

UPPER MORELAND TOWNSHIP & HATBORO BOROUGH MASTER TRAIL PLAN



JUNE 2020
PREPARED BY:



Upper Moreland Township & Hatboro Borough, Montgomery County

A Master Trail Plan

June 10, 2020

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Executive Summary

The [Upper Moreland Township-Hatboro Borough Master Trail Plan](#) supports the desire of township and borough residents to connect their two communities, parks, downtowns, neighborhoods, and transportation hubs through a safe and accessible pedestrian and bicycle network. It was funded, in part, by the Delaware Valley Regional Planning Commission’s Transportation and Community Development Initiative, a regional leader in the planning and expansion of multimodal networks in the Delaware Valley.

The plan has two primary components:

1. Greenway Analysis—an evaluation of the Pennypack Creek and Southampton Creek greenways to determine trail feasibility—an initial review of existing physical conditions and potential opportunities and constraints for the use of the greenways as a multimodal corridor with creek-side trails;
2. Master Trail Plan—to develop a multimodal transportation network between Upper Moreland Township and Hatboro Borough, with a facilities and needs analysis and recommendations prepared with help from the public and key person interviews.

The Present Situation

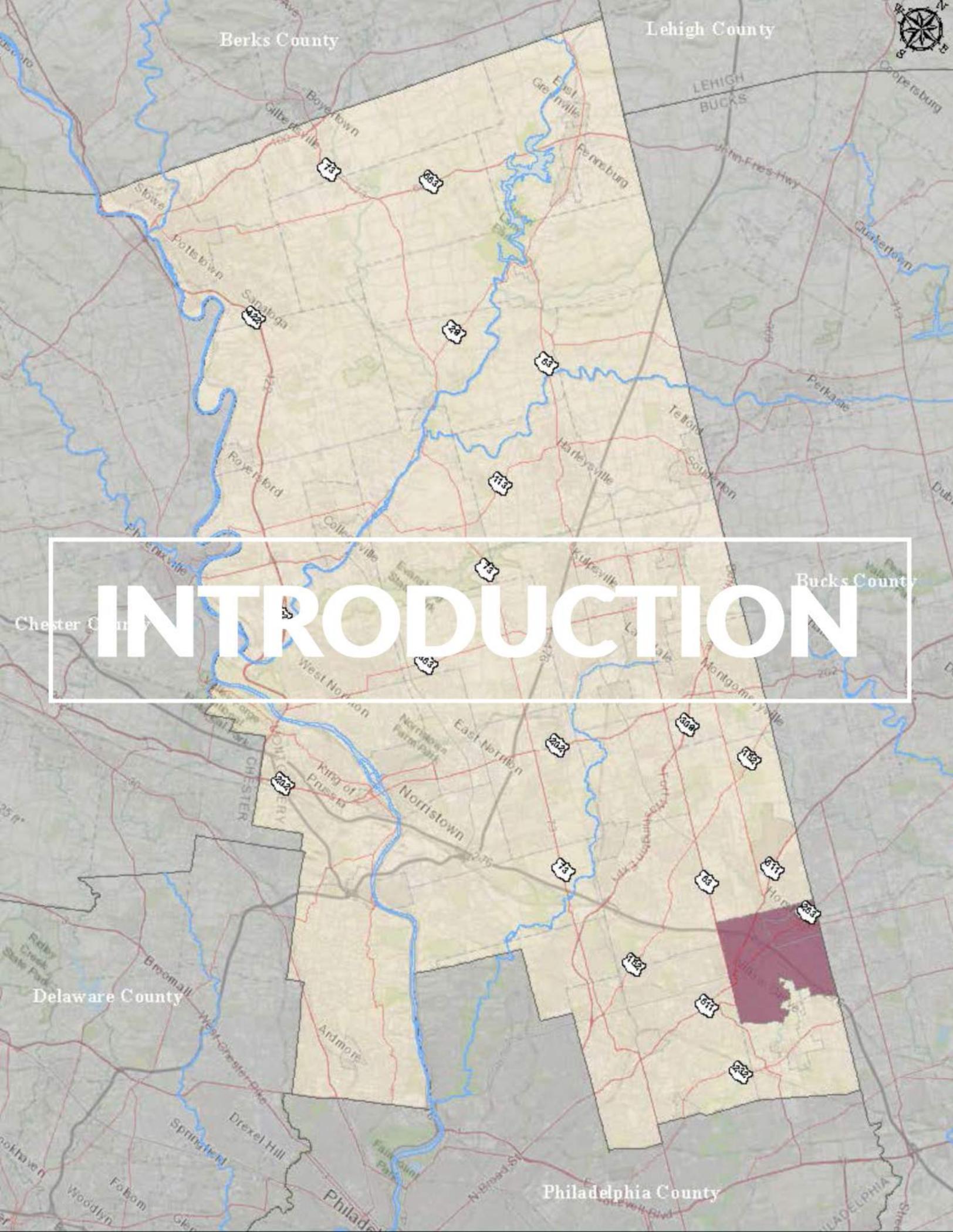
Upper Moreland and Hatboro have exceptional park resources, nature preserve trails, great schools, historic sites, and storied downtowns. They also have a tremendous amount of traffic, aging and incomplete sidewalks, and a population ready for change.

The Plan, along with the added Greenway Analysis, recommendations, and [Action Plan](#) reveals the opportunities for:

-  Over 50 Miles of New Trails
-  Connections to All 26 Parks
-  Connections to Downtown & Shopping Areas
-  Connections to 3 Regional Trails



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Berks County

Lehigh County

LEHIGH
BUCKS



INTRODUCTION

Bucks County

Chester County

Delaware County

Philadelphia County

Introduction

Upper Moreland Township and Hatboro Borough want to achieve what residents and outdoors people are already enjoying statewide, a system of interconnected trails. Throughout the region, trails studies are in the works; community bike plans too. And, to further inspire the township and borough, others have prepared master plans to identify entire networks of pedestrian and bicycle trails. The universal statement of these plans—“links to parks, destination-shopping, and residential areas; a reduction in traffic; and an improved sense of place are the top interest of everyone.” With help from the *Upper Moreland Township and Hatboro Borough Master Trail Plan*, residents and visitors will soon enjoy walking, running, biking, hiking, strolling, and rolling in an area burdened by congestion and yet teeming with potential.

What’s a Master Trail Plan?

A master trail plan document captures the local support for trails and then reveals where new trails could be built. For most communities, these trails are really for pedestrians, of all ages and abilities, and bicyclists. Together, these trails form an entire trail network of “non-motorized transportation.”

For this plan, trails are for “non-motorized transportation:”

- walking,
- jogging,
- running,
- bicycling, or
- using a wheel chair,
- stroller,
- scooter, or
- recumbent bicycle.

Reasons You Might Use the Trails:

- commuting,
- exercising,
- recreation,
- tourism,
- exploring,
- getting to a favorite destination.

In 2018, Upper Moreland Township and Hatboro Borough were awarded grant funding to prepare this master trail plan, from the Transportation and Community Development Initiative (TCDI), a program administered by the Delaware Valley Regional Planning Commission. To reveal the most complete trail network possible, the township partnered with Hatboro and established a Steering Committee to help launch and prepare the plan. Together they found inspiration and support; especially from the Delaware Valley Regional Planning Commission and Montgomery County.

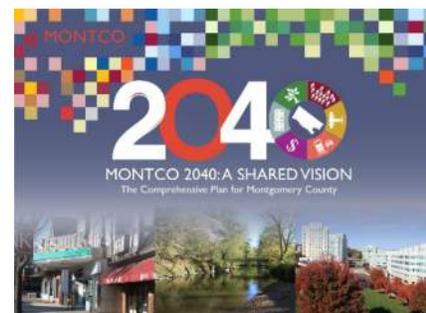
The Inspiration for this Plan

Upper Moreland and Hatboro are surrounded by municipalities eager to develop new trails identified in **The Circuit**, one of the largest trail networks—nationwide. And, the township and borough are located in Montgomery County, Pennsylvania, one of the strongest trail building counties in the entire region.

When complete, **The Circuit** will include over 800 miles of multi-use trails, connect the urban, suburban and rural communities of all 9-counties, in the Philadelphia area, and improve the health and well-being of commuters, residents, visitors, and the environment.



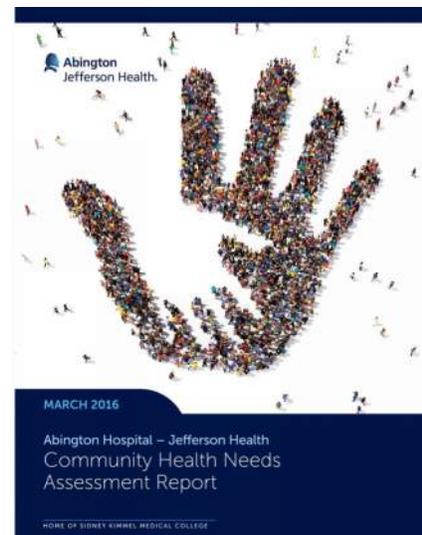
Montgomery County has one of the most extensive trail networks of any county, in Pennsylvania, with 25 trails spanning multiple municipalities and connections to nearly all parks, towns, and neighboring community trails. The Montgomery County Planning Commission (MCPC) played a key role in the development of this plan.



Inspiration came from many sources. For years, residents declared local and regional traffic to be the barrier to new trails. Major state highways, rail lines, bus routes, and the PA turnpike carry millions of travelers through these communities; and, the physical layout of these routes is indeed a barrier. This plan offers suggestions for overcoming the transportation route obstacle.



The township and borough are equally inspired by the **Abington Hospital-Jefferson Health 2016 Community Health Needs Assessment Report**. Of the 544,000 persons supported by Abington-Jefferson, the area including Upper Moreland and Hatboro includes obesity rates for children and adults in need of improvement; 6 out of 10 older adults are considered obese.



The Report recommends increasing physical activity for all age groups, promoting bike share programs and walkable communities, and creating non-traditional partnerships with parks, streets, and planning departments.

We all need to be more active, and, since walking is the number one recreation choice nationally, and the form of exercise most of us can do for life, it's understandable that many health care facilities recommend and support trails and greater walkability.

Walking just 20 minutes/day helps:

- lower your blood pressure 4-10 points;
- lower your risk of an early death by 30%; and
- lower your risk of heart disease, diabetes, strokes, cancer and depression!!



Legend

- Existing Trails
- Parks
- Private Open Space
- Municipal Boundary
- Parcels
- Rail Lines
- State Highways
- SEPTA Regional Rail Stations
- Library
- Municipal Building

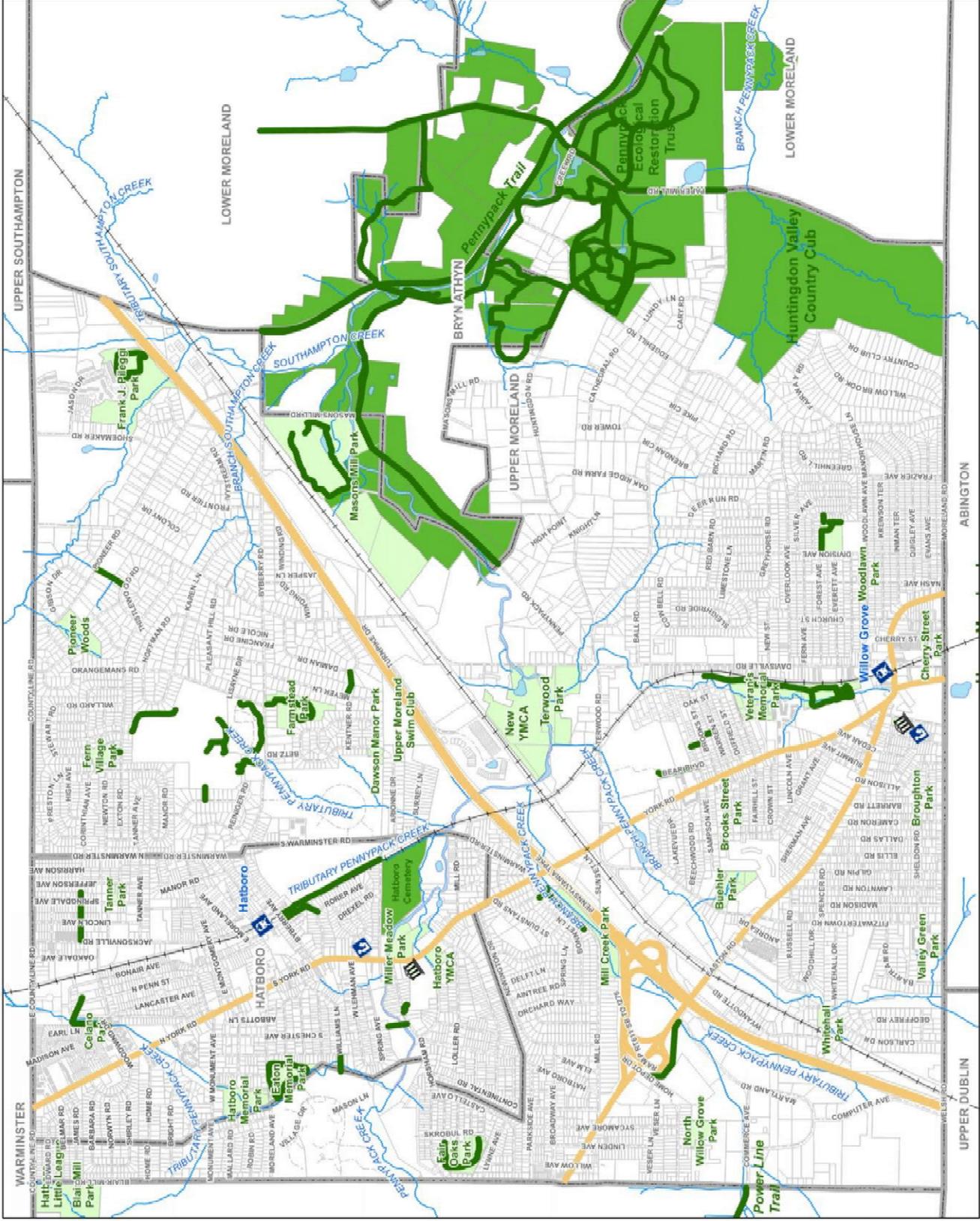
UPPER MORELAND TOWNSHIP - HATBORO BOROUGH
MASTER TRAIL PLAN
BASE MAP

MONTGOMERY COUNTY, PENNSYLVANIA

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JOB NO. 18-10333 DATE: MAY 2020 SCALE: 1/8"



Purpose of the Plan

The purpose of the *Upper Moreland Township and Hatboro Borough Master Trail Plan* is to identify, and make recommendations for the implementation of, a safe, accessible, pedestrian and bicycle trail network to accomplish the following:

- connect the borough and township parks,
- connect neighborhoods and downtowns,
- connect Upper Moreland and Hatboro to **The Circuit**, and other community trails,
- connect people with nature,
- connect transportation hubs,
- establish a foundation for future decision.

The master trail plan makes recommendations for these connections, as well as the use of new signage, trail loops (to encourage greater trail use for keeping active), trailhead parking areas, street crossings, and other amenities common of trails. An additional Greenway Analysis of the Pennypack Creek is included to provide for future discussion of creek-side trails. And, a suggested Trail Ranking is included to provide focus of partnership and funding strategies.

Common Terms Found in the Plan

Open Space: the term used to describe farmland, parks, habitat, scenic vistas, and natural areas and generally undeveloped, without buildings or other manmade improvements.

Greenways: the term used to describe linear corridors of open space, often along streams, rivers, and ridgelines or even beside roads, railroads, and canals. They serve to connect habitat and even outdoor recreation such as trails.

Trails: the term used commonly to describe non-motorized pedestrian and bicycle routes, and can include sidewalks, paths of macadam alongside roadways, crushed stone paths, sometimes over abandoned rail lines and canal tow paths, or even painted lanes in roads for bicycling. Design guidelines do exist for trails all types.

Goals & Objectives of the Plan

Goal 1—To Provide Trail Connections, Between and In, Parks and Open Space

Objective 1A—Formalize a System of Ranking Trail Opportunities

Objective 1B—Support Our County Trail and Bicycle Route Projects

Objective 1C—Support the Pennypack Ecological Restoration Trust efforts to Protect Conservation Areas along Local Greenways

Objective 1D—Jointly Pursue Grant Funding to Develop New Trails, Eliminate Trail and Sidewalk Gaps, and Improve Parks with Trails and Trailhead Amenities

Goal 2—To Increase Downtown Accessibility and Walkability

Objective 2A—Support and Encourage a Vibrant Commercial, Retail, and Eatery Based Downtown and Shopping Center Street life

Objective 2B—Pursue Trail and Transportation Grants to Develop Trails and New Sidewalks in Suggested Recommendations and Trail Ranking

Objective 2C—Seek Design Solutions and Funding for Gateway Signage and Revitalization Efforts in Both Communities.

Goal 3—To Provide Viable Transportation Alternatives to the Automobile

Objective 3A—Develop Trail Connections to Existing Routes to Public Transit, Regional Trails, and Local Parks, and, Increase Trailhead Options

Objective 3B—Launch a Caucus of all Stakeholders in Transportation to Determine the Future of Public Transit, and Need for Additional Connections

Objective 3C—Establish Partnerships with Businesses, School Districts, the Health Network and Other Non-Profit Groups to Promote the Trail Network

Objective 3D—Expand Newsletter and Social Media Feedback System for Resident Concerns and Interests in Trails

Community Background

Together, Upper Moreland Township and Hatboro Borough are one big community. Their history is the same, their residents are family, and their future is as bright as they make it, together. Unique to many places, in and around the City of Philadelphia, Upper Moreland and Hatboro collaborate regularly. Thus far, each municipality has supported the downtown, park, open space, recreation, and comprehensive planning of the other—and, with the express understanding, the quality of life in the township improves alongside that of the borough, and visa-versa.

Location

Hatboro and Upper Moreland are located in the southeast corner of Montgomery County, along the border of Bucks County, just three miles from the City of Philadelphia. The township wraps three sides of Hatboro with Bucks to the east.

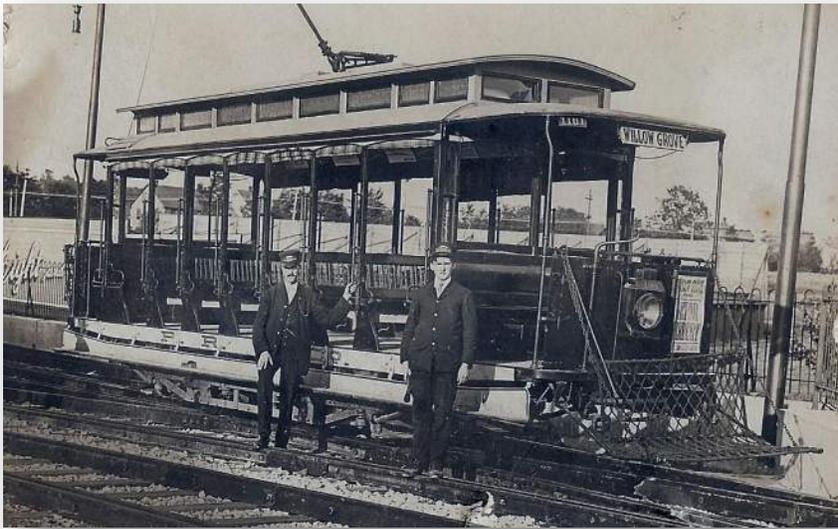
Adjacent municipalities include:

- ❖ In Montgomery County—Horsham Township, Upper Dublin Township, Abington Township, Lower Moreland Township and Bryn Athyn Borough,
- ❖ In Bucks County—Warminster Township and Upper Southampton Township



History

In 1682, the founder of Pennsylvania, William Penn, granted nearly 10,000 acres to Dr. Nicholas More. In the years since, the community has included dairy farms, grist mills, vacation destinations, mineral water healing centers, and the 'Music Capital of the World.' Nearly 150 separate sites are historically significant, locally, and the nation's 2nd oldest library still operates. The populations of Upper Moreland and Hatboro share this history and these resources.



No air-conditioning needed on this open trolley from Philadelphia to Willow Grove. Note the curtains for rain, and the advertisement for a concert at Willow Grove Park.

The other major trolley line ran south from Willow Grove on Old York Rd., which was only two-lanes wide. There was a trolley track set in grass on each side of the road.



Population

Hatboro and Upper Moreland continue to revitalize. New townhomes, apartments, and a train station parking garage are planned or under construction. According to the 2010 U.S. Census, nearly 31,375 people already live here, putting Upper Moreland and Hatboro, together, in the top 5 most populated communities of the County—the 3rd most populated county in Pennsylvania. Any increase to the population, and density, of this community will require serious improvements to the existing park and recreation amenities, especially trails.

Delaware Valley Regional Planning Commission predicts nearly **2,500** new residents by year 2040.

Table 1. Demographic Profile				
		Montgomery County	Upper Moreland Township	Hatboro Borough
Population				
2010 Census		799,874	24,015	7,360
Age	<5	47,305	1,366	433
	5 to 24	198,054	5,520	1,797
	25-64	433,788	13,051	4,115
	65 and <	120,727	4,078	1,015
Median Age		40.6	41.2	38.9
Gender	Female	51.3%	51.2%	51.5%
	Male	48.7%	48.8%	48.5%
Estimates 2020		840,934	24,522	7,591
Population Projection 2010-2040		14.9%	6%	12%
Housing				
Person/household		2.53	2.39	2.42
Housing units		325,735	10,572	3,319
Households		307,750	9,934	3,043
Owner Occupied		73.1%	62.4%	64.4%
Median Value (owner occupied)		\$ 305,800	\$ 264,500	\$ 255,000
Socio-Economic				
Median household income		\$ 81,902	\$ 63,859	\$ 66,176
Per Capita Income		\$ 42,995	\$ 32,916	\$ 31,671
In Labor Force		447,741	13,628	4,486

Data compiled from the Delaware Valley Regional Planning Commission & U.S. Census Bureau, see Appendices. Additional estimates available for 2010 Census prepared 2017 & 2018 estimates

(Please see Appendices for a more detailed population breakdown)

Demographic Profile

Family friendly neighborhoods, great schools, and easy access to all community destinations; that is what keeps the residents of Hatboro and Upper Moreland from leaving, and what is encouraging new development. Each municipality has a housing stock reminiscent of the 1950's, with front porches and wide-internal streets. For nearly 70 years, this style defined the community's sense of place. And, even with the influx of new housing, an aging population, and changes to the size and types of households, the community is still a much sought-after place to live, learn, and work.

Great Neighborhoods

Well priced homes at \$250,000 average median value; lower poverty rates than the county; and close proximity to parks and recreation;

Great Schools

More than 94% of residents earned High School Degrees or Higher, 1/3 over 25 years old have a Bachelor's Degree or Higher. Primary, Intermediate and High Schools are found in two districts:

1. Upper Moreland Township School District
2. Hatboro-Horsham School District

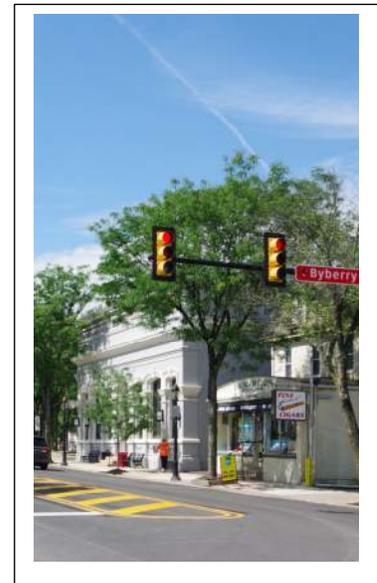
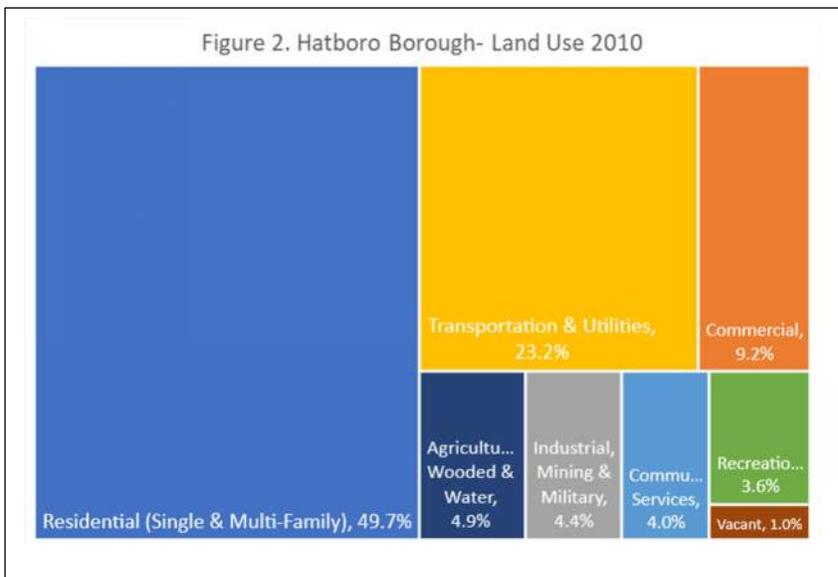
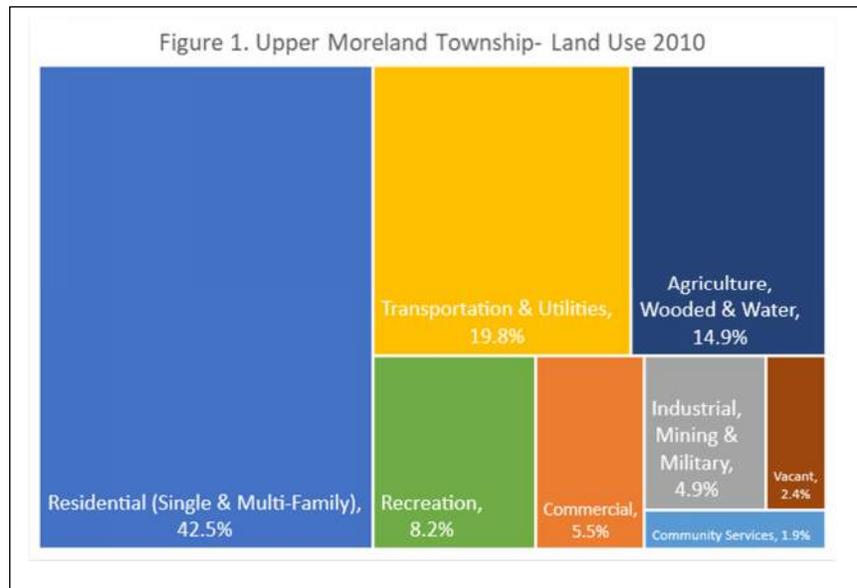
Easy Access to Everything

Major transportation routes, public transit, and close proximity to the city, nature preserves, trails, historic sites, health care and employment make the community very desirable:

- ✓ Great Parks—26 separate public parks
- ✓ Great Trails—5 nearby regional trails
- ✓ Great Nature—the Pennypack Creek Greenway, the Millers Meadow Nature Preserve, and the Pennypack Ecological Restoration Trust, with over 700 acres of nature trails and habitat
- ✓ History---over 150 locally historic properties and self-guided History Trail
- ✓ Getting Around
 - Southeastern Pennsylvania Transportation Authority (SEPTA)-train and bus stations
 - PA Turnpike-Willow Grove Interchange
 - PA 611 and PA 263-direct to the City of Philadelphia
- ✓ Premium Health Care Facilities and Employment
 - Abington-Jefferson Health—hospital and clinical care
- ✓ Great Shopping & Restaurants—downtown shopping in Hatboro and multiple shopping centers and malls in Upper Moreland, with active revitalization and business support for all of them!

Land Use

The land use characteristics of Upper Moreland and Hatboro start to reveal the impact that major transportation has on the community. Both municipalities are relatively dense and developed, with the majority of land dedicated to residential land use. However, in a close second place, *Transportation & Utilities* occupies nearly 1/5 of the community, not including the multi-modal transportation trails Hatboro and Upper Moreland are desperate for.



Upper Moreland Township has twenty-seven (27) zoning districts and Hatboro has seventeen (17), with the Recreation Conservation District and Floodplain/ Conservation Districts potentially supporting some trail development. Please see the Hatboro Borough and Upper Moreland Township Land Use Maps in the Appendices.

Table 2. Zoning Districts of Upper Moreland Township

Zoning District		Zoning District	
BO	Billboard Overlay District	R	Residence District
C-1	Commercial District	R-1	Residence District
C-2	Commercial District	R-2	Residence District
CC	Commercial Core District	R-3	Residence District
FP	Floodplain District	R-3A	Cluster Development District
HPO	Historic Preservation Overlay District	R-4	Residence District
HR	High-Rise District	RC	Recreation Conservation District
I	Limited Industrial District	S	Small Limited Industrial District
INST	Institutional District	SC	Shopping Center District
M	Multiple Dwelling District	SSCD	Steep Slope Conservation District
M-1	Office and Limited Industrial District	TC-1	Town Center District
M-2	Multifamily Dwelling District	TC-2	Town Center District
O	Office District Professional	UDC	Unified Development Commercial District
P	Professional District		

Source: Online Resources of Upper Moreland Township

Table 3. Zoning Districts of Hatboro Borough

Zoning District		Zoning District	
FP	Floodplain Conservation District	LI	Limited Industrial District
R-1	Residential District	HI	Heavy Industrial District
R-2	Residential District	HI-MU	Heavy Industrial – Mixed Use District
R-3	Residential District	OD-1	Overlay District
R-4	Residential District	OD-2	Overlay District
O	Office District	OD-3	Overlay District
RC-1	Retail Commercial District	OD-4	Overlay District
RC-2	Retail Commercial District	LI-TOD	Limited Industrial – Transit Oriented - Development Overlay District
HB	Highway Business District		

Source: Online Resources of Hatboro Borough

Despite the developed nature of Upper Moreland, there are still multiple new development projects proposed and under construction.

New Land Development Projects, in Upper Moreland Township, as of December 2019 include:

Table 4. Upper Moreland Township Active Projects				
Project Name	Proposed/ Under Construction	Location	Development Type	Special Notes
Blair Mill Village East	Under Construction	Village Drive off Blair Mill Road	Residential	-
ACME Corrugated Box Company	Proposed	2700 Turnpike Drive	Industrial Expansion	-
Fairhill Commons	Proposed	270 Fairhill Street	Residential	-
Jaguar/Range Rover Dealership	Proposed	900 South York Road	Commercial	-
UMT Middle School	Under Construction	4000 Orangemans Road	Institutional (Parking Lot Improvements)	Approved on May 17, 2018. Could be completed currently or in near future.
28 N York Road (Apartment Building)	Under Construction	28 N York Road & Church Road	Residential	Due to scope of work and approval date, could be completed currently or in near future.
Masons Mill Park	Under Construction	3500 Masons Mill Road	Park	-
The Station at Willow Grove (Petrucci)	Under Construction	Davisville Rd & York (611)	Residential/ Commercial	-
YMCA/Willow Grove Day Camp	Constructed	3400 Davisville Road	Recreation/ Conservation District	-
BPG Apartments	Under Construction	2405 Maryland Road	Residential	-
Carr & Duff	Proposed	2200 Byberry Road	Industrial	-
UMT Parking Lot	Proposed	UMT Municipal Bldg	Institutional	Parking Lot Reconstruction

One of the most anticipated projects in Upper Moreland, is the recently completed new YMCA family recreation and community center that will replace the existing Hatboro YMCA. The Willow Grove YMCA sits on 40 acres, employs 400 people, and serves as a destination recreation facility for residents in a 100-mile radius; upwards of 20,000 people are expected to join.



Willow Grove YMCA

Destination recreation and community Center to employ 400 people and serve 20,000 members in a 100-mile radius. Major land development and traffic improvements planned.

Location: Davisville Road, Upper Moreland Township



Where Are We in The Bigger Picture?

The population of Upper Moreland and Hatboro is highly educated, growing in number, and even though aging, also adding new residents of younger generations interested in the redeveloped areas close to public transportation, downtowns, parks, and the city. Greater walkability and trail connections, long-range planning, and the cost to implement change are important topics to both established households and newcomers. Upper Moreland and Hatboro have exceptional resources to retain their existing residents and attract even more. It stands to reason that as the population grows, more recreation and especially trails will be needed.

Over a thousand miles of trails are planned for the state, with multiple regional trails planned in Montgomery County. To develop a pedestrian and bicycle network, and to play a role in the regional trail system, with extensions of the Cross County, Powerline, and Pennypack trails, residents should recognize the importance and benefit of a safe and connected trail system and continuously support local implementation. Thankfully, Upper Moreland and Hatboro won't need to search far for case study examples: the nearby Schuylkill River Trail (SRT) was named 'Best Urban Trail' by USA Today in 2015, and in years prior, had \$589.9 million in economic benefit, with 6,154 jobs and \$37.7 million added regional tax revenue (TrippUmbach, 2012).

