2025

HAZELWOOD TO CARRIE FURNACE TRAIL SEGMENT THREE RIVERS HERITAGE TRAIL

FEASIBILITY STUDY

City of Pittsburgh, Swissvale Borough, Rankin Borough, Allegheny County, PA

friends OF THE RIVERFRONT
three rivers heritage trail | three rivers water trail

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ACKNOWLEDGMENTS

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TABLE OF CONTENTS

INDEX OF FIGURES, IMAGES, MAPS & TABLES

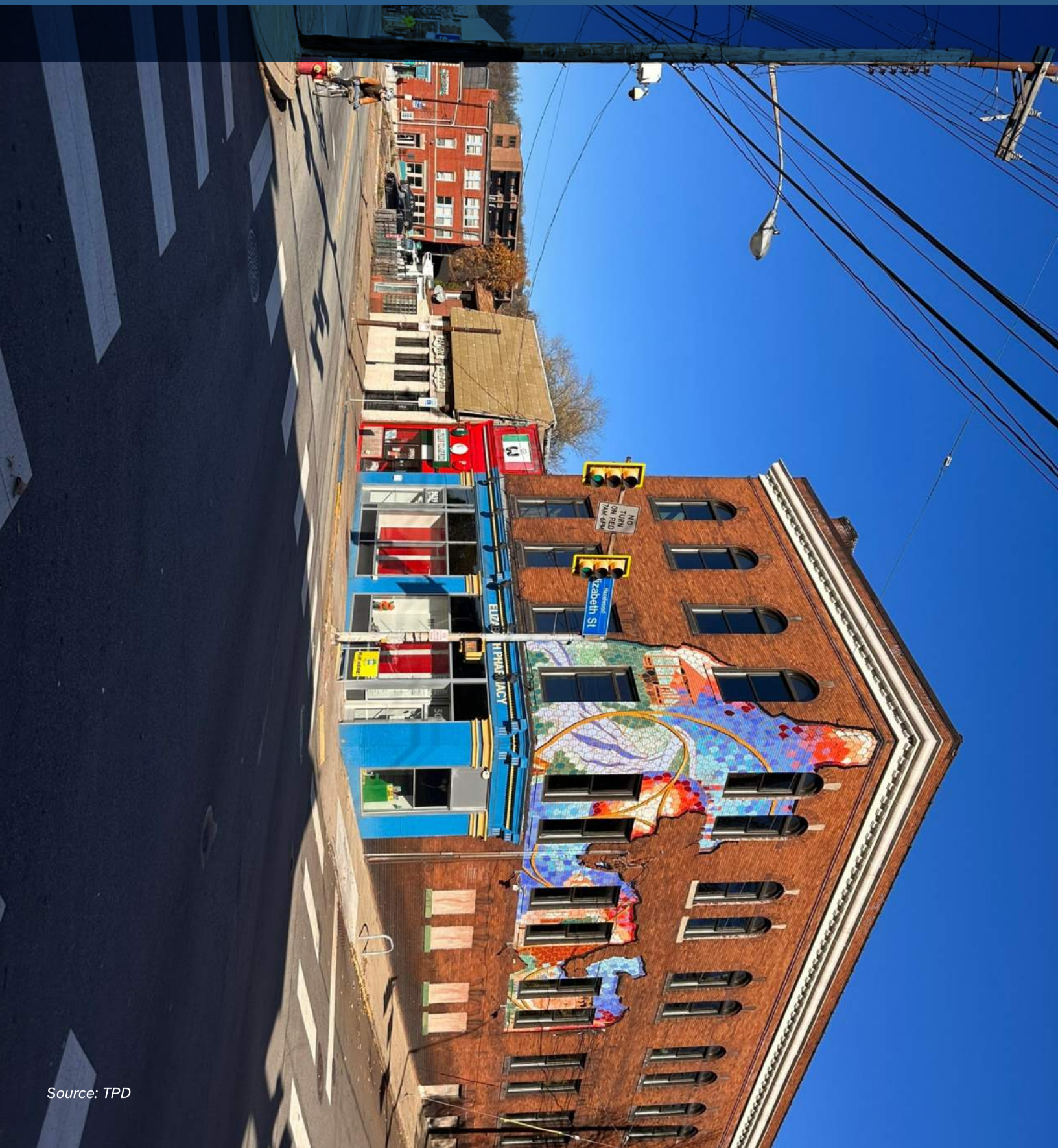
FIGURES

TABLES

IMAGES

MAPS

EXECUTIVE SUMMARY



Source: TPD

EXECUTIVE SUMMARY

The proposed Hazelwood to Carrie Furnace Trail Segment will extend the existing Three Rivers Heritage Trail from Hazelwood in the City of Pittsburgh to Carrie Furnace in the Borough of Rankin, Allegheny County, Pennsylvania. It will establish a safe and accessible route for walking and biking, and will serve both transportation and recreational users along a historic riverfront corridor.

In addition, this trail segment will be a part of the Three Rivers Heritage Trail Network and will provide connections to the Great Allegheny Passage, the future Turtle Creek Connector Trail, Westmoreland Heritage Trail and more.

The purpose of the trail is as follows:

- Connect communities by expanding transportation options for people by linking under served neighborhoods with a new multi-modal facility
- Establish safe and accessible route by utilizing off street trail network or low volume streets.
- Become a community asset for residents and visitors by providing recreational and commuting opportunities in a regional network.

The Hazelwood to Carrie Furnace Trail Segment Feasibility Study investigates the existing conditions of the area, evaluates different trail alignment alternatives to identify opportunities and constraints, provides a thorough planning-level cost estimate, and proposes effective strategies for the future phases and the completion of the new trail connection. The trail corridor is shown in Map 1.

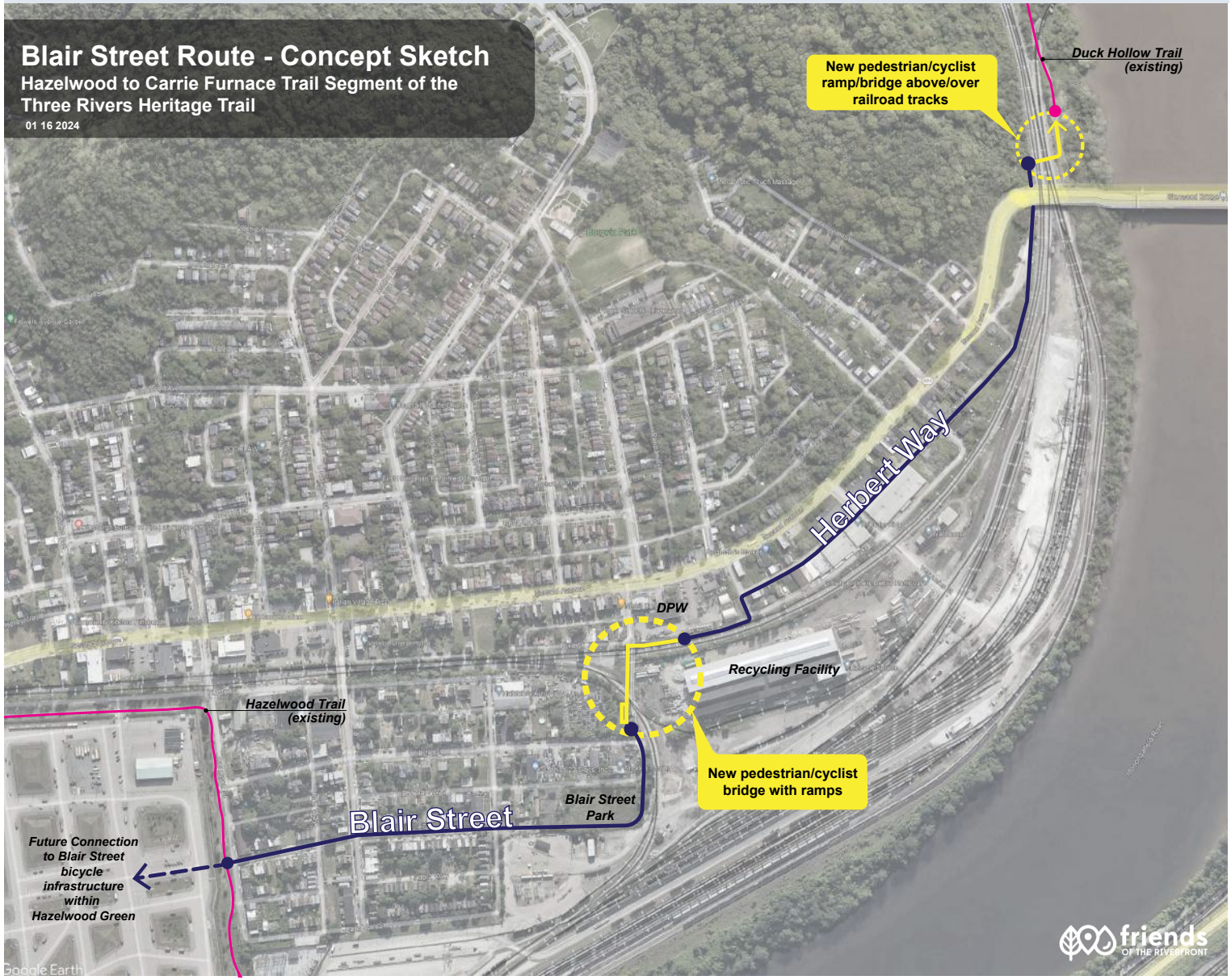
RECOMMENDED ROUTE

The purpose of this project is to determine the optimal route for extending the Three Rivers Heritage Trail (TRHT) from the Hazelwood neighborhood in the City of Pittsburgh to the Carrie Furnace redevelopment site in Rankin where companion trail projects are planned to continue the trail. The trail includes three distinct sections:

1. **Hazelwood to the Glenwood Bridge** – The route will utilize the existing street network through the Hazelwood community as well as the Blair Street Park. It is approximately 1.0 mile of trail and includes a bridge to cross the CSX railroad at Melanchton Street.
2. **Glenwood Bridge to Duck Hollow** – The trail exists for much of this area but lacks a formal railroad crossing at the Glenwood Bridge. The section is approximately 1.5 miles long. The required bridge over the CSX railroad is planned just east of the Glenwood Bridge. On the existing trail section, drainage improvements will be completed.
3. **Duck Hollow to Carrie Furnace** – This section exists as an unimproved path. The existing Second Avenue Bridge over Nine Mile Run will connect the existing Duck Hollow Trail and parking to an improved trail connection to Carrie Furnace. This section of trail is approximately 1.5 miles long.

Map 1. Route Overview and Regional Connections

Map 2. Recommended Route in Hazelwood



From Hazelwood to the Glenwood Bridge, the project team examined and evaluated multiple trail alignments. Through the neighborhood, four possible alternative routes for the new trail connection were considered.

The preferred route was selected based on a comprehensive methodology, which incorporated community feedback, technical assessments, input from the study's steering committee (consisting of local government and community representatives and interactions with property owners along the proposed trail corridor). This comprehensive approach helps ensure that the chosen route aligns with the needs and desires of the community while addressing practical considerations and potential challenges.

The steering committee has been instrumental in determining the preferred alignment for the project. Through the neighborhood of Hazelwood, the Blair Street Route was selected as the recommended route due to its connectivity to the trail infrastructure along Blair Street within Hazelwood Green, the opportunity for improving access to Blair Street Park, easier navigation including wayfinding for trail users, and lower adjacent roadway traffic volumes.

This route, shown on Map 2, will begin at the existing Hazelwood trail segment on Tecumseh Street and will run on-street along Blair Street through Blair Street Park to Melanchton Street. The existing Melanchton Street pedestrian bridge will be replaced to provide an accessible crossing over the CSX right-of-way. The trail will then run within the City owned Department of Public Works (DPW) site to connect to Herbert Way where it will continue on-street to the intersection with Sickle Street. Gateway improvements are proposed along Sickle Street with the construction of a new trail bridge over the existing CSX right of way east of the Glenwood Bridge to connect to the current terminus of the Duck Hollow Trail. Trail maintenance and safety improvements are recommended along the existing Duck Hollow trail segment between the Glenwood Bridge and the Duck Hollow Trailhead at Nine Mile Run.

A new trail segment will be built to connect the Duck Hollow Trailhead at Nine Mile Run to the Carrie Furnace redevelopment site. This improved trail will utilize the existing Braddocksfield Plank Road right-of-way, run between the existing CSX railroad tracks and the Monongahela River, then continue between the two railroads on Braddocksfield Plank Road to the underpass at the Carrie Furnace Boulevard cul-de-sac in Rankin Borough. Separate coordination is ongoing between Allegheny County and Rivers of Steel regarding the planned route for connecting the trail through the Carrie Furnace site to the Rankin Hot Metal Bridge over the Monongahela River to the Great Allegheny Passage (GAP).

COMMUNITY & STAKEHOLDER ENGAGEMENT

Throughout the project's duration, the steering committee convened eight times to offer guidance by reviewing and providing feedback on relevant data, community engagement efforts, alignment recommendations, and implementation strategies. Additionally, Friends of the Riverfront and the TPD team met with study area property owners (including CSX, Duquesne Light Company and the City of Pittsburgh) to present an overview of the study, existing conditions, route alternatives, evaluation methodology, and recommendations for typical cross sections, bridge crossings, and access points / trailhead locations.

Figure 1. Survey Response Quotes

In an effort to gather valuable insights and feedback from the community, three public engagement meetings were held over the course of the project, two online public outreach efforts in Fall 2023 and the team staffed an informational booth at the Rankin Community Days event. During this period, the survey successfully engaged a diverse range of participants, with 325 individuals actively contributing their perspectives and opinions. These responses provide a snapshot of community sentiment, offering invaluable input that has informed and enriched the project decision making process. A sample of survey comments received are shown in Figure 1.

IMPLEMENTATION HIGHLIGHTS

Developing a successful trail connection project is a complex process that depends on a cohesive and unwavering partnership involving diverse stakeholders within the community. Key participants in this collaborative effort include those shown in Figure 2. Each of these entities plays a crucial role in contributing their expertise, resources, and support to ensure the project's success and long term sustainability.

Chapter 6 further outlines implementation considerations including:

- A summary of available funding sources encompassing PennDOT and Allegheny County funding opportunities, federal grant opportunities, potential public-private partnerships to leverage grants, and volunteer support for the trail connection's completion.
- Identification of key partners and their roles, including municipal staff, elected officials, the Friends of the Riverfront staff, regional and state partners, City of Pittsburgh, PennDOT, Allegheny County, private sector collaborators, and community advocacy organizations.

Figure 2. Key Implementation Partners

Table 1. Summary of Costs

Location	Cost
Section #1 Hazelwood to Glenwood Bridge (1.0 Mile)	
Total Estimate for Construction	$10,775,872.00
Total for Survey and Engineering	$2,203,822.52
Total for Utility Relocation - Estimated Cost	$16,900.00
Est. Project Cost (Including Utility Poles, Engineering, and Inspection)	$12,996,594.12
Section #2 Glenwood Bridge to Duck Hollow (1.5 Mile)	
Total Estimate for Construction	$11,624,139.09
Total for Survey and Engineering	$2,097,143.30
Total for Utility Relocation - Estimated Cost	$60,000.00
Est. Project Cost (Including Utility Poles, Engineering, and Inspection)	$13,781,282.39
Section #3 Duck Hollow to Carrie Furnace (1.5 Mile)	
Total Estimate for Construction	$2,589,657.85
Total for Survey and Engineering	$1,018,690.51
Total for Utility Relocation - Estimated Cost	-
Est. Project Cost (Including Utility Poles, Engineering, and Inspection)	$3,608,348.37
Overall	
Total Estimate for Construction	$24,989,668.54
Total for Survey and Engineering	$5,319,656.34
Total for Utility Relocation - Estimated Cost	$76,900.00
Est. Project Cost (Including Utility Poles, Engineering, and Inspection)	$30,386,224.88

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INTRODUCTION

Source: Katie Kovalchik

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INTRODUCTION

OVERVIEW & STUDY GOALS

This project will focus on the projected four miles of new trail that will connect Hazelwood to Duck Hollow and Duck Hollow to Carrie Furnace. The purpose of this project is to determine the optimal route for extending the Three Rivers Heritage Trail (TRHT) from the Hazelwood neighborhood in the City of Pittsburgh to the Carrie Furnace redevelopment site in Rankin Borough where companion trail projects will expand the trail network. The trail includes three distinct sections:

- Hazelwood Green to the Glenwood Bridge – The route will utilize the existing street network through the Hazelwood community.
- Glenwood Bridge to Duck Hollow – The trail exists in much of this area but lacks a railroad crossing at the Glenwood Bridge.
- Duck Hollow to Carrie Furnace – This section exists as an unimproved path. The existing Second Avenue Bridge over Nine Mile Run will connect the existing Duck Hollow trail segment to an improved trail connection to Carrie Furnace.

This project is a collaboration between Friends of The Riverfront, Allegheny County and the City of Pittsburgh. Friends of the Riverfront's mission is to **"build safe, clean, and accessible riverfront trails as part of the Three Rivers Heritage & Water Trail systems and to create and maintain an outstanding experience for trail users while providing economic, environmental, and health benefits to the Pittsburgh region."** They carry out this mission through projects such as this and by maintaining the 35 miles of riverfront trail identified as the Three Rivers Heritage Trail.

Allegheny County is the property owner of the Carrie Furnace redevelopment site and lands in Swissvale and Rankin where the trail will traverse. Friends of the Riverfront received a grant from the Allegheny County Redevelopment Authority Trail Fund to complete this feasibility study and preliminary engineering for the trail connection.

The trail exists through parts of the City's portion, but critical gaps exist. It is anticipated that in the Hazelwood neighborhood, the trail will be an on-street facility since the lands are developed. Additionally, its anticipated that the City will own the trail bridges that are proposed within the city limits.

Friends of the Riverfront (Friends) has a longstanding working relationship with local and regional partners in Allegheny County to extend the TRHT along the three rivers. In 2001, the Duck Hollow segment of the TRHT was completed by Friends in partnership with the City of Pittsburgh. Since that time, that segment of the trail has remained disconnected from the Hazelwood neighborhood in the City of Pittsburgh, Swissvale, Rankin, and Braddock communities. Between the Glenwood Bridge and Duck Hollow the TRHT is a paved trail but ends at the CSX and AVRR railroad tracks with no connection into the Hazelwood neighborhood. From the old Second Avenue Bridge in Duck Hollow to Carrie Furnace, the trail is unimproved, but well used. It lacks an official and clear connection into the Carrie Furnace site due to the CSX Railroad. However, there are two railroad underpasses that could provide access into the site. A third existing underpass would allow a connection into the Swissvale and Rankin communities. The key challenge that has hindered the development of this connection is uncertain property ownership and the adjacent railroad. Within the City, there is an acknowledged 33-foot-wide roadway easement remaining on the CSX property, however, no defined location exists. It is intended that the trail will occupy this space, and coordination and agreements are ongoing with the CSX Railroad.

The goals of the project include:

CONNECTING COMMUNITIES: The proposed trail will connect the Hazelwood community to the Swissvale/ Rankin communities. Existing and planned trail extensions at both ends of this connection further enhance the mobility of these communities. By increasing mobility options, the project elevates the need of those most disadvantaged by our transportation system. It increases equity by providing a facility for people who do not or cannot own a car by enhancing access to school, work, places of worship, shopping destinations, parks and community centers.

ECONOMIC GROWTH AND REVITALIZATION: Creating a connection between the development sites of Hazelwood Green and Carrie Furnace by completing gaps in the TRHT will provide greater access for neighbors to reach job centers, neighborhood amenities such as cafes, restaurants, and shopping destinations. By encouraging foot traffic to the neighborhood business districts, this trail connection has the potential to be a catalyst for the growth of the local businesses that make up the core of the neighboring communities.

PROJECT GOALS

CONNECTING COMMUNITIES

Promoting Economic Growth & Revitalization

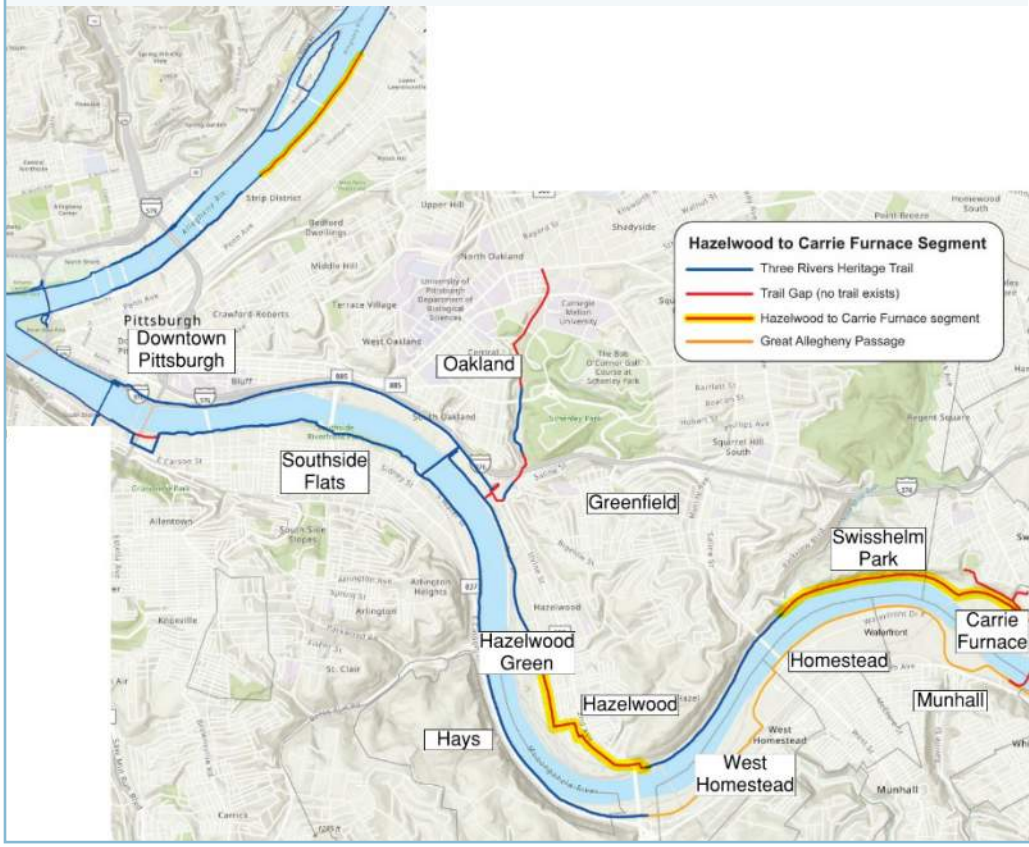


Figure 3. Project Goals

OUTCOMES

A feasibility study yields several specific outcomes, including:

ASSESS BEST ROUTE: Determine the best route and facility types to provide a connection between Hazelwood and Carrie Furnace.

BUILD STAKEHOLDER CONSENSUS: Engage with project stakeholders to develop study recommendations and establish ongoing relationships crucial for the project's progression into the design phase.

ESTIMATE PROJECT COSTS: Through analysis, develop anticipated costs associated with designing and constructing the recommended facility.

PLAN OF ACTION: Based on informed assessments, the study will provide recommendations for preferred route alternatives and outlines a range of potential implementation strategies and funding sources to guide the project's progression.

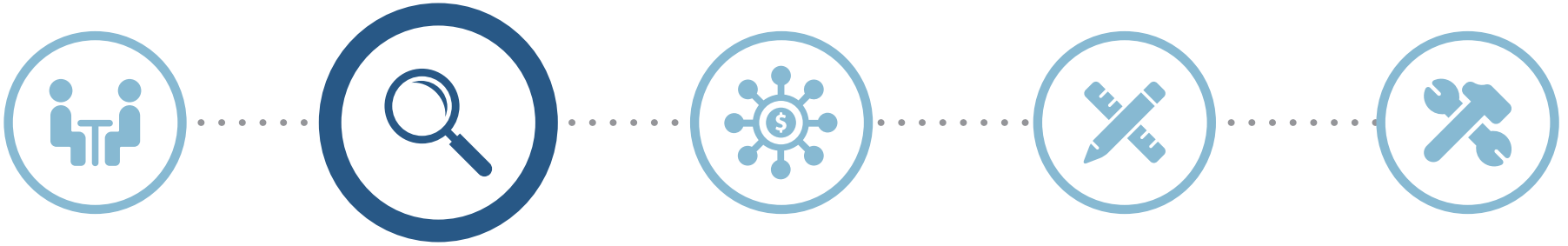
WHAT IS A FEASIBILITY STUDY?

A feasibility study is a technical analysis aimed at assessing the physical and environmental constraints that may affect the construction or enhancement of the investigated facility. A feasibility study is a pivotal point in infrastructure development, particularly for projects like multiuse trails or sidewalks. It serves to pinpoint significant project risks requiring further investigation before finalizing scope and cost estimates. These studies play a crucial role in bridging the gap between initial planning and subsequent stages of prioritization, programming, design and ultimately construction. Equipped with the insights gleaned from such studies, local authorities and their collaborators can effectively identify funding sources, secure necessary permissions, and progress towards finalizing the design and initiating construction.

Key components of a comprehensive feasibility study include:

- Gathering input from local stakeholders and community members
- Assessing environmental features (e.g. wetlands, threatened and endangered species, waterways)
- Evaluating physical constraints (e.g. steep slopes, buildings, and private property impacts)
- Determining right-of-way availability and needs
- Considering utilities and railroad lines

Figure 4. Key Multimodal Transportation Project Steps



PROCESS & SCHEDULE

This project is built upon stakeholder engagement and an analysis of existing conditions, leading to the formulation of route alternatives and recommendations. Initiated in May 2023, the study was led by a project Steering Committee comprised of individuals with local expertise. This committee played a pivotal role, providing consultation at crucial junctures throughout the project timeline.

The process for conducting a multimodal trail feasibility study involves several key steps to assess the viability and potential impact of implementing a new recreational and transportation facility. Initially, the study begins with a kickoff meeting and an analysis of existing conditions.

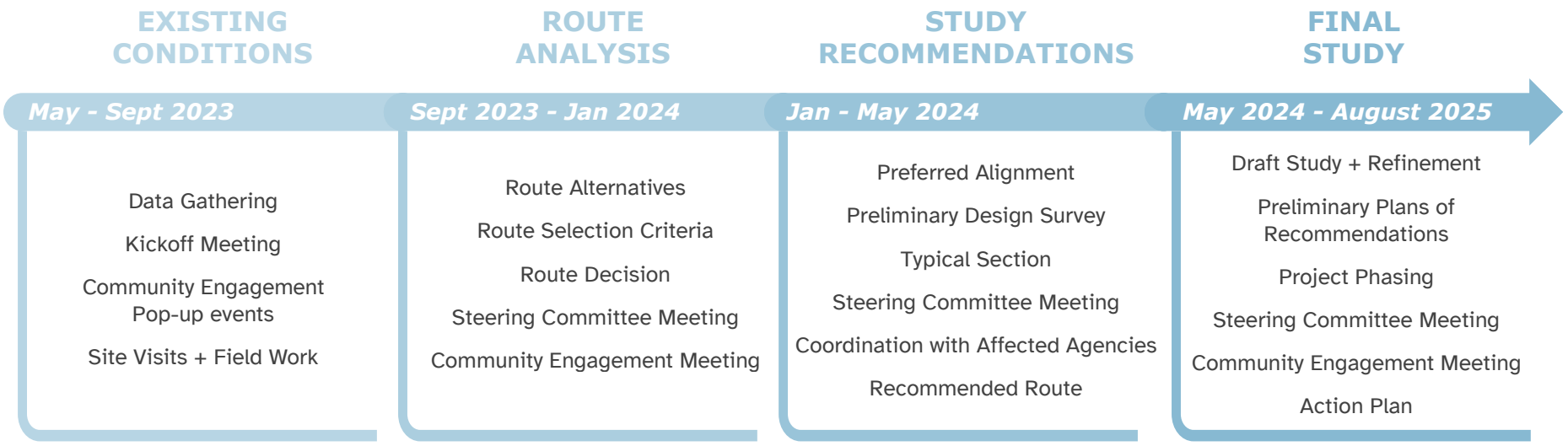
Following this, route analysis takes center stage involving the identification of route alternatives, the establishment of route selection criteria, and the organization of stakeholder meetings to gather feedback.

