CONNECTING PARKERSBURG TO PITTSBURGH BY RAIL-TRAIL:

Bringing a world-class trail network to West Virginia

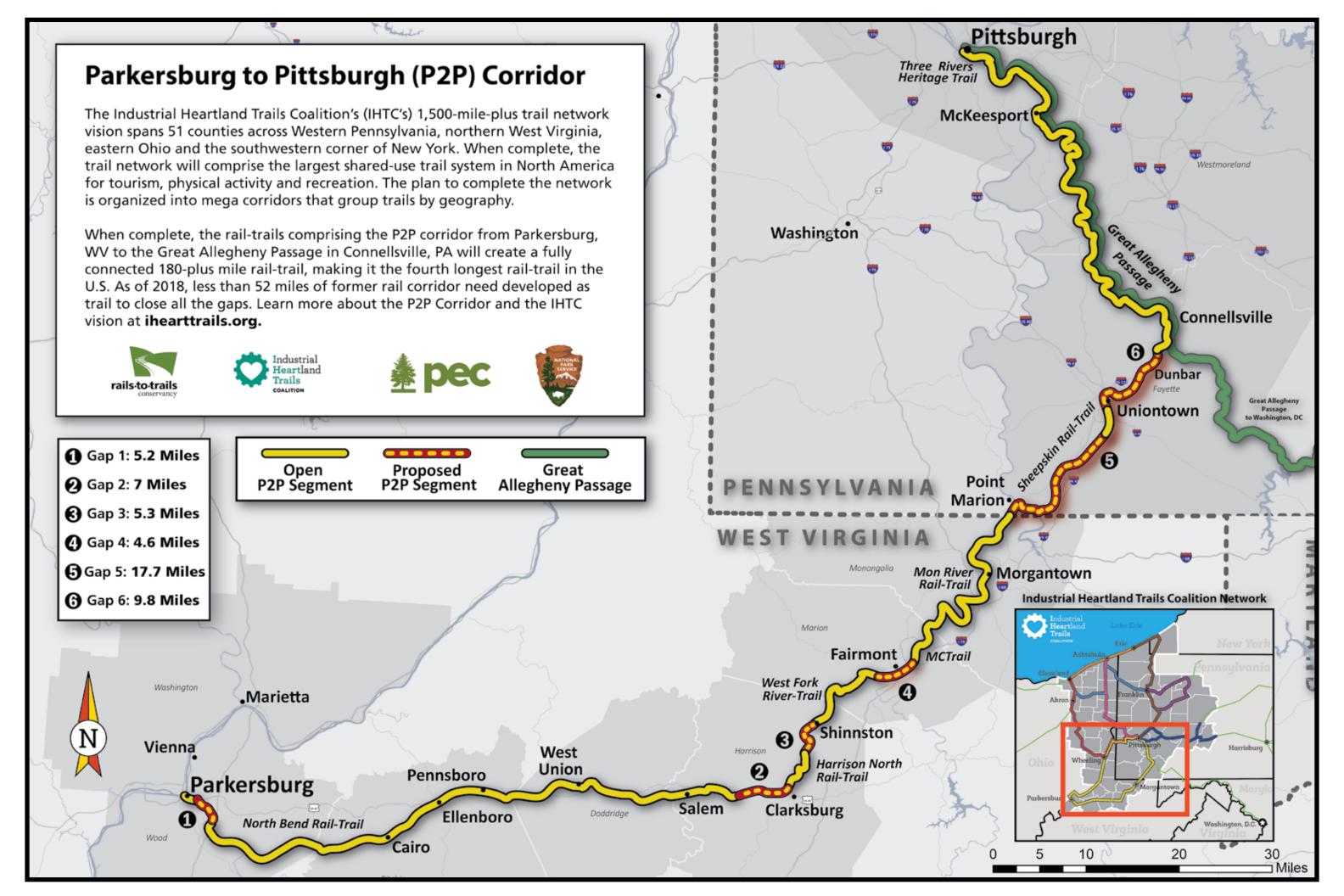
A RAIL-TRAIL FEASIBILITY STUDY OF THE INDUSTRIAL HEARTLAND TRAILS COALITION'S PARKERSBURG TO PITTSBURGH CORRIDOR

PUBLISHED APRIL 24, 2018









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Cover photo: North Bend Rail Trail in Cairo, West Virginia | Photo by Mike Tewkesbury

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ABOUT RAILS-TO-TRAILS CONSERVANCY

RTC is the nation's largest trails organization—with a grassroots community more than 1 million strong—dedicated to connecting people and communities by creating a nationwide network of public trails, many from former rail lines. RTC serves as the national voice for the nation's 32,000+ miles of rail-trails and multiuse trails, and 8,000+ miles of potential trails ready to be built, with the goal of creating more walkable, bikeable communities in America. Connect with RTC at railstotrails.org and @railstotrails on Facebook, Twitter and Instagram.

RTC collaborates with its partners, the Pennsylvania Environmental Council and the National Park Service's Rivers, Trails and Conservation Assistance Program, to lead and staff the Industrial Heartland Trails Coalition. IHTC is one of RTC's eight TrailNationTM projects designed to demonstrate the outcomes that trail networks deliver in every type of community. Learn more about IHTC at ihearttrails.org and RTC's network-building initiative at trailnation.org.

EXECUTIVE SUMMARY

In West Virginia, an incredible opportunity awaits.

The 238-mile Parkersburg to Pittsburgh (P2P) rail-trail is already nearly 80 percent complete; just a few short gaps exist in West Virginia to unlock a contiguous 150-miles-plus stretch of the rail-trail from Parkersburg to the state's border with Pennsylvania. Completing these short gaps in Wood, Harrison and Marion counties will have a transformative impact on West Virginia's economy, drawing some of the 800,000 hikers and bicyclists who visit the Great Allegheny Passage (GAP) each year into the state, along with a share of the more than \$40 million they spend annually in communities along the trail.

A recent study by Rails-to-Trails Conservancy finds that these gaps could be closed, and the potential of the corridor realized, within the next decade.

Connecting existing rail-trails in West Virginia with the world-renowned GAP in southwestern Pennsylvania would open the door to a recreation and tourism economy worth tens of millions of dollars a year. Alone, the West Virginia section of the P2P corridor would be one of the longest rail-trails in the United States, making it a destination that bicyclists and trail enthusiasts would seek out from across the country and around the world. The trail will ultimately connect to the larger, 1,500-miles-plus planned trail network that the Industrial Heartland Trails Coalition envisions spanning 51 counties through West Virginia, Pennsylvania, Ohio and New York.

The goal of completing the P2P rail-trail is about more than building a trail. It is about leveraging the trail to build a sustainable regional economy and rebuild many of the communities along the P2P corridor in West Virginia that have been buffeted and abandoned by cataclysmic changes in the manufacturing and energy industries over the years. Realizing that vision will require closing the approximately 22 miles of remaining trail gaps in Wood, Harrison and Marion counties. That task is well within reach, and officials, local leaders and trail advocates in West Virginia now have a crucial role to play.

New rail-trail networks have been proven to revitalize communities, spark new local business opportunities, and attract and retain residents. They are powerful assets that will make local cities and towns better places to live, work and do business.

For evidence, we need not look very far. The GAP rail-trail through southwest Pennsylvania almost single-handedly revived and reinvented the small rural communities it passes through. Before the trail came to pass, many communities were skeptical that a biking and hiking trail could have any impact on their economy. Today, the trail sees more than 800,000 trail users annually and contributes tens of millions of dollars to the regional economy. A similar opportunity now presents itself to West Virginia.

This study, combined with the Sheepskin Trail Feasibility Study (2018), presents the first comprehensive analysis of existing conditions and recommendations for closing the gaps within the P2P corridor. It estimates that with a coordinated effort at the local, regional and state level, a completed P2P is achievable within a decade. Closing the small gaps in West Virginia alone could create a contiguous 150-miles-plus rail-trail in as few as five years. Since 2016, local municipalities and trail groups have entered into negotiations to acquire 12 parcels necessary for completion, which will close eight of the 22 miles of gaps.

This study also presents the blueprint to make it happen, section by section, identifying funding sources, partnership opportunities, and the planning and municipal processes required to complete the undeveloped gaps. Residents, business leaders and local, state and federal officials have been working on this rail-trail since 1988. With almost 30 years of progress underway, and the end close at hand, local support for completing the P2P continues to grow.

The publication of this study is a moment to reflect and congratulate those West Virginians and their allies across the region that have brought us so close to realizing the P2P connection. Simultaneously, it is important to recognize that the only way to adequately pay tribute to their efforts is to complete the job, and unlock the significant economic, community, health and social benefits that will come with finally making West Virginia an integral part of this new, and truly world-class, rail-trail system.

INTRODUCTION

PROJECT BACKGROUND

Imagine what's possible with a 1,500-miles-plus trail network that connects 51 counties in four states—person by person, town by town, community by community, state by state. This is the vision of the Industrial Heartland Trails Coalition (IHTC): to establish the industrial heartland as a premier destination offering a unique multiuse trail network across West Virginia, Pennsylvania, Ohio and New York—from the shores of Lake Erie to the confluence of the Three Rivers in Pittsburgh, Pennsylvania, and on to the Ohio River and Appalachian foothills in West Virginia. The system is nearly 50 percent complete and, once fully developed, will be the largest multiuse trail network in North America.

IHTC builds upon past efforts to organize the trails community, leverage the cultural heritage of the region into a premier trail destination, and harness and amplify the benefits of the region's trail systems. Trail groups from the region joined together in the early 2000s, eventually forming a coalition in 2011 and branding itself the Industrial Heartland Trails Coalition in 2015 to collectively advance the vision of a 1,500-miles-plus trail network across the region. IHTC is one of Rails-to-Trails Conservancy's (RTC) TrailNationTM projects—model trail network-building projects with the potential to catalyze the connection of trails into powerful trail systems nationwide.

Grouped by geography, the network comprises nine identified trail destination corridors. The Parkersburg-to-Pittsburgh (P2P) corridor extends from Parkersburg, West

Virginia—utilizing existing iconic and popular rail-trails like the North Bend Rail Trail and the Mon River Trail System—and connects beyond the West Virginia—Pennsylvania state line to the Great Allegheny Passage (GAP), continuing to Pittsburgh, Pennsylvania. The P2P corridor spans a total of 238 miles with only 51 gap miles. This study, combined with the Sheepskin Trail Feasibility Study (2018), presents the first comprehensive analysis of existing conditions and recommendations for closing the gaps within the P2P corridor.² It also illuminates a compelling vision for a seamless, almost exclusively rail-trail connection from Parkersburg, West Virginia to the GAP in Connellsville, Pennsylvania. At more than 180 miles, this segment of the P2P corridor, on its own, would become the fourth longest rail-trail in the U.S.³

RTC works together with the Pennsylvania Environmental Council (PEC) and the National Park Service's Rivers, Trails and Conservation Assistance Program to lead and staff this regional trail effort. Since 2013, RTC has taken the lead in coordinating the P2P Cornidor Working Group and in 2016, received support from the Claude Worthington Benedum Foundation to further strengthen local efforts to close the gaps in the West Virginia segment of the P2P cornidor. RTC and its partners in West Virginia have dedicated hundreds of hours to gap-filling along the P2P—including this study and ongoing work to appraise and acquire multiple cornidor segments owned by CSX. We are committed to a continued partnership with the dozens of West Virginia communities, groups and local advocates who share our vision of a completed P2P cornidor.

WHAT'S IN A NAME?

Most of the major or "destination" corridors within the IHTC footprint are currently named for their two termini and often abbreviated (e.g., Parkersburg-to-Pittsburgh becomes "P2P," Cleveland-to-Pittsburgh becomes "C2P," etc.). For the most part, these names and abbreviations are being used to reference the work during this planning and gap-filling phase. As existing trails are extended and new corridors developed to fill in the gaps, a branding and naming process could occur to create more marketable names and unique local brands for each corridor.

- 1. "Background," Industrial Heartland Trails Coalition, accessed March 23, 2018. http://ihearttrails.org/about/about.
- 2. The Sheepskin Trail Feasibility Study is an update to a 1999 study completed in March 2018 by Gibson-Thomas Engineering on behalf of the National Road Heritage Corridor.
- "National and State Trail Statistics," Rails-to-Trails Conservancy, accessed March 23, 2018. https://www.railstotrails.org/our-work/research-and-information/national-and-state-trail-stats/.

PROJECT SCOPE AND STUDY PURPOSE

This study focuses on the segment of the P2P corridor that lies within the state of West Virginia, from Parkersburg to the West Virginia—Pennsylvania border, just north of Morgantown. The primary alignment of the P2P corridor utilizes existing rail-trails and unused or abandoned rail corridors, and was largely determined through the collaborative efforts of P2P corridor partners. The size and scope of this project produce inherent complexities that will take many partners—working in coordination over several years—to complete.

Building on previous mapping work to identify the trail alignment, this study assesses existing physical conditions and feasibility of trail development within the alignment, provides an opinion of probable costs for acquisition and construction of each trail gap, and presents recommendations for moving the project forward. In addition, this study presents a comprehensive vision for connecting the P2P corridor in West Virginia, providing tools and information for planners and partners who are working not only to build trails, but to improve community connections and encourage use and stewardship of existing trails.

In developing this study and applying it in the field, lessons can be taken from the development of the GAP, a national trail destination (described in further detail on page 15) that is similar in length (150 miles) and shares characteristics with the West Virginia section of the P2P corridor—including similar geographic and topographic features (e.g., bridges, tunnels, location along rivers, etc.).