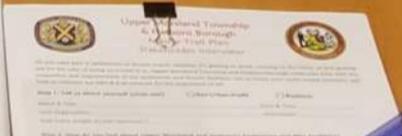
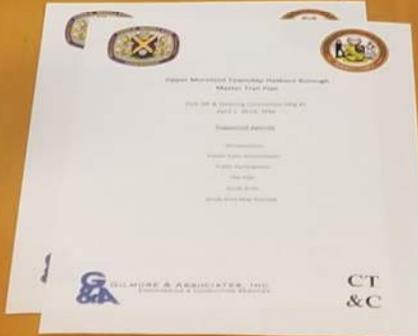


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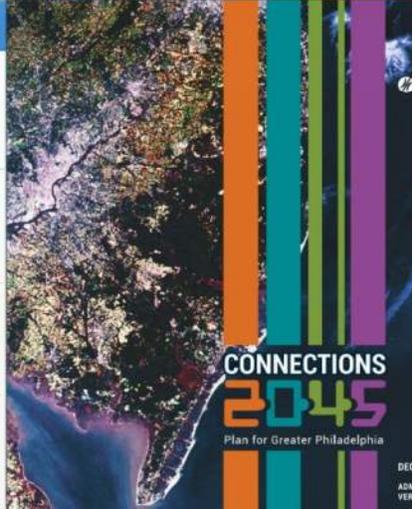
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SUPPORT FOR THE PLAN



Where Do You Really Want To Go?	
<p>SHOPPING & DOWNTOWN</p>	
<p>WORK & SCHOOL</p>	
<p>PARKS, RECREATION, & REGIONAL TRAILS</p>	
<p>TRAIN, BUS, OR CARPOOL STOPS</p>	



Support for this Plan

The Upper Moreland Township-Hatboro Borough Master Trail Plan was prepared with support from the Delaware Valley Regional Planning Commission, Montgomery County Planning Commission, and the volunteer Steering and Park and Recreation committees, staff, and elected officials of Upper Moreland Township and Hatboro Borough. DVRPC administered the grant funds, from the Transportation and Community Development Initiative (TCDI), and offered guidance to help select a planning team, host public workshops and presentations, conduct site investigation tours, and prepare the plan.

Upper Moreland and Hatboro share a great deal in common and, after multiple individual planning and economic development initiatives, realize they share a serious lack of walkability, regional traffic congestion and transportation barriers, and when partnered, a brighter future. They joined together to examine the physical barriers that divide their municipalities, and to identify the solutions that could connect pedestrians and bicyclists. To complete the examination, they established a steering committee, identified a list of stakeholders to interview, sought input from bicycling and resident focus groups, and hosted public outreach gatherings. In the end, these methods revealed a multimodal trail network with more than 50 miles of connected trails, paths and bike routes.

Public Participation

Steering Committee

The **Upper Moreland Township-Hatboro Borough Master Trail Plan** was prepared with help from a 13-person Steering Committee of volunteers from the community, representatives from each municipality, the Upper Moreland Township School District, the Pennypack Ecological Restoration Trust, the Montgomery County Planning Commission, the YMCA, and former SEPTA officials. The committee met regularly and, provided insight into the past, present, and ongoing regional trail efforts, and guided the goals and recommendations of the plan.

Members of the Committee shared information openly at meetings and through questionnaires and group emails that maintained continuous communication throughout the planning process.

Master Trail Plan Steering Committee

<i>Patrick Stasio</i>	<i>Chris Mendel</i>
<i>Elle Anzinger</i>	<i>Bruce Nicholson</i>
<i>Gary Chamberlin</i>	<i>Katrina Nuss</i>
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<i>Ed McCash</i>	<i>Clair Warner</i>
<i>Jim McKay</i>	<i>Chloe Mohr</i>

Gilmore & Associates, Inc. Planning Consultants

Kent A. Baird, AICP, Community Planner
Elizabeth Rosencrans, Junior Planner
Campbell Thomas & Co.
Robert Thomas, AIA
Douglas Maisey, Planner
Harry Murray, Architect

Public Meetings

Two (2) public workshop meetings were held for the plan:

- Wednesday, May 8, 2019 at the Upper Moreland Township Building,
- Wednesday, September 18, 2019 at the Hatboro Borough Hall.

At both public meetings, attendees were invited to share their knowledge and opinions of existing pedestrian and bicycle facilities in Upper Moreland and Hatboro. And, through workshop discussions, paper and online surveys, interactive display boards, and mapping activities residents were encouraged to identify their trail needs and priorities.

Stakeholders and Focus Groups—the Steering Committee identified important Stakeholders of both communities, who were contacted to collect input through discussion and questionnaire forms. Bicyclists provided additional focus group insights to traffic and bikeability.





Upper Moreland Township



Hatboro Borough

A Master Trail Plan

For a Safe and Enjoyable Pedestrian & Bicycle Network



Public Meeting
Hatboro Borough Hall
Wednesday, September 18th @ 7:00PM

Upper Moreland Township and Hatboro Borough partnered for the planning, design, and implementation of a safe and enjoyable pedestrian and bicycle trail network to connect residents and visitors to local and regional parks, trails, transportation networks and the businesses of both downtowns.

Please join us for our second Public Meeting to learn about the project and discuss your thoughts. This trail network and safe connections are for you and your family, so please come and share your suggestions and ideas!



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ENGINEERING & CONSULTING SERVICES



CT & C

Top Survey Findings

Paper and online surveys were an important public input gathering technique used throughout the Master Trail Plan’s development. Paper surveys were shared at both public meetings and the online survey was sent to residents through municipal websites, social media, and email, for a collection total of 669 responses from both methods.

A tally of the surveys showed that 50% of respondents are *Somewhat Satisfied* with the pedestrian and bicycle facilities in Upper Moreland and Hatboro. Walking was identified as the top activity currently enjoyed by respondents, followed by bicycling and nature viewing.

The favorite locations and trails survey respondents like to frequent:

1. The Pennypack Ecological Trust trails;
2. Local sidewalks and walking paths in neighborhoods and around town; and,
3. Masons Mill Park.

The top amenities, destinations, and/or connections needed:

1. Restrooms
2. Lighting and benches
3. Links to the parks and recreation facilities

While most questions elicited a similar response regardless of survey type, it was found that paper surveys showed a higher use of fitness facilities and a stronger vote for neighborhood links.

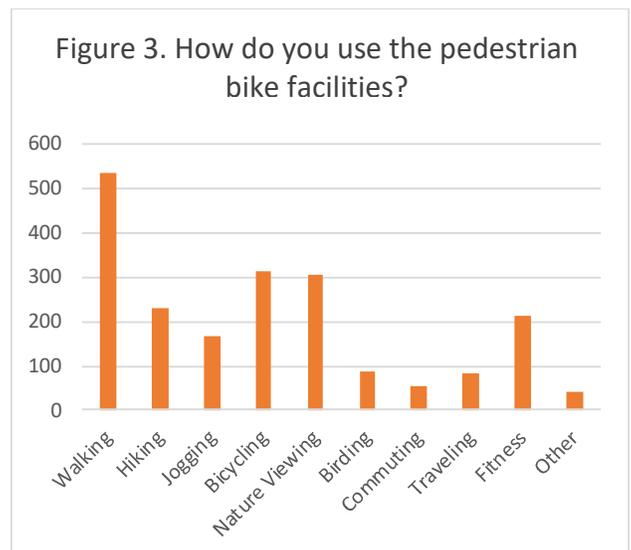


Figure 4. What amenities/destinations/connections are needed?

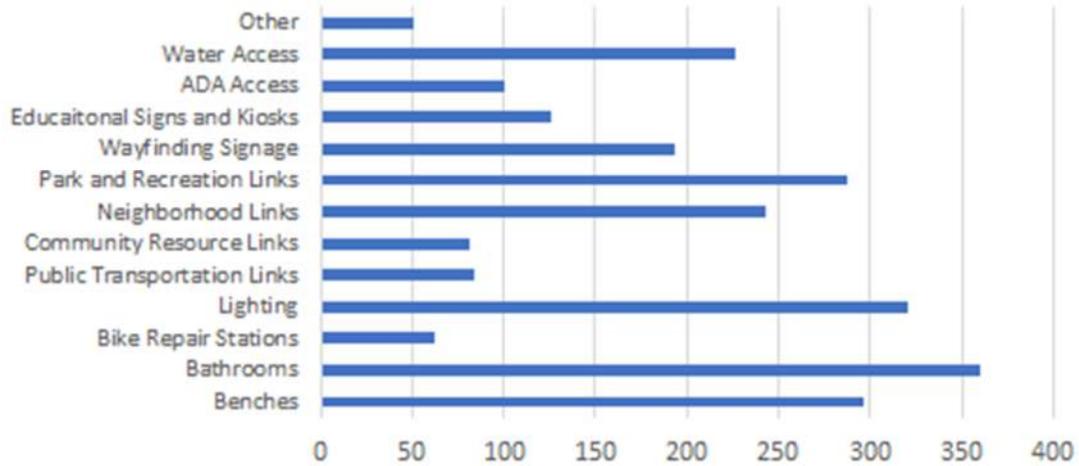
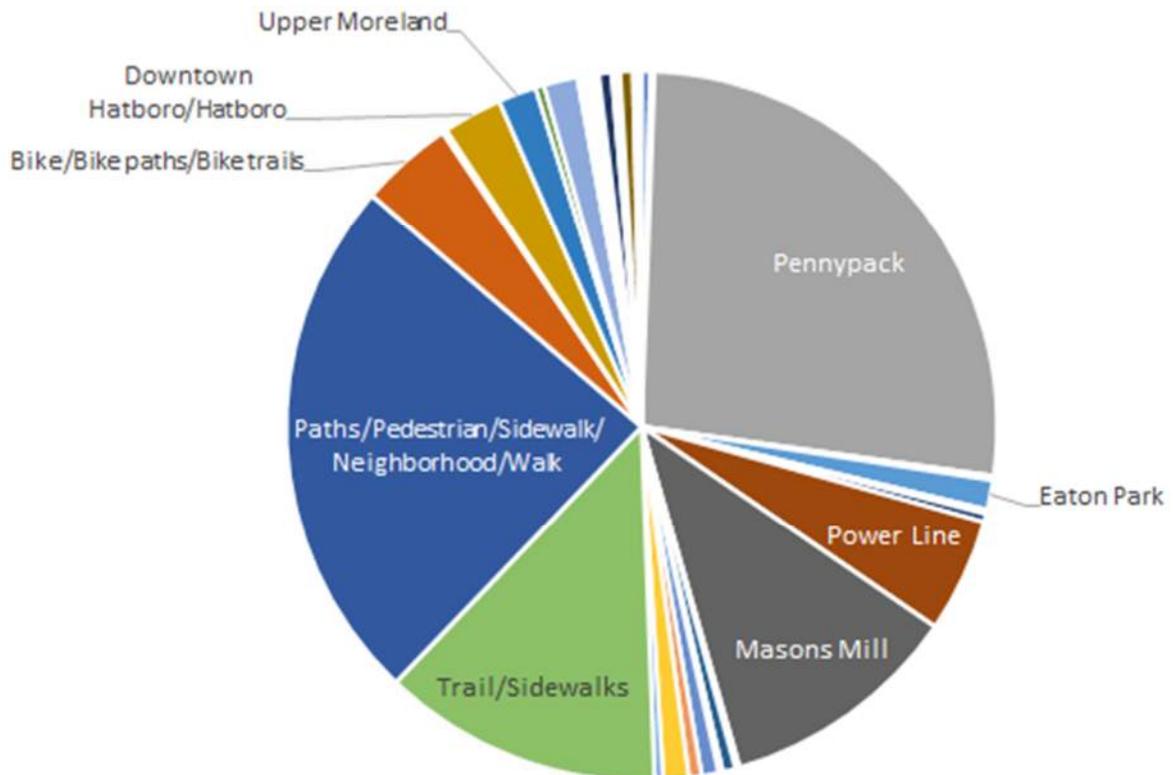


Figure 5. What do you frequent most?



Top Stakeholder Findings

Multiple stakeholders were interviewed to gather their top priorities and concerns regarding a pedestrian and bicycle network between Upper Moreland Township and Hatboro Borough. Over eleven (11) stakeholders responded, contributing recommendations from groups including: the Pennypack Ecological Restoration Trust, the Upper Moreland Township School District, Friends-of groups, the Hatboro Historic Commission, neighboring municipalities, and representatives of both Upper Moreland and Hatboro.

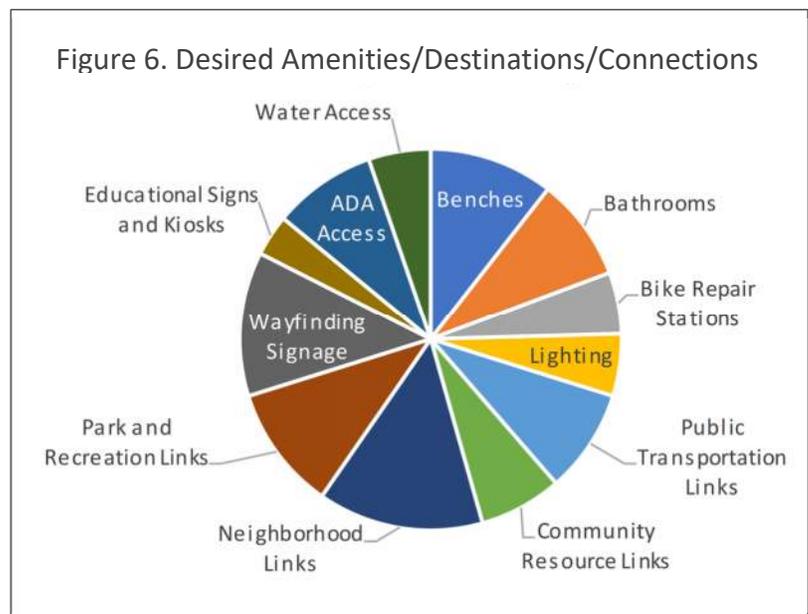
An evaluation of the responses showed that two-thirds of the respondents are *Very Satisfied* with the existing facilities. The most frequented facilities included the Pennypack Trail, Power Line Trail, sidewalks, and internal park trails.

The top activities currently enjoyed by stakeholders included:

1. Walking
2. Fitness
3. Bicycling
4. Nature Viewing

The top comments stakeholders made included:

- Multimodal networks good within urban cores, but lacking surrounding connections
- The Network is in the beginning stages and needs to grow
- Opportunities for local and regional connections
- Want trails, sharrows, signage, amenities, and to fill the gaps



Other Plans, Planners, & Planning

The following studies and projects were reviewed:

Local

- ❖ Hatboro Comprehensive Plan & Revitalization Strategy 2004
- ❖ Hatboro 2005 Open space and Parks & Recreation Plan
- ❖ Hatboro 2006 Elm Street Plan
- ❖ Hatboro SEPTA Regional Rail Station—2019 Draft
- ❖ Upper Moreland 2040 Comprehensive Plan—2019 Draft
- ❖ Upper Moreland Revitalization Plan 2012
- ❖ Upper Moreland Comprehensive Parks and Recreation Plan 2007
- ❖ Upper Moreland Open Space Plan 2006
- ❖ Upper Moreland... Trail of History
- ❖ UMT-Willow Grove Redevelopment Plan Expansion Area, Phase 1 (2014)

County

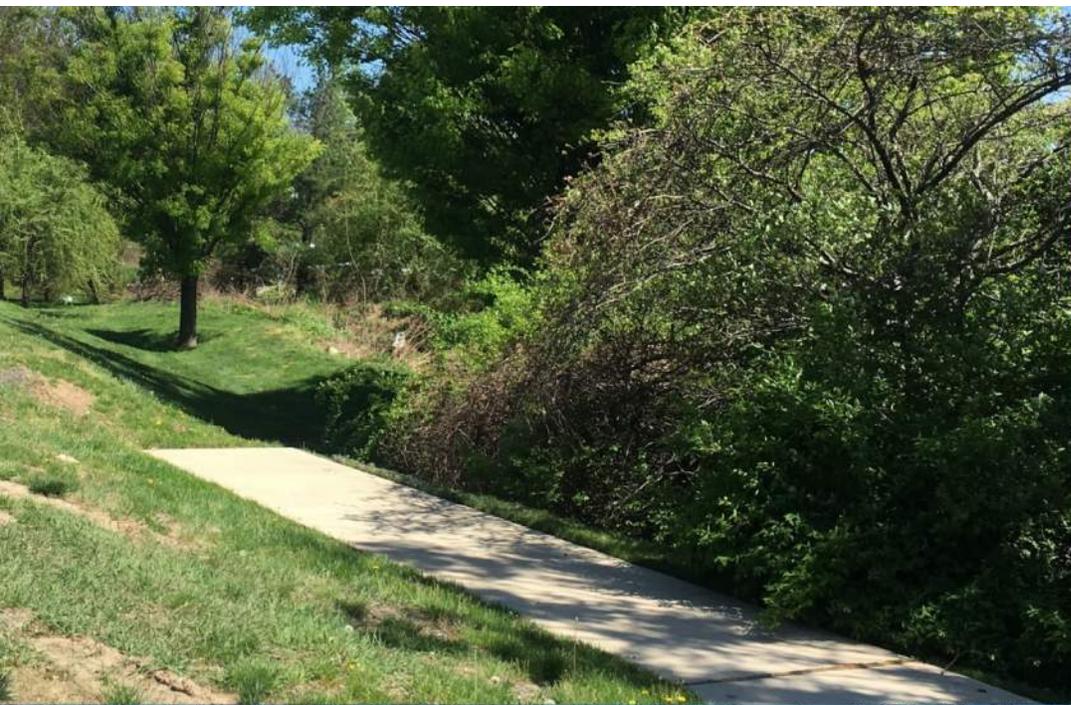
- ❖ Montco 2040 Comprehensive Plan 2015
- ❖ Bike Montco 2018
- ❖ Walk Montco 2016
- ❖ Montco Open Space Plan 2005
- ❖ Turnpike Corridor Reinvestment Project (2015)

Regional

- ❖ Pennypack Strategic Plan 2017-2022
- ❖ DVRPC Connections 2045
- ❖ DVRPC Pedestrian Bicycle Friendly Policies, Practices, and Ordinances
- ❖ DVRPC Aging in Place-Municipal Implementation Tool #12 (2007)
- ❖ DVRPC Age Friendly Communities-Municipal Implementation Tool #30 (2017)
- ❖ SEPTA Cycle-Transit Plan (2015)

Neighboring Municipalities

- ❖ Abington Township Proposed Trail Network 1998
- ❖ Abington Township Comprehensive Plan 2007
- ❖ Abington Township Open Space, Recreation and Environmental Resource Protection Plan (2006)
- ❖ Abington Township Master Bike Plan 2016
- ❖ Bryn Athyn Borough Municipal Parks, Open Space and Recreation Plan Update 2006
- ❖ Horsham Township Open Space Plan Update 2005
- ❖ Horsham Township Comprehensive Plan 2011
- ❖ Lower Moreland Township Open Space Plan 2006
- ❖ Upper Dublin Comprehensive Plan 2010
- ❖ Upper Dublin Open Space and Environmental Resource Protection Plan 2005
- ❖ Upper Southampton Comprehensive Plan 2010
- ❖ Warminster Township Comprehensive Plan...Launching Toward the Future 2018
- ❖ Warminster Township Open Space Update 2010



Inventory & Analysis

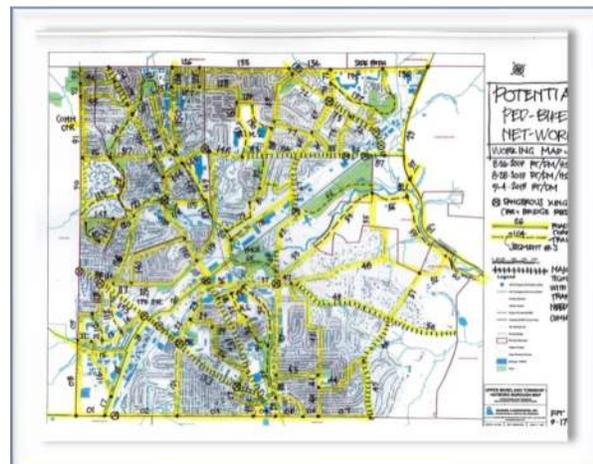
Establishing new trails, in any community, requires a good understanding of the natural and man-made obstacles to those trails: the trail paths, the access, and the actual experience of using the trails. They cannot be too steep. Access to them has to be easy. And, they have to be safe and enjoyable to use. An analysis of the existing conditions of Upper Moreland and Hatboro suggests three primary obstacles: streams, private property, roads, trains, and more roads.

Existing Natural and Man-Made Conditions Studied:

- Geology, Topography, and Soils
- Hydrology
- Woods and Wildlife
- Greenway Analysis
- Favorite Park and Trail Destinations
- Private Property
- Transportation Corridors

Site Visits:

Multiple site investigations were conducted, of the entire community, by the consultant team and during a special Steering Committee tour, with all roadways, existing trails and sidewalks, existing greenways, existing parks, existing destinations, and recommended trail routes visited.



Geology, Topography, and Soils

The geology, topography and soils of a landscape can either support a new trail path, make it expensive to develop a new trail, or completely eliminate any chance of creating one. The three subjects are grouped together because the underlying geology helps define topography and soils.

In Upper Moreland and Hatboro, there are two main geologic provinces:

1. Triassic Lowlands, of the Gettysburg-Newark Section of Piedmont Province—includes sedimentary bedrocks, like red shales and sandstones, and the Stockton Formation with a medium to coarse grained sandstone with siltstone, mudstone, and shale interbeds.
2. Piedmont Upland Section of the Piedmont Province—includes a range of metamorphic and igneous rocks including some Felsic Gneiss, Chickies, Mafic Gneiss and Conestoga formations.

The topography of a landscape matters when looking for steep slopes. Slopes can increase rates of erosion and when disturbed can damage unique habitat and contribute to flood destruction. Upper Moreland consists of gently sloping land with a slope grade at or below 8%, followed by pockets of moderate slopes (8-12%), between Abington Township and the Pennypack Creek, and then fewer pockets of steep slopes (12-20%) in the south. Hatboro contains few steep slopes, most of which are between Mill Road and Pennypack Creek.

Through the interactions of geology, weather patterns, and organisms, soils are formed, and alter through time. Their composition and structure determine the resilience, use and productivity of the land, and determine topography, habitat, hydrology, and rate of groundwater recharge. Hydric soils are formed under periodically wet conditions and can support wetland vegetation, and indicate wetlands and repeated flooding. Some hydric soils are located along the Pennypack and Southampton creeks, and their tributaries. Hatboro contains some seasonally high-water table soils, along the Pennypack, that contribute to drainage/flooding issues.

Hydrology

Water can transport, sustain and shape landscapes, and have highly destructive qualities when disturbed. Hydrology is therefore a critically important subject when developing trails.

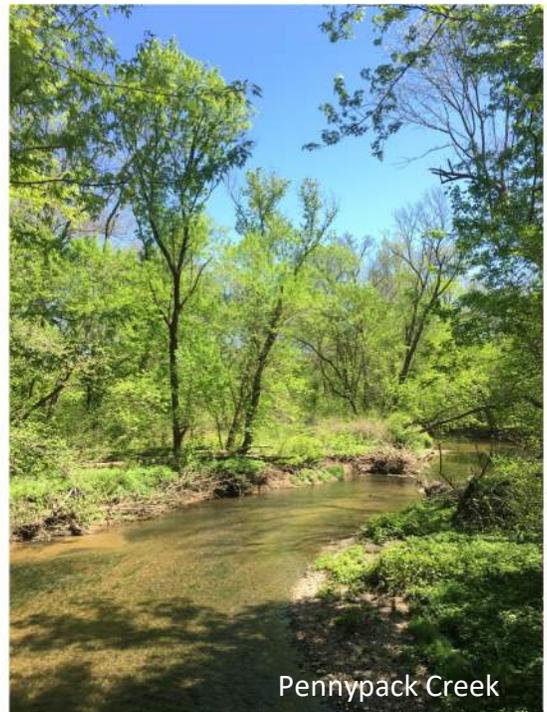
- Pennypack Creek Watershed—most of Upper Moreland and Hatboro drain to the Pennypack
- Southampton Creek Watershed—northeast Upper Moreland drains to Southampton
- Sandy Run Creek Watershed—portions of southern Upper Moreland drain to Sandy Run

The quality of these streams is defined by Chapter 93 of The Clean Streams Law, which helps define how much impact can occur near the stream. The Pennypack Creek is classified as a trout stocked fishery (TSF) and migratory fishes (MF), and the Southampton Creek is classified as a TSF.

There are 100-year floodplains along the Pennypack and Southampton creeks and multiple wetlands have been identified along the Pennypack in both the Township and Borough. Upper Moreland and Hatboro have experienced flood events along the Pennypack.

Groundwater is an important water source for people, industries, and nature; however, the replenishment process of groundwater is very slow. Open space and undeveloped land are essential areas to recharge groundwater. Vegetation slows surface water flow for infiltration to groundwater aquifers. Developed and impervious surfaces prevent infiltration and increase runoff and flooding hazards. The Stockton Formation

found in the community is a complex multi-aquifer system with moderate to large water yields. Some impervious rock, mixed with high percentages of impervious surfaces contributes to slow recharge. Seasonally high-water table soils, where groundwater is less than three feet from the surface, is found along the Pennypack.



Pennypack Creek

Woodlands and Wildlife

Woodlands provide many benefits. They prevent the erosion of soils, absorb and infiltrate water, buffer waterways, and of course provide habitat, scenic views, and recreational and educational opportunities. Historically, Montgomery County was densely forested by hardwoods, including oaks, chestnut, tulip poplar, hickory, ash, red maple, and dogwoods. Few woodlands remain in Upper Moreland and Hatboro, and those that do are mainly concentrated along the Pennypack and Southampton creeks, and their tributaries. Woodlands exist in parks, the Pennypack Ecological Restoration Trust lands, and near Warminster Road.

In Hatboro, the Pennypack Creek greenway corridor and Miller Meadow Park are considered the main scenic and natural resource areas. In Upper Moreland, there are a range of natural and scenic areas, including riparian and wetlands areas along the Pennypack and Southampton with habitat for wildlife including birds, mammals, reptiles, and amphibians. Upper Moreland Township is a certified Audubon Bird Town.

The Natural Areas Inventory of Montgomery County identified multiple areas of significance and species of concern in Upper Moreland Township. They include:

- Frazier's Bog: east of Terwood Road this bog-like habitat historically contained three plants of special concern and supported numerous rare species. Most of the habitat has been lost to a golf course. The site is currently monitored by the Pennypack Ecological Trust.
- Willow Grove Roadside: contains a population of rare plants growing near the PA Turnpike at the Willow Grove exit

Scenic areas add to the enjoyment of a trail. Previous planning studies include the scenic areas, roads, and vistas of: the Pennypack Preserve, the Huntington Valley Country Club, Raytharn and Carson-Simpson Farms, Mason's Mill and Pileggi parks, Terwood Road between Paper Mill & Edge Hill roads, Edge Hill Road east of Overlook Road, Huntingdon Road, and Mason's Mill Road.

Greenway Analysis

The steering committee for this plan requested a deeper analysis of the existing greenway corridors of the Pennypack and its tributaries. Only with additional consideration for the potential to establish off-road trails through the woodlands, floodplains, and topography along the creeks could the master trail plan be finalized.

The methodology of the analysis involved additional site visits, where appropriate and allowed, and use of Geographic Information System (GIS) layering of exiting public data. The study area of Upper Moreland and Hatboro was divided into nineteen (19) segments strictly focusing on the Pennypack Creek and Southampton Creek greenways, and thereafter a system of ranking was established, to determine the feasibility of trails and/or the priority of pursuing feasible trails.

Expanding on the previous definition of *greenway*, the Steering Committee knows the Pennypack and Southampton creek greenways to include corridors of mostly undeveloped land, with streamside habitat, some connections to ribbons of greenery along rail lines, and/or linear parks stretching through the landscape. Planners and designers originally created the term to help describe connected habitat and the need to avoid habitat fragmentation. In time, these areas became ideal for outdoor recreation, with trails, boat launches, and nature viewing. The use of a greenway in a community for trail connections can also give focus to open space preservation, conservation efforts, and natural resource management. And, their connections extend past humans to link wildlife, and plant species.

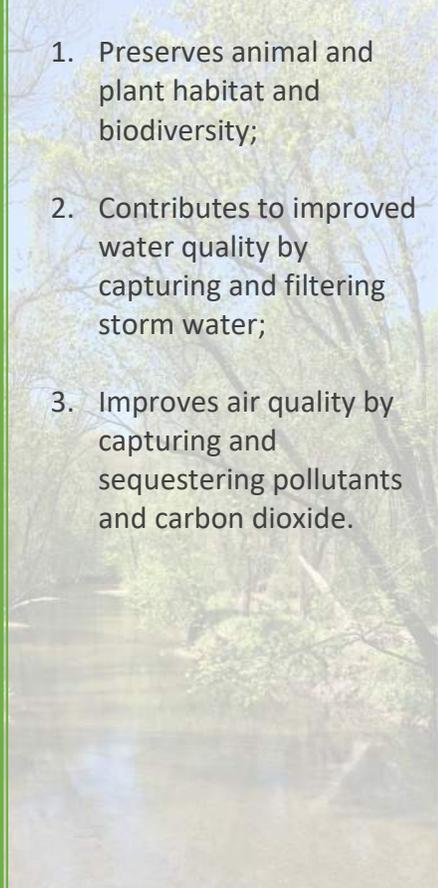
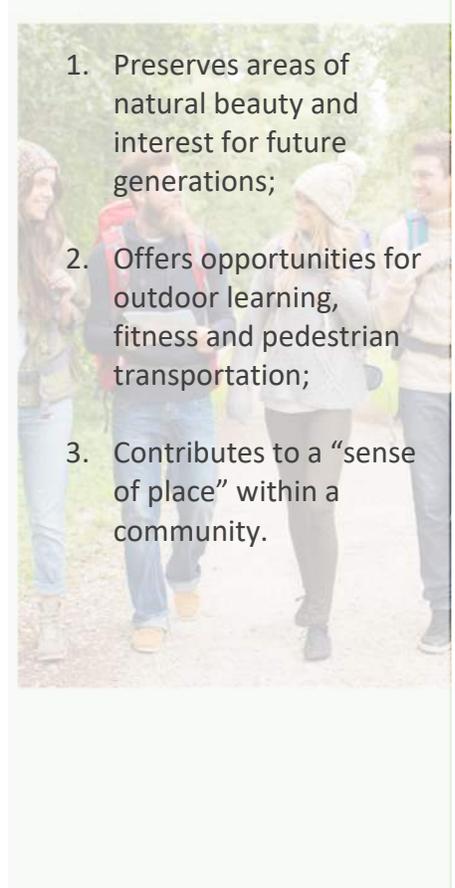
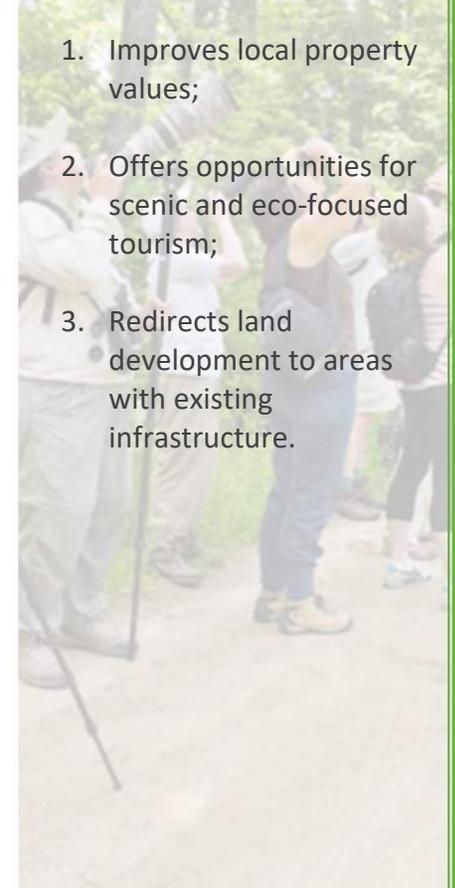
Existing Greenway Corridors

The primary greenways, in Upper Moreland and Hatboro, follow the Pennypack Creek, the Southampton Creek, and their tributaries; with riparian, habitat, and open space buffers beside these waterways. The Pennypack Creek is the largest greenway in the study area, and the only greenway in Hatboro. It enters Upper Moreland and Hatboro from the northwest and stretches across Upper Moreland to the southeastern border. The Southampton Creek flows into Upper

Moreland at its northeastern border with Bucks County and continues along its eastern border, where it joins the Pennypack Creek.

1. Pennypack Creek—flows 22.6 miles through Bucks County, Montgomery County, and Philadelphia, to the Delaware River. It flows through both Upper Moreland and Hatboro, with seven (7) tributaries and multiple branches in Upper Moreland, and one (1) in Hatboro.
2. Southampton Creek—flows 3.4 miles along the border of Bucks County and Montgomery County to the Pennypack Creek. The Creek and three (3) tributaries flow through the eastern corner of Upper Moreland.

The Benefits of Greenways

Environmental Benefits	Social Benefits	Economic Benefits
 <ol style="list-style-type: none">1. Preserves animal and plant habitat and biodiversity;2. Contributes to improved water quality by capturing and filtering storm water;3. Improves air quality by capturing and sequestering pollutants and carbon dioxide.	 <ol style="list-style-type: none">1. Preserves areas of natural beauty and interest for future generations;2. Offers opportunities for outdoor learning, fitness and pedestrian transportation;3. Contributes to a “sense of place” within a community.	 <ol style="list-style-type: none">1. Improves local property values;2. Offers opportunities for scenic and eco-focused tourism;3. Redirects land development to areas with existing infrastructure.

