# Cranberry Township Greenways Study

## Cranberry Township, Butler County, Pennsylvania

*FINAL REPORT - May 2025*

Environmental Advisory Committee

CRANBERRY TOWNSHIP

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# Acknowledgments

This study was prepared with the assistance of the Cranberry Township Environmental Advisory Committee and Township Staff. This study reflects a significant contribution of time, expertise, advice, and feedback from the following individuals and would not have been possible without their valuable participation.

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This study was prepared with assistance from HRG.

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# Executive Summary

The Cranberry Township Greenways Study was developed to assess existing green space, natural landscapes, and other biological resource areas in the Township for their potential to be developed into a connected greenways network. Through a process of data collection and spatial analysis the study outlines potential areas for the creation of a complete greenways network but does not definitively establish the network's path. To guide the creation of this network, research was performed to assess best management practices for the conservation of land and the administration of greenways. Based on the findings of that research, implementation strategies and funding sources were recommended to address the specific needs and goals for the development of a greenways network in Cranberry Township.

The study is organized into several chapters, including an Introduction, Existing Conditions, Land and Connectivity Assessment, Creating a Greenways Network, and Implementation Strategies and Funding Sources. The Introduction outlines the purpose of this effort and establishes goals for the development of the greenways network, including, Connectivity, Usable by People, Education, Protection, Wildlife Corridors, and Economic Development. These goals highlight how the Township will benefit from the development of the greenways network. By enhancing physical connections through the creation of trails and paths, the network will also provide additional opportunities for recreational, economic, social, and civic engagement. By considering contextually appropriate greenways development, natural landscapes can be conserved, providing healthy eco-systems for both human and wildlife communities. By considering all of these elements, the development of the greenways network will be more successful in adding to the high-quality of life experienced by Cranberry Township residents.

The Existing Conditions chapter provides a summary of current physical, geographic, and political conditions in the Township, related to the development of a greenways network. This chapter documents the current status of resources and conditions, informing the exploration of future opportunities and highlighting potential limitations.

The Land & Connectivity Assessment builds on the existing conditions data to perform a spatial analysis aimed at determining a general route to guide the future development of the network. Through the overlaying of relevant data layers, areas best suited for development or preservation may be determined. This spatial analysis also identifies opportunities for connectivity. This chapter helps to identify the best ways to connect existing green spaces to create a complete network. It also identifies opportunities to connect to existing points of interest, like retail hubs, schools, and other community resources. Finally, the assessment helps to identify potential barriers to the formation of the network. These barriers may take a physical form, such as a major roadway like the Pennsylvania Turnpike, which transects the Township, or may represent an administrative or political barrier, like gaining access to develop a trail on an existing utility easement. The opportunities and limitations identified by this process are summarized in the Conceptual Network Map, which provides guidance for the future development of the Brush Creek, Coal Run, and North Boundary Greenways, and their secondary linkages.

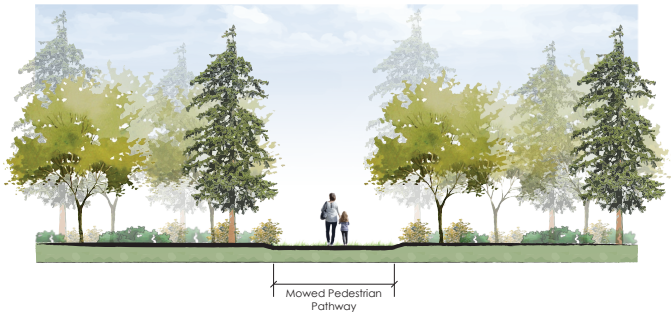
Based on the findings of the Land & Connectivity Assessment, research was conducted to identify potential administrative and legal structures by which a greenways network can be established. Different methods for land acquisition and conservation, and the establishment and maintenance of the greenways network were explored.

Based on the necessary administrative capacity, it is recommended that the Cranberry Township Community Chest (CTCC) be established as the conservation organization, leading the creation and administration of the network, and its associated properties.

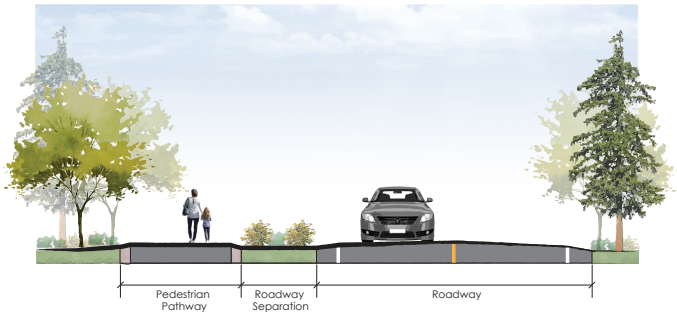
Finally, based on the findings of the earlier sections, as well as input from the Cranberry Township Environmental Advisory Committee (EAC) and Township Staff, implementation strategies were developed. The implementation chapter explores specific opportunities and challenges that the CTCC may face in creating a greenways network, and suggests potential solutions. This section also provides information about external funding sources, which will likely be needed to carry out the vision of this study.

In addition to identifying general locations for the future greenways network, the study also identified connection types, depicted in the images below. These four connection types- organic, on-road, shared-use paths, and trail heads were identified based on their ability to contribute to the fulfillment of the overall goals for the greenways network, while also providing options for contextually specific limitations or opportunities that may arise throughout the development of the network. These connection types are elaborated on in the Land & Connectivity Assessment Chapter.

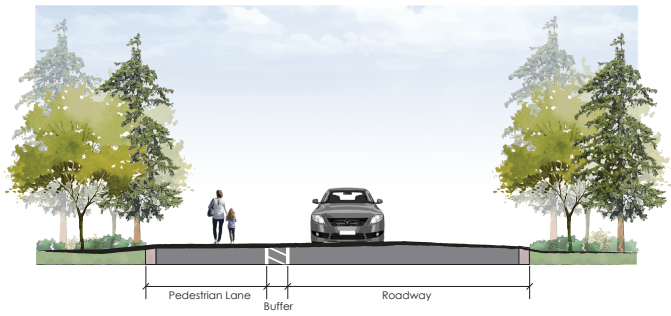
**ORGANIC CONNECTION**



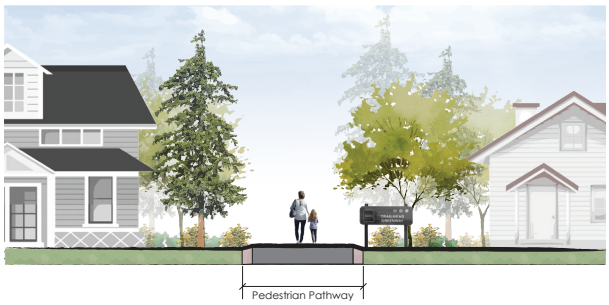

**SHARED USE PATH**




**ON-ROAD CONNECTION**




**TRAILHEAD**



# Introduction

# Overview

Following a period of rapid growth in the 1990s, Cranberry Township has experienced gradual growth over the last thirty years. Residential and commercial development continue to meet local demands. Thoughtful planning efforts have maintained green space and created recreational uses throughout the community. However, a holistic framework has not been put in place to ensure that these spaces are established and used to their greatest potential. The creation of a larger vision will guide the development of an interconnected network of open spaces, which will promote the preservation of the natural environment, enhance quality of life for all residents, and facilitate economic opportunities in Cranberry Township. This larger vision comes in the form of a greenways network.


From regional recreational opportunities at Graham Park to permanent open space required by the creation of a planned residential development (PRD), significant open space has been maintained in Cranberry Township. In some cases, trails have been created to connect these area, like in the case of Hunter's Creek Trail, but the network is not yet complete. The creation of a complete greenways network will benefit the community in many ways.

# Defining Greenways

Originally coined in the nineteenth century, the term "greenway" has taken on many meanings. To some, this term evokes a vision of pristine, natural landscapes, preserving and protecting sensitive habitats, for generations to come. To others, greenways may inherently incorporate recreational opportunities or provide walking and biking connections. In actuality, greenways may serve all of these functions, and many more. Therefore, when discussing greenways, it becomes important to establish a working definition. The working definition for this study has been included below.

It is important to highlight that greenways do not function in a vacuum. Greenways must be established as a network of integrated spaces that provide or enhance connectivity for the movement of people, flora and fauna, and even ideas. This study focuses on the process of expanding on existing, fragmented green spaces to create a larger, more productive and impactful system.

Greenways may mean many different things to many different people. Therefore, the following is the working definition being used for the study:

*A greenway is a corridor of open space. Greenways vary greatly in scale, from narrow ribbons of green that run through urban, suburban, and rural areas to wider corridors that incorporate diverse natural, cultural and scenic features. They may follow old railways or steep slope lines, or they may follow stream corridors or wetlands, and include water trails. While their character may vary, they all serve to create physical and social connections in a community.*

*Some greenways are for human activity and may accommodate motorized and non-motorized recreation and transportation uses. Other greenways conserve natural infrastructure for the benefit of community, economy, and environment and are not designed for human passage.*

# The Value of Greenways

The development of greenways provides numerous benefits to the municipality in which they are located, its residents, and the surrounding region. In addition to the commonly known recreational benefits, greenways also play many important roles in the health and growth of a community. From enhancing overall quality of life to encouraging economic development, greenways have intrinsic value, justifying an investment in their creation and maintenance over time. This section outlines some of the benefits of greenways, which should be cited to help motivate buy-in and investment in greenway development.

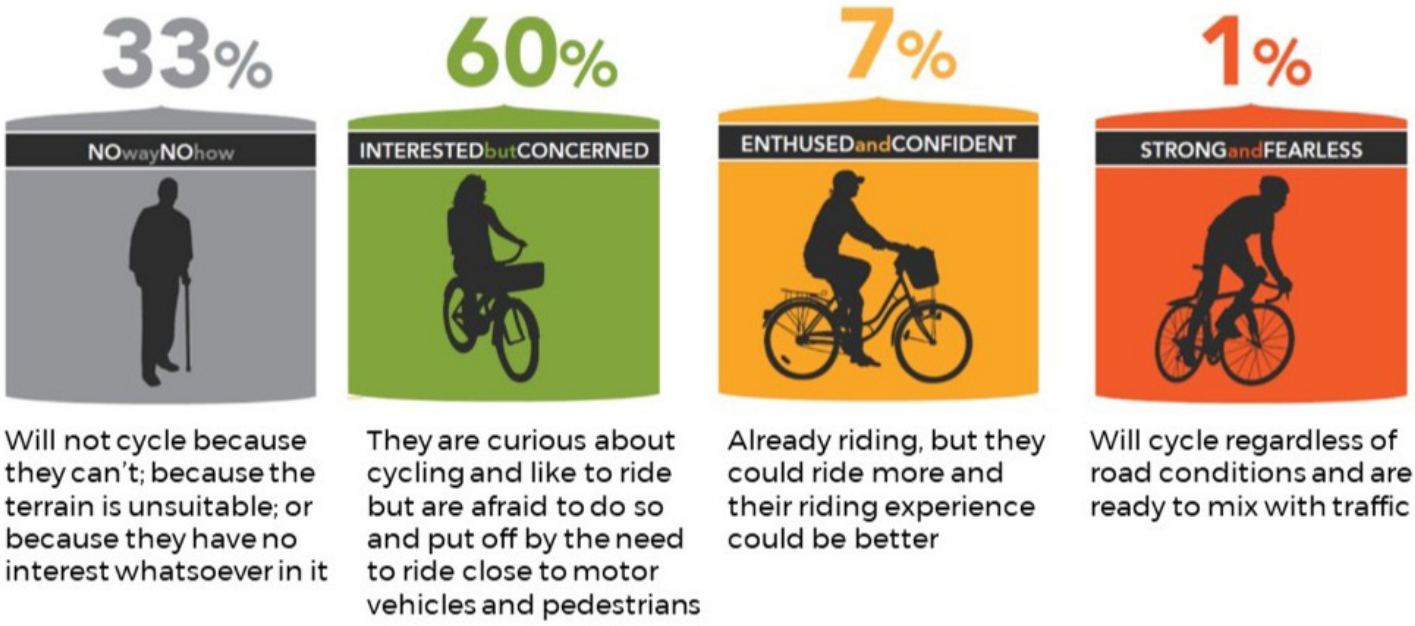
Cranberry Township's unique proximity to both sprawling green countryside and diverse goods and services has attracted many residents to the area. The proactive preservation of open space through development standards has established open space throughout the Township. The formation of greenways will enhance the benefits provided by preserved lands, and ensure that residents continue to enjoy the Township's unique character.

The preservation of these spaces also plays an important role in ecological sustainability. The creation of greenways preserves vital habitats and wildlife corridors; promotes plant and animal species diversity; filters and absorbs contaminants of surface runoff; cleans the air; controls runoff and related flooding, helping to prevent property damage; and can help to mitigate or buffer negative effects of development on the natural environment. By creating greenways, the important services that the natural ecosystem inherently provides are maintained, saving millions of dollars in engineering and construction fees to try to replicate these processes unnaturally.

The formation of greenways not only helps to save money by preserving ecosystem services but can also promote economic development. Greenways encourage both new residents and new businesses to settle in an area. Proximity to natural spaces has been shown to increase demand for and value of residential properties. People, especially younger generations and young families, are attracted to areas with easy access to outdoor recreation. Greenways provide these opportunities by serving as both outdoor space themselves and as connections to parks and other recreational spaces. This activity motivates businesses to locate along greenways as well, bringing new jobs, additional tax dollars, and economic activity.

> "For every dollar that is spent on a *greenway*, it is proven that they will return no less than $3 in benefit, and oftentimes $10 of benefit. Greenways offer substantial return on investment."
>
> ~Charles A. Flink,
> *The Greenway Imperative: Connecting Communities and Landscapes for a Sustainable Future (2020).*

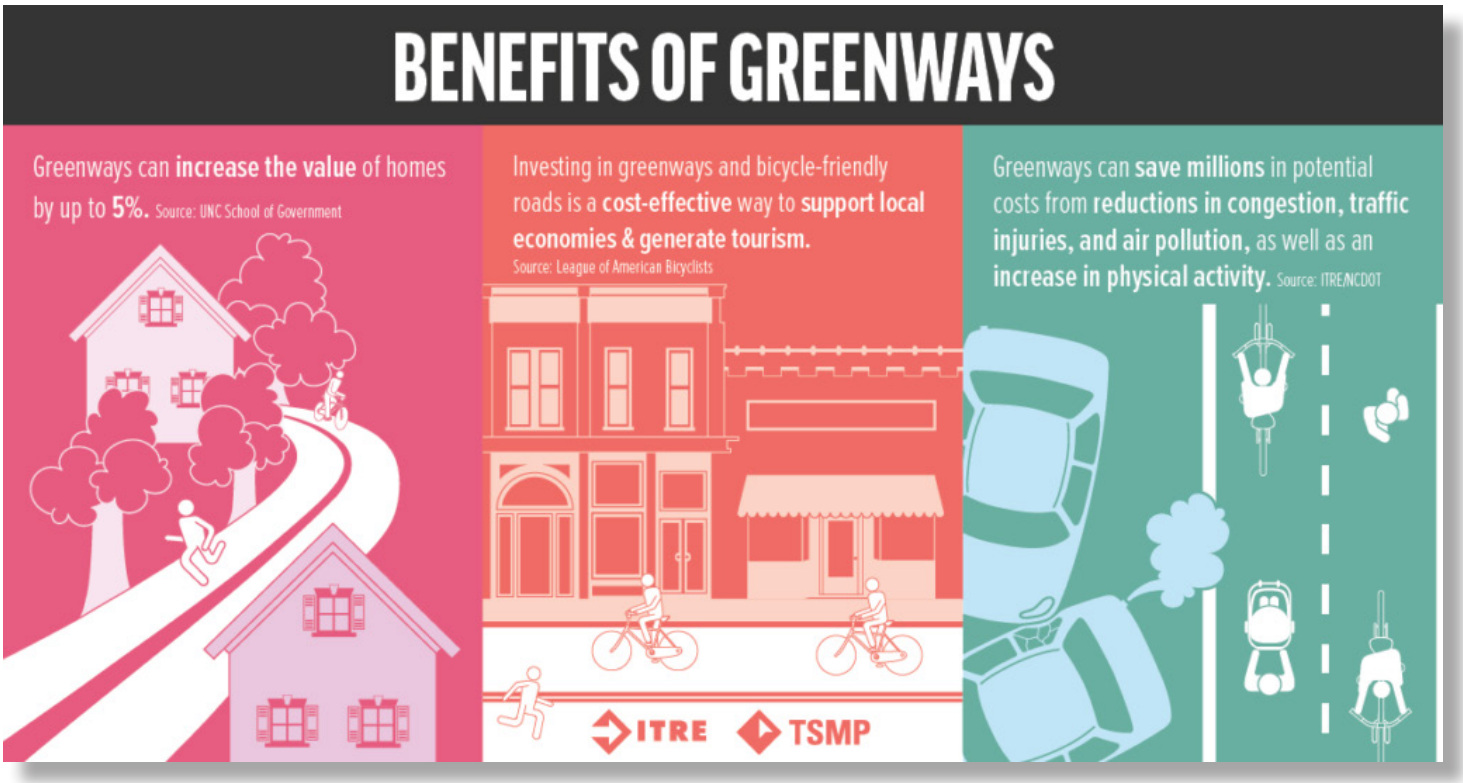
As previously mentioned, greenways establish connections. The creation of greenways provides people with attractive, safe, and accessible places to walk, bike, and roll. These separated and landscaped facilities can provide greater separation from busy roadways, making them more enjoyable and lower stress pathways, expanding not only recreational opportunities, but mode choice for residents. Active transportation users generally fall into four categories- strong and fearless; enthused and confident; interested but concerned; and no way, no how. These categories, elaborated on in the image below, were originally observed and defined by Roger Geller, Bicycle Coordinator for Portland, Oregon, but have since been reviewed and adopted by the transportation planning industry to represent users of all active modes. They generally represent the willingness of users to walk or bike when different types of infrastructure are present, or not. The majority of users fall into "interested but concerned," and are curious about active modes, but require walking and biking facilities separated from vehicular traffic to feel comfortable doing so. The group generally includes children and other vulnerable users. The creation of greenways creates opportunities for these separated facilities that may not otherwise exist. By increasing easy access to comfortable non-motorized transportation routes, it is more likely the people will make use of these options for convenient non-recreational trips. This not only improves health and quality of life for residents, it helps to reduce auto-dependency and vehicle trips, decreasing air pollution and roadway congestion.




*Source: https://john-s-allen.com/blog/2022/12/roger-gellers-categories-conflate-characteristics/*

Physical movement is directly connected to personal health. Therefore, convenient access to active transportation routes and recreational opportunities encourages activity, increasing overall community health. By ensuring that greenways provide people of all ages and physical abilities with safe access to low or no-cost places to cycle, walk, hike, jog, or skate, all residents can incorporate activity into their daily lives. Establishing connections from neighborhood to neighborhood, and from neighborhoods to schools, provides children with autonomy, and establishes lifelong healthy habits. These physical connections also help to establish social connections and community ties, promoting civic engagement and helping to reduce increasing feelings of isolation in modern suburbs.

Overall, greenways play an important role in the physical, emotional, and financial well-being of a community. These spaces establish important connections between people and places. While their creation requires an investment of money and time, it is likely to pay dividends well into the future.




*Source: https://ncvisionzero.org/album/pedestrian-safety-images/resize-benefits-of-greenways20211213_ver6/*

# Purpose

The Cranberry Township Greenways Study was created to explore opportunities to expand and create greenways within the Township. The goal of this study is to document and investigate the Township's existing resources and conditions. Through this process, potential greenways development sites will be identified as part of the creation of a larger network. Finally, a process for carrying out the creation of a structured greenways network will be recommended. This process is not intended to identify an exact network for implementation, but instead identify sites with potential to be included and determine an overarching process for future implementation.

To help guide the research and recommendations of this study, themes were developed to highlight elements most important to Cranberry Township. Each theme represents a desired outcome or benefit from the creation of the greenways network, which should be considered and prioritized throughout the research and development process. The themes were developed in collaboration with the Environmental Advisory Committee (EAC) and Township Staff, and are listed below in no particular order.

- **Connectivity:** Greenways as an opportunity to improve the overall civic connectivity of the Township, as well as providing additional non-motorized connections. The connections provided by these greenways are more welcoming spaces with greater separation from vehicular traffic.
- **Usable by People:** Greenways should exist as part of a "nodal-network" that allows residents to utilize trails for improved connectivity to desirable destinations. Greenways may serve as both destination and the connection, creating bonds with existing destinations in the Township.
- **Education:** Greenways represent an opportunity to educate the public about the environment, stewardship, and land preservation. The greenways may include elements of education, like signage or guided trails that directly educate users, and may be used by education groups as a space to educate interested parties. This will be an opportunity to coordinate and collaborate with organizations like Seneca Valley School District. These opportunities for education may also help to motivate community investment in the greenways network.
- **Protection:** Greenways represent an opportunity to conserve and protect important lands and the bio-resources and ecosystem services they contain.
- **Wildlife Corridors:** Greenways serve not only to protect land, but the animals that rely on these areas for habitat by thoughtfully structuring functional wildlife corridors.
- **Economic Development:** Greenways represent opportunities to capture revenue in the community. This may be through the motivation of recreation and economic activity directly related to the greenways, or through overall improvement in quality of life that will help to motivate attraction and retention of residents. Many residents have moved to the area for the semi-rural character, and the greenways will help to preserve that.

