

# **TOWN OF HALFMOON**

## **TRAILS MASTER PLAN**



**PREPARED BY**

**TRAILS ADVISORY COMMITTEE**

**(Revised January 31, 2006)**

**Adopted by Halfmoon Town Board  
March 7, 2006**

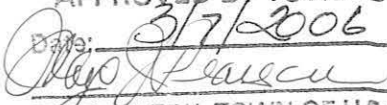
**TRAILS MASTER PLAN  
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APPROVED BY TOWN BOARD  
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Cover Photo by George Hansen

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## INTRODUCTION

Trails are the oldest connection between homes, communities, farms, workplaces and beyond. As such, they are a part of our heritage. To pass this heritage on to future generations of Halfmoon residents, the Town of Halfmoon will provide on and off road paths and trails for bicyclists and pedestrians.

A detailed Pathways Master Plan is called for in the Town's Comprehensive Plan as adopted in 2003.<sup>1</sup> Recommendations were made to adopt and implement the Master Plan for the Historic Erie Canal Towpath Trail as recommended by a joint committee of historically minded residents from Halfmoon and neighboring Clifton Park.<sup>2</sup> The joint feasibility study was one of a number of studies over the years calling for a system of trails in Halfmoon.

The Town of Halfmoon created a Trails Advisory Committee in November of 2002 to assist the Town Board in making decisions regarding the creation, maintenance, construction and location of trails in the Town. The Town recognized the increased use of roadways by pedestrians and bicyclists and expressed the need "to provide for the safe use of trails by its residents." The Trails Advisory Committee is made up of five diverse individuals from various backgrounds and geographic locations within Halfmoon, as well as one representative from the Town's Planning Department and one representative from the Recreation Department.

It is the intention of the Trails Advisory Committee to provide a network of linking trails, nature trails, pathways, off-road trails and wide shoulders where off-road trails are not feasible for walking, running, cross country skiing, bicycling and skating. As Halfmoon continues to grow and develop, its residents will require more opportunities for recreation, health and fitness activities.

This document was prepared to provide a vision and detailed plan for alternative transportation and recreation for public review, comment and eventual adoption as the Town of Halfmoon Trails Master Plan.

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<sup>1</sup> Town of Halfmoon Comprehensive Plan. Chapter III-21.

<sup>2</sup> JOIN US, A Master Plan for the Historic Erie Canal Towpath Trail, Halfmoon Historical Society Trails Subcommittee and Clifton Park Trails Committee, June 1, 2002.

## **BENEFITS**

There are many benefits associated with adding trails to a community. Health and recreation opportunities top the list for people who desire to exercise. Walking, running, bicycling, and cross country skiing represent a few forms of exercise. Studies show that people desire to live near non-motorized trails and property values increase because of this added benefit. Some residents may even be able to commute to work as a result of a trail. Communities with trails enhance quality of life and provide a means of social interaction for all residents.

### **Quality of Life**

This plan establishes a network of public trails that will invite residents to enjoy their public open spaces, parks, recreational facilities and other community activity centers. Trails will provide residents with valuable opportunities for recreation, exercise, wildlife viewing, environmental education and will enhance the quality of life for many of the citizens of Halfmoon.



Trails are part of the community ideal; they act as long linear parks that connect people to places and activities within the community and beyond. Trails add more green space providing habitat for trees, plants and animals, helping with air quality around us, as well as providing visual pleasure. Trails create an important quality of life amenity without major public expenditure.

### **Health Benefits of Walking**

Why should we consider walking? The New York State Department of Health states that 55% of the population is overweight or obese and reaching epidemic proportions. The Health Department encourages physical activity and recommends play hard programs at the community level. There are a number of health benefits associated with walking. Walking is an aerobic exercise that conditions your heart and lungs. Walking helps lower the risk of heart disease and stroke. An ideal walking program involves just 30 – 60 minutes three times a week.<sup>4</sup> Outdoor programs for walking recommend a smooth soft surface away from traffic.

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<sup>4</sup> American Heart Association

“Walkable communities” is a planning concept that is becoming increasingly popular throughout the area. Walkable communities reduce highway traffic and provide a calming effect for residents who seek an alternative method of transportation. The Town of Halfmoon endorsed Saratoga on the Move, a county program based on the national America on the Move (AMOTM), to promote walking and increasing awareness of adding 2,000 more steps a day to promote good health.

### **Alternative Transportation Routes**

One of the principal benefits of trails is their intrinsic safety when compared to use of roadways and highways. This is particularly true when vehicle speeds exceed 30 mph. Providing a separate trail infrastructure as a true alternative for bicycles and pedestrians avoids the potential conflicts between motorized traffic and non-motorized traffic.

Trails link various neighborhoods of Halfmoon with recreational areas and neighboring communities. Trails help connect developments for children to keep in social contact with school friends and for adults to connect to recreational sites and park and ride areas. Increased use of trails promotes safety as trail links and trail infrastructure grows.



As more means of transportation are changed to non-motor vehicle miles, air pollution, traffic noise and traffic congestion are reduced.

### **Economic**

A well designed trail system will provide a variety of economic benefits to Halfmoon and its citizens. These benefits, which are interrelated, include:

- Increased demand within the town for recreational related products and services
- Additional opportunities for fundraising by civic or charitable organizations
- Enhanced property values

A trail system will increase demand for recreational related services and products within the community. The increased availability of recreation activities has been documented to generate increased consumer demand. As more and more people utilize the trail system, the demand for sports equipment, sports apparel and repair services will increase. In addition, more trail users will result in the increased consumption of food and beverage. The increased demand will provide opportunities for expansion of existing and new businesses, which will improve the economic health of the town.

The Halfmoon trail system will link our communities together and provide alternative means of transportation for residents who gather for events, such as band concerts, plays, sporting events,

and celebrations at the new town center, the recreation complex, or the Senior Center. These events provide fundraising opportunities through sale of tickets, refreshments, meals, or memorabilia. The groups that benefit from these opportunities include volunteer organizations (such as Rotary, fire departments, or scouting organizations), local softball, baseball, hockey, and soccer teams. By providing an alternative, enjoyable way to get to the community events, a trail system will increase attendance and enhance the participant's enjoyment.

A well designed trail system enhances property values. Recent studies have shown that easy access to trails can add to the value of an individual residence by providing a feature that makes the property easier to sell. Typically, landowners who live near a trail are very satisfied with the trail. Nearby trails are appealing because they offer the residents opportunities for outdoor recreation at their "doorstep." Access to nearby trails, whether they exist or are being planned, will make residences more attractive to prospective buyers, thus enhancing their property values.<sup>5</sup>

## Historic and Cultural

Trails promote a greater appreciation and protection of Halfmoon's cultural and historic resources. Halfmoon's early trails included Native American routes crossing the town from the Mohawk River to the Hudson River to avoid the Cohoes Falls. During the Revolutionary Period, the King's Highway (Routes 4 and 32) or military route closely followed the shoreline of the Hudson River. The opening of the Champlain Canal and the Erie Canal in 1825 expanded commerce across New York State and the country.

Hamlets such as Crescent sprang up along the canal. Many of the original canal towpaths still exist in Halfmoon today and lend themselves to trail development because they are level, largely publicly owned and accessible to the community. Linking these heritage trails, a valued reminder of our community's past, with residential areas, the Town's municipal center, and recreational sites broadens our understanding of Halfmoon's place and time in history.



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<sup>5</sup> *The Impact of Rail-Trails: A Study of the Users and Property Owners from Three Trails*; U.S. Department of Interior and Pennsylvania State University; 1992.



## Natural Resources

Halfmoon has a long natural history of landforms and many areas which lend themselves to being integrated into a regional trail system. Trails can get an individual closer to and provide access to some of the Town's natural areas and open spaces without causing as much damage as motorized vehicles would. These resources include the Mohawk and Hudson Rivers, Anthony Kill, Dwaaskill, Meyers Creek and McDonald's Creek. Appendix A describes many of the landforms in Halfmoon and how they developed over time.



Trails provide a way to preserve our heritage, understand our environment, and form a personal connection to our surroundings.

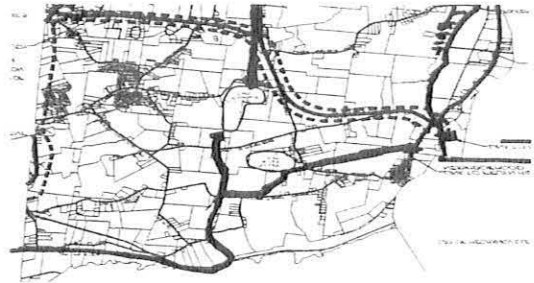
## **VISION AND GOALS**

It is the vision of the Halfmoon Trails Advisory Committee to create an integrated neighborhood based trail system in Halfmoon that will:

- Interconnect parks and open space to maximize access to programs and facilities.
- Improve access to parks, recreational opportunities, open spaces, waterways, wildlife habitat, and historical and cultural sites that are critical to the quality of life for all residents of Halfmoon.
- Promote physical fitness and healthy lifestyles for a variety of users including disabled persons.
- Provide opportunities for rest and relaxation within natural settings through trail related recreation.
- Reduce automobile dependency and enhance a walkable community by providing a connected system of trails and bikeways. Contribute to the improved environmental health of this community with connections to bus routes and park and ride lots.
- Connect open space amenities and link residential areas, workplaces, shopping sites and other community facilities.
- Provide 'outdoor classroom' opportunities for environmental education and local history.
- Encourage social interaction and community pride.

Halfmoon's Trails Master Plan looks at the entire Town, its neighborhoods, schools, parks, shopping areas and open spaces, to identify the opportunities for an interconnected network of trails. These trails will link neighborhoods not only to open space, but also to shopping, historic and natural resource sites, and regional and local parks. Halfmoon's trails, which will be built over the next several years, will invite citizens to leave their cars and explore their neighborhoods, parks, historical and cultural resources, open spaces, and commercial centers by foot, bicycle, wheelchair, horse, or roller blade. The addition of trails will promote a healthy active lifestyle for its residents.

This plan must remain dynamic to accommodate the population growth Halfmoon expects over the next 30 years and as more lands are acquired or dedicated to open space and recreation. Additional trails and trailheads should be considered as new opportunities arise. The challenge lies in tying all the pieces together to reach us where we live, work and play.



The Town of Halfmoon's trail system includes multi-use trails, designated bike routes, pathways, sidewalks, hiking and nature trails. Some trails invite various users—walkers, runners, bicyclists, people in wheel chairs, rollerbladers, cross country skiers, snowshoers, horse back riders and even boaters — to share a trail corridor collectively. Other trails may appeal to only a couple of uses. Planners, designers and managers of multi-use trails need to take into account the assorted needs of these different users as well as the various communities and landscapes through which the trail passes. On the other hand, trails that serve only a couple of uses may require only minor improvements to meet the needs of users.

