to mountain bikers and some hikers. The Piedmont Province lies to the east of this line and is more gently rolling and flat, which is more attractive to road cyclists, cross-country skiers, and casual walkers.

Following the formation of the Highlands and Piedmont Provinces, glaciers scoured the area and left a terminal moraine that bisects Morristown, Morris Township, and Madison. This moraine was covered by Glacial Lake Passaic about 15,000 years ago, which subsequently separated melt waters from the receding lake into two drainage basins. (*NRCS, 2007*) The Passaic River carried water from the shrinking Lake Passaic and deposited it to the north into what is now the Passaic Meadows – a Natural Heritage Priority Site. Great Brook and Loantaka Brook carried water to the south and deposited it into the modern-day Great Swamp National Wildlife Refuge – a habitat where over three

hundred wildlife species, twenty-six of which are State threatened or endangered, can be found. (*Parrish & Walmsley, 1997; County of Morris, 1998*) The Whippany River brought surface waters from the western areas of the Township through the Washington Valley – an EPA Priority Wetland area that also provides habitat for many state threatened and endangered species. (*County of Morris, 1998; Biostar, 1989*).

Many of the natural areas located within and near Morris Township are excellent places to view wildlife and experience nature. These are important places to consider when planning a system of local and regional trails because many of these areas already contain footpaths, but are not accessible to pedestrians or cyclists from the neighborhoods in Morris Township. Patriots' Path connects Morris Township with natural areas in western Morris County, but its right-of-way is broken in Morristown and Hanover Townships. This limits the ability of Morris Township residents to reach the Passaic Meadows and other destinations in eastern Morris County without a vehicle. Supporting the completion of Patriots' Path, and local connections to it, will expand the recreational options open to local residents by making local natural areas more accessible and promote the fitness of Township residents who choose to access these areas by foot or bicycle instead of by car.

Surface Waters

The area's ancient drainage patterns established the system of streams and rivers that crisscross Morris Township today. The Whippany River is the largest river in Morris Township, draining most of the lands north of Mount Kemble and Madison Avenues. It flows west from Mendham Township near Mendham Road eastward through Washington Valley, Speedwell Lake, and Morristown before exiting the Township near Interstate 287. Protecting the Whippany River was an important objective in establishing the Patriots' Path, which roughly parallels the river through Morris Township.

The Great Brook and Loantaka Brook also run through Morris Township. These streams originate in the vicinity of Foote's Pond and Loantaka Brook Reservation, respectively, before flowing south through the Township and into the Great Swamp. Preservation of lands adjacent to these streams has provided opportunities to create trails. Trails in Loantaka Brook Reservation are among the most heavily-used recreational areas in the County, and a system of footpaths is being explored on the Foote's Pond property by New Jersey Conservation Foundation.

Historic Sites

Parts of Morris Township still echo the Revolutionary era in American history. The wooded hills in the Jockey Hollow Unit of Morristown National Historic Park provided shelter for the Continental Army under George Washington during the winters of 1777 and 1779. Continental troops used these high hills as lookout points and the rich forests of oak and walnut trees as material for log huts. (*National Park Service, 2003*) These forested areas, as well as many homes and structures from the Revolutionary era, have been preserved for visitors to enjoy and are accessible by a series of pedestrian footpaths that connect to Patriots' Path.

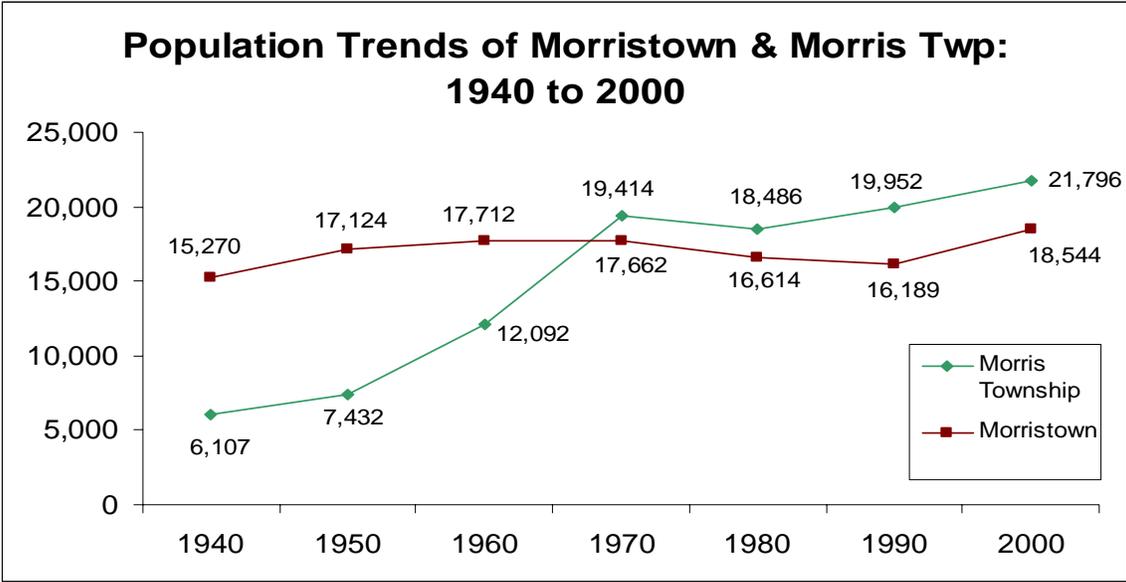
The Washington Valley Historic District in western Morris Township offers another vision of early America. Designated by the National Park Service in 1992 to protect its valuable historic and natural features, the Washington Valley Historic District retains a colonial agricultural landscape encompassing large farmsteads, country estates, and historic buildings dating from the mid-nineteenth century. (*National Register of Historic Places, 2007*) One of these farmsteads in Morris Township, Fosterfields, remains active and open to the public as a “living historical farm” that uses nineteenth century tools and farming methods (*MCPC-I, 2007*). The Washington Valley is a popular destination for hikers, cyclists, and horseback riders as well who utilize the multiple segments of Patriots’ Path and low-traffic roadways in this area.

Patriots’ Path itself is an historically themed recreational facility. Patriots’ Path is a multi-use trail that connects the different units of Morristown National Historic Park with the Washington Valley Historic District in Morris Township as well as many other areas of Morris County. Patriots’ Path allows excellent pedestrian and recreational access to the historic areas within the Township. It is also a key link in the developing regional trail network that will connect residents throughout New Jersey with the historic and recreational sites in and around Morris Township.

Built Environment

In addition to retaining many of its most valuable natural and historical landscapes, Morris Township has also developed into a thriving suburban residential, office, and commercial center. Morristown is a regional hub for commerce and social activity, which has made Morris Township a popular residential location. The population of Morristown has increased from 15,270 residents in 1940 to 18,544 in 2000 (21%), while the population of Morris Township has risen from 6,107 to 21,796 (257%) during the same time (see *Population Trend* chart on page 2-4). (*NJSDC, 2001*) The majority of the Township’s residents live in neighborhoods surrounding Morristown or along principal thoroughfares including West Hanover Avenue, Woodland Avenue, and Sussex Avenue. These additional residents have greatly increased the local demand for recreational facilities and safe transportation options between these facilities and their homes.

Office parks have become common in Morris Township as well due to its proximity to regional transportation arteries. Offices have been developed along Interstate 287, U.S. Route 202 (Mount Kemble Avenue), and Columbia Turnpike. Employees of the businesses within these office parks commonly take walks during the work day and may be especially well-served by local pathways. Also, concentrations of commercial and retail businesses have been established along State Route 124 (Madison Avenue) and West Hanover Avenue that are close to residential neighborhoods. Pathways in these areas of the Township will facilitate pedestrian access between these businesses and the neighborhoods that surround them.



EXISTING TRAILS AND RECREATION AREAS IN MORRIS TOWNSHIP



There are a variety of local and regional trails, footpaths, and bikeways that traverse Morris Township. Some of these trails are designed to provide recreational opportunities in the forms of hiking, bicycling, horseback riding, and cross-country skiing to area residents while others serve as connections to nearby stores, employment centers, and transit stops. This chapter identifies the various trails, footpaths, and bikeways in Morris Township. These are also shown on the *Existing Trails Map* included with this plan.

Patriots' Path

Patriots' Path is a regional trail system that is developed, maintained, and managed by the Morris County Park Commission. It travels nearly 20 miles in southern Morris County, connecting the Bamboo Brook Outdoor Education Center in Chester Township with the Frelinghuysen Arboretum in Morris Township. Patriots' Path runs through the Black River Wildlife Management Area in Chester Township, Lewis Morris County Park in Mendham and Morris Townships, Fosterfields Living Historical Farm in Morris Township, and Morristown. Patriots' Path also has multiple branches that extend from the main trunk trail. These branches connect the trunk trail with regional points of interest including Jockey Hollow (Morristown National Historic Park), the Black River Wildlife Management Area, and Randolph Township's Heistein's Park. (MCPC, 2005)

Morris Township contains two segments of Patriots' Path trunk trail. The trunk trail enters the Township from the west in Lewis Morris Park before turning north and roughly paralleling the Whippany River into Morristown. This segment is accessible from parking areas at its intersections with Whitehead Lane, Sussex Turnpike, Inamere Road, and Lake Valley Road. It reenters the Township from Morristown near Ridgedale Avenue and follows a right-of-way that roughly parallels John Street until it crosses East Hanover Avenue into Hanover Township. The entire length of Patriots' Path trunk trail in Morris Township is accessible to hikers and bicyclists. The portion of the trunk trail that lies west of Sussex Turnpike is open to horseback riders as well (see *Patriots' Path* map on page 3-3). (MCPC, 2005)

Patriots' Path has three branch trails in Morris Township.

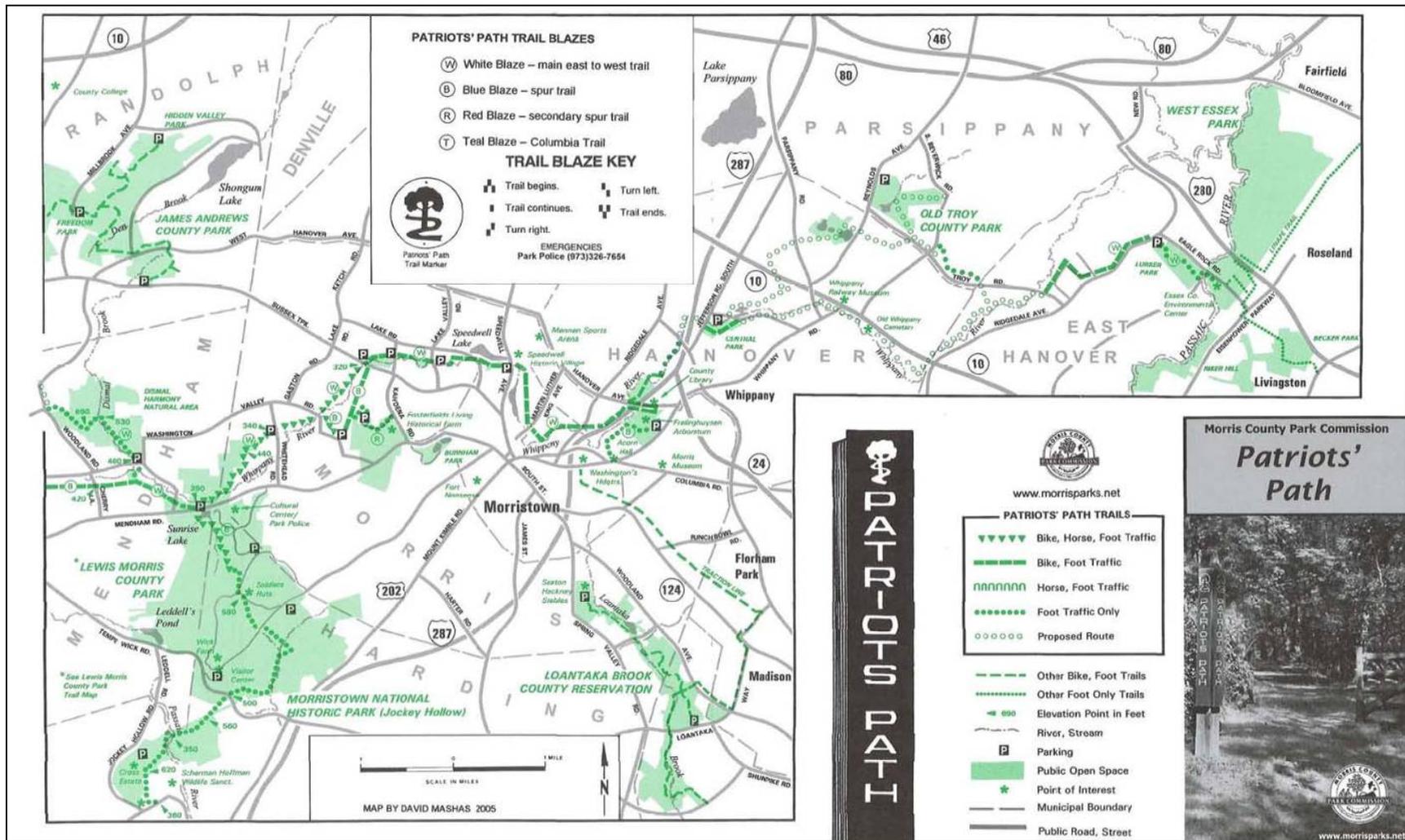
- 1) The **Washington Valley** branch trail extends south and east from the trunk trail to the north of its intersection with Washington Valley Road. It continues through a parking area that is accessible from Washington Valley Road and proceeds north to Sussex Turnpike where it rejoins the trunk trail. The segment of the Washington Valley branch trail that connects the trunk trail with the parking area is open to horses, hikers, and bicyclists, while the segment between the parking area and Sussex Turnpike is open only to hikers and bicyclists.
- 2) The **Fosterfields** branch trail is a footpath (hikers only) that connects Kahdena Road and Fosterfields with the first branch trail. There is a parking area within Fosterfields that provides access to this branch trail.
- 3) The **Acorn Hall** branch trail is a footpath (hikers only) that runs from the intersection of Whippany and Columbia Roads, through the Frelinghuysen Arboretum, and west along Hanover Avenue to its intersection with the trunk trail. It is accessible from a parking area within the Frelinghuysen Arboretum.

Patriots' Path in Morris Township is part of the Liberty-Water Gap Trail that is currently being developed. The Liberty-Water Gap Trail will utilize an interconnected series of trails to form a pedestrian right-of-way between the Statue of Liberty and the Delaware Water Gap. Completion of this project will expand the variety of recreational opportunities that the Patriots' Path affords Morris Township residents. The Liberty-Water Gap Trail is currently broken in a number of places, including downtown Morristown, and will not be finalized until its various segments are connected to one another. (*Kent, 1999*)

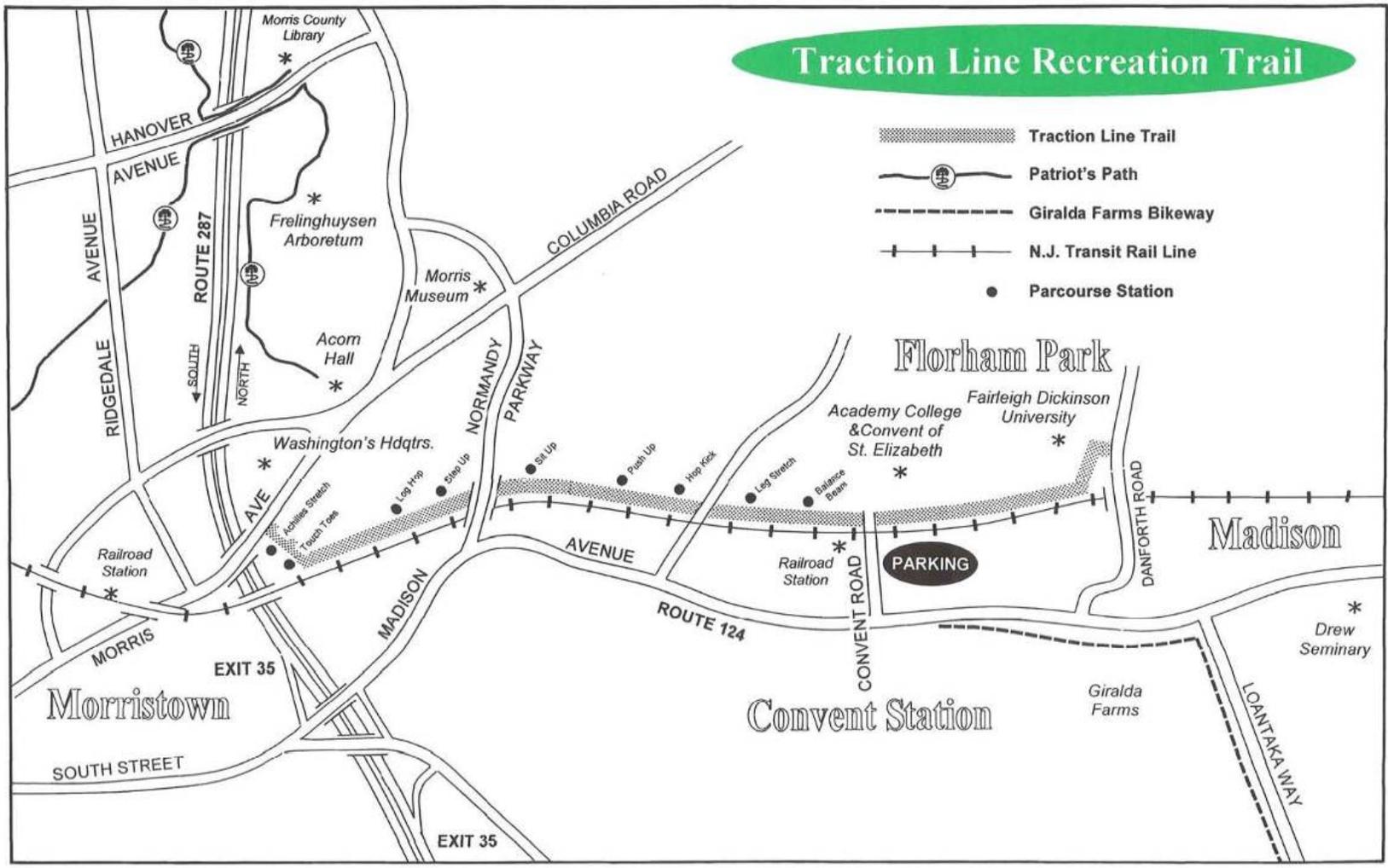
Traction Line Recreation Trail

The Traction Line is a paved, multi-use trail that is maintained by the Morris County Park Commission. Its two-mile right-of-way runs adjacent to the Morris-Essex branch of the New Jersey Transit rail system and connects Danforth Road in Madison Borough with Washington's Headquarters in Morristown. The Traction Line passes by the Convent Station train station in Morris Township and has nine exercise stations along it. Morris Township residents can access the Traction Line by bicycle at Convent Station. There is stair access to the Traction Line at Normandy Parkway as well (see *Traction Line* map on page 3-4).

Residents utilize the Traction Line primarily for exercise. However, the Traction Line also serves as a viable alternative to automobile travel. Residents of nearby neighborhoods use it to travel from their homes to Madison Avenue and downtown Morristown. Limited accessibility makes use of the Traction Line for these purposes difficult. Despite this, the Traction Line is one of the County's most heavily used trails.