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# Existing Conditions

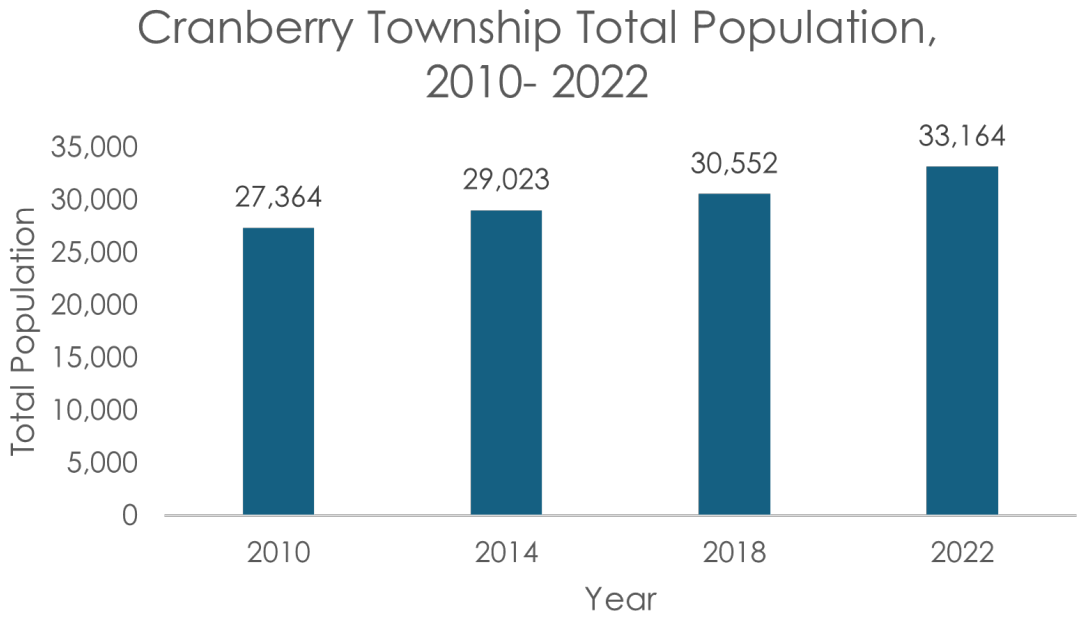
# Township Overview

Cranberry Township, Butler County, Pennsylvania is located in western Pennsylvania. The Township sits at the intersection of Butler, Allegheny, and Beaver Counties. Seven municipalities border Cranberry, including Jackson Township to the north, Forward Township to the northeast, Adams Township to the east, and Seven Fields Borough to the southeast, Pine Township and Marshall Township in Allegheny County are located to the south, and New Sewickley Borough in Beaver County is located to the west.

Situated approximately thirty minutes north of downtown Pittsburgh, the Township has long served as a residential suburb. Prior to that, the Township was predominantly rural, and even in more recent years, residents cited the rural character as a desirable feature when choosing to live in the Township. However, over time Cranberry has developed its own identity as a regional hub for shopping, employment, and other economic activity. The Township's status as a regional hub makes it no surprise that based on American Community Survey (ACS) estimates, Cranberry Township's population has been steadily increasing. The graph below depicts the population increase between 2010 and 2022. This increase has not been the case for all Butler County communities, with many experiencing a slight decrease over the past decade.

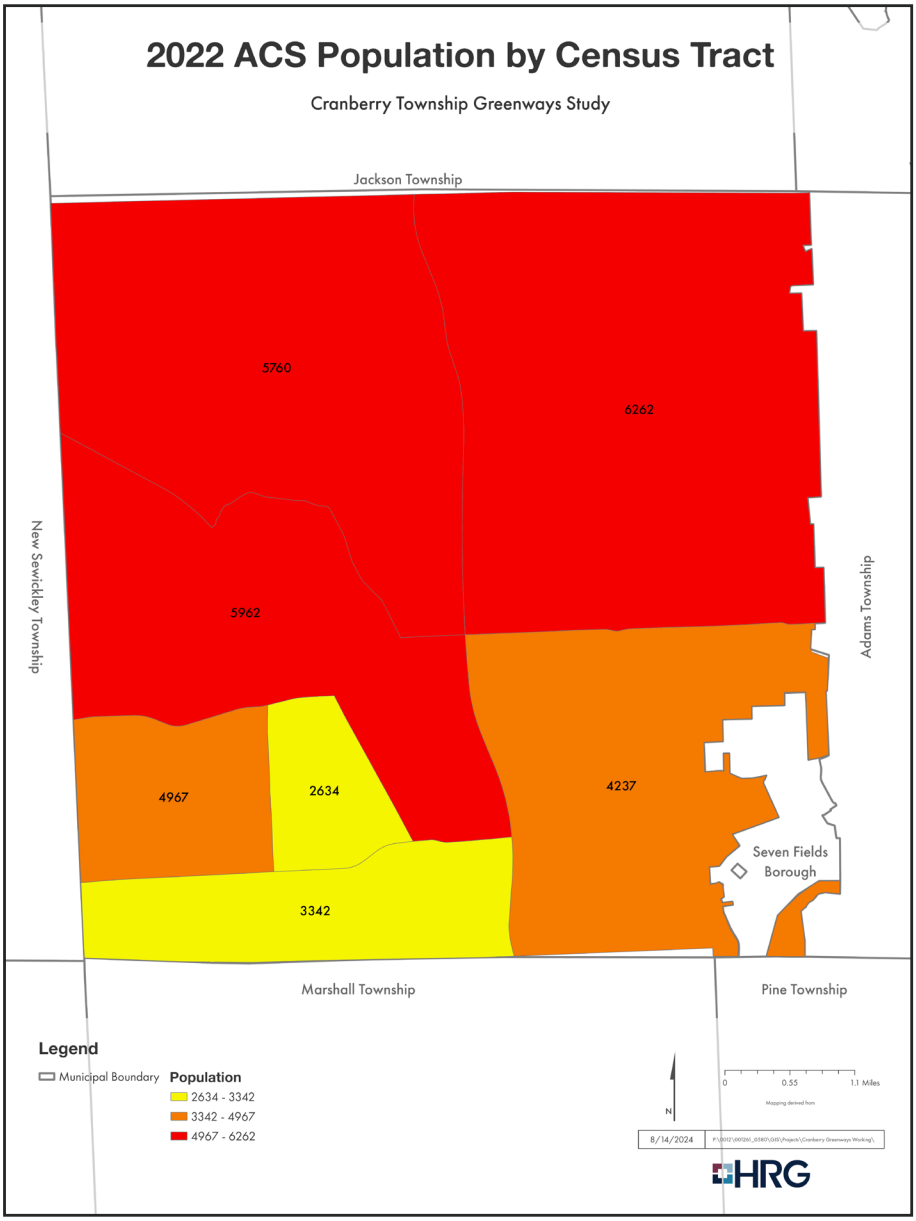
The distribution of the 2022 population within the Township can be seen in the map on the following page. This map breaks the population down by Census Tract to better understand the most populated portions of the Township, and how resources may best be divided to serve the population equitably. In general, most people are located in the northern half of the Township.

During the same period, the total number of housing units also increased, from 10,652 to 14,001 units. This equates to an increase of approximately 2% each year, and represents a healthy housing market.




Source: US Census Bureau, American Community Survey (ACS) 5-year estimates, 2010- 2022

Cranberry's growth and status as an economic hub have resulted in a high quality of life for residents. In 2022, the median household income was $120,554, much higher than Butler County ($81,353), Allegheny County ($72,031), Beaver County ($67,350), and even the State of Pennsylvania as a whole ($71,798). This growth and prosperity represent a great opportunity for ongoing development and quality of life, which open space preservation and greenways can contribute to. Open spaces maintain the historic character of the community and promote public health and recreation. Promoting these spaces also represents its own opportunity for connections and economic benefit. Therefore, the development of a greenways network throughout Cranberry Township is logical. It is the task of this study to determine how it may be carried out.



# Natural & Physical Character

## Overview

The natural and physical character of a place plays a critical role in the potential development of greenways. The landscape's characteristics dictate the ability to develop in certain areas. Slope, soil suitability, and hydrology are some of these factors, which are discussed in this section. Overall, areas that are not suitable for development may be readily used for greenways development. Some of these areas can be seen in the slope, soil suitability, and hydrology maps on the following pages, and will be highlighted in the next level of assessment, the Land & Connectivity Assessment Report.

## Slopes

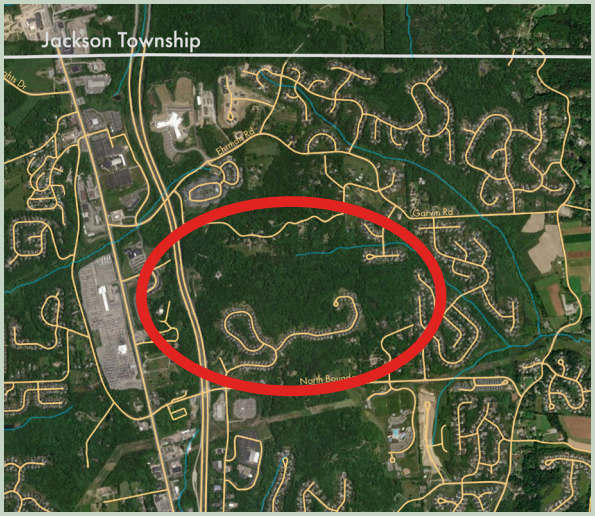
Slopes play a critical role in determining development suitability. Cranberry Township, like many municipalities, regulates development on steep slopes through their land development ordinances and regulations. The Township follows standard slope classifications:

- Slopes of fifteen percent (15%) or less are considered suitable for development.
- Percent slope values greater than fifteen (15%) but less than twenty-five percent (25%) are considered moderate slopes and may be acceptable for some types of development, but will be more restricted.
- Slopes greater than twenty-five percent (25%) are considered steep slopes and are not suitable for conventional development.

The map on the following page depicts slope percents throughout the Township. The steepest slopes are indicated by the deepest brown color. There are some small areas scattered throughout the Township with a percent slope greater than twenty-five, although most areas are located in the northeast quadrant. Dependent on other characteristics, these area may be a focus for greenways development it the Township.

*Development on slopes with a grade of 15% or more is often avoided. This helps to limit:*

- *Soil loss and erosion;*
- *Excessive stormwater runoff;*
- *The resulting degradation of surface water, and;*
- *The likelihood of landslides.*




*The image above depicts an area in the northeast quadrant of the Township where slopes are much greater than 25%, so the area has been left as green space surrounding a development. This area may be accessed as a greenways destination or connection. Source: HRG with imagery derived from Maxar+*


Slopes
Cranberry Township Greenways Study
Jackson Township
New Sewickley Township
Adams Township
Marshall Township
Pine Township
Seven Fields Borough
Heights Dr
Ehrman Rd
Garvin Rd
Callery Rd
Freedom Rd
Glen Eden Rd
North Boundary Rd
Plains Church Rd
Goehring Rd
Unionville Rd
Route 19
Interstate 79
Franklin Rd
Rowan Rd
Peters Rd
Interstate 76
Rochester Rd
Powell Rd
Thomson Park Dr
Haine School Rd
Cranberry Square Dr
Executive Dr
Mars Rd
Hillmont Dr
Old Mars Crider Rd
Cranberry Springs Dr
Route 228
Freedom Rd
Thorn Hill Rd
Commonwealth Dr
Legend
Municipal Boundary
Streams
% Slope
0.001 - 15
15.001 - 25
25.001 - 45.381
N
0
0.55
1.1 Miles
Mapping derived from
8/14/2024
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HRG

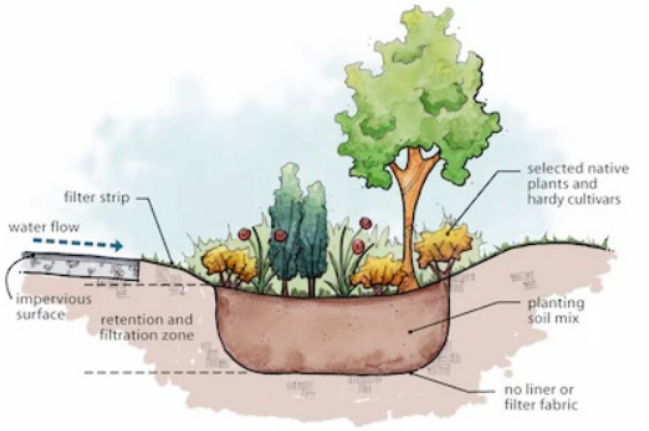
## Soils

The map on the following page depicts soils by drainage classification. In Cranberry Township, soils vary from excessively drained to poorly drained, with the majority of the area being well drained. Well drained soils are good for development, draining water at a desirable rate. Soils that are more quickly or intensively drained may also be appropriate for development, as the main concern in construction is water pooling around the development. However, poorly drained soils should not be used for construction without further intervention, which adds additional cost and is less sustainable than building on appropriate soil types. In Cranberry, poorly drained soils are generally present in and around streams, wetlands, and floodways or flood plains, which are already not suitable or permitted for development in most cases. These areas may serve as ideal greenways connections, running through large areas of the Township, while not allowing for development and providing naturally aesthetic surroundings.

## Hydrology

Hydrology is consistent with soil drainage patterns because water tends to flow to the same places. In this case, development should not be occurring in wetlands, flood plains or floodways, or directly in bodies of water, like streams. The map on page 24 indicates these areas in the Township. The "High Flooding Risk" flood zones shown in this map represent areas where there is one to two percent annual likelihood of flooding.

*Floodplains, floodways, wetlands, and even other areas of poorly drained soils represent an opportunity to incorporate Best Management Practices (BMPs) for stormwater management, along side the creation of greenways and other green infrastructure. Especially in a community like Cranberry Township, with significant amount of impervious surface, implementing stormwater management practices like rain gardens, enhanced riparian areas, naturalized infiltration basins, and bioswales can be a great option for off setting runoff created by development. These projects may also be combined with Municipal Separate Storm Sewer System (MS4) Program funding sources, creating an additional opportunity to fund greenways advancement.*




*The image above depicts how a rain garden design may be used for stormwater management. Source:http://www.coastallandscape.com.au/blogs/news/build-a-rain-garden*


Soils by Drainage Classification
Cranberry Township Greenways Study
Jackson Township
Heights Dr
Ehrman Rd
Garvin Rd
Callery Rd
Glen Eden Rd
North Boundary Rd
Plains Church Rd
Goehring Rd
Franklin Rd
Interstate 79
Route 19
Thompson Run Rd
New Sewickley Township
Rowan Rd
Peters Rd
Adams Township
Interstate 76
Rochester Rd
Powell Rd
Thomson Park Dr
Executive Dr
Old Mars Crider Rd
Hillmont Dr
Mars Rd
Cranberry Springs Dr
Route 228
Mars School Rd
Freedom Rd
Thorn Hill Rd
Commonwealth Dr
Seven Fields Borough
Marshall Township
Pine Township
Legend
Municipal Boundary
Streams
Soil Drainage Rating
Excessively drained
Well drained
Moderately well drained
Somewhat poorly drained
Poorly drained
N
0
0.55
1.1 Miles
Mapping derived from
8/14/2024
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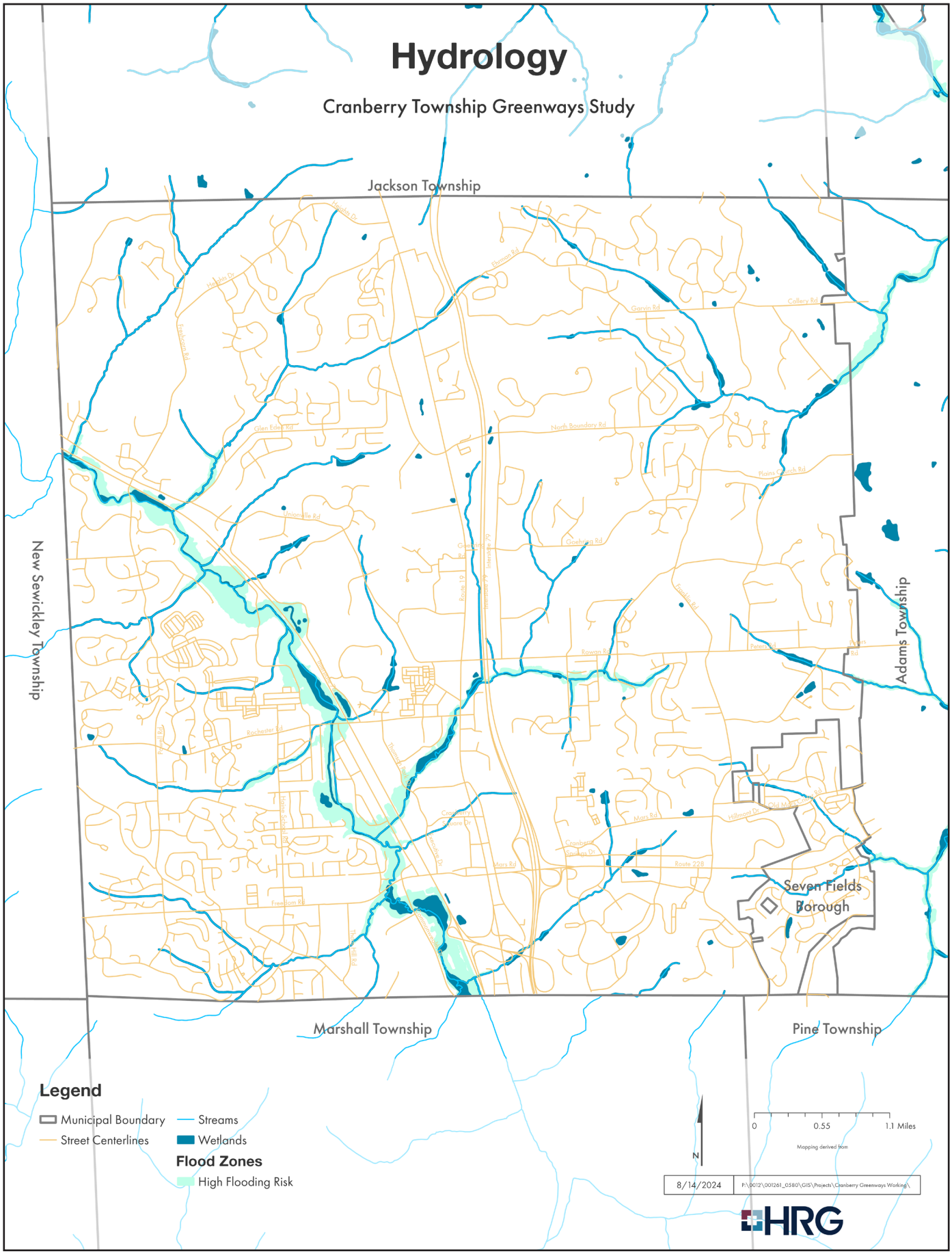
HRG


Hydrology
Cranberry Township Greenways Study
Jackson Township
New Sewickley Township
Adams Township
Marshall Township
Pine Township
Seven Fields Borough
Legend
Municipal Boundary
Street Centerlines
Streams
Wetlands
Flood Zones
High Flooding Risk
N
0
0.55
1.1 Miles
Mapping derived from
8/14/2024
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HRG

# Land Use & Development

## Overview

Land use, development, and the ordinances that regulate them play some of the most critical roles in determining the ability to develop a greenways network. Through these visionary and regulatory documents and standards, a community establishes it goals for what will happen in the future. How land is used shapes how people live, work, and play in a community. In general, these standards must come together to allow an area to be used as an effective greenway in order for it to be viable long-term.

## Land Use

Land use refers to the current activities taking place on a parcel. While there are no conservation easements actively preserving land in the Township at this time, the Future Land Use (FLU) Map does indicate a significant amount of land that would ideally be held as open space or park space. These areas are great candidates for greenways destinations as they have already been established for a related use, and the greenways network should be taken into consideration with any future updates to the FLU Map. Existing parks and open spaces are also shown in the map on page 26. Parks play an important role in greenways by creating outdoor, active destinations. Greenways that lack vitality and activity do not spark additional use from the community. These activated areas also help to spur economic activity, driving additional spending in surrounding areas. Therefore, parks are critical destinations that should be highlighted as part of the network.

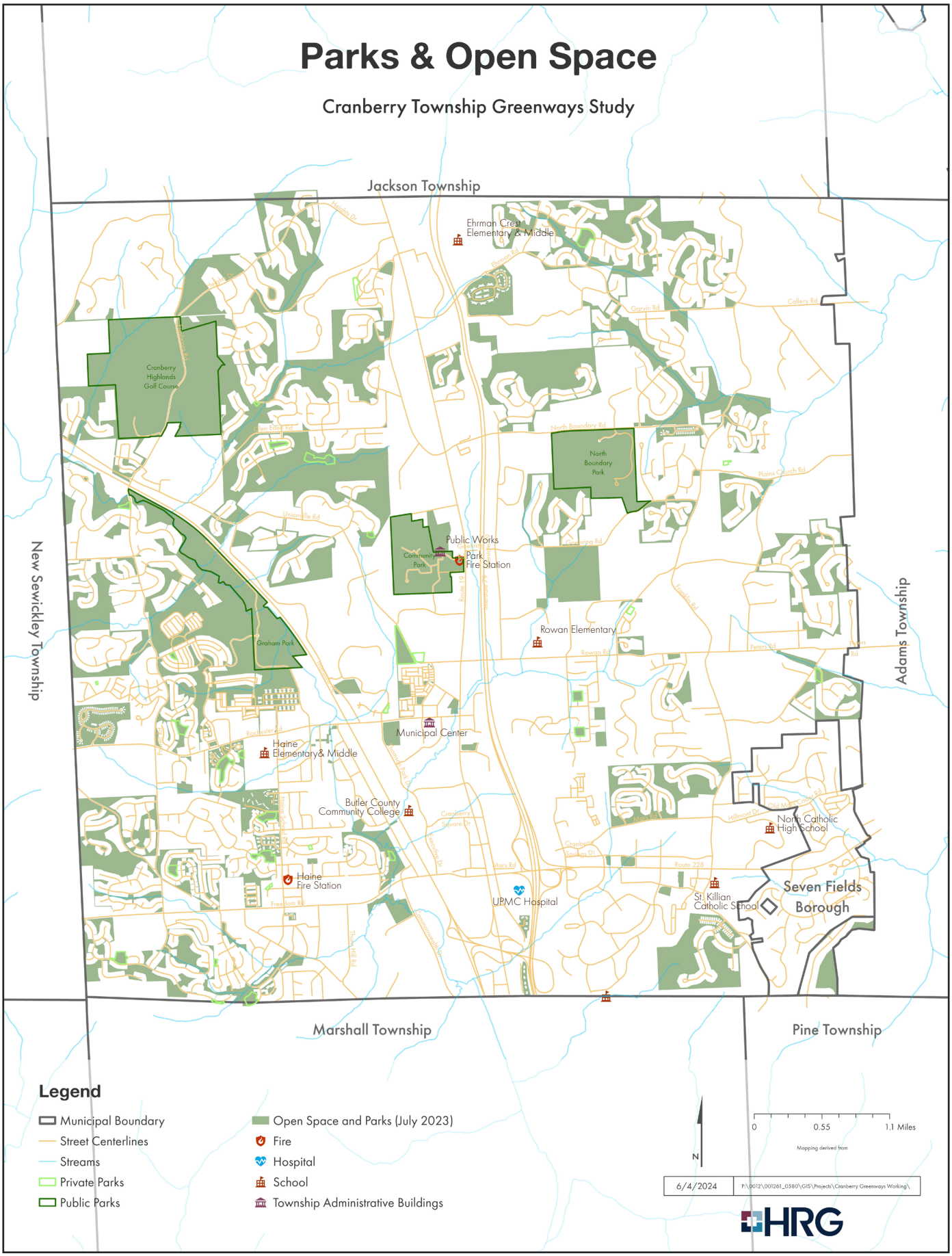
It is important to take into consideration other uses that may serve as destinations connected by the greenways network. Accessing other economic opportunities and activities will also be a goal for this greenway network. These other land uses will be assessed in greater detail as the project continues and priorities evolve. In general, the ability to connect existing economic and recreational hubs through additional non-motorized green spaces will provide opportunities for the Township as a whole.

