

A FEASIBILITY STUDY FOR THE

SCHUYLKILL RIVER TRAIL IN BERKS COUNTY



A THREE PART PROJECT

The Schuylkill River Trail From Reading to Hamburg
The Schuylkill River Trail in Birdsboro & Robeson Township
Preliminary Design & Engineering for an Early Action Project

February 2023

Prepared For:



Prepared By:







The Schuylkill River Trail in Berks County
Feasibility Study & Preliminary Design & Engineering

140 College Drive, Pottstown, PA 19464
484-945-0200
www.schuylkillriver.org

TABLE OF CONTENTS

Foreword 6

Executive Summary 7

Acknowledgements 9

1. Overview 13

2. Trail Corridor Assessment 21

3. Feasibility Analysis 34

4. Corridor Recommendations 38

5. Recommended Implementation Steps 52

Closing Statement 62

Appendix A: Maps 63

Appendix B: The Schuylkill River Trail in Birdsboro & Robeson Township 79

Appendix C: Preliminary Design & Engineering for an Early Action Project 84

FOREWORD

In the pages that follow, you will learn about the vision of a completed Schuylkill River Trail, a trail that will stretch from the City of Philadelphia 120 miles north to the Borough of Frackville, Schuylkill County. By the Spring of 2024, 80 miles of the Schuylkill River Trail will be complete from Philadelphia to Reading, however north of Reading there are still significant gaps. From the historic birthplace of freedom, along an iconic river, and through farmland and 'Smalltown America' the trail will offer so much more than a place to walk, bike or roll. It will offer a connection between people who until now, and especially recently, have been disconnected from each other. The events of recent years taught us that our families, our friends, and our communities need better connections and more time spent outdoors.

Schuylkill River Greenways NHA

The Schuylkill River Greenways National Heritage Area (SRG) is a non-profit organization responsible for promoting our existing relationship to the Schuylkill River Trail. Some completed portions of the trail do exist, nearly all the way to Birdsboro Borough, Berks County, and

here and there beyond. But for nearly 17 municipalities, no trail yet exists. For those who know and support the SRG, they know well the organization celebrates the river, builds and then maintains major portions of trail path, and educates and encourages us to be more vibrant outdoorspeople. Thanks in part to their efforts, five counties of people had access to a trail, as well as river boat landings, to challenge a pandemic, to bond with loved ones, and to improve their health.

The Schuylkill River Greenways NHA now seeks support for the completion of the major trail gaps—unbuilt portions of the trail—that exist in Berks County, specifically the on-road trail section in Birdsboro Borough and Robeson Township and the large trail gaps between the City of Reading and the Borough of Hamburg. On a map, this might be 20 miles. In person, the trail gaps represent a greater distance between neighbors and friends, missing short cuts to a park, or any number of barriers to improving the health and the quality of life in Berks County.

For more information regarding the Schuylkill River Greenways NHA, please visit: <https://schuylkillriver.org/>

EXECUTIVE SUMMARY

The Schuylkill River Trail Feasibility for Northern Berks County

The 120-mile Schuylkill River Trail (SRT) is the spine of the Schuylkill River Greenways NHA. About half of the trail in Berks and Schuylkill Counties is built in several sections. The trail sections in Philadelphia, Montgomery and Chester will be complete in 2024. Eighty miles of the SRT are complete across the five counties. Schuylkill River Greenways NHA is planning and building the remaining 40 miles in Berks and Schuylkill Counties.

The trail in Berks County between Pottstown and Reading is complete. This Feasibility Study looks at the remaining trail to be built in Northern Berks County between Reading and Hamburg. Funding for this study has been provided by the PA Department of Community and Economic Development, the Berks County Commissioners, the Berks County Community Foundation, and the Delaware Valley Regional Planning Commission.

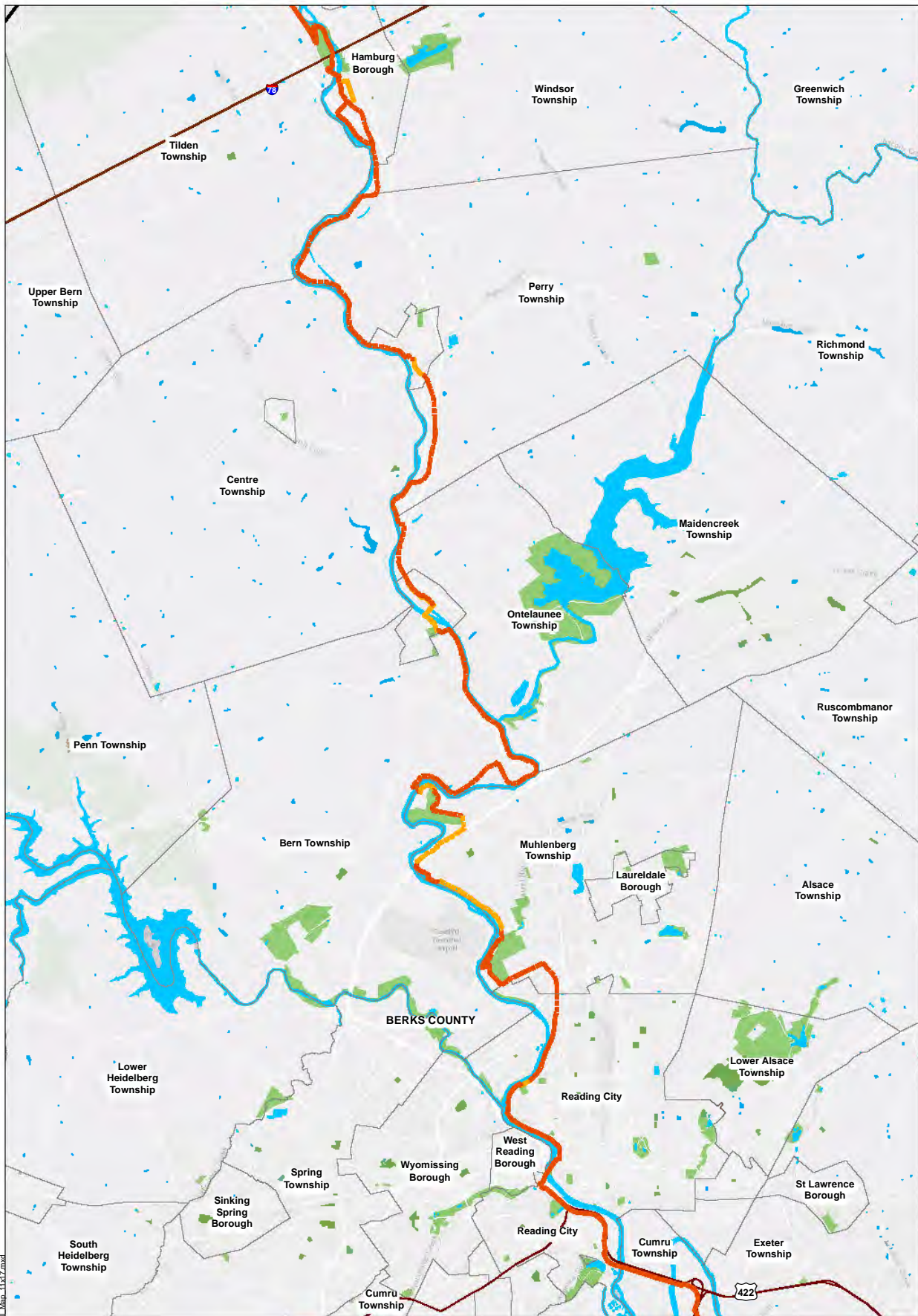
Once the SRT is constructed through additional areas of Berks and Schuylkill counties, those areas will benefit from the recreation resource, economic development, increased transportation opportunities, health benefits, and community building opportunities that the established parts of the SRT have experienced. The SRT is ADA-accessible for bicycling, running, walking, horseback riding, cross-country skiing, nature observation and education. Because the rail-trail has gentle slopes and is separated from car traffic in most areas, it is a tremendous resource for family recreation. The demand for outdoor recreation is increasing. Since the COVID pandemic the number of people using the SRT has doubled in many communities.

The study spans 17 municipalities. The consultant team of HRG, Campbell Thomas & Co., Laird Landscape Architecture, URDC, and Connect the Dots prepared the Feasibility Study. Working with Schuylkill River Greenways NHA, and a regional Steering Committee, the consultant team analyzed the existing gaps in the trail, sought public input through public workshops, public presentations, a survey, stakeholder interviews, and pop-up events, and recommended the route for over 20 new miles of the SRT. The Steering Committee included trail users, municipal officials, business owners, property owners, the Berks County Commissioners and Planning Commission, and elected officials at all levels of the state government.

THE PROPOSED SCHUYLKILL RIVER TRAIL ROUTE BETWEEN READING AND HAMBURG

The proposed route for the trail is shown on the 11 Alignment Maps in this study. In some areas where the alignment is proposed on private property, landowners have participated in determining the trail route. In other areas, discussions with property owners have not begun and this preliminary alignment will shift to address landowner concerns as each section is developed.

To complete the remaining 20-miles of trail in Berks County, SRG will work with the municipalities and other community partners to develop engineered plans, apply for construction funding, and build the trail.



Mapping derived from data provided by Berks County, PEMA, ESRI
 2/2/2023 | PM: KCM | GIS: MSM | QA: KCM | R009012.0425

HRG
 369 East Park Drive
 Harrisburg, PA 17111
 717.564.1121 [phone]
 717.564.1158 [fax]
 www.hrg-inc.com

- Proposed Alignment - On Road
- Proposed Alignment - Off Road
- 2020 Existing Off-Road
- 2020 Existing On-Road
- Muni Boundary
- County Boundary
- Open Space / Park
- Waterbody

**2022 Schuylkill Trail Project
 Overall Map**
Berks County, Pennsylvania

ACKNOWLEDGEMENTS

This study was prepared for the Schuylkill River Greenways NHA, with Special Thanks to:

The County of Berks Commissioners

Christian Y. Leinbach, Chair

Kevin S. Barnhardt, Vice Chair

Michael S. Rivera, Member

The Steering Committee

State Senator Judy Schwank—Senator Judy Schwank with Director Matthew Maniskas and Tara Kutzer

PA Representative Jerry Knowles—Hon. Jerry Knowles

PA Representative David Maloney—Hon. David Maloney

PA Representative Manuel Guzman, Jr.—Hon. Manual Guzman with Advisor Carlos Rivera Melendez

PA Representative Mark Rozzi—Hon. Mark Rozzi with Chief of Staff Chad Schlanger

U.S. Congressman Dan Meuser—Hon. Dan Meuser with Field Advisors Madison Colaco and Tom Gerhard

Berks County Commissioners—Christian Y. Leinbach, Kevin S. Barnhardt, and Michael S. Rivera

Berks County Planning Commission—Ashley Showers, Assistant Director, and Mike Golembiewski PA Dept. of Conservation & Natural Resources—Lorne Possinger

PA Dept. of Transportation, District 5—Charles Richards

Berks County Parks & Recreation—Brendan Lederer

City of Reading Manager—Abe Amoros & Frank Denbowski

City of Reading Public Works & Facilities—Nicole Judge, Kyle Zeibe, Cindy Castner, and Carlos Torres

The Reading Recreation Commission—Daphne Klahr

Reading Area Community College—Dr. Susan Looney, President, Ken Dearstyne, and Sandra Strausse

Berks Nature—Kimberly Murphy, President, and Jeremy Haymaker

Pennsylvania's Americana Region—Crystal Seitz

Berks Area Mountain Biking Association (BAMBA)—Fred Moreadith, Carla Quandel, and Todd Papich

Visions Federal Credit Union - Shawn Gamble

Carpenter Technology Corporation—Rick Tinsman

Greater Reading Chamber Alliance—Katie Hetherington Cunfer and Landon Bernheiser

Our Town Foundation of Hamburg—Deena Kershner, Director

September 11th National Memorial Trail—Andy Hamilton
 Hawk Mountain Regional Group—Chris Spohn
 Hamburg Borough— Amy S. Burkhart, Manager
 Shoemakersville Borough—Amy Botwright, Vice President of Council
 Leesport Borough – David Reimer, Vice President of Borough Council
 Perry Township—Joe Body, Longtime Engineer
 Muhlenberg Township—Jim Bobeck, Manager
 Borough of West Reading—Chris Lincoln, P.E., Member Borough Council
 Longtime Resident Supporter of SRT—Allen Sholenberger, Esq.
 Reading Blue Mountain & Northern Railroad--Andy Muller, Jr., Chairman/CEO, and Therman Madeira
 Americans with Disabilities Act Specialist—William “Bill” Ritting, RLA, ASLA
 Schuylkill River Greenways NHA Board of Directors—David Thun, Mary Timpany, and Dodson Dietrich
 Schuylkill River Greenways NHA Staff—Elaine Schaefer, Executive Director, Tim Fenchel, & Julia Hurle
 Schuylkill River Greenways NHA Volunteer—Chris Wallace

Our Municipal Partners

Tilden Township	CentrePort Borough	West Reading Borough
Hamburg Borough	Leesport Borough	City of Reading
Windsor Township	Ontelaunee Township	Cumru Township
Perry Township	Bern Township	Robeson Township
Shoemakersville Borough	Muhlenberg Township	Birdsboro Borough
Centre Township	Laureldale Borough	

Our Project Team

Herbert, Rowland & Grubic, Inc.

Tim Staub, AICP, Project Manager
 Kent Baird, AICP, Co-Manager
 Kaitlin Mills, Planner
 Tracy Strickland, RLA
 Juni Alam, P.E.
 Mark Maguire, GISP
 Andrea Viazanko

Campbell Thomas & Company

Robert P. Thomas, AIA/Principal, Co-Manager
 Douglas Maisey, Planner
 Harry Murray, NCARB

Connect the Dots

Marisa Denker, Principal
 Mignon Verdell
 Alexandra Zazula

LairdLA

Jim Laird, RLA
 Angelika Laird, CPRP
 Jessica Hepner, Environmental Planner

Urban Research & Development Corporation

Drew Sonntag, Vice President
 Michael Lachman, RLA
 Conni Jones

Other Contributing Partners

Wyomissing Borough—Michele Bare, Bicycle Share Program

Penn State University-Berks Campus—Student Volunteer Project

Mahsa Kazempour, Ph.D., Assoc. Professor of Science Education & Sustainability Education
Coordinator, and her trail supporting students:

Allison Howe

Mallory Lettorale

Autumn Albert

Travis Mauger

Ethan Kennedy

Niko Miranda

Our Funding Agencies

PA Department of Conservation & Natural Resources

Delaware Valley Regional Planning Commission

Berks County Community Foundation

Wyomissing Foundation

National Heritage Area Program

Berks County Commissioners

PA Department of Community and Economic Development



1 OVERVIEW

The Schuylkill River Trail (SRT) is a proposed and partially completed long distance recreational trail located in Eastern Pennsylvania, and primarily in the Schuylkill River corridor. When complete, it will provide trail users a continuous 120-mile long trail from Frackville, Schuylkill County, to the City of Philadelphia. To date, five counties and hundreds of volunteers have built 80 miles of trail. In 2015, it was named 'Best Urban Trail' by USA Today for the important trail segments in Philadelphia. That special designation is the result of decades of meetings, volunteer effort, and state, county, and municipal government support.

Portions of the trail are complete, much loved and well used. However, major trail gaps exist in Berks County, especially in Birdsboro Borough and Robeson Township, and for nearly 20 miles from the City of Reading to the Borough of Hamburg. In 2021, Schuylkill River Greenways NHA (SRG) was awarded three separate grants to pursue closing these trail gaps. To organize their efforts, the SRG proposed the creation of the Schuylkill River Trail Feasibility Study & Preliminary Design & Engineering Project.

The purpose of the Schuylkill River Trail Feasibility Study & Preliminary Design & Engineering Project was to analyze, recruit public input and support for, make recommendations for, and pursue the completion of the Schuylkill River Trail found in Berks County, Pennsylvania. This study presents the most feasible, constructable conceptual 20-mile trail alignment for the Northern Berks County, Reading to Hamburg Study Area. The project also included two subarea studies that were discussed in conjunction with the overall Northern Berks County, Reading to Hamburg Study:

1. An 'Early Action' Engineering Project that included the site analysis, planning and design effort to support the submission of new grant applications with deadlines 'early' in the overall project timeline. This project was partially funded by the Berks County Community Foundation.
2. A Birdsboro Borough and Robeson Township Trail Feasibility Study investigated alternate routes in an effort to eliminate the 3.5-mile on-road section of the existing SRT in Birdsboro and Robeson Township and replace it with an off-road trail. Approximately half of the 3.5-mile on-road trail is proposed to be relocated off-road. This will increase safety for trail users and vehicles and create a more welcoming trail experience.

This plan will focus on the Northern Berks County, Reading to Hamburg Trail Study. Information regarding the other two projects can be found in the Appendix as two standalone studies.

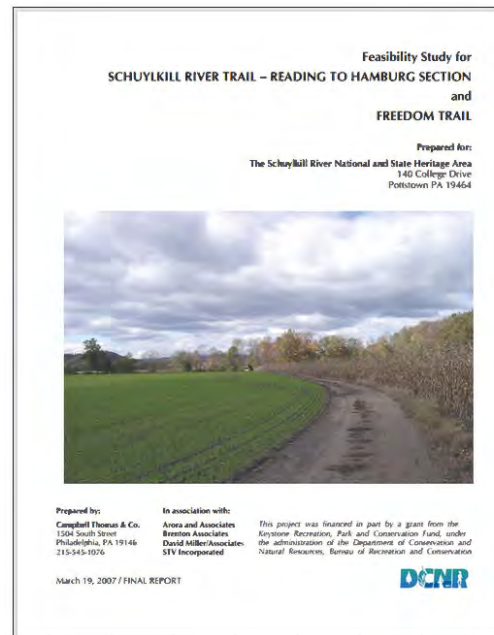
Goals for the Feasibility Study

Complete a Feasibility Study of SRT Trail Gaps from the City of Reading to Hamburg Borough

Objective A. Review 2007 Feasibility Study for Schuylkill River Trail-Reading to Hamburg and Freedom Trail, Complete Field Analysis, and Update and Confirm Assumptions

Objective B. Engage the Public through Workshops, Surveys, Key Person Interviews, and Other Events to Recruit Information Specifically Related to a Possible Alignment

Objective C. Prepare 2022 Proposed Trail Alignment Recommendations, Order of Magnitude Cost Estimates, and Action Plan Guidance.



Base Map and Description

Creating a base map for this project was a vital first step. Geographic Information System (GIS) based technology was not previously available for the 2007 Feasibility Study for Schuylkill River Trail-Reading to Hamburg. GIS features that were provided to the project team included parcel and municipal boundaries, roads, parks, water features, and rights-of-way. As part of the development of the study, the project team created several new layers associated with the trail.

To enhance the interaction between the project team and public, an online map portal was developed and was continuously available to assist the planning process. The online map portal allowed users a more detailed look to view trail alignments and proposed changes. The map portal also allows the SRG to have up-to-date information on the various layers such as property owners associated with the parcel layer. These files are important for SRG and its partners, local municipalities, and other project champions as they work to develop the twenty or more miles of trail from the City of Reading to Hamburg Borough.

Study Area Description & Context

Northern Berks, Reading to Hamburg Study Area — this study area begins where the existing Schuylkill River Trail ends in the City of Reading, at Schuylkill Avenue bridge, and then includes the municipalities that share the Schuylkill River north to the existing trails in Hamburg Borough. The Northern Berks, Reading to Hamburg Study Area has eleven trail segment maps included in the appendix, each with trail segment maps to reveal additional detail.

Seventeen Municipalities

The Northern Berks, Reading to Hamburg Study Area encompasses seventeen municipalities. Each municipality was invited to participate in the planning process, and some were able to volunteer for the Steering Committee.