Source: MCPC, 2005



Source: MCPC website

Lewis Morris County Park Trails

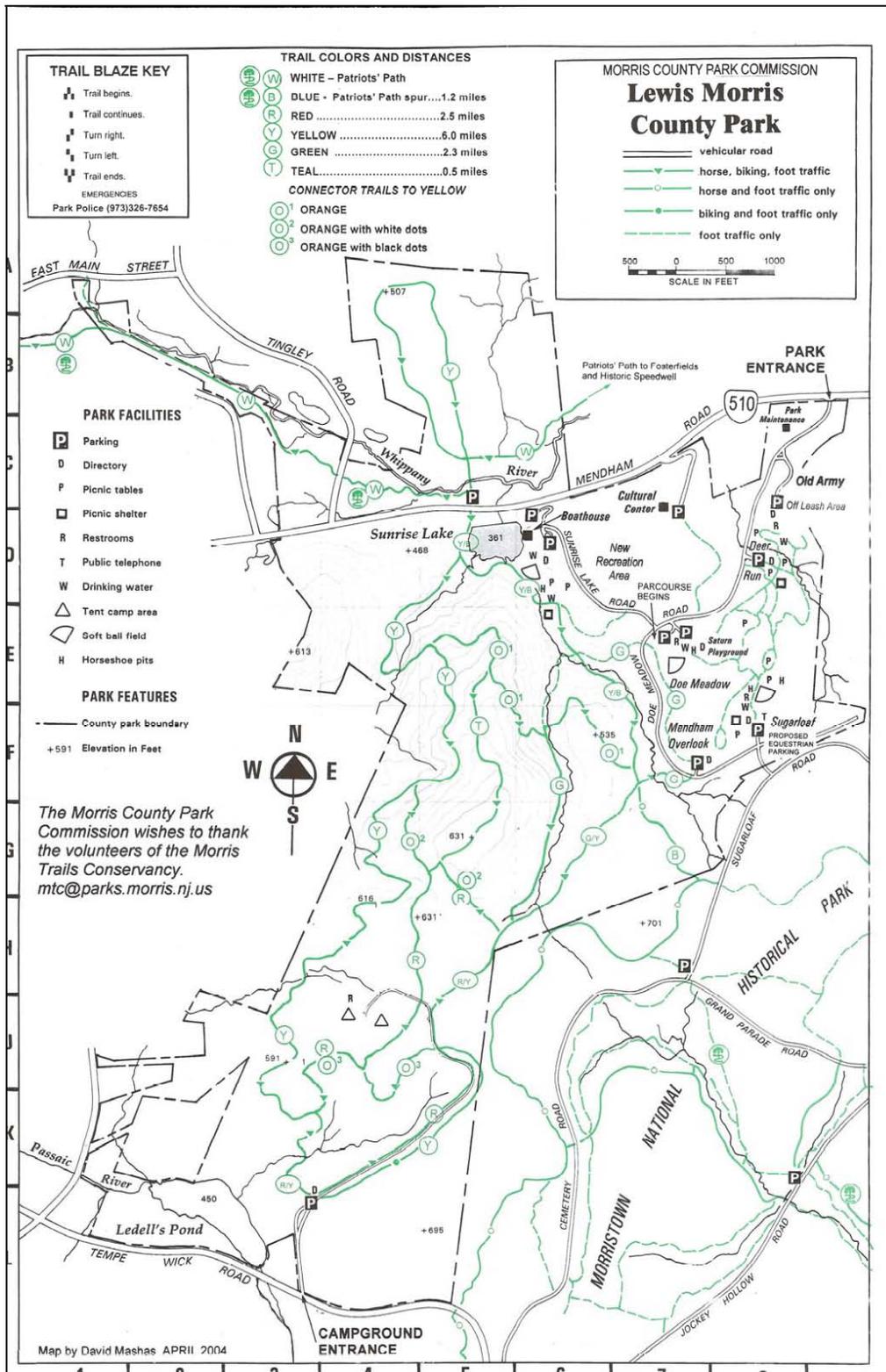
Lewis Morris County Park encompasses a variety of recreational areas in Morris, Mendham, and Harding Townships. It contains a softball field, picnic areas, a boathouse, swimming facilities, sledding hills, and camping areas. These facilities are accessible from the main driveway that turns south from Mendham Road to the west of Delbarton School. Lewis Morris also supports more than 12 miles of trails in thickly forested areas that are available to a wide range of users. Walking-only trails are confined to the active recreation areas, and the shared equestrian and bicycling trails are located in the steeply sloping portions of the Park. These trails are accessible from the main driveway and the entrance north of Tempe Wick Road in Mendham Township (see *Lewis Morris Park* map on page 3-6). (*MCPC-II, 2007*)

The trunk trail of Patriots' Path runs through a portion of Lewis Morris Park north of Mendham Road. A branch trail of the Patriots' Path (Jockey Hollow Branch) that lies west of Morris Township breaks off from this trunk trail at the parking area across from Sunrise Lake in Mendham Township. It runs south through the Park before connecting with the trail system inside the 1,330-acre Jockey Hollow Unit of the Morristown National Historic Park. Trails within Jockey Hollow pass by historical re-creations of the log cabin city built by Colonial troops during the winter of 1779-1780. Direct access to the trails within Jockey Hollow is available from Western Avenue and Sugarloaf Road in Harding Township. (*National Park Service*)

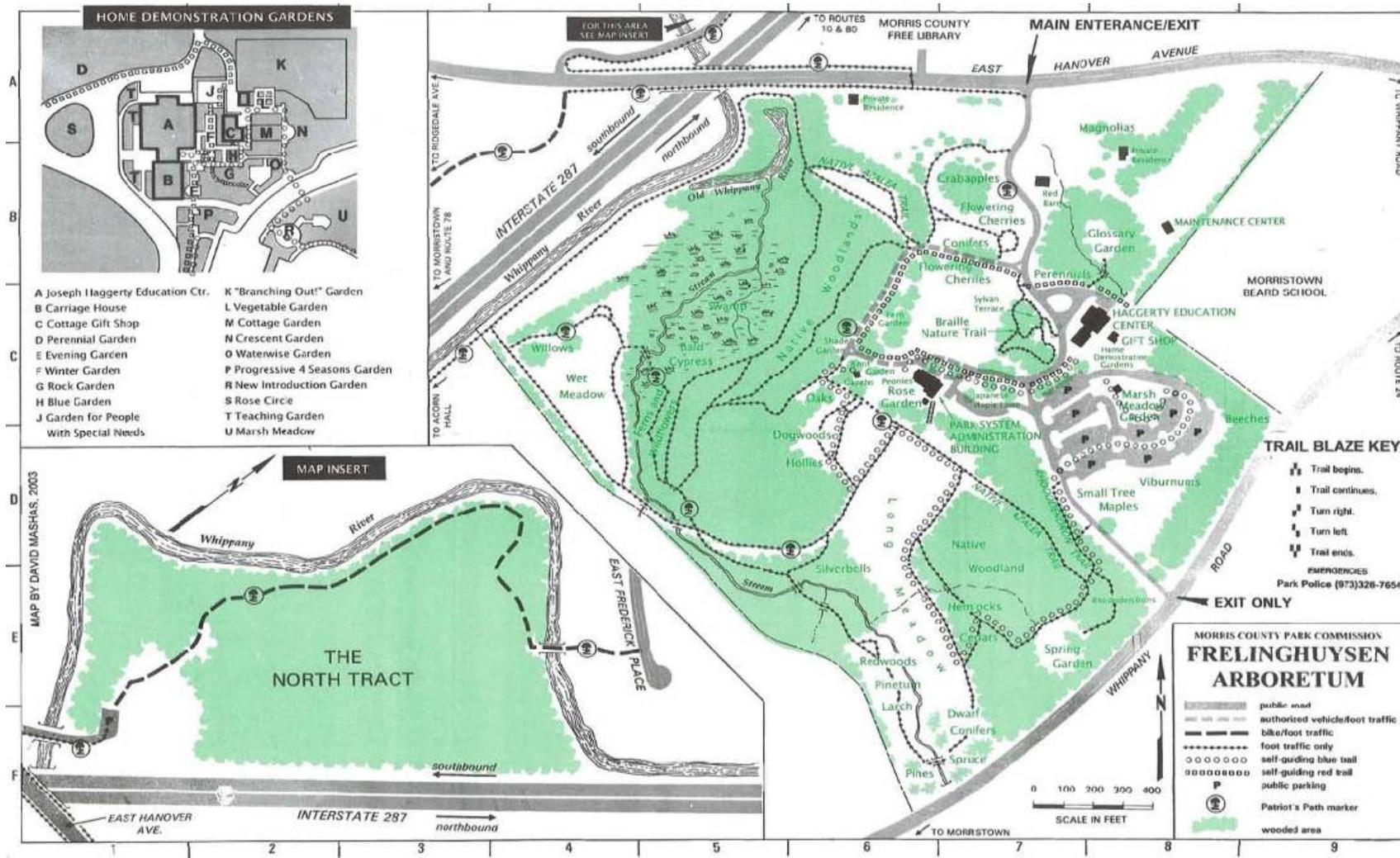
Frelinghuysen Arboretum

The Frelinghuysen Arboretum sits on a 127-acre tract of land in northeastern Morris Township. It is maintained by the Morris County Park Commission as the Commission's headquarters and includes the arboretum, educational center, and research facility. The Frelinghuysen Arboretum contains several miles of heavily used, self-guided walking paths through its various plant communities. The Acorn Hall branch trail of the Patriots' Path runs through the Arboretum (see *Frelinghuysen Arboretum* map on page 3-7). (*MCPC-III, 2007*)

Access to Frelinghuysen Arboretum is available by automobile from East Hanover Avenue to the north. Pedestrians also access the Arboretum at this main entrance. A traffic light on East Hanover Avenue allows walkers on the Patriots' Path to cross between the Arboretum and the Morris County Library. Pedestrian access to the Arboretum, its trails, and Morristown Beard School from the south across Whippany Road is dangerous due to the absence of traffic lights and safe street crossings.



Source: MCPC website



Source: MCPC website

Loantaka Brook Reservation Trails

The Loantaka Brook Reservation is a large County park located in Morris, Harding, and Chatham Townships. It contains three softball diamonds, a playground, an exercise course, picnic areas, ponds, forests, and five miles of paved trails. These facilities are safe and are heavily used by families with young children. County residents easily access the Loantaka Trail from the main parking area on South Street, the pedestrian entrance on Woodland Avenue, or the parking area on Kitchell Road (see *Loantaka Brook Reservation* map on page 3-9). (MCPC-IV, 2007) The Seaton Hackney Stables, located at the north end of Loantaka Brook Reservation, supports equestrian facilities.

Whippany River

The Whippany River roughly parallels Patriots' Path through Morris Township. Patriots' Path offers fishing access to the Whippany River west of Speedwell Lake, where the River is too shallow and rocky for boating. The Whippany River flows over two dams on the eastern ends of Speedwell Lake and Lake Pocahontas in Morristown before continuing past the Arboretum and into Hanover Township.

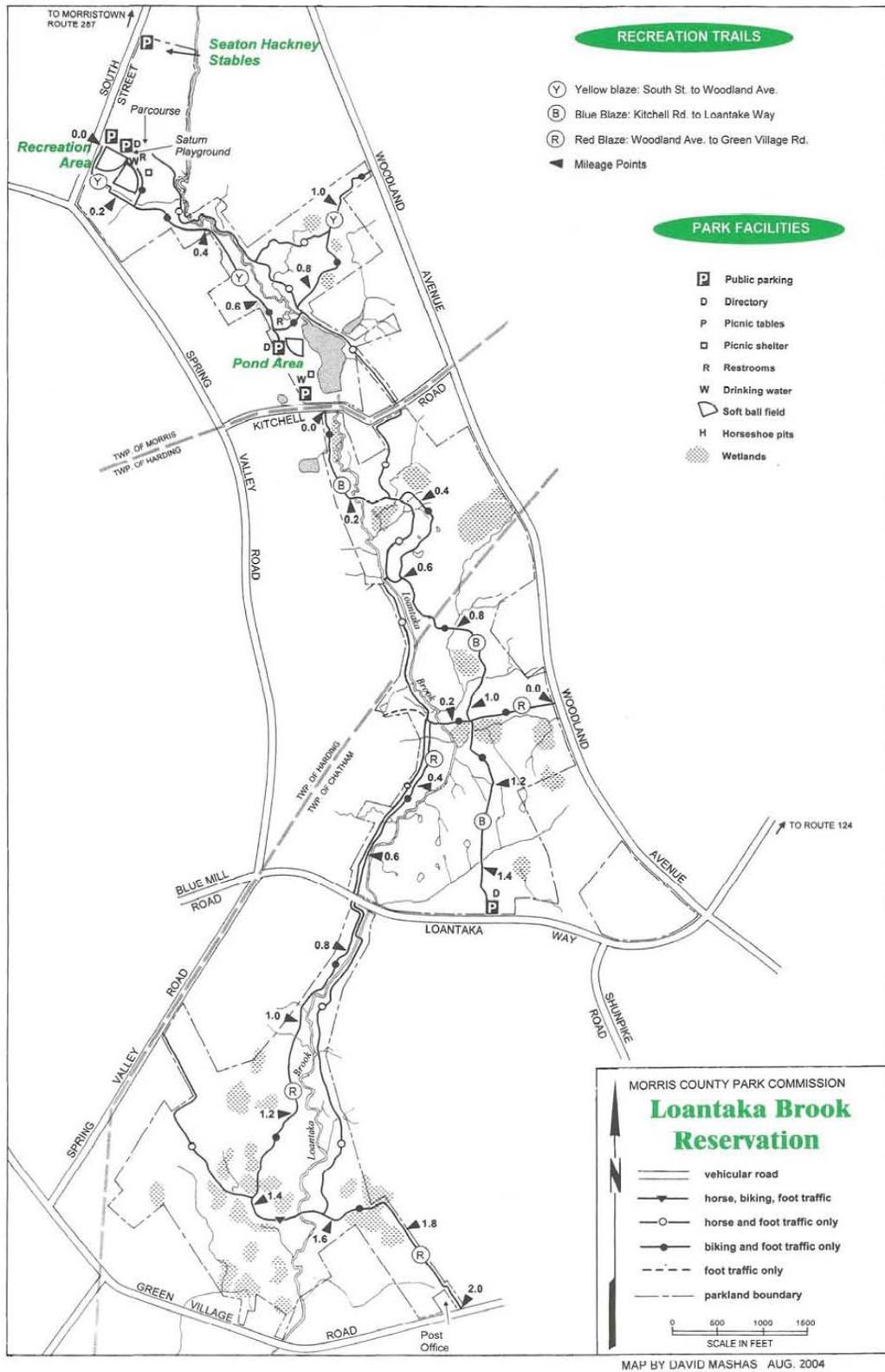
The River is navigable to canoes and kayaks on these lakes and below their dams in the eastern portion of Morris Township. No formal access point where canoes or kayaks can enter the Whippany River exists in this part of the Township. The *Vision & Plan for Morristown Greenway on Patriots' Path* proposes a launching area south of the Lake Road bridge over the Whippany River on open space owned by Morris Township, but no improvements have been made to date. (MCPC, 2000)

Morris Township Walking Paths

The Township of Morris has constructed walking paths at Ginty Park and Woodland School. These paths provide a pedestrian crossing across Woodland Avenue and link the athletic fields on both sides of the road with the Township Municipal Building.

Borough of Madison Trails and Bicycle Paths

The Borough of Madison has a number of trails and recreational paths that are accessible to Morris Township residents. The Borough has recently widened and striped the shoulders of Madison Avenue in order to accommodate bicycle lanes. These improvements have greatly facilitated pedestrian and bicycle access to downtown Madison, but currently end at the municipal border with Morris Township. Additionally, Giralda Farms is a 175-acre tract of land that supports corporate offices and a large area of natural lands. It contains a very popular and well-used system of trails and footpaths that extend south from Madison Avenue into Chatham Township and connect to the Loantaka Brook trails system across Woodland Avenue.



Source: MCPC website

Morris Township Recreational Parks and Facilities

Morris Township owns and manages a wide array of recreational sites and facilities that are available to Township residents. Outdoor basketball courts, football fields, soccer fields, multi-use fields, tennis courts, volleyball courts, playgrounds and pools are some of the active recreational facilities that can be found within Township parks and school grounds. The *Recreational Facilities* charts on the following pages lists the facilities that are available at each of the Township’s parks and recreation areas. The first chart lists facilities by ID number and the second chart lists them alphabetically. The locations of these recreational facilities are shown geographically on the *Morris Township Existing Trails Map*.

Local parks, schools, and private recreation areas are appropriate focal points for the Township’s trails system. Recreation facilities are located throughout the Township, and targeting these areas as the focus of the local trails and pathways network ensures that all Township residents benefit. Recreation areas are also among the most popular destinations for the hikers, bicyclists, and walkers who will use Morris Township’s trails most frequently. Children, elderly residents, and joggers will benefit from safe, accessible connections to local parks that will be made by trails.

Morris Township - Active Recreational Facilities at Destination Points by ID			
ID	Name	Type	Facilities
1	Sussex Avenue School	Public School	1 SB, 1 BkB, 1 MP, 1 PG
2	Hillcrest School	Public School	1 SB, 1 MP
3	Harter Road Fields	Municipal(school)Park	2 BB, 1 So, 1 MP
4	Woodland School	Public School	2 SB, 1 PG
5	Normandy Park School	Public School	1 SB, 1 MP, 1 PG
6	Alfred Vail School	Public School	1 SB
7	Morristown Beard School	Private School	2 MP, 1 BB, 1 track
8	Delbarton School	Private School	2 BB, 3 So, 3 MP, 6 Tennis courts
9	Villa Walsh Academy	Private School	1 SB, 1 MP, 4 Tennis courts
10	The Seeing Eye	Private School	NONE
11	Fosterfields	County Park	NONE
12	Lewis Morris County Park	County Park	2 SB, 2 MP, 1 PG, 1 swimming lake
13	Morris County Golf Course	Private Park	1 Golf course
14	Frelinghuysen Arboretum	County Park	NONE
15	Fort Nonsense Unit of MNHP	National Park	walking paths
16	Loantaka Brook Reservation	County Park	2 SB, 1 MP, 1 PG, 1 fitness trail
17	Jockey Hollow Top	Municipal Park	NONE
18	Kiwanis Field	Municipal Park	1 SB, 1 So, 1 MP
19	Veterans' Field	Municipal Park	1 SB, 1 So
20	Thomas Streeter Recreation Complex	Municipal Park	1 swimming pool
21	Robert La Rue Field	Municipal Park	1 SB, 1 So
22	Cornine Field	Municipal Park	1 FB, 4 tennis courts
23	Butterworth Park	Municipal Park	2 SB, 2 So, 1 MP, 1 PG
24	Children's Park	Municipal Park	1 MP, 1 PG
25	Elmer Saunders Park	Municipal Park	1 SB, 1 BkB, 1 MP
26	Western Avenue Park	Municipal Park	NONE
27	Edward Hayward Park	Municipal Park	1 BkB, 1 PG
28	Donald Delpho Park	Municipal Park	1 SB, 1 Bkb
29	Mark Twain Trail	Municipal Park	NONE
30	John Ginty Recreation Complex	Municipal Park	3 SB, 1 BkB, 1 So, 1 MP, 1 VB, 2 tennis
31	Ginty Pool	Municipal Park	1 PG, 1 VB, 2 tennis, 1 swimming pool
32	Henry Blekicki Field	Municipal Park	1 MP, 1 Street Hockey Court
33	Frelinghuysen Park	Municipal Park	2 SB, 1 So, 1 MP
34	Harlan Green Park	Municipal Park	1 SB, 1 BkB, 1 So, 1 MP
35	Beatrice Tucker Park	Municipal Park	1 SB, 1 MP
36	Collinsville Park	Municipal Park	3 BkB, 1 MP, 1 PG, 1 VB, 3 tennis
37	Cedar Street Park	Municipal Park	same as Beatrice Tucker Park
38	Convent Station (NJ Transit)	Train Station	NONE
39	Crum & Forster	Business/Office Center	NONE
40	Honeywell	Business/Office Center	NONE
41	Morris Museum	Civic Area	NONE
42	Mennen Sports Arena & Field	County Park	indoor ice hockey rinks, rugby field
43	Frelinghuysen Middle School	Public School	1BB, 1 SB, 8 So, 2 MP, 6 TENN
Key	BB = Baseball Field	SB = Softball Field	BkB = Basketball Court
	So = Soccer Field	MP = Multi-purpose	PG = Playground
	VB = Volleyball Court	FB = Football Field	TENN = Tennis Court

Morris Township - Active Recreational Facilities at Destination Points by ID (continued)			
ID	Name	Type	Facilities
44	Mennen Field	Municipal Park	1 SB, 1 So
45	Gateway Center	Business/Office Center	NONE
46	Southgate Complex	Business/Office Center	NONE
47	County Complex	Business/Office Center	NONE
48	Morris Township Municipal Building	Business/Office Center	NONE
49	Lake Road Field	Municipal Park	1 SB, 1 So
50	Seaton Hackney Stables	County Park	Equestrian facilities
51	Bayer	Business/Office Center	NONE
52	Jockey Hollow Unit of MNHP	National Park	Walking Paths
53	Morris Mews	Civic Area	NONE
54	Rabbinical College of America	Private School	Walking paths
55	Jones Woods	Municipal Park	Walking paths

Destination Points Outside Morris Township by ID			
ID	Name	Type	Facilities
A	Morris Plains Train Station	Train Station	NONE
B	Morris County Library (Hanover)	Civic Area	NONE
C	Morristown Train Station	Train Station	NONE
D	YMCA (Hanover)	Private Park	Indoor recreation, pool
E	Morristown Green	Civic Area	walking paths
F	Morristown Hospital	Business/Office Center	NONE
G	Acorn Hall (Morristown)	County Park	walking paths
H	Giralda Farms (Madison)	Business/Office Center	Walking paths and bicycle trails
I	Greystone (Parsippany)	County Park	various facilities (under construction)
J	Morristown High School	Public School	2 multi-purpose fields, track
K	Morristown Library	Civic Area	NONE
L	Foote's Pond (Morristown)	Private Park	walking paths
M	Lidgerwood Park (Morristown)	Municipal Park	1BB, 1 SB, 1 BkB, 4 Ten, playground
N	Burnham Park (Morristown)	Municipal Park	1 BB, 1 SB, Pool, Walking Paths
Key	BB = Baseball Field	SB = Softball Field	BkB = Basketball Court
	So = Soccer Field	MP = Multi-purpose field	PG = Playground
	VB = Volleyball Court	FB = Football Field	TENN = Tennis Court

