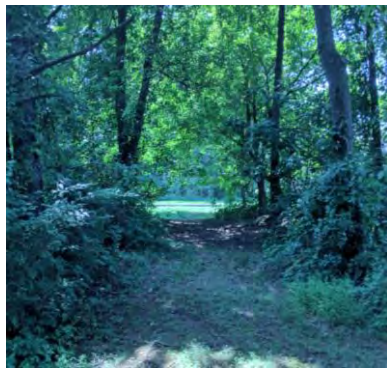




BUCKINGHAM TOWNSHIP

MASTER TRAIL & BICYCLE PLAN

April 2019



BUCKINGHAM TOWNSHIP MASTER TRAIL AND BICYCLE PLAN

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EXECUTIVE SUMMARY

The Buckingham Township Master Trail and Bicycle Plan outlines a vision for improving the quality of life in the Township; providing a wide range of outdoor experiences; and supporting economic development through the development of a comprehensive township-wide trail network.

The process of developing this Master Trail and Bicycle Plan included extensive opportunities for public participation to gain insight and feedback so that the resulting plan is a direct reflection of the community. In addition to details about the public participation process, the plan includes four components:

1. Inventory of Buckingham Township Resources
2. The Trails Plan
3. Implementation and Cost
4. Maintenance and Operations

Inventory of Buckingham Township Resources

This section of the plan identifies information obtained from field reconnaissance as well as summaries of the following resource groupings:

- Natural resources: rivers and streams, wetlands, floodplains, woodlands, topography and agricultural land
- Man-made resources: roads, utilities, existing trails, and parks and open space
- Historic and cultural resources: covered bridges and historic districts

Some of these resources represent destination points within the trail network; others pose constraints or challenges to the development of the network, while others may present opportunities.


The Trails and Bicycle Plan


This plan component begins with a discussion of various standards and guidelines for the design of trails and bicycling facilities, describes various types of trails and recommends trail standards to be adhered to in the development of trails in the Township.


This section also identifies the 61 trails and bike facilities proposed as part of the township-wide trail and bicycle network and provides a written description of each trail and bike route including specifics such as location, proposed surface width, connectivity of each trail/bicycle route to other trails/bicycle routes, park facilities, commercial districts, schools and residential neighborhoods as well as the number of constraints such as bridges and easements to be addressed in the development of the trail. Maps for each trail and bike route are also provided. The new proposed trails and bicycle routes have a combined mileage of 54.1 miles, which when coupled with the existing 14.7 miles of trails in the Township, will result in a network of 68.8 miles of trails.

Buckingham Township - Proposed Trails and Bicycle Facilities


Area	Length (Miles)
Area 1 (Includes #6B Smoke Road since alternative alignment)	11.3
Area 2 (Excludes #26B since alternative alignment and excludes Carversville Connector since outside of Township)	8.2
Area 3	9.7
Area 4	5.7
Area 5	15.0
Area 6 (Excludes Wycombe connector since it's outside of the township)	5.2
Total Proposed Trails and Bicycle Facilities	55.1

Segment	 Dedicated Bicycle Lanes (BL)	Planning Area	Length (Miles)
1 BL	Swamp Road	1	1.2
28	Swamp Road	3	1.4
Total Proposed Bicycle Lanes			2.6

Segment	 Hiking Trail	Planning Area	Length (Miles)
47	Little Buckingham Mountain	4	0.4
Total Proposed Hiking Trails			0.4


Segment	 Sidewalks	Planning Area	Length (Miles)
11	Progress Meadow Drive	1	0.2
37	Route 202	3	0.6
38	Burnt House Hill Road	3	0.1
Total Proposed Sidewalks			0.9

Buckingham Township - Proposed Trails and Bicycle Facilities

Segment	 Shared-Use Trails (SUT)	Planning Area	Length (Miles)
1 SUT	Swamp Road	1	0.3
2	Cold Spring Creamery Road	1	0.4
3	Stony Lane	1	0.5
4	Glen Drive	1	0.1
6B	Smoke Road	1	1.0
7	Church School Road	1	0.2
9	Hansell Road	1	0.5
12	Burnt House Hill Road	1	0.3
13	Mechanicsville Road (West)	1	1.0
16	Durham Road - Cold Spring Creamery Road Intersection	1	0.1
17	Landisville Road	1	0.4
18	Carversville Road	2	0.1
19	Durham Road	2	0.3
20	Mechanicsville Road (East)	2	0.3
21	N. Doe Run Road to Holicong Road	2	0.7
24	Anderson Road	2	0.6
25	Route 202	2	0.5
26B	Maximuck's Farm	2	1.3
27	Holicong MS/Central Bucks East HS to Buckingham Green	2	1.0
36	Durham Village to Route 202	3	0.3
39	Edison Furlong Rd/Cloverly Drive to Heritage Center Drive	4	0.5
41	Swamp Road	4	0.4
42	Forest Grove Road	4	0.2
44	Durham Road/Buckingham Valley	4	1.0
45	Swamp Road	4	0.8
52	Street Road	5	0.4
59	PECO Corridor/Dark Hollow Road	6	1.2
	Wycombe Connector Trail (Wrightstown Township)	6	0.5
Total Shared-Use Trails (Excludes Wycombe Connector since outside of Township and alternative alignments #6B and #26B)			12.1

BUCKINGHAM TOWNSHIP MASTER TRAIL AND BICYCLE PLAN

Buckingham Township - Proposed Trails and Bicycle Facilities

Segment	 Bike Sharrows / Share the Road Signs	Planning Area	Length (Miles)
4	Glen Drive	1	0.3
5	Buttonwood Drive	1	0.4
6A	Smoke Road	1	1.0
8	Fell Road	1	0.8
10	Hancock Ln - Twinbrook Cir - Mallard Ln - Miladies Ln	1	1.5
14	Clay Rd - Danielle Dr - Edgewood Rd - Winchester Rd	1	1.0
15	West Long Lane	1	0.4
17	Landisville Road	1	0.7
21	N. Doe Run Road to Holicong Road	2	0.4
22	Hunters Run Neighborhood	2	1.4
23	Ash Road/Ash Mill Road	2	1.6
26A	Indian Spring Road - Kingfisher Lane - Long Lane	2	1.3
	Carversville Connector (Stover Mill Road - Solebury Twsp)	2	1.4
28	Swamp Road	3	0.1
29	Spring Valley Road	3	1.0
30	Oak Lane	3	0.2
31	Furlong Road	3	1.1
32	Mill Road	3	1.8
33	Church School Rd/Church Road	3	1.6
34	Snake Hill Road	3	0.6
35	Burnt House Hill Road	3	0.9
40	Heritage Center/Villages at Buckingham	4	0.9
43	Upper Mountain Road	4	1.2
46	Devonshire Estates	4	0.3
48	Upper Mountain Road	5	2.5
49	Quarry Road	5	0.7
50	Holicong Road	5	3.2
51	Byecroft Road	5	0.8
53	Lower Mountain Road	5	4.0
54	Creek Road	5	1.4
55	Smith Road	5	1.7
56	New Road	5	0.3
57	Lower Mountain Road	6	1.5
58	Creamery Road	6	0.3
60	Dark Hollow Road	6	1.6
61	Sugar Bottom Road	6	0.6
Total Proposed Bicycle Sharrows/Share the Road (Excludes Carversville Connector since outside of Township)			39.1

Implementation and Cost

This section of the plan outlines a detailed implementation process. Included in this section is a trail priority rating system. This rating system was developed in recognition of the fact that the implementation and development of the trail network will be a multi-year process. This section also provides recommendations on the steps required for development of the network including the adoption of an official map, requiring trails as part of the land development process, methods for acquiring the right-of-way needed for developing the trail, funding opportunities, and an overview of the design, engineering and permitting process.

This section also provides a summary of general cost guidelines for the development of different types of trails. No detailed cost estimate has been provided as many variables impact the cost of trail development. Additionally, it is anticipated that many of the trails will be paid for by developers as part of the land development process. It is envisioned that any additional funding required will be obtained through federal and state grant programs.

Maintenance and Operations

The plan recognizes that the ongoing operation and management of the trail network is essential to its long-term success and provides information in the following areas:

1. Trail maintenance and associated tasks, including the need to develop a trail maintenance program and schedule;
2. An overview of how to ensure safety and security on the trails including user rules and regulations, the development of a system for reporting accidents, educational outreach sessions on trail safety, and the need to develop trail emergency procedures; and
3. Liability and risk management which outlines how the township, as well as any individual private property owners granting easements for a trail, can limit their liability exposure.

CHAPTER 1 – INTRODUCTION

BACKGROUND

In 2017, the Buckingham Township Board of Supervisors established the Trails committee for the purpose of developing a Master Trail and Bicycle Plan for the Township. The committee was made up of six members and included residents, representatives from the Park and Recreation Committee, Planning Commission, the Board of Supervisors and township engineers:

Dan Gray, P.E.	Township Engineer
Thomas Kelso, AICP	Wastewater Engineer
Rebecca Fink	Planning Commission
Louise Silberg	Park and Recreation Commission
Dan Kruger	Resident
Paul Calderaio	Township Supervisor

PURPOSE AND GOALS

One of the initial activities undertaken by the Trails committee was identifying the overall purpose and goals of the *Buckingham Township Master Trail and Bicycle Plan*.

The purpose of the *Buckingham Township Master Trail and Bicycle Plan* is to guide the development of an extensive, integrated, trails and bicycle facilities network to support the needs of the community. The intent is to provide a trail and bicycle network for the township that will improve mobility and quality of life for residents. This plan will serve as a tool to secure grant funding as well as forge partnerships to move towards implementation of the plan elements. Plan goals include:

- Identify preferred trail and bicycle routes;
- Identify opportunities and constraints to the development of those routes;
- Develop an understanding of the potential costs associated with trail and bicycle facility development;
- Identify implementation strategies; and
- Explore and identify potential sources of funding

BENEFITS OF TRAILS

Creation of a township-wide trail network will provide recreational, environmental, quality-of-life and economic benefits including:

Recreational Benefits

- Provides safe places for bicycling and walking including safe routes to schools.
- Provides connections to recreational and commercial areas.
- Provides access to various historic and cultural sites.
- Provides increased access to streams, creeks, and rivers for fishing and water-based recreation.
- Offers opportunities for nature study and bird watching.

Quality of Life Benefits

- Encourages physical activity to improve the health and welfare of users of the trail.
- Inspires residents to participate in the ongoing maintenance of the trail and create a sense of community.
- Allows for the opportunity to use a bicycle as an alternative transportation mode.

BUCKINGHAM TOWNSHIP MASTER TRAIL AND BICYCLE PLAN

Environmental Benefits

- Provides the opportunity to improve stormwater management, re-establish and rehabilitate riparian buffers along streams and creeks, and conduct streambank restoration.
- Provides opportunities for environmental education programs at schools in the area.
- Gives citizens the choice to either walk or bike, reducing the need to drive.

Economic Benefits

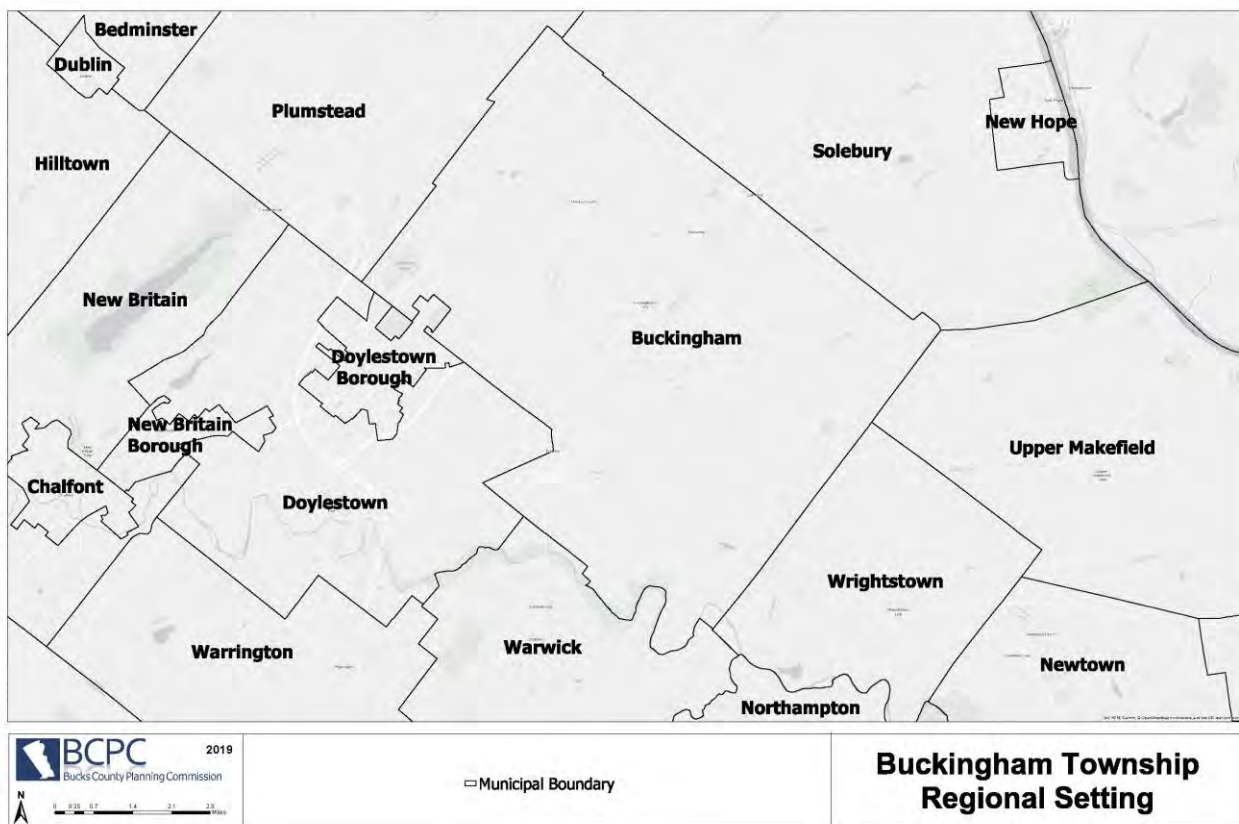
- Placement of trails close to historic boroughs and commercial centers can benefit both businesses and trail users. Businesses provide trail amenities to trail users in the form of restaurants and shops, thus bringing in a new source of income to help grow current businesses and create opportunity for the development of new ones.

COMMUNITY PROFILE

REGIONAL SETTING

Buckingham Township is located in northeast portion of central Bucks County and is bordered by seven municipalities including Doylestown Borough and Doylestown, Plumstead, Solebury, Upper Makefield, Warwick, and Wrightstown townships.

Map 1 - Buckingham Township Regional Setting



LAND USE

Approximately 33 square miles in size (21,077 acres), Buckingham Township is predominately a mix of residential (46%) and agriculture uses (30%). Parks, Recreation and Protected Open Space accounts for almost 7 percent of land use.

Table 1 - Land Use Characteristics, 2012

Land Use Category	Acreage	Percentage
Single-Family Residential	5,537	26.3%
Multifamily Residential	100	0.5%
Rural Residential	4,023	19.1%
Agriculture	6,342	30.1%
Industrial	84	0.4%
Government & Institutional	491	2.3%
Parks, Recreation & Protected Open Space	1,422	6.7%
Commercial	389	1.8%
Transportation & Utilities	1,525	7.2%
Vacant	1,165	5.5%
Total	21,077	100.0%

DEMOGRAPHICS

Buckingham Township's population as of 2017 was estimated to be 20,306. The population of the township tends to be slightly older than Bucks County with a median age of 46.9 years versus 43.6 years. This is partially attributable to a higher percentage of the population in the township being in the 45 - 64 age groups (36.9%) versus the county (30.9%).

The level of education attainment is also higher in Buckingham Township versus Bucks County. Almost 60 percent of the adult population (59.0%) in Buckingham Township has a bachelor's degree or higher. This is in contrast to Bucks County where 39.4 percent have a bachelor's degree or higher.

Similarly, median household income in the township is 52 percent higher versus the county.

Table 2 - Demographics, 2017

	Buckingham Township		Bucks County	
	2017	Percent of Total	2017	Percent of Total
Total Population	20,306		626,486	
Under 5 years	998	4.9%	30,676	4.9%
5 - 9 years	1,140	5.6%	36,654	5.9%
10 - 14 years	1,748	8.6%	39,097	6.2%
15 - 19 years	1,652	8.1%	40,278	6.4%
20 - 24 years	1,068	5.3%	36,135	5.8%
25 -34 years	945	4.7%	68,597	10.9%
35 - 44 years	2,035	10.0%	73,809	11.8%
45 - 54 years	4,280	21.1%	98,424	15.7%
55 - 64 years	3,212	15.8%	95,476	15.2%
65 years and over	3,228	15.9%	107,340	17.1%
Median Age	46.9		43.6	
Education (Population 25 years and over)				
Less than high school graduate	439	3.2%	27,962	6.3%
High school graduate	2,125	15.5%	130,201	29.3%
Some college, no degree	2,258	16.5%	76,095	17.2%
Associate's degree	790	5.8%	34,638	7.8%
Bachelor's degree	3,961	28.9%	104,639	23.6%
Graduate or professional degree	4,127	30.1%	70,111	15.8%
Household Income				
Less than \$24,999	484	6.7%	30,229	12.6%
\$25,000 to \$34,999	361	5.0%	15,834	6.6%
\$35,000 to \$49,999	476	6.6%	23,031	9.6%
\$50,000 to \$74,999	815	11.3%	37,666	15.7%
\$75,000 to \$99,999	642	8.9%	30,709	12.8%
\$100,000 to \$149,999	1,270	17.6%	43,663	18.2%
\$150,000 to \$199,999	931	12.9%	25,671	10.7%
\$200,000 or more	2,235	31.0%	32,868	13.7%
Median Household Income	\$ 128,833		\$ 84,749	

Source: American Community Survey

The population of 20,306 residents is spread across over 7,500 housing units. Both the population and number of housing units more than doubled over the past 27 years from 1990 to 2017 with the majority of that growth occurring from 1990 - 2000. Population and household growth did not grow as significantly from 2000 to 2017, as compared to the previous decade due to the effects of economic downturns and concomitant declines in the housing market. However, the amount of land suitable for development, good access to the regional transportation network, and the availability of public sewer or other centralized sewage disposal capacity make the township attractive for additional residential and nonresidential growth in the future.

Table 3 - Population and Housing Growth

	2000	2010	2017	2000 - 2010		2010 - 2017	
				Change	Percent Change	Change	Percent Change
Population							
Buckingham Township	16,442	20,075	20,306	3,633	22.1%	231	1.2%
Bucks County	597,635	625,249	626,205	27,614	4.6%	956	0.2%
Housing Units							
Buckingham Township	5,861	7,433	7,515	1,572	26.8%	82	1.1%
Bucks County	225,498	245,956	248,873	20,458	9.1%	2,917	1.2%

Source: U.S. Census Bureau, American Community Survey

As the population in the township continues to grow, and given the large percentage of young children in the township, a municipal trail system can serve to augment the existing and growing number of park and recreational facilities in the township.

PLANNING PROCESS

The Buckingham Township trails network outlined in this document was derived from discussions with the Trails committee, township Board of Supervisors, Park and Recreation Committee and citizen input. This plan incorporates the feedback received from these various groups.

Key factors considered in identifying potential trails included:

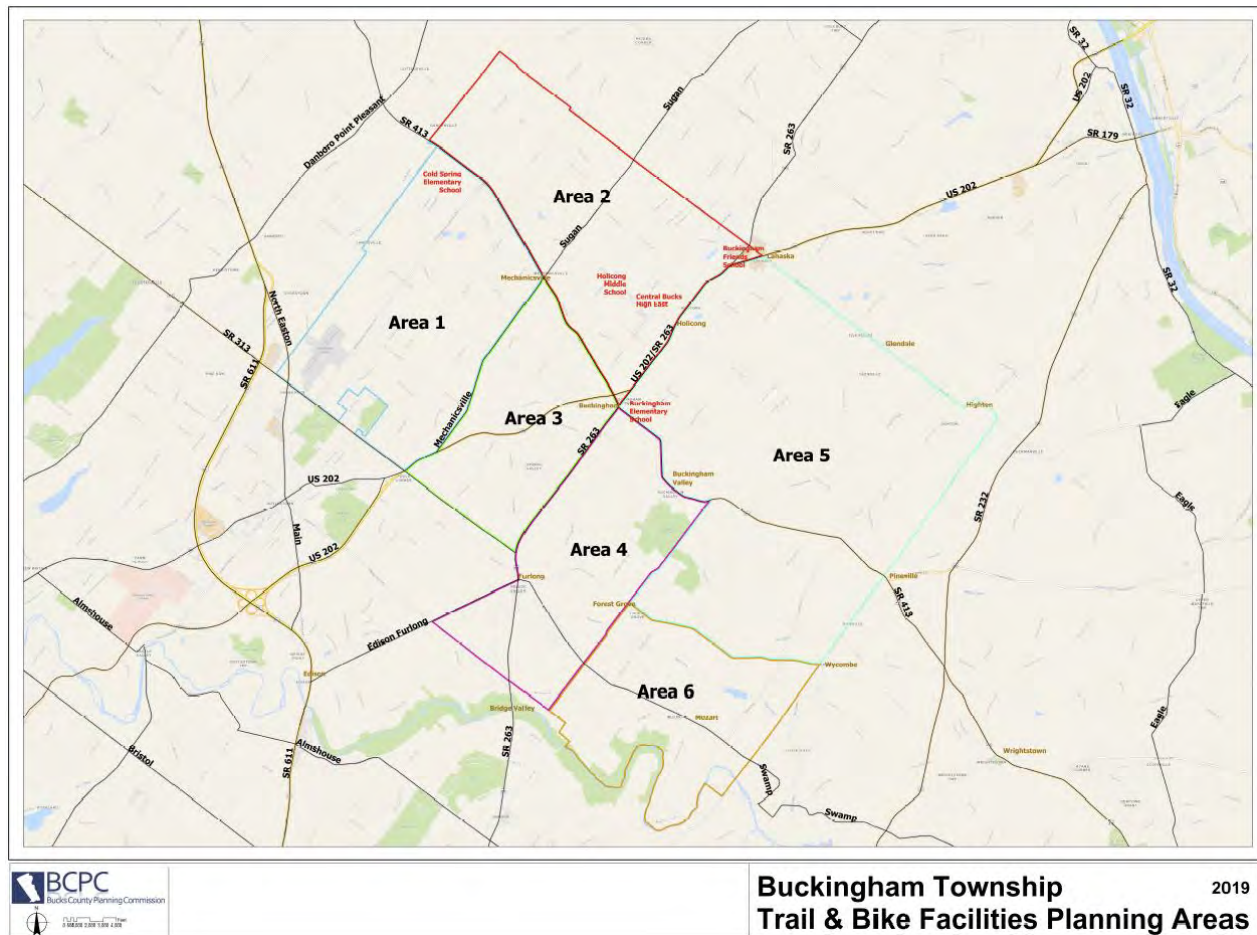
- Establish connectivity to adjacent neighborhoods, commercial areas, park and recreational sites, historic resources, schools, and existing trail networks
- Limit the impact to natural resource features
- Ensure the safety of all trail users
- Design the trail to minimize future maintenance requirements
- Comply with Americans with Disabilities (ADA) guidelines to the fullest extent possible

Recognizing the unique characteristics of various areas of the township, including the extent of development, topography, concentration of resources, transportation network, etc., the planning process was conducted for six separate areas within the township:

Table 4 - Planning Area Boundaries

	Northeast Boundary	Southeast Boundary	Southwest Boundary	Northwest Boundary
Area 1	Durham Road (Route 413)	Mechanicsville Road	Swamp Road (Route 313)	Landisville Road
Area 2	Street Road	Route 202	Durham Road (Route 413)	Ridgeview Drive
Area 3	Durham Road (Route 413)	York Road (Route 263)	Swamp Road (Route 313)	Mechanicsville Road
Area 4	Durham Road (Route 413)	Lower Mountain Road	Sugar Bottom Road	Edison Furlong and York Road (Route 263)
Area 5	Street Road	Township Line Road and Wrightstown Township line	Forest Grove Road and Durham Road (Route 413)	Lower Mountain Road and York Road (Route 263)
Area 6	Forest Grove Road	Wrightstown Township line	Neshaminy Creek and Sugar Bottom Road	Lower Mountain Road

Map 2 - Buckingham Township Planning Areas



To assess the feasibility of each proposed trail, and to identify potential constraints and opportunities, a variety of approaches were used including:

- Site visits and field work
- Bucks County Geographic Information System (GIS) mapping
- Aerial photography
- Interviews with people with local knowledge of the area

While all of the trails proposed are technically possible to develop, township officials need to consider a variety of factors in determining those to be developed including overall need for the trail, safety concerns, the needs and concerns of adjacent residents, and the ability of the township to fund the costs. Additionally, it should be noted the development of a township-wide trail network is a long-term project given the need to identify sources of funding for both construction and ongoing maintenance of the trails, the time involved in negotiating trail easements where needed, the safety concerns needing to be addressed as well as the engineering and permitting process involved.

The features of each planning area, and the proposed trails and bicycle facilities are detailed in Chapter 4.

CONSISTENCY WITH OTHER PLANS

To ensure consistency between this Plan and other related planning efforts, the following related plans were reviewed.

Bucks County Bicycle Master Plan (2012)

- Identifies five on-road connections within Buckingham Township. Connections are defined as routes that provide or have an opportunity to provide a safe bicycle facility for both transportation and recreational purposes. The five on-road connections identified include:
 - East / West Cross County Spine (Route 313/Swamp Road & Forest Grove Road)
 - State Route 413/Durham Road
 - State Route 263/York Road
 - State Route 202/Doylestown-Buckingham Pike
 - Edison Furlong Road

Bucks County Open Space and Greenway Plan (2011)

- Identifies West Branch Neshaminy Creek-Pine Run- Paunacussing Creek, Neshaminy Creek main branch, and Paunacussing-Lahaska-Mill-Jericho-Pidcock Creeks greenways corridors traversing the township.

Buckingham Township Open Space Plan Update (2009)

- Recommended walking trails within Hansell Park and Bush Park

Buckingham Township Park and Recreation Plan (1995 Revision)

- Identified various action steps. One of these action steps recommended was to develop an interconnected park and pathway system to meet the needs of residents who use or desire trails for walking, jogging and bicycling by establishing a bike/hike trail connecting population centers, activity centers, historic sites and recreation areas.

Buckingham Township Comprehensive Plan (1991 Update)

- Recommended the establishment of a planned system of pedestrian/bicycle paths to connect residential areas with recreation and community facilities, parks, playgrounds, shopping areas and employment centers.

CHAPTER 2 - PUBLIC PARTICIPATION

The public participation program is a critical element of any planning process. Adequate public notice and comment are vital to ensuring that the planning documents created reflect the various views of the citizens and organizations in the township. In order for a trail plan to be successful and embraced by the community, it needs to reflect the unique character and needs of the community. To achieve that goal, the public participation process for the Master Trail and Bicycle Plan encouraged participation by all stakeholders affected by the plan including citizens, historic property owners, nonprofit organizations, neighborhood organizations, schools, religious organizations, civic organizations, local business groups, and advocacy groups.

TRAILS COMMITTEE

The Buckingham Township Trails committee was established in 2017 to oversee and guide the planning process. The primary responsibilities of the committee included:

- developing the goals and objectives for the plan;
- generating ideas for possible trail routes;
- providing input on existing conditions and other relevant information;
- soliciting feedback from residents and community organizations; and
- reviewing the findings and recommendations as the trail plan developed.

The committee was made up of six members and included residents, representatives from the Park and Recreation Commission, Planning Commission, the Board of Supervisors, and township engineers:

Dan Gray, P.E.	Township Engineer
Thomas Kelso, AICP	Wastewater Engineer
Rebecca Fink	Planning Commission
Louise Silberg	Park and Recreation Commission
Dan Kruger	Resident
Paul Calderaio	Township Supervisor

Meetings of the committee took place on the following dates and all meetings were open to the public:

July 20, 2017
 September 14, 2017
 October 12, 2017
 December 5, 2017
 January 16, 2018

In addition to the committee meetings, other meetings were held throughout the planning process including:

May 10, 2018	Public Open House which the community was invited to come and review the proposed trail and bicycle routes and ask questions regarding the plan
May 23, 2018	Board of Supervisors Work Session at which the proposed alignment was presented

FINDINGS OF THE PUBLIC PARTICIPATION PROCESS

The public participation process yielded the following insights relative to the proposed trail system:

- Citizens generally recognize the benefits of trails and indicated that providing safe places for walking and bicycling is important for the community.
- Residents would like to see trails that connect neighborhoods to local athletic facilities.
- People support the idea of making the trails ADA accessible to the extent possible given area constraints.
- There is general recognition that not all trails will be able to be off-road facilities given physical and environmental constraints.
- There is agreement that not all trails needed to be paved. However, there is no consensus on the appropriate width for paved trails.
- There is strong support for providing opportunities for students to be able to bicycle or walk to the schools in the community.
- Generally, there is widespread support for the proposed trail system based partially on the quality and user experience of the existing trails within the township.
- Connections to the Doylestown Community Bike and Hike System are desired.
- At the May 10, 2018 open house, it was suggested to explore the potential to provide an off-road shared-use trail along Swamp Road extending from Cold Spring Creamery Road to Cross Keys. This was subsequently explored and this trail route added bringing the total number of routes to 61.

CHAPTER 3 - BUCKINGHAM TOWNSHIP RESOURCES

As part of the planning process, the natural, man-made, and historic and cultural resources of the township were explored. Natural resource features including rivers and streams, riparian buffers, wetlands, floodplains, woodlands, topography and agricultural land were reviewed as the need to protect these features may limit the placement of trails in areas containing these features. Man-made resources such as roads and utilities were identified as these may provide right-of-way opportunities for trails. Other man-made resources including existing trails, parks and existing trails, as well as historic and cultural resources were inventoried as these resources serve as the destination points for the trails network.

NATURAL FEATURES

WATER RESOURCES

The township is divided by two major primary watersheds. A watershed consists of all the land and waterways that drain into the same main body of water. Smaller watersheds make up larger watersheds that combine with even larger watersheds. The drainage of water resources through a watershed includes both groundwater and surface water.

The Neshaminy watershed comprises several secondary watersheds including Robin Run, Mill Creek, Watson Creek, Lahaska Creek and Pine Run, and is the largest drainage area of the township. The Delaware River watershed comprises two secondary watersheds within the township, the Paunacussing and Pidcock Creek watersheds. Additionally, a small portion of the township drains into the Aquetong secondary watershed, although the Aquetong Creek does not flow through the township.

TOPOGRAPHY

Buckingham Township is a place of gently rolling hills, numerous streams, and productive agricultural farmland. Buckingham's topography also encompasses Buckingham Mountain, which at 520 feet, is the second highest elevation in Bucks County. Topography has an influence on trail design in terms of the appropriate placement of trails. Trail development routes in the township will take advantage of the gently rolling terrain where possible to create the most user-friendly and accessible routes possible.

RIPARIAN BUFFERS

A riparian buffer zone is the normally vegetated or wooded area occurring along a streamside. Without the vegetative buffer, runoff from adjacent lawns more quickly enters the stream, exacerbating streambank erosion, increasing floodwaters during the flood cycle, and decreasing stream flows during the normal stream cycle. In addition, pesticides and herbicides used in lawn care and agricultural cultivation, as well as sediment from construction activities, are able to flow directly into the stream's surface water when it rains, reducing water quality. The provision of riparian buffers also create recreational opportunities.

FLOODPLAINS

Floodplains are relatively flat or low-lying areas adjacent to surface waters where flooding has occurred in the past and will likely occur again in the future. During periods of heavy rains and high stream flow, floodplains provide temporary storage for floodwaters, reducing flooding threats to adjacent areas. Floodplain soils or alluvial soils are eroded soils from previous floods that were deposited along the banks of stream or other watercourses. When developing trails in floodplains, buffer areas and wetland areas, caution needs to be exercised to help minimize disturbance and impact to these areas.

BUCKINGHAM TOWNSHIP MASTER TRAIL AND BICYCLE PLAN

WOODLANDS

Woodland resources provide numerous benefits. They support wildlife habitat, provide recreational opportunities, provide diversity to the landscape, and have significant aesthetic value. They also moderate environmental conditions by anchoring soil and reducing erosion and sedimentation, and by providing shade to lower water temperature in streams which helps to maintain aquatic life. The vegetative cover softens the impact of falling rainwater, enables groundwater recharge, and reduces the volume and rate of stormwater runoff. Additionally, woodlands play a role in filtering air pollutants.

FLORA AND FAUNA

Buckingham Township's extensive woodlands, stream corridors and open spaces provide a broad range of habitat for vegetation and wildlife. The diversity of these habitats and the wetland and aquatic ecosystems give the township a unique blend of natural areas and fragile ecosystems. The loss of habitat and alteration of resources are the most significant threats to biodiversity and are responsible for the decline in the number of wild animals and plants. The protection of these resources needs to be considered in the final placement of trails.

AGRICULTURAL LAND

Buckingham Township is fortunate to have a significant amount of undeveloped acreage devoted to agricultural activities, stemming from a rich heritage farming dating back to the founding of the township in 1682. The presence of extensive amounts of agricultural land not only contributes to the local economy, but also provides scenic vistas.

Large areas of agricultural land in the township can be found in the following areas of the township:

- East of Durham Road, south of Long Lane, west of Street Road, and north of and along Mechanicsville Road;
- Along the Route 202/263 corridor;
- In the southern portion of the township bounded by the PECO corridor to the northwest, Street Road to the northeast, the Upper Makefield and Wrightstown township lines to the southeast, and the Neshaminy Creek to the Southwest; and
- In the Furlong area bounded by Swamp Road, Forest Grove Road, and Lower Mountain Road

The Pennsylvania Agricultural Security Area Law (House Bill No. 43) and the provisions of Chapter 138e., Agricultural Conservation Easement Purchase Program, issued under the Pennsylvania Agricultural Security Area Law, specifies that agricultural restricted land preserved under the easement purchase program shall be used solely for agricultural production or other uses permitted by the act. This has implications for trail planning in that farms preserved using state funding for the easement cannot have trails placed on them. Farms which have not been preserved, or have been preserved without the use of state funding, are not subject to this limitation.

MAN-MADE FEATURES

ROAD SYSTEM

Buckingham's transportation network is composed of a hierarchy of arterial, collector, and local access roads.

Arterials are those streets that are designed to provide the highest level of mobility for large traffic volumes to regional businesses and employment centers. Access onto arterial streets is typically controlled because the proliferation of turning movements at individual driveways will degrade the function of an arterial street. Arterial streets in the township include:

- Pennsylvania Route 263 (York Road)
- Pennsylvania Route 313 (Swamp Road)
- Pennsylvania Route 413 (Durham Road)
- Swamp Road
- U.S. Route 202
- U.S. Route 611

Major collector roads are designed to provide the link between arterial highways and local neighborhood streets. They are designed to carry moderate volumes of traffics uninterrupted flow. Major collectors include:

- Anderson Lane from Durham Road to Holicong Road
- Burnt House Hill Road from Route 202 to Plumstead Township line
- Church Road from Durham Road to Burnt House Hill Road
- Church School Road from Mechanicsville Road to Cold Spring Creamery Road
- Cold Spring Creamery Road from Swamp Road to Durham Road
- Dark Hollow Road from Neshaminy Creek to Swamp Road
- Edison Furlong Road from Doylestown Township line to Forest Grove Road
- Forest Grove Road from Township Line Road to Route 263
- Holicong Road from New Hope Road to Mechanicsville Road
- Landisville Road from Old Easton Road to Durham Road
- Long Lane from Durham Road to Street Road
- Mechanicsville Road from Route 202 to Street Road
- New Hope Road from Forest Grove Road to Pineville Road
- Pineville Road from Township Line Road to Street Road
- Smith Road from Swamp Road to Durham Road
- Smoke Road from Swamp Road to Church School Road
- Spring Valley Road from Swamp Road to Furlong Road
- Street Road from New Road to Carversville Road
- Sugar Bottom Road/Mozart Road from Swamp Road to Doylestown Township line
- Township Line Road from Durham Road to Forest Grove Road
- West Lower Mountain Road from Sugar Bottom Road to Lower Mountain Road

Generally, arterials and major collector roads are not suitable for on-road bicycling and/or pedestrian usage given their higher traffic volumes and vehicular speeds. However, in certain cases, there may be significant right-of-way available adjacent to the road to allow for the placement of trails or sidewalks in these areas. Additionally, several of the roads identified as major collector roads in the township have relatively low traffic volumes and often have posted speed limits of 25 - 35 miles per hour which would allow for the establishment of on-road bicycle facilities on these roads.

BUCKINGHAM TOWNSHIP MASTER TRAIL AND BICYCLE PLAN

UTILITIES

Utility corridors often serve as the right-of-way for trails as the land within the utility corridor is typically restricted for future land development. This combined with the linear nature of trails, makes trails one of the very few compatible uses within utility corridors.

PECO owns and operates three high-tension transmission line that traverse the township.

- One running southwest to northeast, between and parallel to Lower Mountain Road and Creamery Road;
- Another running roughly east to west, paralleling Robin Run; and
- One running north to west from the Neshaminy Creek to intersect with the first corridor described

Although PECO has shown a willingness to work with municipalities relative to the placement of trails within their corridors, the presence of numerous streams and wetlands within most of the PECO corridors, along with steep slope constraints in certain areas, presents challenges for the placement of trails within these corridors in the township.

The Texas Eastern Transmission Corporation owns and operates a major natural gas pipeline that connects Texas and the Gulf Coast with high demand markets in the northeastern United States, supplying fuel for electric generation facilities and helping to meet peak-day demands. A portion of this pipeline traverses the interior of Buckingham Township. The pipeline is located underground within easements. Although the land above the gas pipeline has to remain relatively clear for future maintenance, the use of this corridor within the township offers little advantage since the pipeline crosses many private lands in the form of an easement. Placement of a trail within the gas pipeline corridor would require negotiating separate trail easements with each property owner.

TRAILS

There are currently approximately 14.7 miles of existing trails in the township that form the beginnings of the proposed comprehensive trail and bicycle network. These trails include footpaths, shared-use recreational trails, and hiking trails. More details on the trails by each planning area is contained in the next Chapter.

Table 5 - Existing Trails

Area	Existing Trail	Type of Trail	Mileage (Miles)
1	Cold Spring Creamery Road	Shared-use	2.67
1	Hansell Road	Shared-use	0.58
1	Hansell Park	Shared-use	1.72
1	Fireside (behind Nanlyn Farm Circle)	Shared-use	0.26
1	Cold Spring Elementary School to Cold Spring Hunt	Footpath	0.10
1	Durham Road - Cold Spring Creamery Road to Cold Spring Elementary School	Shared-use	0.16
1	Buckingham Square	Shared-use	0.24
1	Church School Road	Shared-use	0.47
2	Mechanicsville Road	Shared-use	0.35
2	Reserve at Holicong	Shared-use	1.25
2	Anderson Road & Holicong Road	Shared-use	0.30
2	Midway Fire Company	Access Drive	0.16
2	Peddlers Village	Footpath	0.41
2	Carriage Homes at Stone Ridge to Peddlers Village	Shared-use	0.10
3	Mechanicsville Road (Covenant Church)	Shared-use	0.09
3	Spring Valley Estates	Shared-use	0.39
3	Hunters Glen to Hunters Crossing	Shared-use	0.12
4	Devonshire Estates	Shared-use	1.11
4	Durham Road (Municipal Complex & Buckingham Elementary)	Shared-use	0.23
4	Forest Grove Road/Windsor Square	Shared-use	0.64
4	Little Buckingham Mountain	Hiking	1.03
6	Estates at Mill Creek Ridge	Shared-use	2.32
Total Existing Trails			14.70

PARKS AND OPEN SPACE

Buckingham Township residents benefit from an abundance of parks and open space. Parks and recreation areas are important features which help to define an area and create a sense of community. Such areas provide the opportunity for individuals to get outdoors and interact with others as well as to be closer to nature.

Specific to trails, parks and open space areas are often among the primary destination points within the trails network. Providing trails that connect to these areas provides an opportunity for children to be able to bicycle to the local parks, and provides opportunities for close-to-home recreation.

Three local township parks, with another one potentially planned for the future, are supplemented by two county parks to provide over 450 acres of permanently protected park and recreation land within the township. Table 6 provides an overview of park and recreation resources in the township.

Table 6 - Parks and Open Space Resources

Park	Ownership	Acreage
Hansell Park	Buckingham Township	39.9
Bush Park	Buckingham Township	49.1
Holicong Park	Buckingham Township	80.5
Landisville Road (Future Proposed)	Buckingham Township & Bucks County Airport Authority	67.2
Dark Hollow Park	Bucks County	136.0
Robin Run Reservoir	Bucks County	85.8
Total Acres		458.5

HISTORIC RESOURCES

The majority of historic resources in Buckingham Township are located within its twelve villages and date from the eighteenth and nineteenth centuries. Each of these communities contains its own blend of architectural, historical, and cultural life that is represented in the built environment.

A village is generally viewed as a relatively small clustered settlement, often dominated by older homes and other structures. Frequently, the house are closely spaced on small lots with dwellings set close to the road, establishing the village as an identifiable place.

Lots are typically small or narrow and structures have a pre-20th century origin. Although villages contain historic structures, the development pattern and village elements are the most significant characteristics.

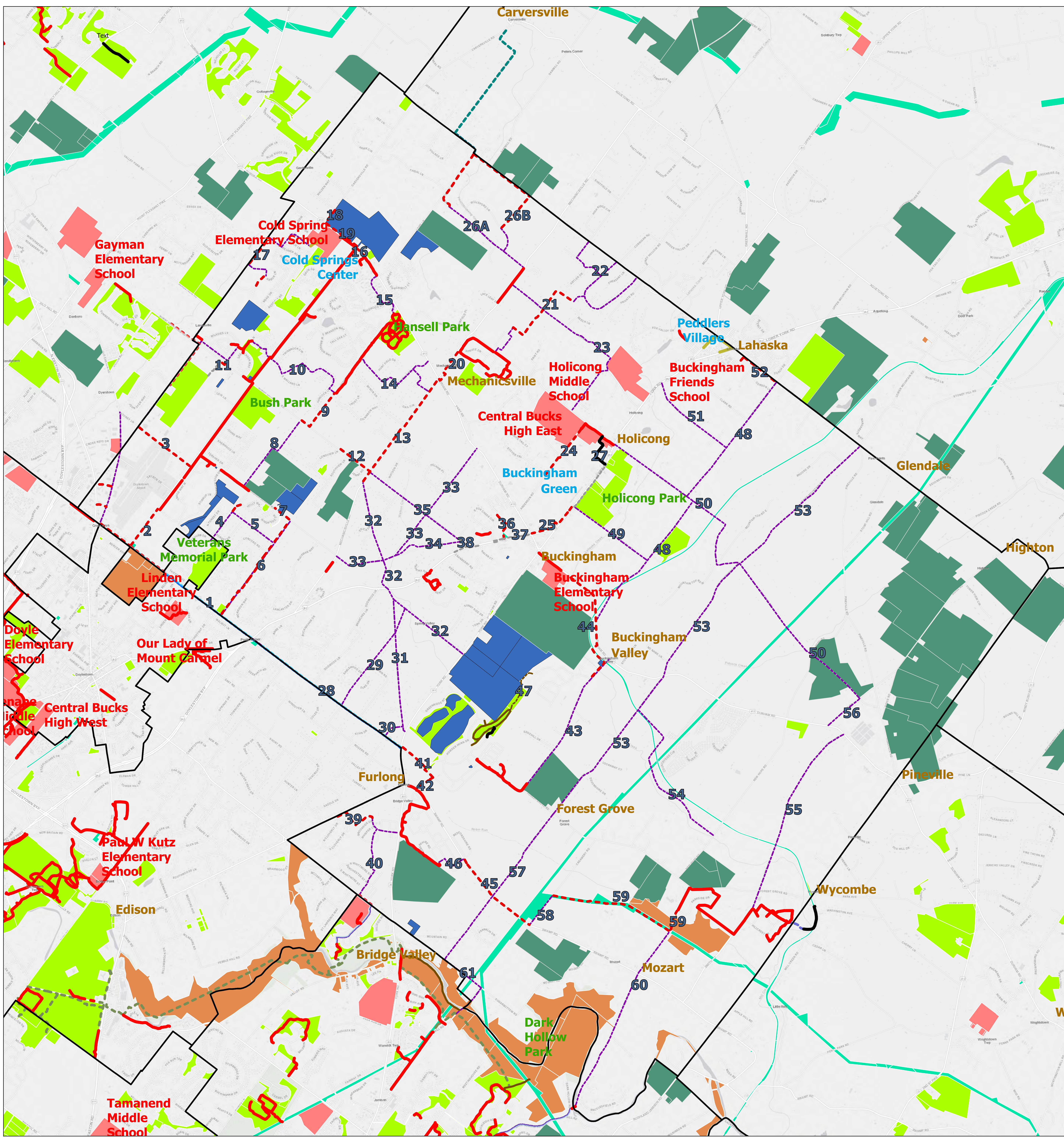
In addition to the twelve villages, five of which have been documented and listed on the National Register of Historic Places, according to the Cultural Resources Geographic Information System, (CRGIS) database maintained by the Pennsylvania Historical and Museum Commission, there are an additional six buildings and structures included in the National Register of Historic Places. The Buckingham Friends Meeting House is also identified as a National Historic Landmark.

Buckingham Township officials have long been aware of the charm and value of the villages within the township and have taken steps to identify and preserve them. Most of these settlements are covered by village-type zoning districts. In some cases, the more rural land surrounding the village core is subject to agricultural zoning. Table 7 identifies the historic and cultural resources within the township.

Table 7 - Historic Resources

Historic Resource	Type	Date Added to National Register of Historic Places
Bridge Valley	Village	-
Buckingham	Village	-
Buckingham Friends Meeting House	NHL	07/31/03
	NRHP	03/28/97
Buckingham Valley	Village	-
Byecroft Farm Complex	NRHP	09/09/83
Forest Grove Historic District	NRHP & Village	04/20/82
Forest Grove Road bridge over Mill Creek	NRHP	06/22/88
Furlong Village	Village	
Gilbert, Lydia & Thomas, Farm	NRHP	05/05/89
Holicong Village Historic District	NRHP & Village	03/20/80
Lacey, General John, Homestead	NRHP	12/02/80
Lahaska	Village	-
Longland Farm	NRHP	12/20/99
Mechanicsville Historic District / Fenton's Corner	NRHP & Village	01/04/89
Mozart	Village	-
Pineville	Village	-
Spring Valley Historic District / Mechanic's Valley	NRHP & Village	01/07/88
Wycombe Village Historic District	NRHP & Village	01/31/85

Key: NHL - National Historic Landmark, NRHP - National Register of Historic Places, Village - Historic Village



Buckingham Township - Proposed Trails and Bicycle Facilities

	Planning Area	Length (Miles)
Dedicated Bicycle Lanes (BL)		
1 BL Swamp Road	1	1.2
28 Swamp Road	3	1.5
Total Proposed Bicycle Lanes		2.7

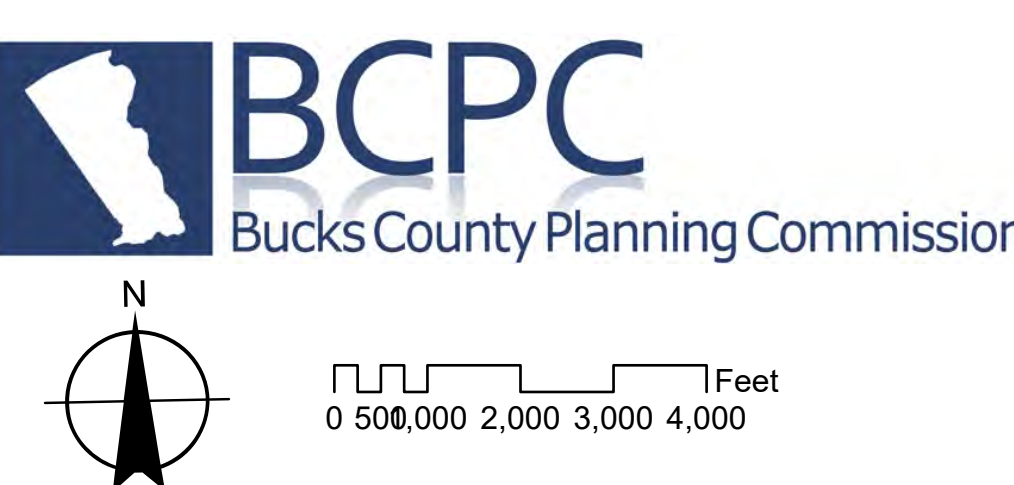
	Planning Area	Length (Miles)
Shared-Use Trails (SUT)		
1 SUT Swamp Road	1	0.3
2 Cold Spring Creamery Road	1	0.4
3 Stony Lane	1	0.5
6B Smoke Road	1	1.0
7 Church School Road	1	0.2
9 Hansell Road	1	0.5
12 Burnt House Hill Road	1	0.3
13 Mechanicsville Road (West)	1	1.0
16 Durham Road - Cold Spring Creamery Road Intersection	1	0.1
17 Landisville Road	1	1.1
18 Carversville Road	2	0.1
19 Durham Road	2	0.3
20 Mechanicsville Road (East)	2	0.3
21 N. Doe Run Road to Holicong Road	2	1.1
24 Anderson Road	2	0.6
25 Route 202	2	0.5
26B Maximuck's Farm	2	1.3
27 Holicong MS/Central Bucks East HS to Buckingham Green	2	1.0
36 Durham Village to Route 202	3	0.3
39 Edison Furlong Rd/Cloverly Drive to Heritage Center Drive	4	0.5
41 Swamp Road	4	0.4
44 Durham Road/Buckingham Valley	4	1.0
45 Swamp Road	4	0.8
52 Street Road	5	0.4
59 PECO Corridor/Dark Hollow Road Wycombe Connector Trail (Wrightstown Township)	6	1.2 0.5
Total Shared-Use Trails (Excludes Wycombe Connector since outside of Township and alternative alignments #6B and #26B)		12.9

	Planning Area	Length (Miles)
Bike Sharrows / Share the Road Signs		
4 Glen Drive	1	0.4
5 Buttonwood Drive	1	0.4
6A Smoke Road	1	1.0
8 Fell Road	1	0.8
10 Hancock Ln - Twinbrook Cir - Mallard Ln - Miladies Ln	1	1.5
14 Clay Rd - Danielle Dr - Edgewood Rd - Winchester Rd	1	1.0
15 West Long Lane	1	0.4
22 Hunters Run Neighborhood	2	1.4
23 Ash Road/Ash Mill Road	2	1.6
26A Indian Spring Road - Kingfisher Lane - Long Lane Carversville Connector (Stover Mill Road - Solebury Twp)	2	1.3 1.4
29 Spring Valley Road	3	1.0
30 Oak Lane	3	0.2
31 Furlong Road	3	1.1
32 Mill Road	3	1.8
33 Church School Rd/Church Road	3	1.6
34 Snake Hill Road	3	0.6
35 Burnt House Hill Road	3	0.9
40 Heritage Center/Villages at Buckingham	4	0.9
43 Upper Mountain Road	4	1.2
46 Devonshire Estates	4	0.3
48 Upper Mountain Road	5	2.5
49 Quarry Road	5	0.7
50 Holicong Road	5	3.2
51 Bycroft Road	5	0.8
53 Lower Mountain Road	5	4.0
54 Creek Road	5	1.4
55 Smith Road	5	1.7
56 New Road	5	0.3
57 Lower Mountain Road	6	1.5
58 Creamery Road	6	0.3
60 Dark Hollow Road	6	1.8
61 Sugar Bottom Road	6	0.6
Total Proposed Bicycle Sharrows/Share the Road (Excludes Carversville Connector since outside of Township)		38.2

	Planning Area	Length (Miles)
Sidewalks		
11 Progress Meadow Drive	1	0.2
37 Route 202	3	0.6
38 Burnt House Hill Road	3	0.1
42 Forest Grove Road	4	0.2
Total Proposed Sidewalks		1.1

	Planning Area	Length (Miles)
Hiking Trail		
47 Little Buckingham Mountain	4	0.4
Total Proposed Hiking Trails		0.4

Total Area 1 (Includes #6B Smoke Road since alternative alignment)	11.3	
Total Area 2 (Excludes #26B since alternative alignment and excludes Carversville Connector since outside of Township)	7.2	
Total Area 3	9.7	
Total Area 4		5.7
Total Area 5		15.0
Total Area 6 (Excludes Wycombe Connector since outside of Township)		5.2
Total Proposed		54.1



- Existing Trails
- Existing Access Road
- Existing Footpath
- Existing Hiking Trail
- Existing Shared-Use Trail
- Proposed Trails
- Bike Sharrows / Share the Road Signs
- Dedicated Bike Lane
- Shared-Use Trail
- Sidewalk
- Sidewalk (Under Construction)
- Hiking Trail
- Carversville Connector - Bike Sharrows / Share the Road Signs
- Carversville Connector - Shared-Use Trail
- Wycombe Connector - Shared-Use Trail
- Neshaminy Greenway Trail
- Adjacent Municipality - Shared-Use Trail
- Adjacent Municipality - Bike Sharrows / Share the Road Signs
- Adjacent Municipality - Dedicated Bike Lane
- PECO
- School District
- Municipal Open Space & Parkland
- County Parkland
- Buckingham Township Water & Wastewater Property
- State Preserved Farmland
- Municipal Boundary
- Village
- Shopping Centers
- Schools
- Parks
- Trail/Bike Facility Number

Buckingham Township

Proposed Trails & Bicycle Facilities

2019

CHAPTER 4 - THE TRAILS PLAN

TYPES OF TRAILS & BICYCLE FACILITIES

The Buckingham Township trail network may be comprised of many different types of facilities:

Table 8 - Types of Trails

	Trail Type	Description of Trail Type
	Hiking Trails	Trails designed to provide hikers, joggers and walkers the opportunity to experience and interact with nature with minimal disturbance from other trail users. As these trails are not designed to accommodate wheeled traffic such as bicycles, strollers, wheelchairs rollerblades and skateboards, these are most often natural surface trails.
	Mown Grass Trail	Trails where the trail surface consists of mown grass. These trails are often located adjacent to ponds and/or other water bodies to provide access for fishing and other nature activities.
	Sidewalk	A path with a hard surface on which people walk along one or both sides of a road. The intent is to provide a safe, two-way shared use area for pedestrians where a multiuse path cannot be accommodated.
	Multiuse / Shared-Use Trails	A trail that permits more than one user group including joggers, walkers, hikers, bicyclists, to occupy the trail at the same time. As the trail is designed to accommodate multiple users including wheeled traffic, these trails would most often be constructed of a hard paved or crushed stone surface.
	Boardwalk	Boardwalks are used to span unavoidable wet areas or depressions. They also can be used to provide trail in areas where grading and filling might harm tree roots or create trail surface that wildlife such as amphibians will not cross. Footings vary depending on soil conditions.
	On-Road Bicycle Sharrows	A shared right-of-way on roadways designated with appropriate signage and pavement markings to help encourage use and warn motorists that bicycles may be present in the roadway.
	On-Road Pedestrian Facilities	This type of trail facility consists primarily of pedestrians walking along the shoulder of the road given a lack of a trail or sidewalk along the side of the road. These types of facilities should be minimized to the extent possible.

TRAIL AND BICYCLE FACILITIES DESIGN STANDARDS

Given the different types of trails and bicycle facilities that will be part of the township trail network, and given the potential for different types of the same type of trail in terms of width, slope, etc., the township will need to consider adopting trail design standards for trails and pedestrian and bicycle facilities. These standards are designed to:

- Promote consistency of standards and guidelines across the township trail network.
- Increase user safety, comfort and convenience.
- Promote universal access, where possible, to users with a broad range of skill levels and abilities, including children, older adults and people with disabilities.
- Minimize impact to sensitive natural resources.
- Increase the ease of long-term trail and facility maintenance by recommending the use of materials and construction practices appropriate for the trail being developed.