Multi-use trails are a modern public space unlike any other, and they must be designed in a way that takes full advantage of their unusual characteristics. The linear corridors from which multi-use trails are formed are generally flat and frequently run along rivers, streams, or old historic transportation routes. Because of the continuous, linear nature of these corridors they link abundant resources to each other. Examples of this are the corridors along the Mohawk and Hudson Rivers. These corridors played an important part of the Town, the region, and American history. Canals like the Erie and Champlain and railroads, which at one time connected every small town and large city, stimulated industrial growth and rapid development throughout the nation. Unfortunately, new technology has forced a decline in these systems, but recycling them into multi-use trails and recreation facilities offers great potential.

Trails not only connect an extensive and irreplaceable corridor system to diverse landscapes, but preserve a significant portion of this country's heritage. The roadway along the Mohawk River corridor is part of the Mohawk Towpath Scenic Byway. Some other local corridors include the Route 146 east-west corridor, the north-south Route 9 corridor that the Town shares with our sister Town of Clifton Park, and the County's Zim Smith Trail corridor that links Halfmoon to other Saratoga County towns and villages. Halfmoon is also a community within the Erie Canalway National Heritage Corridor and the Lakes to Locks Passageway. These are excellent examples of linkages to larger regional, state and international corridors.



Create a town-wide network of trails and bikeways that will:

- Provide safe on- and off-road trails for people traveling between home, work, school, shopping places, and other attractions.
- Promote a healthier community by increasing active lifestyles for all ages.
- Revitalize and highlight historic transportation routes such as canal tow paths, farm to market roads and abandoned rail rights of way with non-motorized transportation infrastructure.
- Stimulate community action and community pride by promoting the town's identity, displaying its heritage and providing close-to-home recreational opportunities.
- Link with other County and neighboring towns via trails and bikeways such as the Zim Smith Trail, the Mohawk Hudson Bikeway, and the Canalway Trail System.
- Provide economic benefit through enhanced property values, keeping some of our recreational money here at home, and supporting local sports shops with greater demand for trail related equipment.

These goals are within our reach. Several communities in Saratoga County already have trail projects underway or completed. Through local initiative, the Town of Halfmoon will build on recent successes to develop a remarkable body of existing and potential trail resources including the old Erie and Champlain Canals, parks, highway right of ways, stream corridors and existing open space. The result will be a network of trails serving our local community.

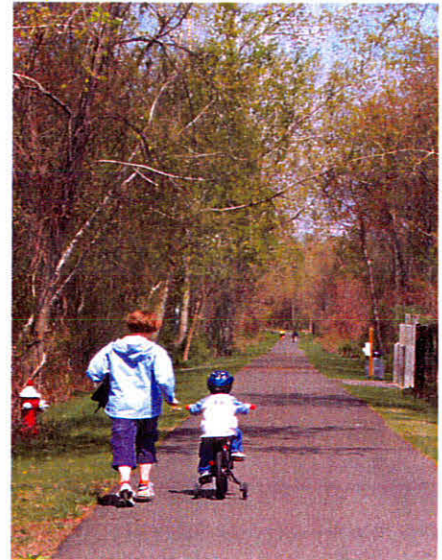
The Town of Halfmoon's trail system offers a practical way to help preserve our past and shape our future. Working together, we can help people to better experience the town as the remarkable place it is. We can help people understand the events that shaped our landscape and our community. As discussed below, a trail system will:

- Provide non-motorized recreation and transportation alternatives;
- Preserve open space;
- Encourage stewardship of our historic, scenic, natural resources, environmentally sensitive areas; and
- Connect our neighborhoods to enhance a sense of community.

## Recreation and Transportation

The Town of Halfmoon's trail system serves as a close-to-home recreational resource that can accommodate a range of users including walkers, hikers, joggers, runners, bicyclists, cross country skiers, snowshoers, roller and in-line skaters, people with wheelchairs, parents with strollers, bird watchers and anglers.

Coupled with these recreational uses is the functional role of virtually all trail systems. Whether used as shortcut to the library or for a 20-mile bicycle commute into the metropolitan area, these trails serve an important transportation purpose. Because of their linear nature and previous uses, trails connect destinations — neighborhoods to community and cultural resources (libraries, schools, businesses and shops, historically significant areas) intrinsically serving as transportation corridors. Multi-use trails are often heralded as playing a key role in alternative transportation, but many short trails (even in rural areas) offer numerous transportation opportunities. In fact, many municipalities are realizing that the time has come to develop trails and trail corridors that offer routes for non-polluting methods of transportation, which can reduce congestion, promote energy conservation, and improve air quality. These factors, in tandem with growing number of nearby recreational facilities, can enhance the quality of life for the residents of Halfmoon.



## Open Space Preservation and Ecology

Trail corridors preserve open space. The linear nature of a trail may be one way to offer green park-like space to people who cannot gain easy access or the time to use traditional, faraway blocks of open space.

Preserving linear corridors near streams, like the Anthony Kill, Dwaaskill, Meyers Creek and McDonald's Creek create a refuge for wildlife and native plants. The multi-use trail's long and narrow form can be used as a corridor for wildlife species to move across the landscape. The use of hedgerows, a particularly appropriate planting for a linear park, can provide much needed cover and protection for birds, small mammals, and other wildlife. Hedges and other plantings for wildlife food and shelter can also promote the growth of a broad range of plants near the trail by sheltering seeds in bird droppings, by preserving humidity and soil moisture, and by protecting an area from wind.

## Neighborhood Development



Trails cut through and connect diverse areas and neighborhoods and have the ability to begin stitching groups together through a common goal of creating a neighborhood amenity. At the same time they can highlight the uniqueness of each community.

The form and location of trails are the cornerstones of their success. They can connect residential, commercial, and industrial areas, and, along the way, a trail can assure each area's individual character and meet specific local needs. In many ways, trails become a community's "backyard," where people can get away from the hectic pace of everyday life to spend time with friends and neighbors and enjoy the outdoors in a refreshing environment.

## Historic Preservation

As mentioned previously trail corridors offer unexpected historical riches. Not only do artifacts representing a period of industrialization remain — canals, locks, tow paths, dry docks, and bridges — but many trail corridors traverse parts of earlier communities and the country side that reveal specific eras of industrialization and transportation development such as farmers bridge abutments, old stone bridges, or old mill factories. These structures, and the corridors



they occupy, symbolize the history of American industry, engineering, and labor. The construction of the Erie and Champlain Canals, the railroad system, and the system of farm to market roads was an enormous industrial feat. Our multi-use trails and their corridors preserve these artifacts and recognize the achievements of their builders, thus educating users about the route's histories, structures, and the stories of those who built them. It also gives the trail corridor and the community a "power of place" by strengthening a trail user's understanding of, and connection to, the trail and its surrounding region and history.

## OBJECTIVES

In order to implement the vision and achieve the goals for trail development in the Town of Halfmoon, the following objectives have been established as guiding principles for this trail master plan effort:

- Develop a comprehensive system of trails and trail related facilities which will provide residents with a diversity of trail experiences and a broad range of trail types, including multi-use trails, single use trails, soft surfaced trails in natural areas, and hard surfaced commuter trails in heavily populated areas.
- Develop a master plan that serves to connect existing and future public resources and facilities identified in the multi use pathways map. (See Chapter 2, Figure I).
- Provide facilities for a wide variety of users with varied levels of challenge including, but not limited to pedestrians, runners, hikers, walkers, people with disabilities, bicyclists, horseback riders, rollerbladers, skateboarders, cross country skiers, snowshoers and non-motorized watercraft. (See Appendix B, Project Access)
- Provide public trails, as appropriate, to connect open space lands, dedicated open space, and parks. Route trails and place facilities to preserve natural resources.
- Provide loop trail opportunities wherever possible, as well as connections to neighborhoods, schools, parks, and transportation hubs.
- Develop trail access points and trail heads that are adequate for the anticipated trail use capacity.
- Develop trails that minimize impacts to the environment. Locate trails responsibly to avoid existing unstable terrain and drainage hazard conditions.
- Develop design guidelines that address the public safety and security concerns of trail users and residents whose homes are adjacent to trails and trail facilities.
- Develop trail signage standards for information, direction, and regulatory purposes.
- Provide trails as an alternative transportation mode for commuting and recreational needs of residents to help reduce automobile use, dependence, congestion, and pollution.

- Coordinate trail development with Saratoga County, the New York State Canalway Authority, National Park Service, Saratoga PLAN and other state and federal agencies.
- Connect the trail system to regional trails and attractions such as the Mohawk and Hudson Rivers, old Erie and Champlain Canals, Saratoga County Heritage Trail system, Mohawk Hudson Bikeway, Mohawk Towpath Scenic Byway, and other bikeway systems.
- Work closely with neighboring communities to link trails between towns and cities.
- Identify and prioritize trail construction projects so that the Town can undertake these projects in the planning process and as opportunities present themselves.
- Develop management, maintenance, and emergency access plans for the trail system.



## **PARTNERSHIPS**

One arrangement for developing and maintaining a trail is for the Town of Halfmoon to own the property over which the trail passes and for the Town to accept the maintenance responsibilities for the trail into the indefinite future. In some areas this has happened; in other areas this is not possible because of land ownership and the way the parcels of land were subdivided and subsequently developed. Some pathways may have been included in private lands or are owned by another public counterpart. In these circumstances partnerships are necessary to either formalize an existing trail use or to develop a new trail or segment of trail as the need arises. In order to foster a town-wide integrated alternative transportation and trail system, the Town of Halfmoon recognizes the importance of developing and maintaining partnerships.

- Maintain partnerships with the County, other municipalities, regional transportation planning agencies, CDTC Bicycle and Pedestrian Task Force, Saratoga PLAN, the Trail Advisory Committee and Open Space Committee to coordinate planning efforts and maximize benefits for local and regional trails, pedestrian and bikeway improvements.
- Where appropriate, trail development projects will be coordinated with street and highway improvements on the town, county and state level, utility improvements and residential and commercial developments within the Town.
- Encourage and work with businesses and private property owners to allow public access and linkages through private developments to connect with planned major trails and recreation areas, when appropriate.
- Work with its utility districts and other public agencies, as districts expand, to obtain connecting trail easements for a comprehensive trail system. The use of utility service and maintenance access roads for recreation trails will be considered whenever and wherever feasible and agreeable with utility providers. Opportunities include utility right of way (water, sewer and power lines).
- Foster partnerships with school districts which serve the Town to promote environmental and historical educational opportunities and broaden opportunities for alternative transportation to and from schools, including the development of trails on school district property, where feasible.