Greenway Ranking

For the purpose of studying the greenways, and for ranking and prioritizing trails within these greenways, the study area was divided into 19 segments. Each segment was evaluated with sub categories regarding existing conditions, the physical space beside the creek, and the potential greenway trail user experience. The resulting evaluation table identifies which segments can support a trail, and the potential ownership, obstruction, and cost severity to establish it.

How Did We Evaluate:

The first step in the evaluation involved the use of Geographical Information Systems (GIS) to map a 25-foot and 45-foot buffer beside each waterway. These buffers represent 1) the distance needed between a stream edge and potential trail to maintain stream health and user safety (approximately 25-ft on each side), and 2) the space needed to install and maintain a trail path, including adequate buffers between adjacent properties and buildings (20-ft in addition to the initial 25-ft stream buffer (totaling 45-ft from the streambank) to include a 10-ft-wide ADA trail path and 5-10 ft buffer between the trail and potential structures). Once these ‘buffer zones’ were mapped, the space within these zones could be evaluated using the following:

- *Physically Feasible– this section looks at 1) is there an existing trail here already, 2) are there steep slopes that may affect the feasibility of a trail path, and 3) does this area flood? This gives the evaluator a basic understanding of how well a trail might fit along this segment, regardless of manmade structures that may change with time and ownership.*
- *Obstacles– this section asks 1) are there buildings within the 45-ft buffer, 2) are road or stream crossings needed, 3) are rail lines present, and 4) are there fences, parking, or other obstacles that enter the buffer? This gives the evaluator an understanding of how a trail might fit when considering manmade structures, and that may require a stream, road, or rail crossing to continue.*
- *Landowner/Community Impact– this section examines 1) what type of landowners will need to be involved along this segment, especially private homeowner associations and/or schools, 2) what type of experience will the trail user have along this segment- scenic or squeezed between buildings and parking lots, 3) will an easement be needed to construct, use, and/or maintain the trail, and 4) what cost will likely be associated with the segment- low, medium, or high. This gives the evaluator an initial understanding of the non-physical aspects of the trail that will affect its ability to be designed, constructed, and used.*

After each category was taken into consideration, each greenway and trail segment was ranked on the map with a green, yellow, or red rank, with green being the most feasible and red as not feasible (please see Appendices for 19 Segment Maps) It is important to remember the following when examining each greenway segment:

- ✓ These greenways are considered natural areas, limited in size compared to the development areas of Upper Moreland and Hatboro;
- ✓ Most greenway routes potentially impact floodplain, which needs to be considered when planning for design and the cost of maintenance;
- ✓ A complete tree and habitat inventories were not included in this initial evaluation;
- ✓ Schools do not typically support public trails within their property;
- ✓ Steep slopes, rail, roadway, and stream crossings present obstacles and raise costs;
- ✓ Private landowners will require negotiations and trail easements;
- ✓ Buildings and landowners change over time- some obstacles today may not be an issue, or may be negotiated tomorrow.

This evaluation focused on the physical feasibility of the Pennypack Creek and Southampton Creek greenways for trail paths, with an initial examination of the non-physical factors like ownership and cost. Next steps would include further evaluation of existing habitat and landowner coordination to determine the true feasibility of each segment.

RESULT: multiple trail alignments were realized from this Greenway Analysis, including portions of Trail Segment's 5, 11, 12, 17, 20, 29, and the Potential Park Trails in Hatboro Memorial Park, Whitehall Park, Pioneer Woods, and Frank J. Pileggi Park.

Table 5. Pennypack Creek Streamside Trails-Greenway Evaluation Criteria

File:

ID	Greenway Segment	Physically Feasible			Obstacles				Landowner/Community Impact			
		Existing Trail	Steep Slope	Flood	Building (s)	Crossing Needed	Rail Line	Fence/ Parking/ Other	Private HOA/ School/ Other	User Experience	Easement Needed	Cost
1	Countyline Rd--Crooked Billet Elementary--Celano Park--York Rd--Timber Ln Circle	Yes	Some	Yes	Multiple Buildings	York Road Crossing Needed	No	Fence	Yes	Between Buildings	Yes	Medium
2	Timber Ln & Blair Mill Rd--Hatboro Memorial Park creek confluence--Harding Ave	Park Trail	Some	Yes	Yes-Non Park	Monument Ave and Moreland Ave	No	Fence	No	Private Residences, Parkland, Woodland	Yes	Medium
3	Harding Ave & Blair Mill Rd to Robert Bruce confluence--Pennypack Elementary School	No	Yes	Yes	Yes	Stream	No	Fence	HOA and Pennypack School	Some Pleasant Woodland, Some Apt. Complex	Yes	LO
4	Pennypack Elementary School--Miller Meadow Park--Village Green Apts-PA Turnpike	Park Trail	Yes	Yes	Multiple Buildings	Stream, York Road, Turnpike	Yes	Fence	HOA/ Cemetery	Woodland	Yes	HI
5	From Byberry Rd (east of Farmstead/Boileau Park) to Arionne Dr.	No	Minor	No	Private Residences	No	No	Fence	No	Private Residences	Yes	HI
6	Branch Pennypack to York Rd PepBoys to Turnpike Dr. Confluence--Terwood/YMCA	Terwood and YMCA Only	Some	Yes	Yes	York Road Crossing Needed	Yes	No	No	Woodland	Yes	HI
7	Branch Pennypack (East and West of PA Turnpike Interchange)--Mill Creek Park. Portion of Tributary above Fitzwatertown also	Mill Creek Park Trail Only	Some	Yes	Yes	Turnpike/ Easton	No	Rear of Restaurant Parking	NO	Park	Yes	Medium
8	Blair Mill Rd--Commerce Ave--Maryland Rd Tributary Confluence--Easton Rd	No	Some	Minor	Yes-Multiple	Easton Rd, Internal Commerce-Maryland possibly	No	Rear or Frontage Corporate/Business	HOA	Linkage	Yes	HI
9	North of Fitzwater Rd (near Buehler Park)--pond at Landing at Willow Grove--York Rd--Westbury Apts--Upr Moreland HS--Terwood Dr--Terwood Park/YMCA	No	Limited	Yes	Multiple Buildings	Mid-Block Crossings Needed	Rail Crossing Needed	Fence/ Parking	2 HOA's to negotiate with	Sewer Plant	Yes	HI
10	Whitehall Park/Hideway Drive--between buildings--Easton Rd--between buildings to confluence (north of Fitzwatertown Rd) with Buehler Park Tributary	No	Serious	Yes	Multiple Buildings	Mid-Block Crossings Needed	No	Fence	No	Between Non-Residential Buildings	Yes	HI
11	Portions of Tributary beginning between Computer Ave and PA Turnpike. Also Moreland Rd--Valley Green Park--Willow Run Apts Tributary--Whitehall Park.	No	Serious	Yes and Stormwater	Multiple Buildings	Internal-Neighborhood Crossing	No	Private Common Area Amenities	YES-Major	Between Non-Residential Buildings	Yes	Medium

Table 5. Pennypack Creek Streamside Trails-Greenway Evaluation Criteria

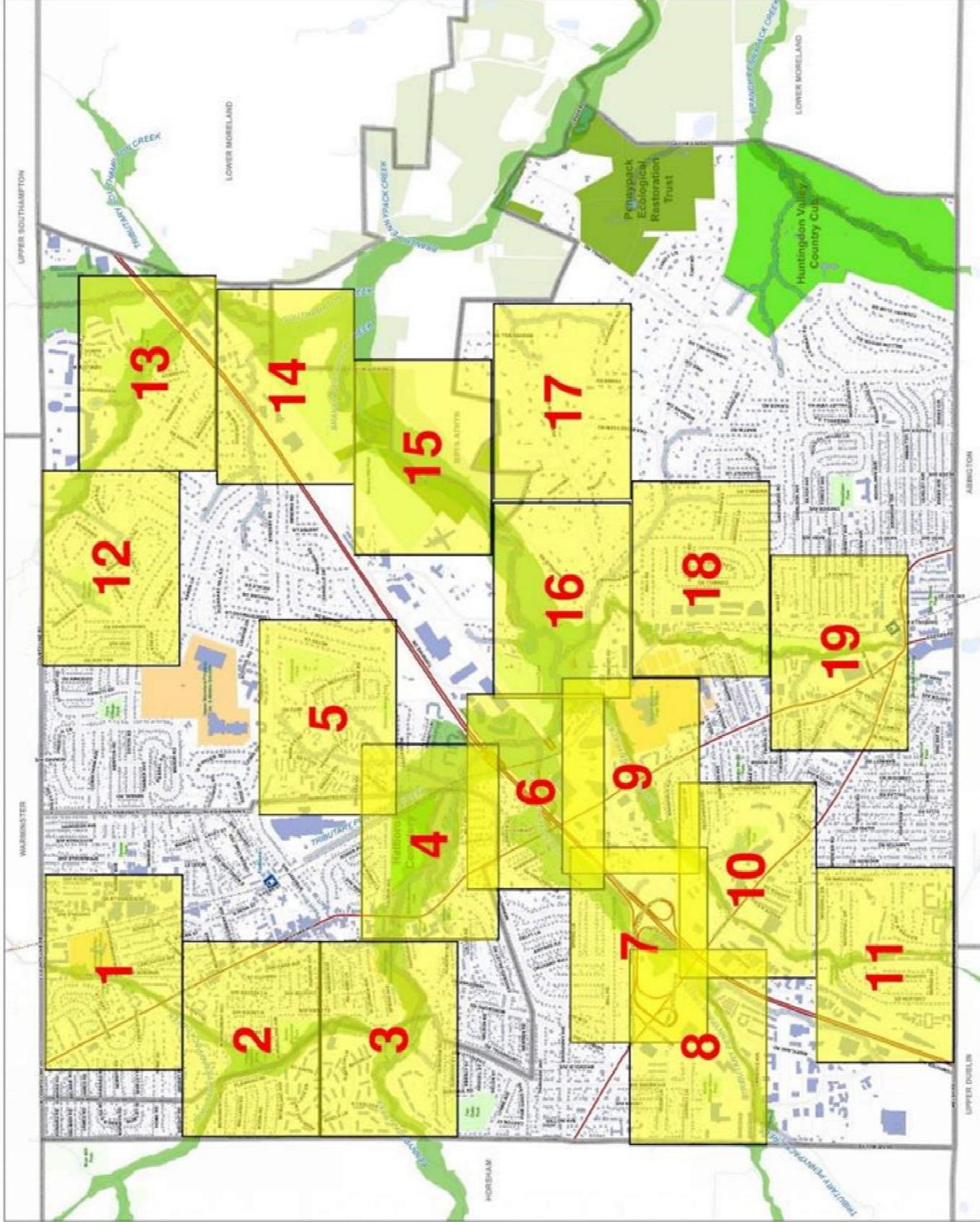
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ID	Greenway Segment	Physically Feasible			Obstacles				Landowner/Community Impact			
		Existing Trail	Steep Slope	Flood	Building (s)	Crossing Needed	Rail Line	Fence/ Parking/ Other	Private HOA/ School/ Other	User Experience	Easement Needed	Cost
12	Pioneer Woods to County Line Rd. Also portion Tributary to Pioneer Rd then to Gibson Dr. confluence with Southampton Creek (south of County Line Rd)	No	No	Flood and Wetlands	Private Residences	Internal-Neighborhood Crossing	No	No	No	No clear link No clear destination	Yes	Lo
13	Branch Southampton Creek from Davisville Rd to Frank J. Pileggi Park--PA Turnpike--Tributary confluence between Turnpike and Rail. Portion of Southampton Creek from County Line to Music and Art confluence	No	Yes	Flood and Wetlands	Multiple Non-Residential Buildings	Turnpike Crossing	Yes	Parking	Possible Commercial HOA	Internal Park Trails Possible	Yes	Medium-Internal Park
14	Tributary Southampton Creek Frontier Rd--Turnpike--Rail--Rail--Bryn Athyn Portions Pennypack Creek through Masons Mill Park.	Yes	Yes	Flood	Yes	Turnpike Crossing	Yes	Fence	No	Park	Not for Park Trails	Medium-Internal Park
15	Masons Mill Park.	Yes	Yes	Flood	No	No	No	No	No	Park/ Woodland	Not for Park Trails	LO
16	Greyhorse Rd to Terwood Park confluence. Ball Rd. to Terwood Park confluence. Terwood Park--Davisville Rd--Masons Mill Park	Park Trail	Some	Flood	Private Residences	Davisville, Terwood, Pennypack	No	Private Nursery	No	Some Challenge. Some Linkage.	Not for Park Trails	Medium
17	Tributary beginning Cathedral Rd--Huntingdon Rd--Lords New Church. Tributary beginning Huntingdon Rd--Masons Mill Rd--Lords New Church.	No	Yes		Private Residences	Crossing Needed	No	Fence	No	Private Residences	Yes	HI
18	Veterans Memorial Park--Upr Moreland HS--Rail--Davisville Rd--Terwood Rd. Also Tributary from Red Barn Rd to Ball Rd to Terwood Rd (running below Terwood)	Yes-Park	Yes	Flood	Multiple Buildings	Crossing Needed	Yes	Fence and Parking	School	Park Use; Areas of Non-Residential	Yes	Medium-on Parkland; Rail Crossing HI
19	Veterans Memorial Park with portion Tributary from York Rd to Veterans.	Yes-Park	Yes	Flood	Multiple Buildings	Crossing Needed			HOA	Park Use	Not for Park Trails	LO

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Greenway Add-On Analysis



Greenway Segments 1-19



Legend

- SEPTA Regional Rail Stations
- SEPTA Regional Rail Lines
- 25' Buffer from Stream Bank
- 45' Buffer from Stream Bank
- Pennypack Greenway
- State Highways
- Municipal Boundary
- Buildings
- Parks
- Pennypack Ecological Restoration Trust
- Private Open Space
- Schools
- Parks
- Steep Slopes
- 10-15%
- 19-20%

UPPER MORELAND TOWNSHIP / HATBORO BOROUGH MAP
UPPER MORELAND TOWNSHIP
MONTGOMERY COUNTY, PENNSYLVANIA

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Favorite Park and Trail Destinations

Upper Moreland and Hatboro include destinations nearly everyone involved with the public input, Steering Committee, and Stakeholder interviews would like trail connections to; especially: all parks, all shopping centers and downtown areas, the Pennypack Ecological Restoration Trust areas, the neighborhoods, the regional trails, the YMCA, and the historic sites.

Historic Sites

Upper Moreland and Hatboro have over 150 locally historic buildings and sites. And, while not all yet have National recognition as historic sites, they all hold community sentiment. In Hatboro, it is estimated that 80% of the structures that existed 70 years ago still stand today.

Hatboro Borough National Register of Historic Places:

- Former Loller Academy, built in 1811 and now the Borough Municipal Office;
- Union Library Company, extension built in 1851, 2nd library in the country;
- Dr. Norman and Doris Fisher House at 197 E. Mill Road; and,
- Roberts and Mander Stove Company, a former manufacturing complex.

The Upper Moreland Historical Commission prepared, and members still promote the *Trail of History*, with nearly 30 sites residents and visitors can visit on a self-walking tour. Homes, inns, barns, mills, and even Farmstead Park, with its own non-profit Friends of Boileau, can be visited.

Friends of Boileau—at Farmstead Park

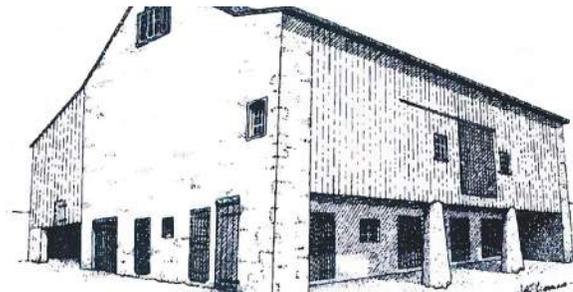


Illustration by Joe Thomas

Parks and Recreation

What's the Difference Between Active and Passive Recreation Anyway?

Park and recreation planners find that the subject of recreation is easier to promote when using two main categories: 1) Active Recreation and 2) Passive Recreation. Both categories include activities and facilities presumably meant to improve a person's quality of life and/or make that person more 'active.' However, there are distinct differences between the two:



Active Recreation—the category of recreation that typically includes organized play, team activities, and the use of fixed-in-place activity fields and/or equipment.

Passive Recreation—a category of recreation that encourages unstructured activities, greater flexibility for personal engagement, minimal number of constructed or permanent facilities, and more often than not, a simpler way to enjoy oneself.

Together, Upper Moreland and Hatboro provide residents and visitors with 26 separate public parks, with a range of passive and active recreation opportunities. These resources are well dispersed and provide a nearby destination to relax and play. There are also other park and recreation resources open to the public, including the trails and wildlife viewing of the Pennypack Wilderness Area, the Huntingdon Golf Club, multiple sport and swim groups and facilities, and a range of field and playground resources at the six (6) public schools.

Major active recreation providers include: Hatboro Little League Baseball and Softball, Upper Moreland-Hatboro-Horsham Youth Basketball Association, Horsham Hawks Football and Cheerleading Association, Upper Moreland-Hatboro-Horsham Soccer Club, and the Horsham Soccer Association. The Upper Moreland School District also owns multiple fields including football, baseball and softball, soccer, lacrosse, track and multipurpose fields.

Table 6. Public Parkland Resources Owned by Upper Moreland Township

Public Park	Location	Acreage	Type of Recreation
Blair Mill Park	Blair Mill Road	0.96 acres	Active & Passive
Brooks Street Park	Brooks Street	0.4 acres	Active & Passive
Broughton Park	107 Barrett Road	0.5 acres	Active & Passive
Buhler Park Nature Study Area & Parks Maintenance Shop	627 Fitzwatertown Road	7.0 acres	Passive
Cherry Street Park	24 Cherry Street	0.5 acres	Active & Passive
Dawson Manor Park	3630 Lukens Lane	1.0 acre	Active & Passive
Fair Oaks Park	2300 Skrobul Road	6.0 acres	Active & Passive
Fern Village Park	614 High Avenue	5.0 acres	Active & Passive
Frank J. Pileggi Park	4255 Shoemaker Road	53.0 acres	Active & Passive
Masons Mill park	3500 Masons Mill Road	76 acres	Active & Passive
Mill Creek Dog Park	3350 Mill Road	1.0 acre	Passive
Mill Creek Park	3530 Mill Road	14.75 acres	Active & Passive
Nathaniel Boileau Park/Farmstead Park	2668 Byberry Road	10+ acres	Active & Passive
North Willow Grove Park	1391 Linden Avenue	3.0 acres	Active & Passive
Pioneer Woods	Pioneer Road	8.4 acres	Passive
Terwood Park	3100 Davisville Road	5.5 acres	Active & Passive
Valley Green Park	3403 Moreland Road	0.5 acres	Active & Passive
Veteran's Memorial Park	220 Mineral Avenue	24.0 acres	Active & Passive
Whitehall Park	2 Hideaway Drive	4.0 acres	Active & Passive
Woodlawn Park	601 Division Avenue	6.0 acres	Active & Passive

Table 7. Public Parkland Resources Owned by Hatboro Borough

Public Park	Location	Acreage	Type of Recreation
Hatboro Memorial Park	330 West Moreland Avenue	9 acres	Active & Passive
Eaton Park	321 West Moreland Avenue	9.7 acres	Active & Passive
Tanner Park	329 Jefferson Avenue	1.8 acres	Active & Passive
Miller Meadow	York/Horsham Roads	8.1 acres	Passive
Hatboro Little League Complex	Blair Mill Road	15.9 acres	Active & Passive
Celano Park	Meadowbrook Avenue	2.4 acres	Passive Recreation

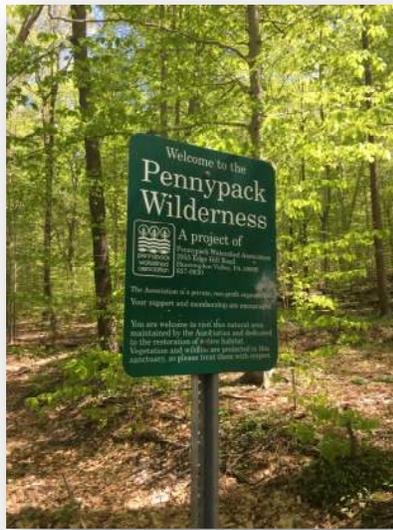


Table 8. Public Parkland Resources in Upper Moreland Township & Hatboro Borough

Public Resource	Location	Acreage	Type of Recreation
Pennypack Ecological Restoration Trust	Pennypack Road	852 acres	Passive
Crooked Billet Elementary School	101 Meadowbrook Avenue	12.18 acres	Active & Passive
Upper Moreland Primary School	3980 Orangemans Road		Active & Passive
Upper Moreland Intermediate School	3990 Orangemans Road	60.07 acres	Active & Passive
Upper Moreland Middle School	4000 Orangemans Road		Active & Passive
Upper Moreland High School	3000 Terwood Road	56 acres	Active & Passive
Pennypack Elementary School	130 Spring Avenue	9.45 acres	Active & Passive



Huntington Valley Country Club- photo from hvccpa.org

Private Recreation within Upper Moreland Township includes the Huntington Valley Country Club and the Upper Moreland Swim Club.

Table 9. Recreation Facilities Owned by Upper Moreland and Hatboro

Public Park	Facilities & Amenities		
Blair Mill Park	Off Street Parking Playground	Swing Sets Tunnels	Ground Zero Balance Beams Climbers
Brooks Street Park	Benches	Playground	
Broughton Park	Playground	Climbers	Benches
Buehler Park Nature Study Area & Park Maintenance Shop	Parking Trail	Playground Small Open Turf Area	Gaga Court
Cherry Street Park	Basketball Court	Gaga Court	Playground
Celano Park	Trail		
Dawson Manor Park	Playground	Half Court Basketball	Modular Play Equipment
Fair Oaks Park	Baseball/Softball Diamond	Soccer Field	Open Turf/ Wooded Areas
	Basketball Court	Trails	Playground
	Volleyball	Youth Roller Hockey Rink	Parking
Fern Village Park	2 Softball Fields with Backstop	Baseball Diamond	Playground
	Basketball and Open Courts		Modular Play Equipment
Frank J. Pileggi Park	Lighted Multi-Purpose Court with 2 Basketball Goals		Restroom/Storage Building
	Soccer Field	Walking Path	2 Lighted Parking Areas
	Two Modular Play Equipment Areas		Picnic Tables/Drinking Fountains
Masons Mill Park	2 Modular Play Equipment Units	6 Pickleball Courts	Fitness Trail with 18 stations
	2 Softball Fields (1 Lighted)	Woody's Fishing' Hole	Wooded Walking Path
	3 Picnic Pavilions (Additional Fee)	Horseshoes	Book Walk
	5 Lighted Tennis Courts	Water Spray Hole	Lighted and Paved Parking Areas
	Archery Range (Additional Fee)	Concert Gazebo	Picnic Tables/Charcoal Grills
	Lighted Volleyball and Basketball Courts	Lighted Baseball Field with Overlapping Football Field	Restrooms/Drinking Fountains
			Safety Town Complex (Additional Fee)
Mill Creek Dog Park	One area for small dogs (25lbs and under)		Off-Leash Dog Park
	One area for large dogs (26 lbs and over)		Parking
Mill Creek Park	Basketball Courts	Playground	Picnic Tables/Grill
	Open Turf / Wooded Areas	Walking Trails	Parking
Nathaniel Boileau Park	Farm House, Spring House, Carriage House, Barn		Walking Trail
	Multipurpose Athletic Field	Parking Area	Open Turf Areas
North Willow Grove Park	Softball Field	Playground	Parking
	Basketball Net		
Pennypack Wilderness Area	Trail	Historical Sites	Parking
	Fishing Areas	Picnic Areas	Natural Habitats
Pioneer Woods	Wooded Area	Signs	
Terwood Park	Baseball / Softball Diamond	Parking Area	
Valley Green Park	Playground	Wooded Area	
Veteran's Memorial Park	2 Basketball/Volleyball Courts	Trails & Perimeter Walking Track	Picnic Tables
	Adult Roller Hockey Rink	10 Acre Wooded Area	Sitting Areas with Benches
	Open Play Field	Playground	Parking Lot
Whitehall Park	Multi-purpose Athletic Field	Open Play Field	Playground
	Small Basketball Court		
Woodlawn Park	3 Basketball Courts (1 Lighted)	Foursquare Courts	Volleyball Court
	2 Tennis Courts	Perimeter Walking Path	Gaga Court
	Baseball Field with Overlapping Soccer Field	2 Age Appropriate Modular Play Equipment Units	Playground
Eaton Park	Basketball Courts	Walking Trail	Creek
	Pavilion with Picnic Table & Play Area		
Hatboro Memorial Park	Baseball Field	Sand Volleyball Court	Creek
	Playground (Leashed Dogs allowed)		Pool
Hatboro Little League Complex	Restroom	Pavilion	Picnic Area
	Ball Fields	Waterway	
Tanner Park	Basketball Court	Large Field	Playground
Farmstead Park	Multi-purpose Playing Field	Loop Walking Trail	Parking Lot
Miller Meadow	Open Multi-Purpose Field		Wooded Area

Summary Destinations

Upper Moreland and Hatboro are packed with bustling downtowns, numerous educational institutions, parks, natural areas, businesses, and a complex network of neighborhoods, all of which were identified as important connections needed within a trail network.

Table 10. Destinations

Upper Moreland Township:		
Blair Mill Park	Frank J. Pileggi Park	Veterans Memorial Park
Brooks Street Park	Mason's Mill Park	Whitehall Park
Broughton Park	Mill Creek Park	Woodlawn Park
Buehler Park Nature Study Area	Farmstead Playground	Multiple School District Owned Fields
Cherry Street Park	North Willow Grove Park	All Schools, especially UM High School
Dawson Manor Park	Pioneer Woods	Cross County Trail*
Fair Oaks Park	Terwood Park	Pennypack Creek*
Fern Village Park	Valley Green Park	Power Line Trail*
PERT	New YMCA	Downtown Upper Moreland
Upper Moreland Swim Club	Neighborhoods	Other Shopping Areas
<i>* connections planned within the Township</i>		
Hatboro Borough:		
Eaton Park	Hatboro Little League Complex	Hatboro YMCA
Tanner Park	Pennypack Elementary School	Sports Exchange Complex
Hatboro Memorial Park and Pool	Crooked Billet Elementary School	Penn America
Miller Meadow	The Union Library of Hatboro	Downtown Hatboro
Neighborhoods	Links to PERT	

Private Property

Private Property issues tend to impact the implementation of new trail networks, especially when private residences, institutions, schools, and businesses occupy a space ideally suited for a trail path or connection. In cases where a direct line from point A to point B could be accomplished through a private landowner's property, it was avoided, and instead substituted for a trail alignment that could support the general public in a more open and park-management manner. Private properties with frontage on existing streets, with the potential to install sidewalks and side-path multi-use trails in the existing road-right-of-way are included.

Transportation

Upper Moreland and Hatboro can nearly be defined by the existing transportation network: state routes, expressways, rail lines, and pedestrian sidewalks and trails. Easton Road (Route 611) and York Road (Route 263), and to some extent Davisville Road, lent to the history of the community as a pass-through to the City of Philadelphia. And, albeit less romantic, the PA Turnpike moves hundreds of thousands of vehicles through the community.

Major Corridors—Pennsylvania Turnpike (I-276), State Routes 263 (York Road), 611 (Easton Road), and 63 (Welsh Road and Moreland Road)

Minor Arterials—Fitzwatertown, Terwood, Davisville, Blair Mill, and Horsham roads.

Large influxes of fast-moving traffic present a major issue for the Township and Borough, with I-276, 611, County Line Road, and Fitzwatertown Road carrying the highest traffic volumes, with Easton Road supporting 20,697 vehicles per day.

In past studies local police determined a ‘High-Crash Zone’ in Upper Moreland Township, along Route 611, from Maryland Road to Blair Mill Road. And, from 2012 to 2016, both municipalities reported nearly 2,000 crashes within their borders, and 6 fatalities.



Easton Road and Blair Mill Road Intersection

Table 11. Commuter & Traffic Data						
	Montgomery County		Upper Moreland Township		Hatboro Borough	
Commuters						
Average travel time to work (minutes)	28.7		27.1		28.1	
Percentage Driving alone to work	78.6%		83%		82%	
Percent Walking/Biking to work	2.6%		1.8%		1.8%	
Residents working within municipality	51.3%		9.1%		4.4%	
Residents commuting outside of municipality	48.7%		90.9%		95.6%	
Top 5 places commuting to:	City of Philadelphia (17%)		City of Philadelphia (18.6%)		City of Philadelphia (16.8%)	
	Upper Merion Township, Montgomery (4.6%)		Upper Moreland Township, Montgomery (9.1%)		Horsham Township, Montgomery (8.8%)	
	Tredyffrin Township, Chester (2.7%)		Horsham Township, Montgomery (6.7%)		Warminster Township, Bucks (6.1%)	
	Horsham Township, Montgomery (2.7%)		Abington Township, Montgomery (6.2%)		Upper Moreland Township, Montgomery (4.7%)	
	Abington Township, Montgomery (2.4%)		Warminster Township, Bucks (3.1%)		Hatboro Borough, Montgomery (4.4%)	
Top Transportation Routes						
	<i>Road</i>	<i>AADT</i>	<i>Road</i>	<i>AADT</i>	<i>Road</i>	<i>AADT</i>
Top 5 Routes and Average Annual Daily Traffic counts (AADT)	US 422 (Pottstown Expswy)	31,319	I 276 Pennsylvania Turnpike	67,176	County Line Road	13,921
	PA 309 (Fort Washington Expwy)	26,899	Easton Road (PA 611)	20,697	Warminster Road	11,821
	PA 363 (Ridge Pike)	22,655	County Line Road	16,110	Moreland Ave Bridge	8,982
	US 202 (DeKalb Pk)	21,163	Fitzwatertown Road	15,024	Horsham Road	8,763
	Paper Mill Rd	21,052	Davisville Road	13,922	Old York Road (PA 263)	8,233
5 Year Crash Summary						
Total Crashes (2012-2016)	42695		1,646		322	
Total Fatal	185	0.43%	3	0.18%	3	0.93%
Total Injured	22959	53.8%	924	56.1%	151	46.9%

*Data compiled from the Delaware Valley Regional Planning Commission, PennDOT & The U.S. Census Bureau

Buses and Trains

The Hatboro-Upper Moreland community is exceptionally well connected to the region and the City of Philadelphia thanks to the Southeastern Pennsylvania Transportation Authority (SEPTA). SEPTA has four separate bus routes here: the 22, 55, 80, and the 310. It maintains two heavily used, active commuter train stations, on the Warminster Line, the Hatboro Station and the Willow Grove Station. And it even has an inactive Newtown Line and future plans to upgrade the station in Upper Moreland.

Other rail corridors in the community are considered significant barriers to trails, and also corridors of potential trail development. The west to east freight-rail corridor owned by Pennsylvania Northeastern Railroad-Norfolk Southern, and maintained by Conrail, has a significant footprint in the community.

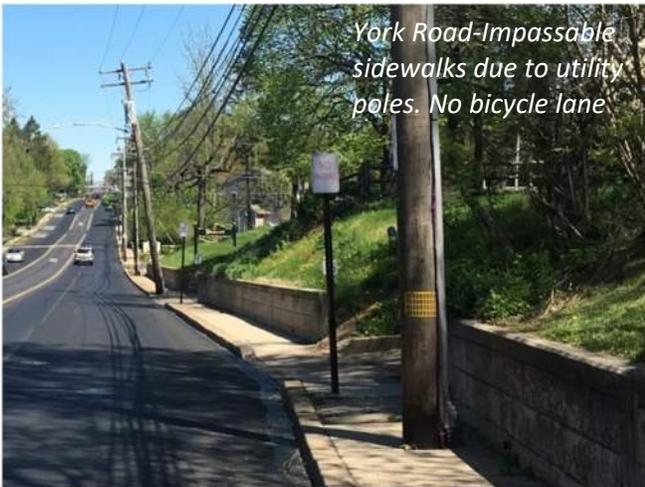
Existing Pedestrian and Bicycle Facilities

The existing pedestrian and bicycle-network includes: sidewalks, neighborhood trail links and cut-thru's, internal park trails, the Pennypack Wilderness Area, and the regional Pennypack Trail. While multiple regional trails stretch to the Hatboro-Upper Moreland community borders, no connections yet exist. Heavy traffic puts a strain on the use of current sidewalks, and bicycle travel within the roadway. Additionally, the physical infrastructure of the Turnpike, wide state roads—upwards of 6 lanes wide, SEPTA and Conrail/Norfolk Southern rail lines, and the Pennypack Creek present significant barriers to a multimodal network.