Morris Township - Active Recreational Facilities at Destination Points (listed alphabetically)			
Id	Name	Type	Facilities
6	Alfred Vail School	Public School	1 SB
51	Bayer	Business/Office Center	NONE
35	Beatrice Tucker Park	Municipal Park	1 SB, 1 MP
23	Butterworth Park	Municipal Park	2 SB, 2 So, 1 MP, 1 PG
37	Cedar Street Park	Municipal Park	same as Beatrice Tucker Park
24	Children's Park	Municipal Park	1 MP, 1 PG
36	Collinsville Park	Municipal Park	3 BkB, 1 MP, 1 PG, 1 VB, 3 tennis
38	Convent Station (NJ Transit)	Train Station	NONE
22	Cornine Field	Municipal Park	1 FB, 4 tennis courts
47	County Complex	Business/Office Center	NONE
39	Crum & Forster	Business/Office Center	NONE
8	Delbarton School	Private School	2 BB, 3 So, 3 MP, 6 Tennis courts
28	Donald Delpho Park	Municipal Park	1 SB, 1 Bkb
27	Edward Hayward Park	Municipal Park	1 BkB, 1 PG
25	Elmer Saunders Park	Municipal Park	1 SB, 1 BkB, 1 MP
15	Fort Nonsense Unit of MNHP	National Park	walking paths
11	Fosterfields	County Park	NONE
14	Frelinghuysen Arboretum	County Park	NONE
43	Frelinghuysen Middle School	Public School	1BB, 1 SB, 8 So, 2 MP, 6 TENN
33	Frelinghuysen Park	Municipal Park	2 SB, 1 So, 1 MP
45	Gateway Center	Business/Office Center	NONE
31	Ginty Pool	Municipal Park	1 PG, 1 VB, 2 tennis, 1 swimming pool
34	Harlan Green Park	Municipal Park	1 SB, 1 BkB, 1 So, 1 MP
3	Harter Road Fields	Municipal(school)Park	2 BB, 1 So, 1 MP
32	Henry Blekicki Field	Municipal Park	1 MP, 1 Street Hockey Court
2	Hillcrest School	Public School	1 SB, 1 MP
40	Honeywell	Business/Office Center	NONE
17	Jockey Hollow Top	Municipal Park	NONE
52	Jockey Hollow Unit of MNHP	National Park	Walking Paths
30	John Ginty Recreation Complex	Municipal Park	3 SB, 1 BkB, 1 So, 1 MP, 1 VB, 2 tennis
55	Jones Woods	Municipal Park	Walking paths
18	Kiwanis Field	Municipal Park	1 SB, 1 So, 1 MP
49	Lake Road Field	Municipal Park	1 SB, 1 So
12	Lewis Morris County Park	County Park	2 SB, 2 MP, 1 PG, 1 swimming lake
16	Loantaka Brook Reservation	County Park	2 SB, 1 MP, 1 PG, 1 fitness trail
29	Mark Twain Trail	Municipal Park	NONE
44	Mennen Field	Municipal Park	1 SB, 1 So
42	Mennen Sports Arena & Field	County Park	indoor ice hockey rinks, rugby field
13	Morris County Golf Course	Private Park	1 Golf course
53	Morris Mews	Civic Area	NONE
41	Morris Museum	Civic Area	NONE
48	Morris Township Municipal Building	Business/Office Center	NONE
Key	BB = Baseball Field	SB = Softball Field	BkB = Basketball Court
	So = Soccer Field	MP = Multi-purpose	PG = Playground
	VB = Volleyball Court	FB = Football Field	TENN = Tennis Court

**Morris Township - Active Recreational Facilities at Destination Points (listed alphabetically)
(continued)**

Id	Name	Type	Facilities
7	Morristown Beard School	Private School	2 MP, 1 BB, 1 track
5	Normandy Park School	Public School	1 SB, 1 MP, 1 PG
54	Rabbinical College of America	Private School	Walking paths
21	Robert La Rue Field	Municipal Park	1 SB, 1 So
50	Seaton Hackney Stables	County Park	Equestrian facilities
46	Southgate Complex	Business/Office Center	NONE
1	Sussex Avenue School	Public School	1 SB, 1 BkB, 1 MP, 1 PG
10	The Seeing Eye	Private School	NONE
20	Thomas Streeter Recreation Complex	Municipal Park	1 swimming pool
19	Veterans' Field	Municipal Park	1 SB, 1 So
9	Villa Walsh Academy	Private School	1 SB, 1 MP, 4 Tennis courts
26	Western Avenue Park	Municipal Park	NONE
4	Woodland School	Public School	2 SB, 1 PG

Destination Points Outside Morris Township (listed alphabetically)

Id	Name	Type	Facilities
G	Acorn Hall (Morristown)	County Park	walking paths
N	Burnham Park (Morristown)	Municipal Park	1 BB, 1 SB, Pool, Walking Paths
L	Foote's Pond (Morristown)	Private Park	walking paths
H	Giralda Farms (Madison)	Business/Office Center	Walking paths and bicycle trails
I	Greystone (Parsippany)	County Park	various facilities (under construction)
M	Lidgerwood Park (Morristown)	Municipal Park	1BB, 1 SB, 1 BkB, 4 tennis, playground
B	Morris County Library (Hanover)	Civic Area	NONE
A	Morris Plains Train Station	Train Station	NONE
E	Morristown Green	Civic Area	walking paths
J	Morristown High School	Public School	2 multi-purpose fields, track
F	Morristown Hospital	Business/Office Center	NONE
K	Morristown Library	Civic Area	NONE
C	Morristown Train Station	Train Station	NONE
D	YMCA (Hanover)	Private Park	Indoor recreation, pool
Key	BB = Baseball Field	SB = Softball Field	BkB = Basketball Court
	So = Soccer Field	MP = Multi-purpose	PG = Playground
	VB = Volleyball Court	FB = Football Field	TENN = Tennis Court

NEEDS FOR TRAILS AND PATHWAYS IN MORRIS TOWNSHIP



A comprehensive network of trails and pathways in Morris Township will help meet the recreation, health, and transportation needs expressed by Township residents at municipal trails workshops. Residents favor expanding the existing trails system to establish better linkages between local parks and neighborhoods and to enhance the enjoyment they derive from these facilities. In turn, strengthening connections from these areas to regional trail networks will broaden the range of recreational activities available in Morris Township. Residents also consider many otherwise desirable routes to be unsafe and require that certain pedestrian-friendly improvements be undertaken before walking or cycling on them. Accommodating these access and safety demands is part of meeting the larger goal of providing opportunities to advance the level of health and wellness among Township residents.

Pedestrian Access to Local Parks

More than 20% of Morris Township (over 2,000 acres) has been permanently preserved as parkland. (*Morris Township Open Space Plan*) Most of these acres support active recreation facilities, such as athletic fields, playgrounds, and pools, and are located in or near residential neighborhoods. This places almost every Morris Township resident within walking distance of a park.

Despite the relatively high proportion of Morris Township that is utilized for parks and open space, many local residents cannot safely access their parks without driving to them. This is partly due to the automobile orientation of many of these parks, which were designed to support organized sporting events and the high parking demand associated with them. Improved pedestrian accessibility in the forms of footpaths, street crossings, and sidewalks would greatly benefit the Township's active parks by partially alleviating traffic and parking congestion within them and enhancing the recreational experience of visitors to these parks.

Morris Township also contains parks that are oriented towards hiking, historic preservation, and natural resource protection. These parks attract users from throughout Morris County. Improving pedestrian access to these areas can be difficult, but connecting them to populated areas, as well as to one another, through a regional network of trails would greatly enhance the appreciation that residents derive from them.

Connections to Regional Trails

Morris Township contains a variety of different local and regional trail systems. However, like many of the Township's parks, these trails can be difficult to access for local residents seeking to use them. Residential areas are often cut-off from trailheads or other access points by busy roads without safe crossing points, steeply sloping topography, and a lack of directional signage. This reduces the recreational benefit that existing trails can provide to local residents. Instead of walking or bicycling to trails, and deriving the exercise and recreation benefits of doing so, residents must drive to them. Potential trail users that do not have access to cars may not be able to use local trails at all. Additionally, automobile-dependent access to local trails has created parking congestion at some trailheads, which forces some users to park cars on the sides of narrow and busy roadways. Local connections between existing trails and nearby neighborhoods are greatly needed to facilitate appropriate trail use in Morris Township.

Equally important as connections to local and regional trails are connections *among* these trail systems. Individual trails and trail networks in Morris Township are separated from one another by many of the same impediments that separate them from nearby neighborhoods. Creating better connections between the Township's existing trails will offer residents a wider array of options for using local roads, trails, and pathways for recreational purposes. The recreational value derived by using the Township's existing trails at Loantaka Brook, the Traction Line, and Frelinghuysen Arboretum, for example, would be greatly enhanced if residents could safely and conveniently reach all three in one trip. Much-needed efforts to connect existing trail systems will help establish Morris Township as a regional hub of recreational trails and pathways.

Safer Streets and Trails

Essential to the success and viability of trails and pathways in Morris Township is the level of safety they provide to their users. Residents will walk on area sidewalks and bicycle on local roads where they feel comfortable and avoid these places where they do not. There are a number of streets and trails in Morris Township that might serve as excellent pedestrian thoroughfares, but may have narrow rights-of-way, high speed traffic volumes, or other undesirable features to potential users. These features limit the connections that Township residents have with the many parks, trails, and outdoor environments that surround them.

Street Crossings

Morris Township is crossed by several highways and multi-lane roads that serve both local businesses and neighborhoods. Unfortunately, these roads often create boundaries to pedestrians and bicyclists that are difficult or dangerous to cross. Roads that are wide, support high-speed traffic, or have limited sight lines are especially problematic. Some of these roads bisect routes that would otherwise be desirable to bicyclists or walkers.

On-road Bicycling and Walking Options

Many of the routes that bicyclists and pedestrians find most convenient are existing roads and streets. Paved surfaces, such as the shoulders of roadways, offer some of the easiest routes for recreational cyclists. Roads and local streets may also provide the most viable pathways for pedestrians walking to local parks or other destinations. Consequently, Township roads often have bicyclists, walkers, and automobiles traveling in close proximity to each other. This situation, if left unchecked, may result in accidents and cause walking or bicycling for recreation in Morris Township to be less desirable. Further promoting the safety of all three user groups on the Township's roadways must be a primary concern.

There are a number of measures that can be taken as part of the trails planning process to improve pedestrian safety on local roadways. First, on-road routes that are currently popular among walkers or bicyclists should be identified. Then, roads that are unsafe for pedestrian use should be noted and possible alternative routes developed. Last, formalized on-road routes should be outlined and the appropriate improvements, such as shoulder striping and signage, completed.

Signage

An important complement to formalized street crossings and on-road routes is a uniform system of signage and trail markings. Signs such as the Woodland Avenue crosswalk marker (*pictured right*) alert drivers and other road users to the presence of pedestrians and promote safer driving habits in areas that are used by walkers and bicyclists.



Additionally, signs such as the Woodland Avenue bicycle route marker (*pictured left*) channel trail users onto routes that have been identified as safe and appropriate for pedestrian use. Many of the existing trails in Morris Township are well-marked, but there is a growing need to establish formal trail signage in other areas of the Township that experience heavy pedestrian use and are not yet part of a local trails system. These routes are indicated on the *Proposed Trails Map*.

Trail User Information

Trail user conflicts, such as bicycle/pedestrian collisions and bicycle/automobile accidents, have occurred in Morris Township partly because users and drivers are poorly informed about how to travel on multi-use roads and trails. Ensuring that the users of local trail routes are adequately educated about traveling on local trails and pathways will help improve the level of safety local residents enjoy. The Township, on its website, newsletter, or by other means, should provide information that encourages safe trail use.

Expanded Health and Fitness Opportunities

The recreational infrastructure of Morris Township, comprised of parks, trails, and indoor facilities, contributes greatly to the level of health and wellness enjoyed by Township residents. They are the sights of athletic events, informal exercise, and other physical activities that help improve the physical well-being of their participants. The recreational infrastructure of Morris Township further promotes wellness among residents by offering a diversity of options that allow a wide range of users, including children, families, adults, and seniors, to spend their leisure time enjoying physical activities that will improve their health.

Many of the recreational facilities in Morris Township that offer such important health and fitness benefits are inaccessible to much of the local population. Some parks are separated from local neighborhoods by busy roads or long distances that are not easily traversed by individual without cars, such as children and seniors, to whom the benefits of these facilities may be the most important. Also, more physically advanced residents, including road cyclists and joggers, are hindered by a lack of formalized, measured bicycle and running routes that are safe and serve their specific purposes.

Established pedestrian connectors between neighborhoods and local parks, as well as identified cycling and running routes, should be developed in order to fulfill the currently unmet demand for these amenities in Morris Township. Information about these connectors and routes should be made available to residents as well in order to more fully promote their use. The *Systems* chapter of this plan outlines a network of trails and pathways designed to expand opportunities for health and fitness in Morris Township.

A LOCAL & REGIONAL TRAIL SYSTEM FOR MORRIS TOWNSHIP



The *Morris Township Trails and Pathways Plan* proposes to meet the various needs for safe and accessible recreation in Morris Township by establishing a comprehensive and interconnected municipal trails network. The Morris Township Trails Network will link important local sites, or “destination points” such as bicycle routes, parks, schools, neighborhoods, and transit stops, into a regional pedestrian system. It will also serve numerous groups of trail users including hikers, bicyclists, mountain bikers, horseback riders, families, transit riders, and casual walkers. New striped and signaled street crossings, bicycle lanes, and footpaths that connect to existing trails will cater to various types of trail users and residents living throughout the Township. This chapter details the improvements that will be necessary to create a comprehensive trails and pathways system in Morris Township.

Destination Points

Destination points serve as junctions within the Morris Township Trails Network. The Network has been designed to improve localized non-vehicular access to the numerous regional and local attractions in Morris Township, listed in the *Existing Trails* chapter and shown on the *Proposed Trails Map*. However, the Network also connects these areas with other nearby destination points in a regional web of trails and pathways. Each type of destination point in Morris Township is discussed below with access considerations specific to their desired uses addressed.

Parks and Recreation Areas

Morris Township’s rich variety of parks and recreational areas, including national, county, municipal, and private parklands, offer a wide range of recreational opportunities to Township residents. The Morris Township Trails Network will establish access routes to these facilities that can support the various forms of recreation available in these parks. For example, the athletic fields and paved pathways at the John Ginty Recreation Complex, which allow use by bicyclists and roller skaters, should be connected to other local multi-use routes. Conversely, trails within sensitive environments, such as those on the Jones Woods and Jockey Hollow Top properties, should only be open to minimally intensive trail users such as hikers. A number of the parks and recreation areas in and around Morris Township where pedestrian access improvements would be especially desirable are discussed in greater detail below.

Burnham Park (#N)

Burnham Park is located in the Town of Morristown, but it is surrounded on three sides by neighborhoods in Morris Township and is heavily used by residents who live nearby. The streets in these neighborhoods are narrow and steeply sloping, making them unsafe for bicyclists and children. Morris Township has preserved a strip of forested land (*pictured at right*) between East and West Lake Boulevards that could support a small footpath connector to Burnham Park.



This property is less sloping than local streets, and is easily accessible to most residents living between Western Avenue and Mendham Road. The property (the Burnham Park Connector) also connects to Jones Woods, and may provide a trail connection to areas south of Western Avenue.

Cornine Field & Streeter Recreation Complex (#20, 22)

Cornine Field and the Streeter Recreation Complex front the north side of Sussex Avenue at its intersection with Inamere and Kahdena Roads. Access from the neighborhoods south of Sussex Avenue is available via a signaled crosswalk over Sussex Avenue at its intersection with Kahdena Avenue. However, this crosswalk is very difficult to use because of narrow shoulders along Kahdena Road and busy traffic on Sussex Avenue. Pedestrian-oriented improvements along Kahdena Road between Sussex Avenue and the Children's Park (#24) would allow residents of this neighborhood to walk safely from the Children's Park along Kahdena to the Sussex Avenue intersection and across the street.

Access to Cornine Field and the Streeter Recreation Complex from the north is currently complicated by the narrow bridge over the Whippany River on Inamere Road. County funding has been appropriated to replace the existing bridge with one that can accommodate pedestrian use and construct a sidewalk along Inamere Road between Sussex Avenue and Lake Road. (*Personal Communication, William Foelsch*) An alternative route for reaching Cornine Field from the north follows Patriots' Path beginning at its intersection with Inamere Road, proceeding west to its intersection with Sussex Turnpike, and then following Sussex Avenue east. Sussex Turnpike has only a narrow shoulder between this Patriots' Path crossing and Cornine Field, but it is relatively straight, flat, and may be suitable for bicycle lanes or shoulders.

Fosterfields (#11)

Fosterfields is a County park that supports a turn-of-the-century historic farm and museum. It is bordered by Kahdena Road to the east, where sidewalks extend past the Fosterfields entrance to Deborah Drive. No street crossings between the Kahdena sidewalks and the Fosterfields entrance currently exist. Kahdena Road continues south without sidewalks down a hill to its intersection with Mendham Road opposite from Burnham Park. There is no viable pedestrian access from the south of Mendham Road to

Fosterfields because the intersection of Kahdena and Mendham Roads has limited sightlines, no pedestrian-oriented improvements, and experiences a regular volume of high-speed traffic.

Access to Fosterfields would be improved, first, by sidewalks across Kahdena Road. To the south, Kahdena Road is too steeply sloping and narrow to support pedestrian access along it. Instead, an off-road trail through the County property east of Kahdena Road and the parcel at the Kahdena Road/Deborah Drive intersection (*pictured at right*) would be more feasible. Also, a pedestrian right-of-way across Mendham Road would complete a connection between Fosterfields, Burnham Park, and residents of their surrounding neighborhoods.



Frelinghuysen Arboretum (#14)

The Frelinghuysen Arboretum is located in the northeastern section of Morris Township, where walkers and bicyclists currently utilize busy roads with little pedestrian-oriented features. Travelling to the Arboretum by foot or bicycle can be difficult because it is



sandwiched between three major roads: Whippany Road, Hanover Avenue, and Interstate 287. The Main and Acorn Hall Branches of Patriots' Path converge at the Arboretum, which provides adequate pedestrian access from the north and southwest (*pictured at left*). Whippany Road is the busy four-lane road that serves as the Arboretum's southeastern boundary. It has no pedestrian crossings, and acts as a barrier between the Arboretum and the adjacent neighborhoods.

A new crossing across Whippany Road at its intersection with Woodruff Road would provide formalized pedestrian access to Frelinghuysen Arboretum for residents in nearby neighborhoods. It would also connect the Arboretum to nearby destination points including the Morris Museum (#41) and the Normandy Park School (#5) via the sidewalks on the southbound side of Woodruff Road. Significant improvements to Whippany Road, including a traffic signal, crosswalk, and pedestrian "island", may be necessary at this location to ensure safe crossing.

Frelinghuysen Park (#33)

Frelinghuysen Park is the most accessible area with active recreation facilities to the many residents who live in the northeastern portion of the Township between Madison Avenue and Route 24. However, Columbia Turnpike runs along the northern edge of the park, and has no shoulders, sidewalks, or crosswalks that could support safe walking or

bicycling. Pedestrian access to Frelinghuysen Park and the ability of local residents to walk and bicycle there would be greatly improved by a striped crossing across Columbia Turnpike at its intersection with Woodruff Road. Similar to the proposed Whippany Road crossing, this intersection will need substantial improvements to accommodate pedestrian use.

Completing a safe connection to Frelinghuysen Park will entail creating a route that takes users south across Columbia Turnpike to Normandy Parkway, which is already wide enough for comfortable bicycle riding (*pictured at right*). Turning east off Normandy Parkway on to Kenilworth Road provides access to the secondary entrance of Frelinghuysen Park. Normandy Parkway may be appropriate for bicycle lane striping as it also serves as a connector to Normandy Park School and the Traction Line. Currently, access to the Park's main entrance on Columbia Turnpike is not safe for pedestrians or bicyclists. An off-road pathway on the south side of Columbia Turnpike may offer a more direct route.



Greystone Park County Recreation Facility (#1)

The New Jersey State Greystone Psychiatric Hospital is located north of West Hanover Avenue in Parsippany-Troy Hills Township. The County of Morris has acquired roughly 300 acres of the site and is planning a large recreational complex there. Morris Township pedestrians will have to cross busy West Hanover Avenue in order to reach the Greystone complex. Currently, there is one signaled crossing over West Hanover Avenue at its intersection with Ketch Road, but existing and recently constructed sidewalks along Ketch Road do not reach this intersection. Consequently, there are no safe, formal access points for Township residents to access the Greystone complex.

Appropriate pedestrian access to the Greystone facility cannot be established at this time because plans for the park have not been finalized. However, there are a number of potential access points across West Hanover Avenue that could be used by Township residents in the future. The Ketch Road intersection can be connected to the neighborhoods south and west of Greystone by extending sidewalks or building footpaths south from West Hanover Avenue to Manor Drive. Ketch Road acts as a local collector street, and nearby residents can travel on the less heavily used neighborhood streets to access it. Residents of the Fairchild neighborhood will have pedestrian access to Greystone through Morris Plains by way of the Delmar/Stiles Avenue sidewalks. An entrance to Greystone Park across from Jane Way would benefit residents who live in the southern areas of the Township as well.

Jockey Hollow Top (#17)

The Jockey Hollow Top property is a large tract of wooded municipal parkland between Mount Kemble and Western Avenues in the southwestern section of Morris Township. Due to the steeply sloping areas that cover much of the area, walking trails are the most appropriate recreational uses for this site, but have not been developed to date. A network of on-site trails would serve as an excellent complement to the ballfields and playground facilities that local residents currently enjoy at Saunders Park (#25) at the end of Rolling Hill Drive.