1. Tilden Township
2. Hamburg Borough
3. Windsor Township
4. Perry Township
5. Shoemakersville Borough
6. Centre Township
7. Centreport Borough
8. Leesport Borough
9. Ontelaunee Township
10. Bern Township
11. Muhlenberg Township
12. Laureldale Borough
13. West Reading Borough
14. City of Reading
15. Cumru Township
16. Robeson Township
17. Birdsboro Borough

PROJECT SCHEDULE

Phase 1 : Planning Analysis

DECEMBER

- Kick-off Meeting**
with the Client

JANUARY

- Steering Committee Meeting #1**
- Background Information**
developed over the next 3 months

FEBRUARY

- Steering Committee Meeting #2**
- Early Action Project Site Visit**
Site visit to look at the potential Early Action Projects, and select one
- Site Information & Analysis**
developed over the next 3 months
- Site Information & Analysis**
developed over the next 3 months

JUNE

- Public Meeting**
Leesport to Hamburg Meeting #2
- Online Survey Closed**
- Key Person Interviews**
Initial interviews with # people
- Team Work Session**
work session with the project team to consider the comments and feedback and updated the proposed trail alignment

JULY

- Steering Committee Meeting #4**
- Site Visit**
Hamburg Borough site visit to walk through current SRT alignment and proposed alternatives.
- Design Cost Estimate**
Cost estimate for proposed trail alignments
- Implementation Matrix**

AUGUST

- Key Person Interviews**
Additional interviews to discuss the proposed alignment

MARCH

- **Public Meetings**
Reading to Leesport Meeting #1, and Leesport to Hamburg Meeting #
- **Online Survey Opened**
- **Early Action Project Survey, Engineering & Grant Support**
- **Design Considerations**

APRIL

- **Design Process – Trail Concept**
developed over the next 4 months
- **Early Action Project Grant Submission**

MAY

- **Steering Committee Meeting #3**
- **Public Meeting**
Reading to Leesport Meeting #2
- **Site Tour**
Birdsboro to Robeson Alignment Options Site Tour

SEPTEMBER

- **Steering Committee Meeting #5**
- **Draft Report**

OCTOBER - DECEMBER

- **Draft Report Review**
- **Draft Report Edits**

JANUARY & FEBRUARY 2023

- **Final Draft Report**
- **Presentation to the Board**
A presentation of the Final Report was made to the SRG Board of Directors

PUBLIC OUTREACH

Description

Gathering public information for the new alignment of the Schuylkill River Trail was a unique process due to the coronavirus pandemic and the subsequent omicron variant along with maintaining positive momentum of three separate projects. Because of the timing of three separate project elements, some adjustments to the schedule of the project were made. The project team worked to engage the public, residents, stakeholders, and elected officials through five Steering Committee meetings, four community workshops, an online community survey, eight key person interviews, and a Birdsboro Focus Group Tour.

Steering Committee

The project Steering Committee was invited to participate in all committee meetings, to answer the prepared project questionnaire and/or online survey, to attend the public workshops, and to attend the Birdsboro Focus Group Tour. The primary focus of committee meetings included the findings of the team and ongoing mapping exercises to refine a proposed trail alignment.

Community Workshops

Four Public Workshops were conducted during the planning process: two focused on the trail alignment from the City of Reading to Leesport Borough, and two focused on the trail alignment from Leesport Borough to Hamburg Borough. PowerPoints, bilingual presentation boards, engagement activities, flyers, and maps were used to help provide an understanding of the project, capture interest and allow attendees to provide their feedback, concerns, and desires, to determine the best trail alignment.

Leesport to Hamburg Workshop #1 and #2 – March 14, 2022, and June 1, 2022

Reading to Leesport Workshop #1 and #2 – March 26, 2022, and May 21, 2022

Key themes from the public workshops included:

- Participants would like to use the new section of the trail to both walk and bike.
- An aspirational goal is for the trail to have more connectivity to existing trails and key locations within the communities.
- Participants were concerned with the safety of the trail both within the urban and more rural areas.
- Participants were concerned there would be increased traffic in residential areas that are adjacent to the trail that may also result in trespassing and related liability.
- Participants would like the trail to provide connections or identification (wayfinding) to food and beverage locations and other services within the communities the trail goes through.
- Participants are concerned with parking accessibility at trailheads.

Community Survey-Online

A community survey was posted on the Schuylkill River Greenways website for the duration of the study. Survey questions were presented in both English and Spanish to gather feedback and input on the Northern Berks segment of the Schuylkill River Trail. The survey was promoted using online and social media postings as well as through hard-copy flyers that were available at all Steering Committee meetings, public

workshops and at a community pop-up event. SRG promoted the survey at every organization function. When the survey closed on June 13, 2022, there were 282 responses. Some key themes included:

- The majority of responders are “very satisfied” with the existing Schuylkill River Trail.
- Improvements that were suggested included: restrooms (67.4%), benches (55.7%) and additional signage including wayfinding, trailheads, parking and educational (40%).
- 42% of respondents use the trail on a weekly basis, with most people biking and walking.
- 83% of respondents would like to use the new section of trail for biking, with 51% and 31% looking to use the trail for walking and running, respectively. [NOTE: respondents could select multiple activities]
- 62% of respondents suggested that they preferred a crushed stone trail alignment, with 33% stating an off-road paved trail would be preferred.
- The majority of respondents felt that the trail should connect people to park and recreation areas, other existing trails, natural areas, provide river access.

Key Person Interviews

Key person interviews were conducted to gain greater insight to the study areas, the history of the SRT, and the chance to complete the trail gaps. Each interviewee was provided a questionnaire prior to meeting and were requested to complete it prior to or during the interview. This questionnaire was used as a guide during the interviews; however additional questions were discussed depending on the interviewee; some of those interviewed use trails differently, some were elected officials, and some had greater insights on alignment issues.

Follow-up interviews were conducted when a refined alignment was developed to allow the project team to gain further insight to the alignment and determine key landowners and possible introductions.

Outcomes

Throughout the planning process the project team worked to develop a trail alignment that took into consideration physical barriers of the study area the public input's overall themes. The overall themes that materialized from the public participation process:

- Access – access to the trail as well as to local destinations matters to residents and officials
- Safety – a safe trail, especially in areas that are perceived as unsafe is necessary
- Off-Road – wherever possible, it is important the SRT be an off-road trail
- Amenities – lighting and restrooms are important trail user amenities
- Economic Development – extending the 20 mile trail will open up economic opportunities to both new and existing businesses

2 TRAIL CORRIDOR ASSESSMENT

Overview

This chapter provides an overview of the SRT as it currently exists in Northern Berks County. The remaining portion of this chapter inventories the current regional trail networks, current Berks County long range planning studies, a demographic breakdown, economic development, a physical inventory, points of interests, and amenities relative to the proposed segment.

Existing SRT

It is important to note that the SRG is not starting from scratch in regard to building the SRT in Northern Berks County as several on-road and off-road segments exist. Specifically, from the Brentwood trailhead, trail users can travel north on an off-road trail section through West Reading, into the City of Reading with a very brief on-road section to the Schuylkill Ave Bridge. From the Schuylkill Ave Bridge there is a proposed trail alignment until an existing short segment of existing trail in Muhlenberg Township, located at Whitmer Road to Route 222.

The next section of completed trail is in Leesport, where there is an off-road trail from just south of Sillman Lane and Washington Road intersection. This segment of trail goes through a borough owned park and reconnects at Washington Street where there is an on-road alignment that goes over the Wall Street bridge, up Canal Street and reconnects to an off-road alignment at the intersection of Canal Street and Walnut Street. This off-road section then terminates at Bellmans Church Road.

The next section of alignment that currently exists is an on-road alignment in Hamburg Borough. The current alignment starts at 3rd and Maple Street, and travels north, cutting west to 2nd Street on Grand, and then along State Street to the State Street Trailhead. At this point there is an existing off-road alignment that will carry users to Auburn and eventually to Frackville.

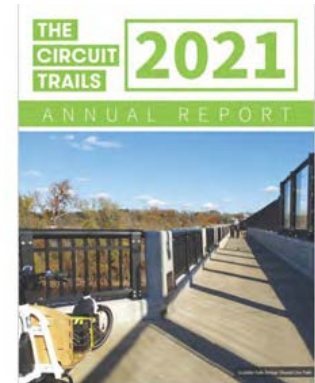
Regional Trail Network

When completed the The SRT in Northern Berks County will be part of the 120-mile continuous Schuylkill River Trail that spans Berks, Chester, Montgomery, Philadelphia, and Schuylkill Counties. The Schuylkill River Trail helps make up part of other local and regional trail networks that the Commonwealth of Pennsylvania, municipalities, and trail groups are working to plan and develop. Two of the most prominent regional trail networks include the Circuit and the September 11th National Memorial Trail.

The Circuit

Delaware Valley Regional Planning Commission (DVRPC) sponsors The Circuit, one of the largest trail networks in the nation. In the 9-county territory covered by DVRPC, over 800 miles of trails are planned for The Circuit, including trail gaps of the Schuylkill River Trail.

364 miles of trail currently exist in the Circuit, with 13 additional miles opening in 2022-2023. In, 2021, The Circuit trail network saw the completion of a new pedestrian bridge for the Schuylkill River Trail over Route 724, in Union Township, Berks County. The \$1.15 million cost of the bridge was shared by DVRPC, DCNR and a private funding source.



The September 11th National Memorial Trail

The 9/11 Trail is a 1,300 mile multi-use route that links the World Trade Center, the Pentagon, and the Flight 93 Memorial. The trail is shaped as a triangle forever connecting the three sites utilizing both existing and proposed trail networks. The Schuylkill River Trail is part of the network or proposed and existing trails. On October 13, 2022 the 9/11 President Joe Biden signed H.R. 2278 bipartisan legislation to designate the 9/11 National Memorial Trail. The National Memorial Trail designation is significant for the SRT as it could provide additional resources for trail construction.



Berks County Long Range Planning Analysis

The Northern Berks Study Area of the Schuylkill River Trail that this feasibility study focuses on is entirely within Berks County. This study reflects and supports the Berks County Planning Commission (BCPC) planning studies and reports, which is discussed in further detail below.



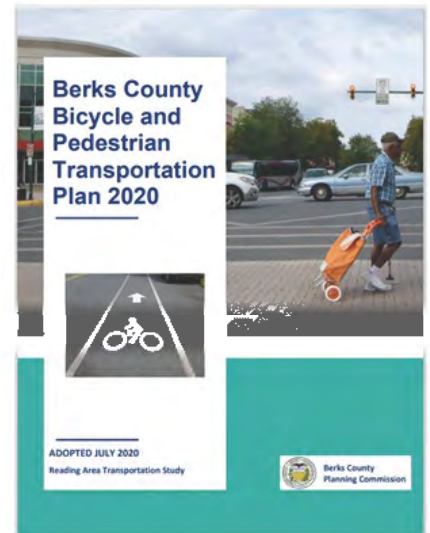
The Berks County Greenway, Park and Recreation Plan

In the Spring of 2022, the BCPC announced its pending Berks County Greenway, Park and Recreation Plan. The new plan will update previous plans, and promote efforts to establish protected open space, non-motorized trails, trail connections to existing parks, and access to the Schuylkill River and Schuylkill River Trail. BCPC coordinated efforts with the project team to ensure consistency of their planning recommendations with the findings of this study.

Berks County Bicycle and Pedestrian Transportation Plan

In 2020, the BCPC prepared the Berks County Bicycle and Pedestrian Transportation Plan. This plan was finalized during the Covid19 pandemic when it was evident that communities were using trails to cope with the pandemic quarantine. The plan has several goals and objectives that support the development of the Schuylkill River Trail in Northern Berks County. The plan has seven goals, with several aligning with this plan including:

- Connect community in ways that support walking and bicycling as a viable transportation option,
- Expand walking and bicycling opportunities for everyone,
- Create and maintain safe bicycling and walking infrastructure,
- Promote non-motorized options as environmentally sustainable and healthy ways to travel, and
- Support walking and bicycling options as ways to grow a vibrant local economy.



Many of the goals have objectives that focus on the development of multi-use trails, and expanding the bicycle and pedestrian network, which includes trails, as they are an integral part of thriving active transportation networks which directly relates to the SRT.

Imagine Berks

The Imagine Berks Strategic Economic Development Action Plan for the County, was adopted in 2022. Imagine Berks contains goals and recommendations to help increase economic development within the County. The plan identifies trails, including the SRT, as an important part of economic growth within the placemaking section of the plan. The goal for placemaking is to invest in and highlight community assets that provide access to a variety of arts, culture, greenspace, and recreation opportunities for all residents and future residents. Investing in the trail system is a key strategy of the plan. Berks County plans to accomplish this by, investing \$250,000 in the Greenway, Parks, and Recreation Plan recommendations, and increasing trail system connections.



Transportation Investment Plan

The Reading Area Transportation Study Coordinating Committee, the designated Metropolitan Planning Organization (MPO) for transportation, helps develop the Transportation Investment Plan for the County. They recently released a 2021 – 2024 Transportation Improvement Program (TIP),

which has 128 proposed projects throughout the County, and cost more than of \$274,000,000. Where projects identified in the TIP (or future TIP) overlap the proposed Schuylkill River Trail Alignment, there should be discussion about ways in which the project can be designed to support both the Transportation Investment Plan as well as the development the Schuylkill River Trail. Examples of this could include intersection redesigns that could help the trail cross over busy roadways or including additional space for pedestrians bridges that are being replaced or rehabilitated.

"The Schuylkill River Trail is truly the spine of our non-motorized pedestrian and bicycle network. It is important that residents see the potential of connecting their neighborhoods, their parks, and their businesses through the use of new and improved trails and sidewalks."

--Michael Golembiewski, Berks County
Transportation Modeler

Demographic Analysis

The total population of residents in 2020 for the five-county area the SRT connects was about 3,503,000 persons. That's equivalent to the population of Connecticut.

A Community of Gaps

As previously discussed, the SRT exists already in a few Berks County communities but the largest trail gap for a county of nearly 430,000 people is over 20 miles and will connect 17 municipalities. The total population for the study area along with the change in population between 2010 and 2020 is provided. Generally speaking the study area is growing with double digit population change occurring in Muhlenberg and Ontelaunee Townships.

Table 1: Schuylkill River Study Population 2010-2020

Community	U.S. Census		Population Change	
	2010	2020		%
Study Area Birdsboro to Robeson				
Birdsboro Borough	5,136	5,106	(30)	-1%
Robeson Township	7,216	7,538	322	4%
Sub-Total	12,352	12,644	292	2%
Study Area Northern Berks				
Tilden Township	3,597	3,603	6	0%
Hamburg Borough	4,289	4,270	(19)	0%
Windsor Township	2,279	2,489	210	9%
Perry Township	2,417	2,475	58	2%
Shoemakersville Borough	1,378	1,360	(18)	-1%
Centre Township	4,036	4,130	94	2%
CentrePort Borough	387	314	(73)	-19%
Leesport Borough	1,918	1,954	36	2%
Ontelaunee Township	1,646	2,598	952	58%
Bern Township	6,797	6,706	(91)	-1%
Muhlenberg Township	19,628	21,915	2,287	12%
Laureldale Borough	3,911	4,277	366	9%
West Reading Borough	4,212	4,553	341	8%
City of Reading	88,082	95,112	7,030	8%
Cumru Township	15,147	15,619	472	3%
Sub-Total	159,724	171,375	11,651	7%
Total Study Areas Population	172,076	184,019	11,943	7%

*Source: US Census Bureau

To prepare for universal access by individuals of all ages and abilities, SRG also investigated the median age of the study areas, with a resulting average of 42 years of age. Digging deeper to understand the potential impact of the data on the actual alignment of a trail, the census of each community revealed 13 municipalities with nearly one third the population in age-cohorts 45-64 years old, and the remaining 4 municipalities showing one third of their populations in slightly younger age-cohorts 25-44 years. Only two communities reported high percentages of young children, with the City of Reading and Ontelaunee Township each reporting 8% of their population 5 years or younger compared to Berks County at 5.7%. This suggests young families are more prevalent in Reading and Ontelaunee. Combined with growth data, and the record increase of 2,287 persons in Muhlenberg, it is clear the region in and north of Reading is growing. Such data can be useful in assessing the amenity needs of small families. Restrooms, playgrounds, and benches at trailheads are popular amenities for families.

Economic Development

There are great economic benefits to having a trail in your community

- Trails can increase the value of private property by \$9 per square foot for every foot closer it is to a trail.
- Outdoor Recreation employs thousands of PA residents.
- Pennsylvania trails have contributed millions in economic development.
- In 2012, all 150 miles of the Great Allegheny Passage trail had a positive economic impact of \$50 million.
- In 2013, the 62-mile-long Erie to Pittsburgh Trail had 159,000 users, and an economic impact of \$7.48 million.

In 2015, the Schuylkill River Trail (SRT) was named 'Best Urban Trail' by USA Today. Just prior to that award, in 2012, the area defined by the Schuylkill River National Heritage Area, including the proposed trail, generated \$589.9 million in economic impact, supported 6,154 jobs, and added \$37.7 million in tax revenue (TrippUmbach, 2012).

The proposed alignment through Northern Berks is an important step to completing major trail gaps from the City of Reading and Hamburg Borough. Because the proposed alignment includes access to over an additional 20 miles of trail where residents and visitors will be encouraged to visit new areas and possibly contribute to the local economy in ways already studied by PA Land Trust Association and PA DCNR. Previous studies completed by these entities found Schuylkill River Trail users spent an average of \$406.31 to prepare for

their visit to completed sections of the trail and an initial \$9.07/day on soft goods. And, with Pennsylvania's second largest industry being outdoor recreation, there will be economic benefits seen within all the communities within the study area.

When thinking about trail development, communities have an opportunity to provide amenities and experiences. By helping enhance the trail user experience it provides a much larger impact to the community as a whole. Ultimately, regional trails provide an opportunity for municipalities to capture economic growth around regional placemaking that is highlighted in the Imagine Berks Plan. Placemaking specific to trails has also been highlighted through the Trail Towns Program. Many trail communities have followed the Trail Town Program to achieve significant economic impact that was not present prior to the introduction of a regional trail system. The SRT can provide a significant economic impact to the communities along the Northern Berks Study Area.

Tourism in Berks County

According to information prepared by the local tourism and promotion group, Pennsylvania's Americana Region, Berks County greatly depends on tourism spending. In 2020, the Pennsylvania Office of Tourism found that tourism spending had dropped from \$950.1 million in 2019 to \$661.5 million in 2020. This drop is a result of the COVID19 pandemic as people were not able, due to quarantining, to visit restaurants, stay overnight or shop local. However, it stands to reason that the five categories of direct spending associated with

tourism spending: Lodging, Food & Beverage, Retail, Recreation, and Transportation, all have a piece of the new trail tourism and will see a significant impact to the region once the trail is established.

Physical Inventory

The assessment of the Northern Berks Study Area from a physical inventory perspective provides information pivotal to the planning process. Land use categories, railroads, Major Roads, topography and the Schuylkill River all provide project context and became elements the project team utilized to organize the SRT development in the study area.

Generalized Land Use and Themes of the Trail

From a land use perspective, the Schuylkill River corridor from the City of Reading to Hamburg Borough can be categorized as Industrial, Agricultural, or Residential. These three categories could coincide with the themes of the Schuylkill River Trail experience: in Reading a Historic Industrial Experience, with trail users learning about the history of the ingenuity of the county, and visit with Carpenter Technology in Reading, a global industry success, then experience a scenic Agricultural theme showcasing the long standing contributions of farmers to Berks County's quality of life and finally, beyond Hamburg Borough, trail users will experience a third primary theme, the Wilderness areas of the trail.

In Reading, Muhlenberg, and parts of Bern, the urban and industrial uses are now welcoming warehouse and fulfillment centers. Growth

in the study area seems most notable in Reading and Muhlenberg. Neighboring West Reading and Wyomissing Boroughs are equally developed and growing, with new hospital and health centers adding to employee housing pressures.

From these communities north, the theme is agriculture. Suburban development exists to a small degree, but these communities have largely maintained their agricultural landscape. The scenery is breath taking, the visit is peaceful, and the options seem limitless for laying out trail alignments. However, farmland in and of itself does not offer outdoor recreation options because it is undeveloped. Many farms have been permanently preserved with help from the Commonwealth and Berks County farmland programs. As such, the covenants placed on the farm restrict public access. Even still, those farms not preserved with state and county funding, do offer unique challenges. Larger landowners have a unique set of needs when being approached for trail easements or trail acquisitions. Overall, the farmland in Berks is a major plus and not an insurmountable hurdle to the Schuylkill River Trail development but need to be carefully considered.

Leesport, Shoemakersville, and Hamburg exhibits a 'Small Town America' destination after travelling for miles through farmland and riverside woodlands. Arriving in Hamburg however, Route 61 pairs up with the Northern Railroad Line to push any hiking trail options closer to the river, and Hamburg itself is now experiencing transportation, warehouse, and truck storage pressures.