Like trail development along the P2P corridor in West Virginia, the GAP began to emerge as a long-distance trail as pieces of the corridor were developed as individual trails, beginning in 1978 with the acquisition of a Western Maryland Railway corridor for trail development. The Allegheny Trail Alliance (ATA)—a coalition of trail groups along the GAP—formed in 1995, launching a concerted effort to develop a

continuous trail from Pittsburgh, Pennsylvania, to Cumberland, Maryland. It took the ATA nearly 20 years from its formation to develop and connect all 150 miles of the GAP, and much of the project's success can be credited to the ATA's persistent and consistent efforts and the Commonwealth of Pennsylvania's investments to prioritize the GAP as a significant project.⁴

West Virginia is positioned to benefit from having one of the longest rail-trails in the country, but realizing those benefits in a timely manner will take the continued and coordinated efforts of partners at the local, regional and state levels.

PROJECT PARTNERS

IHTC and the P2P corridor build on past and ongoing work of local and national trail organizations; conservation and community-based groups; and federal, state and local governments. More than 100 agencies and organizations support and are actively engaged in the IHTC. The P2P corridor effort is truly collaborative and receives active support from local trail advocates; community-based organizations; and city, county and regional planners. These groups and individuals are at the heart of this exciting effort and guide its evolution on the ground.

Currently, 24 organizations and local governments in West Virginia have submitted letters or signed resolutions of support indicating their commitment to connecting the P2P corridor. In addition, Fayette County, Pennsylvania; Point Marion Borough, Pennsylvania; and Marietta, Ohio, have also signed resolutions supporting the corridor's development.

REGIONAL CONTEXT

Demographic and geographic characteristics of the study area, coupled with economic conditions and an overview of existing and connecting trails, provide necessary context for understanding this project's current and potential impact on the region.

 $^{4. \}qquad \text{``Trail History,''} Great Allegheny Passage, accessed March 23, 2018. \\ \underline{\text{https://gaptrail.org/about-us/trail-history.}}$

^{5. &}quot;Who We Are," Industrial Heartland Trails Coalition, accessed March 23, 2018. http://ihearttrails.org/about/who-we-are.

INTRODUCTION

West Virginia Partners and Signed Supporters

City of Clarksburg* Marion County* Town of Ellenboro, W.Va.*

City of Fairmont* Marion County Trails Town of Star City, W.Va.*

City of Morgantown* Mid-Ohio Valley Regional Council* Town of West Union*

City of Parkersburg* Mon River Trails Conservancy West Virginia Community

City of Salem*

Monongalia County*

West Viighta Community

Development Hub

City of Shinnston* West Virginia Rails-to-Trails Council

Morgantown Monongalia

Claude Worthington Benedum
Foundation (serving W.Va. and Pa.)

Metropolitan Planning Organization*
Wood County Alternative
Transportation Council
North Bend Rails to Trails

Foundation Wood County Commission*

Country Roads Cyclists

North Bend State Park

Doddridge County Economic
Development Authority

Northern WV Brownfields
Assistance Center

North Bend State Park

Wood-Washington-Wirt
Interstate Planning Commission
(serving W.Va. and Ohio)*

Doddridge County Historical Society WVU School of Public Health

Harrison County*

Ritchie County Chamber of Commerce

Ritchie County Economic

Harrison Rail Trails Development Authority

Little Kanawha RC&D Council Salem Area Chamber of Commerce

*Indicates West Virginia municipality or regional governmental entity that has passed a resolution of support for the P2P corridor and IHTC efforts as of February 2018

REGIONAL CHARACTERISTICS

The West Virginia segment of the P2P corridor lies within both the North Central and Mid-Ohio Valley regions of the state and extends from west to east through six counties: Wood, Ritchie, Doddridge, Harrison, Marion and Monongalia. Nearly 250,000 people—more than 13 percent of the state's total population—live within 3 miles of the P2P corridor in West Virginia. The counties that the corridor connects are centrally located within a day's drive of North America's most populated areas—more than 61 million people live within a half-day drive (250 miles) and more than 170 million people live within a one-day drive of the P2P corridor in West Virginia. The proximity to

populated areas, coupled with West Virginia's natural beauty and outdoor recreation amenities, fuel a statewide outdoor recreation industry that generates \$9 billion in consumer spending annually and directly supports 91,000 jobs.8

Monongalia County serves as the economic hub of the North Central region, due in large part to the presence of West Virginia University (WVU). North Central West Virginia, which includes Harrison, Marion and Monongalia counties, is one of the state's strongest economic regions, although not all sectors have experienced employment growth. According to a 2016 WVU economic outlook report, employment within the natural resources and mining sector has and will continue to decline because of falling

^{6. &}quot;American Community Survey," U.S. Census Bureau, accessed February 28, 2018. http://www.esri.com/software/american-community-survey.

^{7.} Ibid.

^{8. &}quot;West Virginia," Outdoor Industry Association, accessed March 23, 2018. https://outdoorindustry.org/state/west-virginia.

INTRODUCTION

coal mining and natural gas employment.⁹ The same report demonstrates that, as of 2015, the leisure and hospitality sector accounted for 11 percent of North Central West Virginia's employment.¹⁰

The completion of the P2P corridor would create a national recreation and tourism destination to help expand the leisure and hospitality sector, fuel growth of local businesses and economies, and continue expanding West Virginia's outdoor recreation industry. In addition, a completed P2P corridor would provide opportunities for more economically challenged communities to realize the benefits of being physically linked to counties that are more prosperous and experiencing economic growth.

As of 2017, West Virginia had the highest rates of adult obesity in the nation. ¹¹ A completed trail on the P2P corridor would provide hundreds of thousands of West Virginia residents—of all ages and abilities—a safe, accessible place to walk and bike. When people have safe places to walk within 10 minutes of their home, they are one and a half times more likely to meet recommended activity levels than those who do not. ¹² Rail-trails offer gentle grades and are open to multiple types of uses, making them a place for virtually everyone to exercise and recreate. Investing in trail development is indeed an investment in the health and wellness of West Virginians.

The Plan Review (page 18) further details conditions and characteristics of the region, counties and communities that are relevant to trail development. The region faces its share of socio-economic challenges, which are further documented in the referenced plans, but more importantly, existing state, regional and local planning efforts are recognizing the opportunities and benefits that trails provide.

EXISTING AND CONNECTING TRAILS

The Segment Analysis (page 23) describes the relationship of the P2P corridor to communities it connects, details current conditions and recommended improvements for existing trails within the corridor, and indicates where existing and planned connecting trails could enhance community access to the corridor.

Existing West Virginia rail-trails within the P2P corridor—the North Bend Rail Trail, Harrison North Rail Trail, West Fork River Trail, MCTrail, Mon River Trail South, Caperton Rail-Trail and Mon River Trail North—already connect and serve several cities and communities. Unlocking the potential for economic impact and increased community benefits, however, will occur when the gaps have been filled and each community is connected to the next.

Several other existing trails connect to the P2P corridor in West Virginia and will further extend the reach of the trail network. Deckers Creek Trail and Cheat Lake Trail connect to the P2P corridor in Monongalia County, and the Harrison South Rail Trail heads south from Veteran's Memorial Park in Clarksburg to the town of Lost Creek, West Virginia. At the western end of the P2P corridor, plans are underway to connect an extension along and across the Ohio River into Belpre, Ohio. A long-term vision also exists of connecting a trail along the Ohio River from Parkersburg to Wheeling, West Virginia.

A separate feasibility study, the Sheepskin Trail Feasibility Study, was developed for the Pennsylvania portion of the P2P corridor. This section includes the link into Fayette County, Pennsylvania, at Point Marion on the southern portion of the developing Sheepskin Trail. Completing the Sheepskin Trail will connect the P2P corridor to the GAP at Connellsville, Pennsylvania, allowing trail users to head northwest to Pittsburgh, Pennsylvania, or southeast to Washington, D.C.

John Deskins and Brian Lego, North Central West Virginia Economic Outlook 2017-2021 (Morgantown, WV: WVU Research Corporation, 2016), http://busecon.wvu.edu/bber/outlook_pdfs/NorthCentralWV-EconomicOutlook-2017.pdf.

¹⁰ Ibid

^{11. &}quot;The State of Obesity in West Virginia," The State of Obesity, accessed March 23, 2018. https://stateofobesity.org/states/wv.

^{12.} Kenneth E. Powell, Linda M. Martin, and Pranesh P. Chowdhury, "Places to Walk: Convenience and Regular Physical Activity," American Journal of Public Health 93, no. 9 (2003): 1519-21, accessed March 23, 2018, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1448003.

Gibson-Thomas Engineering, Sheepskin Trail Feasibility Study: Update of the July 1999 Feasibility Study (Latrobe, PA: National Road Heritage Corridor, 2018), https://www.railstotrails.org/resource-library/resources/sheepskin-trail-feasibility-study/.



The Caperton Rail-Trail in Morgantown, West Virginia | Photo by Daniel Boyd

As trail systems grow, they spark new investment in trailside businesses and commercial opportunities along the route. In mid-sized cities and rural communities, such investments spur tourism, bringing new dollars into the community. Trails increasingly demonstrate their significance in community transformation through economic activity by trail users, including visitors and locals.

In West Virginia, however, the P2P corridor's economic impact potential is largely untapped. The trail corridor is widely segmented, limiting its use and lessening its viability as a destination trail. In the Morgantown area, the existing Mon River Trail System—a 48-mile trail network in North Central West Virginia, portions of which are included in

the P2P corridor alignment—provides a glimpse into the prospective economic benefits that the entire P2P corridor could realize.

This section reveals initial economic impact findings from a trail user survey and local business study of the Mon River Trail System that RTC conducted in partnership with WVU Health Research Center and Mon River Trails Conservancy; introduces the Trail Town model as a strategy for capturing tourism dollars and growing local business; and presents case studies of two long-distance destination rail-trails that serve as comparable economic development examples for the P2P: the GAP and Katy Trail.



2015 West Virginia Sojourn in and around Morgantown, West Virginia | Photo courtesy RTC

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A CLOSER LOOK AT THE MON RIVER TRAIL SYSTEM'S ECONOMIC IMPACT

Trails that are still in the visioning or project stage have much to learn from the experience of more mature trails, especially ones that share geographic and demographic characteristics and similar funding, management and operations structures. RTC supported two recent studies of the Mon River Trail System, its users and nearby local businesses to better understand the economic impact of the trail and begin forecasting the potential economic impact of other trails within the P2P corridor.

The Mon River Trail System is a 48-mile trail network in North Central West Virginia that has been in operation in whole or in part since 1998. It comprises four trail segments, three of which—Mon River Trail North, Caperton Rail-Trail and Mon River Trail South—are included in the P2P corridor.

In 2016 and 2017, RTC commissioned WVU Health Research Center to study the impacts of the Mon River Trail System on local businesses in Morgantown. And in the summer of 2017, RTC conducted a trail user survey, supplemented with automated trail user counts, to produce an economic impact study of the Mon River Trail System. Both studies will be combined into a comprehensive report to be released in the fall of 2018. Preliminary findings are summarized here to provide a snapshot of how this existing P2P trail helps fuel local economies and contributes to the region's ability to attract and retain residents.

RTC'S WEST VIRGINIA SOJOURNS SPOTLIGHT THE P2P CORRIDOR

RTC has hosted group bicycle tours—or "Sojourns"—on rail-trails for more than a decade. Sojourns bring dozens, sometimes hundreds, of bicycle tourists to communities along the route. In 2015, RTC hosted its first West Virginia-based Sojourn in and around Morgantown, West Virginia, bringing approximately 100 people to the area for a 122-mile, three-day bike ride through four counties and seven rail-trails.

All told, the 2015 West Virginia Sojourn's positive economic impact to the Morgantown area was \$38,176.

The following year, nearly 130 people participated in the West Virginia Sojourn, this time on the North Bend Rail Trail, with the goal of highlighting existing trails within the P2P corridor and the need to upgrade and connect them to draw even more trail users and tourists in the future. With another positive economic impact of more than \$31,000 to local communities in 2016, the sojourns continue to demonstrate their ability to influence trail development through evidence of trail users generating significant local spending.

BUSINESS IMPACT OF THE MON RIVER TRAIL SYSTEM (2017)¹⁴

In 2017, researchers surveyed 61 business owners, interviewed 17 business owners and conducted a focus group with seven individuals representing various sectors of the North Central West Virginia community. A property value analysis was also conducted. Key findings include:

- The Mon River Trail System has been part of the stimulus for strong economic growth in Monongalia County, particularly along the trail where median property values (including land and building values) have increased 172.6 percent since 2004.
- The Mon River Trail System is unique from other long-distance trails that have been studied to better understand the trail's economic impact on local businesses (e.g., the GAP or the Virginia Creeper Trail) in that the Mon River Trail System is not primarily a tourism destination.
- Many of the businesses along the trail are professional services (e.g., law firms) not primarily impacted by trail traffic, but when you combine these businesses with lodging, retail and food service businesses in close proximity, numerous mutual benefits are realized.
- Because of the type of businesses along the Mon River Trail System, its primary business benefit may be in serving as a regional tool for recruiting and retaining talent who would be drawn to the appeal of trail access, active transportation and active work breaks.
- Trail advocates and local government officials could help business owners understand the direct impact of the trails by frequently soliciting feedback from businesses and disseminating data about trail use and impact.
- Unique self-taxing districts or community value capture instruments could help fund ongoing maintenance, events, policing and other improvements to the Mon River Trail System.