Based on these analyses, study recommendations are formulated, including the identification of a recommended route, design considerations, and ongoing stakeholder engagement to ensure the project continues to align with community needs and preferences.

Finally, the study concludes with the development of a final report, which includes project phasing, a draft study, refinement based on feedback, and potential avenues for implementation. Throughout this comprehensive process, collaboration with stakeholders and rigorous analysis are essential to ensure the feasibility and success of the proposed trail project. This study process was divided into the following four phases:

- Existing Conditions
- Route Analysis
- Study Recommendations
- Final Study

Figure 5. Project Process & Schedule

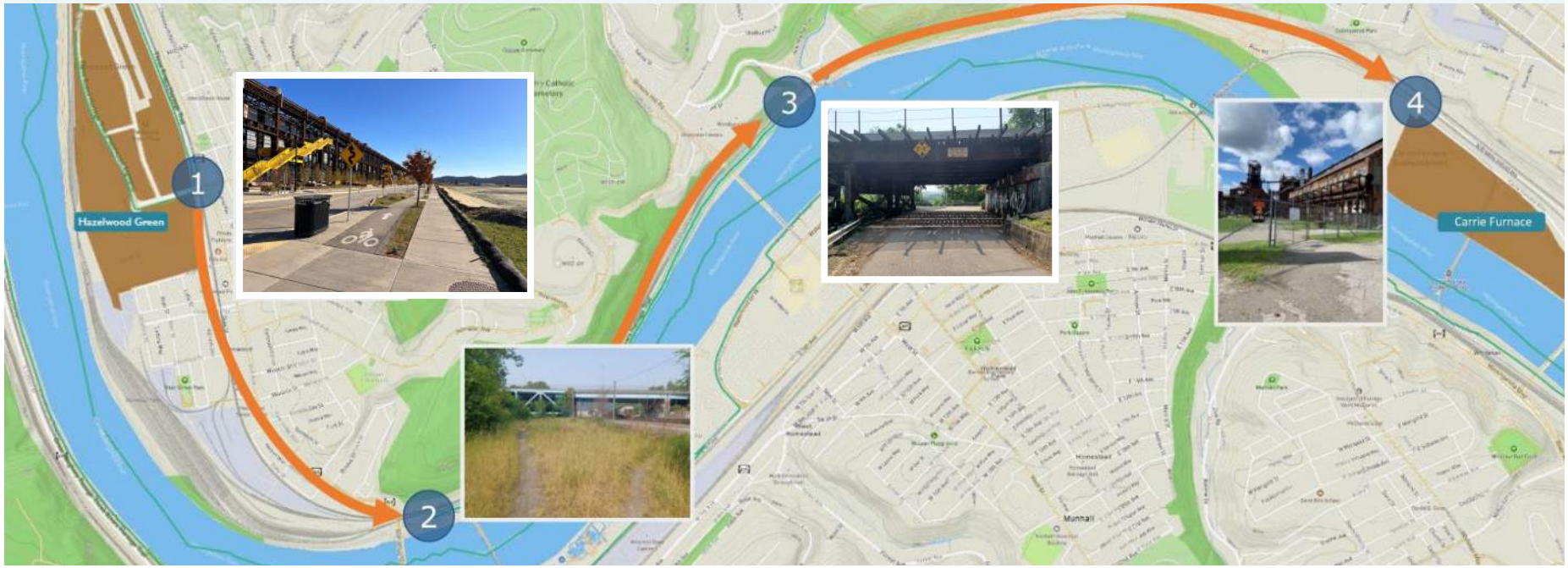


BACKGROUND & SITE HISTORY

There are extensive planning documents related to Hazelwood, Hazelwood Green, and the Second Avenue corridor which form the basis for the development of the Hazelwood to Carrie Furnace Trail Segement Feasibility Study. The Southwest Pennsylvania Commission (SPC)'s *State Route 885 / Second Avenue Multimodal Corridor Study* identified the Hazelwood Trail Expansion as a bicycle / pedestrian improvement in their final plan that would connect the Duck Hollow Trail to Blair Street / Hazelwood Trail through the Hazelwood neighborhood, specifically noting a connection from the Glenwood Bridge to the Duck Hollow trail segment. Friends of the Riverfront's continued focus on the importance of connecting Hazelwood to the Carrie Furnace redevelopment through Duck Hollow, along with strong community and stakeholder support, has further emphasized the priority of this project.

In Fall of 2022, Friends of the Riverfront secured funding from the Redevelopment Authority of Allegheny County's (RAAC) Trail Development Fund to investigate the feasibility and next steps in connecting the communities in the Mon Valley to Hazelwood via the Three Rivers Heritage Trail.

Map 3. Project Study Area



PREVIOUS PLANS & EXISTING POLICIES REVIEW

Existing relevant plan documents previously completed were reviewed to understand community needs and desires. This allows the current project to build upon project ideas that were identified during past planning activities while ensuring the community that past work was not abandoned. The appendix provides the full review of relevant plans. The plans reviewed as a part of this feasibility study are the following:

- Remaking Hazelwood (2009)
- Mon Valley Places: A Study of Transit Oriented Development opportunities in the Lower Monongahela River Valley region of Allegheny County (2014)
- Three Rivers Heritage Trail User Survey and Economic Impact Analysis (2014)
- Greenways for Pittsburgh Policy Guide (2017)
- Mon-Oakland Mobility Plan (2018)
- Greater Hazelwood Neighborhood Plan (2019)
- State Route 885/Second Avenue Multimodal Corridor Study (2019)
- Hazelwood Green Long Range Transportation Plan (2019)
- Our Money Our Solutions Pittsburghers for Public Transit (2019)
- City of Pittsburgh Bike(+) Master Plan (2020)
- NEXTransit 25-Year Long-Range Transportation Plan (2021)
- Pittsburgh Regional Transit (PRT) 2023-2028 Strategic Plan (2022)
- Hazelwood Green Preliminary Land Development Plan (2022)
- Hazelwood Riverfront Master Plan (2022)
- Carrie Furnace Redevelopment Interpretative Plan (2023)
- Turtle Creek Connector Trail Feasibility Study (2023)
- Three Rivers Heritage Trail Economic Impact Study (2024)

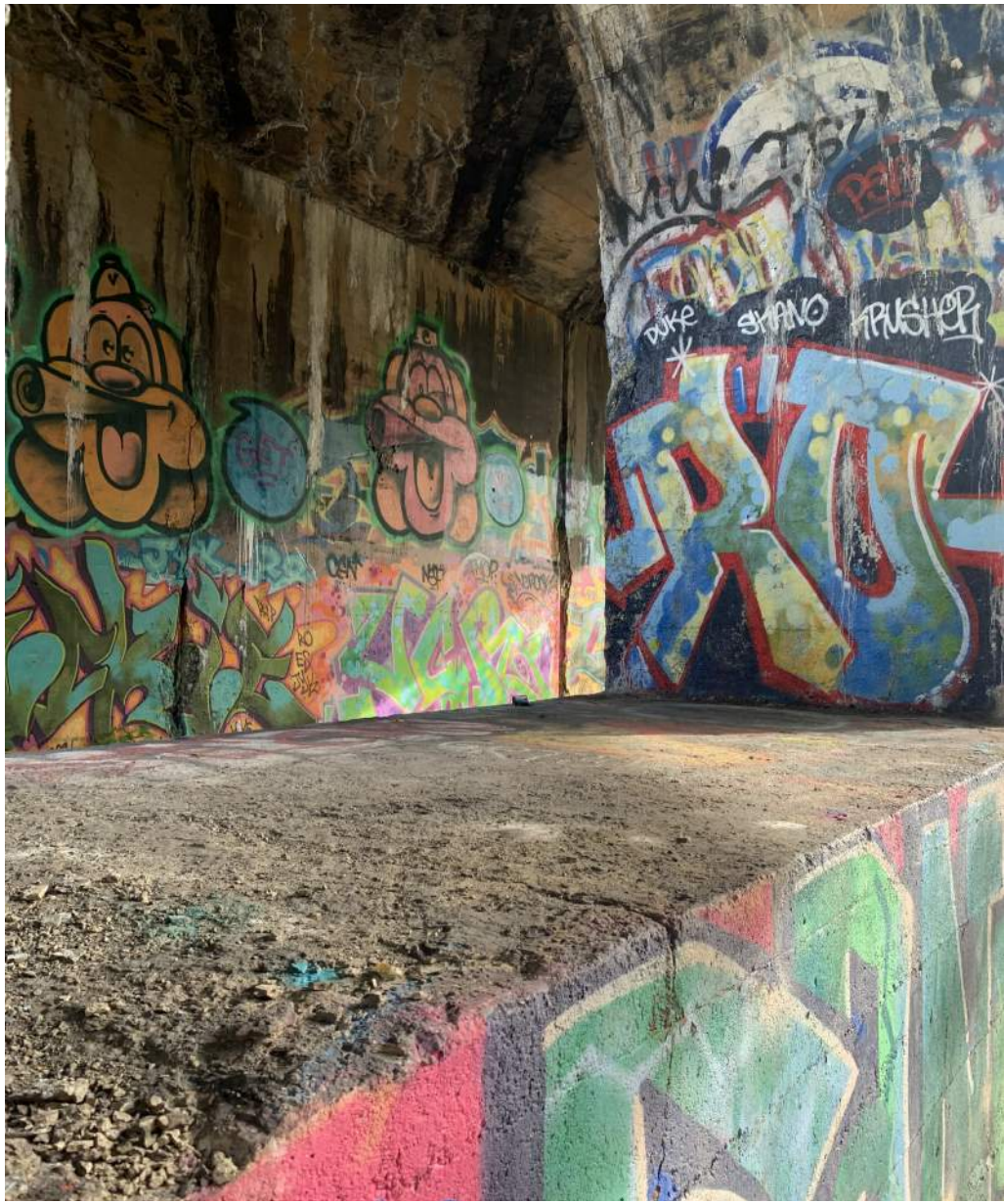


Image 1. Underpass into Carrie Furnace (Source: TPD)

Figure 6. Previous Planning Efforts

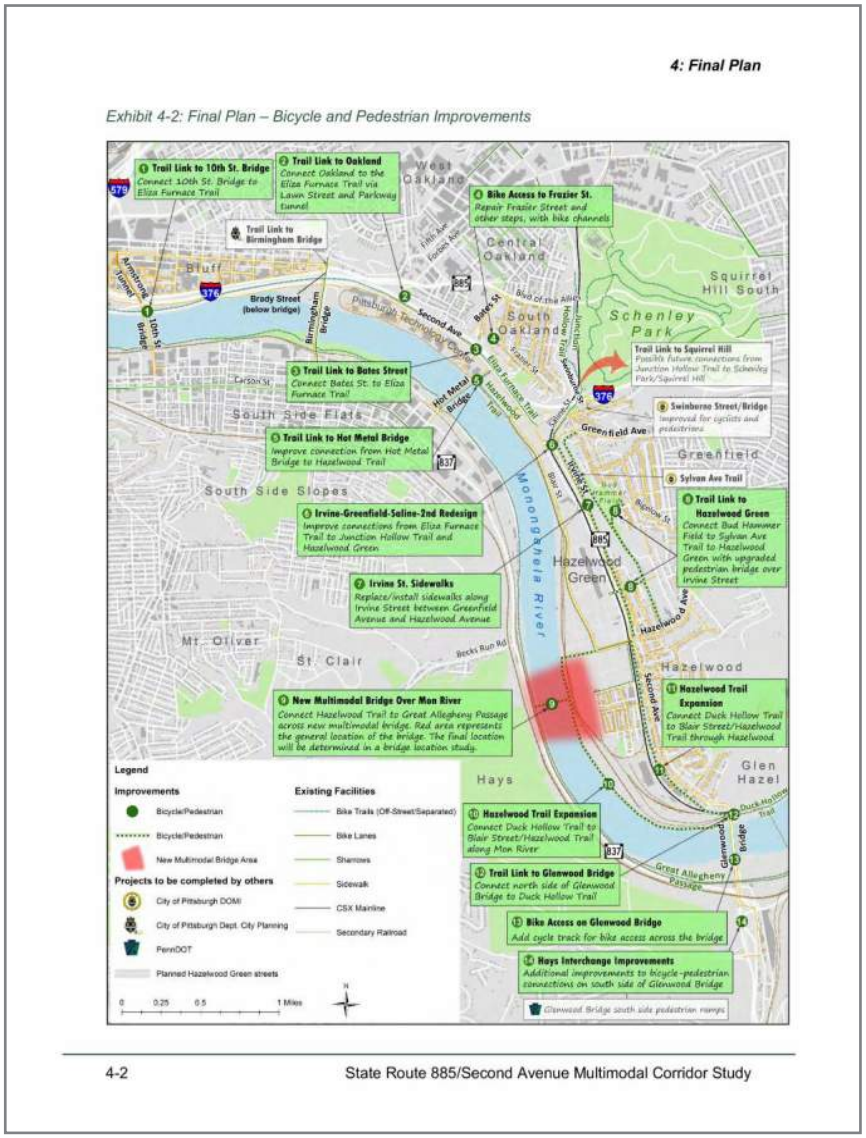


Figure 7. Bicycle and Pedestrian Improvements from the State Route 885/ second Avenue Multimodal Corridor Study

Figure 8. Hazelwood Green Long Range Transportation Plan

Figure 9. Carrie Furnace Master Plan Overview

PROJECT BENEFITS

Enhancing pedestrian and bicycling connectivity along the Monongahela River holds tremendous potential for expanding mobility options within the region. This improvement will not only facilitate easier access to various destinations, including Hazelwood Green and Carrie Furnace, but also enhance connections to workplaces and other key areas from the eastern suburbs to the City of Pittsburgh. Furthermore, the benefits of improved connectivity extend beyond the river corridor. Neighborhoods adjacent to Frick Park which have access to its expansive bike network, will also gain mobility options for commuting and recreation.

By creating a network of pathways along the Monongahela River, the communities stand to benefit from increased accessibility with improved transportation options, further enhancing the overall livability of the area. With the planned river crossing at the Rankin Hot Metal Bridge, the connected communities gain access to commercial and retail space as well as the Great Allegheny Passage for recreational and commuting opportunities.

In the regional network, this portion of the planned TRHT links the Great Allegheny Passage (GAP), Erie to Pittsburgh Trail (EPT), and the future Turtle Creek Connector. The GAP and Erie to Pittsburgh Trail are already part of nationally significant trail systems. The GAP connects Pittsburgh to Washington, D.C., while the Erie to Pittsburgh Trail spans approximately 270 miles, linking the Point in downtown Pittsburgh to the Bayfront in Erie. Completing these connections through Turtle Creek and its extensions—such as the Westmoreland Heritage Trail, West Penn Trail, and Ghost Town

Figure 10. The Many Benefits of Bicycle & Pedestrian Infrastructure

Image 2. Looking upriver from a spur of the the Duck Hollow to Carrie Furnace Trail Segment

Trail—would create a seamless corridor for long-distance travel, tourism, and local commuting.

Establishing dedicated spaces such as multimodal trails can lead to significant improvements in safety. By providing designated areas for bicycling and walking, conflicts with motor vehicle traffic are minimized, thus enhancing safety. Moreover, these dedicated spaces allow individuals to traverse longer distances without the need to navigate busy streets and intersections, reducing conflict with potential hazards and reducing mental fatigue. Trails offer numerous health benefits by encouraging physical activity and supporting both physical and mental well-being. Additionally, the promotion of walking and bicycling extends beyond mere convenience and health considerations, contributing to broader aspects such as public health, economic prosperity, and fostering a sense of community pride.

2 STUDY CONSIDERATIONS

Source: TPD

2

STUDY CONSIDERATIONS

INTRODUCTION

The focus of this chapter is on the natural environment, human environment, and planning factors that define the study area. The natural environment includes water bodies (e.g. rivers and floodplains) and land features (like topography), while the human environment encompasses human-made settings like urban areas and agricultural lands. Planning considerations entail the specifics that characterize the community's residents. Understanding this framework is crucial, as each aspect influences the considerations and project recommendations that are described later in this study.

PLANNING LEVEL CONSIDERATIONS

Planning level considerations explored during the development of this project include community demographics, employment information, and more.

Community Demographics

To understand the current profile of the community, the project team used data from the U.S. Census Bureau's Decennial Census and the 2017-2021

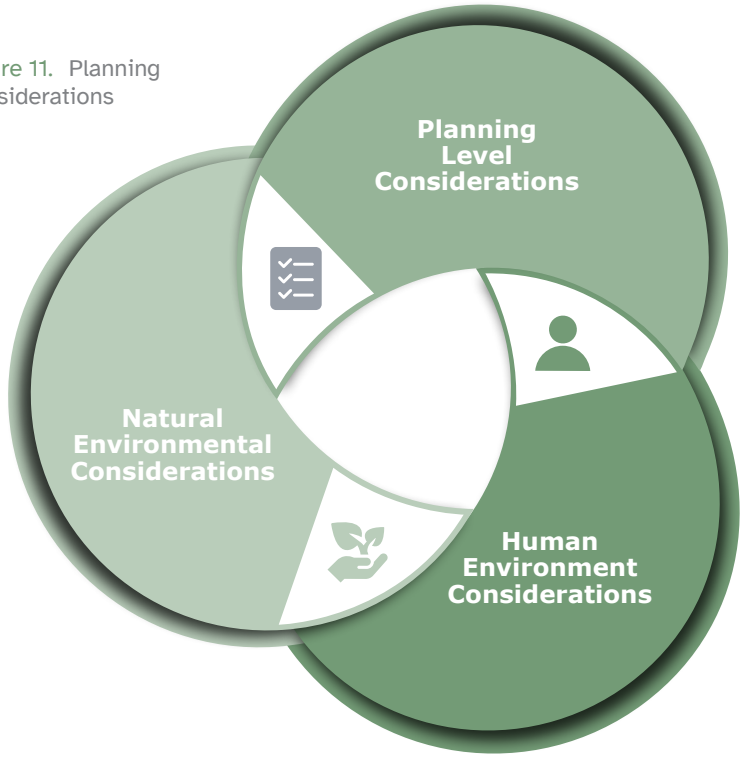


Figure 11. Planning Considerations

American Community Survey for the Hazelwood Neighborhood, Swissvale Borough, Rankin Borough, Braddock Borough, Allegheny County, City of Pittsburgh and Pennsylvania.

Population

Since 2010, the population in the study area decreased by 1,117 people or 6.4%. Whereas Allegheny County increased by over 1% and the Commonwealth of Pennsylvania increased by over 2%.

Comparing by age, the population of the study area roughly follows the population of the overall state. The largest portion of the study area population falls within the 25-34 age bracket with approximately 17 percent of the study area. Forty-two percent area population falls within the ages of 25-54.

The ethnic and racial diversity in the study area is greater than the County, which is slightly more diverse than the state. The study area has a population that is 40.9% non-white, compared to 24.3% non-white in the County and 22.9% non-white in the State.

Household Income and Poverty

With respect to income, the population in the study area varies considerably, between Hazelwood with a median household income of $20,702 to Swissvale with a median household income of $56,594. The County has a median income of $72,537 which is greater than the state median income of $71,798 and both are substantially more than the range in the study area. The proportion of households in the study area with income below the poverty line is 24%, which is more than twice the County (11.1%) and the State (11.8%).

Disability Status

The share of households with at least one person with a disability is higher in the study area (21.3%) than the County (13.7%) and the State (14.1%). **The higher percentage of households with individuals with disabilities in the study area suggests a greater demand for accessible transportation infrastructure. This includes sidewalks, curb ramps, crosswalks, and other pedestrian facilities designed to accommodate individuals with varying mobility needs.**

Figure 12. Study Area Population

Data Source: U.S. Census Bureau's Decennial Census and the 2017-2021

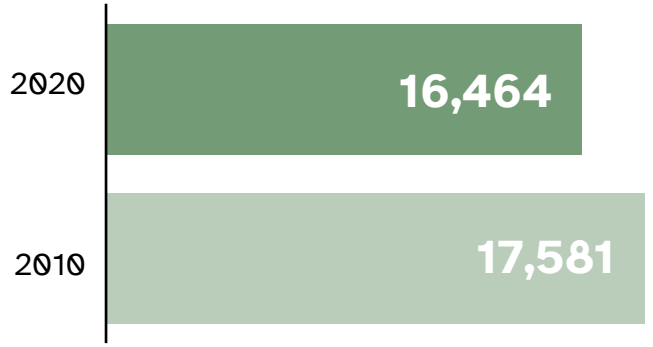


Figure 13. Households Below the Poverty Level

Data Source: U.S. Census Bureau's Decennial Census and the 2017-2021

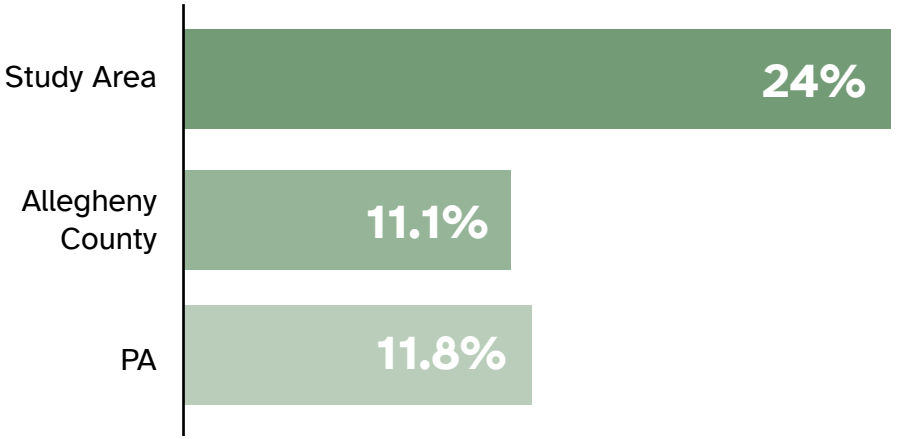
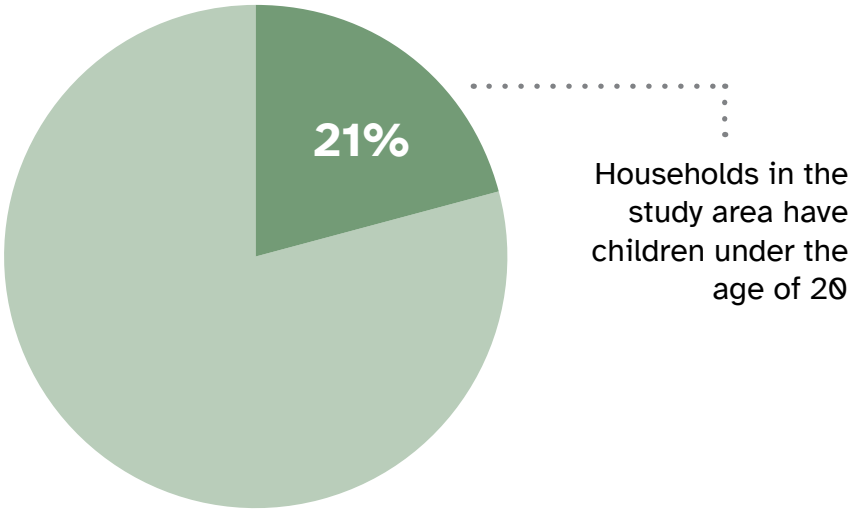


Figure 14. Households with Children

Data Source: U.S. Census Bureau's Decennial Census and the 2017-2021



Households with Children

Twenty-one percent (21%) of households in the study area have children under the age of 20. With a significant portion of households having children and young adults, there is a need for safe routes to schools. Safe crosswalks, intuitive intersections, and continuous sidewalks provide clarity for pedestrians and an intuitive transportation network which allows young and inexperienced people to make safe walking decisions. **Pedestrian and multiuser path improvements become crucial for ensuring the safety of children walking or biking to school and provide a means for safe independent recreation.**

Commuting & Access to Vehicles

In the study area, 61.1% of the population drove to work, with the majority – 51.6% – of those driving alone. A sizable percentage, 18.0% of people in the study area, rode the bus; and 18% used other means to access work, such as remote work or bike/walk.