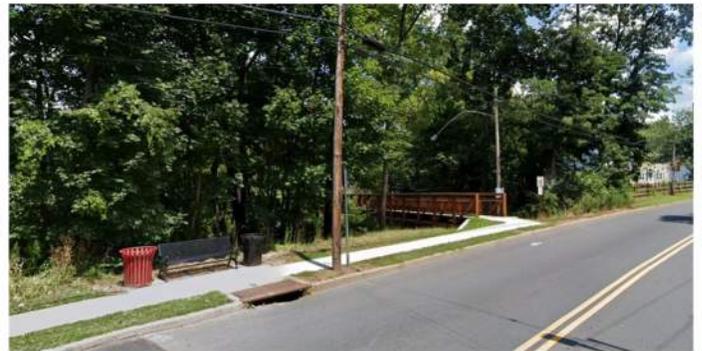
(See Master Trail Plan for more detail on existing Trail facilities)

1. Incomplete and Missing Sidewalks

There are over **130 miles** of existing sidewalk in Upper Moreland and Hatboro. Extensive they may be, they more often have missing sidewalk sections and lost accessible connections to nearby facilities. Examples include:



York Road- Impassable sidewalks due to utility poles. No bicycle lane

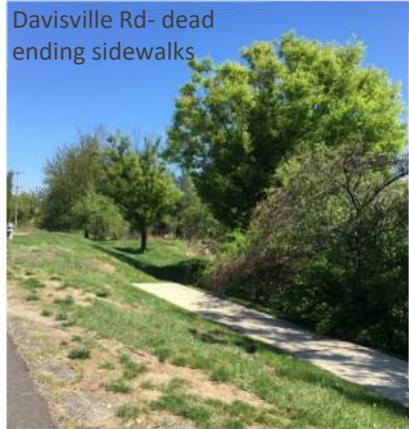


Horsham Road- sidewalk island providing a link to Pennypack Elementary and two parks.



Monument Ave-
missing/ incomplete
sidewalk

← Hatboro Memorial Park



Davisville Rd- dead
ending sidewalks

The sidewalk that
could connect
Masons Mill Park
and Pennypack
Creek Trail to:
Gloria Dei Farms,
PowerBack Rehab,
Carson Simpson
Camp, and the New
YMCA



Davisville Road



Pennypack Road

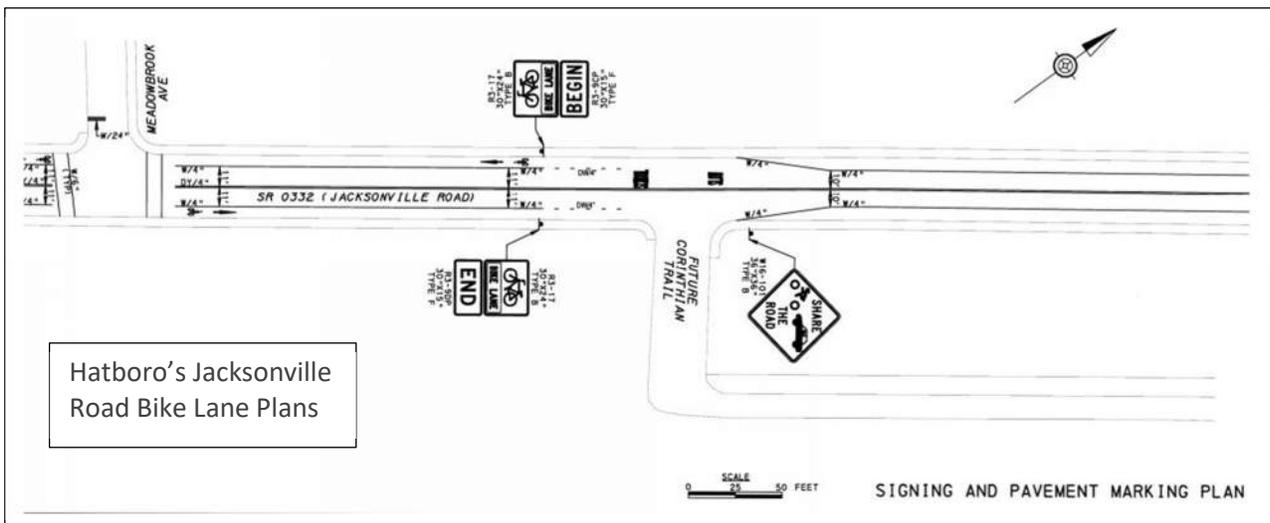


Terwood Park

Missing Pedestrian/Bicycle Facilities:
Pennypack Road entry to the Pennypack Trail;
Terwood Park Sign; and Road to YMCA and
potential Masons Mill Park and Pennypack
loop.

2. Missing Bicycle Facilities

Bicycle facilities are currently limited to a bike lane, on Jacksonville Road, from Montgomery Avenue to Meadowbrook Avenue in Hatboro, and the use of existing multiuse trails. Stress tests by Montgomery County Planning Commission suggest the road network is one that only higher-level bicyclists are comfortable traveling.



With new developments occurring throughout the study area, new neighborhood trails and sidewalks are being installed, filling gaps in the multimodal network. Examples include new sidewalk at the Toll Brothers Hatboro Station housing development, on Warminster Road and the trail connection between the Hatboro Train Station and Hatboro Station development.



Additionally, multiple new and old neighborhood and park connections made by a short trail link can be found throughout the Township and Borough. Examples include: Arionne Drive-Dawson Manor Park/Lukens Lane Link, Meyers Lane-Damian Drive Link, Fern Village Park Link, Horsham Road-Pennypack Elementary School Link, and Horsham Road-Borough Hall Link. A new connection is planned for the Corinthian Trail, in Hatboro. Only one bridge over the Pennypack Creek exists between Horsham Road and the Pennypack Elementary School in Hatboro Borough.



4. Missing Trail Connections

There are currently just under 10 miles of trails within the entire community and 3.87 miles of that belong to the PERT Trail Network. The remaining 6 miles consist mostly of internal park trails and small neighborhood links that provide limited access for residents and are scattered throughout. The major missing piece in this multimodal equation is the larger trail paths that tie these segments together, forming a connected trail system.

5. Significant Barriers

Significant barriers do exist. The PA Turnpike and multiple state routes develop north-south and east-west barriers with challenging crossings for pedestrians and bicyclists. The raised infrastructure of the turnpike and multiple rail lines present underpass and overpass barriers that require radical pedestrian structures to overcome, such as bridges or underpass shelves. And, the Pennypack Creek, while an important greenway, presents an east-west barrier that requires pedestrian bridges or other solutions for trail system.



PA Turnpike- Barriers—the underpass, the interchange, the right of way, the stormwater management, the traffic, the signage, and the corridor.

6. Intersections and Crossings

Intersections and pedestrian road crossings vary widely in their conditions. Multiple new developments and road improvement projects have resulted in safety enhancements and the installation of pedestrian crossing facilities that meet current ADA standards. However, there are numerous crossroads within the study area that lack pedestrian facilities including accessible curb ramps, crosswalks, pedestrian crossing signals with push button poles, and signage. These situations can be observed at both signalized intersections and non-signalized intersections, some of which include sidewalk facilities leading up to the crossing on both sides of the street.



Sidewalk with ramp- missing crosswalk and signage

As of January 2020, four (4) intersections were being examined for improvements, including York Road and Williams Lane, and York Road and Summit Avenue in Hatboro. In Upper Moreland, the intersections of Terwood Road and Davisville Road, and Byberry Road and Davisville Road were included in the new YMCA project and are slated for completion in Spring of 2020.

For this project, a selection of major intersections along York Road, the historically shared route through the Borough and Township, was examined by transportation engineers to identify obstacles and solutions. These intersections include:

<ul style="list-style-type: none">• Old York Road & Terwood/Fitzwatertown• Railway Underpass near Sunset Lane• Old York Road & Jaguar Dealership• PA Turnpike Underpass• Old York Road & Mill/Warminster Road	<ul style="list-style-type: none">• PA Turnpike Underpass to Pennypack Creek• Pennypack Creek crossing to Summit Ave• Summit Avenue to County Line Road• N York Road & County Line Road
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

The findings can be found in the Appendices; each intersection is worthy of additional study.

For the balance of the Hatboro-Upper Moreland community study area, the consultants reviewed all remaining intersections for an initial assessment of existing and missing pedestrian and bicycle facilities, and more importantly, which intersections are worthy of further engineering study. Field visits resulted in photographic inventories and mapping to identify a select number of intersections that may be potentially hazardous in their current state. (see enclosed map)



Sample of Field Evaluation Tables used to identify existing facilities and conditions

POTENTIAL BIKE/PED TRAIL NETWORK SEGMENT REFERENCE SHEET - UPP									
Updated - 9-17-19	SEGMENT NAME		EXISTING CONDITIONS						
REFERENCE NUMBER			N/A	Sidepath	Trail	Sidewalk Complete	Sidewalk Disconnected	No Sidewalk	
141	Castello Ave./Lynne Ave. (Horsham Rd. to Carton Rd./Fair Oaks Park)							X	
142	New Trail through Fair Oaks Park (Carton Rd. to Horsham Rd./Blair Mill Rd.)		X						
143	Horsham Rd. (E. Moreland Rd. to Blair Mill Rd.)								
144	Byberry Rd. (York Rd. to Hatboro Station Tr.)								
145	Byberry Rd. (Hatboro Station Tr. to S. Warminster Rd.)								
146	Byberry Rd. (S. Warminster Rd. to Hatboro Station Tr.)								
147	Hatboro Station Tr.								
148	Extension of Hatboro Station Tr.								X
149	S. Warminster Rd. (Village Green to JacksonVile Rd.)								X
150	JacksonVile Rd. (E. Moreland Rd. to Meadowbrook Ave.)								?
151	Meadowbrook Ave.								
152	York Rd. (Terminator to Hatboro Station Tr.)								?
153	Easton Rd. (Easton Rd. to Park Ave.)								X
154	Park Ave. (Easton Rd. to Pedestrian connection f...)								X
155	Pedestrian connection f...								

REFERENCE SHEET - UPPER MORELAND TOWNSHIP / HATBORO BOROUGH									
EXISTING CONDITIONS			POTENTIAL ENHANCEMENTS						
Sidepath	Sidewalk Disconnected	No Sidewalk	Signed Bike/ Walking Route	Sidewalks	Sidewalk/ Sidepath Combination	Bike Lanes	Sidepath	M-U Trail	NOTES/ SPECIAL TREATMENTS
	X		X	X					Easement likely needed to connect to Horsham Rd.
	X			X		X			
	X		X	X					Heavy Traffic/Dangerous Crossing at S. Warminster Rd.
	X			X					Heavy Traffic/Dangerous Crossing at S. Warminster Rd.
								X	Potential to enhance width of trail
								X	Crossing of Fulmore needed.
	X				X				
					?	X			Connection to the Elementary School Major Corridor with Heavy Traffic, but needed for connection. Key Intersections require improvement. Potential Corridor Study.
	X			X	?	?			Major Corridor with Heavy Traffic, but needed for connection. Key Intersections require improvement. Potential Corridor Study.
									Connection to the Public Library/Municipal Bldg.
	X			X					Utilize existing pedestrian walkway adjacent to Homegoods



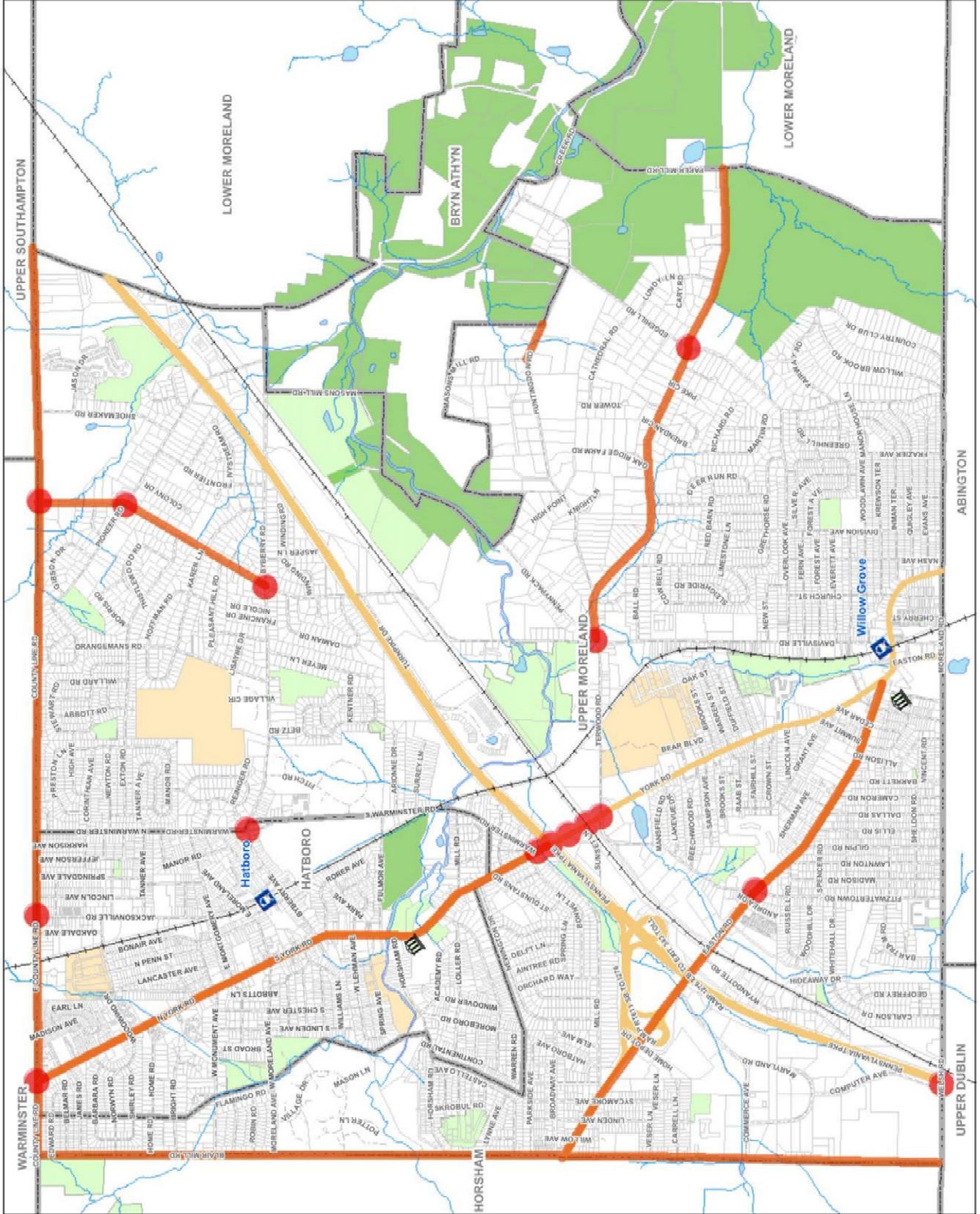
Legend

- Hazardous Intersections
- Hazardous Traffic Corridor
- Rail Lines
- State Highways
- Parcels
- Municipal Boundary
- SEPTA Regional Rail Stations
- Municipal Building

UPPER MORELAND TOWNSHIP - HATBORO BOROUGH
MASTER TRAIL PLAN
HAZARDS MAP
MONTGOMERY COUNTY, PENNSYLVANIA

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A photograph of a dirt trail winding through a forest. The trees are young and have bright green leaves, suggesting a spring or early summer setting. Sunlight filters through the canopy, creating dappled shadows on the path. The text 'MASTER TRAIL PLAN' is overlaid in a white box in the center of the image.

MASTER TRAIL PLAN

Master Trail Plan

Upper Moreland Township and Hatboro Borough are in pursuit of a shared vision, the establishment of a safe and enjoyable pedestrian and bicycle trail network. This Master Trail Plan section organizes the suggestions and recommendations resulting from public workshops, interviews of local stakeholders, Steering Committee meetings, and special tour of the township and borough. The recommendations are not made haphazardly and include a suggested ranking of trails per the collection of input. Viewers of this ranking can of course take comfort in the fact the subject of ‘trails’ has gained a considerable following and is now a top priority in many community planning endeavors. Regionally, nearly every municipality in the Delaware Valley is planning or constructing new trails and bicycle routes. They are especially aware of the funding and logistical support of the Delaware Valley Regional Planning Commission and the success rate of the County of Montgomery to plan and install new trails.

To reiterate, trails or multimodal networks can take the form of a paved macadam pathway through a park, a shared use path along a roadway, a natural footpath in the woods, or a sidewalk in a busy downtown. They support pedestrians, bicyclists, skaters, equestrians, and even boats when water trails are established. While these routes may range drastically in size and complexity, they share one common goal: connecting people to desired destinations, and today these destinations include everything from a community park to a place of employment.

This plan finds that there is great potential for new trails, and further recommends the implementation of:

- 32 New Separate Trail Segments
- 50 Miles of New Trails
- Connections in both communities, and for both communities, and for the region

The benefits of using trails include: being more active, being in nature, gathering with friends for exercise and improving the walkability of communities, including all forms of non-motorized mobility. The benefits of trails are well documented and ever increasing in their numbers (for this plan, non-motorized transportation includes pedestrian and bicycle modes of travel: walking, jogging, running, bicycling, and using a wheel chair, stroller, scooter, or recumbent bicycle). People use trails for commuting, exercising, recreation, and excursions for leisure and/or to reach a destination.



Walking just 20 minutes/day helps:

- ❖ lower your blood pressure 4-10 points;
- ❖ lower your risk of an early death by 30%; and
- ❖ lower your risk of heart disease, diabetes, strokes, cancer and depression!!



Spending time outdoors improves your cognitive reasoning by 50%

Dedicated walk routes and trails improve community economics by attracting tourists, promoting local businesses, and improving property values:

- Trails can increase a property’s value \$9 per foot closer to a trail
- Outdoor recreation adds \$730 billion and 6.5 million jobs to the US economy
- 50% of recreational cyclists earn more than \$100,000; the typical cycling tourist spends \$60/day



Sources:

U.S. News and World Report
 American Hiking Society
 American Heart Association

American Trails.org
 Pa DCNR
 Outdoor Industry Foundation

University of Cincinnati
 National Parks Services
 Livable Landscapes

National Association of Homebuilders
 National Association of Realtors
 Outdoor Industry Association

Benefits of Trail Loops

The benefits of trails are many, and more and more trail user surveys suggest that trail users exercise more often after trails are installed. To encourage even more frequent use, some municipalities are promoting the use of trail loops. A trail loop isn't so much a running track at the local high school, but a designated route to travel from Point A to Point B without using the same path twice. From start to finish, the view or the experience is unique.

This community has a variety of possible trail loops that could be established by word of mouth, simple signage, online mapping, or regular notice in a newsletter. Walking and bicycling groups could form and even find support from the health care community. In more than one county and municipality, the branding for getting out and getting more active has led to partnerships with local hospitals and clinics to help residents improve their health. A trail loop offers even more chances to create unique walk-a-thons and fundraisers like '5K Charity Runs.'

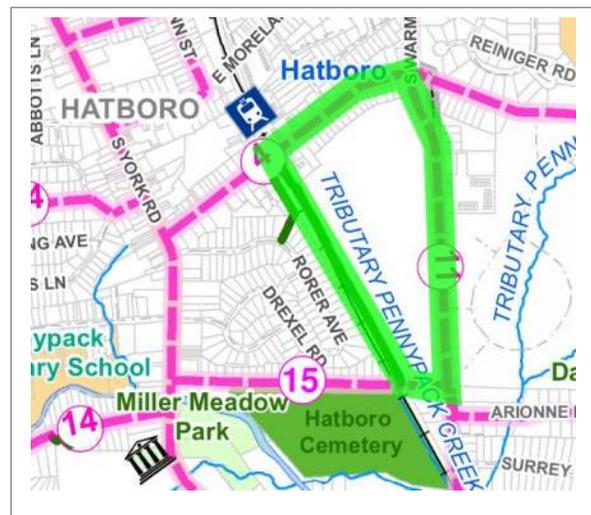
Examples in Upper Moreland Township and Hatboro Borough

Trail Loops Under 1 Mile

- Segment 21 and some of Segment 1 (0.5 Miles)
 - E Montgomery Ave, N Penn St, E Monument Ave, York Rd
- Segment 28 and some of Segment 8 (1 Mile)
 - Sheldon Road, Dallas Road, Terrace Road, and Fitzwatertown Road

Trail Loops 1-2 Miles Long

- Portions of segments 4, 11, 15, and existing Hatboro Station Trail (1.17 Miles)
 - Hatboro Station Trail, Byberry Rd, S Warminster Rd, Fulmor Ave (see adjacent image)
- Segment 27 and portions of segments 8 & 9 (1.5 Miles)
 - Carlson Drive, Fitzwatertown Road, Welsh Road



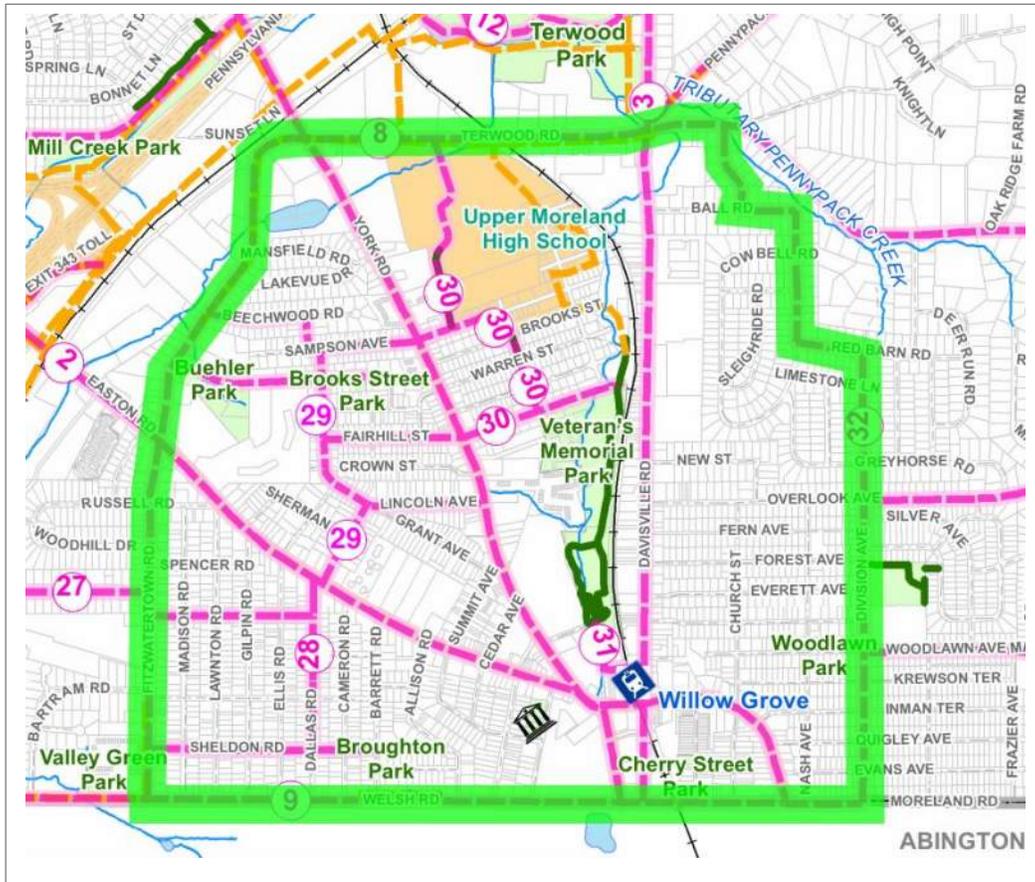
Sample Trail Loop in Hatboro Borough

Trail Loops 2-3 Miles Long

- Segment 13 and portions of segments 10 and 14 (2.34 Miles)
 - Carrell Ln, Sycamore Ave, Mill Rd, Magnolia Ave, Continental Rd, Horsham Rd, Fair Oaks Park Trail, Carton Rd, Lynne Ave, Blair Mill Rd
- Portions of segments 3, 5, and 17 including existing Masons Mill Park trails (2.7 Miles)
 - Pennypack Rd, PERT Trail, Masons Mill Rd, Masons Mill Park trails, Off-road to Davisville Rd

Trail Loops 3 Miles and Longer

- Portions of segments 4, 11, 18, and 19 (3.64 Miles)
 - S Warminster Rd, Tanner Ave, Straton Ln, Exton Rd, Orangemans Rd, Pioneer Rd, Frontier Rd, Byberry Rd
- Segment 8 and portions of segments 7, 32, and 9 (4.7 Miles)
 - Fitzwatertown Rd, Terwood Rd, Morgan Mill Rd, Ball Rd, Greyhorse Rd, Red Barn Rd, Division Ave, Moreland Rd (see image below)



Sample Trail Loop in Upper Moreland Township

Trail Basics

Establishing trail connections, trail width, grade, and material; all depend on the site and intended use. The PA Department of Conservation and Natural Resources is an excellent resource for describing and defining different trail connections. Multiple online and published documents share tips and techniques. For example, a trail system can take multiple forms, ranging from linear to looped, stacked loop, multiple loop, spoked wheel, primary and secondary loop, and maze systems, each with its unique strengths and weaknesses (DCNR Trail Design and Development, pg. 11). The most common width range is 8-12' wide macadam path, with a minimum 4' buffer from the roadway.

Trailheads are a vital point in a trail system and can provide trail users with a space for wayfinding, resting and recharging, gathering, and parking. For every trail there's a trailhead. These hubs can be as simple as a directional sign, or as extravagant as a plaza with restrooms, parking, shelters/pavilion and picnic areas, bike racks, waste bins, kiosks and charging stations. A trailhead can stand alone or be tied to a popular destination, such as a park, nature or visitor center.

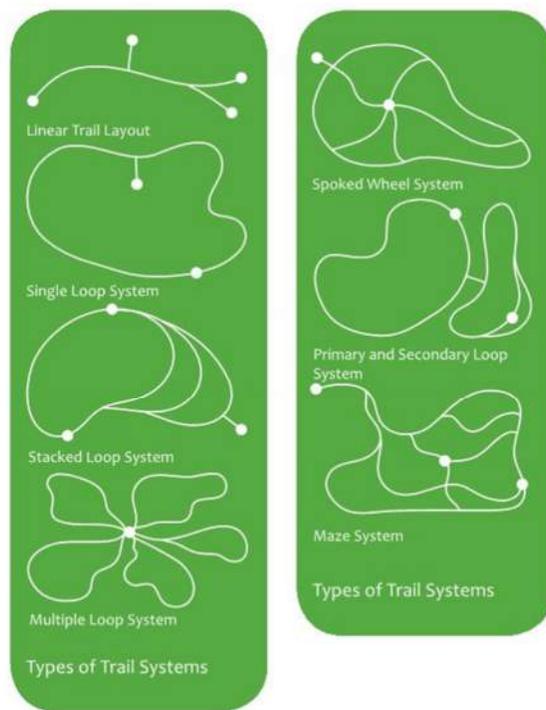


Figure 7. Common Types of Trail Systems from PA DCNR Trail Design and Development Principles



Asphalt



Crushed Stone



Natural



Boardwalk



Bike Lane



Sharrow



Sidewalk



Country Road

A trail network can include a variety of path types including sidewalks, macadam shared-use paths, natural trails, bike lanes, and slow speed roadways.



The most used, and recognized, trail system in Upper Moreland and Hatboro is actually located in Upper Moreland, at the far southeast end of town, in the Pennypack Wilderness Area managed by the Pennypack Ecological Restoration Trust. Trails here conform to the typical standards recommended by the Pa DCNR.

PA DCNR's Two-Way Shared Use Path



Entrance to Pennypack



PA DCNR's Two-Way Hiking Trail



Securing Trail Easements

In the event a trail will best suit Upper Moreland and Hatboro through private property, trail easements will be required. Most private landowners are reluctant at first to allow the public to use their land for trail connections. Even those who are subject to existing road rights of way allowing sidewalks. This has to do with the liability of the person exposed to another person's injury on their property. A proper definition of Liability includes: the extent to which an owner is liable for any person that sustains an injury when on their property, where it is understood that the owner owes that person a duty of care. In public access situations, like trails and greenways, liability can be reduced through government acts, insurance, agreements, and releases.

Legal tools, State Statutes, exist to limit exposure to liability for entities providing public recreation opportunities, trails, when used with solid risk management practices. Statutes are enacted to adjust the legal principles governing liability, and to alter common law principles for landowners that allow free public use of their land for recreation by limiting landowner liability. Statutes are often limited to unimproved land, and if the facility requires regular maintenance, the clearing and repair of trails, then the manager/owner must continue to maintain the facility.

Examples of Pennsylvania statutes limiting 'trail manager' liability:

- Recreation Use of Land and Water Act (RULWA), 68 P.S. §§ 477-1 to 477-8
Protects owners, possessors, trail managers, and lessors from liability
- Rails to Trails Act, 32 P.S. § 5611
Limits liability similarly to RULWA
- Equine Immunity Act, Act 93
Limits liability through safety/warning signage
- Sovereign Immunity Act
Provides a level of immunity for commonwealth and local government
- Political Subdivision Tort Claims
Provides a level of immunity similarly to Sovereign Immunity Act

*Most statutes are nullified if a fee is charged

Liability can also be shifted from the landowner to another party (ex. Trail Group/Municipality) that utilizes liability insurance to cover the risks. Release agreements and indemnity agreements can help further protect the owner and shift any claims to the liable party.

<i>Lowest</i>	→	<i>Highest</i>
Trespassers	Invited or Permitted users	Users charged a Fee

Easements

The best tool for establishing a trail connection is a trail easement. A trail easement is a document recorded with the deed of the landowner and when signed by a qualified non-profit or municipal entity, can relieve the landowner of management, maintenance, stewardship, and even certain liability. The easement allows another person/entity to develop, open, and maintain land for a distinct purpose, without giving up ownership or access to the land. Easements govern the proposed use and memorialize the rights of the owner. Easements use to preserve open space, are often used to develop trails, in addition to their conservation purpose.

Model Grant of Trail Easement
2nd edition (v. 2018.01.19)
Published by the Pennsylvania Land Trust Association
This and an alternative model, the Model Trail Easement Agreement (which addresses easement matters in greater detail), are available at ConservationTrust.org

GRANT OF TRAIL EASEMENT

THIS GRANT OF TRAIL EASEMENT dated _____ is made by _____ (the "Owner") in favor of _____ (the "Holder") with respect to the following parcel(s) of land (the "Property") more fully described as follows:

Street address: _____
Municipality: _____ County: Pennsylvania
Parcel identifier: _____ State: Pennsylvania

- Trail Easement**
Owner grants to Holder an easement in perpetuity to establish and make available for public use a trail, approximately _____ feet in clear steel width, in the location within the Property shown on the easement plan attached as exhibit A. If there is no easement plan attached to this grant, Holder may determine the location in its reasonable discretion. The easement includes the right to install footbridges, retaining walls, and other structures as necessary to prevent erosion and facilitate passage through wet areas, and small meadows and other signs related to the trail.
- Public Interest or Own Risk**
Persons using the trail do so at their own risk. Neither Owners nor Holder may charge for access, nor do they assume any duty to inspect or maintain the trail or warn of any defects or dangerous conditions.
- Recorded Document**
This grant is to be recorded against the Property so as to be perpetually binding upon the undersigned Owners and their successors and assigns.
- Exhibits**
Each exhibit referred to in this grant is made a part of this grant by this reference.
- Entire Agreement**
This grant is the entire agreement of Owners and Holder pertaining to the trail and supersedes any other agreements or understandings, whether or not in writing.
- Defense of Claims**
If a real user asserts a claim for bodily injury or property damage caused by an unsafe condition on the trail, and the unsafe condition was not the fault of Owners or anyone on the Property at the invitation of Owners, then Holder agrees to defend such claim on behalf of both Owners and Holder and, if such defense is not successful, to hold Owners harmless from any judgment entered against Owners on account of such claim. To qualify for the protection offered by Holder under this paragraph, Owners must abide by the requirements for intensity developed under, or with respect to, the Recreational Use of Land and Water Act.
- Consideration**
The Owners acknowledge receipt of the sum of \$0.00 in consideration of this grant.

TO BE LEGALLY BOUND, Owners have signed and delivered this grant to Holder as of _____.

Owner's name: _____ (Full)
Owner's name: _____ (Full)
Owner's name: _____ (Full)
(Name of Holder)

By: _____ (Full)
Name of signatory: _____
Title of signatory: _____

This document is based on the Model Grant of Trail Easement (v. 2018.01.19) provided by the Pennsylvania Land Trust Association and published at ConservationTrust.org.

The world in which this document is based should not be created or relied upon as legal advice or legal opinion on any specific facts or circumstances. It should be revised under the guidance of legal counsel to reflect the specific situation.

Notary Public

Existing Trails

Public Trails

A number of existing trails are heavily used in the Upper Moreland and Hatboro community. They are more often than not found in the park systems.

Table 12. Existing Trails for Public Use in Upper Moreland Township

Trail Name	Location	Length (miles)	Type of Recreation
Buehler Park Nature Trail	627 Fitzwatertown Road	0.32	Passive-Woodchip Trail
F.J. Pileggi Park Walkway	4255 Shoemaker Road	0.32	Passive-Limestone Trail
Fair Oaks Perimeter Trail	2300 Skrobul Road	0.39	Passive-Paved Trail
Masons Mill Nature Trail	3500 Masons Mill Road	1.10	Passive-Woodchip Trail
Masons Mill Fitness Trail	3500 Masons Mill Road	0.72	Passive-Limestone Trail
Mill Creek Park	3530 Mill Road	0.43	Passive-Limestone & Concrete Sidewalk
Veteran's Memorial Park Nature Trail	220 Mineral Avenue	0.42	Passive-Woodchip Trail (To Be Constructed)
Veteran's Memorial Park Walkway	220 Mineral Avenue	0.93	Passive-Paved Walkway & Spur
Hatboro Station Trail	Fulmor Avenue	0.40	Passive-Paved
Rorer Avenue Trail	Rorer Avenue	-	Passive-Paved
Pennypack Elementary Trail	Horsham Road	-	Passive-Paved
Crooked Billet Elementary Trail	Earl Lane	-	Passive-Paved
Tanner Park	Tanner Park	-	Passive-Paved

Private Trails and Connections

Within Upper Moreland and Hatboro there are multiple private trails that are owned by public schools, homeowner associations, and private recreation such as the Huntington Country Club. These areas are generally considered restricted to the public, but arrangements can, and often do, get made for local athletic group-use and for public trail easements.