MON RIVER TRAIL SYSTEM ECONOMIC IMPACT SURVEY (2017)

From June to September 2017, researchers gathered trail user surveys from 343 respondents along the Mon River Trails (North, South and Caperton Rail-Trails). The respondents answered questions about the frequency, duration and purpose of their trail visits; money spent on hard goods (bike, accessories, clothing, footwear, etc.); soft goods (snacks, meals, etc.); and accommodations. They also answered demographic questions about age, gender, household income, etc. Preliminary analysis of the data includes the following findings:

- More than 205,000 people visit the trails annually.
- These users have a significant economic impact on the local economy by contributing more than **\$6 million annually** to the Morgantown, West Virginia, region.
- Trail users spent about \$230 per year on hard goods.
- On average, tourists (traveling 50+ miles) spend \$316 per trip while staying in the area.
- A family of four would have spent \$722 per trip.
- Bicyclists spent more than non-bicyclists on pernight accommodations (\$100 vs. \$59, respectively) and soft goods (\$15 vs. \$10).
- Although most visitors were locals, 20 percent of survey respondents were from 17 states and Washington, D.C., according to analysis of the origin zip codes.
- Survey respondents learned about the trail through word of mouth (42 percent), driving past (14 percent) and the local bike shop (8 percent), among others.

ihearttrails.org

^{14.} Christiaan Abildso, Jessica Coffman, and Thomas Bias, Business Impact of Mon River Trails System (Morgantown, WV: West Virginia University Health Research Center, WVU School of Public Health, 2017), https://www.railstotrails.org/resource-library/resources/business-impact-of-mon-river-trails-system/.



Bicyclists enjoy Mon River Trails during the 2015 West Virginia Sojourn. | Photo by Jake Lynch

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In 2018, RTC will combine a complete analysis of the trail user survey data with the business impact study to produce a comprehensive assessment of the Mon River Trail System's impact on the region. Initial findings reveal how and where investments could be made to increase the trail's economic impact in local communities. For example, elevating the

trail as a major tourist attraction—and specifically targeting bicyclists—could help increase tourism dollars spent along the trail. This study will become a tool for Mon River Trail System advocates and other P2P corridor communities, as it will illustrate the economic power of trails and make the case for investment in new trails and community amenities.

railstotrails.org

"TRAIL TOWNS": A COMMUNITY DEVELOPMENT MODEL THAT LEVERAGES TRAILS

What is a "Trail Town?" The simplest answer is that it is a community located along a trail that seeks to connect to and benefit from local trails. Benefits can range from a bolstered local economy to an increase in community pride and improved health and wellness.

The term was first used in the context of community development along the 150-mile GAP, where the Trail Town Program® was developed to maximize the potential of the long-distance path. The idea was to improve physical connections between trail and town and to position businesses to accommodate trail users, with the end goal of more vibrant, economically healthy places.

This approach to community development, first introduced in 2007, has since spread to other trails around the U.S. Typically, a regional or trail-wide entity will build its own program and designation process according to local needs and capacity. Well-known programs exist in the state of Kentucky, along the Appalachian Trail and on the North Country Trail. While many examples of Trail Towns take a programmatic approach, a formal program is not necessary for a community to adopt "Trail Town" principles and benefit from the community development lessons of the Trail Town Program®.

OPPORTUNITIES AT HOME

Trail tourism professionals warn against viewing the Trail Town approach as a standalone solution to the myriad challenges communities face. However, making efforts to better connect communities to trails and improve business services can make a positive and lasting difference in trail communities. Whether or not a formal program is in place, locals can begin cultivating a culture that celebrates trails and positions places to better connect to them. And while Trail Town initiatives focus on getting trail users to visit and spend money in communities, we should not lose sight of the longer-term goal of creating communities that families and small businesses want to move to. Making towns more attractive and welcoming to potential residents and businesses.

Municipalities along the P2P corridor are ideally positioned to benefit from the trail economy. In West Virginia alone, the eventual 150-mile stretch that connects to an even longer network of trails equates to opportunity knocking. Together, the trails make it possible to attract visitors, while offering an important amenity for local residents that offers opportunities for physical activity and new connections to other places along the route. Whether that's walking a couple of miles pushing a stroller or doing a bike overnight, the trails along the P2P corridor are ripe with possibility.

Strategies for applying the Trail Town model to the P2P corridor—as well as an example of how Shinnston, West Virginia, is already making strides in this area—are included in the Trail Town Recommendations section of the study (page 82).

WHAT IS A TRAIL TOWN?

The North Country Trail's definition is a holistic one that goes beyond infrastructure and economic development as success measures. It emphasizes a culture that embraces the trail and the relationships between town, trail, and those who use and care for it:

"A Trail Town is a community through which the North Country Trail passes that **supports** hikers with services, **promotes** the Trail to its citizens and **embraces the Trail as a resource to be protected and celebrated**. Trail Towns are built on a relationship between a town, the Trail and its volunteers." —North Country Trail Association



Trailside business flourishes on the Great Allegheny Passage. | Photo by Cleo Fogal

CASE STUDIES

Several long-distance trails and trail networks can serve as useful models for the 238-mile P2P trail corridor. The following case studies illustrate how partnerships were formed to build and maintain trail networks that have benefitted adjacent communities.

GREAT ALLEGHENY PASSAGE

The Great Allegheny Passage (GAP) connects Pittsburgh, Pennsylvania, to Cumberland, Maryland—a distance of 150 miles. The first section of the GAP opened in 1986, with the full trail seeing completion in 2013. The GAP was created using abandoned rail corridors formerly owned and operated by the Baltimore and Ohio Railroad; Pittsburgh, Pennsylvania, and Lake Erie Railroad; Union Railroad; and Western Maryland Railway. Sections were acquired over time as funding became available, segments were abandoned and railroads proved willing to participate in the process. Pennsylvania also included \$16 million in its 1997 capital budget to acquire the final sections of right-of-way and begin construction.

To maintain the trail at a common standard, the Allegheny Trail Alliance was created. In 1998, then-Gov. Tom Ridge included \$1.5 million in the statewide capital budget to create the Allegheny Trail Alliance, comprising seven member trail organizations:

- 1. Mountain Maryland Trails
- 2. Somerset County Rails-to-Trails Association
- 3. Ohiopyle State Park
- 4. Regional Trail Corporation
- 5. Steel Valley Trail Council
- 6. Friends of the Riverfront
- 7. Montour Trail Council

Additional trails connect to the GAP to create a branch network, including the Montour Trail (a 52-mile branch that connects to Pittsburgh International Airport) and the C&O Canal Towpath Trail (an 184-mile trail that connects Cumberland, Maryland, to Washington, D.C.).

Researchers from Saint Vincent College in Latrobe, Pennsylvania, conduct user counts along the GAP on an annual or biannual basis. Counts showed a mid-range estimate of more than 867,000 trips in 2015, a 23 percent increase in trail use compared to 2013, a potential indication of trail connectivity benefits.¹⁵

Researchers also conduct studies on the economic impacts of the GAP on nearby areas. A 2013 study on hotel demand found that, among demand generator user groups, GAP users were willing to pay the most for a hotel room (\$125 per night). Most of the GAP trail users indicated they "will visit during peak demand periods and are relatively insensitive to price." ¹⁶

Likewise, the Trail Town Program® surveyed 562 trail users near 11 towns along the GAP in 2014. Sixty-two percent of trail users were planning an overnight stay with an overnight spending average of \$124.58, which was an increase of \$26 from a similar survey conduscted in 2008. Business owners also responded to the survey and reported a sizeable increase in trail user traffic to their businesses between 2013 (the year of the trail's completion) and 2014.

KATY TRAIL

Katy Trail connects 10 counties throughout the state of Missouri, a distance of 240 miles. Built on the former Missouri–Kansas–Texas Railroad, Katy Trail is one of the longest rail-to-trail conversions in the country. The trail segment between St. Charles and Boonville is part of the Lewis and Clark National Historic Trail. Missouri State Parks acquired the first section of Katy Trail in 1986, opening it in 1990. Upon donating 33 miles of rail corridor, Union Pacific Railroad acquired the second section of the trail in 1991. Additional sections opened in 1996 and 1999. Philanthropists Edward and Pat Jones played a critical role in lobbying the Missouri Legislature to use the former rail corridor, and later helped fund the acquisition and construction of Katy Trail.

In 2010, Dan and Connie Burkhardt founded the Katy Land Trust, which seeks to preserve the lands around Katy Trail by working with local landowners. In 2012, Missouri State Parks produced the Katy Trail Economic Impact Study, which estimated that Katy Trail attracts around 400,000 visitors per year. Further analysis showed that the 400,000 visitors have an economic impact of nearly \$18.5 million per year. More than 50 percent of visitor spending took place at restaurants or bars and overnight lodging near Katy Trail. The trail continues to be studied by rail-trail advocates who wish to replicate its economic success.

Another effort is focused on connecting Katy Trail to the Rock Island Spur, which would create a 459-mile trail loop.²⁰ Additional connections will include the Kansas City trail network.

- 19. Ibid.
- 20. "Who We Are," Missouri Rock Island Trail, accessed March 23, 2018. http://rockislandtrail.org/our-mission.

^{15.} Andrew R. Herr, Analysis of 2015 Trail Usage Patterns along the Great Allegheny Passage (Latrobe, PA: Saint Vincent College, 2016), https://gaptrail.org/system/resources/W1siZilsijlwMTYvMTAvMjYvMjEvMzkvMzkvODI1L0FuYWx5c2lzXzlwMTVfVHJhaWxfQ291bnRzLnBkZiJdXQ/Analysis%202015%20Trail%20Counts.pdf.

^{16.} PKF Consulting, Market Demand Study: Proposed Hotel: Connellsville, Pennsylvania (Latrobe, PA: Allegheny Trail Alliance, 2013), https://gaptrail.org/system/resources/W1siZilsljiwMTYvMDkvMTMvMjAvMzAvMDUvMjY0L0Nvbm5lbGxzdmlsbGVQaGFzZTFSZXBvcnQucGRml1ld/ConnellsvillePhase1Report.pdf.

Trail Town Program, Trail User Survey and Business Survey Report: Great Allegheny Passage (Greensburg, PA: Trail Town Program, 2015),
 <a href="https://gaptrail.org/system/resources/W1siZilsljlwMTYvMDkvMTMvMjAvMigvMzEvNDExLzlwMTVfR0FQX1]lcG9ydC5wZGYiXV0/2015-GAP-Report.pdf.

^{18.} Synergy Group/Pragmatic Research, Inc./James Pona Associates, Katy Trail Economic Impact Report: Visitors and MGM2 Economic Impact Analysis
(Jefferson City, MO: Missouri State Parks, 2012), https://mostateparks.com/sites/mostateparks/files/Katy_Trail_Economic_Impact_Report_Final.pdf.

This section describes how the corridor alignment was determined, summarizes stakeholder and public engagement processes that inform this study's content and recommendations, and concludes with a comprehensive review of existing plans that continue to inform and support trail development along the P2P corridor.

DEVELOPMENT OF ALIGNMENT

In many ways, the P2P corridor's development as a rail-trail has progressed steadily over the past several decades. It started with the opening of the North Bend Rail Trail in 1991, then the West Fork River Trail in 1997, followed by the build-out of the Mon River Trail System in the late 1990s and early 2000s. Connecting West Virginia cities like Parkersburg, Clarksburg and Fairmont to these existing trails, and linking the communities along the corridor, has been a dream of local trail advocates for years. In the early 2000s, trail-building groups in Pennsylvania, West Virginia and Ohio formed a Tri-State Trails Initiative to discuss many of the connections that now make up the network of trails IHTC is working to complete.

In 2010, the "Power of 32" regional visioning project engaged thousands of people across 32 counties in Maryland, Ohio, Pennsylvania and West Virginia to create a shared economic development and community revitalization vision for the future. IHTC grew out of this project, formalizing in 2011 to define the trail corridors, identify gaps in the trail network and develop mapping technology to support the overall effort.²¹ These initial efforts relied on the input of trail advocates and local planning professionals, who produced a trail connectivity analysis in 2014. The analysis largely defined the alignment of major corridor "spines" of the trail network.²²

In 2016, RTC engaged stakeholders through P2P Corridor Working Group meetings to further refine and examine the corridor alignment. In partnership with the Northern WV Brownfields Assistance Center (NBAC), RTC co-hosted four community workshops in Harrison County to better understand trail development opportunities and address challenges. NBAC produced a detailed trail connectivity analysis for Harrison County in 2017—the Harrison Rail-Trails Connectivity Plan—which greatly informs the Segment Analysis included in this study.²³

While the vision of a fully connected P2P corridor almost exclusively utilizes former railroad corridors, some infrastructure and property ownership challenges may require temporary on-road connections. These instances are addressed in the Segment Analysis (page 23) and other local plans outlined in the Plan Review (page 18).

STAKEHOLDER AND PUBLIC PARTICIPATION

Many of the stakeholders and partners actively involved in the P2P (see list on page 8) contributed to the accuracy and utility of this study, including participating in several P2P Corridor Working Group meetings and dozens of community-focused meetings from 2016 to 2017 in Parkersburg, Clarksburg and Fairmont. In addition, RTC hosted four community workshops in Harrison County to engage local residents around the P2P vision, gathering their ideas and suggestions for successful trail development, promotion and programming. The public input gathered during these meetings is captured in the Harrison Rail-Trails Connectivity Plan and has been incorporated to both the Segment Analysis (page 24) and Trail Town Recommendations (page 83) sections of this study.

- 21. "Welcome," GoTo TRAILS, accessed March 23, 2018. http://www.gototrails.com.
- P32+ Trail Network Working Group, P32+ Trail Network Connectivity Analysis (P32+ Trail Network Working Group, 2014), http://gototrails.com/Resources/2096%20P32%2B%20Connectivity%20Gaps%20Assessment%20Report%20REV%2011-18-14.pdf.
- 23. Northern WV Brownfields Assistance Center, Harrison Rail-Trails Connectivity Plan (Morgantown, WV: Northern WV Brownfields Assistance Center, 2017).