In Allegheny County, 32.8% of households have access to three or more vehicle and only 5.1% of the county's population has no access to a vehicle. In comparison, Braddock's population includes 27.9% of the people without vehicular access. **This highlights the need that access to transit, and non-motorized transportation is invaluable for commuting or everyday mobility needs.**

Figure 15. Study Area Access to Work

Data Source: U.S. Census Bureau's Decennial Census and the 2017-2021

61.1% of the study area population drove to work

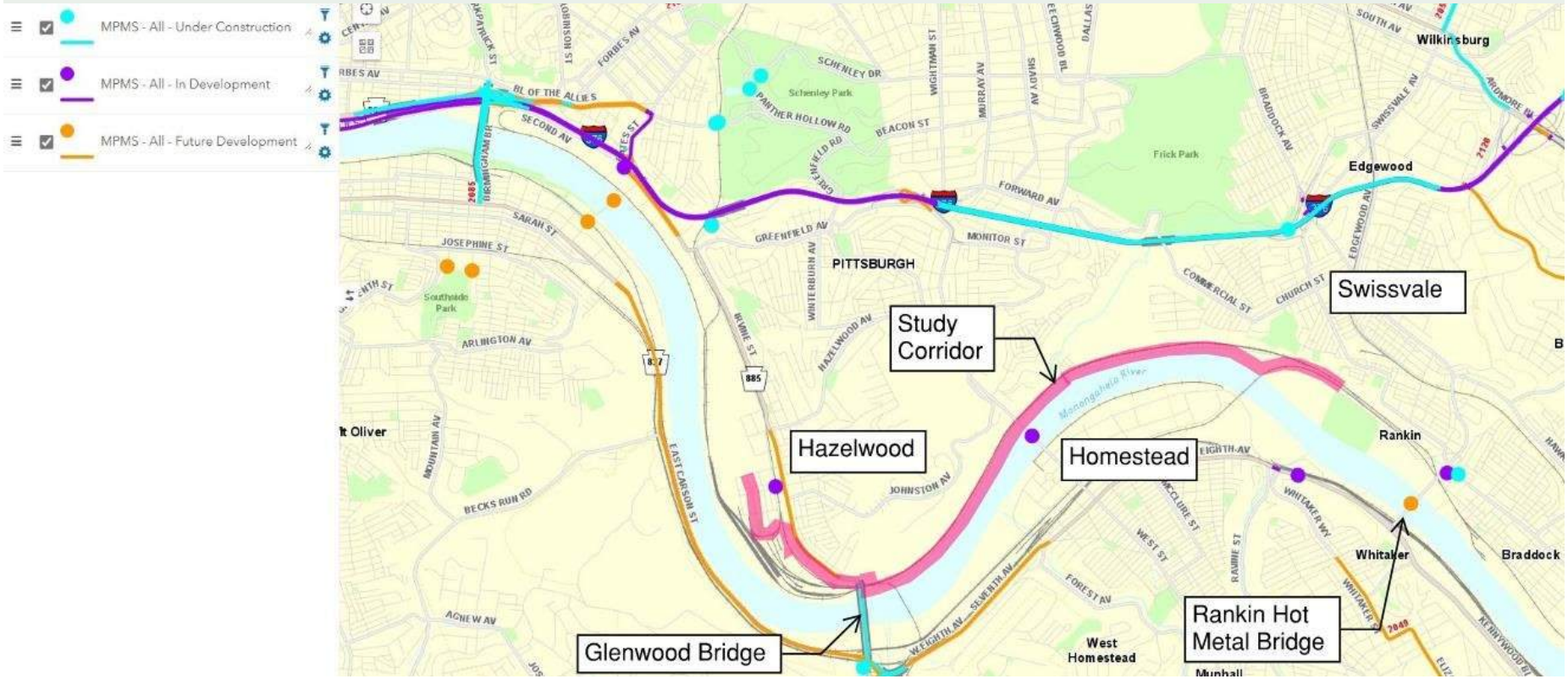
18% of the study area population rode the bus

18% of the study area population used other means to access work

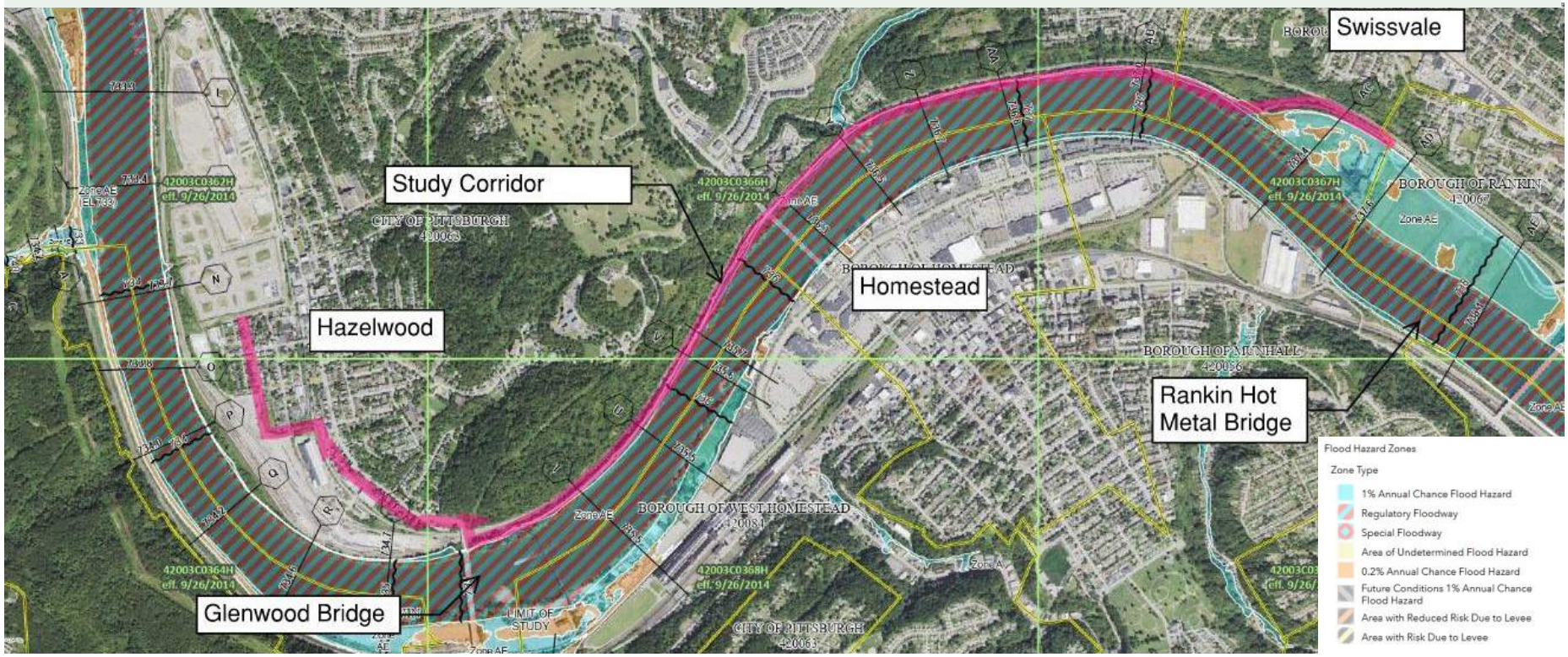
Planned and Programmed Projects

The previous chapter and the appendix describes the many planning projects that have come before this study. A successful plan will incorporate institutional knowledge and avoid duplicating previous project development efforts. Many of these projects are illustrated in Map 4, which is comprised of projects from the State Transportation Improvement Program.

Map 4. Planned Projects



Map 5. Floodplain



NATURAL ENVIRONMENT CONSIDERATIONS

The natural world shapes the way that we connect with and shape the human environment. Much of the natural land encompassed by this project study area has been shaped by humans such as the construction of roadways and railroads along the Monongahela River and the steel mills that were previously found at both the north and south termini of the project. As this project looks to further shape the natural environment, it is important to consider natural resources.

PennDOT's One Map environmental screening map, DEP's eMapPA website, the PA Conservation Explorer website, the USFWS NWI Mapper, the PA-SHARE website, the NRCS Web Soil Survey were consulted to develop a list of potential environmental considerations.

Floodplain

Map 5 illustrates the 100-year floodplain, data retrieved from FEMA Flood Map Service. The project location runs along the Monongahela River, a navigable river and regulatory floodway. The mapping shows the 1% annual chance flood hazard area and the 0.2% annual chance flood hazard areas. The floodplain designation known as the 1% chance of annual flood means the land has a 1% chance of being flooded in any given year. The 1% annual flood (100 year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood. Zone AE as shown on the attached map is a special flood hazard area subject to inundation by the 1% annual chance flood with base flood elevations determined.

Similarly, the floodplain designation known as the 0.2% chance of annual flood means the land has a 0.2% chance of being flooded in any given year. The Hazelwood neighborhood is outside of any floodway mapped areas. The existing and proposed riverfront trail runs along the top of slope of the river. The trail exists between Hazelwood and Duck Hollow where it runs along the mapped floodway areas. The existing parking lot and Second Avenue Bridge both fall within either the 1% chance area or the floodway area, both included in zone AE. Between Duck Hollow and Carrie Furnace, the proposed trail, , in places, crosses into the floodplain. As design continues, care must be exercised to balance earthwork to ensure no fill in the floodplain occurs.

Wetlands

No wetlands are mapped on NWI mapper (as shown in Map 6). There are a small amount of hydric soils (Atkins silt loam (At)) on the eastern section of trail near Carrie Furnace. This indicates a higher chance of wetlands in this area which can be seen in Map 7.

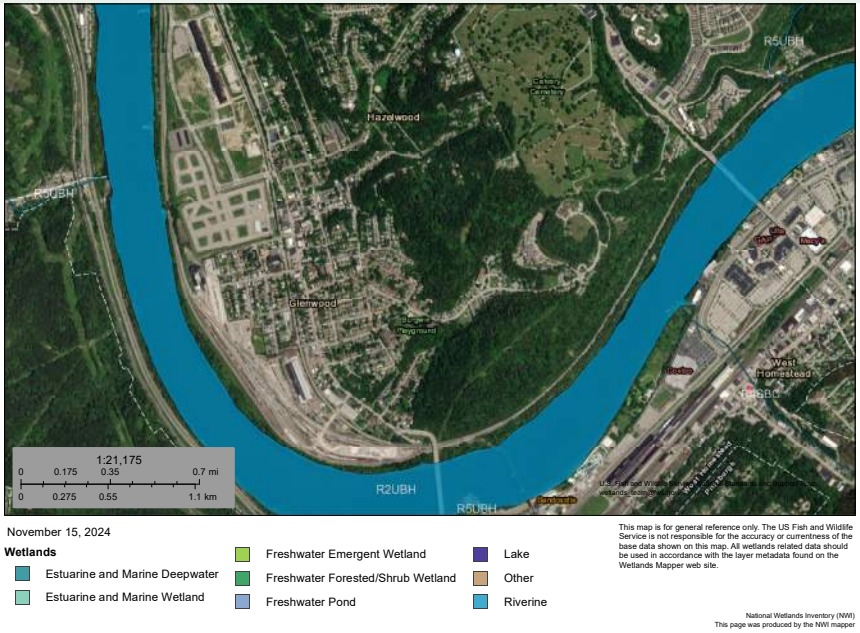
Streams and Rivers

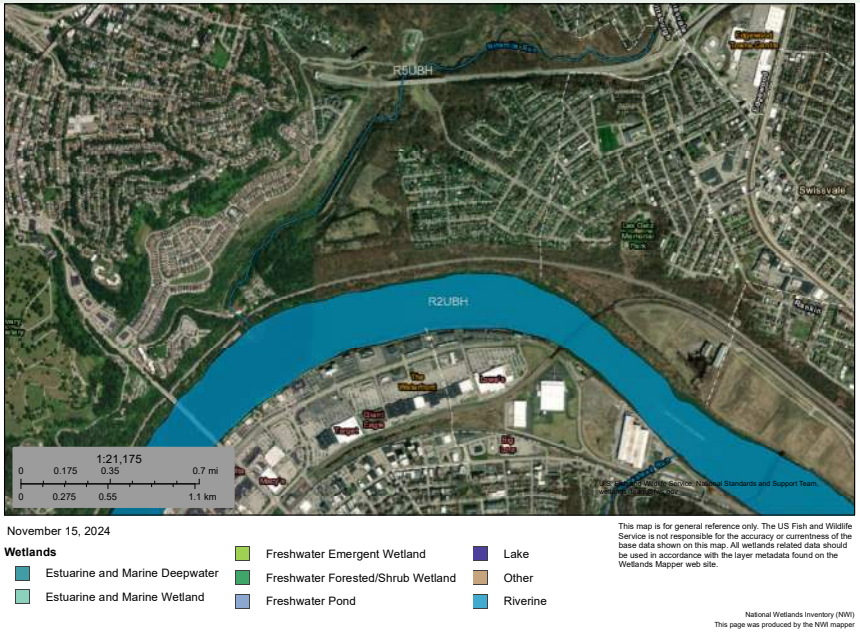
Monongahela River

The proposed trail is to run adjacent to the Monongahela River.

The Monongahela River is a Warm Water Fishes (WWF) classified stream. Per the Pennsylvania code, the definition for Warm Water Fishes is maintenance or propagation, or both, of fish species and additional flora and fauna which are indigenous to a warm water habitat. Warm water fishery streams do not carry any stream restrictions or require special environmental or sedimentary (E&S) controls like an exceptional value or high quality watercourse would. The Monongahela River would not have any special requirements besides the typical E&S controls to protect a water body during construction activities.

Map 6. National Wetlands Inventory Maps





Nine Mile Run

The proposed trail is planned to cross Nine Mile Run on the existing Second Avenue bridge.

Nile Mile Run has a water quality classification of TSF (Trout Stocking). The PA Code definition for Trout Stocking is maintenance and propagation of fish species and additional flora and fauna which are indigenous to a warm water habitat. This stream is not stocked with trout by the PA Fish and Boat Commission. Trout Stocking (TSF) streams do not carry any stream restrictions or require special E&S controls like an exceptional value or high quality watercourse would. Nine Mile Run would not have any special requirements besides the typical E&S controls to protect a water body during construction activities.

Neither the Monongahela River or Nine Mile Run are listed as scenic rivers and both streams are located in the Monongahela River Act 167 Stormwater Plan (approved 6/15/1994).

Neither the Monongahela River or Nine Mile Run are designated as MF which means neither of the streams are considered migratory fisheries. The definition for migratory fishes is passage, maintenance and propagation of anadromous and catadromous fishes and other fishes which ascend to flowing waters to complete their life cycle. (Example fish species are shad, herring, trout, salmon).

Map 7. Wetlands

Image 3. Fringe Tree (Source: Stauffers of Kissel Hill) (top)

Image 4. Ghost Shiner (Source: The Fishes of North Carolina) (bottom)

Topography

A topographic survey was completed for the study area and supplemental GIS data was obtained to provide an overall view of the project, as shown in the project plans. Much of the project area from Hazelwood to Carrie Furnace is bound by a steep hillside and the Monongahela river. The trail is planned between the Monongahela River and the CSX railroad. The steep hillside is beyond the CSX railroad.

Endangered Species

A PNDI environmental pre-screening was performed. This review allows users to screen a project area for potential impacts to threatened, endangered, and special concern species. Species are reviewed using a buffer off the approximate shape placed within the PNDI system.

The PNDI system reviews species under the jurisdiction of the Department of Conservation and Natural Resources (DCNR), PA Fish and Boat Commission (PFBC), PA Game Commission (PGC), and US Fish and Wildlife Service (USFWS).

Department of Conservation and Natural Resource (DCNR)

The plant species listed below are most likely all found within the floodplain of the Monongahela River:

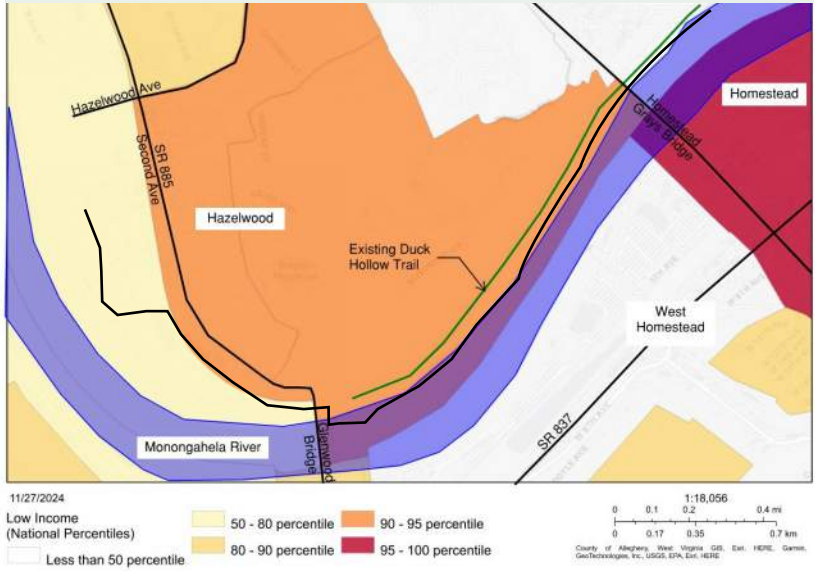
- Fringe Tree (Chionanthus virginicus) - currently species of special concern, proposed status threatened
- Passion-flower (Passiflora lutea) – threatened (vine and grows in wetlands)
- Common Hop-tree (Ptelea trifoliata) – threatened
- Coordination will be required with the agency for the species listed above.

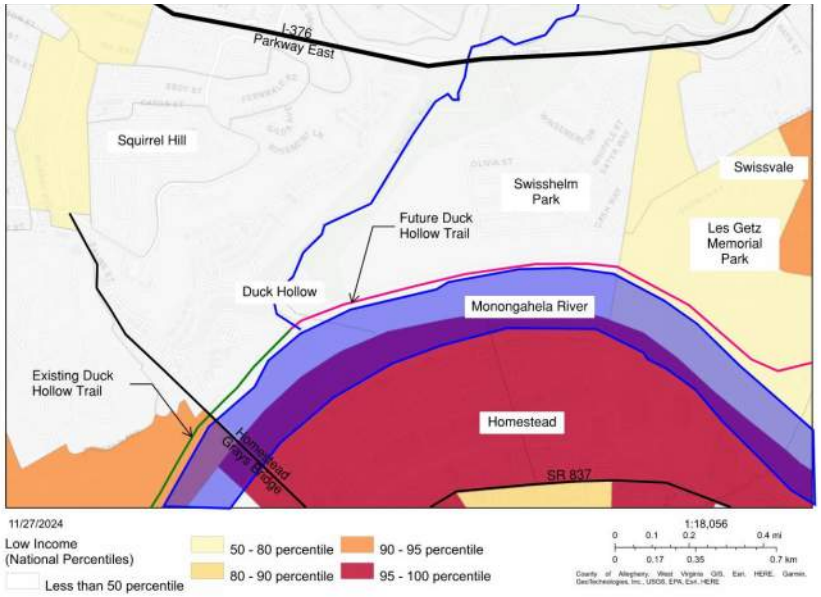
PA Fish and Boat Commission (PFBC)

- Sensitive species – endangered
- Ghost Shiner (Notropis buchanani) - endangered

Coordination is required for the species listed above, but it is likely that this project will be cleared for no impact as the project is not located in a stream and no new bridges over streams are proposed.

Map 8. Human Environment Considerations





HUMAN ENVIRONMENT CONSIDERATIONS

The study area is in an urban area of Allegheny County including areas in the City of Pittsburgh, Swissvale Borough, and Rankin Borough. Parts of the trail go through Low Income Environmental Justice Areas in the 50-80 percentile range (yellow) and the 90-95 percentile (orange) Map 8.

The built-up urban environment leads to the potential for numerous connections into the urban transportation network. The following aspects explore considerations of the human environment:

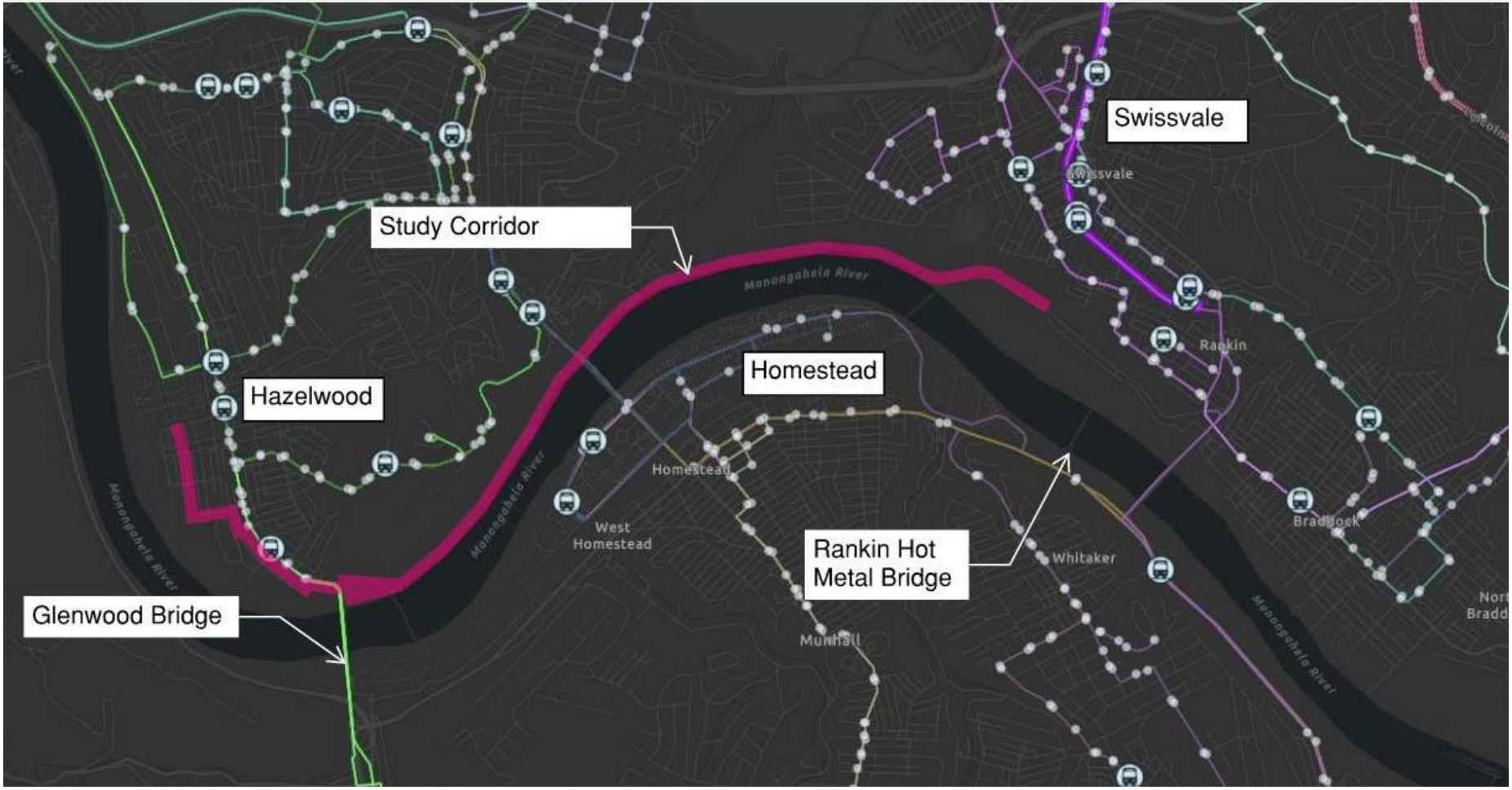
- Existing transportation network
- Points of interest
- Annual Average Daily Traffic (AADT)
- Pedestrian crash history

Existing Transportation Network

Map 10 illustrates the existing trails in the study area and immediate vicinity. The proposed project will connect the Hazelwood neighborhood to the existing trail near the Glenwood bridge which currently ends at the Duck Hollow neighborhood. From Duck Hollow, an existing bridge will be utilized to connect to a new trail segment that continues to the Carrie Furnace site in the Boroughs of Swissvale and Rankin.

Pittsburgh Regional Transit (PRT) operates the public transit in Allegheny County. Along the Hazelwood to Carrie Furnace trail segment, there are opportuniiters for transit connections along Second Avenue in Hazelwood, Brownsill Road in Squirrel Hill, and Braddock Avenue in Rankin. When the Rankin Hot Metal Bridge is rehabilitated for trail users, it will connect to transit routes in Munhall/Homestead/West Homestead. See Map 9.

Map 9. Pittsburgh Regional Transit Routes and Stops as of May 7, 2025



Map 10. Existing Trail Networks

(Source: Friends of the Riverfront)

Utilities

Utilities such as electric, water, sewer systems, and buried fiber optics are present along the trail corridor and can pose significant challenges to a trail construction. First, these utilities may have easements or rights-of-way, which can complicate the acquisition or use of land for the trail project. Negotiating with utility companies or local authorities for access to these areas can prolong the planning process and add to project costs. Additionally, the presence of utilities may limit the available space for constructing the trail, requiring careful design to avoid conflicts and ensure safety for trail users. Furthermore, coordinating with utility companies to relocate or adjust existing infrastructure can introduce delays and additional expenses. In some cases, environmental considerations may also arise, particularly when utilities intersect with sensitive habitats or waterways along the proposed trail route.

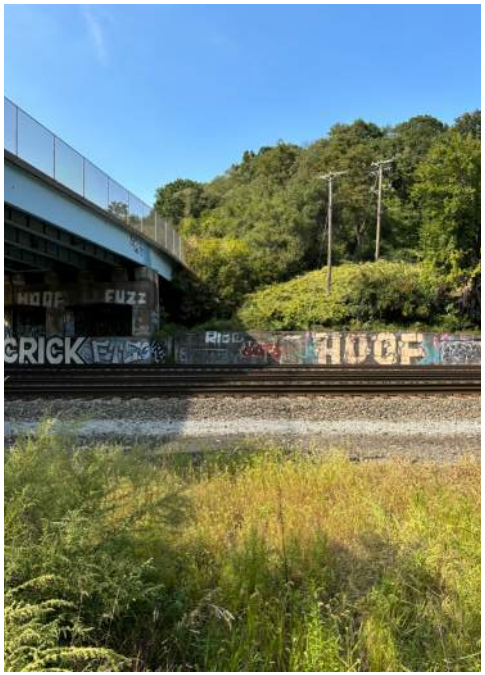


Image 5. Duquesne Light Company Pole at Melanchton Street (Source: TPD) (left)

Image 6. Duquesne Light Company Pole at Glenwood Bridge (Source: TPD) (right)

Navigating the complexities of utilities during the design process for a transportation facility requires thorough assessment, strategic planning, and collaboration with various stakeholders to ensure the successful implementation of the trail project. Part of the feasibility study process involves considering these utility locations when determining the optimal route for the trail.

Utility Considerations

Electric

There are two areas of concern that may have impacts to the electrical utility. The project team has discussed potential conflicts with Duquesne Light Company. The Melanchton Street Pedestrian Bridge is adjacent to an overhead Duquesne Light line that crosses the railroad tracks. The structure's ramping will go under the overhead line so care will be needed to not disturb it. During design, vertical clearance of the new bridge with respect to the existing overhead lines will need to be confirmed.

Near the Glenwood Bridge and the proposed Glenwood Trail Bridge adjacent to the Glenwood Bridge, there are two utility poles that require removal or relocation. The pole nearest the Glenwood Bridge is a supporting pole, and the pole further uphill as seen in Image 6, carries the electric utility. From the uphill pole, the utility goes underground to the Glenwood Bridge and crosses the river attached to the Bridge. It is anticipated that the lower pole will need to be relocated. because it is located within the trail footprint. The uphill pole may be able to remain in place, but further coordination in final design will be required to ensure it is clear of bridge construction.

Coordination has been initiated with Duquesne Light Company. The project team has met with them at both Melanchton Street and Glenwood Bridge. They provided insight into potential impacts and relocation of the utility. They also provided a programmatic level cost to relocate the poles at Glenwood. During Final Design, coordination with Duquesne Light will be necessary to ensure that any required modifications are included in the project budget, and construction can be completed while maintaining the utility.

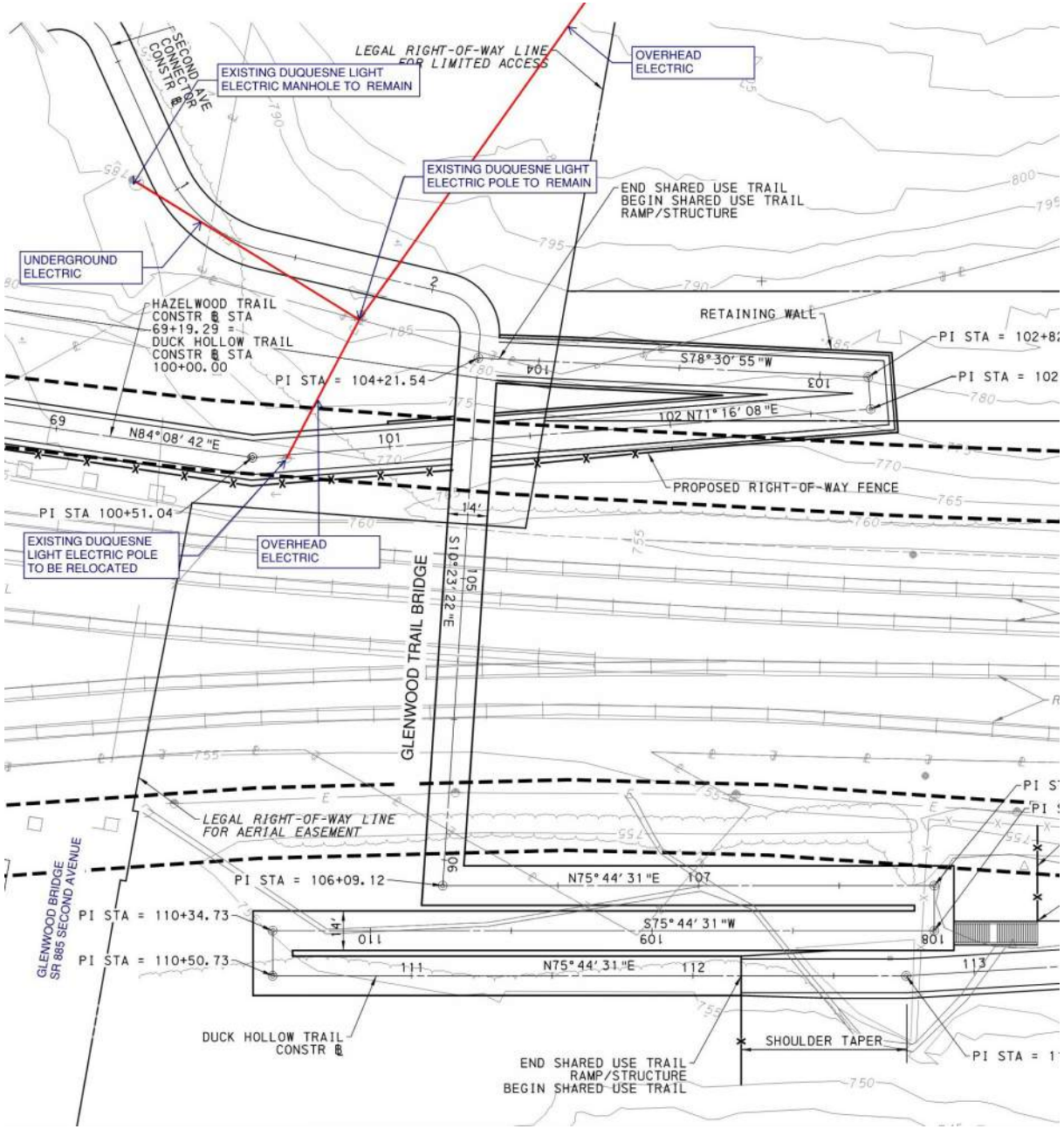


Image 7. Duquesne Light impacts at the Glenwood Trail Bridge

Image 8. Sewer Systems (Source: TPD) (top two photos)

Image 9. Fiber Optic Utilities (Source: TPD) (bottom left)

Image 10. Gas Utilities (Source: TPD) (bottom right)

Water

Multiple fire hydrants were observed along the existing trail alignment indicating the presence of a water line. Further coordination with PWSA will be required during Final Design to determine the route of the water lines and mitigate or minimize impacts. Impacts to the line should be avoided as much as possible.