Railroads

For many individuals, the image of a long-distance trail is that of a 'rail trail.' The Rails to Trails Conservancy captured all our attention years ago when they promoted converting abandoned rail lines into hiking trails. Trains are still very much a part of our every-day life in Berks County, and for the study area they define the landscape .

At the heart of Berks County, Reading is the junction of two very active, separately owned railroads:

1. Reading Blue Mountain & Northern
2. Norfolk Southern Railway Company

The Reading Blue Mountain & Northern Railroad is a major landowner in northern Berks County. Many of its existing and former rail lines parallel the Schuylkill River. There are several trail alignment opportunities to explore with the RBMN.

The Norfolk Southern Railway owns two lines in Birdsboro which occupy nearly all the land on the west side of Route 724 that might be suitable for a walking and cycling trail. From Birdsboro north to Reading the NS Railway property impacts a large area where the proposed trail corridor and proposed pedestrian crossings will be needed. There are several trail alignment opportunities to explore with the Norfolk Southern Railway Company.

Major Roads

Route 61 acts like a brick wall for pedestrians in Berks County, as it travels from Reading north to Hamburg. It is the most important road in central and northern Berks County where approximately 24,000 vehicles travel Route 61 every day. It is an important local option, a connection for businesses, and the primary route between Route 78 and Reading. For trail building and on-road cycling, it is a formidable four lanes, with a 100-foot crossing distance side-to-side. Trickier yet, when it reaches the northern part of Leesport Borough it runs alongside the railroad and together, they squeeze the land along the river to nearly inaccessible width.

Old Route 22 runs east-west through Hamburg where intersections can become very busy because of its collection and delivery of vehicles to and from Hamburg. After crossing the river from Tilden Township, Old Route 22 becomes the frontage of the Front Street Trailhead for the SRT. Any crossing from this trailhead south will need additional design engineering.

Route 222 carries vehicles over the river from Ontelaunee Township to Muhlenberg Township and the height of the bridge and span offers some trail travelling options underneath from or near Felix Dam Park.

Interstate Route 78 runs east-west through Hamburg and is responsible for delivering hundreds of thousands of vehicles through Berks County from central PA to New York City. The location of Hamburg along the river and major transportation routes was not by accident and to this day Hamburg is just as much a crossroads for business as it was 100 years ago.

Topography

The Schuylkill River Trail (SRT) is a decedent in part of the historic Native American Trails used for hundreds of years prior to European settlement.



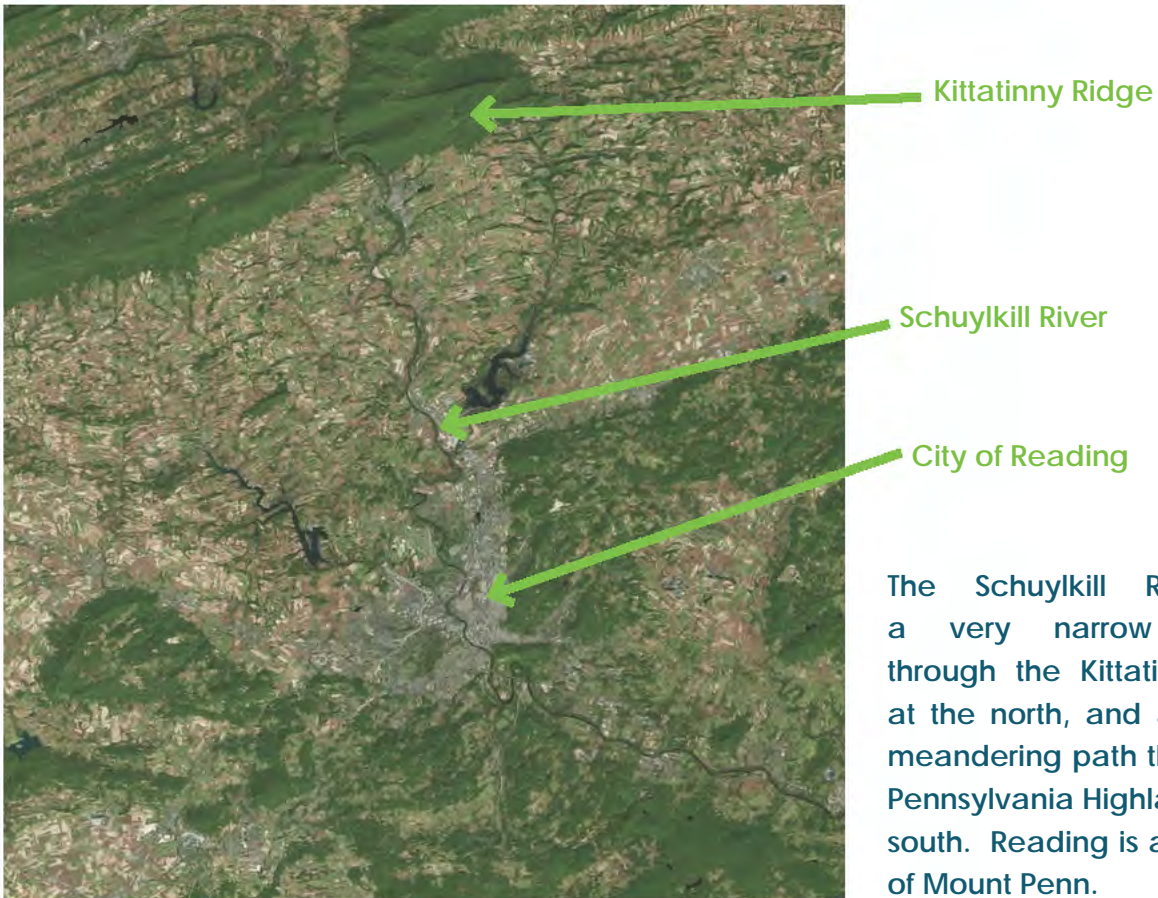
Excerpt of the map in Historic Indian Trails of Pennsylvania (Paul A. W. Wallace, PHMC October 1952)

The Schuylkill River makes its way down from the mountains of Schuylkill County often cutting through mountains and ridges, rather than following a broad agricultural valley. In many places there is no flood plain on which trails, canals, railroads and highways could be easily located. In the map of Indian Trails, one sees the Perkiomen Path on its way from present-day Philadelphia to Reading avoiding the rugged terrain around Phoenixville and Neversink Mountain. Thus, the railroad along with Schuylkill in this area still make use of Tunnels like the Flat Rock and Black Rock Tunnels. Nevertheless, the Schuylkill

Navigation Canal and both the Reading and Pennsylvania Railroads clung to the river as the easiest way to traverse this often challenging terrain while maintaining the easy grade required by boats and trains.

Following the river has left a legacy of abandoned canals and railbeds, some of which are now portions of the Schuylkill River Trail. Other sections of abandoned towpath and railbed are thus often recommended for access for trail use, both for the attractiveness of the river environment, and for the desire to locate the trail on easy grades in an otherwise often challenging topography.

The development of the canal and then the railroads led to the development of such towns and villages as Leesport, Shoemakersville and Hamburg, leaving them with rich collection of architecture, and a quiet resulting from being bypassed by today's major highways. All these factors, created in part by topography, have given these towns the basic resources needed to be attractive, successful trail towns. Planning the Schuylkill River Trail has numerous topographic challenges but can provide its users the opportunity to to enjoy the attractive scenery traversed by the Trail without having to struggle over it.



Schuylkill River

The most important feature in the Study Area is of course the Schuylkill River. From Pottsville to Philadelphia the river flows nearly 135 miles. It carries with it the history of Native/Indigenous peoples, the American Revolution, the Industrial Revolution, and countless cycles of growth and development in Berks County. Every day and in all seasons, people visit the river to be active, challenge themselves, birdwatch, and connect with nature. The same will hold true for the proposed trail.

Points of Interest and Amenities

Outlining historic and other points of interest along the study corridor created nodes for the project team to focus on connecting. These nodes included village and borough centers, river access points, historical, recreational, commercial and informational areas. Other basic human resources such as food and restroom amenities are needed to encourage extended trail use.

Parks and Recreation Destinations

Parks are most often the destination of choice for trail users and most often existing parks can easily accommodate new trailhead facilities and amenities. The project team made inspections of the park facilities immediately connecting to the proposed trail alignments.

Water Trail and River Access Points

The SRT has a sister trail, the Schuylkill River Water Trail, for kayakers and canoe enthusiasts to enjoy the river. In some spots the river access points can also be used as trailheads for the Schuylkill River Trail, bringing the two trails together. An example of this is the water trail landing at Peter Yarnell Park which is also on the proposed route for the SRT.

The Schuylkill Navigation Canal

From 1815 until roughly 1930, a system of canals ran beside the Schuylkill River to serve as a stable and reliable system of cargo transportation, coal transport from Port Carbon to Philadelphia and day-to-day travel. Now over 200 years later, remnants of the canal still exist. In some places they can be seen with water and in other places the route can be seen as an artifact in the landscape. Nearly all the Schuylkill River Trail considers the canal route an important target for trail planning. Using the route or right of way of the canal for the trail could help preserve the history and culture of the National Heritage Area.

Resources and Amenities

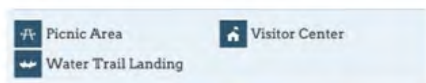
Before planning a trip on a trail users need to understand what resources that are available to them. The Study Area was reviewed to provide a broad perspective of available uses based on five general categories of food, SRT trailheads, parks/parking locations, restroom facilities, bicycle outfitter, and unique and historic resources. Existing resources include:

1. Food (i.e. restaurant or grocery store)

- i. Hamburg – Weis Market, Multiple Restaurant Options
- ii. Shoemakersville – Fiore Restaurant Italiano Bistro, Rico Casa Restaurant, Sheetz, Perry Restaurant,
- iii. Leesport – Leesport Farmers Market, Turkey Hill Mini Market, Sheetz, Redner’s Warehouse Markets, Vida Café, Celina’s Eggacy, The BBQ & Eggacy, Andali’s Family Restaurant and Pizzeria, Dunkin Donuts, Subway, Leesport Diner.

2. SRT Trailheads (may include restrooms and/or parking)

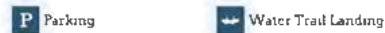
- i. State Street Trailhead – 25 State St., Hamburg



- ii. Reading Railroad Heritage Museum Trailhead – 500 S. Third St., Hamburg



- iii. Peter Yarnell Landing Trailhead – Water St. & 5 Locks Rd., Shoemakersville



- iv. Leesport Trailhead – 1310 Washington Rd., Leesport



3. Parks/Parking Locations

- i. Hamburg Borough Swimming Pool – Franklin St. & N. Second St., Hamburg
- ii. Shoemakersville Park – 8th St., Shoemakersville
- iii. Berks Nature, Ontelaunee Wetlands Preserve – 1060 Mohrsville Rd., Mohrsville
- iv. Jim Deitrich Park -4899 Stoudts Ferry Bridge Rd., Reading
- v. Felix Dam Muhlenburg Twp. Rec. Area – 4100 River Rd., Reading
- vi. Pioneer Grove – 3102-3198 River Rd., Reading
- vii. Laurel Run Recreational Park – 3048 River Rd., Reading
- viii. Kelly’s Lock Overlook – 2820 River Rd., Reading

4. Restroom Facilities (independent from trailheads)

- i. Accounts Advocate Agency – Public Bathroom – 1001 S. Fourth St., Hamburg
- ii. Leesport Borough Office – 27 S. Canal Street., Leesport
- iii. Muhlenberg Township Recreation Building – 3025 River Rd.

5. Bike-Outing Shop

- i. Spokes Bike Shop – 1073 Pottsville Pike, Shoemakersville

6. Unique and Historic Resources

- i. Hamburg War Memorial – 57 State St., Hamburg
- ii. Hamburg Area Historical Society – 102 State St., Hamburg
- iii. Reading Railroad Heritage Museum – 500 S. Third St., Hamburg

Based on this general inventory, trail users on the SRT between Reading and Hamburg have numerous existing resources they could utilize to plan around. It also provides a perspective of what additional trail-oriented businesses and amenities that are needed.

Summary

The assessment of the Northern Berks Study Area from Reading to Hamburg offers great economic impact to an area of Berks County that is growing. A combination of the areas topographical challenges and increased development in both the urban and suburban areas since the 2007 study leaves some options for trail development unavailable. The major transportation road and railways are still present from the previous study but alternatives have not been eliminated from the previous plan. Historic and other points of interest remain and existing segments of the trail are in use and opportunities abound to connect the SRT.

3 FEASIBILITY ANALYSIS

Upon completion of the trail assessment and the public input the project team examined possible trail routes to identify which corridor offered the best opportunity for the SRT. Criteria used to evaluate the feasibility of each route include trail experience, constructability, and community impact.

Trail Experience

The trail experience analysis looks at the qualities of the proposed trail corridor that would provide trail users with the optimal experience.

Conservation and Preservation of Greenspace

Trail development supports ecology and conservation. Building the SRT helps preserve natural landscapes, connects existing greenspaces, and creates a linear park that allows trail users to enjoy nature with minimal environmental impact. The protection of greenspace associated with many parts of the trail running along the Schuylkill River also protects natural floodplains. Trail development also provides opportunities for individuals, businesses, and communities to be responsible stewards of our natural environment creating environmental, economic, and social benefits.

Continuous Connection

The continuous connection criteria looks at the number of proposed road and railroad crossings the proposed trail requires, and the volume of traffic and intersection conditions where crossings are needed.

Uniqueness of Segment

Trail alignments take into consideration the experience users will have on the trail. Generally, users

enjoy off-road experience more than on-road experiences. The potential off-road experiences that were examined range from connection to resources that include the Schuylkill River, the historic canal system, and connections to local destinations within the municipalities.

Off-road preference

The Schuylkill River Trail will be an off-road trail wherever possible. When an off-road route is not available, typically because property rights cannot be obtained or physical barriers interrupt the preferred alignment, short sections of the SRT will use on-road routes until an off-road segment can be identified and developed. Where on-road trail options are proposed, the project team analyzed how to provide a safe and comfortable experience for the user.

Constructability

Meets SRT Trail Design Guidelines

The SRT Design Guidelines describe the width, slope, surface, and details of the trail that will accommodate multiple uses (walking, bicycling, horse riding, skiing) and are accessible for people with a range of mobility issues. This includes the ability to achieve the desired width of a 12-foot-wide off-road trail and a 5% maximum running grade along the trail for accessibility. Other desired guidelines include shoulder clearance and separation between vehicular and trail traffic.

Real Estate Acquisition Feasibility

The real estate acquisition feasibility involved identifying all property owners along the corridor and meeting with owners of more complex

properties in pivotal locations. The purpose of the meetings was to review conceptual trail alignments, gather input, and discuss the process, requirements, timeframe, and future development plans. All property acquisitions have unique circumstances, and the feasibility study considers potentially challenging properties.

When developing proposed alignments, existing rights-of-way and easements were looked at to determine where trail segments might be allowed. These sections would have a head start in development. Conservation or agricultural easements on parcels were also considered as sometimes these easements have stipulations preventing certain uses including public access.

Public and Non-profit Ownership

Federal, State, County, and Municipal properties as well as Non-Profit owned properties were identified as preferential areas in regards to the ease of owner negotiations. Developing trail on these public and non-profit can make the hurdle of building a trail significantly lower than building on private properties.

Bridges

The need for a trail bridge on the SRT is a costly endeavor in both initial capital construction cost and on-going inspection and maintenance needs. Bridge sites represent major control points designed within a trail alignment. Bridges are recommended in areas where the route was determined to be more feasible than the alternative option(s). The process and criteria for identifying and analyzing the most appropriate

locations for these sites will need to be further examined. The consultant team evaluated methods to avoid new bridge construction within each trail segment.

Community Partners

SRT will be constructed through the help of community partners providing in-kind services and project leaders. In-kind services can range from a municipality providing a match to a grant with labor and or supplies or financial support. An example within this section of the proposed trail alignment can be seen with the Early Action Project, which is a trail segment from Kelly's Lock to Laurel Run Park in Muhlenberg Township (additional information on this project can be found in Appendix B). Muhlenberg Township supported the grant application for this project with in-kind labor for the construction of this section of the trail. The SRG does not have the capacity to take the lead on the multiple projects simultaneously to develop the alignment proposed in this feasibility study. Therefore, it is vital that community leaders participate as project leaders for trail development and work to develop sections within their community, while receiving guidance from SRG.

Project Cost of Work

The cost of each proposed trail segment was considered. Cost for trail development include: a combination of real estate, engineering, and construction fees. Real estate costs including due diligence environmental analysis, market value appraisal, legal costs associated with transaction fees. Engineer fees includes surveying, designing for construction,

permitting, bidding, and construction administration. Estimated construction costs include construction based on SRT Trail Design Guidelines that include: security needs, landscaping, trail amenities, and signage.

Maintenance Costs

Once the trail is developed there will be maintenance required to maintain the trail. The cost to maintain the trail will depend on a variety of factors. Due to the current staffing levels, the SRG will need the help and partnerships of municipalities and other local organizations and businesses to maintain trail segments.

Community Impact

Ease of Access to Trail

The team considered how many people occupying existing residential properties near the trail had barriers to access the proposed SRT and how many residents are within a 0.5 mile or 10-minute walk along a local sidewalk network. Barriers such as railways and major highways were limiting factors that caused the proposed trail to shift its route.

Connection to Existing Destinations

Good access to destinations is important to trail users' experience and provides an economic boost to businesses and communities. The previous chapter highlighted the economic benefits trails provide to communities along with points of interest and existing resources and amenities within the study area. The project team met with community leaders to determine the best way to connect the SRT to existing destinations, resources and amenities.

Placemaking

Berks County Planning Commission in its Imagine Berks Economic Action Plan highlights placemaking as an opportunity for economic growth. Imagine Berks further identifies trails and greenways as areas to focus its Placemaking resources. The construction of the Northern Berks SRT will serve as a new “Place” within Berks County but also the Boroughs, villages and points of interest can elevate its Placemaking potential as an result of the SRT implementation.

Equity and Inclusion

The Schuylkill River provides a natural backdrop for trail experience but also provides a barrier to connection to the trail. Each segment was analyzed through the lens of equity and inclusion, with the intention to avoid negative impacts to different communities by not simply placing the trail on one side of the Schuylkill River. The planning-level analysis considered access to economic activity centers as a positive impact, but a more detailed analysis might be considered at the engineering stage of the trail development.

Additionally, in 2020, the US Census recorded about 184,000 persons in the combined study areas of the Schuylkill River Trail Feasibility Study. US Census data for the study areas reported nearly 44% of residents as Hispanic or Latino. It is important to the Schuylkill River Greenways NHA that the trail is inclusive and welcoming to all. Even during the planning process of this feasibility study minority groups were included in the discussion and community engagement exercises were in both English and Spanish.

Property Stakeholder Support

A list of property owners was generated at the draft trail alignment stage. The list was circulated with the steering committee to determine critical connection property owners associated trail development. Initial meetings were held with a few of the significant property owners to assess support or concerns. Based on these discussions, the trail alignment was adjusted, or efforts were made to mitigate the concern. The community feedback and local intel gathered allowed the project team the opportunity to provide a feasible trail design for SRG to consider.

4 CORRIDOR RECOMMENDATION

The Schuylkill River Trail has nearly 80 miles of completed trail, pedestrian bridges, trailheads, and signage from Philadelphia north. There are national standards for designing safe and equitably accessible trails, trails that comply with the Americans with Disabilities Act of 1990 (ADA) and that encourage trail planners to seek fair options for location and promotion of trails. Locally, Schuylkill River Greenways NHA has developed and continues to develop standards of trail design, signage, and especially communication among their staff, Board, and members for connecting with and maintaining positive relationships with underserved communities and for fostering deeper connections with people of all backgrounds.

Prior to committing to any proposed trail segment, SRG will evaluate the physical site with environmental professionals, property surveyors, and engineers and the political conditions related to landowner and community concerns, especially where there are opportunities to bridge the gaps of neighborhoods and community.

In the pages that follow, common trail design standards are presented, Schuylkill River Trail samples provided, and design recommendations offered. Design recommendations for the proposed trail alignments are meant to be far reaching. To look to the needs of not just the present but the future generations.