## Agreements

The best type of relationship is in the form of a deed restriction providing access or a right-of-way. This is an enforceable document filed with the land records and lasts beyond one owner's lifetime.

Another possibility is a use or license agreement, which can be a formally written agreement between two or more parties. Although this agreement may be enforceable, circumstances that led to the agreement can change. This is the least desirable of the types of agreements, but can be used on a limited basis, particularly if it is a temporary agreement that includes an understanding that the parties intend to execute a more formal agreement at sometime in the future.

## Examples of Partnerships

The Saratoga County Sewer District supplies sewage collection and treatment services to the populated areas of the county. From a trail advocate's perspective this public utility owns or controls linear properties that link residential areas. The opportunity was ripe to develop a trail partnership over land which the Saratoga County Sewer District owned. A major advantage in developing a sewer line is a corridor maintained in an open state and easily accessible. Disadvantages include occasional disruptions of trail use for utility maintenance and the existence of manholes.

The Zim Smith Trail, a nine mile cross-county trail, was planned in the early 1990's to utilize the corridor land owned by the Saratoga County Sewer District from Coons Crossing in Halfmoon to connect with the Malta Town Park, Ballston Lake Trail and to end in the Village of Ballston Spa. Through the efforts of the County, the Saratoga County Heritage Trail Committee and numerous interested parties, an application was submitted for a grant to fund construction. After several tries, a federal TEA grant was awarded in 2002. Future trail linkages are being explored with private and public partners to eventually connect the Zim Smith Trail with the State Park in Saratoga Springs.



## TRAIL DESIGN

The Halfmoon Trail system should be a comprehensive set of interconnecting facilities designed to meet the needs of the community and encourage residents to use non-motorized transportation. The system of trail facilities will consist of off-road facilities such as multi-use paths, nature trails and hiking trails, and on-road facilities such as bicycle routes, highway shoulders, sidewalks and shared use lanes. Each of these facilities may serve a general or specific purpose, or may serve as a link to other facilities in the system. Together, they will form a cohesive system of trails that will provide mobility, opportunities for exercise and a higher quality of life for residents of all ages and skill levels.



Good design, coupled with education and enforcement, will help accomplish this goal of a comprehensive system of trails. The general guidelines and design considerations, which are discussed in the remainder of this chapter, that are applicable to Halfmoon include:

- Multi-Use Paths
- Walking, Hiking, and Nature Trails
- Highway Shoulders and Sidewalks
- Trailheads
- Trail Access Points
- Signage
- Scenic Viewpoints
- Water Way Crossings
- Grading, Drainage, and Erosion Control
- Plantings for Buffer, Screening and Revegetation

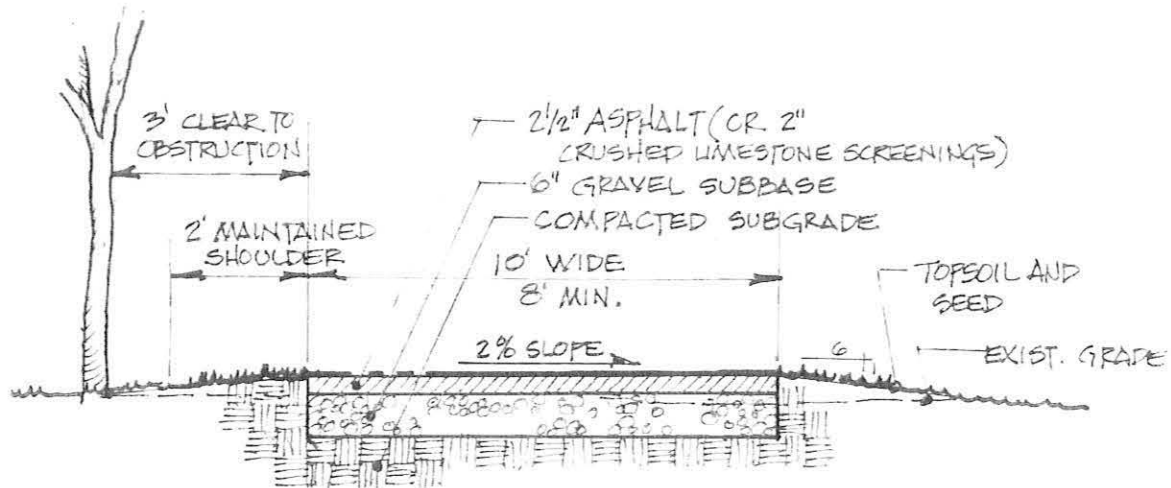
More detailed design guidelines and requirements are available in the current edition of the *Guide for the Development of Bicycle Facilities*, and *Policy on Geometric Design of Highways and Streets*, both produced by the American Association of State Highway and Transportation Officials (AASHTO); *Manual on Uniform Traffic Control Devices (MUTCD)* as adopted by NYSDOT; Chapter 25 on Traffic Calming in NYSDOT's *Highway Design Manual*; *Americans with Disabilities Act (ADA) Guidelines* and FHWA's *Flexibility in Highway Design*.

### Multi-Use Paths

Multi-use paths are either gravel or paved trails suitable for a broad range of activities such as walking, hiking, running, roller skating commuting, bicycling, mountain bike riding, and horse back riding. These trails are designed and installed to minimize loss of large trees and disturbance to the surrounding environment.



Multi-use paths will also accommodate trail maintenance and utility service vehicles as well as fire, police, and medical emergency vehicles where appropriate and feasible. A vehicular access control gate with padlock will be installed where paths connect with public streets or trailhead parking areas.

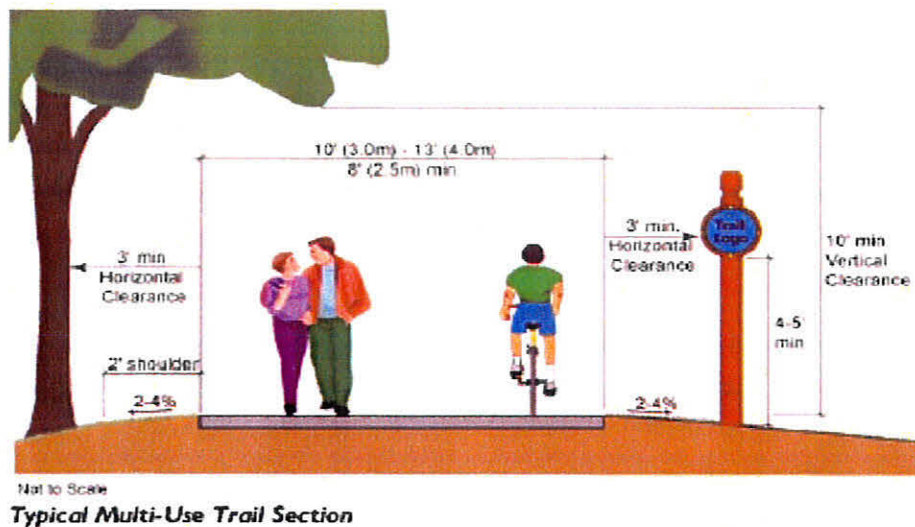


### TYPICAL SECTION OF A PAVED OR CRUSHED STONE MULTI-USE PATH

Multi-use paths will be designed and constructed based on the following standards:

- The desirable width of the path is 10 feet wide. The width may be reduced to 8 feet wide where use is occasional, terrain is level and bicycle speeds are slow, and a diversity of users is not anticipated.
- Trail surface shall consist of a layer of compacted crushed rock, except for asphalt paving where necessary due to steep slope conditions or if high volumes of trail users are expected. Depth of crushed rock will be determined by soil conditions and intended use.
- Paved paths shall have two and one half (2 1/2) inches of asphalt over six inches of gravel subbase. Where frequent maintenance vehicle traffic is anticipated, four inches of multi-layer asphaltic concrete paving over a six inch layer of compacted 3/4" minus crushed stone base should be considered.
- A geo-textile fabric should be installed under the crushed stone where soft ground conditions are encountered. The structural section for paths will vary, subject to site-specific geotechnical engineering investigation and analysis.

## Typical Multi-use Trail Clearances



- Path shoulders shall be 2 feet minimum width, have a maximum 1:6 slope, and shall be topsoiled and seeded.
- Lengthwise grade shall not exceed 3% with crushed rock surfacing and 16% with asphalt paved surfaces. The maximum length for grades over 11% shall be 50 feet or less. If the trail is intended to be handicap accessible, lengthwise grades shall not exceed 5%.
- Cross-slope shall have a 1% minimum grade for adequate surface drainage and a maximum of 2% cross slope. It is intended that these paths also meet disability accessibility standards where topography allows.
- Plantings along paths within 30 feet of private property boundaries should be designed to buffer views between the trail facilities and nearby residences where appropriate and needed.
- Turnaround for permitted vehicles should be provided where grades will not allow vehicular access.
- Trail signage should be installed to provide information about destination, distances, appropriate trail usage, and/or interpretation of natural or historic areas.

Prior to trail construction, the path's corridor will be cleared of obstructions, including fallen trees, dangerous trees, and tree limbs as necessary for public safety reasons, for a minimum of three feet from the edge of the path and a clearance of ten feet above the trail.

## Walking, Hiking, and Nature Trails

These trails will be primarily for passive pedestrian uses, which include walking, hiking, running, cross country skiing, snowshoeing and mountain bike riding. Where there are steep slopes, erosive soils, vegetation, other environmentally sensitive site conditions or safety concerns, certain activities would not be permitted.

Walking, hiking and nature trails would be designed and constructed to minimize loss of large trees and damage to the surrounding environment and would be based on the following standards:

- Path should be 4 to 6 feet wide. (Path or segments of it may be up to 10 feet wide if vehicular access is required.)
- Trail surface shall be native soil unless conditions dictate the use of other surfacing materials such as compacted crushed rock, stone dust or asphalt paving.
- Where steep slope conditions exist or if high volume of trail users are anticipated, the trail may have an asphalt paved surface with a two inch layer of asphaltic concrete over a six inch layer of compacted crushed stone.
- A geo-textile fabric should be installed under crushed stone where soft ground conditions are encountered. The typical cross section of these trails will vary, subject to site-specific geotechnical engineering investigation and analysis.
- Lengthwise grade should not exceed 10%, except over short distances. Where severe site conditions warrant, grade maximum may be 20% for short distances. Cross grade 2% minimum to 3% maximum grade for stone dust and asphalt paved paths shall be provided to assure good surface drainage and an ADA accessible surface.
- Plantings along trails within 30 feet of private property boundaries should be designed to buffer views between the trail facilities and nearby residences where appropriate and needed.
- Buffer screening and vegetation should be with native plant materials.
- Trail signage should provide direction, distance, destination, safety, appropriate trail usage, historic and natural interpretive information.