On-site trails at the Jockey Hollow Top property could form a potentially vital link in a longer series of trails to connect it to other areas in Morris Township. To the north, trail spurs through Saunders Park and the Morristown Armory, as well as along Rolling Hill Drive, could extend to the Villa Walsh and Jones Woods pathways. Access to the south is limited by the tract's spotty frontage along busy Mount Kemble Avenue. The most likely location for a crossing over Mount Kemble Avenue is at its intersection with Frederic Place – an uncrowded neighborhood street. Frederic Place can be used to reach the recreation areas at Delpho Park and Harter Road via Ironwood and Darney Roads.

Jones Woods (#55)

Jones Woods is a parcel of municipally owned open space that is completely encircled by land owned by the Southeast Morris County Municipal Utilities Authority (SMCMUA), the Morris County Park Commission, and Villa Walsh Academy (#9). It adjoins water towers to its south and west and contains pathways around the small pond on site. These pathways extend to the water towers on the southern portion of the property before wrapping around the athletic fields at Villa Walsh.

Limited public access to this popular natural area is currently available from Hillcrest Avenue through a gated driveway in the northeastern portion of the SMCMUA site, but is entirely dependent upon the owners of neighboring parcels allowing the public to cross their lands. This has reduced the effectiveness of Jones Woods as a municipal park because the gate to the SMCMUA driveway is normally closed and locked (*pictured at right*). The use of Jones Woods would be greatly enhanced by partnering with the SMCMUA to allow access to this driveway, which may provide a critical trail link between Fosterfields and Burnham Park to the north and Jockey Hollow Top and Saunders Park to the south.



Alternatively, access to Jones Woods could be made available through the adjacent Township-owned parcel that has a narrow frontage on Picatinny Road. This parcel is currently undeveloped and heavily wooded, but it is also steeply sloping and accessible only from narrow sections of Picatinny Road. Another alternative access point is from Western Avenue through the Villa Walsh property. A footpath up the hill to the north of Western Avenue would connect with the paved pathways in the southern portion of the SMCMUA property and Jones Woods. If the intersection of this footpath with Western Avenue is located across from Rolling Hill Drive, it would also connect Jones Woods with Saunders Park (#25) and Jockey Hollow Top (#17) via local roads.

Kiwanis Field (#18)

Kiwanis Field is the closest recreation facility to residents of the Fairchild neighborhood in the northern area of the Township – an area where many young children and families live (*pictured at right*). The only existing access to Kiwanis Field is by automobile from Lake Valley Road – there are no existing trails or pathways that connect the Fairchild area to Kiwanis Field. Alternative access to this park is limited by the Watnong Brook, which flows along the eastern portion of the property, the steep slopes it abuts, and the narrowness of the Mill Road bridge that spans the Brook.



Opportunities for establishing pedestrian access to Kiwanis Field are limited. Mill Road is the most direct route between Lake Valley Road and the Fairchild neighborhood, but pedestrian use of its existing narrow and heavily-traveled bridge is not safe. An access easement or fee-simple purchase of one of the properties on the north side of Mill Road at its intersection with Bromleigh Way would be necessary to allow access from Mill Road. Alternatively, there is a small right-of-way that connects the cul-de-sac of Fairchild Avenue/Irondale Road with Lake Valley Road. This right-of-way crosses the Watnong Brook, but no bridge is currently in place there. A third possibility for improving access to recreational areas for Fairchild residents is to strengthen north-south connections to Patriots' Path and the Lake Road Fields. In progress sidewalk improvements along Burnham Road will greatly facilitate this objective.

Existing Trails

Although they are not labeled as destination points, existing trails and providing access to them must be primary considerations in developing the Morris Township Trails Network. As with recreational areas, access to existing trails must reflect the kinds of trail use that they currently support. Multi-use paths, such as the Traction Line and the Loantaka Brook Reservation pathways, should be connected to local neighborhoods by similar multi-use routes while limited use areas, such as the Frelinghuysen Arboretum trails, such be accessible by footpath. The following recommendations will help improve access to existing local trails.

Patriots' Path

Patriots' Path enters Morris Township in the western area of the Township and then re-enters it east of Morristown. There are numerous trailheads and parking facilities in the western portion of the Township, but residents in the Ketch Road area are not well-served by these facilities due to an absence of designated pathways and busy roads. Pedestrian and bicycle striping along Sussex Avenue between Lake Road and its intersection with Patriots' Path would start to build this connection. An alternate route through the Frelinghuysen Middle School could also be established by extending existing on-site pathways through the Mark Twain Trail Property (#29) to Lake Road. Here, walkers can proceed eastward on Lake Road to Inamere Road, which Patriots' Path intersects.

The same barriers of busy, narrow streets face residents of the Fairchild neighborhood who are looking to use Patriots' Path. The main north-to-south connectors to Patriots' Path – Burnham and Lake Valley Roads – are currently narrow and dangerous to pedestrians. However, the in-progress Burnham Road improvements should be targeted to improve the pedestrian link between Patriots' Path and this neighborhood. An alternative route would take hikers down Bromleigh Road, which is a less busy north-to-south street with sidewalks along most of its length. This street dead-ends into Lake Road directly across from a Patriots' Path trailhead.

The Frelinghuysen Arboretum and Morris County Library offer the best access point to Patriots' Path for residents in the eastern part of Morris Township (*pictured at right*). Unfortunately, despite their relative proximity in this area, Patriots' Path does not connect with the Traction Line Trail. The Traction Line, which ends at Washington's Headquarters in Morristown, is less than one-half mile from the trailhead of the Patriots' Path Acorn Hall Branch. Coordination with the Town of Morristown will be imperative in establishing a link between these popular regional trails.



Cooperation with Morristown will also be needed to complete Patriots' Path from Speedwell Lake through to the eastern side of Morris Township. Currently, the trail is broken by gated and locked parking lots in Morristown. Residents of Morris Township around Martin Luther King Avenue, who currently have no access to trails or pathways, would benefit from the completion of Patriots' Path in this area as well as designated on-road routes that link them with Patriots' Path.

Traction Line Recreational Trail

Access to the Traction Line, among the Township's most popular recreational areas, is complicated in a number of places by below-grade street crossings, the adjoining rail line, and the high-traffic Madison Avenue commercial corridor. Normandy Parkway currently offers the safest connection to the Traction Line from the north. However, the access



point from Normandy Parkway to the Traction Line is a stairway that is not easily traversed by users with bicycles. The only at-grade access points to the Traction Line in Morris Township occur at its intersections with Kahn (Old Glen) Road and Convent (Canfield) Road. Reaching these areas by bicycle from the northern parts of the Township will require bicycle lanes along Madison Avenue.

Access to the Traction Line from the south necessitates crossing Madison Avenue. A signaled pedestrian crossing exists at the intersection of Madison Avenue and Canfield/Convent Road. South of Madison Avenue, Canfield Road becomes Fox Hollow Road, which dead-ends into Woodland Avenue across from a Loantaka Brook trailhead. This route could serve as an excellent regional connection between the Traction Line and the pathways within Loantaka Brook Reservation. Significant roadway improvement to Fox Hollow Road would be necessary to make this route safe for pedestrians and bicyclists.

Kahn/Old Glen Road offers the only other at-grade access point to the Traction Line in Morris Township. South of Madison Avenue, Old Glen Road is heavily-traveled and undesirable as a bicycle or pedestrian thoroughfare. An on-road connection that follows Old Glen Road, Beechwood Drive, Turtle Road, and Johnson Drive to Woodland School and the Municipal Building is more feasible. This route would form a critical connection between the civic center of Morris Township and its most popular recreational trail. The intersection of Old Glen Road and Madison Avenue may require pedestrian-oriented improvements to ensure the safety of walkers and bicyclists using it.

Loantaka Brook Reservation Trails

The paved pathways within Loantaka Brook Reservation extend between the neighborhoods of southern Morris Township and the Great Swamp National Wildlife Refuge, where an abundance of recreational opportunities are available. The primary access point for local residents to Loantaka Brook is through a parking area east of South Street – a high-speed and heavily traveled road with limited shoulder striping along its length. The shoulders of South Street would have to be widened in order to support safe bicycle riding or walking. To the west, Blackberry Lane, James Street, and Harter Road form a popular bicycle route between Loantaka and western Morris



Township. This route is narrow along James Street south of Blackberry Lane. Bicyclists in this area would greatly benefit from bicycle lanes or shoulders.

Kitchell Road offers another route to access the trails in the Loantaka Reservation. Sidewalks exist south and west of Woodland Avenue, but stop before they reach the

intersection of Kitchell Road and the Loantaka trails. Pedestrian walkways between Woodland Avenue and Loantaka along Kitchell Road would provide a safer connection to these trails for residents in adjacent apartment complexes.

Morris Township/Ginty Field Walking Paths

The Morris Township/Ginty Field walking paths are located near the civic center of Morris Township. Woodland School, the Municipal Building, and the Ginty Recreational Complex are all adjacent to these paved paths. Woodland Avenue is the primary route for nearby residents who use the Ginty Field walking paths and recreation complex. Sidewalks on Woodland Avenue north of its intersection with Pippins Way are sporadic, but the roadway is wide enough for bicyclists and pedestrians (*pictured at right*). Pedestrian striping on this section of Woodland Avenue would help solidify Woodland Avenue as a viable connection to Ginty Field and slow vehicular traffic along this busy thoroughfare as well.



Borough of Madison Bicycle Paths

Madison Avenue provides the most direct link between Morris Township and the bicycle paths in the Borough of Madison. Madison Avenue in Morris Township contains a heavy concentration of commercial and office establishments (*pictured at left*). Consequently, it is among the busiest roads in Morris Township. The existing sidewalks and shoulders on Madison Avenue do not allow pedestrians or bicyclists to travel its length into the Borough of Madison safely. A formalized bicycle lane and extensive safety signage would help to bridge this gap between Morristown, Morris Township, and the Borough of Madison.



Business/Office Centers

Morristown and the eastern portion of Morris Township form a concentration of corporate offices and retail areas where a strong demand for walking and bicycling amenities has arisen. Some employees who work there commute by bicycle and would benefit from on-road routes that run through this area of the Township, especially along Southgate Parkway and Madison Avenue. Other employees take walks during the work-day or patronize nearby restaurants. For them, “loop” routes and walking paths in the vicinities of South Street and Columbia Road, in particular, would be desirable.

Amenable pedestrian environments around local commercial and office centers will help make them attractive to potential businesses and employees. Trails and paths will offer residents who work locally viable alternatives to commuting by car and ease congestion on the Township's arterial roads. This is particularly relevant for the Madison Avenue commercial corridor, which borders a number of large offices. Initiatives undertaken by individual corporations and office complexes to establish walking pathways on site can be incorporated into the municipal trails and pathways network as well.

Civic Areas

Civic spaces are areas where local residents congregate, such as meeting halls, museums, and public plazas. These places should be accessible to a wide variety of individuals, including those without access to motorized transportation. Morris Township has numerous civic spaces both within the Township and in nearby municipalities. These civic areas are served by existing trails, sidewalks or pathways, but connections to the Morris Museum, Morris Township Municipal Building, and Morristown Green are complicated by busy roads and dangerous street crossings. These civic areas are valuable for promoting education and social interaction among local residents and should be connected to Township neighborhoods by pedestrian-friendly trails and pathways.

Morris Museum (#41)

The Morris Museum is located on the northwest corner of Woodruff Road and Columbia Road in the eastern part of the Township. Local streets convey residents of the adjoining neighborhood to the Museum, but it is cut off from areas to the north and south by busy roadways. To the north, on-road access along Woodruff Road between Whippany Road and the Museum's entrance in addition to a pedestrian-friendly street crossing to Frelinghuysen Arboretum would provide safer, more amenable access. To the south, on-road bicycle and pedestrian lanes along Normandy Parkway and a more pedestrian accessible intersection at Columbia Road would connect Morris Museum to the Traction Line and the colleges in Madison. Segments of Columbia Road between the Morris Museum and Morristown are unsafe for pedestrians, but an alternate route that brings walkers and bicyclists from the west along Washington Avenue would bypass this gap.

Morris Township Municipal Building (#48)

The Morris Township Municipal Building is located on Woodland Avenue next to the Woodland School (#4) and across the street from the John Ginty Recreation Complex (#31). The most direct route to the Municipal Building from the north follows Old Glen Road – a heavily traveled and unsafe roadway for pedestrians. Alternatively, walkers and bicyclists could follow Beechwood Drive, Turtle Road, and Johnson Drive from Madison Avenue and the Traction Line to reach Town Hall. Woodland Avenue itself is crossed by existing pathways and bicycle routes, but pedestrian striping along its shoulders does not yet exist. Creating a bicycle lane within the shoulders of Woodland Avenue would establish appropriate access to the Municipal Building for nearby residents.

Morristown Green (#E)

The Morristown Green lies at the center of the county's heaviest concentration of commercial and cultural amenities. Many of the county's administrative offices and courts are located near the Green as well, making it a busy place and desirable destination point. South Street offers a direct on-road route between the Green and Morris Township. It was identified by Morristown residents participating in the development of a Bicycle Plan as a desirable location for bicycle lanes. Currently, high-traffic volumes and numerous cross streets make South Street difficult and dangerous for bicyclists. Similar conditions are observed on James Street – a potential alternate route. Inter-municipal coordination between Morristown and Morris Township will be necessary in order to provide pedestrians with safer, more viable options for reaching Morristown Green.



Transit Stops

Morris Township is well-served by public transportation. The Morristown Branch of New Jersey Transit's Morris and Essex Line bisects the Township. It provides rail service seven days a week between Hackettstown and New York City from its stations in Morris Plains, Morristown, Convent Station, and Madison. (*New Jersey Transit website*) The Morris County Metro bus system also services Morris Township. Bus stops in the Township include the Morris County complex on West Hanover Avenue, Mennen Field at Martin Luther King Avenue, the Honeywell complex off Madison Avenue, the Convent Station rail stop, Fosterfields, and Delbarton on Mendham Avenue. Buses which serve these stops run five days per week to various locations throughout the County. (*New Jersey Transit website, Morris County Division of Transportation website*)



The transit stops in Morris Township are excellent candidates for pedestrian-oriented improvements. People that use transit stops commonly walk or bicycle to them. Also, these stops are often located near busy areas, such as corporate offices (Honeywell, County Complex, and Mennen) and shopping districts (Madison Avenue, downtown Morristown, and downtown Morris Plains), which could benefit from reductions in local automobile traffic that higher transit use would cause. Focusing pedestrian-oriented improvements around transit stops will make their surrounding areas more attractive and accessible to local residents who might not otherwise visit them or use mass transit.

Madison Avenue services the Convent Station Train Station and is the most commonly used road by public buses. Pedestrian accessibility to the transit stops on this road should be promoted by establishing both walking pathways and bicycle routes along it. Links to other local trails and pathways, including the Traction Line, Canfield/Fox Hollow Road, and Woodland School Connector, will allow many of the Township's residents to more safely use the public transportation options available on Madison Avenue. Access between the bus stop at the Martin Luther King Boulevard / West Hanover Avenue intersection and the Collinsville neighborhood could be improved as well by multi-use routes in this area.

Schools

All of the Township's public schools and one of its private schools (Morristown Beard) are located within residential neighborhoods. Unfortunately, most of these neighborhood schools, and the recreational amenities they contain, are difficult to reach for students and their parents who might walk to them. Existing sidewalks and street crossings around these schools may be confusing to children or, in some cases, non-existent. Pedestrian access to the Frelinghuysen Middle School (#43), Woodland Avenue School (#4), Morristown Beard (#7), and Alfred Vail School (#6) are particularly difficult due to the lack of pedestrian pathways in surrounding neighborhoods.

Walking or bicycling to schools in the less developed areas of Morris Township is also difficult due to their distance from students' neighborhoods and the busy, narrow roads that access them. However, connecting schools into the local trails network will create alternatives to vehicular transportation and increase residents' access to the Township's schools and their associated playgrounds and athletic fields.

Frelinghuysen Middle School (#43)

Frelinghuysen Middle School, located south of West Hanover Avenue, serves as both an educational and recreational center for Morris Township. In addition to its regular school activities, the fields around Frelinghuysen Middle School are heavily used by local recreation clubs and groups making recreational access to this site especially desirable. From the south, the Mark Twain Trail property (#29) can support a footpath that will connect the Middle School with nearby residences and Patriots' Path. Existing pathways extending into the Middle School from the cul-de-sac at the end of Elder Drive could also be linked to other roads within the surrounding neighborhood. To the north, a pedestrian-friendly connection between Frelinghuysen Middle School and the future recreational amenities at Greystone Park should be established as well. This will require a signaled crossing at the intersection of Jane Way and West Hanover Avenue.

Woodland Avenue School (#4)

Proposed access improvements to the Woodland Avenue School are identical to those proposed in the *Morris Township Municipal Building* section above.

Morristown Beard (#7)

Morristown Beard is located on the southwest corner of Whippany Road and Hanover Avenue (*pictured at right*). Access to Morristown Beard has traditionally been available only by automobile due to the wide, high-speed roads that border it. More recently, local sports clubs have begun to utilize the school's recreational facilities. This has overwhelmed the available parking at Morristown Beard and caused parents to park in nearby neighborhoods, increasing the frequency of pedestrian crossings over Whippany Road. Alleviating the danger caused by mid-road crossings here would require improving the Whippany Road / Hanover Avenue intersection to accommodate pedestrian use. Supporting walkways from Morris County Library would be desirable as well.



Alfred Vail School (#6)

The Alfred Vail School is located along the east side of Speedwell Avenue north of Morristown. Residents from the Fairchild neighborhood live in close, walkable proximity to the School, but must use narrow and busy roads to reach it. This situation is unsafe for school children and the many local residents who walk on nearby roadways due to the absence of footpaths and trails. Mill Road is the most direct connection between the Fairchild neighborhood and Alfred Vail School. Pedestrian-oriented improvements, such as shoulder striping for bicycles and walkers, will increase the level of safety for local residents and school children.

The Morris Township Trails Network

In addition to providing better access to local destination points, the Morris Township Trails Network will itself serve as a recreational facility that accommodates the variety of different user groups in the Township, including horseback riders, joggers, hikers, casual walkers, road cyclists, and off-road bicyclists. To meet the demands of these various user groups, the Morris Township Trails Network will encompass a wide range of trails and pathways, including on-road routes, bicycle lanes, sidewalks, and off-road trails as well as the intersection improvements that span 51 miles (see *Proposed Trails Map*). Among the routes that service each individual user group will be appropriately long and continuous segments of trails that offer their users extended trail experiences. These regional routes will also serve to connect different parts of the Township to one another.

Multi-Use Trails and Pathways

Multi-use trails are routes on which a variety of different kinds of uses are appropriate. Multi-use trails can be hard-packed gravel or dirt surfaces, such as Patriots' Path, that can support walkers and bicyclists (as well as horses in some places). Multi-use trails can also be paved pathways that are open to a wider range of users, including roller skaters, walkers with strollers, and road cyclists. Some multi-use trails, such as the Loantaka Brook Reservation Trails, meander through natural areas of the Township while others fall within shoulders or bicycle lanes along existing roads. Multi-use trails and pathways will be the most common type of route within the Morris Township Trails Network.

Three regional multi-use trail routes – Patriots' Path, the Traction Line, and the Loantaka Brook Reservation Pathways – have already been established within Morris Township. The regional multi-use routes to be created as part of the Morris Township Trails Network will link these existing trails into a highly-accessible and interconnected system of multi-use pathways.

Eastern Route (Frelinghuysen Arboretum to Loantaka Brook Reservation)

The Eastern Route will run from the Frelinghuysen Arboretum to the Loantaka Brook Reservation pathways, forming a nearly continuous connection between the Great Swamp National Wildlife Refuge and Patriots' Path. From the Arboretum, bicyclists and walkers will cross Whippany Road and travel south along Woodruff Road and Normandy Parkway to the Traction Line. Once on the Traction Line, users may turn south onto Kahn Road and utilize the Old Glen/Beechwood/Turtle/Johnson route to the Woodland School or continue further east before turning on to the Canfield/Fox Hollow connector, which ends at a Loantaka Brook Reservation trailhead.

Northern Route (Washington Valley to Frelinghuysen Arboretum)

The Northern Route runs along Patriots' Path from the Township's western border with Mendham to Frelinghuysen Arboretum. Between Mendham Township and Washington Valley Road, this segment of Patriots' Path is accessible to horses as well as walkers and bicyclists. The Northern Route continues west along Patriots' Path to its intersection with Bromleigh Way and Lake Road, where it splits into two spur trails. The Route 24 Branch will follow the abandoned Route 24 right-of-way north of Speedwell Lake and Mennen Arena into Hanover Township, where it will connect to existing Patriots' Path segments within the Frelinghuysen Arboretum's north tract. The Morristown Branch will run south of Speedwell Lake along the Whippany River where it will connect with an existing Patriots' Path segment near Abbett Road in Morristown. These branches form a potentially attractive "loop" trail.