Nearby and Regional Trails

Beyond the local trails of Upper Moreland and Hatboro, there are multiple regional trail networks near the community. Most significant regional trail systems require leaving the Hatboro-Upper Moreland community to access and use:

Pennypack Trail | Length: 5.4 Miles | Type: Gravel

- POI: Pennypack Ecological Restoration Trust, Lorimer Park, Philadelphia's Pennypack Park, Fox Chase Farm, Bryn Athyn Cathedral and mansions, Pennypack Creek scenery and amenities
- Links: Cross County Trail, Fairmount Park trail system, Pennypack Ecological Restoration Trust trail system, Lorimer Park trail system



The Pennypack Trail is a Montgomery County owned Trail that is not a part of, or associated with, the Pennypack Ecological Restoration Trust trail network.

Powerline Trail | Length: 5.24 Miles | Type: Asphalt

- POI: municipal parks, Wissahickon Green Ribbon Preserve, College Settlement Farm and local historic sites, Montgomery Mall, North Wales Roth Living Farm Museum of Delaware Valley College
- Links: Evansburg, Liberty Bell, Cross County, Wissahickon Trails, Route 202 trail, municipal trail systems.

Cross County Trail | Length: 3 Miles Complete, 17.5 Miles Planned | Type: Asphalt

- POI: Fort Washington State Park, Wissahickon Valley County Park, Wissahickon Green Ribbon Preserve, Hope Lodge, Pennypack Wilderness Preserve, Conshohocken and Bryn Athyn, SEPTA train stations in Conshohocken, Norristown, Fort Washington and Willow Grove
- Links: Schuylkill River Trail and Chester Valley Trails, Wissahickon, Power Line and Pennypack Trails, state and county park trail systems.



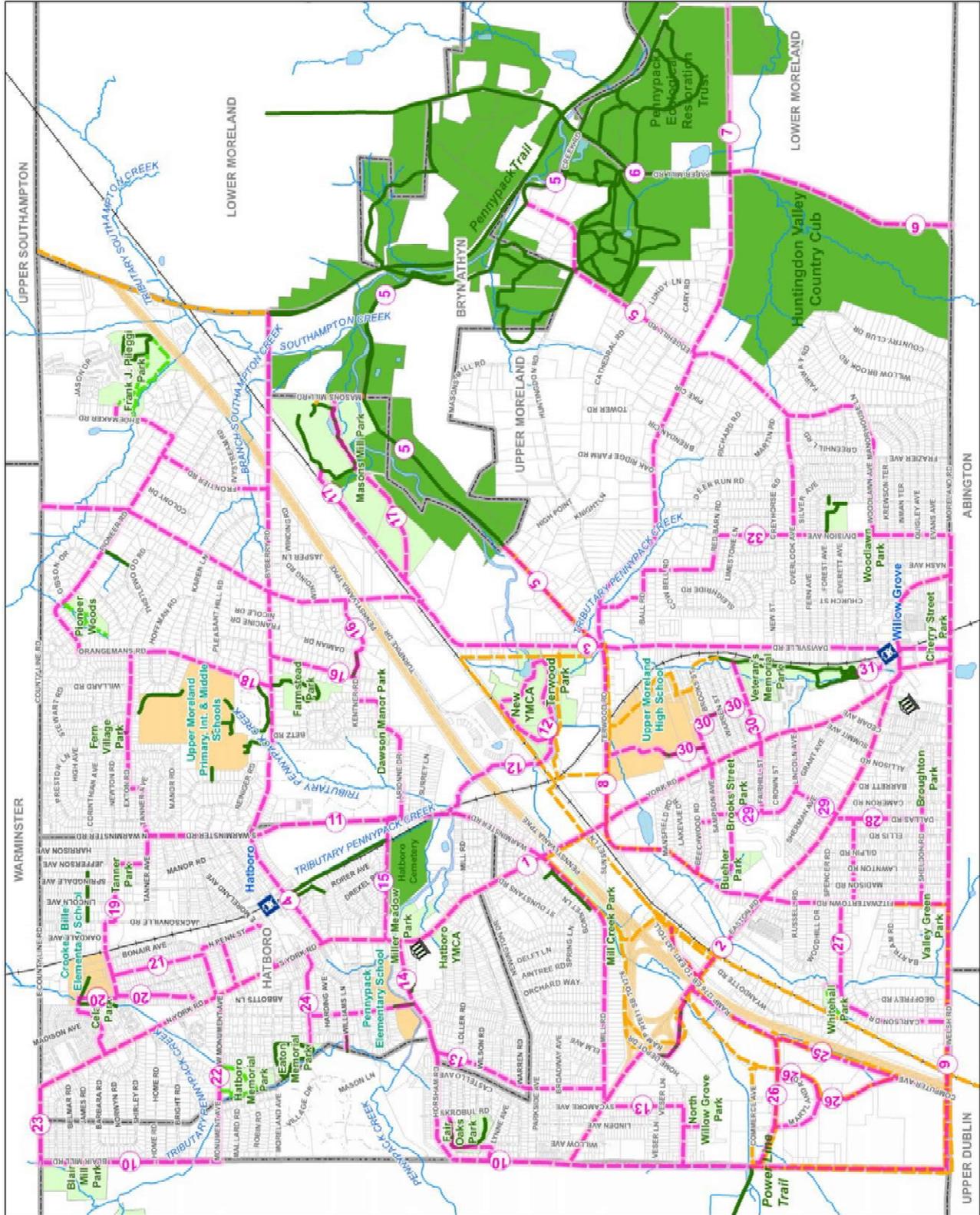
Legend

- Proposed Trail Segments
- Potential Park Trails
- Previously Proposed County Trails & Bike Routes
- Existing Trails
- Rail Lines
- State Highways
- Parcels
- Parks
- Private Open Space
- Schools
- Municipal Boundary
- SEPTA Regional Rail Stations
- Municipal Building

UPPER MORELAND TOWNSHIP - HATBORO BROUGH
MASTER TRAIL PLAN
MASTER TRAIL MAP
 MONTGOMERY COUNTY, PENNSYLVANIA

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 ENGINEERING & CONSULTING SERVICES
 85 EAST BUTLER HIGHWAY, NEW BRUNSWICK, PA 18901-0106 • (717) 364-4338
 www.glimore-associates.com

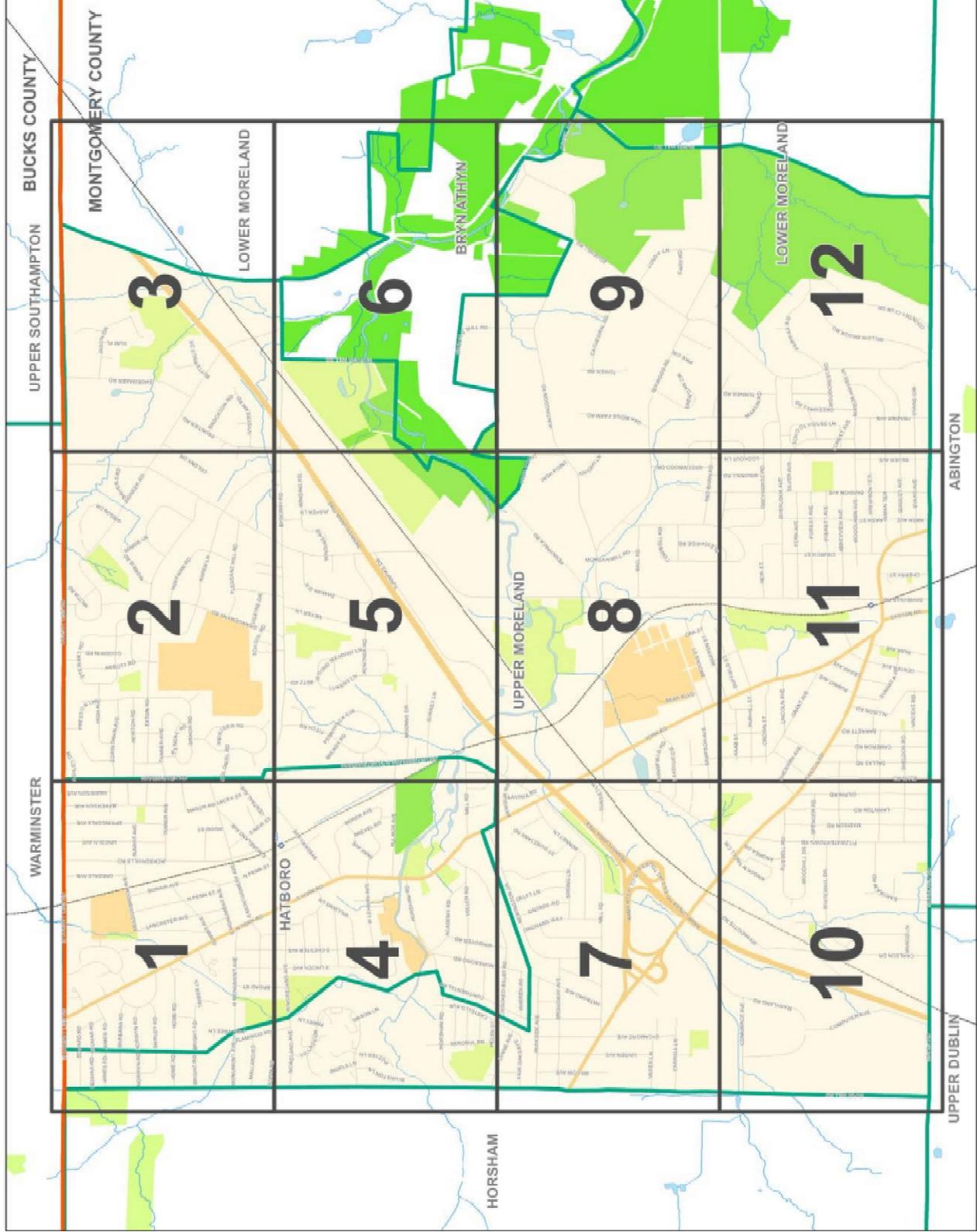
JOB NO. 18-1022 DATE: JUNE 2020 SCALE: 1"=1"



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Master Trail Plan Map Tiles



Legend

- Parks
- Private Open Space
- Schools
- Rail Lines
- Municipal Boundary
- County Boundary

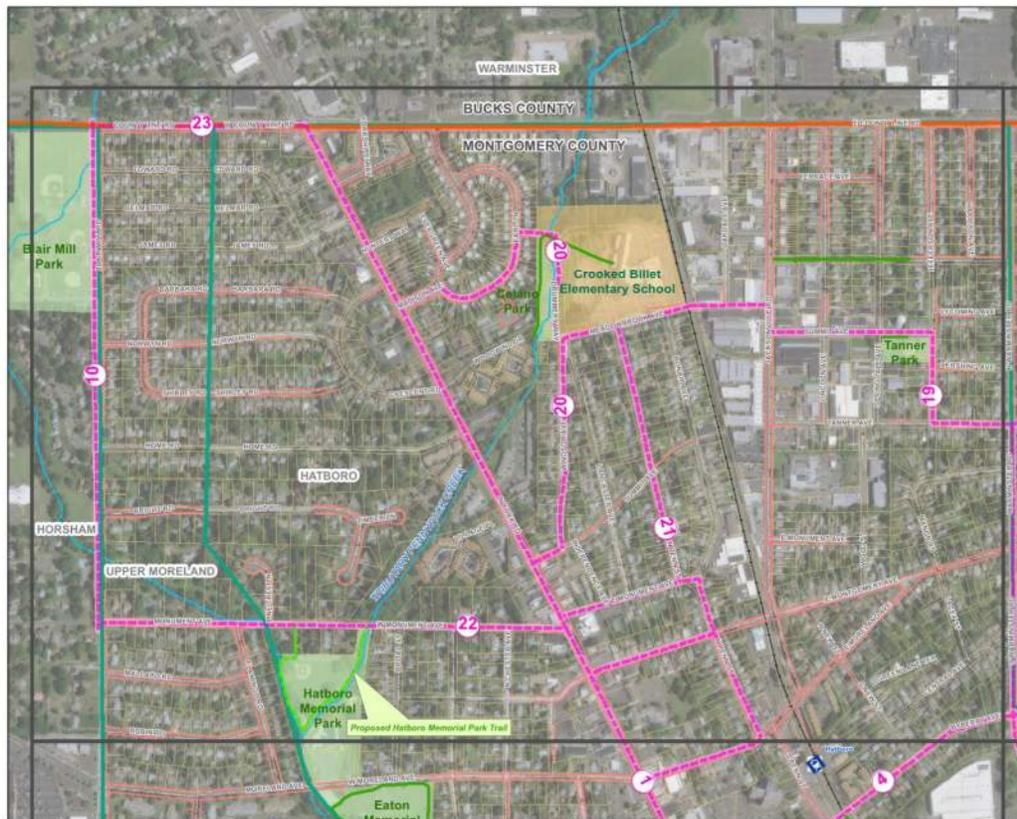


**UPPER MORELAND TOWNSHIP-
HATBORO BOROUGH
MASTER TRAIL PLAN**
MONTGOMERY COUNTY, PENNSYLVANIA

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ENGINEERING & CONSULTING SERVICES
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www.gilmoreassoc.com

JOB NO: 16-1103 DATE: APRIL 2016 SCALE: 1" = 256'

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MAP TILE #1

1	2	3
4	5	6
7	8	9
10	11	12

Legend

- Proposed Trail Segments
- Potential Park Trails
- Previously Proposed County Trails & Bike Routes
- Existing Trails
- Existing Sidewalk
- Parcels
- Parks
- Private Open Space
- Schools
- Municipal Boundary
- County Boundary

0 425 850 1275 1,695 2,115 Feet



MAP TILE #2

1	2	3
4	5	6
7	8	9
10	11	12

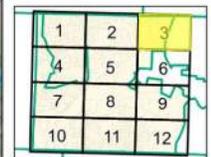
Legend

- Proposed Trail Segments
- Potential Park Trails
- Previously Proposed County Trails & Bike Routes
- Existing Trails
- Existing Sidewalk
- Parcels
- Parks
- Private Open Space
- Schools
- Municipal Boundary
- County Boundary

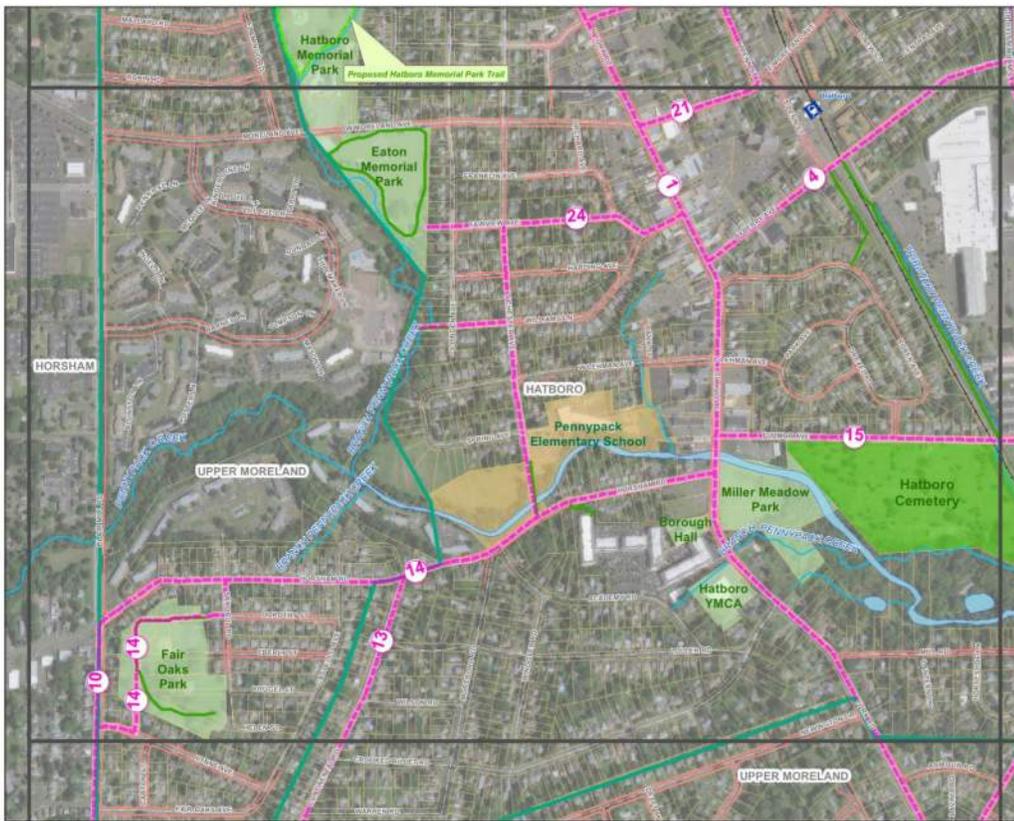
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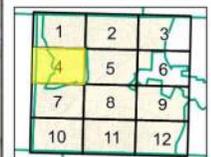
MAP TILE #3



- Legend**
- Proposed Trail Segments
 - Potential Park Trails
 - Previously Proposed County Trails & Bike Routes
 - Existing Trails
 - Existing Sidewalk
 - Parcels
 - Parks
 - Private Open Space
 - Schools
 - Municipal Boundary
 - County Boundary



MAP TILE #4



- Legend**
- Proposed Trail Segments
 - Potential Park Trails
 - Previously Proposed County Trails & Bike Routes
 - Existing Trails
 - Existing Sidewalk
 - Parcels
 - Parks
 - Private Open Space
 - Schools
 - Municipal Boundary
 - County Boundary





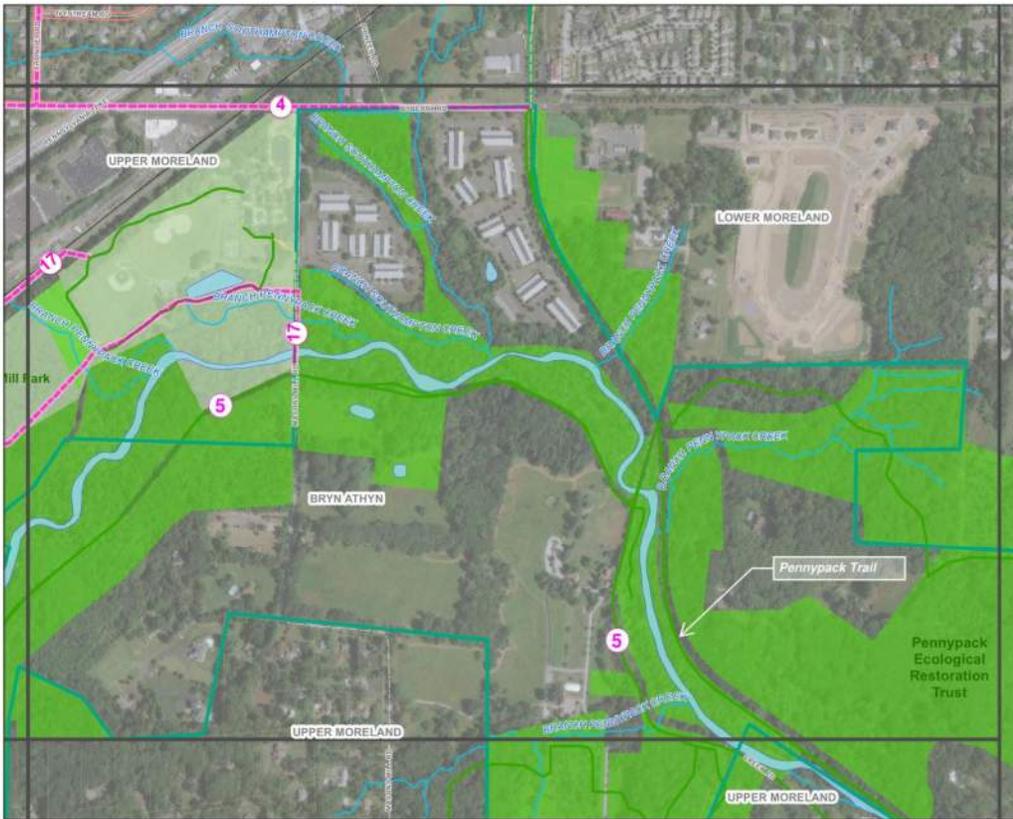
MAP TILE #5

1	2	3
4	5	6
7	8	9
10	11	12

Legend

- Proposed Trail Segments
- Potential Park Trails
- Previously Proposed County Trails & Bike Routes
- Existing Trails
- Existing Sidewalk
- Parcels
- Parks
- Private Open Space
- Schools
- Municipal Boundary
- County Boundary

0 125 250 500 750 1,000 1,200 Feet



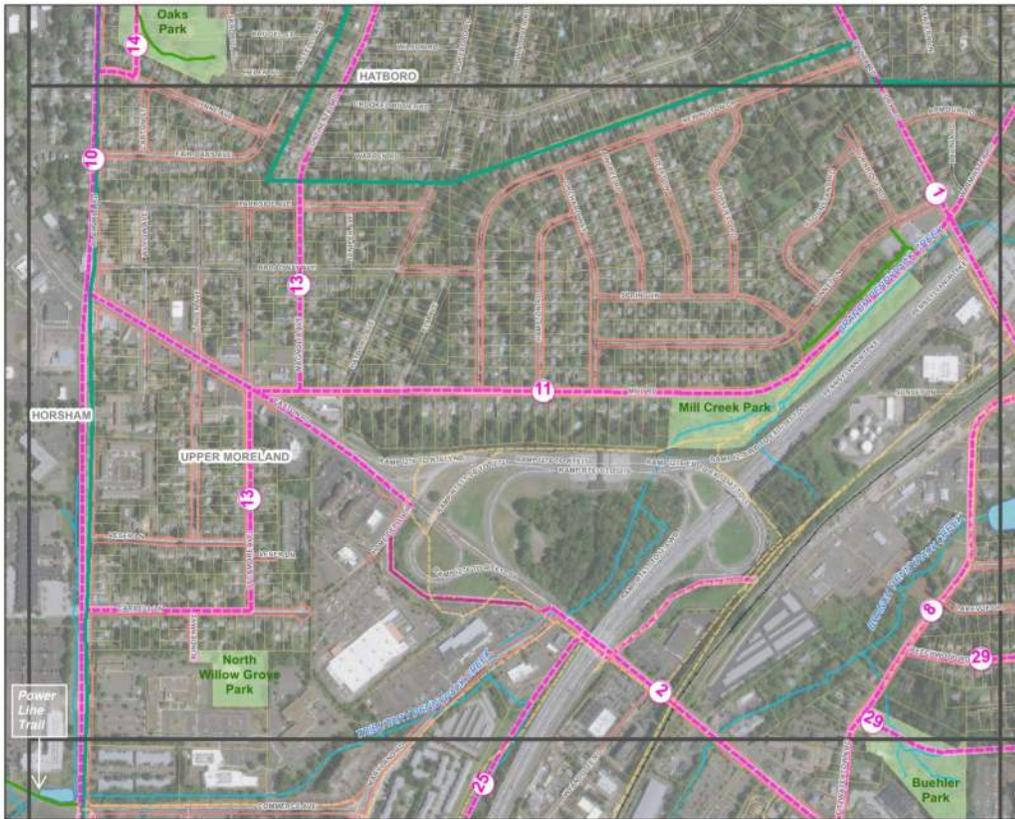
MAP TILE #6

1	2	3
4	5	6
7	8	9
10	11	12

Legend

- Proposed Trail Segments
- Potential Park Trails
- Previously Proposed County Trails & Bike Routes
- Existing Trails
- Existing Sidewalk
- Parcels
- Parks
- Private Open Space
- Schools
- Municipal Boundary
- County Boundary

0 125 250 500 750 1,000 1,200 Feet



MAP TILE #7

1	2	3
4	5	6
7	8	9
10	11	12

Legend

- Proposed Trail Segments
- Potential Park Trails
- Previously Proposed County Trails & Bike Routes
- Existing Trails
- Existing Sidewalk
- Parcels
- Parks
- Private Open Space
- Schools
- Municipal Boundary
- County Boundary



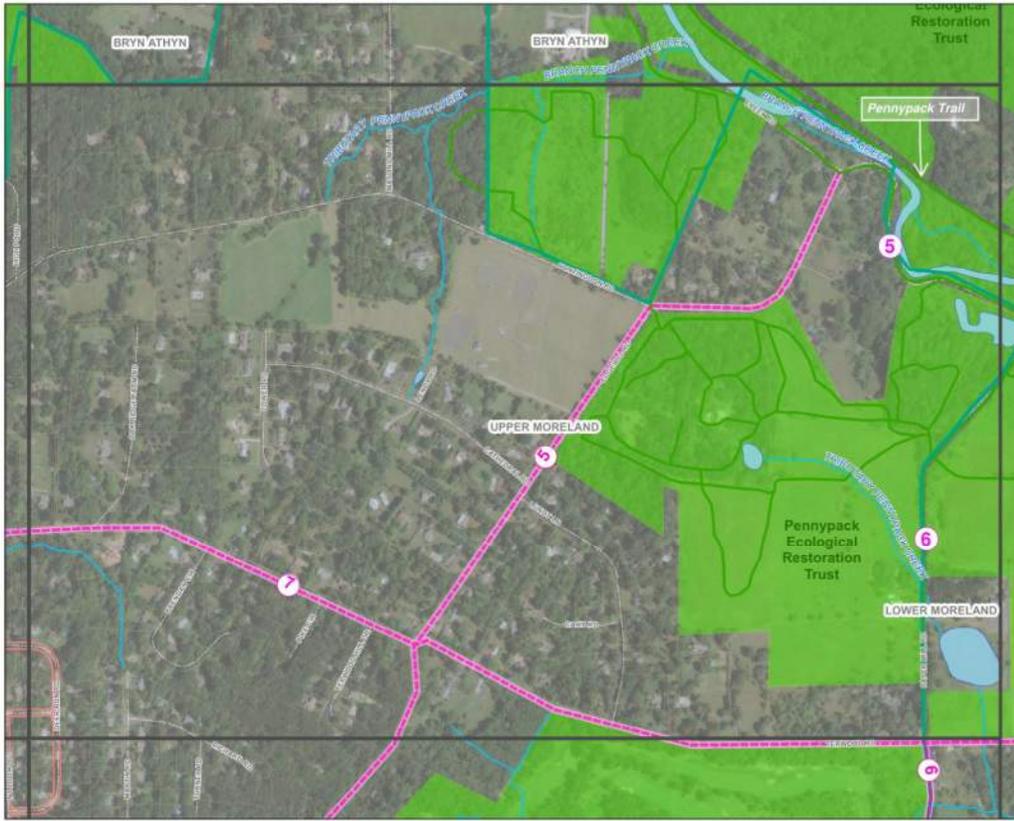
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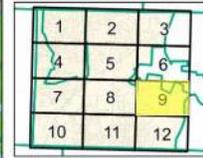
Legend

- Proposed Trail Segments
- Potential Park Trails
- Previously Proposed County Trails & Bike Routes
- Existing Trails
- Existing Sidewalk
- Parcels
- Parks
- Private Open Space
- Schools
- Municipal Boundary
- County Boundary



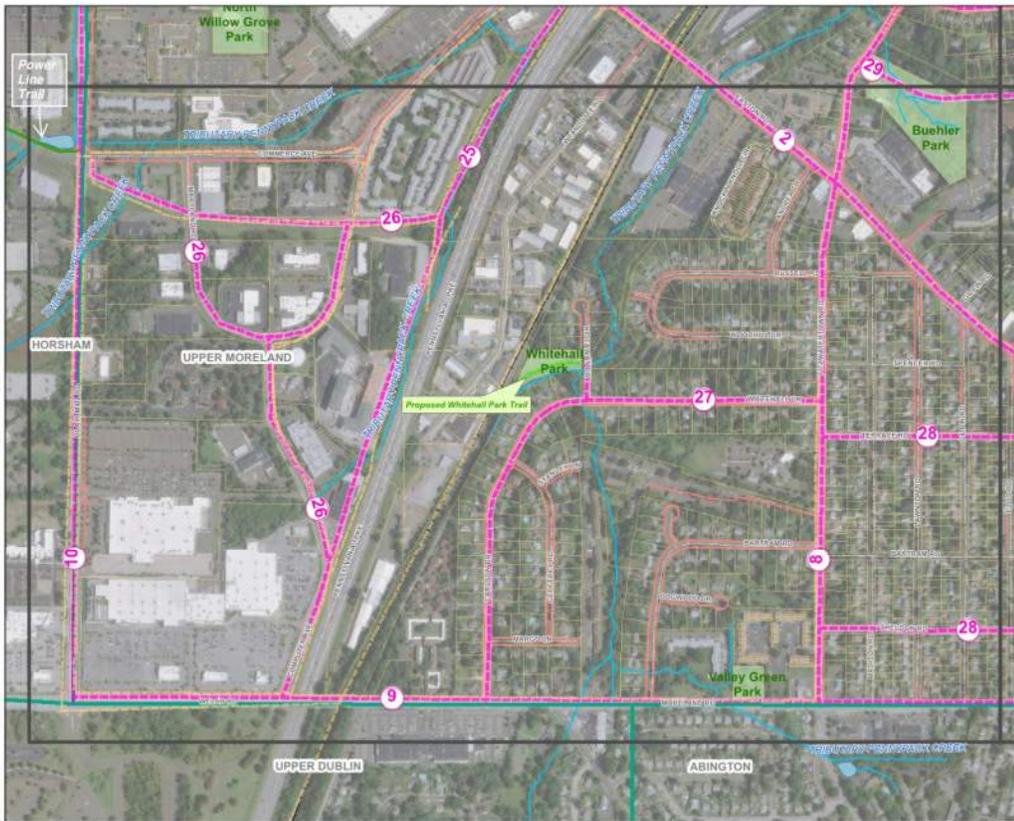


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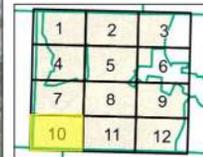


Legend

- Proposed Trail Segments
- Potential Park Trails
- Previously Proposed County Trails & Bike Routes
- Existing Trails
- Existing Sidewalk
- Parcels
- Parks
- Private Open Space
- Schools
- Municipal Boundary
- County Boundary



MAP TILE #10



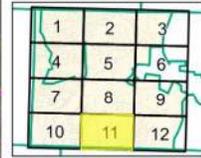
Legend

- Proposed Trail Segments
- Potential Park Trails
- Previously Proposed County Trails & Bike Routes
- Existing Trails
- Existing Sidewalk
- Parcels
- Parks
- Private Open Space
- Schools
- Municipal Boundary
- County Boundary



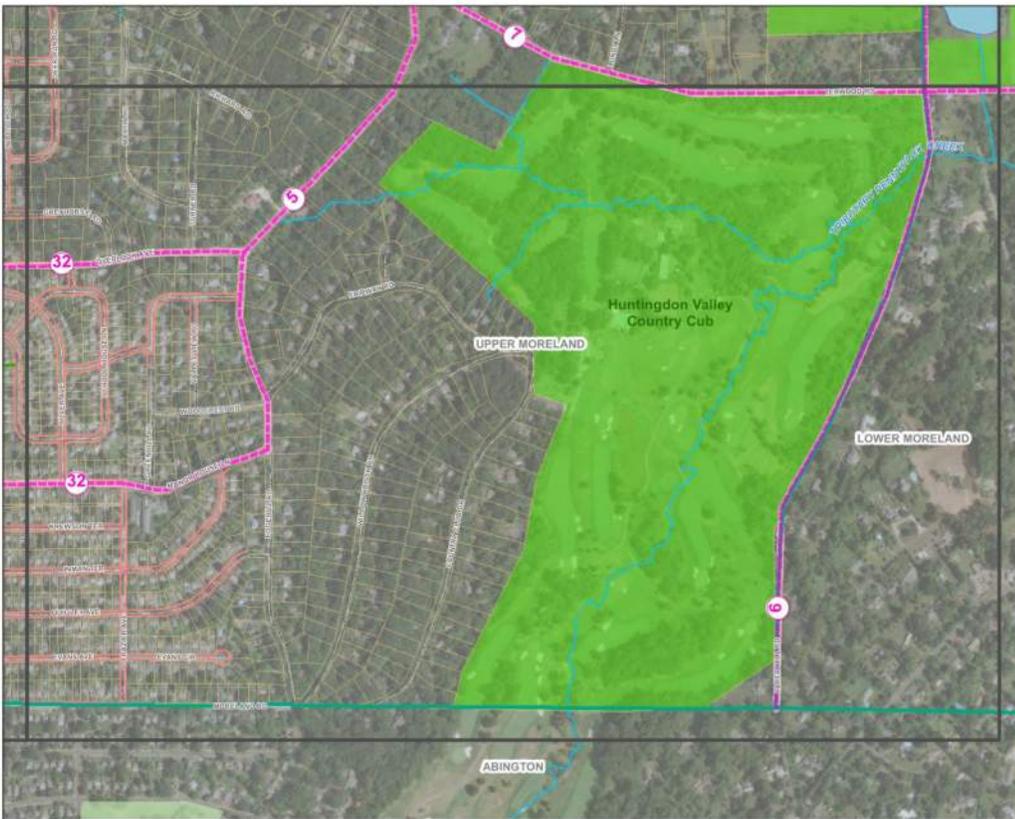


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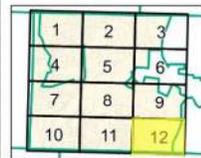


Legend

- Proposed Trail Segments
- Potential Park Trails
- Previously Proposed County Trails & Bike Routes
- Existing Trails
- Existing Sidewalk
- Parcels
- Parks
- Private Open Space
- Schools
- Municipal Boundary
- County Boundary



MAP TILE #12



Legend

- Proposed Trail Segments
- Potential Park Trails
- Previously Proposed County Trails & Bike Routes
- Existing Trails
- Existing Sidewalk
- Parcels
- Parks
- Private Open Space
- Schools
- Municipal Boundary
- County Boundary



Trail Segment Recommendations

The Upper Moreland Township-Hatboro Borough community is eager to complete a pedestrian-bicycle trail network, with connections to parks, schools, shops and downtown areas, regional trails, public transportation, and more. After a thorough evaluation of the existing conditions of both municipalities, the addition of a Pennypack Creek greenway analysis, and broad and consistent public and committee input, a total of thirty-two (32) trail segments were identified, with nearly 50.92 miles of recommended trails.