Sewer Systems

Both PWSA and ALCOSAN have sewer systems within the area of the existing trail and proposed trail from Glenwood to Carrie Furnace. Major grade changes are not anticipated in these areas. Throughout the neighborhood section of the project, the trail will be on-street and impacts may be encountered when building curb extensions.

Fiber Optic

Along the existing trail there are numerous markers denoting an underground fiber optic line. Within the existing Duck Hollow trail section and the section of new trail from Duck Hollow to Carrie Furnace, it is anticipated that fiber optic exists. Minimal earth disturbance is anticipated. Near the proposed Glenwood Trail Bridge, care and coordination will be required to determine if construction of the structure will impact the utility.

Gas

Existing plans show gas lines at both proposed bridge crossings. At Melanchton Street, plans show a 36-inch gas line running parallel to the bridge. It is anticipated that gas lines are present in the neighborhood streets. At the proposed Glenwood Trail Bridge, numerous gas valves are located under the bridge at the abutment and an easement exists extending east.

The current plans depict the above-ground infrastructure. Future design phases will need to identify and integrate underground facilities. Additional investigation will be necessary to ensure that existing utilities are not negatively impacted.

For all digging activities a utility PA 811 call will be required.

Map 11. Historical Right-of-Way from Hazelwood to Duck Hollow

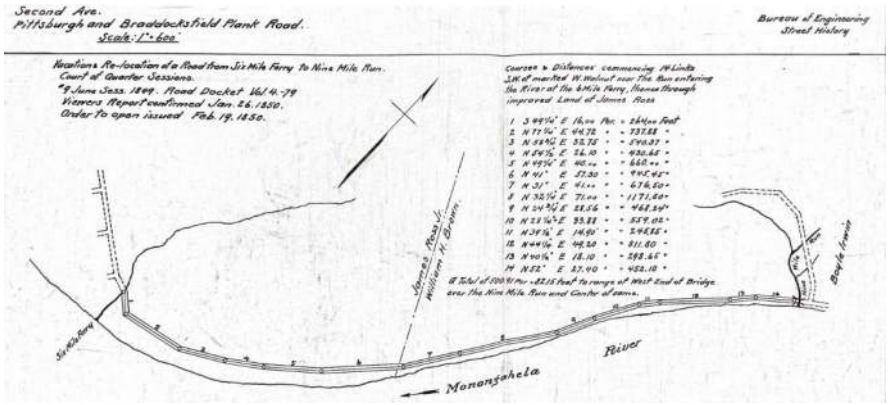


Image 11. Second Avenue Bridge at Duck Hollow

Right-of-Way

The three sections of trail have three very different right-of-way conditions.

- Hazelwood to the Glenwood Bridge Trail Segment – The route will mainly utilize the existing street network through the Hazelwood community. The trail begins on Blair Street at Tecumseh Street on the southern boundary of the Hazelwood Green development site. The first portion of the trail is on street, and therefore completely within the City right-of-way. As the trail runs adjacent to the Blair Street Park, the trail follows the historic Blair Street right-of-way and then turns onto the Melanchton Street right of way. Portions of the Melanchton Street right-of-way were vacated, but the park and roadway remain. Within the park, ALCOSAN has a pump facility and in order to avoid impacting that utility, the trail will occupy park space. As the proposed trail crosses the railroad on the Melanchton Street trail bridge, it will turn and traverse the City owned parcel on the east side of the railroad. It is anticipated that an easement will be dedicated for the trail to occupy that space. As the proposed trail continues toward the Glenwood Bridge, it remains within city right-of-way.
- Glenwood Bridge to Duck Hollow Trail Segement – The trail exists for much of this area but lacks a formal grade separated railroad crossing at the Glenwood Bridge. For the existing trail, CSX acknowledged that the trail exists legally. However, the right-of-way is not clearly defined. It is anticipated that right-of-way will be dedicated to ensure property rights are clearly defined for the future. The proposed Glenwood Trail Bridge will require a new agreement. In discussion with CSX, they indicated that an easement or license agreement would be necessary.
- Duck Hollow to Carrie Furnace Trail Segment – This section exists as an unimproved path. The existing Second Avenue Bridge over Nine Mile Run will connect the existing Duck Hollow Trail head and parking to an improved trail connection to Carrie Furnace. Within the City of Pittsburgh, right of way is shown on the railroad's Valuation maps and found in the City's records. As the planned trail crosses into Swissvale, the property is owned by Allegheny County.

Points of Interest

The study area connects two redevelopment sites, three municipalities and provides enhanced connections to numerous neighborhood resources, as shown in Map 12: Points of Interest.

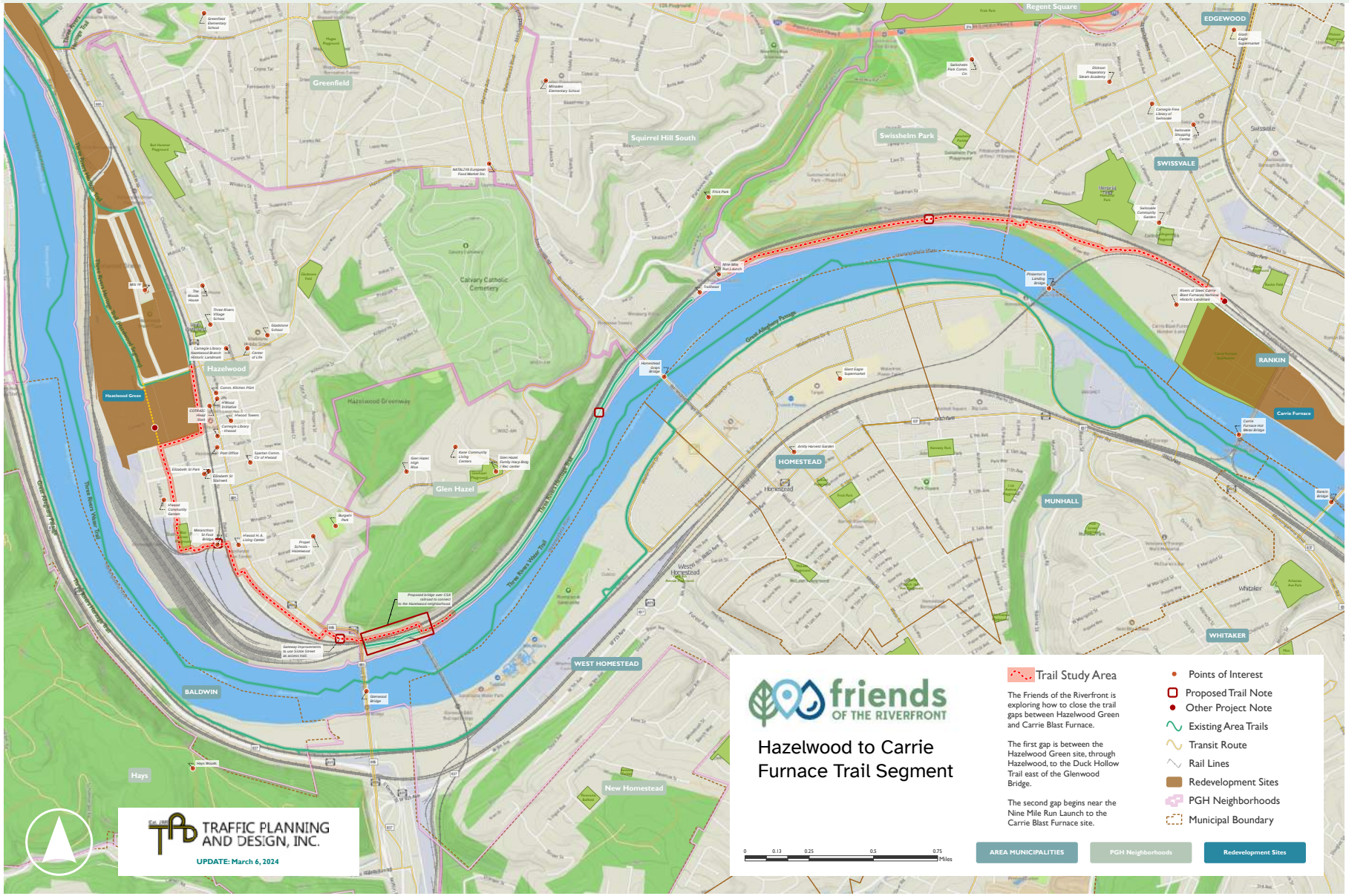
- Social services: Carnegie Library, Hazelwood Branch, Hazelwood Post Office, Spartan Community Center, Hazelwood Healthy Active Center, Carnegie Library, Swissvale branch,
- Affordable housing and senior housing: Glen Hazel, Kane Community Living Centers, Hazelwood Towers, Riverview Towers
- Commercial destinations: Hazelwood Business District, Swissvale Business District, Waterfront shopping district
- Government: City of Pittsburgh, Department of Public Works, Third Division
- Schools and Preschools: COTRAIC head Start, Propel Schools Hazelwood,
- Parks and Recreational Areas: Frick Park, Hazelwood Greenway, Les Getz Memorial Park, Great Allegheny Passage

These destinations would all be well-served by a more connected pedestrian network where people may be able to walk to go shopping, to go to school, to receive services, or to go to work.

Image 12. Carnegie Library, Hazelwood Branch (Source: Carnegie Library) (top)

Image 13. Hazelwood Greenway (Source: All Trails) (bottom)

Map 12. Points of Interest



Historic Properties

There are a number of historic properties located within or adjacent to the study area (see Maps 13-14). The Hazelwood Brewing Company and the Homestead Grays Bridge are both listed on the National Register of Historic Places. The Carrie Blast Furnaces are listed as a Historic National Landmark

Historic site protections often impose strict regulations and guidelines that limit the development of adjacent land. In 2023, Allegheny County, the property owner, completed an Interpretative Plan for the Carrie Furnace Redevelopment to provide a conceptual framework that will allow for economic development and new construction sympathetic to the property's historic character while ensuring the accessibility, interpretative, education, recreation, and long-term preservation of the historic structures and surrounding landscape.

These protections aim to preserve the historical integrity and significance of the site, which may include maintaining its visual and environmental context to ensure minimal impact on the historic setting. Trail projects must strike a balance between providing recreational amenities and respecting the historical significance of the area.

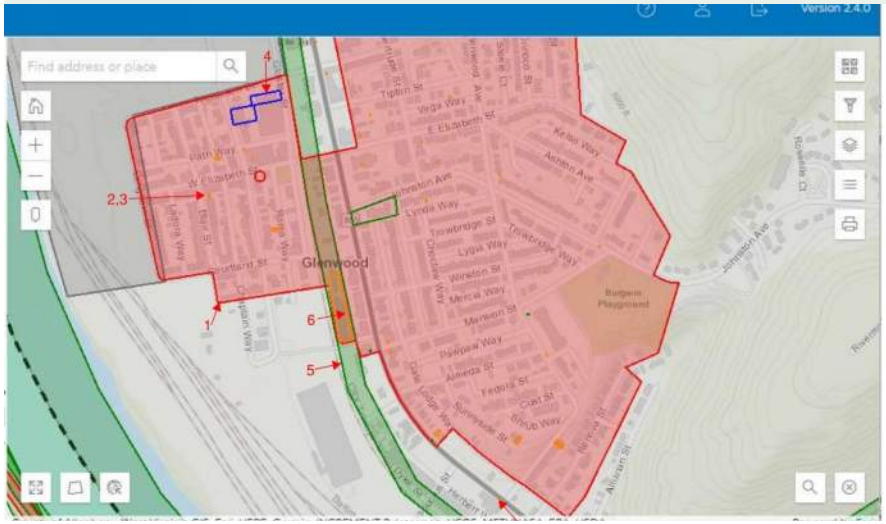
Rivers of Steel is a nonprofit organization dedicated to preserving and celebrating the industrial and cultural heritage of southwestern Pennsylvania. They play a key role in the stewardship of the Carrie Blast Furnaces. They offer tours, workshops, exhibitions, and festivals, and work to promote heritage tourism and economic revitalization.

Historic Resources (Maps)

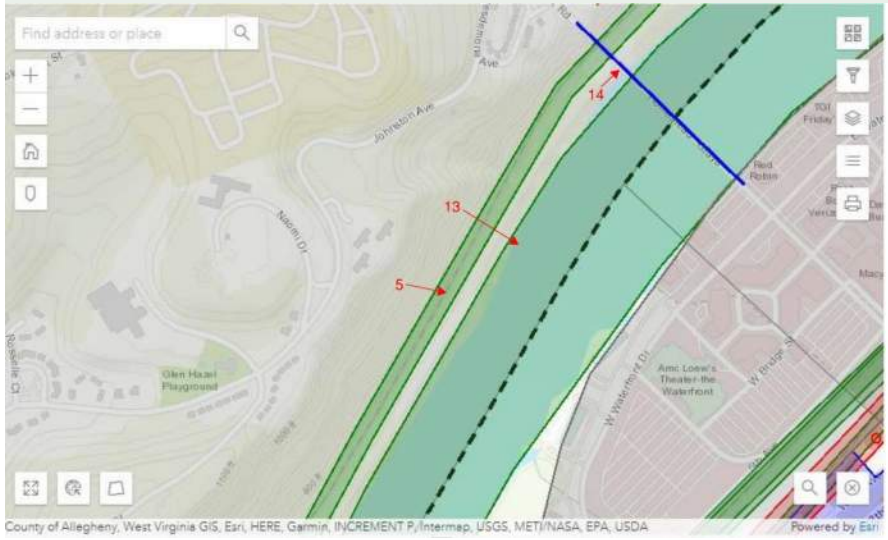
The following historic resources were identified during the environmental screening and shown in the Historic Resource Maps.

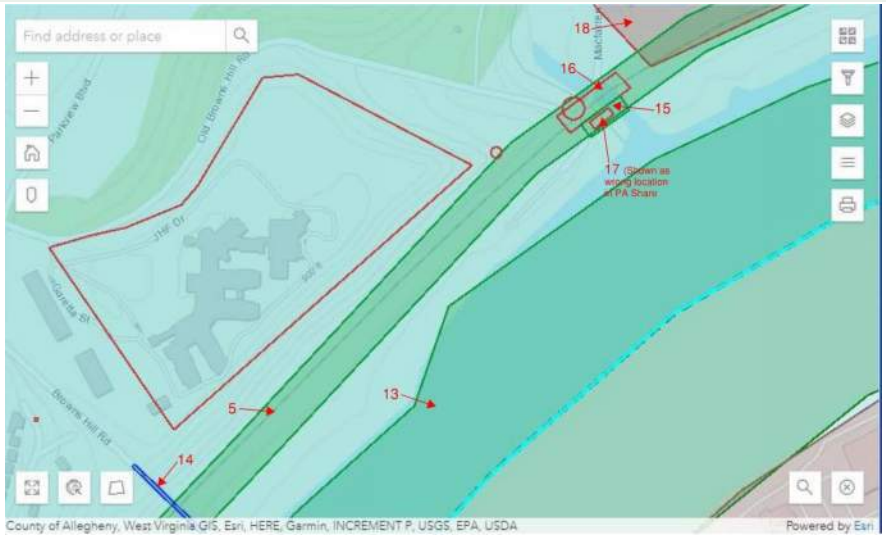
1. Hazelwood Historic District – Resource #1997RE00600, not eligible for the National Register of Historic Places
2. Building at 5107 Blair Street – Resource #1995RE00266, undetermined for the National Register of Historic Places
3. Building at 5109 Blair Street - Resource #1995RE54071, undetermined for the National Register of Historic Places

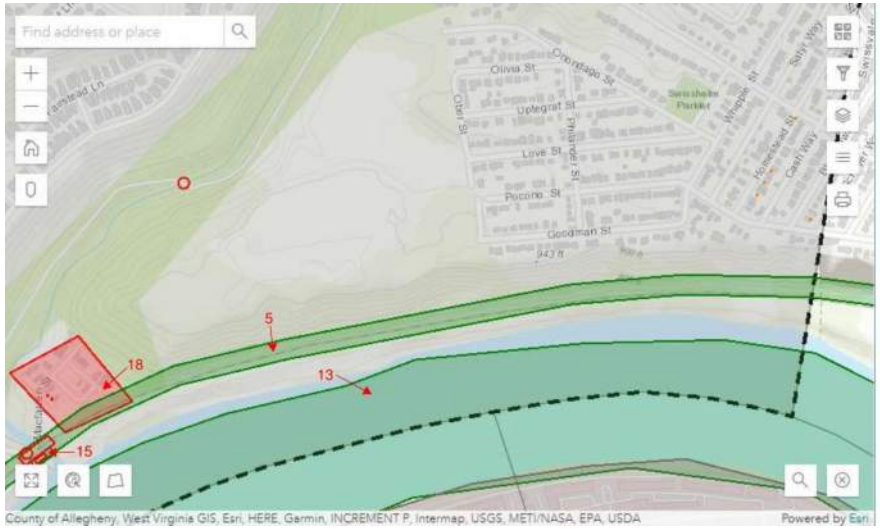
Map 13. Historic Properties

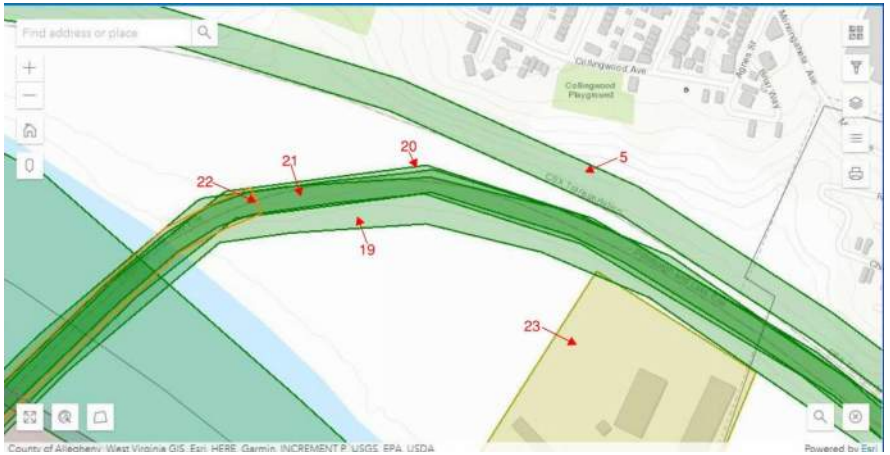


Map 14. Historic Properties (continued)









4. Hazelwood Brewing Company (5007 Lytle St.) – Resource #2020RE01189, above ground buildings on 2 lots, **listed on the National Register of Historic Places**
5. Baltimore & Ohio Railroad: Pittsburg Division (Maryland line to city of Pittsburgh), District – Resource #1997RE01591, **eligible** for the National Register of Historic Places
6. Building at 5235 Dyke Street – Resource #1995RE00726, undetermined for the National Register of Historic Places
7. Building at 5334 2nd Avenue – Resource #1985RE00005, **eligible** for the National Register of Historic Places
8. Building at 5524 2nd Avenue, Morningstar Baptist Church – Resource #1995RE33973, undetermined for the National Register of Historic Places
9. Building at 5634 Herbert Way - Resource #1995RE00725, undetermined for the National Register of Historic Places
10. Barker Property, building at 5628 2nd Ave. – Resource #1997RE00825, **eligible** for the National Register of Historic Places
11. MA08 Glenwood Bridge (Structure) – Resource #2018RE02160, undetermined for the National Register of Historic Places
12. Baltimore & Ohio Railroad (Glenwood to Hays Borough), District – Resource #2001RE00201, **eligible** for the National Register of Historic Places
13. Monongahela River Navigation System, District – Resource #1996RE00823, **eligible** for the National Register of Historic Places
14. Homestead High Level Bridge (Structure) – Resource #1985RE00097, **listed on the National Register of Historic Places**
15. 2nd Avenue Bridge over Nine Mile Run (Structure) – Resource #1997RE01215, **eligible** for the National Register of Historic Places

Image 15. Hazelwood Brewing Company (Source: Hazelwood Brewing Company)

Image 14. Homestead High Level Bridge (Source: American Institute of Steel Construction)

16. Baltimore & Ohio Railroad: Bridge (Duck Hollow) (Structure) - Resource #2000RE00989, located at Nine Mile Run at Duck Hollow, not eligible for the National Register of Historic Places
17. McFarren Road Bridge (Structure) - Resource #2000RE00501, located at Nine Mile Run at Duck Hollow, not eligible for the National Register of Historic Places
18. Duck Hollow (District) - Resource #1997RE00574, not eligible for the National Register of Historic Places
19. Pittsburgh & Lake Erie Railroad (District) – Resource #2010RE03867, **eligible** for the National Register of Historic Places
20. Pittsburgh & Lake Erie Railroad (Mahoning Twp. Lawrence Co. to Brownsville Fayette Co. and Connellsville) (District) - Resource #2001RE01532, **eligible** for the National Register of Historic Places
21. Pittsburgh & Lake Erie Railroad (Port Perry to Rankin) (District) - Resource #1997RE01592, **eligible** for the National Register of Historic Places
22. Pittsburgh & Lake Erie Railroad: Pemickey Bridge (Structure) - Resource #1991RE00894, undetermined for the National Register of Historic Places
23. Carrie Blast Furnaces Number 6 & 7 (District) – Resource #1992RE00264 **listed as a National Historic Landmark**

The historic properties provide opportunities for historic interpretive signage along the future trail.

Image 16. Pittsburgh & Lake Erie Railroad (Source: American Rails) (top)

Image 17. Carrie Blast Furnaces (Source: TPD) (bottom)

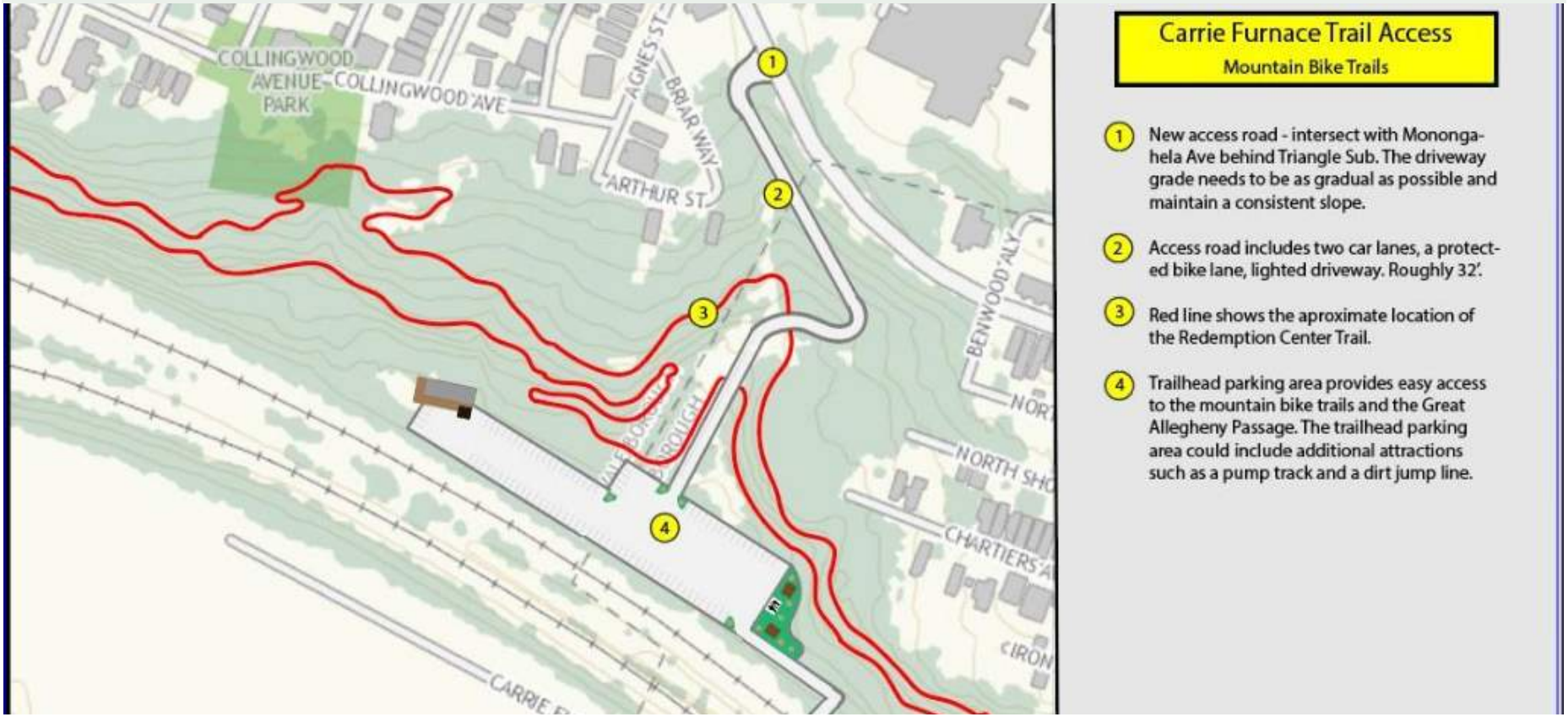
Parks and Recreation Lands

Map 16 shows the parks and recreational sites located near the study area. The Blair Street Park is a park area located at the intersection of Blair Street and Melanchton Street. The proposed trail is anticipated to skirt along the outer edge of the park partially in the park and historic right-of-way. Between the Glenwood Bridge and Duck Hollow, the existing trail is identified on the map and minor upgrades to drainage facilities are anticipated. The existing trail will be extended in both directions. The Les Getz Memorial Park is located across the railroad tracks and above/along the hillside in Swissvale. It is not anticipated to be impacted.