## Zoning & SALDO

The Township's Zoning Ordinance and Subdivision and Land Development Ordinance (SALDO) both play a critical role in defining what may be developed and its character once it is developed. These ordinances will be reviewed in more detail during the implementation portion of this planned process as the specific regulations more significantly relate to that portion of the research. However, it is important to keep these documents in mind as part of the base knowledge and their power to shape the development and overall appearance of Cranberry Township.

## Historic Landmarks & Destinations

Historic landmarks and destinations within the Township have been included in this chapter because their existence shapes the form of development similar to other limitations placed on development. These spaces also function as potential greenways destinations, similar to other land uses. Therefore, it is important to consider the location of existing historic landmarks and historic trolley lines and roads. For the purposes of this study, they may be considered both opportunities and limitations- serving as potential desirable destinations, as well creating potential limitations by requiring preservation. The map of these areas can be seen on page 27.


Parks & Open Space
Cranberry Township Greenways Study
Jackson Township
New Sewickley Township
Adams Township
Marshall Township
Pine Township
Ehrman Crest Elementary & Middle
Cranberry Highlands Golf Course
North Boundary Park
Public Works
Community Park
Park
Fire Station
Rowan Elementary
Graham Park
Municipal Center
Haine Elementary& Middle
Butler County Community College
Haine Fire Station
UPMC Hospital
St. Killian Catholic School
North Catholic High School
Seven Fields Borough
Legend
Municipal Boundary
Street Centerlines
Streams
Private Parks
Public Parks
Open Space and Parks (July 2023)
Fire
Hospital
School
Township Administrative Buildings
N
0
0.55
1.1 Miles
Mapping derived from
6/4/2024
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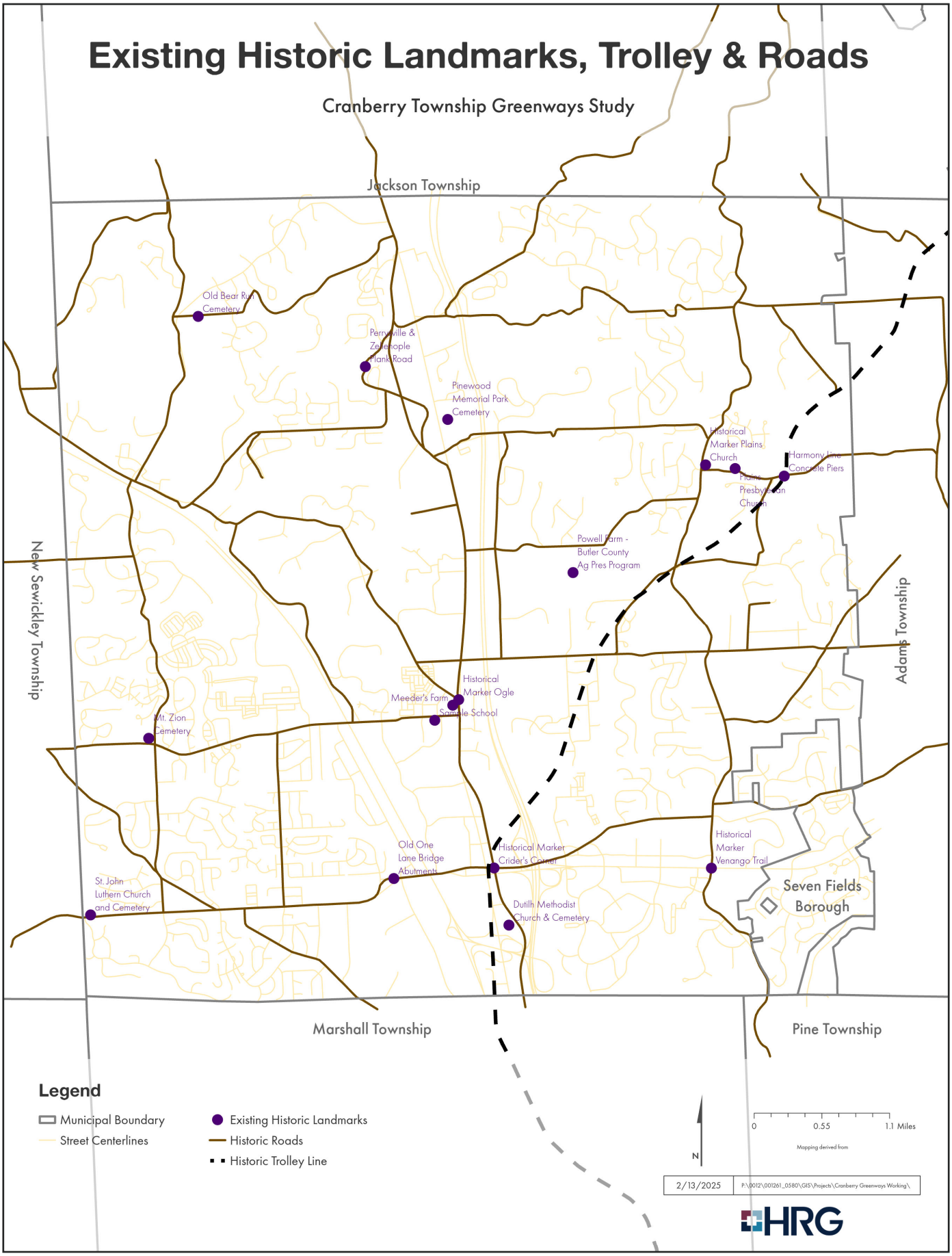
Existing Historic Landmarks, Trolley & Roads
Cranberry Township Greenways Study
Jackson Township
Old Bear Run Cemetery
Perrysville & Zelienople Plank Road
Pinewood Memorial Park Cemetery
Historical Marker Plains Church
Harmony Line Concrete Piers
Plains Presbyterian Church
Powell Farm - Butler County Ag Pres Program
New Sewickley Township
Adams Township
Historical Marker Ogle Meeder's Farm
Sample School
Mt. Zion Cemetery
Old One Lane Bridge Abutments
Historical Marker Crider's Corner
Historical Marker Venango Trail
Seven Fields Borough
St. John Luthern Church and Cemetery
Dutilh Methodist Church & Cemetery
Marshall Township
Pine Township
Legend
Municipal Boundary
Street Centerlines
Existing Historic Landmarks
Historic Roads
Historic Trolley Line
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1.1 Miles
Mapping derived from
2/13/2025
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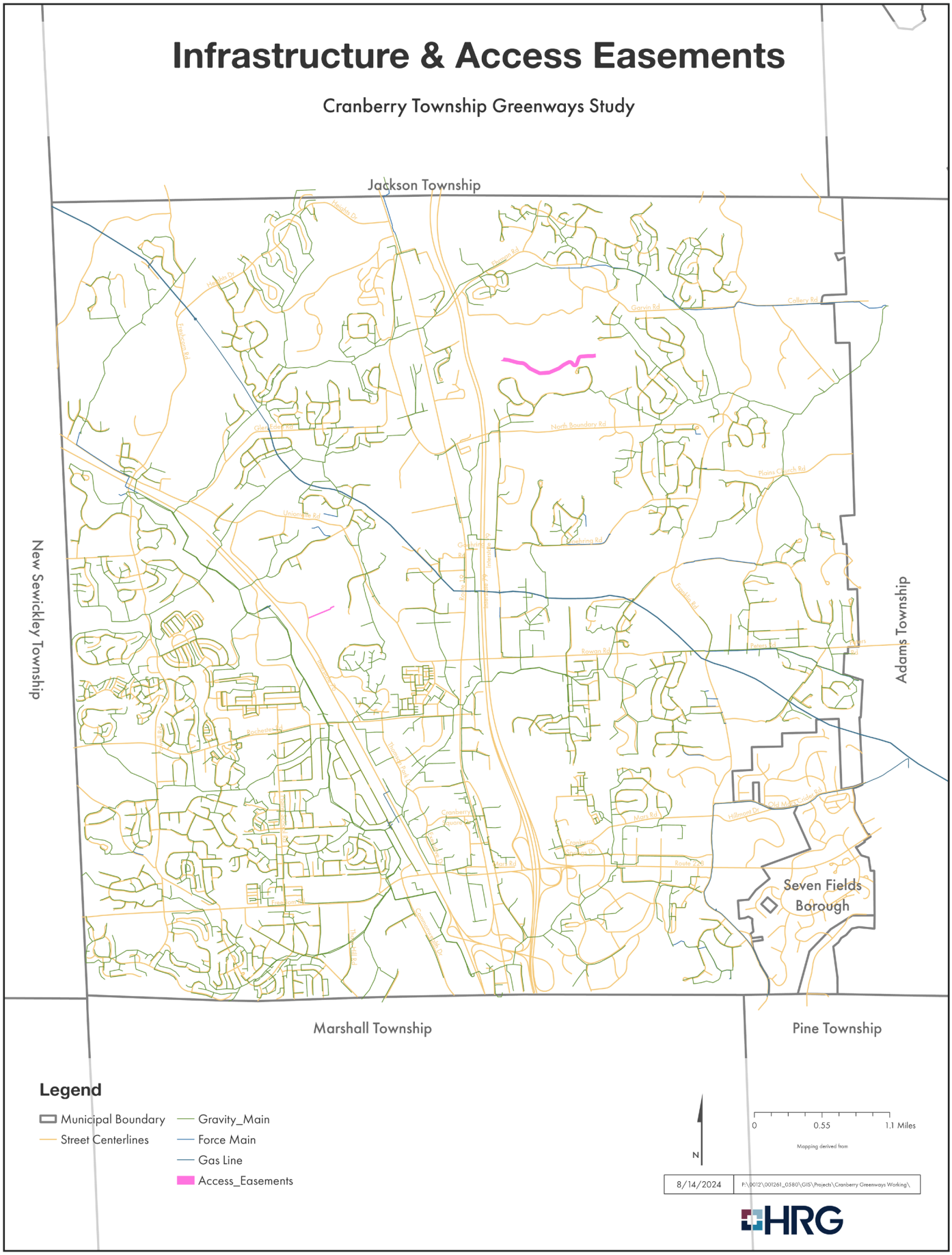
HRG

# Infrastructure

For the purpose of this study, infrastructure is referring to any space that will remain available with the purpose of accessing and/or maintaining some kind of facility. The map on the following page shows the location of force mains, gravity water mains, and gas lines. While these areas represent private property, they are also areas where easements may be obtained. Existing access easements are also shown, which were originally established to maintain access for a potential trail. In general, these are all facilities or resources that cannot be built over or around. Access may be needed for regular maintenance or emergency issues, so permanent structures are generally not built on top of the easement. However, some forms of "development," like green infrastructure, outdoor recreation, or open space may be possible in these areas because easements may be granted by the property owner. This means that this is another potential area for greenways connections to be established, although there may be additional time required and hoops to jump through to make it happen.

*The image below shows a similar area where utilities cross the land and access may be possible for creating greenways. The red ellipse is highlighting the area in the northern portion of the Township where electrical transformers run. This area will always look like this and development underneath this infrastructure is not safe, but it may be possible to obtain an easement for crossing this area, eliminating it as a barrier to connectivity for the greenways network.*


*Source: HRG with imagery derived from Maxar*


Infrastructure & Access Easements
Cranberry Township Greenways Study
Jackson Township
New Sewickley Township
Adams Township
Marshall Township
Pine Township
Seven Fields Borough
Legend
Municipal Boundary
Street Centerlines
Gravity_Main
Force Main
Gas Line
Access_Easements
N
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0.55
1.1 Miles
Mapping derived from
8/14/2024
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HRG

# Connectivity

## Overview

Greenways are unique from simple open space, in part because they exist as part of a network, creating connections between spaces and enhancing accessibility. This means that once defined, these spaces may also provide for the development of non-motorized infrastructure. In this way, greenways networks may contribute to the enhancement of the non-motorized network, and existing non-motorized infrastructure may contribute to the greenways network by creating connections between greenway destinations. This enhances mobility and accessibility for walkers and bikers in the community.

Cranberry Township has a significant amount of existing and planned non-motorized infrastructure, which will be discussed in this chapter.

*The image above depicts a portion of Graham Park Drive with existing sidewalks and share the road signage. This roadway provides access to existing parks and open space that can be considered part of the existing greenways network.*
*Source: Google StreetView*

*Transportation networks are intricate systems of connected pieces that allow users to move from origins to destinations. The ability to move from place to place is often broken down into two factors- mobility and accessibility:*

**Mobility** *refers to how far and how fast a user can go. In some cases, this can refer to a person's ability to physically move their body, which may change with age or other life events. When referring to transportation networks, mobility refers to the ability of users to move freely from an origin to a destination. For instance, heavy traffic slowing down cars along a busy road or a pedestrian waiting a long time to cross the street could be described as reduced mobility along a roadway.*

**Accessibility** *refers to the availability of a route between a start and end point. Again, accessibility may take on a meaning at the individual level, referring to the quality of specific infrastructure for the specific user. This often refers to the fulfillment of the Americans with Disabilities Act (ADA) and Public Right of Way Access Guidelines (PROWAG) requirements to enable access for all users. At the network level, accessibility refers to the more general connections and routes between origins and destinations, and the feasibility of a user being able to access a destination.*

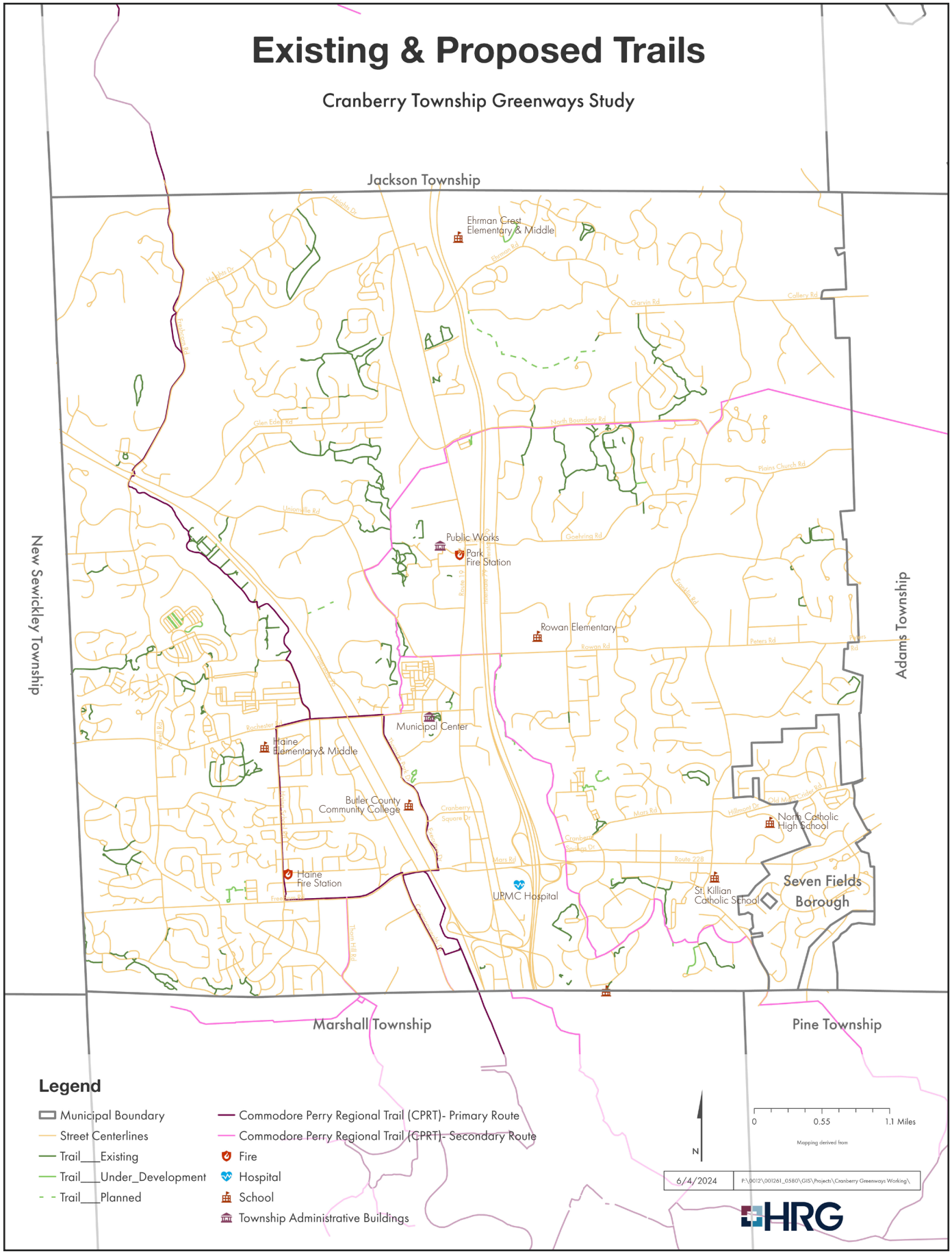
## Existing & Proposed Trails

Of all the types of non-motorized infrastructure, trails have the most obvious connections with greenways. Trails may travel through greenways and green spaces, like the existing trails at parks throughout the Township. In other cases, trails may be greenways in and of themselves, serving as both connections and destinations. This is true of many regional trails in the area, like Brush Creek Trail, and the larger Commodore Perry Regional Trail. Both of these larger trails contain additional facilities like benches and educational signage, so they can serve as both a transportation route and a desirable place to pass time. These regional trails also provide connections between municipalities. Greenways may be best developed by following existing natural connections and not being limited by municipal or other political boundaries.

Additional trails are already planned to fill gaps in the Township's existing network. The locations of existing and planned trails may be seen in the map on the following page. These resources should be leveraged for creating a connected and accessible greenways network that contributes to larger non-motorized transportation goals for the community.

*The Commodore Perry Regional Trail is the result of collaboration between The Township of Pine, Marshall Township, the Borough of Bradford Woods, Adams Township, Cranberry Township, and Jackson Township. Each community is actively working to enhance and expand their sidewalk and trail network. The creation of this regional asset benefits Cranberry Township by expanding the network and creating connections to key destinations throughout the community and region as a whole. In total, the Commodore Perry Trail traverses fifty-two miles and provides open access to thousands of acres of green space.*

*The image above depicts the Commodore Perry Regional Trail as it passes through Cranberry Township. Source: The Commodore Perry Trail: A Multi-Municipal Collaboration, 2017*


Existing & Proposed Trails
Cranberry Township Greenways Study
Jackson Township
New Sewickley Township
Adams Township
Marshall Township
Pine Township
Ehrman Crest Elementary & Middle
Public Works
Park
Fire Station
Rowan Elementary
Municipal Center
Haine Elementary& Middle
Butler County Community College
Haine Fire Station
UPMC Hospital
St. Killian Catholic School
North Catholic High School
Seven Fields Borough
Legend
Municipal Boundary
Street Centerlines
Trail___Existing
Trail___Under_Development
Trail___Planned
Commodore Perry Regional Trail (CPRT)- Primary Route
Commodore Perry Regional Trail (CPRT)- Secondary Route
Fire
Hospital
School
Township Administrative Buildings
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1.1 Miles
Mapping derived from
6/4/2024
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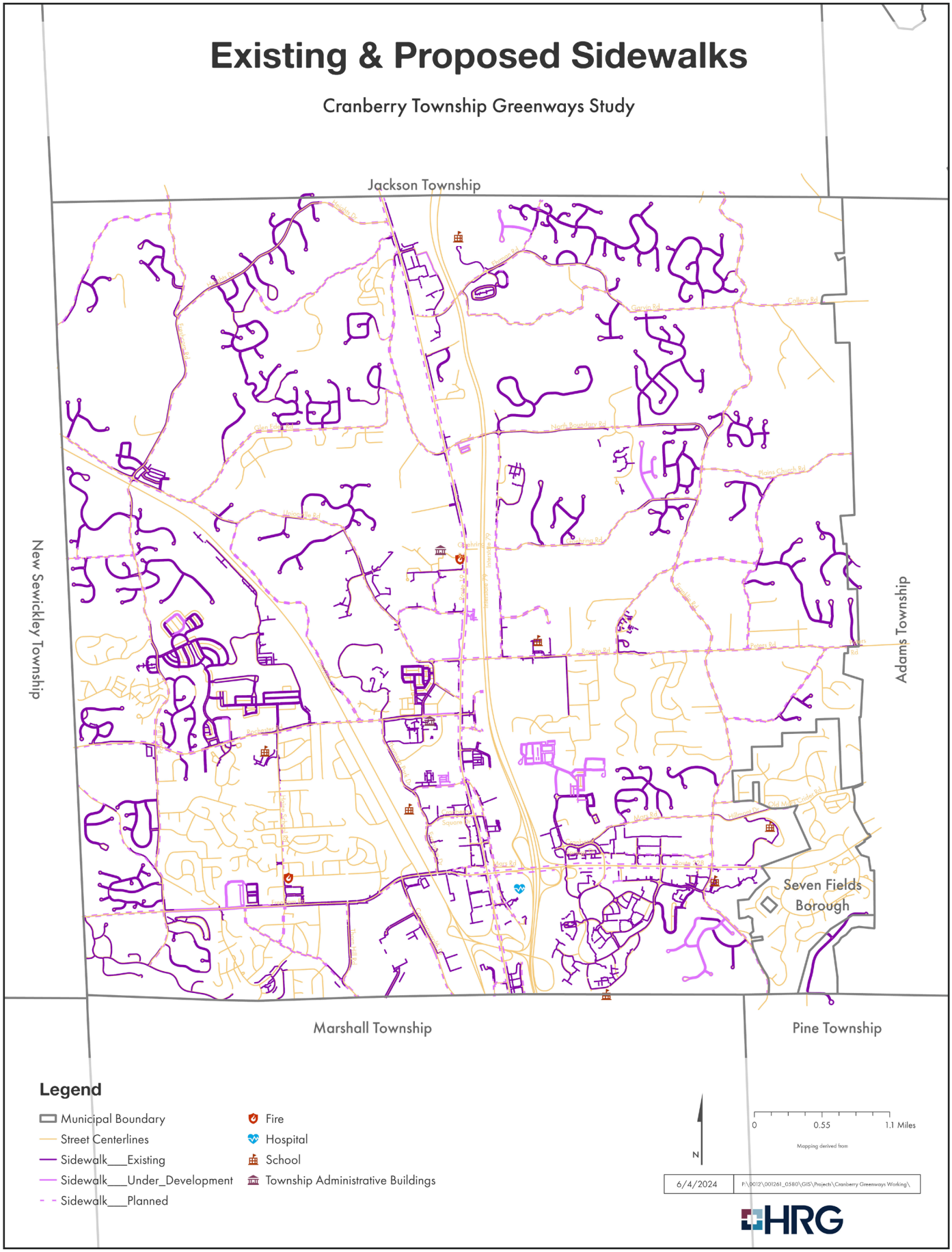
HRG

## Existing & Proposed Sidewalks

While less commonly thought of in conjunction with greenways, sidewalks may also contribute to a greenways network by providing connectivity between greenways destinations. Cranberry Township has a significant number of existing sidewalks. The existing and planned sidewalks can be seen in the map on the following page. While the existing sidewalks are a great resource for the community, they are primarily within residential developments. Many of the planned sidewalks are intended to better connect residential developments to one another. This also opens up opportunities to connect the green spaces within these residential developments. As part of the land development process, developers are required to dedicate a certain amount of land to open space, which is then passed on to the homeowners' associations. If connectivity between these spaces exists or can be developed, these areas may serve not only as destinations, but also as connections between residential neighborhoods, creating safe access for neighbors to connect with each other.

