

GREENWAYS AND PATHWAYS

GREENWAYS DEFINED

A greenway is a linear feature within the natural landscape that acts as a conveyance to integrate the various components of the landscape. Portions of the greenway function is to tie together the cultural landscape by providing transportation routes and access between Genoa's residential population and the various recreational, civic, cultural, and natural resources. Greenways also enhance the ecological function of Genoa's natural environment by preserving natural areas and corridors which are vital to the environment. A greenway is a corridor that provides the following:

- Protection, management and enhancement of Genoa's cultural resources and provision of recreational opportunities, including:
 - nature trails, bike paths and pedestrian facilities development,
 - establishing linkages between cultural and recreational resources, and
 - providing recreational opportunities;
- Protection, management and enhancement of Genoa's natural resources, including:
 - water quality improvement,
 - fish and wildlife migration and habitat enhancement, and
 - protection of natural vegetation;
- Enhancement of the quality of life and aesthetic appeal of Genoa, including:
 - scenic natural areas,
 - natural character of residential neighborhoods, and
 - natural buffers between residential and non-residential land uses,
- Provision of an alternative non-motorized transportation mode to link residential areas to major destination points within the Township.

Greenways function as linkages which tie together the various components of Genoa's cultural and natural resources. The function of creating and maintaining these linkages as a Township wide network, enhances the value and quality of each individual component.

Greenways are corridors or linkages that are managed for conservation and/or recreation and which connect focal areas. These include:

- ***Recreational greenways featuring paths and trails of various kinds, based upon natural corridors and public rights-of-ways;***
- ***Ecologically significant natural corridors possibly along waterways and/or drainageways;***
- ***Scenic routes along public right-of-ways, especially along waterways and through natural areas;***
- ***Buffer zones between neighborhoods and other, non-residential land uses; and,***
- ***Linkages providing for alternative modes of non-motorized movement between residential neighborhoods and destinations such as recreation areas, shopping districts, schools and churches.***

GREENWAY GOALS & OBJECTIVES

- Create a complete non-motorized network to provide the opportunity for pedestrian activity such as walking, jogging, and bicycling in a safe and comfortable environment.
- Provide linkages between residential areas and recreation areas.
- Preserve the Township's natural character of forested areas, water resources and open views of rural open space.
- Provide a natural corridor of open space connecting significant natural/open space and conservation areas of the Township.
- Provide buffers between development and ecologically sensitive areas.
- Maintain the ecological functions of natural waterways and drainage networks.
- Enhance natural habitat and migration routes to increase the Township's ability to support indigenous wildlife.
- Increase awareness and access to the system of greenways, bike paths and the Township's natural amenities.

Greenway Objectives:

- *Pedestrian activity*
- *Linkages from neighborhoods to destinations*
- *Preserve natural rural character*
- *Natural corridors connecting open space*
- *Buffer ecologically sensitive areas*
- *Protect natural waterways*
- *Wildlife habitat*
- *Increase awareness of greenways*

SOUTHEAST LIVINGSTON GREENWAYS

A conceptual greenways plan has been prepared for southeast Livingston County. This plan illustrates a non-motorized system of paths and conservation corridors containing significant natural features. This plan is a cooperative effort between the City of Brighton, the four surrounding townships, including Genoa, the Livingston County Planning Department and the Southeastern Livingston County Recreation Authority

The Livingston County Planning Department has also prepared a greenway manual for the Livingston County Greenways Initiative. This document outlines goals, and objectives of greenways and standards for greenway development within the county.

Both of these documents are incorporated into this plan by reference as they provide a basis and a regional context. This plan examines Genoa Township in more detail and makes additional recommendations relative to the development of greenways concurrently with the growth and development of Genoa Township.



GENOA'S CULTURAL AND NATURAL RESOURCES

Cultural and natural resource components are comprised of a variety of land and water areas; all of which function as an integral system. Because the combined total system provides more value than the sum of its individual parts decisions on individual locations should be based upon the vision of the whole. The components of Genoa's cultural and natural resource system are classified into a range of categories from public to private. These include the following:

- Brighton State Recreation Area;
- Detroit Camp;
- County lands;
- Township Hall and other Township owned properties;
- Other government properties such as public schools, road rights-of-way and utility easements;
- Private areas which are maintained in a natural state such as drainageways and wetlands;

These open space areas are accessible to a varied group of people. Government owned areas are generally accessible to the public while private green space is only open to a smaller private group of users.