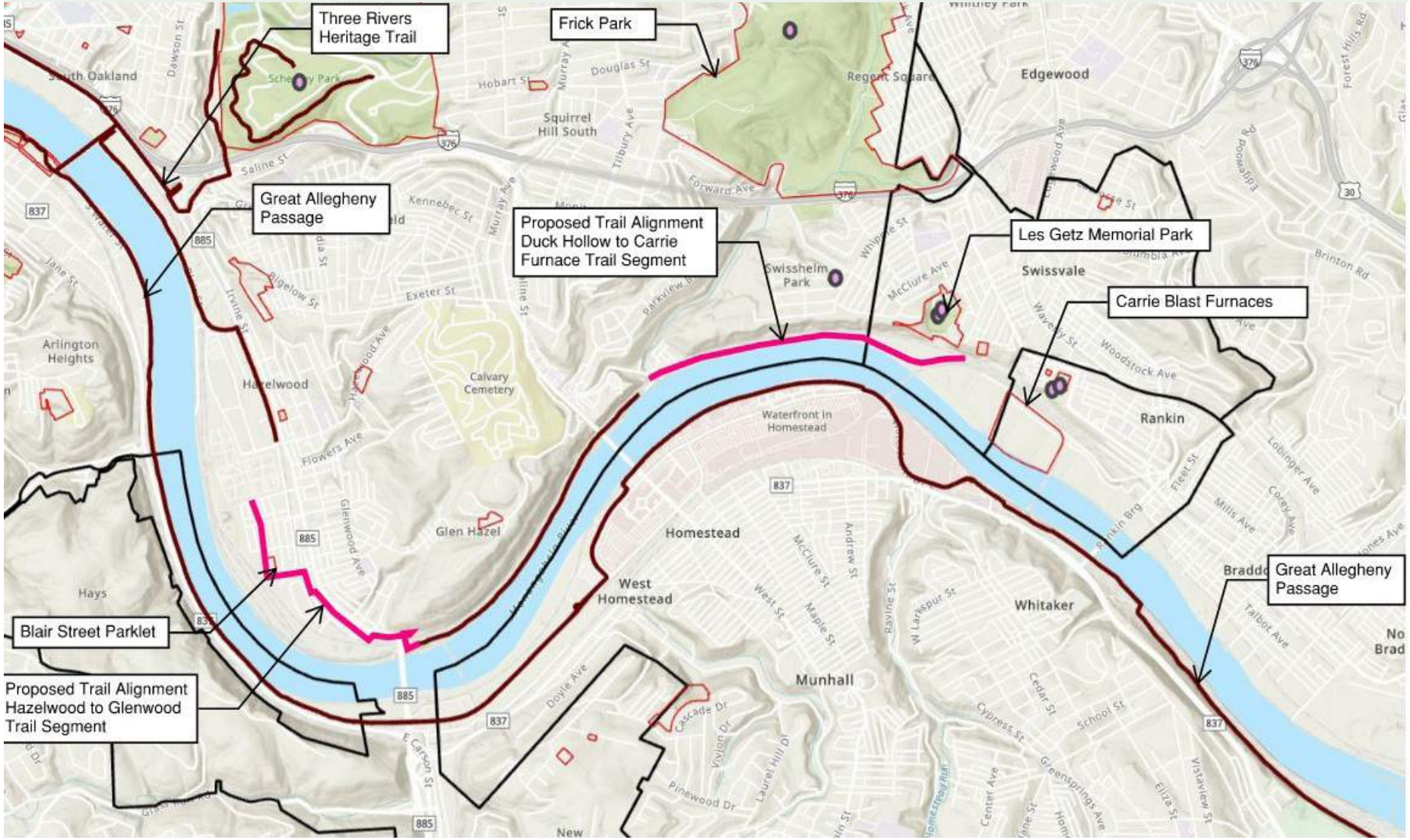
There are potential connections to the neighborhood that could be created by rehabilitating the existing railroad underpass that leads to the hillside. The hillside area includes numerous mountain biking trails and a parking lot.

For all these items, special considerations must be made during design and construction for any work to be completed that may affect these recreational lands. An environmental evaluation and clearance will be needed to ensure these items are given proper attention.

Map 15. Slag Trail (Source: Robert Peil & Landon Bloomer)



Map 16. Parks and Recreational Sites



Hazardous Waste Areas

The following storage tanks (Inactive) have been identified in the study area:

- Cortland & Blair Streets, AST (Above ground storage tank)
- 5246 Lytle Street, AST
- Second Ave & Vespucius St, AST

The following hazardous waste generators have been identified in the study area:

- Tri State Hydraulic SVC PGH PLT - captive hazardous waste operation
- Almond CP Coke Plant, Monongahela Connecting Railroad Co – captive hazardous waste operation

The following groundwater media have been identified in the study area:

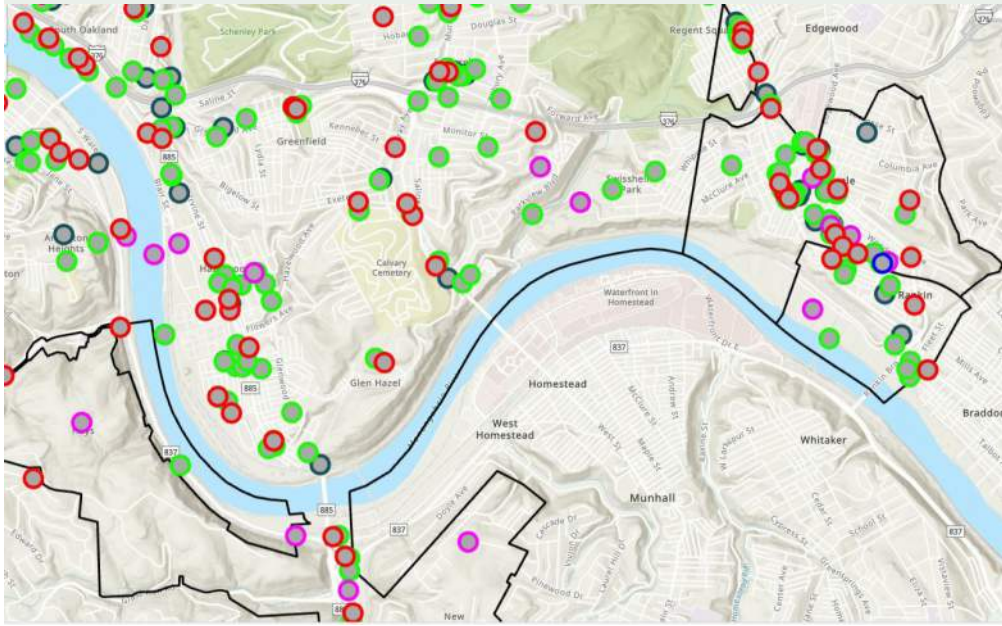
- Nine Mile Run Slag Disposal Site, groundwater media
- US Steel Carrie Furnace Property

The following Envirofact Facilities have been identified in the study area:

- Greenwood Rd Salt Transfer Facility, Blair Street
- Pittsburgh Recycling Services, LLC, 50 Vespucius Street
- CSX Transportation Inc., Second and Vespucius Streets
- Kerotest Manufacturing Corporation, 5500 Second Ave
- Nine Mile Run, near Old Browns Hill Road
- Swissvale Borough Sewer Systems, south of Les Getz Memorial Park

These sites are mapped on Map 17.

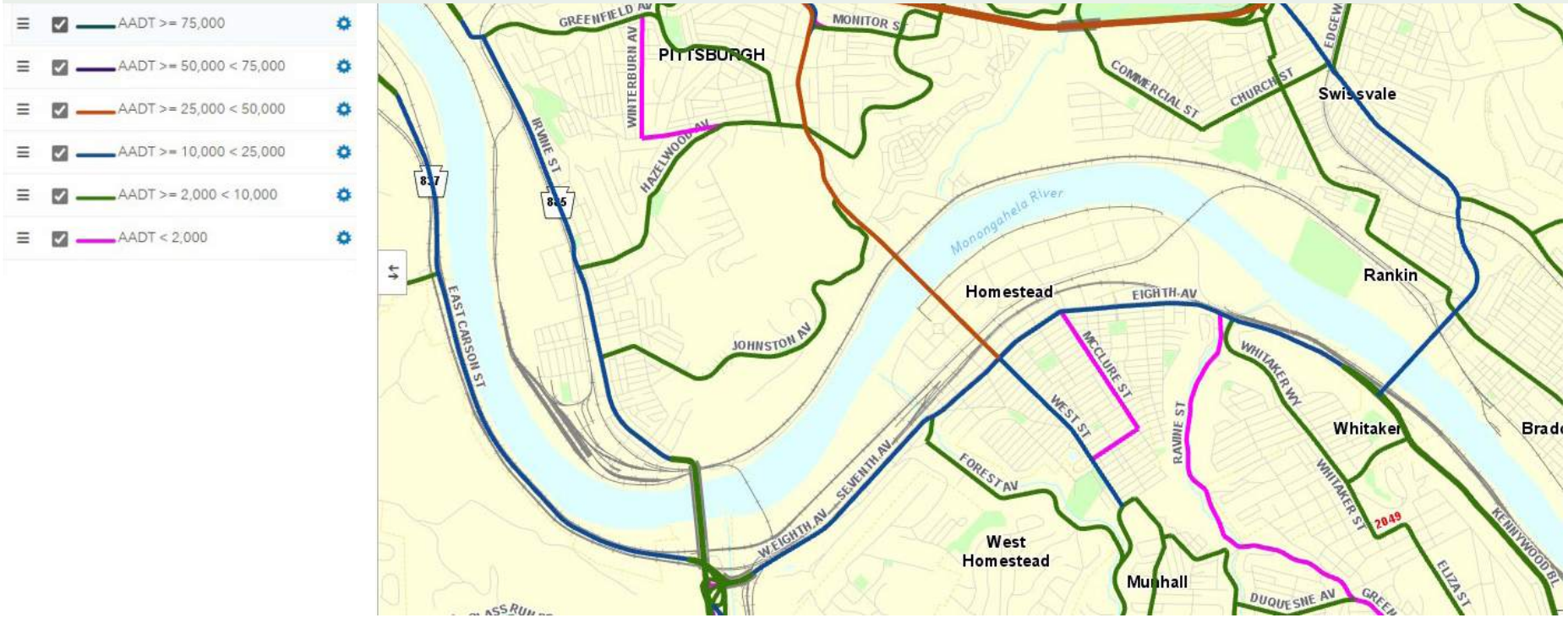
Map 17. Hazardous Waste Areas (Source: PennDOT One Map)



Traffic Volumes

Leveraging data from PennDOT OneMap, we can understand the traffic volume on key corridors influencing the study area (See Map 18). Second Ave, SR 885 carries around 10,700 vpd. Although Second Avenue is a direct connection from the neighborhood to the proposed trail, the high traffic volumes on the two-lane roadway make it clear why this is not an all ages, all abilities solution.

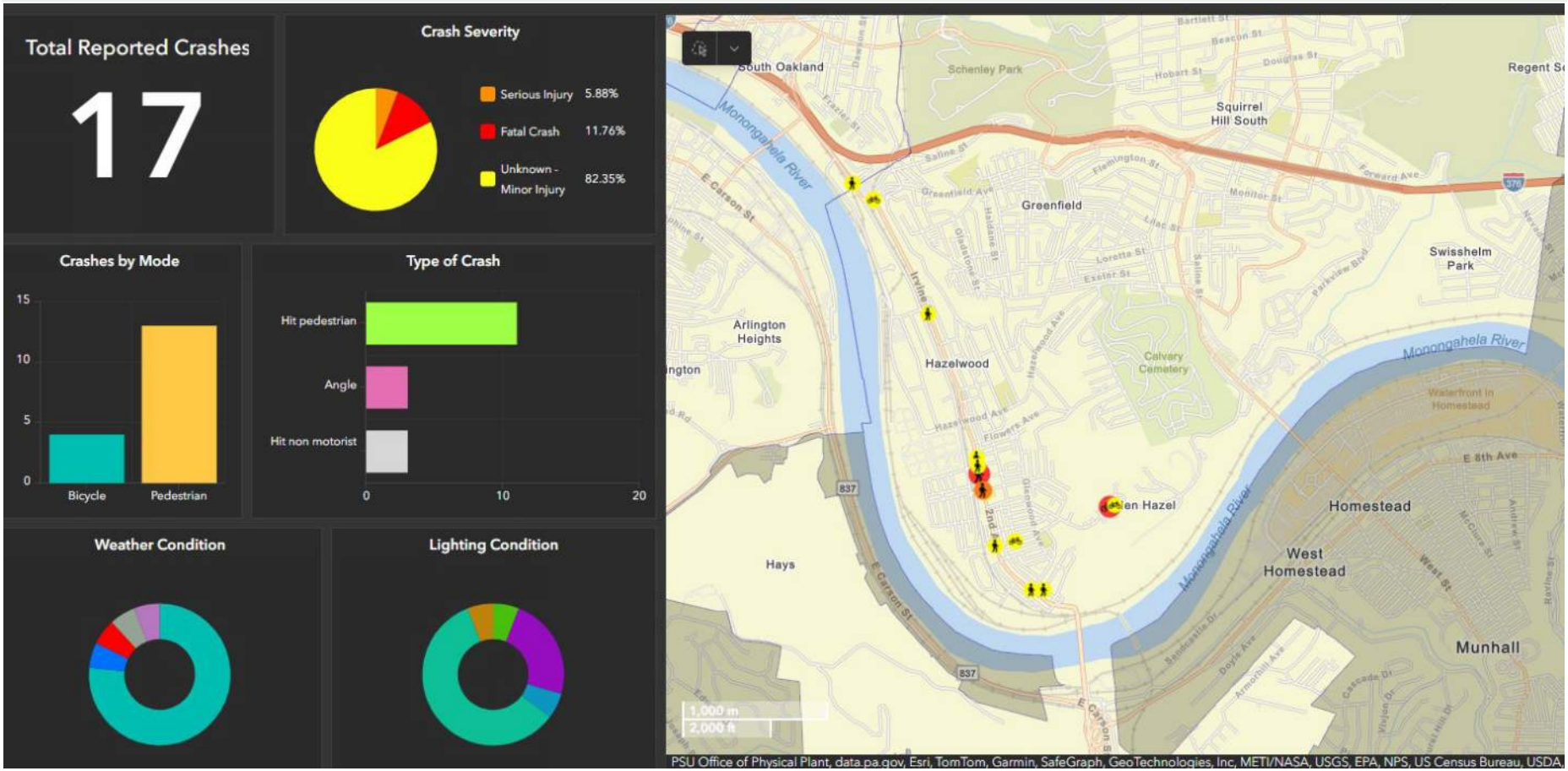
Map 18. Annual Average Daily Traffic (Source: PennDOT One Map)



Bike and Pedestrian Crash History

Map 19 illustrates the location of bike and pedestrian crashes that occurred in Hazelwood between 2019 and 2023. Ten bicycle/ pedestrian crashes occurred within the study area of Second Avenue including one fatal crash in the business district. In review of upcoming projects as noted in the section above, a vulnerable road user safety improvement project is in development for Second Avenue from Johnston Avenue to Renova Street. During stakeholder meetings, the number of crashes along Second Avenue was a major factor in the community representatives requesting an alternative to Second Avenue for the bike route.

Map 19. Bike and Pedestrian Crash History



FIELD OBSERVATIONS

To fully understand a project, it is necessary to visit the site and record photographs, measurements, and observations of the natural/human environment. Multiple field observations were held throughout the study. The project team visited the Hazelwood portion of the project to discuss potential alignments and community needs with various stakeholders. The project team toured the Carrie Furnace site to understand the possible connections into the site and into the Swissvale and Rankin communities. The project team explored the unimproved trail section to understand topography and physical constraints. The team paid close attention to the considerations listed in this chapter, which strongly shaped the identification of the preferred alignment.

COMMUNITY ENGAGEMENT

Source: TPD

3

COMMUNITY ENGAGEMENT

OVERVIEW

Active involvement from the community is integral to every planning endeavor. The most successful plans are connected to the aspirations of the communities they serve. The planning process draws upon insights from various stakeholders including community members, members of working groups, supportive agencies, and non-profit organizations to which has and will continue to shape the Hazelwood to Carrie Furnace Trail Segment Feasibility Study.

PREVIOUS ENGAGEMENT EFFORTS

Past engagement initiatives provide valuable insights into the needs, preferences, and concerns of various stakeholders, including residents, advocacy groups, local businesses, and governmental organizations. By acknowledging and building upon these previous efforts, this study can leverage insights to refine strategies, tailor interventions, and prioritize resources based on the community's input and feedback. This will lead to more informed decision-making and the development of multimodal solutions that better serve the needs of all trail users.

The introduction lists numerous planning efforts previously completed in the study area and a summary of these documents is provided in the appendix.

Image 18. Community Meeting #2 (Source: TPD)

Image 19. Trail Project Booth at Rankin Community Days (Source: TPD) (top)

Image 20. Flyers to Encourage Community Engagement (Source: Friends of the Riverfront) (bottom)

STEERING COMMITTEE

The steering committee was made up of a diverse group of participants, with representation from Friends of the Riverfront, the project sponsor, Allegheny County, City of Pittsburgh, Swissvale Borough, Rankin Borough, Senator and Representative offices, PennDOT, transit organizations, neighborhood organizations, and advocacy groups. The steering committee convened eight times throughout the project's duration, offering guidance by reviewing and providing feedback on pertinent data, community engagement initiatives, alignment suggestions, and implementation strategies.

COMMUNITY ENGAGEMENT

At the outset of the feasibility project, the project team crafted a Public Involvement Plan (PIP) to delineate forthcoming outreach activities and ensure fair public engagement throughout the project's duration. The PIP functions as a dynamic document throughout the project's life cycle, aiming to:

- Provide an overview of past community involvement and planning efforts.
- Assess public interest in the planning process.
- Determine where the community seeks multimodal connections.
- Identify how to phase and prioritize project segments for future investment and development.

Community engagement was advertised on the City of Pittsburgh and Friends of the Riverfront's websites. Many members of the steering committee sent meeting announcements to their mailing lists. Flyers were distributed in the Duck Hollow neighborhood.

Summary of Project Meetings

Kickoff Meeting

This meeting was held virtually on May 8, 2023, to launch the project and begin discussing important tasks, milestones, and goals. Attendees included the project design team and the steering committee. A project scope and schedule was discussed. Attendees were encouraged to share relevant information and opportunities for engagement.

Steering Committee Meetings

The Steering Committee met monthly with the first meeting held on July 25, 2023. Meetings are virtual and included a presentation of progress and upcoming activities. Opportunity for input and discussion was available throughout the meeting. Meetings have been held on the following dates:

- July 25, 2023
- August 29, 2023
- October 31, 2023
- November 28, 2023
- January 30, 2024
- April 30, 2024
- July 30, 2024
- October 29, 2024
- January 28, 2025
- May 27, 2025
- July 29, 2025

KEY POINTS:

Meeting #1, July 25, 2023

Outlined the project scope, project team and expectations for the steering committee.

Meeting #2, August 29, 2023

Included more detailed discussion on community engagement. At this meeting, the idea to submit a Homepage article was received. The Homepage is the Hazelwood Initiatives community newsletter. The project team agreed to hold the first community meeting at the monthly Hazelwood Initiative's standing meeting. It was discussed to further explore use of the DPW maintenance lot for the trail.

Meeting #3, October 31, 2023

Announced the launch of the online community engagement survey and used the meeting as a dry run to the upcoming community meeting. Feedback from the steering committee was received and incorporated into the meeting materials. The steering committee was reminded to share the community meeting invite and outreach efforts were discussed.

Meeting #4, November 28, 2023

Reviewed the conversations from the key interviews and community meeting. Advised the steering committee that the purpose and needs survey was closed and that a route survey will be available for the month of December.

Meeting #5, January 30, 2024

Announced and gained concurrence on the selected route. The Blair Street Route with a new Melanchton Street trail bridge was selected as the route to advance. The Blair Street route and the Herbert & Dyke route were very closely ranked, but the steering committee felt that if replacement of the Melanchton Street Pedestrian Bridge can be incorporated into the project, it is the clear favorite. It incorporates the needs of the community while emphasizing safety and connectivity. For the route selection, over 450 people engaged the survey and 124 completed the survey. There were over 100 open-ended comments received throughout the survey.

Meeting #6, April 30, 2024

Reviewed the alignment of the proposed trail. Provided an overview of recent coordination with CSX and the City Department of Public Works.

Meeting #7, July 30, 2024

Reviewed the proposed alignment and discussed progress of design. Updated the Steering Committee on progress with CSX and DPW. Discussed potential grant applications.

Meeting #8, October 29, 2024

Provided a recap of the second community meeting held at the Hazelwood Brew house on 10/08/2024. Provided an overview of the meeting with AVRR and announced that they are in support of the trail and the grade separated crossings. Reviewed the proposed trail design and progress made since the previous meeting. Discussed prefabricated bridge options.

Meeting #9, January 28, 2025

Reviewed pertinent comments received from the City of Pittsburgh regarding the alignment through the Hazelwood Neighborhood and provided a recap of conversations held between the project team CSX and AVRR.

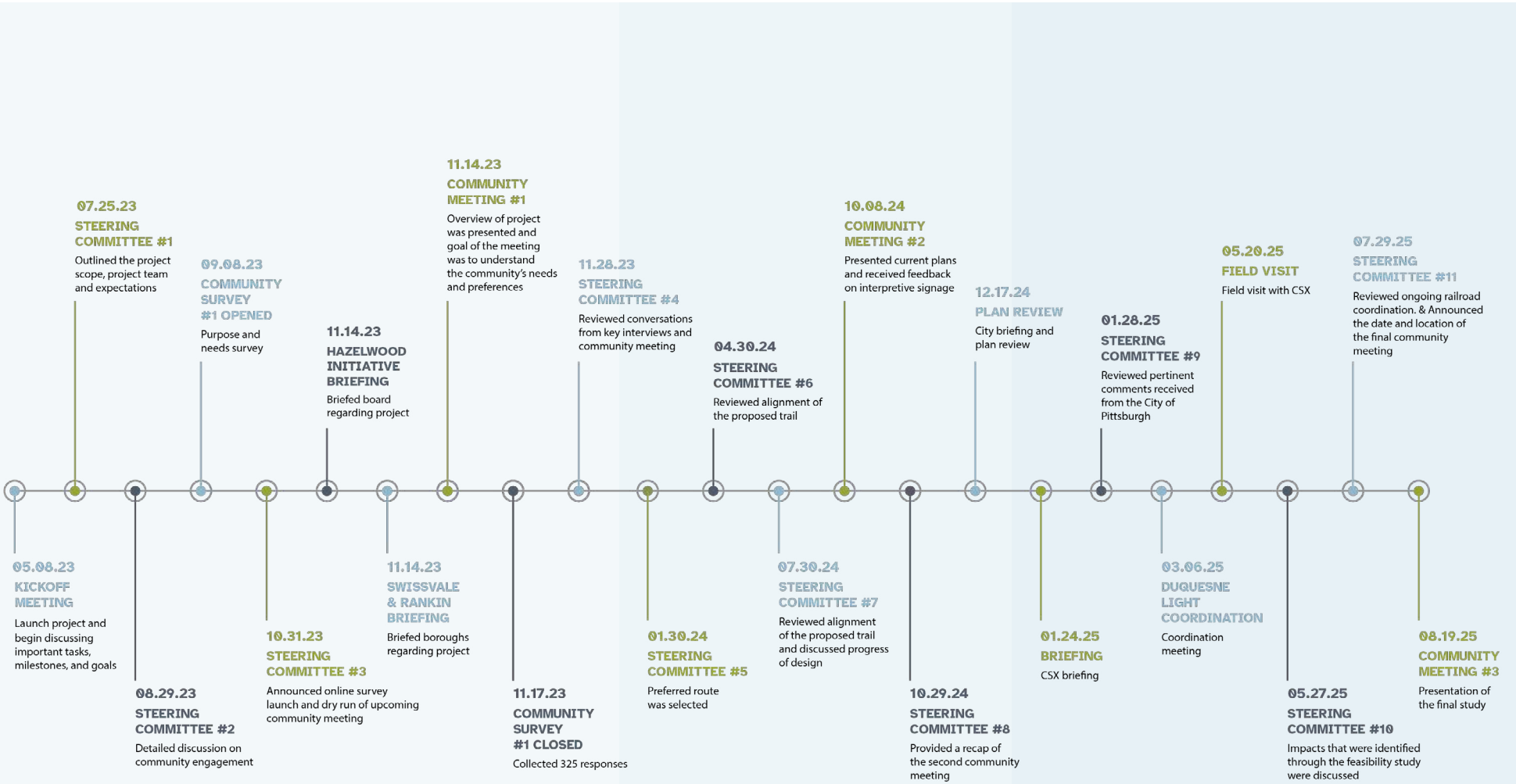
Meeting #10, May 27, 2025

Following the field meeting with CSX, a recap of that meeting was provided. Additionally, impacts that were identified through the feasibility study were discussed. following the meeting the feasibility study was provided to the steering committee for comment.

Meeting #11, July 29, 2025

Reviewed ongoing railroad coordination. Discussed incorporating the committee's comments into the feasibility study and announced the date and location of the final community meeting.

Figure 16. Community Engagement Timeline



Community Survey #1, Purpose and Needs

To understand the potential demand and type of use a trail from Hazelwood to Carrie Furnace would see, the project team developed a Purpose and Needs Survey. It was active from September 8, 2023 through November 17, 2023. During that time the survey saw 325 responses. The survey was advertised by Friends of the Riverfront, the steering committee, the Homepage article and supported by a link and project page on the City of Pittsburgh's engage page website.

Comments that were reiterated through the surveys:

- The trail link is an important connection that people would use.
- Most people want to use the trail for recreation (biking, walking, running) and enjoying nature more than commuting.
- Only a few people say they would use the trail daily (e.g., for commuting). Most would use it a few times a month.
- Preferred trail surface was evenly split between paved asphalt and crushed stone, as long as it is accessible.
- Concerns about relying on the Melanchton Street footbridge without it being accessible.
- Concerns about routing walkers and bicyclists along 2nd Avenue due to traffic safety concerns.

Figures 17 - 25 summarize survey questions 1 - 12 results.