*Residential developments in Cranberry Township, especially newer developments like Meeder and The Links shown below, have done a great job creating internal connections, allowing residents to walk safely within their neighborhood. Additional external connections, many of which are already planned by the Township, are needed in order to increase access between greenways destinations.*

*Top Image: Meeder Mixed-Use Development*
*Lower Image: The Links Residential Development*
*Source: Google Maps*


Existing & Proposed Sidewalks
Cranberry Township Greenways Study
Jackson Township
New Sewickley Township
Adams Township
Marshall Township
Pine Township
Seven Fields Borough
Legend
Municipal Boundary
Street Centerlines
Sidewalk___Existing
Sidewalk___Under_Development
Sidewalk___Planned
Fire
Hospital
School
Township Administrative Buildings
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1.1 Miles
Mapping derived from
6/4/2024
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HRG

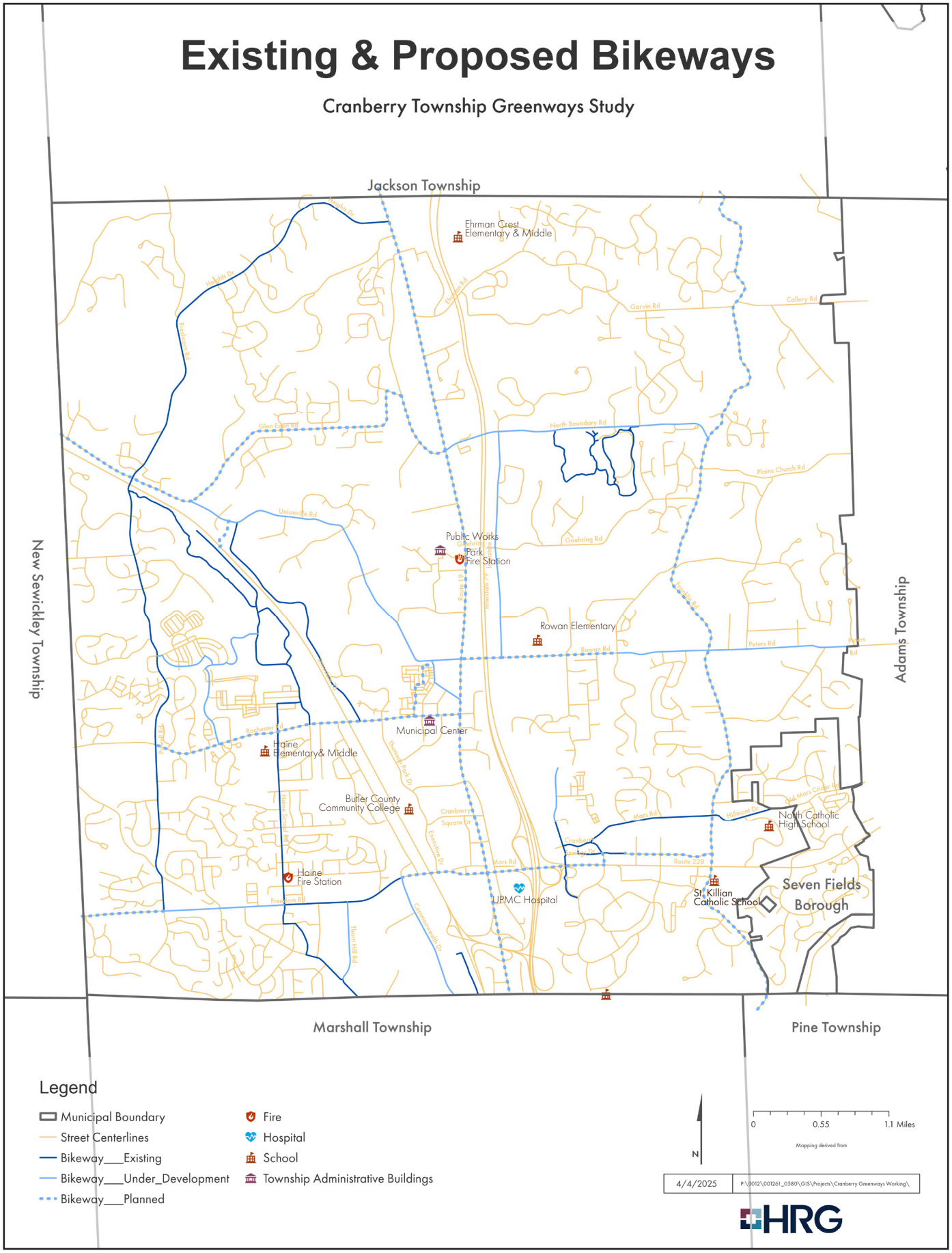
## Existing & Proposed Bikeways

Like many communities, Cranberry Township has been committed to adding additional bicycle infrastructure. However, this can be difficult in a community that already has significant development. Existing busy roadways and high traffic volumes make it difficult to create safe and enjoyable bicycle connections. In this regard, greenway connectivity can contribute to bicycle connections by creating safe connections, separated from the roadway. By utilizing trail style infrastructure to create connections, busy roadways that may otherwise represent barriers can be safely connected. This way, greenways can contribute to solving the issue of bicycle connectivity. Existing and proposed bikeways can be seen in the map on the following page.

*The presence of non-motorized infrastructure along a busy roadway like Freedom Road/ State Route 3020 is a great asset. However, bike lanes along this type of high-volume corridor may only serve a limited portion of the population, who are willing to ride in high-stress conditions.*

*Alternatively, separate connections may be created, which may also serve as greenways and/or greenway destinations. These trail style connections would provide more scenic and lower-stress connections. These facilities would be more suitable for a wider variety of users, including children and other less confident riders.*


*The image above depicts existing sidewalks and bike lanes along Freedom Road/State Route 3020 in Cranberry Township.*
*Source: Google Maps*


Existing & Proposed Bikeways
Cranberry Township Greenways Study
Jackson Township
New Sewickley Township
Adams Township
Marshall Township
Pine Township
Ehrman Crest Elementary & Middle
Public Works
Park
Fire Station
Rowan Elementary
Municipal Center
Haine Elementary& Middle
Butler County Community College
Haine Fire Station
UPMC Hospital
St. Killian Catholic School
North Catholic High School
Seven Fields Borough
Garvin Rd
Callery Rd
North Boundary Rd
Plains Church Rd
Unionville Rd
Goehring Rd
Rowan Rd
Peters Rd
Mars Rd
Route 228
Cranberry Square Dr
Rochester Rd
Thorn Hill Rd
Commonwealth Dr
Legend
Municipal Boundary
Street Centerlines
Bikeway___Existing
Bikeway___Under_Development
Bikeway___Planned
Fire
Hospital
School
Township Administrative Buildings
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1.1 Miles
Mapping derived from
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# Key Takeaways

Based on the data reviewed and assessed in this Existing Conditions Report, some initial findings emerge as most relevant to the development of a greenways network in Cranberry Township:

- Cranberry is a regional economic hub, with gradual population growth. The population is generally focused in the northern portion of the Township, and understanding this distribution is important when considering the network distribution and expansion.
- The natural and physical features of the Township, like slopes, soils, and hydrology, place inherent limitations on development, but areas with limited development potential are perfect for greenways. Like most municipalities, the Township has areas that are not suitable for development, which has generally already been addressed appropriately in the Future Land Use map, but provides opportunities to create a beneficial use on a limited lot.
- The Township does not currently have any conservation easements. However, existing and future land uses indicate significant tracts dedicated to open space and parks.
- Public infrastructure and associated access easements represent connection opportunities.
- Multi-modal transportation connectivity and the creation of a greenways network are directly connected. The creation of one type of infrastructure may directly or indirectly provide for the other.

Based on these key findings, it is clear that the creation of a greenways network stands to serve the Township not only for additional recreation, but as an economic benefit and non-motorized connectivity attribute. In some cases, the creation of this network may take advantage of parcels not suitable for development to create greenways destinations, but it is assumed that further analysis will reveal that Cranberry will truly lend itself to and benefit most from the creation of greenways connections that lead to existing destinations. This will improve connectivity from neighborhood to neighborhood; between open spaces and all other uses; between retail and commercial uses and all other uses; and between all uses and public facilities, including schools. While destinations will still be considered in the ongoing analysis, the incorporation of connections throughout Cranberry Township will benefit the community in many ways.

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# Land & Connectivity Assessment

# Overview

While this study does not seek to plan a specific greenways network, an exploration of potential routes is necessary for creating a vision and better understanding potential future needs and limitations. The following assessment was performed using a spatial overlay process to help identify critical areas. The assessment is broken into three focus areas- preservation, connections, and barriers- which are then combined to create a visual summary of potential future greenways, included as the "Conceptual Network." The Conceptual Network highlights the formation of the three main proposed greenways- Brush Creek, Coal Run, and North Boundary. Secondary greenways have been shown that will enhance the overall system and contribute to the goals for the network, but should be prioritized for development after the primary connections. Overall, the Conceptual Network is intended to provide high-level guidance for future project development, and does not necessarily indicate specific project alignments. When implemented, the greenways network will be comprised of multiple connection types- organic connections, on-road connections, and shared use paths. Each of these connection types is explained and depicted in this chapter.


Brush Creek Trail, northwest of Graham Park, near Powell Road, in Cranberry Township

# Preservation

Greenways are often developed as part of an effort to preserve open space. However, the purpose of that preservation may vary. In some cases, land may be preserved because it is not suitable for development. This is true in the case of steep slopes, floodplains, wetlands, and bodies of water. In other cases, it may be preserved for its natural beauty or its capacity to support wildlife habitat. Land may also be preserved simply because it has already been developed as valuable recreational space. All of these uses may be categorized as areas being preserved and as greenways, but they vary greatly in their character. Therefore, when evaluating the landscape, it is important to evaluate them separately.

In this evaluation, lands that are not suitable for development and existing open space were classified as areas for preservation. Lands not suitable for development include areas with a slope greater than 30%, flood prone areas, wetlands, and streams. Existing open space includes all existing public and private open space. Private open space includes homeowners' association (HOA) properties contained by planned residential developments (PRDs). While these spaces are technically private now, these areas remain open and are often used by the general public, and may be considered for future public acquisition, as discussed later in the study. These areas can be seen in the map on the following page.

Moving forward, the differences in these spaces may be captured by in the different types of greenways. While this isn't mandatory, it can be valuable if establishing design guidelines or other policies, which are discussed later in the study.

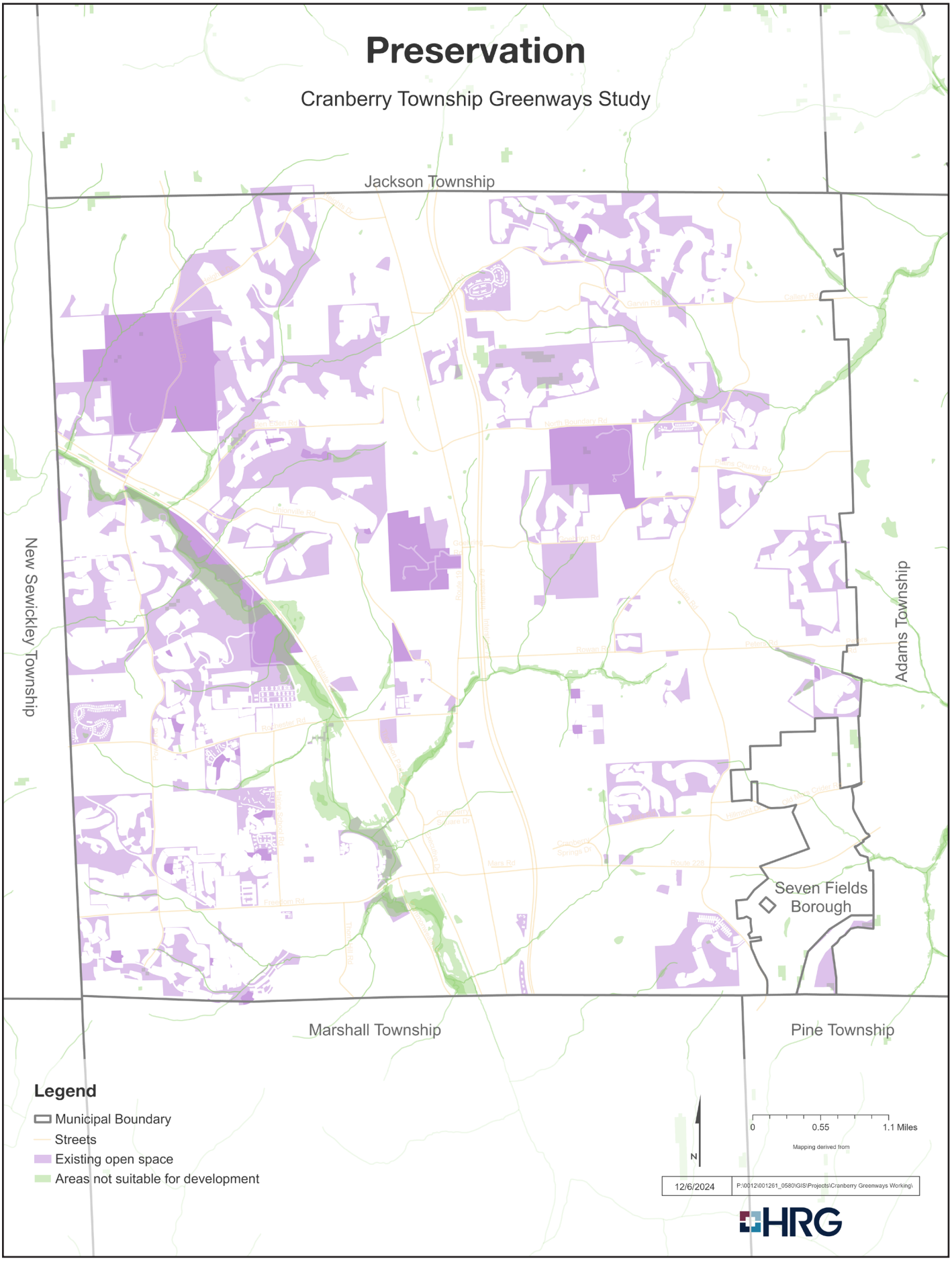
### Greenways, Ecological Connectivity, & Wildlife Corridors

Man-made structures form barriers in the environment, blocking the natural flow of native species through a region. At times this even applies to the humans that created these barriers, as discussed later in the section. The inability to move freely negatively impacts the health and growth of flora and fauna populations.

Ecological connectivity can be restored through the development of greenways that incorporate and/or serve as wildlife corridors. The creation of these connections increases the value of small preserved pockets by creating larger ecosystems. These larger ecosystems positively contribute to biodiversity, and the overall health of the landscape.

The formation of the Cranberry Township greenways network should take into consideration the need not only for preserved open space, but for large, connected swaths of land that will support a variety of species.

*The image above is an example of a wildlife corridor constructed over I-78 in Pennsylvania.*
*Source: https://savepaforests.org/general/the-importance-of-wildlife-corridors/*


Preservation
Cranberry Township Greenways Study
Jackson Township
New Sewickley Township
Adams Township
Seven Fields Borough
Marshall Township
Pine Township
Legend
Municipal Boundary
Streets
Existing open space
Areas not suitable for development
N
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0.55
1.1 Miles
Mapping derived from
12/6/2024
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HRG

# Connections

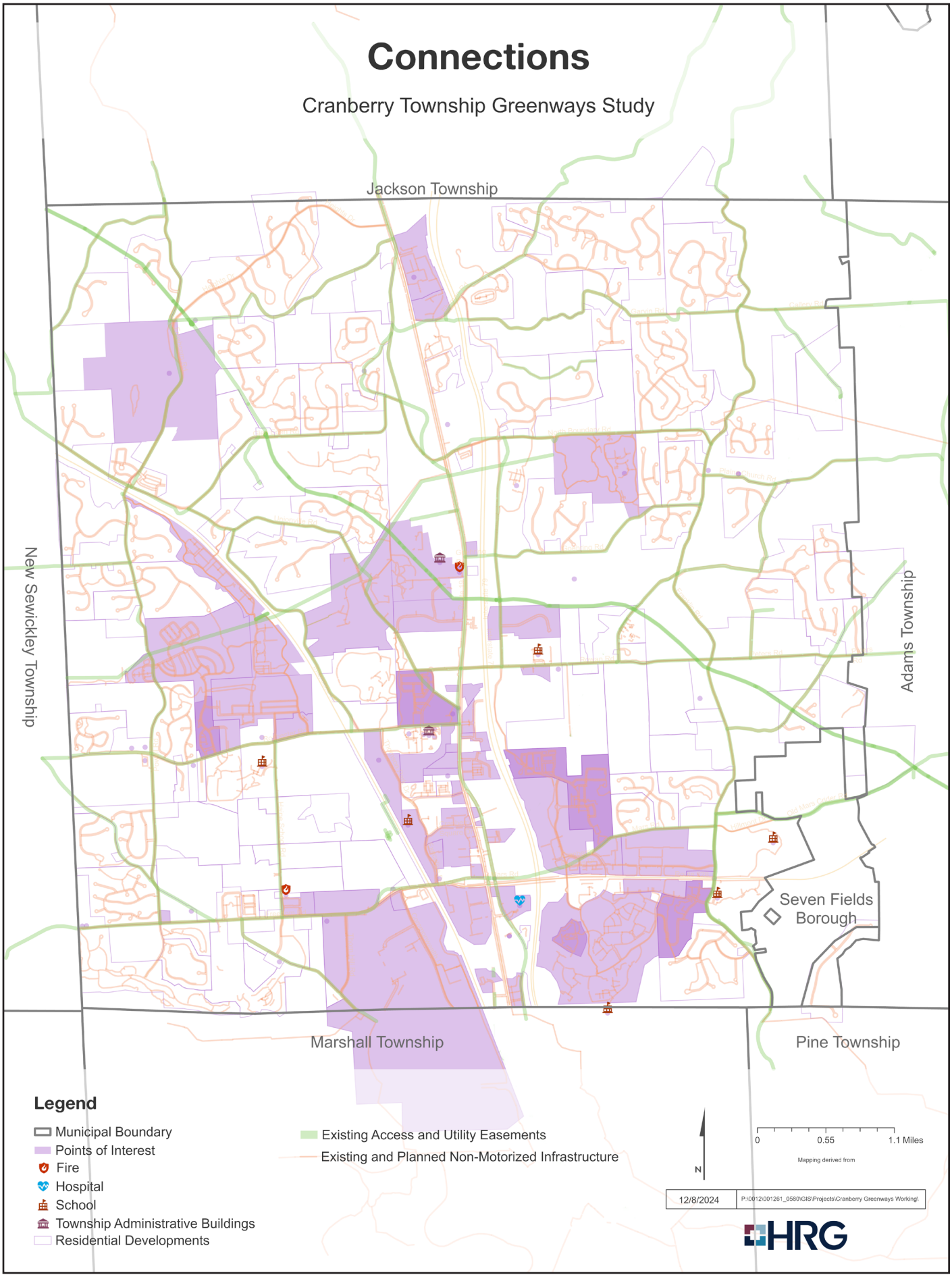
In addition to preserving open space, greenways are often developed to create connections. These connections take on both physical and social value by not only establishing non-motorized transportation corridors leading to critical community destinations, but by also creating community spaces, allowing people to socially connect with each other. Through the process of developing this study, Cranberry Township identified both types of connections as themes that should be addressed by the eventual development of a greenways network.

When assessing critical areas for providing both physical and social connections, several feature types are important to understanding potential future connectivity. These features can be generalized into two categories- points of interest, and existing and potential future connections. Points of interest were defined to include community destinations, like schools, the hospital, the municipal center, etc., as well as major retail and employment hubs. Finally, residential developments were also shown given that these locations may serve as origins for trips to other points of interest, as well as being desired destinations in and of themselves.

Connections consider both existing infrastructure for their potential to be connected to, and spaces that may be utilized based on their geographic expanse. Existing connections focus on existing and planned non-motorized infrastructure. This includes on-street facilities like bike lanes, as well as off street facilities like sidewalks and trails. Existing access and utility easements capture potential future connections. Included in the easements is an approximate location of the Penn Power electrical easement that runs east-west through the Township. These areas traverse large sections of the Township and preserve space that may be used to develop trails. Later sections of this study discuss the steps for gaining access to these areas and their potential use as part of the greenways network. Finally, future connections also consider the historic trolley line, present on the eastern side of the Township, and historic roads and landmarks. These are spaces already being preserved for their intrinsic cultural value that may have facilities added in a way that facilitates their conservation, while connecting the public with both critical destinations and the Township's heritage.

This connections assessment considers origins and destinations, as well as potential travel routes. Moving forward in the creation of a greenways network, priority should be given to projects that will not only enhance greenspace in the community, but that will also contribute to enhancing bicycle and pedestrian connectivity. Non-motorized connections inherently improve social connectivity by providing space and opportunities for people to operate and meet outside of their personal space.

These connections also should consider major economic hubs, as included in the land assessment. As previously noted, the creation of greenways increases economic activity and vitality of neighboring areas. Therefore, it is in the best interest of Cranberry Township and its residents to consider the potential for connections to all types of land uses when creating the greenways network.