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A major stakeholder in the planning and acquisition phase of P2P trail development is CSX, the railroad company that owns several of the corridor's gap segments. In 2015, RTC informed CSX of the P2P corridor and community interest to acquire corridor parcels for trail development. Since then, RTC and local stakeholders have continued to cultivate this important partnership, inviting and hosting CSX representatives from their Jacksonville, Florida, headquarters for P2P Corridor Working Group and IHTC meetings. In 2016 and 2017, RTC worked closely with CSX to conduct joint appraisals for eight corridor segments in Wood, Harrison and Marion counties, totaling more than 11 miles. RTC will continue to coordinate with CSX and local trail communities throughout the negotiation process.

PLAN REVIEW

Segments of the P2P trail corridor appear in various forms in several plans at the state, county/regional and local levels in West Virginia. This Plan Review analyzes the available regional and statewide comprehensive plans, long-range transportation plans, comprehensive economic development strategies, and miscellaneous plans and field surveys that mention trails and trail networks.

This review revealed that "trails" are generally referenced and often prioritized in local, regional and state plans relating to transportation, recreation, health and economic development, but that the P2P corridor and its position within a much larger 1,500-miles-plus trail network need to be elevated within these plans, accompanied by specific action items or recommendations that will advance gap-filling at the local level. Including this project in such plans will be important for future funding and construction priorities.

STATEWIDE PLANS

In 2010, the West Virginia Department of Transportation (WVDOT) prepared its **Multi-Modal Statewide Transportation Plan**—mandated by federal transportation legislation that requires each state to maintain an up-to-date, 20-year-plus transportation plan that increases safety, security, accessibility and mobility for motorized and non-motorized users.²⁴

During the process of developing its 2010 plan, WVDOT held a series of public meetings and opened a public comment period. Approximately 47 percent of these comments referenced a desire for the state to make greater investments in promoting walking, bicycling and transit. Comments addressed the need to attract younger people to the state through increased recreation opportunities like bike lanes, trails, and the construction of bicycle and pedestrian corridors along newly constructed or resurfaced multi-lane highways. Likewise, commenters wrote that the North Bend Rail Trail should be finished and that counties should be more involved in building and maintaining trails.

At the first round of public meetings, participants were presented with an activity to set their own statewide transportation spending priorities based on fiscal constraints. The largest percentage of the participants' desired spending (27 percent) was devoted to bicycle and pedestrian transportation projects. Despite this public focus, the Multi-Modal Statewide Transportation Plan did not include a section on statewide walking or bicycling priorities. The state has not identified spending to promote walking or bicycling projects.

The West Virginia Development Office last updated its **Statewide Comprehensive Outdoor Recreation Plan** (SCORP) in 2015, which goes through 2020.²⁵ One of the West Virginia SCORP's primary purposes is to outline priorities for spending Land and Water Conservation Fund (LWCF) dollars. The plan highlights three priorities to provide assistance for:

- Park, forest or wildlife area capital repairs to restore or maintain services to support growing demands.
- 2. State or local park renovations to promote active lifestyles, innovate community cores, and attract and retain visitors to an area.
- The acquisition and development of natural areas in support of trail development to match approved recreational trail projects or other federally approved, LWCF matching share programs.

The plan indicates that these priorities are notable because "a plurality of residents' demands for better maintained parks as opposed to more park facilities represents the most significant change from prior West Virginia SCORP priorities." West Virginia residents would like to see major repairs to basic park infrastructure, including existing trails. However, this desire does not indicate an unwillingness to see new trails being built or connected. In a survey conducted

^{24.} West Virginia Department of Transportation, West Virginia Multi-Modal Statewide Transportation Plan (Charleston, WV: West Virginia Department of Transportation, 2010), http://transportation.wv.gov/highways/programplanning/planning/statewide/Documents/West Virginia Long Range Multi-modal Transportation Plan.pdf.

West Virginia Development Office, Statewide Comprehensive Outdoor Recreation Plan – SCORP – State of West Virginia 2015-2020 (Charleston, WV: West Virginia Development Office, 2015), http://www.wvcommerce.org/App_Media/assets/pdf/peopleandplaces/communityresources/2015-2020_WV_SCORP.pdf.

by West Virginia's Development Office, respondents ranked trails as either the top or second-highest recreation facilities priority. This held true for frequent, casual and infrequent park users in both urban and rural areas.

The SCORP also highlights that in 2015, three West Virginia towns along the P2P corridor—Morgantown, Fairmont and Shinnston—received Growing Healthy Communities grants administered by the West Virginia Department of Health and Human Resources, all for trail-related projects.

COUNTY AND REGIONAL PLANS

The P2P corridor in West Virginia spans six counties (Wood, Ritchie, Doddridge, Harrison, Marion and Monongalia), one metropolitan planning organization (Morgantown Monongalia Metropolitan Planning Organization) and one interstate planning commission (the Wood-Washington-Wirt Interstate Planning Commission, or WWW). Plans from each of these counties and organizations were reviewed as part of the study to understand the context surrounding trail development from west to east along the corridor.

Wood County, which is included in WWW's jurisdiction, also encompasses portions of Ohio. WWW produces and updates a **Long Range Transportation Plan** (last updated in 2016) and a **Biennial Transportation Improvement Program** (last updated in 2015 for Fiscal Years 2016-2019). ^{26, 27} The Long Range Transportation Plan identifies IHTC's 1,500-miles-plus trail vision and recommends that WWW invest in the completion of IHTC corridors.

The plan also identifies a lack of local bicycle and pedestrian network connections to and from parks, schools, places of employment, regional connections and other points of interest. The Long Range Transportation Plan estimates a necessary \$1.1 million to enhance the existing

North Bend Rail Trail and \$5 million to complete the Little Kanawha Connector Trail, which would connect the North Bend Rail Trail to Parkersburg. Neither project is funded through the Biennial Transportation Improvement Program, which identifies funding at the state level for projects for four fiscal years. However, two trail projects are funded in this improvement program: 1) installing restrooms at one location on the North Bend Rail Trail (\$38,000), and 2) constructing the Ohio River Trail from Point Park to the Memorial Bridge in Parkersburg (\$554,000).

Wood County produced an **Alternate Transportation Plan** in 1996. A group of engaged citizens formed the Alternate Transportation Advocacy Committee to create alternate transportation opportunities in western West Virginia. The plan calls for the inclusion of alternate transportation opportunities in the design and development of new road projects and road resurfacing projects. A major plan priority is to complete the Little Kanawha Connector Trail from Point Park in Parkersburg to the North Bend Rail Trail trailhead at State Route 47/Staunton Turnpike and I-77. The Wood County Commission established a new Alternative Transportation Council in 2013 to address these concerns.

The Mid-Ohio Valley Health Department produced two reports in 2012 addressing regional trail connectivity: 1) Connectivity Enhancement Plans for Wood County and 2) Connectivity Trail for Six County Region.^{29, 30} The connection between the North Bend Rail Trail and Point Park in Parkersburg is the top trail mentioned in both reports. Two options are outlined for completing this trail connection. Option 1 would use the abandoned CSX tracks at an estimated cost of between \$616,000 (stone) and \$1,598,000 (asphalt), while Option 2 would build a bridge spanning a large drainage area before connecting back to the CSX tracks at an estimated cost of between \$970,000 (stone) and \$1,952,000 (asphalt). The six-county region trail plan includes preliminary engineering documents from engineering and architecture firm Burgess & Niple. A further recommendation includes adding additional signage to highway signs for the North Bend Rail Trail.

- Wood-Washington-Wirt Interstate Planning Commission, Comprehensive Long Range Multimodal Transportation Plan Update 2040 (Parkersburg, WV: Wood-Washington-Wirt Interstate Planning Commission, 2016), https://www.movrc.org/Programs/WWWIPC/WWW-Long-Range-Plan.aspx.
- Wood-Washington-Wirt Interstate Planning Commission, Biennial Transportation Improvement Program (Parkersburg, WV: Wood-Washington-Wirt Interstate Planning Commission, 2017), https://www.movrc.org/Programs/WWWIPC/WWW-Transportation-Improvement-Program.aspx.

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- Alternate Transportation Advocacy Committee, Wood County Alternate Transportation Plan (Alternate Transportation Advocacy Committee, 1996), http://www.movrc.org/MOVRC/media/WWW-Files/reports/Proposed Wood County Alternate Transportation Plan 7-16-09.pdf.
- Burgess & Niple, Connectivity Enhancement Plans for Wood County (Parkersburg, WV: Mid-Ohio Valley Health Department, 2012), http://www.movrc.org/MOVRC/media/WWW-Files/reports/Wood County Final Report.pdf.
- Burgess & Niple, Connectivity Trail for Six County Region (Parkersburg, WV: Mid-Ohio Valley Health Department, 2012), http://www.movrc.org/MOVRC/media/WWW-Files/reports/Connectivity-Trail-for-Six-County-Region.pdf.



Once acquired, this segment of disused rail between I-77 and DeBarr Trucking in Parkersburg will connect to the North Bend Rail Trail extension. | Photo courtesy RTC

The West Virginia Department of Commerce requires regional councils to prepare or update a Comprehensive Economic Development Strategy (CEDS) focusing on factors critical for economic advancement of the region. The Mid-Ohio Valley Regional Council creates the CEDS for Wood and Ritchie counties, the most recent version of which is titled MOV Tomorrow: Building Communities for Tomorrow's Economy (2016).³¹ The Mid-Ohio Valley CEDS recognizes the economic importance of tourism, multi-modal transportation systems and the chronic health conditions that limit work force productivity. The CEDS' Parks and Recreation chapter mentions the North Bend Rail Trail as one of several unique options for outdoor recreation, describing it as a natural asset that "present[s] opportunities for tourism and economic development." However, no specific goals or policies exist to build out a trail system that would deliver such economic impact.

The Region VI Planning and Development Council wrote the CEDS for the remainder of the corridor. The most recently available version of the **Region VI Development Plan – Comprehensive Economic Development Strategy Plan** is from FY 2009-2013.³² Region VI includes Doddridge, Harrison, Marion and Monongalia counties (as well as Preston and Taylor counties, not along the trail corridor).

Industrial sectors in Region VI, particularly mining and manufacturing, are in decline, while the service sector is expanding. Though expansion of water and sewer service is the CEDS' No. 1 priority, trails are mentioned specifically in several sections as economic generators in tourism and recreation. As described in the CEDS, a major goal in travel and tourism development for Region VI is "to provide technical assistance to programs concerning current 'Rails to Trails' projects underway in the region's counties." The council has created an inventory of all the trails in the region, including how each can be connected. Council staff are working closely with local communities on this initiative. The Region VI Planning and Development Council is also focused on developing a regional tourism marketing strategy and package for hiking and biking trails.

The Harrison County Commission produces its own Comprehensive Plan (2016).³³ While the commission recognizes rail-trails as a major opportunity for Harrison County, the plan acknowledges that "there is a current lack of knowledge and promotion of the three bicycle trails in the county." Action steps to increase transportation choices in the county include expanding bicycle trails into Clarksburg, Shinnston and Wolf Summit and marketing the bicycle trails to residents and visitors.

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^{31.} Mid-Ohio Valley Regional Council, MOV Tomorrow: Building Communities for Tomorrow's Economy (Parkersburg, WV: Mid-Ohio Valley Regional Council, 2016), http://www.movrc.org/MOVRC/media/ComDev-Files/2016-CEDS-RDP.pdf.

Region VI West Virginia Planning and Development Council, Regional Development Plan – Comprehensive Economic Development Strategy Plan, FY 2009-2013 (White Hall, WV: Region VI Planning and Development Council, 2009), https://www.regionvi.com/RDP_CEDS_FIVE_YEAR_PLAN.pdf.

Harrison County Commission, Harrison County Comprehensive Plan (Clarksburg, WV: Harrison County Commission, 2016), http://www.harrisoncountywv.com/Forms/Comp_Plan.pdf.

Finally, the Morgantown Monongalia Metropolitan Planning Organization has produced two documents addressing trails—the **Long Range Transportation Plan** (2013) and the **Bicycle Plan** (2013). 34, 35 The Bicycle Plan envisions "that bicycles should be a practical transportation option and that people should be able to ride bicycles in a safe and supportive environment," and is incorporated to the Long Range Transportation Plan. Morgantown is the city in West Virginia with the highest proportion of its population walking for exercise. The Long Range Transportation Plan speculates that these numbers may be a result of the trails in the area. Two of the plan's major objectives are 1) increasing the use of existing rail-trails for transportation purposes, and 2) increasing the number of trail users with trip purposes of commuting, shopping or entertainment.

LOCAL PLANS

Three cities in West Virginia along the P2P trail corridor have plans that reference walking, bicycling and trails: Parkersburg, Fairmont and Morgantown. These plans are summarized below from west to east.

In Parkersburg, the **2020 Parkersburg Comprehensive Master Plan Update** (2011) includes goals for a variety of elements, including transportation.³⁶ The primary transportation goal of this plan is that by 2020, Parkersburg will have developed a balanced and efficient transportation system for all local modes of travelers. Broad community support also exists for such a vision. When city planners asked residents via survey if the city should focus future investments on installing sidewalks and bike lanes, 90 percent of respondents agreed (60 percent strongly agreed or agreed; 30 percent somewhat agreed).

The plan recognizes the importance of walking and bicycling in an urban area, and makes three main recommendations to:

- Include bicycle and pedestrian facilities for all new and redevelopment projects.
- 2. Develop a city-wide, comprehensive, shared-use path system.
- 3. Establish and market a heritage tourism trail.