TOWNSHIP PROPERTY

The Township owns approximately 45 acres containing Township Hall and featuring large open space areas and wetlands. The surrounding land also provides the opportunity for other uses such as public open space, conservation and recreation. In addition, two sites located near Latson Road and Grand River Avenue were recently dedicated for future neighborhood parks. The Township is also seeking locations for future community parks, as detailed in the Parks and Recreation Plan. The Township lands should be linked with the greenways and bike path system for the community to tie the public lands with surrounding neighborhoods.

Genoa Township is made up of a number of individual cultural and natural resource components which combine to create the overall quality community. These include:

- *Township owned natural areas and public open space properties;*
- *Other municipal properties such as the Township Hall;*
- *Schools, roads and bike paths;*
- *Drainageways, wetlands and floodplains; and,*
- *Private open space.*

PROPERTIES OWNED BY OTHER GOVERNMENT AGENCIES

The Township contains other publicly owned lands which contribute to the overall network of public open space. These include the following:

- Many road rights-of-way provide linear paths. Some have improvements such as bike paths that allow non-motorized movement. Many provide natural aesthetic amenities such as natural vegetation and views of open water.
- Public schools will serve more as destinations than routes for cultural and civic activities. These facilities are destinations for children in the community as well as locations for school related community events.
- The Brighton State Recreation Area is 4,947-acre park is located at the southern edge of the Township. The majority of the park is located in Hamburg Township, however a portion is in Genoa. Brighton Recreation Area provides a multitude of year round activities.
- The Lake Chemung Park is a recreational facility, located along Grand River on Lake Chemung, is owned by the Livingston County Road Commission. The small site provides open space and picnic facilities.
- Lucy Road Park is a 50-acre park, located just south of Grand River Avenue near the township's western boundary and owned by the City of Howell. The former landfill was closed in 1988, the City has been working with the Michigan Department of Environmental Quality to reopen the park.
- There are two Department of Natural Resources (DNR) Access Sites within Genoa Township, one of which is located on Lake Chemung and the another on Crooked Lake. These sites provide public boat launches.

Management of natural greenway systems enhances each individual's enjoyment of their own private open space and protects the investment that each resident has made in their property through the following:

- *Habitat for wildlife.*
- *Buffers between clustered development and ecologically sensitive areas.*
- *Minimize increases in storm water runoff.*
- *Vegetation to maintain air quality.*
- *Maintain natural rural character.*

PRIVATE OPEN SPACE

In addition to having public areas for access, recreation and non-motorized movement, a need exists to have these networks for ecological reasons. Private open space plays an important role in maintaining the Township's ecological functions. These include private lands maintained in a near natural state through regulatory means such as drainageways and wetlands. Private open space can also include conservation easements or park/common areas within

developments, such as PUD's as well as areas which have been left undeveloped due to constraints, such as steep slopes and dense forest.

While these private open space areas are not accessible by the general public, they do enhance the quality of each individual's personal space. Collectively, these open space areas are essential to maintaining the investment that each resident has made as a part of the community. As the Township becomes more developed, natural ecosystems will be disrupted and the rural character of the community may be altered. Providing for a natural open space which is integrated with development will help to mitigate these impacts and protect private property owner's investments. This private open space also still provides ecological benefits and wildlife habitat. Private open space within Genoa Township includes the following:

- Subdivision parks and common areas range in size from about half an acre to over 100 acres.
- Commercial Recreation Facilities include; the Mt. Brighton Ski Area, a 220-acre recreation area located in the southeastern portion of the township featuring downhill skiing during winter and an 18-hole golf course. Other commercial recreational facilities within Genoa Township include golf courses.

It is important that pathways to these publicly and privately owned facilities be provided to ensure a higher level of pedestrian activity is achieved within the Township.

ENVIRONMENTAL CONDITIONS

The natural environment is a critical element. The components to the environment function, change and interact as part of the ecosystem. A major objective of the greenway program is to maintain these natural functions in a balanced state, while still allowing the community to grow in a controlled manner. One method to protect these areas is through the greenways program. The environmental features to be considered, as described in the Environmental Conditions section of this Master Plan, are soils, topography, creeks, wetlands, lakes, woodlands and wildlife habitat.