Trail Types

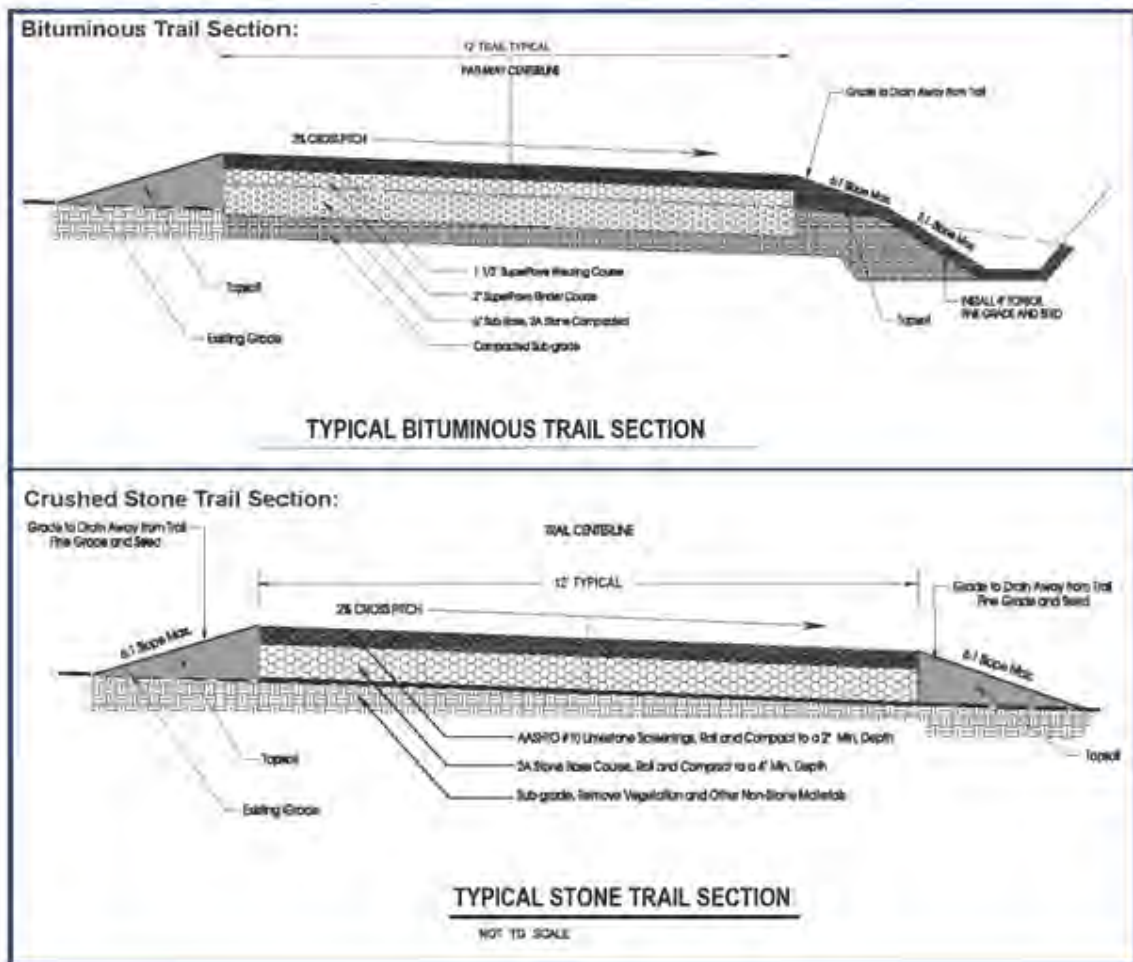
Schuylkill River Trail design standards are recommended based on existing conditions, the types of users and how the trail is used. Ideally, the SRT will be a non-motorized trail to serve multiple types of trail users including pedestrians, bicycles, equestrians, etc. Trail use is from dawn to dusk with extended hours in urban and suburban areas where the lighting is

present. The design standards recommended are each intended to be compliant with the following:

1. American Association of State Highway and Transportation Officials' (AASHTO) Guide for Planning, Design and Operation of Bicycle Facilities
2. ADA Accessibility Guidelines and Standards for Accessible Design
3. Federal Access Board Accessibility Guideline for Outdoor Development Areas
4. US Access Board's Public Right of Way Accessibility Guidelines (PROWAG)
5. Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD)
6. Pennsylvania and SRG Trail Design Standards
7. Pennsylvania Land Trust Association's Universal Access Trails and Shared Use Paths

Three main types of non-motorized trails are recommended Schuylkill River Trail:

1. **Proposed Off-Road Trail** – Off-Road trails are the preferred trail type for safety. Off-Road trails can travel along farm fields and through woodlands, follow stream corridors and meander along riverbanks. They can be some of the most scenic trails, introducing users to the beauty of the landscape. This trail type should be 12 feet wide for two-way traffic. Trail surfaces may be stone or paved (See trail sections below). Paved trails are preferred where steeper slopes are involved to prevent erosion from water runoff. Stone trails are better suited for level areas.



2. **Proposed On-Route Trail (Sidepath)** – On-Route Trails are multi-use paths that closely parallel vehicular routes with a buffer separating the road and trail. This trail type should be 12 feet wide for two-way traffic. A minimum buffer of 10 feet should be provided when possible. Landscaping within the buffer, especially street trees help enhance the user experience and create a greater sense of separation and safety. Trail surfaces may be stone or paved (See trail sections below). Paved trails are preferred where steeper slopes are involved to prevent erosion from water runoff. Stone trails are better suited for level areas.



3. **Proposed On-Road** - Along low volume and low speed roads, On-Road trails may still be the best option. This might include areas where the trail passes through a village or town where there is simply not enough right-of way between buildings. In other cases, lightly traveled roads through scenic countryside might be utilized when there are no other feasible options. In villages and towns, sidewalks would be used by pedestrians and streets would have dedicated bike lanes, advisory bike lanes or sharrows for bicycles. On country roads where both pedestrians and bicyclists share the road with vehicles, advisory bike lanes could be used while serving as traffic calming for vehicles. Advisory bike lanes are denoted by a dash line and changes in color of the pavement. Often accompanied by signs noting that vehicles share the center lane unless passing. (See below.)



Trail Surfaces

There are a number of different types of trail surfaces and types for off-road trail, however for the proposed alignments it is recommended that the trail be asphalt and permeable pavement, or crushed stone.

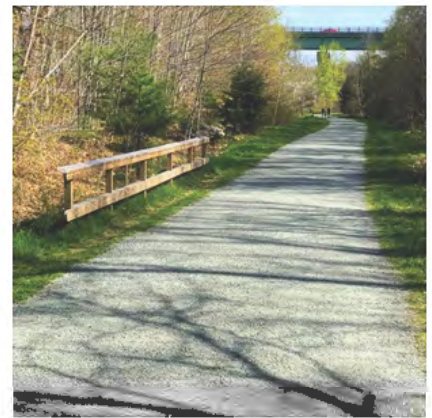
Asphalt and Permeable Pavement

This type of off-road trail is a durable surface, however, it comes at an increased cost. For this alignment it is recommended that pavement be considered in areas where there is a steeper slope or there is potential for a crushed stone trail surface to be washed away. It is also recommended that when a crushed stone trail crosses a road or driveway that asphalt be used for 30 to 50 feet before and after crossing depending on conditions. This will help stabilize the area around the crossing and ensure there will be no harsh changes in elevation between the trail and the road or driveway.



Crushed Stone

Crushed stone is the recommended surface for the proposed off-road trail alignment, except in the areas identified above. Crushed stone when installed correctly can provide a compacted surface for all types of trail users from bikers to runners. As mentioned above there are certain circumstances in which crushed stone should not be used, however long stretches of the trail would be able to use a crushed stone surface for the proposed off-road alignment.

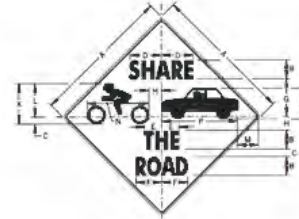


Trail Signage Standards

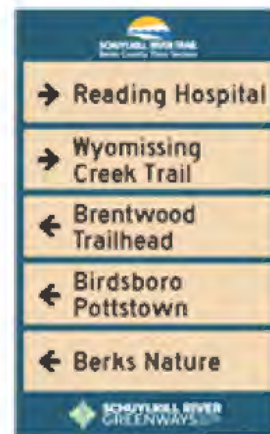
In 2006, the Schuylkill River Greenways NHA, in partnership with many partners, developed a Sign Manual for the entire 120-mile trail and system of wayfinding, education and trailheads. That manual continues to improve with the additions of QR codes, social media links, and multi-language software tools. For each new project, the chance to improve the messaging is immediately addressed.

For the current project, the below graphics offer a glimpse of the sign details commonly used by Schuylkill River Greenways NHA that might be used in the Northern Berks, Reading to Hamburg trail gap study areas:

Standard Safety Signage:



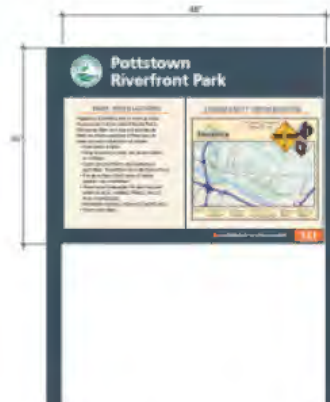
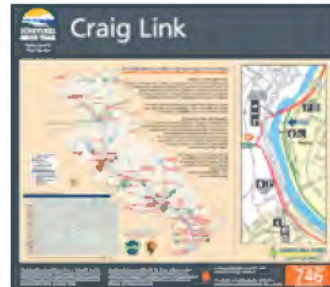
Typical Wayfinding Signage:



Typical Trailhead Signage for 3-Sided Kiosk:



Typical Interpretive Signage-Freestanding:



Alignments and alternative alignments –

describe the issues requiring alternatives and how the route will ultimately be decided. The ideal alignment for the Schuylkill River Trail is a 12 foot wide off-road alignment. The proposed alignment was developed using the criteria previously noted and information gathered during the public and stakeholder engagement process. The consultant team developed a proposed off-road alignment option that is shown on the maps as a dashed red line.

Every trail segment defined here can be seen as an opportunity to truly inspire local partnerships and statewide support. Berks County should be encouraged by the success of other communities and other Trail Heritage Areas to build exciting trails, with and without bridges, with unique experiences and destinations. There are opportunities to partner with tourism trails or even celebrate Berks County industrial ingenuity through trails, trail loops and historic district self-guided trails.

To establish a framework of understanding for the Steering Committee and the public, a set of base maps was prepared. Each base map is scaled large and was used by the public workshop attendees:

- Study Area Map : Hamburg Borough to Shoemakersville Borough
- Study Area Map: Shoemakersville Borough to Leesport Borough
- Study Area Map: Leesport Borough to Jim Dietrich Park (in Muhlenberg Township)
- Study Area Map: Jim Dietrich Park to City of Reading

Discussion of Segments

The content of each Study Area Map was then divided into eleven (11) Segment Maps. The eleven segment maps are located in the appendix.

Segment One – From Hamburg Trailhead to south of Route 61 in Hamburg

This segment will create a link from State Street Trailhead to the attractive Schuylkill Riverfront south of Route 61. Two alternatives are recommended for crossing Route 61 – one at-grade with the existing signalized intersection with Grand Street, and the other via a new culvert under Route 61 near the Reading Railroad Heritage Museum. The last part of this segment follows the alignment of the Schuylkill Navigation Canal.

Segment Two – From south of Route 61 in Hamburg to south of the Peter Yarnell Trailhead and Landing

The off-road alignment for this segment runs near the Schuylkill River, with a target of the landing in Perry Township. From the Peter Yarnell Trailhead and Landing the alignment continues to run near the edges of properties closest to the River.

Segment Three – Peter Yarnell Trailhead and Landing south of Shoemakersville in Perry Township

As the alignment enters Shoemakersville Borough, it continues to be located near the edges of properties along the River, until the alignment reaches the existing on-road segment of the Schuylkill River Trail. This on-road segment travels along River Road until it meets

Main Street. From there the alignment turns first onto 2nd Street and then becomes an off-road alignment that is aligned with the railroad and the former Schuylkill Navigation Canal once within Perry Township.

Segment Four – From south of Shoemakersville in Perry Township to Bellemans Church Road

This segment follows the alignment of the Schuylkill Navigation Canal through woodlands. The trail alignment then crosses at Main Street, getting closer to the River and through Berks Nature’s Property. From there it travels south and connects to an existing section of the Schuylkill River Trail at Bellemans Church Road in Ontelaunee Township.

Segment Five – From Bellemans Church Road through Leesport to south of Herbine’s Lock

This segment follows the alignment of the Schuylkill Navigation Canal from Bellemans Church Road to Wall Street, in Leesport, passing the Canal Museum. It then follows the existing on-road alignment through Leesport Borough. From there the on-road segment connects to an off-road segment that starts at the Washington Street Trailhead and ends at Herbine’s Lock. From there the proposed alignment follows the Schuylkill Navigation Canal.

Segment Six – From south of Herbine’s Lock to below Peacock Lock

This segment follows the alignment of the Schuylkill Navigation Canal except where it diverges away from the River from the Peacock Railroad Bridge. This diversion first runs parallel to

the Reading and Northern Railroad, and then makes use of an existing minor trail corridor through State-Owned land.

Segment Seven – From below Peacock Lock to Jim Dietrich Park

This segment follows the alignment of the Schuylkill Navigation Canal down to the site of the historic Stoudts Ferry Bridge. It then takes a new proposed bridge across the Schuylkill River and travels on Stoudts Ferry Bridge Road to Jim Dietrich Park in Muhlenberg Township.

Segment Eight – From Jim Dietrich Park to Muhlenberg Township south of Route 222 across the River from the Reading Airport

The proposed alignment is briefly on-road before utilizing part of the existing trail through Jim Dietrich Park. The Alignment then continues through Muhlenberg Township utilizing a mix of on-road and off-road trail segments. Areas along River Road extending from Felix Dam Park are proposed to be on-road.

Segment Nine – From south of Route 222 across the river from the Reading Airport to Carpenter Technology

The on-road alignment will connect to the proposed off-road trails north of Pioneer Grove, bringing the trail through Muhlenberg Township Property, to connect to Sofianos Road, where a side path will be constructed. The alignment continues off-road through Carpenter Technology, and then passes First Energy Stadium.

Segment Ten – From Carpenter Technology to Schuylkill Avenue Bridge

As the off-road alignment passes along Carpenter Technology, it hugs the Schuylkill River connecting to the existing trail at the Schuylkill Avenue Bridge. From there, there is a short section of existing on-road trail, that connects to an existing off-road segment along the Schuylkill River.

Segment Eleven – City of Reading

This segment of the Schuylkill River Trail includes an off-road alignment that is already developed and widely used. It connects trail users from the Reading Trailhead, across the Schuylkill River, connecting to both the West Reading Trailhead and the Brentwood Trailhead.

Temporary On-Road

When developing the trail temporary on road alignments will be utilized help continue the alignment for trial users, where safe and feasible. However, the temporary on-road alignments are not proposed to be the final trail alignment but are anticipated to be used during the duration of the development process, as this process will not be accomplished overnight. The trail development process will take time and resources as well as easements and or property acquisition, which is why a temporary on-road alignment is proposed (orange dashed line on proposed alignment map) and will need to be utilized, until the entire 20 miles of off-road trail is developed.

On-Road Spur Trails

The proposed alignment was developed using the criteria previously discussed, which means it may not go through the hearts of the boroughs or their commercial districts or connect to parks or nearby amenities. However, there can be spurs or downtown trails developed to help connect trail users to these areas or amenities.

Developing spur trail segments or downtown loops are something that the municipalities can work with the Schuylkill River Greenways to develop, both alignments and kiosks or wayfinding. Kiosks can be located on the trail and or at trail heads to guide trail users to these amenities and commercial districts. This has been done successfully in Phoenixville Borough, Chester County, where the Schuylkill River Trail does not run through the commercial area of the borough.

Cost Estimate/ On-going Maintenance

Estimates of potential cost, for an Order of Magnitude estimate, 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. Side-paths are considered along a roadway, while trails are off-road facilities.
- Sidewalk & Curb- accounts for concrete sidewalk and curbing.

- Bike Route- includes in street 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 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. Where there is a trail and bike route, two signage packages are identified.
- Small Trailhead- includes the costs of simple kiosks and small landscaping
- Large Trailhead- includes the costs of 1) Parking Pavement & Striping, 2) 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 - this recommendation includes a mix of cost estimates for smaller pedestrian bridges over creeks, and larger pedestrian gateway bridges over roadways. 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.

Maintenance & Operation

Our experience is that it costs \$3,000 per mile per year to maintain the SRT in Berks and Schuylkill Counties. The D&L estimates \$5,000 per year. Much of the cost of maintenance of a trail is the result of repairing erosion, resurfacing from storm damage and limb and leaf litter, and bathroom or comfort station maintenance. Costs and lifespans also differ by trail material. For example, asphalt is thought to have a longer lifespan before needing repairs or replacement. And the landscape has a large impact on which surface material can, and should, be used. For trails within a floodplain, crushed limestone and mixed surfaces should be considered due to their ability to absorb water and permit drainage.

Schuylkill River Greenways employs full time and part time trail managers and works with volunteer trailkeepers and other volunteers to maintain and manage 35 miles of the Schuylkill River Trail.

Cost Estimates

Order of Magnitude Cost Estimate

Schuylkill River Trail Feasibility Study

Study Area Map: Hamburg Borough to Shoemakersville Borough

Feature	Unit	Cost	Segment 1		Segment 2		Segment 3	
			Qty	Total	Qty	Total	Qty	Total
Paved, 12' wide				0		0		0
Gravel, 12' wide	LF	50	33200	1660000	15840	792000	15500	775000
Trail Approach Apron	EA	1000	2	2000	6	6000	7	7000
Sidewalk & Curb	LF	110	240	26400		0		0
Bike Shoulder*	LF	135	1400	189000	15840	2138400		0
Advisory Bike Lane*	LF	60		0		0		0
Ramp	EA	3800		0		0		0
Crossing-Continental	EA	1500	2	3000		0		0
Sign Package (Way)	EA	1500		0	12	18000	24	36000
Fencing	LF	100	300	30000		0	500	50000
Small Trailhead	LS	125000		0		0		0
Larger Trailhead	LS	350000	1	350000		0		0
Landscape Enhance	LS	50000		0		0		0
Raised Walkway/Bridge	LS	2000000		0		0		0
Culvert	EA	1200000		0		0		0
Culvert-Over	EA	75000	2	150000		0	1	75000
Culvert-Drainage	EA	3000		0	10	30000	12	36000
Traffic Calming	LS	50000		0		0		0
Intersection	EA	800000	1	800000		0		0
Median				0		0		0
Subtotal				3210400		2984400		979000
Mobilization (15%)				481560		447660		146850
Contingency (5%)				160520		149220		48950
Subtotal Construction				3852480		3581280		1174800
Design/Engineering (15%)				577872		537192		176220
Easements/Acquisitions								
Segment Total				4,430,352.00		4,118,472.00		1,351,020.00

Order of Magnitude Cost Estimate

Schuylkill River Trail Feasibility Study

Study Area Map: Leesport Borough to Jim Dietrich Park

Feature	Unit	Cost	Segment 6		Segment 7		Segment 8	
			Qty	Total	Qty	Total	Qty	Total
Paved, 12' wide	LF	75		0	100	7500		0
Gravel, 12' wide	LF	50	5280	264000	10560	528000	15840	792000
Trail Approach Apron	EA	1000	4	4000		0	4	4000
Sidewalk & Curb	LF	110		0		0		0
Bike Shoulder*	LF	135		0	13200	1782000	1000	135000
Advisory Bike Lane*	LF	60		0		0	1000	60000
Ramp	EA	3800		0		0	8	30400
Crossing-Continental	EA	1500	2	3000	2	3000	4	6000
Sign Package	EA	1500		0	4	6000	5	7500
Fencing	LF	100	1000	100000	1000	100000	4000	400000
Small Trailhead	LS	125000		0		0		0
Larger Trailhead	LS	350000		0		0		0
Landscape Enhance	LS	50000		0		0		0
Raised Walkway/Bridge	LS	2000000		0		0	2	4000000
Culvert	EA	1200000		0		0		0
Culvert-Over	EA	75000		0	1	75000	1	75000
Culvert-Drainage	EA	3000		0		0		0
Traffic Calming	LS	50000		0	1	50000	1	50000
Intersection	EA	800000		0		0		0
Median				0		0		0
Subtotal				371000		2551500		5559900
Mobilization (15%)				55650		382725		833985
Contingency (5%)				18550		127575		277995
Subtotal Construction				445200		3061800		6671880
Design/Engineering- (15%)				66780		459270		1000782
Easements/Acquisitions								25000
Segment Total				511,980.00		3,521,070.00		7,697,662.00