The Buckingham Township trail and bicycle facilities standards outlined in Table 9 were derived from multiple sources and are intended as a planning tool to allow for flexibility in design, appropriate to the location, site-specific environmental conditions, and expected users. However, the guidelines are not intended to be engineering specifications or replace existing mandatory or advisory state and federal standards including:

- American Association of State Highway and Transportation Officials (AASHTO) Guide for the Planning, Design, and Operation of Bicycle Facilities
- ADA Accessibility Guidelines for Buildings and Facilities (ADAAG)
- ADA Standards for Accessible Design
- Federal Access Board Accessibility Guidelines for Outdoor Developed Areas (AGODA)
- Public Right of Way Accessibility Guidelines (PROWAG)
- Manual on Uniform Traffic Control Devices (MUTCD)
- Pennsylvania Trail Design & Development Principles

Table 9 - Buckingham Township - Recommended Trail & Bicycle Facilities Standards

Facility	Minimum Width	Minimum Shoulder Width Each Side	Surface		Running Slope		Cross Slope		Minimum Vertical Clearance Each Side	Signage
			Desired	Acceptable	Minimum	Maximum	Minimum	Maximum		
Hiking Trail										
Hiking Trail	6 feet *	-	Compacted Gravel	Compacted Earth / Natural Surface	0%	12.50%	2%	5%	8 feet	Trailhead and Wayfinding Signage
Mown Grass Trail										
Mown Grass	8 feet	-	Grass	Grass	0%	N/A	1%	2%	8 feet	Trailhead and Wayfinding Signage
Pedestrian Facilities in Right-of-Way										
Sidewalk	5 feet	2 feet	Concrete	Asphalt	1%	2%	1%	2%	8 feet ***	Wayfinding Signage
Multi-Use										
Multi-Use Trail – Asphalt or Crushed Stone	10 feet	2 feet	Asphalt	Crushed Stone	1%	5%**	1%	2%	8 feet ***	Trailhead and Wayfinding
Boardwalk	10 feet	-	Concrete	Wood / Synthetic	1%	5%	1%	2%	8 feet ***	3" edge protection for boardwalks 30" or less above grade / 42" handrails for 30"+ above grade
On-Road Bike Facilities										
On-Road / Bike Sharrows	-	-	Asphalt	Asphalt	-	-	-	-	10 feet	MUTCD: Shared Lane Markings and W6-101 Share the Lane sign
On-Road Pedestrian Facilities										
On-Road	-	-	Asphalt	Asphalt	-	-	-	-	-	MUTCD: R9-1 Walk on Left Facing Traffic sign

*Anything less than 5 feet requires a passing space at intervals no less than 1,000 feet

**Following variances are allowable: 8.3% maximum for distances up to 200 feet, 10% maximum for distances up to 30 feet / 12.5% maximum for up to 10 feet

***Minimum clearance overpasses: 10 feet

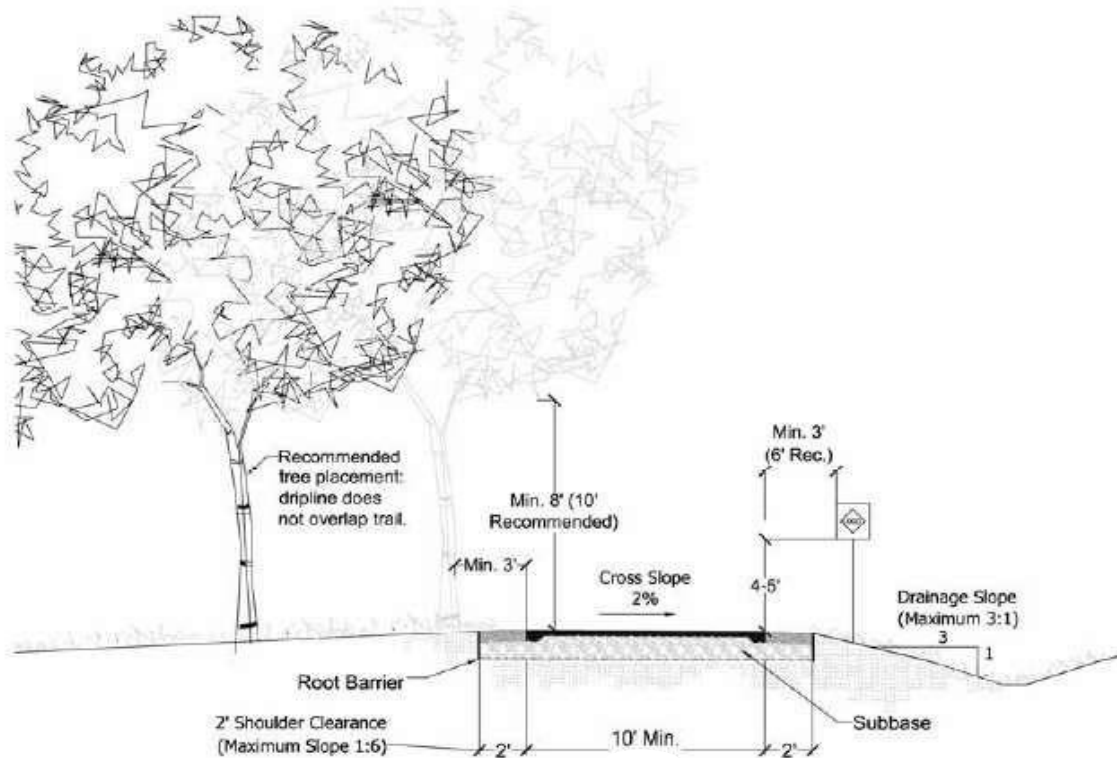
TRAIL AND BICYCLE FACILITIES DESIGN ELEMENTS

TRAIL SURFACE, WIDTH, SLOPE AND VERTICAL CLEARANCE

As shown in Table 9, trail widths, surfaces, slopes and vertical clearances for the trails as part of the Buckingham Township trail network will vary dependent on the type of trail. These differences are driven by the type of users the trail is designed to accommodate. For instance hiking trails can be narrower and may have steeper slopes and different surface materials given that they are designed primarily to accommodate walkers, not bicyclists. In contrast, the recommended width for a multiuse trails is 10 feet with surfaces needed to accommodate wheelchairs, bicyclists and other user groups.

BUCKINGHAM TOWNSHIP MASTER TRAIL AND BICYCLE PLAN

The recommended typical design cross-section for a shared-use trail is shown below. This design would be modified to fit various environmental conditions that are encountered.



TRAIL SAFETY SIGNAGE

Although the trail network is designed to minimize the extent to which users will be on-road, there may be sections where the trail will need to utilize existing streets or roadways which carry low volumes of motor vehicle traffic. In these situations, the *Manual on Uniform Traffic Control Devices* recommends a combination of signage and on-road pavement markings to help improve pedestrian safety.

Pedestrians in Roadway: Section 2B.50 of the *Manual on Uniform Traffic Control Devices* recommends signage to help improve pedestrian safety on roadways with no adjacent sidewalks or shoulders.

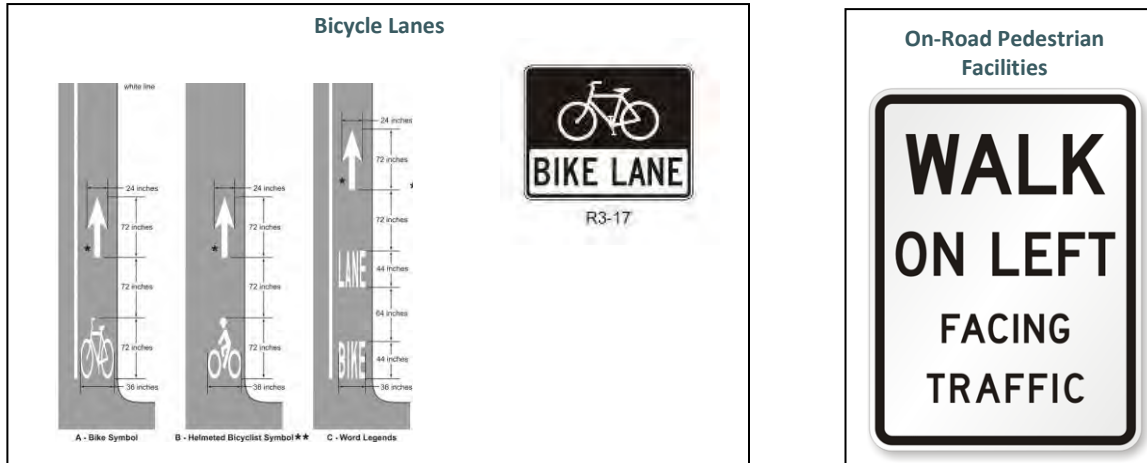
Bicyclists in Roadway: The regulations and signage requirement vary dependent upon the speed limit of the road:

- **Roads with a speed limit of greater than 35 miles per hour:** Section 9B.18 of the *Manual on Uniform Traffic Control Devices* specifies that Share the Road signs should be used on roadways with a speed limit above 35 mph where there is a need to warn motorists to watch for bicyclists traveling along the roadway.
- **Roads with a speed limit 35 miles per hour or less:** Section 9C.07 Shared Lane Marking specifies the parameters for the use of Shared Lane Markings, also known as Bicycle Sharrows. Specifically, Shared Lane Markings may be used to:

- o Assist bicyclists with lateral positioning in lanes that are too narrow for a motor vehicle and a bicycle to travel side by side within the same traffic lane;
- o Alert road users of the lateral location bicyclists are likely to occupy within the traveled way;
- o Encourage safe passing of bicyclists by motorists; and
- o Reduce the incidence of wrong-way bicycling.

Examples of the recommended pavement markings and signage are shown below.

Manual on Uniform Traffic Control Devices - Pavement Markings and Signage



In addition to signage and pavement markings being used to alert motorists of the existence of trail users within or adjacent to the roadway, Rectangular Rapid Flashing Beacons and clearly marked crosswalks will be used anytime the trail crosses a roadway where the crosswalk approach is not controlled by a yield sign, stop sign, or traffic-control signal; or at a crosswalk at a roundabout.



BUCKINGHAM TOWNSHIP MASTER TRAIL AND BICYCLE PLAN

EMERGENCY SIGNAGE

To improve emergency response to trail incidents, it is recommended that as the Buckingham Township trail network grows, consideration be given to incorporating an Emergency Locator System. This system would place signage markers with unique location identifiers at every eighth of a mile. These assigned geographic coordinates would allow the Bucks County Department of Emergency Communications, to easily determine the best route for reaching the emergency.

PARKING AREAS / TRAILHEADS

Trailhead parking areas provide points of access for trail users. These access points will not only accommodate people from the immediate area, but those who have traveled farther to use the trail. It is anticipated that the majority of trail users will be local residents who will likely walk or bike to the trail from their homes; however, there may be some trail users who will choose to drive. At this time, the intent is not to construct any specific trailhead parking areas, but instead to make use of existing parking lots available at township facilities, schools, and commercial centers. As each trail segment is developed, the design phase should determine the need for any additional trailheads and consider where these might be feasible.

BOARDWALKS AND BRIDGES

Site characteristics, property ownership and other constraints within the Buckingham Township Master Trail project area may require that the trail, to cross a floodplain or creek, be constructed within wetland areas. Where the trail alignment crosses through the floodplain, much of the trail will be elevated and will occasionally cross the creek channel. The selection of construction methods will need to consider how the water surface elevations vary along the various creeks. Construction of bridge and boardwalk facilities within the floodway may impact surface water levels if these structures impede flow within the trail corridor. The proposed design should recognize the potential for debris to accumulate on the upstream face of bridge sections. It is recommended that bridges be placed above the flood elevation.

Bridges and boardwalks can be surfaced with a variety of materials including timber or timber-plastic composites, concrete or steel. The main factors driving the frequent use of timber are its low initial cost, the perception that it is more suitable to natural environments, and the comparative simplicity of timber construction in sensitive environments, given its light weight and ease of fabrication. The disadvantage of timber is that it is susceptible to deterioration from exposure to the environment, even when pressure treated, and that timbers may be slippery in wet or merely damp conditions.

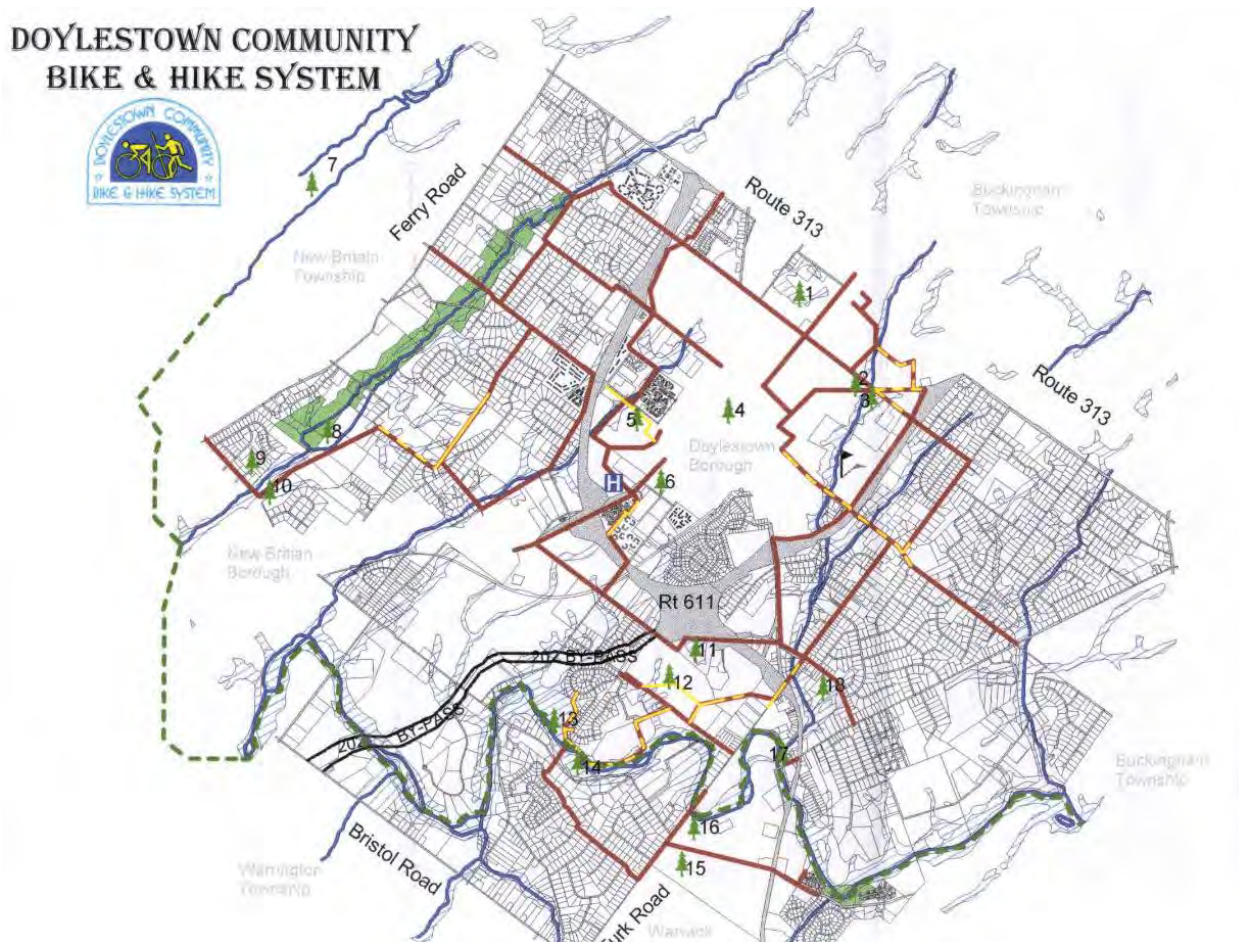
PHYSICAL BARRIERS

In certain areas, physical barriers such as wood rail fencing, dense shrubbery, or other type of physical barrier may need to be installed along the trail to prevent users from traversing the side slopes. Typically this barrier should be installed along the top of slope to protect trail users. In general, the greater the height of the drop-off, the greater the need for protection. According to AASHTO guidelines, the fence should be set at a height of 3.5 feet (42 inches). Rub-rails are recommended at a height of approximately 3-feet from grade to prevent snagging of handlebars. All fences should be smooth and free of protruding objects such as bolts.

EXAMPLE OF A SIMILAR TRAIL & BICYCLE FACILITIES NETWORK

The Doylestown Community Bike and Hike system is a similar trail network to what is proposed for Buckingham Township. The Doylestown Community Bike and Hike Committee (DBHC) was established with the expressed goal of connecting principal population centers, places of work, schools, commercial areas, historical and cultural sites, park and recreation areas, mass transit and other intermodal connections in both Doylestown Township and Doylestown Borough. Over 26 miles of bicycle and hike paths have been established, contributing greatly to the health, safety and well-being of Doylestown residents. The rapid growth of Doylestown Township caused main roads and smaller roads to become very congested, with access to Doylestown becoming dangerous for pedestrians and bicyclists.

This trail system features a combination of both paved asphalt trails, natural surface and crushed stone surfaces and includes trails within the township's park system, trails along the right-of-way of roads, trails behind private properties, and bicycle facilities such as the Route 202 Parkway bicycle lanes.



Doylestown Community Bike and Hike System



THE TRAILS & BICYCLE ROUTE NETWORK

The Trail and Bicycle Plan Map provided at the end of this chapter illustrates the proposed Buckingham Township trail and bicycle network. Trails and bicycle routes traverse parkland, open space parcels, private property, and include hiking trails, crushed stone trails, paved asphalt trails, boardwalks, and on-road bicycle and pedestrian facilities.

Although it was the desire and intent to provide full connectivity throughout the township, and to have the trails be off-road to the greatest extent possible, various barriers prevented full connectivity and the ability to provide off-road trails in all areas. There are areas of the township that do not have trails suggested or where off-road trails are not possible. This is primarily a function of topography or the presence of large expanses of state-preserved farmland.

Development of the trail network would be easier to accomplish if the entire network could be placed on public land, as this would minimize the need to acquire easements or rights-of-way. However, to maximize connectivity and achieve some of the highly desirable connections, it will be necessary to place trails on privately held lands.


Although many on-road bicycle routes have been identified, several of these are in areas where there is a limited number of residents and large expanses of farmland. Although many of these farms are not preserved using state funding and would potentially be willing to grant easements for the development of trails, the limited population in these areas doesn't, at this time, warrant the additional expense of the development of shared-use trails versus on-road bicycle routes. In contrast, there are other areas where on-road bicycle routes are recommended in areas with a large numbers of residents. In these instances other variables such as topography, the need for multiple easements, limited right-of-way width along the roads would make it very challenging for developing off-road shared-use trails.


Upon analysis of documents, mapping, site conditions and interaction with the community, 61 trails and bicycle routes have been identified with the township with two connectors outside of the township also being identified. Following is a map showing the location of each of the trails as well as a list of the trails, and a detailed discussion of each trail detailing key features such as the length of the trail, its proposed surface, the extent to which bridges, road crossings and easements will be required, as well as its overall rank relative to implementation priority.

This chapter will provide an overview of each of the planning areas, including an inventory of land use, natural features and man-made features. Following the description of each planning area, an overview of each trail or bicycle route including maps, photographs and summary points is provided.

Table 10 - Buckingham Township - Proposed Trail & Bicycle Facilities

Area	Length (Miles)
Area 1 (Includes #6B Smoke Road since alternative alignment)	11.3
Area 2 (Excludes #26B since alternative alignment and excludes Carversville Connector since outside of Township)	8.2
Area 3	9.7
Area 4	5.7
Area 5	15.0
Area 6 (Excludes Wycombe connector since it's outside of the township)	5.2
Total Proposed Trails and Bicycle Facilities	55.1

Segment	 Dedicated Bicycle Lanes (BL)	Planning Area	Length (Miles)
1 BL	Swamp Road	1	1.2
28	Swamp Road	3	1.4
Total Proposed Bicycle Lanes			2.6

Segment	 Hiking Trail	Planning Area	Length (Miles)
47	Little Buckingham Mountain	4	0.4
Total Proposed Hiking Trails			0.4


Segment	 Sidewalks	Planning Area	Length (Miles)
11	Progress Meadow Drive	1	0.2
37	Route 202	3	0.6
38	Burnt House Hill Road	3	0.1
Total Proposed Sidewalks			0.9

Table 10 - Buckingham Township - Proposed Trail & Bicycle Facilities



Segment	 Shared-Use Trails (SUT)	Planning Area	Length (Miles)
1 SUT	Swamp Road	1	0.3
2	Cold Spring Creamery Road	1	0.4
3	Stony Lane	1	0.5
4	Glen Drive	1	0.1
6B	Smoke Road	1	1.0
7	Church School Road	1	0.2
9	Hansell Road	1	0.5
12	Burnt House Hill Road	1	0.3
13	Mechanicsville Road (West)	1	1.0
16	Durham Road - Cold Spring Creamery Road Intersection	1	0.1
17	Landisville Road	1	0.4
18	Carversville Road	2	0.1
19	Durham Road	2	0.3
20	Mechanicsville Road (East)	2	0.3
21	N. Doe Run Road to Holicong Road	2	0.7
24	Anderson Road	2	0.6
25	Route 202	2	0.5
26B	Maximuck's Farm	2	1.3
27	Holicong MS/Central Bucks East HS to Buckingham Green	2	1.0
36	Durham Village to Route 202	3	0.3
39	Edison Furlong Rd/Cloverly Drive to Heritage Center Drive	4	0.5
41	Swamp Road	4	0.4
42	Forest Grove Road	4	0.2
44	Durham Road/Buckingham Valley	4	1.0
45	Swamp Road	4	0.8
52	Street Road	5	0.4
59	PECO Corridor/Dark Hollow Road	6	1.2
	Wycombe Connector Trail (Wrightstown Township)	6	0.5
Total Shared-Use Trails (Excludes Wycombe Connector since outside of Township and alternative alignments #6B and #26B)			12.1

Table 10 - Buckingham Township - Proposed Trail & Bicycle Facilities

Segment	 Bike Sharrows / Share the Road Signs	Planning Area	Length (Miles)
4	Glen Drive	1	0.3
5	Buttonwood Drive	1	0.4
6A	Smoke Road	1	1.0
8	Fell Road	1	0.8
10	Hancock Ln - Twinbrook Cir - Mallard Ln - Miladies Ln	1	1.5
14	Clay Rd - Danielle Dr - Edgewood Rd - Winchester Rd	1	1.0
15	West Long Lane	1	0.4
17	Landisville Road	1	0.7
21	N. Doe Run Road to Holicong Road	2	0.4
22	Hunters Run Neighborhood	2	1.4
23	Ash Road/Ash Mill Road	2	1.6
26A	Indian Spring Road - Kingfisher Lane - Long Lane	2	1.3
	Carversville Connector (Stover Mill Road - Solebury Twsp)	2	1.4
28	Swamp Road	3	0.1
29	Spring Valley Road	3	1.0
30	Oak Lane	3	0.2
31	Furlong Road	3	1.1
32	Mill Road	3	1.8
33	Church School Rd/Church Road	3	1.6
34	Snake Hill Road	3	0.6
35	Burnt House Hill Road	3	0.9
40	Heritage Center/Villages at Buckingham	4	0.9
43	Upper Mountain Road	4	1.2
46	Devonshire Estates	4	0.3
48	Upper Mountain Road	5	2.5
49	Quarry Road	5	0.7
50	Holicong Road	5	3.2
51	Byecroft Road	5	0.8
53	Lower Mountain Road	5	4.0
54	Creek Road	5	1.4
55	Smith Road	5	1.7
56	New Road	5	0.3
57	Lower Mountain Road	6	1.5
58	Creamery Road	6	0.3
60	Dark Hollow Road	6	1.6
61	Sugar Bottom Road	6	0.6
Total Proposed Bicycle Sharrows/Share the Road (Excludes Carversville Connector since outside of Township)			39.1

Planning Area 1

This planning area, located in the northwest corner of the township, is bounded by Durham Road to the northeast, Mechanicsville Road to the southeast, Swamp Road (Route 313) to the southwest, and Landisville Road to the northwest. The area borders Doylestown Borough, and Doylestown and Plumstead townships. The features of this area are described below:

Land Use

Land use in this planning area is a diverse mix of:

- Manufacturing, commercial and agricultural use in the area bounded by Landisville Road, Burnt House Hill Road, Cold Spring Creamery Road, and Swamp Road;
- Parks and open space;
- Transportation and utilities including the Doylestown Airport and wastewater spray ponds and fields;
- Agricultural in the area bounded by Church School Road, Mechanicsville Road, Burnt House Hill Road and Fell Road; and
- Single Family Residential which represents the largest land use in this planning area.

Natural Features

Topography

- Similar to the majority of the township which can be classified as gently rolling.

Water resources

- The area is part of the Neshaminy Creek watershed with the primary secondary watershed in this area being the Pine Run watershed.

Woodlands and Natural Areas

- The two primary wooded areas in this area include the riparian corridors along Pine Run; and an area running between the Buttonwood Glen and Ridings of Buckingham extending up to Church School Road.

Man-Made Features

Commercial Areas

- Cross Keys
- Cold Spring Center

Existing Trails

Area	Trail	Type of Trail	Mileage (Miles)
1	Cold Spring Creamery Road	Shared-use	2.67
1	Hansell Road	Shared-use	0.58
1	Hansell Park	Shared-use	1.72
1	Fireside (behind Nanlyn Farm Circle)	Shared-use	0.26
1	Cold Spring Elementary School to Cold Spring Hunt	Footpath	0.10
1	Durham Road - Cold Spring Creamery Road to Cold Spring Elementary School	Shared-use	0.16
1	Buckingham Square	Shared-use	0.24
1	Church School Road	Shared-use	0.47
Total Area 1			6.20

Schools

- Cold Spring Elementary





Parks and Recreation Areas

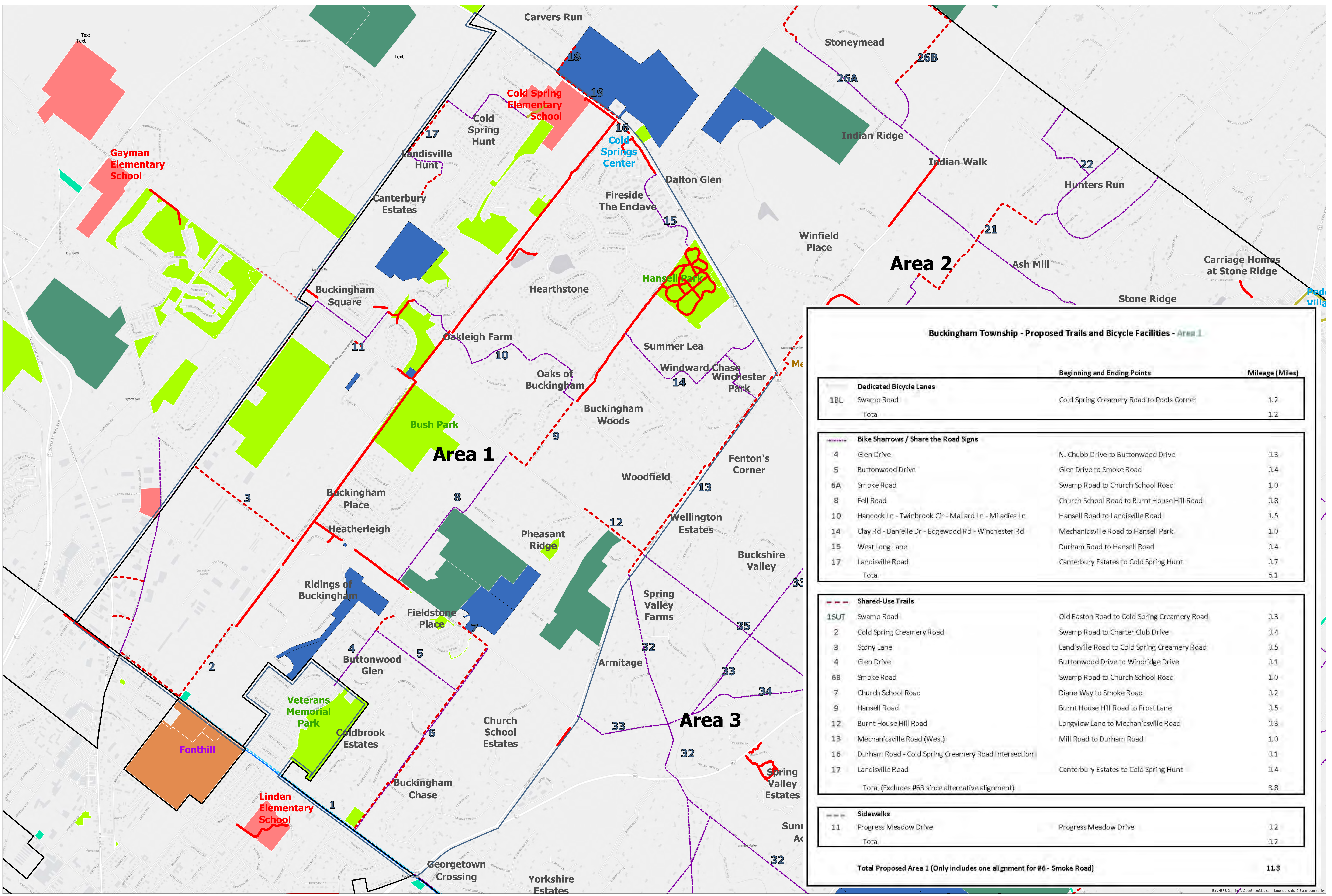
- Hansell Park
- Bush Park
- Maennerchor Field

Historic Resources

- Mechanicsville Historic District

Table 11 - Proposed Trails & Bicycle Facilities - Planning Area 1

Segment	 Dedicated Bicycle Lanes (BL)	Segment Limits	Length (Miles)
1 BL	Swamp Road	Cold Spring Creamery Road to Pools Corner	1.2
Total Proposed Bicycle Lanes			1.2
Segment	 Sidewalks	Segment Limits	Length (Miles)
11	Progress Meadow Drive	Progress Meadow Drive	0.2
Total Proposed Sidewalks			0.2
Segment	 Bike Sharrows / Share the Road Signs	Segment Limits	Length (Miles)
4	Glen Drive	N. Chubb Drive to Buttonwood Drive	0.3
5	Buttonwood Drive	Glen Drive to Smoke Road	0.4
6A	Smoke Road	Swamp Road to Church School Road	1.0
8	Fell Road	Church School Road to Burnt House Hill Road	0.8
10	Hancock Ln - Twinbrook Cir - Mallard Ln - Miladies Ln	Hansell Road to Landisville Road	1.5
14	Clay Rd - Danielle Dr - Edgewood Rd - Winchester Rd	Mechanicsville Road to Hansell Park	1.0
15	West Long Lane	Durham Road to Hansell Road	0.4
17	Landisville Road	Canterbury Estates to Cold Spring Elementary Sch.	0.7
Total Proposed Bicycle Sharrows/Share the Road			6.1
Segment	 Shared-Use Trails (SUT)	Segment Limits	Length (Miles)
1 SUT	Swamp Road	Old Easton Road to Cold Spring Creamery Road	0.3
2	Cold Spring Creamery Road	Swamp Road to Charter Club Drive	0.4
3	Stony Lane	Landisville Road to Cold Spring Creamery Road	0.5
4	Glen Drive	Forest Drive to Windridge Drive	0.1
6B	Smoke Road	Swamp Road to Church School Road	1.0
7	Church School Road	Diane Way to Smoke Road	0.2
9	Hansell Road	Burnt House Hill Road to Frost Lane	0.5
12	Burnt House Hill Road	Longview Lane to Mechanicsville Road	0.3
13	Mechanicsville Road (West)	Mill Road to Durham Road	1.0
16	Durham Road - Cold Spring Creamery Road Intersection		0.1
17	Landisville Road	Canterbury Estates to Cold Spring Hunt	0.4
Total Shared-Use Trails (Excludes #6B since alternative alignment)			3.8
Total Proposed Area 1 (Only includes one alignment for #6 - Smoke Road)			11.3



Buckingham Township - Proposed Trails and Bicycle Facilities - Area 1

Beginning and Ending Points		Mileage (Miles)	
Dedicated Bicycle Lanes			
1BL	Swamp Road	Cold Spring Creamery Road to Pools Corner	1.2
Total		1.2	
Bike Sharrows / Share the Road Signs			
4	Glen Drive	N. Chubb Drive to Buttonwood Drive	0.3
5	Buttonwood Drive	Glen Drive to Smoke Road	0.4
6A	Smoke Road	Swamp Road to Church School Road	1.0
8	Fell Road	Church School Road to Burnt House Hill Road	0.8
10	Hancock Ln - Twinbrook Ctr - Mallard Ln - Miladies Ln	Hansell Road to Landisville Road	1.5
14	Clay Rd - Danfelle Dr - Edgewood Rd - Winchester Rd	Mechanicsville Road to Hansell Park	1.0
15	West Long Lane	Durham Road to Hansell Road	0.4
17	Landisville Road	Canterbury Estates to Cold Spring Hunt	0.7
Total		6.1	
Shared-Use Trails			
1SUT	Swamp Road	Old Easton Road to Cold Spring Creamery Road	0.3
2	Cold Spring Creamery Road	Swamp Road to Charter Club Drive	0.4
3	Stony Lane	Landisville Road to Cold Spring Creamery Road	0.5
4	Glen Drive	Buttonwood Drive to Windridge Drive	0.1
6B	Smoke Road	Swamp Road to Church School Road	1.0
7	Church School Road	Diane Way to Smoke Road	0.2
9	Hansell Road	Burnt House Hill Road to Frost Lane	0.5
12	Burnt House Hill Road	Longview Lane to Mechanicsville Road	0.3
13	Mechanicsville Road (West)	Mill Road to Durham Road	1.0
16	Durham Road - Cold Spring Creamery Road Intersection		0.1
17	Landisville Road	Canterbury Estates to Cold Spring Hunt	0.4
Total (Excludes #6B since alternative alignment)		3.8	
Sidewalks			
11	Progress Meadow Drive	Progress Meadow Drive	0.2
Total		0.2	
Total Proposed Area 1 (Only includes one alignment for #6 - Smoke Road)		11.3	

1 - Swamp Road - Cold Spring Creamery Road to Pools Corner



Swamp Road - Existing right-of-way between Cold Spring Creamery Road and Cross Keys - Proposed location for shared-use trail

**1 - Swamp Road
Cold Spring Creamery Road to Pools Corner**

Trail/Bike Route Type and Length:

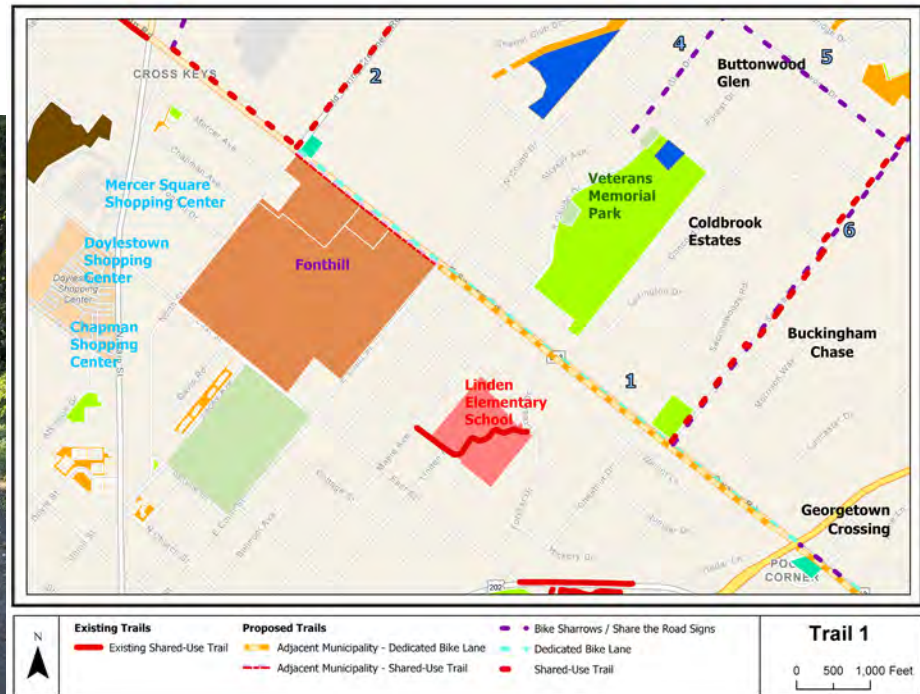
Dedicated Bicycle Lanes: 1.2 miles
 Shared-Use Trail: 0.3 miles

Summary:

- Provides a connection from many residential areas to Cross Keys
- Would connect to 2 - Cold Spring Creamery Road trail once completed
- 5' wide bicycle lanes appear to be able to be accommodated along both sides of Swamp Road. However, pinch points do exist on the Doylestown side at Creek Road, and at the intersection with Route 202 @ Pools Corner
- Shared-use trail from Cold Spring Creamery Road to Cross Keys would require several easements



Swamp Road - Existing shoulder and proposed location for dedicated bike lane



2 - Cold Spring Creamery Road - Swamp Road to Charter Club Drive

**2 - Cold Spring Creamery Road
Swamp Road to Charter Club Drive**

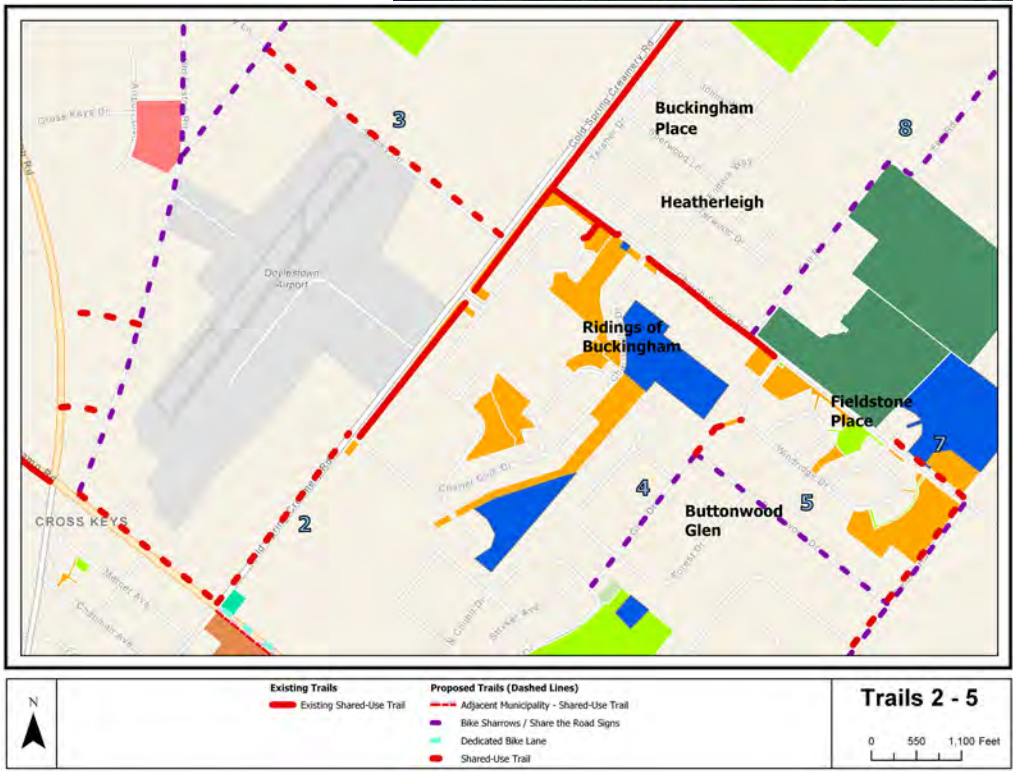
Trail/Bike Route Type and Length:
 Shared-Use Trail: 0.4 miles

Summary:

- Would complete 2 - Cold Spring Creamery Road Trail to Swamp Road providing access to Doylestown Borough and Cross Keys
- Will require easements from private property owners including Maennerchor Field



Cold Spring Creamery Road - Looking southwest in front of Maennerchor Field



3 - Stony Lane - Landisville Road to Cold Spring Creamery Road

3 - Stony Lane

Landisville Road to Cold Spring Creamery Road

Trail/Bike Route Type and Length:

Shared-Use Trail:

0.5 miles

Summary:

- Would provide a safe connection to Plumstead Township
- Would connect to 2 - Cold Spring Creamery Road trail
- Some landscaping and slope constraints along northeast side of Stony Lane, particularly in area of DM Tech



Stoney Lane - Northeast side between Cold Spring Creamery Road and Landisville Road

4 - Glen Drive - Forest Drive to Windridge Drive

4 - Glen Drive Forest Drive to Windridge Drive

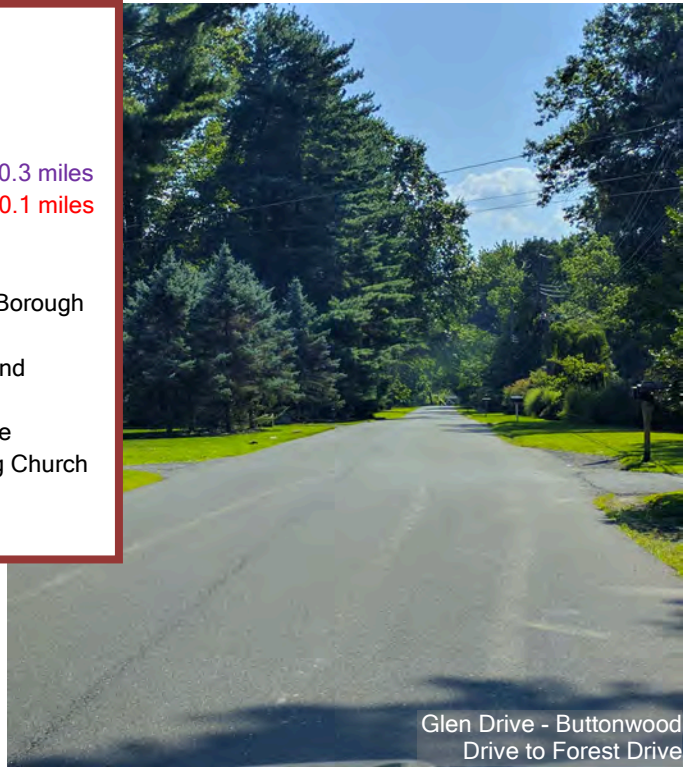
Trail/Bike Route Type and Length:

Bike Sharrows/Share the Road Signs: 0.3 miles

Shared-Use Trail: 0.1 miles

Summary:

- Would provide another connection to Doylestown Borough for several neighborhoods
- Shared-Use trail connection between Glen Drive and Windridge Drive would partially follow gas pipeline
- Via connection to Windridge Drive/Fieldstone Place neighborhood, would connect to existing trail along Church School Road
- Posted Speed Limit - 25 mph



Glen Drive - Buttonwood Drive to Forest Drive



Glen Drive - Proposed location for trail connecting to Field Stone Place

5 - Buttonwood Drive - Glen Drive to Smoke Road

5 - Buttonwood Drive Glen Drive to Smoke Road

Trail/Bike Route Type and Length:

Bike Sharrows/Share the Road Signs: 0.4 miles

Summary:

- Would provide a loop trail/bicycle route in the Buttonwood Glen and Fieldstone Place neighborhoods
- Combined with existing trail along Church School Road, and proposed 3 - Stony Lane trail, would provide a cross township route
- Posted Speed Limit - 25 mph



Buttonwood Drive - Smoke
Road to Glen Drive

6 - Smoke Road - Swamp Road to Church School Road

Two possible alignments exist for the proposed Trail/Bike Route extending along Smoke Road from Swamp Road to Church School Road:

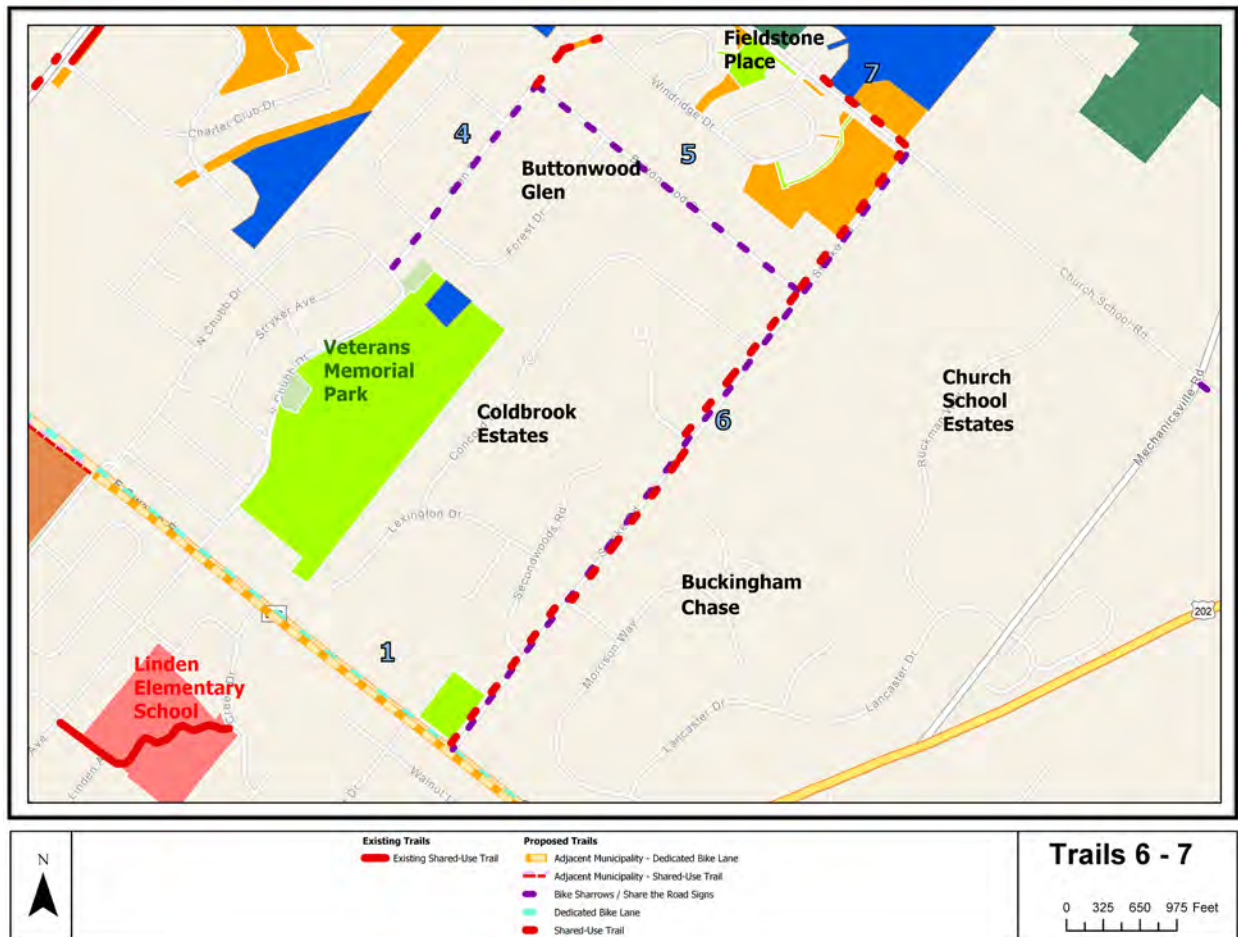
- 6A would be an entirely on-road bike route
- 6B would be an off-road shared-use trail

**6A - Smoke Road
Swamp Road to Church School Road**

Trail/Bike Route Type and Length:
Bike Sharrows/Share the Road Signs: 1.0 miles

Summary:

- Less expensive option versus establishing a shared-use trail and could be the preferred option if the easements needed to construct a trail along Smoke Road could not be obtained
- Would extend from Swamp Road to Church School Road and connect to the proposed bike route along 5 - Buttonwood Drive and proposed shared-use trail along 7 - Church School Road up to the Fieldstone Place neighborhood creating a loop
- Posted Speed Limit - 35 mph



**6B - Smoke Road
Swamp Road to Church School Road**

Trail/Bike Route Type and Length:

Shared-Use Trail: 1.0 miles

Summary:

- Would provide a safer off-road route along Smoke Road for both bicyclists and pedestrians
- Although easements from some property owners would be required, the right-of-way (ROW) width along Smoke Road, which varies from 40' to 80', means that much of the trail could be built in the right-of-way
- The proposed route for the off-road trail would be as follows:
 - Swamp Road to Philmont Drive - ROW along northwest side (0.25 miles)
 - Philmont Drive to Lakeview Circle - Southeast side, primarily in ROW, although 2 easements would be needed (0.25 miles)
 - Lakeview Circle to Church School Road - Northwest side with easements needed for the majority of the distance (0.50 miles)



Smoke Road - Looking southwest between Church School Road and Swamp Road

7 - Church School Road - Diane Way to Smoke Road

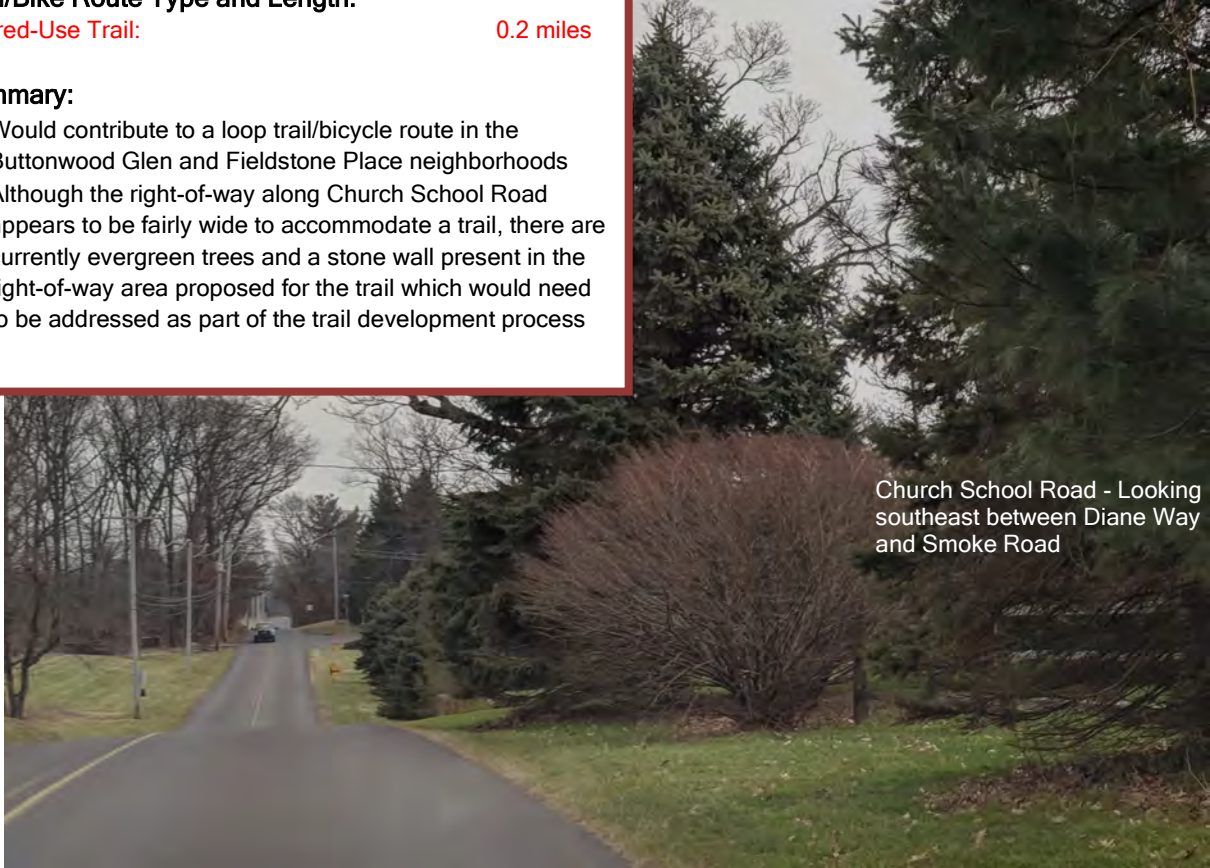
7 - Church School Road Diane Way to Smoke Road

Trail/Bike Route Type and Length:

Shared-Use Trail: 0.2 miles

Summary:

- Would contribute to a loop trail/bicycle route in the Buttonwood Glen and Fieldstone Place neighborhoods
- Although the right-of-way along Church School Road appears to be fairly wide to accommodate a trail, there are currently evergreen trees and a stone wall present in the right-of-way area proposed for the trail which would need to be addressed as part of the trail development process



Church School Road - Looking southeast between Diane Way and Smoke Road



Church School Road - Looking northwest between Smoke Road and Diane Way

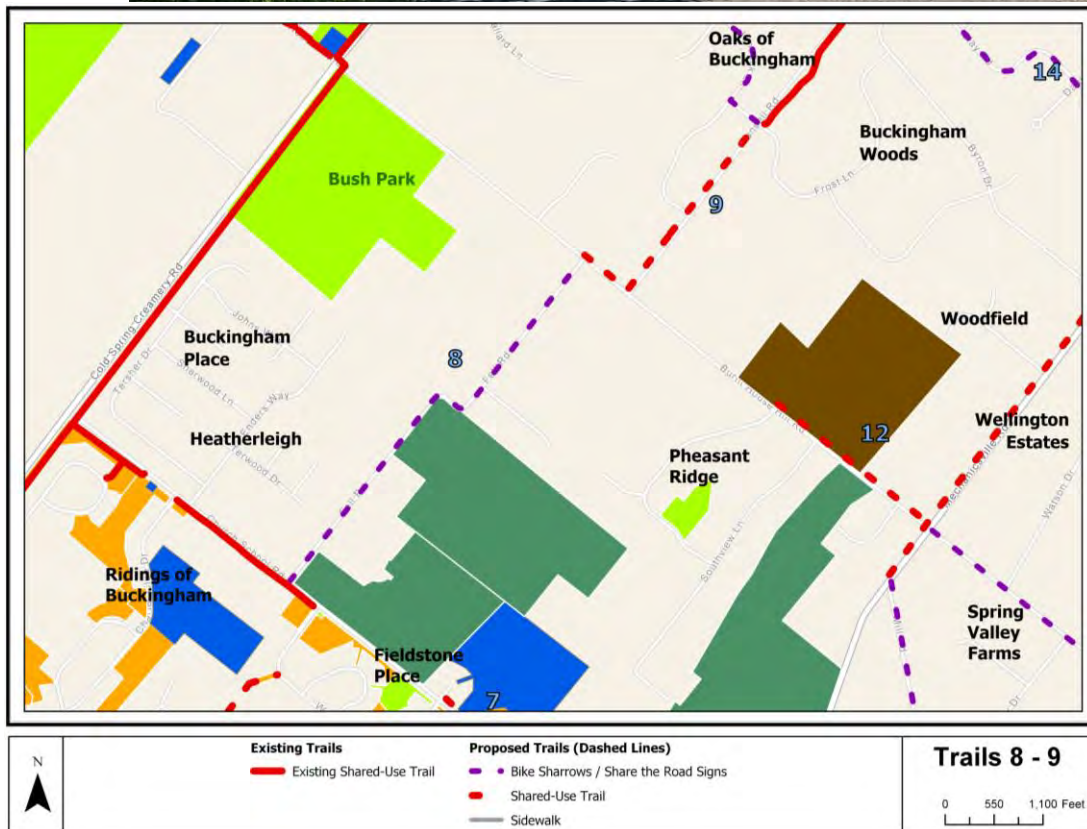
8 - Fell Road - Church School Road to Burnt House Hill Road

8 - Fell Road
Church School Road to Burnt House Hill Road

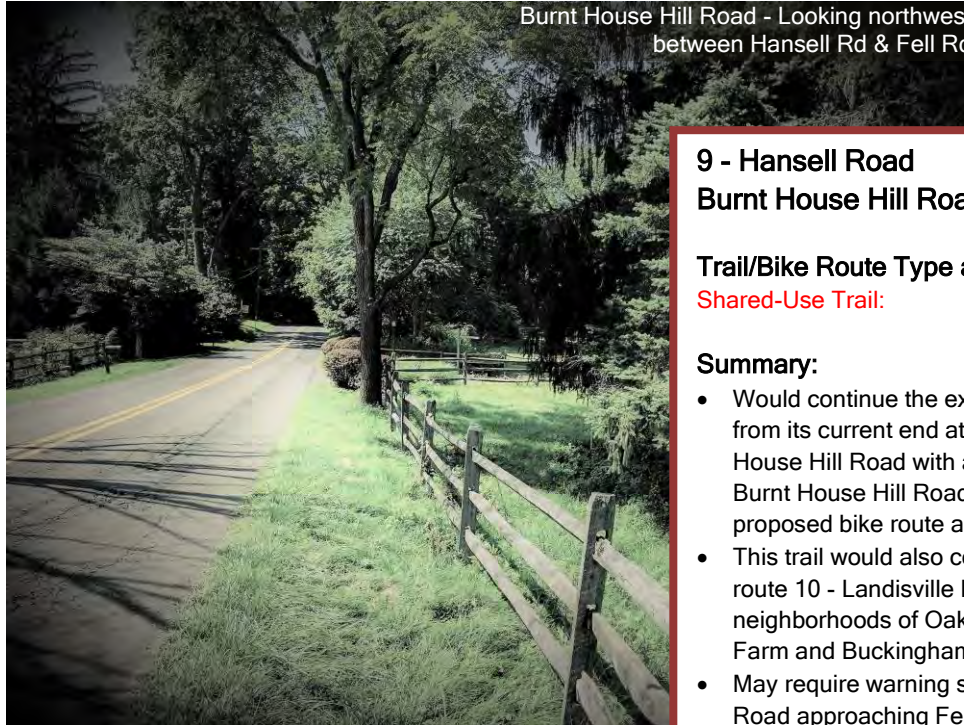
Trail/Bike Route Type and Length:
 Bike Sharrows/Share the Road Signs: 0.8 miles

Summary:

- Although not an off-road trail, a bike route along Fell Road, combined with the extension of the existing 9 - Hansell Road trail, will provide another longer distance trail/bike route in the township similar to the existing Cold Spring Creamery Road trail
- The narrowness of the roadway, the presence of speed humps, and the posted speed limit of 25 mph contribute to this being a good candidate for a bike route
- Posted Speed Limit - 25 mph



9 - Hansell Road - Burnt House Hill Road to Frost Lane



Burnt House Hill Road - Looking northwest between Hansell Rd & Fell Rd

9 - Hansell Road Burnt House Hill Road to Frost Lane

Trail/Bike Route Type and Length:

Shared-Use Trail: 0.5 miles

Summary:

- Would continue the existing Hansell Road trail from its current end at Frost Lane, to Burnt House Hill Road with an additional section along Burnt House Hill Road connecting north to the proposed bike route along Fell Road
- This trail would also connect to the planned bike route 10 - Landisville Road through the neighborhoods of Oaks of Buckingham, Oakleigh Farm and Buckingham Square
- May require warning signage on Burnt House Hill Road approaching Fell Road to let motorists know that users may be crossing between the trail and the bike route on Fell Road



Hansell Road - Northwest side right-of-way between Frost Lane and Hancock Lane

10 - Hancock Lane - Twinbrook Circle - Mallard Lane - Miladies Lane

Hansell Road to Landisville Road

10 - Hancock Lane - Twinbrook Circle - Mallard Lane - Miladies Lane - Hansell Road to Landisville Road

Trail/Bike Route Type and Length:

Bike Sharrows/Share the Road Signs: 1.5 miles

Summary:

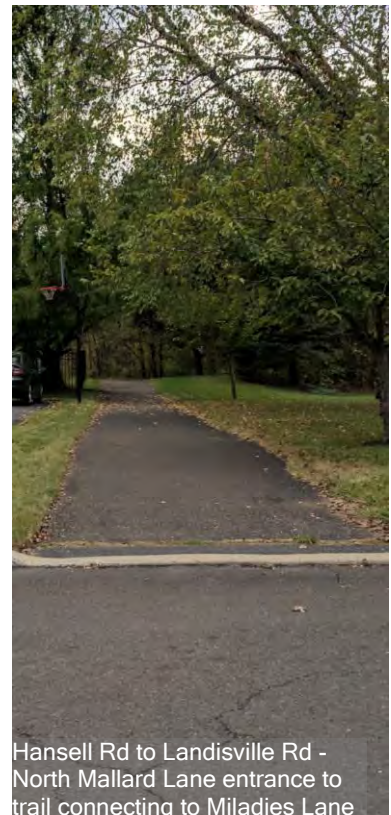
- Similar to the existing Cold Spring Creamery Road and Hansell Road trails, which provide connections across the township from southwest to northeast, this bike route, which connects to both of those trails, would provide a northwest to southeast route within this area of the township
- Would serve as a connector route between Bush Park and Hansell Park
- Low volume neighborhood streets with speeds typically less than 25 mph



Hansell Rd to Landisville Rd - Trail existing from Miladies Lane out to Landisville Road



Hansell Rd to Landisville Rd - Bike Route through Oaks of Buckingham, Oakleigh Farm and Buckingham Square



Hansell Rd to Landisville Rd - North Mallard Lane entrance to trail connecting to Miladies Lane

11 - Progress Meadow Drive - Progress Meadow Drive

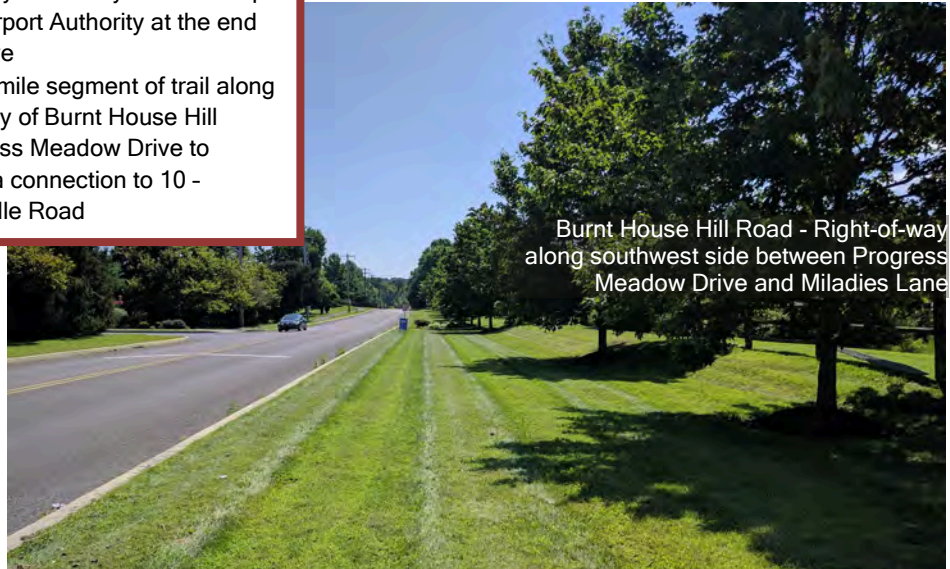
11 - Progress Meadow Drive Progress Meadow Drive

Trail/Bike Route Type and Length:

Shared-Use Trail: 0.1 miles
Sidewalk: 0.2 miles

Summary:

- Would provide a connection to the future proposed park on the property jointly-owned by the township and the Bucks County Airport Authority at the end of Progress Meadow Drive
- This would include a 0.1 mile segment of trail along the southwest right-of-way of Burnt House Hill Road across from Progress Meadow Drive to Miladies Lane providing a connection to 10 - Hansell Road to Landisville Road



Burnt House Hill Road - Right-of-way along southwest side between Progress Meadow Drive and Miladies Lane



Progress Meadow Dr - Proposed area for sidewalk along northwest side

12 - Burnt House Hill Road - Longview Lane to Mechanicsville Road

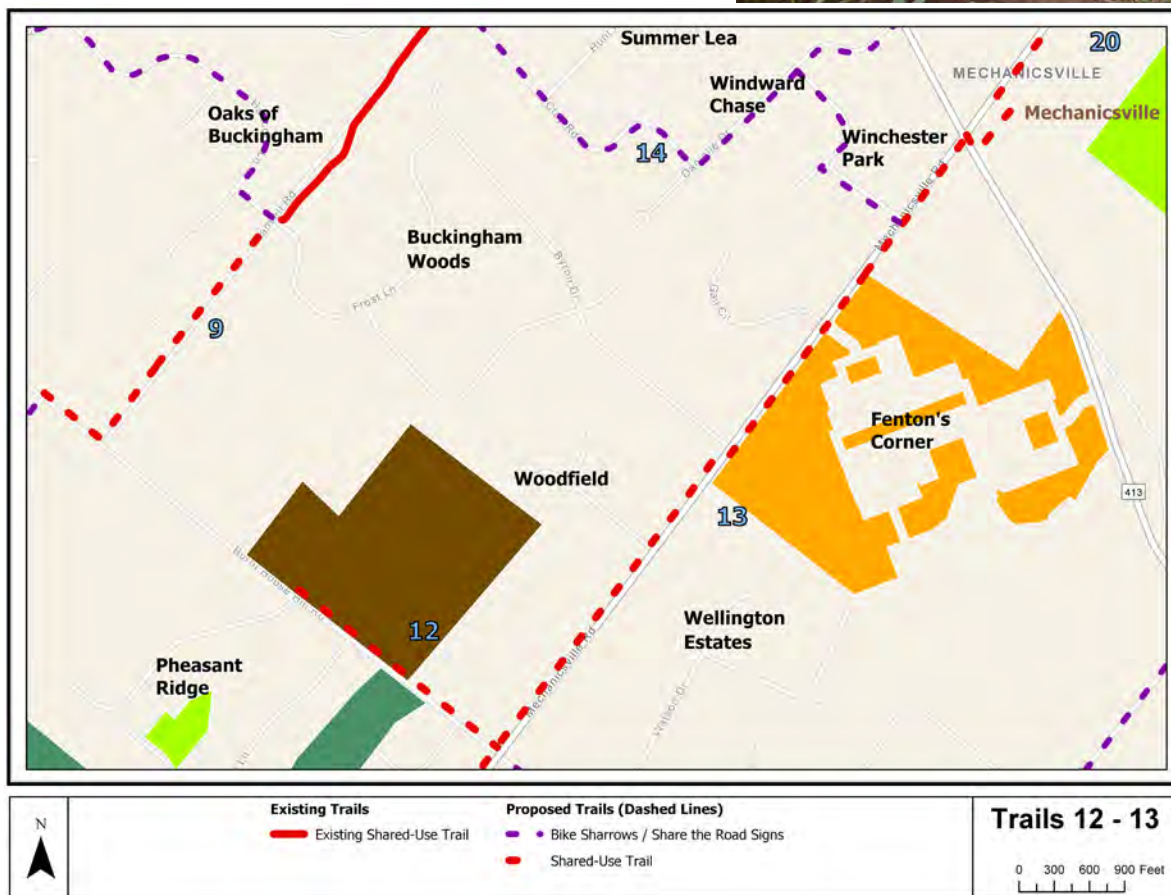
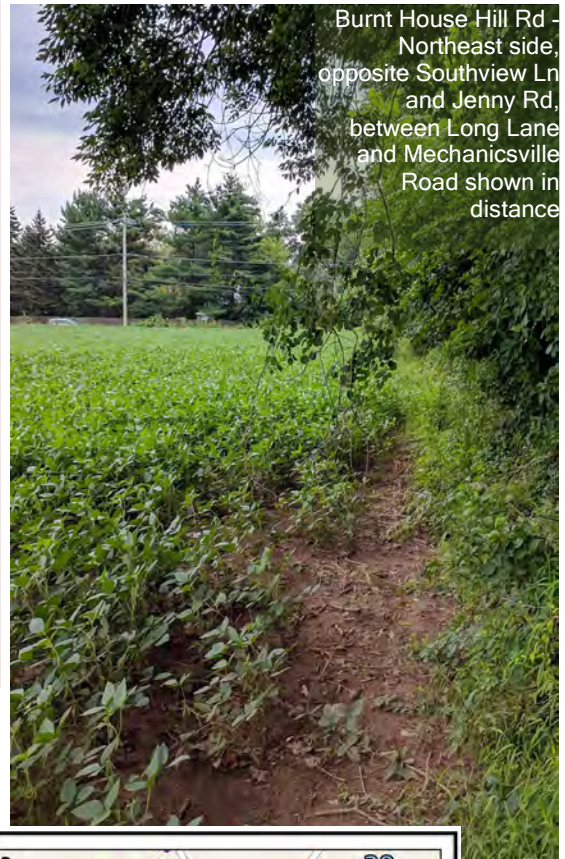
12 - Burnt House Hill Road Longview Lane to Mechanicsville Road

Trail/Bike Route Type and Length:

Shared-Use Trail: 0.3 miles

Summary:

- Would extend along the northeast side of Burnt House Hill Road from Longview Lane, located on the southwest side of the road, to Mechanicsville Road
- Would connect with 13 - Mechanicsville Road trail running along Mechanicsville Road providing connection to the on-road bike routes along 32 - Mill Road and 31 - Furlong Road in Planning Area 3, as well as the proposed on-road bike route 35 - Burnt House Hill Road south of Mechanicsville Road
- Will require easements from Heritage Conservancy and the owner of the property located at the northeast corner of the intersection of Burnt House Hill Road and Mechanicsville Road



13 - Mechanicsville Road (West) - Mill Road to Durham Road

13 - Mechanicsville Road (West) Mill Road to Durham Road

Trail/Bike Route Type and Length:

Shared-Use Trail: 0.9 miles

Summary:

- Would extend along Mechanicsville Road from Mill Road to Durham Road at Mechanicsville Village
- Via connections to 12 - Burnt House Hill Road trail & 14 - Mechanicsville to Hansell Road trail, this trail would connect several neighborhoods to the existing Hansell Road trail and to Hansell Park
- The segment of the trail from Mill Road to Byron Drive would be located along the northeast side of the road. From Byron Drive to Durham Road, the trail would be located along the southeast side of the road
- Crossing at Byron Drive will also allow this trail to connect to the Fenton's Corner development currently under construction
- As the trail is intended to be off-road, given the higher speeds and traffic volumes along Mechanicsville Road, it will require several easements



Mechanicsville Rd -
Southeast side
between
Winchester Drive
and Durham Road

**14 - Clay Road - Danielle Drive - Edgewood Road - Winchester Road
Mechanicsville Road to Hansell Park**

14 - Clay Road - Danielle Drive - Edgewood Road - Winchester Road Mechanicsville Road to Hansell Park

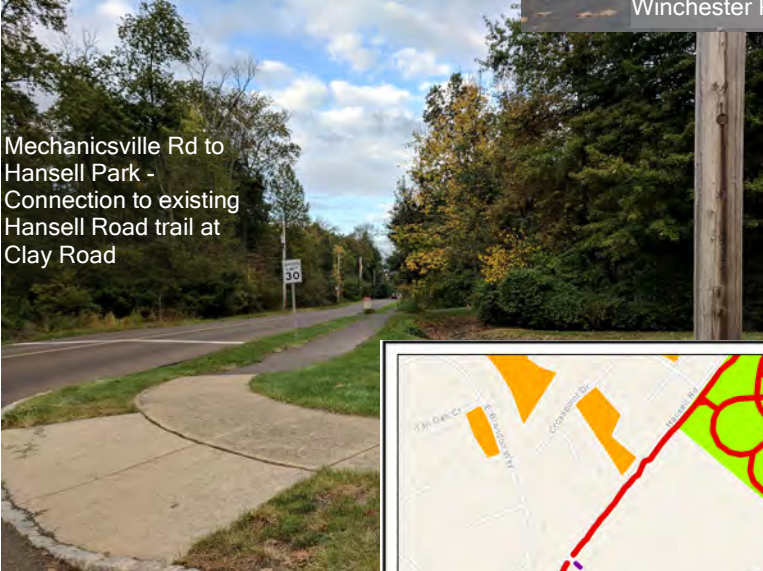
Trail/Bike Route Type and Length:
Bike Sharrows/Share the Road Signs: 1.0 miles

Summary:

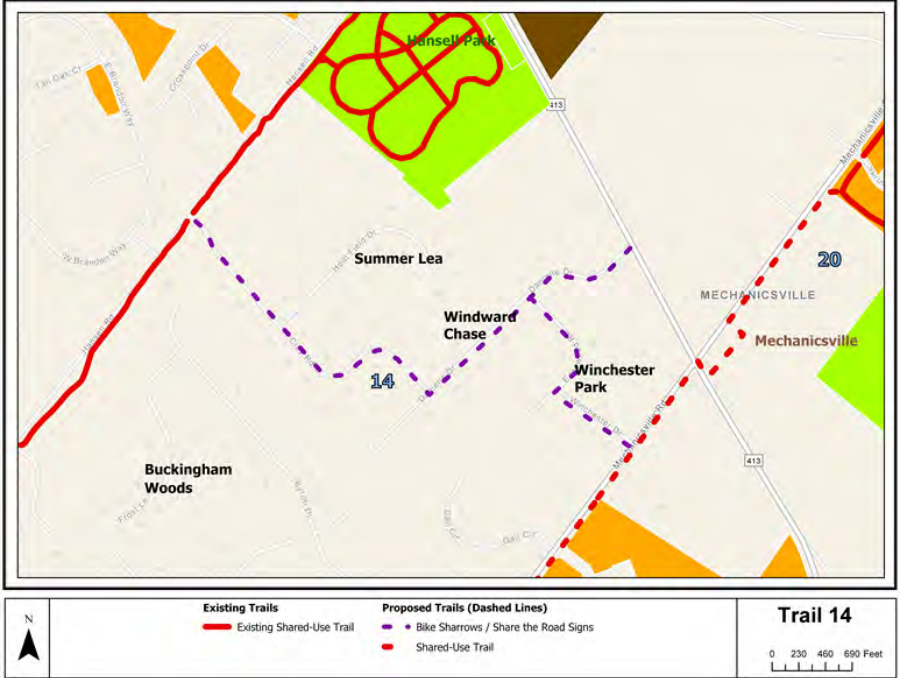
- This on-road bike route is intended to serve as a connector between Mechanicsville Road and Hansell Road and Hansell Park
- The installation of sidewalks along one side of Winchester Drive, Edgewood Road, Danielle Drive and the completion of the sidewalk along the northeast side of Clay Drive is recommended as part of this project
- Low volume neighborhood streets with speeds typically less than 25 mph



Mechanicsville Rd to Hansell Park - Bike route through Winchester Park and Windward Chase neighborhoods



Mechanicsville Rd to Hansell Park - Connection to existing Hansell Road trail at Clay Road



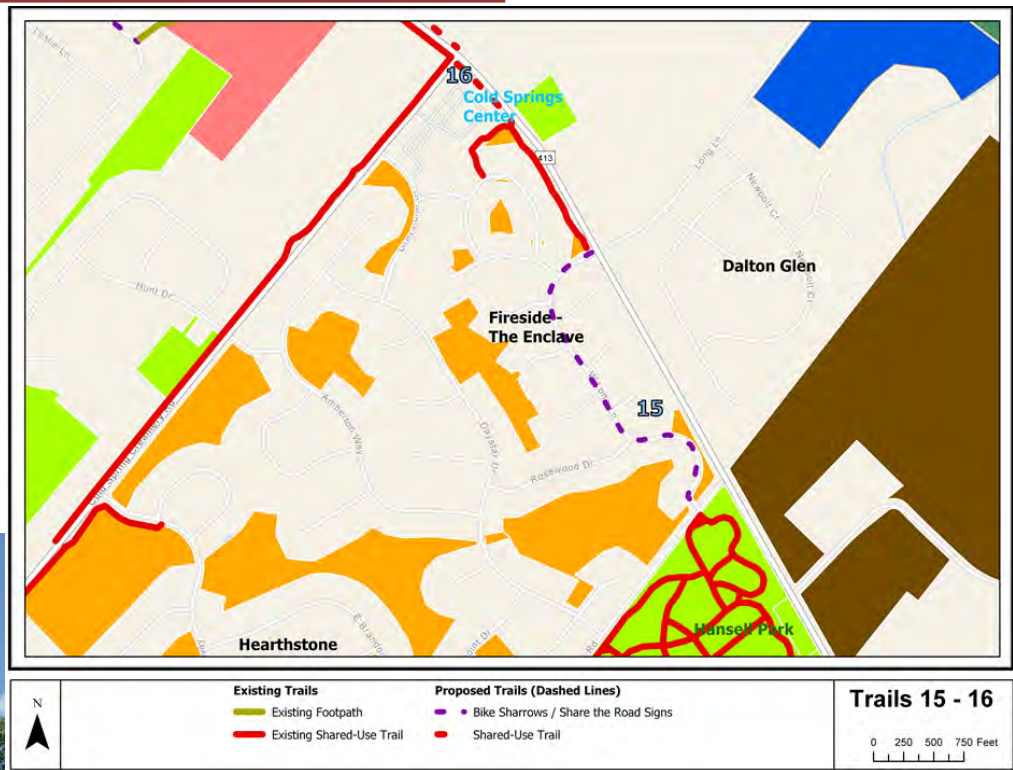
15 - West Long Lane - Durham Road to Hansell Road

**15 - West Long Lane
Durham Road to Hansell Road**

Trail/Bike Route Type and Length:
Bike Sharrows/Share the Road Signs: 0.4 miles

Summary:

- Via connections to 16 - Durham Road/Cold Spring Creamery Road and 17 - Landisville Road, as well as the existing Cold Spring Creamery Road trail, this route would provide access to Hansell Park for several neighborhoods including Landisville Hunt and Cold Spring Hunt
- Posted Speed Limit - 25 mph



16 - Durham Road and Cold Spring Creamery Road intersection

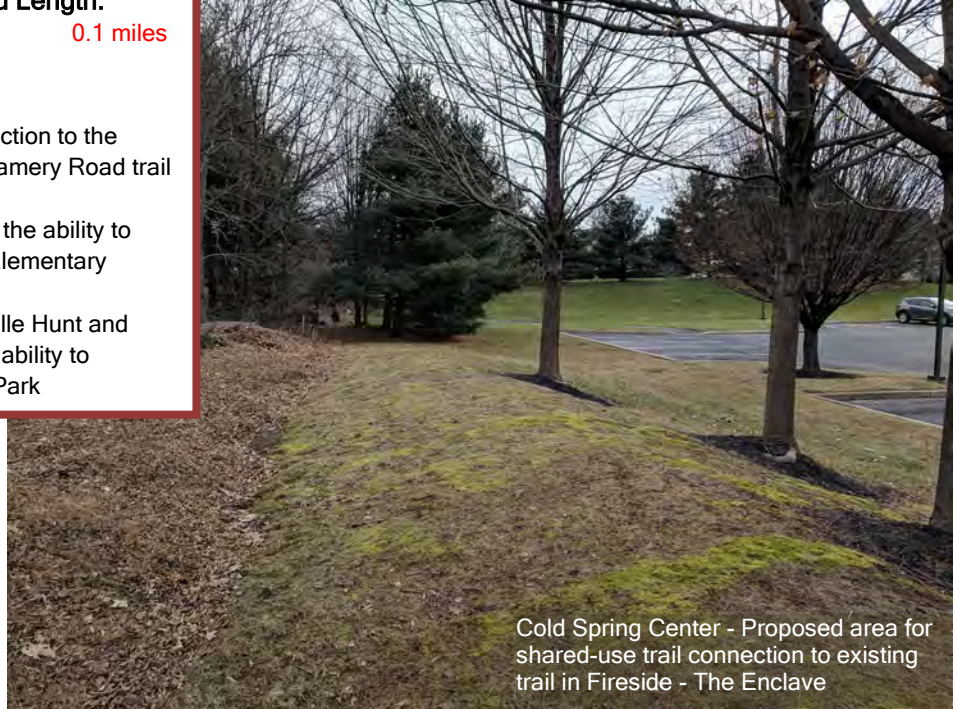
16 - Durham Road and Cold Spring Creamery Road

Trail/Bike Route Type and Length:

Shared-Use Trail: 0.1 miles

Summary:

- Would complete a connection to the existing Cold Spring Creamery Road trail which would facilitate:
 - Residents in Fireside the ability to walk to Cold Spring Elementary School
 - Residents of Landisville Hunt and Cold Spring Hunt the ability to walk/bike to Hansell Park



Cold Spring Center - Proposed area for shared-use trail connection to existing trail in Fireside - The Enclave



Durham Road - Right-of-way along southwest side past Cold Spring Creamery Road intersection

17 - Landisville Road - Canterbury Estates to Cold Spring Elementary School

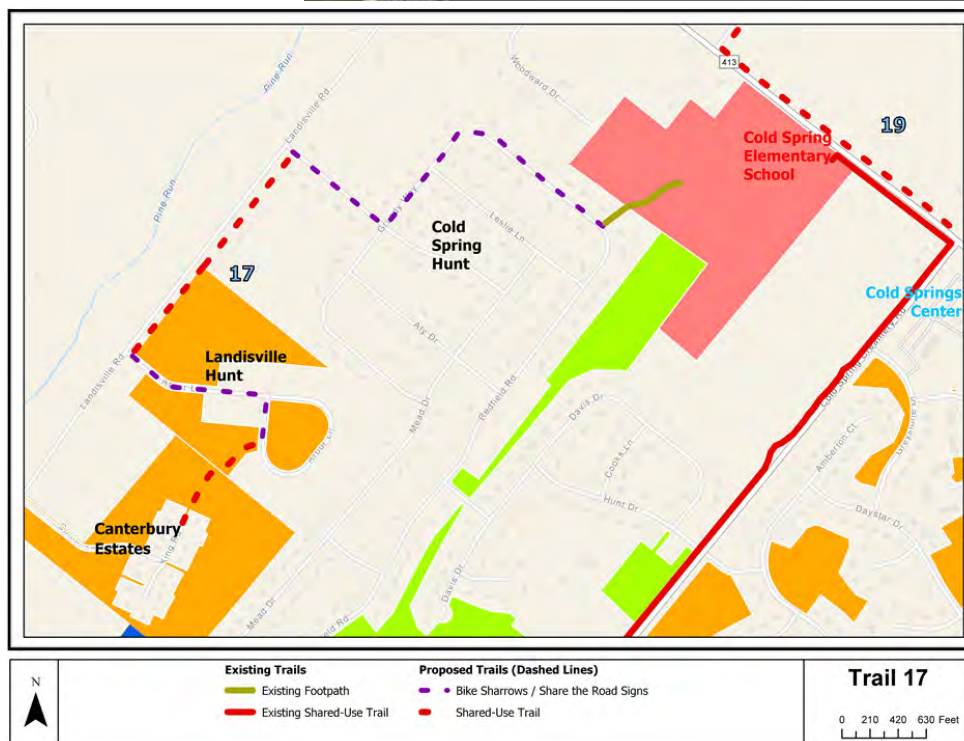
17 - Landisville Road Canterbury Estates to Cold Spring Elementary School

Trail/Bike Route Type and Length:

Bike Sharrows/Share the Road Signs: 0.7 miles
 Shared-Use Trail: 0.4 miles

Summary:

- Would provide a walking/bicycling route for residents of Canterbury Estates and Landisville Hunt to Cold Spring Elementary School and Cold Spring Center
- Easements would be required from the homeowner associations of both Canterbury Estates and Landisville Hunt. The wide right-of-way (55 feet) along Landisville Road might eliminate the need for easements from private property owners along Landisville Road
- Posted Speed Limit - 25 mph





Canterbury Estates to Cold Spring Elementary - Landisville Rd right-of-way between Arbor Ln & Michener Rd



Canterbury Estates to Cold Spring Elementary - Arbor Ln looking southwest toward Canterbury Estates



Canterbury Estates to Cold Spring Elementary - End of Kings Rd (Canterbury Estates) looking northeast toward Arbor Ln (Landisville Hunt)



Canterbury Estates to Cold Spring Elementary - On road bike route in Cold Spring Hunt

Planning Area 2

This planning area is bounded roughly by Street Road to the northeast, Route 202/Route 263 to the southeast, Durham Road to the southwest, with Ridgeview Drive forming the northwest boundary. The planning area borders Plumstead Township to the northwest and Solebury Township to the northeast. The features of this area are described below:

Land Use

Land use in this planning area is a diverse mix of:

- Single Family Residential and Rural Residential;
- Agricultural, particularly between Street and Durham roads and Mechanicsville and Long Lane including Maximuck’s Farm;
- Commercial along Route 202/Route 263 corridor; and
- Institutional in the form of Central Bucks East High School and Holicong Middle School

Natural Features

Topography

- Primarily gently rolling hills although there are steep slopes along the southeast side of Ridgeview Drive and in an area running southwest to northeast roughly parallel to a line formed by Paist Road and South Deer Run Road.

Water resources

- There are two primary watersheds in this planning area. The portion east of Durham Road and north of Mechanicsville Road is part of the Delaware River watershed which encompasses the Paunacussing and Pidcock Creek secondary watersheds. The remainder of the planning area is in the Neshaminy Creek watershed with a secondary watershed of Lahaska Creek.

Woodlands and Natural Areas

- Woodlands can be found to the southeast of Carversville Road, surrounding the Reserve at Holicong neighborhood, between the Deer Valley neighborhood and the schools on Holicong Road, and around Buckingham Monthly Meeting on Route 202/Route 263.

Man-Made Features

Commercial Areas

- Village of Buckingham
- Peddlers Village
- Buckingham Green

Existing Trails

Area	Trail	Type of Trail	Mileage (Miles)
2	Mechanicsville Road	Shared-use	0.35
2	Reserve at Holicong	Shared-use	1.25
2	Anderson Road & Holicong Road	Shared-use	0.30
2	Midway Fire Company	Access Drive	0.16
2	Peddlers Village	Footpath	0.41
2	Carriage Homes at Stone Ridge to Peddlers Village	Shared-use	0.10
Total Area 2			2.57

Schools

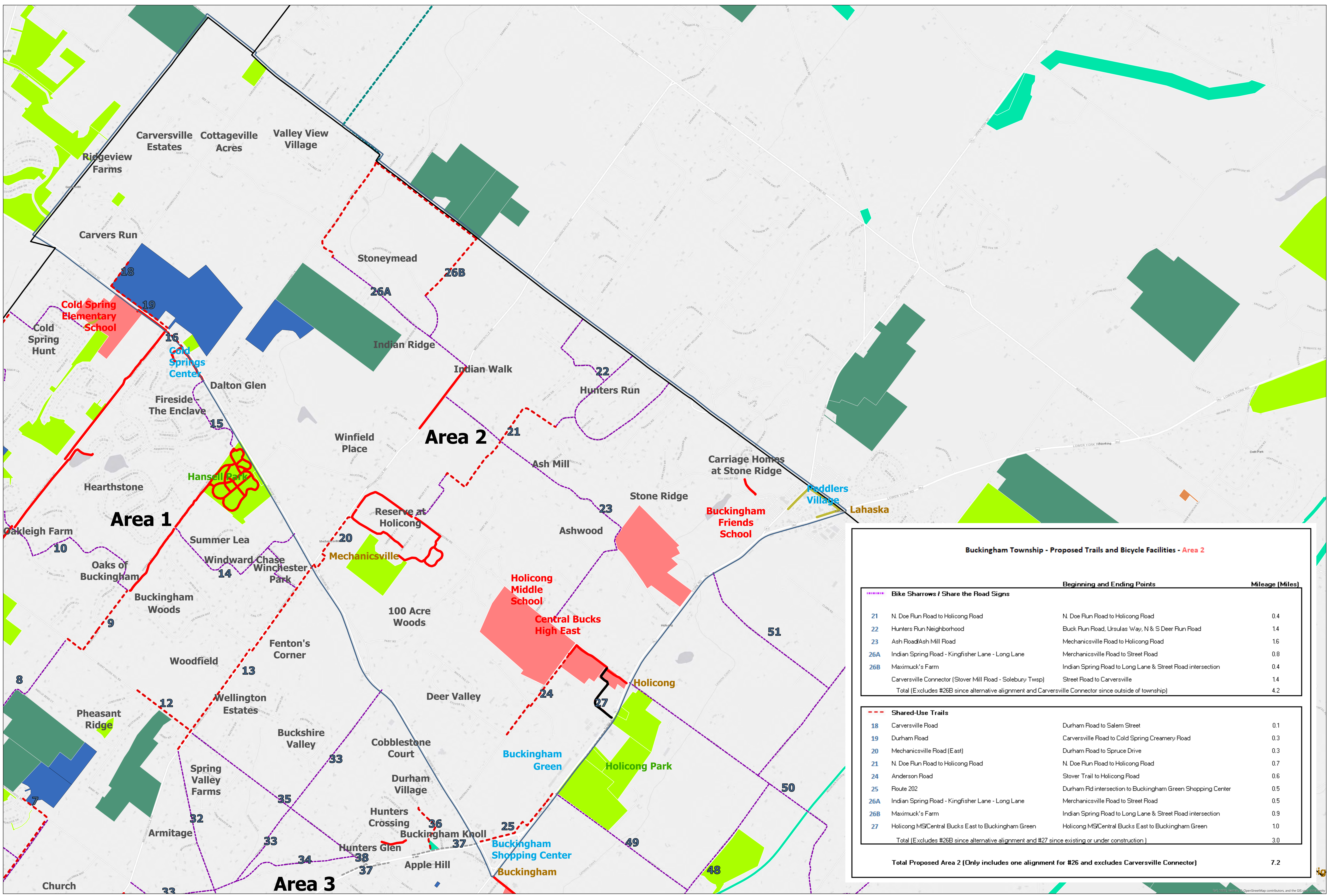
- Holicong Middle School
- Central Bucks East High School

Parks and Recreation Areas

- Midway Fire Company/Penn Athletics Club

Historic Resources


- Village of Buckingham
- Buckingham Friends Meeting House
- Lydia & Thomas Gilbert Farm
- Holicong Village Historic District
- Village of Lahaska
- Longland Farm
- Mechanicsville Historic District



Buckingham Township - Proposed Trails and Bicycle Facilities - Area 2

	Beginning and Ending Points		Mileage (Miles)
Bike Sharrows / Share the Road Signs			
21	N. Doe Run Road to Holicong Road	N. Doe Run Road to Holicong Road	0.4
22	Hunters Run Neighborhood	Buck Run Road, Ursulas Way, N & S Deer Run Road	1.4
23	Ash Road/Ash Mill Road	Mechanicsville Road to Holicong Road	1.6
26A	Indian Spring Road - Kingfisher Lane - Long Lane	Mechanicsville Road to Street Road	0.8
26B	Maximuck's Farm	Indian Spring Road to Long Lane & Street Road intersection	0.4
	Carversville Connector (Stover Mill Road - Solebury Twsp)	Street Road to Carversville	1.4
	Total (Excludes #26B since alternative alignment and Carversville Connector since outside of township)		4.2
Shared-Use Trails			
18	Carversville Road	Durham Road to Salem Street	0.1
19	Durham Road	Carversville Road to Cold Spring Creamery Road	0.3
20	Mechanicsville Road (East)	Durham Road to Spruce Drive	0.3
21	N. Doe Run Road to Holicong Road	N. Doe Run Road to Holicong Road	0.7
24	Anderson Road	Stover Trail to Holicong Road	0.6
25	Route 202	Durham Rd intersection to Buckingham Green Shopping Center	0.5
26A	Indian Spring Road - Kingfisher Lane - Long Lane	Mechanicsville Road to Street Road	0.5
26B	Maximuck's Farm	Indian Spring Road to Long Lane & Street Road intersection	0.9
27	Holicong MS/Central Bucks East to Buckingham Green	Holicong MS/Central Bucks East to Buckingham Green	1.0
	Total (Excludes #26B since alternative alignment and #27 since existing or under construction)		3.0
Total Proposed Area 2 (Only includes one alignment for #26 and excludes Carversville Connector)			7.2

Table 12 - Proposed Trails & Bicycle Facilities - Planning Area 2

Segment	 Bike Sharrows / Share the Road Signs	Segment Limits	Length (Miles)
21	N. Doe Run Road to Holicong Road	N. Doe Run Road to Holicong Road	0.4
22	Hunters Run Neighborhood	Buck Run Road, Ursulas Way, N&S Deer Run Road	1.4
23	Ash Road/Ash Mill Road	Mechanicsville Road to Holicong Road	1.6
26A	Indian Spring Road - Kingfisher Lane - Long Lane	Merchanicsville Road to Street Road	0.8
26B	Maximuck's Farm	Indian Spring Road to Long Lane/Street Road	0.4
	Carversville Connector (Stover Mill Road - Solebury Twsp)	Street Road to Carversville	1.4
Total Proposed Bicycle Sharrows/Share the Road (Excludes #26B since alternative alignment and Carversville Connector since outside of Township)			4.2
Segment	 Shared-Use Trails (SUT)	Segment Limits	Length (Miles)
18	Carversville Road	Durham Road to Salem Street	0.1
19	Durham Road	Carversville Road to Cold Spring Creamery Road	0.3
20	Mechanicsville Road (East)	Durham Road to Spruce Drive	0.3
21	N. Doe Run Road to Holicong Road	N. Doe Run Road to Holicong Road	0.7
24	Anderson Road	Stover Trail to Holicong Road	0.6
25	Route 202	Durham Road to Buckingham Green Shopping Ctr	0.5
26A	Indian Spring Road - Kingfisher Lane - Long Lane	Mechanicsville Road to Street Road	0.5
26B	Maximuck's Farm	Indian Spring Road to Long Lane/Street Road	0.9
27	Holicong MS/Central Bucks East HS to Buckingham Green	Holicong MS/CB East to Buckingham Green	1.0
Total Proposed Area 2 (Only include one alignment for #26 and excludes Carversville Connector)			3.0

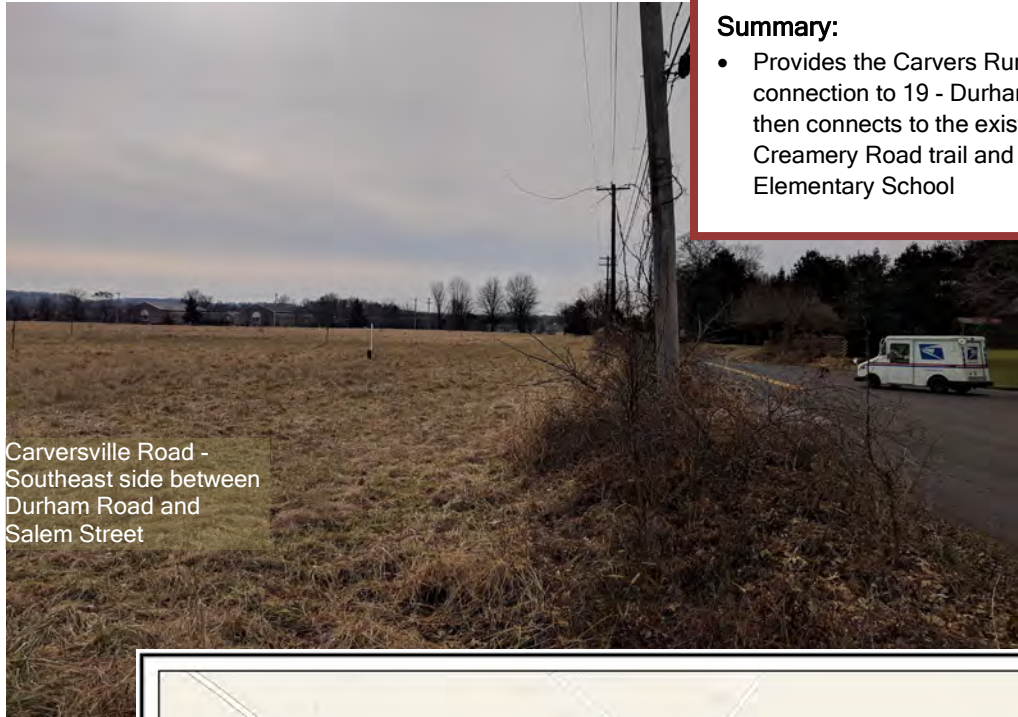
18 - Carversville Road - Durham Road to Salem Street

**18 - Carversville Road
Durham Road to Salem Street**

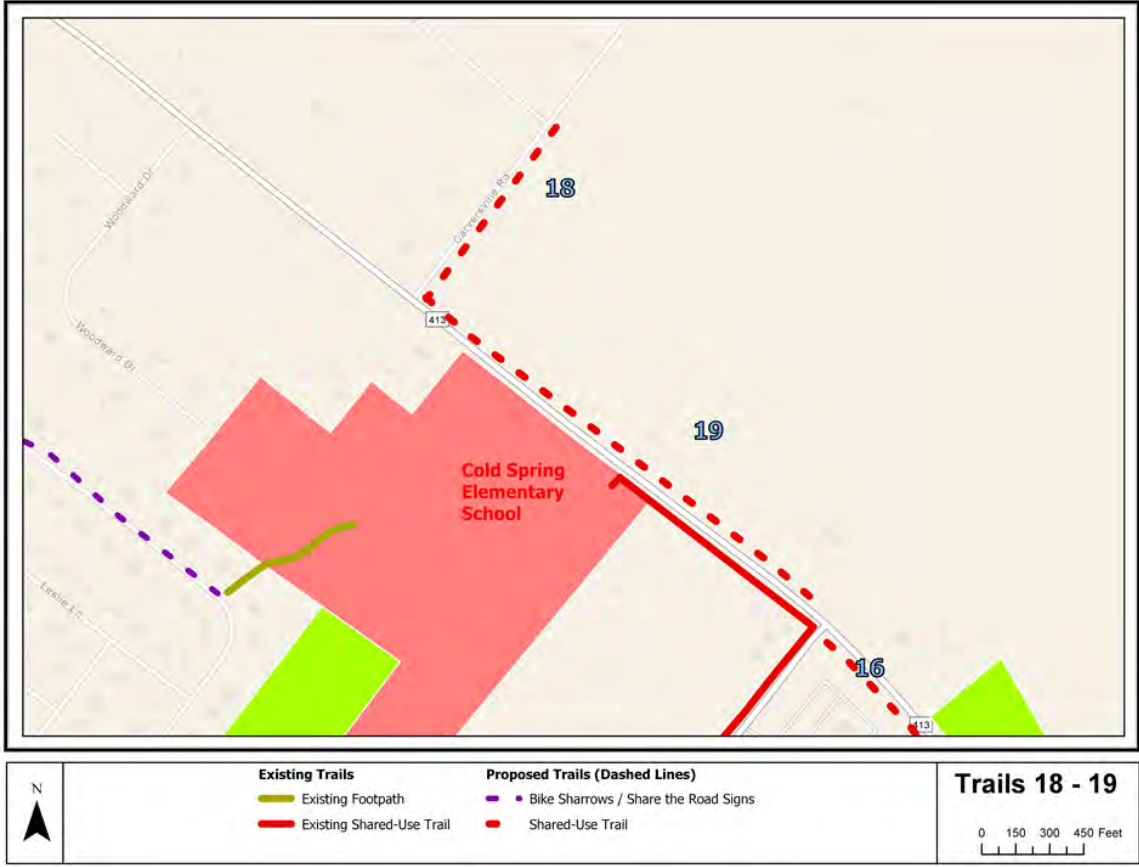
Trail/Bike Facility Type and Length:
Shared-Use Trail: 0.1 miles

Summary:

- Provides the Carvers Run community with a connection to 19 - Durham Road trail which then connects to the existing Cold Spring Creamery Road trail and Cold Spring Elementary School



Carversville Road - Southeast side between Durham Road and Salem Street



19 - Durham Road - Carversville Road to Cold Spring Creamery Road

19 - Durham Road Carversville Road to Cold Spring Creamery Road

Trail/Bike Facility Type and Length:

Shared-Use Trail: 0.3 miles

Summary:

- Creates a link between 18 - Carversville Road and the existing Cold Spring Creamery Road trail and Cold Spring Center
- As this is located on publicly-owned land, no easement would be required for this trail.



Durham Rd - Northeast side between Cold Spring Creamery Road and Carversville Road

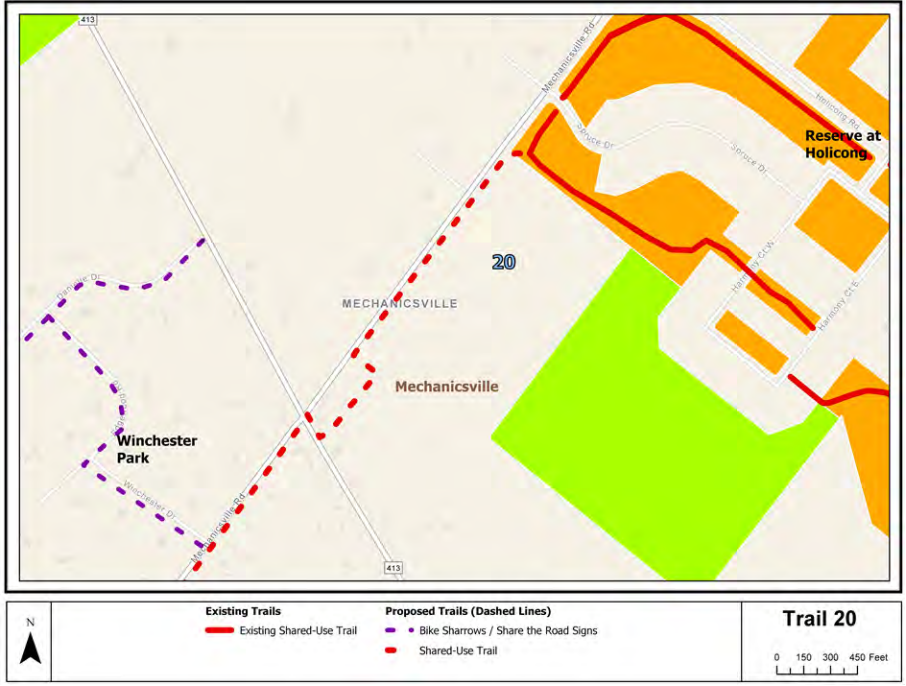
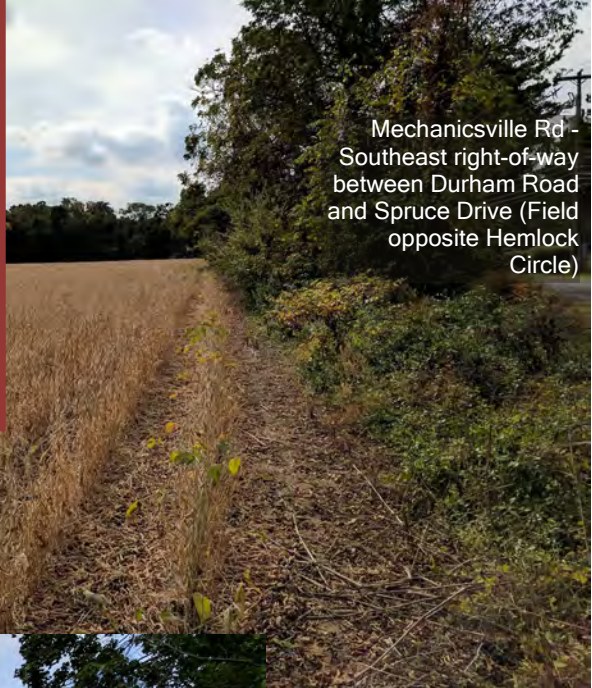
20 - Mechanicsville Road (East) - Durham Road to Spruce Drive

**20 - Mechanicsville Road (East)
Durham Road to Spruce Drive**

Trail/Bike Facility Type and Length:
Shared-Use Trail: 0.3 miles

Summary:

- Provides existing trails in the Reserve at Holicong with access to Durham road and the village of Mechanicsville
- Connects to 13 - Mechanicsville Road and 14 - Mechanicsville to Hansell Road trails providing a connection into Hansell Park



21 - North Doe Run Road to Holicong Road

21 - North Doe Run Road to Holicong Road

Trail/Bike Facility Type and Length:

Bike Sharrows/Share the Road Signs: 0.4 miles

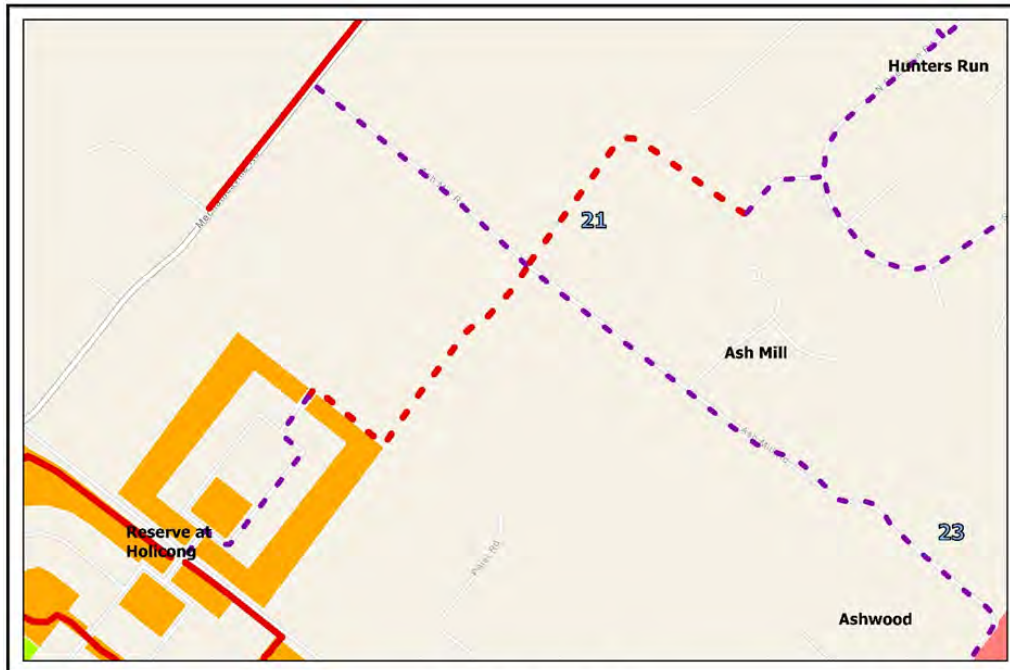
Shared-Use Trail: 0.7 miles

Summary:

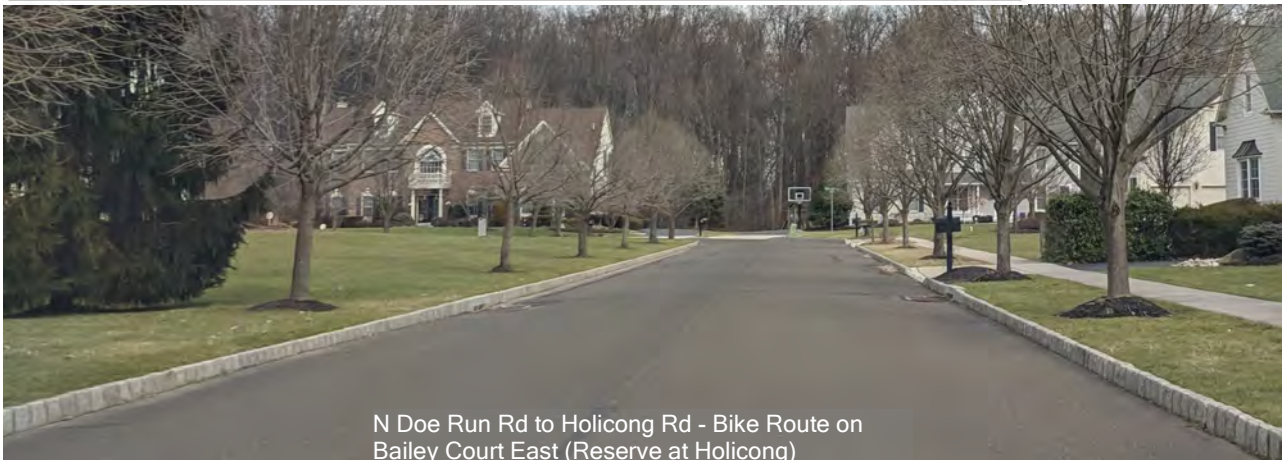
- Links the developments of Hunters Run, Ash Mill, and the Reserve at Holicong via a new shared-use trail
- The bike route portion of the trail would be on low volume roads where speeds typically do not exceed 25 mph



N Doe Run Rd to Holicong Rd - End of Quail Drive (Hunters Run) looking southwest toward Ash Mill Road



	Existing Trails Existing Shared-Use Trail	Proposed Trails (Dashed Lines) Bike Sharrows / Share the Road Signs Shared-Use Trail	Trail 21 0 240 480 720 Feet
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N Doe Run Rd to Holicong Rd - Bike Route on Bailey Court East (Reserve at Holicong)

BUCKINGHAM TOWNSHIP MASTER TRAIL AND BICYCLE PLAN

N Doe Run Rd to Holicong Rd -
Proposed crossing location of Ash
Mill Road between Mechanicsville
Road and Pin Oak Drive



N Doe Run Rd to Holicong Rd - End of Wilson Drive looking northeast toward Ash Mill Road

22 - Hunters Run Neighborhood - Buck Run Road, Ursulas Way, North and South Deer Run Road

**22 - Hunters Run Neighborhood
Buck Run Road, Ursulas Way, North and South Deer Run Road**

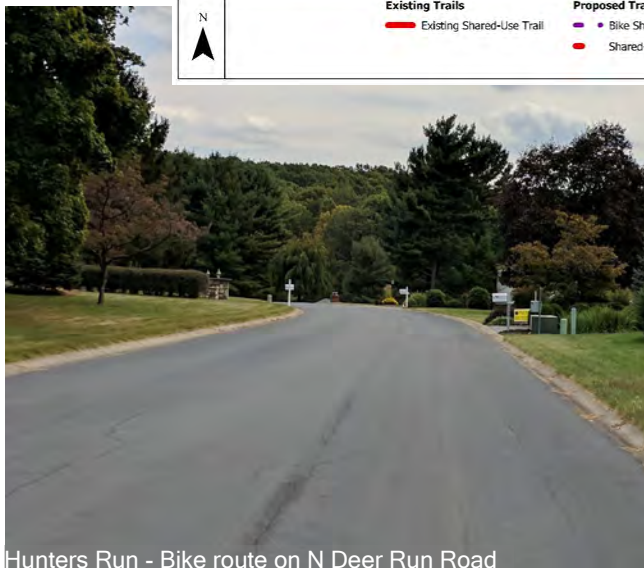
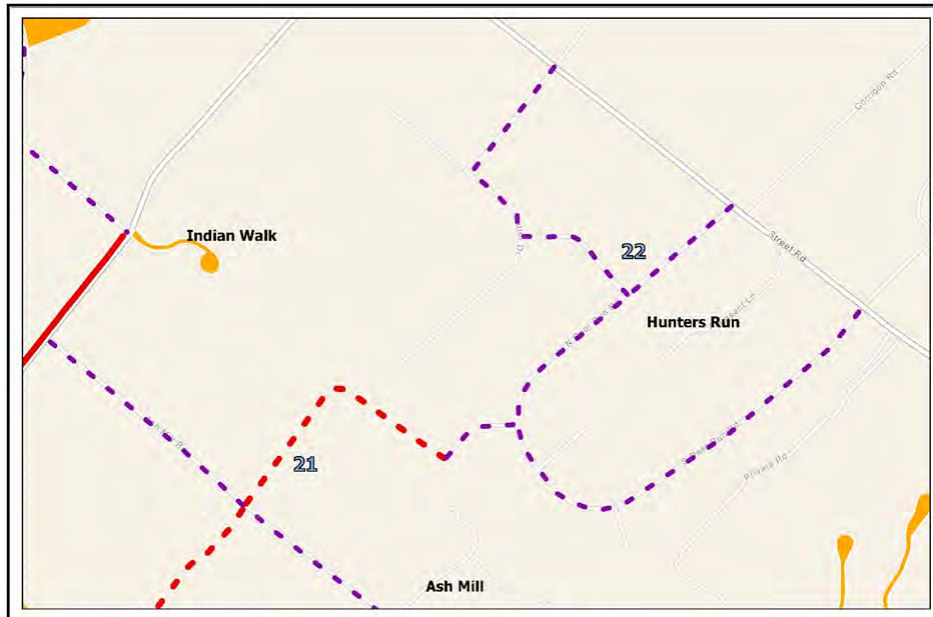
Trail/Bike Facility Type and Length:
Bike Sharrows/Share the Road Signs: 1.4 miles

Summary:

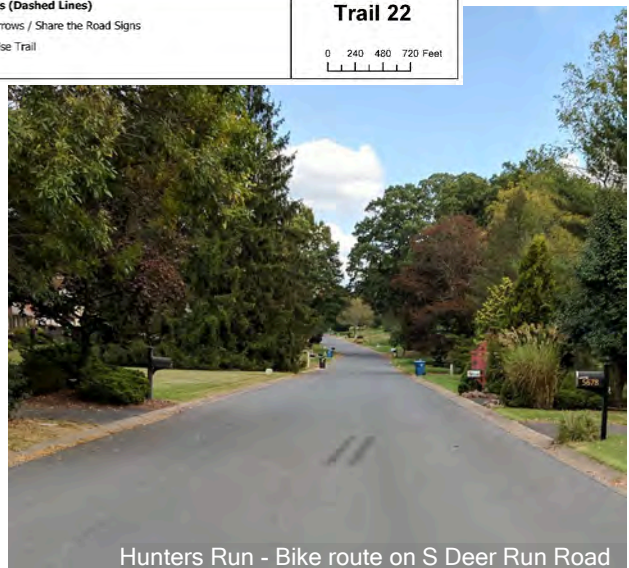
- Provide a bike route for the Hunters Run neighborhood which in turn connects to 21 - North Doe Run Road to Holicong trail
- Streets in the neighborhood are low volume where speeds typically do not exceed 25 mph



Hunters Run - Bike route on Antler Drive



Hunters Run - Bike route on N Deer Run Road



Hunters Run - Bike route on S Deer Run Road

23 - Ash Road/Ash Mill Road - Mechanicsville Road to Holicong Road

**23 - Ash Road/Ash Mill Road
Mechanicsville Road to
Holicong Road**

Trail/Bike Facility Type and Length:

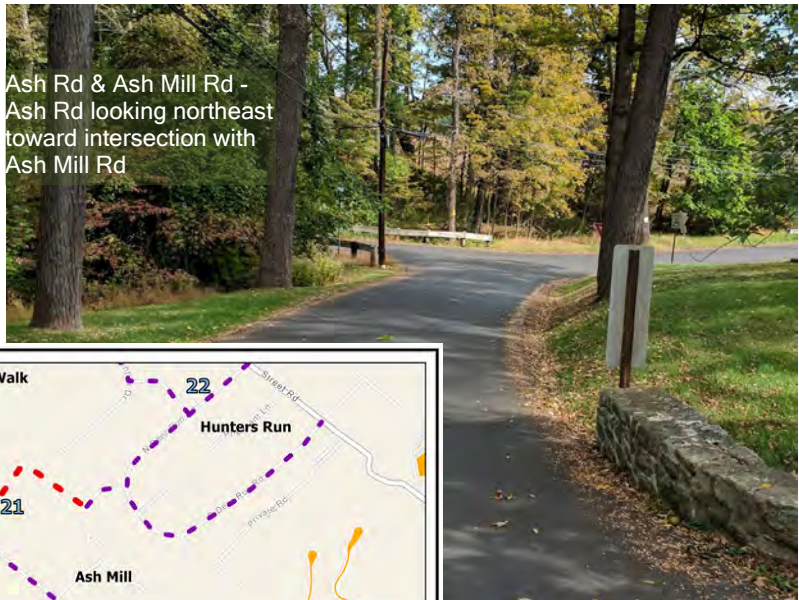
Bike Sharrows/Share the Road Signs:
1.6 miles

Summary:

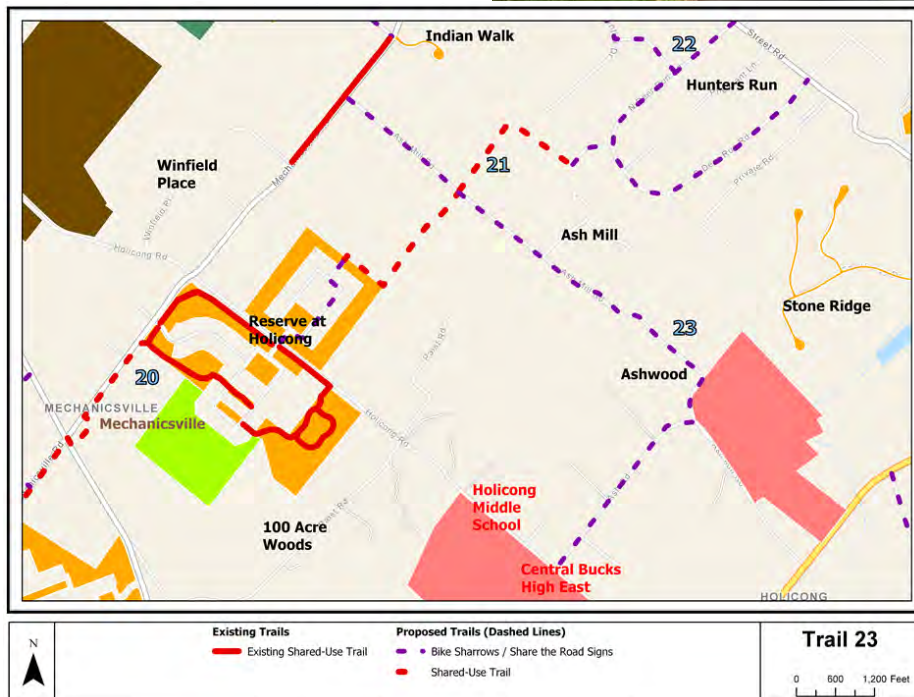
- Provide students with a connection to Holicong Middle School and Central Bucks East High School
- Connects to the existing trail on Mechanicsville Road running between Lace Leaf Drive and Indian Springs Road which in turn would connect to 26 - Mechanicsville Road to Street Road
- Although there is already signage headed northwesterly on Ash Mill Road at the curve prior to crossing an unnamed tributary to the Lahaska Creek encouraging motorists to slow down, additional signage should be considered so that motorists aren't caught off-guard by a bicyclist in the road in this area
- Posted Speed Limit - 25 mph