The following pages present the graphic recommendations of each proposed trail segment, including the type of trail, and approximately where specific facilities are needed. For example, several trail segments make use of and recommend the construction of sidewalks, and therefore the recommendations include existing sidewalk as well as where new sidewalk facilities are required to complete the trail segment. At times trail segment recommendations benefit from trails previously proposed by Montgomery County, including bike routes. Finally, additional suggestions are shared for the creation or expansion of internal park trails. These trails are separately presented with support from the public, the committee and the municipalities, for the sake of pursuing additional park planning to improve each park trail network destination.

Existing/Previously Proposed Facilities

-  Existing Sidewalk
 -  Existing Trails
 -  Previously Proposed County Trails & Bike Routes
- existing sidewalk & trail locations
- “potential alignments” proposed by the County

Recommended Facilities

-  Proposed Trail Segments
 -  Recommended Sidewalks
 -  Recommended Trails
 -  Recommended Bike Routes
 -  Recommended On-Road Route
- recommended trail segment alignments
- to connect existing/add new sidewalk facilities
- to add sidepath trail or off-road trail facilities
- to add bike signage and sharrow road markings
- to add pedestrian signage and road markings

Segment 1: York Road Multiuse Trail System

LENGTH: **3.77 Miles**

SEGMENT DESCRIPTION

This route segment follows existing and proposed sidewalk along York Road (Rt 263) from Moreland Road to County Line Road. This segment is also a recommended Bike Route.

PARKS CONNECTED

-  Miller Meadow Park
-  Veterans Memorial
-  Old YMCA

OTHER DESTINATIONS

-  Willow Grove Train Station
-  Neighborhoods
-  Businesses and Restaurants
-  Cross County Trail

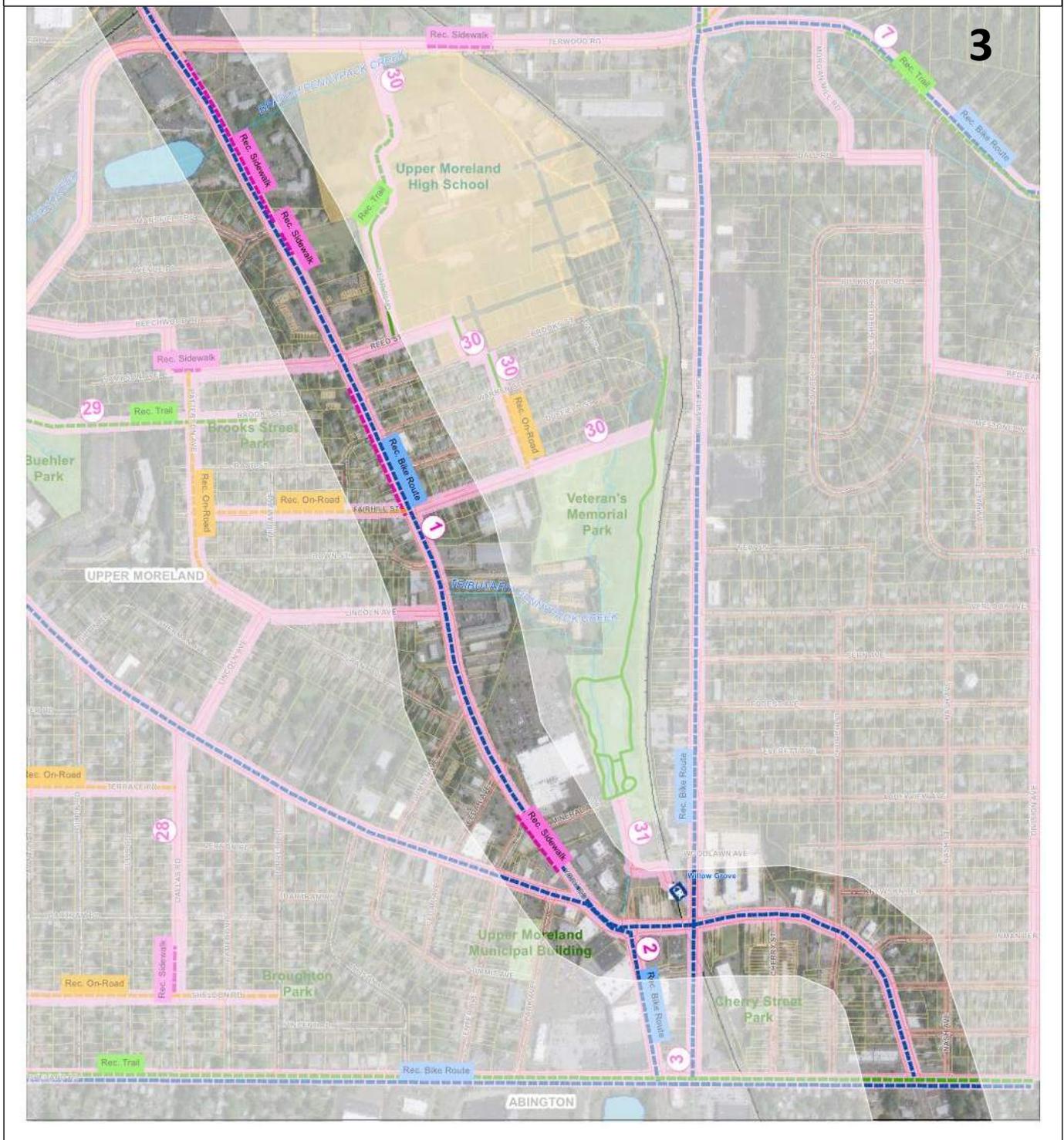
TOP RECOMMENDATIONS

- Sidewalk: 0.93 Miles
- Bike Route: 3.77 Miles
- Signage
- Pedestrian Crossing Improvements
- Large Trailhead

1. York Road from County Line Road (top) to Fulmor Avenue (bottom)
2. York Road from Fulmor Avenue (top) to Fitzwatertown Road/Terwood Road (bottom)



3. York Road from Fitzwatertown Road (top) to Moreland Road (bottom)



Segment 2: Easton Road Multiuse Trail System

LENGTH: **2.32 Miles**

SEGMENT DESCRIPTION

This route segment follows existing and proposed sidewalk and trail along Easton Road (Rt 611) from Moreland Road to Blair Mill Road. This segment is also a recommended Bike Route.

PARKS CONNECTED

 Promotes the connection of other trail segments

OTHER DESTINATIONS

-  Downtown Businesses
-  Commercial Destinations
-  Neighborhoods

TOP RECOMMENDATIONS

- Sidewalk: 0.44 Miles
- Bike Route: 2.32 Miles
- Signage
- Pedestrian Crossing Improvements
- Small Trailhead

1. Easton Road from Blair Mill Road (left) to Knock N Knoll Circle (right)



2. Easton Road from Knock N Knoll Circle (left) to Moreland Road (right)



Segment 3: Davisville Road Multiuse Trail System

LENGTH: 3.23 Miles

SEGMENT DESCRIPTION

This route segment follows Davisville Road from County Line Road in the north, to Moreland Road in the south via: A) existing sidewalks, sidewalk connections, and a new sidepath trail along the eastern side of Davisville from County Line Road to Byberry, B) new sidepath trail on both sides of Davisville from Byberry to Terwood, and C) existing sidewalks from Terwood to Moreland. This segment is also a recommended Bike Route.

PARKS CONNECTED

-  Terwood Park
-  New YMCA
-  Masons Mill Park

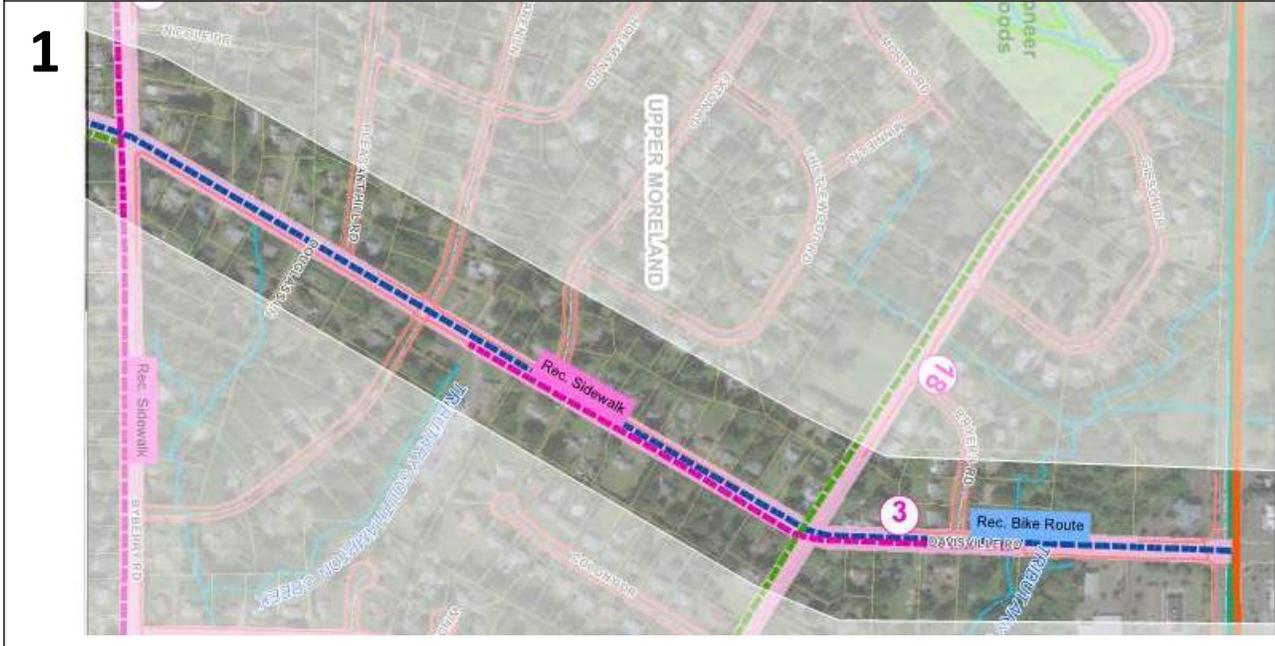
OTHER DESTINATIONS

-  Proposed Cross County Trail
-  Businesses
-  Neighborhoods

TOP RECOMMENDATIONS

- Sidewalk: 0.43 Miles
- Sidepath: 2.24 Miles
- Bike Route: 3.23 Miles
- Signage
- Pedestrian Crossing Improvements
- Pedestrian Facilities on Davisville Road over Pennypack Creek
- Small Trailhead

1. Davisville Road from County Line Road (right) to Byberry Road (left)



Segment 4: Byberry Road Multiuse Trail System

LENGTH: **2.25 Miles**

SEGMENT DESCRIPTION

This route segment covers Byberry Road from York Road to the Pennypack Trail east of Southampton Creek though sidewalk connections along the south side of Byberry Road. Pedestrian improvements including to the Turnpike bridge and rail line underpass are included in this segment. This segment is also a recommended Bike Route.

PARKS CONNECTED

-  Farmstead Park
-  Masons Mill Park
-  PERT

OTHER DESTINATIONS

Hatboro Train Station, Neighborhoods, Existing Neighborhood and Rail Trails, Pennypack Trail and Proposed Cross County Trail, Upper Moreland Primary, Intermediate, Middle schools

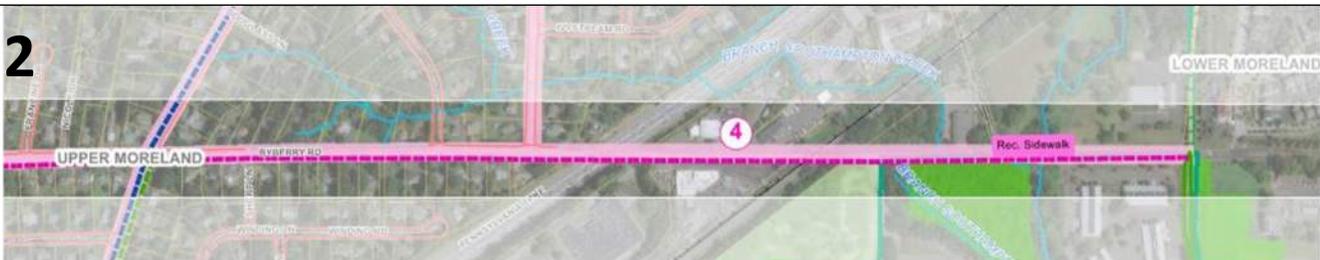
TOP RECOMMENDATIONS

- Sidewalk: 1.44 Miles
- Bike Route: 2.25 Miles
- Pedestrian Crossing Improvements
- Signage and Small Trailhead

1. Byberry Road from York Road (left) to Nicole Drive (right)



2. Byberry Road from Nicole Drive (left) to Pennypack Trail (right)



Segment 5: PERT Link

LENGTH: **4.09 Miles**

SEGMENT DESCRIPTION

This route segment provides two connections to existing PERT trails via: A) an on-road route along Pennypack Road from Davisville Road to an existing trailhead, and B) a side path trail along the west side of Edge Hill Road from Manor House Lane to Terwood Road, and along the east side from Terwood to Huntingdon Road, and C) continuing along the south side of Huntingdon Road to existing Creek Road Trail.

PARKS CONNECTED



PERT



Masons Mill Park

OTHER DESTINATIONS

Neighborhoods and Neighboring Municipalities (Upper Southampton, Lower Moreland, Bryn Athyn)

TOP RECOMMENDATIONS

- Sidepath: 1.94 Miles
- On-Road: 0.47 Miles
- Signage
- Pedestrian Crossing Improvements



1. Pennypack Road from Davisville/Terwood Intersection (left) to PERT Trail (right)

2. Huntingdon Road from PERT Trail (right), continuing along Edge Hill Road to Manor House Lane (left)



Segment 7: Terwood Road Multiuse Trail System

LENGTH: **2.32 Miles**

SEGMENT DESCRIPTION

This route segment follows Terwood Road from Davisville Road to Creek Road Trail in Lower Moreland via existing sidewalk and proposed side path trail along the southern side of Terwood Road. This segment is also a recommended Bike Route.

PARKS CONNECTED



PERT



Terwood Park



Huntingdon Valley Country Club

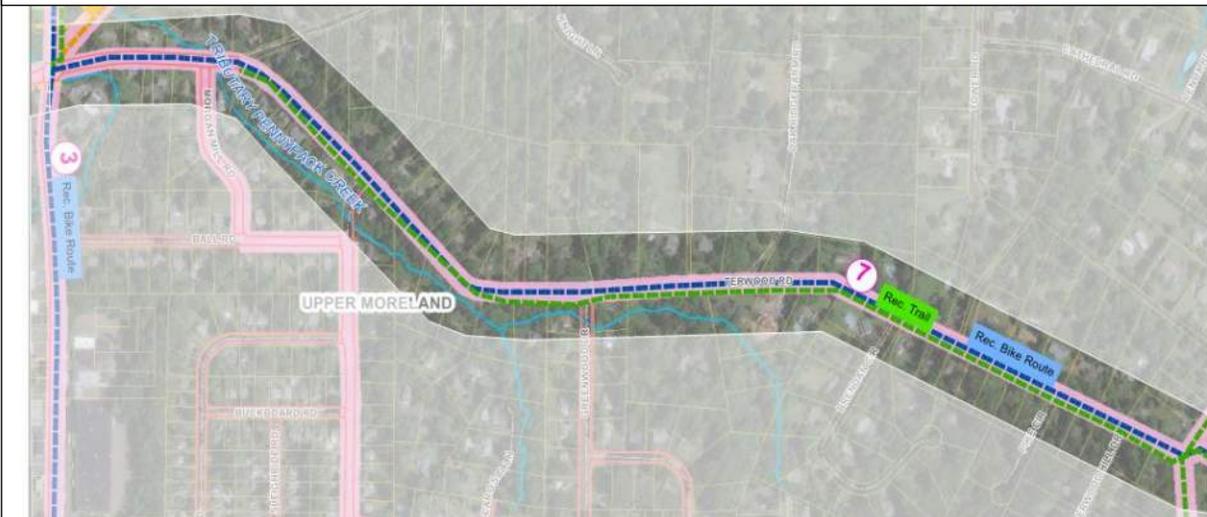
OTHER DESTINATIONS

Neighborhoods and Small Businesses

TOP RECOMMENDATIONS

- Sidepath: 2.19 Miles
- Bike Route: 2.32 Miles
- Pedestrian Crossing Improvements
- Signage

1. Terwood Road from Davisville Road (left) to Edge Hill Road (right)



2. Terwood Road from Edge Hill Road (left) to roadway entrance to PERT Creek Road Trail (right)



Segment 8: Fitzwatertown Road Multiuse Trail System

LENGTH: **1.89 Miles**

SEGMENT DESCRIPTION

This route segment extends along the southern and western sides of Fitzwatertown Road and Terwood Road from Davisville Road to Moreland Road via existing sidewalks and includes sidewalk upgrades at the rail road underpass. This segment is also a recommended Bike Route.

PARKS CONNECTED



Terwood Park



Buehler Park

OTHER DESTINATIONS

Cross County Trail, Upper Moreland High School, Neighborhoods, Businesses

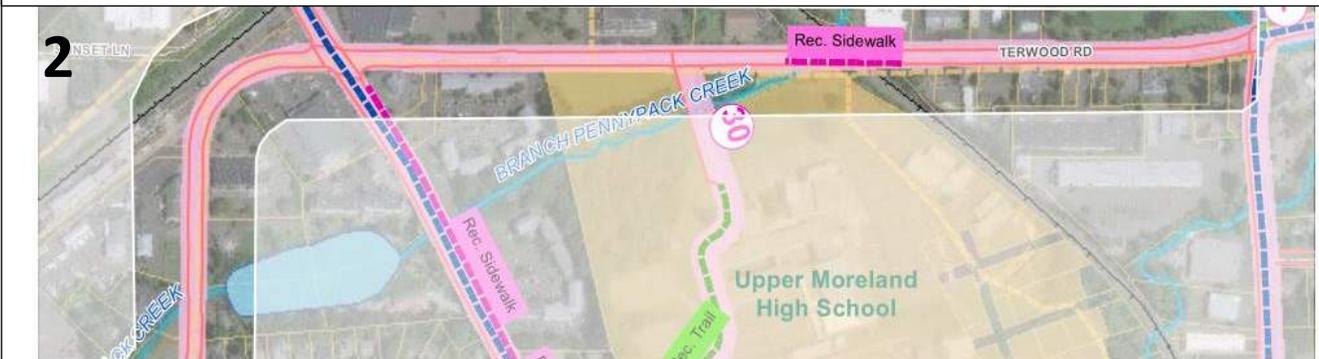
TOP RECOMMENDATIONS

- Sidewalk: 0.08 Miles
- Bike Route: 1.89 Miles
- Pedestrian Crossing Improvements
- Redesign Underpass

1. Fitzwatertown Road from Moreland Road (left) to Mansfield Road (right)



2. Fitzwatertown Road from Mansfield Road (bottom), continuing along Terwood Road to Davisville Road (right)



Segment 9: Moreland Road Multiuse Trail System

LENGTH: **2.17 Miles**

SEGMENT DESCRIPTION

This route segment recommends the existing sidewalk on the northern side of Welsh Road and Moreland Road be replaced with a side path trail from Blair Mill Road to Division Avenue. This segment is also a recommended Bike Route.

PARKS CONNECTED

-  Valley Green Park
-  Cherry St Park

OTHER DESTINATIONS

Neighborhoods, Businesses, and Neighboring Municipalities including Upper Dublin Township and Abington Township

TOP RECOMMENDATIONS

- Sidepath: 2.17 Miles
- Bike Route: 2.17 Miles
- Signage and Small Trailhead

1. Moreland Road from Blair Mill (left) to Fitzwatertown Road (right)



2. Moreland Road from Fitzwatertown Road (left) to Division Avenue (right)



Segment 10: Blair Mill Road Multiuse Trail System

LENGTH: **2.32 Miles**

SEGMENT DESCRIPTION

This route segment utilizes a side path trail along the eastern side of Blair Mill Road from County Line Road to Monument Avenue, and from Horsham Road to Welsh Road to replace dated sidewalk facilities on a busy roadway. This segment, including Blair Mill Road between Monument and Horsham, is also a recommended Bike Route.

PARKS CONNECTED

-  Fair Oaks Park
-  Blair Mill Park
-  Hatboro Little League Fields

OTHER DESTINATIONS

The Powerline Trail, Horsham Trail Network, Businesses, and Neighborhoods

TOP RECOMMENDATIONS

- Sidepath: 2.32 Miles
- Bike Route: 3.11 Miles
- Pedestrian Crossing Improvements
- Signage

1. Blair Mill Road from County Line Road (top) to Monument Avenue (bottom)
2. Blair Mill Road from Horsham Road (top) to Carrell Lane (bottom)
3. Blair Mill Road from Carrell Lane (top) to Moreland Road (bottom)



Segment 11: Warminster-Mill Multituse Trail System

LENGTH: **2.33 Miles**

SEGMENT DESCRIPTION

This route segment consists of: A) a side path from Easton Road to Fulmer Avenue with upgrades at the Mill Creek Park internal trail and a pedestrian crossings over the Pennypack Creek and rail road, B) a side path trail from Station Park Drive to Byberry Road, and C) a continuation of existing sidewalk on the western side of Warminster Road from Byberry to Tanner.

PARKS CONNECTED

-  Mill Creek Park
-  Miller Meadow Park

OTHER DESTINATIONS

Hatboro Cemetery, Neighborhoods, Businesses/Employment centers, and Restaurants

TOP RECOMMENDATIONS

- Sidepath: 1.68 Miles
- Pedestrian Bridge over the Pennypack
- Pedestrian Crossing over Rail Line
- Signage and Small Trailhead

1. Mill Road from Easton Road (left) to Mill Creek Park (right)



2. Mill Road from Mill Creek Park (left) continuing along Warminster Road to rail line (right)



3. Warminster Road from rail line (right) to Tanner Avenue (left)



Segment 12: Pennypack-YMCA Link

LENGTH: **1.28 Miles**

SEGMENT DESCRIPTION

This route segment consists of a trail path from Warminster Road to the new YMCA along the Pennypack Creek and under the PA Turnpike. This route includes the planned YMCA trail path.

PARKS CONNECTED

-  Terwood Park
-  New YMCA

OTHER DESTINATIONS

Indirect link to the Hatboro Cemetery and Miller Meadow Park, connects to the proposed Cross County trail, Businesses off of Turnpike Drive

TOP RECOMMENDATIONS

- Sidepath/Trail: 0.53 Miles
- Improvements under Turnpike
- Signage



From Davisville Road (left) to new YMCA (right)

Segment 13: North Willow Grove-Pennypack Elementary Link

LENGTH: **1.13 Miles**

SEGMENT DESCRIPTION

This route segment consists of existing sidewalk along the southern side of Carrell Lane from Blair Mill Road to Sycamore Avenue, the eastern side of Linden Avenue and Sycamore Avenue. The route continues across Easton Road to follow a side path along the western side of Magnolia Avenue and Continental Road to Horsham Road.

PARKS CONNECTED



North Willow Grove Park



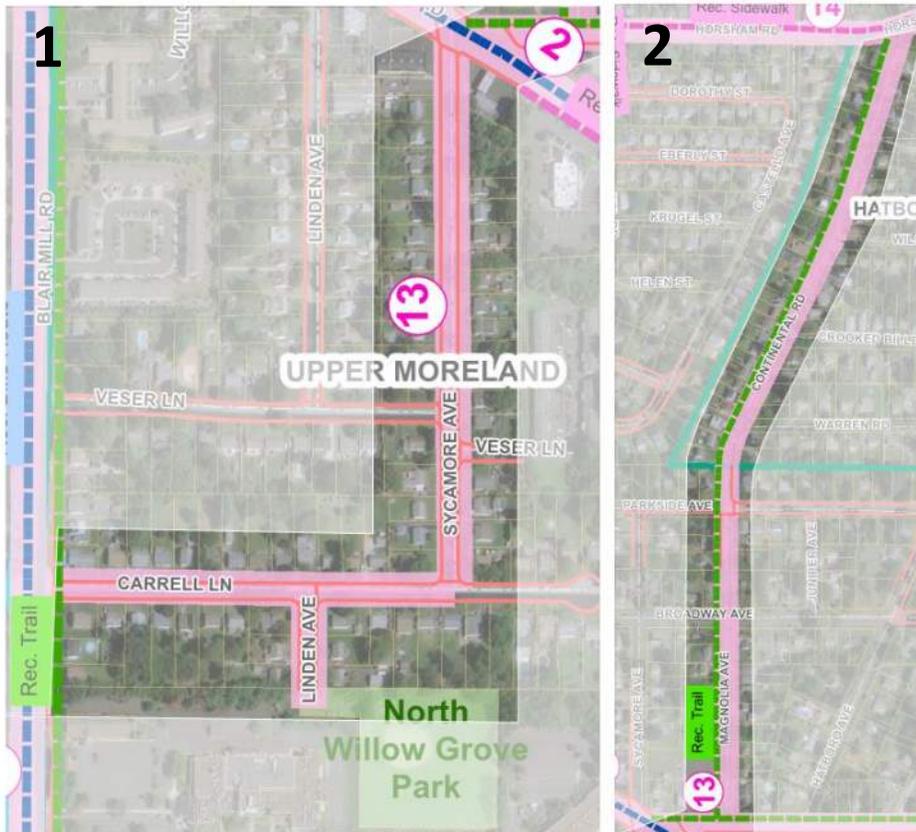
Supports connections to Mill Creek Park, Hatboro Memorial Park, Eaton Memorial Park, and Fair Oaks Park

OTHER DESTINATIONS

Jefferson Health Abington, Neighborhoods, and indirect links to Pennypack Elementary School and Businesses along Easton Rd

TOP RECOMMENDATIONS

- Sidepath: 0.59 Miles
- Pedestrian Crossing Improvements
- Signage



1. Carrell Lane and Sycamore Avenue from Blair Mill Road (left) to Easton Road (top)
2. Magnolia Avenue and Continental Road from Easton Road (bottom) to Horsham Road (top)

Segment 14: Horsham Road & Fair Oaks Park

LENGTH: **1.08 Miles**

SEGMENT DESCRIPTION

This route consists of sidewalk connections between existing sidewalks along the northern side of Horsham Road from Blair Mill Road to York Road. It also includes a sidewalk connection on the western side of Skrobul Road from Horsham Road to existing sidewalk adjacent Dorthy Street, at which point the route utilizes existing park trails, new trail connections, and existing sidewalk on Carton Road and Lynne Avenue to reach Blair Mill Road.

PARKS CONNECTED

-  Miller Meadow
-  Fair Oaks Park

OTHER DESTINATIONS

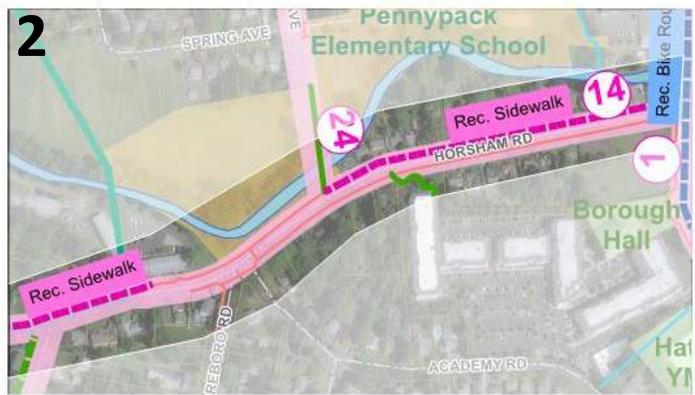
Pennypack Elementary School, Neighborhoods, York Rd Businesses, Existing Trail Connection to Hatboro Borough Hall and Businesses

TOP RECOMMENDATIONS

- Sidewalk: 0.65 Miles
- Sidepath: 0.05 Miles
- Pedestrian Crossing Improvements
- Signage
- Miller Meadow Master Park Plan

1. Horsham Road from Blair Mill Road (left) to Continental Road (right)

2. Horsham Road from Continental Road (left) to York Road (right)



Segment 15: Hatboro Cemetery Trail

LENGTH: **0.56 Miles**

SEGMENT DESCRIPTION

This route segment includes a side path trail on the southern side of Fulmor Avenue from York Road to Warminster Road and includes a railroad crossing.

PARKS CONNECTED

 Miller Meadow

OTHER DESTINATIONS

Hatboro Cemetery, Neighborhoods, Rail Trail and Hatboro Train Station link, Stutz Candy Company, York Rd Businesses

TOP RECOMMENDATIONS

- Sidepath: 0.4 Miles
- Pedestrian Crossing over SEPTA Line
- Pedestrian street crossings
- Signage

Fulmor Avenue from York Road (left) to Warminster Road (right)



Segment 16: Dawson Manor-Farmstead Link

LENGTH: **1.23 Miles**

SEGMENT DESCRIPTION

This route segment includes new sidewalk connection on the eastern side of Warminster Road from Fulmor Avenue to Arionne Drive and on the northern side of Arionne Drive from Warminster Road to an existing neighborhood connection to Lukens Lane. The segment continues along existing sidewalks on the southern side of Lukens Lane, Round Meadow Lane and Kentner Lane and the eastern side of Meyers Lane to Byberry Road. This segment also includes the existing neighborhood link from Meyers Lane to Damian Drive and existing sidewalks along Damian Drive to Davisville Road.

PARKS CONNECTED

-  Dawson Manor
-  Farmstead Park

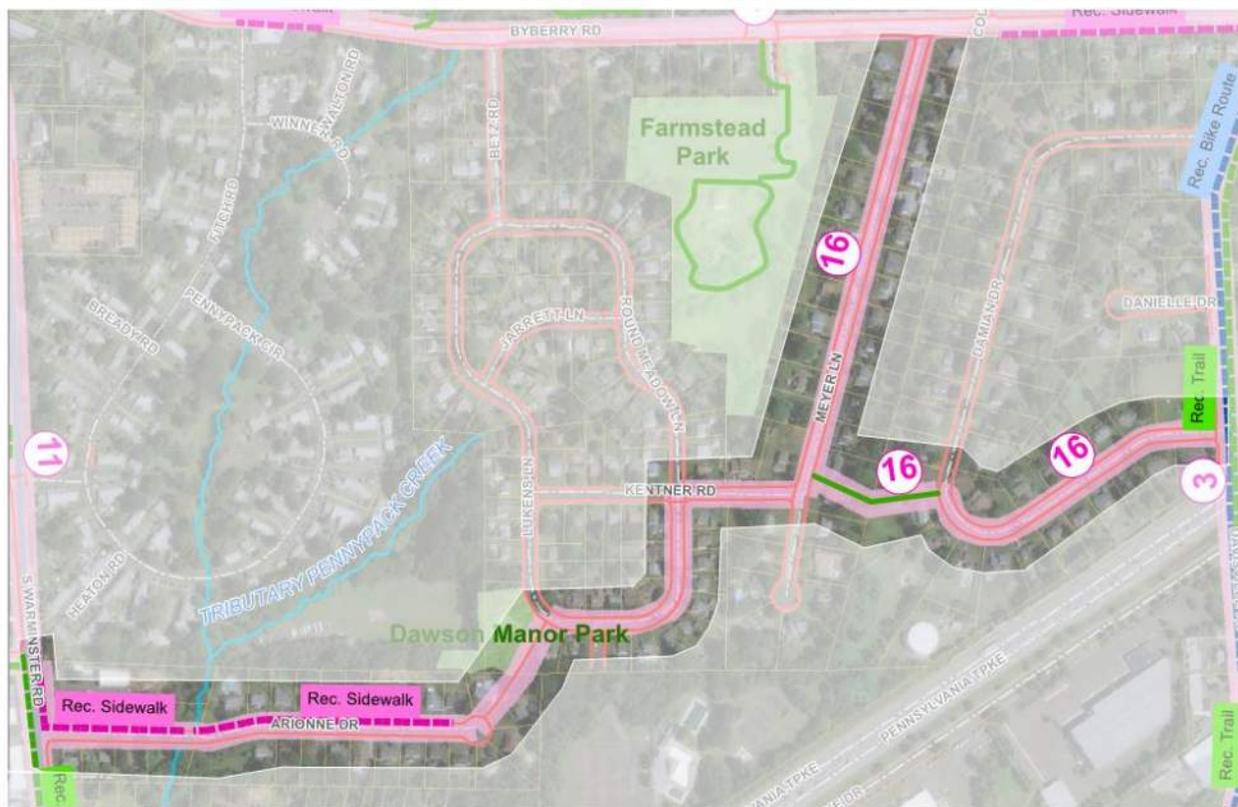
OTHER DESTINATIONS

Neighborhoods and a nearby link to the Hatboro Cemetery

TOP RECOMMENDATIONS

- Sidewalk: 0.3 Miles
- Pedestrian Crossing Improvements
- Signage

Arionne Drive from Warminster Road (left), continuing to Damian Drive and Davisville Road (right)



Segment 17: Cross County-Masons Mill Link

LENGTH: **1.4 Miles**

SEGMENT DESCRIPTION

This route segment includes a trail along the cross county alignment from existing sidewalk on Davisville Road to Masons Mill Park internal trails. The segment also includes a branching trail path through the woodland south of the cross-county alignment that connects to the internal park trail and continues to Masons Mill Road to connect with the existing PERT trail.