Prior to trail construction, the trail corridor shall be cleared of obstructions for public safety reasons, including fallen trees dangerous trees, and limbs as necessary for a distance of four feet each way from the path's center line and a height of eight feet above the trail.

## Highway Shoulders and Sidewalks

Many of Halfmoon's trails will use the town highway right-of-way for a portion of the trail, particularly in the more developed parts of the town. The portions of the trails that are in the highway right-of-way may be either shared with the travel lane, on the roadway shoulder, or a separate sidewalk/bikeway. Widening highway right-of-way to include shoulders for bicyclists and sidewalks for pedestrians offers a variety of benefits due to the additional space they provide. According to ASSHTO, these benefits include:

- Increased safety
- Increased capacity
- Easier maintenance.

**Shared Roadway** – On low volume and low speed roadways, bicyclists may share the roadway with vehicles without compromising the level of service or convenience for either bicyclists, pedestrians or motorists. Generally, a roadway with travel lanes greater than 12 feet wide will allow a motorist to pass a bicyclist without having to leave the travel lane. If sufficient space is available, bike route signs may be installed in accordance with the MUTCD to direct bicyclists to destinations. The most suitable application of shared roadways is on residential streets that connect to other trail facilities. Shared roadways shall have a posted speed of no greater than 30 mph and a minimum shared lane width of 14 feet.

**Highway Shoulders** - The following guidelines shall be used for any new construction or resurfacing projects that include use of highway shoulder as a designated trail.

- Vehicle travel lanes shall be a minimum of 11 feet wide in both directions.
- Shoulders shall be a minimum of four feet on each side of the road and shall not include drainage structures or drainage ways unless specifically designed to be used with bike and pedestrian traffic.
- When traffic volumes exceed 10,000 ADT and speeds exceed 40 mph, shoulders shall be six feet wide.
- Adequate sub-base preparation and drainage shall be provided across the entire highway profile including shoulders.
- Shoulder pavement shall be placed in



the same pass as the adjacent travel

lane so that there is no construction 'joint' between travel lane and shoulder.

- Signage and/or pavement markings shall be provided to designate a shoulder as a trail so that motorists are aware that bicycle, pedestrian, and other trail traffic should be expected along the shoulder and so that trail users remain vigilant to

motor vehicle traffic.

Placing a multi-use path or bikeway along the side of roadway requires in-depth analysis. These types of facilities are referred to as side paths or “sidewalk bikeways.” They are not appropriate where they are placed along heavily trafficked roadways with numerous driveways. Studies have shown that these facilities put bicyclists in an unpredictable situation and the risk of collisions with motor vehicles is higher than with on-road facilities. Multi-use trails should be placed along the side of a roadway only when the following conditions occur:

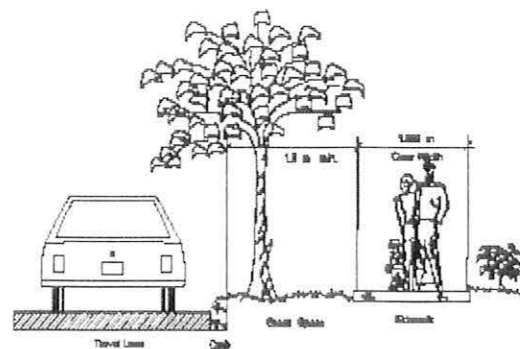
- Intersection and driveway crossings are infrequent.
- The trail links two destinations on the same side of the roadway.
- The trail will accommodate mostly young or inexperienced bicyclists who will use the trail similar to a sidewalk by stopping and yielding at all crossings.
- The trail will not preclude the use of the roadway by more experienced bicyclists.

When a multi-use trail is designed along a roadway, the guidelines for multi-use trails should apply with the following additions:

- A minimum of five feet of separation shall be maintained between the trail and the edge of roadway pavement. Eight feet is preferable.
- Stop signs shall be placed at all intersections with roadways and “yield” pavement markings shall be placed at intersections with driveways.

When sidewalks that will accommodate primarily pedestrians will be constructed as a part of the trail system, the following standards should be used:

- Sidewalks should be located as far as practical from the roadway travel lanes. The desirable separation between edge of sidewalk and the shoulder or curb of the roadway is eight feet, with a minimum acceptable distance of four feet in residential areas.
- Sidewalks shall have a minimum width of five feet.
- Sidewalks shall be hard-surfaced, durable, and provide for all-weather use.



Typical Sidewalk

Source - NYSDOT Highway Design Manual, Chapter 18, Pedestrians and bicycles



## Trailheads

The Town of Halfmoon's trail system is envisioned as a system of short trails that connect residential areas with parklands, schools, commercial and culturally significant sites. Significant trail head facilities are not necessary except at access points to large recreational areas such as the Mohawk River, the Hudson River, the Zim Smith Cross County Trail, the Crescent Trail, the Champlain Canal Trail, the State Forest Preserve off of Ushers Rd., the planned Town Recreation Park off of Route 146 and a proposed trail terminus point at Vosburgh Rd. and Route 146.

In these cases trail head facilities should include off street vehicular parking, vehicular access control gate with padlock, removable and fixed bollards, bike rack, and may include information kiosk, trail orientation and regulatory signs, over head shelter, drinking fountain, benches and picnic tables.

Wherever it is possible accommodations should be made for persons with disabilities; however, topography and other site constraints will prevent some trails from being fully accessible. Because open space, parks and trail use is prohibited after dark, trail head parking areas may be gated and locked to prevent unauthorized vehicular access after dark. To discourage unwanted night use and activities, lighting is not recommended at trailheads. However, it is recognized that adequate lighting may be used successfully to discourage certain activities after dark, but lighting must be designed to address specific needs of the trailhead and the neighborhood around it.



Trailhead parking areas should be designed and constructed to the following standards and as improvements are made to existing parking lots they shall be upgraded as well.

- Paved parking surface with four inches of asphalt paving over an eight inch layer of compacted 3/4 inch crushed stone and geo-textile fabric over the subgrade dependent on soil conditions and intended use. Where buses are expected a more resilient pavement design is recommended.
- Finished grade shall be a minimum of 2% slope and a maximum of 5%.
- Parking spaces will be clearly identified by painted lines, including parking for handicapped persons.
- Control of surface water run-off from these areas will comply with best management practices.
- Trail signage should provide direction, distance, destination, safety, appropriate trail usage, and historic and natural interpretive information.
- Plantings around trailheads within 30 feet of private property boundaries will be designed to buffer views between the trailhead facilities and nearby residences where appropriate and needed.



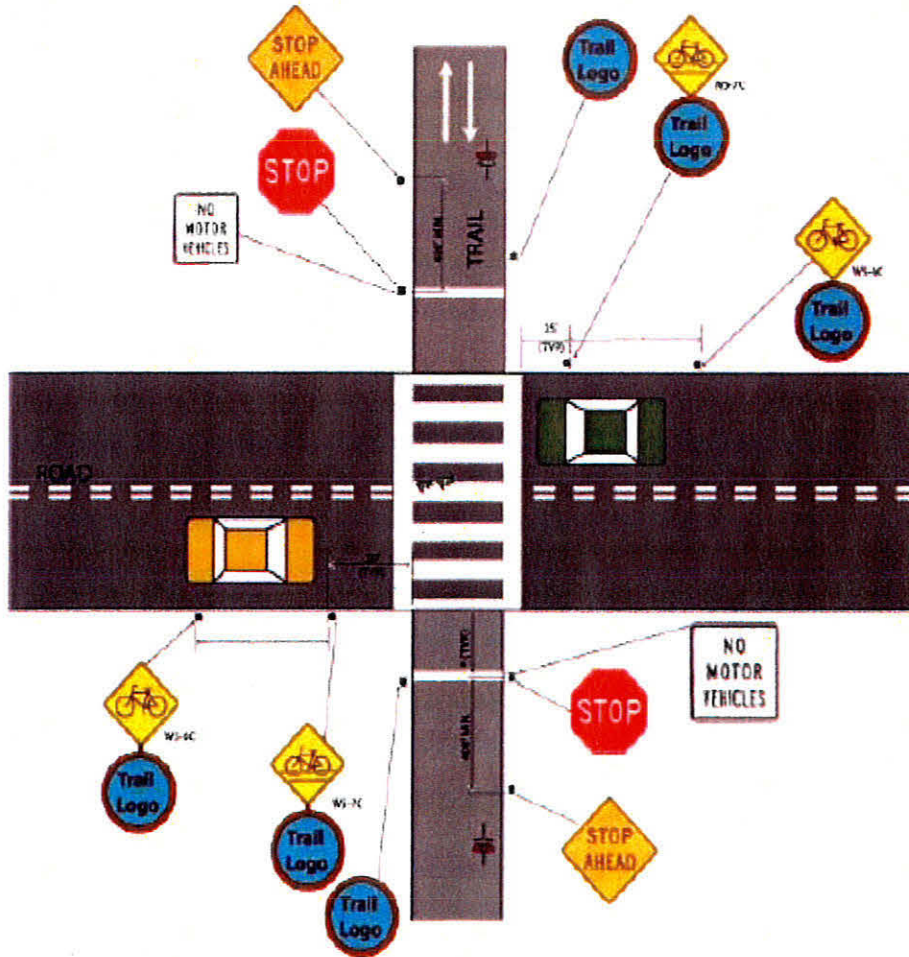
### **Trail Access Points**

Trail access points are minor entry points primarily for neighborhood residents to access the trail from their neighborhood, streets, sidewalks, parks and other public facilities. Signage at these access points will be important to inform users of direction, distance, destination, safety, appropriate trail usage, and historic and natural interpretive information. It should also entice potential new users to explore the trail and the area through which it passes.

## Signage



Signage shall be placed along the trails and at all points at which trails intersect roads and highways. Signage shall provide relevant information about the trail and surrounding areas as well as provide adequate traffic control. All regulatory and warning signs shall be consistent with the requirements of the NYS Manual of Uniform Control Traffic Devices.



Typical configuration of trail signs at unprotected, marked trail crossing of roadway. Diagram and table based on the typical Canalway Trail crossing (by New York State Canal Corporation).

## Scenic Viewpoints

Scenic viewpoints should be constructed at key locations that will afford trail users an opportunity to view significant landforms, landscape features, wildlife habitat and activities, and areas of historic or cultural significance. Possible viewpoint amenities include benches, orientation and interpretive signs, special paving, and low walls or handrails for public safety where necessary.