Ash Rd & Ash Mill Rd - Ash Mill Road looking northwest to Pin Oak Drive



Ash Rd & Ash Mill Rd - Ash Rd looking northeast toward intersection with Ash Mill Rd



24 - Anderson Road - Stover Trail to Holicong Road

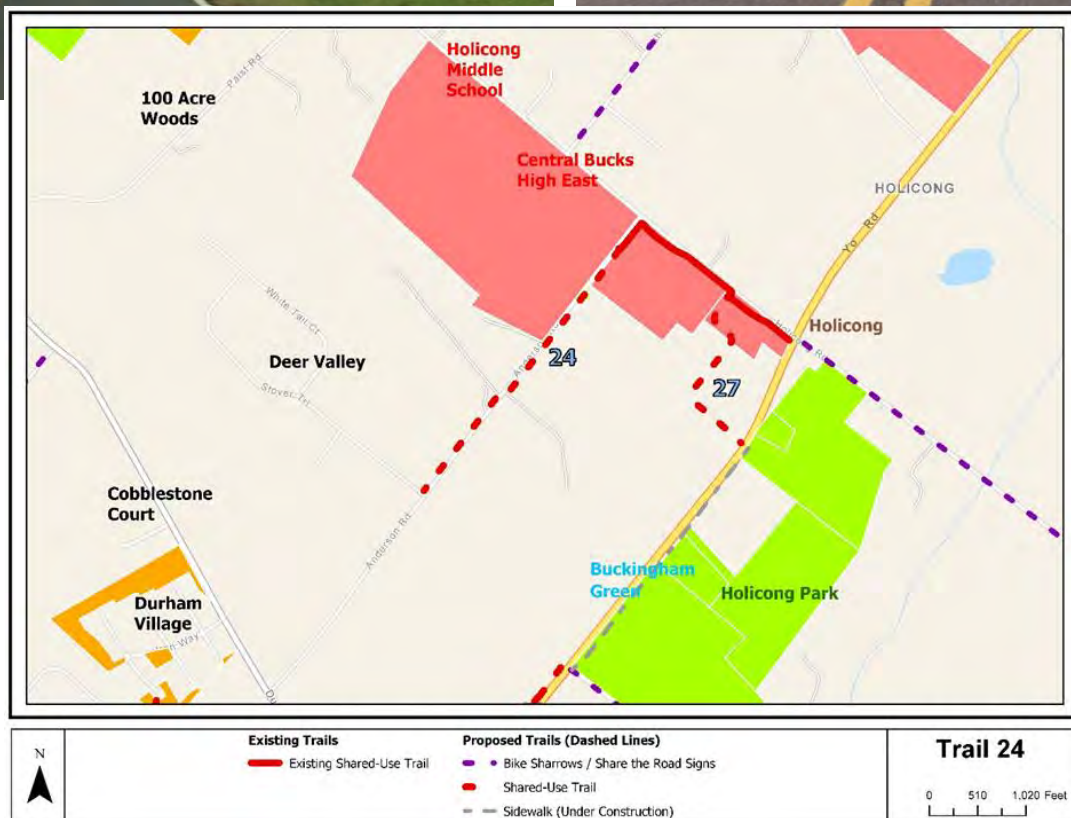
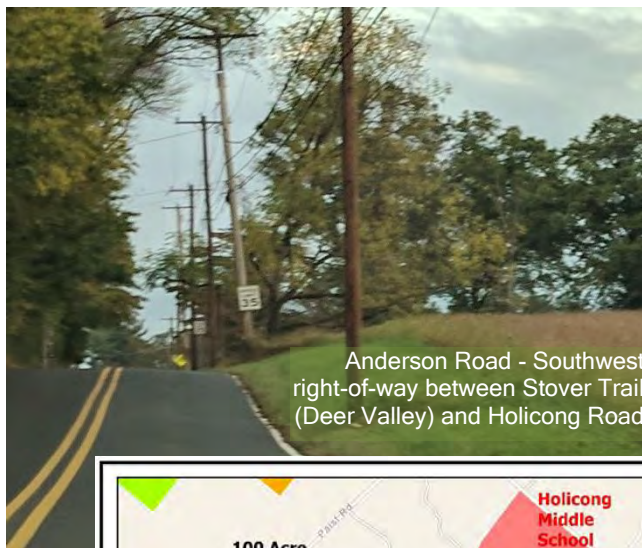
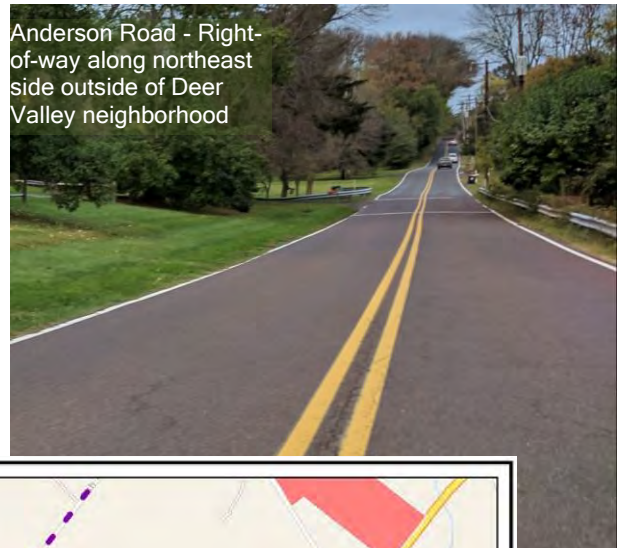
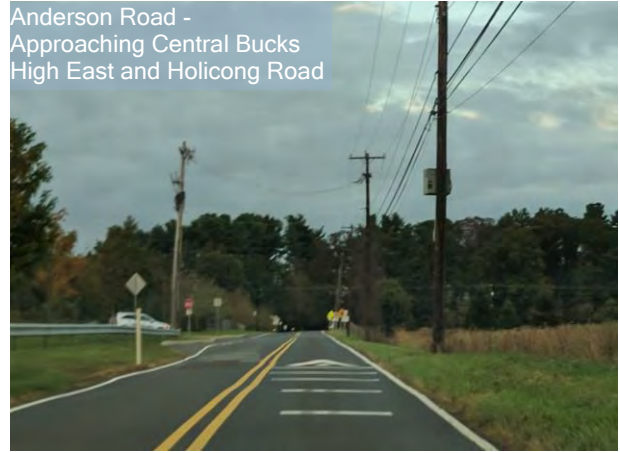
24 - Anderson Road Stover Trail to Holicong Road

Trail/Bike Facility Type and Length:

Shared-Use Trail: 0.5 miles

Summary:

- Provides students living in the Deer Valley neighborhood with a shared-use trail to safely get to Holicong Middle School and Central Bucks East High School
- A bridge will be required in the vicinity of the former Stovers Farm Market



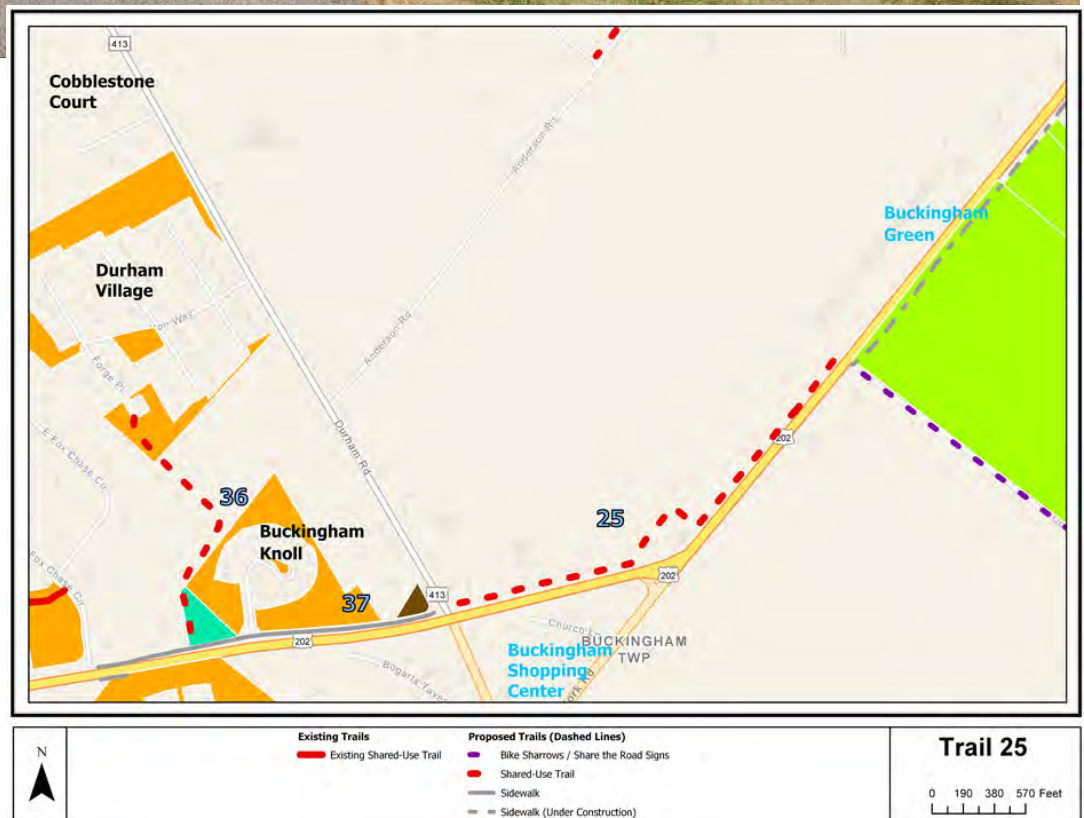
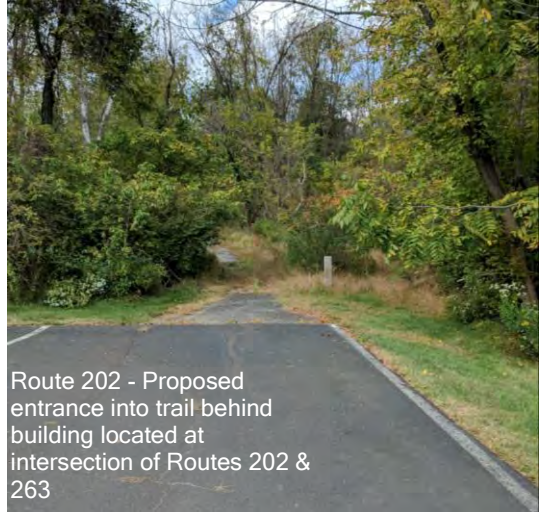
25 - Route 202 - Durham Road to Buckingham Green Shopping Center

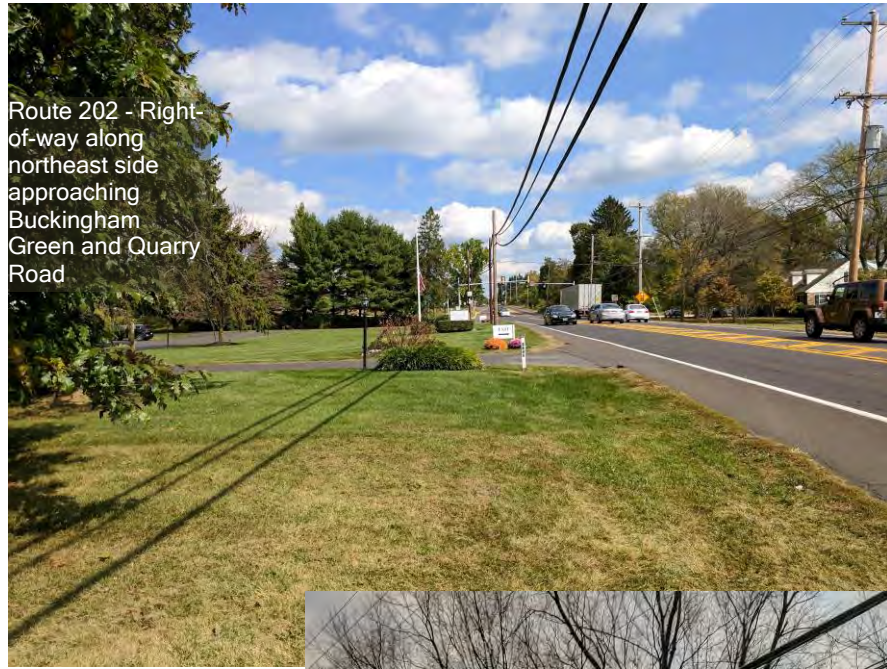
25 - Route 202
Durham Road to Buckingham Green Shopping Center

Trail/Bike Facility Type and Length:
Shared-Use Trail: 0.5 miles

Summary:

- Creates a shared-use trail that allows for safe navigation of the intersection of Routes 413, 202, and 263
- Creates a link between the village of Buckingham and Buckingham Green
- Connects to 37 - Route 202 which provide residents living in developments along Route 202 a link to Buckingham Green





Route 222 - Right-of-way along northeast side approaching Buckingham Green and Quarry Road



Route 222 - Wooded area between Family of God Lutheran Church and Trinity Episcopal Church-Buckingham

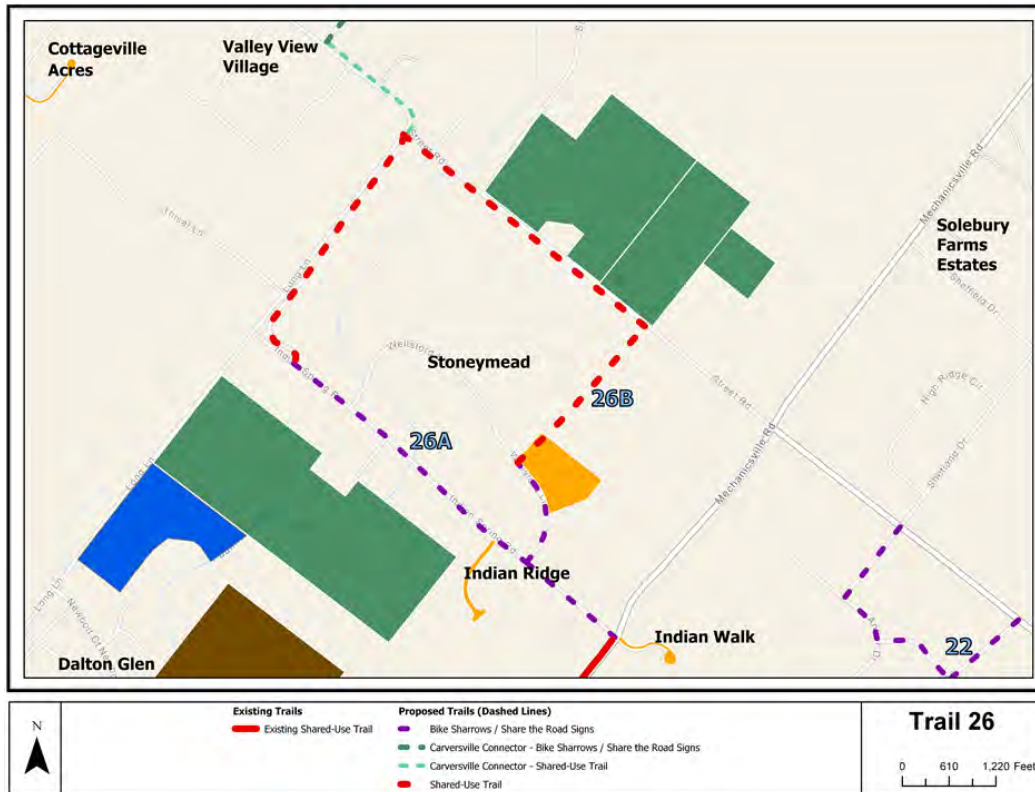


Route 222 - Right-of-way along northeast side in front of Buckingham Pediatrics

26 - Mechanicsville Road to Street Road

Two possible alignments exist for this specific segment:

- 26A - This route consists of a bike route along Indian Spring Road from Mechanicsville Road to Long Lane and a shared-use trail along the southeast side of Long Lane, in front of Maximuck’s Farm, from Indian Spring Road to Street Road
- 26B - This route would consist of a bike route along Indian Spring Road from Mechanicsville Road to Wellsford Lane where it would connect through HOA-owned property, run along the southeast property line of Maximuck’s Farm, before continuing along Maximuck’s Farm property along Street Road to its intersection with Long Lane.



26A - Indian Spring Road - Kingfisher Lane - Long Lane Mechanicsville Road to Street Road

Trail/Bike Facility Type and Length:

Bike Sharrows/Share the Road Signs: 0.8 miles
Shared-Use Trail: 0.5 miles

Summary:

- This route consists of a bike route along Indian Spring Road from Mechanicsville Road to Long Lane and a shared-use trail along the southeast side of Long Lane, in front of Maximuck’s Farm, from Indian Spring Road to Street Road
- The initial portion of the trail along Long Lane between Indian Spring Road and Maximuck’s Farm will require easements for the property owners along Kingfisher Lane
- Posted Speed Limit - 25 mph





26 - Mechanicsville Road to Street Road

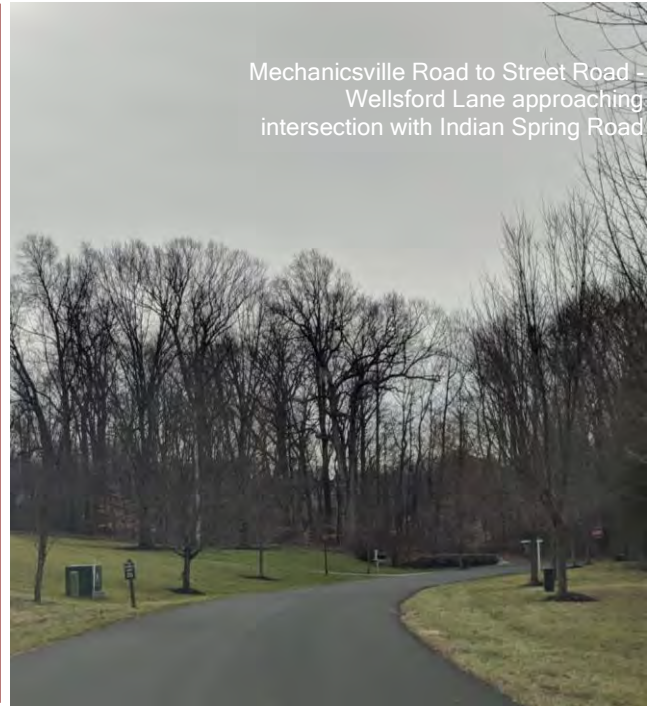
26B - Maximuck's Farm Indian Spring Road to Long Lane & Street Road Intersection

Trail/Bike Facility Type and Length:

Bike Sharrows/Share the Road Signs: 0.4 miles
Shared-Use Trail: 0.9 miles

Summary:

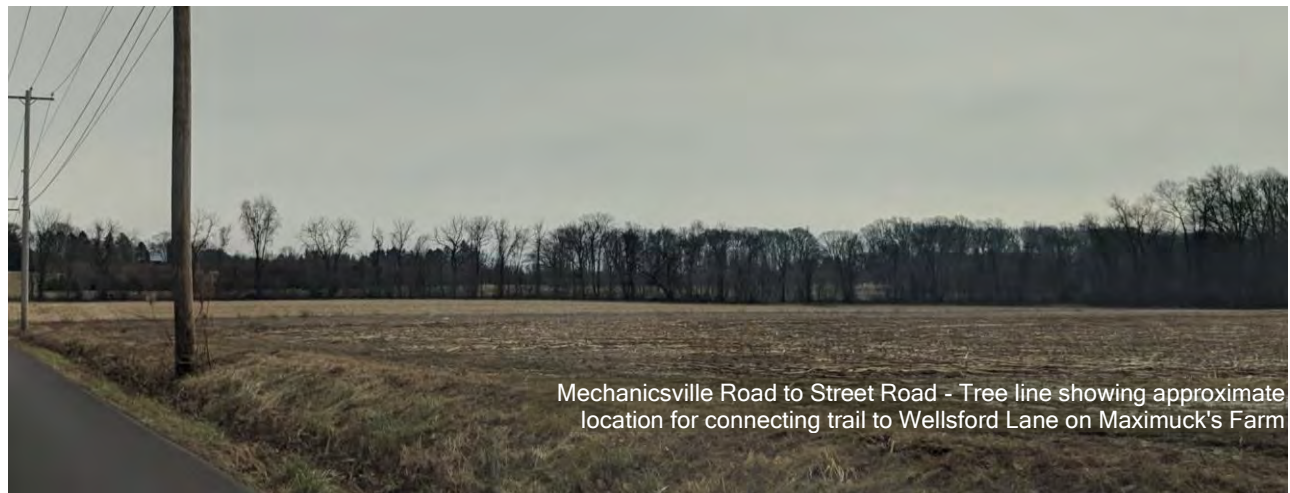
- This route would consist of a bike route along Indian Spring Road from Mechanicsville Road to Wellsford Lane where it would connect through HOA-owned property, run along the southeast property line of Maximuck's Farm, before continuing along Maximuck's Farm property along Street Road to its intersection with Long Lane
- Connects to the proposed Carversville Connector trail/bike route
- Posted Speed Limit - 25 mph



Mechanicsville Road to Street Road - Wellsford Lane approaching intersection with Indian Spring Road



Mechanicsville Road to Street Road - Street Road right-of-way along southwest side of Street Road at Maximuck's Farm



Mechanicsville Road to Street Road - Tree line showing approximate location for connecting trail to Wellsford Lane on Maximuck's Farm

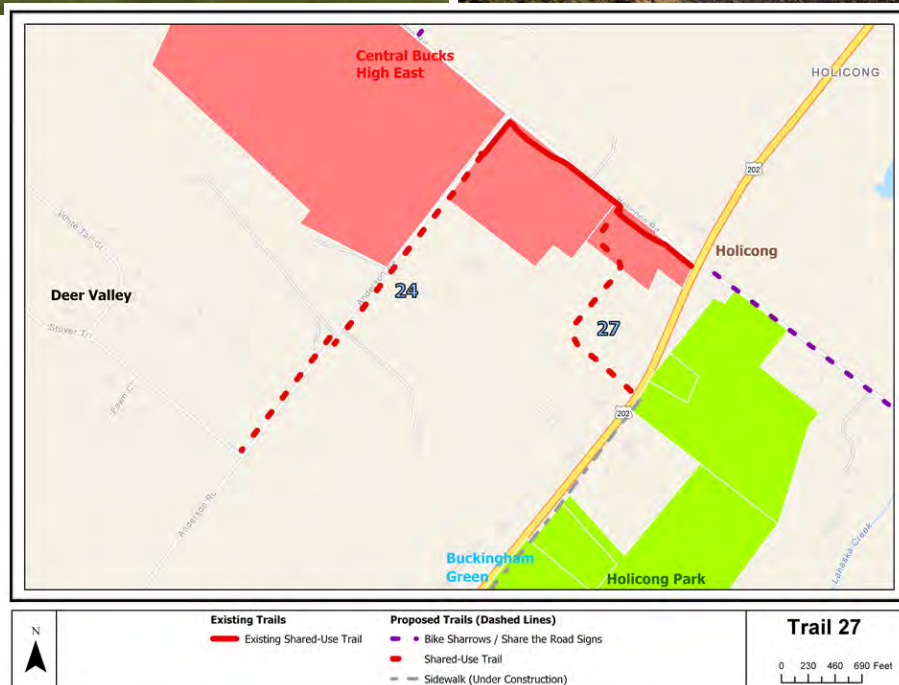
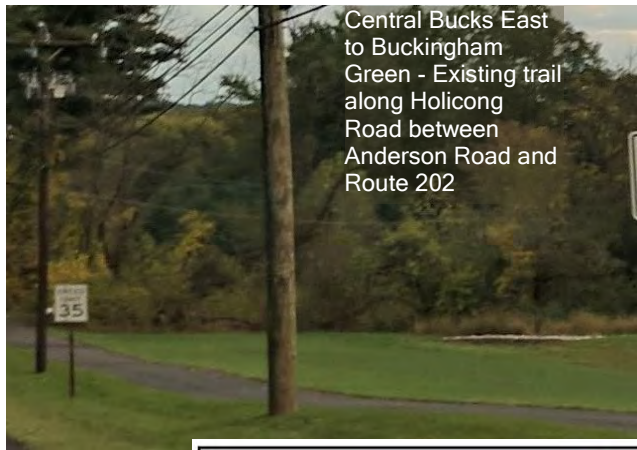
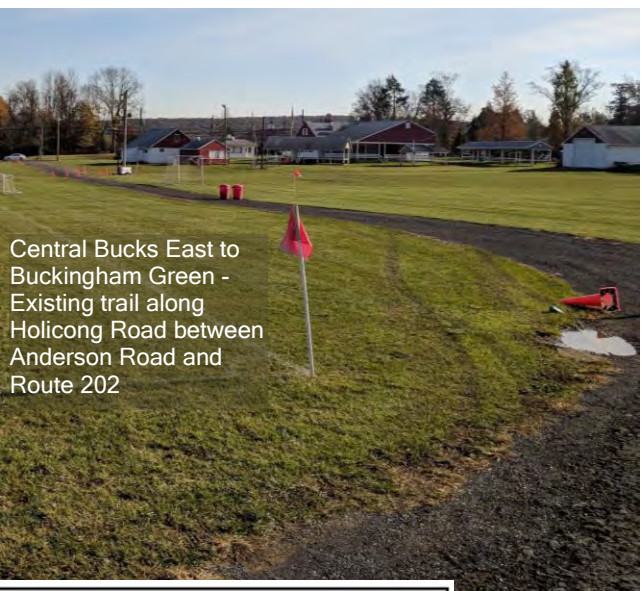
27 - Holicong Middle School/Central Bucks East High School to Buckingham Green

27 - Holicong Middle School/Central Bucks East High School to Buckingham Green

Trail/Bike Facility Type and Length:
 Access Roads (Existing): 0.4 miles
 Sidewalks (Under Construction): 0.4 miles
Shared-Use Trail (Existing): 0.2 miles

Summary:

- Provides students with a safe connection to Holicong Park and Buckingham Green
- Trail would utilize an existing access road to place users between Holicong Park and Buckingham Green
- Will require some design work to ensure a safe crossing of Route 202 between Midway Fire Company and Holicong Park



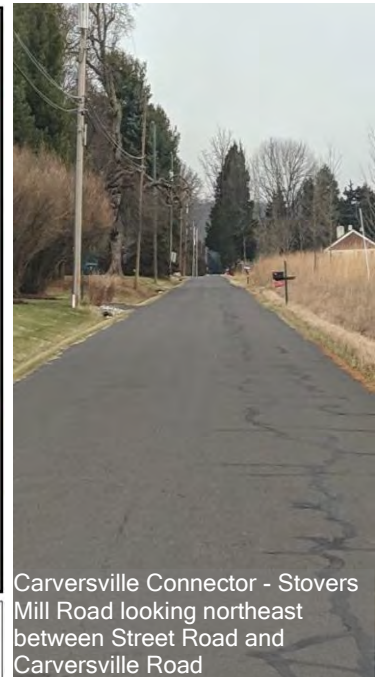
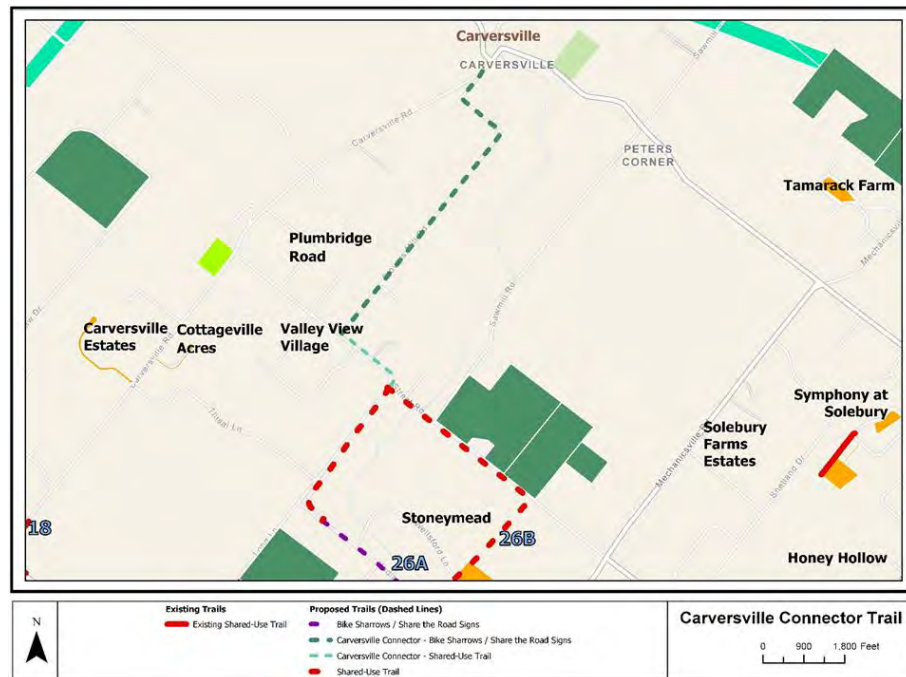
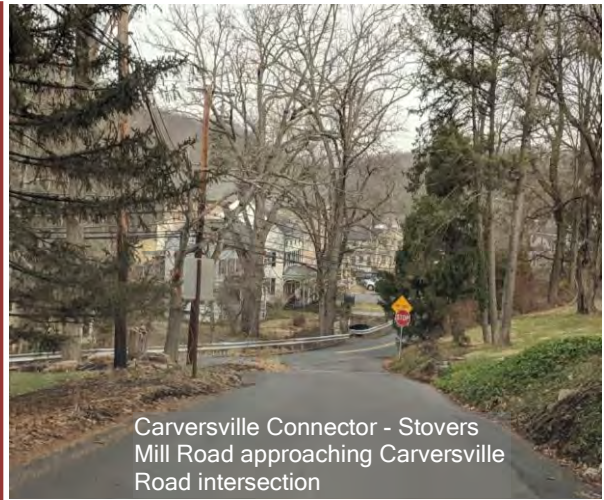
Carversville Connector - Street Road to Carversville

Carversville Connector
Street Road to Carversville Road

Trail/Bike Facility Type and Length:
 Bike Sharrows/Share the Road Signs: 1.4 miles

Summary:

- Links Buckingham and Solebury Townships
- Creates a designated bike route to the village of Carversville
- Posted Speed Limit - 35 mph along Stovers Mill Road
- Will require requesting a lower speed limit on Street Road between Long Lane and Stovers Mill Road since the current speed limit is 45 mph



Planning Area 3

This planning area, located east of Area 1 and south of Area 2, is bounded by Durham Road (Route 413), York Road (Route 263) to the southeast, Swamp Road (Route 313) to the southwest, and Mechanicsville Road to the northwest and borders Doylestown Township. The features of this area are described below:

Land Use

Land use in this planning area is a diverse mix of:

- Commercial uses scattered in various portions of the Planning Area, but mainly concentrated in the area along Route 202 and Swamp Road and along York Road;
- Protected open space mainly associated with residential developments;
- Minimal Agricultural area which is located in the area south of Route 202;
- Several Rural Residential areas; and
- Single Family Residential which represents the largest land use in this planning area.

Natural Features

Topography

- Similar to the majority of the township which can be classified as gently rolling.

Water resources

- The area is part of the Neshaminy Creek watershed with the primary secondary watershed in this area being the Watson Creek watershed.

Woodlands and Natural Areas

- The primary wooded areas in this area include the riparian corridor along Watson Creek; and an area running along Spring Valley Road, Branches Lane and Church Road.

Man-Made Features

Commercial Areas

- Hyde Park Office Complex
- None Such Farm Market

Existing Trails





Area	Trail	Type of Trail	Mileage (Miles)
3	Mechanicsville Road (Covenant Church)	Shared-use	0.09
3	Spring Valley Estates	Shared-use	0.39
3	Hunters Glen to Hunters Crossing	Shared-use	0.12
Total Area 3			0.60

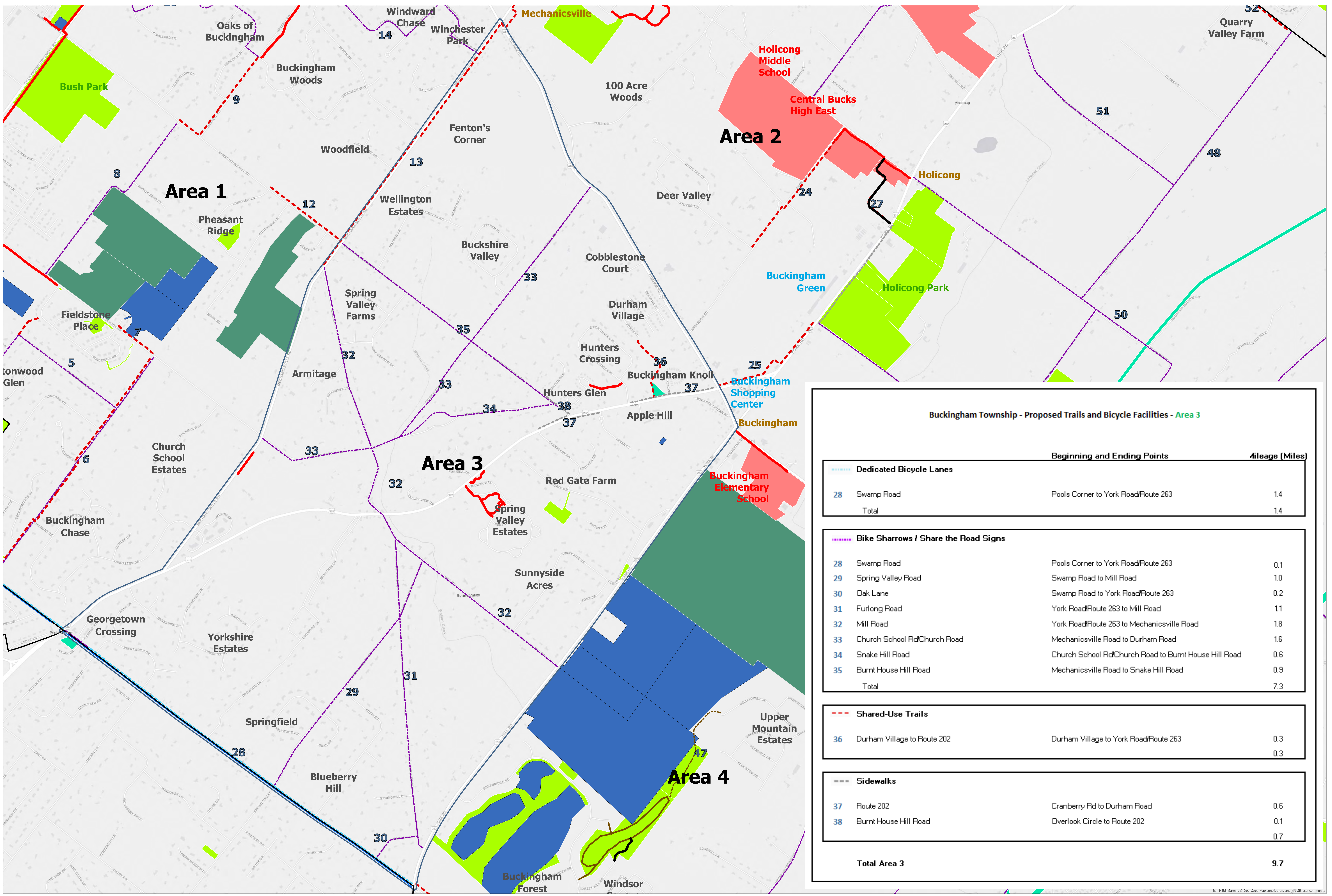
Historic Resources

- Spring Valley Historic District

Following is a description of each of the trail/bicycle facilities proposed for this planning area.

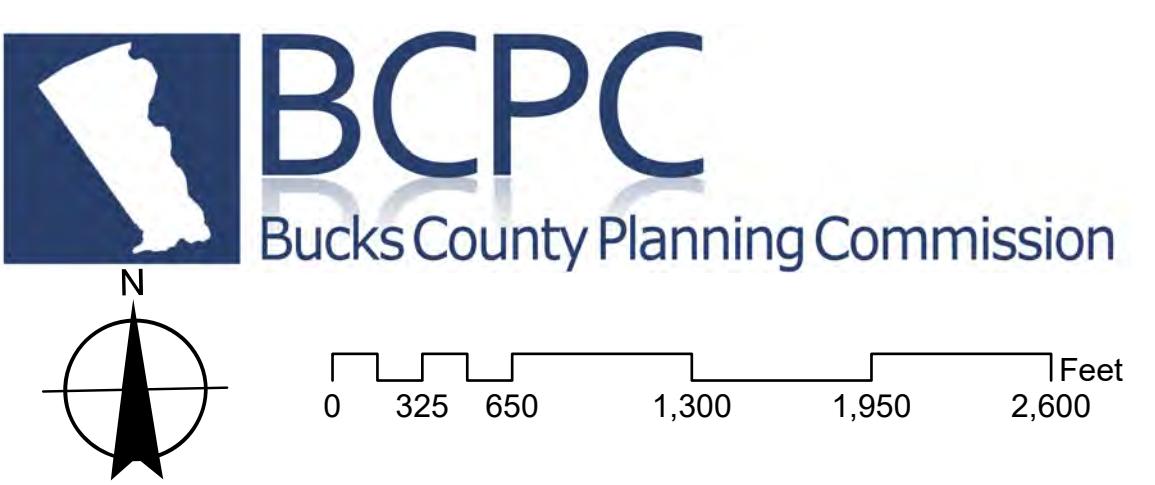
Table 13 - Proposed Trails & Bicycle Facilities - Planning Area 3

Segment	 Dedicated Bicycle Lanes (BL)	Segment Limits	Length (Miles)
28	Swamp Road	Pools Corner to York Road/Route 263	1.4
Total Proposed Bicycle Lanes			1.4
Segment	 Bike Sharrows / Share the Road Signs	Segment Limits	Length (Miles)
28	Swamp Road	Pools Corner to York Road/Route 263	0.1
29	Spring Valley Road	Swamp Road to Mill Road	1.0
30	Oak Lane	Swamp Road to Furlong Road	0.2
31	Furlong Road	York Road/Route 263 to Mill Road	1.1
32	Mill Road	York Road/Route 263 to Mechanicsville Road	1.8
33	Church School Rd/Church Road	Mechanicsville Road to Durham Road	1.6
34	Snake Hill Road	Church School Rd/Church Rd to Burnt House Hill Rd	0.6
35	Burnt House Hill Road	Mechanicsville Road to Snake Hill Road	0.9
Total Proposed Bicycle Sharrows/Share the Road			7.3
Segment	 Shared-Use Trails (SUT)	Segment Limits	Length (Miles)
36	Durham Village to Route 202	Durham Village to York Road/Route 263	0.3
Total Shared-Use Trails			0.3
Segment	 Sidewalks	Segment Limits	Length (Miles)
37	Route 202	Cranberry Road to Durham Road	0.6
38	Burnt House Hill Road	Overlook Circle to Route 202	0.1
Total Proposed Sidewalks			0.7
Total Proposed Area 3			9.7



Buckingham Township - Proposed Trails and Bicycle Facilities - Area 3

Beginning and Ending Points		Mileage (Miles)
Dedicated Bicycle Lanes		
28	Swamp Road	Pools Corner to York Road/Route 263
Total		1.4
Bike Sharrows / Share the Road Signs		
28	Swamp Road	Pools Corner to York Road/Route 263
29	Spring Valley Road	Swamp Road to Mill Road
30	Oak Lane	Swamp Road to York Road/Route 263
31	Furlong Road	York Road/Route 263 to Mill Road
32	Mill Road	York Road/Route 263 to Mechanicsville Road
33	Church School Rd/Church Road	Mechanicsville Road to Durham Road
34	Snake Hill Road	Church School Rd/Church Road to Burnt House Hill Road
35	Burnt House Hill Road	Mechanicsville Road to Snake Hill Road
Total		7.3
Shared-Use Trails		
36	Durham Village to Route 202	Durham Village to York Road/Route 263
Total		0.3
Sidewalks		
37	Route 202	Cranberry Rd to Durham Road
38	Burnt House Hill Road	Overlook Circle to Route 202
Total		0.7
Total Area 3		9.7



- Existing Trails**
- Existing Access Road
- Existing Hiking Trail
- Existing Shared-Use Trail
- Proposed Trails**
- Bike Sharrows / Share the Road Signs
- Dedicated Bike Lane
- Shared-Use Trail
- Sidewalk
- Sidewalk (Under Construction)
- Hiking Trail
- Adjacent Municipality - Dedicated Bike Lane
- School District
- Municipal Open Space & Parkland
- Buckingham Township Water & Wastewater Property
- State Preserved Farmland
- Municipal Boundary
- Subdivision
- Village
- Shopping Centers
- Schools
- Parks
- Trail/Bike Facility Number

Buckingham Township - Area 3 Proposed Trails & Bicycle Facilities

2019

28 - Swamp Road - Pools Corner to York Road/Route 263

28 - Swamp Road
Pools Corner to York Road/Route 263

Trail/Bike Facility Type and Length:
 Dedicated Bicycle Lanes: 1.4 miles

Summary:

- Provides a dedicated bicycle lane along Swamp Road
- Would connect to 29 - Spring Valley Road and 30 - Oak Lane bike routes once completed
- 5' wide bicycle lanes appear to be able to be accommodated along both sides of Swamp Road. However, pinch points do exist on the Buckingham side at the following places:
 - Intersection with Route 263/York Road
 - Just after Robin Road
 - From Brentwood Drive (Georgetown Crossing) to Pools Corner



29 - Spring Valley Road - Swamp Road to Mill Road

29 - Spring Valley Road Swamp Road to Mill Road

Trail/Bike Facility Type and Length:

Bike Sharrows/Share the Road Signs: 1.0 miles

Summary:

- Connector route between 28 - Swamp Road bike lanes, 31 - Furlong Road bike route, and 32 - Mill Road bike route
- Provides connection to neighborhoods of Blueberry Hill and Springfield
- Posted speed limit - 35 mph



Spring Valley Road - Swamp Road to Furlong Road looking northeast

30 - Oak Lane - Swamp Road to Furlong Road

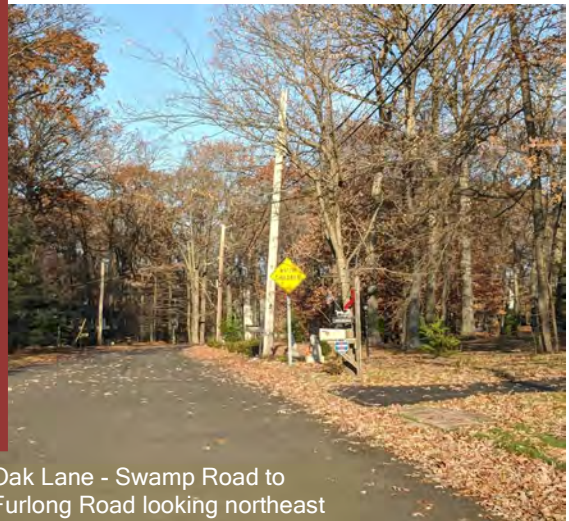
30 - Oak Lane Swamp Road to Furlong Road

Trail/Bike Facility Type and Length:

Bike Sharrows/Share the Road Signs: 0.2 miles

Summary:

- Connector route between 28 - Swamp Road bike lanes and 31 - Furlong Road bike route
- Quicker route between those two routes for bicyclists headed northwest along Swamp Road from Route 263/York Road as compared to 29 - Spring Valley Road
- Low volume street, with speeds typically below 25 mph



Oak Lane - Swamp Road to Furlong Road looking northeast

31 - Furlong Road - York Road/Route 263 to Mill Road

31 - Furlong Road York Road/Route 263 to Mill Road

Trail/Bike Facility Type and Length:

Bike Sharrows/Share the Road Signs: 1.1 miles

Summary:

- Provides connection between Route 263/York Road and Mill Road
- Includes several connections including 29 - Spring Valley Road and 30 - Oak Lane
- Posted speed limit - 35 mph



Furlong Road - Oak Lane to Spring Valley Road looking north

32 - Mill Road -York Road/Route 263 to Mechanicsville Road

32 - Mill Road
York Road/Route 263 to Mechanicsville Road

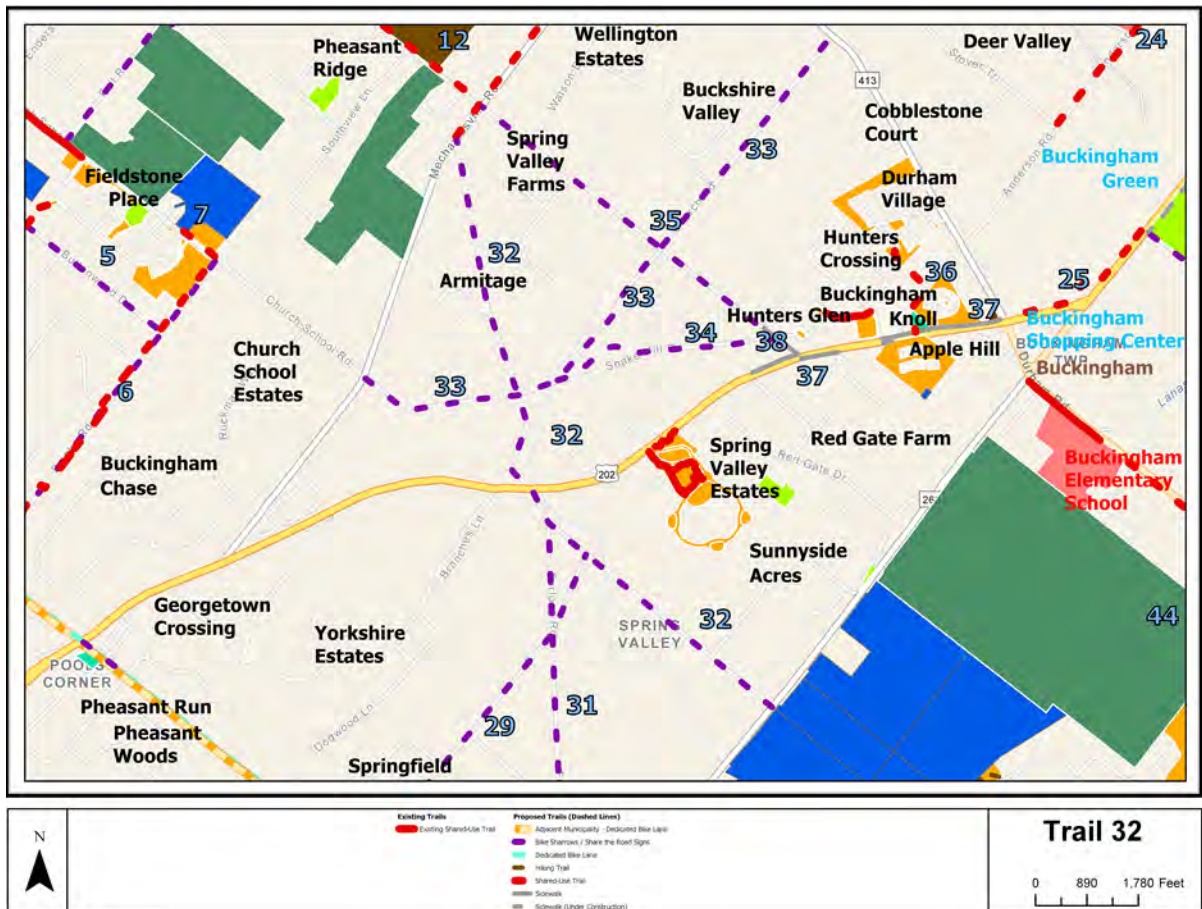
Trail/Bike Facility Type and Length:
 Bike Sharrows/Share the Road Signs: 1.8 miles

Summary:

- Includes several connections including 29 - Spring Valley Road bike route, 31 - Furlong Road bike route, 33 - Church School Road/Church Road bike route, and 13 - Mechanicsville Road trail
- Provides connections to the neighborhoods of Armitage and Spring Valley Farms
- Warning signage for bicyclists should be placed in advance of the busy Route 202 intersection, particularly given the grades and curves on Mill Road on the north side of Route 202
- Posted speed limit - 25 - 35 mph



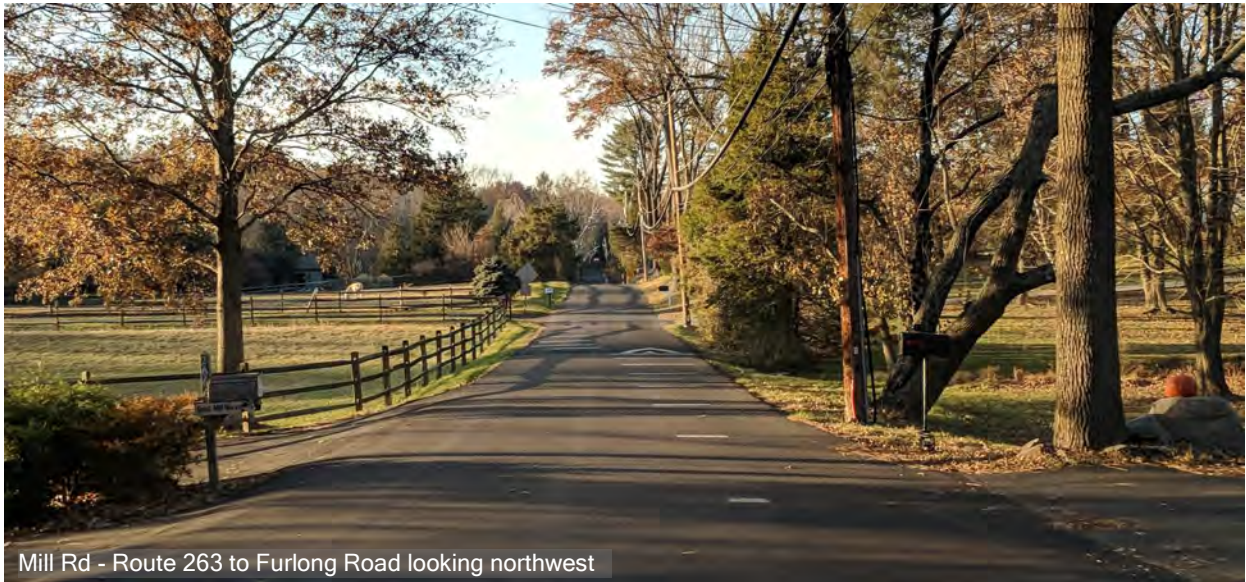
Mill Rd - Church School Road to Mechanicsville Road at intersection with Erica Drive



BUCKINGHAM TOWNSHIP MASTER TRAIL AND BICYCLE PLAN



Mill Rd - Church School Road to Mechanicsville Road looking north from Church School Road



Mill Rd - Route 263 to Furlong Road looking northwest



Mill Rd - Route 202 to Church School Road looking north from Route 202

33 - Church School Road/Church Road - Mechanicsville Road to Durham Road

33 - Church School Road/Church Road Mechanicsville Road to Durham Road

Trail/Bike Facility Type and Length:

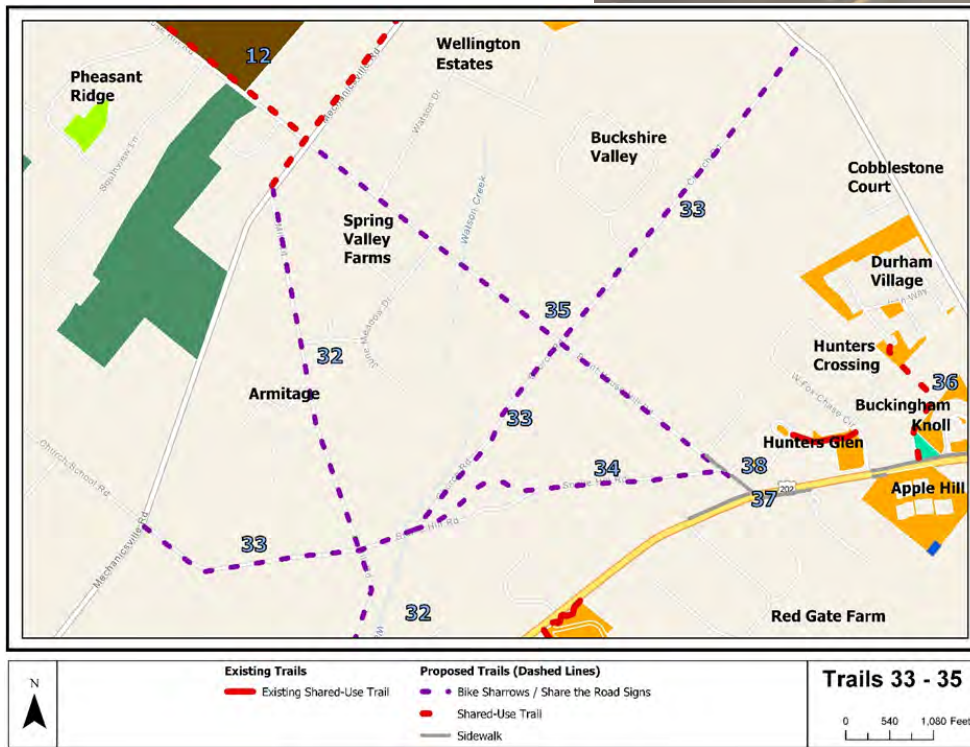
Bike Sharrows/Share the Road Signs: 1.6 miles

Summary:

- Includes connections to several other trails and bike routes including 34 -Snake Hill Road and 35 - Burnt House Hill Road
- Provides connection to the Buckshire Valley neighborhood
- Posted speed limit - 35 mph



Church School Road & Church Road - Mechanicsville Road to Mill Road looking east



Church School Road & Church Road - Intersection of Church Road and Durham Road



Church School Road & Church Road - Mill Road to Snake Hill Road at bridge over Watson Creek

34 - Snake Hill Road - Church School Road/Church Road to Burnt House Hill Road

34 - Snake Hill Road
Church School Road/Church Road to Burnt House Hill Road

Trail/Bike Facility Type and Length:
Bike Sharrows/Share the Road Signs: 0.6 miles

Summary:

- Provides connection between 35 - Burnt House Hill Road and 33 - Church School Road/Church Road bike routes
- Although this is a low volume road with a low posted speed limit, caution should be exercised when considering designating this a bike route to ensure that there are no blind spots and/or curves where a bicyclist might not be easily seen by an approaching motorist
- Posted speed limit - 20 mph



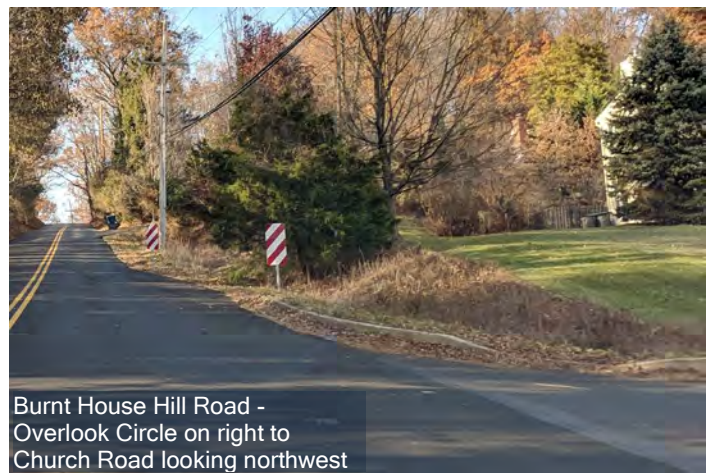
35 - Burnt House Hill Road -Mechanicsville Road to Snake Hill Road

35 - Burnt House Hill Road
Mechanicsville Road to Snake Hill Road

Trail/Bike Facility Type and Length:
Bike Sharrows/Share the Road Signs: 0.9 miles

Summary:

- Connects to 12 - Burnt House Hill Road trail, 13 - Mechanicsville Road trail, and 37 - Route 202 sidewalks
- Provides connection to neighborhoods of Hunters Glen and Wellington Estates
- As part of the installation of bicycle sharrows or share the road signs, the route should be evaluated to identify spots where there is a ridge in the road. In these areas, signage should be placed along the road to alert motorists to the possibility of a bicyclist on the other side of the ridge
- Posted speed limit - 35 mph



36 - Durham Village to Route 202 - Durham Village to York Road/Route 263

**36 - Durham Village to Route 202
Durham Village to York Road/Route 263**

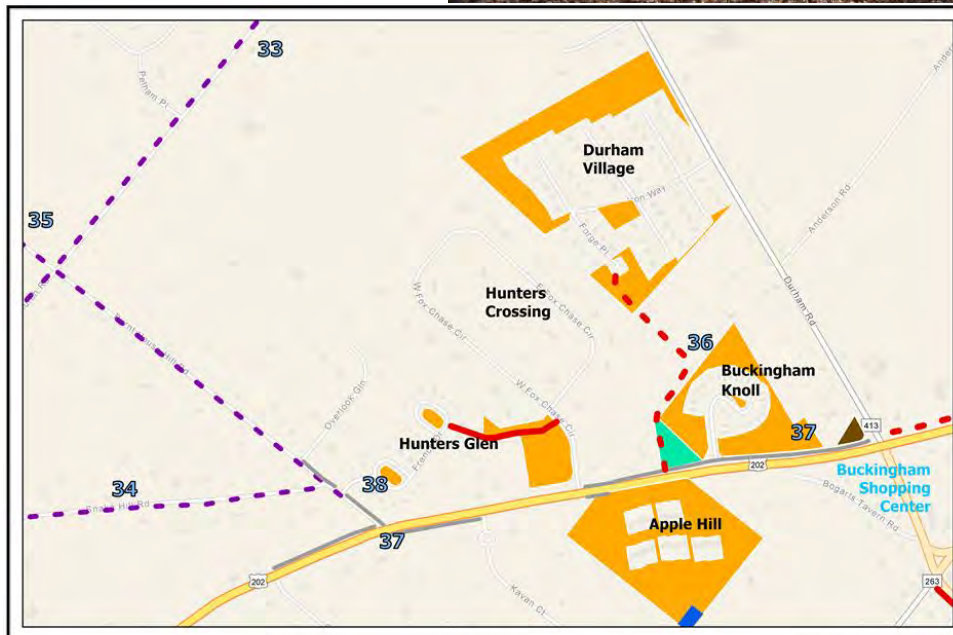
Trail/Bike Facility Type and Length:
Shared-Use Trail: 0.3 miles

Summary:

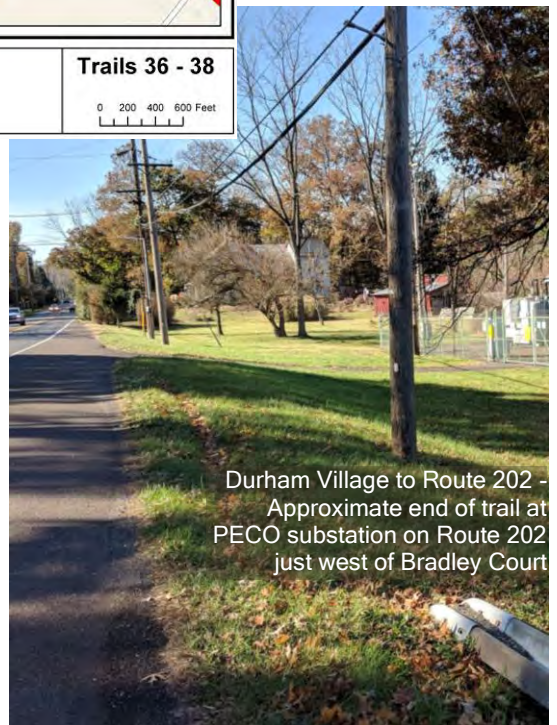
- Provides connection to neighborhoods of Durham Village and Buckingham Knoll
- Will require easements from the HOA's of Durham Village and Buckingham Knoll as well as a few private property owners



Durham Village to Route 202 - Wooded area for trail located between Durham Village and Buckingham Knoll



Durham Village to Route 202 - Proposed area for trail along rim of stormwater basin located at the end of Forge Place



Durham Village to Route 202 - Approximate end of trail at PECO substation on Route 202 just west of Bradley Court

37 - Route 202 - Cranberry Road to Durham Road

37 - Route 202 Cranberry Road to Durham Road

Trail/Bike Facility Type and Length:

Sidewalks: 0.6 miles

Summary:

- Provides a sidewalk connection to the village of Buckingham and the Buckingham Green shopping center to the neighborhoods of Hunters Glen, Red Gate Farms, Hunters Crossing, Durham Valley, Buckingham Knoll, and Apple Hill
- As part of the design of the sidewalk network, careful consideration should be given to the crossings of Route 202 at Burnt House Hill Road and West Fox Chase Circle
- Pinch points along the route include the house just to the east of West Chase Circle, approaching the intersection of Route 202 and Durham Road/Route 413, and between Cranberry Road and Burnt House Hill Road



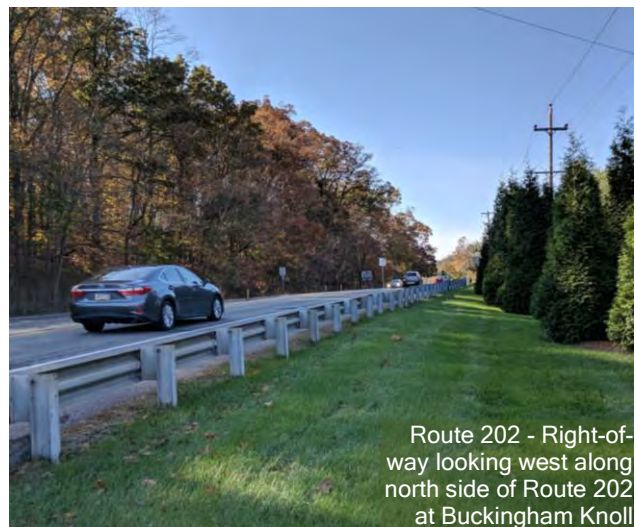
Route 202 - Looking east from Fox Chase Circle with Apple Hill neighborhood across Route 202



Route 202 - Right-of-way along north side looking west between Bradley Court and Fox Chase Circle



Route 202 - Right-of-way along north side of Route 202 at intersection with Durham Road



Route 202 - Right-of-way looking west along north side of Route 202 at Buckingham Knoll

38 - Burnt House Hill Road - Overlook Circle to Route 202

**38 - Burnt House Hill Road
Overlook Circle to Route 202**

Trail/Bike Facility Type and Length:

Sidewalks: 0.1 miles

Summary:

- Provides a sidewalk connection from the neighborhood of Hunters Glen to the Route 202 sidewalk network



Burnt House Hill Road -
Looking northwest from Route
202 to Overlook Circle

Planning Area 4

This planning area is bounded by Durham Road (Route 413) to the northeast, Lower Mountain Road to the southeast, Sugar Bottom Road to the southwest, and Edison Furlong and York Road (Route 263) to the northwest. The features of this area are described below:

Land Use

Land use in this planning area is a mix of:

- Agriculture including the Froelich and Yerkes (None Such Farm) farms on Route 263, the Slack farm on Forest Grove Road, and the Rockafellow, Dunn, Schroeder and Kocis farms on Lower Mountain Road;
- Parks and open space in the form of Lookaway Golf Club and open space as part of Heritage Center and Villages of Buckingham;
- Manufacturing, commercial and agricultural use in the area bounded by Landisville Road, Burnt House Hill Road, Cold Spring Creamery Road, and Swamp Road;
- Utilities including the large spray field along Durham Road between Carversville and Cold Spring Creamery roads; and
- Single Family Residential.