Connections
Cranberry Township Greenways Study
Jackson Township
New Sewickley Township
Adams Township
Seven Fields Borough
Marshall Township
Pine Township
Legend
Municipal Boundary
Points of Interest
Fire
Hospital
School
Township Administrative Buildings
Residential Developments
Existing Access and Utility Easements
Existing and Planned Non-Motorized Infrastructure
N
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1.1 Miles
Mapping derived from
12/8/2024
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HRG

# Barriers

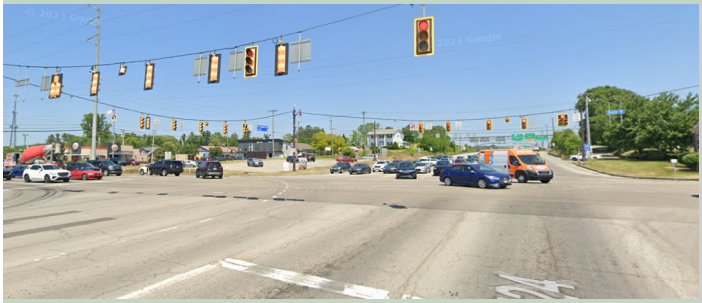
While the goals for creating a greenways network in the Township include the preservation of open space, and the creation of physical and social connectivity, in a community that is as developed as Cranberry, there will always be barriers to establishing any kind of new network. The following physical barriers are in addition to potential lack of public support, which should be addressed through public engagement, consensus building, and other techniques included in the implementation chapter.

Physical barriers consist primarily of regional roadways, like the Pennsylvania Turnpike/ Interstate 76, Interstate 79, Pennsylvania Route 228, and Pennsylvania Route 19, which can be seen in the map on the following page. These roadways serve as important motorized connections to desired regional destinations. Their nature as significant arterial roadways means they have high traffic volumes, high speeds, and many travel lanes, making them difficult to cross. These roadways and the surrounding rights-of-way are also not under the Township's jurisdiction, therefore, any improvements also come with significant additional administrative requirements and negotiations.

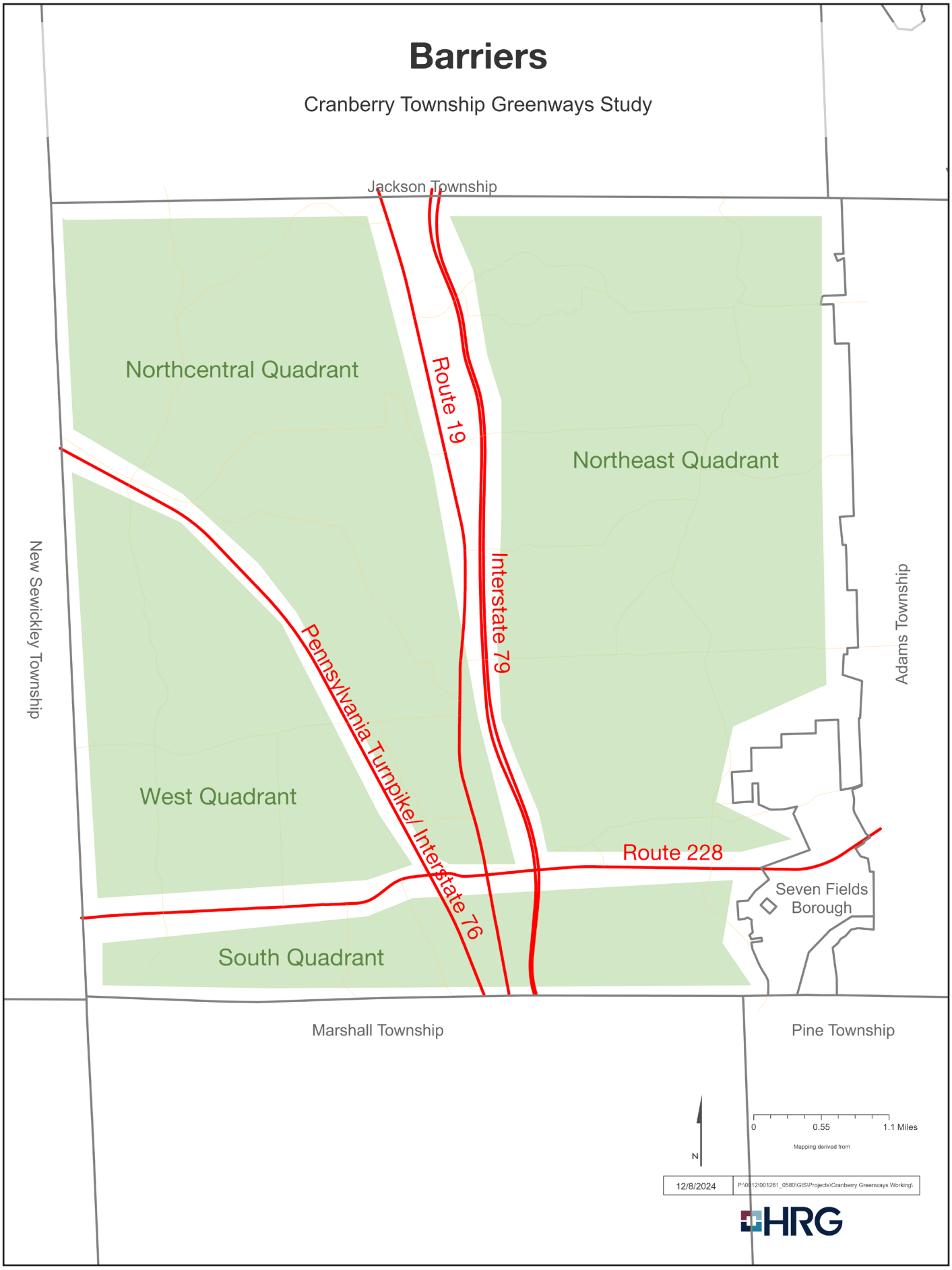
Overcoming these barriers will be more expensive and more time consuming than other projects, but not impossible. Even the interstates may be bi-passed through the construction of grade-separated crossings, like a pedestrian bridge or tunnel. This will be expensive and require permission from the appropriate authorities. In some cases, reusable infrastructure already exists, like the old cattle underpasses under the Turnpike, which may reduce costs, if the Township can gain access. Creating this infrastructure would create critical connections between neighborhoods and community destinations. This is evident in the lack of connectivity along Powell Road, between The Links residential development and Brush Creek Trail to the south. The Powell Road Bridge does not provide a safe non-motorized connection. However, residents still use it because of the demand for access to recreational facilities.

While these barriers may represent delays in implementation of the greenways network, they may also serve to help prioritize localized projects, while these large connections evolve more slowly. The map on the following page not only shows the key barriers, but also how those barriers divide the community into manageable pieces. By organizing implementation based on these quadrants of the community, short-term goals and projects may be identified for each area, while longer-term discussions are started to overcome overall connectivity needed at the current barriers.

*View of the Pennsylvania Turnpike from the north side of the Powell Road Bridge.*



*View from the southwest corner of the intersection of Route 228 and Route 19.*
*Source: Google Maps*


Barriers
Cranberry Township Greenways Study
Jackson Township
Northcentral Quadrant
Route 19
Northeast Quadrant
New Sewickley Township
Interstate 79
Adams Township
Pennsylvania Turnpike/ Interstate 76
West Quadrant
Route 228
Seven Fields Borough
South Quadrant
Marshall Township
Pine Township
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1.1 Miles
Mapping derived from
12/8/2024
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HRG

# Conceptual Network

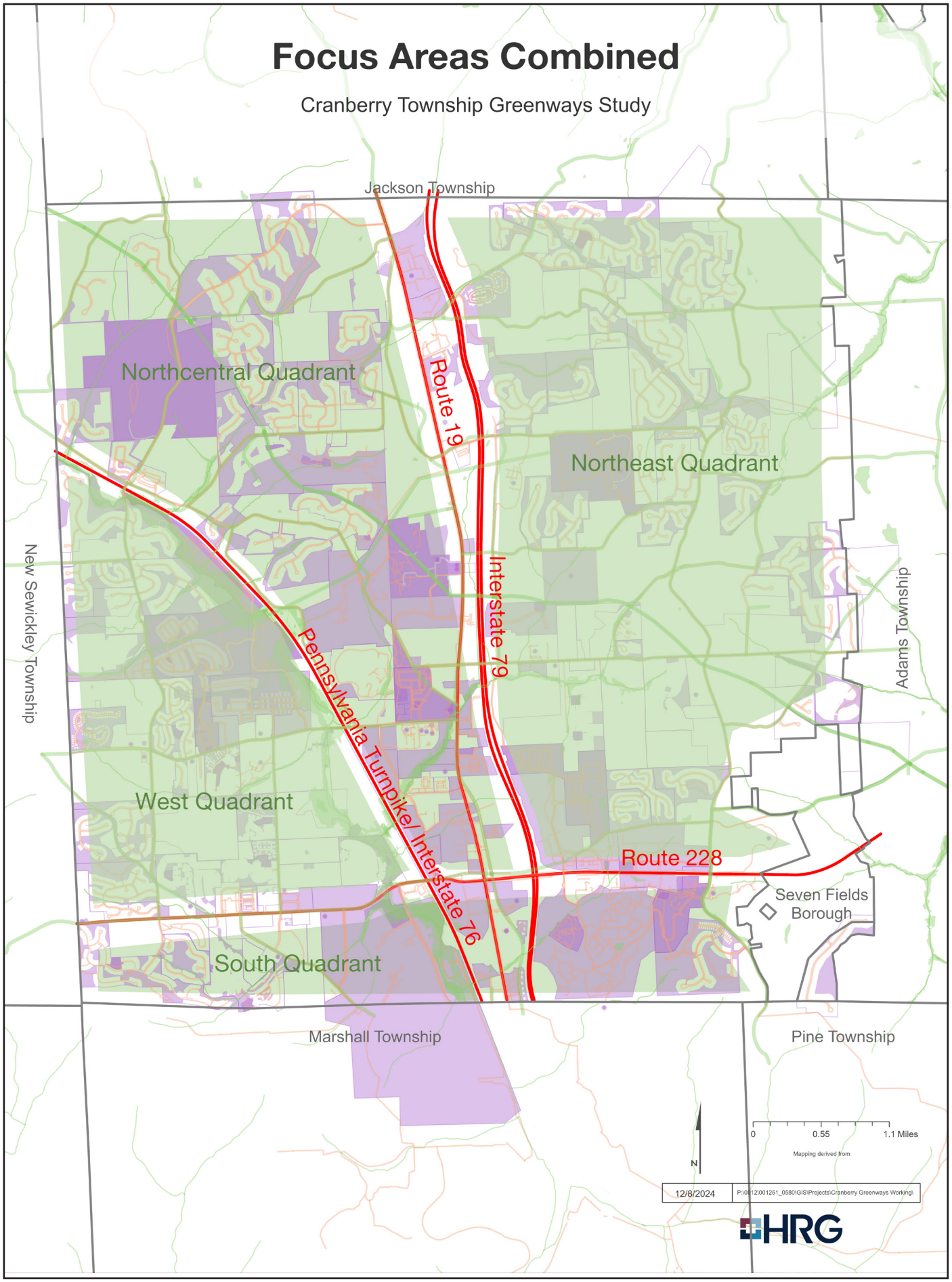
The three focus areas highlighted by this chapter may be combined to better understand the most critical locations for developing the greenways network. By combining the components making up the three focus area maps, which can be seen in the following page, nodes of existing activity and potential connections begin to emerge.

The identification of these nodes and connections can be seen in the map on page 49. Nodes have been broken into existing open space and recreational facilities, and areas of economic activity, like retail and job centers. The open space and recreational facilities include areas that are currently public, as well as areas currently under HOA authority. The existing nodes create destinations for the network to ultimately access through the connections highlighted on the map. The connections utilize existing infrastructure, existing easements, and environmentally sensitive areas that should be preserved to develop generalized paths between the existing nodes. Areas for connectivity between the quadrants have also been identified as ideal areas to attempt to bridge the existing barriers. However, as previously discussed, these projects may take longer to accomplish and their actual construction will vary based on approval from the appropriate authorities. Finally, this map suggests potential connections beyond Cranberry Township, to neighboring municipalities. These connections were informed by the Related Plans and Documents Summary Report, which includes reviews of planning documents from adjacent communities, and is included in its entirety in Appendix B.

Through the identification of the nodes and connections, the overall network can be seen. In the Conceptual Network Map on page 50 a potential network is shown, highlighting three main greenway connections- the Brush Creek Greenway, the Coal Run Greenway, and the North Boundary Greenway. These three main greenway connections were established based on their alignment with existing resources, their potential to provide additional connectivity through the Township, and their ability to facilitate environmental stewardship. Secondary connections have also been identified as future additions, to help support the network's ability to achieve its overall goals. The map on page 51 shows how these proposed connections relate to existing resources, like the CPRT, existing non-motorized facilities in the Township, and the Penn Power easement. In addition to the CPRT, existing non-motorized facilities highlight the ability to establish connections beyond the greenways, expanding overall multi-modal connectivity in the Township. Additional details about each greenway is included, following the network maps.

Based on the connections shown, specific projects may be developed to establish the network. Projects should focus on maximizing the use of existing infrastructure to facilitate connectivity. Coordination with the CPRT, should be considered, especially for how this effort may contribute to the planned, but not yet implemented secondary route. There should also be coordination with the existing power easement and HOA properties. Additional information about coordination and potential partnerships is discussed in the following chapter.

Moving forward, additions to the greenways network should consider this nodes and connections process to ensure that the goals of the study are fulfilled. To progress from a conceptual framework to implementation, one of the first steps must be an analysis of how these identified conceptual nodes and connections relate to actual parcels and ownership.


Focus Areas Combined
Cranberry Township Greenways Study
Jackson Township
Northcentral Quadrant
Route 19
Northeast Quadrant
Interstate 79
New Sewickley Township
Adams Township
Pennsylvania Turnpike/ Interstate 76
West Quadrant
Route 228
Seven Fields Borough
South Quadrant
Marshall Township
Pine Township
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Mapping derived from
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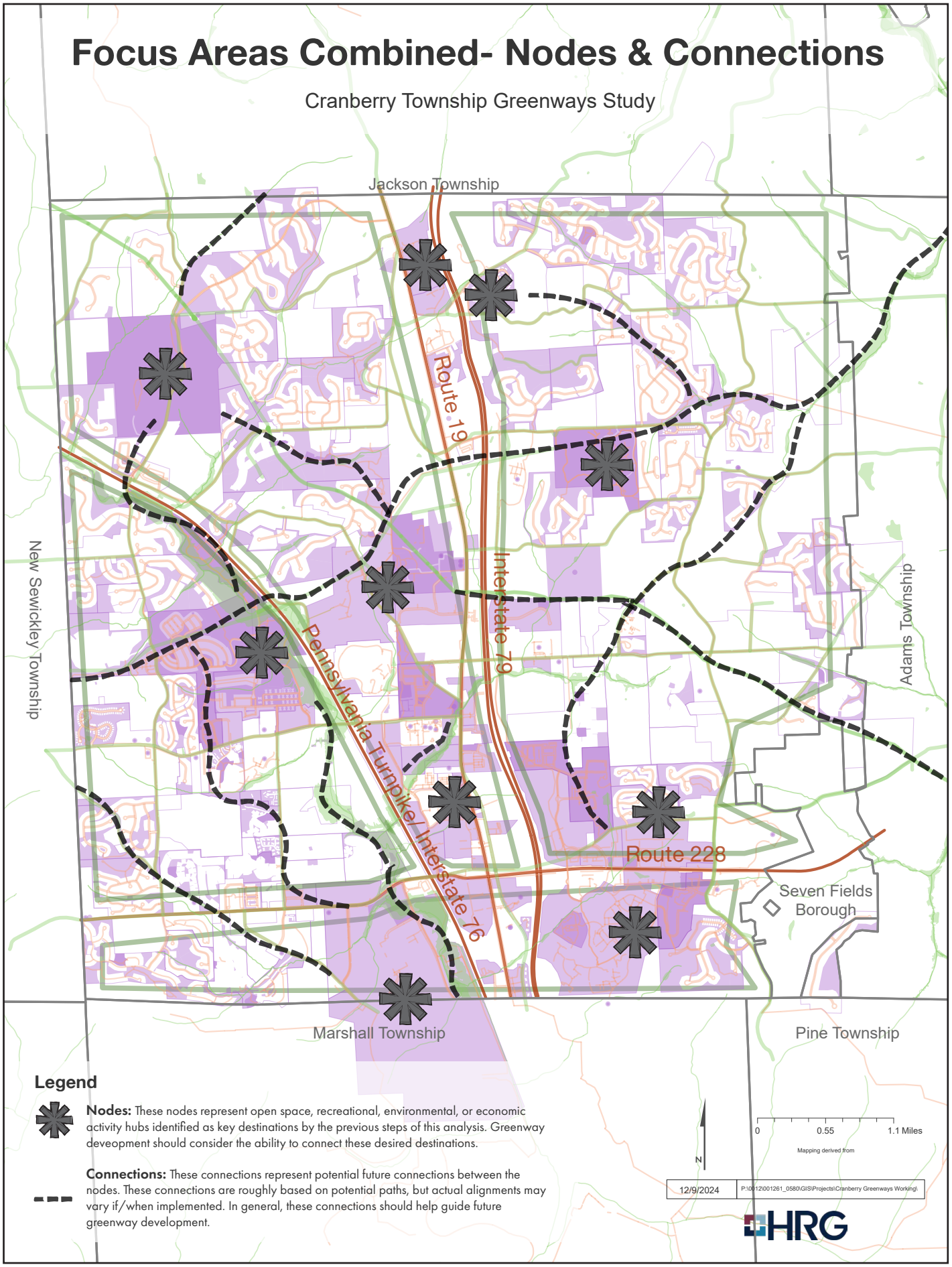
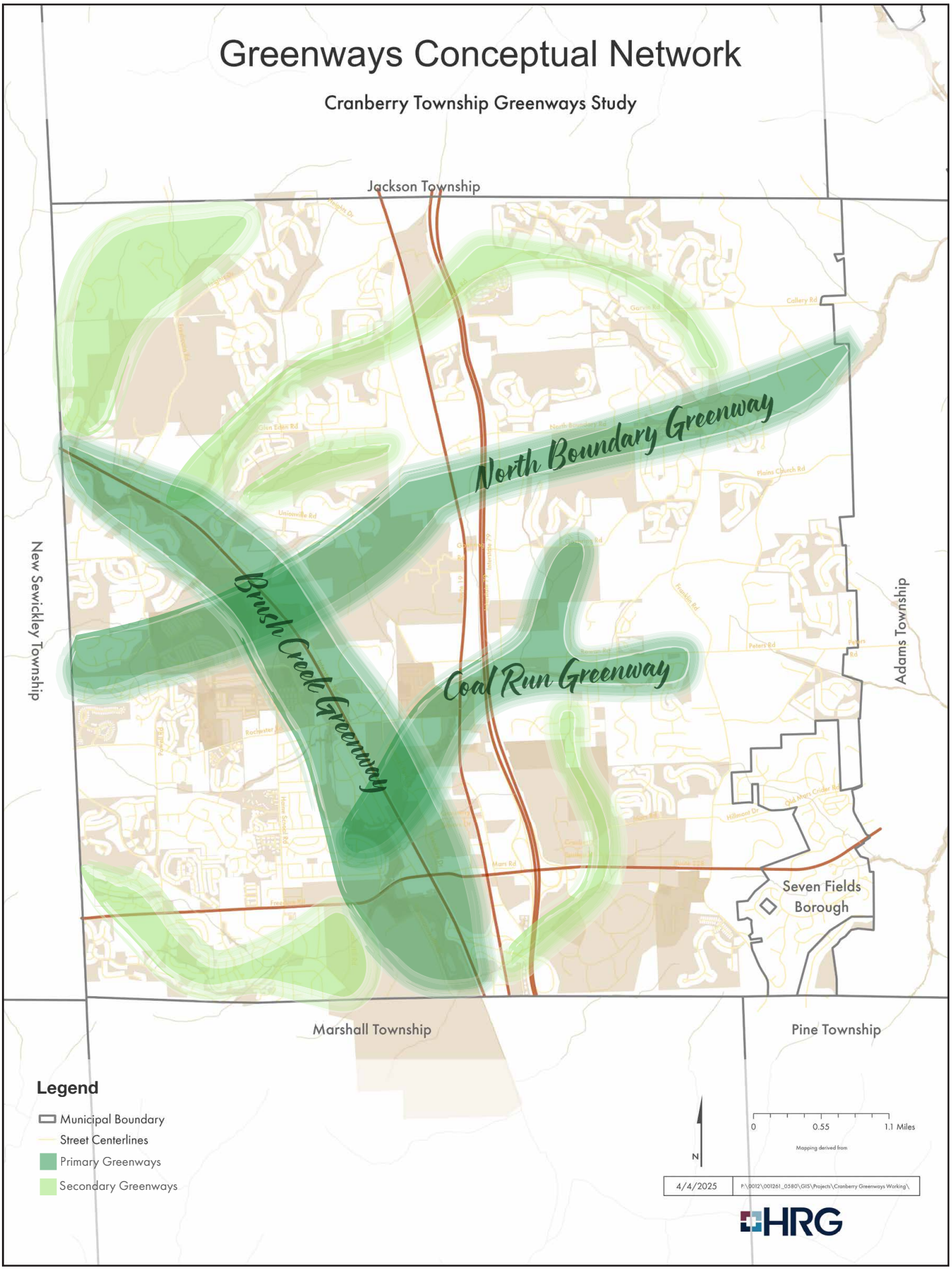
HRG