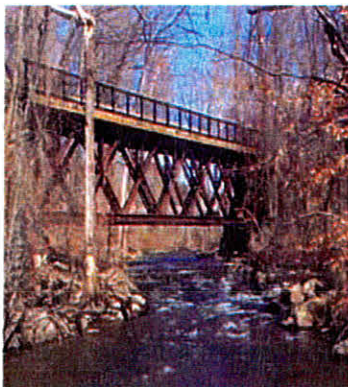


Existing vegetation should be maintained to preserve scenic views from the viewpoints. New plantings will be selected with emphasis on low growing, low maintenance native and ground cover species. Plantings should be selected and planted to avoid adverse impacts on the views from the scenic viewpoint and nearby residences.

## Waterway Crossings

While it is the intent of this master plan to develop trails that have minimal impact on the environment, there will be locations where trails will need to cross waterways and wetlands. In fact, given the number of designated wetlands within the Town of Halfmoon signage along trails that provides interpretive information on wetlands would enable trail users to gain a better understanding of the importance of these natural resources.

Appropriate engineering studies shall be performed to assess which method of crossing is best suited to minimize impact to the environment. Major stream and wetland crossings will be coordinated with the Town Planning Department, New York State Department of Environmental Conservation, and, if appropriate, with the Army Corps of Engineers for their review, approval, and any required permitting.



Bridges will be used where trails cross creeks that have water in them for at least 5 to 6 months each year. Where bridges are more than 30 inches above the bed of the stream a railing will be provided to a height of 42 inches from the bridge decking. Where the bridges are less than 30 inches above the stream bed no railing is necessary. However, a vertical edge or curb 2 inches high shall be installed to guide the visually impaired and wheelchairs. Consideration should be given to the dominant vegetation in the bridged area. Design of bridge foundations should include consideration for flood conditions and, even for the simplest bridge, a method to hold the bridge through a flood condition.

Culverts should be installed where trails cross over drainage ways and small, rainfall created surface water discharges. Boardwalks are another crossing option to consider where appropriate to site conditions, such as wetlands.

### **Grading, Drainage, and Erosion Control**

All trail related improvements shall be designed to minimize grading, drainage and erosion problems. Special attention should be given to trail improvements on steeper slopes and/or in proximity of residential development and existing neighborhoods.

Drainage and erosion control measures such as swales, culverts, and revegetation plantings may be required to minimize any adverse impacts to the environment and surrounding communities. If site conditions deem it necessary, the following drainage and erosion control measures will be installed:

- A swale on the up slope side of the trail to channel surface water run-off for proper discharge.
- Culverts properly sized to pipe surface run-off water to cross under trails.
- Revegetation plantings with soil binding roots to provide soil erosion control.

Construction shall be scheduled so that a minimum of disturbed earth is exposed during periods when rain is anticipated and will be overseen and monitored by the Town's Parks and Recreation and/or the Highway Superintendent.

### **Plantings for Buffer, Screening, and Revegetation**



Plantings around trails and trail access points within 30 feet of private property boundaries should be designed to buffer views between the trail facilities and nearby residences where appropriate and needed. Buffer, screening, and revegetation plantings should be of native plant species that are compatible and blend with the natural surroundings. Revegetation plantings shall be installed to provide drainage and erosion control for all areas disturbed by trail construction activities.

Native plant species worthy of consideration include rye grass, fern, shadblow, honeysuckle, serviceberry, vernal witch-hazel, winterberry, arrowwood viburnum, dogwood, red maple, sugar maple, white ash, white pine, pin oak and white oak.

## RESOURCES

There are six types of resources that should be considered when preparing a Trails Master Plan: (1) natural resources within the town that provide points of interest and act as a destination; (2) recreational resources that include both public and private recreational areas; (3) heritage resources such as trails from historic canal days and native footpaths; (4) funding resources; (5) human resources which includes volunteers or programs to provide trail construction or maintenance and (6) in-kind services for grant applications.

### Natural Resources

The Town of Halfmoon has several natural resources that lend themselves to nature trails or have major trails crossing them. Zim Smith, the mid-county trail located in the northern end of the Town, crosses over the Dwaaskill that empties into the Anthony Kill. The McDonald Creek flows from the mid portion of the Town and empties into the Hudson River. The Hudson and Mohawk Rivers are both natural resources that are attractive destinations for trails.



There is another natural area and unnamed stream that runs northeast from Halve Maen Manor North to the Anthony Kill that would make a peaceful nature trail. Halfmoon shares Wager Pond with Clifton Park off Riverview Road west of the Northway. Combining natural areas with trails is a positive benefit for both recreation and the environment.

### Recreational Resources

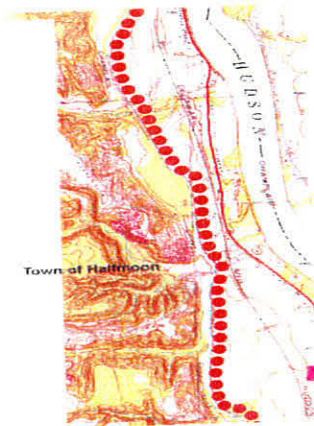
Trails can be safe, off-road connecting pathways to town recreation areas. Adults and children could bicycle or walk to games, playtime or recreational events without using automobiles. A main recreational field is being planned in the Town near the municipal center. Trails should be constructed near or along routes which lead to the municipal center and recreation complex. Crossing lanes between the municipal center and the recreational complex need to be explored. There are a few pocket parks located in the town; namely, Woodin Rd. baseball fields and the small ballfield next to the Halfmoon Firehouse on Middletown Rd.

Private recreational areas should also be considered when planning connections for trails. The Town has seen several private recreational ventures: Sports Complex off Route 9, Sports Barn on Route 236 and the planned A&M recreational site off McBride Rd. and Route 146. Once again, cars should not be considered the only means of transportation to and from these sites.

Passive parks planned for the Town should include trail access. A number of sites have been designated and should be carefully planned to include trail connections.<sup>6</sup>

## Heritage Resources

The Old Erie and Champlain Canals both crossed the Town of Halfmoon during the early 1800's. As a result, canal towpaths still lend themselves as excellent opportunities for trail building. These linear transportation routes can be turned into enviable trail destinations for residents of our community. Efforts are currently underway to expand the short segment of Crescent Park into a two and one-half mile long trail along the north shore of the Mohawk River. A 2002 feasibility study, JOIN US, revealed the potential for a trail that would connect Halfmoon along the old towpath into neighboring Clifton Park.<sup>7</sup> A last remaining segment of the old Erie Canal still exists near the town's western border.



The old Champlain Canal is visible and still actively used by residents. It parallels Routes 4 and 32 and connects the Town of Waterford to the south with Route 236 at the northern end. Even though the old canal is in a neglected state, it is still distinguishable as a trail. It would require some upgrading to restore it to a viable trail. Several historic canal structures still remain intact and would attract trail users. This old canal route has been earmarked as a trail and is of interest to the Canalway Trail Partnership, a consortium of state and federal agencies organized to assess the possibility of developing certain trails in New York State.<sup>8</sup>

<sup>6</sup> Town of Halfmoon, Comprehensive Plan, 2003.

<sup>7</sup> JOIN US, A Master Plan for the Historic Erie Canal Towpath Trail, Clifton Park Trails Advisory Committee and Halfmoon Historical Society Trails Committee, June 1, 2002.

<sup>8</sup> The Canalway Trail Partnership is made up of the New York State Canal Corporation, National Park Service Rivers, Trails and Conservation Assistance Program and New York Parks and Conservation Association. The Partnership issued a Canalway Trail Gap Segment Assessment Report Saratoga County, New York, June 2000.

## **Funding Resources**

A large number of recreational activities in the Town of Halfmoon have been funded by developers' mitigation fees. That approach should be continued while development continues to occur. A portion of those fees should be allotted for trail building and maintenance. The Town should budget annually for these projects. The Town should establish a system to document and determine the resource needs to maintain an adequate and safe trail system. Costs associated with this documentation should be included in the routine budgetary process.

A second source of funding is bonding. Trail construction could be part of a bonding issue when it is associated with a large project. One example is the Water Improvement Project planned for the old Champlain Canal. Trail improvement over the historic canal is considered a major community benefit.

A third source of funding is grants. Grants often require matching funds from State, Federal or private sources. Matching funds should be considered in a trails budget and anticipated as application for grants take place.

Finally, donations by various user groups, youth and fraternal organizations and commercial establishments help make trails a reality. These organizations can provide project assistance or help to purchase certain amenities like benches, bike racks and interpretive signs.

## **Human Resources**

Organizations such as the Scouts, Rotary and the Chambers of Commerce look favorably at donating time and money to trail projects and amenities. Crescent Park included a foot bridge that was built as an Eagle Scout project. Community service programs are a source of manpower for developing and maintaining trail projects. A chart of organizations and interested groups should be created and utilized throughout the trail building process.

## **In-Kind Services**

As was previously stated, the Town's own highway and parks departments play an important role in developing and maintaining trails. Municipally provided services can often be classified as in-kind services when grants are received and local matching funds are calculated. Volunteers often possess skills that can be classified as in-kind services for matching grants.



## TRAILS MANAGEMENT AND MAINTENANCE

The Town of Halfmoon's Town Board, Planning and Zoning Departments, in conjunction with the Trails Advisory Committee, are responsible for the development of trails and related facilities within the Town of Halfmoon. The town supervisor is responsible for coordinating trail efforts with other Town departments, developers, citizens, neighborhood associations, community organizations, private interests and other governmental agencies and organizations outside town government. Trail maintenance is done and/or coordinated by the Town's Parks Department. Rules and regulations will be promulgated by the Town Board.

The goals of the trail management and maintenance strategy are to maintain the functional use of the trails, provide for fire mitigation, eliminate potential hazards, provide for the public safety, protect natural and historic resources and maintain the aesthetic quality of the trail's environment.



Trail management and maintenance recommendations follow:

- Establish and revise a Trails Management and Maintenance policy, procedures and record keeping for the inspection and maintenance of developed trails, trail facilities and trail corridors on a regular basis by town staff/crews, community service groups or volunteers.
- Prior to completion of the first phase of trail improvements, the Town's Parks Department should develop a plan for trail maintenance and management. This planning will allow the department to properly budget and plan for staff to maintain a satisfactory level of service for the trails as they are developed.
- Conduct annual inspections of and provide maintenance to trails to identify and correct existing or potential problems, ensure public safety and minimize town liability.
- Clear fallen trees and control trail vegetation within two feet of multi-use trails to reduce the chance of fire and as part of vegetation management. Vegetation management is essential to good trail maintenance.

- Provide resurfacing of paved asphalt or crushed stone as needed to maintain trail stability. Wood chips or bark are not recommended as a resurfacing material due to high cost of installation and maintenance. The exception is on nature trails that experience low volume traffic. Special situations include areas affected by seasonal drainage and erosion.
- Identify maintenance tasks that can be performed more cost effectively by contracting with private maintenance service providers.
- Conform to the National Recreation and Park Maintenance Association's Park Maintenance Standards where practicable.