Order of Magnitude Cost Estimate

Schuylkill River Trail Feasibility Study

Study Area Map: Leesport Borough to Jim Dietrich Park

Feature	Unit	Cost	Segment 6		Segment 7		Segment 8	
			Qty	Total	Qty	Total	Qty	Total
Paved, 12' wide	LF	75		0	100	7500		0
Gravel, 12' wide	LF	50	5280	264000	10560	528000	15840	792000
Trail Approach Apron	EA	1000	4	4000		0	4	4000
Sidewalk & Curb	LF	110		0		0		0
Bike Shoulder*	LF	135		0	13200	1782000	1000	135000
Advisory Bike Lane*	LF	60		0		0	1000	60000
Ramp	EA	3800		0		0	8	30400
Crossing-Continental	EA	1500	2	3000	2	3000	4	6000
Sign Package	EA	1500		0	4	6000	5	7500
Fencing	LF	100	1000	100000	1000	100000	4000	400000
Small Trailhead	LS	125000		0		0		0
Larger Trailhead	LS	350000		0		0		0
Landscape Enhance	LS	50000		0		0		0
Raised Walkway/Bridge	LS	2000000		0		0	2	4000000
Culvert	EA	1200000		0		0		0
Culvert-Over	EA	75000		0	1	75000	1	75000
Culvert-Drainage	EA	3000		0		0		0
Traffic Calming	LS	50000		0	1	50000	1	50000
Intersection	EA	800000		0		0		0
Median				0		0		0
Subtotal				371000		2551500		5559900
Mobilization (15%)				55650		382725		833985
Contingency (5%)				18550		127575		277995
Subtotal Construction				445200		3061800		6671880
Design/Engineering- (15%)				66780		459270		1000782
Easements/Acquisitions								25000
Segment Total				511,980.00		3,521,070.00		7,697,662.00

Order of Magnitude Cost Estimate

Schuylkill River Trail Feasibility Study

Study Area Map: Jim Dietrich Park to City of Reading (Bridge)

Feature	Unit	Cost	Segment 9		Segment 10	
			Qty	Total	Qty	Total
Paved, 12' wide-West	LF	125	2000	250000	5000	625000
Gravel, 12' wide-East	LF	50		0	5700	285000
Gravel, 12' wide-River Rd	LF	50	14000	700000		
Trail Approach Apron	EA	1000	4	4000	4	4000
Sidewalk & Curb	LF	110	3000	330000	300	33000
Bike Shoulder*	LF	135	5260	710100		0
Advisory Bike Lane*	LF	60	5260	315600		0
Ramp	EA	3800	22	83600	8	30400
Crossing-Continental	EA	1500	13	19500	9	13500
Sign Package	EA	1500	9	13500	10	15000
Fencing-Natl Guard	LF	100	3500	350000	10700	1070000
Small Trailhead	LS	125000		0		0
Larger Trailhead-Auxillary	LS	350000		0	1	350000
Landscape Enhance	LS	50000		0		0
Raised Walkway/Bridge	LS	2500000	1	2500000		
CarTech Bridge	LS	4000000		0	1	4000000
SwitchBack	LS	500000		0	1	500000
Culvert	EA	1200000		0		0
Culvert-Over	EA	75000	1	75000		0
Culvert Drainage	EA	3000		0		0
Traffic Calming	LS	50000	1	50000	1	50000
Intersection	EA	800000		0		0
Median				0		0
Subtotal				5401300		6975900
Mobilization (15%)				810195		1046385
Contingency (5%)				270065		348795
Subtotal Construction				6481560		8371080
Design/Engineering (15%)				972234		1255662
Easements/Acquisitions				10000		10000
Segment Total				7,463,794		9,636,742

5 RECOMMENDED IMPLEMENTATION STEPS

Completing the Schuylkill River Trail from the Hamburg Borough to City of Reading will require strategic partnerships, grants and private funding, and negotiation with landowners. The Schuylkill River Greenways NHA has a history of partnering with other organizations and municipalities to develop the trail, which is how the Schuylkill River Trail has over 80 miles of continuous trail. The chart below identifies key steps for implementation, however, once the development process begins additional steps may be needed to complete the development of the Schuylkill River Trail from Hamburg Borough to the City of Reading.

Where to Start

Scoring Trail Segments

For long distance trails it can be difficult to pick a segment to pursue first. A scoring system is provided for Schuylkill River Greenways NHA staff, municipalities, and other partners to help guide the development of the proposed segments. From the Hamburg Borough to the City of Reading, there are several segments that might perfectly fit a high score from the table below, but that can only be decided by the Schuylkill River Greenways NHA, municipalities and other potential partners.

Possible Scoring System to Compare Like Segments of the Trail		
Connects to Existing Trail	Potential to connect to existing SRT or municipal trail(s)	0 - No Potential 1 - Potential
Connects Neighborhoods & Parks	Number of people in High-Need for trail or that can be physically connected by the trail	0 - No Connection 1 - Parks 2 - Neighborhoods 3 - Parks & Neighborhoods
Landowner Negotiation Required	Number of landowners that need negotiation	0 - 10+ Landowners 1 - 6-10 Landowners 3 - 5 or less Landowners
Available Right-Of-Way	Available right-of-way, to reduce landowner negotiation	0 - No ROW 1 - Some ROW 2 - All ROW
Partnership Potential	Potential municipal or non-profit partner	0 - None 1 - Non-Profit Only 3 - Municipal 4 - Municipal & State
Grant Worthy	Likelihood of grant and potential to be funded	0 - None 1 - Streetside 2 - Trail 3 - Combination of Grants

Connects to Existing Trail

Connecting to existing Schuylkill River Trail segments are some of the best places to start. It allows Schuylkill River Greenways NHA and municipalities to build off existing successful projects along the 20 miles of proposed trail. The SRT ends in the City of Reading and Hamburg Borough, but also have built sections of the SRT in Leesport Borough, Shoemakersville Borough (On-Road Segment), Ontelaunee Township, Bern Township and Muhlenberg Township.

Connects Neighborhoods and Parks

Connecting Neighborhoods and Parks through trails can provide a useful and important asset to the community. The number of people that can be connected to or access a new trail segment should be considered when determining what projects to prioritize. Another item to consider is if a new trail segment will provide an area for a community without access to a park to place to recreate.

Landowner Negotiations

Landowner negotiations is an important category as it can largely affect the cost of an alignment as well as the time needed to complete the project. Often the greater number of property owners you need to negotiate with the longer the process, and greater cost to acquire access easements. Therefore, proposed alignment sections with fewer landowners should be prioritized.

Right-of-Way Availability

Existing right-of-way that can be utilized to develop a trail can greatly increase the ability of a trail alignment being developed. That is why if a trail alignment utilizes existing right-of-way, it should be prioritized over one that does not utilize any existing right of way.

Partnership Potential

Schuylkill River Greenways NHA has limited staff and cannot take on developing the 20 miles of trails in Northern Berks alone. That is why when there is partnership potential that can allow the project to progress forward it should be considered. This could be a potential partnership with another non-profit organization, municipality, or the State.

Grant Worthy

If a project is potentially able to secure grant funding over other sections it should be prioritized.

SRG & Municipality Partnerships

A major step toward implementation of the proposed alignment and its sections and segments is to garner municipal support from the municipalities the trail is proposed to go through. In the coming months and years, it will be critical for Schuylkill River Greenways NHA to build and strengthen their relationships with the municipalities and provide any technical assistance that they may need to develop sections of the trail alignment. The municipalities can support the development efforts through submitting grant applications and providing local in-kind match for trail development. Partnerships between the Schuylkill River Greenways NHA and Municipalities will be vital to the development and the success of the Schuylkill River Trail in Northern Berks County.

Priorities for Trail Development between Hamburg and Reading

Understanding the “Gordian Knot” that stymies trail development in this reach

Typically, when a long section of trail, such as the 18 miles needed to link Reading to Hamburg, is examined for prioritization of the development of reaches, the first stages are often sought that are easy to build in regard to construction cost and acquisition of right-of-way, and that will extend already open sections of trail.

However, there are large obstacles at both the south end of Hamburg and the north end of Reading. Nevertheless, building one or both reaches will extend the very long completed sections of trail going both north from Hamburg, and south from Reading.

Beginning Sections at Both Hamburg & Reading

Specifically, we recommend the following two reaches as PRIORITY ONE (NORTH) and PRIORITY ONE (SOUTH). Either one will work well as the first priority, thus they are seen as a pair, with either one completed as part of Priority One. Their descriptions are as follows.

Note also that we have broken each Priority section into specific Segments that are typically sized for individual grant funding and construction.

North to South

Priority One (North): Hamburg to Five Locks Road. Currently building a trail south from Hamburg to Five Locks Road requires crossing very busy Route 61 and running parallel to it until the Canal is reached in the vicinity of Five Locks Road. Work will include detailed alternative design for this gap and acquiring easements or title for a right-of-way. This work will link the lower end of Hamburg via a safe, attractive, continuously interesting trail with the quiet, bucolic areas along the Schuylkill Canal and riverbank going south.

- [Segment 1-A \(North\)](#): (See Map Sheet 1 of 11) State Street Trailhead to and across Rt 61: This segment approximately follows the alignment of the former Schuylkill Navigation Canal, and includes the creation of an underpass beneath Route 61 to prepare for Segment 1-B. A spur should be constructed to the Reading Railroad Heritage Museum to give access to the existing on-road trail going south. As a riverfront alternative, the trail would otherwise be constructed from the State Street Trailhead along the old Canal alignment, and then would follow a sidepath along Grand Street to an at-grade, signalized crossing of Route 61. From here the trail would follow the Schuylkill River's bank about 0.8 mile to a temporary dead-end, awaiting Segment 2.
- [Segment 1-B \(North\)](#): (See Map Sheets 1 and 2 of 11) Route 61 to Peter Yarnell Trailhead. This segment begins at either the underpass at Route 61 or the end of the riverfront trail constructed in Segment 1-A. It first follows the Schuylkill Canal alignment and then the riverbank to the Peter Yarnell Trailhead at Fisher Dam Road and Water Street.

South to North

[Priority One \(South\)](#): From the existing Trail at Schuylkill Avenue to the west end of Sofianos Lane. From the Schuylkill Avenue Bridge the Trail will follow the east bank of the River and then skirt the east side of Carpenter Technologies, passing First Energy Stadium. It would then follow the alignment of existing drives, passing

beneath the Warren Street Bypass (Route 12) and the Norfolk Southern RR. Finally, a new section of path will bring the Trail to Sofianos Lane. The Trail will parallel Solfianos Lane on a landscaped sidepath.

- [Segment 1-A \(South\)](#): (See Map Sheet 9 and 10 of 11). Schuylkill Avenue Bridge to First Energy Stadium. This segment begins at the current end of the SRT at the Schuylkill Avenue Bridge and works its way down to the riverbank. After following the riverbank, it skirts the edge of Carpenter Technology coming to First Energy Stadium.
- [Segment 1-B \(South\)](#): (See Map Sheet 9 of 11) First Energy Stadium to the west end of Solfianos Lane. The Trail will follow the alignment of existing drives beneath the Warren St. Bypass (Route 12) and the Norfolk Southern RR almost all the way to Solfianos Lane, to which a short section of Trail will need to be constructed. The trail along Solfianos Lane will be a landscaped sidepath.

Subsequent Sections to Close the Large Trail Gap

Once the challenging "goalposts" of this section are complete, the rest of the trail reaches in between will be easier to complete as they are built in phases as extensions either north from Reading or south from Hamburg until the two extensions meet in the middle at Herbine's Lock. Note that Northern Priorities are going in a southerly direction from Hamburg to Herbine's Lock, while the Southern priorities

are given going in a northerly direction from Reading to Herbine's Lock.

Note again that we have broken each Priority section into specific Segments that are typically sized for individual grant funding and construction.

North to South

Priority Two (North): Peter Yarnell Trailhead to Shoemakersville. This section will ideally make use of the restored Schuylkill Riverbank for the most part. Closer to Shoemakersville, the Trail will use River Drive -- a dead-end street with virtually no traffic -- and will deliver the user to Main Street in Shoemakersville.

- Segment 2-A (North): (See Map Sheet 2 of 11) From Peter Yarnell Trailhead to Water Street Entrance (about halfway to Shoemakersville). The Trail will follow the Schuylkill Riverbank. Access at Water Street will allow trail users to use that temporary back road route until Segment 2-B (North) is completed.
- Segment 2-B (North): (See Map Sheets 2 and 3 of 11) From Water Street Entrance to Shoemakersville. The Trail will continue on the riverbank, finally turning onto River Drive which will bring the user to Main Street in Shoemakersville.

Priority Three (North): From downtown Shoemakersville to Leesport Schuylkill Canal Lock House. This reach of trail will largely follow the restored towpath of the Schuylkill Navigation Canal, some new riverbank trail, then some existing trail going south from Bellemans Church

Road, and a few back streets or parts of the restored Canal towpath as one enters Leesport.

- Segment 3-A (North): (See Map Sheet 3 of 11) From downtown Shoemakersville to Main Street Bridge at Mohrsville. The Trail will leave Main Street in Shoemakersville and then follow the Schuylkill Navigation Canal to the Schuylkill River Bridge at Mohrsville.
- Segment 3-B (North): (See Map Sheets 3 and 4 of 11) From the Main Street Bridge at Mohrsville to the Leesport Schuylkill Canal Lock House. The Trail will largely follow the Schuylkill Riverbank to Bellman's Church Road, then the existing Trail to Walnut Street, continuing on either Canal Street or the restored towpath of the Schuylkill Navigation Canal to the Leesport Schuylkill Canal Lock House.

Priority Four (North) – From the Leesport Schuylkill Canal Lock House to Herbine's Lock. The Trail will follow Wall Street across the Schuylkill River, then back streets through Leesport, and then the existing off-road Trail from Washington Street to Herbine's Lock.

- Segment 4-A (North): (See Map Sheet 5 of 11) From the Leesport Schuylkill Canal Lock House to Herbine's Lock The Trail will follow the description given just above. Work will include landscaping and otherwise make the on-road sections attractive, and bicycle- and-pedestrian friendly. Consideration will be given as well to appropriate in-town lighting and interpretive signage. The existing multi-use trail segment to Herbine's Lock will receive attention to make it fully ADA accessible.

South to North

Priority Two (South): West end of Solfianos Lane to Muhlenberg Township's Felix Dam Recreation Area. The Trail will be a landscaped sidepath along Solfianos Lane, and then will link several Muhlenberg Township recreation areas including the former impounding basin as well Kelly's Lock, Pioneer Grove, and other parkland along the township's Schuylkill River waterfront.

- Segment 2-A (South): (See Map Sheet 9 of 11) From west end of Solfianos Lane to Pioneer Grove. The Trail will leave Solfianos Lane, climbing up to the former impounding basin, and then down to Kelly's Lock and Pioneer Grove.
- Segment 2-B (South): (See Map Sheets 8 and 9 of 11) From Pioneer Grove to the Felix Dam Recreation Area. The Trail will link several parklands owned by Muhlenberg Township. The design will endeavor to create a sidepath where needed along River Road.

Priority Three (South): From the Felix Dam Recreational Area to Jim Dietrich Park and the Proposed Bridge at Stoudts Ferry Bridge Road.

The Trail will pass under Route 222, work its way along the narrow residential corridor between Route 222 and the River up to Stoudts Ferry Bridge Road, then taking an off-road route through Jim Dietrich Park to a connection point with a proposed bridge placement near Stoudts Ferry Bridge Road.

- Segment 3-A (South): (See Map Sheet 8 of 11) From the Felix Dam Recreational Area to Jim Dietrich Park. The Trail will leave the Recreation Area, pass under Route 222,

follow a utility pass-through to Riverside Drive and then Pine Heights Road to Stoudts Ferry Bridge Road. Tree-planting and other landscaping will be employed to give the Trail a sense of place and beauty amongst the homes in this residential section of the Trail. A sidepath will be built along Stoudts Ferry Bridge Road, leading to the driveway that will carry the Trail through most of Jim Dietrich Park.

- Segment 3-B (South): (See Map Sheets 7 and 8 of 11) From Jim Dietrich Park to the proposed bridge placement near Stoudts Ferry Bridge Road, and Construction of the Bridge. The Trail will link Jim Dietrich Park to the bridge crossing of the Schuylkill, most likely on the very quiet residential section of Stoudts Ferry Bridge Road. This segment includes the construction of the pedestrian and bicycle bridge at roughly the same location as the former historic bridge. Consideration should be given to recreating the appearance of the former landmark bridge, while providing a secondary emergency access to the large neighborhood of this part of Muhlenberg Township which currently has only one way to gain access across Route 222.

Priority Four (South) – From a new Stoudts Ferry Bridge to Herbine's Lock.

The Trail will cross a new bridge in the general location of the former Stoudts Ferry Bridge, and travel off-road, bypassing Peacock Kennels, and finally using a restored section of the Schuylkill Navigation Canal to reach Herbine's Lock.

- **Segment 4-A (South):** (See Map Sheets 6 and 7 of 11). Segment 2-A (South) (See Map Sheet 9 of 11). From a new Stoudts Ferry Bridge to Cross Keys Road. The Trail will leave the new proposed bridge, and travel on the riverbank, by-passing Peacock Kennels, and then generally follow the alignment of the Schuylkill Navigation Canal to Cross Keys Road.
- **Segment 4-B (South):** (See Map Sheets 5 and 6 of 11) From Cross Keys Road to Herbine's Lock. The Trail will generally follow the alignment of the Schuylkill Navigation Canal through this entire segment.

Grants and other Funding Sources

The Schuylkill River Trail is identified by the seventeen municipalities and Berks County as a desirable recreational opportunity. With prior planning efforts that provide years of support and this study striving for implementation of the proposed alignment, there is nearly 18 miles of trail that will need to be built. The Schuylkill River Greenways NHA, the seventeen municipalities and Berks County should look to the numerous potential funding sources that can assist in trail development.

A few funding agencies include the Pennsylvania Department of Environmental Protection, Pennsylvania Department of Community and Economic Development, PA DCNR, PennDOT, and Berks County.

Next are some highlights of potential funding opportunities.

Multimodal Transportation Funds Program

PA DECD offers grants for projects that support safe and reliable transportation networks and help encourage economic development. Eligible projects develop or rehabilitate transportation assets for communities that include, but are not limited to, sidewalks, pedestrian safety, streetscapes, and improving connectivity.

Greenways, Trails, and Recreation Program

The Pennsylvania Department of Community and Economic Development administers funds for the planning, acquisition, development, rehabilitation and repair of recreational trails, open space, parks, greenways, and beautification projects.

Community Conservation Partnership (Trails)

The Pennsylvania Department of Conservation and Natural Resources offers matching grants for planning, acquisition, construction, enhancement and maintenance of multi-use trails and related facilities. This also can include amenities to support trails, such as interpretive signage, access roads, parking areas and equipment that is required for maintenance.

Community Conservation Partnership Program (Community Recreation and Conservation Planning)

PA DCNR offers a grant of matching funds to prepare future planning, development, acquisition, and management of parks, recreation facilities, critical habitats, open space, greenways, and natural areas.

Community Conservation Partnership Program (Land Acquisition and Conservation)

PA DCNR offers a matching grant for the purchase and or donation of land for the purpose of parks and recreation, critical habitat, greenways and open space.

Community Conservation Partnership Program (Park Rehabilitation and Development)

DCNR offers matching grants for the rehabilitation and development of parks, indoor and outdoor recreational facilities, greenways, river conservation and restoration projects, and greenways.

Community Conservation Partnership Program (State and Regional Partnership Funds)

PA DCNR offers matching grants for the formation of collaborative initiatives that help to improve the capacity to develop and manage park and recreation facilities, and advance conservation of resources.

Municipal Assistance Program

The Department of Community and Economic Development provides funds for local governments for the planning and implementation of multiple services including community planning and floodplain management. This project requires a 50% match, with 25% not being state funded.

Redevelopment Assistance Capital Program

The Pennsylvania Department of the Budget offers matching grant funds for economic development, cultural or recreational improvements for acquisition and construction projects.