# Focus Areas Combined- Nodes & Connections

Cranberry Township Greenways Study




Greenways Conceptual Network
Cranberry Township Greenways Study
Jackson Township
North Boundary Greenway
Brush Creek Greenway
Coal Run Greenway
New Sewickley Township
Adams Township
Seven Fields Borough
Marshall Township
Pine Township
Legend
Municipal Boundary
Street Centerlines
Primary Greenways
Secondary Greenways
N
0
0.55
1.1 Miles
Mapping derived from
4/4/2025
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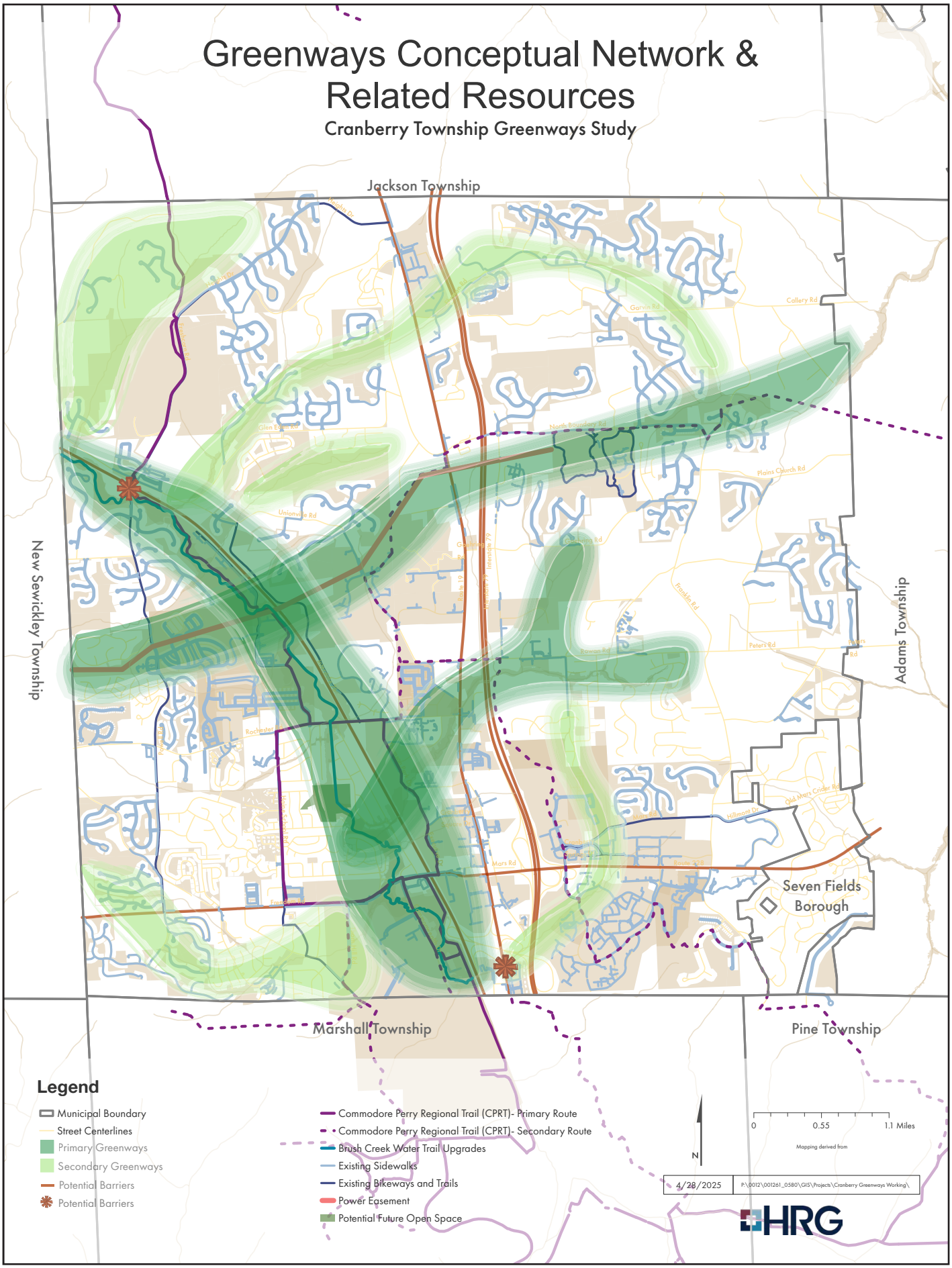
HRG


Greenways Conceptual Network & Related Resources
Cranberry Township Greenways Study
Jackson Township
New Sewickley Township
Adams Township
Seven Fields Borough
Marshall Township
Pine Township
Legend
Municipal Boundary
Street Centerlines
Primary Greenways
Secondary Greenways
Potential Barriers
Potential Barriers
Commodore Perry Regional Trail (CPRT)- Primary Route
Commodore Perry Regional Trail (CPRT)- Secondary Route
Brush Creek Water Trail Upgrades
Existing Sidewalks
Existing Bikeways and Trails
Power Easement
Potential Future Open Space
N
0
0.55
1.1 Miles
Mapping derived from
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## The Conceptual Network

The greenways shown in the Conceptual Network represent basic guidance for the development of the greenways network. The large swaths of land shown are a guide for creating thoughtful connections in the community, and future projects may follow this general guidance as a path forward. The three primary greenways- Brush Creek, Coal Run, and North Boundary- lay the foundation for the greenways network in Cranberry Township, traversing the community and creating generalized north/south and east/west connectivity. Secondary greenways are shown as part of the Conceptual Network to help expand the network and completely fulfill the goals for establishing the network in the Township. In some cases, the proposed greenways overlap. These intersections often occur at existing or potential nodes. These nodes will serve as focal points in the network, and should be treated with design features highlighting the unique character of that node, and providing wayfinding signage indicating connections with the greenways network and beyond.

### *Brush Creek Greenway*

Generally following its namesake, the Brush Creek, this greenway would represent a significant connection for the community. Incorporating the Brush Creek stream bed, the associated floodway, and adjacent wetlands, this greenway would encompass significant biological resources, and create an important ecological connection and stewardship opportunity in the community. From Graham Park to the Clearbrook Pavilion, a substantial amount of open space already exists within this proposed connection, creating sufficient space to establish and maintain a wildlife corridor and riparian buffer within the community.

The Brush Creek Greenway also represents important opportunities to connect people. The connection proposed is surrounded by existing open space and commercial nodes of interest, while existing trails may be expanded on to connect these desired destinations. The Commodore Perry Regional Trail's primary route runs adjacent to the proposed greenway connection, while the existing Brush Creek Trail and Brush Creek Water Trail pass through the area. Much of this area already contains walking and biking connections, in the form of sidewalks, on-road facilities, and trails, with opportunities to expand connections to these regional trails, through the proposed greenway. Additional connection opportunities may include linkages between existing open spaces, like the HOA open space at Park Place with Graham Park, via the Hunters Creek Trail. This example can be seen in Appendix C: Linkages Case Study. Other connections include upgrades to the Brush Creek Water Trail, which would enhance it as an important recreational feature and provide additional opportunities for social connectivity in the Township.

Establishing this greenway will require overcoming barriers to connectivity, like the Pennsylvania Turnpike/ Route 76 and the need for bridge improvements at Powell Road. Taking these barriers into consideration now, at the outset of this effort to help to ensure they can be overcome. Early communication with the Pennsylvania Turnpike Commission and ongoing pursuits for sufficient funding, will mean that these connections can be made when the time comes. By establishing this biologically rich area as a valuable connection for both animals and people, the Brush Creek Greenway will turn an area that is otherwise not suitable for significant development into a valuable community asset.

### *Coal Run Greenway*

The Coal Run Greenway represents an important opportunity to connect economic activity in the region with the natural environment. This greenway's proposed route traverses more developed areas of the Township. However, natural resources like Coal Run still exist, and border important community destinations, like the Cranberry Municipal Center and commercial development along Cranberry Square Drive. Enhancing peoples' ability to connect through this area, will also enhance their ability to connect with this area. The establishment of the Coal Run Greenway would require establishing connections across the Pennsylvania Turnpike/ Interstate 76, Pennsylvania Route 19, and Interstate 79. The need for these connections should be considered key projects within the development of this greenway, which will require long term consideration and political coordination to acquire the necessary space, permits, and funding. However, the ability to cross these barriers will represent significant gains for mobility within the Township, and provide connectivity opportunities for wildlife, people, and goods.

### *North Boundary Greenway*

The North Boundary Greenway generally follows the existing Penn Power easement that runs east/west through the Township but would encompass additional adjacent open space and connection opportunities. This greenway would serve as a critical connection at the northern end of the Township, traversing several residential connections and creating opportunities to connect with resources owned by the Seneca Valley School District. This greenway represents an important connection opportunity, bringing many separated residential developments together, connecting their residents to valuable community resources and one another. Enabling this greenway will require coordination with the power company to gain access to space. This partnership and the potential for a trail connecting this area is discussed in the following chapter. Like the potential barriers to development for the Brush Creek and Coal Run Greenways, with early consideration and coordination, the North Boundary Greenway may be developed alongside existing resources to bring added value to this area of the community.

### *Secondary Greenways*

Generally following small streams or other existing open space, like the Cranberry Highlands Gold Course, these secondary greenways have been proposed based on their capacity to help fulfill the overall goals of the greenways network. However, they should be implemented later in the process based on their potential complexity. These connections may lay the groundwork for future connections between municipalities, like linking Cranberry and Jackson Township along Fresh Corn Road, or help to establish additional connections to regional trails, like the Rachel Carson Trail that runs southeast of the Township. However, coordination between multiple municipalities or regional agencies adds complexity and time to implementation. Many of the areas highlighted may be more difficult to gain access to or may have site specific challenges to overcome through design. Overall, like the greenways network as a whole, these connections represent additional opportunities to bring added value to the community, but it will be best to consider them for a later phase of implementation.

# Types of Greenway Connections

## Overview

Defining types of greenway connections can assist with defining and prioritizing future projects. Each of the connection types varies primarily by the infrastructure proposed, and therefore each has an appropriate application throughout the greenways network.

## Organic Connections

Organic connections represent the lowest impact on the natural environment. These connections could consist of natural landscapes with only mowed trails guiding users, surrounded by preserved vegetation and minimal added facilities, seen in the image below. This type of connection should be implemented in areas focused on conservation of the natural landscape and eco-system services, and the provision of wildlife corridors.

Within the greenways network, organic connections should be considered for areas like the Powell Farm property. This property is being preserved in its existing state, limiting any new construction on the site. However, this property represents a potential connection in the Township's northeast quadrant. The use of an organic connection, limited to the maintenance of a mowed path on the Powell Farm site itself, would allow for the connection to be created without violating its conservation. This connection may be supported in the future through additional facilities, like parking, on adjacent parcels.

Organic connections may be utilized in other areas focused on the preservation of the existing landscape. This may include areas around other historic or cultural sites, sensitive natural features, or within existing easements that may restrict construction on the site.

### ORGANIC CONNECTION


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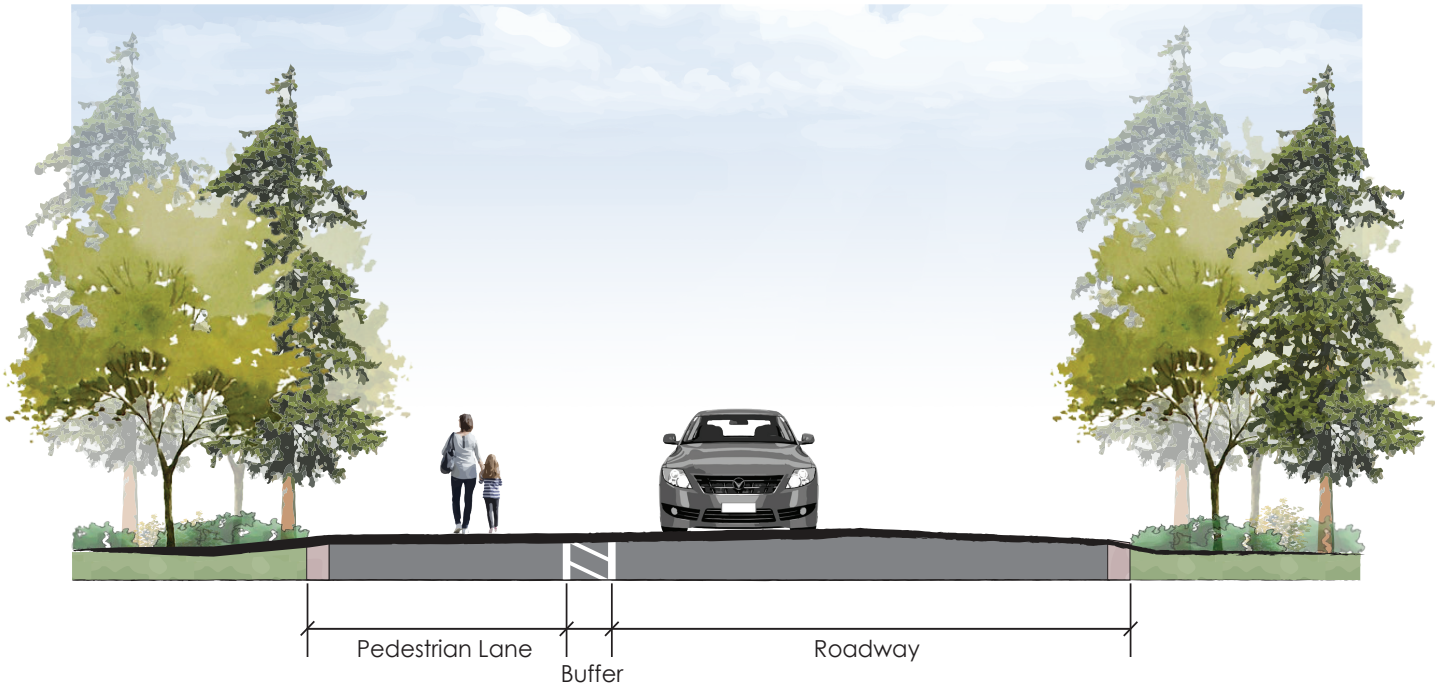
## On-Road Connections

While on-road facilities may not be the first thing that comes to mind when thinking about greenways, these connections represent an important opportunity to link community destinations and existing open space, while providing dedicated space for non-motorized users to travel. These connections are especially important in areas of the Township where opportunities for other connections to be created do not exist. This may be true in areas where narrow rights-of-way and existing development limit opportunities for adjacent facilities, like a trail or path. It may also be true due to limitations of the landscape, like extreme grade changes around the roadway. In these cases, taking advantage of the existing connection provided by the roadway may be the most logical option.

On-road connections are similar to pedestrian lanes as defined by the Federal Highway Administration (FHWA) guidebook, "Small Towns and Rural Multimodal Networks." These are areas on the roadway delineated by striping and signage, allowing non-motorized users a designated space in the roadway, and allowing pedestrian access. The image below depicts this connection type. This example includes a painted buffer between the on-street lane and the vehicular travel lane. This painted buffer is the minimum that should be included. Ideally bollards or another form of raised buffer would be incorporated if possible. This type of connection should only be implemented on low-speed, low-volume roadways. An existing example of this type of facility can be seen in the Township along Robinhood Drive, between Freedom Road and Rochester Road.

### ON-ROAD CONNECTION



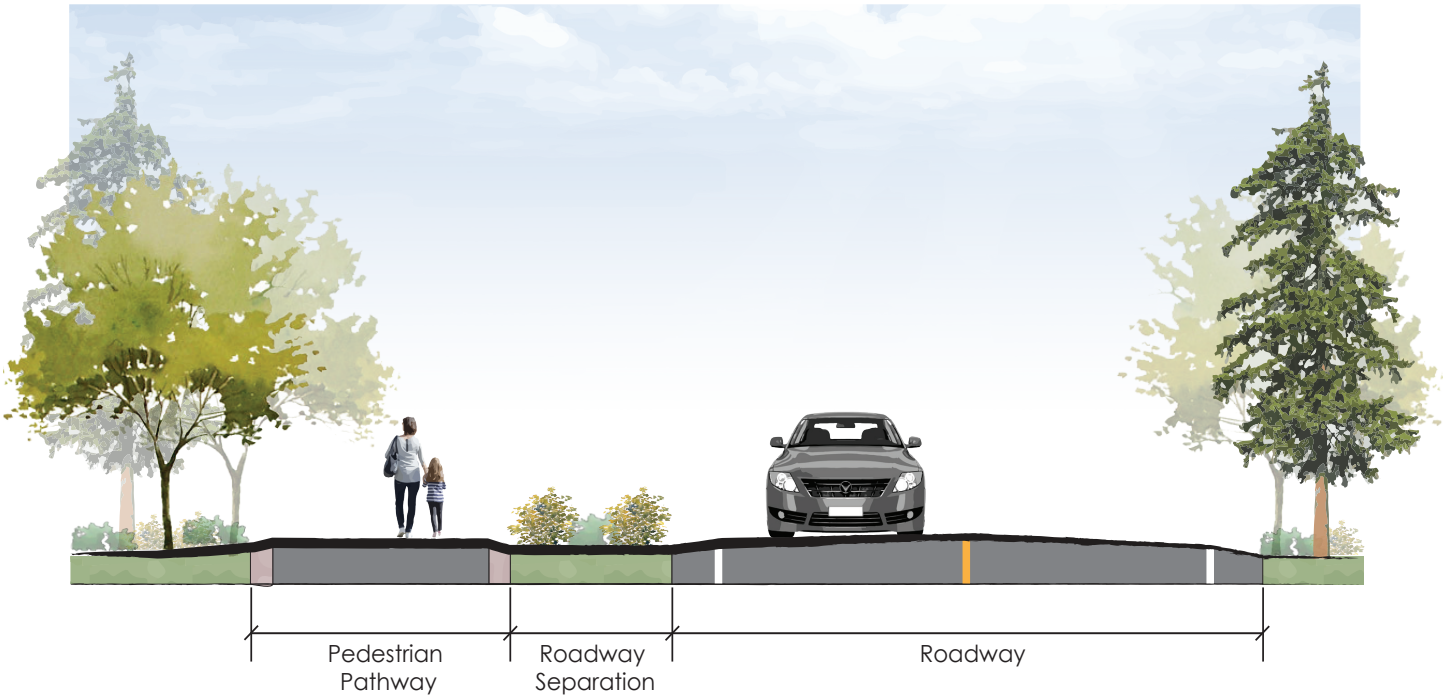
## Shared Use Paths

Shared use paths are multi-use trails designed to be used by all non-motorized users. These paths are wider than sidewalks, separated from roadways, and provide a safe and comfortable space for different types of users to travel together. They are commonly found in parks, greenways, and urban areas to promote active transportation and recreation. These facilities can also be located next to the roadway, but provide separation from traffic by including a buffer, as shown below.

These facilities should be at least eight feet wide, but would ideal be twelve feet wide to allow bi-directional traffic, and or separation between pedestrians and bicyclists. The width of the path should be established based on the space available, the presence and character of an adjacent roadway, and the demand in that area. Shared use paths are usually paved but can also be surfaced with crushed stone or other materials. Materials should be determined based on demand, the character of the surrounding area, intended purpose of the connection, and anticipated future maintenance.

Shared use paths should be implemented in areas of higher traffic volumes or along roadways with higher speeds. However, between their increased width and the need for buffering, these facilities require a larger amount of space, which is not always available. The installation of a shared-use path can be expensive and time-consuming, so demand should be carefully considered. A shared use path may be advisable along portions of the Coal Run Greenway, including the connection between Executive Drive and Rochester Road in the Township's north central quadrant.

**SHARED USE PATH**



Shared use paths may also be used to create trails with specific themes or purposes. By giving these paths a specific purpose, they would be able to serve not only as connections, but also as destinations by drawing in residents to engage with the area. Themes may be established based on adjacent land uses or as they relate to partnerships. Some examples of this include:

- **Fitness or Rehabilitation Trails:** While shared use paths inherently provide opportunities for physical activity, fitness may be promoted through the incorporation of outdoor exercise equipment or obstacles that provide additional challenges and opportunities to promote good health. Similarly trails may be developed for physical rehabilitation by incorporating mile markers to track progress, frequent seating for necessary breaks, and readily accessible emergency call boxes in case medical assistance is needed. Partnerships with local health care providers, athletic associations, or other relevant groups should be considered when creating this type of connection.
- **Educational or Story Trails:** Educational trails are not uncommon and may be used as an opportunity to engage users of all ages. These trails provide information relevant to the area's history, geology, geography, flora and fauna, or even just about environmental stewardship. Similarly, story trails feature pages from a story displayed in stands along the trail, allowing users to read the story as they progress. Both of these trails provide opportunities for additional enrichment, and may be an ideal time to partner with Seneca Valley School district or other educational providers, or Cranberry Public Library.
- **Historical or Cultural Trails:** Similar to educational trails, historical and cultural trails engage users by connecting them with the location. Trails may be developed to highlight existing historic landmarks or overall cultural landscapes, telling the history of the Township.

*The images below depict the "StoryWalk" at Autumnwood Park in Ferguson Township, Centre County, Pennsylvania. This is part of a county wide program, provided through a partnership between Centre Foundation, Centre Region Parks and Recreation, Penn's Prairie, Schlow Centre Region Library, and Centre County Library and Historical Museum, with support from Blake and Linda Gall. The larger StoryWalk Project was established by Anne Ferguson of Montpelier, Vermont.*


*Source: https://www.schlowlibrary.org/children/storywalk*

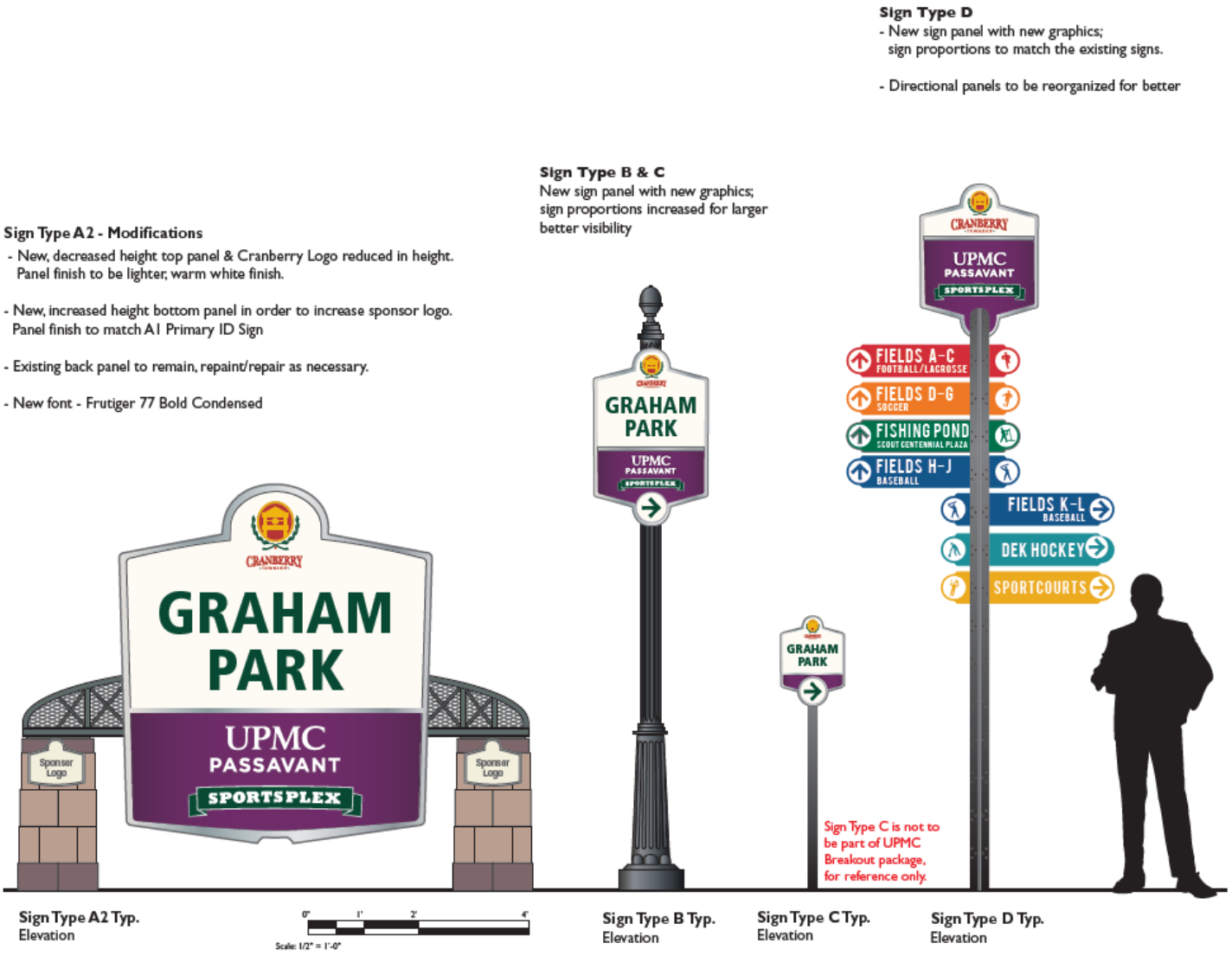
## Trailheads & Signage

Finally, while they are not a type of greenway connection, trailheads and wayfinding signage are an important part of the overall greenways network and should be used to guide users to these new connections and resources. When public spaces transect private property, users are often confused about their permission to access these spaces. Without motivated users, the purpose of the new greenways network is lost. Therefore, appropriate and consistent signage and facilities indicating open access, will be an important part of establishing successful connections and increasing access to active transportation.