Figure 17. Q1: How Would You Use the Trail

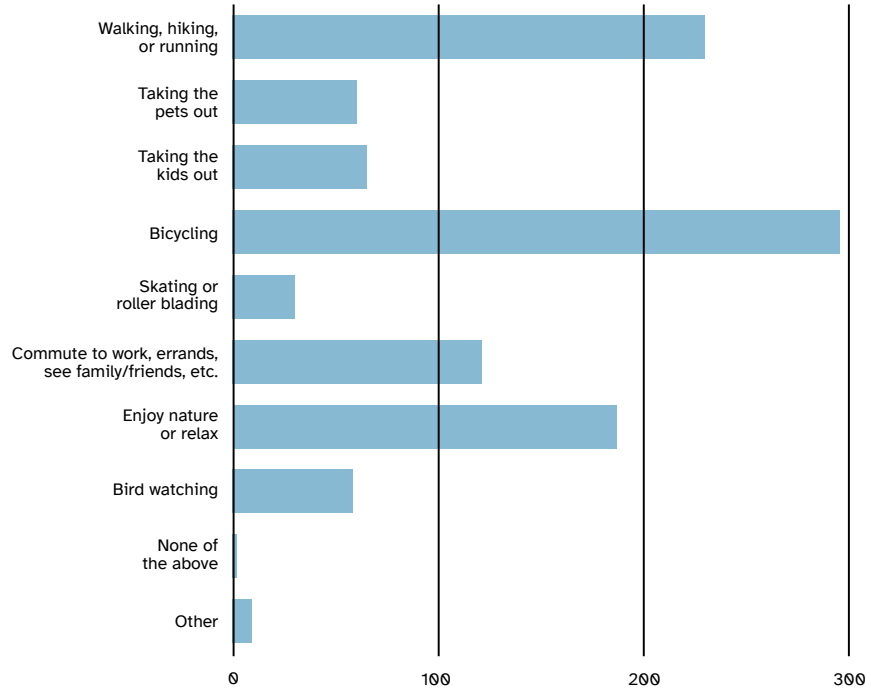


Figure 18. Q2: What Services Do You Think the Trail Needs

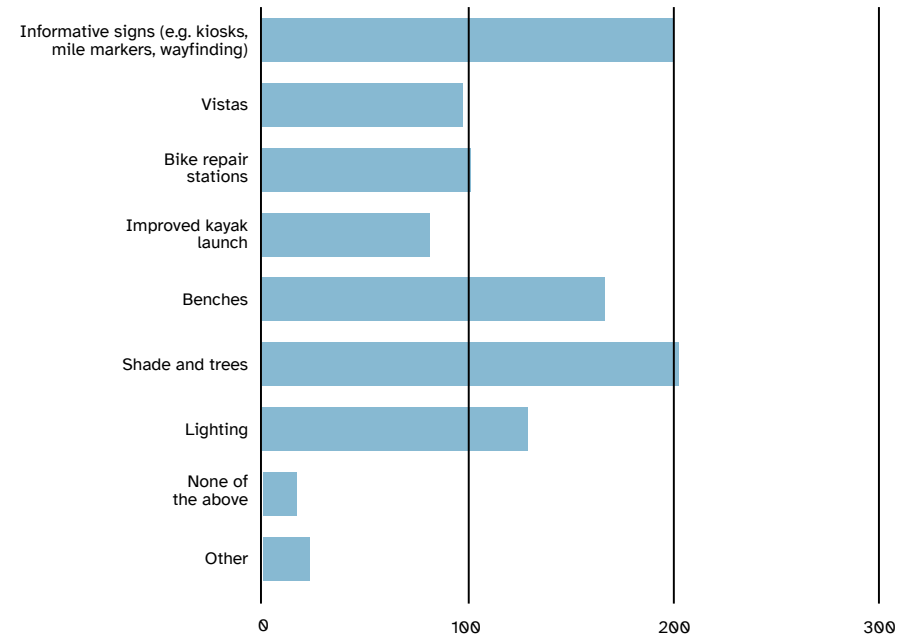


Figure 19. Q3: Where Would You Like to Access the Trail in our Community

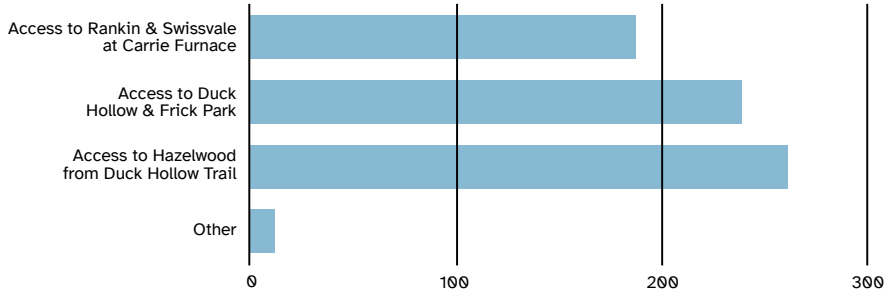


Figure 20. Q4: How Frequently Would You Use This Proposed Trail Connection

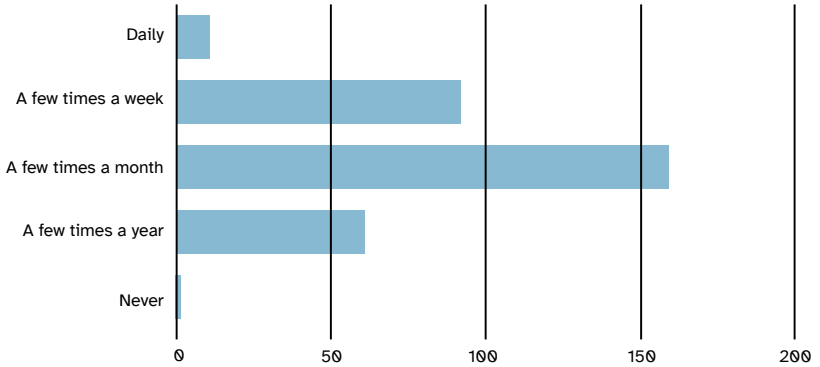


Figure 21. Q5: What Type of Trail Surface Are You Interested In

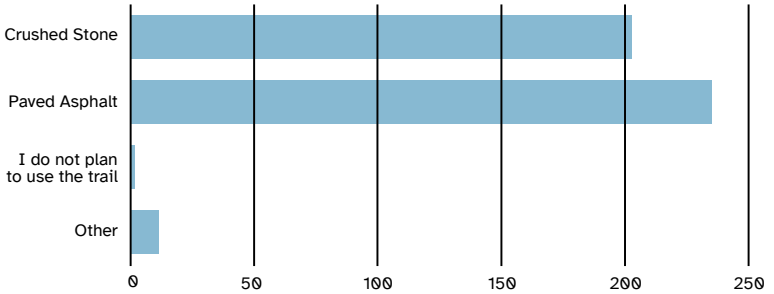


Figure 22. Q9: Where Would You Go on the Trail from Duck Hollow to....

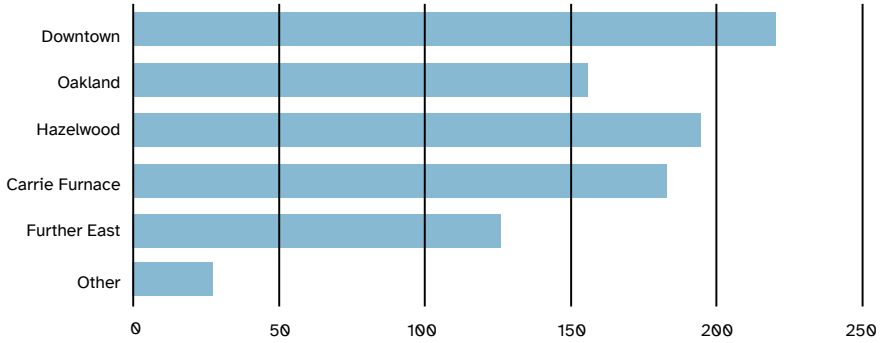
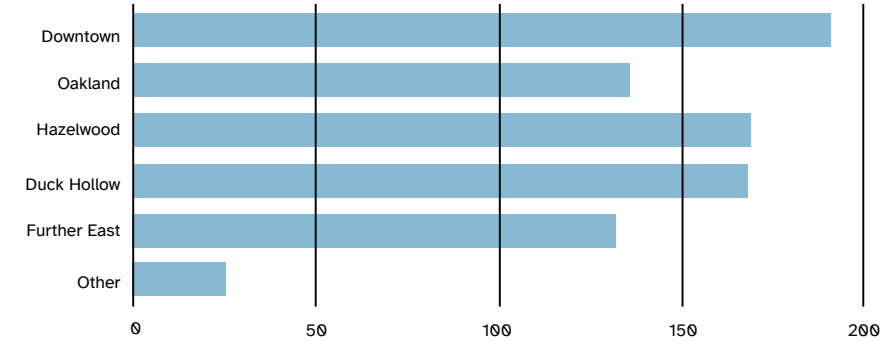


Figure 23. Q10: Where Would You Go on the Trail from Carrie Furnace to...



Define success

Next respondents were asked for their thoughts on what would make the trail exciting or successful. Thoughts were organized into themes with comments following:

Continued Engagement

- Working with local advocates to demonstrate support and host events when complete.
- Greater outreach to residents in the Boroughs that will be impacted.
- Organized walks that are themed could make the trail fun and interactive!

Connecting Communities

- Making solid connections from this trail to the surrounding neighborhoods and existing heavily used GAP trail will make it successful.
- Connecting to the Homestead Grey's Bridge to connect to the Great Allegheny Passage and communities to the south of the river.
- Allowing for safer bike commuting to eastern suburbs and bringing more trail users to Rankin and Braddock business districts.
- Connect to multi-modal facilities like bus stops, bike share and car share.
- Providing a safe connection across the railroad.
- Supporting local communities.
- Pairing the trail with traffic calming measures in Hazelwood and Greenfield so that the trail can be safely accessed by all.
- Providing safe urban connections with protected buffers so that it can feel like a complete greenway system.

Accessibility & Safety

- Create a trail for cyclists and walkers of all ability levels. Smaller wheeled users adults, children, handicapped, etc should be included! (paved asphalt)
- Lighting for safety.

Amenities

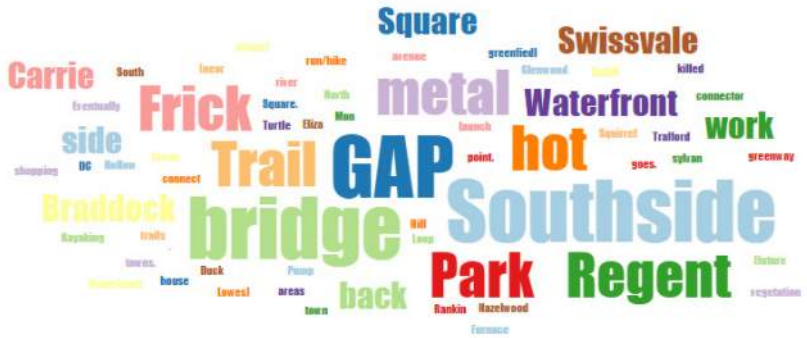
- Benches/rest stop, trees for shade and signage/maps
- Interpretive and wayfinding on all the trails
- Mini parklets along the river to sit by the water
- Vistas and kiosks
- New public art along the trail.

Destinations

The last questions asked respondents to share where they would go on the trail.

Respondents to the survey were primarily white between the age of 26-45. Demographic information is summarized in figures 25 and 26.

Figure 24. Q8: Where Would You Go on the Trail?



Hazelwood Initiative Briefing

In advance of the community engagement meeting that would occur at the November 14, 2023 Hazelwood Initiative monthly meeting, Friends of the Riverfront and TPD attended a Hazelwood Initiative Board meeting to brief the board regarding the project. The feasibility study presentation was presented to the board. The board provided feedback which was incorporated into the presentation.

Swissvale and Rankin Briefing

On November 14, 2023, Friends of the Riverfront and TPD meet with officials from the Borough of Swissvale and the Borough of Rankin to provide a project briefing. The meeting occurred on the same day as the community engagement meeting. Officials provided insight on upcoming municipal projects such as the Swissvale/ Rankin walking Trail that connects the residential areas to the CSX RR pedestrian underpass and followed up after the meeting with plans for the walking path.

Community Meeting #1

The first community meeting was held on November 14, 2023. It was well attended and held in conjunction with the Hazelwood Initiative monthly meeting. Within the presentation, an overview of the project was given along with the purpose of the meeting. The goal of the meeting was to understand the community's needs and preferences for the routing of the trail. In addition to the meeting, an online purpose and needs survey was open for community to provide input without having to attend the meeting. In coordination with the steering committee, the theme of the trail was determined to be "Connecting Communities". The community meeting reinforced this idea as many desire connections to family and businesses in Downtown, Oakland, Hazelwood, Duck Hollow, Swissvale, Rankin and Braddock. Connections to the business district and the Hazelwood Greenway were also emphasized.

Figure 25. Q11: Survey Demographics: Age

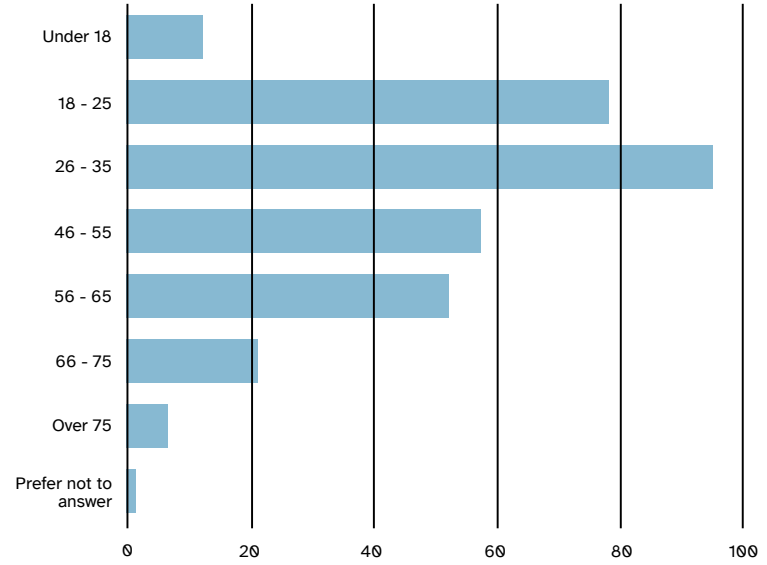


Figure 26. Q12: Survey Demographics: Race

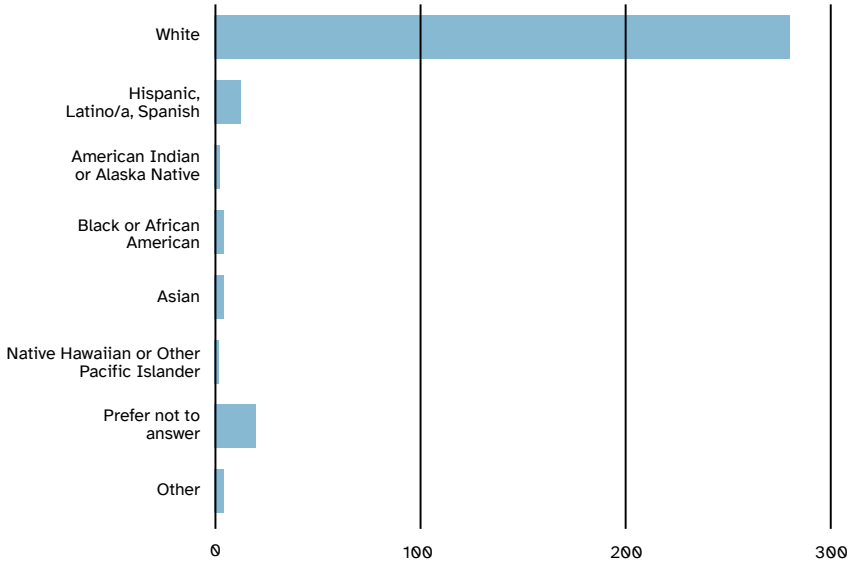
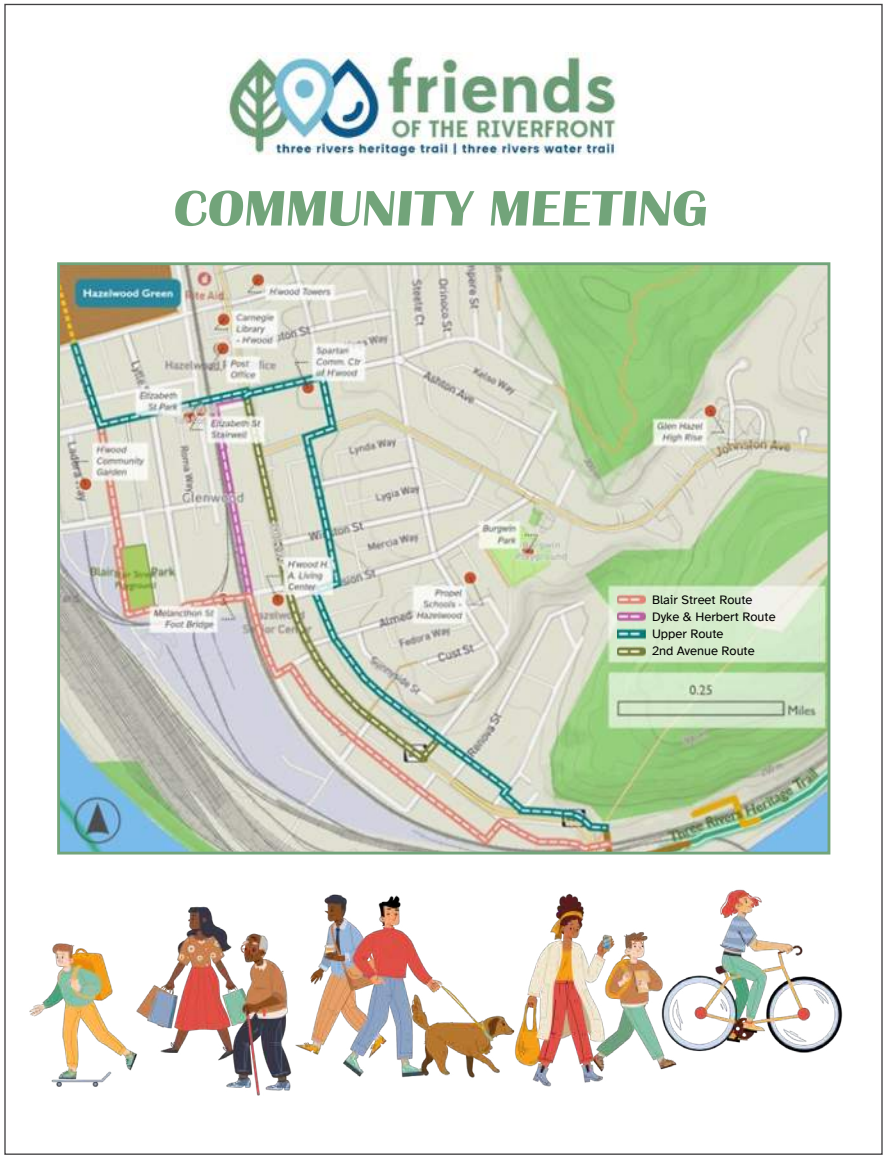


Figure 27. Four Alignments Presented at Community Meeting #1



At the meeting, a Mentimeter exercise was conducted to understand the route preferences of the community. Four routes were presented with pros and cons of each and the community was asked the same two questions on all four alignments. The four alignments can be seen in Figure 27.

- Q1: How well would this route serve the people in this neighborhood who walk or bike?
- Q2: How well would this route connect the Three Rivers Heritage Trail for People who walk or bike?

The results of the Mentimeter polling are shown in the Figures 28-29.

Finally, participants were asked to rank the four alignments keeping in mind:

- The overall goal of the project which is to complete the gap in the Three Rivers Heritage Trail network between Hazelwood and Carrie Furnace.
- The neighborhood's goals which include Mobility and Accessibility; Economic Growth and Revitalization; Environmental Sustainability; Community Enhancement and Identity; Equity and Health
- The trade offs between each route option.

The four route alignments in order of their ranking were the (1) Dyke & Herbert Route, (2) Blair Street Route, (3) Upper Route, (4) Second Avenue route.

Hazelwood Initiative and the attendees of the meeting requested that he Mentimeter exercise be expanded to an online survey to engage more of the community. Following the meeting, the Mentimeter exercise was replicated as an online survey and distributed to the public.

Figure 28. Results of Mentimeter Polling from Community Meeting #1

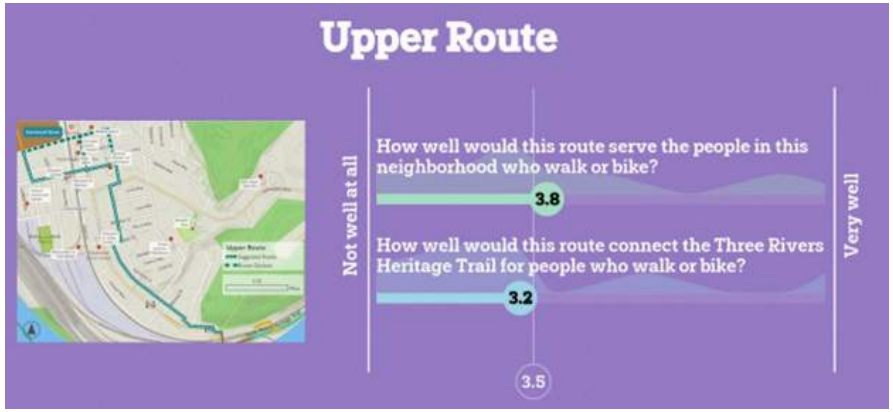


Figure 29. Four Route Alignment Final Rankings from Community Meeting #1

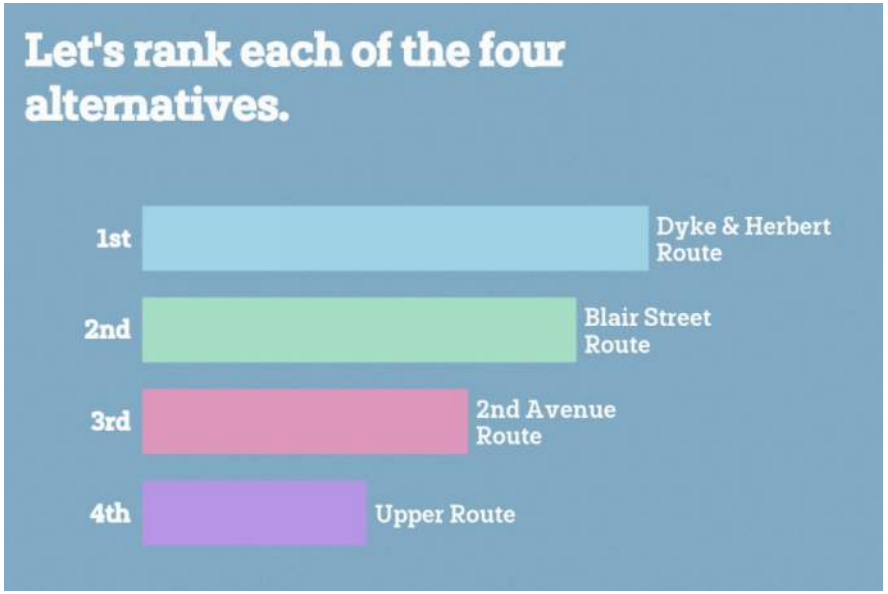
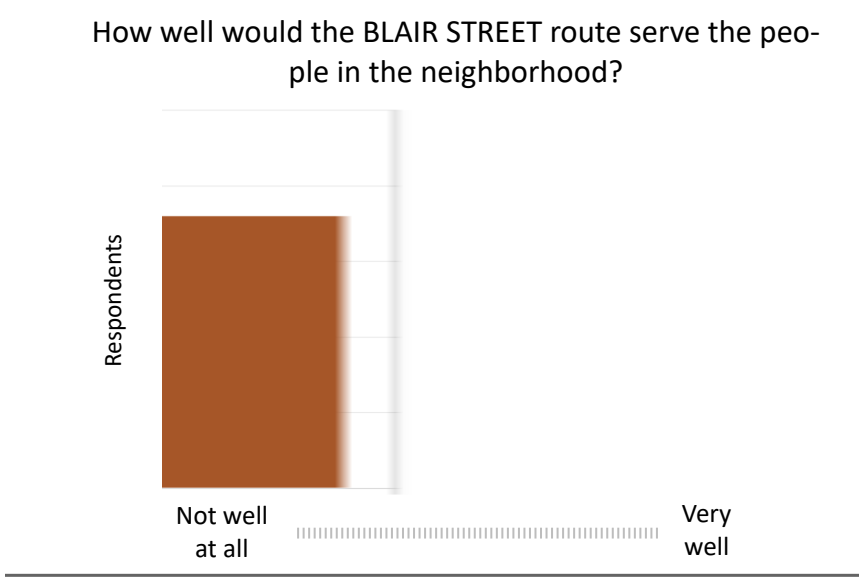


Figure 30. Results from Online Survey for Community Survey #2



Community Survey #2, Alignment

Following Community Meeting #1, a survey was developed using the questions from the Mentimeter activity, to better understand the desired routing through the neighborhood and associated trade offs that had to be weighed. The four routes are discussed and shown in Chapter 3 Alternatives Development.

Similar to the Mentimeter exercise at Community Meeting #1, the survey asked questions to understand the route preferences of the community. The four routes were presented and the same two questions were asked on each of the four alignments.

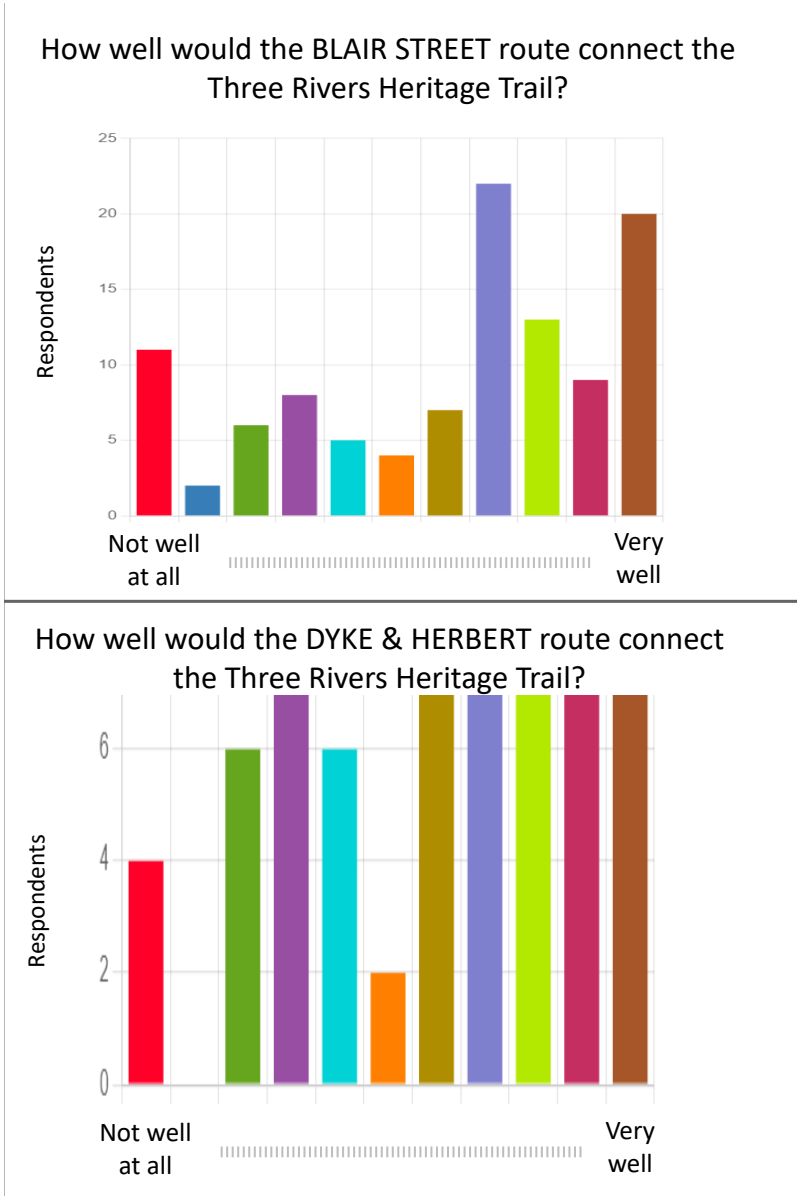
- Question #1 – How well would this route serve the people in this neighborhood who walk or bike?
- Question #2 – How well would this route connect the Three Rivers Heritage Trail for People who walk or bike?

Results from the online survey can be seen in Figures 30-32.