The plan identifies the connection from the North Bend Rail Trail through Parkersburg via the Little Kanawha Connector Trail as a vital portion of the future city-wide, comprehensive, shared-use path system. Such a trail connection could also help the city reach its goal of attracting heritage tourists and outdoor recreation enthusiasts.

Moving eastward, the city of Fairmont has included trails in various chapters of its **City of Fairmont Comprehensive Plan** (2005) and **Fairmont Connectivity Plan** (2014).^{37, 38} The Comprehensive Plan recognizes the importance of trails in its transportation, recreation, economic development and tourism chapters. Specifically, the transportation chapter highlights the funding proposals to begin the property acquisition, design and construction of the first trail leg connecting the West Fork River Trail to the Mon River Trail, one of the key gaps in the P2P corridor. The comprehensive plan also mentions the acquisition and development of the abandoned railway property between the Watson bridge and the Nickel/Low Level Bridge, construction of a new bicycle and pedestrian bridge over the Monongahela River, and completion of the trail along the east side of Fairmont.

Completing the trail is also a significant part of Fairmont's tourism strategy. Its comprehensive plan recognizes that the existing trails are tourist attractions. Completing the trail network would both increase the tourist draw and enhance quality of life for Fairmont residents.

The city of Fairmont created the Fairmont Connectivity Plan in response to demands for improved bicycle and pedestrian facilities. The plan's goals include making alternative transportation safe and reliable, and encouraging biking and walking as viable modes of transportation for all residents and visitors. The Fairmont Connectivity Plan also recognizes that it is a missing link in the completion of a trail corridor in North Central West Virginia, and that the city is "at the center of all the potential economic benefits created by this recreational corridor." All the trail segments needed to connect this trail corridor are listed as high priorities in the connectivity plan, as are on-road bicycle connections to bring people from the trail into town to capitalize on economic benefits.

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Burgess & Niple, Morgantown Monongalia Metropolitan Planning Organization's 2040 Long Range Transportation Plan (Morgantown, WV: Morgantown Monongalia Metropolitan Planning Organization, 2012), https://www.morgantownwv.gov/DocumentCenter/Home/View/126.

^{35.} Morgantown Monongalia Metropolitan Planning Organization, Morgantown Monongalia MPO Bicycle Plan (Morgantown, WV: Morgantown Monongalia Metropolitan Planning Organization, 2013), https://drive.google.com/file/d/0B8UM6dsVoQTIZ3]EX2oyOUoyVjg/view.

Municipal Planning Commission of the City of Parkersburg, 2020 Comprehensive Master Plan Update (Parkersburg, WV: City of Parkersburg, 2011), http://parkersburgcity.com/pc/wp-content/uploads/2015/10/Pburg-City-Comp-Plan-2011.pdf.

^{37.} City of Fairmont, City of Fairmont Comprehensive Plan (Fairmont, WV: City of Fairmont, 2005), https://fairmontwv.gov/158/Comprehensive-Plan.

^{38.} City of Fairmont, Fairmont, WV Connectivity Plan: Connecting Today to Tomorrow (Fairmont, WV: City of Fairmont, 2014), https://fairmontwv.gov/DocumentCenter/View/1306.

Last, Morgantown includes trails in the Morgantown Comprehensive Plan (2013) and Greater Morgantown Bicycle Plan (2012).^{39, 40} The comprehensive plan draws directly from the Morgantown Monongalia Metropolitan Planning Organization Long Range Transportation Plan, including the need to improve and expand infrastructure for pedestrians, bicyclists and people with disabilities and increase use of existing rail-trails for transportation purposes. The plan lists the area's rail-trails as major assets, stating that "connecting neighborhoods to [them] should be a priority." In addition, the comprehensive plan lists leisure and hospitality as the city's economic sector with the third-highest rate of growth. The plan notes that capitalizing on Morgantown's "strong reputation for outdoor sports and recreation that increasingly attracts sports enthusiasts and tourists from around the country" by investing in trails is a priority moving forward.

The Greater Morgantown Bicycle Plan sets a goal for 2020 to have 5 percent of all trips in and through Morgantown made by bicycle. The plan discusses the Mon River Trails (North and South) as two of Morgantown's most valuable assets that should be "maintained at a level not less than that applied to the public roadway." The plan also recognizes that novice cyclists prefer to be physically separated from motor vehicle traffic, and as such, "increasing segregated facilities such as rail trails ... can be expected to increase the number of novice cyclists." Specific actions in the plan related to trails include maintaining the rail-trails to be free of glass, snow and ice; installing bike and pedestrian bridges across Deckers Creek; and making small connections from side streets and paths to the Mon River Trail.

INCLUDING THE PROJECT IN FUTURE PLANS

The P2P corridor and the individual projects it comprises should be included in future plans and plan updates. CEDS plans are intended to be updated annually, while comprehensive plans and transportation plans are generally updated every 10 years. The first West Virginia Statewide Bicycle Connectivity Plan is currently being drafted. Partners should ensure the P2P corridor is included in this first-of-its-kind draft.

*Comprehensive plans could not be located for Wood, Ritchie, Doddridge or Marion counties, and long-range transportation plans could not be located for Ritchie, Doddridge, Harrison or Marion counties.

^{39.} City of Morgantown, Comprehensive Plan: City of Morgantown (Morgantown, WV: City of Morgantown, 2013), http://www.morgantownwv.gov/191/2013-Comprehensive-Plan.

^{40.} City of Morgantown, Greater Morgantown Bicycle Plan (Morgantown, WV: City of Morgantown, 2012), http://bikemorgantown.com/Plan/morgantown_bicycle_plan_v15-1.pdf.

SEGMENT ANALYSIS

Of the 146.7 miles along the P2P corridor between Parkersburg and the Pennsylvania–West Virginia border, 123.9 miles are already developed as trail, with 22.8 miles remaining. The following segment analysis is divided into two types of segments: existing trails ("open") and gaps in the trail network ("gap").

For open trails, this report discusses the existing condition of the trail, any recommended improvements and the costs associated with those improvements. For trail gaps, this report discusses trail characteristics and recommended alignment, trail and trailhead facilities, proposed easements and property acquisition, operations and maintenance recommendations, and opinions of probable costs.

Various case studies—where possible, from West Virginia and the greater Appalachian area—informed the opinions of probable costs. Where needed, this analysis also considered examples from around the country to get the widest range of possible costs for each element. Cost estimation details (Appendix A) outline the values and case studies used for each element.

Several spurs to the P2P corridor in West Virginia are also noted in this analysis. While the spurs are not included in the official route segments or mileage indicated above, they are important local trails that will feed into the greater P2P alignment and are highlighted as such.

Table 1 – West Virginia Segments of the P2P Corrid	dor	
Segment Name	Status	Segment Length (in Miles)
Mon River Trails and Marion County Trails	Open	31.5
Trail Gap – Fairmont	Gap	4.6
West Fork River Trail	Open	14.5
Trail Gap – Shinnston to Spelter	Gap	6
Harrison North Rail Trail	Open	7
Trail Gap – Clarksburg	Gap	5.9
North Bend Rail Trail	Open	72
Trail Gap – Parkersburg	Gap	5.2
	TOTAL MILEAGE	146.7

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Bicyclists riding along the Mon River Trail in Morgantown, West Virginia | Photo courtesy RTC

MON RIVER TRAILS AND MARION COUNTY TRAILS

Heading south from the Pennsylvania–West Virginia border, the P2P corridor utilizes several existing trails in the Mon River Trail System. The trail system consists of three trails in Monongalia County, two of which are along the P2P corridor (Mon River Trail and Caperton Rail-Trail). The Mon River Trail System then connects to the MCTrail at the Monongalia–Marion County border. Together, these three trails compose the first 31.5 miles of the P2P corridor.

The Mon River Trail System was constructed upon former corridors of the Morgantown and Kingwood Railroad and the Fairmont, Morgantown and Kingwood Railroad. The Baltimore and Ohio Railroad eventually acquired and

operated both lines. In 1996, CSX acquired the 51-mile corridor to be railbanked as a non-motorized trail system.

EXISTING CONDITION

The Mon River Trails Conservancy, which first established the trails in the late 1990s and early 2000s, ensures that they are well maintained. Most of the trail miles are crushed stone with asphalt throughout the busier parts of the Morgantown area. A variety of trailheads allow users to access the network. Point Marion Community Park includes a parking area which, if converted to a formal trailhead, could be used as a convenient access point to the P2P corridor on either side of the Pennsylvania–West Virginia state line.

Table 2 – Trails Included in the Mon River Trails and Marion County Trails Segment			
Trail Name Type of Trail Length (in Mil			
Mon River Trail (North and South)	Crushed Stone	23.5	
Caperton Rail-Trail	Asphalt	6	
MCTrail	Asphalt	2	
	TOTAL MILEAGE	31.5	

TRAIL IMPROVEMENT RECOMMENDATIONS

The trails in the Mon River Trail System are approaching 20 years old in some locations. The trails have been resurfaced in certain areas for emergency repairs, but none of the trails have been fully resurfaced since their original construction. Aside from isolated improvements as needed, asphalt trails should be resurfaced approximately every 10 years and natural surface trails every 20. As funding for resurfacing has historically been difficult to obtain in West Virginia, creative and sustainable ways to fund resurfacing and other maintenance costs should be identified.

The Mon River Trails Conservancy has also begun installing directional totem signs like those seen on the GAP. These totems can be 4 to 6 feet high and direct trail users to amenities, particularly in urban or commercial areas. Such totems serve several purposes: to direct trail users and tourists to commercial areas, brand the trail and make it easier for new riders to navigate the trail system. The Mon River Trails Conservancy has installed three totems so far and has plans to install several others. These directional totems are a useful way to tie the trail together, and are recommended to be placed at trailheads and major intersections along the entire P2P corridor.



A directional totem recently installed near the Van Voorhis trailhead on the Mon River Trail | Photo by Ella Belling



Walkers using the Caperton Rail-Trail through Star City, West Virginia | Photo courtesy RTC



Trestle bridge along the Caperton Rail-Trail in Morgantown, West Virginia, entering Hazel Ruby McQuain Park | Photo courtesy RTC

OPINION OF PROBABLE COSTS

To complete the recommended trail and trailhead upgrades, probable costs are estimated between \$1,484,334 and \$3,923,248, including an additional 10 percent for design and engineering.

Opinion of Probable Resurfacing Costs

The Mon River Trails Conservancy is currently in the process of resurfacing the majority of Deckers Creek Trail, another trail in the system that connects to the main stem of the P2P corridor. Resurfacing the 19.5 miles of

the Deckers Creek Trail, which is surfaced with crushed stone, was recently awarded to a bidder for a total of \$166,320, including materials, trucking and compaction. WVDOT also requires additional engineering work for trail resurfacing that was not included in the \$166,320 award. Engineering costs are included in the total estimated costs listed below.

The remaining 31.5 miles of trail in the Mon River Trail System and Marion County Trails along the P2P corridor should be fully resurfaced as soon as funds become available. Cost estimates are broken down by type and width of trail below.

Table 3 – Probable Resurfacing Costs for Mon River Trails and Marion County Trails Along P2P Corridor				
Type of Trail	Length (in Miles)	Low Estimate	High Estimate	
Crushed stone, 10 feet wide	23.5	\$230,437	\$1,958,326	
Asphalt, 12 feet wide	6	\$860,271	\$1,227,771	
Asphalt, 10 feet wide	2	\$246,186	\$355,492	
TOTAL	31.5	\$1,336,894	\$3,541,589	



The Mon River Trail as it passes under the Morgantown Personal Rapid Transit line | Photo courtesy RTC

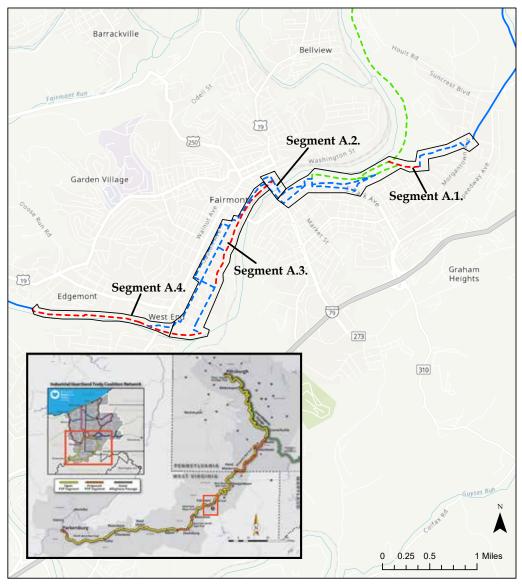
Opinion of Probable Signage Costs

The Mon River Trails Conservancy is currently installing directional totems at a cost between \$2,500 and \$5,000 per totem. The conservancy has plans to install an additional five totems, funded through grants from WVDOT.

Table 4 – Probable Signage Costs for Mon River Trails and Marion County Trails Along P2P Corridor			
Description	Low Estimate	High Estimate	
Directional totems (5)	\$12,500	\$25,000	
TOTAL	\$12,500	\$25,000	

TRAIL GAP - FAIRMONT

Between the western end of the MCTrail and the eastern end of the West Fork River Trail, there is a 4.6-mile trail gap that will be acquired and built through the city of Fairmont. The county seat of Marion County, Fairmont is also home to Fairmont State University. Connecting these two trails through Fairmont will not only help complete the P2P corridor, but also provide a convenient, safe transportation and recreation corridor for Fairmont's residents.