The image below depicts how the entrance to a trail through a neighborhood or connecting two neighborhoods might appear. Access to these trails will often be between two homes, and signage will be important for signaling public access. The use of trailheads to help direct users will be especially important when creating connections using HOA property, to ensure resident awareness. Guidelines should be created to establish design standards that will be consistent throughout the neighborhoods. Signage type and placement may also be dictated by the guidelines. Consistency will assist with navigation and user comfort. Therefore, access to the correct signage will need to be available to HOAs or other organizations when developing trails or other greenways connections.

### TRAILHEAD

Signage used at trailheads or in other wayfinding installations, like at the intersection of two greenways, should also be consistent, not only with other greenways signage, but with existing recreational signage used in the Township. Using designs like what is already seen in the Township also contributes to consistency, as well as a sense of place and community identity. Existing recreational signage designs can be seen in the image below. These signs are used in Graham Park but follow the consistent style of signage in Cranberry Township. They may be used as a base for creating specific greenways wayfinding signage that may include a unique color or other unique features to signal the connection with the greenways network. Being consistent with existing signage is also important because locations like Graham Park are important nodes in the network, and the nodes and connections should be viewed holistically.




*Source: Kolano Designs (2022). Graham Park- UPMC Sponsorship Signage Color Analysis.*

# Key Takeaways

The conceptual development of the Cranberry Township greenways network defines high-level future projects that may be used as a guide for implementation efforts. Created to help fulfill the themes and goals identified by Township Staff and the EAC, the layout is intended to facilitate physical and social connectivity, economic activity, and facilitate resident access to these facilities, including educational opportunities. The Conceptual Network may be used as a jumping off point for the development and prioritization of additional projects, and the creation of detailed project plans.

- The development of the Conceptual Network is based on nodes and connections, which the basis for the three primary greenways- the Brush Creek, Coal Run, and North Boundary.
- The nodes incorporate existing points of interest but may also provide additional opportunities to create community gathering spaces or facilitate educational programming.
- The connections incorporate existing infrastructure and make use of other resources, like easements, but additional property may needed o complete the network.
- Future connection projects have been broken into three types- organic connections, on-road connections, and shared use paths. The trailhead design and signage information should be used to help establish consistent design moving forward.
- The next steps in creating the greenways network will require establishing explicit projects for development. These projects should make use of existing infrastructure where possible, and consider connections to existing regional trails.
- This Conceptual Network and the identified implementation projects will guide the physical creation of the greenways network. However, that process will also require the identification of an administrative structure, which is discussed in the next chapters of this Study.

# Creating a Greenways Network

# Overview

While the Land & Connectivity Assessment provides guidance on the physical locations and connectivity needs that should eventually be addressed by the creation of the greenways network, administrative and legal processes must also be considered for the creation of a successful, complete, and maintainable greenways network. The following section outlines options for land acquisition, best management practices for the creation of a greenways network, and maintenance considerations. This section also identifies ways to address the potential barriers identified by the Land & Connectivity Assessment.

Based on the information collected, the management of the greenways network can be most effectively carried out by the Cranberry Township Community Chest (CTCC). As an existing non-profit organization, the CTCC may carry out the necessary functions to create and administer the greenways network. Specific recommendations and next steps will be outlined in the following chapter.

Clearbrook Pavilion in the Clearbrook subdivision.

# Land Conservation & Acquisition

There are several different methods through which a complete greenways network can be completed in Cranberry Township. Regulatory tools, like zoning and other ordinances or official maps may be used to regulate development in ways that lend themselves to protecting open space and desired connections. Land acquisition and conservation tools may be used to more permanently hold the land for its desired purpose.

## Regulatory Tools

Zoning and other regulatory tools may be used to help establish areas in which development is less suitable, and therefore conservation or use as green space may be most logical. Cranberry Township's Zoning Ordinance currently requires the maintenance of open space associated with the creation of a planned residential development (PRD) and establishes standards for said open space and requires non-motorized connectivity to be established. However, the ordinance does not specifically call out a preservation or conservation zoning district. The use of more explicit conservation zoning may facilitate the preservation of green space over time by limiting development in environmentally sensitive areas, like those shown in the previous chapter. However, rezoning or the creation of an overlay district may be a costly and cumbersome process, and as long as land remains within the control of other property owners, its future is not ensured.

Another regulatory tool that may be considered is the creation of a program for the Transfer of Development Rights (TDR). This was originally proposed by the Township's 2012 Comprehensive Recreation and Open Space Plan: Shaping Cranberry Township. TDR establishes conservation target areas and allows property owners to transfer some or all of the development rights to their land (sending areas) to areas where growth is desired at higher densities than zoning allows (receiving areas). The landowners keep title to the land and the right to use it, but give up the right to develop it for other purposes. The buyer of development rights uses them to develop another parcel at greater density than would otherwise be permitted. With TDR, transfer of rights occurs at the time of development. Purchase of Development Rights (PDR) operates in a similar manner. However, with PDR, an entity buys the rights to develop land from the landowner. The landowner retains title and use of the land and receives tax benefits. A municipality can pass a bond issue to buy the rights and "bank" them. A developer may then purchase the development rights from the municipality when ready to develop an area with high density. Both TDR and PDR come with significant administrative burdens to both establish and maintain the programs. However, they have the potential to very explicitly direct growth and preservation by establishing target areas.

Finally, official maps ride the line between regulatory and acquisition tools. By creating and adopting an official map, a municipality officially establishes interest in acquiring specific land or easements on specific land for public use, like becoming part of a larger greenways network. Once the map officially documents the municipality's interest, if a landowner pursues development on the "reserved" land, the municipality has one year to pursue acquisition from the landowner before the owner can build or subdivide the property. Adoption of an official map is regulated by Article IV of the Pennsylvania Municipalities Planning Code (MPC), but is a generally straightforward process which may be guided by the mapping provided by this study.

## Acquisition Tools

The use of acquisition tools instead of regulatory tools may allow for more permanent preservation of land, and more readily enable non-government entities to acquire and manage land. Greenways can be acquired through a variety of methods. The form of ownership of a greenway determines the responsibilities of the property owners and the rights of potential users. Some of the most common forms of land ownership are summarized below.

Fee simple purchase is the most common form of land acquisition. In this process, the purchaser has all the rights to the property. The owner can use and develop the property as he/she/they wish(es). The owner has the right to grant the use of the property to others. An example of fee simple ownership would be a municipality owning a park. This makes the municipality responsible for the cost and maintenance of the property, but also provides the greatest degree of freedom for future use.

A fee simple property owner can grant designated property rights to a second party. This is known as an easement. The party receiving the easement can get shared or exclusive use of the property. The easement identifies in writing the terms and conditions of use. Easements are commonly used for trails and greenways. An easement is a legal term for a type of property right that allows another person, business, or entity access to a specific part of another person's property. Easements enable a flexible approach to creating and preserving greenways. Often, easements provide tax incentives for landowners/developers to create green space. There are many types of easements including greenway easements, trail easements, utility easements, and conservation easements. Descriptions of each of these easement types are provided in the table to the right.

A landowner can also provide permission to another party to use their property for a specific purpose and a defined period. This is known as a land license. It can be written or verbal and is revocable at will. These licenses are commonly used to grant hunting or fishing rights but could be temporarily used to gain access across a property or to a point of interest in certain situations. However, because this is a more tentative form of acquisition, it is generally not ideal for the formation of an established network.

The formation of a complete greenways network will likely require a combination of regulatory or acquisition tools. Understanding the options available relative to the properties the Township would like to gain access to is an important step in implementing the larger network. Being prepared to deploy the correct tool at the appropriate time will be critical for successful implementation.

| EASEMENT TYPE | DESCRIPTION |
|---|---|
| **Greenway** | Property that has been designated to support greenway activities, which could include dirt, gravel, boardwalk, or paved materials. |
| **Trail** | Property that gives the public the right ingress and egress through the property for a trail use like walking, hiking, biking, etc. |
| **Utility** | Property that gives a utility company the right to access and use a portion of another person's land for a specific purpose. |
| **Conservation** | Property that is used to help landowners preserve their land and its legacy, primarily used for historic or environmental resource protection. |

# Legal Standards & Structures

It is not enough to know the tools available for gaining access to land, the legal structure in which these tools can and would be used must also be understood before any action can be taken. In the case of regulatory tools, it is within the right of the Township to implement these tools as they desire, as long as they are compliant with the MPC. The Township has already opted to assist in the open space preservation process through several of the regulatory tools available to them.

Acquisitions are regulated differently. The Conservation and Preservation Easements Act of 2001 provides a path for implementing conservation easements that avoids standard enforcement of real estate agreements following common law. According to WeConservePA, following the Act and not being subject to common law has the following advantages:

1. Easement presumed valid. The Act says that, as a matter of public policy in Pennsylvania, conservation easements conforming to the Act are valid, notwithstanding the ways they defy traditional categorization under common law.

2. Interpretation in favor of conservation. The Act directs courts to construe language in a grant of conservation easement in favor of conservation (specifically, in favor of the purposes of the easement and the policy and purpose of the Act). This provides a distinct advantage over the common law rules, which are generally more likely to preference a less restrictive reading of restrictions on the use of land.

3. Enforceable only by certain persons. The Act clarifies key matters as to who has the right to enforce a conservation easement.

The Act outlines the entities able to obtain and hold property solely for the purpose of conservation. This would allow Township to own land outright or obtain and hold conservation easements. However, while it is within the Township's right to acquire these properties, they must consider if that is the best option. Acquisition comes with increased administrative burden to administer and maintain the properties. The Township may instead allow a non-profit organization to take the lead acquiring and maintaining the properties, with some support from the Township, and other local organizations and stakeholders, as needed. To comply with the Act, the non-profit organization must be registered under Pennsylvania's Conservation and Preservation Easement Act; registered with the Pennsylvania Department of State, Bureau of Charitable Organizations; and have a conservation-oriented mission. A conservation-oriented mission is defined as:

1. Preservation of land for outdoor recreation by the general public or for education of the general public;

2. Protection of relatively natural fish, wildlife, or plant habitats;

3. Preservation of open space (including farmland and forest land) which yields a significant public benefit and is either (a) for the general public's scenic enjoyment, or (b) pursuant to a clearly delineated federal, state, or local conservation policy (e.g., an open space plan); or

4. Preservation of historically important land areas or certified historic structures.

To most effectively and efficiently implement the greenways network, the CTCC will need to comply with the Conservation and Preservation Easements Act, which will require them to redefine their mission to include conservation, following the definition previously listed. The formation of a subsidiary of the CTCC could also be considered, to ensure that the mission is truly conservation-based and focused on the formation of the greenways network, while still allowing the administration of the network to occur under the umbrella of the CTCC. The ideal structure should be determined by the CTCC based on their current capacity, Internal Revenue Service (IRS) status, and requirements for registration under the Conservation and Preservation Easement Act.

In addition to legal structures, there are several standards that will need to be adhered to and complied with throughout the development and design of a greenways network in Cranberry Township. Legal requirements to be considered come from several national and federal standards, including, but not limited to, those shown to the right.

**American Association of State and Highway Transportation Officials (AASHTO)**
AASHTO is a standards setting body that publishes industry standard guidelines for transportation design standards.

**Americans with Disabilities Act (ADA)**
Adopted in 1990, ADA is a federal law that prohibits discrimination in employment, transportation, public accommodations, communications, access to government programs, and access to telecommunications on the basis of mental and/or physical disabilities. ADA Standards for Accessible Design establish accessibility requirements for buildings or facilities.

**Manual on Uniform Traffic Control Devices (MUTCD)**
Created by the FHWA, the MUTCD prescribes standards for traffic signs, road surface markings, and signals, including non-motorized facilities.

**National Association of City Transportation Officials (NACTO)**
NACTO establishes industry standard guidelines for the design of transportation facilities, focusing on active modes.

**Public Right of Way Accessibility Guidelines (PROWAG)**
PROWAG provides standards for accessibility within the public right-of-way. This set of guidelines establishes best practices for facilities like sidewalks; non-motorized crossings; curb ramps and detectable warnings; and much more. While PROWAG is not yet enforceable, these guidelines have been generally accepted as industry standard and provide much needed instruction for creating accessible public spaces.

# Management & Maintenance

One thing is certain, it will take a team effort and many partners to not only implement but to also manage and maintain future greenways in the Township. There are several different strategies and action steps that could be taken to ensure that Cranberry's greenways network is properly managed and well maintained.

To ensure implementation of the greenways network, as well as maintenance of any associated conservation easements moving forward key stakeholders will need to be identified within the organization acquiring and holding the land. These stakeholders would be responsible for determining how positions and departments interact with and influence the greenways, as well as performing any necessary reporting or other administrative tasks to maintain acquired land.

- As the conservation organization of choice, the CTCC would need to develop a dedicated committee focused on conservation and the development of the greenways network. This committee should incorporate diverse representation from the community, including EAC representatives to help guide the implementation of the greenways network.
- Forming an advisory board to oversee the implementation of the greenways network. The EAC may serve in this capacity, even if the Township is not the organization primarily responsible for the greenways network.
- Partnering with other organizations with greenways experience, especially stewardship programs.
- Recruiting volunteers – Adopt-a-Greenway Segment program or Greenways Rangers.
- Maximizing partnerships and encouraging collaboration.
- Applying for and administering grants to develop the greenways network. Most funding opportunities listed in the following chapter are available to non-profit organizations, but in some cases additional funding may become available through a partnership with the Township.

While a single entity may be responsible for the overall management of the greenways network, specific tasks may be carried out through partnerships. This allows public agencies to be members of that corporation, either through representation on the board, or contributing money, land, or service. The ongoing relationship between the CTCC and the Township would allow the two organizations to provide mutual support, while the CTCC takes the lead carrying out management responsibilities and operation of the greenways network.

When establishing the maintenance structure for the greenways network, regular and irregular maintenance needs should be considered. These needs may vary based on the type of greenway, with more "developed" and active greenways requiring more regular maintenance. When acquiring and designing greenways, the long-term maintenance needs should be taken into consideration, in coordination with the capacity of the administrative structure. Again, partnerships may be required to help maintain these resources. The Township may provide more skilled maintenance through their Public Works Department as needed, while simple maintenance tasks may be carried out by volunteers.

# Key Takeaways

Establishing the operational structure of the greenways network is just as important as the network itself. A non-profit organization, in this case the CTCC, may take the lead as the conservation organization, carrying out the administrative elements of the greenways network, with support from other organization, like the Township. The points below summarize the key considerations that will need to be evaluated during the startup process.

- The acquisition and maintenance of conserved lands comes with significant administrative needs. This effort should be lead by a dedicated conservation organization, with an ongoing partnership with the Township to help inform the formation of the network.
- To most effectively and efficiently serve as the conservation organization, the CTCC will need to establish a conservation based mission as required by the The Conservation and Preservation Easements Act. This may be through their primary mission or through the creation of a subsidiary.
- Partnering or collaborating with existing entities for elements of greenways management and maintenance will still be possible and necessary.
- Once the administrative structure is established, a combination of appropriate regulatory and acquisition tools may be utilized to implement the complete network.
- When acquiring and designing greenways, consideration must be given to how the network will be maintained into the future. When establishing the network, consideration must be given to the capacity to perform the required maintenance, and the partnerships needed.

The image above is of a Cranberry Township portion the Brush Creek Trail. Below is a piece of the same regional trail in Marshall Township. The coordination of regional trails like Brush Creek and the Commodore Perry are examples of how regional partnerships have already coordinated in the creation and connection of greenways. Continued coordination will be necessary to implement the greenways network, especially any regional connectivity.

# Implementation Strategies & Funding Sources

# Overview

Based on the research and assessments performed in the earlier chapters, the following chapter lays out implementation strategies and funding sources intended to best fit the specific goals for establishing a greenways network in Cranberry Township. While this study does not aim to establish specific construction projects associated with the creation of the greenways network, it does aspire to inform and facilitate the steps needed to pursue the network as a whole. To that end, initial tasks for implementation, potential funding strategies, partnership and collaboration considerations, and general recommendations have been provided. These implementation methods and recommendations should be used to implement the high level connectivity priorities identified with the Conceptual Network in the Land & Connectivity Assessment.

Hunters Creek Trail, off of Smiley Cookie Lane near Rochester Village Subdivision

# Initial Tasks for Implementation

Implementation is a key component to the future success of a greenways network in Cranberry Township. First steps would be to determine ownership of key properties and to develop a strategy to initiate conversations about potential use or purchase. The conservation organization would assess methods of acquisition and develop a budget. There are several important steps and actions needed to begin to work on establishing a true greenways network throughout the community. Many of these steps may occur in parallel and/or iteratively throughout the process. For example, the public may be engaged for a review of the network as a whole, as well as during the implementation of specific projects. The following list outlines the steps.

1. Determine the need for further planning and the feasibility of property acquisition or easement establishment.
2. Anticipate questions, issues, and concerns of landowner(s). Prepare a response detailing how proper planning will specifically address landowner questions and issues, alleviate concerns, and promote healthy relationships between the conservation organization and landowner(s). Relationships between landowners and Township staff and officials should also be considered as there will be a close connection though the Township is not the conservation organization.
3. Coach officials and partners in preparing to negotiate the acquisition or establishment of easements on the greenway segment.
4. Approach landowner(s) with assistance and support from partners, to discuss the project, identify landowner issues / concerns, and address ability of planning and design to address those concerns in a manner acceptable to all parties. Request permission from landowner(s) to advance planning and design of the greenway segment. Schedule a follow-up meeting with landowner to present a conceptual design for the greenway segment.
5. Present preliminary planning and design of greenway segment, ask owner if his/her concerns have been sufficiently addressed. Revise planning and/or design if necessary until acceptable to all parties.
6. Review methods of acquisition and preservation and negotiate with landowners to acquire property or establish easement(s).
7. Build consensus and support amongst municipal officials and the public. Consider holding public engagement opportunities to engage residents in specific greenways planning efforts, which may or may not be part of a more official greenways planning effort.
8. Arrange for the preparation of legal documents for acquisition of property or establishment of easements in greenway segment. The conservation organization will need legal representation.
9. Establish a construction budget, and determine each partner's level of involvement or participation in development of the greenway segment.
10. Prepare grant applications to secure funding for acquisition and/or development of greenway segment.
11. Oversee development of greenway segment.

# Funding Strategies

Development of a greenways network can be costly and requires a long-term strategy to access a variety of funding opportunities. Funding programs designed to conserve natural resources, develop recreational trails, and create transportation improvements are all potential sources of grants for implementation of a greenways network.

External funding sources, like grants, generally require some form of local match from the conservation organization, and sometimes one grant opportunity can be utilized as the 'local match' for another grant opportunity. DCNR and DEP funding may be used for development, rehabilitation, and improvements to public parks, recreation areas, greenways, trails, and river conservation. Some of the projects associated with the development of the greenways network, especially projects that will not allow for public access, may fall outside of these guidelines, and in those cases, additional funding sources should be considered.

The tables on the following pages list many funding sources that are available to assist in funding greenway efforts. Because these programs are constantly changing, these tables are a starting point. When seeking grant programs, applicants should check web sites of the funding organizations for an updated listing of grant programs and eligibility requirements. Moreover, any funding strategy should leverage local resources as well. Private and non-profit foundations in the community and region are important sources of funding that should not be overlooked when assembling funding strategies. In addition, efforts should be made to create public- private partnerships and to seek in-kind contributions from local businesses in the communities and the region.

The funding sources listed are generally accessible to non-profit organizations, as well as municipalities. In some limited cases, partnership with the Township may be needed to qualify for or be competitive for funding sources. Again, partnering will be key in the funding process.

Land may also be acquired for less if a landowner donates an easement or sells for less than fair market value. Landowners who may be entitled to an income tax deduction as well if they do this and pass the easement to a qualified holder, which has the same requirements as compliance with the Conservation and Preservation Easements Act. Therefore, complying with this act may have additional financial benefits.