The Blair Street Route and the Dyke & Herbert Routes garnered the most positive responses to both questions. The Upper route saw the most consistent negative response to both questions. Whereas the results for the Second Avenue Route were split. Responses show that some people feel it would serve the community very well, and others thought it would serve the community not well at all. The community was more united on feeling that it would not connect the TRHT very well. Ultimately the responses from the online survey mimic closely the results achieved at the Community Meeting #1.

However, the online survey allowed for participants to provide comments. An online survey has the benefit of allowing participants to think and answer at their own pace and with anonymity. The comments were consulted when trying to determine the best route advance.

Figure 31. Results from Online Survey for Community Survey #2



Blair Street Route Comments:

A number of comments recognize the difficulty using the existing Melanchton Street Pedestrian Bridge. Almost half 24 of the 50 comments on this route identify the Melanchton Street pedestrian bridge as a detriment to using this route. However, respondents also recognize that the Blair Street Route utilizes streets with low volumes and provides direct connections to residents. Many comments note that this appear to be the safest route.

Dyke Street & Herbert Route Comments:

The Dyke Street & Herbert Route received 46 individual comments. Commenters liked the proximity to the Hazelwood Business District. Opinions were mixed on the use of the Elizabeth Street Bridge, Second Ave and Dyke Street.

Upper Route Comments:

This route received 50 comments. Commenters mention that the Upper Route connects to more of the dense residential and so may be a good connection, but not as part of the TRHT. The hills and weaving through the neighborhood make it a confusing and less desirable route. Some of the roads used see heavy traffic necessitating protected bike lanes.

Second Avenue Route Comments:

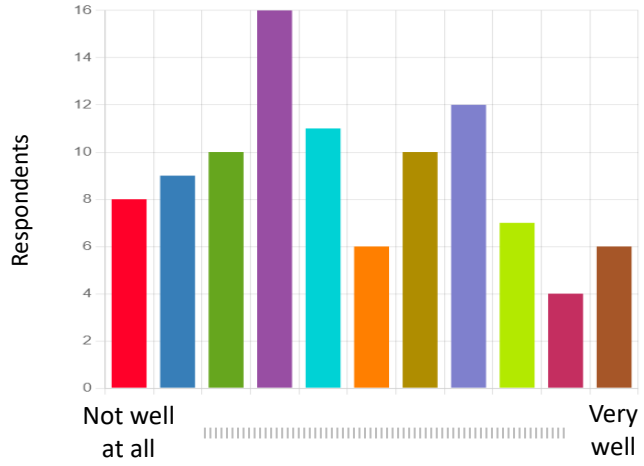
The Second Avenue Route received 64 individual comments. A few comments noted that this is the most direct route and connects the best to the business district. Approximately 90 percent of the comments bring up traffic safety issues and the major changes that would be needed to make this a viable option.

The final question asked on the online survey was to rank each route by order of preference. See the ranking results in Figure 33. The Blair Street route was ranked the best by the most participants, followed closely by the Dyke & Herbert Route. The Second Avenue route was ranked fourth the most.

Respondents to the alignment survey were asked to provide their zip code. The largest proportion of survey respondents were from Hazelwood (20%), Squirrel Hill (17%) and Swissvale (12%). The response shows that approximately half of the survey participants were from areas directly along the proposed trail.

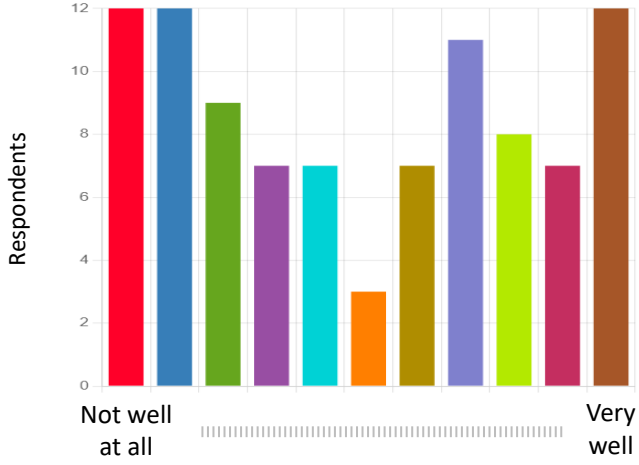
Figure 32. Results from Online Survey for Community Survey #2 (continued)

How well would the UPPER route serve the people in the neighborhood?

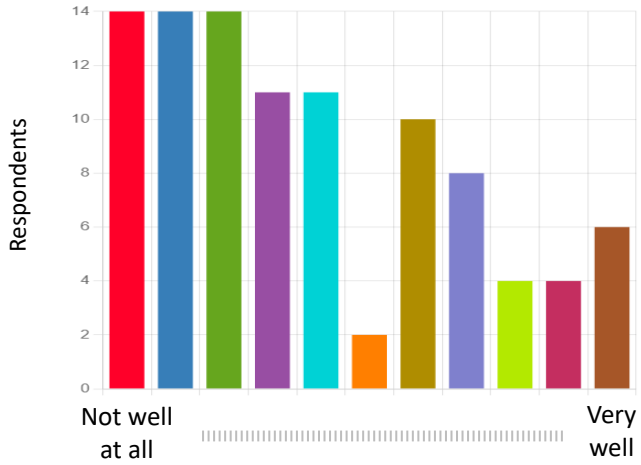


How well would the UPPER route connect the Three Rivers Heritage Trail?

How well would the SECOND AVENUE route serve the people in the neighborhood?



How well would the SECOND AVENUE route connect the Three Rivers Heritage Trail?



Selected Alternative

After review of the information gathered through the public engagement, the steering committee agreed to advance the Blair Street Alternative. The Blair Street Alternative meets the goals of the project and can overcome the limitations of the route by replacing the Melanchton Street Pedestrian bridge with a pedestrian and bicycle friendly bridge.

Figure 33. Route Ranking Results from Community Survey #2

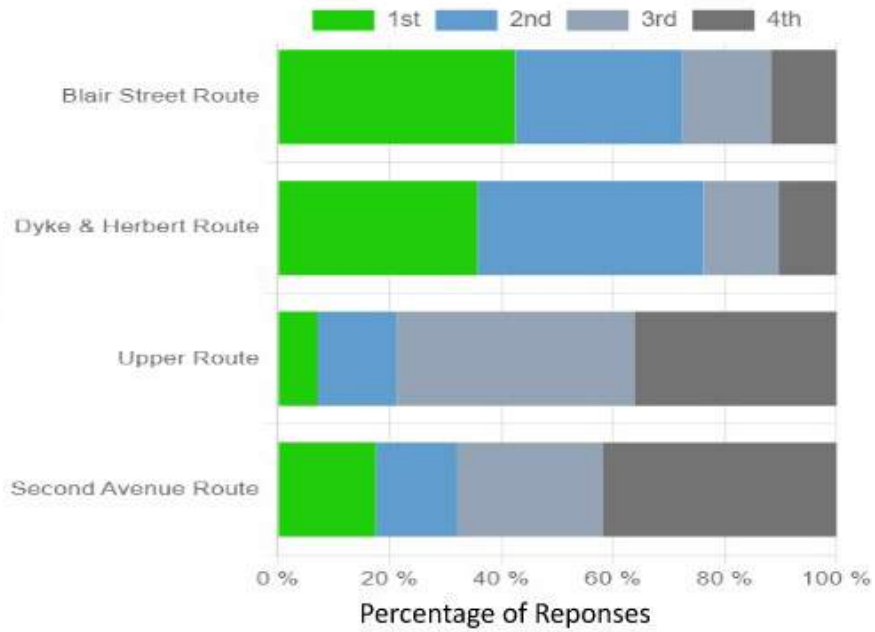
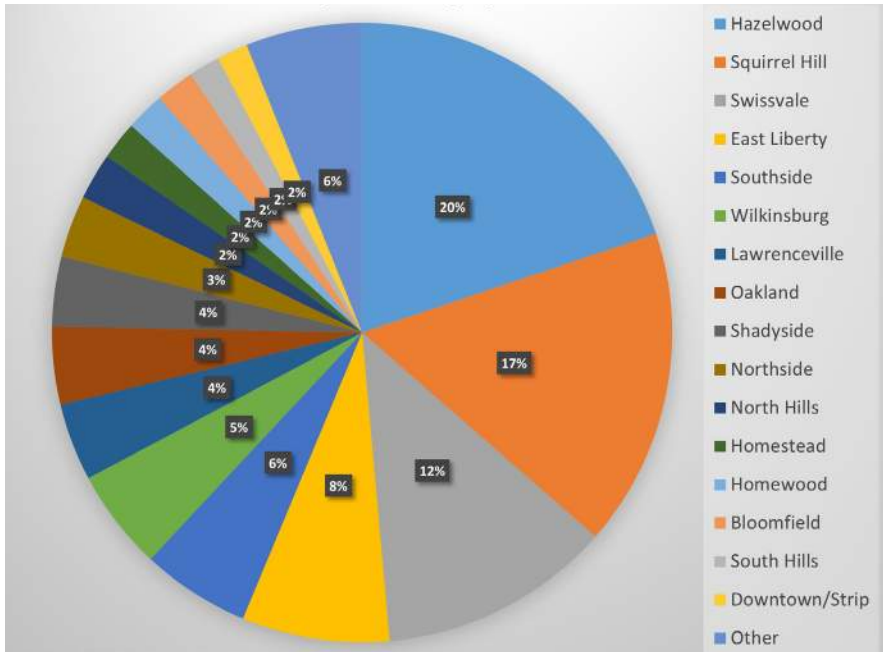


Figure 34. Respondents by Zip Code



Railroad Coordination

A series of meetings were held with CSX Transportation (CSX). CSX owns the property in the area of both bridge crossings and along the riverfront in the vicinity of the trail extension. With selection of a route completed in January, the project team met with CSX to brief them on the project and determine their overall opinion of the proposed trail. On March 13, 2024, CSX real estate and engineering met with representatives from the project team. Three elements of the project were discussed with CSX, (1) replacement of the Melanchton Street Pedestrian Bridge, (2) a new grade separated structure at Glenwood and (3) the extension of the trail to Carrie Furnace. A follow up meeting was held on August 28, 2024. CSX is agreeable to the two bridge crossings and upgrades to the existing trail to enhance safety and reduce encroachment onto the rails.

Carload Express is a regional short line railroad. They own the multiple tracks in the project area that are on CSX property. They indicated that since they own the tracks while CSX owns the property, all reviews would be appropriately routed when submitted through CSX. Carload Express indicated their support for the grade separated crossing at the Glenwood Bridge and the trail in general to reduce unauthorized entry into their rail yard.

A field meeting was held on May 20, 2025 with representatives from the City of Pittsburgh, Friends of the Riverfront and CSX Transportation. Multiple alignments and alternatives were discussed with CSX. CSX indicated support of the project. Discussion regarding property transfers at Melanchton Street and from Glenwood Bridge to Carrie Furnace were discussed. CSX indicated they would entertain aerial easements for the two trail crossings at Melanchton Street and adjacent to the Glenwood Bridge. CSX discussed safety measures that should be incorporated into the trail design and discussed specific design parameters to follow while developing the trail and structure design.

Ongoing coordination efforts will be necessary with both railroads and all design submissions should be directed to CSX to review and approve any proposed infrastructure within CSX's right-of-way. As noted in Chapter 2, the existing right of way for Second Avenue persists through the study area. However, clarification of location along with modifications to right of way is anticipated

City of Pittsburgh Department of Public Works Coordination

As discussed above in a previous chapter, the selected alignment is the Blair Street Route. It includes the replacement of the Melanchton Street Pedestrian Bridge, and crossing through the Department of Public Works (DPW) Maintenance Lot as well as skirting along the outer edge of the Blair Street Park. The design team met with the DPW on April 4, 2024. They requested a site plan that shows how the operations of the DPW yard could be maintained with the trail through the site. Additionally, they asked for a footprint of the trail along Blair Street Park to coordinate their plans for use of the site.

Community Meeting #2

A second community meeting was held on October 8, 2024. Approximately 40 people attended the meeting at the Hazelwood Brew House. This community meeting was used to present the current plans to the community and ask what types of interpretive signage they would like to see on the trail. The majority of attendees were in support of the trail as presented. Of the people who provided feedback on interpretive signage, 14 people preferred to read about history along the trail, 11 people were in favor of wildlife and 10 people wanted to see signage regarding trees and plants.

Community Meeting #3

A final community meeting was held at the Rivers of Steel Carrie Furnace Site. The purpose of the meeting was to present the final plan to the public. It was well attended with approximately 50 people.

Figure 35. Flyer for Community Meeting #2

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ALTERNATIVES DEVELOPMENT

Source: TPD

4

ALTERNATIVES DEVELOPMENT

DESIGN CRITERIA

Design criteria are the parameters that a project must operate within to be successful; these shape the final recommendation. Based on project team and steering committee feedback, this project seeks to develop a bicycle and pedestrian-focused design solution that connects the Monongahela River communities social, economic and recreational opportunities. To achieve the project goals, the existing trail from Duck Hollow to the Glenwood Bridge is proposed to be extended in both directions.

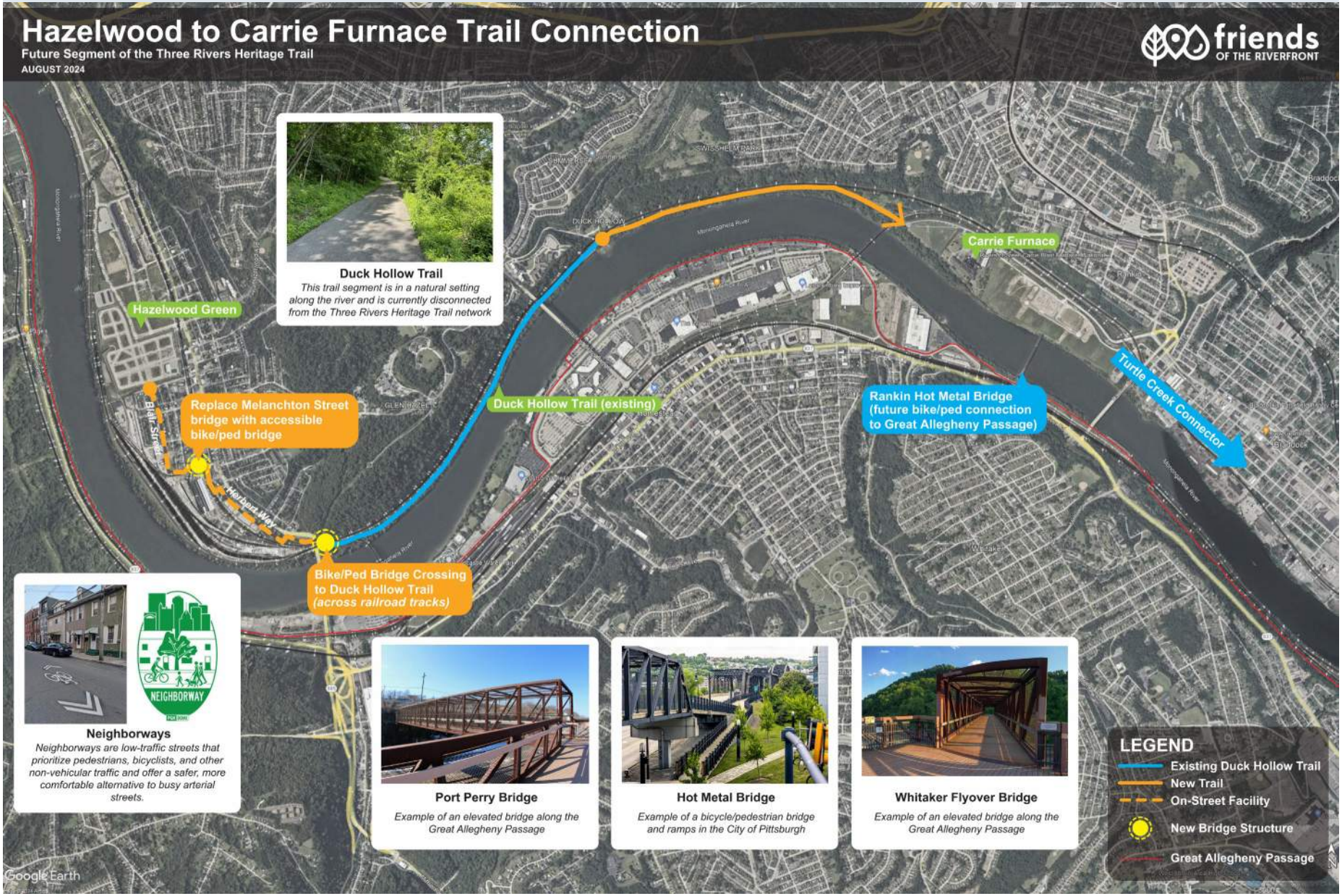
The three sections listed below are as described in Chapter 1. Each section has its own unique considerations.

- Hazelwood to the Glenwood Bridge – The existing street network will be utilized through Hazelwood. Four separate routes were developed and presented to the community to determine the best route to serve the community and the trail users. At the first community meeting held on November 14, 2023 and in a follow up survey, the community was asked to consider four alternative alignments and rank them for their ability to complete the trail connection and serve the community. More information on the community involvement activities is included in Chapter 4.
- Glenwood Bridge to Duck Hollow – The trail exists for much of this area but lacks a railroad crossing at the Glenwood Bridge. A companion bicycle/ pedestrian bridge will be constructed near the Glenwood Bridge to cross the CSX railroad tracks. The alignment for the railroad crossing was determined by maintaining clearances from the Glenwood Bridge over the railroad tracks while minimizing the span across the railroad.
- Duck Hollow to Carrie Furnace – This section exists as an unimproved path. A connection to this section of path to the parking lot is provided by the existing Second Avenue Bridge over Nine Mile Run. Generally, the alignment of the existing path was maintained with modifications to meet railroad clearance requirements.

The trail alignment is shown on Map 20. To develop alternatives for each of the sections, the project team focused on the following design parameters:

- Connectivity through the study area
- Traffic Speeds and volumes that are conducive to share the road facilities

Map 20. Trail Alignment



- Traffic calming potential for on-street segments of the chosen route
- Topography
- Property Ownership
- Railroad impacts

CONSIDERED ALTERNATIVES

Section 1 – Hazelwood to the Glenwood Bridge

Four routes were explored to provide bicycle/pedestrian connectivity from Hazelwood to the Glenwood Bridge. The route alternatives for the section of trail in the Hazelwood neighborhood are summarized in Table 2, with more detail and a preferred alignment provided in Chapter 4. Map 21 illustrates these connections.

Each of the four routes has benefits and trade offs that the community was asked to weigh and consider. When developing the initial routing the following elements were considered:

- All routes began and ended at the same point
- Vehicle exposure that vulnerable road users would be subjected to on the route
- Current bicycle and pedestrian use
- Ease of use, accessibility concerns, grade, maintenance
- Directness and convenience
- Engineering feasibility

Working from the known start and end points of the proposed trail, the alignment will cross the railroad tracks twice. Once in the Hazelwood community and once near the Glenwood bridge.

The four alternatives within the Hazelwood community would cross the railroad once. In the Hazelwood neighborhood, there are four streets that currently cross the railroad tracks.

- Hazelwood Avenue: At grade street crossing including sidewalks on both sides of the crossing
- Tecumseh Street: At grade street crossing with sidewalks on the east side of the crossing
- Elizabeth Street: Grade separated street crossing. Substantial grade to get over the railroad with narrow lanes and sidewalks.
- Melanchton Street: Grade separated pedestrian walkway with steps on both sides.

Each of these crossing locations were reviewed a potential trail alignment. Hazelwood Ave and Tecumseh Street are both at grade crossings and would require multiple blocks of protected bike lanes on Second Avenue. The area that would be affected is part of the Hazelwood business district and development of protected bike lanes would require parking removal. Due to the parking impacts, these options were eliminated leaving only the Elizabeth Street above grade street crossing and the Melanchton Street Pedestrian Bridge crossing as viable rail crossings.

It should be noted that a previous study reviewed the feasibility of a riverfront trail alignment between Hazelwood Green and Glenwood. This alignment has the benefit of not requiring the two railroad crossings, but due to property ownership existing land uses and limited width of the available land next to the river, retaining walls and structures are necessary for much of the length. Additionally, it does not meet the community's goal of providing connections into the community.

PREFERRED ALTERNATIVE

Section 1 – Hazelwood to the Glenwood Bridge

The preferred Alternative was found to be the Blair Street Route. It includes a replacement structure to cross the railroad at Melanchton Street since the current bridge is not ADA accessible and could better serve the community as a bicycle/ pedestrian friendly bridge. The route leverages existing city property to create a route that parallels Second Avenue but avoids the traffic issues associated with the arterial roadway.

Table 2. Route alternatives for the section of trail in the Hazelwood neighborhood

ID	Description	Length & Estimated Cost	Opportunities	Challenges/Constraints
1	Blair Street Route	5,418 feet $$$	o Direct route using alleyways, city streets, and Blair Street Park o Could include traffic calming o Route runs along and through the Blair Street Park	o New trail bridge at Melanchton Street with ramps o Crosses through the City owned DPW lot & requires the relocation of the DPW compactor o Improvements needed on Sickle Street o Lighting needed in the park
2	Dyke & Herbert Route	5,768 feet $$	o Uses alleys, city streets and could include traffic calming o Brings the trail to the Business District o Uses the sidewalk between Dyke Street and Elizabeth Street Bridge	o Crosses to railroad using the Elizabeth Street Bridge with steep grades, narrow lanes and high traffic o Interactions with heavy vehicles and construction equipment on Dyke Street o Crosses through the City owned DPW lot & requires the relocation of the DPW compactor o Crosses the Duquesne Light Parcel o Improvements needed on Sickle Street
3	Second Avenue Route	5,473 feet $$	o Alignment stays east of Second Ave from Glenwood bridge to Glenwood Avenue to access Second Ave at a signal o Brings the trail to the Business District o Gentle grades and high visibility	o Second Ave is a high-volume street o Second Ave is on the city's high injury network o In order to make this a safe bicycle/ pedestrian connection, a fully protected cycle track or protected bike lanes are necessary o Parking would need to be removed to provide a protected bike lane o Improvements needed on Ellis Way
4	Upper Route	5893 feet $	o East of Second Ave using alleyways and city streets and could include traffic calming o Connections to the greenway	o Steep climbs o Narrow roadway widths o One way streets o Improvements needed on Ellis Way

Map 21. Section Alternatives

Section 2 – Glenwood to Duck Hollow

In Section 2, the portion of trail between the existing Glenwood Bridge and Duck Hollow remains on the existing alignment. Consideration for the bridge crossing location was determined by a combination of geometric constraints. The minimum clearance over the railroad requires a switchback to reach the necessary height on the east side of the railroad. Also keeping the bridge closer to the existing Glenwood Bridge reduces the width of the railroad crossing span. The two existing Duquesne Light poles nearest to the Glenwood Bridge appear to require relocation or removal in order to place the bridge so they were not considered a constraint in recommended bridge crossing location. The Project Team met with DLC multiple times to discuss the potential relocation of these assets to facilitate a new bridge in this area.

The existing trail between Glenwood and Duck Hollow is a paved trail. There are areas where drainage improvments would benefit users. Amenities such as benches could be added at vistas. Safety elements such as fencing and signage are planned to be added where the trail is close to the railroad.

Section 3 – Duck Hollow to Carrie Furnace

Section 3 extends the trail from the existing Duck Hollow trailhead across the Second Avenue Bridge over Nine Mile Run to the Carrie Furnace site. The proposed trail in this section was aimed to follow the existing unimproved trail. The unimproved trail routes between the railroad and the Monongahela River. In some cases the alignment was smoothed in either horizontal or vertical alignment. The vertical alignment was kept to a maximum of five percent grade to allow for an ADA accessible design. The railroad is also a constraint through the section and a 50 foot wide offset was desired. Where this was not possible a minimum of 25 feet of clearance was maintained with the addition of a fence to reduce the chance that pedestrians would encroach upon the railroad tracks.

Image 21. Glenwood to Duck Hollow Trail Segment (left)
Image 22. Glenwood to Duck Hollow Trail Segment at the AVRR Overpass (right)

Image 23. Duck Hollow to Carrie Furnance Segment

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RECOMMENDATIONS

Source: TPD

5

RECOMMENDATIONS

In Chapter 3, the alternative alignments that were reviewed are presented. These possibilities were shared with key project stakeholders and the community as described in Chapter 4. In this chapter, the preferred alternative is further discussed and design details, a cross-section, and a concept plan are presented.

RECOMMENDATIONS

This project has focused on four miles of new trail sections that will connect Hazelwood to Carrie Furnace. As discussed in the introduction, the trail includes three sections:

- Hazelwood to the Glenwood Bridge – Utilizing the existing street network through the Hazelwood community.
- Glenwood Bridge to Duck Hollow – Provide a grade separated railroad crossing near the Glenwood Bridge and enhance the existing trail.
- Duck Hollow to Carrie Furnace – Connect the existing Duck Hollow trail head and parking to Carrie Furnace by improving the existing primitive trail.

Recommendations are provided for the three sections of trail independently. The design criteria that was considered while developing these recommendations can be found in Table 3.

Image 24. Proposed Duck Hollow Trail (Source: TPD)

Table 3. Design Criteria

Design Element		Criteria
		Duck Hollow Trail, Allegheny County
Design Controls	User	Interested by Concerned Bicyclist
	Bicycle Design Speed	15 mph
	Expected Traffic Volumes AADT	300-500 users per day
	Design Year Selection	2044
	Truck Traffic	Limited to Maintenance and Emergency Vehicles
	Functional Classification	Shared Use trail
	Terrain	Level / rolling
	Right-of-Way	Utilize existing property rights along corridor within railroad property
	Access Control	N/A
	Utility Impacts	Low
	Hazardous Sites	Carrie Furnace site and rail corridor
	Structure Impacts	2 railroad crossings; multiple culverts
Typical Section	Trail Width	12' Total Width
	Unpaved Shoulder Width	2' at 6:1
	Unpaved Shoulder Width when adjacent to a slope >=3:1	5' at 6:1
	Offset to Intermittent Vertical Elements	2'
	Offset to Continuous Vertical Elements (Minimum)	2'
	Vertical Obstruction Clearance	10'
	Pavement Thickness (Minimum)	6" Anticipated, To Be Finalized w/ Pavement Design Tasks
Bridges	Structural Capacity	Emergency vehicles
	Clear Trail Width	12 feet
	Vertical Clearance Over Trail (Desired/Constrained)	10.0' /8.0'
	Vertical Clearance Over Railroad	23.0'

Table 3. Design Criteria (continued)

Design Element			Criteria
			Duck Hollow Trail, Allegheny County
Alignment Criteria	Sight Distance	Stopping Sight Distance	102' at level grade
		Passing Sight Distance	N/A
		Intersection Sight Distance	Varies
	Horizontal	Minimum Radii	45'
		Superelevation	2%
	Vertical	Maximum Grade	5%
		Minimum Grade	0.50%
		Eye Height	42"
		Minimum Crest Curve Length (2)	Varies (Use AASHTO Bike Guide)

For a trail facility, The design user is the interested but concerned individual.

There are four types of bicyclists:

1. **Non-Bicyclists**
   These individuals are either physically unable to ride, uninterested in bicycling, or feel uncomfortable riding under any conditions.
2. **Interested but Concerned**
   They prefer off-street paths, separated bike facilities, or quiet roads with low traffic and speed. If these options aren't available, they may choose not to ride at all. Some may opt for sidewalks over bike lanes due to discomfort.
3. **Somewhat Confident**
   Comfortable using bike lanes or paved shoulders, though they still prefer separated facilities when available.
4. **Highly Confident**
   Comfortable riding in traffic, regardless of the presence of bike lanes.