Hiking Trails and Walking Paths

The *Proposed Trails Map* envisions a number of new footpaths and trails that will be limited to walkers and hikers alone. These types of trails are primarily located within environmentally-sensitive areas associated with steep slopes, wetlands, stream corridors, or terrain that would be difficult to traverse by other means. Most walking-only routes are located off-road and are comprised of natural surfaces, such as packed dirt. In Morris Township, new walking-only routes will enhance residents' access to the following natural areas (see *Proposed Trails Map*):

Jones Woods	Jockey Hollow Top	Doremus Tract
Washington Valley	Fosterfields	Mark Twain Trail
Foote's Pond	Fort Nonsense	Saunders Park
Whippany River	Lake Pocohantas	

Western Route (Greystone to Jockey Hollow)

In addition to the regional multi-use routes that will be accessible to pedestrians, the Western Route will provide hikers and walkers with a route that traverses some of the most pleasant natural landscapes in Morris Township. From Greystone Park, walkers will cross West Hanover Avenue and utilize the walking paths at Frelinghuysen Middle School and a new footpath on the Mark Twain Trail property to reach Lake Road and Inamere Road. A wider, more pedestrian-friendly bridge over the Whippany River on Inamere Road will connect hikers to Kahdena Road and Fosterfields. Here, pedestrians will be able to continue south on the Jones Woods Branch or the Gillespie Hill Branch.

The Gillespie Hill Branch will run along Patriots' Path through Fosterfields to Washington Valley Road where it will turn south along a new walking that follows the Gillespie Hill Tributary of the Whippany River to Mendham Road. After crossing Mendham Road, the Gillespie Hill Branch will follow Valley View and Wood Roads, extend through the Delbarton property, and connect with the proposed multi-use route on Western Avenue. The Jones Woods Branch will continue down Kahdena Road, cross Mendham Road through Burnham Park, the Burnham Park Connector, and the SMCMUA property to the Jones Woods property. Then, the Jones Woods Branch will extend through Villa Walsh to Western Avenue, forming a loop with the Gillespie Hill Branch.

From Western Avenue, the Western Route continues south to Saunders Park before ending at the Jockey Hollow Top Property. Walkers will also be able to choose to travel west along Western Avenue towards the Jockey Hollow Unit of Morristown National Historic Park or east towards Fort Nonsense, Edward Hayward Park, and Foote's Pond.

Bicycling

Bicycling is a popular activity among Morris Township residents. Multi-use trails meet the needs of less experienced riders, such as children, while more experienced riders frequently utilize roadways. Road cyclists require longer routes than other types of trail users in order to provide themselves with the desired recreational benefit. Unfortunately, establishing bicycle routes through Morris Township is complicated by a number of factors. The rolling topography in many parts of the Township presents a formidable challenge to all but the most experienced cyclists. Additionally, the Township contains many narrow, crowded roadways that are unsafe for bicycles. If any of these conditions exist along a bicycle route, the trail will not serve as a viable connection. The *Proposed Trails Map* proposes three on-road bicycle routes in Morris Township that will be accessible predominately to bicyclists. Their primary function will be to connect local bicyclists to the regional network of on-road bicycling routes, many of which extend outside of the Township.

Madison Avenue Bicycle Route (Morristown to the Madison Bicycle Lanes)

The Madison Avenue Bicycle Route will run the length of Madison Avenue between Morristown and the Borough of Madison bicycle lanes. Completing the Madison Avenue Route will require striping and widening the shoulder of Madison Avenue in some places and expanding the paved right-of-way immediately east of its intersection with Normandy Parkway. It will also require extensive signage along the length of Madison Avenue to ensure riders' safety.

Southern Route (Jockey Hollow Top to Loantaka Brook Reservation)

The Southern Route will form a continuous connection between Mount Kemble Avenue and Woodland Avenue. It will begin across Mount Kemble Avenue from the Jockey Hollow Top Property, the end of the Western Route, before running south along local streets to Harter Road. It then crosses I-287 on Harter Road to James Street. There, cyclists can either turn south on James Street and towards the on-road routes in Harding Township or north. Turning north will allow cyclists to stay on James Street to Foote's Pond and Morristown or veer east onto Southgate Parkway towards Loantaka Brook Reservation. From Loantaka Brook, cyclists can travel south along Spring Valley Road towards Harding or continue through the Reservation to future bicycles lanes on Woodland Avenue and the terminus of the Eastern Route.

Washington Valley Bicycle Connector (Washington Valley to James Andrews Park)

The Washington Valley Bicycle Connector will bridge a gap in the Patriots' Path trails network. From the Patriots' Path trailhead along Washington Valley Road, this route will follow Washington Valley Road west to Schoolhouse Lane through Mendham Township and into Randolph Township where it will cross Sussex Turnpike and connect with the segment of Patriots' Path that ends in James Andrews Park.

Equestrian Trails

Trails that are accessible to horseback riding are currently constrained to the western segments of Patriots' Path and Lewis Morris Park as well as the Seaton Hackney Stables. These areas are suitable for horse riding as they are either located within large forested areas far from busy roads, where the horses are less likely to be spooked, or within a confined area where appropriate equestrian facilities have been developed. Horseback riding in Morris Township could be further supported by ensuring that user conflicts between riders and other trail users are minimized. Informative signage at the start of horse and walking routes that outlines the necessary precautions to be taken by hikers to protect themselves around horses may be appropriate.

Intersection Improvements

Many of the routes described above will require pedestrian and bicycle-oriented street crossings in order to be completed. Different intersections pose unique challenges to trails and pathways that utilize them. Some wide and high-speed roads, for example, may require stop lights and striped crosswalks, such as at the Patriots' Path intersection with Hanover Avenue (*pictured at right*). Others may necessitate pedestrian "islands" between vehicle travel lanes. Appropriate intersection improvements should be determined on a site-specific basis after transportation and engineering analyses. The following intersections have been identified as in need of improvements in order to accommodate pedestrian use.



Woodruff Road / Whippany Road
Jane Way / West Hanover Avenue
Old Glen Road / Madison Avenue
Hanover Avenue / Whippany Road
Rolling Hill Drive / Western Avenue

Woodruff Road / Columbia Turnpike
Kahdena Road / Sussex Road
Bromleigh Way / Lake Road
Old Mendham Road/Mendham Road
Frederic Place / Mt. Kemble Avenue

ACTION PROGRAM FOR MORRIS TOWNSHIP



The Action Program recommends specific actions the Township can pursue in order to implement the *Trails and Pathways Plan*. The action points for the first-year following the adoption of the Plan are considered most urgent. Three and five-year action points focus on land preservation and trail development, which require more planning. Five-year actions address broader issues that are oriented with the long-term goals of the Plan.

First Year (2008 – 2009)

- Submit the *Trails and Pathways Plan* to the Planning Board for adoption as an element of the Township Master Plan.
- Work with the Township Administrator and Engineer's offices to prepare and submit grant applications to begin to design and implement the Morris Township Trails Network.
- Establish a system for communication and review between the Trails Committee and the Planning Board for possible trails easements on private properties as development applications are submitted.
- Assist governing body and Open Space Committee with any proposed land acquisitions which may implement the *Trail and Pathways Plan*.
- Work with the Engineering Department to identify potential challenges to implementing the Morris Township Trails Network.
- Hold a trail workshop meeting with neighboring municipalities, local businesses, and interest groups to discuss possibilities for regional and inter-municipal connections.
- Meet with the Morris County Department of Planning and/or the New Jersey Department of Transportation to discuss improvement of pedestrian infrastructure at the designated intersections mentioned in the *Trails and Pathways Plan*.
- Develop a uniform system of trails and pathways signage.
- Establish or utilize volunteer organizations to assist with the construction, stewardship, and monitoring of the local trail infrastructure.
- Begin implementing the Madison Avenue Bicycle Route.
- Begin implementing the Washington Valley Bicycle Connector.
- Begin designing and constructing trails on the Jockey Hollow Top property.

Within Three Years (2009 – 2011)

- Construct trails on municipal open space lands including the Mark Twain Trail, Doremus, and Burnham Park Connection properties.
- Establish an annual public meeting/workshop to discuss the implementation of the Morris Township Trails Network.
- Identify appropriate projects and apply for Safe Routes to School funding.
- Apply annually for grant funds to the New Jersey Department of Transportation, New Jersey Department of Environmental Protection and Morris County Open Space Trust Fund for grants to implement the Trails and Pathways Plan.
- Develop a management and ongoing maintenance schedule with the Department of Parks and Recreation.
- Coordinate with the Morris County Park Commission to establish connections and trails within the County Parks in Morris Township.
- Coordinate with the National Park Service to establish connections within the national recreation areas in the Township.
- Coordinate with Morris County to increase signage in the Township identifying public parks in the municipality.
- With the Engineering Department, ensure that the Morris Township Trails Network complements the existing sidewalk system in the Township.
- Meet with the Southeast Morris County Municipal Utilities Authority to discuss public access to the Jones Woods site.
- Meet regularly with key private landowners to discuss providing public access to their properties.
- Produce a trail map and user guide for the Morris Township Trails Network to be made available at local parks and trailheads.

Within Five Years (2011 – 2013)

- Construct trail heads at local parks and street locations where appropriate.
- Continue to submit annual applications for land acquisition and trail development.
- Implement the intersection and roadway improvements identified in the *Trails and Pathways Plan*.
- Establish a structure for review, oversight, and management for the stewardship and expansion of the Morris Township Trails Network.
- Meet yearly with neighboring towns and park managers to ensure maximum utilization and flexibility of trail design and use.
- Continue to regularly update the *Morris Township Trails and Pathways Plan*, its associated maps and the user's guide for the Morris Township Trails Network.

TRAIL DESIGN, CONSTRUCTION, AND MANAGEMENT



The groundwork of trail construction begins once the use, surface type, and purpose is decided and the location is identified on a map. These factors will influence how and where a trail is built. Therefore it is important that they are realistic and will serve the intended users. While loop trails are popular for day-use trails because they enable easy access and parking, line trails which connect two points, the trailhead and destination, are the most common due to their simplicity. Horseshoe trails are valuable particularly in areas with public transportation. All trails will be greatly enhanced by signage, which provides objective information about trail conditions and directions.

This section provides an introduction to trail design, construction and management and addresses critical issues such as water management, security, handicap accessibility and permits. It is meant as a general overview of these issues.

TRAIL DESIGN AND CONSTRUCTION

Locating a Trail

The main objectives of locating a trail are to:

- Verify control points (places of entry and exit) to determine if the mapped route is feasible
- Find the best alignment that fits all objectives
- Identify natural features to enhance the user's experience
- Validate that the route is reasonable to construct and maintain

The trail locator must scout a property to find the best route to investigate the presence of the following features:

- Gaps or passes
- Stream crossings
- Rock outcrops
- Known areas to avoid (threatened and endangered species, poor soils)
- Known features to include (scenic overlook, historic site).

There are a number of tools the trail locator needs in order to accurately mark the route as it meanders between control points. Some of these tools are more necessary than others; however a working knowledge of maps and compass reading is important. Some suggested tools include:

- Clinometer (instrument used for measuring angles of slope), compass, altimeter, flagging of different colors, wire or wood stakes, roll-up pocket surveyor's pole, permanent marker

to make notes on the flagging, field book, probe to check soil depth to bedrock, maps, and perhaps a GPS (global positioning system) unit.

Scouting a trail is best done with two people. One person can walk ahead of the other to look out for obstacles and the best possible route while the other records all data collected using various tools. This individual can also “flag” the trail route. (*USDOT, 2007*)

Environmental Considerations in Trail Design

Trails need to be located on soils that are capable of withstanding the amount of anticipated use without eroding or becoming wet and muddy. In addition;

- Compaction is a problem that occurs when the surface horizons of the soil compact into a cement-like hardness due to plant mortality caused by hikers. The compacted surface loses its pore space and its ability to absorb surface water.
- Surface erosion is another problem, which leaves loose stones, gravel and tree roots after the stabilizing sand and silt particles have been removed by water. This then causes poor footing for the hiker causing the hiker to walk along the edge of the trail, further killing plants and compacting the soil.

In determining the best location for a trail, one should consider:

- Soil wetness: areas with very poorly drained soils should be avoided.
- Soil Texture: loam soils with a mixture of sands, clay, and silt will resist erosion and compaction most successfully and absorb a high level of rainfall.
- Soil Structure: Hardpans are firm, compacted soil horizons that are generally impervious to the downward movement of water and makes trails wet and susceptible to damage.
- Soil Depth: Shallow soils are heavy and saturated with water, which leads to erosion when walked upon.

To minimize erosion, the trail should:

- Minimize amount of ground area that is disturbed especially in areas over a 5% grade. Trails on steep slopes should be narrow.
- Follow grades equal to or less than 5%.
- Natural drainage patterns should not be altered.

A number of techniques can be used to manage water run-off on a trail including:

- Native plants to absorb water: very useful in large areas where the soil has been disturbed.
- Sediment barriers: bales of hay, silt fencing, retaining walls and filter strips. These tools trap sediment and prevent an area down slope from becoming over-silted which negatively impacts plant as well as wetlands and waterbodies.

Proper drainage will carry the water either over the trail, under the trail, or will intercept the water before it crosses the trail. Surface runoff intercepted by erosion-control measures must be collected by drainage ways and discharged in stabilized areas or sediment basins. Cross-drainage techniques such as swales, culverts, water bars and deflectors should be utilized to divert water off of the trail as soon as possible.

- *Swale*: a depression constructed across a slope above and in conjunction with an earthen berm. A swale is appropriate where runoff might create erosion problems running across a trail. Use on slopes which have a trail grade less than 10%.
- *Culvert*: a metal, plastic, cement or wood pipe placed under a trail to permit crossing an intermittent or active stream.
- *Water bar*: a rock, earthen or log barrier angled to divert water off a trail. In general, the greater the slope and the higher the velocity or volume of water, the greater the need for waterbars as opposed to other drainage techniques.
- *Deflectors*: rubber belting fastened to treated timbers which are placed in the ground to deflect water off a trail. Areas appropriate for this tool are where low water volume is expected and heavily traveled trails where mountain bikes are expected.

Some additional items to consider when designing trails to minimize erosion concerns:

- Observe the trail during a rainstorm to more accurately determine the need for these tools.
- When crossing shallow pools or areas that are consistently wet, stepping-stones are appropriate. This is especially necessary in areas where hiker's steps widen the path as they move to avoid wet areas.
- When crossing deep water, bridges or raised boardwalks are necessary to cross extended areas of water or wetlands.
- Wetland Crossings: Resources suggest avoiding wetlands whenever possible. Trail surveys should be conducted during wet months, actual construction during dry months. Have alternate routes available if trail has to be closed for seasonal high water. If a wetland crossing is unavoidable it should be made at the narrowest point and the design should encourage positive drainage into a stabilized area or sediment basin.
(*Best Management Practices for Erosion Control 2004*)

Designing Trails

- A trail should blend into natural surroundings by maintaining continuity and regularity in the way it traverses the land.
- Cultural and historic features add dimensions to a trail design and should be utilized.
- Trail design is a balance between beauty and function.
- The best time of year to conduct a trail layout is during the spring and fall, when the leaves are off the trees and the ground is clear of ice and snow. It is also beneficial to check a trail location throughout the year, to see if it possesses any drainage problems.
- Parking facilities should be carefully planned along with trails.
- Vegetation in trail design can be used to channel and contain hiker traffic, slow down trail erosion, protect from the weather, buffer and insulate hiking activities, can be used to provide building material, and act as indications of soil characteristics.

Multi-Use Trails

Multi-use paths are located on developed land where users include walkers, bicyclists and handicapped.

- The width of the multi-use trail affects pedestrian usability and the types of users who can utilize the path.
- The tread of the path should be at least eight to ten feet wide.
- The surface of this path should accommodate all potential users.
- Alternatives to traditional paving should be considered where appropriate such as pervious paving and recycled materials.

Equestrian Trails

Helpful factors to consider when constructing horse trails:

- Parking should accommodate horse trailers and hitching posts.
- Single direction loops or multiple loops are suitable for horse trails. Because horseback riders travel at average speeds ranging from 4 to 8 miles per hour, many day-use trails are designed to cover 5 to 25 miles.
- Wet areas and steep slopes pose extreme difficulties to trail maintenance and should be avoided.
- Erosion problems often develop on grades exceeding 10%. Switchbacks and waterbars may be necessary to traverse steep slopes. Offer resting grades (4% or less) of at least 500 feet in length at regular intervals.
- Water and motorized road crossings should be kept to a minimum. Signs should warn riders at least 100 to 200 feet in advance of all motorized road crossings. Natural water crossings and culverts are favored over bridges. However, if bridges need to be constructed they must be designed to meet the needs and weight of horse travel.
- Natural trail surfaces are preferable since hard surfaces like asphalt may injure horses' hooves.
- Avoid sharp-angled turns on steep slopes.
- If horse traffic flows in both directions or hikers share the trail, forward sight distances of 50 to 100 feet should be provided. (*Rathke, 2007*)

Cross-Country Skiing

Cross-country skiers travel at a rate of 2 to 8 miles per hour, averaging a little over 3 miles per hour. Because desired experiences range from 2 to 4 hours, trail lengths for cross-country skiing should be between 4 to 8 miles. Design should favor loop trails with internal connector trails and cutoffs to provide different trail lengths and permit easy return access for tired skiers. Other factors to consider for constructing cross-country ski trails:

- Multiple, short loops with a single access point are preferable to one long loop.
- Restrict two-way traffic to the access trail. If traffic must flow in both directions, provide a separate uphill and downhill segment on slopes exceeding 8 percent.
- Favor northeast-facing slopes, where snow cover remains the longest.
- Desired trail widths should vary with degree of usage and whether the trail will accommodate one or two way traffic.
- Forward sight distances are not critical except if the slopes are steeply sloping or the trail crosses roads, waterways, and other potential hazards. (*Rathke, 2007*)

Bicycling

Bicyclists typically travel at speeds ranging from 8 to 20 miles per hour. A bicyclist's speed, however, can be dramatically influenced by trails design, terrain, and the type of bicycling (mountain or tour). Desirable trail lengths range from 5 to 20 miles. Several recommended trail standards are listed below:

- Avoid steep downhill grades that can endanger trail users and encourage erosion due to continual braking and skidding. When possible, place unavoidable steep grades on uphill climbs to force riders to dismount on grades over 15%.
- Trail grades of 5% are considered acceptable.
- Use culverts, bridges, or boardwalks to cross waterways.
- Trail surface will vary with the type of bicycling.
- Allow forward sight distances of at least 100 feet at roadways and water crossings and on trails with 2-way traffic. Use curves and bends to control travel speeds while considering the need for forward sight distance.
- Bicycling and horseback riding are not compatible uses on the same trail. (*Rathke, 2007*).

Canoe & Kayak Portages

Access to water for canoes and kayaks should be carefully located. The following factors are recommended for successful canoe and kayak portages:

- Favor level, sandy approaches.
- Landings should be located on stable soils in areas of slow moving water.
- Construct portage trail corridors 6 feet wide and 12 feet high, with additional clearance for negotiating curves.
- Use natural tread surface materials such as gravel, woodchips, or boardwalks in wet areas.
- Most canoeists favor 0 to 5% grades, but can negotiate 20% grades for short distances.
- Switchbacks and waterbars may be needed on steep slopes. (*Rathke, 2007*)

Trail Surface Type

- Surface types are gauged by their firmness, stability and slip resistance.
 - Firmness: the degree to which the surface resists deformation by indentation when someone walks or wheels across it.
 - Stability: the degree to which a surface remains unchanged by contaminants or applied force.
 - Slip resistance: based on the frictional force necessary to allow someone to travel across the surface without slipping.
- All trails should be firm and stable.
- If open land/meadows become available for purchase or lease, the Township should consider mowed trails as they may prove advantageous for



hikers desiring a “softer” trail for sore joints, as shown in the photograph above (mowed trail at the Frelinghuysen Arboretum).

- Examples of trail surfaces with their corresponding firmness, stability and slip resistance include:
 - Asphalt: firm, stable, slip resistant
 - Concrete: firm, stable, slip resistant
 - Boardwalk: firm, stable, slip resistant
 - Stone cylinders for crossing watered areas: firm, stable, slip resistant
 - Soil with stabilizer (soil cement): firm, stable, slip resistant
 - Packed soil without stabilizer: firm, stable, not slip resistant
 - Soil with high organic content: soft, stable, slip resistant
 - Crushed rock with stabilizer: firm, stable, slip resistant
 - Pea gravel: soft, unstable, not slip resistant
 - Sand: soft, unstable, not slip resistant
- The tool used for determining firmness and stability is known as a rotational penetrometer. It measures surface firmness by pressing an indenter into the surface with a specified amount of force and records the amount of displacement. Stability is measured by rotating the indenter back and forth while the force is applied and then records the amount of displacement.
(USDOT, 2001.)

Stream Crossings

Stream crossings vary with the size and depth of the stream. Observing the area during a rainstorm will help identify optimal crossing structures. When the trail design includes crossing a stream or drainage ditch, consult the New Jersey Department of Agriculture Division of Soil and Water Conservation to determine if the proposed trail crosses a protected area or wetland. If a wetland crossing is unavoidable, permits may be required.