Natural Features

Topography

- Although the majority of the topography in the area can be characterized as farmland and gently rolling hills, this area also encompasses Little Buckingham Mountain (approximate elevation 330 feet). An area of steep slopes can be found in the wooded area as part of the Villages at Buckingham.

Water resources

- The area is part of the Neshaminy Creek watershed with the primary secondary watersheds being Watson Creek, Mill Creek, and Robin Run Creek.

Woodlands and Natural Areas

- The primary wooded areas in this area include the wooded open space area as part of the Villages at Buckingham, the riparian corridor along Robin Run; and Little Buckingham Mountain.

Man-Made Features

Commercial and Office Areas

- Peddler’s Village/Lahaska
- Furlong Village
- None Such Farm Market

Existing Trails

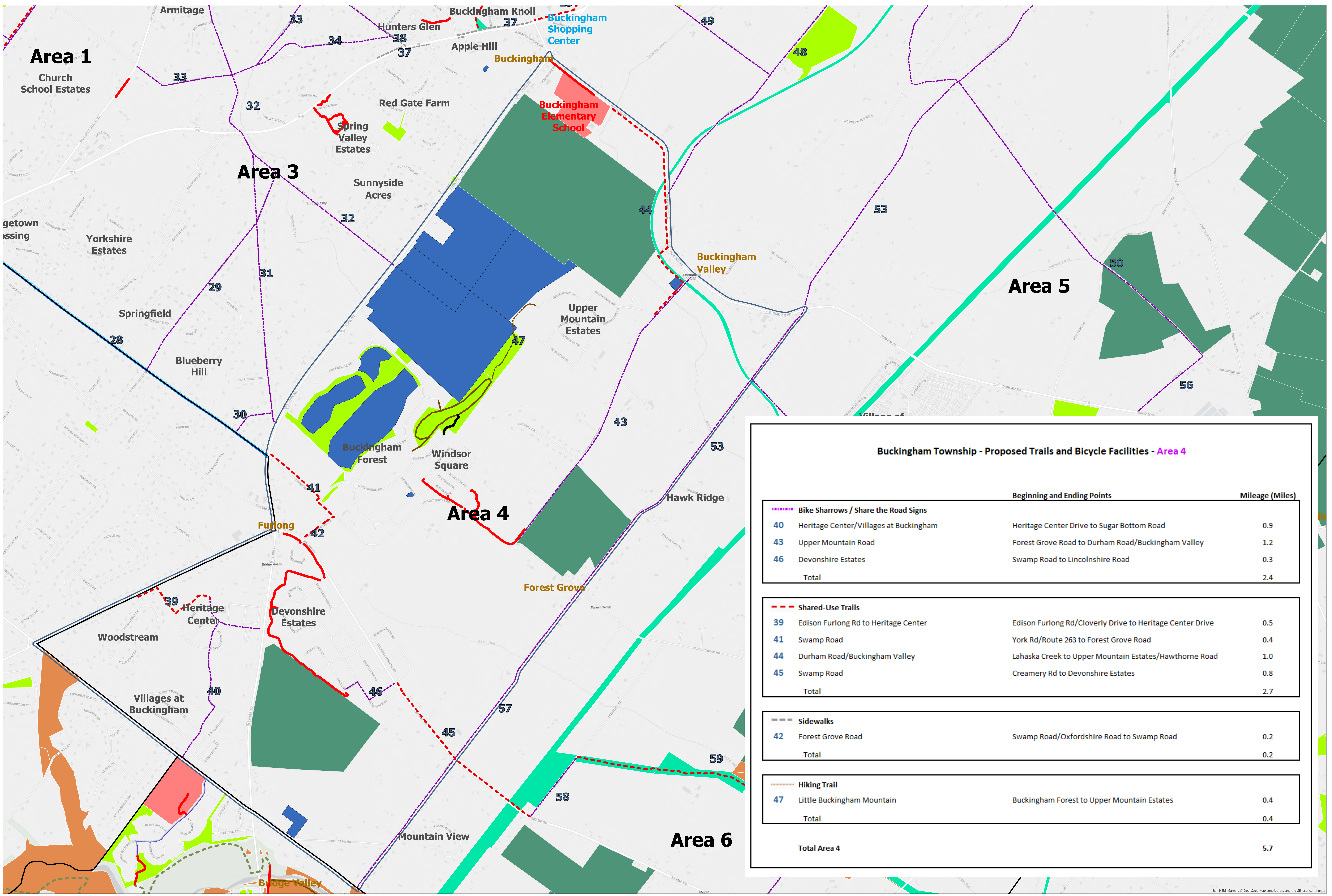
Area	Trail	Type of Trail	Mileage (Miles)
4	Forest Grove Road/Windsor Square	Shared-use	0.64
4	Little Buckingham Mountain	Hiking	1.03
4	Devonshire Estates	Shared-use	1.11
4	Durham Road (Municipal Complex & Buckingham Elementary)	Shared-use	0.23
Total Area 4			3.01

Schools

- Buckingham Elementary School

Historic Resources




- Village of Buckingham Valley



Buckingham Township - Proposed Trails and Bicycle Facilities - Area 4

	Beginning and Ending Points	Mileage (Miles)	
Bike Sharrows / Share the Road Signs			
40	Heritage Center/Villages at Buckingham	Heritage Center Drive to Sugar Bottom Road	0.9
43	Upper Mountain Road	Forest Grove Road to Durham Road/Buckingham Valley	1.2
46	Devonshire Estates	Swamp Road to Lincolnshire Road	0.3
Total		2.4	
Shared-Use Trails			
39	Edison Furlong Rd to Heritage Center	Edison Furlong Rd/Cloverly Drive to Heritage Center Drive	0.5
41	Swamp Road	York Rd/Route 263 to Forest Grove Road	0.4
44	Durham Road/Buckingham Valley	Lahaska Creek to Upper Mountain Estates/Hawthorne Road	1.0
45	Swamp Road	Creamery Rd to Devonshire Estates	0.8
Total		2.7	
Sidewalks			
42	Forest Grove Road	Swamp Road/Oxfordshire Road to Swamp Road	0.2
Total		0.2	
Hiking Trail			
47	Little Buckingham Mountain	Buckingham Forest to Upper Mountain Estates	0.4
Total		0.4	
Total Area 4		5.7	

Table 14 - Proposed Trails & Bicycle Facilities - Planning Area 4

Segment	 Bike Sharrows / Share the Road Signs	Segment Limits	Length (Miles)
40	Heritage Center/Villages at Buckingham	Heritage Center Drive to Sugar Bottom Road	0.9
43	Upper Mountain Road	Forest Grove Road to Durham Road	1.2
46	Devonshire Estates	Swamp Road to Lincolnshire Road	0.3
Total Proposed Bicycle Sharrows/Share the Road			2.4
Segment	 Shared-Use Trails (SUT)	Segment Limits	Length (Miles)
39	Edison Furlong Road to Heritage Center Drive	Edison Furlong Road to Heritage Center Drive	0.5
41	Swamp Road	York Road/Route 263 to Forest Grove Road	0.4
42	Forest Grove Road	Swamp Road/Oxfordshire Road to Swamp Road	0.2
44	Durham Road/Buckingham Valley	Lahaska Creek to Upper Mountain Estates	1.0
45	Swamp Road	Creamery Road to Devonshire Estates	0.8
Total Shared-Use Trails			2.9
Segment	 Hiking Trail	Segment Limits	Length (Miles)
47	Little Buckingham Mountain	Buckingham Forest to Upper Mountain Estates	0.4
Total Proposed Hiking Trails			0.4
Total Proposed Area 4			5.7

39 - Edison Furlong Road to Heritage Center

39 - Edison Furlong Road to Heritage Center
Edison Furlong Road/Cloverly Drive to Heritage Center Drive

Trail/Bike Route Type and Length:

Bike Sharrows/Share the Road Signs: 0.1 miles
 Shared-Use Trail: 0.4 miles

Summary:

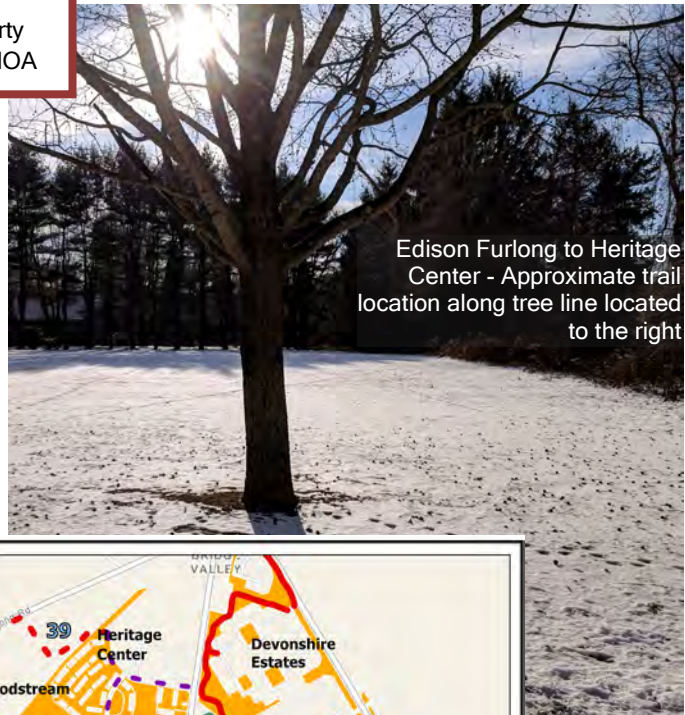
- Via a connection to 40 - Heritage Center, this trail would provide a connection for the residents of the Woodstream neighborhood to Bridge Valley Elementary School (Warwick Township) and to the developing Neshaminy Greenway Trail
- Would require easements from four private property owners and the Townhomes at Heritage Center HOA



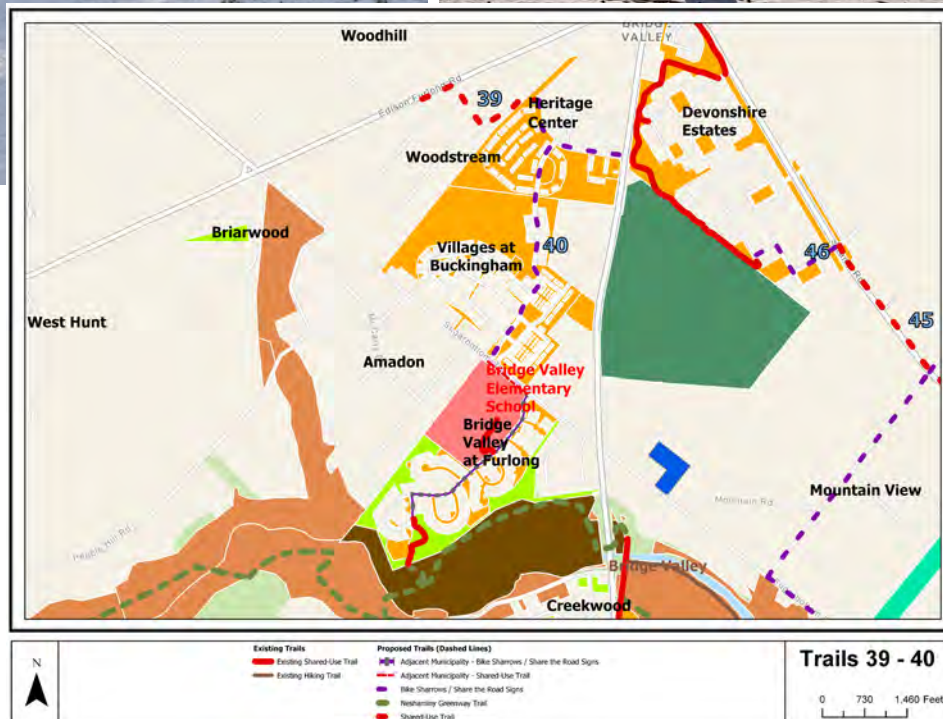
Cloverly Drive to Heritage Center - End of Heritage Center Drive and connecting point to trail to Edison Furlong Road



Edison Furlong to Heritage Center - Right-of-way along south side of Edison Furlong just northeast of South Cloverly Drive

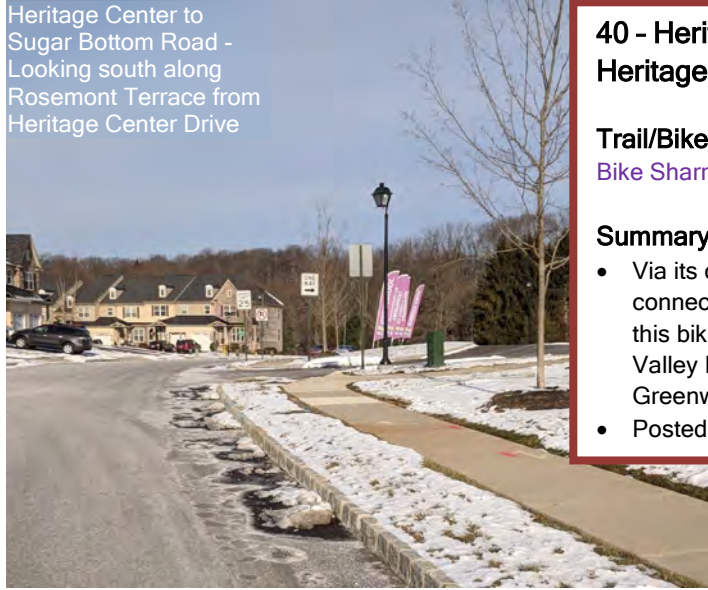


Edison Furlong to Heritage Center - Approximate trail location along tree line located to the right



40 - Heritage Center/Villages of Buckingham

Heritage Center to Sugar Bottom Road - Looking south along Rosemont Terrace from Heritage Center Drive



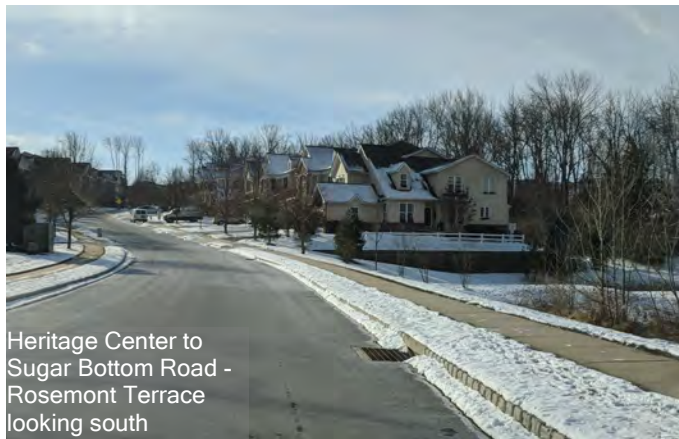
40 - Heritage Center/Villages of Buckingham Heritage Center Drive to Sugar Bottom Road

Trail/Bike Route Type and Length:

Bike Sharrows/Share the Road Signs: 0.9 miles

Summary:

- Via its connection to 39 - Cloverly Drive, and a proposed connection to the existing trails within Devonshire Estates, this bike route would serve as a connector route to Bridge Valley Elementary School and the future Neshaminy Greenway Trail
- Posted Speed Limit - 25 mph



Heritage Center to Sugar Bottom Road - Rosemont Terrace looking south



Heritage Center to Sugar Bottom Road - Heritage Center Drive entrance at Route 263



Heritage Center to Sugar Bottom Road - West Brighton Street looking southwest toward intersection with Sugar Bottom Road

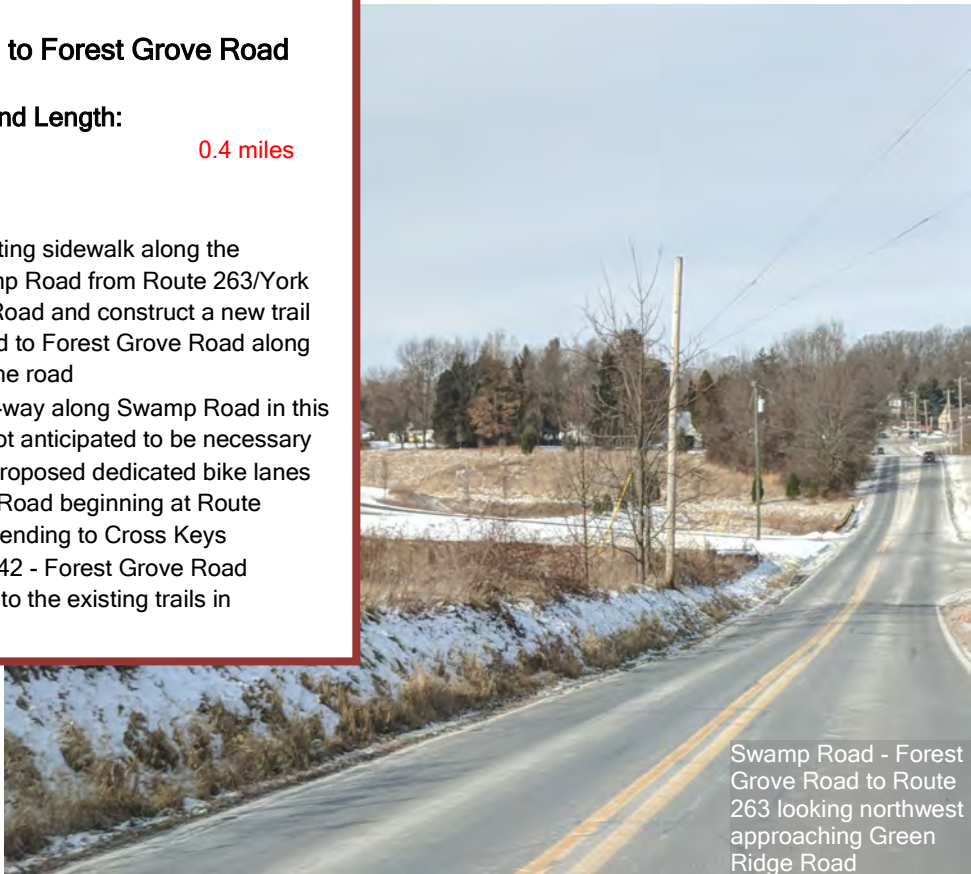
41 - Swamp Road - Route 263/York Road to Forest Grove Road

41 - Swamp Road
Route 263/York Road to Forest Grove Road

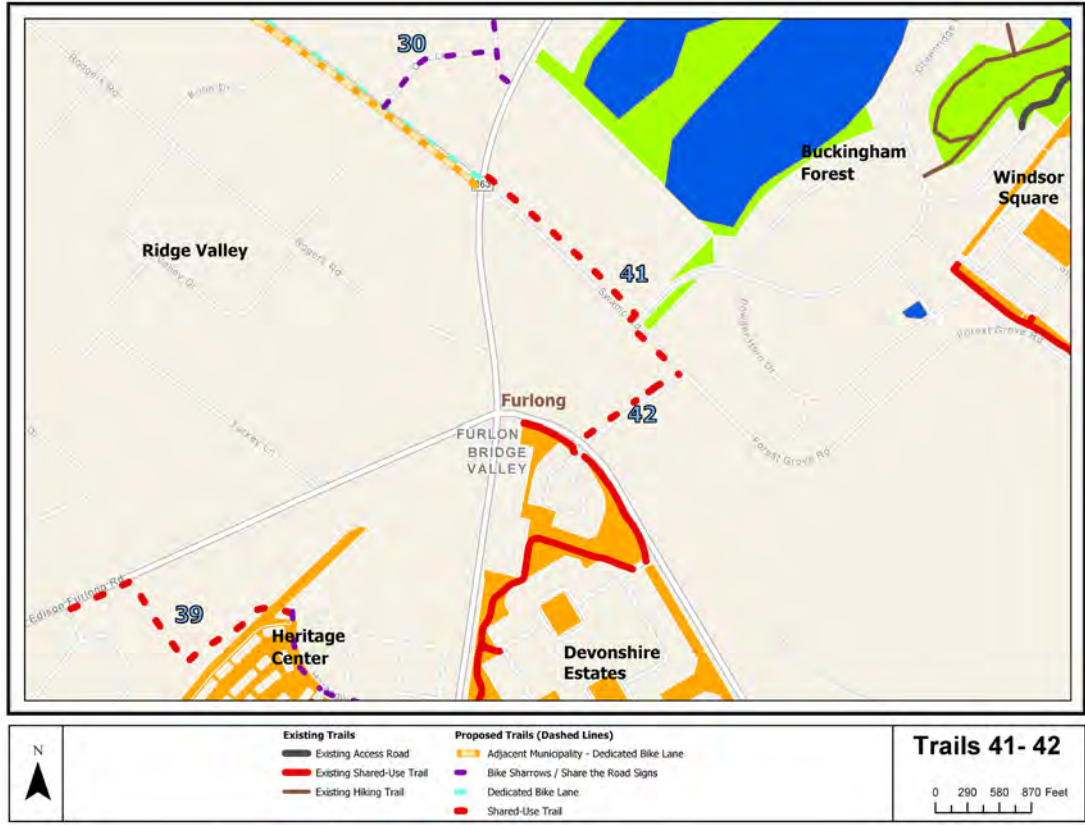
Trail/Bike Route Type and Length:
Shared-Use Trail: 0.4 miles

Summary:

- Would replace the existing sidewalk along the northeast side of Swamp Road from Route 263/York Road to Green Ridge Road and construct a new trail from Green Ridge Road to Forest Grove Road along the southwest side of the road
- Given the wide right-of-way along Swamp Road in this area, easements are not anticipated to be necessary
- Would connect to the proposed dedicated bike lanes along 1 & 28 - Swamp Road beginning at Route 263/York Road and extending to Cross Keys
- Would also connect to 42 - Forest Grove Road providing a connection to the existing trails in Devonshire Estates



Swamp Road - Forest Grove Road to Route 263 looking northwest approaching Green Ridge Road



42 - Forest Grove Road - Swamp Road/Oxfordshire Road to Swamp Road

42 - Forest Grove Road Swamp Road/Oxfordshire Road to Swamp Road

Trail/Bike Route Type and Length:

Shared-Use Trail: 0.2 miles

Summary:

- Would serve as a connector between 41 - Swamp Road, the existing trails within Devonshire Estates, and potentially a connection to 40 - Heritage Center which connects to Bridge Valley Elementary School and the future Neshaminy Greenway Trail
- Combined with existing trail along Church School Road, and proposed 3 - Stony Lane Road trail, would provide a cross township route
- Although the right-of-way is generally wide enough to accommodate a trail, one easement will be required from a private property owner



Forest Grove Road - Right-of-way along north side

43 - Upper Mountain Road - Forest Grove Road to Durham Road/Buckingham Valley

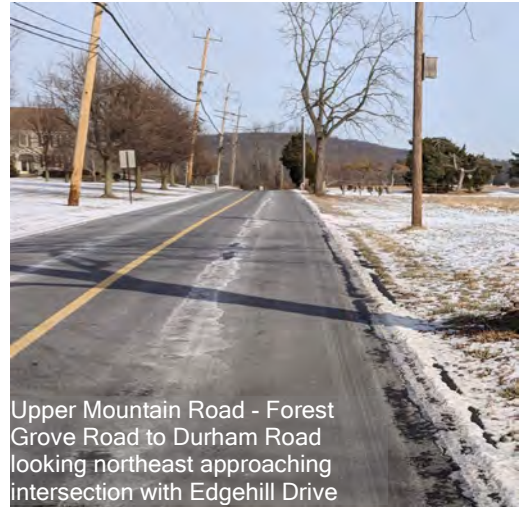
**43 - Upper Mountain Road
Forest Grove Road to Durham Road/Buckingham
Valley**

Trail/Bike Route Type and Length:

Bike Sharrows/Share the Road Signs: 1.2 miles

Summary:

- In conjunction with the existing hiking trail on Little Buckingham Mountain, and the existing shared-use trail along Forest Grove Road, would provide a loop trail in the Buckingham Forest, Windsor Square and Upper Mountain Estates neighborhoods
- Would also connect to the 48 - Upper Mountain Road bike route which continues to Street Road
- Posted Speed Limit - 35 mph



Upper Mountain Road - Forest Grove Road to Durham Road looking northeast approaching intersection with Edgehill Drive



Upper Mountain Road - Forest Grove Road to Durham Road looking northeast at intersection with Hawthorne Road



Upper Mountain Rd - Forest Grove Road to Durham Road looking northeast at entrance to Lookaway Golf Club

44 - Durham Road/Buckingham Valley - Lahaska Creek to Upper Mountain Estates/Hawthorne Road

44 - Durham Road/Buckingham Valley Lahaska Creek to Upper Mountain Estates/Hawthorne Road

Trail/Bike Route Type and Length:

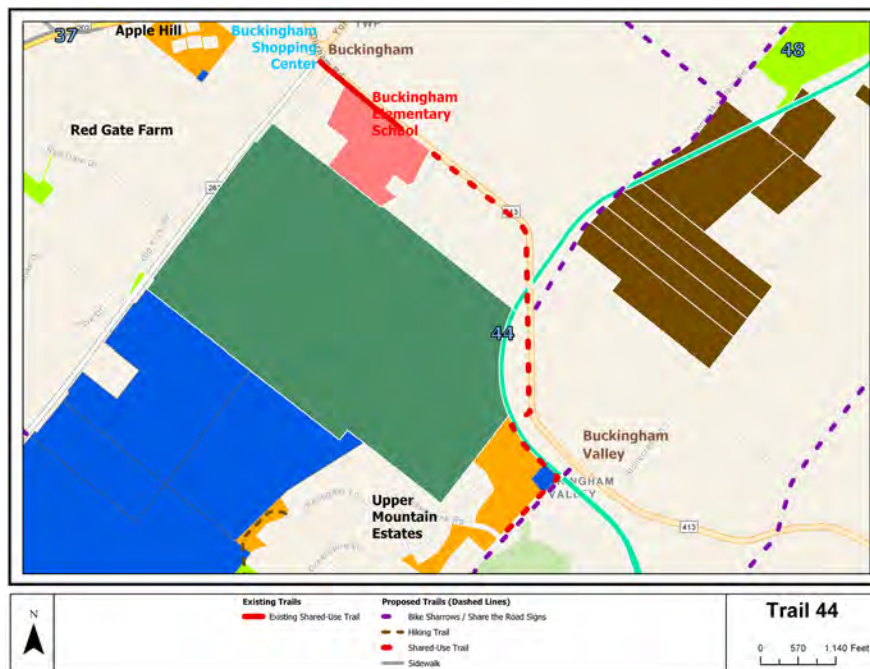
Shared-Use Trail: 1.0 miles

Summary:

- Would provide an off-road connection between Upper Mountain Estates and Buckingham Elementary School and Buckingham Village
- This trail would be complex to implement due to the need for:
 - An easement from the Upper Mountain Estates HOA;
 - Bridges over Mill Creek on Upper Mountain Road and over Lahaska Creek on Durham Road;
 - A crossing over the New Hope-Ivyland railroad; and
 - Various easements from the Hughesian School



Buckingham Valley - Buckingham E.S. to Hawthorne Road - Area for trail adjacent to New Hope-Ivyland RR tracks



Buckingham Valley - Buckingham E.S. to Hawthorne Road approaching New Hope-Ivyland RR crossing on Durham Road



Buckingham Valley - Buckingham E.S. to Hawthorne Road - Northwest right-of-way of Upper Mountain Road

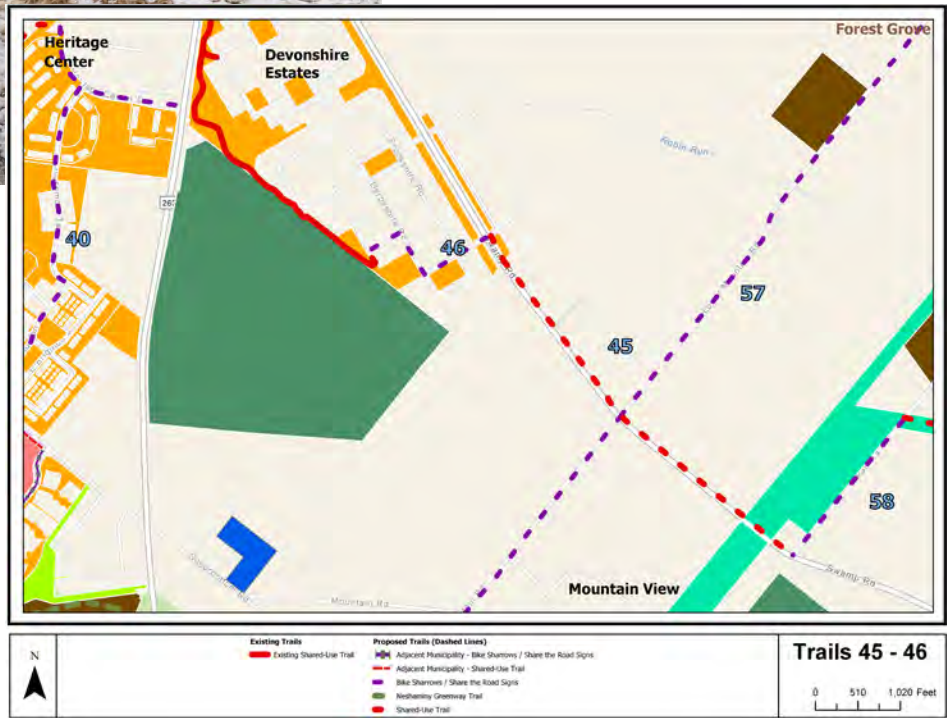
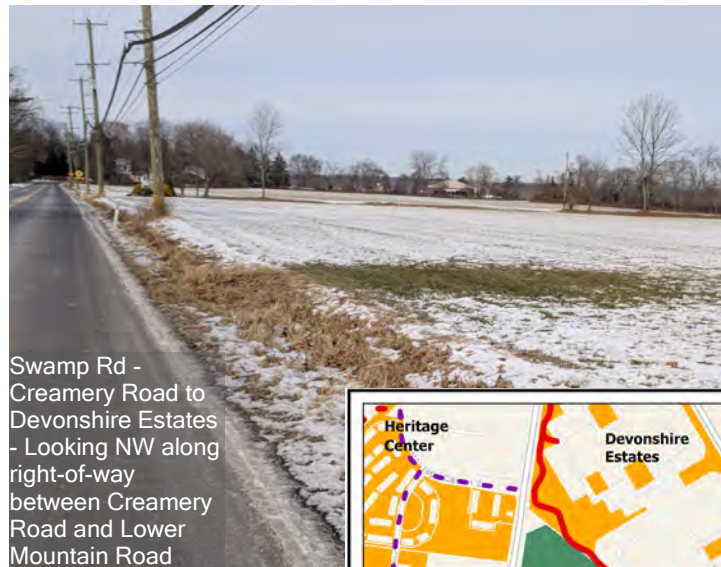
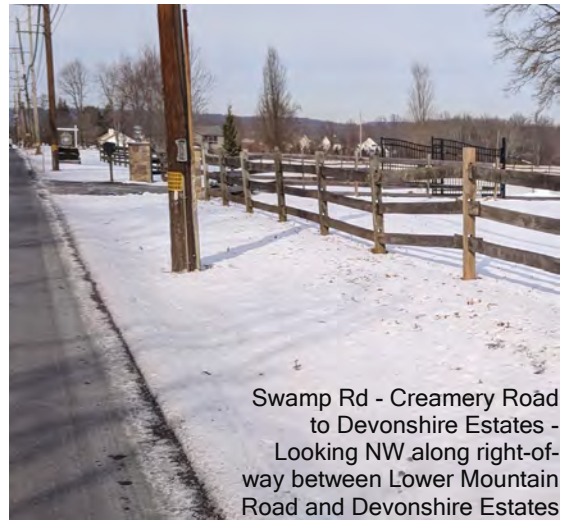
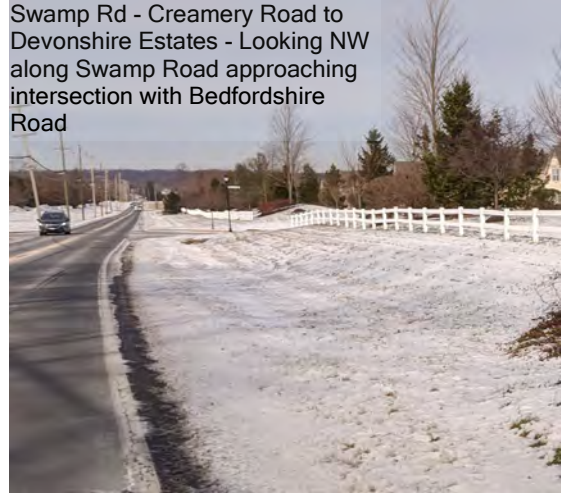
45 - Swamp Road - Creamery Road to Devonshire Estates

45 - Swamp Road
Creamery Road to Devonshire Estates

Trail/Bike Route Type and Length:
 Bike Sharrows/Share the Road Signs: 0.1 miles
 Shared-Use Trail: 0.7 miles
 Sidewalks: 0.1 miles

Summary:

- Would provide a mostly off-road route along Swamp Road connecting Devonshire Estates and Estates of Mill Creek Ridge
- Would extend along the northeast side of Swamp Road between Bedfordshire Road and Creamery Road, requiring several easements from private property owners
- The trail would need to become a sidewalk within the village of Forest Grove due to the close proximity of the homes and buildings to Swamp Road which limits the available space for a trail



46 - Devonshire Estates - Swamp Road to Lincolnshire Road

46 - Devonshire Estates Swamp Road to Lincolnshire Road

Trail/Bike Route Type and Length:

Bike Sharrows/Share the Road Signs: 0.3 miles

Summary:

- This bike route would run on-road within Devonshire Estates along Cheshire Road, Derbyshire Road and Lincolnshire Road before connecting to the existing trail at the end of Lincolnshire Road
- As part of the development of this bike route, a safe crossing of Swamp Road at its intersection with Cheshire Road and Bedfordshire Road would need to be designed
- Additional effort should be given to connecting this trail to 40 - Heritage Center given that would provide a connection for the residents of Devonshire Estates to access the developing Neshaminy Greenway Trail
- Posted Speed Limit - 25 mph



Devonshire Estates - Bike route along Cheshire Road, Derbyshire Road and Lincolnshire Road

47 - Little Buckingham Mountain - Buckingham Forest to Upper Mountain Estates

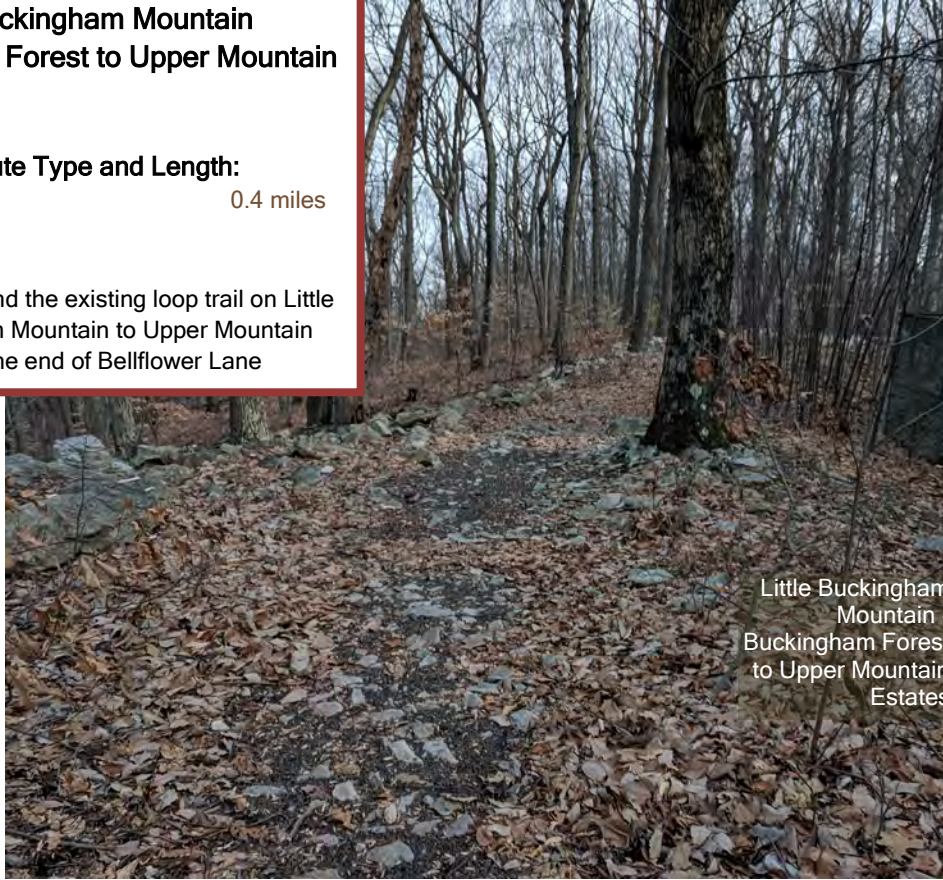
**47 - Little Buckingham Mountain
Buckingham Forest to Upper Mountain
Estates**

Trail/Bike Route Type and Length:

Hiking Trails: 0.4 miles

Summary:

- Would extend the existing loop trail on Little Buckingham Mountain to Upper Mountain Estates at the end of Bellflower Lane



Planning Area 5

This planning area, located in the southeast corner of the township, is bounded by Street Road to the northeast, Township Line Road and the Wrightstown Township line to the southeast, Forest Grove Road and Durham Road to the southwest, and Lower Mountain Road and York Road (Route 263) to the northwest. This area borders Solebury, Upper Makefield and Wrightstown townships. The features of this area are described below:

Land Use

Land use in this planning area is a diverse mix of:

- Commercial uses in the area along York Road and a portion of Lookaway Golf Club extends into the area;
- Parks and open space in the form of Holicong Park;
- Transportation and utilities including the New Hope - Ivyland Railroad and PECO Corridor;
- Agricultural areas are prevalent throughout and represent the largest land use in the Planning Area; and
- Single Family Residential uses are scattered through the Planning Area with greatest concentration being the Village of Buckingham Springs

Natural Features

Topography

- This planning area contains Buckingham Mountain, but most of the planning area can be classified as gently rolling

Water resources

- The area is part of the Neshaminy Creek watershed and the Delaware River South watershed with the primary secondary watershed in this area being the Pidcock watershed

Woodlands and Natural Areas

- The primary wooded area in this area is Buckingham Mountain running between the Upper Mountain Road and Lower Mountain Road

Man-Made Features

Reflective of the vast amounts of agricultural land in the area, the number of man-made features is very limited and does not include any schools or trails.

Commercial Areas

- Peddler's Village

Existing Trails

- None

Parks and Natural Areas


- Holicong Park

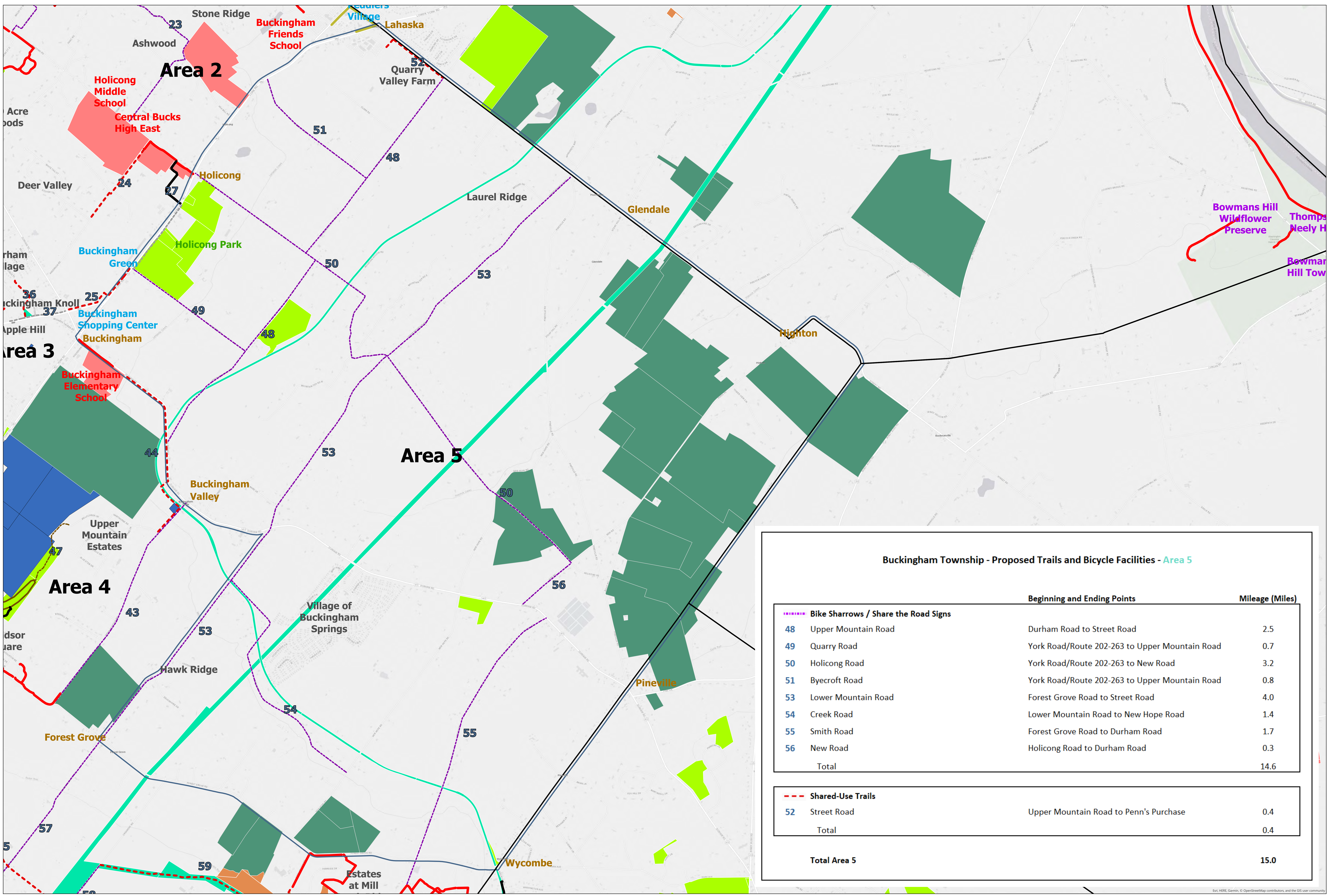
Historic Resources

- Byecroft Farm Complex
- Holicong Village Historic District
- General John Lacey Homestead
- Village of Lahaska
- Village of Pineville

Following is a description of each of the trail/bicycle facilities proposed for this planning area.

Table 15 - Proposed Trails & Bicycle Facilities - Planning Area 5

Segment	 Bike Sharrows / Share the Road Signs	Segment Limits	Length (Miles)
48	Upper Mountain Road	Durham Road to Street Road	2.5
49	Quarry Road	York Road/Route 202-263 to Upper Mountain Road	0.7
50	Holicong Road	York Road/Route 202-263 to New Road	3.2
51	Bycroft Road	York Road/Route 202-263 to Upper Mountain Road	0.8
53	Lower Mountain Road	Forest Grove Road to Street Road	4.0
54	Creek Road	Lower Mountain Road to New Hope Road	1.4
55	Smith Road	Hillcrest Drive to Durham Road	1.7
56	New Road	Holicong Road to Durham Road	0.3
Total Proposed Bicycle Sharrows/Share the Road			14.6
Segment	 Shared-Use Trails (SUT)	Segment Limits	Length (Miles)
52	Street Road	Upper Mountain Road to Penn's Purchase	0.4
Total Shared-Use Trails			0.4
Total Proposed Area 5			15.0



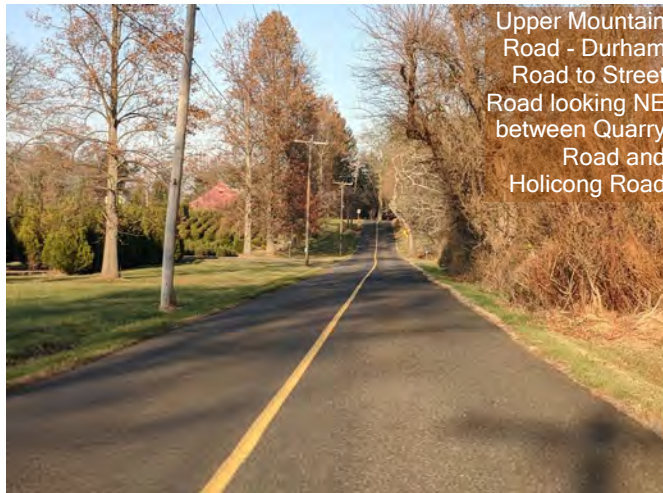
48 - Upper Mountain Road - Durham Road to Street Road

**48 - Upper Mountain Road
Durham Road to Street Road**

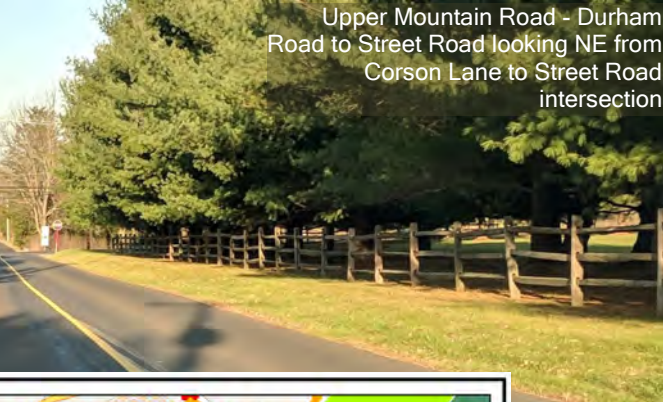
Trail/Bike Facility Type and Length:
Bike Sharrows/Share the Road Signs: 2.5 miles

Summary:

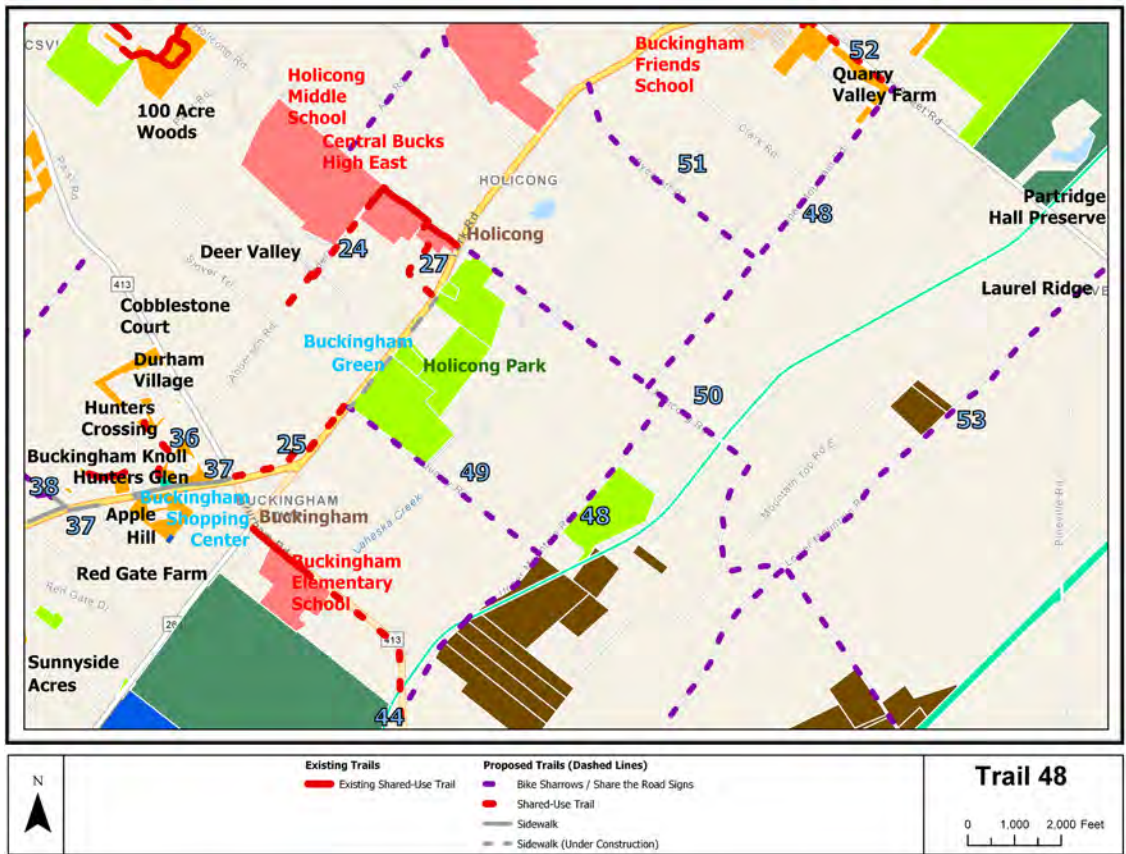
- Serves as a primary southwest to northeast trail route across the township
- Includes several connections including 51 - Byecroft Road, 50 - Holicong Road, 49 - Quarry Road and 44 - Buckingham Valley which in turn connect to a variety of destinations including Buckingham Green, Holicong Middle School and Central Bucks East High School, and via a connection to 52 - Quarry Valley Farm, Peddlers Village
- Posted Speed Limit - 35 mph



Upper Mountain Road - Durham Road to Street Road looking NE between Quarry Road and Holicong Road



Upper Mountain Road - Durham Road to Street Road looking NE from Corson Lane to Street Road intersection



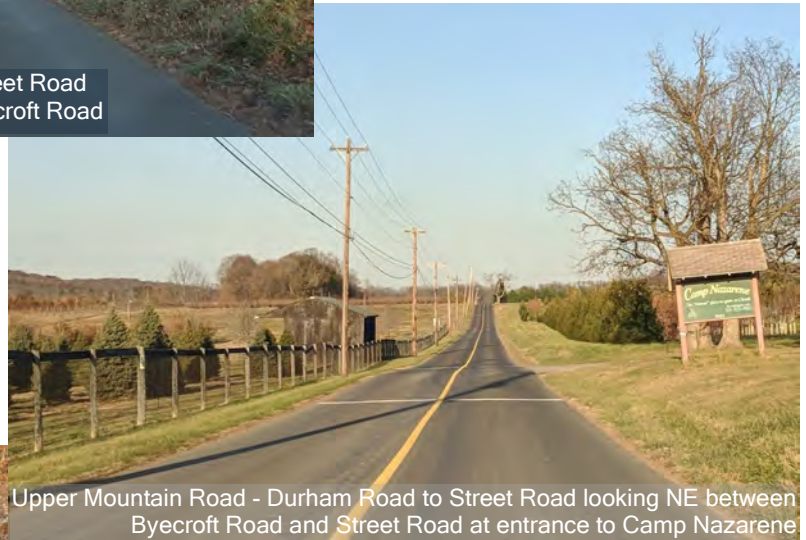
BUCKINGHAM TOWNSHIP MASTER TRAIL AND BICYCLE PLAN



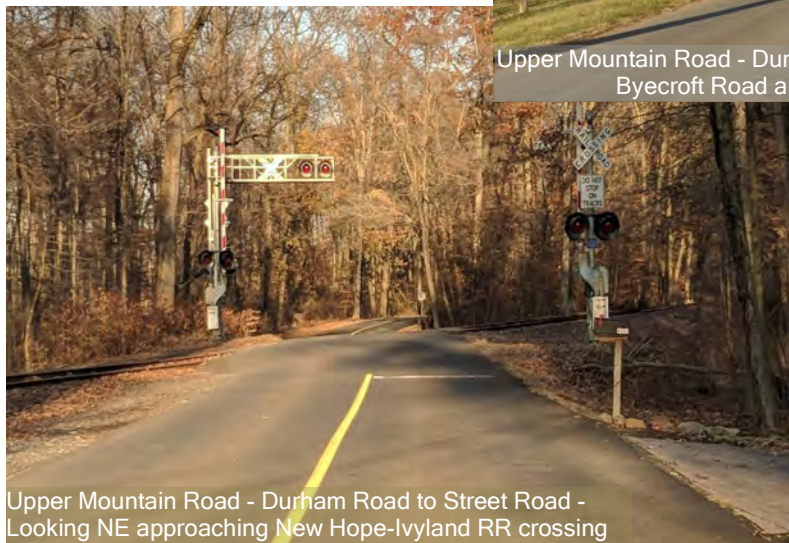
Upper Mountain Road - Durham Road to Street Road
- Looking NE at intersection with Holicong Road



Upper Mountain Road - Durham Road to Street Road
looking NE between Holicong Road and Byecroft Road



Upper Mountain Road - Durham Road to Street Road looking NE between
Byecroft Road and Street Road at entrance to Camp Nazarene



Upper Mountain Road - Durham Road to Street Road -
Looking NE approaching New Hope-Ivyland RR crossing