The interested but concerned cyclist is the largest group of users accounting for 51-56 percent of the population and they would be likely users of the trail system.

Section 1 - Hazelwood to the Glenwood Bridge

The recommended route will utilize the existing street network through the Hazelwood community, which was determined through community engagement and steering committee input.

The route is shown in Map 22. The route follows the existing street grid through the Hazelwood neighborhood beginning at Blair Street and Tecumseh Street. This will connect to the existing separated bicycle path through Hazelwood Green to the Hot Metal Bridge at Second Avenue. The route includes Blair Street to the Blair Street Parklet, across a new Melanchton Street trail bridge, through the DPW lot, and onto Herbert Street. Finally, the Sickle Street right of way connects the trail to the Glenwood Bridge.

The on-street portion along Blair Street and Herbert Way will be tranformed into a neighborway. It will include traffic calming measures such as curb extensions, speed humps, wayfinding signage and pavement markings. In Blair Street Park, the fencing along the perimeter of the park will be relocated to provide adequate space for the trail within the historic right-of-way and park property. Figure 36 - Typical Section A shows the footprint of the trail along the perimeter of the park.

The Melanchton Trail Bridge and the DPW lot both have two options for future consideration.

Wayfinding signage is recommended to destinations such as the Hazelwood Business District, the Hazelwood Greenway, Hazelwood Green, and the Great Allegheny Passage.

Interpretive signage can discuss items like the J&L steel, local Bald Eagle nests, historic buildings, and the history of Scotch Bottom, Glen Hazel or Glenwood.

Figure 36. Typical Section of the Trail along the Perimeter of the Park

Map 22. Section 1 - Hazelwood to the Glenwood Bridge

Melanchton Trail Bridge Option 1

Under this option, the bridge is skewed from its original alignment to shorten the railroad crossing length to approximately 230 feet. A vacant parcel is utilized to house a stacked ramp system. A vertical clearance of 23 feet over the railroad is required with an assumed structure depth of two feet giving a total required vertical distance of 25 feet to climb over the railroad. With the nearby ground sloping away from the structure, almost 600 feet of ramp is required to reach grade in the vacant parcel. The vacant parcel is assumed to be owned by CSX. CSX real estate has not yet verified ownership, but they are aware of this proposed option and potential use of the parcel. This option can be seen in Map 23.

Map 23. Melanchton Trail Bridge Option #1

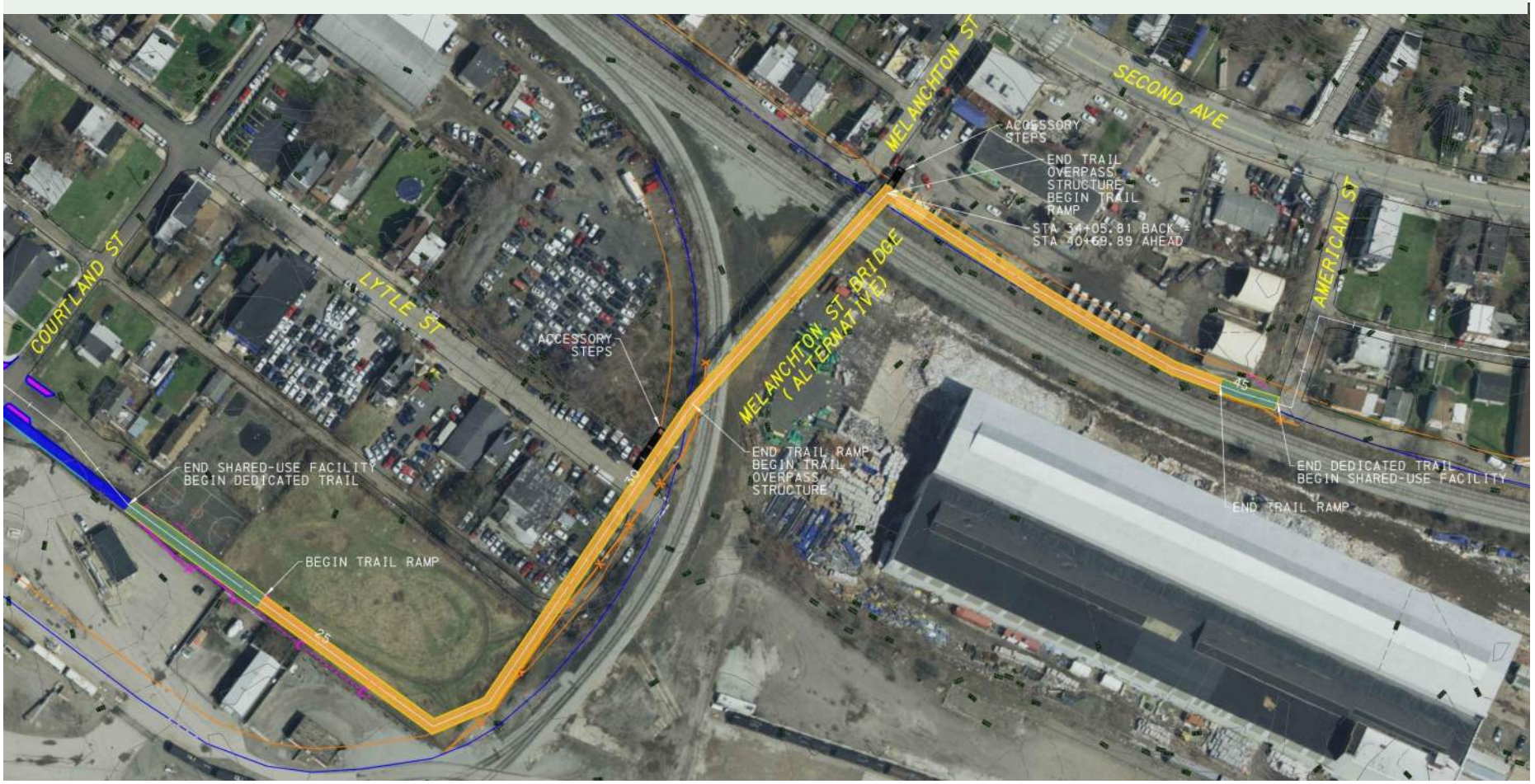
Image 25. Existing Melanchton Street Pedestrian Bridge

Image 26. Example Structure: Whitaker Bridge, West Mifflin/ Whitaker

Melanchton Trail Bridge Option 2

Option #2 uses a straight run of ramping to the Melanchton Street trail bridge along the anticipated alignment. The ramp will extend across Melanchton Street and into the Blair Street Park. Due to the railroad geometry, the structure maintains the railroad crossing height for approximately 300 feet before the ramp can begin. The section of Melanchton Street between Lytle Street and Chaplain Way will be closed to vehicular traffic as shown on Map 24 to allow for the 675 feet of ramp to occupy the existing right of way. This option allows a single level ramp structure and occupies the existing alignment and right of way.

Map 24. Melanchton Trail Bridge Option 2



DPW Maintenance Yard

As the trail crosses the tracks on the Melanchton Trail bridge and runs parallel to the railroad, it must traverse the DPW Maintenance yard. The trail will be mainly on structure ramping down to grade prior to exiting the lot. Two options for the reconfiguration of the maintenance yard are shown in Map 25 and Map 26, both of which provide adequate space for the City operations and the trail structure on the the parcel. The ramp structure is currently shown in an aerial easement from the railroad. The reconfiguration shows that if the aerial easement from the railroad is not possible or detailed survey shows adequate space isn't available, City operations can be accommodated in with the ramping structure along the edge of the parcel and the changes shown in the lot.. Options are presented to show that there are multiple ways to configure the lot that accommodate the activities currently on site. This shows that there is some flexibility in the reconfiguration and as the project is designed, the current operations can be reviewed with staff to develop a plan that works the best at that time.

While discussing with CSX, they indicated that an aerial easement at this location could be considered which would reduce the amount of space the trail would occupy in the DPW lot. As the trail exits the yard, it will continue on Herbert Street. There are two intersections along Herbert Street. Both are recommended for safety improvements. In order to prioritize trail safety, creating the Herbert Street Neighborway is proposed by daylighting intersections and adding enhanced signage and pavement markings at the intersections is recommended to bring attention to the vulnerable road users who will cross at the intersection. Additional lighting in the alley way and at the intersections to improve the safety and comfort of trail users. The trail alignment then occupies the Sickle Street right-of-way as it approaches the Glenwood Bridge.

Map 25. Reconfiguration of the Maintenance Yard Option 1

Map 26. Reconfiguration of the Maintenance Yard Option 2

Section 2 - Glenwood Bridge to Duck Hollow

From the Glenwood Bridge to Duck Hollow, the recommended horizontal alignment follows the existing trail but a critical gap from the Hazelwood neighborhood to the trail exists. A connection to the trail will be established from the existing south sidewalk of the Glenwood Bridge and from Section 1 of the trail on Sickle Street. At the terminus of Sickle Street, the trail will go under the Glenwood bridge and climb the hillside to cross the railroad tracks on a new Glenwood Trail Bridge. It is anticipated that retaining walls will be required to make this connection. The alignment crossing the railroad has been surveyed to understand the necessary grade to cross the railroad tracks. A minimum vertical clearance over the railroad of 23 feet is required which will be met by ramping up the hillside until proper clearance is obtained. There is an opportunity to connect to the Glenwood Bridge with an at grade sidewalk. On the river side of the railroad tracks, the structure will ramp to ground level at a maximum five percent grade. Map 27 shows the planned alignment. Figure 37 shows a rendering of the proposed bridge as viewed from the end of the existing bridge.

Within the area of the proposed railroad crossing, Duquesne Light has infrastructure on both bridge approaches. Both may need relocated or placed underground to support the trail construction. Fencing will be required to direct trail users onto the bridge and eliminate encroachment onto the railroad.

From this point, the proposed trail will tie into the existing trail and continue to the Duck Hollow trailhead, see Map 28. Upgrades to the existing trail will include items such as improved drainage, removal of invasive plants, the creation of vistas and installation of benches. In locations where the existing trail is within 50 feet of the railroad tracks, fencing is recommended as a safety improvement.

Wayfinding signage is recommended to destinations such as the Hazelwood Business District, Hazelwood Green, and the Great Allegheny Passage, Sandcastle, Duck Hollow, Carrie Furnace, Frick Park and Squirrel Hill

Interpretive signage can discuss items like river crossings and historic ferries, the airplane lost in the Mon, the Brown House relocation, vegetation and wildlife, landslide prone hillsides and habitual flooding that plagued the corridor that lead to the loss of Second Avenue.

Map 27. Glenwood Trail Bridge Planned Alignment

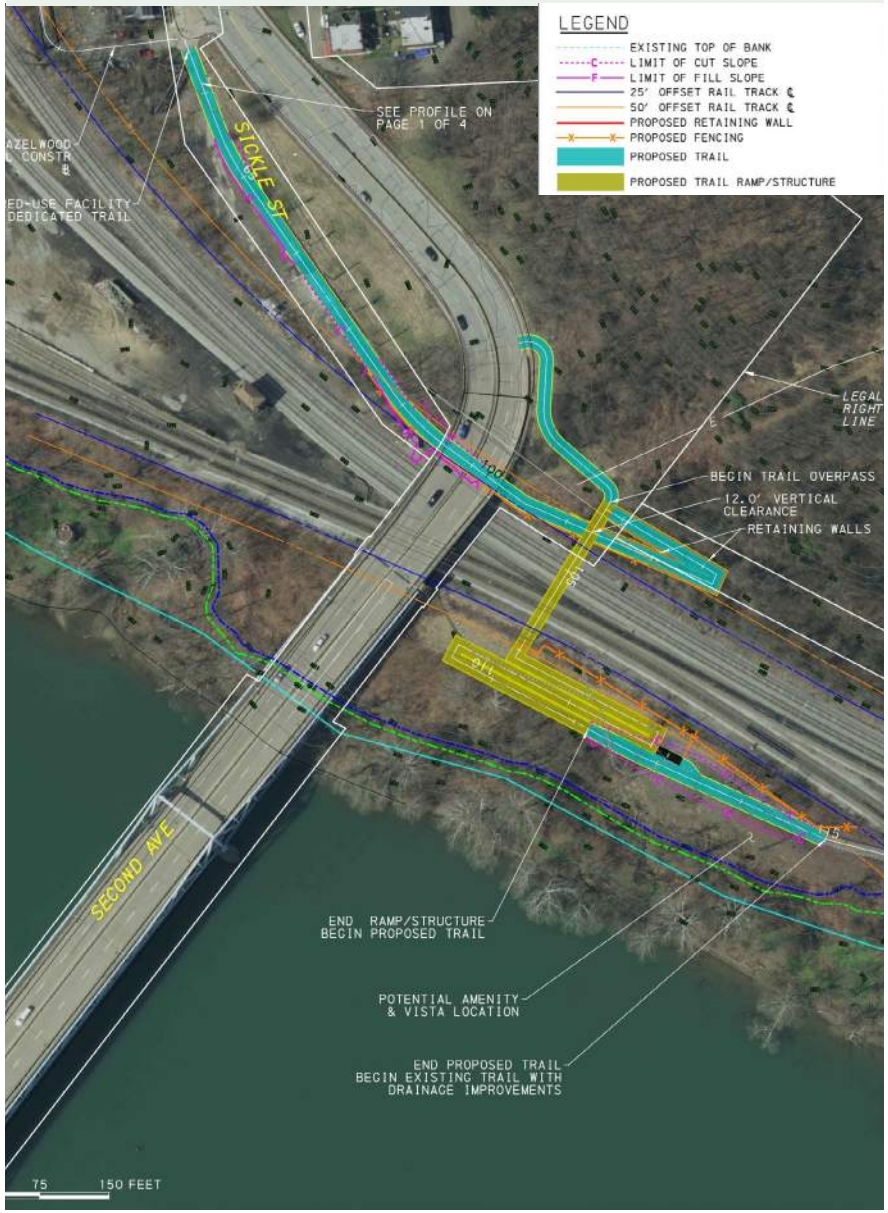


Figure 37. Rendering of the Proposed Bridge as Viewed from the End of the Existing Bridge

Map 28. Section 2 - At Nine Mile Run

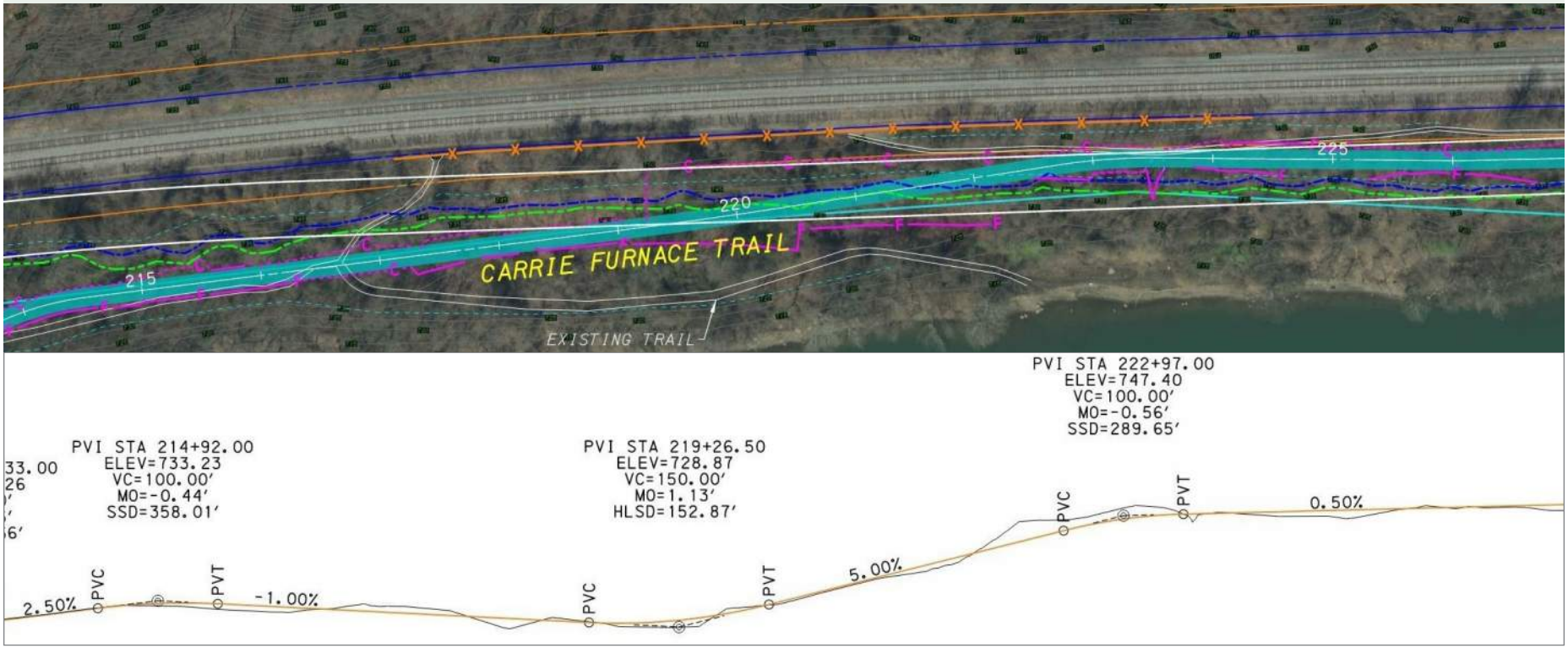
Section 3 - Duck Hollow to Carrie Furnace

The third section of the trail connects the Duck Hollow trail head to the Carrie Furnace site. The existing Second Avenue Bridge over Nine Mile Run shown in Map 28 will be utilized to access the riverfront land. A connection to McFarren Street still exists as a graded area under the CSX railroad bridge but cannot be used as the trail since it does not provide the required pedestrian canopy. From this point at Nine Mile Run to the City of Pittsburgh/Swissvale Borough boundary, the existing path is unimproved and mainly occupies land owned by CSX. Records indicate the historic Second Avenue right of way has been preserved for future transportation use although the exact location has been lost. Formal agreements between the City and CSX will be needed.

Section 3 begins in the floodplain at the Second Avenue Bridge over Nine Mile Run. Detailed design and permitting will require no fill to occur in the 1 percent chance floodplain.

The current alignment has been designed to minimize earthwork. Map 29 shows the location where the trail climbs from the lower shelf to the higher shelf. A maximum five percent grade is utilized to maintain ADA accessibility while matching the natural slope of the land as much as possible. When the trail reaches the higher shelf, it is within 50 feet horizontally from the railroad tracks. Based on conversations with CSX, fencing is planned where the trail is closer than 50 feet from the railroad.

Map 29. Section 3 - At Duck Hollow



Wayfinding signage is recommended to destinations such as the Hazelwood Business District, Hazelwood Green, the Great Allegheny Passage, Duck Hollow, Carrie Furnace, Swissvale and Rankin

Interpretive signage can discuss items like the locks/dams of the Mon, vegetation and wildlife, and Carrie Furnace

The proposed trail alignment was developed to meet the design criteria shown in Table 3 above while keeping as close as possible to the existing path. The typical section of the path can be seen in Figure 38. A 50' offset to the railroad was planned, but in areas where this could not be accomplished, fencing was placed to restrict people from accessing the railroad.

As the proposed trail crosses the Swissvale Borough line, see Map 30, property ownership changes to the Allegheny County Redevelopment Authority. The parcel is fairly flat but the alignment was positioned along the top of the river bank to allow additional uses of the property in the future. This also brings the trail closer to the railroad's Monongahela River Crossing where an underpass exists into the Carrie Furnace site. This feasibility study did not review the needs of creating a bike/pedestrian connection into the site at this location, but a connection is shown for future consideration. The proposed trail then parallels the railroad onto Braddocksfield Plank Road where the project ends at the railroad underpasses. The railroad underpass into the Carrie Furnace site is owned by the County and anticipated to be rehabilitated to bring the trail to the site and connect to the Turtle Creek Connector Trail. The eastern limit of this study ends on Braddocksfield Plank Road, and therefore defining the work involved with rehabilitating the railroad underpass was not included in this study.

Figure 38. Typical Section of the Path

12' Paved Path with 5' Shoulder

Map 30. Proposed Trail Entering the Carrie Furnace Site

PRELIMINARY PLANS

Preliminary plans are included in the appendix of this report that further detail the recommendations of this report.

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IMPLEMENTATION

Source: TPD

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IMPLEMENTATION

The findings presented in this report offer a plan for a multimodal network that will connect Hazelwood to Carrie Furnace providing an important link between residential neighborhoods, municipalities, regional tail networks and redevelopment sites. This chapter presents project phasing and planning-level cost estimates. Also essential to project advancement are key local and regional partnerships, which are outlined in this chapter. Finally, this chapter contains an action plan, delineating tasks, designating lead agencies and primary partners, establishing an implementation timeline, and defining metrics for gauging success.

A PHASED APPROACH

Although the Hazelwood to Carrie Furnace segment of the Three Rivers Heritage Trail will be four miles long, the recommendations of this plan may be implemented as a series of smaller, stand-alone projects. Consistently throughout the plan, three distinct sections were discussed. The three sections each built on their own would complete a connection that is highly desired by the neighborhoods.

In developing an implementation and phasing plan, several factors are considered that may impact the timing of project implementation. Projects are divided into phases based on:

- Availability of right-of-way and property ownership
- Railroad involvement
- Permitting challenges: Such as coordination with PennDOT, flood impacts, and environmental impacts
- Project need: Prioritizing locations with known safety issues, crash history, or key network gaps or greatest potential use
- Project cost, available grants, expiration of grant funding
- Potential funding and matching funds
- Project partnerships

IMPLEMENTING THE PLAN

Programmed Projects

The Transportation Improvement Program (TIP) is the locally endorsed list of highway, bridge, and transit projects proposed to be implemented with Federal assistance. The City/ County may wish to engage with local planning partners to discuss how the recommendations identified in this

plan align with regional goals. Elements of the plan can be incorporated into existing TIP funded projects or new projects should be added to the TIP to advance the goals of this project.

Grant Opportunities

The City/ County may choose to seek out grant funding from a variety of sources to fully advance the Trail Plan. Grants well-suited for this Plan include:

Congestion Mitigation and Air Quality Improvement

Primary Purpose: Improving air quality and relieving congestion

Application Window: June 2025

Transportation Alternatives Set-Aside – Penndot

Primary Purpose: multimodal improvements

Application Window: June 2025

Carbon Reduction Program (CRP)

Primary Purpose: Reduce transportation carbon emissions through the development of State carbon reduction strategies and by funding projects designed to reduce transportation carbon emissions

Application Window: June 2025

Greenways, Trails and Recreation Program (Act 13)

Primary Purpose: parks, greenways, and trails

Amount: $250,000 max, 15% match

Application Window: February - May

Pennsylvania DCNR Community Conservation Partnerships Program (C2P2)

Primary Purpose: public parks, trails, & preserves

Amount: Up to $500,000, 50% match

Application Window: April

Multimodal Transportation Fund - CFA/DCED

Primary Purpose: roadway, bridge, multimodal, transit, freight improvements

Amount: $100,000 - $3,000,000; 30% match

Application Window: July 2025

Multimodal Transportation Fund - PennDOT

Primary Purpose: roadway, bridge, multimodal, transit, freight improvements

Amount: $100,000 - $3,000,000; 30% match

Anticipated Window: March 2025

Land Development/Redevelopment

Beyond grants and programmed projects, the City may wish to implement elements of the Corridor Improvement Plan through proposed development/redevelopment within the Hazelwood neighborhood.

Integration with Maintenance Projects

In locations where the City has planned maintenance projects or capital improvements, such as traffic signal replacements, stormwater management projects, or street resurfacing, there may be opportunities to incorporate improvements identified in this plan in a cost-effective manner.

OPINION OF PROBABLE COST

The project is a candidate for phased implementation. The three sections of the trail can be developed and constructed independently and create meaningful connections for the communities they serve. The consultant team developed the following opinion of probable cost for the corridor concept plan.

Table 4. Construction Costs

Section (Construction Cost)	Extents	Scope	Funding	Lead
#1 - Hazelwood to Glenwood Bridge ($10,800,000)	Tecumseh St to Courtland Street	Repave street as needed; Create on-street bike way with curb extensions, speed humps, markings and signage;	City Budget, Maintenance funds	City
	Courtland St to the Bridge/Ramp	Install side path and trail along outer edge of park. Include lighting and fence.	City budget or grant funding	City
	Replacement of Melanchton Street Ped Bridge and ramping	Remove existing Melanchton Street Ped Bridge and replace with a new trail bridge that is ADA accessible with ramps on both approaches. Reconfigure the DPW Lot to accommodate trail and public works uses.	Grant funding	Friends
	American Street to the Glenwood Bridge	Repave street as needed, install appropriate traffic control at intersections, install lighting	City budget; maintenance funds	City
#2 – Glenwood Bridge to Duck Hollow ($11,600,000)	Bridge over CSX Railroad to the existing trail	Construct grade separated railroad crossing near the Glenwood Bridge, anticipate a prefabricated bridge with ADA accessible ramping; dedicate right of way	Grant Funding	Friends
	Existing Duck Hollow Trail	Repave sections as needed; add amenities; reconstruct or maintain nonfunctional drainage; add fencing and signage where CSX recommends for safety; dedicate right of way	Maintenance funds	City
#3 Duck Hollow to Carrie Furnace ($2,600,000)	Duck Hollow to City Line	Construct trail; add amenities; add fencing and signage where CSX recommends for safety dedicate right of way	Grant Funding	City / Friends
	City Line to Carrie Furnace underpass access	Construct Trail; dedicate right of way	Grant Funding	County
TOTAL COST $25,000,000				

A detailed cost is provided in the Appendix.

MAINTENANCE CONSIDERATIONS

Proper maintenance is critical to ensure that the infrastructure we build can be safely accessed well into the future. Sidewalks, crosswalks, and paths should be kept clear of debris and damage so that their surfaces are traversable; and curb ramps should be ADA accessible. Sections of trail within the floodplain should be checked after heavy storms to ensure they are passable. Maintenance not only extends the life of a project, but it also reduces long-term facility costs. The following includes maintenance considerations for the long-term viability of this pedestrian connector project:

- Establish a maintenance plan and funding resources for repairs to sidewalks, paths, and curb ramps.
- Maintain pavement markings routinely to ensure visibility.
- Routinely inspect and clean drainage structures along the trail to ensure they are in good working condition.
- Develop a maintenance plan for the two trail bridges over the railroad include routine inspections and dedicate funding resources for repairs.
- Purchase appropriately sized equipment to clear the trails and bridges of snow
- Clear trail of invasive plant species and keep vegetation under control

The Hazelwood to Carrie Furnace segment will be a part of the TRHT and maintenance for the TRHT is currently a partnership between the City of Pittsburgh and Friends of the Riverfront.

The City recently completed the Three Rivers Heritage Trail Maintenance Plan. It is a first of its kind plan will act as a blueprint for the City of Pittsburgh and its partners guiding maintenance activities for the immensely popular Three Rivers Heritage Trail. The plan focuses on four key areas of maintenance and management along the trail. They are:

- Canopy and Invasive Plant Management.
- Riparian Restoration and Preservation.
- Trail Surface and Drainage Management.
- Maintenance financing.

The Three Rivers Heritage Trail Maintenance Plan should be used as the primary guide to maintain the trails and should be updated as trail infrastructure is added or changed.

Source: Friends of the Riverfront Instagram Page

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APPENDIX

Source: TPD

friends
OF THE RIVERFRONT
three rivers heritage trail | three rivers water trail