Green Light Go

The Pennsylvania Department of Transportation administers fund for grants that improve the mobility and or safety by reducing congestion and improving the efficiency of existing traffic.

Transportation Alternatives Program

The Pennsylvania Department of Transportation funds eligible construction projects up to 100%. This program does not award money for preconstruction costs such as but not limited to design, permitting, right of way or land acquisition, and environmental. TAP projects are those that build pedestrian and bike facilities, improve access to public transportation, help create safe routes to school, create trail projects that serve a transportation service while working to promote safety and mobility.

People for Bikes Community Grants

The Bike Advocacy Group works to provide cash grants for projects that have a heavy bike facility component. These funds are also able to be used as match to other grant projects.

Landowner Analysis

The proposed off-road trail alignment has the potential to go through 200 or more properties. Within 30 feet of the proposed off-road alignment there are 194 properties, and 235 within 50 feet of the alignment. The tables below show the break down of the types of properties within 30 feet and 50 feet of the proposed off-road alignment. The majority of properties are residential, with exempt properties being the second largest group.

Land use within 30 feet of the Proposed Alignment



Commercial Exempt Farm Industrial Public Utility Residential

30ft Buffer Parcels	
Row Labels	Count of CLASS
Commercial	20
Exempt	28
Farm	16
Industrial	19
Public Utility	19
Residential	92
Grand Total	194

50ft Buffer Parcels	
Row Labels	Count of CLASS
Commercial	23
Farm (Farmland & Woodland)	19
Industrial	24
Public Utility (Exempt)	21
Residential	115
Tax Exempt	33
Grand Total	235

Landowner Liability Concerns

The first approach to negotiating a trail or path across private property of any size, is to suggest a trail easement. Considered only a part of the actual rights of ownership the easement grants access in dedicated and restricted areas of the land. Private landowners can be reluctant at first to allow the public to use their land for trails; even those with existing road rights of way allowing sidewalks. This often has to do with the liability of the person exposed to another person's injury on their property.

A proper definition of Liability often 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, 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

Schuylkill River Greenways NHA uses both a state-approved and a non-profit standard trail easement. For each municipality engaging in a possible partnership, an example document should be shared with the municipal solicitor for review.

CLOSING STATEMENT

We hope that this feasibility study portrayed the vision of a completed Schuylkill River Trail, a trail that when complete will stretch from the City of Philadelphia 120 miles north to the Borough of Frackville, Schuylkill County. From the City of Philadelphia, along an iconic river, and through farmland, Boroughs, and 'Smalltown America' the trail will offer so much more than a place to walk, bike or roll. It will offer a connection between places and people.

Closing the nearly 20 miles of trail gaps from the City of Reading to Hamburg Borough will be a great feat, but taking the project step by step, segment by segment, with community and municipal partners, will make this vision a reality.



SCHUYLKILL RIVER
GREENWAYS
NATIONAL HERITAGE AREA

APPENDIX A



P:\009000\09012_2022\09012_SchuylkillTrail_Segment_Map_11x17.mxd
 2/2/2023 | PM: TJS | GIS: MSM | QA: KCM | R009012.0425

700 0 700 Feet

— Proposed Alignment - On Road
— Proposed Alignment - Off Road
— 2020 Existing Off-Road
— 2020 Existing On-Road
— Open Space / Park
— Municipal Boundary

Attraction
 Park
 Trailhead

HRG

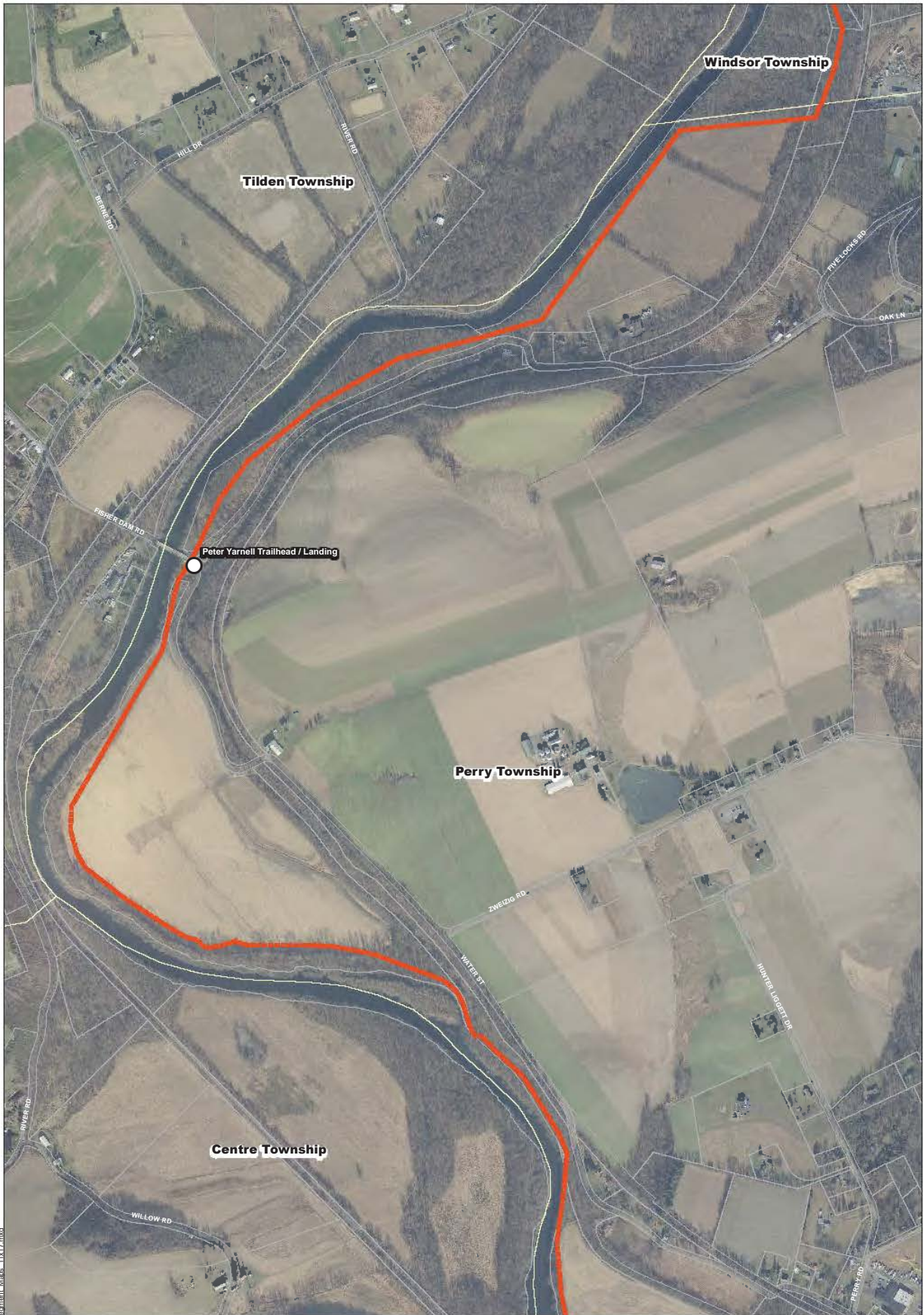
 Harwood Regional & County, Inc.
 Engineering & Estimation Services
 An Employee-Owned Company

369 East Park Drive
 Harrisburg, PA 17111
 717.564.1121 [phone]
 717.564.1158 [fax]
 www.hrg-inc.com


**2022 Schuylkill Trail Project
Trail Segment Map**

**Berks County, Pennsylvania
Sheet 1 of 11**

Note: Alignments will be revised as needed to address property owner concerns.



20220608012_20220608012_SchuylkillTrail_Segment_Map_11x17.mxd

 700 0 700 Feet
 Mapping derived from data provided by Berks County, PEMA, ESRI
 2/2/2023 PM: TJS GIS: MSM QA: KCM R009012.0425
 369 East Park Drive
 Harrisburg, PA 17111
 717.564.1121 [phone]
 717.564.1158 [fax]
 www.hrg-inc.com

- Proposed Alignment - On Road
- Proposed Alignment - Off Road
- 2020 Existing Off-Road
- 2020 Existing On-Road
- Open Space / Park
- Municipal Boundary
-  Attraction
-  Park
-  Trailhead


**2022 Schuylkill Trail Project
Trail Segment Map**

**Berks County, Pennsylvania
Sheet 2 of 11**

Note: Alignments will be revised as needed to address property owner concerns.



P:\030000012_049656\Projects\Trail Segment Maps_11x17.mxd

 700 0 700 Feet
 Mapping derived from data provided by Berks County, PEMA, ESRI
 2/2/2023 PM: TJS GIS: MSM QA: KCM R009012.0425



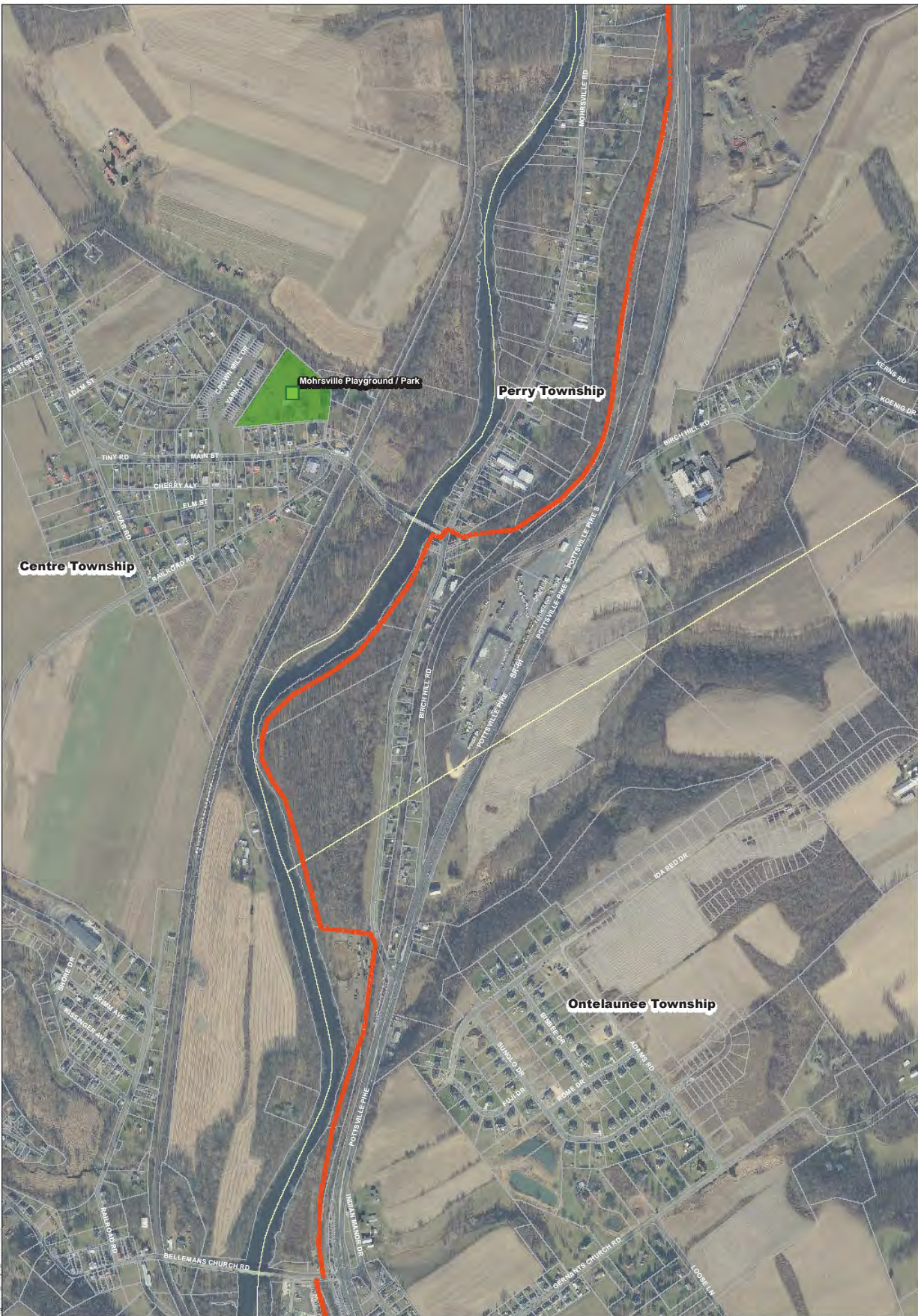
369 East Park Drive
 Harrisburg, PA 17111
 717.564.1121 [phone]
 717.564.1158 [fax]
 www.hrg-inc.com


-  Proposed Alignment - On Road
-  Proposed Alignment - Off Road
-  2020 Existing Off-Road
-  2020 Existing On-Road
-  Open Space / Park
-  Municipal Boundary
-  Attraction
-  Park
-  Trailhead

**2022 Schuylkill Trail Project
Trail Segment Map**

**Berks County, Pennsylvania
Sheet 3 of 11**

Note: Alignments will be revised as needed to address property owner concerns.




 700 0 700 Feet
 Mapping derived from data provided by Berks County, PEMA, ESRI
 2/2/2023 | PM: TJS | GIS: MSM | QA: KCM | R009012.0425
HRG
 369 East Park Drive
 Harrisburg, PA 17111
 717.564.1121 [phone]
 717.564.1158 [fax]
 www.hrg-inc.com


-  Proposed Alignment - On Road
-  Proposed Alignment - Off Road
-  2020 Existing Off-Road
-  2020 Existing On-Road
-  Open Space / Park
-  Municipal Boundary
-  Attraction
-  Park
-  Trailhead

2022 Schuylkill Trail Project
Trail Segment Map
Berks County, Pennsylvania
Sheet 4 of 11

Note: Alignments will be revised as needed to address property owner concerns.

P:\000000912_0425\GIS\Projects\Trail_Segment_Maps_11x17.mxd




 700 0 700 Feet
 Mapping derived from data provided by Berks County, PEMA, ESRI
 2/2/2023 PM: TJS GIS: MSM QA: KCM R009012.0425
HRG
 Herbert, Ross & Grubb Inc.
 Engineering & Planning
 An Implex-Chartwell Company
 369 East Park Drive
 Harrisburg, PA 17111
 717.564.1121 [phone]
 717.564.1158 [fax]
 www.hrg-inc.com










- Proposed Alignment - On Road
- Proposed Alignment - Off Road
- 2020 Existing Off-Road
- 2020 Existing On-Road
- Open Space / Park
- Municipal Boundary
- ▲ Attraction
- Park
- Trailhead

2022 Schuylkill Trail Project
Trail Segment Map
Berks County, Pennsylvania
Sheet 5 of 11

Note: Alignments will be revised as needed to address property owner concerns.




 700 0 700 Feet
 Mapping derived from data provided by Berks County, PEMA, ESRI
 2/2/2023 PM: TJS GIS: MSM QA: KCM R009012.0425
HRG
 369 East Park Drive
 Harrisburg, PA 17111
 717.564.1121 [phone]
 717.564.1158 [fax]
 www.hrg-inc.com

 Proposed Alignment - On Road	 Attraction
 Proposed Alignment - Off Road	 Park
 2020 Existing Off-Road	 Trailhead
 2020 Existing On-Road	
 Open Space / Park	
 Municipal Boundary	


2022 Schuylkill Trail Project
Trail Segment Map
Berks County, Pennsylvania
Sheet 6 of 11

Note: Alignments will be revised as needed to address property owner concerns.




P:\03000000\030012_030012\GIS\MapDocs\Trail_Segment_Map_11x17.mxd

CONTINUED ON SEGMENT MAP 6


700 0 700
Feet

Mapping derived from data provided by Berks County, PEMA, ESRI
 2/2/2023 PM: TJS GIS: MSM QA: KCM R009012.0425



 369 East Park Drive
 Harrisburg, PA 17111
 717.564.1121 [phone]
 717.564.1158 [fax]
 www.hrg-inc.com

-  Proposed Alignment - On Road
-  Proposed Alignment - Off Road
-  2020 Existing Off-Road
-  2020 Existing On-Road
-  Open Space / Park
-  Municipal Boundary
-  Attraction
-  Park
-  Trailhead

2022 Schuylkill Trail Project
Trail Segment Map

Berks County, Pennsylvania
Sheet 7 of 11

Note: Alignments will be revised as needed to address property owner concerns.



700 0 700 Feet
 Mapping derived from data provided by Berks County, PEMA, ESRI
 2/27/2023 PM: TJS GIS: MSM QA: KCM R009012.0425
HRG
 369 East Park Drive
 Harrisburg, PA 17111
 717.564.1121 [phone]
 717.564.1158 [fax]
 www.hrg-inc.com


- Proposed Alignment - On Road
- Proposed Alignment - Off Road
- 2020 Existing Off-Road
- 2020 Existing On-Road
- Open Space / Park
- Municipal Boundary
- ▲ Attraction
- Park
- Trailhead


2022 Schuylkill Trail Project
Trail Segment Map

Berks County, Pennsylvania
Sheet 8 of 11






Note: Alignments will be revised as needed to address property owner concerns.




 700 0 700 Feet
 Mapping derived from data provided by Berks County, PEMA, ESRI
 2/27/2023 PM: TJS GIS: MSM QA: KCM R009012.0425


HRG
 Harsanyi, Rombard & Grubbs, Inc.
 Engineering & Related Services
 An Employee-Owned Company

369 East Park Drive
 Harrisburg, PA 17111
 717.564.1121 [phone]
 717.564.1158 [fax]
 www.hrg-inc.com










-  Proposed Alignment - On Road
-  Proposed Alignment - Off Road
-  2020 Existing Off-Road
-  2020 Existing On-Road
-  Open Space / Park
-  Municipal Boundary
-  Attraction
-  Park
-  Trailhead

2022 Schuylkill Trail Project
Trail Segment Map
Berks County, Pennsylvania
Sheet 9 of 11

Note: Alignments will be revised as needed to address property owner concerns.




 700 0 700 Feet
 Mapping derived from data provided by Berks County, PEMA, ESRI
 2/22/2023 PM: TJS GIS: MSM QA: KCM R009012.0425
HRG
 Herbert R. Reed & Associates, Inc.
 Engineering & Related Services
 An Employee-Owned Company
 369 East Park Drive
 Harrisburg, PA 17111
 717.564.1121 [phone]
 717.564.1158 [fax]
 www.hrg-inc.com

-  Proposed Alignment - On Road
-  Proposed Alignment - Off Road
-  2020 Existing Off-Road
-  2020 Existing On-Road
-  Open Space / Park
-  Municipal Boundary
-  Attraction
-  Park
-  Trailhead

2022 Schuylkill Trail Project
Trail Segment Map
Berks County, Pennsylvania
Sheet 10 of 11
 Note: Alignments will be revised as needed to address property owner concerns.

