

Ontario County is a part of the Finger Lakes Region and is made up of 662 square miles, of which 18 square miles are water. Ontario County is especially rich with historic sites that highlight the unique history and culture of the area. The cities, Canandaigua and Geneva, town of East Bloomfield and Farmington, and the village of Clifton Springs, in particular have impressive and well preserved historic districts.

# 1. What is green infrastructure?

Stormwater is the water generated by rain or snowmelt on "impervious surfaces" (such as roads, sidewalks, parking lots, and buildings). In urban environments, stormwater usually flows into stormwater system pipes before eventually going to a local stream, lake, or waste water treatment plant. This stormwater management approach is often termed "gray infrastructure". An alternative approach is the use of green infrastructure. Green Infrastructure is a system that mimics natural processes in order to infiltrate, evaporate, and/or reuse stormwater. Green infrastructure uses soils, topography, and vegetation in a way that minimizes the impacts of our everyday life on the environment and local ecosystem while also maintaining water quality.

# 2. Why is green infrastructure historic?

The goal of the National Historic Preservation Society is to keep alive historic sites, and keep the valuation of history alive. By implementing green infrastructure the integrity of both the historic district and the environment may be protected, restored, and preserved.

Historically, stormwater was managed and stored on site, rather than directed away and into a treatment facility, or another waterway. Green infrastructure is historic because it brings this concept of treating water on site back. Historically, gardens, heavy vegetation, porous pavement, and water storage was common practice. By integrating these types of techniques back into urban modern environments the historic nature of these districts can be strengthened.

## Acknowledgements

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## About the FLI-Community Design Center (FLI-CDC)

The Finger Lakes Institute, in partnership with Hobart & William Smith Colleges has created a community design center that strives to provide Finger Lakes communities with innovative, creative, and sustainable design solutions that improve the built environment and quality of life, while protecting the natural environment.

Communities throughout the Finger Lakes region share similar economic, environmental, and social characteristics mainly as a result of the natural assets and history of the region. The current and future state of communities relies on improving quality of life for all citizens, being good stewards of natural resources, and fostering the responsible growth of the built environment. To support these efforts, we offer comprehensive sustainable community development planning and design services to communities throughout the Finger Lakes region.

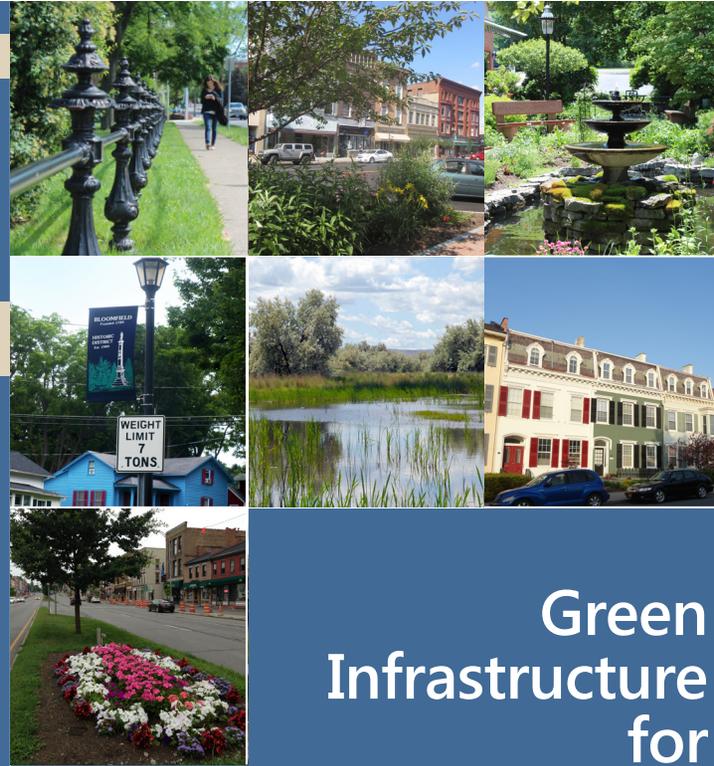
It is our mission to:

- Raise awareness of the benefits and potential of sustainable community development and design for small towns, villages, cities and other entities;
- Encourage preservation and protection of natural resources and the built environment;
- Facilitate regional planning and collaboration among communities, businesses, non-profits, higher education institutions, and other entities;
- Foster community resilience by providing an active resource center for holistic community planning and design and disseminating our expertise nationally.

Please contact us at [fli@hws.edu](mailto:fli@hws.edu) for more information.

## About this Project

The primary goal of Green Infrastructure for Historic Districts is to provide assistance to municipalities and residents who wish to incorporate the concepts and practices of green infrastructure into their structures while maintaining the historic integrity of the individual buildings and the overall character of their community.