# POTENTIAL GREENWAYS, TRAILS, & OUTDOOR RECREATION FUNDING SOURCES
# STATE & FEDERAL

| AGENCY | PROGRAM NAME | GRANT (% FUNDED) OR LOAN | BRIEF DESCRIPTION | OPEN FUNDING ROUND (TYPICAL) |
|---|---|---|---|---|
| Commonwealth Financing Authority (CFA) | Greenways, Trails and Recreation | Grant (85%) | Planning, acquisition, development, rehabilitation, and improvements to public parks, recreation areas, greenways, trails, and river conservation | Due in May |
| Commonwealth Financing Authority (CFA) | Watershed Restoration and Protection Program | Grant (85%) | Construction, improvement, expansion, repair, maintenance, or rehabilitation of new or existing watershed protection BMPs | Due in May |
| Dept. of Conservation and Natural Resources (DCNR) | Community Conservation Partnerships Program (C2P2) | Grant (50%) | Planning, acquisition, and development of public parks, recreation areas, trails, river conservation, and access / conservation of open space | Spring |
| Dept. of Conservation and Natural Resources (DCNR) | Wild Resource Conservation Program | Grant (75%) | Priorities for species surveys, conservation / management, and climate change. Must show clear indication of wild resource benefits | Due in July |
| DCNR / Fish & Boat Commission / PA Trout | Coldwater Conservation Planning & Implementation Grants | Grant | Develop Coldwater Conservation Plans to conserve and protect our cold-water streams | Due in March |
| PA Fish & Boat Commission | Boating Facility Grant Program | Grant (50%) | Projects relating to fishing and boating access facilities and related amenities | Due in December |
| U.S. Fish & Wildlife Service | Cooperative Endangered Species Conservation Fund | Grant (75%) | Species and habitat conservation actions on non-federal lands | Due in April |
| U.S. Fish & Wildlife Service | North American Wetlands Conservation Act | Grant | Increase bird populations and wetland habitat | Due in July |
| PA Dept. of Environmental Protection (DEP) | 319 Non-Point Source Management Grants | Grant (100%) | Address non-point source pollution originating from agriculture, stormwater runoff, stream channel degradation, and AMD | Due in June |
| PA Dept. of Environmental Protection (DEP) | Growing Greener Plus | Grant (85%) | Watershed protection and restoration, abandoned surface mine reclamation, and abandoned oil and gas well plugging projects | Due in June |
| U.S. Bureau of Reclamation | Cooperative Watershed Management Program | Grant | Promote the sustainable use of water resources and improve the condition of rivers and streams through collaborative conservation efforts | Due in March |
| Rails-to-Trails Conservancy | Trail Grants Program | Grant | Complete and connect trails, improve trail use experience, and support local organizations dedicated to new and existing trails | Varies |
| U.S. Dept. of Agriculture (USDA) Forest Service | State and Private Forestry Landscape Scale Restoration (LSR) Grant Program | Grant | Funds collaborative, science-based restoration of priority rural forest landscapes, leverages public and private resources, and supports State Forest Action Plans. Outcomes: improve fish and wildlife habitat, improve water quality and watershed function, mitigate invasive plants, insect infestation, and disease, reduce wildfire risk, improve forest ecosystem health | Drafts due in September, Applications due in November |

| POTENTIAL GREENWAYS, TRAILS, & OUTDOOR RECREATION FUNDING SOURCES REGIONAL | | | | |
|---|---|---|---|---|
| **AGENCY** | **PROGRAM NAME** | **GRANT (% FUNDED) OR LOAN** | **BRIEF DESCRIPTION** | **OPEN FUNDING ROUND (TYPICAL)** |
| Appalachian Regional Commission | Area Development Program | Grant (30-80%) | Projects that create and retain jobs in the Appalachian Region including trail investments | Varies |
| National Fish and Wildlife Foundation (NFWF) | Central Appalachia Habitat Stewardship Program | Grant (50%) | Restore and sustain healthy forests, rivers, and streams that provide habitat for diverse native bird and aquatic species populations | Varies |
| PA Dept. of Environmental Protection (DEP) & NOAA | Coastal Zone Grants | Grant (50%) | Used to implement the Coastal Resources Management Program. Focus Areas: Coastal Hazard Areas, Fisheries Management, Wetlands, Public Access for Recreation, Historic Sites / Structures, Port Activities, Energy Facilities, Intergovernmental Coordination, Public Involvement, and Ocean Resources / Biodiversity | Due in October |
| National Oceanic and Atmospheric Association (NOAA) | Coastal and Marine Habitat Restoration Grants | Grant | Restoration projects that use a habitat-based approach to rebuild productive and sustainable fisheries, contribute to recovery and conservation of resources, promote healthy ecosystems, and yield community and economic benefits | Due in April |
| Western PA Conservancy | Canoe Access Development Grants | Grant (100%) | Improve or develop stream access sites for canoeing or kayaking | Due in November |

| POTENTIAL ACTIVE TRANSPORTATION FUNDING SOURCES | | | | |
|---|---|---|---|---|
| **AGENCY** | **PROGRAM NAME** | **GRANT (% FUNDED) OR LOAN** | **BRIEF DESCRIPTION** | **OPEN FUNDING ROUND (TYPICAL)** |
| Commonwealth Financing Authority (CFA) | Multimodal Transportation Fund (MTF) | Grant (70%) | Development, rehabilitation, and enhancement of transportation assets | Due in July |
| PA Dept. of Transportation (PennDOT) | Multimodal Transportation Fund (MTF) | Grant (70%) | Transportation and related improvements for transportation assets that enhance communities, pedestrian safety, and transit revitalization | Due in November |
| PA Dept. of Transportation (PennDOT) | Transportation Alternatives Set-Aside (TASA) Program | Grant (100%) | Funding for projects defined as transportation alternatives, including pedestrian and bicycle facilities, public transportation infrastructure projects, safe routes to school projects, etc. | Varies |
| Commonwealth Financing Authority (CFA) | Local Share Account (LSA) – Statewide | Grant (100%) | Distributed from gaming funds to support economic development projects, community improvement projects, and projects in the public interest, including parks and recreation. | Due in November |
| PA Dept. of Transportation (PennDOT) | Automated Red Light Enforcement (ARLE) Funding Program | Grant (100%) | Improvements to traffic control signals and related intersection traffic control improvements | Due in June |
| PA WalkWorks | WalkWorks Funding Program | Grant | Development of active transportation plans and related policies – pedestrian, bicycle, and transit transportation systems that increase connectivity | Varies |
| AARP | AARP Community Challenge Grants | Grant | Funds quick-action projects that can help communities become more livable for people of all ages, specifically the needs of people 50-plus. Project types include transportation, parks, and community resilience | Varies |
| T-Mobile | Hometown Grants Program | Grant | Funds projects to build, rebuild, or refresh community spaces that help foster local connections in your town. Projects should be shovel-ready, | Due Quarterly |

# Project Prioritization

It is important to create a vision for the entire greenways network to guide the overall implementation process. However, funding will not become available to implement all of the projects at the same time. This makes it important to establish a process to prioritize projects as funding becomes available.

Project prioritization criteria have been drafted and may be used to annually review potential projects for funding and implementation. The table on the following page contains the drafted project evaluation rubric. In this case, a scoring system has been included, with a score out of one hundred points, but the characteristics may be used on their own as a qualitative system of assessment, if preferred.

For each category, one or more criteria have been developed with an associated measure. In some cases, this measure is simply a yes or no. In other cases, the measure will require a basic analysis to assess fulfillment of the criteria. This assessment will likely need to be prepared by Township Staff in advance of the prioritization exercise, especially for projects that are not being proposed by an external source.

Like Cranberry Township's existing Sidewalk Links Program, proposed projects may be reviewed annually. These projects may be based on an existing map of identified connections and/or other projects that have been submitted to the conservation organization or Township for consideration. The review process may also be initiated by an internal or public participatory mapping process to identify remaining needs. A combination of all of these sources may be included.

A final process will need to be decided on by the conservation organization, its partners, and its greenways advisory committee. These criteria, their associated measures, and their relative rankings were established based on input from Township Staff and the EAC. In its final form, the project prioritization process may be used as a mechanism to take advantage of opportunities as they arise or address opportunities as they may become available. The volume of projects selected in any given year will be dependent on the funds available, and the prioritization exercise should be timed appropriately to allow the results to be considered in the budgeting process.

| PROJECT PRIORITIZATION RUBRIC | | |
|---|---|---|
| **CRITERIA** | **MEASURE** | **POSSIBLE POINTS** |
| **SAFETY** | | |
| Does the project contribute to multi-modal safety needs? Does the project propose a direct solution to an existing safety concern or problem? | Yes or No<br><br>The measure may also consider any safety analysis performed to determine the degree of safety improvement. However, these may or may not be available as part of a proposal. Points should be assigned out of 20 based on the perceived degree of improvement or importance of the improvement based on the degree of the existing safety concern. | /25 pts |
| **FINDING CONNECTIONS** | | |
| In what way does the project create new connections to community resources? This may include connections to public centers, churches, commercial centers, parks, schools, or other resources deemed valuable by the evaluation committee. | How many community resources would the project improve access to? Resources within a quarter mile radius of the termini of the project should be considered as part of this direct connection. | /20 pts |
| How many people would be connected by the implementation of this project? | How many housing units are directly connected based on the implementation of this project? This should be assessed based on the number of housing units within a quarter mile radius of the termini of the project. | /15 pts |
| **PROJECT FEASIBILITY** | | |
| What is required for the implementation of the project? How Complex is the project? What external coordination is needed? | The project should be assessed and scored based on relevant characteristics, including the need for additional funding, the need for external coordination, the need for land acquisition, and the overall complexity of the project's implementation. | /15 pts |
| Has the project taken into consideration known future development and consistency with community goals for the future? | Yes or No | 5 pts if yes/ 0 pts if no |
| **MAINTENANCE PLAN** | | |
| Has the project considered a maintenance plan for the future? Is maintenance of the project reasonable? | Yes or No | 10 pts if yes/ 0 pts if no |
| **COMMUNITY BUY-IN** | | |
| Is there an effective champion for the project? | Yes or No | 5 pts if yes/ 0 pts if no |
| Is there community buy-in for the project? | Yes or No | 5 pts if yes/ 0 pts if no |

# Potential Partnerships & Supporting Actions

While the construction of a complete greenways network is the overarching goal, the feasibility of that outcome depends on the formation of a supporting structure. This comes in the form of strong partnerships and the fulfillment of supporting actions. Partnerships include working with other community organizations and key stakeholders to mutually accomplish the greenways goals. Supporting actions are the intangible- policy, planning, and engagement related-projects that function to ensure the feasibility and sustainability of the greenways network.

## Partnerships

Strong partnerships will be needed for every step of the greenways planning, development, and maintenance process. Key partnerships should include but are not limited to land trusts and conservation groups; HOAs; Seneca Valley School District and other educational entities; utility companies and other easement holders; regional transit agencies; PennDOT and the Pennsylvania Turnpike Commission (PTC); and local land and business owners. Cranberry Township likely has existing relationships with all of these entities, but specific communication related to these efforts should be initiated early in the process and maintained throughout.

### *Land Trusts & Conservation Groups*

The involvement of land trusts or other conservation groups in the greenways network is not necessarily all or nothing. While it is in the best interest of the Township for the CTCC to be the primary holder of conservation lands, partnerships with these very experienced organizations may still be possible and beneficial. Coordination with land trusts may be necessary in the acquisition of desired parcels. In some cases, landowners may be more willing to approach these groups. This makes coordination and communication of the overarching greenways goals and priority parcels critical to the success of filling specific gaps in the network. Land trusts may also be able to assist with the negotiation of the acquisition, although this may require the CTCC to underwrite the cost of land trust staff time and resources. Part of this partnership may involve an established reimbursement process. Land trusts may also be able to accept property that may not otherwise meet the established criteria for accepting an easement as part of Cranberry Township's greenways network, but that may still be beneficial to the area, and vice versa. For example, if the CTCC is not yet prepared to accept an easement or does not currently have the capacity to maintain the property, the land trust may accept it, still accomplishing the larger goal of conserving the property. The CTCC and Township may then be able to assist with future plans for the property.

Land trusts and other conservation groups may also be coordinated with for the maintenance of developed greenways and trails. These experienced and well-connected groups may be willing to assist with clean up and restoration efforts when needed or help to coordinate their existing volunteer resources. In turn, the Township may choose to support other efforts being made by the organization, through in-kind contributions, to maintain the relationship into the future.

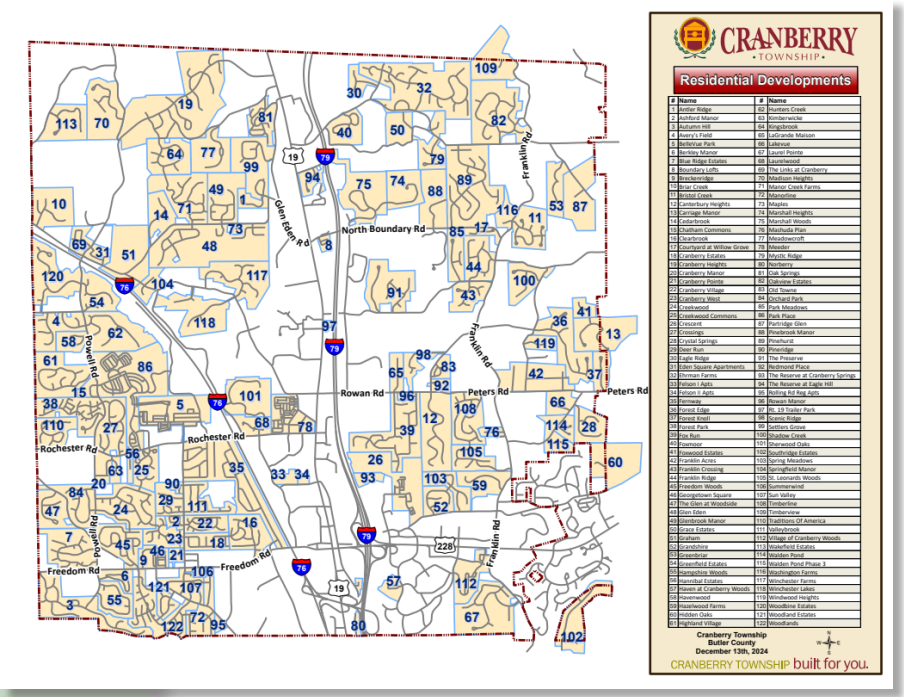
*Homeowners Associations (HOAs)*

As established by the Land & Connectivity Assessment, there is a great deal of open space property in the Township that is currently under the jurisdiction of the developments' associated HOAs. The private holding of these areas creates some confusion about public access to them and allows the HOA to utilize and maintain the areas without consideration with the larger greenways and connectivity goals. As previously mentioned, these properties can be turned over to the authority of the Township or conservation organization, which would allow for them to be included as part of the larger greenways network structure but would also make them the responsibility of the new holder.

As of December 2024, there are over sixty residential developments in Cranberry Township. Most of these developments have an HOA responsible for maintenance and coordination. The Township already pursues an open line of communication with these groups through the Neighborhood Forum, held several times throughout the year. Additional materials are shared via the Township's website.

These existing relationships may be utilized to help develop the greenways network through HOA property by creating mutually beneficial agreements. Coordination with HOAs may also assist with community engagement and better understanding desired connections.

In some cases, HOAs have recognized the value of using their properties to create greater access and have contacted the Township about the creation of trails and other connections using these properties. A formalization of this process may be beneficial for making more HOAs aware of this possibility and streamlining the Township's ability to coordinate this process with the conservation organization. Formalizing this process may include the creation of an application made available online and advertised through existing communication with HOAs and residents at large. The application should coordinate with the prioritization criteria, helping to ensure that the proposed project/connection is high quality and will provide additional value to the Township and greenways network. Additional agreements needed, like maintenance, insurance, and access should be explained as part of the application process so HOAs can be prepared. Formalizing this process will also help to streamline these agreements.




Source: https://www.cranberrytownship.org/DocumentCenter/View/225/Residential-Neighborhoods-Map?bidId=

### *Seneca Valley School District & Other Educational Institutions*

The School District is an important partner for acquisition, development, and maintenance of the network, as well as future programming. The establishment of a greenways network opens up a variety of educational opportunities that may be beneficial to the schools. This may come in the form of physical development, like guided trails or educational structure, or through the establishment of events and programs that students can both take part in and help facilitate through volunteer programs. Students may also serve as an important source of volunteer maintenance. The School District is not only a significant property owner in the Township, but they also have authority as a taxing entity. They also have the authority to hold land in conservation and use their resources to contribute to conserving land.

### *Utility Companies & Other Easement Holders*

Coordination with utilities will be a critical part of creating necessary connections in the Cranberry Township greenways network. Existing power, gas, and sanitary sewer easements, as shown in the Land & Connectivity Assessment, may all be utilized for the creation or trails or other greenways connections, if permission is granted by the holder of the easement, i.e. the utility company. Other types of utility easements may also be considered for this, like broadband or fiber-optic easements, as well as irrigation districts.

Gaining access to these areas may be done through different means. One way is to work with utility companies is to encourage them to develop a trail or other greenway facility in the area themselves. In some cases, this may help them to fulfill community outreach requirements. This may be less probable as it requires the company to take on that burden, although it may be motivated through a maintenance agreement with the Township. Alternatively, an easement or access agreement may be established. An easement would establish a more permanent access to the area, while other less official agreements may be at the will of the company. Access to these areas will likely require coordination with and agreement from the surrounding property owner as well, as most utilities exist within easements to begin with.

The image above shows an electrical transformer in a power easement that transects the Hunter Creek Trail. Additional access running along the length of this easement would provide additional connectivity in an existing open space.

### *Regional Transit Providers*

The creation of a greenways network has the capacity to create not only great recreational and open space opportunities, but to establish necessary connections needed to facilitate day to day non-motorized travel. Whether by necessity or choice, more and more Americans are choosing to forgo car ownership, or at least reducing their personal vehicle miles traveled. This makes it important to provide transit connections, which require non-motorized connections for access. The formation of the greenways network should consider coordination with regional transit, either the Butler County Regional Transit Authority (BCRTA) or the Pittsburgh Regional Transit Authority (PRT) to expand future service, facilitated by a more built-out non-motorized transportation system.

### *The Pennsylvania Department of Transportation (PennDOT) & The Pennsylvania Turnpike Commission (PTC)*

As identified by the Land & Connectivity Assessment, the Pennsylvania Turnpike and other high-volume PennDOT roadways like Route 19 create barriers to connectivity in the community. Traversing these barriers will require coordination with these groups and communication should start early to better understand the process for gaining access. That process may be facilitated by formalizing a greenways plan and fulfilling a public engagement process, documenting demand and public support for these connections.

### *Local Land & Business Owners*

In addition to these major groups, strong partnerships should be established with local businesses and property owners to ensure buy-in and support for the program, especially if acquisition of their land is a priority. Early and upfront communication with these stakeholders help to facilitate future negotiations. This may be facilitated through the formation of a working group or open forum that meets regularly to discuss the goals for the development of the greenway with those whose properties might be impacted.

Communication should also be opened with local businesses even if their property will not be impacted. Greenways, especially in developed areas, as shown to increase economic activity. Buy-in from businesses can help to support these benefits in the long run.


*Source: https://www.digi.com/resources/customer-stories/pittsburgh-improves-public-transit-ridership*

PRT service currently only extends as far north as the McCandless/Wexford area. However, limited services was previously provided as far north as Cranberry Township. Increased demand may motivate additional routes to serve these area. That demand may be encouraged through the creation of sufficient non-motorized facilities, contributed to by the creation of a greenways network.

## Supporting Actions

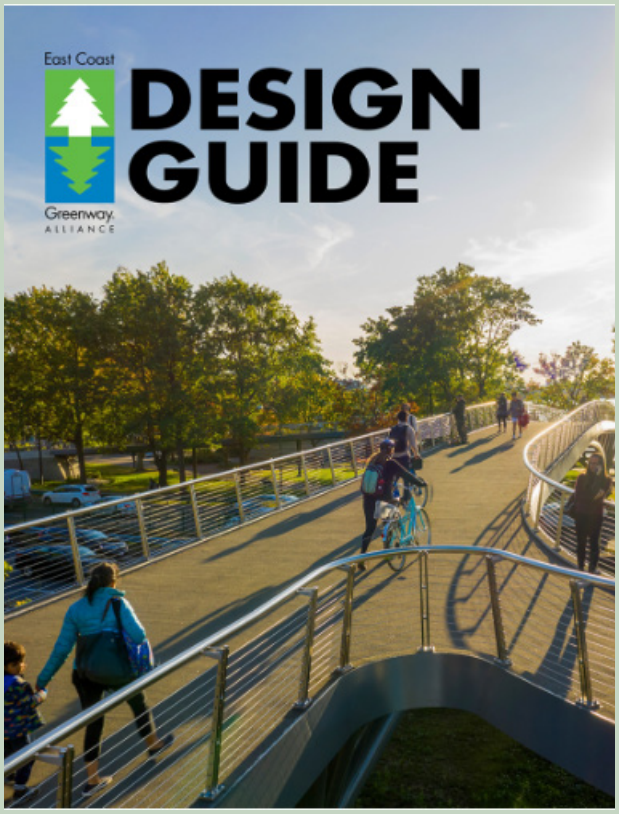
In addition to the acquisition and development of physical property, there are policy and programming efforts that can help to facilitate and support the long-term success of a greenways network. Partnerships will be important in facilitating these efforts as well, through assistance with establishing and facilitating some efforts, and with compliance in others.

### *Education & Encouragement*

As previously mentioned, greenways can contribute to educational efforts in the community. Programming or educations facilities may be open to residents of all ages and abilities, not just current students. However, someone needs to take the lead on developing these efforts. Programs and events must be developed to provide high quality experiences for the intended audience. This requires time and money that should be allocated for this purpose.

### *Greenways Design Standards*

Much like the Township's existing overlay standards which direct the appearance and characteristics of developments in the zoning overlays, greenways design standards should be established to ensure that greenways containing an active development are designed to the standard expected by the Township. Consistent design standards can help ensure that facilities are safe, sustainable, and have minimal impact on the surrounding natural environment and surrounding developed land uses. The design standards should consider common elements like signage and lighting, compliance with ADA and PROWAG, and appropriate plans for non-motorized connectivity. Additionally, the design standards may layout appropriate uses of environmentally sensitive areas. Appropriate treatments of areas in the floodplain, like the need for riparian buffers, or the appropriate treatment of steep slopes may be outlined to ensure that these areas are designed properly in the future.




*Source: https://greenway.org/design-guide*

Greenway design guidelines are not uncommon and many examples can be found online. One example is the *East Coast Greenway Design Guide* created by the Greenway Alliance. This and other examples are listed in Appendix A.

# Key Takeaways & Conclusions

The creation of a complete greenways network in Cranberry Township has the potential to establish valuable connections between community destinations and existing open space, which will create pleasant linkages for non-motorized transportation and social interaction. While the benefits of a greenways network obvious, implementation was not inherently clear. The information provided in this study should guide the next steps as this goal is pursued. Next steps to consider include:

- An administrative process must be formalized identifying the CTCC as the conservation organization. Given the unrealistic administrative demand for the Township, a non-profit entity is more realistic. Based on their existing presence in the community and the established partnership with the Township, the CTCC makes the most sense.
- Compliance with the Conservation and Preservation Easements Act will be the most efficient process. This will require the CTCC to create a subsidiary with a conservation focused mission.
- A formalized vision for the greenways network must be developed based the Conceptual Network provided, as well as additional assessment based on the prioritization criteria, additional standards for feasibility, and the incorporation of public input.
- Standards by which the CTCC accepts easements will need to be developed. These guidelines should consider the long-term feasibility and sustainability of holding and maintaining properties, as well as how well that property may contribute to the overall greenways network. The prioritization criteria may be considered as a base for this.
- As part of the administrative structure carried out by the conservation organization, an advisory committee must also exist to review and recommend potential properties. This committee may incorporate representation from any or all partnerships, as well as representation from the EAC.
- Funding sources must be considered, applied for, and administered. The CTCC must determine which sources they are interested in pursuing, and if there is political will to support the use of taxation.

Based on the findings of this study, the implementation of the greenways network will depend on a balance of physical construction and intangible support systems. By pursuing that balance, a complete greenways network may be created, providing additional opportunities for social and physical connection, physical health, recreation, education, and economic development for the community as a whole.

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