Segment Map - Fairmont Trail Gap

P2P Route
--- Planned/Gap, Publicly-Owned
--- Planned/Gap, Acquisition Pending
--- Planned/Gap, Potential Route Identified

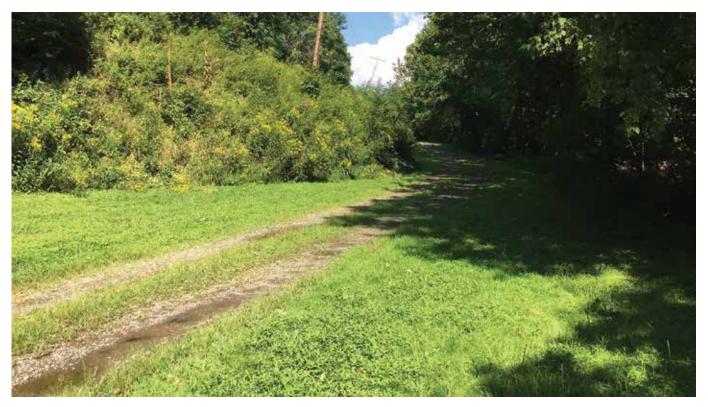
TRAIL CHARACTERISTICS AND RECOMMENDED ALIGNMENT

A clear rail-trail option is not available to complete the entire Fairmont gap. The 4.6-mile gap can be divided into four distinct sections, each of which has various options for completion. These options are described in detail below.

Table 5 – Proposed Trail Segments Along Fairmont Trail Gap					
Segment	Segment Name	Starting Point	Ending Point	Length (in Miles)	
A.1.	MCTrail to Palatine Park	MCTrail trailhead at Winfield Street	East bank of Monongahela River and Palatine Park	1.7	
A.2.	Crossing Monongahela River	East bank of Monongahela River and Palatine Park	West bank of Monongahela River	0.1	
A.3.	Monongahela River to Fairmont Avenue	West bank of Monongahela River	End of West Fork River	1.8	
A.4.	Industrial Contracting	End of West Fork River	West Fork River Trail at Edgeway Drive	1.0	
			TOTAL	4.6	

Table 6 – Proposed Trail Segment Along Monongahela River Spur			
Segment Name	Starting Point	Ending Point	Length (in Miles)
Riverbend Spur	Hickman Run	Mon River Trail South trailhead at Prickett's Fort State Park	5.0

Note: The Fairmont gap could also be completed using a 5-mile corridor along the Monongahela River, connecting Hickman Run to the Mon River Trail South trailhead at Prickett's Fort State Park and bypassing the MCTrail. This route is less direct, but would be a great addition to the Marion County Parks and Recreation Commission (MCPARC) trail system. Because this trail segment would be a spur to the P2P corridor, it is not analyzed further in this report.



The trail is proposed to travel along Dixie Avenue in Fairmont, West Virginia. | Photo courtesy RTC

MCTrail to Palatine Park

From the existing western MCTrail trailhead, the trail will travel west along Winfield Street, navigating an unsignalized crossing of Morgantown Avenue. Traffic analysis is needed to determine if an enhanced crossing (with a crosswalk and flashing pedestrian beacons) would be sufficient for trail user safety, or if a full traffic signal is warranted at this location. The trail would then head west along Dixie Avenue, a low-volume, dead-end street. After 450 feet, the alignment will transition to a dedicated trail along the former Buckhannon and Northern Railway, necessitating a slight elevation change. The trail would then transition to an inactive CSX rail corridor after traveling approximately 1,200 feet on the Buckhannon and Northern corridor, which will require moderate earthwork to make this connection. Marion County owns a large, flat area between the Buckhannon and Northern and CSX corridors that could be appropriate for recreational use such as a trailhead pavilion or campsites.

A new bridge should be constructed to cross Hickman Run while remaining on the CSX corridor. After crossing this minor stream, the trail would follow the former Buckhannon and Northern Railway corridor west to Alta Vista Avenue. Sidewalks would need to be widened and/or bike lanes installed on Alta Vista Avenue, East Park Avenue and Auburn Street, where the trail turns west and enters Palatine Park. This routing would be temporary until \$400,000 can be raised to acquire CSX parcel WV-049-1077543 along the Monongahela riverfront and a right-of-way negotiation can be made with local business owners adjacent to Palatine Park.

After entering the park, the trail will head west toward the Monongahela River crossing. A relatively new addition to the riverfront, complete with parking and amenities, Palatine Park is an ideal location for a trailhead.

MCPARC and Friends of Marion County Trails and Waterways are working on a deal with a local private developer to construct the extension of the MCTrail to Palatine Park along the Monongahela River. The private developer investment will be significant, with plans to include residential units that will benefit from an adjacent trail. This deal may impact some of the route options listed above and some of the property owners listed in Table 7, on page 33.

Crossing Monongahela River

The Nickel Bridge (or Low Level Bridge) was built in 1908 and spanned the Monongahela River, with a crossing at Palatine Park. It was deemed unsafe and demolished in the 2000s, but the existing abutments on either side of the river (and one in the middle) provide a glimpse of what this crossing could be. A trail-like crossing of the Monongahela River would be best accomplished by rebuilding a bridge at this location.

Temporary routing would be required while the funding is raised for bridge construction. Such temporary routing could be provided by crossing the river on the existing Jefferson Street Bridge; however, the existing sidewalk along the bridge is undersized for a permanent trail and could not be expanded into a trail without removing a lane of automobile traffic. Trail users would need to negotiate automobile traffic at intersections on either side of the bridge in the temporary solution, which is not ideal for a permanent trail.

Monongahela River to Fairmont Avenue

Once across the Monongahela River, the trail offers two options that both end at the 3rd Street Bridge: either continuing southwest along Cleveland Avenue and Everest Drive or immediately transitioning to a rail-with-trail adjacent to an active CSX corridor. Everest Drive/4th Street is an option for continuing the trail southwest; a bridge over Coal Run on Everest Drive/4th Street is structurally deficient for vehicles, and the city of Fairmont is considering reconstructing it. If the city chooses not to reconstruct the bridge, it could leave a large stretch of Everest Drive/4th Street available for the sole use of walking and biking.

At the 3rd Street Bridge, there are several options for trail alignment:

• Virginia-Gaston, Option 1: Transition to the former Beltline Railway corridor and replace and reconfigure the fencing at the Board of Education bus depot to allow trail access. The trail would then follow Minor Avenue, which would require about 2,000 feet of sharing the road. At the southern end of Minor Avenue, the trail could then connect to a brief section of abandoned CSX corridor as it heads west under the Watson bridge at Fairmont Avenue.

- *Virginia-Gaston, Option 2:* Follow Virginia Avenue south to 7th Street, then transition to the Beltline Railway corridor and follow the path of Option 1.
- Virginia-Gaston, Option 3: Follow Gaston Avenue and Virginia Avenue by converting them to one-way streets with bike lanes. At 10th Street, the trail could then head east to connect to Minor Avenue or continue south along Virginia Avenue to 14th Street, where both options connect to the brief section of abandoned CSX corridor to the Watson bridge. A fully on-road option heads west at 14th Street and crosses the Watson bridge at grade at Beverly Road.

Industrial Contracting

After the trail crosses the Watson bridge at Fairmont Avenue, it can follow Industrial Contracting Road, a deadend road. The trail should be built adjacent to the road, which has low speeds and volumes and would not require significant separation or physical protection. A temporary on-street routing option can be provided by placing trail signage on Industrial Contracting Road until a permanent trail is built.

The West Fork River Trail currently ends at Edgeway Drive, where trail users must continue up a steep hill into Edgemont. Instead of continuing up the hill into neighborhoods, the new trail will continue along the West Fork River adjacent to the Industrial Contracting property. Moderate earthwork will be required to create a proper trail base, repair washouts, create a few small bridges and protect against flooding. The project team has engaged the owner of the Industrial Contracting property, who is amenable to a trail being routed along the edge of the property with adequate security (i.e., a fence separating the trail from equipment, which is included in the cost estimates later in this section).

TRAIL AND TRAILHEAD FACILITIES

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A formal trailhead exists at the western extent of the MCTrail at Winfield Street. Users looking to access the West Fork River Trail from the eastern extent must park in a nearby shopping center or on neighborhood streets and follow a road to the trail. A formal trailhead should be developed at this eastern extent. With its access to parking and restroom facilities, Palatine Park can act as a logical trailhead between the western and eastern trailheads. Signage would enhance all three trailheads.

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The trail is proposed to be built in the open space between the Industrial Contracting property and the West Fork River. | Photo courtesy RTC

AT-GRADE ROAD CROSSINGS

Note: There are multiple route options to complete the Fairmont section. Recommendations for at-grade crossing upgrades are in brackets.

- Morgantown Avenue uncontrolled [signal, stop sign, crosswalk and signage needed]
- Auburn Street uncontrolled [stop sign, crosswalk and signage needed]
- Everest Drive signalized
- Jefferson Street signalized
- Cleveland Avenue uncontrolled [crosswalk and signage needed]
- Kirkway Drive minor street stop-controlled
- Virginia Avenue minor street stop-controlled
- 5th Street minor street stop-controlled

- 6th Street minor street stop-controlled
- 7th Street minor street stop-controlled
- 8th Street minor street stop-controlled
- 9th Street minor street stop-controlled
- 10th Street major street stop-controlled or uncontrolled [crosswalk and signage needed]
- 11th Street minor street stop-controlled or uncontrolled [crosswalk and signage needed]
- 12th Street minor street stop-controlled
- 13th Street minor street stop-controlled or uncontrolled [crosswalk and signage needed]
- Beverly Road minor street stop-controlled
- Fairmont Avenue minor street stop-controlled [signal needed]



The Nickel Bridge (or Low Level Bridge) in Fairmont, West Virginia, was removed, but a new bridge can be constructed on the remaining abutments. | Photo courtesy RTC

PROPOSED EASEMENTS AND PROPERTY ACQUISITION

Five parcels are currently under negotiation for trail use to complete the gap between the western end of the MCTrail and the eastern end of the West Fork River Trail (Table 7).

Table 7 – Parcels Currently Under Negotiation or Agreement Along Fairmont Trail Gap					
Description	Owner	Length (in Miles)	Acreage	Appraised Value	
CSX WV-049-1077543 - Along the curve of the Monongahela River (north of downtown Fairmont)	CSX	1.99	26.81	\$400,000	
CSX WV-049-1083017 - Parallel to Dixie Avenue	CSX	0.67	4.04	\$50,000	
CSX WV-049-1073018 - Parallel to Virginia Avenue	CSX	0.86	7.70	\$75,000	
CSX WV-049-1077539 - Below Moore Place and 11th Street	CSX	0.83	8.53	\$21,500	
Industrial Contracting - Fairmont Avenue to West Fork River Trail trailhead at Edgeway Drive	Industrial Contracting	1.0	easement alor	ntracting has agreed to an ng the West Fork River to uplete this section of trail.	

Table 8 below lists the parcel numbers, ownership information and deed information for parcels along the potential route to fill the Fairmont gap. Private individual property owners are not mentioned by name in this table to protect their privacy. Property owners in this table either have indicated a willingness to allow the trail to travel through their property or will be contacted by the project team soon to discuss the potential trail route.

8 – Parcels Along Fa	nirmont Trail Gap	
Parcel ID	Grantee	Deed Information
05 1024300000000	MCPARC	Book 888, Page 306
05 5033000000000	Stern Holding Company LLC	Book 1017, Page 627
05 5031800000000	Private Individual Owner	Book W114, Page 455
05 5033310000000	Private Individual Owner	Book 924, Page 312
05 5032400000000	MCPARC	Book 888, Page 306
05 5032400040000	City of Fairmont	Book 1122, Page 69
05 5032500000000	The County Commission of Marion County, W.Va.	Book 1007, Page 299
05 5033200000000	Marion County Development Authority	Book 1135, Page 58
05 7000300000000	Marion County Development Authority	Book 1135, Page 58
03 1014200000000	Private Individual Owner	Book 1164, Page 614
03 2025600000000	Marion County Chamber of Commerce	Book 796, Page 1100
03 3028900000000	Baltimore & Ohio Railroad Company	Not available
03 5015800000000	CSX Transportation Inc.	Not available
03 6016900000000	CSX Transportation Inc.	Not available
03 6016900030000	CSX Transportation Inc.	Not available
03 7007300000000	Private Individual Owner	Book 900, Page 490
03 7007400000000	Private Individual Owner	Not available
03 7000800000000	CSX Transportation Inc.	Book 914, Page 1090
03 8014000000000	CSX Transportation Inc.	Book 914, Page 1090
03 8014000010000	Industrial Resources Inc.	Book 914, Page 1093
03 9008200000000	Industrial Resources Inc.	Book 914, Page 1093
03 1000600000000	Industrial Resources Inc.	Book 914, Page 1093

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OPINION OF PROBABLE COSTS

To complete the new trail segments and the recommended trail and trailhead upgrades, probable costs are estimated between \$3,336,615 and \$11,058,085, including an additional 10 percent for design and engineering. The majority of estimated costs are for constructing 4.5 miles of new trail and a new bridge crossing the Monongahela River.

Opinion of Probable Trail Construction Costs

Completing the trail gaps in Fairmont could be accomplished with trail made entirely of crushed stone, asphalt or a combination of both, with asphalt surface through the more urban areas of Fairmont. All three options are priced out below (Table 9).

Opinion of Probable Bridge Costs

A new bridge is required to provide a separated trail crossing the Monongahela River. The bridge can be reconstructed using the remaining three abutments from the Nickel/Low Level Bridge. In addition, minor improvements will need to be made to an existing low-water crossing over Hickman Run to make it safer for trail users (Table 10).