USER GROUPS

There are a number of user groups for various components of the Township Greenways system. These include the following:

- **Pedestrians:** This group utilizes the trail and path system for an alternative means of transportation. While the requirements of this group are similar to those of the recreational walkers, convenient and safe access to destinations is most important.
- **Bicyclists:** This group utilizes the path system for recreation as well as transportation. The pathway's physical requirements are much different for this group. Bicyclists will generally have a much larger range than pedestrians and require more greatly improved trails. In crowded situations, there will be conflicts between pedestrians and bicyclists. If there are high traffic areas, separately designated paths may be required.
- **Recreational/health walkers and joggers:** These groups will utilize the path system for recreation, scenic enjoyment and physical exercise. These users require a safe and relaxing environment.
- **Handicapped:** In development of a greenway system, the specialized needs of the handicapped need to be considered. Handicapped accessible facilities should minimize hazardous conditions and permit maneuverability.
- **Educators/students:** An integral part of the greenway system are Brighton and Howell area schools. Greenways can not only be used as routes for students going to and from school, but also as "outdoor classrooms" for the study of nature.
- **Equestrians:** Despite the rapid rate of development in Genoa Township, there is a significant amount of residents that keep horses. Currently, horseback riders utilize private property, the Brighton State Recreation Area, and gravel county roads with low traffic volumes. Trails for this use may conflict with other users. If there is a demand for this use, specific bridle trails may be designated in proximity to any riding stables in the Township.

User Groups:

- ***Pedestrians***
- ***Bicyclists***
- ***Recreational/health walkers and joggers***
- ***Handicapped***
- ***Educators/students***
- ***Equestrians***

GREENWAYS

PATHWAYS

The trails proposed under the Greenway plan will provide connections between homes and neighborhood schools, and activity centers, as well as other trails and transportation facilities. In addition, these trails will provide ample opportunities for recreational use.

RECREATION

In addition to recreation related to trails and active parks, other passive recreation is encouraged where environmental impacts will be acceptable and where appropriate easements exist. Passive recreation consists of activities which are not programmed and do not require developed facilities. Examples are photography, resting, bird and wildlife observation, picnicking, reading, and fishing.

Types of Greenways:

- *Conservation*
- *Recreation*
- *Pathways*

CONSERVATION

Greenways can be established to maintain and enhance the ecological functions which are vital to the quality of life on Genoa. The natural functions to maintain and the components of the natural system are described in the previous section of this plan under Environmental Conditions. Natural features which will determine the most appropriate location for greenways serving this purpose are soils, drainage, wetlands, vegetation and wildlife habitat.

Drainageways: Greenways should be established to protect natural drainageways. This will include the drainageways wetland areas that the drain flows through and the natural vegetation in the upland areas surrounding drainageways. Sufficient natural buffers on both sides of creeks should be protected in a natural vegetative state to maintain the quality and moderation of surface water flow into the drainageways and protect from excessive soil erosion.

Habitat: Greenways should be established to reconnect natural habitat corridors. Where there are areas of wildlife habitat such as wooded areas or wetlands, these can be connected by greenways. Connections should be made between like natural areas, and the connection should match the natural characteristics of the existing habitat areas.

PATHWAYS

Pathways are to be shared use facilities among pedestrians, cyclists, equestrians, the handicapped, and other pathway users. The pathways will provide connections between homes and neighborhood schools, other activity centers, other pathways and transportation facilities. In addition, these pathways will provide ample opportunities for recreation. Pathways are proposed in the following locations:

- **Along Grand River Avenue:** Paved pathways should be developed along both sides of Grand River Avenue from the City of Brighton to the City of Howell. This will serve as the principal east-west connection through the Township and link many of the neighborhoods in the northern portion of the Township with the adjacent cities. Other north-south pathways will provide connections to the Grand River Avenue paths to create an integrated network.
- **Latson/Nixon/Chilson Roads:** a continuous paved path is proposed to span the Township from north to south along the Latson/Nixon/Chilson Road corridor. If a new interchange is constructed at Latson Road, the overpass will be designed with a pedestrian pathway. Pathways are proposed along both sides of Latson Road, north of Grand River Avenue to serve the higher density residential in this area which is in close proximity to the Grand River Avenue corridor. The sections along Nixon Road and Chilson Road in the southern portion of the Township may include a paved path and a separate unpaved path for horseback riding. At the southern edge of the Township, the pathway will enter the Brighton State Recreation Area and tie into the hiking paths located in Hamburg Township to the south.
- **Brighton Road:** A pathway is proposed along Brighton Road between Chilson Road and the City of Brighton. This will provide a connection between the higher density residential in the area of Oak Pointe and the City of Brighton.
- **Dorr Road:** A new Township Hall has been constructed on Dorr Road between I-96 and Crooked Lake Road. A pathway along Dorr Road would provide a link between the Township Hall and the new Town Center at Grand River Avenue. This would require a pedestrian bridge over I-96. A pathway along this route would also provide a strong link between the higher density residential area around Lake Chemung and that around the Tri-Lakes area. A long term goal is to have the path extended down Conrad and Clifford Road to connect with Brighton Road.