### **Public Safety**

The Town of Halfmoon is sensitive to the needs of citizens regarding police, fire and emergency medical services. Trails will be posted to advise users of applicable rules and regulations. Neighborhood residents whose homes are in close proximity to a proposed trail and trails corridors will require the same protections afforded to other residents near traffic areas. Issues include crime prevention, policing, fire prevention and emergency access.

For the most part, trail facilities are self-policed by users and neighboring residents. Citizens take a great deal of pride in their neighborhood parks and trails and tend to "keep an eye out" for suspicious activities. Experience has shown that areas that receive a lot of use by families and adults deter undesirable activities.

The Town should consider working with the various school districts and Summer Recreation Program to help educate students of all ages about the value of open spaces, greenways and trails; how they can use trails safely; and how they can help preserve and enhance these valuable public resources. Earth Day and National Trails Day offer the opportunity to spread the word regarding conservation efforts along trails.

Law enforcement responsibilities in Halfmoon are shared by the Saratoga County Sheriff's Department, New York State Police and the New York State Department of Environmental Conservation (both conservation officers and forest rangers). Complaints or calls for assistance would be directed to these agencies.

Multi-use paths/trails should be designed to accommodate access by police patrol and emergency vehicles. If access becomes a problem or if regular periodic patrols become necessary, then the law enforcement agencies may consider additional equipment to facilitate improved access to trails. Uniformed officers on specially equipped mountain bikes have proven effective in other communities

Neighborhood homeowner associations may act as monitors of local trails. A "neighborhood watch" type of model would be valuable in determining if trail rules and etiquette are being observed by trail users.

The trails planning process will consider and coordinate closely with the Town's Fire Marshall on location and design of trails to allow for fire and emergency service access to open space, greenways, parks and trails.

As a first step in fire protection and emergency access, trail maintenance staff or volunteers should remove fallen trees, branches, combustible materials and debris that are within close proximity to the trail. Regulation signs will be posted to inform users that open fires and fireworks are prohibited trail activities.

Fire department view paths and trails as an advantage to their ability to respond to fires and medical emergencies. Paths and trails can be considered as added access point to wild land fires and can also serve as pre-built fire breaks that can be used as fire control points.

Multi-use trails will be designed and constructed to accommodate access by pickup sized firefighting and emergency response vehicles. Where hiking and nature trails narrow (reaching a point where four wheel drive vehicles cannot gain access) or on longer trail segments, vehicular turn around points will be provided to facilitate rapid egress.

### **Litter and Vandalism Control**

Regulatory signs at trailhead or neighborhood access points will state a "carry in – carry-out" policy. Regular inspections and maintenance help to control litter and vandalism. Maintenance staff or volunteers will also collect major illegal dumping of refuse at trailheads, trail access points, scenic viewpoints and along trail corridors as needed. Volunteer efforts can play an important role in litter control. National Trails Day, the first Saturday in June, can be targeted by maintenance staff and volunteers in efforts to cleanup trails.

Regular trail use, as previously mentioned, is an effective way to minimize vandalism and illegal activities. Trail users, as well as homeowners, want a safe wholesome environment.

### **Vegetation Management**

Appropriate management of vegetation along trail corridors is essential to trail usability, public safety, watershed protection, aesthetic benefits and wildlife habitat preservation. Trees and low growing vegetation may be maintained to preserve views at scenic viewpoints and other areas of interest along paths and trails. Trees and branches in view shed areas may be thinned to retain views. Dominant and poisonous weeds may need to be controlled along trail corridors. Replanting of any trailside areas will be done with native species to preserve the natural character of the nearby trail environment where appropriate.

## **Natural Resource and Historic Protection**

Some trails may be proposed for open space lands, along river and stream banks, wetlands, sand dunes, eroded plateau, clay and shale formations and other geological features. These areas provide a diverse habitat for birds, mammals, reptiles, amphibians, insects and unique native plants. Trails that are located and constructed near these natural resources will be designed to minimize disturbance to the surrounding natural environment.



Where trails are located in areas designated as hillside constraint, floodplain or other natural resource, the Town must comply with all codes governing development in these special purpose districts. In addition, the Town must comply with the New York State Departments of Environmental Conservation, Transportation, Canal Authority and U.S. Corps of Engineers regulations concerning development in wetlands and/or waterways. In special circumstances where trails may be created over historic canal lands or archeological sites, the New York State Historic Preservation Office (SHPO) will be consulted before construction.

A regular maintenance schedule will be developed and reviewed periodically to evaluate the effectiveness of management, maintenance and environmental education programs. Bridges and culverts will be inspected for damage and/or clogging. Any debris which may cause an obstruction to drainage flow will be removed.

## **Volunteer Participation Program**

The Parks and Recreation Departments, and the Trails Advisory Committee will solicit and involve residents and community service groups interested in promoting, supporting, building and maintaining trails. Volunteer activities might include:

- Periodic trail inspection for major maintenance needs.
- Removal of litter and graffiti along trails.
- Removal of undesirable vegetation adjacent to trails.
- Brush clearing and building of hiking and nature trails.
- Special projects such as building foot bridges and adding plantings.
- Contributing to or distributing a town newsletter to trail users.
- Attending public meetings to promote and support trails.

Volunteer efforts could be facilitated through “adopt-a-trail/greenspace” efforts. Individuals, families, informal neighborhood groups or organizations are encouraged to volunteer to assist with maintenance of a specific segment of trail. These groups should register with the Parks Department. Parks will send reminders on a semi-annual basis to complete a trail cleanup and inspection of “their” segment. The Town will also recognize the volunteer efforts by including a volunteer’s name on an “adopt-a-trail/greenspace” marker along trail segments. Brochures describing the “adopt-a-trail” program may be prepared by the Town and distributed by the Town Clerk.



### **Staffing Requirements**

Adequate staff is essential for the successful management and maintenance of trails and trail facilities. Currently, maintenance of trails, parks and recreation facilities is the responsibility of the Parks Department. The Parks Department should partner with other Town agencies such as Highway, Transfer Station and Water Department and volunteer groups to maximize efficiencies of Town resources and funds. Some grants are available to hire additional summer or seasonal help.

## TRAIL PROJECTS

The Town of Halfmoon has recently completed a major revision of its Comprehensive Plan. The Town Comprehensive Plan, revised and adopted in 2004, calls for the creation of a number of major trails to be located in the Town. Those trails included: the Zim Smith Trail (part of the cross county system), the Old Champlain Canal Trail, the Crescent Park Trail along the old Erie Canal and a route to connect the core center of the Town to passive parks and recreation areas.

The challenge to the Town and the Trails Advisory Committee will be to link the major trails with neighborhoods, recreation and municipal areas, as well as private recreational endeavors.

### COMPLETED TRAILS

Halfmoon started its trail system several years ago with a few small trails. In the late 1990's Crescent Park and its short trail was opened. Crescent Park Trail is approximately 1,000 feet long and allows pedestrians and bicyclists to cross busy Route 9 under the Crescent Bridge to a small parking lot on Canal Rd. near Crescent Vischer Rd. Because of its location on the river and scenic vistas, this small trail has spawned interest in further development of a trail along the Mohawk River. A nature trail was created several years ago behind the Senior Center off of Lower Newtown Rd., but remains underutilized due to its short distance and narrow footpath.

### Bike Routes on State and County Highways

In the early 1990's Route 9 (north and south) and Route 146 in Halfmoon were widened to include facilities for bike and pedestrian traffic. Route 9 has wide shoulders and is a designated state road bike route in Saratoga County; however, it is not marked as such. That omission should be rectified because of increased vehicular traffic along a busy commercial corridor. A small segment, perhaps 200 feet, of Route 146 near the intersection of Route 9 has a sidewalk on the south side providing pedestrian access to commercial areas and a park-and-ride lot next to the Northway in close proximity to the town border at Exit 9.

New York State Bike Route 9 is a major on-road bike route that runs north and south from New York City to the Canadian border. In the Town of Halfmoon, Bike Route 9 is located along the Route 4 and 32 corridor on Hudson River Rd. and features a number of historical sites. Maps of this 339 mile bike route are available from the New York State Department of Transportation.



## PROPOSED TRAILS

Proposed trails are categorized into two groups: Major Trails and Secondary or Linking Trails. The following trails are broken down into those two groups.

### Major Trails

#### Zim Smith Trail

One of the first trail projects to emerge as a genuine multi-use trail in the Town of Halfmoon is the Zim Smith Trail. The Zim Smith is named after a volunteer who spearheaded the project in the early 1990's. The trail is a result of the efforts of Saratoga County and the Saratoga County Heritage Trail Committee. After years of planning and grant applications, this trail plan was rewarded with a state grant in 2002.

Zim Smith runs on top of the County Sewer right-of-way and begins in Halfmoon at Coons Crossing and ends in Ballston Spa. Zim Smith is strategically located near the Anthony Kill, the Dwaaskill and a State Forest Preserve. Construction of this 9 mile long trail across the mid county region will not only link Halfmoon with Ballston Spa, but it is expected to reach further north into the Saratoga State Park. Zim Smith will serve a growing residential area in the northern end of Halfmoon, as well as the Town as a whole. It has the potential to link the northern end of Town with the eastern portion to the old Champlain Canal and the Hudson River area down to Champlain Canal Locks 1 and 2.



Engineering and construction plans for the Zim Smith Trail are underway. Construction is to begin in Halfmoon and the trail is expected to be completed by 2006.

#### Crescent Park Trail



A continuation of this heritage trail along the historic Erie Canal is in the planning process. Grant funding has been provided to construct a trail for 2 ½ miles from Crescent Park to the town line at the Vischer's Ferry Preserve. This is an ambitious project that would link two towns for future waterfront recreation. The trail plan, in large part along Canal Rd., captures the historic canal era while it provides a number of recreational opportunities along the north shore of the Mohawk River.

### Old Champlain Canal Trail

The old Champlain Canal reminds us of its nineteenth century creation and historical connection as a route to the north country. This 5 ½ mile, off-road, heritage trail with its remaining canal structures is a prime example of blending history with recreation. This old canal inland route is presently owned by the City of Mechanicville, but Halfmoon has a direct interest in utilizing and preserving this linear corridor because of its physical location within the Town. Grant applications have been submitted, as recently as December 2004, to acquire the old canal corridor for recreation and historical preservation.