49 - Quarry Road - York Road/Route 202-263 to Upper Mountain Road

49 - Quarry Road
York Road/Route 202-263 to Upper Mountain Road

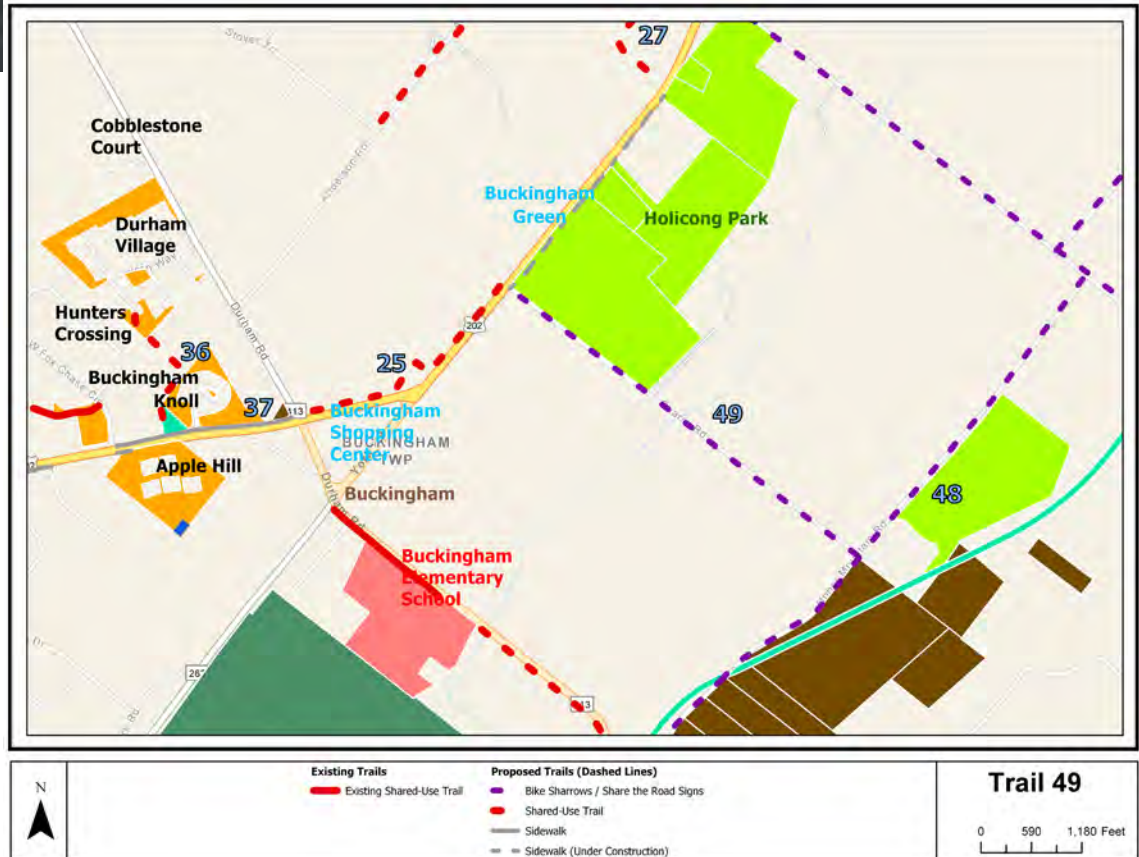
Trail/Bike Facility Type and Length:
 Bike Sharrows/Share the Road Signs: 0.7 miles

Summary:

- Connects to 48 - Upper Mountain Road
- Provides connection to Buckingham Green and businesses along Route 263/Route 202
- Posted Speed Limit - 35 mph



Quarry Rd - Upper Mountain Road to Route 202 looking NW at Lahaska Creek bridge



50 - Holicong Road - York Road/Route 202-263 to New Road

50 - Holicong Road

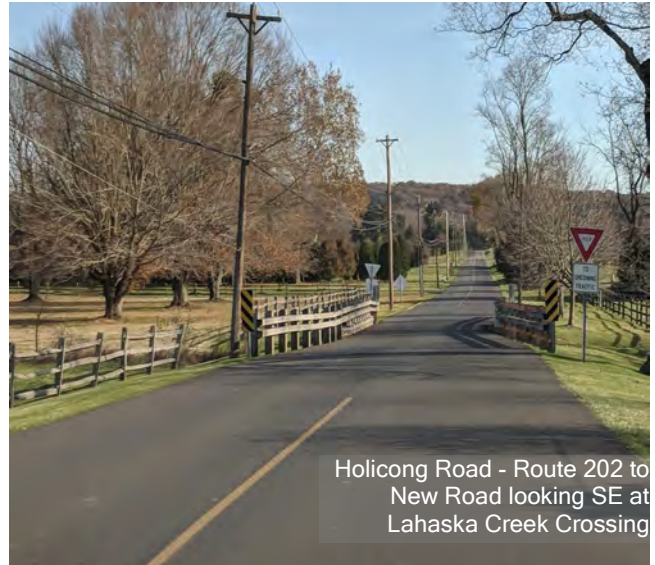
York Road/Route 202-263 to New Road

Trail/Bike Facility Type and Length:

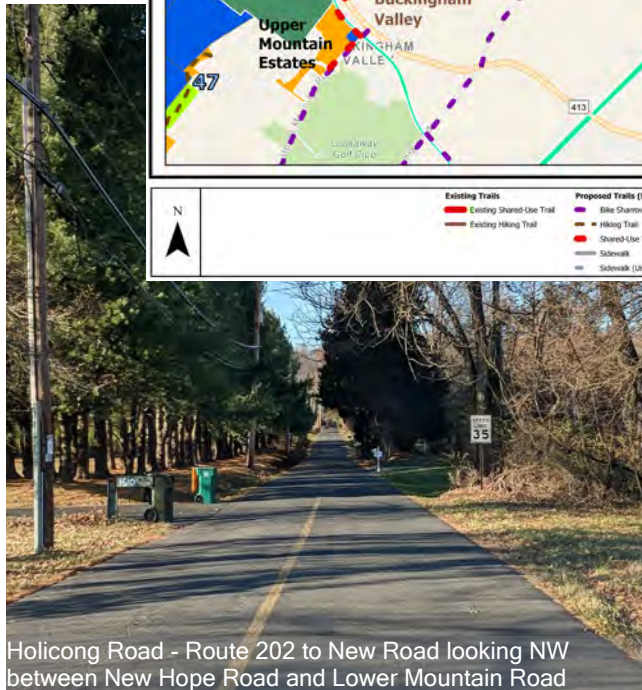
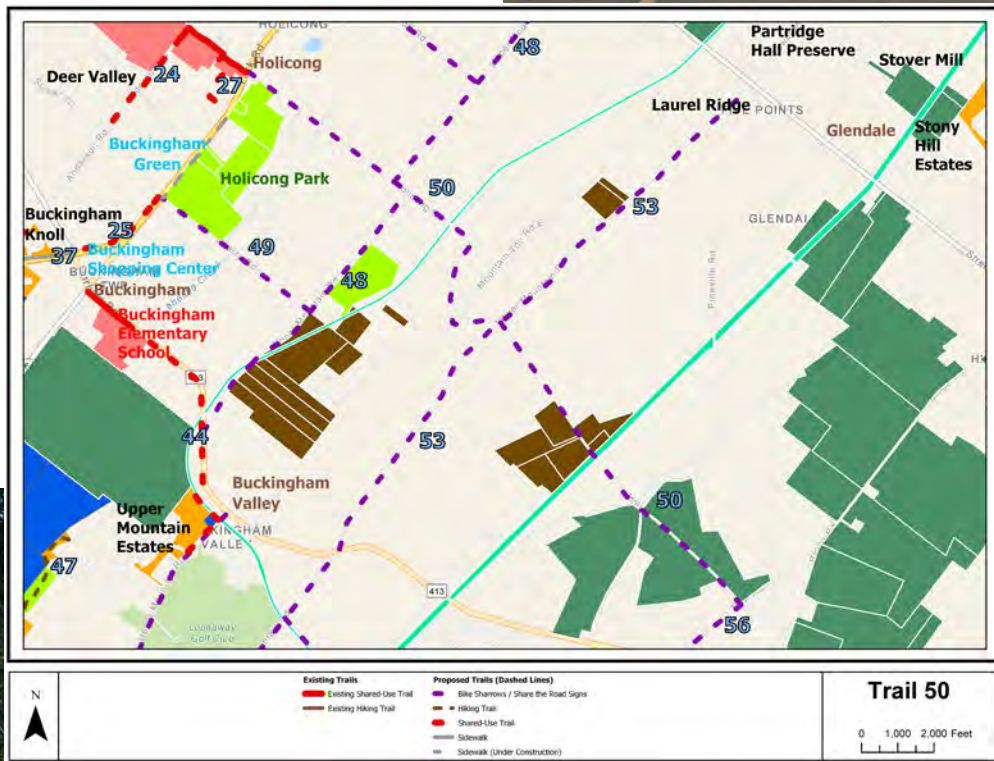
Bike Sharrows/Share the Road Signs: 3.2 miles

Summary:

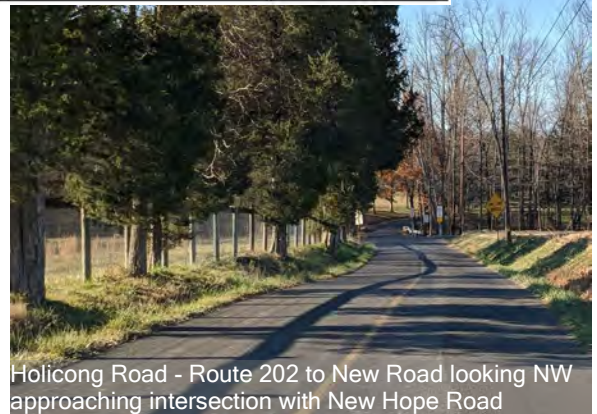
- Connects to several other trails/bike routes including 48 - Upper Mountain Road, 53 - Lower Mountain Road and 56 - New Road
- Provides connections to Holicong Park, Holicong Middle School and Central Bucks East High School
- Posted Speed Limit - 35 mph except for Buckingham Mountain segment (New Hope-Ivyland Railroad to Lower Mountain Road) where the speed limit is 25 mph



Holicong Road - Route 202 to New Road looking SE at Lahaska Creek Crossing



Holicong Road - Route 202 to New Road looking NW between New Hope Road and Lower Mountain Road



Holicong Road - Route 202 to New Road looking NW approaching intersection with New Hope Road



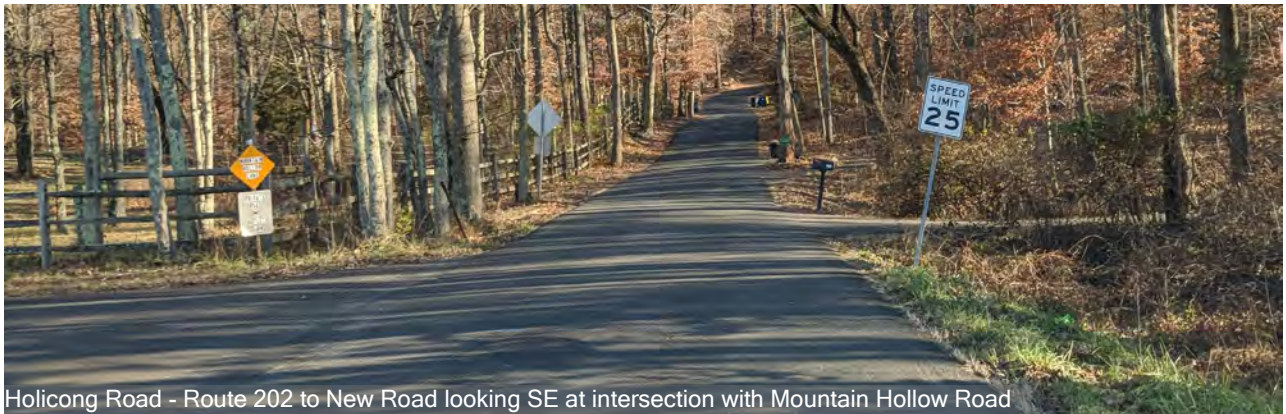
Holicong Road - Route 202 to New Road looking NW past intersection with New Road



Holicong Road - Route 202 to New Road looking SE at intersection with Upper Mountain Road



Holicong Road - Route 202 to New Road looking NW at Pidcock Creek bridge



Holicong Road - Route 202 to New Road looking SE at intersection with Mountain Hollow Road

51 - Byecroft Road - York Road/Route 202-263 to Upper Mountain Road

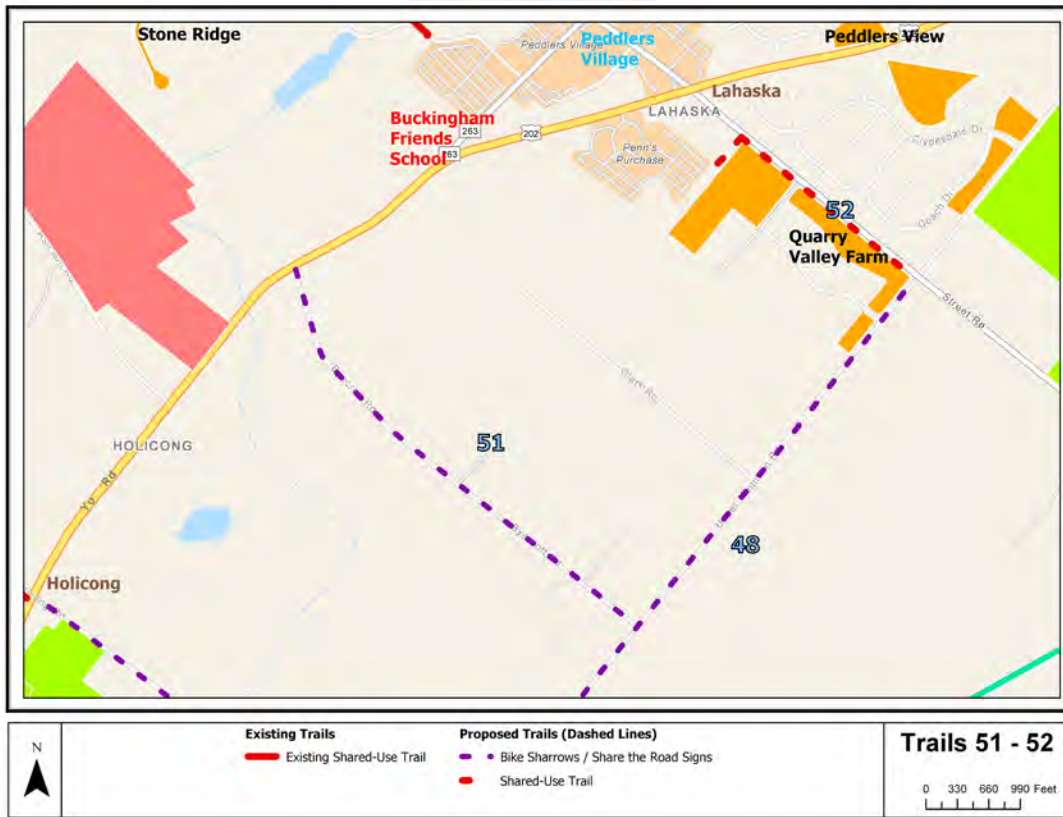
51 - Byecroft Road
York Road/Route 202-263 to Upper Mountain Road
Trail/Bike Facility Type and Length:
 Bike Sharrows/Share the Road Signs: 0.8 miles

Summary:

- Includes several connections including 48 - Upper Mountain Road and U.S. Route 202/Route 263
- Posted Speed Limit - 25 mph



Byecroft Road - Upper Mountain Road to Route 202 looking NW between Upper Mountain Road and Route 202



52 - Street Road - Upper Mountain Road to Penn's Purchase

52 - Street Road
Upper Mountain Road to Penn's Purchase
Trail/Bike Facility Type and Length:
 Shared-Use Trail: 0.4 miles

Summary:

- Provides a connection between Quarry Valley Farm and Peddlers Village
- Also connects Peddler's View, located in Solebury Township, to Peddlers Village
- Connects to 48 - Upper Mountain Road



Quarry Valley Farm to Penn's Purchase - SW side of Street Rd between Corson Lane and Upper Mountain Rd

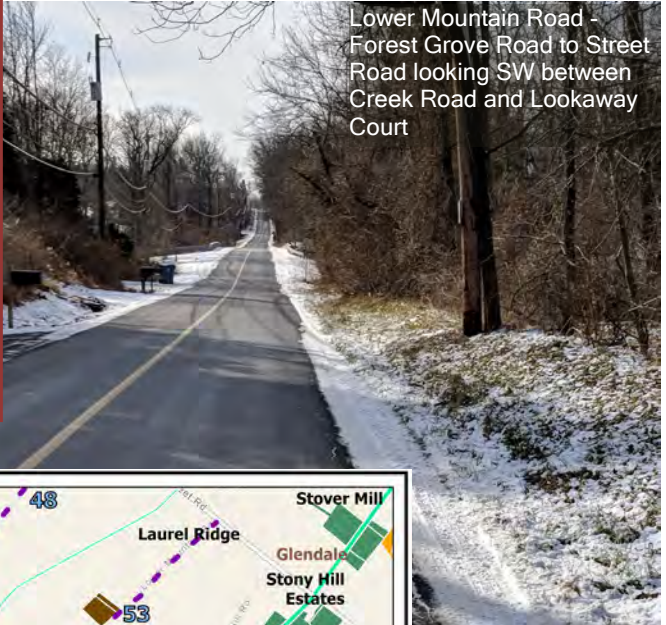
53 - Lower Mountain Road - Forest Grove Road to Street Road

**53 - Lower Mountain Road
Forest Grove Road to Street Road**

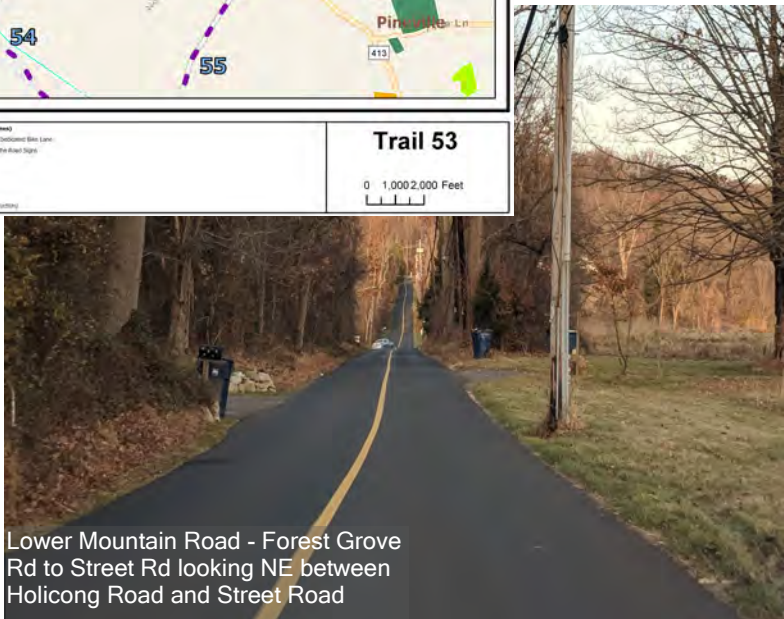
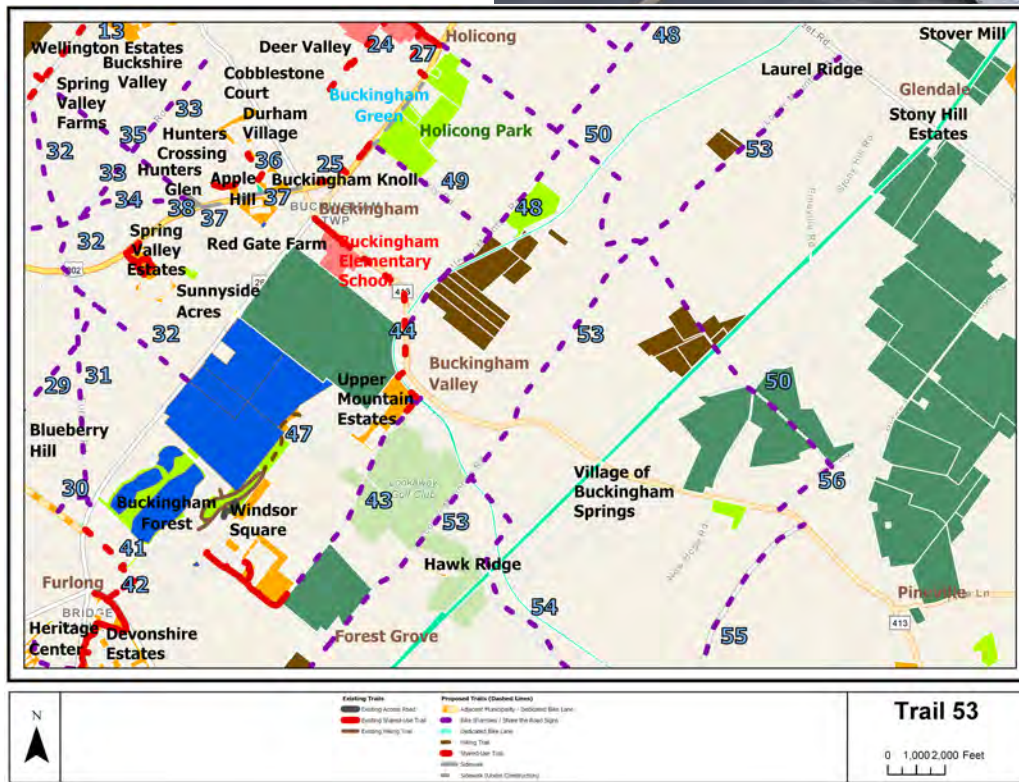
Trail/Bike Facility Type and Length:
Bike Sharrows/Share the Road Signs: 4.0 miles

Summary:

- Via connections at both ends, this route serves as the primary bike route between Doylestown and New Hope
- Connects to several other trails and bike routes including 45 - Swamp Road, 54 - Creek Road, and 50 - Holicong Road
- Posted Speed Limit - 35 mph



Lower Mountain Road - Forest Grove Road to Street Road looking SW between Creek Road and Lookaway Court



Lower Mountain Road - Forest Grove Rd to Street Rd looking NE between Holicong Road and Street Road

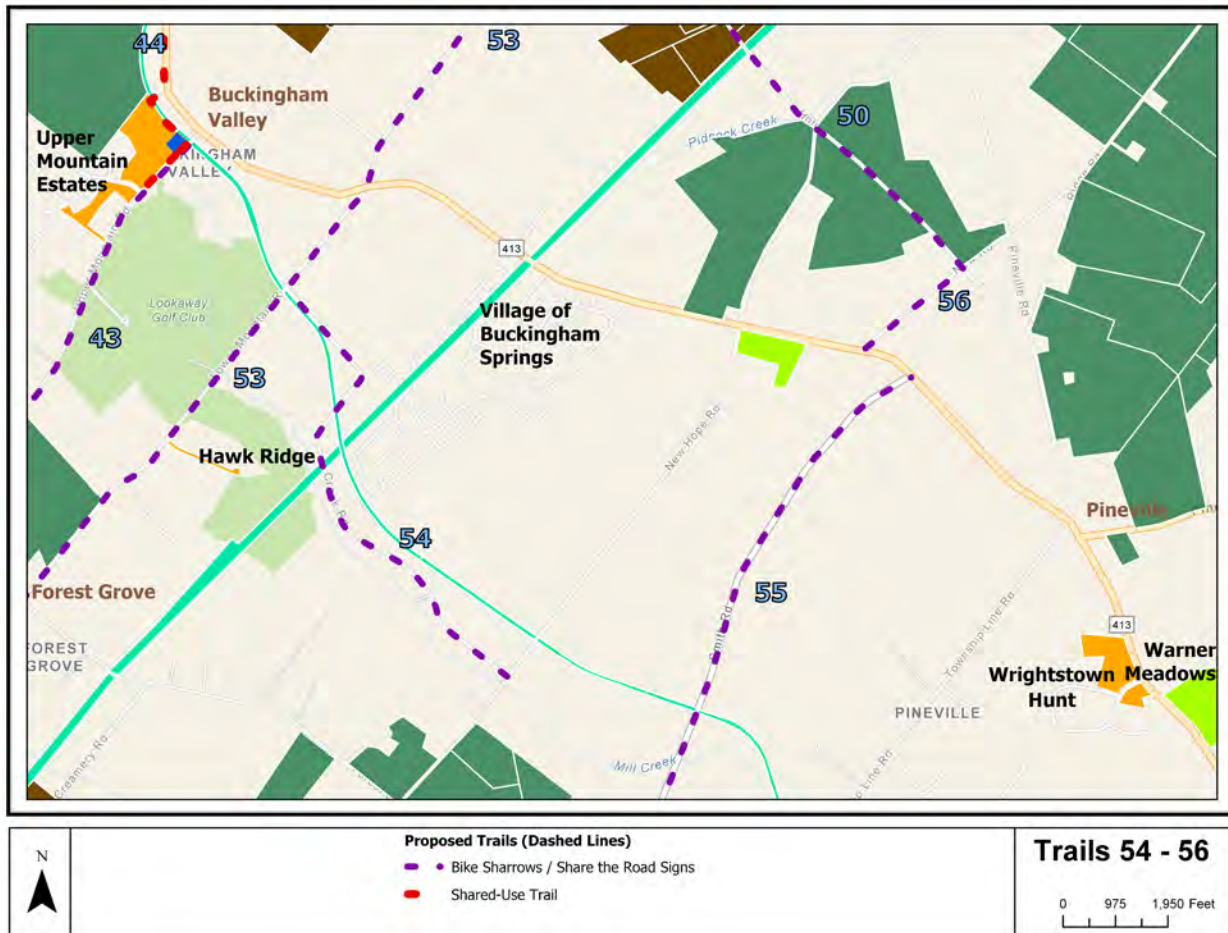
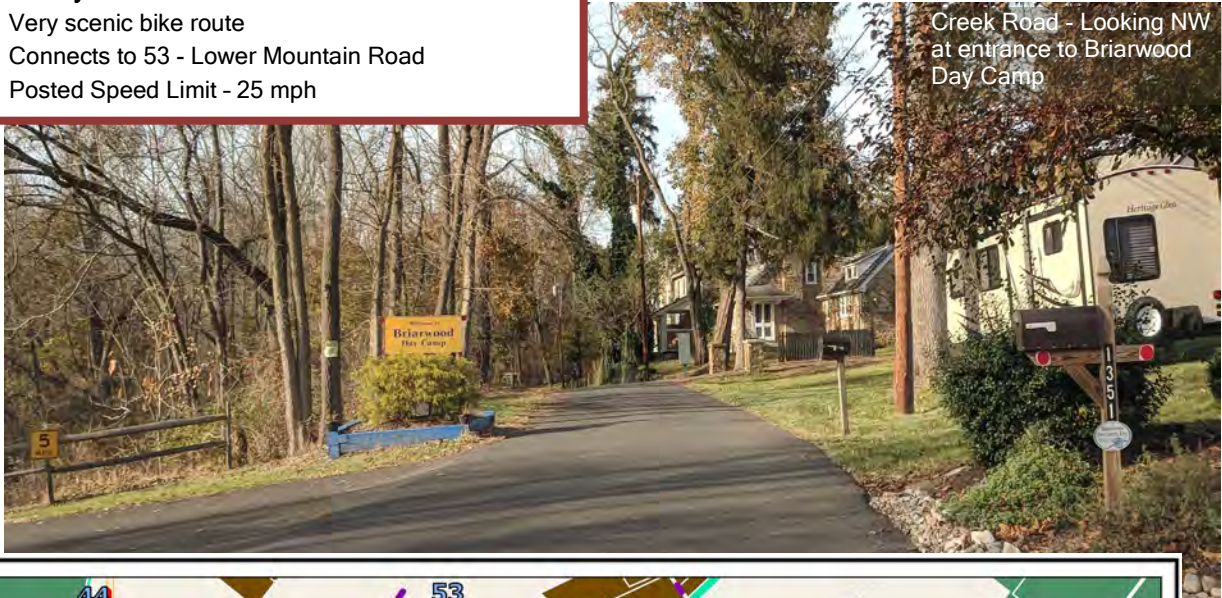
54 - Creek Road - Lower Mountain Road to New Hope Road

54 - Creek Road
Lower Mountain Road to New Hope Road

Trail/Bike Facility Type and Length:
 Bike Sharrows/Share the Road Signs: 1.4 miles

Summary:

- Very scenic bike route
- Connects to 53 - Lower Mountain Road
- Posted Speed Limit - 25 mph



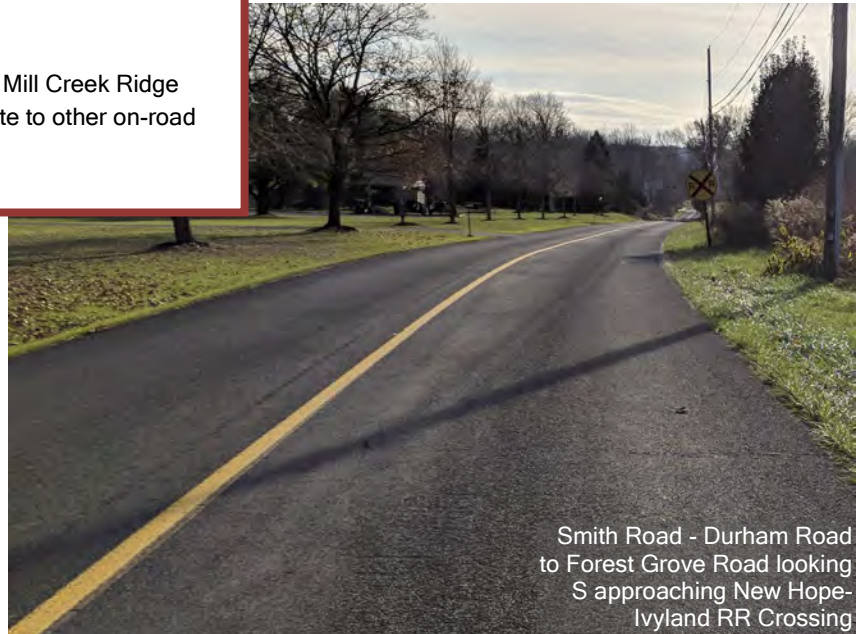
55 - Smith Road - Hillcrest Drive to Durham Road

55 - Smith Road
Forest Grove Road to Durham Road

Trail/Bike Facility Type and Length:
Bike Sharrows/Share the Road Signs: 1.7 miles

Summary:

- Provides connection to Estates at Mill Creek Ridge
- Links 50 - Holicong Road bike route to other on-road bike routes
- Posted Speed Limit - 35 mph



Smith Road - Durham Road to Forest Grove Road looking S approaching New Hope-Ivyland RR Crossing

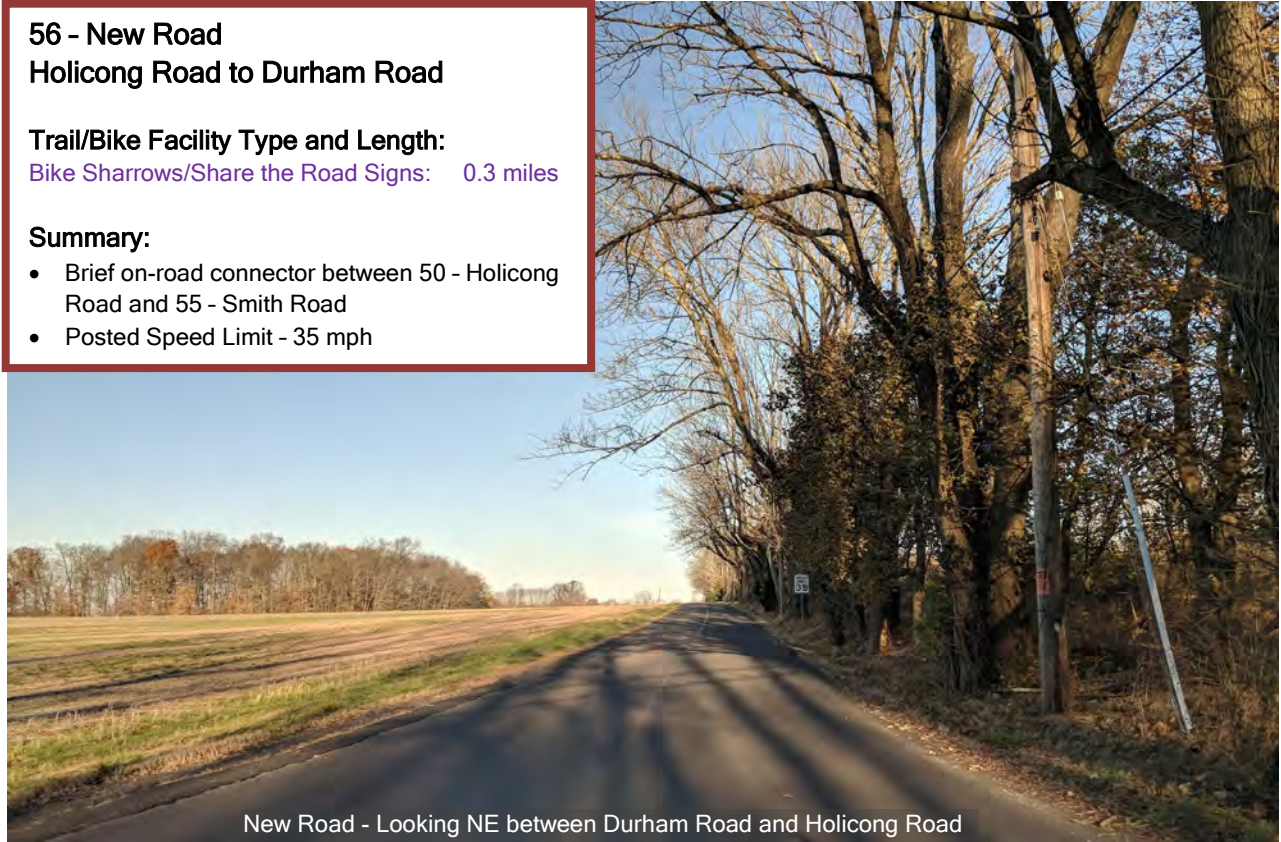
56 - New Road - Holicong Road to Durham Road

56 - New Road
Holicong Road to Durham Road

Trail/Bike Facility Type and Length:
Bike Sharrows/Share the Road Signs: 0.3 miles

Summary:

- Brief on-road connector between 50 - Holicong Road and 55 - Smith Road
- Posted Speed Limit - 35 mph



New Road - Looking NE between Durham Road and Holicong Road

Planning Area 6

The boundaries of this planning area consist of, Forest Grove Road to the northeast, the township line with Wrightstown Township to the southeast, the Neshaminy Creek and Sugar Bottom Road to the southwest, and Lower Mountain Road to the northwest. This planning area borders both Wrightstown Township and Warwick Township.

Land Use

Land use in this planning area is comprised primarily of:

- Agricultural, particularly along the southwest side of Forest Grove Road and Sugar Bottom and Mozart roads;
- Parks and open space, primarily owned by Bucks County in the form of Dark Hollow Park and Robin Run Reservoir;
- Rural residential; and
- Utilities in the form of three PECO powerline corridors:
 - One running southwest to northeast, between and parallel to Lower Mountain Road and Creamery Road;
 - Another running roughly east to west, paralleling Robin Run; and
 - One running north to west from the Neshaminy Creek to intersect with the first corridor described

Natural Features

Topography

- Most of the agricultural land in this area is characterized by gently rolling hills. However, along the Neshaminy and Mill Creek valleys, there are areas with steep slopes.

Water resources

- The area is part of the Neshaminy Creek watershed with the primary secondary watersheds in this area being the Robin Run and Mill Creek watersheds.

Woodlands and Natural Areas

- The primary woodland and natural areas in this planning can be found along the Neshaminy Creek, the Robin Run and Mill Creek stream corridors, and along an unnamed tributary to the Neshaminy Creek extending from Lower Mountain Road, across a few parcels just to the north of Franklynn Drive, across Sugar Bottom Farms before connecting with Dark Hollow Park and the Neshaminy Creek.

Man-Made Features

Commercial Areas

- Wycombe Village

Existing Trails

Area	Trail	Type of Trail	Mileage (Miles)
6	Estates at Mill Creek Ridge		2.32
Total Area 6			2.32

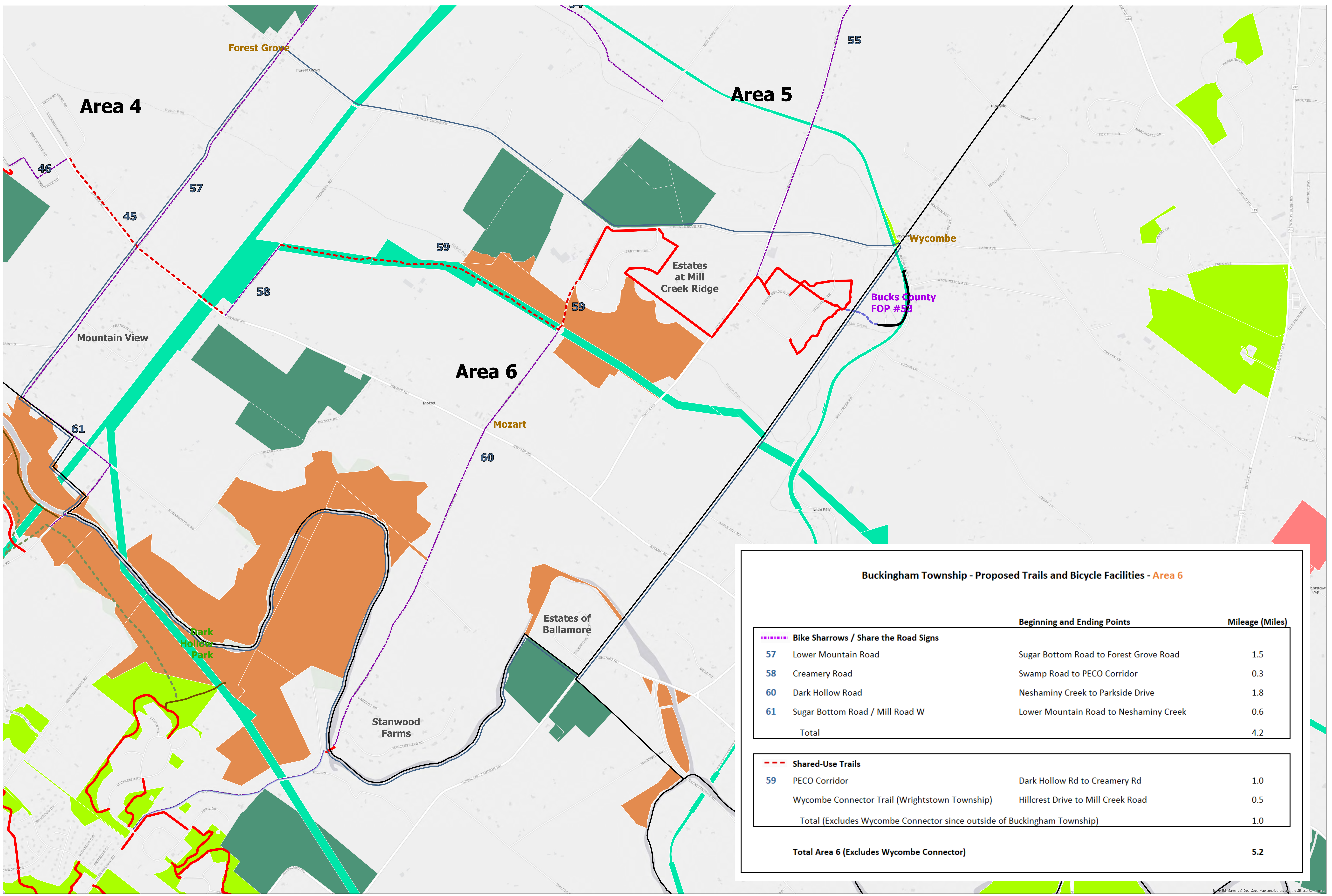
Parks and Recreation Areas

- Dark Hollow Park
- Robin Run Reservoir

Historic Resources

- Village of Bridge Valley
- Forest Grove Historic District
- Forest Grove Road over Mill Creek (Wycombe)
- Village of Mozart
- Wycombe Village Historic District



Following is a description of each of the trail/bicycle facilities proposed for this planning area.



Buckingham Township - Proposed Trails and Bicycle Facilities - Area 6

	Beginning and Ending Points		Mileage (Miles)
----- Bike Sharrows / Share the Road Signs			
57	Lower Mountain Road	Sugar Bottom Road to Forest Grove Road	1.5
58	Creamery Road	Swamp Road to PECO Corridor	0.3
60	Dark Hollow Road	Neshaminy Creek to Parkside Drive	1.8
61	Sugar Bottom Road / Mill Road W	Lower Mountain Road to Neshaminy Creek	0.6
Total			4.2
----- Shared-Use Trails			
59	PECO Corridor	Dark Hollow Rd to Creamery Rd	1.0
	Wycombe Connector Trail (Wrightstown Township)	Hillcrest Drive to Mill Creek Road	0.5
Total (Excludes Wycombe Connector since outside of Buckingham Township)			1.0
Total Area 6 (Excludes Wycombe Connector)			5.2

Table 16 - Proposed Trails & Bicycle Facilities - Planning Area 6

Segment	 Bike Sharrows / Share the Road Signs	Segment Limits	Length (Miles)
57	Lower Mountain Road	Sugar Bottom Road to Forest Grove Road	1.5
58	Creamery Road	Swamp Road to PECO Corridor	0.3
60	Dark Hollow Road	Neshaminy Creek to PECO Corridor	1.6
61	Sugar Bottom Road / Mill Road W	Lower Mountain Road to Neshaminy Creek	0.6
Total Proposed Bicycle Sharrows/Share the Road			4.0
Segment	 Shared-Use Trails (SUT)	Segment Limits	Length (Miles)
59	PECO Corridor/Dark Hollow Road	Parkside Drive to PECO corridor to Creamery Road	1.2
	Wycombe Connector Trail (Wrightstown Township)	Hillcrest to Mill Creek Road	0.5
Total Shared-Use Trails (Excludes Wycombe Connector)			1.2
Total Proposed Area 6 (Excludes Wycombe Connector)			5.2

57 - Lower Mountain Road - Sugar Bottom Road to Forest Grove Road

**57 - Lower Mountain Road
Sugar Bottom Road to Forest Grove Road**

Trail/Bike Facility Type and Length:
Bike Sharrows/Share the Road Signs: 1.5 miles

Summary:

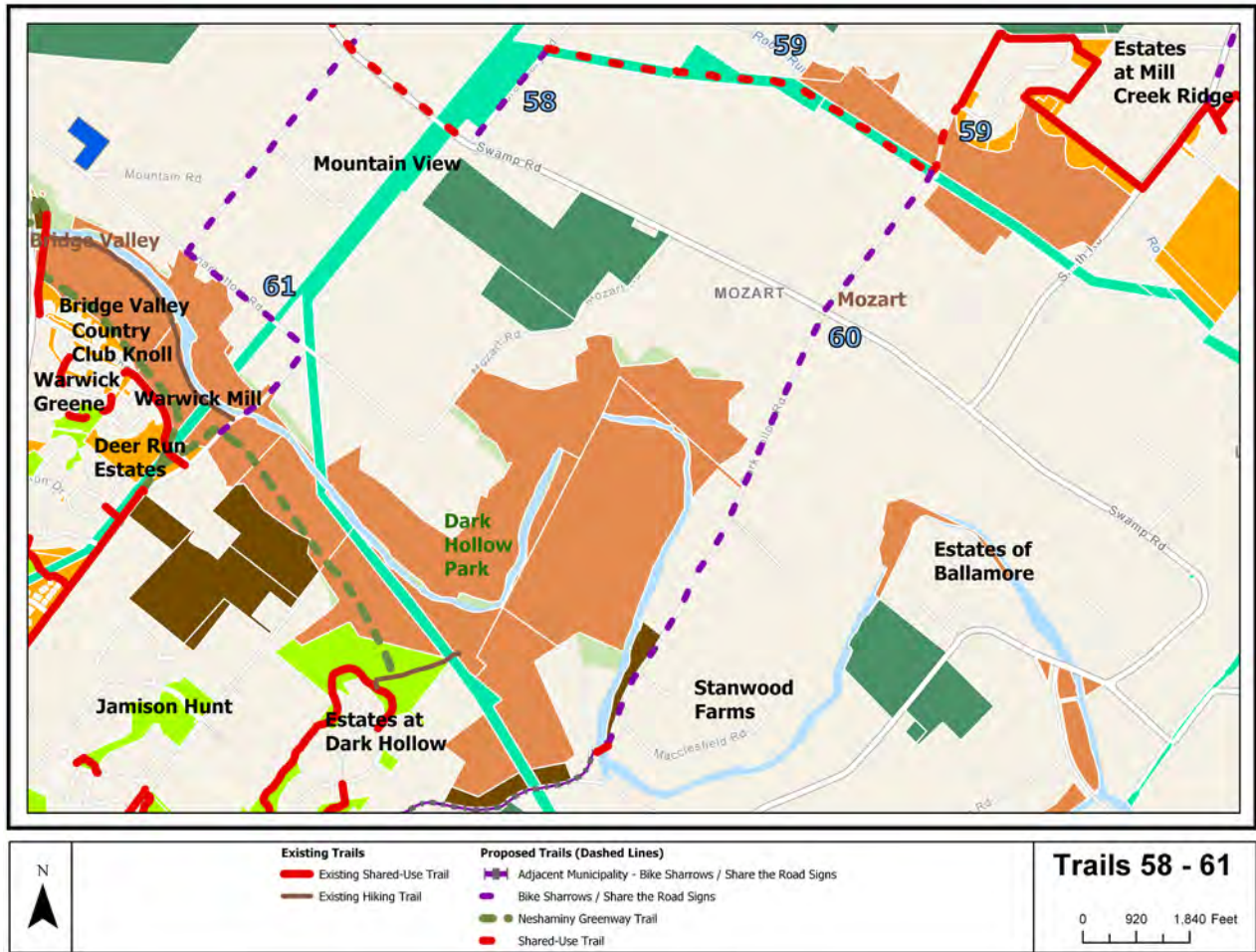
- Extends 53 - Lower Mountain Road from Planning Area 5 into Planning Area and down to Sugar Bottom Road
- Provides a direct connection to Dark Hollow Park via Sugar Bottom road.
- Connects with 61 - Sugar Bottom Road/Mill Road to provide access to the Neshaminy Creek Greenway Trail
- Posted Speed Limit - 35 mph



Lower Mountain Road looking NE between Swamp Road and Forest Grove Road



	Existing Trails Existing Shared-Use Trail Existing Hiking Trail	Proposed Trails (Dashed Lines) Adjacent Municipality - Bike Sharrows / Share the Road Signs Adjacent Municipality - Shared-Use Trail Bike Sharrows / Share the Road Signs Neshaminy Greenway Trail Shared-Use Trail	<p>Trail 57</p>
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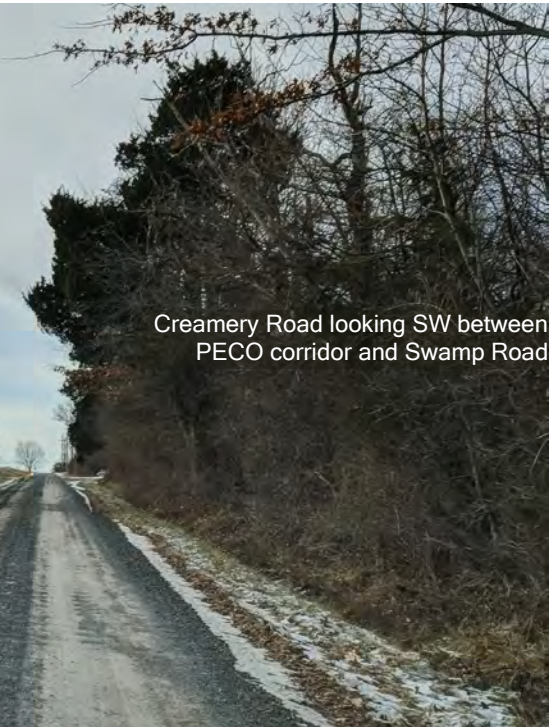
58 - Creamery Road - Swamp Road to PECO corridor

58 - Creamery Road
 Swamp Road to PECO corridor

Trail/Bike Facility Type and Length:
 Bike Sharrows/Share the Road Signs: 0.3 miles

Summary:

- Would connect the 45 - Swamp Road trail to the 59 - PECO corridor trail running parallel to Robin Run Creek
- Low volume road, speeds typically do not exceed 25 mph



Creamery Road looking SW between PECO corridor and Swamp Road

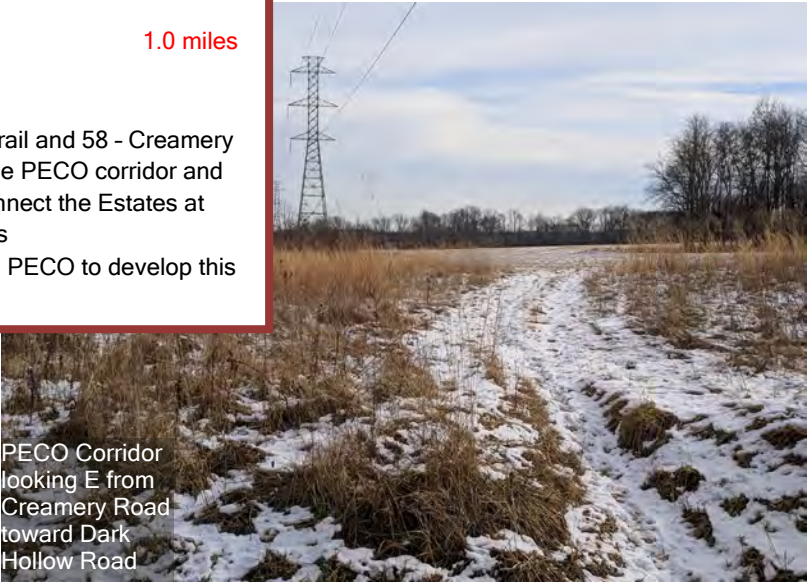
59 - PECO corridor/Dark Hollow Road - Parkside Drive to PECO corridor to Creamery

**59 - PECO corridor/Dark Hollow Road
Parkside Drive to PECO corridor to Creamery Road**

Trail/Bike Facility Type and Length:
Shared-Use Trail: 1.0 miles

Summary:

- Via connections to 45 - Swamp Road trail and 58 - Creamery Road bike route, this trail, running in the PECO corridor and parallel to Robin Run Creek, would connect the Estates at Mill Creek Ridge to Devonshire Estates
- Will require the use of easements from PECO to develop this segment of trail



60 - Dark Hollow Road - Neshaminy Creek to PECO corridor

**60 - Dark Hollow Road
Neshaminy Creek to PECO corridor**

Trail/Bike Facility Type and Length:
Bike Sharrows/Share the Road Signs: 1.6 miles
Shared-Use Trail: 0.2 miles

Summary:

- Would provide an on-road bicycle route along Dark Hollow Park connecting the Estates at Mill Creek Ridge to the Neshaminy Creek
- The existing bridge at the end of Dark Hollow Road provides access between Warwick and Buckingham townships
- Posted Speed Limit - 35 mph



61 - Sugar Bottom Road and Mill Road West - Lower Mountain Road to Neshaminy Creek

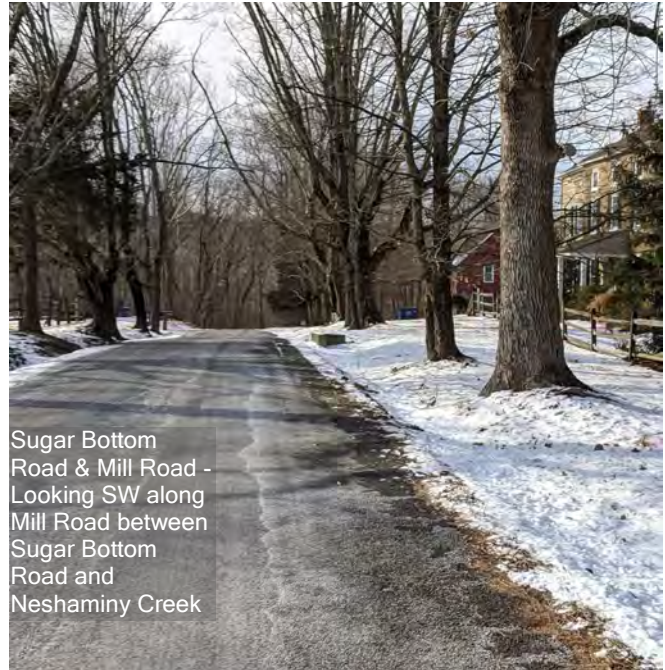
61 - Sugar Bottom Road and Mill Road West Lower Mountain Road to Neshaminy Creek

Trail/Bike Facility Type and Length:

Bike Sharrows/Share the Road Signs: 0.6 miles

Summary:

- Primary purpose is to provide a direct connection to the Neshaminy Creek Greenway Trail via the now closed Mill Creek Road bridge over the Neshaminy Creek
- By spanning the Neshaminy Creek, the trail provides a link between Warwick and Buckingham Townships
- Both Sugar Bottom Road and Mill Road are low volume roads where speeds are typically below 25 mph



Wycombe Connector - Hillcrest Drive to Mill Creek Road

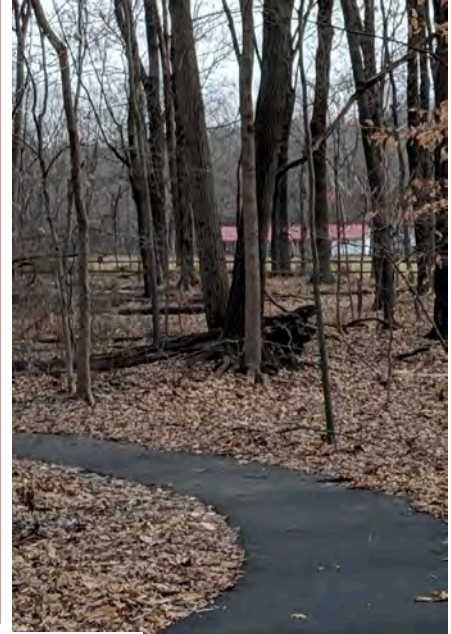
**Wycombe Connector
Hillcrest Drive to Mill Creek Road**

Trail/Bike Facility Type and Length:

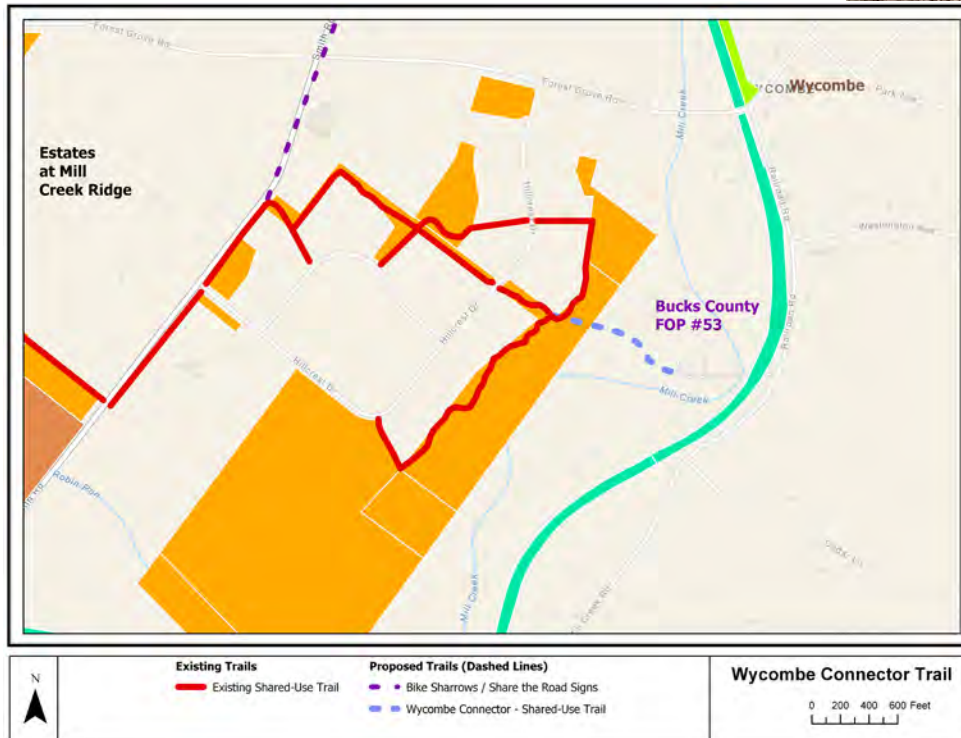
Shared-Use Trail: 0.2 miles
 Access Roads (Existing): 0.3 miles

Summary:

- Links the Estates at Mill Ridge Creek to historic Wycombe Village
- To eliminate the construction of another bridge over Mill Creek in this hilly and wide creek corridor, the intent is to make use to the Bucks County Fraternal Order of Police (FOP) #53 property which already has a bridge over the creek
- This trail would require easements from both the Estates at Mill Creek Ridge HOA as well as the Bucks County FOP #53
- Access from Mill Creek Road to the FOP property is via a private driveway across from the Wycombe Public House. Sidewalks would then be used to get users to Wycombe Village and train station



Wycombe Connector - Existing trail within Estates at Mill Creek Ridge with Bucks County FOP #53 buildings in distance



Wycombe Connector - Entrance to Bucks County FOP #53 off of Mill Creek Road



Wycombe Connector - Mill Creek Road looking N to Wycombe Train Station and Forest Grove Road intersection

Chapter 5 - IMPLEMENTATION AND COST

This plan as a whole is a planning document that represents a vision for how the trail network can provide recreation and transportation alternatives for the township. Development of the system will require significant capital expenditures, the need for acquisition of right-of-ways via easements and other mechanisms, the coordination of many agencies, and the dedication of township staff.