- **Crooked Lake Road:** A pathway extending west along Crooked Lake Road from the Township Hall to Nixon Road would complete a looped path system around the Tri-Lakes area. This would also provide a linkage between the Township Hall and the Three Fires Middle School.
- **Challis Road:** An off-road shared used pathway should be developed along Challis Road from Dorr Road to the City of Brighton.
- **Bauer Road:** An off-road shared used pathway should be developed along Bauer Road from Challis Road to the Brighton State Recreational Area at the southern edge of the Township.

Pathway Siting: The major objectives of pathway location are as follows:

- To design a pathway that produces a minimum impact on the land.
- To provide for recreation and transportation.
- To choose an alignment that is visually pleasing and provides a variety of views and experiences.
- To take advantage of the natural terrain and vegetation.
- To provide a pathway that requires minimum maintenance.
- To have minimum impact on wildlife habitat and wetlands.

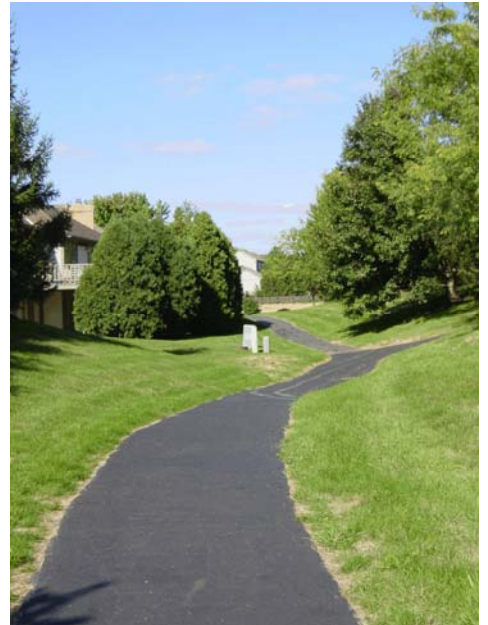
Design:

- The Livingston County Greenways Initiative contains standards for development of various types of trails. The standards contained in this plan should be followed.
- A pathway should be designed with curves that appear to have a purpose, not be placed haphazardly or regularly throughout the pathway length. An alignment which has long curves and short tangents will flow gracefully through the landscape.
- The relationship between Greenway projects, particularly pathways, and nearby private spaces must be carefully considered. Views, residential privacy, and access from residential privacy, and access from residential areas adjacent to Greenways are important.

- Residential neighborhoods require a design that is sensitive to the character, forms, materials, and colors. Nearby residents should be closely involved in the design process. Consider carefully the character of the public/private interface.
- Environmentally sensitive areas require a careful balance between the desire for recreation and the protection of natural resources. Determine the appropriate location and intensity of use of any path system carefully. Take advantage of opportunities to enhance the natural environment of the greenway. Provide seating in areas where wildlife can be observed without being disturbed.
- Pathways and wildlife habitat potentially conflict because of the environmental impact of construction. In addition, some wildlife species are intolerant of the presence of pathway users. Where high quality habitat is present, pathway links should be rerouted around the habitat. Subtle, attractive buffers should be integrated where necessary to protect privacy and wildlife.
- Occasional viewing, and seating areas can be provided along the path for resting and passive recreation activities.
- Path alignment should consider the larger patches of vegetation, open space, and drainage corridors that have high wildlife value by not cutting through the center of such parcels.
- Locate path intersections at natural focal points and convenient access points.

Pathway type: Pathways can be paved or unpaved. Paved pathways should be designed and constructed following the standards of the American Association of State Highway and Transportation Officials. To determine whether paved, unpaved, or parallel paved and unpaved pathways are most appropriate, the following criteria can be used:

- Paved pathways should be provided when:
 - High bicycle speed and volume is anticipated
 - There is an existing or projected year round transportation need for the pathway.
 - Winter maintenance is anticipated.
 - The pathway connects paved pathway sections along a Greenway.
- Unpaved pathways should be provided when:



- The Township finds that a paved pathway would cause unacceptable environmental impacts.
 - The criteria for paving a pathway are un-met and a pathway is still needed.
 - Equestrian use is anticipated.
- Separate paved and unpaved pathways may be provided when:
 - Both the criteria for paving a pathway are met and equestrian use is anticipated.
 - Use conflict are anticipated because of high volume.
 - The environmental impacts of separate pathways are acceptable.
 - The area has sufficient space and amenity to make separate pathways desirable.