Several New York State agencies and statewide trail organizations are also interested in the creation of a Champlain Canal Trail running from Waterford north to the National Park in Stillwater where remnants of an older historical canal built by Phillip Schuyler remain. The Halfmoon segment remains an important link with Waterford to the south and other communities to the north. Linking the old Champlain Canal towpath from Waterford through Halfmoon provides a continuous trail route from Albany County into a large portion of eastern Saratoga County and possibly to the Saratoga National Park and its historical battlefield. This extended trail could also link with the cross county Zim Smith Trail to the northwest into Ballston Spa.

### **Secondary/Linking Trails**

#### Development Links

A number of Planned Development Districts (PDDs) have included a trail plan as a public benefit. Projects including trails to date include:

Fairway Meadows (Johnson Rd.)

Sheldon Hills (Route 146 near Vosburgh Rd. and Upper Newtown)

Rolling Hills (Tabor Rd. and Rte. 9 area)

Prospect Meadows (north side of Farm to Market Rd.)

Summit Hills (south side of Farm to Market Rd.)

Vosburgh Rd. PDD (donated park land on the northeast side of  
Vosburgh Rd. near intersection of Vosburgh and Route 146)



A & M Sports Complex (McBride Rd. & Route 236)

Adam's Pointe (at southwest intersection of McBride and Johnson Rds.)

Since many of these projects are in various planning stages, actual trail routes are not currently delineated. Refer to the Trails Map, Figure I, included in Chapter 3 for locations.

Additionally, some planned development projects will be asked to provide a right-of-way along road frontage to provide space for future trails or sidewalks to reach public destinations. One example of this planned cooperative effort is the Farmview Development on Harris Road.

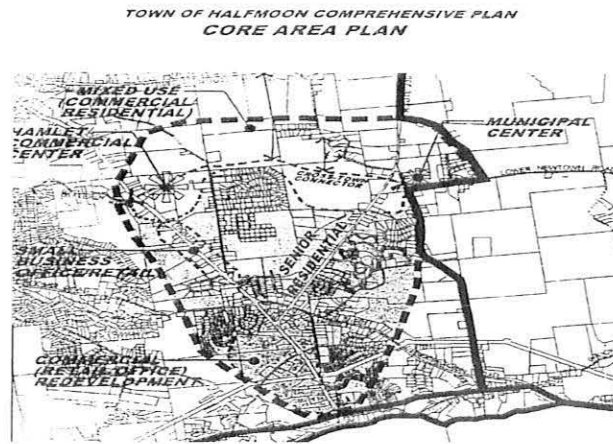
### **On-Road Loops**

On-road loops have also been identified for residents who might want to reach a destination or simply to use as a route for recreational needs. Several have been selected because of their accessibility to certain destinations or recreational value for short trips of less than 5 miles. See Figure I, Chapter 3.

As the roads delineated in the on-road loops are scheduled for improvements, consideration should be given to enhance their suitability for pedestrian/bicycle usage. Other loops may be identified in the future as recreational needs increase.

## Study Areas

A recent public information meeting regarding a town center concept revealed a great amount of interest in trails linking neighborhoods with a town/village green area. Similarly, this same concept works with the emerging municipal center. Roads leading to these areas could be planned or retrofitted to include wide shoulders, sidewalks or trails. If a new road is constructed, then trail planning may be included.<sup>9</sup>



Another example of a study area is the Northway or Interstate 87 as it runs north and south through Halfmoon. A proposal for a study was submitted to determine the feasibility of a trail running parallel with the Northway from Canal Rd. under the Twin Bridges north to Exit 10. A joint grant application was prepared and submitted by the Towns of Halfmoon and Clifton Park in 2004 to fund such a study.

Study areas are needed to produce a viable, linking neighborhood trail system that connects major residential areas with recreational opportunities and serve as alternative transportation routes.

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<sup>9</sup> Town Core Center, Public Information and Workshop, January 25, 2004. Town of Halfmoon Comprehensive Plan, Land Use Plan, 2004.

## BUILDING PUBLIC SUPPORT

Trails make good neighbors. Experience in other communities demonstrates that once a trail is built and used, adjacent property owners as well as the public at large become trail supporters. The benefits of living near a trail for recreation and healthy exercise become apparent.

Property value, liability, vandalism litter, privacy and safety are the most common concerns of property owners. The Town of Halfmoon recognizes that outreach to all concerned citizens is a necessary component of building trust and public confidence. The Town Board or its designated representative and a member of the Trails Advisory Committee will be prepared to meet with concerned residents and discuss or address any questions or issues.

A survey of residents along the Mohawk Hudson Bike-Hike Trail in 1998 indicated the following:

- 86% of the property owners use the trail.
- 88% said they were satisfied or neutral about the trail as a neighbor.
- 85% felt that the trail increased or had no effect on their ability to sell their homes.
- 86% felt the trail did not pose a risk to their own or their family's safety.
- 80% felt that the trail improved the quality of the neighborhood or had no impact on it.

(Summary of a 1998 survey, prepared by the Schenectady County Department of Planning, on adjacent landowners' view of the Mohawk-Hudson Bike-Hike Trail, a 37 mile long multi-use trail that travels along the shores of the Mohawk and Hudson Rivers through Albany and Schenectady Counties.)

### Liability

New York State law limits the liability of landowners who voluntarily allow access to their land for certain recreational activities. The Recreational Use Statute offers an important measure of protection. Trails on town land are covered by the same provisions as other municipal parks and recreational areas.

## Privacy and Trespassing

The Town recognizes the rights of private property and privacy. Trail users tend to stay on trails and respect private property as well. Trails that are well marked and signed help to direct trail users through specific areas. Additional signs can be added as a reminder to educate trail users to respect adjoining property owners and to carry out any litter.

## Safety

Trails have excellent safety records compared to many other public places. Studies have indicated that trails are among the safest places in communities. People on trails look out for each other and involved neighbors often act as local “eyes and ears.” A study of the 1800 mile Appalachian Trail found that a person was more likely to be struck by lightning than to be a victim of crime on the trail. It is recommended that emergency response strategies be included in trail management plans and on-site meetings be held with local enforcement authorities and emergency response organizations.<sup>10</sup>



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<sup>10</sup> Getting Started. A guide to Planning Trails in New York State. Parks & Trails New York and Hudson River Valley Greenway. June 2004.

## Summary

The Town will attempt to address issues that concern landowners and will work to allay any fears that may be envisioned with trails. Public education and public input combine to establish a trail system that is safe, respectful and adds to the quality of life in a community.

Adding programs to educate the public about trails is important. The Trails Advisory Committee has been holding self-guided tours on National Trails Day (the first Saturday in June) to highlight heritage trails and encourage use. Trails not only bring people out to recreate but they can serve as an introduction to the local history along many heritage areas. Trails can provide a better understanding of community, its history and how the past comes together with the present and future.



Holding public information meetings before a major trail is built is a productive indicator of public perception and cooperation. The Town held a public information meeting in March of 2005 regarding plans for the Mohawk River waterfront. A recreational survey conducted by the Town in 2003 showed overwhelming interest in trails for recreation and exercise. Out of 1444 responders the largest number of positive responses indicated interest in walking (576), nature trails (344) ranked third and bicycling (265) finished fourth.<sup>11</sup>

The Trails Advisory Committee has focused attention on the need for providing safe alternatives for residents who wish to recreate outdoors and to reach destinations without increasing automotive traffic. Producing a Trails Master Plan and updating its contents establishes a link between the Town and its neighborhoods. Bolstering public participation and trust is a positive means of gaining public support and confidence.

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<sup>11</sup> Observations of the Recreation Working Group, subcommittee of the Town of Halfmoon Facilities Committee, December 10, 2003.

## APPENDIX A

### LANDFORMS AND NATURAL AREAS

By Keith Loomis

Local landforms have been shaped by four geological events: over thrusting from the east during the Taconic mountain building, the advance and retreat of the Wisconsin Ice Sheet, wind blown sands and stream erosion.

The Halfmoon Bluffs rise 200 feet above the Hudson Valley to form the eastern edge of the Shenendehowa plateau or great plain. The plain was formed in melt water with sediments being deposited against the ice margin of the slowly retreating Hudson Ice Block which, at its greatest extent, stretched from Glenville Hills to Albia and Sycaway, east of Troy. As the ice block began to melt more rapidly than the rate of deposition of fine clays and silts, the bluffs were formed. The bluffs are composed of a series of clays with such colorful names as: Podunk, Odessa, Pantan and Vergessnes. These clays are poorly drained with a very slow rate of permeability. They have a tendency to creep on slopes. The Old Champlain Canal travels along the base of these bluffs, as does the old Delaware and Hudson Railroad and Routes US 4 and NY 32. The canal pathway is an undeveloped but potentially scenic trail from Albany to the Saratoga Battlefield and Lake Champlain. Development of this route into a bikeway which could connect into Lakes to Locks, a federally designated trail, is a goal of the Halfmoon Trails Advisory Committee.

The Halfmoon Terraces can be viewed from the northern end of the bluffs where Rt. NY 146 cuts through the bluffs as it turns towards Mechanicville. The terraces consist of three margin delta stacked one on-top-of the other. They were formed by the Iroquois-Mohawk River (Alplaus, Ballston, Round Lake, Anthony Kill channel) into the retreating Lake Albany. The highest terrace at 260 feet was constructed while ice still occupied the central gorge; a second terrace tilting from 240 to 200 feet marks the upper limit of sand sedimentation following the melting of the ice block in the gorge. The third terrace at 100 feet was formed during the period as the Iroquois-Mohawk was being transformed into today's Mohawk River with the slow opening of the Alplaus plug east of Schenectady.

Perhaps the major geologic features throughout the Town of Halfmoon are the sand mounds which resulted when the shallow melt water lakes to the west began to dry, exposing extensive sand deposits extending from Albany to Schenectady and Amsterdam. Prior to becoming covered with vegetation, these sands became 'wind worked' into what is known as the 'Colonie blow sands'. Blown across Halfmoon these sands became trapped against tilted rock outcroppings and glacial gravels sticking out of the recently deposited clays at 280 feet, in some cases burying them to a depth of 20 to 50 feet. Aquifers soon developed in these overlaying sands, the water becoming trapped between the permeable sands and the hard to penetrate clays, thus saturating the sand mounds. Springs have formed along the sand to clay margins.

The Halfmoon Anticline is an outcropping which was not fully covered by blown sands. The anticline, a convex fold in which the upheaved strata slope down from an axis in opposite directions, is located at the top of a hill on NY 146 about 1.7 miles east from the intersection of US 9 and NY 146 and 0.5 west of NY 146 and 236 intersection. The anticline is a good example of thrust faulting in the eastern Mohawk Valley. Though associated with Taconic thrusting during the Middle Ordovician Period, it is located far west of the western most zone of the Taconic region and represents small scale thrusting as a result of a more major violent event further to the east. The exposed strata are assigned to the Normanskill formation and are represented primarily by the Austin Glen Graywacke system. Black shales and siltstones are interceded along with the graywackes. Mud pebble conglomerates common in Normanskill formations can also be observed. No fossils have been reported from this outcropping but the lithology is typical of the Middle Ordovician Period.