The following provides a general guideline for various types of streams:

Slow moving, shallow streams: Stream crossings that are located in areas with gently sloping, stable banks and contain gravel or sand bottoms are favorable conditions for a trail. Overall, erosion and other environmental impacts have the potential to be reduced by placing stream crossings in these particular areas. When crossing shallow pools less than 24 inches deep or areas that continuously remain wet, stepping-stones are an appropriate tool for crossing. Stones should be large enough for the surface to remain dry while having between one-third and one-half their heights submerged in the streambed. Gravel or natural rock may also be added to improve the streambed for horse travel. Stream banks may also be graded for safety. However, finished banks should be no steeper than 5:1 (horizontal: vertical). Steeper banks should be seeded or mulched to reduce erosion.

Deep streams or ditches: Culverts or bridges can be used for crossing a deep stream or ditch. On hiking trails, a basic log bridge is suitable when the crossing is 10 feet or less. Log bridge crossing is favorable in locations with stable soils and relatively even banks on both sides. Stream crossings wider than 10 feet will require permanent bridge structures and will likely require permits and professional assistance (Rathke, 2007).

Roadway Intersections

- Intersect trails with the street at a 90-degree angle to increase visibility of pedestrians for motorists.
- Increase trail width at the intersection to reduce user conflicts.
- Provide signage for both motorists and pedestrians to ensure awareness of the intersection and a reduction in speed.
 - Use signs, both on the road and the trail, to clearly indicate whether motorists or trail users have the right of way.
- Provide a visible crosswalk across the intersection to increase trail user and motorist awareness and safety.
- Use curb ramps as required and include detectable warnings, such as audible countdowns or visual countdown crossing aids, to ensure that trail users with vision impairments are aware of the street.
- Make curb ramps as wide as the average width of the trail. They should also have a number of other characteristics:
 - A level maneuvering area or landing at the top of the curb ramp
 - A clearly identified boundary between the bottom of the curb ramp and the street with a detectable warning (bumps or ribbon cuts)
 - Adequate drainage to prevent the accumulation of water or debris on or at the bottom of the ramp
(*USDOT, 2001*).

Sidewalks

Sidewalks are a limited, but important part of the Trails Network within Morris Township. The Engineering Department are primarily responsible for location and establishing sidewalks.

Permits

NJDEP requires a permit for trails in wetland areas. One of these permits will incur fees and need to be considered as part of the total construction cost of a trail. The Freshwater Wetlands General Permit Authorization issued by the New Jersey Department of Environmental Protection. General Permit 17 is specific to trails and boardwalks and permit costs are \$600 and the review process typically last 90 days. The costs change from year to year and vary for different applications. (*NJDEP, 2007*) Preparing the permit package costs significantly more than the application fee. A general wetlands permit package can cost \$2,000, while a more involved Stream Encroachment permit package could easily cost far more.

Handicap Accessibility

The Americans with Disabilities Act of 1990 (ADA) requires trails to be handicap accessible. However it did not provide guidelines for construction. Accessible guidelines were developed by the Regulatory Negotiation Committee under the Architectural and Transportation Barriers Compliance Board (Access Board) to ensure that new construction and alterations of facilities

covered by the ADA were readily accessible to and usable by individuals with disabilities. Their recommendations were detailed in a final report published in September 1999 (*Access Board, 1999*). These guidelines have undergone several revisions and updates based upon public comment and review. As of November 2005 the Access Board updated the guidelines related to sidewalks, street crossings, and pedestrian facilities (*American Trails, 2007*). These guidelines are for newly constructed and altered trails; standards are set for running slope, cross slope, width, surface, passing space, edge protection, and signs. Provisions also address beach access routes, picnic sites and camping areas. The Access Board anticipates that these guidelines will be federally enforced by mid-2008 (*Access Board, 2007*).

Under the proposed ADA guidelines, an accessible pedestrian trail would meet the following minimum technical provisions:

- Clear tread width: 36 inch minimum
- Tread Obstacles: two inch high maximum (up to three inches high where running and cross slopes are 5% or less)
- Cross Slope: 5% maximum
- Running slope (trail grade) meets one or more of the following:
 - 5% or less for any distance.
 - up to 8.33% for 200 feet maximum; Resting intervals no more than 200 feet apart.
 - up to 10% for 30 feet maximum; Resting intervals 30 feet.
 - up to 12.5% for 10 feet maximum; Resting intervals 10 feet.
- No more than 30% of the total trail length may exceed a running slope of 8.33%.
- Passing Space: provided at least every 1000 feet where trail width is less than 60 inches
- Signs: shall be provided indicating the length of the accessible trail segment.

Departures from specific accessibility guidelines are permitted for any portion of the trail where compliance would:

- Cause substantial harm to cultural, historic, religious, or significant natural features or characteristics;
- Substantially alter the nature of the setting or the purpose;
- Require construction methods or materials that are prohibited by Federal, State, or local regulations or statutes;
- Not be feasible due to terrain or the prevailing construction practices.

Potential Trail Expenses

Some of the potential costs, which may be required for trail development, include:

- Trail design
- Trail signs and markers
- Trail surface materials
- Roadway improvements for bicycles such as bike lane striping, asphalt bicycle stickers and storm drain covers compatible with bicycle tires
- Wooden gates when trails begin along and cross roadways
- Privacy fences when trails are located close to homes
- Construction tools and equipment
- Surface materials and professional labor as needed

- Expenses associated with a New Jersey Department of Environmental Protection Freshwater Wetlands General Permit

When designing and implementing this *Trails and Pathways Plan*, Morris Township will work with the Township Engineering Department to calculate costs.

Randolph Township provides a local example of some of the expenses that can be expected when developing a municipal trails network. Their annual maintenance cost for 15 miles of multi-use trails is approximately \$20,000 per year which encompasses labor for the removal of fallen trees, addressing erosion problems, and removing leaves. Construction costs for these multi-use trails, including clearing, grading and restoration, approached \$100,000 per mile on average. Much of the material used to construct these trails had to be transported long distances through the woods to reach the trail sites. The engineering and design was done in-house by Randolph Township. Steep slopes, bridges, boardwalks, fencing, and rock excavation tended to increase costs. (*Personal Communication, John Lovell and Darren Carney*)

TRAIL MANAGEMENT

Trail Maintenance

The task of maintaining trails varies widely from trail to trail, according to local conditions, trail type, and user type. Costs include trail resurfacing, trail regrading, and vandalism.

- *Adopt-a-Trail Program* will connect local volunteers to specific trails for stewardship purposes. These volunteers will accomplish all necessary maintenance work that does not require heavy equipment, on a regular basis to ensure the trails remain usable and safe. Prior to opening a trail the Open Space and Trails Committees or designated municipal department will work to identify a steward for that trail.
- *Regular clearing* is one of the most important jobs for maintaining established trails.
- *Standardizing* is a technique of clearing brush next to a trail to put it into standard condition (adequate height and width). Standard width varies with vegetation and terrain but a 4 to 6 foot clearance is standard in most cases. Standard height is normally 8 feet or as high as one can reach.

Trail Signage

- Signs are an essential component of a trail, used to mark locations and usage.
- Trailheads should be posted with signs that provide a map and other trail connections with the trail name, distance, and the color of blazes used to mark the trail along its course and any potential danger. Nearby roads and landmarks are also useful to help orient and prevent the individual from becoming lost.
- Special signs indicating intended users and rules should be considered such as the dog park sign used in Livingston (shown here).
- Multi-use trails signs at trailheads should indicate which uses are permitted.

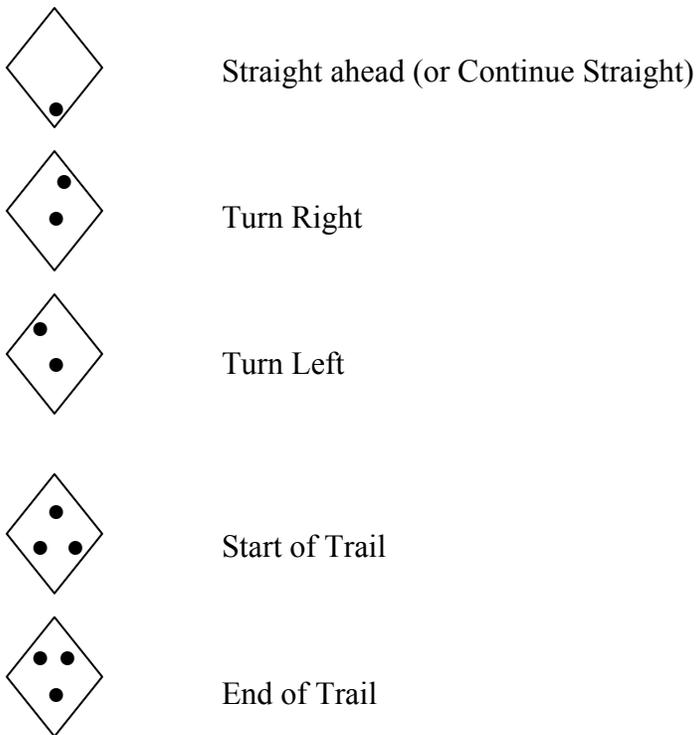
- Signs need to be standardized and easily accepted and recognized by all users of the trails.
- Cairns and Posts – treeless areas sometimes require cairns (constructed rock piles). In the absence of rocks, posts can be used. (USDOT, 2007)



Paint blazing

This is most common, durable, and inexpensive form of signage. Blazes are simply marks on a tree made with a distinct color of paint. Typically they are 6 inches by 3 inches and occur at intervals of 100 yards or less if the trail contains many turns and is subject to vegetative overgrowth.

Blazing (often painted on trees) marks paths. These marks follow each other at certain, though not necessarily exactly defined, distances and mark the direction of the trail. Blaze marks normally found on the trails include:



Bicycle Signage

Bicyclists require particular signage. Bicycle signs must be standard in shape, legend, and color. All must be retroreflectorized for use on bikeways, including shared-use paths and bicycle lane facilities. (*Manual on Uniform Traffic Control Devices*) Details of the specificities can be found in the *Manual on Uniform Traffic Control Devices*.

Trail Safety

Trail networks require policing in case of emergencies such as when a user becomes lost or injured. The need for trail security and policing typically stems from the illegal use of off-road vehicles (ORV), such as ATVs and dirt bikes, on public hiking trails. A partnership between the Committee and local police and emergency response teams will work to mitigate security related issues as they develop. Directional signs should be added to guide trail users and avoid confusion.

Trail users at times become disoriented or injured, which may result in the need of an emergency response team. In order to reduce the potential of users becoming lost the Township can develop and distribute trail maps that identify trails, their names and the location relative to significant landmarks in the Township. These maps can be posted and distributed at trailheads. The Township police department and local emergency response team should also be made aware of the trail network as well as points of risk to trail users. In order to facilitate their response time in emergencies, points of entry for their vehicles and equipment as well as environmental features that pose a risk to their work should be identified.

ORVs pose a serious threat to the safety of trail users and cause substantial environmental degradation. ORV use on trails leads to erosion, which facilitates the destruction of a trail. The following list identifies various methods for addressing illegal ORV use on public lands:

- Conduct an education outreach to inform residents that ORV use should be prohibited on municipal property. Provide locations in the region where they are permitted.
- Establish a municipal ordinance that prohibits the use of ORVs on municipal property and levies severe fines against those who are apprehended.
- Require ORV owners to register their vehicles with the Township and implement a vehicle identification system.
- Urge trail users to call the police when they observe ORV use on municipal property. This is accomplished by posting advisories that cite the municipal ordinance and provides police and emergency medical team phone numbers.
- Provide resources to report incidents to the Township police and Recreation Department. For example, provide forms at trailheads and on the Township website that provides space to record the location, date, time of the incident.
- Access barriers: in some cases the placement of boulders, gates or metal posts will prevent ORVs from accessing trails.

TRAIL PARTNERS AND FUNDING SOURCES



Federal Agencies

National Park Service. The National Park Service maintains Morristown National Historic Park, which consists of four non-contiguous units: Washington’s Headquarters, Fort Nonsense, Jockey Hollow, and the New Jersey Brigade Area. Portions of the Jockey Hollow and Fort Nonsense Units extend into Morris Township. The Park contains 27 miles of walking trails and is looking to improve access and circulation between its units.

30 Washington Place / Morristown, N.J. 07960-4299 / Phone: 973.539.2016 / <http://www.nps.gov/morr/>

State Agencies

New Jersey Department of Environmental Protection, Green Acres Program. Green Acres administers the Planning Incentive program, which provides grants to municipalities for open space acquisition and preservation and loans for recreation facility development. Green Acres funding requires a one to one dollar match. Morris Township has previously received funding for land preservation and recreation development from Green Acres.

P.O. Box 412 / Trenton, N.J. 08625-0412 / Phone: 609.984.0500 / <http://www.state.nj.us/dep/greenacres/>

New Jersey Department of Environmental Protection, Historic Preservation Office. New Jersey's Historic Preservation Office, located within the Department of Environmental Protection, offers a staff of historians, researchers, planners, architectural historians, architects, engineers, and archaeologists that specialize in preserving historic resources and landscapes. Morris Township contains many designated historic structures as well as part of the Morristown National Historic Park and the Washington Valley Historic District that may benefit from historic preservation efforts.

P.O. Box 404/Trenton, N.J. 08625-0404/ Phone:609.292.2023/
<http://www.state.nj.us/dep/hpo/>

New Jersey Department of Environmental Protection, Recreational Trails Program. The NJDEP delegates funding from the National Recreation Trails Program, which is provided by the U.S. Federal Highway Administration for the development and maintenance of recreational trails. Funds are awarded through a competitive application process with a deadline normally set in mid- December.

Larry Miller, Coordinator / NJDEP-Division of Parks & Forestry, Office of Natural Lands Management / PO Box 404 / Trenton, NJ 08625-0404 / (609) 984-1339

New Jersey Department of Transportation. The New Jersey Department of Transportation has established funding, through the federal Transportation Equity Act for the 21st Century (TEA-21), to maintain and enhance New Jersey's transportation system and improve quality of life. The program focuses on projects that will preserve and protect environmental and cultural resources as well as promote alternative modes of transportation. Projects include land acquisition, bikeway and trail construction, historic preservation, and environmental mitigation to address water pollution and scenic or historic highway programs. Randolph Township has received funding for trails development through the NJDOT in the past, and Morris Township is eligible for future DOT funding.

Division of Local Aid and Development/NJ Department of Transportation/1035 Parkway Avenue/ P.O. Box 600/Trenton, N.J. 08625/ Contact: Joe Jagniakowski / (609)530-3686
<http://www.state.nj.us/transportation/>

New Jersey Department of Community Affairs, New Jersey Historic Trust. The New Jersey Historic Trust was created by law in 1967 to preserve the state's historic resources. The mission of the Trust is to advance historic preservation in New Jersey for the benefit of future generations through education, stewardship, and financial investment programs that save our heritage and strengthen our communities. The Trust receives an allocation (historically \$6 million) per year for historic preservation projects, which are awarded in the forms of grants for restoration projects. Morris Township contains many state-important historic resources that may be eligible for funding through the Trust.

P.O. Box 457/06-508 E. State St. /Trenton, NJ 08625/Phone: 609.356.8856
<http://www.njht.org>

County Agencies

Morris County Park Commission. With over 31 recreational, cultural, historic, and educational sites, the Morris County Park System controls 13,500 acres of land, recreational facilities, and historic/cultural sites. The County Parks Commission maintains Lewis Morris Park, Fosterfields, and Washington Valley as well as the Patriots' Path and Traction Line in Morris Township.

53 East Hanover Avenue / P.O. Box 1295 / Morristown, NJ 07962-1295 /
<http://parks.morris.nj.us> / Phone: 973.326.7600 / info@parks.morris.nj.us

Morris County Department of Planning, Development and Technology. The Department of Planning, Development, and Technology for Morris County is composed of four programs: Community Development, Farmland Preservation, Planning, and Transportation Management. They also administer the annual Morris County Open Space and Farmland Preservation Trust Fund Grants, from which Morris Township has previously received money for land acquisition. This department is developing a bike and pedestrian plan for Morris County. This plan has called for shared roadways and multi-use paths in Morris Township.

30 Schuyler Place / Morristown, N.J. / Planning Phone: 973.829.8120 /
Transportation Management Phone: 973.829.8101 / <http://www.co.morris.nj.us> /

Morris County Historical Society. The Morris County Historical Society was founded in 1945. This non-profit, volunteer based organization is dedicated to encouraging and developing an appreciation for and an understanding of the history of Morris County and the State of New Jersey. The Society produces programs, exhibits and publications that encourage a better understanding of local history and its place in the larger context of the history of the nation. Their headquarters are located at Acorn Hall at the terminus of the Acorn Hall Branch of the Patriots' Path that runs through Morris Township.

68 Morris Avenue / Morristown, N.J. 07960/Phone: 973.267.3465 /
<http://www.acornhall.org>

Southeast Morris County Municipal Utilities Authority. The Authority (SMCMUA) is an independent agency that provides drinking water to Morris Township, Morristown, Morris Plains, and the Township of Hanover. The SMCMUA draws its water from the Clyde Potts Reservoir in Mendham Township and thirteen public groundwater wells that are dependent upon the Buried Valley Aquifer. The Authority owns 40 acres in the Township near Jones Woods. The Township has also partnered with the Morris County Municipal Utilities Authority (MCMUA) to preserve land in the Washington Valley.

19 Saddle Road/Cedar Knolls, N.J.07927/ /Phone:973.326.6880 /
<http://www.smcmua.org>

Non-Profit Organizations

Boy Scouts of America. The Boy Scouts of America (Council #358) is a not-for-profit organization that is dedicated to preparing young men to make ethical choices by instilling in them the values of good character, citizenship, and personal fitness. Each year it serves over 20,000 youth members and 6,000 leaders in the counties of Morris, Somerset, Sussex, Union and parts of Middlesex, New Jersey. Boy Scouts voluntarily construct and maintain trails as part of their outdoor training.

Patriots Path Council 358/222 Columbia Turnpike/Florham Park, N.J. 07932/
Phone:973.765.9322/ <http://www.ppbsa.org>/

Great Swamp Watershed Association. The Great Swamp Watershed Association was formed in 1981 to encourage good management policies and practices on behalf of the 12,000 acres of the protected land within the Great Swamp watershed. The Great Swamp Watershed Association protects the Great Swamp watershed basin and acts as a steward for this valuable and sensitive region in northern New Jersey. A small portion of Morris Township lies in the Great Swamp Watershed.

Great Swamp Watershed Association / P.O. Box 300 / New Vernon, N.J. 07976 /
Phone: 973.966.1900/ <http://www.greatswamp.org/index.htm>

Harding Land Trust. The Harding Land Trust acquires real property or easements in Harding Township for conservation, as well as protects and conserves the forests, plant life, water resources, wildlife habitat, soils, and other natural resources.

PO Box 576 /New Vernon, N.J. 07976-0576. / Phone: 973. 267.2515
http://www.ltanet.org/findlandtrust/one.tcl?pc_id=10113/

Marty's Reliable Cycle. Marty's Reliable Cycle is a bicycle supply and repair shop headquartered in Morristown. It sponsors regular bicycle rides through Morris County.

173 Speedwell Ave./Morristown, N.J., 07960/Phone: 973.538.7773.
Contact: Marty Epstein, Marty@martysreliable.com

Morristown Partnership. The Morristown Partnership hosts "Morristown, NJ online", which helps to bring together the people, businesses, and organizations in our community.

44 Market Street/Morristown, N.J. 07960/ Phone: 973.455.1133 / Contact: Michael Fabrizio, Executive Director / <http://www.morristown-nj.org/index.html/>

Morris Area Freewheelers. The Morris Area Freewheelers Bicycle Club is a volunteer organization dedicated to promoting all aspects of road cycling. The members of the Club primarily reside in the following New Jersey counties: Morris, Sussex, Hunterdon, Essex, Somerset, Warren, Union, and Passaic.

<http://www.mafw.org/>

Morris Land Conservancy. Founded in 1981, Morris Land Conservancy is a non-profit, member-supported organization dedicated to preserving and permanently protecting open space lands in northern New Jersey. The Conservancy assisted Morris Township in the production of its Open Space & Recreation Plan and Trails Plan and has assisted the Township since 1997 to preserve and securing funds to acquire land. The Conservancy is an active participant in neighboring community's preservation programs.

19 Boonton Avenue / Boonton, N.J. 07005 / Phone: 973.541.1010
<http://www.morrislandconservancy.org/>

Morris Trails Partnership. The Partnership is a not-for-profit membership organization whose members manage trails throughout Morris County and love to hike, bike, and horseback ride in Morris County's outdoors.

PO Box 1295/Morristown, N.J. 07962-1295/ Phone: 973.829.8256
<http://www.morristrails.org/>

New Jersey Conservation Foundation. New Jersey Conservation Foundation (NJCF) is a statewide conservation organization that preserves land and natural resources throughout New Jersey. They provide technical advice and financial support for land conservation projects. NJCF also facilitates the Garden State Greenways program, which seeks to establish contiguous belts of preserved lands across New Jersey.

Bamboo Brook/170 Longview Road/Far Hills, N.J. 07931/ Phone: 908.234.1225 /
<http://www.njconservation.org/>

New Jersey Recreation & Park Association. The New Jersey Recreation and Park Association is a not-for-profit organization of citizen and professional members dedicated to enhancing the quality of life by promoting recreation, parks, conservation, and leisure services through education, professional development, public awareness, legislative advocacy, and direct membership services. Founded in 1928, NJRPA supports supporting outstanding park, recreation, and natural resources management programs through their 700 volunteer members: professionals and citizens working in state, county, municipal, non-profit and private park, recreation, health and conservation agencies; students and faculty at colleges and universities; and commercial suppliers of parks and recreation products and services. The Association can provide valuable expertise for trails development.