PARKS CONNECTED



PERT



Masons Mill Park

OTHER DESTINATIONS

Cross County Proposed Trail, Gloria Dei Farms and Businesses, and Businesses north of the rail line

TOP RECOMMENDATIONS

- Sidepath/Trail: 1.17 Miles
- Pedestrian Bridge over the Pennypack
- Signage
- Large Trailhead

Davisville Road (left) to Masons Mill Road (right)



Segment 18: Farmstead-School-Pioneer-Pileggi Loop

LENGTH: 2.22 Miles

SEGMENT DESCRIPTION

This route segment includes: A) existing sidewalk and trail along the western side of Orangemans Road from Byberry Road to Pioneer Road and existing sidewalk along the southern side of Pioneer Road from Orangemans Road to Pioneer Woods, B) a new side path trail extending from the existing sidewalk on Pioneer Road to Shoemaker Road, C) crossing over Pioneer Road the route continues along existing sidewalk on the eastern side of Shoemaker Road to a new sidepath trail connecting to the Frank J. Pileggi Park, and D) existing sidewalk and new sidewalk connections on the western side of Frontier Road from Byberry Road to Pioneer Road

PARKS CONNECTED



Frank J. Pileggi Park



Farmstead Park



Pioneer Woods

OTHER DESTINATIONS

Neighborhoods and nearby link to Shopping along County Line Rd, Upper Moreland Primary Intermediate, and Middle schools, and Businesses along Jacksonville Rd

TOP RECOMMENDATIONS

- Sidewalk: 0.15 Miles
- Sidepath: 0.85 Miles
- Pedestrian Crossing Improvements
- Signage



1. Orangemans Road from Byberry Road (left) to Pioneer Road (right)



2. Pioneer Road from Orangemans Road (left) to Frontier Road (right)



3. Pioneer Road from Frontier Road (top) to Shoemaker Road, and continuing to Frank J. Pileggi Park

Segment 19: School Multiuse System

LENGTH: **1.41 Miles**

SEGMENT DESCRIPTION

This route segment includes: A) existing sidewalk and new sidewalk connections along the southern side of Exton Road from Orangemans Road to Straton Road, B) a connection via existing trail and updated crossings to Fern Village Park, C) new sidewalk connections and existing sidewalk along the eastern side of Straton Road, the northern side of Tanner Road from Straton Road to Jefferson Avenue, the western side of Jefferson Avenue to Summit Avenue, and the northern side of Summit Avenue from Jefferson to Jacksonville Road, and D) following existing sidewalk on the eastern side of Jacksonville Road to Meadowbrook Avenue and continue along the northern side of Meadowbrook via existing and new sidewalks to Crooked Billet Elementary School and Celano Park.

PARKS CONNECTED

-  Celano Park
-  Tanner Park
-  Fern Village Park

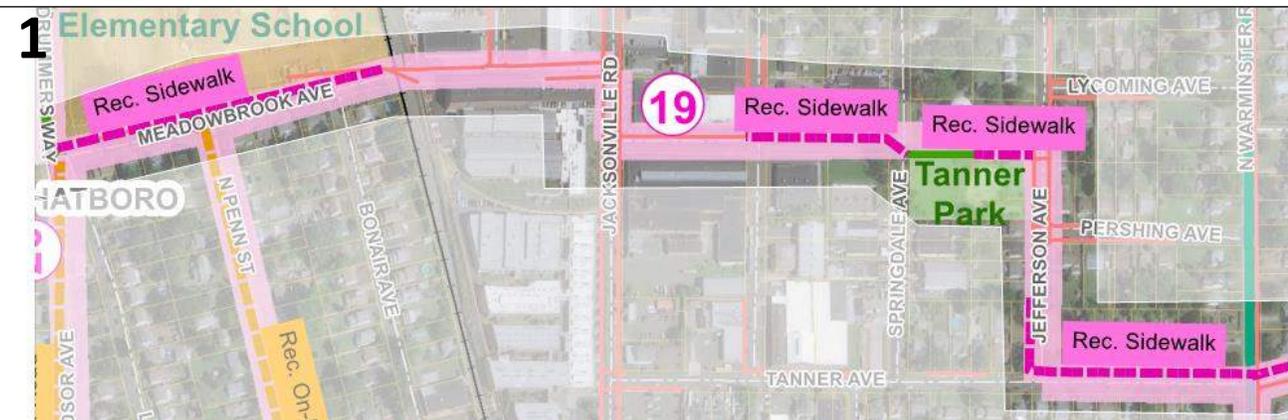
OTHER DESTINATIONS

Crooked Billet Elementary School, Upper Moreland Primary, Intermediate, and Middle schools

TOP RECOMMENDATIONS

- Sidewalk: 0.52 Miles
- Pedestrian Crossing Improvements
- Signage

1. Meadowbrook Avenue from Windsor Avenue (left) to Warminster Road (right)



2. Tanner Avenue from Warminster Road (left) continuing along Exton Road to Orangemans Road (right)



Segment 21: Celano-Downtown Link

LENGTH: **1.02 Miles**

SEGMENT DESCRIPTION

This route segment includes an on-road alignment along North Penn Street from Meadowbrook Avenue to E Monument Avenue, where it crosses to new sidewalk to span the southern side of E Monument in its entirety. The route continues along new sidewalk to extend along the western side of N Penn Street from E Monument Avenue to existing sidewalk at E Montgomery Avenue, which it continues along to E Moreland Avenue. Existing sidewalk along E Montgomery Avenue and E Moreland Avenue from N Penn St to York Road are also included in the route.

PARKS CONNECTED

 Celano Park

OTHER DESTINATIONS

Crooked Billet Elementary School, Neighborhoods, and Businesses along York Road

TOP RECOMMENDATIONS

- Sidewalk: 0.21 Miles
- On-Road: 0.32 Miles
- Pedestrian Crossing Improvements
- Signage and Small Trailhead

N Penn Street from Meadowbrook Avenue (left) to E Moreland Avenue (right) and York Road (bottom)



Segment 22: Hatboro Memorial Link

LENGTH: **0.57 Miles**

SEGMENT DESCRIPTION

This route alignment includes a new side path trail and connections to existing sidewalk along the southern side of W Monument Avenue from Blair Mill Road to York Road with a spur trail connection to the Hatboro Memorial Park.

PARKS CONNECTED



Hatboro Memorial Park



Supports connections to Eaton Memorial Park

OTHER DESTINATIONS

Neighborhoods and Businesses along York Road and Blair Mill Road

TOP RECOMMENDATIONS

- Sidepath/Trail: 0.37 Miles
- Pedestrian Crossing Improvements
- Signage

Monument Avenue from Blair Mill Road (left) to York Road (right)



Segment 23: County Line Link

LENGTH: **0.25 Miles**

SEGMENT DESCRIPTION

This route segment includes replacing existing sidewalk along the southern side of County Line Road with a side path trail from Blair Mill Road to York Road.

PARKS CONNECTED

 Blair Mill Park

OTHER DESTINATIONS

Connection Between a Primary Travel Corridor (York Road) and Blair Mill Road trail segments, Neighborhoods, and Businesses on County Line Road and York Road

TOP RECOMMENDATIONS

- Sidepath: 0.25 Miles
- Pedestrian Crossing Improvements
- Signage

County Line Road from Blair Mill Road (left) to York Road (right)



Segment 24: Eaton Memorial-Pennypack Link

LENGTH: **0.81 Miles**

SEGMENT DESCRIPTION

This route segment includes existing sidewalk along Orchard Avenue and Fairview Avenue from York Road to South Chester and continuing along existing sidewalks on the eastern side of Chester, south to Horsham Road via existing bridge and trail. The route also includes: A) a park connection via existing sidewalks on Fairview Avenue from Chester Avenue across Linden Avenue to a new trail link into the park, and B) a neighborhood connection via existing sidewalk along Williams Lane from Chester to an existing trail link to parking on Dunbar Lane.

PARKS CONNECTED



Eaton Memorial Park

OTHER DESTINATIONS

Pennypack Elementary School, Neighborhoods, York Rd Businesses, and Existing Trails

TOP RECOMMENDATIONS

- Sidepath: 0.05 Miles
- Pedestrian Crossing Improvements
- Signage

1



1. Fairview Avenue from Eaton Memorial Park (left) to York Road (right) and south to Williams Lane (bottom)

2



2. S Chester Avenue from Williams Lane (left) to Horsham Road (right)

Segment 25: Cross County-Turnpike Trail

LENGTH: 1.21 Miles

SEGMENT DESCRIPTION

This route segment begins at Welsh Road and follows the northern side of the Pennsylvania Turnpike to Easton Road, where it crosses to the southern side turnpike to link with additional segments of Montgomery's Cross County Trail system.

PARKS CONNECTED

 No parks connected directly- regional trail connections

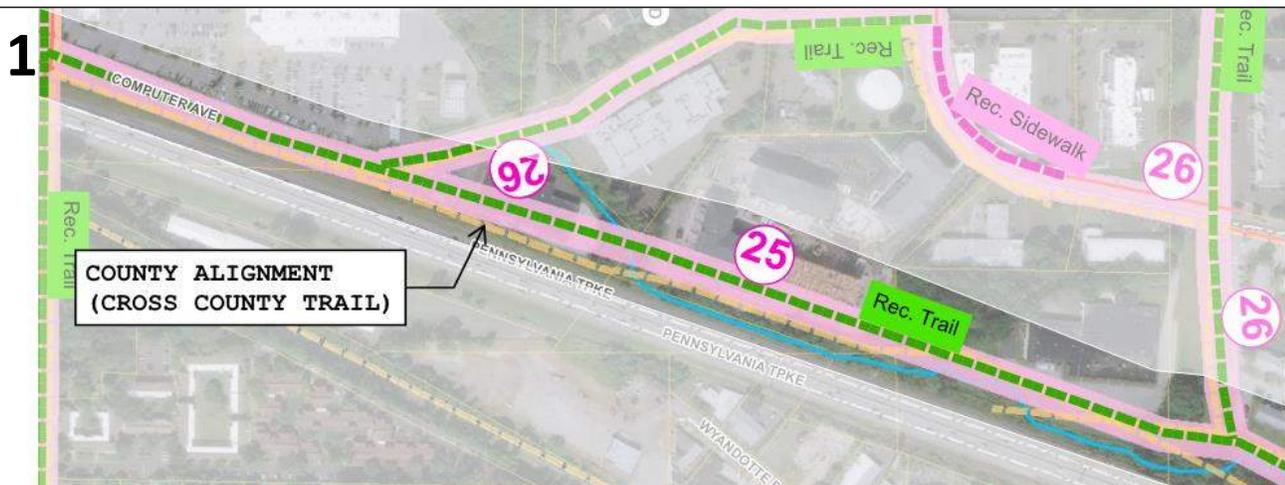
OTHER DESTINATIONS

Cross County Trail Network, Tributary of the Pennypack Creek and Commercial Shopping along Easton Road

TOP RECOMMENDATIONS

- Sidepath/Trail: 1.21 Miles
- Pedestrian Crossing Improvements
- Signage and Small Trailhead

1. Computer Avenue from Welsh Road (left) continuing along Pennypack to Segment 26 (right)



2. Off-road along Pennypack from Segment 26 (left) to link with Cross County Trail (right)



Segment 26: Power Line-Cross County Connector

LENGTH: 1.14 Miles

SEGMENT DESCRIPTION

This route segment begins at the Power Line Trail on Blair Mill Road and continues along a trail path south of Commerce Avenue to connect with the proposed Cross County-Turnpike Trail. The route also includes existing and proposed sidewalk along Maryland Road and proposed side path trail along the eastern side of Computer Avenue.

PARKS CONNECTED

 No parks connected directly- regional trail connections

OTHER DESTINATIONS

Powerline Trail, Cross County Trail Network, Businesses, and Pennypack Tributary

TOP RECOMMENDATIONS

- Sidewalk: 0.19 Miles
- Sidepath/Trail: 0.74 Miles
- Pedestrian Crossing Improvements
- Signage



1. Commerce Avenue from Blair Mill Road (left) to Segment 25 (right), and Maryland Road loop.



2. Computer Avenue from Maryland Road to Segment 25.

Segment 27: Whitehall Park Link

LENGTH: **0.77 Miles**

SEGMENT DESCRIPTION

This route segment includes existing sidewalk along the western side of Carlson Drive and the northern side of Whitehall Drive from Welsh Road to Fitzwatertown Road, and a proposed shared use path along the western side of Hideaway Drive to connect with Whitehall Park.

PARKS CONNECTED

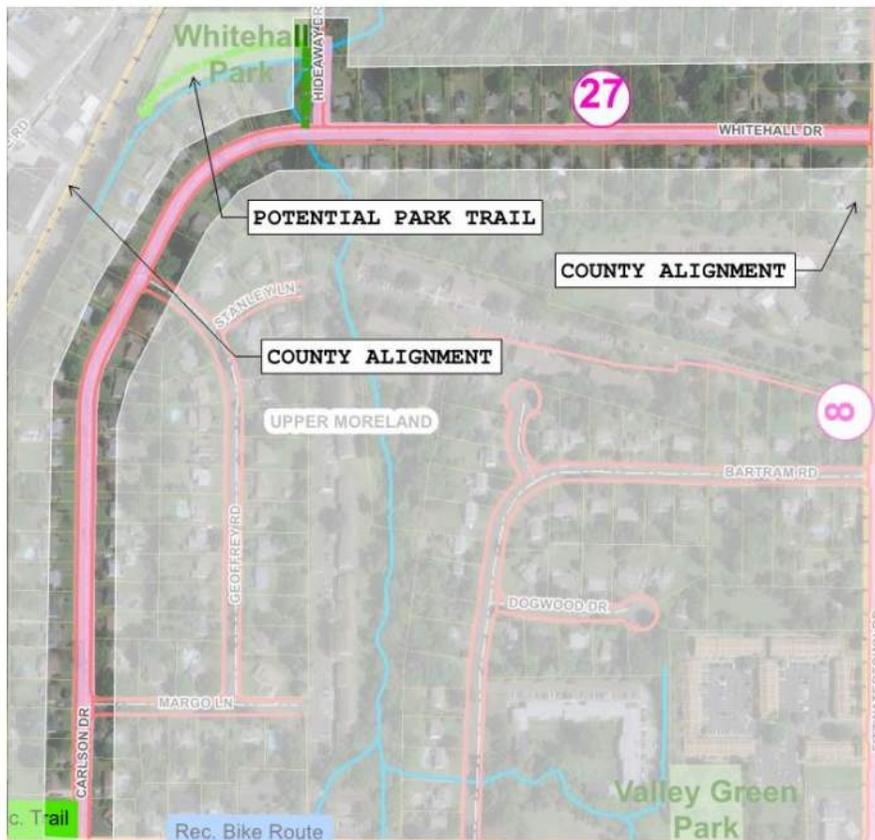
 Whitehall Park

OTHER DESTINATIONS

Neighborhoods

TOP RECOMMENDATIONS

- Sidepath: 0.04 Miles
- Pedestrian Crossing Improvements
- Signage



Carlson Drive from Welsh Road (bottom) continuing along Whitehall Drive to Fitzwatertown Road

Segment 28: Broughton Park Link

LENGTH: **1 Mile**

SEGMENT DESCRIPTION

This route segment includes on-road walking paths on Terrace Road from Fitzwatertown Road to Dallas Road and on Sheldon Road from Fitzwatertown Road to Broughton Park. It also includes existing sidewalk and proposed sidewalk along the western side of Dallas Road from Sheldon Road to Easton Road.

PARKS CONNECTED



Broughton Park

OTHER DESTINATIONS

Neighborhoods and Downtown Upper Moreland

TOP RECOMMENDATIONS

- Sidewalk: 0.05 Miles
- On-Road: 0.69 Miles
- Pedestrian Crossing Improvements
- Signage



Terrace Road and Sheldon Road from Fitzwatertown Road (left) to Dallas Road and Broughton Park (right)

Segment 29: Brooks Street-Buehler Link

LENGTH: **1.69 Miles**

SEGMENT DESCRIPTION

This route segment includes: A) existing sidewalk along the northern side of Lincoln Avenue from Easton Road to York Road, B) on-road route, existing, and new sidewalk along Grant Avenue and Patterson Avenue from Lincoln Avenue to Sampson Avenue, C) on-road route along Fairhill Street from Patterson Avenue to York Road, D) existing and new proposed sidewalk along the northern side of Sampson Avenue from Patterson Avenue to York Road, E) existing sidewalk on the southern side of Beechwood Road from Fitzwatertown to Patterson Avenue, and F) a side path trail along the southern side of Brooks Street from Brooks Street Park to, and through, Buehler Park to Fitzwatertown Road.

PARKS CONNECTED



Brooks Street Park



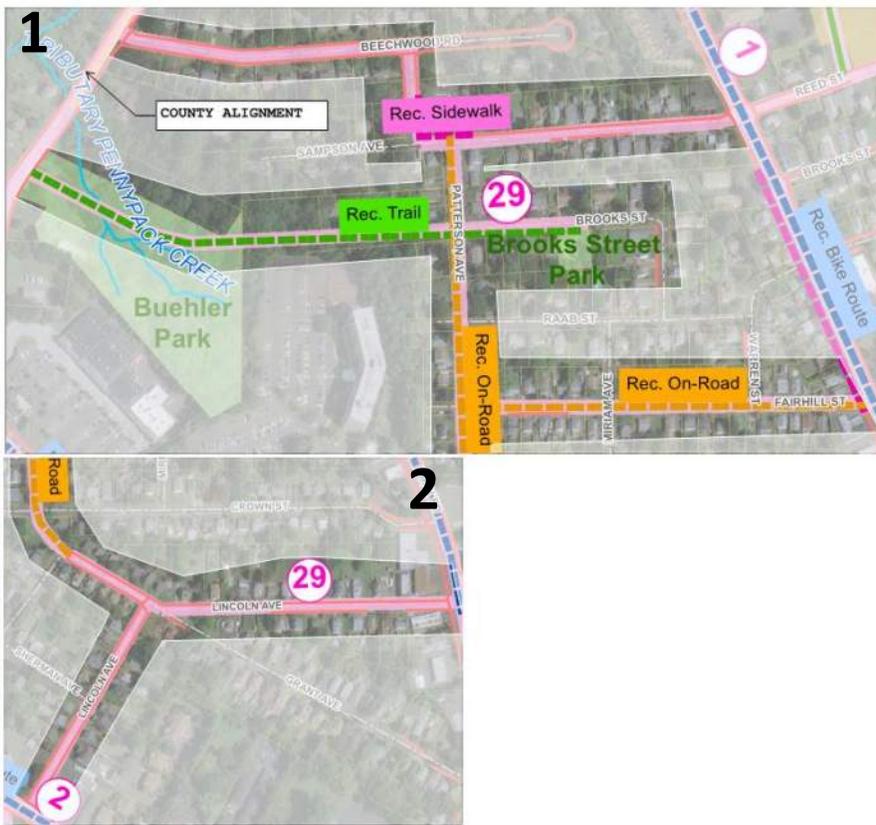
Buehler Park

OTHER DESTINATIONS

Downtown Upper Moreland, Neighborhoods, Tributary of the Pennypack in Buehler Park

TOP RECOMMENDATIONS

- Sidewalk: 0.06 Miles
- Sidepath/Trail: 0.34 Miles
- On-Road: 0.49 Miles
- Pedestrian Crossing Improvements
- Signage



1. Beechwood Road and Buehler Park alignment from Fitzwatertown Road (left) along Sampson Avenue and Fairhill Street to York Road (right)

2. Miriam Avenue from Fairhill Street (top) along Lincoln Avenue to Easton Road (bottom) and York Road (right)

Segment 30: Veterans Memorial- High School Link

LENGTH: **1 Miles**

SEGMENT DESCRIPTION

This route segment includes: A) existing sidewalk and proposed side path along Bear Boulevard from Reed Street to Terwood Road, B) existing sidewalk along the northern side of Reed Street and side path along the eastern side, C) existing trail and proposed on-road route along Maple Street, and D) existing sidewalk along the southern side of Fairhill Street.

PARKS CONNECTED

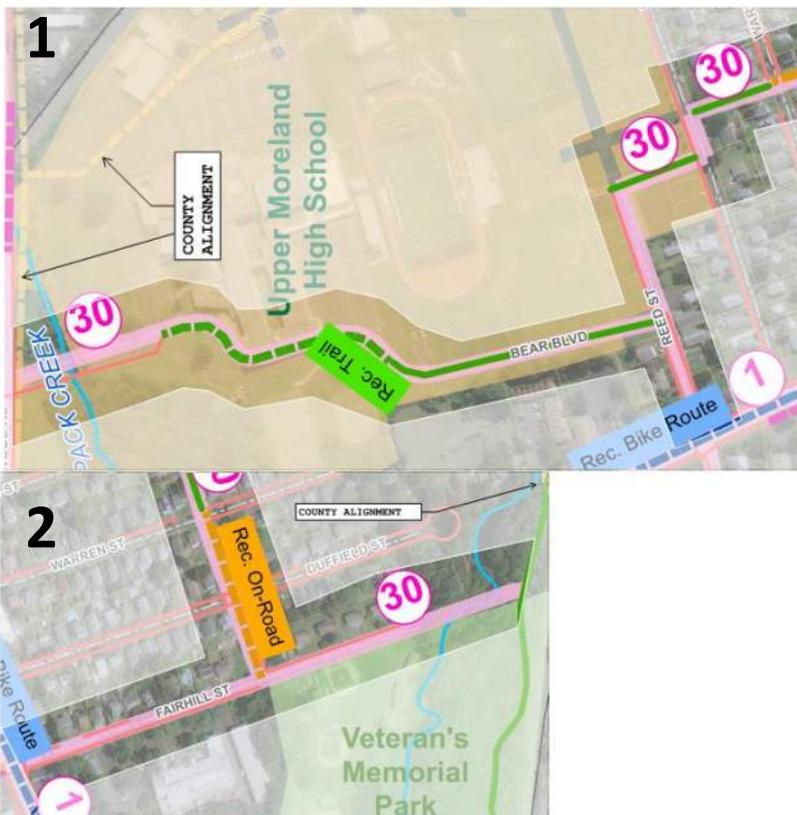
 Veterans Memorial Park

OTHER DESTINATIONS

Upper Moreland High School and Neighborhoods

TOP RECOMMENDATIONS

- Sidepath/Trail: 0.13 Miles
- On-Road: 0.1 Miles
- Pedestrian Crossing Improvements
- Signage



1. Bear Boulevard from Terwood Road (left) to Reed Street and York Road (bottom) and Warren Street (top right)

2. Maple Street from Warren Street (top) to, and along Fairhill Street, linking with York Street (bottom left)

Segment 31: Veterans Memorial-Willow Grove Station Link

LENGTH: **0.14 Miles**

SEGMENT DESCRIPTION

This route segment follows existing sidewalks through the Willow Grove Station parking lot and on the western side of Memorial Park to the Veterans Memorial Park.

PARKS CONNECTED

 Veterans Memorial Park

OTHER DESTINATIONS

Willow Grove Train Station, Downtown Upper Moreland, Upper Moreland High School

TOP RECOMMENDATIONS

- Signage



Memorial Park from Veterans Memorial Park (top) to Willow Grove Train Station (bottom right)

Segment 32: Woodlawn Link

LENGTH: 2.28 Miles

SEGMENT DESCRIPTION

This route segment includes: A) existing sidewalk on the eastern side of Morgan Mill Road, the northern side of Ball Road, the eastern side of Greyhorse Road, the northern side of Red Barn Road, and the eastern side of Division Avenue from Terwood Road to Moreland Road, B) existing sidewalk and on-road route along Overlook Avenue from Division Avenue to Edgehill Road, and C) existing sidewalk and on-road route along Woodlawn Avenue and Manor House Lane from Division Avenue to Edgehill Road.

PARKS CONNECTED

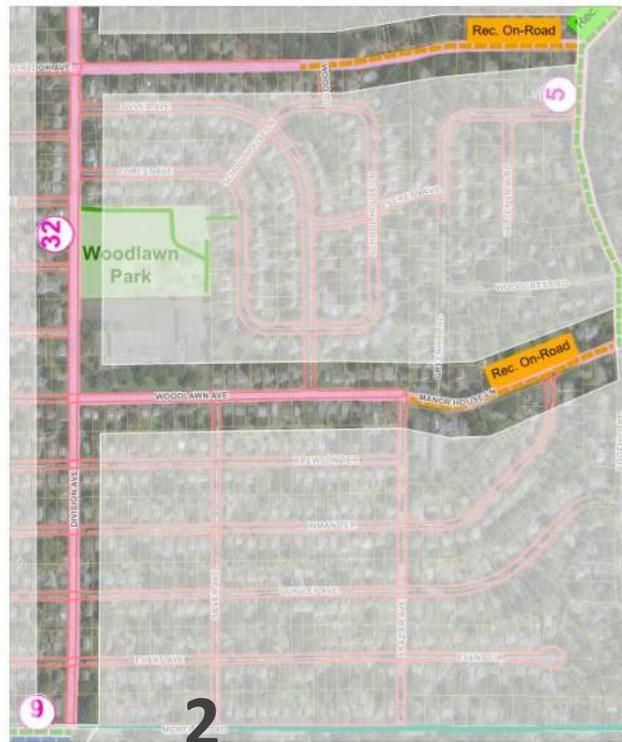
 Woodlawn Park

OTHER DESTINATIONS

Neighborhoods and other trail segments

TOP RECOMMENDATIONS

- On-Road: 0.4 Miles
- Pedestrian Crossing Improvements
- Signage



1. Morgan Mill Road from Terwood Road (top) continuing along various roads to Overlook Avenue (bottom)

2. Division Avenue from Overlook Avenue (top) to Moreland Road (bottom). And, Overlook Avenue and Woodlawn/Manor House to Edge Hill Road (right)

Potential Park Trails

SEGMENT DESCRIPTION

Resulting from the Greenway Analysis, four (4) internal park trails along the Pennypack and Southampton creeks were identified. These trails are located in Hatboro Memorial Park, Pioneer Woods, Frank J. Pileggi Park, and Whitehall Park.

TOP RECOMMENDATIONS

- Sidepath/Trail
- Signage



Trail Ranking

After identifying multiple *trail segments*, and determining the ideal recommendations for each, the segments were ready to be ranked. Ranking each segment adds a quantitative aspect to the segment evaluation, and assists in determining priority segments, as well as the order in which segments should be implemented.

How Did We Rank: To rank the trail segments, each alignment was evaluated based on its general characteristics, including: where it begins and ends; the availability of existing facilities including existing trails, sidewalks and road crossings; the number of street crossings; the ADA potential of each segment; and the surrounding land uses. Please note that street crossings only include those required by a ‘recommended facility’ to account for new street crossings needed.

The segments were then ranked in seven (7) categories on a scale of 0-5, with 0 being the lowest priority and 5 being the highest. These categories were designed to hone in on aspects that affect trail complexity, cost, and eligibility for financial support. Categories that contribute to trail complexity and cost include the number of landowners involved, availability of rights-of-way, and connections to existing and planned trails, while the inclusion of greenways, neighborhood connections, partnership potential, and grant worthiness contribute to a segment’s potential to gain public support, local partnerships, and non-profit/grant funding. The assigned ranks were then added to give each segment a Total Ranking score.



Table 13. Trail Ranking System (0-5)		
Ranking Category	Explanation	Ranks
Greenway Included	<i>Does the trail lie within, or connect to, a greenway</i>	0 (No), 5 (Yes)
Connect to Existing/Planned Trail	<i>Potential to connect with an existing trail (within the Study Area or neighboring municipality) and/or regional trail network</i>	0 (No potential), 1-3 (for Upper Moreland-Hatboro Links), 4 (Neighboring Municipality Links), 5 (Regional Trail Network Link)
Landowner Negotiation	<i>Number of landowners that need negotiations and easements</i>	0 (20+ Landowners), 1 (15-20), 2 (10-15), 3 (5-10), 4 (2-5), 5 (1)
Available ROW	<i>Available rights-of-way that reduce landowner negotiations</i>	0 (No ROW/Easement is Needed), 3 (ROW for some trail/Easement needed for some of trail), 5 (ROW for whole trail/No Easement Needed)
Neighborhood Connections	<i>Number of people and places physically connected by a trail segment</i>	0 (None), 1 (neighborhood link), 2 (multiple neighborhoods), 3 (neighborhoods/downtown/park), 4 (neighborhoods, downtown, and parks), 5 (Regional connection)
Partnership Potential	<i>Potential to partner with neighboring municipalities and/or non-profit groups</i>	0 (None), 3 (Local/Non-Profits), 4 (Neighboring Municipalities), 5 (Regional Partnerships)
Grant Worthy	<i>Likely grant eligibility and potential to be funded</i>	0 (None), (no 1), 2 (streetscape grant), 3 (trail grants), 4 (trail & school or community resource grants), 5 (trail & greenway/natural habitats)

How To Use the Ranking: The Trail Ranking Sheet should be used by following these steps:

1. Know the Trail Segment you want to build?
 - Look for your specific segment under the Name category
 - Use the Trail Characteristics to get a general idea of the segment
 - Use the Trail Ranking to understand the opportunities and constraints of the segment. If there is a high ranking for partnerships and/or grants begin developing these relationships and applying for funding support. Next begin negotiations for easements and ROW.

2. Looking for the Trail Segment you should build?
 - Look at the Trail Ranking Totals to identify highly ranked segments.
 - Identify which of the highest-ranking segments would currently be most supported in your community, i.e. are off road recreational trails the most popular, or sidewalk improvements to a beloved community park?
 - Use the funding opportunities section of this plan to identify which grant opportunity you should pursue and begin a conversation with the grant agency.
 - If the segment has a high partnership potential ranking begin building a relationship with local and regional partners for support during grant applications and potential funding/materials/maintenance support.