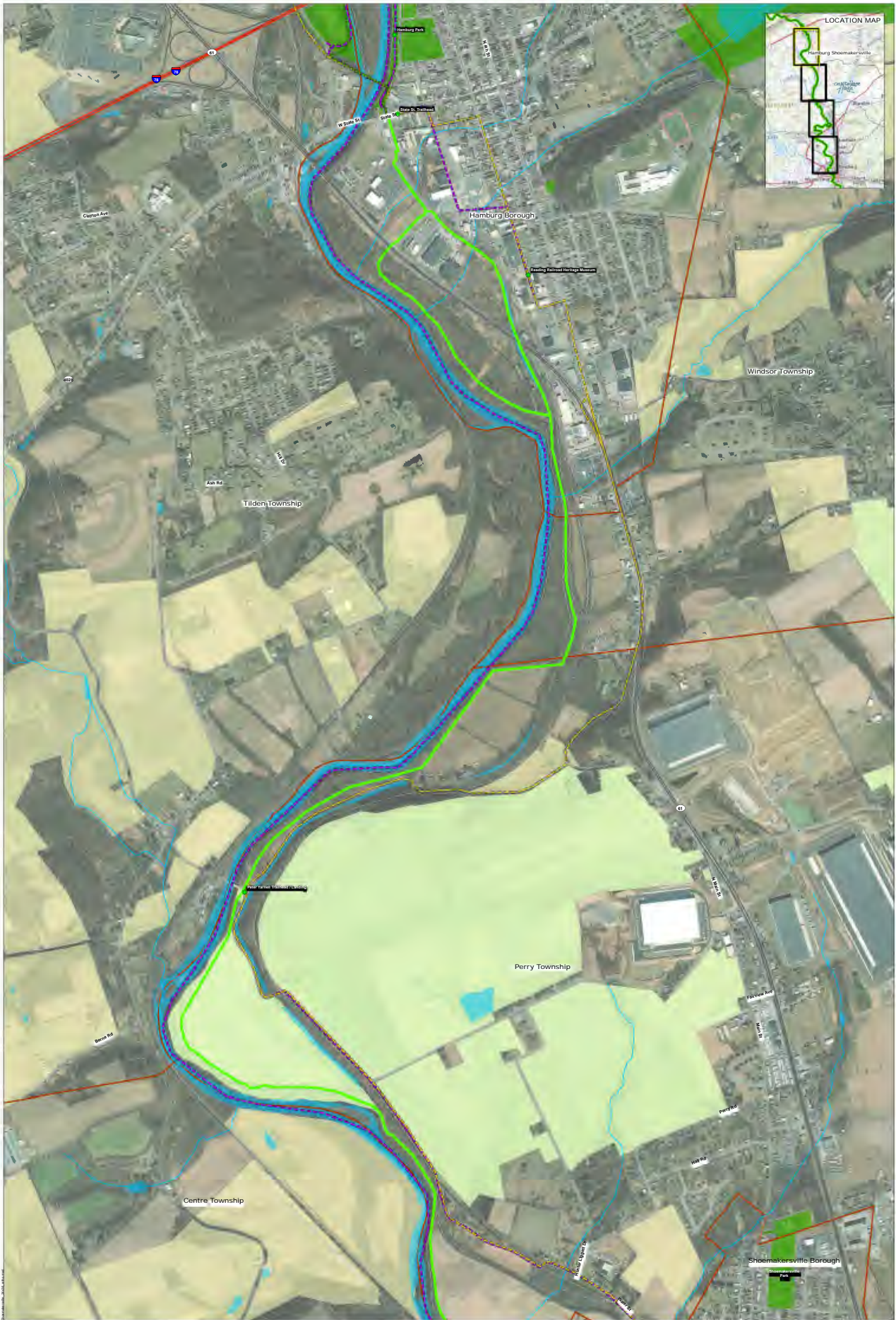


700 0 700 Feet
 Mapping derived from data provided by Berks County, PEMA, ESRI
 2/27/2023 PM: TJS GIS: MSM QA: KCM R009012.0425
HRG
 369 East Park Drive
 Harrisburg, PA 17111
 717.564.1121 [phone]
 717.564.1158 [fax]
 www.hrg-inc.com

- Proposed Alignment - On Road
- Proposed Alignment - Off Road
- 2020 Existing Off-Road
- 2020 Existing On-Road
- Open Space / Park
- Municipal Boundary
- ▲ Attraction
- Park
- Trailhead

2022 Schuylkill Trail Project
Trail Segment Map
Berks County, Pennsylvania
Sheet 11 of 11

Note: Alignments will be revised as needed to address property owner concerns.



Mapping derived from data provided by Berks County, COE, PG&A,

 20220223 PM-WAB-05-1828-04-1000-1000012-0425

 355 East Park Drive

 Hamburg, PA 17111

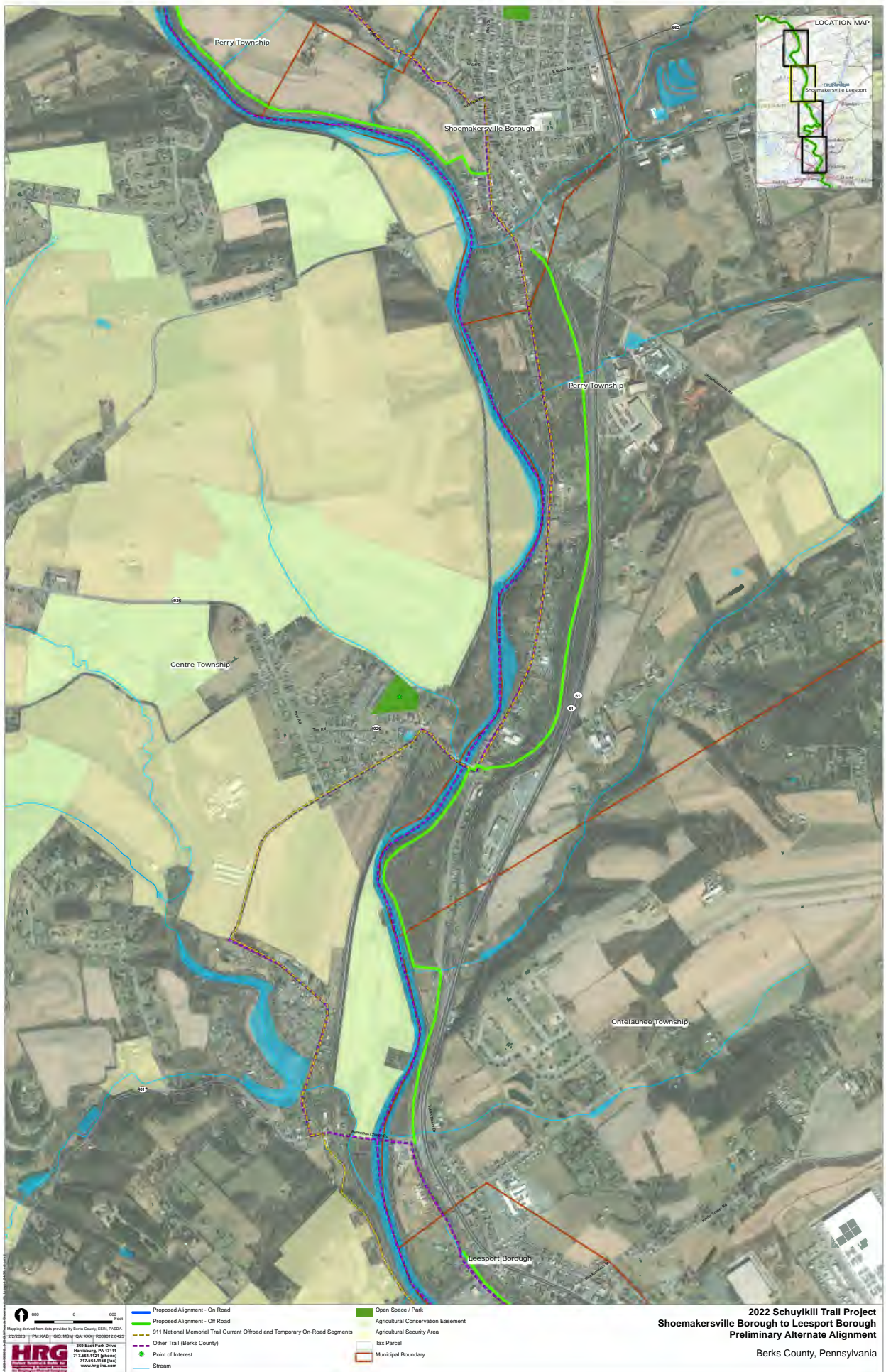
 717.264.1121 (phone)

 717.264.1158 (fax)

www.hrginc.com

- Proposed Alignment - On Road
- Proposed Alignment - Off Road
- - - 911 National Memorial Trail Current Offroad and Temporary On-Road Segments
- - - Other Trail (Berks County)
- Point of Interest
- Stream
- Open Space / Park
- Agricultural Conservation Easement
- Agricultural Security Area
- Tax Parcel
- Municipal Boundary

2022 Schuylkill Trail Project
Hamburg Borough to Shoemakersville Borough
Preliminary Alternate Alignment
 Berks County, Pennsylvania





0 500 1000 Feet

Mapping derived from data provided by Berks County, ESRI, PA/SDA, 2/22/2022 | 1/16/2022 | 10:27:58 AM | QC: 1000 | 10/27/2022

HRG
 300 East Park Drive
 Harrisburg, PA 17111
 717.564.1100 (phone)
 717.564.1158 (fax)
 www.hrg.com

- Proposed Alignment - On Road
- Proposed Alignment - Off Road
- - - 911 National Memorial Trail Current Offroad and Temporary On-Road Segments
- - - Other Trail (Berks County)
- Point of Interest
- Stream
- Open Space / Park
- Agricultural Conservation Easement
- Agricultural Security Area
- Tax Parcel
- Municipal Boundary

2022 Schuylkill Trail Project
Leesport Borough to Jim Dietrich Park
Preliminary Alternate Alignment
 Berks County, Pennsylvania



0 100 200
 Mapping derived from data provided by Berks County, ESRI, PAZDA,
 20220223 1961K180 025 18089 046 10001 0400007129285
HRG
 300 East Park Drive
 Reading, PA 17101
 717.264.1121 (phone)
 717.264.1156 (fax)
 www.hrg.com

- Proposed Alignment - On Road
- Proposed Alignment - Off Road
- 911 National Memorial Trail Current Offroad and Temporary On-Road Segments
- Other Trail (Berks County)
- Point of Interest
- Stream
- Open Space / Park
- Agricultural Conservation Easement
- Agricultural Security Area
- Tax Parcel
- Municipal Boundary

2022 Schuylkill Trail Project
Jim Dietrich Park to City of Reading
Preliminary Alternate Alignment
 Berks County, Pennsylvania

APPENDIX B

EARLY ACTION PROJECT: KELLY'S LOCK TO LAUREL RUN PARK

A ½ MILE SECTION OF THE SRT IN MUHLENBERG TOWNSHIP

Overview

In 2022 the Schuylkill River Greenways NHA launched a three-part study of the remaining gaps of the trail in Berks County. That study, the Schuylkill River Trail Feasibility Study & Preliminary Design & Engineering includes three separately funded parts:

1. The Schuylkill River Trail From Reading to Hamburg
2. The Schuylkill River Trail in Birdsboro & Robeson Township
3. Preliminary Design & Engineering for an Early Action Project

This report discusses the Preliminary Design and Engineering for the Early Action Project. The Preliminary Design and Engineering for Early Action Projects was funded by Berks County Community Foundation.

Goals of the Early Action Engineering Trail Project

Goal 1. Identify a Portion of the SRT Trail Gap Suitable for a 2022 PA DCNR Trail Grant Application

Goal 2. Complete Site Analysis, Planning, Surveying, and Design of Early Action Project

Goal 3. Support the Submission of a PA DCNR Grant Application

Goal 4. Incorporate the Early Action Project into the Overall Project

Early Action Planning Process

Selection of the Early Action Project

The Consultant Team looked at the proposed alignment and developed four options for consideration to be selected as the Early Action Project. The three projects that were not selected but discussed as potential Early Action Projects included:

- **Old Schuylkill Boulevard** – Which used the right-of-way along River Road in Muhlenberg to accommodate an off-road side path.
- **Riverfront** – which was a trail continuing north from the existing Schuylkill River Trail section in the City of Reading.
- **Jim Dietrich Park Connector** – which would be an off-road trail that connected Jim Dietrich Park to Riverfront Road.

All four projects were required to have the ability to be implemented within the next year. Which was the expectation as a grant application was being submitted for the chosen Early Action Project in April of 2022, to help fund the selected project. The four options were presented to the SRG as well as the project steering committee. After discussion with SRG, the steering committee and site visits to the potential project sites, an Early Action Project was selected.

The selected project is a trail segment from Kelly's Lock Park through Pioneer Grove to Laurel Run Park in Muhlenberg Township. This project was selected for several reasons including that the trail would be located on property that was owned by Muhlenberg Township, there was existing room for the alignment to go through the parks, and connected three parks within the Township together, while also being a part of the proposed Schuylkill River Trail Alignment. Additionally, this project had a lot of support from the Township, who agreed to use their public works department to build the Early Action Project Trail Segment.

Additional reasons this Early Action Project was selected include:

- The Kelly's Lock section of the Schuylkill River Trail is a ready-to-build project
- The timing of the project overlaps with the larger Schuylkill River Trail Feasibility Study for Northern Berks County and will serve as a demonstration project to encourage additional sections within the Feasibility Study to be built.
- SRG can use the momentum created from his project to prepare design drawings for additional connecting sections within the City of Reading and Laurel Run Park.
- The segment of trail included within the Early Action Project was already part of a multi-year strategy for Muhlenberg Township to help complete the trail gaps of the Schuylkill River Trail within their community.

Early Action Project Benefits

The Early Action Project will provide several benefits.

Locally the Early Action Project will introduce users to the Schuylkill River Trail including the Statewide Greenway. Additionally, it will provide active and passive recreational opportunities, and will provide an ADA accessible trail segment. From a connectivity standpoint this segment of trail will provide additional access to three riverside parks in Muhlenberg Township which will provide and encourage usage by residents as well as visitors.

Regionally, the Early Action Project is a missing half-mile segment of trail of what will be part of the 120-mile long Schuylkill River Trail, and will provide additional access to communities and municipalities in Berks County. The alignment will continue to provide recreation, economic, transportation and community building opportunities that have already been seen in communities where the Schuylkill River Trail is already established.

In terms of **recreation**, the Early Action Project will provide a multi-use off-road trail alignment that will be ADA-accessible, providing increased walking, biking, running and nature observation and educational opportunities. The Early Action Project will provide both an active and passive recreational opportunity when there has been a tremendous increase in trail usage in the past few years.

Trails can provide great **economic** benefits which other communities that have access to the Schuylkill River Trail have experienced. In 2012, the area defined by the Schuylkill River Greenways NHA, including the proposed trail, generated \$589.9 million in economic impact, supported 6,154 jobs, and added \$37.7 million in tax revenue (TrippUmbach, 2012). The PA Land Trust Association and PA DCNR found that in completed sections of the Schuylkill River Trail, visitors spent an average of \$9.07 per day on soft goods. With the potential to continue the alignment from this section to connect to existing sections of the Schuylkill River Trail, the economic impact is only expected to grow, as the length of the trail does.



Early Action Project Benefits

After the Early Action Project was selected, a preliminary design was prepared for the half-mile new trail segment of the Schuylkill River Trail. The Early Action Trail segment is an off-road trail which is the preferred trail type for safety reasons. Off-Road trails can travel through woodlands, follow stream corridors and meander along riverbanks. This trail segment will be 12 feet wide to allow for two-way traffic.

The preliminary design included at the end of this report, complies with the Schuylkill River Trail design and standards. The design standards recommended are compliant with the following:

1. American Association of State Highway and Transportation Officials' (AASHTO) Guide for Planning, Design and Operation of Bicycle Facilities
2. ADA Accessibility Guidelines and Standards for Accessible Design
3. Federal Access Board Accessibility Guideline for Outdoor Development Areas
4. US Access Board's Public Right of Way Accessibility Guidelines (PROWAG)
5. Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD)
6. Pennsylvania and SRG Trail Design Standards
7. Pennsylvania Land Trust Association's Universal Access Trails and Shared Use Paths

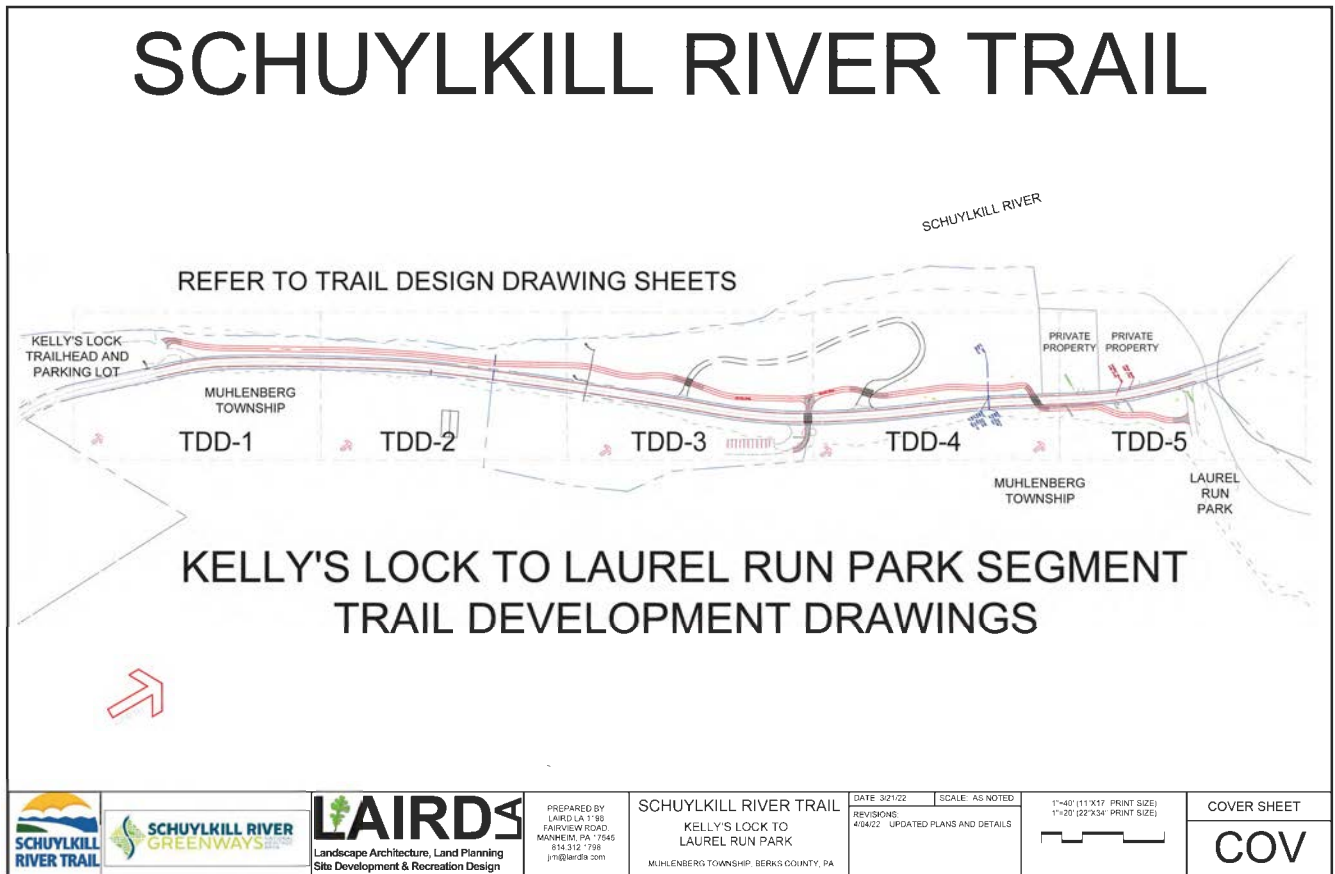
Signage for this segment of trail was included in the preliminary design and cost estimate. The proposed signage adheres to and uses the standards of the Schuylkill River Greenways NHA. Additional information on the SRT signage is included within the Schuylkill River Trail Feasibility Study for Northern Berks County.

Grant Application

As part of the Early Action Project a grant application was submitted to PA DCNR in April 2022. This effort was supported by the Township with support from the Schuylkill River Greenways NHA and the project consultant team. The grant application included a narrative section that included the benefits, needs and urgencies of the project, how it aligns with prior planning efforts, as well as the preliminary design of the Early Action Project and Cost Estimate.

Early Action Project Outcome

With the help and support of Muhlenberg Township, the Schuylkill River Greenways NHA, and the consultant team, the Township was able to secure funding for the construction of the Kelly's Lock Park to Laurel Run Trail Segment of the Schuylkill River Trail. The Township received a grant from the Pennsylvania Department of Conservation and Natural Resources from the Spring 2022 funding cycle. The Township will be providing an in-kind match for the supplies and labor needed to construct the half mile segment of trail. The project will begin in early 2023, with an anticipated completion in March of 2024.



		<p>Landscape Architecture, Land Planning Site Development & Recreation Design</p>	<p>PREPARED BY LAIRD LA 1-98 FAIRVIEW ROAD MORRISTOWN, NJ 07960 814-312-7398 p@lairds.com</p>	<p>SCHUYLKILL RIVER TRAIL</p>		<p>DATE: 9/21/22</p>	<p>SCALE: AS NOTED</p>	<p>1"=40' (11"X17" PRINT SIZE) 1"=20' (22"X34" PRINT SIZE)</p>	<p>COVER SHEET</p>
				<p>KELLY'S LOCK TO LAUREL RUN PARK</p>		<p>REVISIONS: 4/04/22 UPDATED PLANS AND DETAILS</p>		<p>COV</p>	

APPENDIX C

THE SCHUYLKILL RIVER TRAIL IN BIRDSBORO AND ROBESON TOWNSHIP

Overview

In 2022, Schuylkill River Greenways NHA, the non-profit organization responsible for the promotion, building and maintenance of major portions of the Schuylkill River Trail, and stewardship of the Schuylkill River Greenways National Heritage Area designation of the Schuylkill River, launched a three-part study of the remaining gaps of the trail in Berks County. This study, the Schuylkill River Trail Feasibility Study & Preliminary Design & Engineering includes three separately funded parts:

1. The Schuylkill River Trail From Reading to Hamburg
2. The Schuylkill River Trail in Birdsboro & Robeson Township
3. Preliminary Design & Engineering for an Early Action Project

The Birdsboro Borough and Robeson Township Trail Study revisited previous trail alignments to update or improve the proposed route of the Schuylkill River Trail between completed sections from Gibraltar to Birdsboro.