13 April Lane/Somerset, N.J. 08873-5301/Phone: 732.568.1270/
<http://www.njrpa.org/home.cfm>

Trust for Public Lands-New Jersey Chapter. The Trust for Public Land's New Jersey Chapter is located in Morristown, New Jersey. TPL strives to protect "parks for people", such as urban parks and trails.

The Trust for Public Land, New Jersey Field Office / 20 Community Place, Suite 7 /
Morristown, NJ 07960 / (973) 292-1100

Washington Association of New Jersey. The Washington Association of New Jersey (WANJ) is one of the oldest historic preservation organizations in the nation. The primary activities of WANJ are to preserve the area known as Washington's Headquarters. They also conduct other activities necessary for perpetuating the memory of George Washington and those who were associated with him.

P.O. Box 1473/Morristown, N.J. 07962/ Phone: 973.292.1874 / <http://www.wanj.org/>

Whippany River Watershed Action Committee, Inc. The Action Committee's mission is to protect and improve the waters of the Whippany River through community action. The Committee's work helps to keep the lakes, as well as the sections of the Whippany River, that are found in Morris Township clean. Morris Township is a member of the Committee and participates in its programming.

P.O. Box 223 / Morristown, N.J .07963-0223 / Phone: 973.267.1224

FUNDING SOURCES FOR TRAIL DEVELOPMENT AND CONSTRUCTION - GRANT DESCRIPTIONS

Grant Title	Grant Source	Grant Description	Eligible Applicants	Evaluation Factors	Amount Funded	Contact	Additional Comments
NJDEP - National Recreational Trails Program	New Jersey Department of Environmental Protection	Provides monies for maintenance and restoration of existing trails; development and rehabilitation of trailside and trailhead facilities and trail linkages for trails (e.g., parking, signage, shelters, sanitary facilities); purchase and lease of trail construction and maintenance equipment; construction of new trails in existing parks or in new right of way; for motorized use only, acquisition of easement and fee simple title to property for trails.	Public agencies at the federal, state, county, and municipal level, nonprofit organizations, and Friends of a Park group.	Trail is in the NJ Trails Plan; longer trails or connector trails are desired; trail connects population or recreational centers; proposal is innovative; proposal provides disabled access; trail provides for more than one activity; project will restore trail; project is a partnership; proposal is critical for erosion control, enhancement of natural features; compatibility with landscape; and scenic location.	Maximum grant award of \$25,000 for non-motorized projects. In 2005, approximately \$800,000 was available for projects. (Projects are funded on an 80% federal share and 20% matching share basis. Matching share can be in-kind.)	Larry Miller, Coordinator NJDEP, Division of Parks and Forestry Office of Natural Lands Management PO Box 404 Trenton, NJ 08625-0404 (609) 984-1339 larry.miller@dep.state.nj.us http://www.state.nj.us/dep/parksandforests/natural/njtrails.html	Projects must begin within two years of approval date and grantees have three years after notification of award to complete their projects. Notifications sent out July-August of following year. Applications are due December 15.
NJDEP - Green Acres Local Government Assistance - Land Acquisition and Park Development	New Jersey Department of Environmental Protection	The Green Acres Program assists municipalities and counties in the acquisition of open space for recreation and conservation purposes, and the development of outdoor recreation facilities. Eligible land acquisition projects include, but are not limited to, the purchase of natural areas, historic sites, conservation areas, water bodies, and open space for active or passive recreation purposes. Funding assistance is also available for park development projects that result in increased public use and enjoyment of outdoor recreation areas. Recreational facilities that may be funded include, but are not limited to, facilities that provide boating, fishing, swimming, outdoor games and sports, biking, picnicking, camping, or nature interpretation.	Municipalities, counties, and nonprofit organizations.	Addresses specific local open space and recreation facility needs; the amount of public input and support during the planning process; consistency of the proposal with existing state and local planning objectives; project quality; clear precise project narrative.	Program funding comes from the Garden State Preservation Trust, supplemented by varying awards from federal programs such as the Land and Water Conservation Fund.	Cathy Elliot-Shaw Green Acres Program CM 412 501 East State Street, 1st Floor P.O. Box 412 Trenton, NJ 08625-0412 Phone: (609) 984-0570 Fax: (609) 984-0608 www.nj.gov/dep/greenacres	For development projects to be eligible, the local government unit must own the land or have a 25 year irrevocable lease or use agreement (which must be reviewed and approved by Green Acres in advance, if possible). All proposals must reflect established needs as identified in New Jersey's 2003 Statewide Comprehensive Outdoor Recreation Plan. A summary of the Plan is available upon request. Applications are accepted throughout the year in different funding rounds, typically February 15 and August 15.
NJDOT - Transportation Equity Act (TEA-21) - Transportation Enhancement Fund	New Jersey Department of Transportation	Provides monies for projects that are designed to foster more livable communities, enhance the travel experience, and support new transportation investment partnerships. The Program focuses on transportation projects that will preserve and protect environmental and cultural resources, and help to promote alternative modes of transportation.	Any municipal or county government, nonprofit organization, or State agency.	Transportation related; readiness for construction/implementation; maintenance commitment; supplemental funds; user impact; regional or community benefits; element of a larger plan; timing/urgency; economic/tourism benefit; value as a cultural/historic resource; community support.	Funds from this program do not require a match, however, projects with supplemental funding will score higher in that criteria. Program authorizes over \$200 billion to improve Nation's transportation infrastructure. There is no standard maximum award, however, project must be worth at least \$250,000.	Joe Jagniatowski Roxbury Corporate Center 200 Stierli Court Mount Arlington, NJ 07856 (973) 770-5070/5068 http://www.fhwa.dot.gov/tea21/index.htm	Application must show that Transportation Enhancement funds in combination with committed or obligated funds from other sources cover 100% of the project cost. All selected projects must receive Federal authorization for construction within two years of the announcement. Bicycle Transportation and Pedestrian Walkways Program, Surface Transportation Program, and Congestion Mitigation and Air Quality Program are all available through this fund. Applications are due April 10.

FUNDING SOURCES FOR TRAIL DEVELOPMENT AND CONSTRUCTION - GRANT DESCRIPTIONS

Grant Title	Grant Source	Grant Description	Eligible Applicants	Evaluation Factors	Amount Funded	Contact	Additional Comments
USDOT - Transportation Community System Preservation Program	US Department of Transportation - Federal Highway Administration	This program is a comprehensive initiative of research and grants to investigate the relationships between transportation and community and system preservation and private sector-based initiatives. Planning assistance under the TCSP is intended to provide financial resources to States and communities to explore integrating their transportation programs with community preservation and environmental activities. Grants will be awarded for planning activities that will achieve this integration, meet the purposes of the program described above and are innovative. This may include, for example, public and private involvement activities; improving conditions for bicycling and walking; better and safer operation of existing roads, signals and transit systems; development of new types of transportation financing and land-use alternatives; development of new programs and tools to measure success; and the creation of new planning tools and policies necessary to implement TCSP-related initiatives.	States, local governments, and metropolitan planning organizations.	Improve the efficiency of the transportation system; reduce the impacts of transportation on the environment; reduce the need for costly future public infrastructure; ensure efficient access to jobs; services and centers of trade; encourage private sector development patterns.	A total of \$270 million was authorized for this program for FY's 2005-2007. The TCSP Federal share is 100%. Actual TCSP Program funding levels can vary based on Congress' annual appropriations. Although activities are eligible for full federal funding, applicants are encouraged to demonstrate the commitment of non-Federal resources. <i>Future funding is still under discussion.</i>	Kenneth Petty TCSP Program Manager Office of Planning Phone: (202) 366-6654 Fax: (202) 493-2198 kenneth.petty@fhwa.dot.gov http://www.fhwa.dot.gov/tcsp/p_i_tcsp.htm	Every proposal receiving planning and implementation grant funds must annually report on the status of the project and the degree to which the project is achieving stated goals and objectives.
NJDOT - Local Aid and Economic Development Program (Municipal Aid, Local Bikeway, Safe Streets to Schools, Transit Village and Centers of Place Programs)	New Jersey Department of Transportation	The New Jersey Department of Transportation is committed to advancing traditional and non-traditional projects that enhance safety, renew the aging infrastructure and support new transportation opportunities. The Transportation Trust Fund has provided the opportunity for State assistance to local governments for the funding of road, bridge, and other transportation projects. These projects may include: road repairs; construction of bikeways or walkways; signage; streetscape improvements; pedestrian safety and improvements.	States, counties, and municipalities	Must maintain and improve New Jersey's transportation infrastructure.	In the municipal aid program, funds are appropriated by the Legislature for municipalities in each county based on a formula contained in legislation. The State pays 75% of the funds at the time of bid approval and the remainder on a reimbursement basis after acceptance by the municipality and the State of the work completed. Based on the current proposed fiscal year 2007 Capital Program, \$78.75 million will be available for municipalities statewide. Program levels are subject to change before approval by Legislature.	Joe Jagniatkowski Roxbury Corporate Center 200 Stierli Court Mount Arlington, NJ 07856 (973) 770-5070/5068 http://www.state.nj.us/transportation/business/localaid/	Each program application will be evaluated independently, allowing municipalities to receive funding in more than one category. A separate application must be completed for each program you are applying for. Application due by April 15.
ANJEC - Smart Growth Planning Assistance Grants Program	Association of New Jersey Environmental Commissions (ANJEC)	The Smart Growth Program provides grants to help municipalities with the process of comprehensive planning to create livable and environmentally sustainable communities. Examples of suitable projects include: natural resource inventories (NRI); open space plans and preservation programs; master plan conservation elements; brownfields or revitalization plans that include new open space; bicycle/pedestrian network plans; critical areas protection ordinances; regional plans to protect common resources (greenways, etc.); and other local land use planning.	Municipalities that have a functioning environmental commission, established by an ordinance.	Grant projects must include a process for involvement of the environmental commission in both the planning and execution phases and promote balanced land use. Each proposal must also include specific activities for public participation and public outreach such as press releases, articles, surveys, public meetings and exhibits. Products of project must work towards protecting natural resources and towards the goal of the State Plan.	This program contributed approximately 200,000 in fiscal year 2006, in the form of 30 planning grants. ANJEC awards 1-to-1 matching reimbursement grants of up to \$20,000. A municipality may provide up to 50% of its match through in-kind services, such as professional staff, elected officials, administrative staff, environmental commissions etc.	Association of NJ Environmental Commissions Kerry Miller Phone: (973) 539-7547 Fax: (973) 539-7713 kmiller@anjec.org www.anjec.org	Grantee municipalities have one year to complete their projects, and must submit quarterly progress reports to ANJEC. To obtain reimbursement, a town will need to complete all project tasks, provide a copy of the finished grant product to ANJEC, and submit a final report that summarizes the project and documents expenditure of all funds. Typically, application deadline is April 1.

FUNDING SOURCES FOR TRAIL DEVELOPMENT AND CONSTRUCTION - GRANT DESCRIPTIONS

Grant Title	Grant Source	Grant Description	Eligible Applicants	Evaluation Factors	Amount Funded	Contact	Additional Comments
Kodak American Greenways Awards Program	Eastman Kodak Company, The Conservation Fund, and the National Geographic Society	Provides small grants to stimulate the planning and design of greenways in communities throughout America. Grants may be used for activities such as: mapping, ecological assessments, surveying, conferences, and design activities; developing brochures, interpretative displays, audio-visual productions or public opinion surveys; hiring consultants, incorporating land trusts, building a foot bridge, planning a bike path, or other creative projects. In general, grants can be used for all appropriate expenses needed to complete a greenway project including planning, technical assistance, legal and other costs. Grants may not be used for academic research, general institutional support, lobbying, or political activities.	Awards will primarily go to local, regional, or statewide nonprofit organizations. Public agencies may also apply, however, community organizations will receive preference.	Projects are selected according to the following criteria: importance of the project to local greenway development efforts; demonstrated community support for the project; extent to which the grant will result in matching funds or other support from public or private sources; likelihood of tangible results; capacity of the organization to complete the project.	The maximum grant is \$2,500. However, most grants range from \$500 to \$1,500.	American Greenways Program Coordinator 1655 Fort Myer Drive Suite 1300 Arlington, Virginia 22209-2156 Phone: (703) 525-6300 Fax: (703) 525-4610 greenways@conservationfund.org http://www.conservationfund.org	Applications will only be accepted online. Materials complementing the online application must be sent through the mail in one packet. Online applications and related hard copy materials must be received by June 1. Applications or supplementary materials received after June 1 will not be considered. A postmark from June 1 will not be sufficient.
Land and Water Conservation Fund	US Department of the Interior - National Park Service	This program provides matching grants to States and local governments for the acquisition and development of public outdoor recreation areas and facilities. 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. Over 37,000 grants to states and localities have been approved under the LCWF grants program for acquisition, development and planning of outdoor recreation opportunities in the United States.	State and local governments.	Grant projects must assist in accomplishing the overall purpose of the LCWF program; relate to statewide comprehensive outdoor recreation plan; have the ability to match grant award; provide recreation uses more appropriately administered by a public agency rather than a private enterprise; provide for adequate operation and management of the proposed project area. (All grant applications submitted must be in accord with the more specific priorities listed in its state's action plan.)	All states receive individual allocations of grant funds based on a national formula. Applicants must be able to match funding amount. Since the inception of the program in 1965, annual appropriations to the Fund have ranged from a high of \$369 million in 1979 to four years of zero funding between 1996 and 1999. For FY 2006, the Interior Appropriation Act allocated \$27,994,976 for States Grants.	N.J. Green Acres Program Dept. of Environmental Protection Trenton, NJ 08625-0412 Phone: (609) 984-0535 http://www.nps.gov/ncrc/programs/lwcf/	Since 1972, the County of Morris has received more than \$3,042,717 in grant monies from this program. The benefits of the Land and Water Conservation Fund extend beyond park and recreation facility construction and open space acquisition. The Fund also plays a major stewardship role, ensuring the integrity and recreational quality of Fund-assisted parks and conservation lands, now and for future generations.
TransOptions Transportation Demand Management (TDM) Municipal Initiatives Grant Program	TransOptions	The purpose is to encourage transportation demand management initiatives in communities. By providing financial support and assistance to municipal governments, community groups and schools, the program develops transportation demand management services for participating communities.	Municipalities	Grants will be awarded on a competitive basis for distinct four projects. TDM programs are designed to maximize the people-moving capability of the transportation system, increase the number of persons in a vehicle, influence the need to travel, provide a variety of mobility options, and create or enhance a community's ability to provide for safe and accessible bicycle and pedestrian activities. There is a list of specific project eligibilities following the TDM program goals.	There will be four grants: \$8000, \$6000, \$4000 and \$2000	John F. Ciaffone, President TransOptions, Inc. 2 Ridgedale Avenue, Suite 200 Cedar Knolls, NJ 07927 Phone: (973) 267-7600 www.TransOptions.org	Programs/ projects must be relatively 'project ready', meaning that it is ready for piloting research implementation. Funding may not be used to reimburse costs already expended. Applications due May 23. Funds must be expended by June 30 of the following year.

FUNDING SOURCES FOR TRAIL DEVELOPMENT AND CONSTRUCTION - GRANT DESCRIPTIONS

Grant Title	Grant Source	Grant Description	Eligible Applicants	Evaluation Factors	Amount Funded	Contact	Additional Comments
<p>Morris County Open Space Preservation Trust Fund</p>	<p>Morris County Preservation Trust</p>	<p>The purpose is preservation of land for open space, recreation, farmland and historic resources.</p>	<p>Municipalities of Morris County, Morris County Park Commission, Morris County Municipal Utilities Authority, Morris County Agriculture Development Board, Qualified charitable conservancies.</p>	<p>The County seeks projects which: increase connectivity with other preserved lands, create multiple recreation opportunities, protect natural resources/ habitats, are under immediate threat of development, serve multiple communities, are applying to multiple funding sources including NJDEP Green Acres, non-profits, park commissions, utility authorities, etc. Projects should be consistent with the objectives of the County and Municipal Open Space Plans.</p>	<p>In 2007, \$20.6 million was approved by the Board of Chosen Freeholders.</p>	<p>Barbara Murray, Program Coordinator Morris County Open Space Preservation Program Dept. of Planning, Development & Technology P. O. Box 900 Morristown, NJ 07963 (973) 829-8120 Fax: (973) 326-9025 http://www.morrispreservation.org/</p>	<p>Applicants approved for funding have 18 months to acquire the property, commencing January 1st of the following calendar year. The county will allow for up to two extensions, if necessary.</p>

FUNDING SOURCES FOR TRAIL DEVELOPMENT AND CONSTRUCTION - GRANTS CALENDAR

	January	February	March	April	May	June	July	August	September	October	November	December
NJDEP - National Recreational Trails Program						Committee to research sites for new trail construction or maintenance/restoration work.	Meet with municipal engineer to discuss and develop possible project areas and schematic drawing.	Request grant application packet.	Receive grant application packet. Call NJDEP if packet not received. Begin gathering necessary maps, permits, and other necessary documentation for project application.	Present grant application to township committee for review and comment. Prepare draft grant application.	Present draft grant application to township committee for review and comments.	Application due December 15. Exact due date is subject to change from year to year.
NJDEP - Green Acres Local Government Assistance - Land Acquisition and Park Development		Applications for funding are typically due on February 15.					Committee to research possible project ideas and sites.	Download grant application packet from internet. Meet with municipal engineer to discuss and develop possible project areas and schematic drawing.	Begin gathering necessary maps, permits, and other necessary documentation for project application.		Present grant application to township council for review and comment.	Present draft grant application to township council for review and comments.
NJDOT - Transportation Equity Act (TEA-21) - Transportation Enhancement Fund	Receive grant application packet. Call NJDOT if packet not received.	Present grant application to township council for review and comment. Prepare draft grant application.	Present draft grant application to township council for review and comments. Obtain resolution of endorsement from appropriate governing body to include in application.	Exact application due date is subject to change from year to year. (Submit ten copies).		Committee to research possible projects and project areas.	Meet with municipal engineer to discuss and develop possible project areas and schematic drawing. NJDOT requires the use of licensed professionals in the design and construction of the projects.		Meet with township council to discuss proposed project ideas and areas.	Begin researching and obtaining all necessary environmental and construction permits required for project for inclusion in application. <i>After application submission-</i> Applicants will be notified if their proposal has been selected and invited to a meeting with DOT staff to learn more about the Implementation and Authorization Process.		Request grant application packet. Prepare project schedule with dates to start and complete each phase of work for attachment to application.

FUNDING SOURCES FOR TRAIL DEVELOPMENT AND CONSTRUCTION - GRANTS CALENDAR

	January	February	March	April	May	June	July	August	September	October	November	December
USDOT - Transportation Community System Preservation Program (Due to uncertainty of funding, no calendar or application deadline has been provided.)	Contact FHWA to find out if the program will be funded for the current year.	Committee to research sites for development of new trails and bikeways or sites that need maintenance and restoration of existing trails and bikeways.	Meet with municipal engineer to discuss and develop possible project areas and schematic drawing. Project applications are typically due March 30th 2007.									
NJDOT - Local Aid and Economic Development Program (Municipal Aid, Local Bikeway, Safe Streets to Schools, Transit Village and Centers of Place Programs)	Download application packet from internet website (SA-96 form, location map, and accompanying forms for specific program you are applying for must be completed).	Present grant application to township council for review and comment. Prepare draft grant application.	Present draft grant application to township council for review and comments.	Application due by April 15. Exact due date is subject to change from year to year.			Committee to research possible projects and project areas.		Meet with municipal engineer to discuss and develop possible project areas and schematic drawing.			Finalize project(s) for grant application.
ANJEC - Smart Growth Planning Assistance Grants Program	Compile one-year work plan of schedule of tasks and individuals who will complete them and obtain letter of support from environmental commission/open space committee.(will be included in application). Download grant application packet from internet site.	Present grant application to township committee for review and comment. Prepare draft grant application.	Application due March 30th, by 5pm.		Successful applicants will be notified of their award.				Committee to research possible projects (plan, report, study, ordinance, etc.)		Meet with town council to discuss possible grant projects.	Identify a project team, consultant, and other key individuals (will be included in application).
Kodak American Greenways Awards Program	Present project ideas to township council for discussion.		Application period begins. Download application from internet.	Present draft grant application to township council for review and comments.	Submit application online and mail accompanying materials (ensure that all application materials will be received by June 1).	Application period ends. Applications are due on June 1.		Grant notifications will be made by mail in early August.				Committee to research possible projects. Meet with engineer to formulate plans.

FUNDING SOURCES FOR TRAIL DEVELOPMENT AND CONSTRUCTION - GRANTS CALENDAR

	January	February	March	April	May	June	July	August	September	October	November	December
TransOptions Transportation Demand Management Municipal Initiatives Grant Program					Application due by May 23.	Grant applicants notified of approval/denial by June 16. Funds must be used by June 30 of the following year.						
Morris County Open Space Preservation Trust Fund							Application and Schedule worksheet due July 27. Exact due date subject to change year to year.		Appraisal and Post-Appraisal Project Financing Sheet must be submitted as part of application by September 7. Exact due date subject to change year to year.			