IMPLEMENTATION PROCESS

Although there is no standard template for how trails and trail networks get developed, there are some actions that are fairly common. Some or all of the following actions may be necessary to implement this plan and to build the trail network. These include:

- Adoption of Official Map
- Requiring trails as part of the development process
- Acquisition of right-of-way
- Securing funding
- Design and Engineering, Permitting and Construction

ADOPTION OF OFFICIAL MAP

The Pennsylvania Municipalities Planning Code permits a municipality to adopt an official map to show streets, parks, open space reservations, pedestrian ways, bikeways, trails, sidewalks and easements. Once the Official Map is adopted, these areas are “reserved” for the designated use and can be incorporated into future improvements and land development plans. The official filing of a land development application or other written notice to the township to develop lands containing Official Map reservations is the “trigger” beginning a one year period during which time the township has the right to acquire reserved land for public improvements. The township may also negotiate with the applicant to build reserved improvements as a part of the land development process. Trails and greenways that are shown on the official map have a better chance of being constructed.

REQUIRING TRAILS AS PART OF THE DEVELOPMENT PROCESS

One of the easiest, most cost effective and timely methods for achieving the development of the trail network envisioned in this plan is to require developers to construct trails and pedestrian facilities as part of the development process. This will eliminate the need to secure funding for these improvements.

Currently the Buckingham Township Subdivision and Land Development Ordinance requires the installation of sidewalks and bicycle paths as part of the land development process.

- [Article 9.18.B.1 Sidewalks and Bicycle/Pedestrian Paths](#)
Sidewalks or bicycle/pedestrian paths shall be provided along all existing and proposed streets. It is the intent of the township to accommodate safe pedestrian and bicycle access to all parts of the township.
- [Article 9.18.C.1 Bicycle/Pedestrian Paths](#)
All subdivisions and land developments shall be required to establish bike paths in accordance with the Township Bike Plan and Open Space Plan. Off-street bicycle/pedestrian paths are preferred. Bike

BUCKINGHAM TOWNSHIP MASTER TRAIL AND BICYCLE PLAN

lanes may be provided where bicycle/pedestrian paths cannot be built due to vegetation or building obstructions. Bicycle Paths are off-street bikeways laid out on private property, public right-of-way, or open space and recreational areas.

To take full advantage of these ordinance provisions, the township needs to:

- Ensure that the proposed improvements within this plan are included in all new land development and roadway improvement projects.
- Ensure that trail alignments proposed within this plan are included in the land development plans proposed by the developers as part of the land development process, and in the design plans for roadway improvements.
- Review roadway design projects to ensure that adequate area is made for bicycle and pedestrian facilities proposed in this plan, including bicycle lanes or routes, shoulder improvements, bicycle safe grates, signage, and crossing improvements.
- Mandate that this plan be referenced in the review of all land development applications and roadway design projects.

In those situations where trails cannot be obtained as part of the development process, the township will need to take a more complex approach to the development of trails involving the acquisition of right-of-way, securing funding, and undertaking the engineering, permitting and construction of the trail.

ACQUISITION OF RIGHT-OF-WAY

Prior to the development of any trail, it is necessary to have control of the land. Much of the Buckingham Township trail network would be placed on land already under the ownership of the township. However, as is often the case with trail projects, it might be necessary to obtain the rights to use privately-held land to achieve the development of some trails. Some of the more common techniques for the acquisition of the right-of-way for trails include:

- **Easements:** This is the most often used technique for acquiring the permission needed for a trail to cross private property. This is the preferred method as it is less costly than acquiring full ownership of the land. Specific to trails, an easement modifies the deed to a property to allow the use of a portion of the property for the construction of the trail and permanent use of the trail. Local examples of easements include the gas pipeline easements which cross multiple properties in the township.
- **Fee simple purchase:** Purchasing the needed land is an alternative to easements, however, fee simple acquisition of the land can be much more costly and time consuming as compared to easement. Additionally, fee simple ownership gives the owner complete control of the land, including all public access and conservation practice decisions.
- **Lease:** Similar to easements, a lease agreement can be negotiated authorizing the use of the land for construction of the trail. In contrast to easements, leases have a specific time frame associated with them. Although this type of arrangement would allow for construction of the trail, if a private property owner opts not to renew the lease upon its expiration, this may leave a gap in the trail network.
- **Donations:** Land or an easement on the land is frequently donated by a private owner, organization, or corporation. Local governments should encourage the donation of land or easements by pointing out benefits of such actions, including possible federal income and estate tax benefits and public relations value. In addition to land, corporations and other private parties also frequently provide cash donations for worthy causes, including land preservation.

- **Eminent Domain:** Although not desirable, and therefore not used very often, eminent domain can be used to acquire land. Eminent domain is the power of government to acquire property for public use so long as the government pays just compensation. The government can exercise the power of eminent domain to acquire property even if the property owner does not wish to sell the property. Government taking of such property is called a condemnation, or a taking. It is seldom used in part due to the need to show that the taking of the land does constitute public use.

These techniques may be used separately or in combination to facilitate acquisition.

SECURING FUNDING

Securing funding for the development of the township-wide trail network will require funding at every step of the process including planning, design and engineering, right-of-way acquisition and construction. There are multiple sources of funding, each with their own requirements, specific criteria regarding eligible projects, funding cycles, match requirements, etc. The sources of funds include federal, state and local funding sources, as well as private foundations and donations. Government funding programs change frequently. Those mentioned here are in place in 2019, but will likely change in the future.

Federal Funding Sources

The Federal Government provides funding for transportation projects through various funding programs. These are typically in the form of block grants provided to states through funding formulas and are typically administered through the state or the Delaware Valley Regional Planning Commission. On December 4, 2015, the President signed the Fixing America's Surface Transportation (FAST) Act into law (Pub. L. 114-94). There are several new programs under this bill as described below:

Surface Transportation Block Grant Set-aside Program (STBGSP)

Formerly known as the Transportation Alternatives Program (TAP), this program sets aside federal transportation funds for community-based projects designed to build infrastructure for cyclists and pedestrians. Planning, design and construction of on-road and off-road facilities including sidewalks, trails, bicycle lanes, and pedestrian and bicycle signals are some of the eligible projects. <http://www.dvrpc.org/tap>

Surface Transportation Block Grant Program (STBG)

The FAST Act amended the Surface Transportation Program (STP) contained in 23 U.S.C. 133, and changed the program name to the Surface Transportation Block Grant Program (STBG). This program has the most flexible eligibilities among all Federal-aid highway programs. In general, STBG projects may not be on local roads or rural minor collectors. There are a number of exceptions to this requirement including recreational trail projects eligible under 23 U.S.C. 206, pedestrian and bicycle projects in accordance with 23 U.S.C. 217, and Safe Routes to School projects under Section 1404 of SAFETEA-LU (23 U.S.C. 402 note). <https://www.fhwa.dot.gov/fastact/factsheets/stbgfs.pdf>

Highway Safety Improvement Program (HSIP)

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned roads and roads on tribal land. HSIP funds be used for safety projects that are consistent

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with the State's strategic highway safety plan (SHSP) and that correct or improve a hazardous road location or feature or address a highway safety problem. <https://safety.fhwa.dot.gov/hsip/about.cfm>

Congestion Mitigation and Air Quality Program (CMAQ)

CMAQ is a transportation air quality improvement program that provides funding for both design and construction of bicycle and pedestrian facilities that serve to reduce automobile travel. A municipality/applicant must complete a CMAQ Air Quality Analysis Worksheet for Bicycle and Pedestrian Projects to document a quantifiable reduction in auto emissions and/or congestion to be eligible under this program. Under this program, the project cost is funded 80% federal and 20% state or local match. <http://www.dvrpc.org/cmaq>

In addition to federally funded transportation grant programs, there are other federal funding programs available for trails and recreation funding.

United States Department of the Interior - National Parks Service (NPS) - Rivers, Trails and Conservation Assistance (RTCA) Program

This is a National Parks Service program that provides technical assistance to establish and restore greenways, rivers, trails, watersheds and open space. <http://www.nps.gov/orgs/rtca/apply.htm>

Land and Water Conservation Fund

Created by Congress in 1965, the Land and Water Conservation Fund (LWCF) is a bipartisan commitment to safeguard natural areas, water resources and our cultural heritage, and to provide recreation opportunities to all Americans. The program uses revenues from the depletion of one natural resource - offshore oil and gas - to support the conservation of land and water. This is accomplished by using royalties paid by energy companies drilling for oil and gas on the Outer Continental Shelf (OCS). These royalties are placed in the fund for the purpose of creating and protecting national parks, areas around rivers and lakes, national forests, and national wildlife refuges from development, and to provide matching grants for state and local parks and recreation projects. <https://www.lwcfcoalition.com/lwcf-programs/>

State Funding Sources

The Commonwealth of Pennsylvania offers multiple funding sources in support of open space, historic and cultural resource preservation, natural resource protection, recreation and park facilities, and greenways implementation. Similar to the federal funding programs, these programs are administered by a variety of different departments. The Pennsylvania Greenways Toolbox's Funding Guide provides additional information about these programs.

http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_20028922.docx

Pennsylvania Department of Conservation and Natural Resources (PA DCNR)

DCNR administers the federally-funded Recreational Trail Program and the state-funded Community Conservation Partnership Program (C2P2).

Recreational Trails Program

The Pennsylvania Recreational Trails Program (PRT) is an assistance program funded through the U.S. Department of Transportation's Federal Highway Administration (FHWA). FHWA provides funds to states

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to develop and maintain recreational trails and trail-related facilities for motorized and non-motorized recreational trail uses. The Department of Conservation and Natural Resources (DCNR) has been designated as the state agency responsible for administering this federal program in Pennsylvania. http://www.docs.dcnr.pa.gov/cs/groups/public/documents/document/d_001241.pdf

Community Conservation and Partnership Program (C2P2)

These grants are awarded to municipalities and authorized nonprofit organizations for recreation, park, trail and conservation projects. These include planning for feasibility studies, trail studies, conservation plans, master site development plans, and comprehensive recreation, park and open space and greenway plans; land acquisition for active or passive parks, trails and conservation purposes; and new development and rehabilitation of parks, trails and recreation facilities.

http://www.dcnr.state.pa.us/cs/groups/public/documents/document/D_001230.pdf

Pennsylvania Department of Community and Economic Development (PA DCED)

Greenways, Trails and Recreation Program (GTRP)

The PA Department of Community and Economic Development (DCED) administers this program, which allocates funds to the Commonwealth Financing Authority (CFA) for planning, acquisition, development, rehabilitation and repair of greenways, recreational trails, open space, parks and beautification projects.

<http://dced.pa.gov/programs/greenways-trails-and-recreation-program-gtrp/- .V9i0amOMFmg>

Multimodal Transportation Fund (MTF)

The PA Department of Community and Economic Development (DCED) administers this program, which provides grants to encourage economic development and ensure that a safe and reliable system of transportation is available to the residents of the commonwealth. Funds may be used for the development, rehabilitation and enhancement of transportation assets to existing communities, including lighting, sidewalk enhancement, pedestrian safety, bicycle circulation, connectivity of transportation assets and transit-oriented development.

<http://dced.pa.gov/programs/multimodal-transportation-fund/- .V9i0oGOMFmg>

Pennsylvania Department of Transportation, Bureau of Maintenance and Operations

Automated Red Light Enforcement (ARLE) Program

Provides opportunities for transportation enhancement grants through revenues generated by the automated red light enforcement program to improve safety and reduce congestion. No matching funds are required for the ARLE grant program. Relevant eligible projects include pedestrian safety improvements at signalized intersections such as count down timers, easily accessible and quick response pushbuttons, crosswalk striping, pedestrian signing and pedestrian mobility improvements with a combination of eligible features.

<http://www.dot.state.pa.us/portal%20information/traffic%20signal%20portal/FUNDARLE.html>

The township should utilize its municipal funds to leverage additional grant funding from state and federal sources. In order to develop proposed trails that will not be constructed as the result of land development and roadway projects, the township will need to apply for and receive grant funding from local, state and/or federal sources. Many state grant programs can be used as a designated match for other federal grant programs and

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vice versa. By leveraging funds, the township will be able to maximize the amount of constructed improvements per municipal dollar.

Local Funding

There are a number of other government initiatives that can provide funding for implementing trail plans.

Bond Referendums

As evidenced by the successes of both the two previous Bucks County Open Space Program bond referendums totaling \$146.0 million, and the three previous Buckingham Township open space bond referendums totaling \$20.0 million, bonds are a proven and effective way to finance long-term recreational improvements and open space preservation. Both of these bond programs have focused primarily on the preservation of open space, not trails.

Property Tax and Earned Income Tax

Pennsylvania's Act 153 of 1996, which amended the Pennsylvania Conservation and Land Development Act, expanded the authority of municipalities to fund open space projects through local taxes. Under the Act, two different taxation tools were identified that can be used to purchase development rights or open space lands.

Property Tax

This is a tax charged to real property owners based on a percentage of the assessed property value, not to exceed the millage authorized by voter referendum. Property taxes provide a steady source of revenue. However, because communities are limited in the total level of the millage rate, the use of property taxes to fund open space activities may inhibit the ability of the municipality to raise money for other needed activities.

Earned Income Tax

This is a tax applied only to earned income, not to real estate assets or pensions. Because of this, it may prove to be more acceptable in municipalities with a higher percentage of retired senior citizens. Pennsylvania caps the earned income tax at 1.0 percent. However, Act 153 authorizes voters to approve the levy of an increased earned income tax beyond the 1.0 percent limit, exclusively for the purpose of financing purchases of open space.

Private Funding Sources

Grant funding is available through many private avenues, most of which have specific agendas. Key to obtaining such funding is a clear match of the project goals to the funding intent. Often, private grants require a non-profit entity to receive and administer any funds. Frequently, private funding can be used to meet the matching requirements of many public programs that require some amount of local funding as a good faith indication of local support. Finally there are in-kind gifts and cooperative partnerships that permit a right of way through private lands and develop a cooperative agreement for use, maintenance and safety. These can frequently be seen in rails-with-trails as well as trails that use utility rights of way and cooperative maintenance.

PECO Green Region Grants Program

Green Region grants are available to municipalities in amounts up to \$10,000. The grants can be used with other funding sources to cover a wide variety of planning and direct expenses associated with developing and implementing open space programs, including consulting fees, surveys, environmental assessments, habitat improvement, and capital improvements for passive recreation. The program is administered through National Lands Trust.

https://www.peco.com/SafetyCommunity/Community/Pages/Environment_OLD.aspx

William Penn Foundation/Delaware Valley Regional Planning Commission Regional Trails Program

The William Penn Foundation's mission is to improve the quality of life in the Greater Philadelphia region through efforts that foster rich cultural expression, strengthen children's futures, and deepen connections to nature and community. In partnership with others, the Foundation works to advance a vital, just, and caring community. The Foundation works to improve the quality of life in the Greater Philadelphia region by advancing dynamic and diverse communities that provide meaningful opportunity.

In 2011, the Foundation provided \$10 million in funding for The Regional Trails Program, administered by the Delaware Valley Regional Planning Commission (DVRPC), with the goal of capitalizing upon opportunities for trail development by providing funding for targeted, priority trail design, construction and planning projects that will promote a truly connected, regional network of multi-use trails with Philadelphia and Camden as its hub. In December 2014, DVRPC and the William Penn Foundation announced a renewed commitment to invest \$7 million in the Circuit Trails, a vast network of hundreds of miles of multiuse trails in the Greater Philadelphia region that is growing in size each year. Upon completion, the Circuit Trails will include over 800 miles of trails. In 2018, the Foundation announced another \$10.6 million in grant funding to assist in further the development of the Circuit Trails.

<http://www.dvrpc.org/Trails/RegionalTrailsProgram/>

American Hiking Association - National Trails Fund

Established by the American Hiking Society in 1998, this national grants program provides funding for "hiking trail improvement" grants to active member organizations of their Hiking Alliance. Once a year, Alliance Members have the opportunity to apply for a grant (value between \$500 and \$5,000) in order to improve hiking access or hiker safety on a particular trail. <https://americanhiking.org/category/national-trails-fund/>

People for Bikes

The PeopleForBikes Community Grant Program provides funding for important and influential projects that leverage federal funding and build momentum for bicycling in communities across the U.S. These projects include bicycle paths and rail trails, as well as mountain bike trails, bike parks, BMX facilities, and large-scale bicycle advocacy initiatives. <https://peopleforbikes.org/our-work/community-grants/>

Donations

One often overlooked source of funding for the development and ongoing operation and maintenance of trail systems are donations. Donations may take several forms including:

- Monetary donations
- Donations of easements or land for the trail route

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- Donations of goods such as landscaping and trail building materials
- Donations of professional services from architects and engineers for the development of grant applications and engineering consultant. The donation of these services can often be counted as part of the match contribution for grant applications.
- Volunteer labor from church groups, scouting organizations, civic groups, cycling clubs and environmental groups for help with fund-raising, security, trail maintenance and other support activities.

DESIGN AND ENGINEERING, PERMITTING AND CONSTRUCTION¹

The following outlines typical implementation steps for municipal trail development. The physical conditions, constraints, and adjacent and underlying landownership of the trail segment will further determine the action steps to develop the trail for public use.

- Complete deed research, boundary and topographic survey, wetlands delineation, and Pennsylvania Natural Diversity Inventory (PNDI) search, Phase 1 archeological study, as necessary, for the trail corridor segment(s).
- Develop construction documents that detail and engineer the trail improvements and associated amenities. Engineering may include structural design of bridges, culverts, railings, and pavements; traffic studies; and detailed crossing improvements. Prepare a project manual including technical and bidding specifications.
- Develop land development plans for submission and review by the municipalities affected by the trail, as required.
- Obtain approvals from the various governing agencies prior to construction. The following is a listing of typical approvals for a development of this nature but may not be all-inclusive.
 - Municipal approval for land development plans within the affected municipalities, if required.
 - Bucks County Conservation District approval for erosion and sedimentation control plans and National Pollutant Discharge Elimination System (NPDES) Permit.
 - Pennsylvania Department of Transportation approval for work within a PennDOT right-of-way.
 - Pennsylvania Department of Environmental Protection/US Army Corp. of Engineers approval for any work within the waters of the Commonwealth including delineated wetlands and stream encroachments and crossings.
 - Pennsylvania One Call. Pennsylvania law requires three working days-notice for construction phase and ten working days in design stage.
 - Approval from public utilities impacted by the trail.

Each of the above permits and approvals are typically involved and will require advance planning to facilitate the process. Adequate preparation and review time should be allotted.

- Upon receipt of all required approvals and permits and completion of the trail construction documents, the project can begin construction. This can be accomplished by either soliciting bids for construction,

¹ Tri-Municipal Master Trail & Greenway Plan November 2010, p Chapter 5-3 to 5-4.

or utilizing in-house resources such as the township's public works department which has already completed several trail segments in the township.

TRAIL DEVELOPMENT COSTS

The cost to develop the various trails included in this plan will vary depending on the type of trail constructed, the sources of funding involved, the extent and complexity of constraints and environmental challenges encountered, and the number of easements. It is also possible that many of the trails may be built by developers as part of the land development process. As no detailed engineering work such as topographic or planimetric surveys, detailed grading and site engineering have been completed, it is not possible to provide a more detailed and accurate cost estimate at this time.

The costs included here are a general guideline for the purpose of preliminary estimation of trail costs and are based on time-honored practices in the construction industry. More detailed cost estimation will be obtained as one of the outcomes of the design and engineering stage. Utilization of in-house forces (e.g. township crews) can result in costs considerably lower than those presented in this plan.

The following is a summary of the probable costs of construction for various trail types as presented in this plan. Costs for design and engineering, construction management, right-of-way acquisition and contingencies have not been included in these figures.

Table 17 - Probable Costs of Construction

Item	Estimated Unit Cost
8-foot wide Multi-Use Asphalt Trail	\$95 per linear foot
10-foot wide Multi-Use Asphalt Trail	\$110 per linear foot
10-foot wide Crushed Stone / Aggregate Trail	\$75 per linear foot
4-foot wide Hiking Trail	\$25 per linear foot
Boardwalk Trail	\$250 per linear foot
Mown Grass Trail	\$25 per linear foot
5-foot wide Concrete Sidewalk	\$75 per linear foot
Bicycle Sharrows on Road (Recommended placement - immediately after an intersection and spaced at intervals not greater than 250 ft thereafter. Source: AASHTO Guide for the Development of Bicycle Facilities)	\$300 each
Trail Signage	\$1.50 per linear foot
PennDOT Road Crossings with crosswalks, curb cuts, and rapid-rectangular flashing beacon (RRFB)	\$60,000 each
Easement costs	\$1.50 - \$2.00 per square-foot of easement area
Design and Engineering Fees	15% - 20% of estimated construction costs

Chapter 6 - MAINTENANCE AND OPERATIONS

The ongoing operation and management of the trail network is essential to its long-term success and includes ongoing trail maintenance, ensuring the safety of trail users, and minimizing the liability of the township.

TRAIL MAINTENANCE

TRAIL MAINTENANCE PROGRAM AND TASKS

The quality, condition, and safety of the trails are all essential to the long-term success of a trail network. To ensure successful operation of the trail, and to assist in minimizing risk both to trail users and the township, a maintenance plan is necessary. A well-designed and executed maintenance program will:

- Reduce long-term costs by extending the costs of trail components
- Help win the continued support of residents, homeowners, and businesses, which may translate into lower operating costs if residents feel pride in the trail and donate volunteer time to assist in its upkeep
- Ensure a quality recreational or travel experience for the trail user

Sufficient manpower and resources must be devoted to a regular maintenance schedule in order to meet these goals.

The Northeast Regional Office of the Rails-to-Trails Conservancy, has published an excellent guidebook entitled Rail-Trail Maintenance & Operation. The 43-page book may be downloaded, in pdf format, from the American Trails web site at this location: <https://www.americantrails.org/images/documents/railtrailmaint.pdf>.

Key elements of the maintenance and management program should:

- Include a system through which trail users can contact the township with concerns regarding trail maintenance and safety
- Specify a frequency for the inventory of all trails and facilities
- Identify specific maintenance goals and standards for each type of trail
- Provide a list of the tasks necessary to achieve maintenance quality levels
- Clearly delineate which maintenance tasks are designated to specific departments or individuals
- Provide a control system for tracking accomplishments and relevant costs

The frequency of the maintenance tasks to be performed would vary based on the type of trail surface, the surrounding landscape character, and the particular segment of trail. Important short and long-term maintenance tasks that need to be addressed in the maintenance program are shown in Table 18.

Table 18 - Recommended Trail Maintenance Schedule

Frequency	Task
Weekly	Litter Pickup and Trash Removal (Can also implement a Carry in / Carry out policy)
	Restocking of any dog waste bag dispensers or receptacle stations, if provided
Monthly	Shoulder Mowing - 4-foot minimum on each side of trail (where applicable)
	Pavement Sweeping to remove gravel, wet leaves, broken glass and other debris
Annually	Pruning - 4 feet back from sides of trails and vertically to maintain needed clearance
	Fencing maintenance
	Evaluation and removal of unhealthy or dead trees and limbs
	Maintenance of drainage features including culvert and inlet clean out
	Inspection of trail surfaces to determine need for patching / regrading
	Bridge Inspection (Inspect every two years by professional engineer)
2-years	Replace on-street pavement markings (bicycle sharrows)
5-years	Sealcoat asphalt trails
10-years	Resurface and/or regrade trails
20-years	Replace / reconstruct trails
As required	Signage - Maintain and replace as necessary
	Gates / Bollards - Inspect and repair
	Removal of fallen trees and limbs
	Graffiti control and vandalism repair
	Address any maintenance problems and hazards reported by trail users
	Patching and minor pothole repair
	Trail Surface (on local roads) - Resurface
	Trail Surface (gravel road) - Repair surface damage from vehicles, erosion, etc.
	Trail Surface (boardwalk) - Repair and replace damaged areas

ESTIMATED MAINTENANCE COSTS

The costs associated with the repair and maintenance of the trails should be considered an ongoing expense and should be reflected in the township’s annual budget. Costs will vary dependent on maintenance capabilities already in place, the type of trails, and the extent to which volunteer labor is used.

Based on data from other existing trails, annual maintenance costs range from approximately \$2,000-\$7,500 per mile as shown below. As the township currently has some trails already in place, the township should review its current maintenance expenses as a potential source for estimating future maintenance costs. Once the trail is open, future budgets should be based on actual costs from the first few years of operation.

Table 19 - Estimated Maintenance Costs

Trail Type	Trail Length	Estimated Maintenance Costs per Mile	Source of Cost Estimate
Bicycle Lanes	1 mile	\$7,400	Tri-Municipal Master Trail & Greenway Plan (2010) http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_004949.pdf
Off-Road Trails	1 mile	\$3,000	Tri-Municipal Master Trail & Greenway Plan (2010) http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_004949.pdf
Off-Road Trails	1 mile	\$1,000 - \$5,000	Destination Peace Valley Feasibility Study (2011) http://www.doylestownpa.org/wp-content/uploads/2013/09/Destination-Peace-Valley-Feasibility-Study-final-1-2011.pdf
Conewago Rail-Trail	5.5 miles	\$2,750	Lebanon Valley Rail-Trail and Conewago Recreation Trail 2011 User Survey (2011) http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_009851.pdf
Lebanon Valley Rail Trail	15 miles	\$2,000	Lebanon Valley Rail-Trail and Conewago Recreation Trail 2011 User Survey (2011) http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_009851.pdf
Off-Road Trails	1 mile	\$2,000	Rail-Trail Maintenance and Operations (2005) http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_002300.pdf
Off-Road Trails	1 mile	\$5,000 - \$7,000	Cresheim Trail Feasibility Study (2008) http://www.cheltenhamtownship.org/files/documents/plans_studies_drafts-Cresheim-Trail-Final-Report-05-23-08-R.pdf

SAFETY AND SECURITY

Buckingham Township should work in cooperation with its police department and the Buckingham Volunteer Fire Department to develop and implement a safety and security plan for the proposed trail network. This plan should consist of well-defined safety and security policies; the identification of trail management, law enforcement, emergency, and fire protection policies; and a system that offers timely response to issues or problems related to safety and security. Important components of the safety and security plan should include:

- Institution of user rules and regulations
- Preparation of a trail and bicycle safety manual
- Development of trail emergency procedures
- Preparation of a safety checklist for the trails
- Preparation of a trail user response form

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- Development of a system for accident reporting and analysis
- Regular maintenance and inspection programs
- Site and facility development and review
- Public education and information programs including educating users on safety tips for on-road bicycling
- Employee training programs for safety and emergency response

In addition to the design of a safety and security plan, the township should proactively address trail safety in the design phase of the trails. Although there are many safety regulations required by the Pennsylvania Department of Transportation specific to on-road trail and bicycle facilities, as well as the types, placement, and required signage for the crossing of roads, the township should also consider utilizing Crime Prevention through Environmental Design principles during the trail design process.

CPTED principles are designed to encourage desired behavior, and discourage undesired behavior on the trail system. CPTED is defined as “the proper design and effective use of the built environment that can lead to a reduction in the fear and incidence of crime and an improvement in the quality of life.” As applied to trails, CPTED principles focus on access control, maximizing visibility of the trail from the surrounding community, clearly defining public and private properties and intended uses, facilitating emergency response, and long-term maintenance of the trail.

In addition to following PennDOT safety requirements and CPTED principles during the design process, the township should ensure that design and construction documents for the trails are reviewed by appropriate agencies to ensure that they meet all current safety regulations.

Finally, during the construction phase, the township should discourage the general public from using any segment of the trails that are under construction such as was done recently with the construction of the trails within Owls Nest Park. Trail segments should not be considered open for public use until a formal dedication ceremony has been staged and authorized agents of the township have declared the pathway open.

LIABILITY AND RISK MANAGEMENT

LIABILITY²

Trail projects often generate concerns about liability. These concerns may come from individual property owners, organizations, and municipal, county and state governments. The Rails to Trails Conservancy has published a primer on liability related to rail trails that provides useful information on this topic. It can be downloaded at the following website: <http://www.railstotrails.org/resourcehandler.ashx?id=3501>.

There are three legal precepts, either alone or in combination that define, and in many cases, limit liability for injury resulting from trail use. The first is the concept of duty of care that speaks to the responsibility that a landowner (private or public) has to anyone on their land. Second is the Recreational Use Statute (RUS) which is available in all 50 states and provides protection to private landowners and some public landowners who allow public free access to land for recreational purposes. Third, for all private and public parties, liability insurance provides the final line of defense.

² Morris, High (2000), A Primer on Trail-Related Liability Issues & Risk Management Techniques. Washington D.C.: Rails to Trails Conservancy. P 6-9.

DUTY OF CARE

Tort law, with regard to finding fault for an incident that occurs in a particular location, is concerned with the “class” of person who sustained the injury and the legal duty of care owed to a person in that class. The legal duty of care that a landowner owes a member of the general public varies from state to state but is generally divided into four categories. In most states, a landowner’s responsibility for injuries depends on the status of the injured person. A landowner owes increasingly greater duties of care (i.e.; is more at risk) if the injured person is a “trespasser,” a “licensee,” an “invitee,” or a “child.”

Trespasser – a person on land without the landowner’s permission, whether intentionally or by mistaken belief that they are on public land. Trespassers are due the least duty of care and therefore pose the lowest level of liability risk. The landowner is generally not responsible for unsafe conditions. The landowner can only be held liable for deliberate or reckless misconduct, such as putting up a trip wire. Adjacent landowners are unlikely to be held liable for injuries sustained by trespassers on their property.

Licensee – a person on land with the owner’s permission but only for the visitor’s benefit. This situation creates a slightly higher liability for the landowner. For example, a person who is permitted to hunt on a farm without paying a fee, if there were no RUS, would be classified as a licensee. If the landowner charged a fee, the hunter would probably be classified as an invitee. Again, the landowner is not responsible for discovering unsafe conditions; however the landowner must provide warning of known unsafe conditions.

Invitee – a person on the owner’s land with the owner’s permission, expressly or implied, for the owner’s benefit, such as a paying customer. This is the highest level of responsibility and therefore carries the highest level of liability. The owner is responsible for unknown dangers that should have been discovered. Put a different way, the landowner has a duty to:

- 1) Inspect the property and facilities to discover hidden dangers;
- 2) Remove the hidden dangers or warn the user of their presence;
- 3) Keep the property and facilities in reasonably safe repair; and
- 4) Anticipate foreseeable activities by users and take precautions to protect users from foreseeable dangers.

The landowner does not ensure the invitee’s safety, but must exercise reasonable care to prevent injury. Generally, the landowner is not liable for injuries caused by known, open, or obvious dangers where there has been an appropriate warning. For example, customers using an ice rink open to the public for a fee would be invitees.

Child – even if trespassing, some states accord children a higher level of protection. The concept of “attractive nuisance” is particularly relevant to children. Land forms such as ponds can be attractive to children who, unaware of potential danger, may be injured if they explore such items.

RECREATIONAL USE STATUTES

Recreational use statutes are now on the books in all fifty states. These state laws provide protection to landowners who allow the public to use their land for recreational purposes. The theory behind these statutes is that if landowners are protected from liability they would be more likely to open up their land for public recreational use and that, in turn, would reduce state expenditures to provide such

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areas. To recover damages, an injured person must prove “willful and wanton misconduct” on the part of the landowner essentially the same duty of care owed to a trespasser. However, if the landowner is charging a fee for access to the property, the protection offered by the recreational use statute is lost in most states.

Pennsylvania’s Recreational Use of Land and Water Act (RULWA) limits landowners liability for personal injury or property damage if they make their land available to the public for recreation for no charge. The purpose of the law is to encourage landowners to allow hikers, fishermen, and other recreational users onto their properties by limiting the traditional duty of care that landowners owe to entrants upon their land. So long as no entrance or use fee is charged, the Act provides that landowners do not have to keep their land safe for recreational users and have no duty to warn of dangerous conditions. This immunity from liability does not protect landowners who willfully or maliciously fail to warn of dangerous conditions.

Landowners who permit or invite members of the general public onto their properties for recreational purposes, free of charge, can raise this statute as a defense if they are sued for personal injury or property damage. RULWA does not prevent landowners from being sued; it provides them with an immunity defense to claims that their negligence caused the plaintiff’s injury. Negligence is the failure to exercise ordinary care such as a reasonably prudent and careful person under similar circumstances would exercise.

As noted above, although RULWA immunizes landowners from negligence claims, landowners remain liable for willful or malicious failure to guard or warn recreational users of a dangerous condition of the land. To determine whether a landowner’s behavior was willful, courts will look at whether the owner had actual knowledge of the threat and whether the danger would be obvious to entrants. Actual knowledge might be presumed if the owner were aware of prior accidents at the same spot. But if the land contained a dangerous feature that should have been obvious to recreational users, they may be considered to be put “on notice,” which generally would preclude landowner liability. For more information, visit <http://conservationtools.org/guides/show/81-Recreational-Use-of-Land-and-Water-Act-ixzz3CAm0sug0>.

LIABILITY INSURANCE

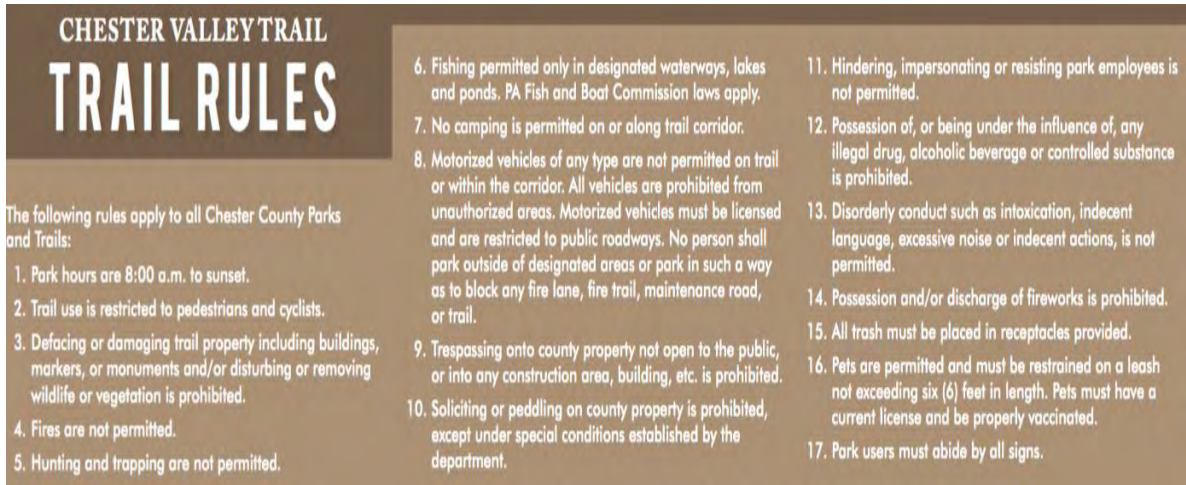
Insurance is the last line of defense. While the precepts of Duty of Care and the Recreational Use Statute may mean a lawsuit does not ultimately prevail in the courts, they cannot prevent a suit from being filed. Insurance is necessary for both trail owners/managers and adjacent landowners. Fortunately, both tend to have insurance already. Most trails are owned and operated by a public entity such as a parks department. Under this structure, the responsible entity most often is covered by an umbrella insurance policy that protects all municipal activities and facilities.

RISK MANAGEMENT

Although the Pennsylvania Recreational Use of Land and Water Act may limit the liability of property owners and government entities in the event of a personal injury lawsuit, to minimize the possibility of injuries on the trail, risk management strategies should be taken to provide protection in the event of a lawsuit. These include:

- Identify and, to the extent possible, remove hazardous conditions and attractive nuisances during the original construction of the trail.
- Design the trail for safety.
- Conduct public educational and informational programs relative to safe trail usage as it applies to various user groups including bicyclists, dog walkers, in-line skaters, etc.

- Use prominent signage to warn users of potentially dangerous areas.
- Regularly inspect the trail and correct any unsafe conditions and keep written records of inspections and maintenance activities performed.
- Develop procedures for handling medical emergencies.
- Prominently post hours of operation and other rules and regulations, along with emergency contact information. Below is an example of trail rules for the Chester Valley Trail in Chester and Montgomery counties.³



CHESTER VALLEY TRAIL
TRAIL RULES

The following rules apply to all Chester County Parks and Trails:

1. Park hours are 8:00 a.m. to sunset.
2. Trail use is restricted to pedestrians and cyclists.
3. Defacing or damaging trail property including buildings, markers, or monuments and/or disturbing or removing wildlife or vegetation is prohibited.
4. Fires are not permitted.
5. Hunting and trapping are not permitted.
6. Fishing permitted only in designated waterways, lakes and ponds. PA Fish and Boat Commission laws apply.
7. No camping is permitted on or along trail corridor.
8. Motorized vehicles of any type are not permitted on trail or within the corridor. All vehicles are prohibited from unauthorized areas. Motorized vehicles must be licensed and are restricted to public roadways. No person shall park outside of designated areas or park in such a way as to block any fire lane, fire trail, maintenance road, or trail.
9. Trespassing onto county property not open to the public, or into any construction area, building, etc. is prohibited.
10. Soliciting or peddling on county property is prohibited, except under special conditions established by the department.
11. Hindering, impersonating or resisting park employees is not permitted.
12. Possession of, or being under the influence of, any illegal drug, alcoholic beverage or controlled substance is prohibited.
13. Disorderly conduct such as intoxication, indecent language, excessive noise or indecent actions, is not permitted.
14. Possession and/or discharge of fireworks is prohibited.
15. All trash must be placed in receptacles provided.
16. Pets are permitted and must be restrained on a leash not exceeding six (6) feet in length. Pets must have a current license and be properly vaccinated.
17. Park users must abide by all signs.

³ <http://www.chesco.org/DocumentCenter/View/25344>. Accessed 9/9/16.

APPENDIX A - GLOSSARY

Access Points: Designated areas that allow the public to reach a trail from adjacent streets or areas.

Accessible: Typically refers to describe a site, building, facility or trail that complies with the Americans with Disabilities Act (ADA) Accessibility Guidelines and can be approached, entered, and used by physically disabled people.

Alignment: The configuration of the trail in horizontal and vertical planes. The bends, curves, and ups and downs of the trail.

Asphalt: Petroleum-based surface material that provides a smooth surface that is suitable for a wide variety of trail users including runners, walkers, bicyclists, skateboarders, etc.

At-Grade Crossing: A trail crossing a roadway on the same elevation as the road itself. These typically have either a traffic signal or other device that can be activated by trail users to notify vehicles of their intent to cross the roadway.

Bicycle Lane: A bicycle lane is defined as a portion of the roadway that has been designated by striping, signage, and pavement markings for the preferential or exclusive use of bicyclists. Bike lanes enable bicyclists to ride at their preferred speed without interference from prevailing traffic conditions and facilitate predictable behavior and movements between bicyclists and motorists.

Bicycle Sharrow: Shared lane pavement markings are bicycle symbols carefully placed to guide bicyclists to the best place to ride on the road, avoid car doors and remind drivers to share the road with cyclists. Unlike bicycle lanes, sharrows do not designate a particular part of the street for the exclusive use of bicyclists. They are simply a marking to guide bicyclists to the best place to ride and help motorists expect to see and share the lane with bicyclists.

Boardwalk: A structure elevating the trail above wet ground, water, or plant communities needing protection.

Cross Slope: The slope of grade of the trail perpendicular to the direction of travel. The cross slope is designed to promote drainage of water from the trail.

Design Standards: Specific guidelines / standards for the design and construction of trails that based on the intended users of the trail.

Easement: Grants the right to use a specific portion of land for a specific purpose or purposes. Easements may be limited to a specific period of time or may be granted in perpetuity, or the termination of the easement may be predicated upon the occurrence of a specific event. An easement agreement survives transfer of land ownership and is generally binding upon future owners until it expires on its own terms.

Erosion: Natural process by which soils move downhill; may be greatly accelerated on trails due to water, wind and user traffic.

Grade: The angle or slope of any surface, though here most concerned with the grade trails climb. In trail work, grade is expressed as a percentage determined by dividing the rise of the trail (vertical), over the run/length of the trail. For example, a 10-feet of rise over 100-feet or run is a 10% slope or grade.

BUCKINGHAM TOWNSHIP MASTER TRAIL AND BICYCLE PLAN

Midblock crossings: Locations between intersections where a marked crosswalk has been provided. Midblock crossings are often installed in areas with heavy pedestrian traffic to provide more frequent crossing opportunities. They may also be added near major pedestrian destinations, such as schools, where people might otherwise cross at unmarked locations.

Multi-use Trails (also referred to as shared use paths): Refers to trails designed for pedestrian, equestrian, bicycles or other non-motorized wheeled use, such as wheelchairs.

Running Slope: This is the same as grade and represents the rise of the trail vertically divided by the length of the trail horizontally.

Shoulder: The usually paved portion of a road, which is contiguous to the travel lanes, allowing motor vehicle use in emergencies. When specifically delineated and marked, shoulders may serve for specialized use by pedestrians and bicyclists.

Sight Distance: The visible and unobstructed forward and rear view seen by a trail user from a given point along the trail.

Stopping sight distance: The length of highway over which a 2-foot high object on the roadway is continuously visible to the driver, with the driver's eye height assumed to be 3.5 feet above the road surface.

Wetlands: Swampy or marshy areas usually saturated with water and offering unique habitat for flora and fauna.

APPENDIX B

PUBLIC PARTICIPATION

Buckingham Township Trails & Bike Facilities Plan Public Input Opportunities

Board of Supervisors

- Oct 26, 2016
- Apr 26, 2017
- Apr 18, 2018
- May 23, 2018
- Jul 25, 2018
- Apr 24, 2019

Park & Recreation Commission - Trails Subcommittee

- Jul 20, 2017
- Sep 14, 2017
- Oct 12, 2017
- Dec 05, 2017
- Jan 16, 2018

Public Open House

- May 10, 2018

Posting to Buckingham Township website

- Jun 01 - Jun 22, 2018

BUCKINGHAM TOWNSHIP
BUCKS COUNTY, PENNSYLVANIA

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Board of Supervisors Work Session

10/26/2016 6:00 PM

Work Session

Minutes

The work session of the Buckingham Township Board of Supervisors was held October 26, 2016 in the Township Building, 4613 Hughesian Drive, Buckingham, Pennsylvania.

Present: Jon Forest Chairman
 Maggie Rash Vice-Chairman
 Paul Calderaio Member
 Dana Cozza Township Manager
 Dan Gray Township Engineer
 Craig A. Smith, Esquire Township Solicitor

Not Present: Lynn Bush Bucks County Planning Commission
 Tom Kelso Township Water/Wastewater Consultant

The work session commenced at 6:50 p.m.

Budget – Water and Wastewater Department

Mr. Graham Orton, Director of the Water and Wastewater Department, and Mrs. Pistory, Director of Finance Department, were present. Mrs. Pistory distributed Water Department and Wastewater Department budget spreadsheets.

Water Budget

The following specific items were noted:

- Cold Spring Well CS-4 & 3 Arsenic Removal System. Mr. Orton explained this is a new item, budgeted at \$1,000,000 over a 3-year period, to install an arsenic removal system, as required by law. Mr. Orton said engineering and permitting procedures will begin in year 2017, followed by construction in 2018 and 2019.
- Water Meter Replacement Program. Mr. Orton said this is in process and will continue.
- New Water Operations Center. Mr. Orton said \$500,000 is budgeted in the Water Capital Plan (and \$500,000 is budgeted in the Wastewater Capital Plan) and each are split between years 2018 and 2019 for development of the Lindquist Property to house the new water and wastewater operations center.

- Well CS-5 Development and Connection. Mr. Orton said \$345,960 is budgeted in year 2022 to develop the well on property jointly owned by the township and the airport.

Wastewater Budget

The following specific items were noted:

Mrs. Pistory noted the Water/Wastewater Operations Center is included (same as in the Water Budget).

- Mr. Orton said they are continuing to work on getting the generators installed at all of the pump station sites and \$426,015 was budgeted in year 2016 for that purpose. He said at least \$100,000 was saved by splitting the purchasing under state contract to save 20%, and then hiring a contractor to do the installations.
- Mrs. Cozza said the pump station work is broken out to individual line items as they are complex replacement projects. Mr. Orton said they can be unpredictable, as this is what happened with PS7 that is being engineered now, and will go out to bid in year 2017.
- Mrs. Pistory noted the Cold Spring Capacity Improvements project on the new land acquired from Mike Feeney at Fieldstone, stating \$1,178,193 is budgeted for increased capacity.
- Lagoon Dredging. \$665,000. Mr. Orton said one lagoon has been dredged, and now there are two more close to needing dredging. He said this is regular maintenance that will always be necessary.

Mrs. Cozza said the water and wastewater capital plans have been highly accurate in the past few years.

Budget – Finance Department

Mrs. Pistory reported there is little change in the Finance Department budget except for insurance and small miscellaneous items.

7:30 p.m. The Work Session adjourned.

10:11 p.m. The Work Session resumed.

Keenan Mercedes – Inter-Connection, TMP 6-2-1, 6-2-4, 6-2-5

Mr. Gray said he received a request from Keenan Mercedes to inter-connect parking areas between their Wells Fargo building and the Autoland property in order to accommodate valet services from one to the other without going onto the roadway when they have special events. Mr. Gray told the Board that Mr. Myers, Zoning Officer, shared some concerns regarding available parking spaces that would remain for use by the Wells Fargo building, part of which is being converted to an urgent care medical facility by Doylestown Hospital.

Mr. Gray said he did not believe this qualified as a Land Development, but wanted the Board's consensus on the concept. The Board was fine with the concept, and agreed with a condition of parking capacity being set and noted on the plan so as not to intrude on the Wells Fargo building use.

Covenant Presbyterian Church, LD 2001-02A

Mr. Gray reminded the Board that Phase 2 of the Covenant Presbyterian Church project approved a 15,000-square foot building addition with additional parking, lights and landscaping. However, they are now revising the project and are requesting to build reserve parking areas on top of the stone underlayment that was installed during Phase 1. Mr. Gray asked if additional escrows should be required for this step. The Board agreed not to require additional escrows if they are only installing the parking area, but asked Mr. Gray to confirm that the project is only for the additional parking, and does not include the building addition.

Mini-Cellular Towers/Installations

Mrs. Cozza requested guidance on how to proceed with a number of requests the township has received for the installation of mini-cellular towers. Mr. Smith said in former conversations with the Board the main issue was whether they were being installed on existing poles or buildings, or in neighborhoods without poles. Mr. Smith also said if they are proposing a new tower with a new cellular antenna array, then it is a cellular tower that is regulated under the zoning ordinance as a telecommunication tower and is allowed use only in the overlay districts and is required to go through the Conditional Use process. Mr. Smith also noted that these communication towers established in rights-of-way may be regulated by the PUC, which overrules township ordinances.

Mr. Smith said Northampton Township has an ordinance prepared regarding this matter; the Board asked Mr. Smith to review the ordinance and they will discuss this item again afterwards.

Budget – Board of Supervisors

Mrs. Cozza said based on previous years, the budget includes \$750 for one member to attend PSATS annual convention. Mrs. Rash said she would probably go in 2017.

Mrs. Cozza also reported health insurance appears to be a 15% increase in 2017.

Budget – General Fund

Mrs. Pistory noted with Mrs. Schwartz retiring, health insurance cost may increase if the new hire has family coverage versus single.

Mrs. Cozza asked the Board their opinion on upgrading the projector and viewing screen system in the Buckingham Room, proposing a computer/projector on a rolling cart with two monitors above the dais for the audience to see and another for the Board. She said Warrington Township had a nice set-up. Mr. Forest said he would take a look at Warrington's before forming an opinion, Mr. Calderaio said he did not want it to look like a newsroom.

Budget – Administration Department

Mrs. Cozza said the only significant change is an increase in health insurance premiums.

Mrs. Pistory reported some new computers are needed and are part of the inclusive technology plan.

Budget – Police Department

Mrs. Cozza said in previous discussion regarding the police department budget, she had the following items outstanding:

- Helmets. The Board agreed to budget for the maximum number of officers on duty at one time. Mrs. Pistory budgeted for six.
- Tasers. The budget will not include tasers at this time, however the new police chief may determine their addition during 2017.
- Succession planning. Mrs. Cozza said she added money for a consultant to assist with the employee turnover expected in the next few years due to multiple retirements.
- Hats / Badges. Mr. Calderaio was in favor of hats to be worn during ceremonies; Mr. Forest was not in favor of the expense. Mr. Forest said he had suggested to the Lieutenant to gather the best-looking badges, and then get more made to match; rather than ordering all new badges.
- Training on 3D Equipment. Mrs. Cozza said she added a cushion in the training budget that could be used for the 3D equipment or for something the new chief may need that is not currently specified.

Budget – Park and Recreation Department

Mr. Forest noted the Repair Maintenance increased 75%; Mrs. Pistory reported a \$6,000 increase over last year's budget.

- **Formal Trail/Map Plan.** Mrs. Cozza requested guidance for the preparation of the formal trail map/plan, adding the Bucks County Planning Commission is offering their services to prepare the map/plan and include our Park and Recreation Commission in the process, for \$9,000. The Board was agreeable.

- Dug Outs / Batting Cages. The Board agreed to a simplified version of dugouts, with benches and fencing. They also agreed to the fenced in batting cages.

Budget – Transfers

Mrs. Pistory recommended transferring one million from fund balance and another million next year, all to capital reserve. The Board agreed.

Mrs. Cozza asked the board their opinion on doing some major renovations/addition to the administrative building, which was built in 1989, as usage of the space has changed since its inception. The Board agreed it would be good to think about what would be beneficial, rather than spending money on major internal reuses of existing space.

Election Day – Administrative Office Closure

The Board agreed to close the administrative offices this Election Day as the parking spaces will be needed by the extra voters coming out for the presidential election.

11:30 p.m. The Work Session was adjourned.

Approved by the Board of Supervisors on the 16th day of November, 2016.

Buckingham Township Board of Supervisors

Jon Forest, Chairman

Maggie Rash, Vice-Chairman

Paul Calderaio, Member

Attest:

Dana S. Cozza, Secretary

Minutes respectfully submitted by Lori Wicen.

[View Meeting Minutes prior to June 23, 2009](#)

BUCKINGHAM TOWNSHIP
BUCKS COUNTY, PENNSYLVANIA

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Board of Supervisors Work Session

4/26/2017 6:00 PM

Work Session

Minutes

The work session of the Buckingham Township Board of Supervisors was held April 26, 2017 in the Township Building, 4613 Hughesian Drive, Buckingham, Pennsylvania.

Present:	Maggie Rash	Chairman
	Paul Calderaio	Vice-Chairman
	Jon Forest	Member
	Dana Cozza	Township Manager
	Lynn Bush	Bucks County Planning Commission
	Dan Gray	Township Engineer
	Tom Kelso	Township Water/Wastewater Consultant
	Craig A. Smith, Esquire	Township Solicitor

The work session commenced at 6:00 p.m.

Request for Waiver of Land Development, submitted by Catherine A. Ponist for Crystal Clear Holdings LLC, 1950 Durham Road, TMP 6-18-20

Catherine and Dan Ponist were present to request a waiver from land development and stormwater requirements for a proposed remodeling of and addition to the existing structure, and the addition of 3 gravel spaces to the parking area. They explained with the proposed improvements only 100 square feet of impervious surface will be added to the existing footprint.

Mrs. Ponist noted they had received a comment from Knight Engineering that while reviewing aerial photos, it appeared the gravel parking area had expanded over the years. She said over the years the parking area may have changed due to the snowplow pushing the stones around, also that some of the stones were pushed into the mulch which may make it appear to be additional parking areas from an aerial view. Mrs. Ponist also explained they had spray painted white lines on the gravel so that customers knew where to park. She said the only paved parking are the required handicapped spaces and near Route 413.

Mr. Gray described the project's history, noting that originally the first phase of the expansion was approved with stormwater management deferred, with the expectation that a fully engineered land development submission would be prepared for the second phase of the building addition and parking, with stormwater addressed to cover both phases of the development. What is proposed now is the second phase, but with another land development waiver being sought.

Mrs. Rash explained that stormwater management requirements are mandated by the state, and cannot be waived by the township.

Mrs. Ponist said due to the existing drainage ditch located in the center of the property, they have severe restrictions in developing the lot, and felt their lot accommodates runoff from other properties. Mr. Gray agreed there are restrictions on the lot, however emphasized that stormwater management cannot be waived as it would then affect others located downstream. He said there are underground methods to control the stormwater that could be used on the lot. Mr. Ponist clarified that just to get a cost estimate on the stormwater management controls they would need to get the property surveyed and drawings made; Mr. Gray concurred.

Mrs. Ponist said they had already scaled back the original addition because of the expense, and with the cost of the stormwater management controls, they would be putting too much money into the property that could not be returned.

The Ponists' thanked the Board for their time.

Bucks County Planning Commission / Buckingham Township Park and Recreation Commission

Several members of the Buckingham Township Park and Recreation Commission including Jeff Lake, Louise Silberg and Steve McKee, along with Rebecca Fink of the Buckingham Township Planning Commission, and Tom Kelso who is a member of the Doylestown Township Park and Recreation Commission and serves on their Trails Committee, were present to participate in a discussion regarding the Buckingham Township trail system.

Mr. Paul Gordon, Trails Planner for the Bucks County Planning Commission, presented a project overview that covered the history of trails planning in Buckingham Township, goals of the Trails Plan, factors influencing and the process involved in the development of the Trails Plan, and the final outcome/product of the planning process.

Mr. Gordon said the steps involved would be to:

- 1) Identify feasible route(s).
- 2) The Township would then fund the design and engineering stage.
- 3) The County would apply for a "design only" grant from DCNR.
- 4) The easements for those areas where the trails cross private property would have to be acquired.
- 5) Funding would be sought from non-township sources (most funding will not pay for the easements).
- 6) The project is bid for construction.

Mr. Gordon explained there are tiers of funding available for trail creation, sources include the DCNR as a primary source, DCED, and PennDOT's TIP program, as well as funding from private firms such as William Penn, the Knight Foundation and also PECO Green Region. He said sometimes multi-model funding is used. Mr. Kelso noted private funding is also an option.

Mr. Gordon said multi-municipality projects are more highly considered for funding In Buckingham there is potential for multi-municipal projects in the Landisville Road area, as well as potential for the airport on its property and township to form a joint project that could connect to the Cold Spring Creamery Road trail. He also suggested it might make sense to start with the park trails and build from there throughout the developments.

Mr. Gordon proposed a committee could be formed within the township of members who could study segments of the township (either based on location or population density), and evaluate while prioritizing locations. He said that trails with more connectivity are more likely to receive a grant whereas if an expensive bridge is needed, it would be less likely to be considered for a grant.

Mr. Gordon stressed when considering placement for new trails, the state does not allow trails to be placed on their preserved property. On lands preserved by the county and/or township an easement would need to be granted by the landowner prior to consideration of a trail. He also said the goal is to connect trails already in place.

Mr. Smith asked if the county anticipated condemning properties for the trails in order to acquire the easements; and Mr. Gordon said they do not condone that, rather they work with the landowner and may negotiate incentives, adding that sometimes the easements are even donated.

Mr. Gordon said many trails are constructed of fine crushed stone, which are ADA compliant and inexpensive. However in an area prone to flooding, a paved trail would be preferred. Mr. Calderaio asked if a trail could have both types of surfaces for different uses, and Mr. Gordon said yes, Montgomery County has equestrian use trails (soft) and hard asphalt for bicycles installed in the same location.

Mr. Gordon said most of the trails are 10' wide and serve as an alternate form of transportation. However the 202 Expressway trail is 12' wide due to the extremely large right of way.

Mr. Smith asked how much money is needed per mile to build a trail; Mr. Gordon replied the average cost is one million dollars (\$1,000,000.00) a mile for a paved asphalt 10' wide trail, with boardwalks and bridges being very expensive. He said a crushed stone path averages \$400,000 per mile. Mr. Gordon said this is for construction only. To that cost you need to add engineering which averages 20% of the construction cost, plus a contingency for cost overruns. Mr. Gordon commented this did also not include the cost of acquiring easements from private parties, which cost is about two dollars (\$2.00) a square foot. Mr. Gordon noted that the necessary stormwater management for impervious surface makes the construction expensive, and if pervious pavement is used it needs to be periodically vacuumed and depends on the soil conditions for consideration.

Mr. Lake asked what is the next step; and Mr. Gordon recommended the Board of Supervisors appoint a sub-committee of the Park and Recreation Commission to oversee the plan and process, with the committee to meet monthly. Mr. Gordon said the first meeting could be a joint county and township committee meeting to investigate potential trails.

The Board agreed that along with Mr. Gordon and Mr. Ives of Bucks County Planning Commission, Louise Silberg, Rebecca Fink, Dan Gray and Tom Kelso would comprise the membership of the Trail Development Sub-Committee of the Buckingham Township Park and Recreation Commission.

Mr. Smith asked if grass trails were ever used; Mr. Gordon replied yes, they are fine for nature walking but must be kept mowed.

Mr. Calderaio asked if steps were ever installed on the trails and Mr. Gordon said not usually as steps are not ADA compliant and it would limit the funding possibilities.

Mr. Forest asked if other townships snowplow their trails; Mr. Gordon said that is up to the municipality, adding if the trail is not plowed it can be used for snow shoes or cross country skiing.

Mrs. Fink requested a current trail map and Mrs. Cozza said Mr. Gray is preparing one to use as a base, and it will be considered for adoption by resolution in the near future by the Board of Supervisors. Mr. Gordon stressed it must mirror the county's map showing state preserved farm locations, township sprayfields, and other such features. Mrs. Fink said this will be a useful tool for the Planning Commission in reviewing proposed development and encouraging expansion of the trail system.

Mr. Gordon said Mr. Gray had asked about sidewalks in villages being part of the trail plan, and the reply is that they may be considered if they led to connectivity, however DCNR does not fund these. Mr. Gray noted residential sidewalks are 4', commercial are 6' and trails have to be at least 10' wide. Mr. Gordon said for community development a 5-6' trail would work, but would not get funding.

Mr. Lake thanked the County and the Board of Supervisors for providing the trail program update and encouragement for the ad hoc committee.