Halfmoon still has several natural areas which lend themselves to being integrated into a regional trail system while others are best used as self-contained multi-use islands.

Myers Brook-Dwaaskill natural area corridor begins near Farm-To-Market Road, flows north along US 9 and enters the Anthony Kill below the Round Lake outlet. These streams contain native trout and are easily accessible to both fishermen and hikers. The Town of Halfmoon's Comprehensive Plan recommends stream corridor protection of this and all streams flowing within the town.

The Zim Smith Trail is an integrated system which could connect Mechanicville and the northeastern corner of Halfmoon with Round Lake, Malta and beyond. The trail follows the old Delaware and Hudson Railroad bed (present Saratoga Sewage Line) and has an easy grade. It follows the south side of the Anthonykill, passes through Coon's Crossing, proceeds over the Dwaaskill and traverses along the edge of the Round Lake marshes. The Zim Smith should be extended toward Mechanicville with the object being integration into the long proposed Old Champlain Canal Trail System.

The Halfmoon bluffs form another natural area and are home to deer, wild turkey, small game animals, pileated woodpecker, and woodland and wetland birds. Both the MacDonald Creek and the Ensign Kill have cut gorges through the bluffs on their way to the Hudson River. Both streams contain native trout. The bluffs have been mined and remediation efforts may be required to improve the habitat. brownfields and other hazards may exist in some of the abandoned mine pits. A trail along the Old Champlain Canal would make this natural area more accessible, allowing it to be enjoyed and used by both residents and visitors. This trail offers the opportunity of integration with other trails running both north and south along the Hudson Valley, east and west along the Mohawk Valley and the Zim Smith Trail.

The in-progress Old Erie Canal Trail traveling along the Mohawk River is another natural resource abundant in fish and other wildlife. The trail traverses the edge of Snake Hill, which rises 400 feet above the valley. This trail, when finished, will offer another route from Albany to points west. Further development around the Crescent Bridge area is necessary to take full advantage of this natural area and offers the town a unique opportunity. There is a need for improvement in both auto parking and boat docking. The area could be further enhanced by creating handicap accessible gardens and a fishing pier. The western section beyond the Northway offers a unique natural and historic opportunity. The area is remote and offers a good example of "Clinton's ditch" and the towpath. The towpath runs along the southside, is in good condition, and can be walked for approximately one half mile to where one crosses into the Town of Clifton Park near Wager Pond outlet. To open this area for biking, a way must be found to proceed under the Twin Northway Bridges.

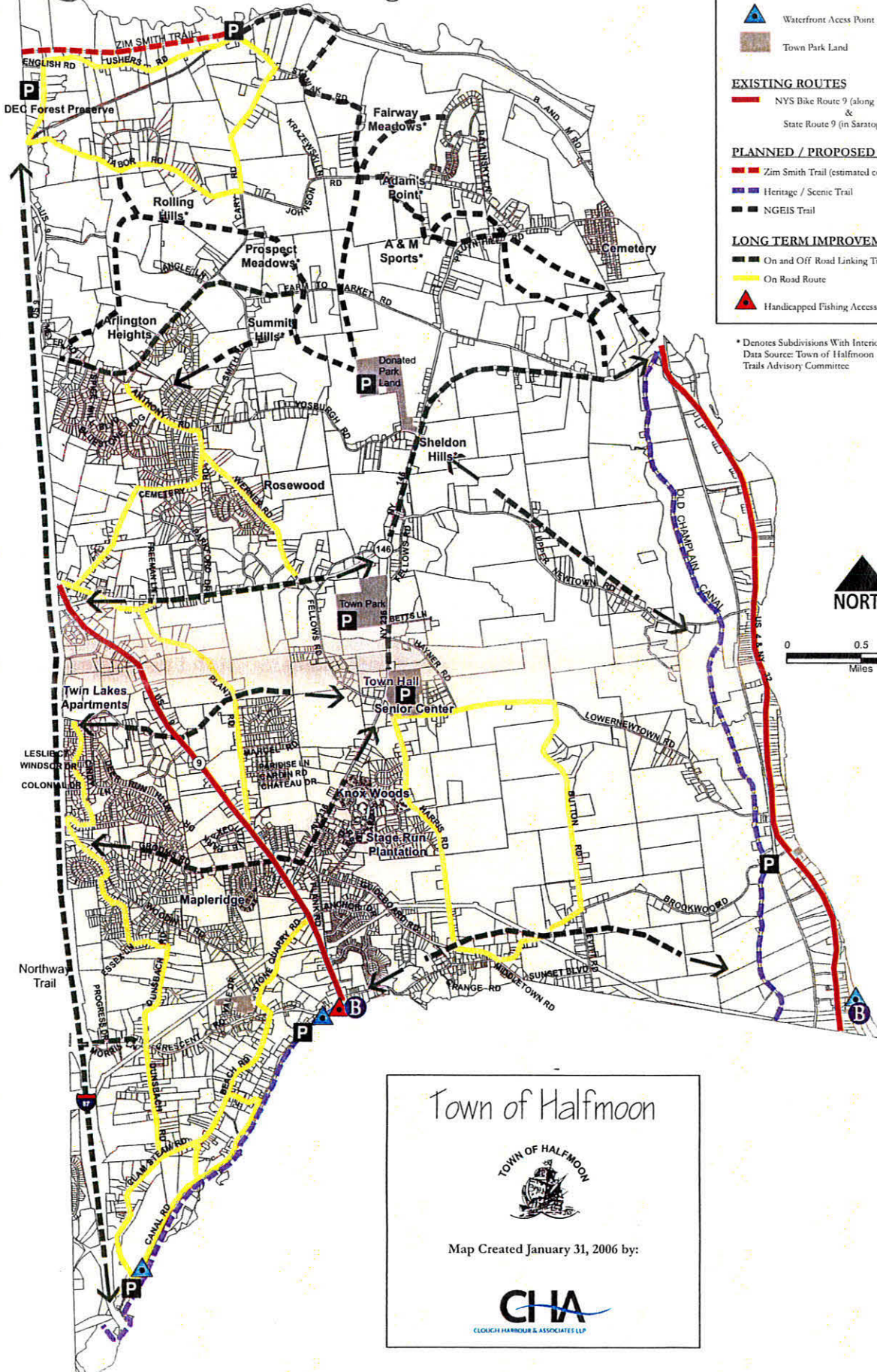
A fourth potentially integrated linear natural resource with trail development potential is the north-south telephone, and several east-west electric right-of-ways which traverse the town. These rights of way form a natural field environment and offer easy access to motorized recreation vehicles. Easements could be negotiated between the companies involved, the land owners and the manufacturing and user groups interested in this type of activity. State, county and town government could play a role by offering tax incentives and well marked and safety signed specific road crossings.

In southern Halfmoon two natural areas of note exist which do not lend themselves easily to being integrated with other areas but offer interesting experiences to local residents. These areas should be investigated by the town's Open Space Committee as potential sites for Open Space easements.

One can be broadly defined as being the interior bounded by: Rt. US 9, Beach Rd., Northway and

# Trails Master Plan

## Figure I



### EXISTING DESTINATION POINTS

- B** State Dock/Boat Launch
- P** Trailhead Parking
- ▲** Waterfront Access Point (WAP)
- Town Park Land

### EXISTING ROUTES

- NYS Bike Route 9 (along Rte. 4 & 32) & State Route 9 (in Saratoga County)

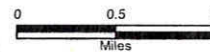
### PLANNED / PROPOSED ROUTES

- Zim Smith Trail (estimated completion 2006)
- Heritage / Scenic Trail
- NGEIS Trail

### LONG TERM IMPROVEMENTS

- On and Off Road Linking Trail
- On Road Route
- ▲** Handicapped Fishing Access

\* Denotes Subdivisions With Interior Trails  
 Data Source: Town of Halfmoon  
 Trails Advisory Committee



Town of Halfmoon



Map Created January 31, 2006 by:





Appendix B

Example of a Project Providing Accessibility



## Capital District Fly Fishers

Est. 1977

Conserving \* Restoring \* Educating  
Thru Fly Fishing

[www.timesunion.com/communities/cdff](http://www.timesunion.com/communities/cdff)



# Project Access

## Town of Halfmoon

### Master Plan

Welcome to  
**Project Access**  
The Town of Halfmoon  
is pleased to have you here.

The logo for 'Project Access' features the word 'Project Access' in a sans-serif font. The 'A' is stylized with a fishing hook and line. Below the text is a decorative graphic consisting of a horizontal line with a green-to-yellow gradient, followed by a blue wavy line representing water.

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## Vision

Our vision is to provide a fishing access site for handicap individuals, that is easy to convert, with minimal cost to transform, a here to for under-utilized area into a unique fishing access site. The site will be designed to accommodate use by several individuals at the same time.



**Think Under the Bridge!!!**



This pad, which is 7' by more than 80' can be quickly and inexpensively converted to the area's only covered fishing area for handicap individuals.



Looking west at the project site – plenty of room.



Looking east from proposed fishing pier.

## Objectives

It is our desire to bring together all interested parties so that an agreement is reached concerning the conversion, continued use and maintenance of the proposed Town of Halfmoon – Project Access Site.



Plenty of room for parking at the Terminal Dock area and a hardpan path is already in place.

## Design

The design of this project is broken down into two phases.

### Phase I

Phase I deals with the actual Project Access fishing site, which is to be constructed on the top of the abandoned bridge pier, together with an appropriate access/egress to the existing Town of Halfmoon Trail. The primary scope is to provide appropriately designed area for a handicap use (safety railing and easy access seating) on top of the existing cement pad, together with providing a wheelchair accessible walkway from the pier to the trail. In addition, provide an area appropriately signed, lined and spaced for at least three (3) handicap parking spaces on the south side of Terminal Drive.

### Phase II

Phase II expands the project by adding general site improvements from the fishing access site to the parking area on Terminal Drive. Phase II is condition upon obtaining the necessary funding needed. The primary focus of Phase II would be to (as funding permits) provide a paved walkway, properly edged (sloped & seeded if appropriate) from the access site to the parking area and provide a reserved area for handicap parking.

## Maintenance & Other Issues

It is anticipated that the maintenance of the site, after construction will be minimal.

Baring any vandalism, it is reasonable to expect that the maintenance will be limited to removing the railing and seating and moving it to higher ground to prevent being damaged by spring ice jams and then reinstalling them after ice out.

Maintenance is to be provided by the Town of Halfmoon Parks and Recreation Department.