Table 9 – Probable Trail Construction Costs for Fairmont Trail Gap					
Option 1	Length (in Miles)	Low Estimate	High Estimate		
Crushed stone	4.5	\$483,360	\$1,487,428		
	Option 1 TOTAL	\$483,360	\$1,487,428		
Option 2	Length (in Miles)	Low Estimate	High Estimate		
Crushed stone	3.5	\$378,169	\$1,161,333		
Asphalt	1.0	\$293,272	\$1,104,000		
	Option 2 TOTAL	\$671,441	\$2,265,333		
Option 3	Length (in Miles)	Low Estimate	High Estimate		
Asphalt	4.5	\$1,284,724	\$4,898,000		
	Option 3 TOTAL	\$1,284,724	\$4,898,000		

SEGMENT ANALYSIS TRAIL GAP – FAIRMONT

Opinion of Probable Fencing Costs

Industrial Contracting has stipulated that it will require some fencing between the trail and its property. The fence would need to be at least 6 feet high and span the length of the property. The table below provides estimates for chainlink fencing along the Industrial Contracting property,

both with and without fencing in the parking lot. Likewise, estimates for fencing along the Mont Levine property, which may also require such fencing, are included as a conservative measure.

Table 10 – Probable Bridge Costs for Fairmont Trail Gap				
Description	Length	Low Estimate	High Estimate	
Crossing the Monongahela River	650 feet	\$2,295,150	\$4,590,300	
Crossing Hickman Run	50 feet	\$45,507	\$69,046	
	TOTAL	\$2,340,657	\$4,659,346	

able 11 – Probable Fencing Costs for Fairmont Trail Gap			
Description	Length	Low Estimate	High Estimate
6-foot-high chain-link fencing along Industrial Contracting property	1,500 to 2,400 feet	\$22,875	\$116,400 (includes fencing the parking lot)
6-foot-high chain-link fencing along Mont Levine property	4,000 feet	\$61,000	\$194,000
	TOTAL	\$83,875	\$310,400

SEGMENT ANALYSIS TRAIL GAP – FAIRMONT

Opinion of Probable Street Crossing Costs

The trail will need to cross several streets, depending on the final alignment. These crossings should have new crosswalks, warning signage and, where appropriate, bollards to prevent motorized vehicle access to the trail. Analysis of traffic counts should be conducted to determine if a traffic signal is warranted at the Morgantown Avenue crossing, a factor that would significantly increase costs and is not included in this estimate. Shared-lane markings (also known as "sharrows") or bike lanes should also be installed along any on-road connections that are part of the final alignment.

Opinion of Probable Trailhead Costs

A new trailhead should be constructed near the western extent of the Fairmont gap. The trailhead should include a new parking area, restroom and signage indicating that it is part of the trail network. Estimates below do not include any potential costs for property easements or acquisition. The other two trailheads in this section, the West Fork River Trail trailhead at Edgeway Drive and the MCTrail trailhead at Winfield Street, should also receive upgraded signage and trailhead totems.

Table 12 – Probable Street Crossing Costs for Fairmont Trail Gap			
Description	Low Estimate	High Estimate	
Crosswalks (4)	\$1,536	\$6,000	
Signs (10)	\$1,500	\$20,000	
Bollards (4)	\$2,000	\$6,000	
Sharrows (12)	\$3,600	\$4,200	
Warning beacons (4)	\$30,000	\$30,000	
TOTAL	\$38,636	\$66,200	

Table 13 – Probable Trailhead Costs for Fairmont Trail Gap			
Description	Low Estimate	High Estimate	
New trailhead (engineering, construction of parking lot, toilet, installation of toilet, signage and trailhead totem)	\$81,159	\$100,859	
Signage at trailheads (2)	\$600	\$8,000	
Trailhead totems (2)	\$5,000	\$10,000	
TOTAL	\$86,759	\$118,859	

SEGMENT ANALYSIS WEST FORK RIVER TRAIL



The West Fork River Trail entering Shinnston, West Virginia | Photo courtesy RTC

WEST FORK RIVER TRAIL

The West Fork River Trail is a 14.5-mile trail beginning at the southern end of Fairmont and ending in Shinnston, crossing between Marion and Harrison counties. The trail opened in 1997 and runs along a section of the former Baltimore and Ohio Railroad.

Table 14 – Surfacing of the West Fork River Trail		
Type of Trail	Length (in Miles)	
Asphalt	11.4	
Crushed stone	3.1	
TOTAL MILEAGE	14.5	



The West Fork River Trail heading north from Shinnston, West Virginia | Photo courtesy RTC

SEGMENT ANALYSIS WEST FORK RIVER TRAIL

EXISTING CONDITION

Heading west from Fairmont, the trail is paved for the 11.4 miles through Marion County. The trail becomes surfaced with crushed stone once it enters Harrison County for its remaining 3.1 miles. The paved trail surface in Harrison County has some divots and deep grooves that need to be repaired.

Trailheads of various levels exist along the West Fork River Trail, including informal parking lots in Monongah, Everson, Worthington and Enterprise. A more formal trailhead exists at the western extent of the West Fork River Trail in Shinnston at the Sue Ann Miller Trailhead, which includes parking, shelter and a picnic table.

TRAIL IMPROVEMENT RECOMMENDATIONS

The crushed stone trail surface in Harrison County also has divots and deep grooves needing repair. The asphalt in Marion County is in good shape but should be resurfaced soon for routine maintenance. No part of the West Fork River Trail has been resurfaced since its opening in 1997.

The Norway Trestle, which crosses the West Fork River in Fairmont, is scheduled to receive pedestrian safety upgrades in the spring of 2018. A new sign at the Norway Trestle for the trail system has already been erected.

A new trailhead at the eastern end of the West Fork River Trail, as discussed in the Fairmont section earlier, would provide clear access to the trail from the east. Funds for this new trailhead were included in the Fairmont cost estimates. The trailheads and parking lots in Monongah, Everson, Worthington and Enterprise should have additional signage to formalize their presence along the trail.

OPINION OF PROBABLE COSTS

To complete the recommended trail and trailhead upgrades, probable costs are estimated between \$1,544,290 and \$2,449,300, including an additional 10 percent for design and engineering. Costs are broken down per element below.

Opinion of Probable Resurfacing Costs

The West Fork River Trail should be resurfaced for regular maintenance. Note that width variants are not included in the cost estimates as the West Fork River Trail is the same width throughout.

Opinion of Probable Signage Costs

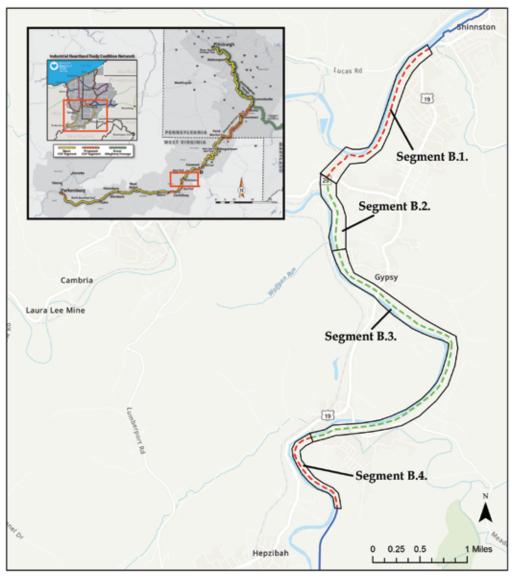
The trailheads at Monongah, Everson, Worthington and Enterprise should have additional signage and directional totems to maintain consistency along the trail.

Table 15 – Probable Resurfacing Costs for West Fork River Trail					
Type of Trail Length (in Miles) Low Estimate					
Asphalt	11.4	\$1,356,260	\$1,932,304		
Crushed stone	3.1	\$36,440	\$258,332		
	TOTAL	\$1,392,700	\$2,190,636		

Table 16 – Probable Signage Costs for West Fork River Trail			
Description	Low Estimate	High Estimate	
Signage (8)	\$1,200	\$16,000	
Directional totems (4)	\$10,000	\$20,000	
TOTAL	\$11,200	\$36,000	

TRAIL GAP – SHINNSTON TO SPELTER

The West Fork River Trail currently terminates at its southern extent at the Sue Ann Miller Trailhead in Shinnston. This extension will connect to the Harrison North Rail Trail in Spelter.



Segment Map - Shinnston to Spelter Trail Gap



TRAIL CHARACTERISTICS AND RECOMMENDED ALIGNMENT

The suggested route for the Shinnston to Spelter extension continues south from the Sue Ann Miller Trailhead 6 miles along the inactive railway, briefly cutting through town to bypass the Harrison Power Station. The gap between Shinnston and Spelter can be divided into three segments.

Shinnston to Power Station

The proposed Shinnston extension will continue 1.6 miles south on the inactive railway from the Sue Ann Miller Trailhead. The railway parcels adjacent to the trailhead are under private ownership, including a large section that is owned by Mon Power, a FirstEnergy company, which has expressed a willingness to discuss a trail easement on its property.

Power Station to Gypsy

The inactive railway continues to follow the West Fork River around the Harrison Power Station. This power station is not compatible with a trail, and options exist to avoid this area. The proposed alternate route would follow an existing utility corridor from the inactive railway to Cervullo Road, where the trail crosses State Route 20 and passes through a residential area before rejoining the inactive railway to the south. Additional research, as well as negotiations with public and private property owners, are needed before the alignment along this section can be confirmed.

Heading south from where the trail rejoins the inactive railway, the proposed route travels through several properties in Gypsy that were previously bisected by the railway. RTC and local partners are conducting additional research to determine if the corridor, which was previously controlled by CSX, has been divested to the adjacent, private landowners or if it remains in public ownership. Private property owners appear to be maintaining the corridor and have, in some cases, displayed "No Trespassing" signage. Determination of property ownership, as well as outreach to individual adjacent landowners, will occur in 2018.

In Spelter, a garden center was constructed over a small portion of the inactive corridor. If the owner of the garden center agrees, the route could run through the southern portion of the garden center parking lot. If reassembling the corridor through the garden center is infeasible, a boardwalk along the West Fork River could be constructed to achieve connectivity through Meadowbrook.

Chemours Property

At Spelter Road, the trail continues another 0.7 mile to the start of the Harrison North Rail Trail. This segment is currently being used as an informal trail. The property owner, Chemours, has offered to donate the land along the former rail line through their property for formal trail development.

Gypsy to Spelter

Table 17 – I	Table 17 – Proposed Trail Segments Along Shinnston to Spelter Trail Gap						
Segment	Segment Name	Starting Point	Ending Point	Length (in Miles)			
B.1.	Shinnston to Power Station	Sue Ann Miller Trailhead at Bridge Street, Shinnston	Lincoln Drive, Shinnston	1.6			
B.2.	Power Station to Gypsy	Lincoln Drive, Shinnston	Gypsy Camp, Gypsy	0.5			
B.3.	Gypsy to Spelter	Gypsy Camp, Gypsy	Spelter Road, Spelter	3.2			
B.4.	Chemours Property	Spelter Road, Spelter	End of Chemours Property	0.7			
			TOTAL	6			

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TRAIL AND TRAILHEAD FACILITIES

The Sue Ann Miller Trailhead exists at the western terminus of the existing West Fork River Trail in Shinnston, which includes public parking and a pavilion with a picnic table. A new trailhead should be constructed at the existing eastern terminus of the Harrison North Rail Trail on Spelter Road in Spelter.

PROPOSED EASEMENTS AND PROPERTY ACQUISITION

Two parcels are currently under negotiation for trail use between the West Fork River Trail and the Harrison North Rail Trail in Spelter (See Table 18, below).

AT-GRADE ROAD CROSSINGS

Recommendations for at-grade crossing upgrades are in brackets.

- Haywood Road minor street stop-controlled [crosswalk and signage needed]
- Meadowbrook Road uncontrolled [crosswalk and signage needed]
- B Street uncontrolled [crosswalk and signage needed]

Table 18 – Parcels Currently Under Negotiation or Agreement Along Shinnston to Spelter				
Trail Gap Description	Owner	Length (in Miles)	Negotiations	
Sue Ann Miller Trailhead to Harrison Power Station	City of Shinnston; private individual owners; Mon Power	1.6	Mon Power will not permit trail development on power plant property, but may be willing to allow access on property owned north of the power plant.	
Spelter Road to end of Chemours Property	Chemours Company FC, LLC	0.7	The former rail line is being used as an informal trail. Chemours has offered to donate the former rail line to the county for formal trail development.	