# Green Infrastructure for Historic Districts in Ontario County, NY

- Genesee Park Historic District
- Geneva South Main Historic District
- Clifton Springs Historic District
- East Bloomfield Historic District
- Farmington Quaker Crossroads Historic District
- Canandaigua National Historic District
- Downtown Geneva Historic District

### 3. How is green infrastructure connected to the specific history of each historic district?

#### Genesee Park National Historic District

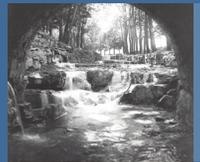
is a great place to re-implement porous paving. **Porous or permeable pavement** is material that allows storm water to move through the surface and be absorbed rather than flow over the surface. The current pathway in the park, sidewalks, driveways, and streets are impervious and could be replaced with a porous material. Historically, the park had a dirt path, and cobblestone and gravel streets and driveways, now they are asphalt and concrete. **Ribbon driveways** could also be applied in this district.



Residences are close together, enabling easy sharing of driveways.

#### Clifton Springs National Historic District

s sanitarium used to feature a rooftop garden in the solarium, which could easily be reintroduced to the building. A **roof garden** is simply any kind of garden that is grown on the roof of a building, which helps reduce, and filter, rainwater and run-off. Sulphur Creek also was channelized by concrete, and could be daylighted to help prevent flooding, restore and recharge groundwater, and filter water. **Stream daylighting** is the process of exposing a concealed stream or channelized stream and returning it to its natural state. Adding more **stormwater planters** to the district and installing a cistern system could also enhance the districts historic feel while also helping mitigate stormwater. **Cisterns** are large-scale rain barrels used in commercial and industrial settings. A cistern system could be installed underground and feed into the sanitarium, help water stormwater planters that exist, or collect water to be used in the gardens surrounding the hospital or Foster Cottage.



#### East Bloomfield Historic District

is home to many shared driveways. **Shared parking** refers to areas or spaces that are used to serve two or more properties. This is when individual properties, either on the same site or from nearby sites form an agreement to share available parking space and/or driveways. these are examples of historic green infrastructure practices that still exist today in this district. A vegetated swale and filter strips are also recommended. A **bio-swale** is a drainage channel that is broad and shallow with a dense stand of vegetation covering the side slopes and bottom. A **filter strip** is a type of buffer strip that is an area of vegetation, generally narrow and long, that slows the rate of stormwater run-off from impervious surfaces. Using these together helps drastically improve



drainage and filtration issues and allows native vegetation to grow and reclaim impervious areas that wouldn't have existed pre-industrialization.



#### Canandaigua National Historic District

is made up of two major different sections: commercial and residential. The residential section is rich with **ribbon and shared driveways** that are characterized by porous paving as well. Historically, this area was characterized by its wide tree-lined streets and lush gardens, which still exist for the most part today. The commercial district is currently undergoing some construction where stormwater planters, tree pits, and rain gardens are being installed. A **rain garden** is a shallow depression in the landscape that is planted with deep-rooted native plants and grasses. **Stormwater planters** are small landscaped containers that act as storm water treatment devices and can be placed above or below ground. **Tree planting** usually refers to concentrated groupings of trees planted in landscaped areas while tree pits, also called tree boxes, generally refer to individually planted trees in contained areas such as sidewalk cut-outs or curbed islands. The enhancement and addition of these green infrastructure techniques will only amplify the historic



feel of this district and restore some integrity-after all gray infrastructure, impervious pavement, and pipes didn't originally exist when most of these historic structures were built.

#### Farmington Quaker Crossroads Historic District

is located in an area home to a large portion of the State's freshwater wetlands. Historic illustrations and photos depict heavily vegetated and natural scenes and properties, where many of the homes are surrounded by a moat of vegetation. A **rain garden** is a shallow depression in the landscape that is planted with deep-rooted native plants and grasses. These look like normal gardens, but help soak up more water and alleviate any drainage issues property owners may have. **Porous paving** is recommended for the driveway and parking lot of Farmington Friends Church, cemetery, and Meeting-house due to fairly light traffic, and historically the Quakers left it as grass wanting to leave their natural environment as untouched as possible.



#### Geneva South Main National Historic District

currently has rain barrels and ribbon and shared driveways, however, more are recommended. Historically, the western lakeside of the street was supposed to be left undeveloped, but as development occurred people experienced poor drainage issues in their backyards due to the severe slope. **Rain barrels** help capture and store this water, preventing flooding and erosion. They are water tanks used to collect and store rainwater runoff, typically from rooftops via rain gutters. **Storm drain marking** is also recommended for this district. Storm drain marking is labeling a storm drain inlet with a re-printed marker, title, sticker, or stencil that has a message to prevent pollution into storm drains.



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#### Downtown Geneva Historic District

is undergoing a transformation economically, and aesthetically. Gardens and contained planters along streets and outside of businesses is not only making the area more friendly looking, but also helping mitigate stormwater runoff. Additional **rain gardens, stormwater planters, and tree pits** could help bring uniformity to this, and treat a greater amount of water before it reaches Seneca Lake. Installing green roofs to large buildings could also help mitigate rainwater. **Green roofs** are roofs that are partially or completely covered with vegetation planted over a rooftop membrane.



These would have little to no effect on the historic integrity of the district because of their location - they would hardly be visible.