Literature Cited

- American Trails. National Trails Training Partnership. "Accessible Trails."
<http://americantrails.org/resources/accessible/newsaccess.html>. 2007. Accessed January 9, 2008.
- American Trails. National Trails Training Partnership. "Best Management Practices for Erosion Control During Trail Maintenance and Construction."
www.americantrails.org/resources/trailbuilding/NHerosioncontrol.html. 2004. Accessed January 9, 2008.
- American Trails. National Trails Training Partnership. "Questions and Answers on proposed ADA trail guidelines".
www.americantrails.org/resources/accessible/ADASummFeb00. 2007. Accessed January 9, 2008.
- Biostar Associates. "Report on Washington Valley Wildlife." 1989. December 2007.
- County of Morris. "Natural Resource Management Guide for the County of Morris." 1998. December 2007.
- Kent, A. "The Liberty-Water Gap Trail: A Proposal." 1999. December 2007.
- Morris County Division of Transportation. "Morris County Metro Bus Schedules".
www.mcdot.org/bus/bus-mcmPubSched.asp. Accessed October 25, 2007.
- Morris County Park Commission (MCPC). "Vision & Plan for the Great Morristown Greenway on Patriots' Path." 2000. April 2007.
- Morris County Park Commission (MCPC). "Map of the Patriots' Path." 2005. April 2007.
- Morris County Parks Commission. (MCPC-I) "Fosterfields Living Historical Farm." www.morrisparks.net/aspparks/ffmain.asp . Accessed April 12, 2007.
- Morris County Park Commission. (MCPC-II) "Lewis Morris County Park." 2007. April 2007.
- Morris County Park Commission. (MCPC-III) "The Frelinghuysen Arboretum." 2007. April 2007.
- Morris County Park Commission. (MCPC-IV) Loantaka Brook Reservation." 2007. April 2007.

- National Park Service. National Park Service – Northeast Region. “Morristown National Historic Park: General Management Plan and Environmental Impact Statement”. 2003. December 2007.
- National Register of Historic Places. “Washington Valley Historic District.” www.nationalregisterofhistoricplaces.com/NJ/Morris/districts.html. Accessed April 12, 2007.
- Natural Resources Conservation Service (NRCS). “Soils Online Study Guide – Geology.” www.nj.nrcs.usda.gov/partnerships/envirothon/soils/geology.html Accessed April 5, 2007.
- New Jersey Department of Environmental Protection (NJDEP). Office of Information Resources Management, Bureau of Geographic Information Systems. “2002 Land use/Land cover Update, Upper and Mid Passaic, Whippany, and Rockaway Watershed Management Area, WMA-6.” www.nj.gov/dep/gis/lulc02cshp.html. 2007. Accessed December 19, 2007.
- New Jersey Department of Environmental Protection. (NJDEP). Division of Land Use Regulation. “Forms, Checklists, & Other Documents.” www.state.nj.us/dep/landuse/forms/index.html#fww. 2007. Accessed January 9, 2008.
- New Jersey State Data Center (NSDC). “New Jersey Population Trends: 1790 to 2000.” <http://www.wnjin.net/OneStopCareerCenter/LaborMarketInformation/lmi25/pub/NJSDC-P3.pdf>. 2001. Accessed April 12, 2007.
- New Jersey Transit. “Morris-Essex Line”. www.njtransit.com/pdf/rail/current/r0040.pdf. Accessed October 25, 2007.
- Parrish, K. & Walmsley, A. Great Swamp Watershed Association. Saving Space: The Great Swamp Watershed Greenway and Open Space Plan. 1997. October 2007.
- Rathke, David, M., Baughman, Melvin, J. University of Minnesota Extension. Recreational Trail Design & Construction. www.extension.umn.edu/distribution/naturalresources/DD6371.html .2007. Accessed October 15, 2007.
- State of New Hampshire. Department of Resource and Economic Development. Division of Parks and Recreation. Bureau of Trails. Best Management Practices for Erosion Control During Trail Maintenance and Construction. 2004. January 2008.
- United States Access Board (USAB). Final Report. “Regulatory Negotiation Committee on Accessibility Guidelines for Outdoor Developed Areas.” www.access-board.gov/outdoor/outdoor-rec-rpt.htm. 1999. Accessed January 8, 2008.

- United States Census Bureau (USCB). “2002 Economic Census: Summary Statistics by 2002 NAICS for Morris Township, NJ.”
www.census.gov/econ/census02/data/nj/48090.HTM . 2002. Accessed April 12, 2007.
- U.S. Department of Transportation (USDOT). Federal Highway Administration. “Forest Service Publication List”. www.fhwa.dot.gov/environment/fspubs. 2007. Accessed January 9, 2008.
- U.S. Department of Transportation (USDOT). Federal Highway Administration. Trail Construction and Maintenance Notebook. 2007 Edition.
www.fhwa.dot.gov/environment/fspubs/07232806/toc.htm Accessed January 2008.
- U.S. Department of Transportation (USDOT). Federal Highway Administration. Designing Sidewalks & trails for Access: Part II of II: Best Practice Design Guide. www.fhwa.dot.gov/environment/sidewalk2/ 2001. Accessed January 9, 2008.
- U.S. Department of Transport (USDOT). Federal Highway Administration. Manual on Uniform Traffic Control Devices for Streets and Highways. 2003 Edition. Part 9 Traffic Controls for Bicycle Facilities.
- U.S. Forest Service. Outdoor Recreation Accessibility Guidelines. May 2006.
<http://www.fs.fed.us/recreation/programs/accessibility/FSORAG.pdf>. Accessed March 27, 2008.
- U.S. National Park Service. Handbook for Trail Design, Construction and Maintenance. www.nps.gov/noco/parkmgmt/NCTTRAILCONSTRUCTIONMANUAL1.htm.2007. Accessed January 9, 2008.

Personal Communication:

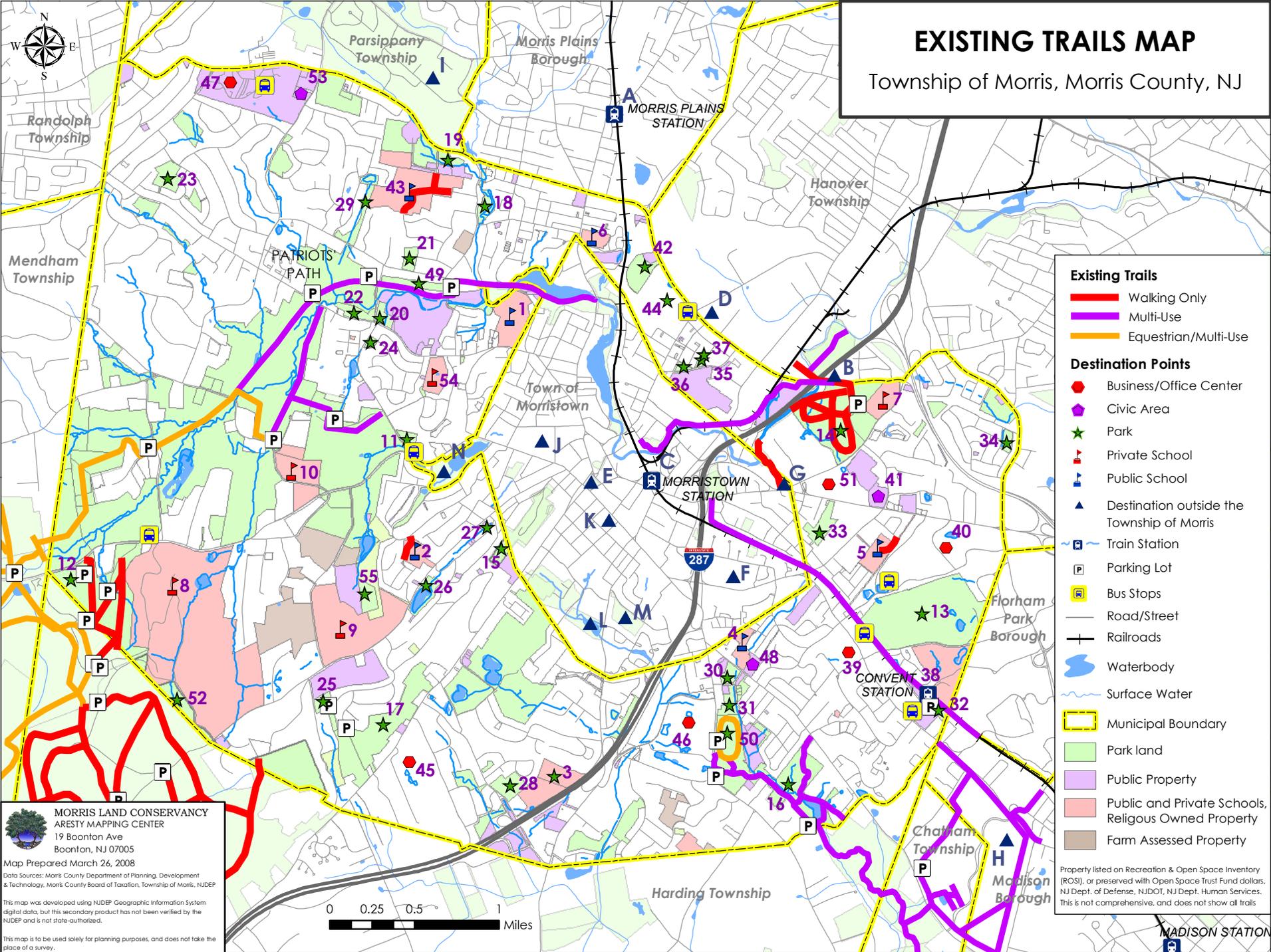
- Darren Carney, Planning and Zoning Administrator, Township of Randolph. February 2006.
- William Foelsch. Director, Morris Township Department of Parks and Recreation. February, 2008.
- John Lovell, Township Manager, Township of Randolph. February 2006.

MAPS

- a. Existing Trails Map
- b. Proposed Trails Map

EXISTING TRAILS MAP

Township of Morris, Morris County, NJ



- Existing Trails**
- Walking Only
 - Multi-Use
 - Equestrian/Multi-Use
- Destination Points**
- Business/Office Center
 - Civic Area
 - Park
 - Private School
 - Public School
 - Destination outside the Township of Morris
 - Train Station
 - Parking Lot
 - Bus Stops
 - Road/Street
 - Railroads
 - Waterbody
 - Surface Water
 - Municipal Boundary
 - Park land
 - Public Property
 - Public and Private Schools, Religious Owned Property
 - Farm Assessed Property
- Property listed on Recreation & Open Space Inventory (ROS), or preserved with Open Space Trust Fund dollars, NJ Dept. of Defense, NJDOT, NJ Dept. Human Services. This is not comprehensive, and does not show all trails.

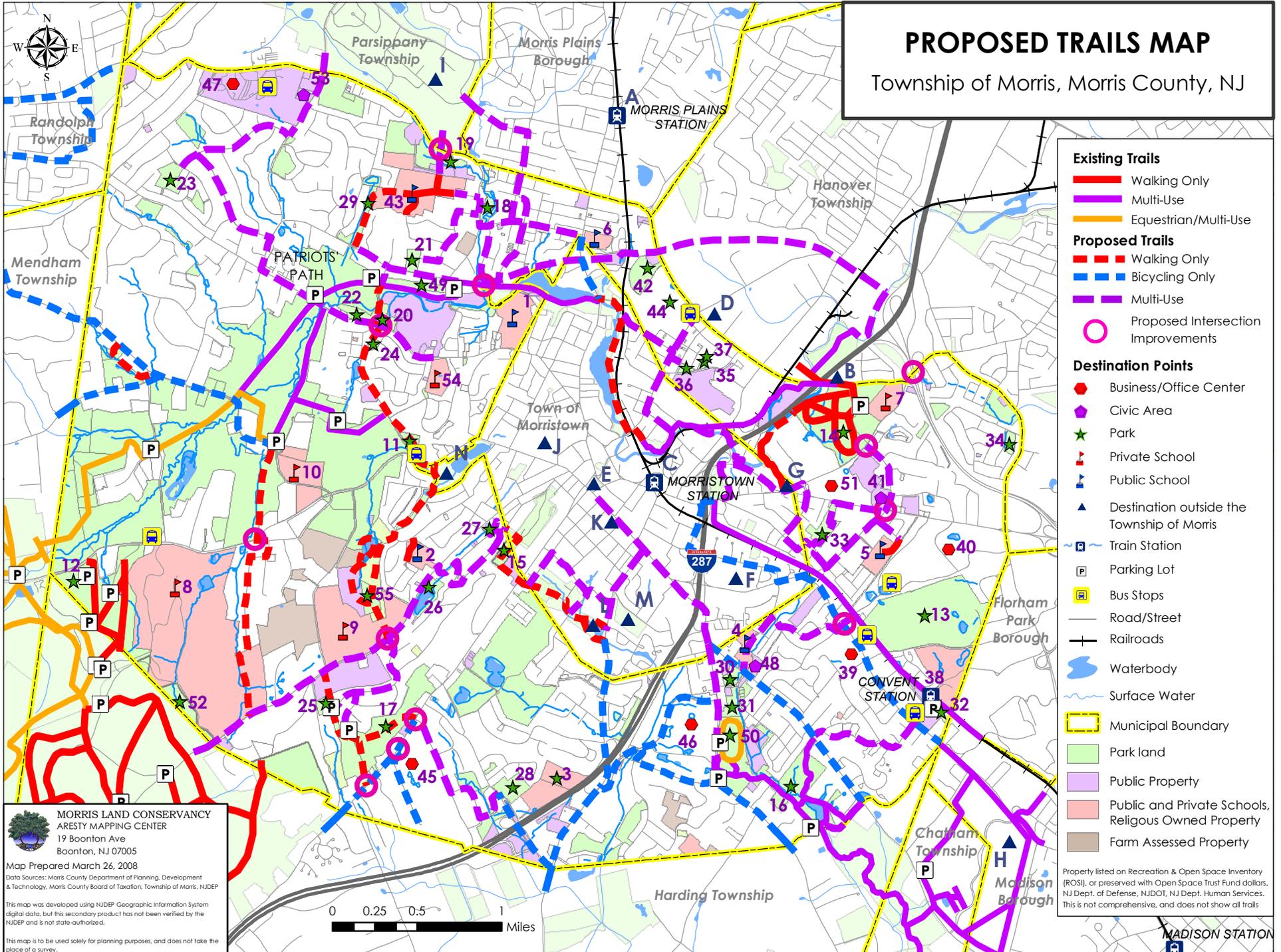
MORRIS LAND CONSERVANCY
ARESTY MAPPING CENTER
 19 Boonton Ave
 Boonton, NJ 07005
 Map Prepared March 26, 2008
 Data Sources: Morris County Department of Planning, Development & Technology, Morris County Board of Taxation, Township of Morris, NJDEP
 This map was developed using NJDEP Geographic Information System digital data. But this secondary product has not been verified by the NJDEP and is not state-authorized.
 This map is to be used solely for planning purposes, and does not take the place of a survey.



- Draft -

PROPOSED TRAILS MAP

Township of Morris, Morris County, NJ



- Existing Trails**
- Walking Only
 - Multi-Use
 - Equestrian/Multi-Use
- Proposed Trails**
- Walking Only
 - Bicycling Only
 - Multi-Use
- Proposed Intersection Improvements
- Destination Points**
- Business/Office Center
 - Civic Area
 - Park
 - Private School
 - Public School
 - Destination outside the Township of Morris
 - Train Station
 - Parking Lot
 - Bus Stops
 - Road/Street
 - Railroads
 - Waterbody
 - Surface Water
 - Municipal Boundary
 - Park land
 - Public Property
 - Public and Private Schools, Religious Owned Property
 - Farm Assessed Property

MORRIS LAND CONSERVANCY
ARESTY MAPPING CENTER
 19 Boonton Ave
 Boonton, NJ 07005

Map Prepared March 26, 2008

Data Sources: Morris County Department of Planning, Development & Technology, Morris County Board of Taxation, Township of Morris, NJDEP

This map was developed using NJDEP Geographic Information System digital data. But this secondary product has not been verified by the NJDEP and is not state-authorized.

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Property listed on Recreation & Open Space Inventory (ROSI), or preserved with Open Space Trust Fund dollars, NJ Dept. of Defense, NJDOT, NJ Dept. Human Services. This is not comprehensive, and does not show all trails

APPENDICES

- a. September 26, 2007 Public Meeting – Invitation, Agenda, Notes

Township of Morris
50 Woodland Avenue, P.O. Box 7603
Convent Station, NJ 07961-7603

August 30, 2007

The Morris Township Open Space and Trails Committees will host a public workshop on Wednesday, September 26, 2007 at 7 p.m. to discuss the development of a municipal Trails Plan. The goal of the Morris Township Trails Plan is to enhance the recreational opportunities for local residents by linking parks, schools, neighborhoods, historic areas and transit stops. The Trails Plan will also attempt to provide connections between local trails, regional trails, and trail networks in neighboring municipalities.

The Morris Township Trails Committee would like to hear your suggestions for any improvements to the trail design and development activities in the Township. To aid in this discussion, a Trails Map showing existing trails and local destination points will be available for review. An opportunity for public comment to suggest future trail locations and pose questions concerning the upcoming Trails Plan will also be provided.

For more information, please contact Thomas Kenny at the Morris Township Hall (973-326-7427; Tkenny@Morristwp.com) or Andrew Szwak at the Morris Land Conservancy (973-541-1010; aszwak@morrislandconservancy.org). We look forward to seeing you on Wednesday, September 26, 2007 at the Morris Township Municipal Building at 7pm.

Sincerely,

Morris Township Trails Committee

September 26, 2007
Morris Township Trails Plan
Public Meeting

Agenda

- Opening remarks: Mayor Robert Nace, Morris Township
- Introductions
- Overview of Trails Plan
 - Why produce a Trails Plan?
 - Organization of the Trails Plan
 - Schedule for completing the Trails Plan
- Audience comments and suggestions
 - Where are the existing trails that you use?
 - What *types* trails would best fit your needs?
(walking/hiking, bicycling, bicycle lanes on roads, equestrian, ADA accessible)
 - Where do you want to go on local trails?
(neighborhoods, parks, schools, historic areas, shopping areas)
 - Do you have any concerns about local trails?
 - Where do you want new trails?
- Trails Map
 - Public comments on Draft Trails Map
- Meeting adjourns

NOTES

General issues –

- Extend the Traction Line further into Morristown (to Patriots Path)
- Pedestrianism is good for local businesses as opposed to big boxes
- Gather feedback from residents at Morristown Fall Festival
- Sidewalks on some collector roads would make them safer for pedestrians
- Focus on making pedestrian links into Morristown
- Look to connect northwest areas of Twp. to Traction Line & southeast areas of Twp.
- Morristown enforcing “no bikes on sidewalks” law, making biking tougher there
- Will Township bear significant maintenance responsibilities for trail facilities?
- Safety from others a concern on Traction Line, Pats’ Path at Lake Pocahantas
- Residents may resist trail connections because of parking on streets, in cul-de-sacs
- Look to improve pedestrian circulation within school districts and neighborhoods

Trail user conflicts in Lewis Morris Park, elsewhere –

- Mountain bikers spook horses, hit hikers
- Need better signage to educate park users about trail etiquette
- Online resource where “Rules of the Trail” are published would be helpful as well
- Dogs off leashes (general concern)

Improve bicycle safety on major roads –

- People won’t ride bikes if there is not strong striping or physical barriers between cars
- Implement on-road bike lanes by striping shoulders, narrowing vehicle rights-of-way
- Improve signage on roads where bikes/pedestrians travel – “Share the Road” signs
- Provide bikes racks at destination points (Convent Station)

Routes in need of pedestrian/bicycle improvements –

- Lake Road
- Morris Avenue
- James Street
- Normandy Parkway
- Speedwell Ave. (between West Hanover Ave. and Morristown)
- Punchbowl Road (in anticipation of new developments nearby in Florham Park)
- Mendham Road west to Lewis Morris Park
- Madison Ave
- Woodland Ave
- Traction Line (has few access points for bikes)
- Western Ave.

Potential new trails, trail connections –

- James Street through Southgate to Loantaka Reservation
- Burnham Park north across Mendham Avenue to Patriots Path, Lake Road
- Burnham Park southwest through Jones Woods to Jockey Hollow Top
(negotiate with Villa Walsh about using existing trails from Jones Woods around VW fields to Western Ave)
- Develop trails within Jockey Hollow Top
- Connection between end of Traction Line and Patriots Path in Morristown
(Morris Street west to Ridgedale Ave north to Abbett Ave west to Patriots' Path)

Improve walking options near office parks –

- Mount Kemble Ave.
- Columbia Tpk.
- Southgate (South Street)
- Morris Plains
- Malapardis
- Morristown Hospital

Additional Destination Points –

- Mo'town Beard (needs improved pedestrian access across Hanover, Whippany Aves.)
- YMCA (in Hanover)
- Morristown Farmers Market (Spring and Morris)
- Giralda Farms (Madison)

Funding and implementation partners –

- Morristown Partnership (local business group that is focusing on sustainability)
- Dodge
- SAFETEA-LU
- Safe-Routes-to-School
- Morristown Environmental Commission (currently drafting a Trails Plan and survey)