The Findings of the 3-Part Project

The findings of the project site observations and public input revealed each study area had not changed substantially since the last trail feasibility study. However, two important benefits of the current study are: 1) onsite, roadside, and aerial photography combined with new mapping tools revealed new alignment options, and 2) direct contact between the project team and the major landowners attending the public workshops and committee meetings resulted in brand new working relationships for the trail.

Specific to this project, the Birdsboro-Robeson Study eliminated the constrained options of the Exeter Township riverside route due to a pinch point, unsignalized crossings of Route 724 because of safety and the rail with trail route due to the difficulties around a rail with trail alignment. It also revealed opportunities for new advisory bicycle lanes, roadside trail route, trail easement acquisitions, and connections along historic canal routes between publicly owned land.

This report will focus on the Birdsboro Borough and Robeson Township Schuylkill River Trail Feasibility Study which was funded by DVRPC.

Goals of This Study

Goal A. Review Existing Proposed Alignments and Current Conditions

Goal B. Host a Focus Group Discussion Regarding Opportunities and Constraints

Goal C. Make Recommendations for Temporary, Alternate and Ultimate Trail Alignments

Study Area

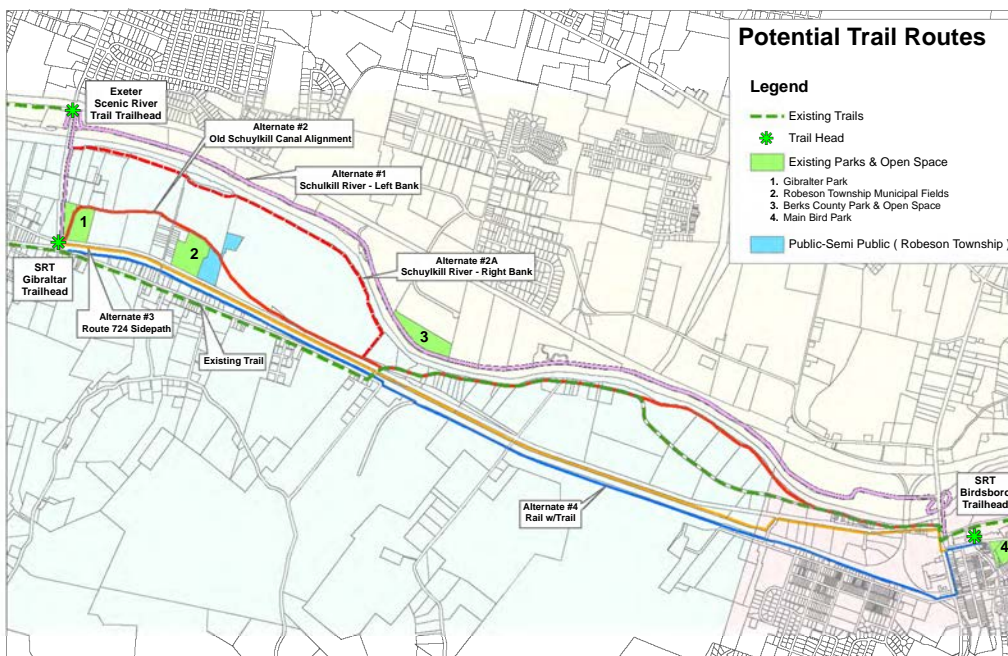
The SRG currently utilizes an on-road alignment to span the 3.7-mile gap between Gibraltar and Birdsboro. This alignment follows Old-River Rd. for 1.2 miles, before crossing an active railroad and Route 724 at an unsignalized intersection to connect to Schuylkill Rd. Schuylkill Rd. continues for 2.0 miles before again re-joining Route 724 (W Main St.) at an unsignalized intersection just north of Birdsboro. The on-road route continues for 0.2 miles on W Main St. to Route 345, briefly co-locating with Route 345 before crossing to connect with Armorcast Rd to connect to the trailhead.

The study area includes Birdsboro Borough, portions of Exeter Township, and portions of Robeson Township. Alignments proposed in 2007 were analyzed and several alternative alignments were studied and analysed to improve this on-road connection with the objective to develop a fully off-road trail experience. The Gibraltar to Birdsboro segment is a 4 mile stretch of the SRT located between Reading and Pottstown.

Birdsboro Borough is located in southeastern Berks County, along the south bank of the Schuylkill River. It is seven miles southeast of the City of Reading and the same amount northwest of Pottstown Borough.

Roughly 5,000 people call Birdsboro home with many residents benefitting from the community services of adjacent Robeson and Union Townships. The town continues to be a hub for freight rail and state roads.

Robeson Township is located immediately adjacent to Birdsboro, still on the south bank of the river. Nearly 7,400 people live in the Township known for its woodland habitat, proximity to nature preserves—Birdsboro Preserve and Hopewell Big Woods/French Creek State Park, and north-south transportation routes of Route 476 and Route 724 and freight rail. The residents of Robeson have access to miles and miles of hiking trails, preserved natural beauty, and three Exceptional Value streams.



Map of alternative alignments

Birdsboro's Roots

Birdsboro was a major force in America's iron and steel industries from the mid 18th century through World War II. William Bird built the first iron forge in the area near the confluence of Hay Creek and the Schuylkill River in 1740. It soon became one of the most important ironworks in the colonies. Throughout the 1800's, Bird's sons and later Matthew Brooke and his sons built the business into a leading national supplier of armaments, plowshares, stoves and other iron products.

In the late 19th and early 20th centuries, the company transitioned into steel under the name of Birdsboro Steel Foundry and Machine Company, which was later called the Birdsboro Corporation. In 1944, the U.S. Navy built the huge Armorcast tank facility in Birdsboro, which the company ran and subsequently acquired.

In addition to being known for iron and steel, Birdsboro gained prominence in the 1800's from its location along the Schuylkill River becoming a transportation hub. During the 19th and early 20th centuries, the Girard Canal section of the Schuylkill Navigation system passed through the Borough. At nearly 22 miles, the Girard Canal was the longest continuous canal segment in this waterway transport system, which stretched from the coal fields of Schuylkill County to Philadelphia. Railroads and a trolley line crisscrossed in Birdsboro and at one point there were four railroad stations for Birdsboro.

After a long successful history, steelmaking shut down in Birdsboro during the 1980's in the face

of cheaper foreign competition and a long labor strike. Today, with a population of 5,141 Birdsboro is a classic small town reinventing itself. The Borough offers many amenities and points of interest for trail users, including a new trailhead, restaurants, convenience store and gas station, parks and historic sites.

Robeson Township's Roots

Robeson Township, Berks County, Pennsylvania was established in 1729, named for either Andrew Robeson, Jr. or his son Israel Robeson. Andrew Robeson, Jr. bought 600 acres of land in 1716 in what would become Robeson Township. He never lived on this land, but his son Israel did.

In the 1700s Robeson Township was home to early European settlers and native indigenous people who lived peacefully among each other. The early settlers were starting their forges and mills along the many creeks of the township and became very prosperous.

In the 1800s came the Schuylkill Canal, Philadelphia & Reading Railroad and the Pennsylvania Railroad through the northern portion of the township. With them came major changes in the township. Industry became much larger due to the fact that they now had upgraded transportation to ship their products to Reading, Philadelphia, New York or elsewhere. They no longer had to rely on very crude road paths. With more industry came more residents and many one-room schools, churches and hotels were built for the increased population. In 1845 there was a plan to divide

the Township in half. The southern half would have been renamed Hay Creek Township, but on March 7, 1846, the proposal was rejected.

The early 1900s brought the Birdsboro Trolley through the northern portion of the township that ran from Birdsboro to Reading. The demise of the early forges and mills were continuing. By the mid-1900s became the demise of the Schuylkill Canal and the Birdsboro Trolley line. The late 1900s brought in many housing developments just about everywhere in the township where there was a farm or open land.

The Trail segment ends in the crossroads village of Gibraltar (originally named Seideltown) after an early Swedish emigrant that operated an early forge in the area.

Today Robeson Township has a population of 7,601. Along the trail route are amenities and points of interest for trail users, including a trailhead, parks, and a gas-convenience store in Gibraltar. Historic sites along the trail route include canal remnants, remains of an aqueduct over Indian Corn Creek and a large number of early stone homes and barns along Schuylkill Road.

Proposed Alignment for Gibraltar to Birdsboro

Birdsboro – Robeson Segment – 3.9 Miles (Off-Road – 1 mile/ On-Route – 0.6 miles/On-Road- 2.3 miles)

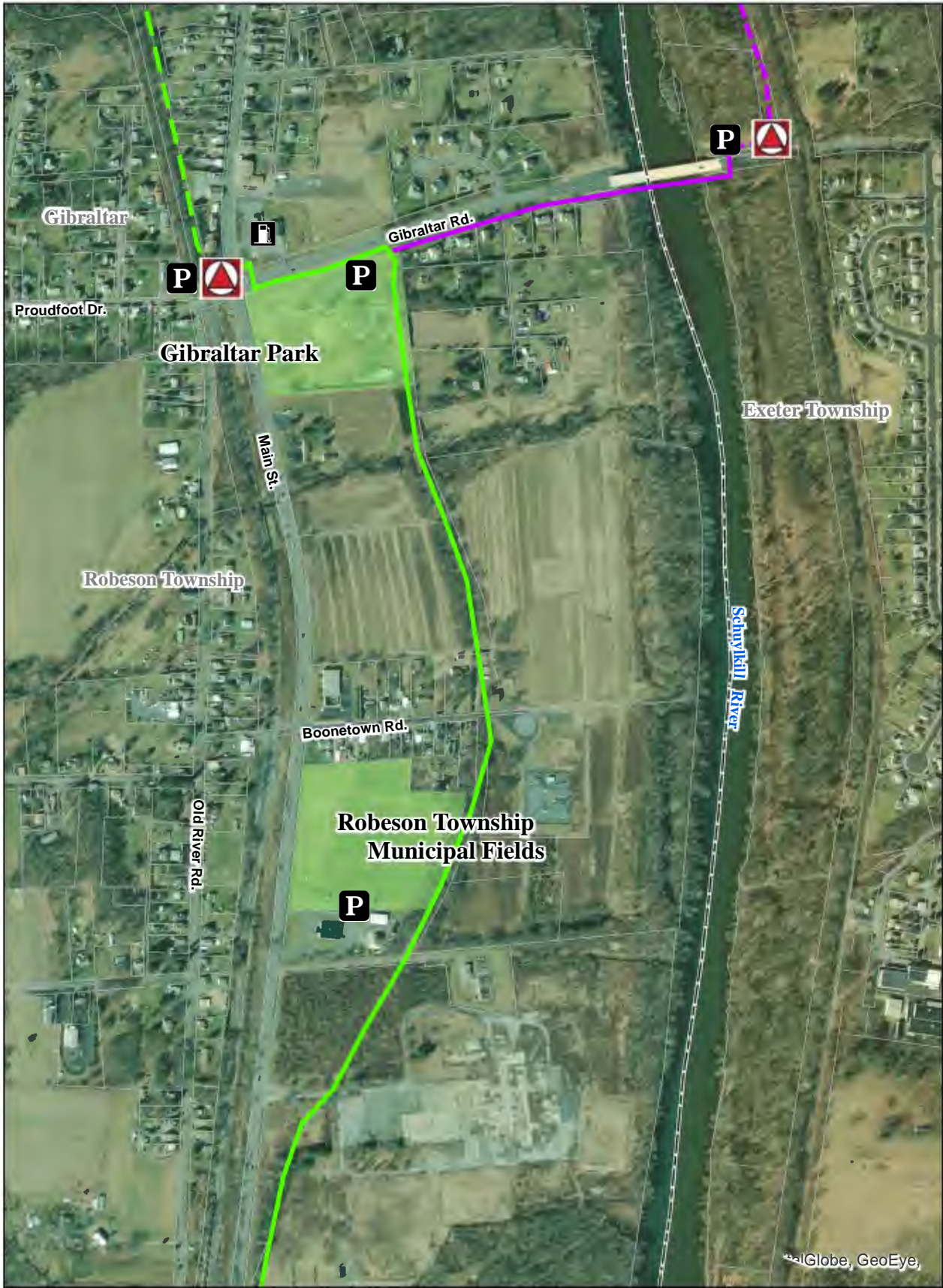
The Birdsboro – Robeson segment begins in the Village of Gibraltar in Robeson Township at the Gibraltar Trailhead for the Schuylkill River Trail.

From the trailhead, the trail is an On-Route Trail along Gibraltar Road to Gibraltar Park utilizing the signalized intersection to cross Route 724. Another On-Route Trail connection continuing along Gibraltar Road to the Exeter Scenic River Trail trailhead. At Gibraltar Park the trail becomes an Off-Road Trail following the old canal bed until it reconnects with Route 724. From here the trail becomes an On-Route Trail for a short distance until it meets with Schuylkill Road. The proposed route then follows Schuylkill Road as an On-Road Trail to and through Birdsboro until connecting with the existing Off-Road Trail at Armorcast Road.

ABOUT ON-ROAD & OFF-ROAD TRAIL ALIGNMENTS










The Schuylkill River Trail will be an off-road trail wherever possible. When an off-road route is not available, typically because property rights cannot be obtained or physical barriers interrupt the preferred alignment, short sections of the SRT will use on-road routes until an off-road segment can be identified and developed. Where on-road trail options are proposed how can the project team provide a safe and comfortable experience for the user. Below is an example of an off-road trail alignment.






 0 200 400 800 Feet
 Mapping derived from data provided by Berks County, PASDA, ESRI.

Urban Research & Development Corporation
 81 Highland Ave. • Bethlehem, PA 18017 • 610-865-0701

 Existing Schuylkill River Trail (SRT)	 Trailhead or Access	2022 Schuylkill Trail Project Birdsboro Trail Segment Map Berks County, Pennsylvania Sheet 3 of 3
 Proposed Off-Road SRT	 Parking	
 Proposed On-Road SRT	 Restaurant	
 Existing Connector Trail	 Gasoline/ Convenience Store	
 Proposed Connector Trail		

Note: Alignments will be revised as needed to address property owner concerns.

Proposed Trail Corridor Recommendations

Starting at the Gibraltar Trailhead, the trail would be an On-Route crushed stone trail to the signalized intersection at Route 724. The trail would use the signalized intersection to cross Route 724 and Gibraltar Road/Old River Road to reach Gibraltar Park. The intersection of Route 724 and Gibraltar Road is already signalized with pedestrian push buttons, crosswalks and ADA accessible curb ramps. It is recommended the traffic signal be upgraded to include pedestrian countdown signals which show how much time you have remaining to cross. Timing of pedestrian crossing should be evaluated and adjusted to assure adequate crossing time. ADA ramps should be widened and wayfinding signs should be installed to direct trail users from the trailhead on the southwest corner to Gibraltar Park on the northeast corner.

Once across 724, the SRT On-Route Trail would be a crushed stone trail with a buffer running along the east side of Gibraltar Road and west side of Gibraltar Park. The alignment could either be within the park or along the outside of the park fence using the drainage swale as a buffer from the road. This alignment would continue along the park to the northern edge of Gibraltar Park where it meets the former canal bed.

To link with the Exeter Scenic River Trail, an On-Road Trail could continue along Gibraltar Road using the wide shoulder. Once across the bridge over the Schuylkill River, the trail would connect to the Exeter Scenic River Trail trailhead by looping under the bridge.

At the former canal on the northern edge of Gibraltar Park, the SRT would turn east away from Gibraltar Road to become an Off-Road Trail for 5,100 LF. The Off-Road Trail would be crushed stone and follow the former canal bed eastward until it reconnected with Route 724. The trail would cross two roads, an access drive to the Township's wastewater treatment plant and Boonetown Road. Both crossings would require safety improvements including ADA access ramps, crosswalks, signage, and safety gates. A small bridge is anticipated for the trail where it crosses Seidel Creek. Easements and/or rights-of-way would need to be required. This alignment will connect both the Robeson Township Recreation Fields and Gibraltar Park. Parking and seasonal portable toilets are located at both parks. (There are two potential alternatives to this alignment along the historic canal corridor. One would be to continue the On-Route Trail along 724 and the other would follow the riverbank instead of the canal corridor.)

As the trail approaches Route 724 it will switch from an Off-Road Trail to an On-Route Trail with the trail surface remaining crushed stone. This On-Route portion will continue south for 2,400 lineal feet paralleling Route 724. Here the SRT would have a 10 ft buffer strip with street trees between the edge of the shoulder and trail. Before reaching the former canal the trail would cross an unnamed tributary of the Schuylkill River. It is anticipated the crossing of this tributary could be made with a culvert. Easements and/or rights-of-way would need to be acquired along Route 724 from two property owners. This alignment however eliminates the



Mapping derived from data provided by Berks County, PASDA, ESRI.

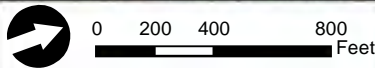
Urban Research & Development Corporation
 81 Highland Ave. • Bethlehem, PA 18017 • 610-865-0701
 URDC

- Existing Schuylkill River Trail (SRT)
- Proposed Off-Road SRT
- Proposed On-Road SRT
- Existing Connector Trail
- Proposed Connector Trail
- Trailhead or Access
- Parking
- Restaurant
- Gasoline/ Convenience Store

2022 Schuylkill Trail Project
Birdsboro Trail Segment Map

Berks County, Pennsylvania
Sheet 2 of 3

Note: Alignments will be revised as needed to address property owner concerns.



Mapping derived from data provided by Berks County, PASDA, ESRI.

Urban Research & Development Corporation
 81 Highland Ave. • Bethlehem, PA 18017 • 610-865-0701
 URDC

- Existing Schuylkill River Trail (SRT)
- Proposed Off-Road SRT
- Proposed On-Road SRT
- Existing Connector Trail
- Proposed Connector Trail
- Trailhead or Access
- Parking
- Restaurant
- Gasoline/ Convenience Store

2022 Schuylkill Trail Project
Birdsboro Trail Segment Map

Berks County, Pennsylvania
Sheet 1 of 3

Note: Alignments will be revised as needed to address property owner concerns.

dangerous crossing of Route 724 that currently exists.

The SRT would then turn right onto Schuylkill Road becoming an On-Road Trail and following this scenic road westward until it reconnects with Route 724 (Main Street) in Birdsboro. Schuylkill Road has very little traffic and a low posted speed limit of 35 MPH. The road surface would be painted with Advisory Bicycle Lanes for 10,680 lineal feet and signage would be installed. This would act as a traffic calming measure visually narrowing the road for motorists while designating safe places for trail users.

The trail would continue east as an On-Road Trail along Route 724 to Furnace Street using the wide shoulder along the north side, crossing under the railroad viaduct to Furnace Street. It is proposed that a 12 ft wide area of the shoulder be colorized to denote the trail.

At Furnace Street, trail users would cross using the signalized intersection at Main Street (Route 724) and Furnace Street (Route 345) to a short stretch of existing sidewalk connecting Armorcast Road. Utilizing the existing pedestrian crossing and push buttons, trail users would cross West Main Street and then Furnace Street arriving at the northwest corner of the intersection. Crosswalks at this intersection are worn and need to be restriped. Timing of pedestrian crossing should be evaluated and adjusted to assure adequate crossing time.

The trail would continue along Armorcast Road to where the existing off-road SRT ends. This segment would begin an On-Road Trail and use the existing sidewalk along the south side for pedestrians and Advisory Bicycle Lanes for bicycles. Advisory Bicycle Lanes would be colorized on the road surface for 1500 LF along Armorcast Road. Near the intersection of the road that leads to the trailhead, 120 LF of curb and sidewalk and ADA curb ramps on Armorcast Road would be installed. The road leading to the trailhead would receive 300 LF of Advisory Bicycle Lanes.