Table 14. Proposed Trail Segments-Trail Evaluation Criteria

Trail Segments			Trail Characteristics						Trail Ranking							
ID	Name	Length (miles)	Start Point	End Point	Existing Facilities	Street Crossing	ADA Potential	Surroundings	Greenway Included	Connection to Existing/Planned Landowner	Negotiation	Available ROW	Neighborhood Connections	Partnership Potential	Grant Worthy	TOTAL
1	York Road Multiuse Trail System	3.77	Moreland Road	County Line Road	Yes	2	Yes	Neighborhood Downtown Park	5	5	0	3	5	5	4	27
2	Easton Road Multiuse Trail System	2.32	Moreland Road	Blair Mill Road	Yes	2	Yes	Neighborhood Downtown Park	5	5	0	3	5	5	4	27
3	Davisville Road Multiuse Trail System	3.23	Moreland Road	County Line Road	Yes	14	Yes	Neighborhood Downtown Park	5	5	0	3	5	5	4	27
4	Byberry Road Multiuse Trail System	2.25	York Road	Pennypack Trail	Yes	6	Yes	Neighborhood Park	0	5	0	3	5	5	4	22
5	PERT Link	4.09	Davisville Road	Manor House Lane	Yes	6	Yes	Neighborhood Park	0	5	0	3	5	5	4	22
6	Papermill PERT Link	1.36	Grasshopper Road	PERT	Yes	1	Yes	Neighborhood Park	0	5	5	3	3	5	3	24
7	Terwood Road Multiuse Trail System	2.32	Davisville Road	Creek Road Trail	Yes	10	Yes	Neighborhood Park	0	5	0	3	5	4	4	21
8	Fitzwatertown Road Multiuse Trail System	1.89	Davisville Road	Moreland Road	Yes	11	Yes	Neighborhood Park School	0	3	4	3	3	3	4	20
9	Moreland Road Multiuse Trail System	2.17	Blair Mill Road	Division Avenue	Yes	21	Yes	Neighborhood Park Downtown	0	5	5	3	4	4	4	25
10	Blair Mill Road Multiuse Trail System	2.32	County Line Road	Welsh Road	Yes	20	Yes	Neighborhood Park Businesses	0	5	0	3	5	4	4	21
11	Warminster-Mill Multiuse Trail System	2.33	Easton Road	Tanner Avenue	Yes	13	Yes	Neighborhood Park Businesses	0	3	0	3	3	3	5	17
12	Pennypack-YMCA Link	1.28	Warminster Road	YMCA	Yes	0	Yes	Creek Park Neighborhood	5	3	4	0	3	3	5	23
13	North Willow Grove-Pennypack Elementary Link	1.13	Blair Mill Road	Horsham Road	Yes	5	Yes	Neighborhood Park Downtown School	0	3	0	3	4	3	4	17
14	Horsham Road & Fair Oaks Park	1.08	Blair Mill Road	York Road	Yes	2	Yes	Neighborhood School Park Downtown	0	4	0	3	4	4	4	19
15	Hatboro Cemetery Trail	0.56	York Road	Warminster Road	No	0	Yes	Cemetery Neighborhood Trails	0	3	4	3	3	3	3	19
16	Dawson Manor-Farmstead Link	1.23	Warminster Road	Byberry / Davisville	Yes	2		Neighborhood Park	0	3	2	3	3	0	3	14

Table 14. Proposed Trail Segments-Trail Evaluation Criteria



Trail Segments			Trail Characteristics						Trail Ranking							
ID	Name	Length (miles)	Start Point	End Point	Existing Facilities	Street Crossing	ADA Potential	Surroundings	Greenway Included	Connection to Existing/Planned Landowner Negotiation	Available ROW	Neighborhood Connections Partnership Potential	Grant Worthy	TOTAL		
17	Cross County-Masons Mill Link	1.4	Davisville Road	PERT	Yes	0	Yes	Park Regional Trails Woodland	5	5	4	3	5	3	5	30
18	Farmstead-School-Pioneer-Pileggi Loop	2.22	Byberry Road	Frank J. Pileggi Park	Yes	9	Yes	Neighborhood Park School	0	3	0	3	3	3	4	16
19	School Multiuse System	1.41	Orangemans Road	Winsor Avenue	Yes	7	Yes	Neighborhood Park School	0	3	0	3	3	3	4	16
20	Earl-Winsor Link	0.68	York Road	York Road	Yes	1	Yes	Neighborhood Park School Downtown	5	3	5	3	4	3	4	27
21	Celano-Downtown Link	1.02	York Road	York Road	Yes	3	Yes	Neighborhood Park School Downtown	0	3	2	3	4	0	4	16
22	Hatboro Memorial Link	0.57	Blair Mill Road	York Road	Yes	3	Yes	Neighborhood Park Downtown	0	4	1	3	4	4	4	20
23	County Line Link	0.25	Blair Mill Road	York Road	Yes	0	Yes	Neighborhood Park Downtown	0	3	0	5	3	4	4	19
24	Eaton Memorial-Pennypack Link	0.81	York Road	Horsham Road	Yes	8	Yes	Neighborhood Park School Downtown	5	4	4	3	4	3	4	27
25	Cross County-Turnpike Trail	1.21	Welsh Road	Cross County Trail	No	1	Yes	Turnpike Woodland Businesses	5	5	4	3	5	5	5	32
26	Power Line-Cross County Connector	1.14	Blair Mill Road	Cross County Trail	Yes	3	Yes	Businesses Hotels	0	5	3	3	5	5	4	25
27	Whitehall Park Link	0.77	Moreland Road	Fitzwatertown Road	Yes	1	Yes	Neighborhood Park	0	3	4	3	3	0	3	16
28	Broughton Park Link	1	Fitzwatertown Road	Easton Road	Yes	11	Yes	Neighborhood Park	0	3	4	3	4	0	3	17
29	Brooks Street-Buehler Link	1.69	Fitzwatertown Road	York Road	Yes	4	Yes	Neighborhood Park Downtown	5	3	3	3	4	3	4	25
30	Veterans Memorial- High School Link	1	Fairhill Street	Terwood Road	Yes	5	Yes	Neighborhood Park School	0	3	4	3	4	3	4	21
31	Veterans Memorial-Willow Grove Station Link	0.14	Memorial Park	Veterans Memorial Park	Yes	2	Yes	Downtown Park Train Station	0	3	0	5	3	3	4	18
32	Woodlawn Link	2.28	Terwood Road	Moreland Road	Yes	14	Yes	Neighborhood Park	0	3	5	5	3	0	4	20

Cost Estimates

Estimates of potential cost were prepared for each trail segment with the help of planners, transportation engineers, and landscape architects. Features that may be recommended for each segment include:

Side-path or Trail- accounts for a 12-foot-wide asphalt trail path. Sidepaths are considered along a roadway, while trails are off-road facilities.

Sidewalk & Curb- accounts for a 5-foot-wide concrete sidewalk and curbing.

Bike Route- includes in street thermoplastic stencils to be painted every 250 feet, or 22 stencils within a mile, and after intersections. Signage within these areas may include bike route directional signage, “Share the Road”, and “Bike May Use Full Lane” signs

On-Road Route- includes thermoplastic stencils to be painted every 250 feet, or 22 stencils within a mile, and after intersections. Signage within these areas may include directional signage, pedestrian and crossing signage, and “Share the Road” signs.

Crossings- account for pedestrian crossing improvements including 2 ADA ramps, crosswalks, and signage for each crossing.

Sign Packages- include directional signage and mile markers.

Small Trailhead- includes the costs of simple kiosks and small landscaping

Large Trailhead- includes the costs of 1) Parking Pavement and Striping, 2) Composting Restrooms (2 unit), 3) a Kiosk, 4) Fencing and Landscaping, 5) A Gateway Entrance Treatment, and 6) Two Picnic Tables, Two Park Benches, and Lighting.

Raised Walkway/Bridge/Underpass Redesign- this recommendation includes a generalized cost estimate for pedestrian bridges, raised boardwalks, and underpass improvements to accommodate pedestrians. A more detailed design study will be needed to identify the actual costs related to the unique site conditions of each segment requiring these features.

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Table 15. Recommended Trail Segments

Cost Estimate			Segment 1		Segment 2		Segment 3		Segment 4		Segment 5		Segment 6		Segment 7		Segment 8	
Feature	Unit	Cost	Qty	Total														
Sidpath/Trail, 12' wide	LF	\$ 250		\$ -		\$ -	11827.2	\$ 2,956,800		\$ -	10243.2	\$ 2,560,800	4171.2	\$ 1,042,800	11563.2	\$ 2,890,800		\$ -
Sidewalk & Curb	LF	\$ 300	4910.4	\$ 1,473,120	2323.2	\$ 696,960	2270.4	\$ 681,120	7603.2	\$ 2,280,960		\$ -		\$ -		\$ -	422.4	\$ 126,720
Bike Route (every 250 ft)	EA	\$ 250	19905.6	\$ 20,735	12249.6	\$ 12,760	17054.4	\$ 17,765	11880	\$ 12,375		\$ -		\$ -	12249.6	\$ 12,760	9979.2	\$ 10,395
Bike Lane	LF	\$ 10		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
On-Road (every 250 ft)	EA	\$ 250		\$ -		\$ -		\$ -		\$ -	2481.6	\$ 2,585		\$ -		\$ -		\$ -
Crossing	EA	\$ 15,360	2	\$ 30,720	2	\$ 30,720	9	\$ 138,240	6	\$ 92,160	6	\$ 92,160	1	\$ 15,360	10	\$ 153,600	11	\$ 168,960
Sign Package	EA	\$ 6,000	1	\$ 6,000	1	\$ 6,000	2	\$ 12,000	1	\$ 6,000	1	\$ 6,000	1	\$ 6,000	2	\$ 12,000	1	\$ 6,000
Small Trailhead	EA	\$ 20,000	1	\$ 20,000		\$ -	1	\$ 20,000	1	\$ 20,000		\$ -		\$ -		\$ -		\$ -
Large Trailhead	EA	\$ 380,000		\$ -	1	\$ 380,000		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
Raised Walkway/Bridge	EA	\$ 750,000		\$ -		\$ -	2	\$ 1,500,000		\$ -		\$ -		\$ -		\$ -	1	\$ 750,000
Traffic Calming	LF	\$ 200		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
<i>Subtotal</i>				\$ 1,550,575.00		\$ 1,126,440.00		\$ 5,325,925.00		\$ 2,411,495.00		\$ 2,661,545.00		\$ 1,064,160.00		\$ 3,069,160.00		\$ 1,062,075.00
<i>Mobilization (15%)</i>				\$ 232,586.25		\$ 168,966.00		\$ 798,888.75		\$ 361,724.25		\$ 399,231.75		\$ 159,624.00		\$ 460,374.00		\$ 159,311.25
<i>Contingency (5%)</i>				\$ 77,528.75		\$ 56,322.00		\$ 266,296.25		\$ 120,574.75		\$ 133,077.25		\$ 53,208.00		\$ 153,458.00		\$ 53,103.75
<i>Subtotal Construction</i>				\$ 1,860,690.00		\$ 1,351,728.00		\$ 6,391,110.00		\$ 2,893,794.00		\$ 3,193,854.00		\$ 1,276,992.00		\$ 3,682,992.00		\$ 1,274,490.00
Design/ Engineering (10%) Easements/Acquisitions				\$ 186,069		\$ 135,173		\$ 639,111		\$ 289,379		\$ 319,385		\$ 127,699		\$ 368,299		\$ 127,449
TOTAL SEGMENT COST				\$ 2,046,759		\$ 1,486,901		\$ 7,030,221		\$ 3,183,173		\$ 3,513,239		\$ 1,404,691		\$ 4,051,291		\$ 1,401,939

Table 15. Recommended Trail Segments

Cost Estimate			Segment 9		Segment 10		Segment 11		Segment 12		Segment 13		Segment 14		Segment 15		Segment 16	
Feature	Unit	Cost	Qty	Total	Qty	Total	Qty	Total	Qty	Total	Qty	Total	Qty	Total	Qty	Total	Qty	Total
Sidpath/Trail, 12' wide	LF	\$ 250	11457.6	\$ 2,864,400	12249.6	\$ 3,062,400	8870.4	\$ 2,217,600	2798.4	\$ 699,600	3115.2	\$ 778,800	264	\$ 66,000	2112	\$ 528,000		\$ -
Sidewalk & Curb	LF	\$ 300		\$ -		\$ -		\$ -		\$ -		\$ -	3432	\$ 1,029,600		\$ -	1584	\$ 475,200
Bike Route (every 250 ft)	EA	\$ 250	11457.6	\$ 11,935	16420.8	\$ 17,105		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
Bike Lane	LF	\$ 10		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
On-Road (every 250 ft)	EA	\$ 250		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
Crossing	EA	\$ 15,360	21	\$ 322,560	20	\$ 307,200	13	\$ 199,680	0	\$ -	5	\$ 76,800	2	\$ 30,720	1	\$ 15,360	2	\$ 30,720
Sign Package	EA	\$ 6,000	2	\$ 12,000	2	\$ 12,000	1	\$ 6,000	1	\$ 6,000	1	\$ 6,000	1	\$ 6,000	1	\$ 6,000	1	\$ 6,000
Small Trailhead	EA	\$ 20,000	1	\$ 20,000		\$ -	1	\$ 20,000		\$ -		\$ -		\$ -		\$ -		\$ -
Large Trailhead	EA	\$ 380,000		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
Raised Walkway/Bridge	EA	\$ 750,000		\$ -		\$ -	2	\$ 1,500,000	1	\$ 750,000		\$ -		\$ -		\$ -		\$ -
Traffic Calming	LF	\$ 200		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
<i>Subtotal</i>				\$ 3,230,895.00		\$ 3,398,705.00		\$ 3,943,280.00		\$ 1,455,600.00		\$ 861,600.00		\$ 1,132,320.00		\$ 549,360.00		\$ 511,920.00
<i>Mobilization (15%)</i>				\$ 484,634.25		\$ 509,805.75		\$ 591,492.00		\$ 218,340.00		\$ 129,240.00		\$ 169,848.00		\$ 82,404.00		\$ 76,788.00
<i>Contingency (5%)</i>				\$ 161,544.75		\$ 169,935.25		\$ 197,164.00		\$ 72,780.00		\$ 43,080.00		\$ 56,616.00		\$ 27,468.00		\$ 25,596.00
<i>Subtotal Construction</i>				\$ 3,877,074.00		\$ 4,078,446.00		\$ 4,731,936.00		\$ 1,746,720.00		\$ 1,033,920.00		\$ 1,358,784.00		\$ 659,232.00		\$ 614,304.00
Design/ Engineering (10%) Easements/Acquisitions				\$ 387,707		\$ 407,845		\$ 473,194		\$ 174,672		\$ 103,392		\$ 135,878		\$ 65,923		\$ 61,430
TOTAL SEGMENT COST				\$ 4,264,781		\$ 4,486,291		\$ 5,205,130		\$ 1,921,392		\$ 1,137,312		\$ 1,494,662		\$ 725,155		\$ 675,734

Table 15. Recommended Trail Segments

Cost Estimate			Segment 17		Segment 18		Segment 19		Segment 20		Segment 21		Segment 22		Segment 23		Segment 24	
Feature	Unit	Cost	Qty	Total	Qty	Total	Qty	Total	Qty	Total	Qty	Total	Qty	Total	Qty	Total	Qty	Total
Sidepath/Trail, 12' wide	LF	\$ 250	6177.6	\$ 1,544,400	4488	\$ 1,122,000		\$ -	686.4	\$ 171,600		\$ -	1953.6	\$ 488,400	1267.2	\$ 316,800	264	\$ 66,000
Sidewalk & Curb	LF	\$ 300		\$ -	792	\$ 237,600	2745.6	\$ 823,680		\$ -	1108.8	\$ 332,640		\$ -		\$ -		\$ -
Bike Route (every 250 ft)	EA	\$ 250		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
Bike Lane	LF	\$ 10		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
On-Road (every 250 ft)	EA	\$ 250		\$ -		\$ -		\$ -	1320	\$ 1,375	1689.6	\$ 1,760		\$ -		\$ -		\$ -
Crossing	EA	\$ 15,360	0	\$ -	9	\$ 138,240	7	\$ 107,520	1	\$ 15,360	3	\$ 46,080	3	\$ 46,080	0	\$ -	8	\$ 122,880
Sign Package	EA	\$ 6,000	1	\$ 6,000	1	\$ 6,000	1	\$ 6,000	1	\$ 6,000	1	\$ 6,000	1	\$ 6,000	1	\$ 6,000	1	\$ 6,000
Small Trailhead	EA	\$ 20,000		\$ -		\$ -		\$ -		\$ -	1	\$ 20,000		\$ -		\$ -		\$ -
Large Trailhead	EA	\$ 380,000	1	\$ 380,000		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
Raised Walkway/Bridge	EA	\$ 750,000	1	\$ 750,000		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
Traffic Calming	LF	\$ 200		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
<i>Subtotal</i>				\$ 2,680,400.00		\$ 1,503,840.00		\$ 937,200.00		\$ 194,335.00		\$ 406,480.00		\$ 540,480.00		\$ 322,800.00		\$ 194,880.00
<i>Mobilization (15%)</i>				\$ 402,060.00		\$ 225,576.00		\$ 140,580.00		\$ 29,150.25		\$ 60,972.00		\$ 81,072.00		\$ 48,420.00		\$ 29,232.00
<i>Contingency (5%)</i>				\$ 134,020.00		\$ 75,192.00		\$ 46,860.00		\$ 9,716.75		\$ 20,324.00		\$ 27,024.00		\$ 16,140.00		\$ 9,744.00
<i>Subtotal Construction</i>				\$ 3,216,480.00		\$ 1,804,608.00		\$ 1,124,640.00		\$ 233,202.00		\$ 487,776.00		\$ 648,576.00		\$ 387,360.00		\$ 233,856.00
Design/ Engineering (10%) Easements/Acquisitions				\$ 321,648		\$ 180,461		\$ 112,464		\$ 23,320		\$ 48,778		\$ 64,858		\$ 38,736		\$ 23,386
TOTAL SEGMENT COST				\$ 3,538,128		\$ 1,985,069		\$ 1,237,104		\$ 256,522		\$ 536,554		\$ 713,434		\$ 426,096		\$ 257,242

Table 15. Recommended Trail Segments

Cost Estimate			Segment 25		Segment 26		Segment 27		Segment 28		Segment 29		Segment 30		Segment 31		Segment 32	
Feature	Unit	Cost	Qty	Total	Qty	Total	Qty	Total	Qty	Total	Qty	Total	Qty	Total	Qty	Total	Qty	Total
Sidepath/Trail, 12' wide	LF	\$ 250	6388.8	\$ 1,597,200	3907.2	\$ 976,800	211.2	\$ 52,800		\$ -	1795.2	\$ 448,800	686.4	\$ 171,600		\$ -		\$ -
Sidewalk & Curb	LF	\$ 300		\$ -	1003.2	\$ 300,960		\$ -	264	\$ 79,200	316.8	\$ 95,040		\$ -		\$ -		\$ -
Bike Route (every 250 ft)	EA	\$ 250		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
Bike Lane	LF	\$ 10		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
On-Road (every 250 ft)	EA	\$ 250		\$ -		\$ -		\$ -	3643.2	\$ 3,795	2587.2	\$ 2,695	528	\$ 550		\$ -	2112	\$ 2,200
Crossing	EA	\$ 15,360	1	\$ 15,360	3	\$ 46,080	1	\$ 15,360	11	\$ 168,960	4	\$ 61,440	5	\$ 76,800	2	\$ 30,720	14	\$ 215,040
Sign Package	EA	\$ 6,000	1	\$ 6,000	1	\$ 6,000	1	\$ 6,000	1	\$ 6,000	1	\$ 6,000	1	\$ 6,000	1	\$ 6,000	1	\$ 6,000
Small Trailhead	EA	\$ 20,000	1	\$ 20,000		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
Large Trailhead	EA	\$ 380,000		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
Raised Walkway/Bridge	EA	\$ 750,000		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
Traffic Calming	LF	\$ 200		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
<i>Subtotal</i>				\$ 1,638,560.00		\$ 1,329,840.00		\$ 74,160.00		\$ 257,955.00		\$ 613,975.00		\$ 254,950.00		\$ 36,720.00		\$ 223,240.00
<i>Mobilization (15%)</i>				\$ 245,784.00		\$ 199,476.00		\$ 11,124.00		\$ 38,693.25		\$ 92,096.25		\$ 38,242.50		\$ 5,508.00		\$ 33,486.00
<i>Contingency (5%)</i>				\$ 81,928.00		\$ 66,492.00		\$ 3,708.00		\$ 12,897.75		\$ 30,698.75		\$ 12,747.50		\$ 1,836.00		\$ 11,162.00
<i>Subtotal Construction</i>				\$ 1,966,272.00		\$ 1,595,808.00		\$ 88,992.00		\$ 309,546.00		\$ 736,770.00		\$ 305,940.00		\$ 44,064.00		\$ 267,888.00
Design/ Engineering (10%) Easements/Acquisitions				\$ 196,627		\$ 159,581		\$ 8,899		\$ 30,955		\$ 73,677		\$ 30,594		\$ 4,406		\$ 26,789
TOTAL SEGMENT COST				\$ 2,162,899		\$ 1,755,389		\$ 97,891		\$ 340,501		\$ 810,447		\$ 336,534		\$ 48,470		\$ 294,677



IMPLEMENTATION



Plan Implementation

Implementing the recommendations of the [Upper Moreland Township-Hatboro Borough Master Trail Plan](#) will be the shared responsibility of the elected officials, commissions, staff, volunteer committees, residents, businesses, consultants and professionals of both communities who care about connecting people and places through a safe and accessible multimodal trail network. Each recommendation is presented as a piece of the puzzle, with the greater goal of connecting both communities, through a range of pedestrian and bicycle pathways, and in the nearest term possible. Some recommendations will impact the Township and Borough financially in ways which require strategic and funding partnerships, and others may require respectful negotiations with private landowners.

Action Plan

Recommendations are provided in the form of Goals and Objectives

Goal: An overarching vision

Objectives: A specific priority under the Goal

Project Priority Levels are ranked from 1-3, with 1 being a top priority, and determined based on difficulty, feasibility, project size and cost, landowner negotiations and potential funding support.

How to Implement this Plan?

1. To implement the recommendations of any planning document, the following should be considered a guiding force for decision making:

- a) When choosing one option over the other, ask the question, **‘which will be the more equitable?’**
- b) When setting priorities, **buzz words and phrases “Highest” and “Lowest” can be derogatory** and weak minded **compared to “Soonest Possible Success,”** and finally.

- c) All recommendations are subject to **changing grant agency priorities** and **local and state political will**.

2. A review of the recommendations of this plan suggests

- a) initially selecting **action items that might have the soonest success** in areas of the community currently lacking trail facilities but paired nicely with state and regional grant priorities. That requires a deep understanding of the history of grants awarded in the area by state agencies, regional and county funding programs, and even non-profit organizations.
- b) Thereafter, because all recommendations are subject to local political will, it also matters that each recommendation be reviewed for the **impact and benefit on the broadest population**, the **largest economic development improvement**, and/or the **greatest sense of relief or enthusiasm**. Success builds on success. Early and often leads to always and forever.

It may be truly important to set **one overarching goal for implementation**, such as, ‘We will install 1 mile of trail each year, even if just in pieces and parts, for the benefit of those without, and those who will someday deserve it.’

Responsibility

Some of the 32 Trail Segments require a degree of joint effort between Hatboro Borough and Upper Moreland Township to successfully design, construct, and maintain a trail that benefits both municipalities. Trail segments suggested for joint effort can be seen below. The remaining trail segments are the primary responsibility of the designated municipality.

Joint Effort: 1, 4, 11, 12, 13, 14, 16, 19, 22, 23

Upper Moreland Township: 2, 3, 5, 6, 7, 8, 9, 10, 17, 18, 25, 26, 27, 28, 29, 30, 31, 32

Hatboro Borough: 15, 20, 21, 24

Recommended Phasing

This study recommends over 50 miles of trail path ranging from short neighborhood park links, to regional connections. Any of the 32 segments, and/ or internal park trails may launch further analysis, design, engineering, or construction at any time in the near future.

Further Study– Many of the recommended trails will require further evaluation in the form of a design-engineering feasibility study. An important example is the Cross County Trail. As of June 2020, Montgomery County predicts it will prepare a trail feasibility study to confirm or reject the previously proposed trail alignment of the Cross County Trail, through the Upper Moreland Township-Hatboro Borough community study area. Any trail segment recommended in this Master Trail Plan for connection to the alignment depicted by the County and by the Circuit Trail network will therefore need to receive additional analysis. Additional studies related to the natural areas, habitat, wetlands, and community demographics may prove important for certain segments along the Pennypack Creek. Thereafter, grant funds should be immediately pursued to support any and all additional studies.

Acquisitions– Thus far, the majority of trails recommended encourage the use of public lands, and or rights of way. The first step of acquiring trail easements, if needed, from landowners includes initial landowner outreach, appraisals, negotiations, and eventually acquisitions. Small properties require just as much attention as larger properties.

Year 1 Engineering –Success in year one will come from working on trails on publicly owned land. Master Plans should be developed for each segment, followed by any necessary connection acquisitions or easements, engineering plans, and construction.

Year 1 Signage/Construction–Signage to promote all parks and downtowns should begin in earnest and have the potential to immediately begin construction improvements.

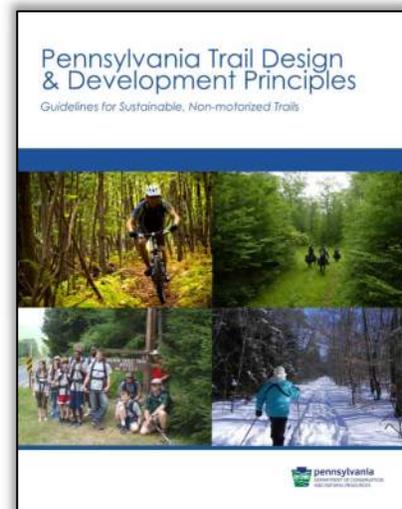
Trail Maintenance & Operation

Pennsylvania is fast becoming a national leader in trail planning, design and construction, with nearly all municipalities participating in some form of state, county, local and/ or regional, trail network development. As a result, information related to trail maintenance, in all categories, is rapidly improving. Two primary sources of information for Southeast Pennsylvania are:

1. PA Department of Conservation & Natural Resources (DCNR)—Pennsylvania’s number one state agency for managing state parks, forests and recreation areas, with data, staff, and financial resources allocated each year for trail development support.
 - a. Website—www.dcnr.pa.gov

2. The Circuit Trails—a collaborative effort of the Delaware Valley Regional Planning Commission, the non-profit William Penn Foundation, and the Pennsylvania Environmental Council, with the aim to install more than 800 miles of non-motorized trail paths throughout the region.
 - a. Website—www.circuittrails.org

The actual process, from start to finish, of building a trail is quite involved, and includes a wide variety of specialists, including: land planners, habitat analysts, environmental scientists, geologists, surveyors, landscape architects, and engineers. The best manual available for the planning, design, construction, and maintenance of trails in Pennsylvania is *Pennsylvania Trail Design & Development Principles: Guidelines for Sustainable Non-Motorized Trails* prepared by PA DCNR.



Maintaining the condition of any trail contributes to its ongoing use by residents, but also by visitors who, in the testimony of economic impact studies, contribute millions of dollars to local economies. It is therefore important to budget for weekly, monthly and yearly maintenance. To answer the most common question asked, “How Much Does it Take to Maintain a Trail?” the Delaware Valley Regional Planning Commission reports ‘\$1,000/mile’. Studies of completed trails suggest much of the cost of trail maintenance is the result of repairing erosion, resurfacing from storm damage and limb and leaf litter, and especially bathroom maintenance, or comfort station maintenance. Long-term maintenance will be unique for each of the 32 recommended trail segments due to the variety of trail surface types. These costs will be examined in more detail in each respective feasibility analysis and design plan.

Short Term Maintenance

The following short-term maintenance needs are common:

- Weekly mowing, empty trash receptacles, pick up loose litter, and fill dog waste bag dispensers
- Weekly trail path cleaning with overhang branch pruning, and tree and shrub limb removal if needed
- Weekly storm damage and erosion check
- Weekly lighting condition check
- Weekly restroom inspections
- Monthly fence maintenance
- Monthly sign and kiosk check
- Monthly kiosk map or brochure updates
- Seasonal trailhead snowplowing
- Annual or biannual trail path paving and/or grading
- Annual or biannual parking- space striping and

Long-Term Maintenance

Long term maintenance generally involves major facility replacement, due to age, weathering or destruction; and it also involves resurfacing of the trail and the trailhead parking.

Habitat improvement projects and stormwater improvement projects tend to occur on longer timelines with multiple agency involvement.

For the Trail Segments identified in the Upper Moreland-Hatboro Borough Master Trail Plan, it is recommended that the communities of Hatboro and Upper Moreland consider a Memorandum of Understanding (MOU) with Montgomery County and with the non-profit, Pennypack Ecological Restoration Trust. Such an MOU would capture the shared responsibilities of the trail maintenance, facilities, and amenities replacement if needed for segments that are part of, or contribute to the PERT trail network or Cross-County Trail.

Risk Management Security Plan

Managing the risks inherent with continuous public use of land is important. For private landowners, the Pennsylvania Recreational Use of Land and Water Act limits landowner liability for trail user injury or property damage, if they make their land available for public recreation at no charge. To further support participating landowners, and to ensure the local law enforcement isn't needlessly challenged by the trail implementation, a security plan should be prepared by Upper Moreland and Hatboro.

Such a plan would clearly state where law enforcement can safely access the trail, where emergency services can access the trail, and where residents and volunteers can promote these locations, and the safe use of the trail through newsletters and signage.

Elements of a security plan might include:

- Trail mapping
- Emergency vehicle and response staging area mapping
- Public transportation-trail connection regular inspections
- Updates to elected officials
- Annual presentations to schools and institutions regarding trail safety

Table 16

**Upper Moreland Township & Hatboro Borough Master Trail Plan
ACTION PLAN**

	Priority	Action
Goal 1: To Provide Trail Connections, Between and In, Parks and Open Space		
Objective 1A: Formalize a System of Ranking Trail Opportunities	1	UMT & HB
Objective 1B: Support Our County Trail and Bicycle Route Projects	1	UMT & HB
Objective 1C: Support the Pennypack Ecological Restoration Trust efforts to Protect Conservation Areas along Local Greenways	1	UMT & HB
Objective 1D: Jointly Pursue Grant Funding to Develop New Trails, Eliminate Trail and Sidewalk Gaps, and Improve Parks with Trails and Trailhead Amenities	1	UMT & HB
Goal 2: To Increase Downtown Accessibility and Walkability		
Objective 2A: Support and Encourage a Vibrant Commercial, Retail, and Eatery Based Downtown and Shopping Center Street life	1	UMT & HB
Objective 2B: Pursue Trail and Transportation Grants to Develop Trails and New Sidewalks in Suggested Recommendations and Trail Ranking	1	UMT & HB
Objective 2C: Seek Design Solutions and Funding for Gateway Signage and Revitalization Efforts in Both Communities	2	UMT & HB
Goal 3: To Provide Viable Transportation Alternatives to the Automobile		
Objective 3A: Develop Trail Connections to Existing Routes to Public Transit, Regional Trails, and Local Parks, and, Increase Trailhead Options	1	UMT & HB
Objective 3B: Launch a Caucus of all Stakeholders in Transportation to Determine the Future of Public Transit, and Need for Additional Connections	3	UMT & HB
Objective 3C: Establish Partnerships with Businesses, School Districts, the Health Network and Other Non-Profit Groups to Promote the Trail Network	1	UMT & HB
Objective 3D: Expand Newsletter and Social Media Feedback System for Resident Concerns and Interests in Trails	2	UMT & HB

Partnerships and Funding

Funding Opportunities

When the time comes to plan, design, and construct the recommendations of this Master Trail Plan, there are multiple partners and a variety of funding sources available to support each new project. Primary sources of funding include the use of municipal dollars, earned from tax revenue, fees, developer concessions, and/or borrowing. Federal, State, County, and local funding opportunities are available, and can help with many of the recommendations of this plan. Secondary sources of funds include private foundation monies and contributions from private donors, benefactors, and non-profit groups.

Funding sources change from year to year: in some cases, available funds have decreased and in others the variety of funds is more interesting; for example, the Commonwealth now has funding for trail maintenance and equipment. The recommendations of this plan incorporate multi-modal means of transportation, recreation facilities, streetscapes, and natural environment protection, and are therefore mostly eligible for grant support.

Note: See Appendices for a full breakdown of potential grant sources.



Partnership Opportunities

Through the preparation of the **Upper Moreland Township-Hatboro Borough Master Trail Plan**, several important partnership opportunities were identified. Upper Moreland Township and Hatboro Borough should seek to develop, or strengthen a relationship with each or all organizations below, to support the implementation of co-beneficial recommendations made in this plan. Please refer to the Action Plan to see identified partnership projects.

Pennypack Ecological Restoration Trust (PERT)

PERT participated on the Steering Committee and contributed greatly to the preparation of this plan. It will be an important partner in the development of proposed trail network, especially where it connects to the nature preserve and trails. Formed in 1970, PERT's mission is to protect and maintain the Pennypack Preserve natural areas and to inspire stewardship and appreciation through education and enjoyment of the local ecosystem.

Website: www.pennypacktrust.org



Montgomery County

The County of Montgomery was involved in the preparation of this Master Trail Plan, and will be an important partner moving forward for the planning, design, and eventual construction of the proposed trail network, with grant funds through the MontCo2040 Program, coordination of municipal planning, achieving the county bike routes, and especially where it connects to or develops portions of the Cross-County Trail.

Website: www.montcopa.org



Delaware Valley Planning Commission

The regional planning commission provided financial support for the development of this plan, and will continue to be an important project partner as Upper Moreland and Hatboro pursue the design and construction of the recommended trail network. Grant funds continue to be available to the completion of the regional trail network, The Circuit, of which the Cross County Trail, in Upper Moreland Township, is an important trail.



Website: www.dvrpc.org

Local Business Partners

Through the planning process multiple partnership opportunities for local businesses presented themselves, including the potential for advertising in parks and inclusion in wayfinding signage in exchange for financial support. Local businesses are excellent partners for trail facility construction and volunteer maintenance.

Neighboring Municipalities

This Master Trail Plan proposes multiple alignments that connect with neighboring municipalities to form multi-municipal trail links, including: Lower Moreland Township, Bryn Athyn Borough, Horsham Township, and Abington Township, in Montgomery County, and Warminster Township and Upper Southampton Township in Bucks County. A relationship should be developed with these communities for support when applying to grant agencies, and for financial support to design and construct these municipal links that further the regional trail network.

Upper Moreland Township and Hatboro Borough

These two communities are forever linked by the Pennypack Creek, the highways and rail roads, and missing pedestrian linkage. They should maintain the existing partnership and committee for the sake of the shared enjoyment of trails in the future.

Upper Moreland Township-Hatboro Borough

Master Trail Plan

Appendices