Mr. Lake requested an update on the Holicong Park Expansion project; Mr. Gray replied the bid has been awarded and on-site preparation will begin this spring. He said some of the features within the first phase include 3 multi-purpose fields near Route 263/202, 2 tennis courts (which may include pickleball courts), and a 6' wide mowed trail.

Mr. Lake asked why the Park and Recreation Committee's request for shade canopies at George M. Bush park were denied, and also made a new request for benches to face the sandbox for parents to sit upon. Mrs. Rash said that the Board had concerns regarding the ongoing maintenance of canopies, including damage due to vandalism. Mr. Forest said benches facing the sandbox should be considered.

BUCKINGHAM TOWNSHIP
BUCKS COUNTY, PENNSYLVANIA

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Board of Supervisors Work Session

4/18/2018 6:00 PM

Buckingham Township Board of Supervisors

Work Session

Minutes

The work session of the Buckingham Township Board of Supervisors was held April 18, 2018 in the Township Building, 4613 Hughesian Drive, Buckingham, Pennsylvania.

- Present:
- | | |
|-------------------------|----------------------------------|
| Maggie Rash | Chairman |
| Paul Calderaio | Vice-Chairman |
| Jon Forest | Member |
| Dana S. Cozza | Township Manager |
| Daniel Gray | Township Engineer |
| John Ives | Bucks County Planning Commission |
| Craig A. Smith, Esquire | Township Solicitor |

Not Present: Tom Kelso Township Water/Wastewater Consultant

The work session commenced at 6:00 p.m.

Road Concerns

Mrs. Cozza informed the Board that following previous conversations and requests from concerned citizens, she had formally requested PennDOT to study the speed limits along Route 202 approaching the Route 413 intersection. She said the results showed that rather than the speed reduction to 35mph after the Route 413 intersection, the speed reduction should start just after the entrance to Apple Hill townhomes where you are approaching the Route 413 intersection. Mrs. Cozza said PennDOT has instructed the township to change the signage from "Reduced Speed Ahead" to Speed Reduction signage.

Mr. Forest noted that PennDOT has completed the safety markings approaching the intersection of Mill Road and Route 202 as requested by the township and several residents.

Mrs. Cozza said that PennDOT is working on a traffic study for Pineville Road and she will share the results when they are received.

Lindquist House Renovation

Mrs. Cozza updated the Board on the Lindquist House renovation project, proposing the project be phased due to higher construction costs than were originally anticipated. Mrs. Cozza proposed phases as 1) farmhouse renovation, 2) construction of an unheated storage building, 3) construction of a heated equipment garage with locker room.

Mrs. Cozza said the farmhouse renovation for the building is proposed at \$553,000, including the offices, a kitchenette, and an ADA toilet with handicapped accessible entry. She said replacement of the heating system and running wastewater to the house is in the process of being quoted. Mrs. Cozza said she is told the existing well is fine to use.

Mrs. Cozza said the heated equipment garage will contain a locker room and space to accommodate 10 bays worth of equipment (currently stored in other water and wastewater locations). She said the estimate for this building is 1.2 million dollars.

Mrs. Cozza said that the unheated storage building will be used to store farm equipment and is estimated to cost \$500,000.

Mrs. Rash explained the project to the audience, saying the Lindquist Property on York Road is owned by the township, and the township is planning to repurpose the historic home by using it to provide the township's water and wastewater department with one central location, rather than its current multiple offices. Mr. Robb, Indian Walk, commented it is nice to use a structure like that.

Mr. Calderaio stated the monies used for this project would come from the residents who enjoy the services of the township's public water and wastewater systems.

Ms. Shannon Sticker, Kavan Court, asked if there would be an increase in water and wastewater rates to fund the project. Mrs. Cozza said no, the township has been planning this project for many years and has been setting aside monies. Ms. Sticker asked what percentage of residents use the public system versus private. Mrs. Cozza said there are approximately 2,000 customers total, however some use only water and some use only wastewater, as many residents have private wells or sewer, and others have township water and sewer service from Bucks County Water and Sewer.

Bucks County Airport Authority – Project Status Update

Mr. Geoffrey Graham, Attorney for the Bucks County Airport Authority, Mr. Rick Holes, engineer for the Authority, and Mr. Lou McKay and Mr. Paul Tolleni, Bucks County Airport Authority members, were present to discuss upcoming and ongoing projects at the "Doylestown" Airport.

Mr. Graham explained that there are several projects planned over the next couple of years, including:

1) Resurfacing the existing runway, which is very old and heavily cracked with deep fissures that have been patched several times. Mr. Graham emphasized they are not extending or widening the existing runway. He said they are not milling out substrate or adding any increased load bearing capacity. They are simply resurfacing for safety and function. Mr. Graham said that the schedule to resurface the runway will involve shutting the airport and runway down for a period of time, with some operations to be done at night under lights. Mr. Holes said it may take about a month, working 5 days a week, 10 hours a night between 8:00pm and 6:00am and with the airport closed and reopening during the day, to get the job done. Mrs. Rash questioned if any residences nearby would be bothered by the light, and it was agreed to notify the neighbors of the intended work.

2) Add two proposed paved bypass taxiways between the existing bypass taxiway and the runway. Mr. Tolleni explained by adding two bypass taxiways it will help clear up traffic issues on the existing bypass taxiway and runway.

3) Replace runway lighting. Mr. Holes explained the runway and taxiway lighting needs to be brought up to current day standards. He said this does not include the parking lot area.

4) Install Hard Surface Tie Downs. Mr. Holes said they have received enough funding to install six hard surface tie downs along the taxiway area, where currently they are on grass. Mr. Holes said an asphalt surface will be much more useful. Mr. Gray said the tiedown apron expansion area is behind the PA Biotechnology Center and was approved as part of the Phase 2 Land Development. Mr. Holes concurred, adding they have been working with the township's Landscape Review Consultants on a shared border landscaping buffer. Mr. Holes added they plan to build another 6-8 hard surface tie downs in 2020-2021 if funding is received, and at that time the stormwater portion of the Phase 2 Land Development could be completed.

Mr. Graham provided the Board with an aerial picture of the proposed 2018 projects and the Board said that would be nice to display in the meeting room for the public to see.

Mr. Graham noted the airport authority has received grants to fund these proposed projects, adding they wait until grant monies are received before proceeding to the next project.

Mr. Calderaio asked if the airport planned on producing an updated master plan. Mr. Graham said yes, however that would be grant funded and they do not yet have that grant, and it would probably happen in a couple of years. Mr. Graham emphasized the master plan is a design plan of possibilities, not necessarily what will get done.

Mr. Graham asked if Mr. Stannik, Chairman of the Buckingham Township Environmental Advisory Commission, was present and was told no, he had other obligations this evening. Mr. Graham said Mr. Stannik had requested a copy of the airport's Master Plan, and so he brought a hard copy to provide to him, noting the plan was written 12 years ago and may not apply today. Mr. Graham explained the process that a 12-year plan is required in order to be eligible for funding opportunities.

Mr. Smith inquired about the airport's recent acquisition of the neighboring Goff property. Mr. Graham said a majority of one grant was spent to purchase the 30-acre property, which the FAA says is a contiguous compatible use property. Mr. Graham said there are many trees on the property that need to be removed but there are no other plans for development of the property at this time.

Discussion was held on renovating or relocating the administration building, also known as the FBO (Fixed Base Operation). Mr. Graham said the building was built in the early 1960's, is not environmentally sound and is not ADA compliant. However they do not have the money to fund any changes at this time. Mr. McKay said it is part of the 12-year planning process for funding and said if they renovated they would have it fit the Bucks County theme in appearance, be low impact, energy efficient, and ADA compatible with an elevator. Mr. Tolleni said it also is noncompliant in being too close to the runway, as there should be a minimum of 250' from centerline of runway to any buildings or parked aircraft.

Disclosure Ordinance

Mr. Smith explained that he and Mr. Gray had discussed the benefits to potential township residents of having a disclosure statement available at the time of purchase for vacant properties that require stormwater, septic, potable water and utility improvements for the construction of a home. Much like the existing ordinance requires developers to make disclosures to prospective purchasers, this change would assure notice is given potential future residents of the expense and private and public improvements, including engineering and legal cost thereof, they would need to undertake in order to build a home on an undeveloped lot.

Mr. Smith said the information on developing vacant lots is available through court house records, however, most title insurance companies do not present it unless asked. Moreover, unless the future resident hires an attorney who can advise them and knows what to look for, naive purchasers are caught unawares and place blame for their predicament and unforeseen expenses on the Township.

Mr. Forest asked if there are that many lots out there in this circumstance, and Mr. Smith said yes.

Mr. Calderaio said he thinks the disclosure would help the person buying the lot, and also help our taxpayers as it takes a lot of resources and money for township staff and consultants to deal with persons who were misinformed when they bought an unimproved lot. Mrs. Rash said its also providing customer service and is the right thing to do.

Mrs. Rash asked if the disclosure could be provided to potential residents who call the township to do their research prior to purchasing property and Mrs. Cozza said yes. Mr. Smith suggested it be posted on the township website.

7:30 p.m. The Work Session was adjourned.

8:17 p.m. The Work Session resumed.

Meeting Date – Ad Hoc Trail Committee

Mrs. Cozza asked the Board for a date when they would like the Ad Hoc Trail Committee to present their results to the public. Mr. Ives said this would be an open house format showing the trail on poster boards in various stages, providing the residents with an opportunity to view and comment, followed by possible revisions and then presentation to the Board of Supervisors. The Board agreed on Thursday, May 10, 2018.

Act 172 Firefighters Tax Act

Mrs. Cozza updated the Board with information regarding the firefighter's tax act where the township may provide active members of fire companies tax breaks as an incentive for recruitment of volunteer firefighters. She said various municipalities are discussing property tax relief or earned income tax relief and are also discussing a contribution amount. She explained it is complicated by fire companies that cross township borders, and municipalities debating varying amounts of relief of varying types. Mrs. Cozza said she will continue to collect information and report back to the Board.

Meeting Schedule

Mrs. Cozza requested guidance on the May Board of Supervisor meeting dates. The Board agreed to cancel the May 9, 2018 Work Sessions and Regular Business Meetings and hold the May 23, 2018 Work Session and Regular Business Meeting as scheduled.

9:16 p.m. The Board retired into executive session to discuss legal matters concerning the potential purchase of an easement on the Maximuck Tract, and police personnel matters.

9:30 p.m. The Work Session was adjourned.

Approved by the Board of Supervisors on the 23rd day of May, 2018.

Buckingham Township Board of Supervisors

Maggie Rash, Chairman

Paul Calderaio, Vice-Chairman

Jon Forest, Member

Attest:

Dana S. Cozza, Secretary

Minutes respectfully submitted by Lori Wicen.

[View Meeting Minutes prior to June 23, 2009](#)

BUCKINGHAM TOWNSHIP
BUCKS COUNTY, PENNSYLVANIAMeeting Minutes And Agendas

Filter: Search: (optional)**Board of Supervisors Work Session****5/23/2018 6:00 PM**

The work session of the Buckingham Township Board of Supervisors was held May 23, 2018 in the Township Building, 4613 Hughesian Drive, Buckingham, Pennsylvania.

Present:

Maggie Rash, Chairman

Paul Calderaio, Vice-Chairman

Jon Forest, Member

Dana S. Cozza, Township Manager

Daniel Gray, Township Engineer

John Ives, Bucks County Planning Commission

Craig A. Smith, Esquire, Township Solicitor

Not Present:

Tom Kelso, Township Water/Wastewater Consultant

The work session commenced at 6:00 p.m.

Trail Committee Update

Mr. Paul Gordon, Bucks County Planning Commission, was present to provide the Board of Supervisors with an update on the results as produced by the recent meetings of the Buckingham Township Ad Hoc Trail Committee.

Mr. Gordon distributed maps to the Board and also displayed them on an easel for the audience. He explained the committee began by dividing the township into 6 planning areas and then focused on each by itself and then as an integrated township concept. He pointed out that the maps include existing trails and proposed trails or bike routes.

Mr. Gordon said the committee recognized a large challenge in planning trails is acquiring the proper right-of-way easements and may also be limited by environmental constraints. He said for those reasons, they looked more at establishing formal bicycle routes, using primarily lower volume and lower speed roadways that are suitable for biking.

Mr. Gordon said the committee identified 60 different trail or bike routes, 54 miles total, with 36 of them "on road" biking, or "sharrows" (a shared lane marking indicating a shared lane environment for bicycles and automobiles), (which is the least expensive option). He said the routes could be identified with bike sharrows (a bicycle with two chevron arrows) painted on the roadway, or by posting a "share the road" sign (a more effective cost). Mr. Gordon explained of the 54 miles identified, 36 are bike routes and 13 are shared use trails. He said they selected the routes and trails based on their safety, cost effectiveness and making overall sense.

Mr. Gordon proposed offering the community a public comment period in which to view the trail maps on the township website and offer comments prior to drafting the plan. He said following receipt of the comments he would analyze and present the Board with the results. The Board agreed that would be a good thing to do. The Board thanked Mr. Gordon for his time and leadership on this project.

Park Usage Fee Waiver Request – CB East Cheerleaders

Mrs. Cozza explained the township had received a fee waiver request for renting a park pavilion for use by the Central Bucks East Cheerleaders. Mrs. Rash asked if we normally waive the fee, and Mrs. Cozza replied we do not, as it is set low and just covers the cost of inspection following the use. The Board agreed to keep it uniform and not to waive the fee for this request.

June Meeting Dates

Mrs. Cozza asked the Board what meeting date(s) should be scheduled in June, and the Board agreed to cancel the June 13th meetings, and keep the June 27th meetings.

Fee Schedule

Mrs. Cozza explained that the Board may wish to consider revising the Fee Schedule resolution moving the placement of the Park and Recreation Fee from the Subdivision Fee area to the Building Permits Fee area. She explained that the fee was historically located with the subdivision fees, due to it being required when a house is built, however if there is a subdivision and the home is not built right away or even for many years, the person purchasing the lot and building home may question the fee. Mrs. Cozza said the fee has normally been collected as part of the building permit process and may make more sense to be listed in that area of the resolution. Mrs. Cozza suggested adding language that the Park and Recreation Fee is due when the building permit application is filed, or something similar. The Board agreed to Mrs. Cozza's request and asked that it be included in the next revision of the fee schedule resolution.

Mrs. Cozza questioned the Zoning Hearing Board fees, as they have not been raised in years, and processing costs have increased, especially the legal advertising which is required by law. Mrs. Rash said it is rational that the fee paid by the applicant should cover the expenses of processing the application, and not be paid by other township residents. Mr. Forest and Mr. Calderaio agreed. Mrs.

Cozza was instructed to adjust the fees accordingly and include in the next revision of the fee schedule resolution.

Bamboo Ordinance

Mrs. Cozza said every year the township receives complaints from one neighbor about another neighbor's bamboo encroaching onto their yards or blocking sight distances along roadways. Mr. Smith reminded the Board they had discussed this previously, and the ability to enforce the ordinance is the ongoing issue. Mr. Gray noted bamboo is also spread by bird droppings, can grow naturally, and that it spreads laterally underground making it very difficult to identify who planted it. Mr. Forest suggested that the township gets a sample ordinance from another township or borough and find out how they enforce it. Mr. Smith advised the township would likely be engaged in neighbor disputes if they enacted an ordinance.

7:15 p.m. The Board retired into Executive Session to discuss potential litigation concerning the Feeney tract.

7:30 p.m. The Work Session adjourned.

9:32 p.m. The Work Session continued.

Police Department Body Cameras

Mrs. Cozza said that Chief Gallagher had requested body cameras for the officers to wear as standard equipment. Mr. Forest said some townships have received grants for the equipment. Mrs. Cozza said she had questions about storage requirements – retention of records and storage location due to the large file size of videos. Mr. Forest suggested more research be done and then discussion held again.

9:50 p.m. The Work Session adjourned.

Approved by the Board of Supervisors on the 27th day of June, 2018.

Buckingham Township Board of Supervisors

Maggie Rash, Chairman

Paul Calderaio, Vice-Chairman

Jon Forest, Member

Attest:

Dana S. Cozza, Secretary

Minutes respectfully submitted by Lori Wicen.

[View Meeting Minutes prior to June 23, 2009](#)

BUCKINGHAM TOWNSHIP
BUCKS COUNTY, PENNSYLVANIA

Meeting Minutes And Agendas

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Board of Supervisors Work Session

7/25/2018 5:00 PM

The work session of the Buckingham Township Board of Supervisors was held July 25, 2018 in the Township Building, 4613 Hughesian Drive, Buckingham, Pennsylvania.

Present:

Maggie Rash, Chairman

Paul Calderaio, Vice-Chairman

Jon Forest, Member

Dana S. Cozza, Township Manager

Daniel Gray, Township Engineer

John Ives, Bucks County Planning Commission

Craig A. Smith, Esquire, Township Solicitor

Not Present:

Tom Kelso, Township Water/Wastewater Consultant

The work session commenced at 5:00 p.m. with Executive Session with the township consultants and a traffic engineer to discuss potential litigation issues that may be coming before the Board with regard to the Cross Keys Enterprise Zone Overlay District.

6:00 p.m. The Work Session continued in regular session. Mr. Ives departed.

McKee Tract – Revised Pre-Submission Sketch Plan dated July 19, 2018, Lower Mountain Road / Creek Road / Durham Road (Route 413), TMP 6-18-76 & 6-18-79

Ed Murphy, Esquire and Mr. Greg Glitzer of Gilmore & Associates, were present along with Mr. Fred Ebert of Ebert Engineering and Mr. Mark McGonigle from The McKee Group.

Mr. Murphy said that this project was presented to the Board of Supervisor's two years ago, was discussed by the Planning Commission one month ago, and was modified since that discussion. Mr. Murphy said that Mr. Glitzer will be describing the transition of the plan from the original to the current concept. Mr. Murphy said that Mr. Fred Ebert of Ebert Engineering is present to discuss his design of the onsite sewage disposal system.

Mr. Glitzer provided project history with the following details, saying that all iterations have used the B14 Living Community zoning ordinance use:

2016 Sketch Plan

- Similar to the prototypes in the Subdivision Ordinance shown as a template for use B14.
- Based on a desktop level of understanding the soil capacities, showing the wastewater treatment site along Creek and Lower Mountain Road with a foreground of green along Creek Road and some secondary green areas, with the development in a compact fashion towards Durham Road.
- 63 units relying on 42 units for basic density permitted in B14 and 50% increase using Transferable Development Rights (TDR's).

Mr. Glitzer stated that after starting soil testing, the soil scenario was the opposite of their original thought. Soils by Creek Road were not so well suited for spray irrigation capacity, and soils closer to Durham Road showed more promise. This led to the 2018 plan layout.

2018 Sketch Plan

- B14 living community plan – much more compact than the 2016 Sketch plan. Showing the bulk of open space towards Durham Road and development in a compact fashion along Creek and Lower Mountain Roads. Foreground green space along Creek Road and some secondary green areas, as well.
- Concern over not meeting the intent/details of B14 layouts.
- Concern over not complying with solar orientation requirements in the Subdivision and Land Development Ordinance.
- 42 Mixed use – singles and twins. Not using TDR's – basic maximum density based on size of site.

2018 Revised Sketch Plan

- B14 living community plan.
- More centrally located green system with a primary green in the center surrounded by units, with a secondary green. Road alignment promoting solar orientation and 80% of units in compliance.
- Less efficient with open space / tradeoff from previous 2018 plan which provided almost 8 acres of open space; this one showing 2 acres beyond the required amount.

Mr. Glitzer stated the 2018 plans rely on a lagoon for wastewater off the Durham Road setback and two spray fields. The area between the spray fields is the 50% of required fully farmed open space. He said the revised plan also shows additional farmland that could be preserved near the bend of Creek Road.

Mr. Fred Ebert explained that he visited the site with Joe Valentine, soil scientist, and they tested the entire property for suitable wastewater treatment areas. Their results of the stringent EPA method of mounding analysis and soil testing identified two areas along Durham Road. They tested by Creek Road but the areas were not suitable.

Mr. Murphy said per ordinance they are required to demonstrate to the township that there is a self-sustaining self-compliant free standing sewage treatment solution. He said they prefer the 2016 sketch with units closer to Durham Road, however due to the sewage solution they are compelled to adopt the 2018 layout along Creek and Lower Mountain Roads.

Mrs. Rash opened the conversation to the audience for their comments.

Mr. Glenn Thomson, Lovering Drive, said as a member of the Planning Commission he wanted to know what Mr. Murphy's team had taken away from the last meeting. Mr. Murphy said they heard tons of negative comments about traffic, density, location of sewer and more that was decidedly negative. He said from a planning standpoint the centralized green on the plan from June 2018 met the original directives, however the lots lacked solar orientation, with both items focused on in the revised 2018 plan.

Ms. Lutz Fischer, Lower Mountain Road, asked if the fact that the Planning Commission had a negative impression of the plan had any impact to the applicant's team? Mr. Murphy said yes, however the bottom line is designing a plan in accordance with township ordinances, and they believe both of the 2018 plans meet the ordinance requirements.

Ms. Fischer said traffic is her largest concern, adding she lives on Lower Mountain Road, and knows that she cannot turn left onto Durham Road from Lower Mountain or Upper Mountain Roads. She asked why they cannot make an entrance onto Durham Road. Mr. Murphy said the Durham Road option is not one they have, unless the township would cooperate and grant relief from Township land use ordinance requirements.

Mr. Forest asked about a road connecting with Buckingham Springs. Ms. Linda Bowers, Sassafras Court (Buckingham Springs), said it is difficult to get onto Durham Road from the Springs. She also expressed her ongoing concerns about how to evacuate in case of natural disaster in this concentrated area. Mr. Forest noted there is an emergency exit onto Creek Road from the Springs. Ms. Bowers said it is locked.

Ms. Beth Ann Rinkus, Creek Road, shared concern about flooding on Creek Road that has increased in recent years. She said when Buckingham Springs was developed a retention basin was built on her property, but now the creek leading to it is 6 times the size it was due to runoff. She does not believe any more development can be accommodated along that watershed.

Ms. Rinkus stated the traffic addition of at least 3 cars per household, or 80-120 cars onto Creek and Lower Mountain Roads is a concern. She said Creek Road is a 2-lane narrow road. She stated they moved into this area for the quality of life which included farmlands, and asked is there not an option to buy the development rights? Mrs. Rash said yes, there is that option if the property owner wants to sell the rights. Mr. Smith clarified there had not been an official offer to buy the development rights, however, there have been discussions.

Mr. Fred Prozzillo, Creek Road, said the stormwater gathers at his mailbox, and he will get the brunt of it if flooding cannot be controlled.

Ms. Barrie Barr, Creek Road, read an extended statement of why she was opposed to the June sketch and is equally opposed to the 2018 sketch. Her concerns included: overdevelopment; overburdening agricultural land; devastation of the community; impact on roads, water and environment; catastrophic for natural habitat and native wildlife; vehicle accidents – pedestrian accidents; safety hazard turning onto Route 413 from Lower Mountain Road; erosion; paved surface will create toxic water runoff into the Creek; extensive noise of construction and vehicles will impact her holistic veterinary business.

Ms. Barr had questions including: Will Creek Road be widened? Will there be a traffic light at Durham and Lower Mountain Roads? Will there be a 3-way stop at Creek and Lower Mountain Roads? Will there be a traffic light at Forest Grove and Lower Mountain Road? Will calculations be correct for major storms? Will storm sewers be adequate?

Ms. Barr said the only place for a main entry for high density development is Durham Road, diverting all traffic away from Creek Road. Ms. Barr implored McKee to preserve part of the land with the township and Heritage Conservancy, and have 10+ acre lots with large homes and walking trails. Ms. Barr asked why the Township is

not fighting the development of this tract.

Mr. Smith stated the township has been to the Supreme Court on this tract three times and has ardently worked over 20 years to defend Township ordinances and this tract from inappropriate development.

Mrs. Rash thanked everyone for attending and commenting on the plans. She assured them the supervisors value their input. However, she said there are state statutes, specifically the Municipalities Planning Code, that the supervisors have to comply with. She said that there is a certain amount of discretion the Supervisors have within their decision-making process; however, the township does not own the property and can only do their best to be sure the plan is compliant with township land use ordinances.

Ms. Fischer asked who pays for all of the studies that have been discussed, and Mr. Murphy said the applicant does. She asked how do they know the reports are correct, and Mr. Forest said the township engineer reviews them.

Ms. Cathy Sorace, Creek Road, said her family has been trapped twice in the past three months due to flooding on Creek Road; they can't get out and emergency vehicles can't get in. She said they would not even be able to use the road for walking or biking if there is additional traffic as it is barely a 1-1/2 lane road. Ms. Sorace asked if they could access Durham Road with a roadway through the treatment plant area? Mr. Glitzer said he would anticipate that putting a road through the farmland preserve with spray irrigation would defeat the ordinance provision. Mr. Murphy said the goal is to demonstrate a fully compliant ordinance plan to the township, and they believe the revised 2018 sketch does so.

Mr. Murphy confirmed there has been communication regarding preservation since the Planning Commission meeting, and that is a financial consideration they are looking at.

Ms. Carol Mauermann, Creek Road, said putting an entrance onto Creek Road with these many houses is insanity. She said this winter they had five trees fall onto the road, the creek floods, snow falls, and they cannot get out. Ms. Mauermann said there is an emergency route through Buckingham Springs to access Durham Road and they had to use it to get out.

Mr. Bob Smith, Durham Road (corner of Lower Mountain), said preservation is his preference, but if not possible then the traffic's best exit onto Durham Road would be through Buckingham Springs. He said anything closer to the Lower Mountain Road intersection would be corner blind, and at least at the exiting at Buckingham Springs location you can see both ways with a fair amount of sight distance.

Ms. Sara Wiley, Creek Road, said she lives right across from the Buckingham Springs emergency exit, and her understanding is that the emergency exit has a chain because it is illegal to exit onto Creek Road due to its size as basically a one-lane road. She said school buses do not come down Creek Road, telephone poles are along one side, and she doesn't see how it could even be widened. She questioned why the developer wastes their time when the road cannot be widened.

Mrs. Rash thanked everyone for coming to the meeting and urged the residents to stay involved in the process.

Park and Recreation Update

Park and Recreation Commission members Mrs. Louise Silberg, Dr. Susan Salvesen and Mr. Stephen DeMaura were present to meet with the Board of Supervisors.

Dr. Salvesen requested an update on the trail system project. Mrs. Cozza explained that after the Ad Hoc Trail Committee meetings concluded and a draft trail system map was prepared, there was a public comment period offered on the township website. The comments were forwarded to Mr. Paul Gordon of the Bucks County Planning Commission to analyze and use to prepare the final copy of the trail map for the Board of Supervisors to consider. Mrs. Silberg asked if they could attend the meeting when the final trail map is presented? Mrs. Cozza said yes, adding it should be done prior to year-end.

Mrs. Silberg asked how the Park and Recreation Commission can be involved once the trail plan is approved. Mrs. Rash suggested the township could prioritize and schedule one section of the trail to be focused on at a time. Then the Park and Recreation Commission / Ad Hoc Trail Committee could contact the bordering residents about it.

Mr. Forest suggested the Park and Recreation Commission could approach the residents of the Devonshire subdivision where the township envisioned the existing trail to be part of the township trail system. However the Devonshire homeowners' association does not want anyone except Devonshire residents to use the trail. Mr. Forest said the intention was for Heritage Center residents to be able to connect to the Devonshire trail and vice versa. Mr. Forest noted the Devonshire Homeowners' association has asked for a connector to cross Swamp Road to the other area of the Devonshire subdivision.

Mrs. Silberg noted there is only 13 miles of trail in the plan that needs to be built, and if the road crew installed some, or the township applied for a matching grant, then it would not cost one million dollars per mile. Mr. Gray said that some recent developments, such as Leaver Cable Funeral Home on Route 262/202 does not want the sidewalk/trail installed until the township does them comprehensively so they are consistent.

Dr. Salvesen asked for details on Holicong Park, Phase 2. Mrs. Cozza explained there may have been confusion on the phases, clarifying that currently the Expansion is now separated into Phase 1 and Phase 2, and the original section of the park is referred to as Phase 3. Mr. Forest said the phases have been planned to distribute the cost over several years.

Mrs. Cozza explained that baseball fields were originally planned in the Expansion Phase 2. However, the local baseball community requested a field be added at George M. Bush park instead so that all of the baseball fields would be located at one place. She said the fields in Phase 2 would be constructed as multi-purpose fields instead, and used for soccer and lacrosse.

Mrs. Cozza said when the Expansion phases are complete, the Board will revisit the original section of the park (now Phase 3), and that may be where an all-inclusive playground is installed.

Mrs. Silberg asked if the all-inclusive playground would be privately funded? Mr. Calderaio said his idea was that the township would provide the land, and the community could assist in raising money for the equipment. Mr. Calderaio said the playground should be designed with input from persons having disabilities, and should be for all ages of persons with needs from adults to children. He said there should also be equipment for typical ability persons so that persons with different skill levels would be playing together.

Mr. Calderaio said he would be working with the Park and Recreation Commission and township residents in the design of the all-inclusive playground area.

Dr. Salvesen said the Park and Recreation Commission would like to be more actively involved in brainstorming or planning township events, such as suggesting recreation activities, and in general being more informed of what's going on with the township parks. Mrs. Cozza said in previous years the Park and Recreation Commission seemed to focus on sports and improvements to the parks and trails, and the township is open to ideas on those and recreation programs. Although Mrs. Cozza noted that ideas must be submitted with a budget in mind, so they can be presented to the Board of Supervisor's during budget preparation meetings. Mrs. Cozza asked to be provided with the Park and Recreation Commission's meeting minutes soon after their meetings for open communication. Mr. Calderaio suggested the Park and Recreation Commission present their ideas quarterly for the Board to consider.

7:39 p.m. The Work Session adjourned.

8:26 p.m. The Work Session commenced.

Wycombe Baptist Church – Overflow Parking, TMP 6-24-7, 6-24-8, 6-24-11

Mr. Gray presented the Board with a request from Mark Hintenlang, P.E. on behalf of Wycombe Baptist Church to install overflow parking facilities for approximately 14 vehicles versus the 47 spaces they had planned in the 2017 land development application (which was withdrawn). Due to known stormwater issues in the Wycombe area, the Board agreed that the proposal would need to follow the Land Development procedure.

August Meeting Dates

Mrs. Cozza asked the Board what meeting date(s) should be scheduled in August, and the Board agreed to cancel the August 8th meetings, and keep the August 22nd meetings.

9:00 p.m. The Work Session adjourned.

Approved by the Board of Supervisors on the 22nd day of August, 2018.

Buckingham Township Board of Supervisors

Maggie Rash, Chairman

Paul Calderaio, Vice-Chairman

Jon Forest, Member

Attest:

Dana S. Cozza, Secretary

Minutes respectfully submitted by Lori Wicen.

[View Meeting Minutes prior to June 23, 2009](#)

BUCKINGHAM TOWNSHIP

P.O. Box 413, Buckingham, Pennsylvania 18912
Phone (215) 794-8834 • Fax (215) 794-8837

Website - www.buckinghampa.org



The Intelligencer Record, Legal Advertising
Doylestown, PA 18901

July 12, 2017

Sent via e-mail: Gpmlegals@phillyburbs.com

RE: Run Date: July 18, 2017, The Intelligencer – Central Bucks Edition

Dear Sir/Madam:

Please print the following legal notice one time on Tuesday, July 18, 2017, and forward proof of publication to the attention of Lori Wicen, at this office.

BUCKINGHAM TOWNSHIP MEETING NOTICE

The Ad Hoc Trail Committee has scheduled a meeting on July 20, 2017 at 7:30 p.m. in the Buckingham Township Building, 4613 Hughesian Drive, Buckingham, PA 18912.

Dana S. Cozza, Township Manager

If you have any questions, please contact Lori Wicen at this office. Thanking you in advance for your attention to this matter.

Sincerely,

Dana S. Cozza
Township Manager

/lw

ecc: Board of Supervisors / Ad Hoc Trail Committee Members / Teri Swanson,
Finance Dept. / Theresa Langston, Webmaster / Sue Taylor / Mary Jane Atkinson

Buckingham Township Ad-Hoc Trail Committee
Meeting Minutes
July 20, 2017

Present: Paul Gordon, BCPC
John Ives, BCPC
Dana S. Cozza, ESQ., Buckingham Township
Dan Gray, P.E., Buckingham Township
Thomas Kelso, AICP, Buckingham Township
Rebecca Fink, Planning Commission, Buckingham Township
Louise Silberg, Parks and Recreation Commission, Buckingham Township
Dan Kruger, Buckingham Township Resident

Discussion Items:

1. Introductions were made by all.
2. Paul Gordon (PG) outlined the purpose of the committee and discussed objectives and goals of the trail plan.
3. PG talked about positions needed on the committee. Positions include Chairman, Vice-Chairman, Secretary, etc. John Ives was appointed to take meeting minutes and the group decided that the other positions would be determined if needed.
4. PG discussed the planning and field investigation process to help determine the location of trails and connections. He displayed a map that divided the Township into various sections based on road alignment and developments as a means to define areas to focus on when doing field work. Dan Gray (DG) and Thomas Kelso (TK) suggested slightly changing a couple planning/study area boundaries to better align with the developed areas and more rural areas of the Township. There are different priorities and speed limits associated with the different areas on the Township. PG agreed and a new map will be available on-line (via drop-box) and at the next meeting.
5. Group discussion involved several trail issues and concerns that include the following:
 - a. Lack of connection to Doylestown Borough.
 - b. Connections and links to other Township destinations.
 - c. Grants are more possible to obtain if the trails are classified as multi-use trails commonly 10'-12' wide. Most existing trails in Buckingham are under 10' wide and vary from 3' to 8'.
 - d. Trail surface: crushed stone, mowed grass, and asphalt.
 - e. Adding designated bike lanes and sharrows on certain roads.
6. PG noted that it would be best to keep trails on publicly owned land or in street R.O.W. Trails are not allowed on state funded preserved farmland, which Buckingham has substantial acreage. Constructing trails on HOA property and gaining easements from private land owners poses challenges and is time consuming.
7. TK suggested the publication *Small Town and Rural Multimodal Networks* (December 2016) as prepared by the U.S. Department of Transportation, Federal Highway Administration as a potential resource with regard to Yield Roadways and Advisory Shoulders. The ideas may be applicable to roads in Buckingham Township, especially in the lower rural area.
8. DG added that the Township has development plans throughout the Township that indicate road R.O.W. if needed.
9. The group decided they would start analysis and field work in the section labeled #1, which is located in the Cold Spring area. Road speed limits will be checked and work will start mid-August 2017.
10. The group decided that monthly meetings will be held on the second Thursdays of the month at 6:30 p.m., prior to the Parks and Recreation Commission meeting time. The next meeting will be September 14, 2017.

Meeting Adjourned: 8:30 p.m.

BUCKINGHAM TOWNSHIP

P.O. Box 413, Buckingham, Pennsylvania 18912
Phone (215) 794-8834 • Fax (215) 794-8837

Website - www.buckinghampa.org



The Intelligencer Record, Legal Advertising
Doylestown, PA 18901

September 8, 2017

Sent via e-mail: Gpmlegals@phillyburbs.com

RE: Run Date: September 11, 2017, The Intelligencer – Central Bucks Edition

Dear Sir/Madam:

Please print the following legal notice one time on Monday, September 11, 2017, and forward proof of publication to the attention of Lori Wicen, at this office.

BUCKINGHAM TOWNSHIP MEETING NOTICE

The Ad Hoc Trail Committee has scheduled meetings the second Thursday of each month at 6:30 p.m. in the Buckingham Township Building, 4613 Hughesian Drive, Buckingham, PA 18912.

Dana S. Cozza, Township Manager

If you have any questions, please contact Lori Wicen at this office. Thanking you in advance for your attention to this matter.

Sincerely,

A handwritten signature in cursive script that reads "Dana Cozza".

Dana S. Cozza
Township Manager

/lw

ecc: Board of Supervisors / Ad Hoc Trail Committee Members / Teri Swanson,
Finance Dept. / Theresa Langston, Webmaster / Sue Taylor / Mary Jane Atkinson

Buckingham Township Ad-Hoc Trail Committee
Meeting Minutes
September 14, 2017

Present: Paul Gordon, BCPC
John Ives, BCPC
Rebecca Fink, Planning Commission, Buckingham Township
Louise Silberg, Parks and Recreation Commission, Buckingham Township
Andy Hamilton, Guest Speaker

Discussion Items:

1. July 20, 2017 meeting minutes accepted by all.
2. Andy Hamilton (AH) spoke about the Circuit Trail system and the September 11 Memorial Trail. The Circuit is an interconnected network of trails throughout the Philadelphia region. One circuit connector is proposed in Buckingham and is located along Route 202, from Doylestown to New Hope. AH asked for support from the local municipalities, including Buckingham in the form of a resolution that supports the trail network.
3. AH gave an overview of the 911 Memorial Trail that connects the three National Memorials at the World Trade Center in New York City, in Shanksville, Pennsylvania and at the Pentagon in Washington, D.C.
4. Paul Gordon (PG) and group reviewed the planning areas and no changes were made. PG and John Ives (JI) visited Area 1 on August 9, 2017 to determine field feasibility of the proposed trail segments.
5. PG reviewed alignments and trails within Area 1, including notes received from Dan Gray.
6. The group agreed with trail alignments and several segments have the following concerns:
 - a. Area 1, Trail 4: Potential neighborhood concerns between Windridge Drive and Buttonwood and Glen drives on the paper street.
 - b. Area 1, Trail 6A: Homeowner association constraints Smoke Road.
 - c. Area 1, Trail 6B: Discussed trail on or off-road.
 - d. Area 1, Trail 7: Add sharrows.
 - e. Area 1, Trail 8: Along Hansel Road, should separate trail parallel Hansel Road from Frost Lane to Hancock lane? Sidewalks extend through neighborhood area to make connection.
 - f. Area 1, Trail 10: Many constraints (slopes, close neighbors, and fences) between Longfellow Court and Bush Park to make connection. Explore potentially back side entrance to Bush Park off Fell Road through private property.
 - g. Area 1, Trail 12: No trail through church and cemetery, sidewalks exists along Daniel Drive connecting to Clay Road and ultimately to the Hansel Road trail.
 - h. Look at possible trail along Landisville Road that connects Cold Spring Hunt development, Landisville Green, and Canterbury and potentially extend to Allohaken Park in Plumstead Township
7. The group decided they would start analysis and field work in the section labeled #2, which encompasses the area north of Route 202, east of Durham Road, and west of Street Road. Road speed limits will be checked and site visit will be scheduled in September.
8. The group decided that monthly meetings will be held on the second Thursdays of the month at 6:30 p.m., prior to the Parks and Recreation Commission meeting time. The next meeting will be October 12, 2017.

Meeting Adjourned: 8:45 p.m.

Buckingham Township Ad-Hoc Trail Committee
Meeting Minutes
October 12, 2017

Present: Paul Gordon, BCPC
John Ives, BCPC
Paul Calderaio, Supervisor, Buckingham Township
Rebecca Fink, Planning Commission, Buckingham Township
Louise Silberg, Parks and Recreation Commission, Buckingham Township
Dan Gray, P.E., Buckingham Township

Discussion Items:

1. September 14, 2017 meeting minutes accepted by all.
2. Paul Gordon (PG) and John Ives (JI) visited Planning Area 2 and 3 on October 6, 2017 to determine field feasibility of the proposed trail segments.
3. PG added 5 new trail segments stemming from discussion at previous meeting (9/14/17) and reviewed concerns regarding Area 1:
 - a. Segment 7 added: Church School Road – Fieldstone Place to Smoke Road.
 - b. Segment 10 added: Hansell Road to Landisville/Burnt House Hill Road.
 - c. Segment 17 added: Landisville Road – Canterbury Development to Cold Spring Elementary School.
4. The group agreed with the proposed trail alignments in Planning Areas 2 and 3 with the following discussion items and concerns:
 - a. Area 2, Trail 19: Trying to get PennDOT action at intersection of Long Lane and Route 413, most likely no light will occur in future. Group decided no trail along northeast side of Route 413, due to wall constraints, slopes, house close to road, and already existing trail on opposite side.
 - b. Area 2, Trail 20: Explore rear side of Mechanicsville Post Office property for a trail/walking path to connect Mechanicsville Village/Route 413 and Holicong Road.
 - c. Area 2, Trail 21: Stay off private farm property between Holicong and Mechanicsville roads. Explore connections through Wilson Drive stub in the Reserve at Holicong development.
 - d. Area 2, Trail 25: Sidewalks have been deferred along the frontage of the churches at the intersection of Routes 413 and 202, therefore the proposed alignment can be revised. Discussion on having a segment from the churches to Buckingham Green Shopping Center. As land developments are submitted, can get sidewalks/walking paths deferred or constructed, such as the Leaver-Cable Funeral Home property.
 - e. Group added looking at potential new links:
 - i. Consider Holicong Road to Route 202 via the Midway grounds utilizing the existing gravel drive that meanders through the property at the back side CB East High School.
 - ii. Consider future connection from Anderson Road to Route 202 (Buckingham Green Shopping Center) through the large tract (TMP 6-10-113) if future land development plans are submitted.
 - iii. Look at bike sharrows along Long Lane to Street Road
 - iv. Look at bike sharrows along Indian Spring Road (PG noted speed limits on adjacent roads may be a constraint).
 - v. Look at walking trail/path on Maximuck's property (require easement) or shift to Kingfisher Lane (will require approvals).
 - vi. Explore ways to get to Carversville Village, Delaware River and connections to adjacent townships. Hunters Run to Aquetong Road. Look at Shetland Drive. Reduce speed limit from Long Lane and Street Road to Carversville Road (need studies and approval).
5. The group decided they would start analysis and field work in Planning Area 5, which encompasses the area south of Route 202 in the eastern quadrant of the township to the border with Wrightstown and Upper Makefield townships.
6. The group decided the next monthly meeting will be held on December 5, 2017.

Meeting Adjourned: 8:55 p.m.

Buckingham Township Ad-Hoc Trail Committee
Meeting Minutes
December 5, 2017

Present: Paul Gordon, BCPC
John Ives, BCPC
Rebecca Fink, Planning Commission, Buckingham Township
Louise Silberg, Parks and Recreation Commission, Buckingham Township
Dan Gray, P.E., Buckingham Township

Discussion Items:

1. October 12, 2017 meeting minutes accepted by all.
2. Paul Gordon (PG) and John Ives (JI) visited Planning Area 5 on November 15, 2017 to determine field feasibility of the proposed trail segments.
3. PG reviewed new additions to Planning Areas 2 and 3 that were discussed at the previous meeting (10/12/17) and all were in agreement. Ultimately, contact will have to be made with Solebury Township to investigate connections beyond Buckingham's borders to Carversville Village and the Delaware River and canal towpath trail. BCPC will undertake those discussions at a later date, following completion of the current plan.
4. PG reviewed new additions to Planning Areas 2 and 3:
 - a. Bike lanes along Route 313 from Route 202 (Poole's Corner) to Route 263 (Segment 28).
 - b. Add sharrows on Spring Valley Road, between Route 313 and Furlong Road.
 - c. Remove sharrows on Segment 35.
 - d. Route 202 crossing a challenge, will need easements (Segment 38).
 - e. Crossing Route 202 to go to Mill Road in Buckingham Village a concern: vehicle speeds, site distance, and number of accidents.
5. The group agreed with the proposed trail alignments in Planning Area 5 with the following discussion items and concerns:
 - a. Future connections to Penns Purchase along Street Road. Potential connection into back side of Penns Purchase property that will connect with the rest of Peddlers Village.
 - b. Look at shared rails/trails idea in area along Route 413 and Upper Mountain Road. Shared right of way - will need approval.
 - c. Add sharrows along New Road between Route 413 and Holicong Road.
6. The group decided they would start analysis and field work in Planning Areas 4 and 6, which encompasses the area south of Route 202 in the western quadrant of the township to the border with Wrightstown and Warwick townships.
7. The group decided the next monthly meeting will be held on January 16, 2017.

Meeting Adjourned: 8:20 p.m.

Buckingham Township Ad-Hoc Trail Committee
Meeting Minutes
January 16, 2018

Present: Paul Gordon, BCPC
John Ives, BCPC
Rebecca Fink, Planning Commission, Buckingham Township
Louise Silberg, Parks and Recreation Commission, Buckingham Township

Discussion Items:

1. December 5, 2017 meeting minutes accepted by all.
2. Paul Gordon (PG) and John Ives (JI) visited Planning Areas 4 and 6 on January 3, 2018 to determine field feasibility of the proposed trail segments.
3. The group agreed with the proposed trail alignments and sharrows proposed in Planning Areas 4 and 6 with the following discussion items and concerns:
 - a. Cloverly Drive neighborhood connection to adjacent neighborhoods and Furlong Village (intersection of Route 263 and Edison Furlong Road) tough to do, due to the following constraints: slopes, homes, and R.O.W. on Edison-Furlong Road and obtaining easements on private property. Connection through the natural area and woods to the Townhomes at Heritage Center and adjacent residential development will require easements from several property owners and homeowners association.
 - b. Louise Silberg (LS) may try to talk with neighbors regarding easements to the rear portion of the Cloverly Drive neighborhood to gain access to the rear side of the 2 Heritage developments on Route 263.
4. The group decided the next step would be approaching the township officials to set up a public meeting for public awareness and to garner public input. It would be an informational type meeting/open house for residents to understand the trail master plan, review work to date, and give input. The overall setup would have stations of the various planning areas.
5. BCPC will begin work on written portion of document.
6. The group decided the next monthly meeting will be held on February 6, 2018.

Meeting Adjourned: 8:10 p.m.

The Intelligencer
Sunday, May 6, 2018

BUCKINGHAM TOWNSHIP TRAILS & BIKE FACILITIES PLAN PUBLIC OPEN HOUSE

THURSDAY, MAY 10, 2018

6:30 PM to 8:30 PM

Buckingham Township Municipal Building
4613 Hughesian Drive, Buckingham, PA 18912

The development of the Buckingham Township Trails & Bicycling Facilities Plan is underway and we want your input. Attendees to this special open house will get an update on the project and have an opportunity to provide public comment. The open house will be an informational open house with boards available showing the various trails and other facilities identified to date.

No formal presentation is planned so come when you are able.

Bucks County Planning Commission staff, the consultant for this project, will be available to discuss and answer questions, take public input, and share information regarding the various trail and bicycling facilities being planned for Buckingham Township.

For more information, please contact:
Paul Gordon, Bucks County Planning Commission,
215-345-3884

Buckingham Township – Trails & Bicycle Facilities Plan
 Public Open House
 Buckingham Township Municipal Building
 May 10, 2018

Name	Contact Information (Address, Phone or Email)
Rebecca Fink	5543 Pin Oak Dr. Doylestown, PA 18902 Rebecca@PAOL.com
John F. + Donna M. Hartzel	5175 Lower Mtn Rd., New Hope, PA 18938
Ed Jarrel	3154 Cleavelly Dr Furlong PA 18925
Jim + Andrea Mlekley	Box 1 Buckingham Pa 18901
Kristina + Marcy Wiat	4581 PREP CREEK WAY DOYLESTOWN PA 18902
JOEL WUSSER	3133 CLOVERLY DRIVE FURLONG
Jenn + Chad Wehabe	3113 CLOVALY DR Furlong
Tom Silberg	3126 Cleavelly Dr, Furlong PA
Tom Silberg	3026 CLOVELLY DR. FURLONG, PA 18925

May 10, 2018 - Public Open House





Buckingham Township – Trails & Bicycle Facilities Plan
Public Open House
Buckingham Township Municipal Building
May 10, 2018

RECEIVED
BUCKS COUNTY

MAY 14 2018

COMMENT FORM

PLANNING
COMMISSION

Dear Community Member:

Thank you for attending tonight's open house on the Buckingham Trails & Bicycle Facility Plan. We are interested in your comments on the information provided tonight. Staff members are available to record your opinions, and you may also complete this comment form to provide feedback. The form may be left with one of the staff members, or may be mailed or emailed. Thank you for your feedback and for your interest in this project.

Comments:

1. Are there specific trails and/or bicycle routes that have not been identified, but which you would like to have evaluated for potential inclusion in the plan? If so, please provide a location or brief description.

WILL THERE BE A PATH FROM CLOVERLY DRIVE
DOWN EDISON-FURLONG TO THE PROPOSED CUT THROUGH?

2. Are there trails and/or bike routes which have been identified that you have particular concerns about? If so, please indicate the trail/bike route and provide a description of your concerns.

3. Other comments:

I WAS PLEASED TO SEE THAT THE
PLAN INCLUDED A WAY FOR THE RESIDENTS
OF CLOVERLY DRIVE/WOODSTREAM TO CONNECT
TO THE EXISTING & PROPOSED TRAILS

Name: JOEL WUSSLER

Address: 3133 CLOVERLY DR.
FURLONG, PA 18925

Phone/Email: jrwussler@gmail.com

If mailing/emailing this form, please send to:

Paul W. Gordon
Planner, Bucks County Planning Commission
1260 Almshouse Road
Doylestown, PA 18901
pwgordon@buckscounty.org

**Buckingham Township – Trails & Bicycle Facilities Plan
Public Open House
Buckingham Township Municipal Building
May 10, 2018**

COMMENT FORM

Dear Community Member:

Thank you for attending tonight's open house on the Buckingham Trails & Bicycle Facility Plan. We are interested in your comments on the information provided tonight. Staff members are available to record your opinions, and you may also complete this comment form to provide feedback. The form may be left with one of the staff members, or may be mailed or emailed. Thank you for your feedback and for your interest in this project.

Comments:

1. Are there specific trails and/or bicycle routes that have not been identified, but which you would like to have evaluated for potential inclusion in the plan? If so, please provide a location or brief description.

2. Are there trails and/or bike routes which have been identified that you have particular concerns about? If so, please indicate the trail/bike route and provide a description of your concerns.

3. Other comments:

The proposals all look great
we live on Clovaly + would like
to be connected to other neighborhoods

Name: Jenn Wetherbee
Address: 3113 Clovaly Dr
Purton
Phone/Email: jennwetherbee@gmail.com

If mailing/emailing this form, please send to:

Paul W. Gordon
Planner, Bucks County Planning Commission
1260 Almshouse Road
Doylestown, PA 18901
pwgordon@buckscounty.org

Buckingham Township Trails & Bicycle Facilities Plan

Posted: 6/1/2018 10:39 AM

Thank you for your interest in the Buckingham Township Trails & Bicycle Facility Plan. We are interested in your comments on the proposed trails and bicycle facilities proposed as part of the plan. The Buckingham Township Trail Committee hosted a public meeting on May 10, 2018 where they displayed the proposed trail maps and the Board of Supervisors reviewed a draft proposed map at their May 23rd work session. We are looking for additional input from the community members who could not attend the meetings on the proposed routes represented on the various maps. Please feel free to provide your comments using the Public Comment Form included below.

A variety of materials are included for your review:

- [A map showing the various planning areas](#) in the Township that were each evaluated for potential trails and bicycle facilities.
- [A sheet describing the various types of trails and bicycle facilities](#) being proposed.
- [An overall map of the township](#) showing all of the proposed trails and bicycle facilities, as well as a [detailed legend identifying each trail](#) by number, type, and indicating the mileage.
- Detailed maps of each of the six planning areas: [Area 1](#) / [Area 2](#) / [Area 3](#) / [Area 4](#) / [Area 5](#) / [Area 6](#)
- [A public comment form that can be completed online](#) or sent to Paul Gordon at the Bucks County Planning Commission, The Almshouse, Neshaminy Manor Center, 1260 Almshouse Road, Doylestown, PA 18901. These comments will be summarized and provided to the Board of Supervisors for their review. Although a total vision has been presented for the Township, the plan itself is in the Draft stage. The Trail Committee meeting, the Board of Supervisors worksession, and this comment form represent opportunities for the public to provide their input relative to the proposed routes in total, or specific routes.

Thanks again for your interest in, and input into, the Buckingham Township Trails & Bicycle Facility Plan.

Please submit all comments by June 22, 2018.

[Return to News Listing](#)

Public Comments received from posting May 10, 2018 Open House materials including maps, and a description of the various types of trails and bicycle facilities to the Buckingham Township website.

From: JotForm <noreply@jotform.com>
Sent: Saturday, June 16, 2018 12:54 PM
To: Lori Wicen <lwicen@BuckinghamPA.org>
Subject: Re: Trail and Bicycle Facilities Plan - public comment

Trail and Bicycle Facilities Plan - public comment

Are there specific trails and/or bicycle routes that have not been identified, but which you would like to have evaluated for potential inclusion in the plan? If so, please provide a location or brief description. If the proposed trail into/out of Hunters Run is approved, something connecting Hunters Run with Peddlers Village would allow a lot more people to be able to walk or bike to the shops and restaurants there.

Other comments: I am 200% behind the proposed trail into Hunters Run and connecting "sharrows". I live here and we are largely cut off from the rest of the township unless we get in a car and drive. The trails would give us walking and biking options to get to the High and Middle Schools, the parks, etc.

Your Name Bart Creedon
Your Address Street Address: 5626 N Deer Run Rd
City: Doylestown
State / Province: PA
Postal / Zip Code: 18902
Your Telephone Number (215) 7949712
Your E-mail Address bartcreedon@yahoo.com

From: JotForm <noreply@jotform.com>
Sent: Tuesday, June 19, 2018 8:53 AM
To: Lori Wicen <lwicen@BuckinghamPA.org>
Subject: Re: Trail and Bicycle Facilities Plan - public comment

Trail and Bicycle Facilities Plan - public comment

Are there specific trails and/or bicycle routes that have not been identified, but which you would like to have evaluated for potential inclusion in the plan? If so, please provide a location or brief description.

Thanks for providing the proposed Buckingham bike/trail plan on the web site. Lots of great work has gone into the proposal and I look forward to a time when all the planned trails are completed which will add to everyone's continued enjoyment of our beautiful township. I am a member of the Buckingham Township Planning Commission and having this proposed plan available is a valuable resource in ensuring that any proposed development supports this vision and the Buckingham Township Comprehensive Plan

Upon reviewing the proposal, I noted what I considered to be some "white space", an area that seemed to lack connectivity to the trails. This is in Area 2 as identified in the Buckingham Township map, northeast of Durham Road. The entire area involving Carversville Road/Long Lane/Mechanicsville Road seems to me to lack attention in the proposal. There is a sidewalk on the north end of the Dalton Glen development along Long Lane that does not seem to connect with anything rendering it essentially useless. The residents of the Dalton Glen development seem cutoff from trail access.

More specifically, as currently proposed, the Dalton Glen residents and children attempting to connect up and use the trail system at trail 16 and proposed trail 15 to get to Hansell Park must cross Durham Road. I think the intersection of Long Lane and Durham Road as currently configured is very dangerous for pedestrian crossing (its even become a difficult intersection for cars making a left hand turn onto Durham Road since the change to allow a right hand turn on red at the Cold Spring Creamery Road/Durham Road traffic signal). There is simply no way young children or older adults can safely cross on a routine basis.

Additionally, looking at the proposal in the other direction along Long Lane, there is no access for Dalton Glen residents to connect up with proposed trails 26a and 26b which would also provide access to Holicong and CB East schools.

I recommend this "white space" get some attention on the proposed trail system. First, creating a safe pedestrian/bike walkway across Durham Road would help address some of the gap. If one were to brainstorm creative alternatives, a couple proposals come to mind, the most extravagant (expensive and probably unrealistic) option is a pedestrian bridge across Durham Road. What might be a more realistic suggestion is to install a four way blinking traffic light that is controlled by the pedestrian crossing the street. Lines could be applied on the street identifying it as the trail/bike path. I understand this would need approval by PennDot. Second, I recommend adding a proposed path along Long Lane that connects the Dalton Glen sidewalk to trail 26a. An additional benefit is the creation of safer pedestrian/bike access to the Maximuck Farm store.

I appreciate the opportunity to provide input into the plan. Excellent work!!

Your Name Glenn Thomson
Your Address Street Address: 5265 Lovering Drive
City: Doylestown
State / Province: PA
Postal / Zip Code: 18902
Your Telephone Number (215) 5340113
Your E-mail Address glenn.carol@me.com

From: JotForm <noreply@jotform.com>
Sent: Wednesday, June 20, 2018 2:26 PM
To: Lori Wicen <lwicen@BuckinghamPA.org>
Subject: Re: Trail and Bicycle Facilities Plan - public comment

Trail and Bicycle Facilities Plan - public comment

Are there specific trails and/or bicycle routes that have not been identified, but which you would like to have evaluated for potential inclusion in the plan? If so, please provide a location or brief description. I would like to see a bicycle path included in the plan to revamp the Cross Keys area. The developers of the "Super" Wawa site at Cross Keys have sought a waiver to avoid putting in such a path, essentially arguing that the area isn't used recreationally and there are no other paths nearby, so why put one in? Yet one of the reasons given for the revamp is to relieve traffic congestion at the intersection of Swamp, Old Easton and New Easton roads. A bike lane could help, giving residents another commuting option. Let's expand the fragmented bicycle-path system we have now to connect more trails, allowing people to safely and conveniently get where they need to go--by bike if they so choose.

Your Name Andrea Strout
Your Address Street Address: 2898 Mill Road

City: Doylestown
State / Province: PA
Postal / Zip Code: 18902
Your Telephone Number (215) 794-7429
Your E-mail Address alstrout_2000@yahoo.com

From: JotForm <noreply@jotform.com>
Sent: Sunday, June 24, 2018 8:42 PM
To: Lori Wicen <lwicen@BuckinghamPA.org>
Subject: Re: Trail and Bicycle Facilities Plan - public comment

Trail and Bicycle Facilities Plan - public comment

Are there specific trails and/or bicycle routes that have not been identified, but which you would like to have evaluated for potential inclusion in the plan? If so, please provide a location or brief description.

It'd be nice to have a shared use trail to get to Peddler's Village from the Hunter's Run Community. This trail would greatly benefit the families of Hunter's Run as well as the many adjacent communities.

Your Name John Murphy
Your Address Street Address: 5886 S Deer Run Road
City: Doylestown
State / Province: PA
Postal / Zip Code: 18902
Your Telephone Number (267) 261-7200
Your E-mail Address jmurph2@gmail.com