The Shinnston to Spelter gap requires additional analysis to determine exact alignment and any proposed easements or properties that need to be acquired. Table 19 includes parcels and parcel ownership along the Shinnston to Spelter segment.

able 19 – Parcels Along Shinr arcel ID Gi		Deed Information
061003025900000000	City of Shinnston	Book 1300, Page 9-
061002003700000000	Private Individual Owner	Book W127, Page 8
05 208013900000000	Monongahela Power Company	Book 1523, Page
061001013800000000	Private Individual Owner	Book 1367, Page 4
05 208000200000000	Private Individual Owner	Book W171, Page 3
05 208005400000000	Private Individual Owner	Book 1176, Page 03
05 208013900000000	Monongahela Power Company	Book 1523, Page
05 207003800000000	Private Individual Owner	Book 1253, Page 1
	Private Individual Owner	
05 915001800000000 05 208011300000000		Book 1271, Page 8
05 208011300000000	ALS Enterprises LLC Private Individual Owner	Book 1416, Page (
		Book 1418, Page 13
05 208011100000000	Private Individual Owner	Book 1279, Page 1
05 914000100000000	Private Individual Owner	Book 1568, Page 10
05 914000800000000	Private Individual Owner	Book 1568, Page 10
05 914001500000000	Private Individual Owner	Book 1436, Page 1
05 914002200000000	Private Individual Owner	Book 1222, Page
05 914002800010000	Private Individual Owner	Book 1259, Page
05 914003300010000	Private Individual Owner	Book W103, Page
05 914003900000000	Private Individual Owner	Book 1472, Page 12
05 914004300000000	Private Individual Owner	Book 1469, Page 13
05 914005000000000	Private Individual Owner	Book 1469, Page 13
05 914005500000000	Private Individual Owner	Book W189, Page
05 914005900000000	Private Individual Owner	Book W103, Page 2
05 914007500000000	Private Individual Owner	Book W103, Page 2
05 914007600000000	Private Individual Owner	Book 1555, Page
05 228000100000000	Bible Baptist Fellowship Church Trustees	Book 1156, Page
05 228000700000000	Gypsy LLC	Book 1390, Page 2
05 228001600000000	Shiloh Development LLC	Book 1563, Page 8
05 2280010000000000	Private Individual Owner	Book 1403, Page 12
05 228002400000000	Private Individual Owner	Book 1464, Page
05 228002700000000	Private Individual Owner	Book 1357, Page 2
09 207006600000000	United International Inc	Book 1280, Page

OPINION OF PROBABLE COSTS

To complete the new trail segments and the recommended trail and trailhead upgrades, probable costs are estimated between \$944,318 and \$3,041,223, including an additional 10 percent for design and engineering. Costs are broken down per element below.

Opinion of Probable Trail Construction Costs

The trail should be constructed using a crushed stone or similar material to the existing West Fork River Trail and Harrison North Rail Trail.

Opinion of Probable Bridge Costs

A new bridge will be required over Simpson Creek at the western extent of the Shinnston to Spelter extension. Two options exist for the building of this bridge. Option 1 assumes that the trail can be constructed through the southern end of the garden center in Spelter. Option 2 assumes that the trail would need to be routed along the West Fork River, which would require elevated boardwalks to avoid flooding.

Table 20 – Probable Trail Construction Costs for Shinnston to Spelter Trail Gap				
Type of Trail	Length (in Miles)	Low Estimate	High Estimate	
Crushed stone	6	\$641,146	\$1,976,570	
	TOTAL	\$641,146	\$1,976,570	

Table 21 – Probable Bridge Costs for Shinnston to Spelter Trail Gap				
Option 1	Length	Low Estimate	High Estimate	
Crossing Simpson Creek at garden center	100 feet	\$101,014	\$158,091	
	Option 1 TOTAL	\$101,014	\$158,091	
Option 2	Length	Low Estimate	High Estimate	
Crossing Simpson Creek along West Fork River	100 feet	\$101,014	\$158,091	
Installing a boardwalk-style trail along West Fork River	900 feet	\$160,075	\$467,228	
	Option 2 TOTAL	\$261,089	\$625,319	

Opinion of Probable Street Crossing Costs

The trail will need to cross several streets. Sight lines on State Route 20 are good, and crossing it should only require a crosswalk and yield signs. US 19 and Meadowbrook Road are higher-volume streets that will require enhanced crosswalks, yield signs, warning beacons and bollards to prevent vehicles from entering the trail.

Opinion of Probable Trailhead Costs

A new trailhead should be constructed at the western extent of the Shinnston to Spelter extension, where the trail meets the Harrison North Rail Trail at Spelter Road. Property may need to be acquired at this location for a trailhead; the cost of property acquisition is not included in the estimates below. The trailhead should, at a minimum, have a parking lot, restroom and signage. Additional amenities can be provided based on community desires.

Table 22 – Probable Street Crossing Costs for Shinnston to Spelter Trail Gap				
Description	Low Estimate	High Estimate		
Crosswalks (3)	\$1,152	\$4,500		
Signs (10)	\$1,500	\$20,000		
Bollards (5)	\$2,500	\$7,500		
Warning beacons (4)	\$30,000	\$30,000		
TOTAL	\$35,152	\$62,000		

Table 23 – Probable Trailhead Costs for Shinnston to Spelter Trail Gap		
Description	Low Estimate	High Estimate
New trailhead at Spelter Road (engineering, construction of parking lot, toilet, installation of toilet, signage and trailhead totem)	\$81,159	\$100,859
TOTAL	\$81,159	\$100,859

SEGMENT ANALYSIS HARRISON NORTH RAIL TRAIL

HARRISON NORTH RAIL TRAIL

The Harrison North Rail Trail follows the West Fork River 7 miles between Spelter and the North View neighborhood in Clarksburg. The trail originally ran along the Baltimore and Ohio Railroad, which conveyed the railbanked property to the West Virginia Railroad Maintenance Authority (RMA) in 1983. Harrison County Commission entered into a lease agreement with the RMA in 1987 to develop the corridor as a public hiking and biking trail.

A group of residents recently formed a friends group, Harrison Rail Trails, to expand rail-trails in Harrison County and increase programming on the trails. The energy and enthusiasm of this group has greatly benefitted the Harrison North Rail Trail and other trails within the county.

EXISTING CONDITION

The Harrison North Rail Trail is primarily composed of gravel, grass and cinder. The trail was recently repaired in some sections, though it remains rough and in need of additional grading and resurfacing in others.

Adjacent to the southern terminus of the Harrison North Rail Trail lies the Fourco property (formerly the North 25th Street Glass and Zinc site). The property has a history of glass and zinc manufacturing, which has left lead, arsenic and zinc in the soil. In 2010, the Environmental Protection Agency (EPA) capped the area as a temporary measure at the request of the West Virginia Department of Environmental Protection. The site was officially added to the National Priorities List in the fall of 2016, rendering it eligible for federal cleanup funding.

Based on its proximity to the Harrison North Rail Trail, remediation of the Fourco site is a priority. In conjunction with the RMA, the project team plans to pursue an EPA Cleanup Grant to fund the cleanup process.⁴¹ Part of this process is an investigation to determine the extent of the contamination and analyze remedial options.

The following list outlines the EPA Superfund remediation process:

- Preliminary assessment and site investigation
- National Priorities List site listing
- Remedial investigation and feasibility study (current step)
- Remedy decisions
- · Remedial design and action
- Construction completion
- Post-construction assessment
- · National Priorities List deletion
- Site reuse/redevelopment

Two trailheads exist along the Harrison North Rail Trail: a trailhead with unmarked parking at the trail's southern terminus on North 25th Street in Clarksburg, and a second trailhead 2 miles north with unmarked parking, where the trail crosses Fall Run (off Glen Falls Road).

TRAIL IMPROVEMENT RECOMMENDATIONS

The Harrison North Rail Trail has not been resurfaced in its entirety since it was originally constructed and should be resurfaced to maintain its integrity and usefulness.

Upgrades to trailheads at both ends of the trail are addressed in the sections of the adjoining gaps (the Shinnston to Spelter extension and Clarksburg gap, respectively). The trailhead at Fall Run should be more formalized with trail signage.

SEGMENT ANALYSIS HARRISON NORTH RAIL TRAIL



An old rails-to-trails mural at the North 25th Street trailhead on the Harrison North Rail Trail in Clarksburg, West Virginia | Photo courtesy RTC

OPINION OF PROBABLE COSTS

To complete the recommended trail and trailhead upgrades, probable costs are estimated between \$79,754 and \$651,564, including an additional 10 percent for design and engineering. Costs are broken down per element below.

Opinion of Probable Resurfacing Costs

The 7 miles of the Harrison North Rail Trail should be resurfaced with new stone. Note that width variants are not included in the cost estimates as the Harrison North Rail Trail is the same width throughout.

Opinion of Probable Trailhead Costs

Signs, including a directional totem, should be placed at the Fall Run trailhead to further establish it as a trailhead along the P2P corridor.

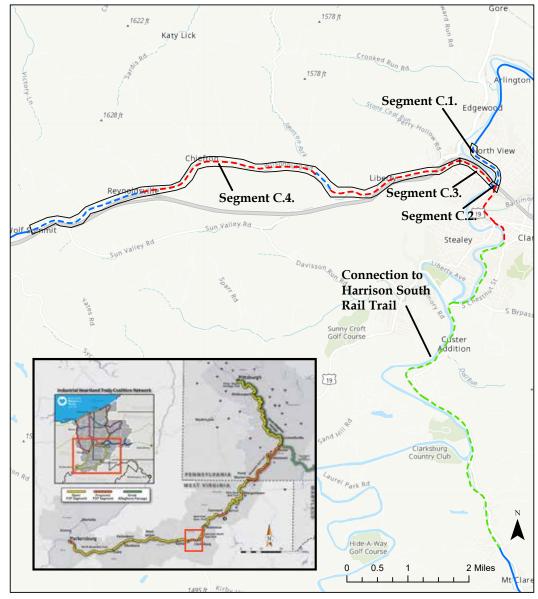
SEGMENT ANALYSIS HARRISON NORTH RAIL TRAIL

Table 24 – Probable Resurfacing Costs for Harrison North Rail Trail			
Type of Trail	Length (in Miles)	Low Estimate	High Estimate
Crushed stone	7	\$69,703	\$583,331
	TOTAL	\$69,703	\$583,331

Table 25 – Probable Trailhead Costs for Harrison North Rail Trail				
Description	Low Estimate	High Estimate		
Signs at Fall Run trailhead (2)	\$300	\$4,000		
Directional totem (1)	\$2,500	\$5,000		
TOTAL	\$2,800	\$9,000		

TRAIL GAP - CLARKSBURG

A 5.9-mile gap exists in the P2P corridor from the southern end of the Harrison North Rail Trail to the eastern extent of the North Bend Rail Trail through the city of Clarksburg.



Segment Map - Clarksburg Trail Gap

P2P Route --- Planned/Gap, Publicly-Owned
--- Open Trail --- Planned/Gap, Acquisition Pending
--- Planned/Gap, Potential Route Identified

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Table 26	Table 26 – Proposed Trail Segments Along Clarksburg Trail Gap					
Segment	Segment Name	Starting Point	Ending Point	Length (in Miles)		
C.1.	Harrison North Rail Trail connection	North 25th Street trailhead (Clarksburg)	US 50 (northern side)	0.7		
C.2.	Crossing US 50 and West Fork River	US 50 (northern side)	West Fork River (western side)	0.2		
C.3.	Adamston	West Fork River (western side)	CSX BA 304 (rail lines split)	0.5		
C.4.	North Bend Rail Trail extension	CSX BA 304 (rail lines split)	Wolf Summit	4.5		
			TOTAL	5.9		

TRAIL CHARACTERISTICS AND RECOMMENDED ALIGNMENT

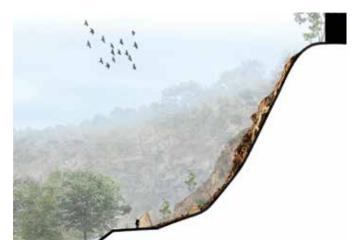
The gap through Clarksburg can be divided into four segments.

Harrison North Rail Trail Connection

The Clarksburg segment begins at the existing Harrison North Rail Trail's southern trailhead at North 25th Street and Hamill Avenue. The trail heads southwest along an abandoned CSX rail line. Topography along this section makes trail development challenging, and a section of the abandoned corridor has serious erosion damage. Falling rock and loose soil line the corridor where the hillside has cut in, and will need to be removed. The soil and rock could prove useful in regrading and revegetating the eroded hillside.

A series of terraces could be used to stabilize the hillside, using live staking techniques to control and prevent erosion with the added benefit of being more cost effective and attractive than conventional retaining walls.

Enhanced structural engineering techniques may be used in more severe areas, and a combination of techniques may prove to be the most structurally sound and cost-effective option.



A rendering of the failed slope near this section of trail | Photo courtesy NBAC

If the eroded section is deemed irreparable, an alternate trail route may be determined through and around private property along the West Fork River. This alternate route would require traversing elevation change at each end of the section, rendering it a less attractive alternative.



An example of terracing and slope stabilization | Photo courtesy NBAC

Crossing US 50 and West Fork River

The trail continues south across US 50 and an active CSX line. At this point, WVDOT has removed a former train trestle that crossed US 50 to accommodate over-height vehicles, and CSX has discussed removing two bridges that cross the active rail line to accommodate double-stacked train cars. New bridges will need to be built to cross both facilities at a height that is amenable to both WVDOT and CSX. WVDOT left the bridge abutments in place to cross US 50, which could be reused for the new bridges and reduce total costs.

Once the trail crosses US 50 and the active CSX line, it will need to head west and cross the West Fork River. One bridge crosses the river in this location, but it carries the active CSX rail line. As there is no opportunity to expand this bridge for trail, a new bridge will be needed. Option 1 would span both the river and the embankment, while Option 2 would span only the river and use trail switchbacks to scale the embankment to the US 50 bridge crossing. Option 1 would be significantly longer and pricier than Option 2.

Adamston

After the crossing of the West Fork River into Adamston, the trail would utilize an abandoned CSX rail line that parallels an active CSX line for approximately a half-mile. The trail would continue along this segment until the active tracks turn north over US 50 behind a new shopping center on Adams Avenue.

North Bend Rail Trail Extension

The final segment in the Clarksburg gap begins where the active tracks fork north and the abandoned corridor continues west. This segment extends 4.5 miles along the abandoned rail corridor to the Wolf Summit trailhead at the intersection of School Street and Wilsonburg Road. CSX identifies seven small bridges on this segment that will be repaired or replaced as part of the trail construction process.



A rendering of Option 2, including all three new bridges needed to cross US 50, the active CSX line and the West Fork River | Photo courtesy NBAC



The trail would connect Adamston, West Virginia, to the start of the North Bend Rail Trail via a former CSX corridor. | Photo courtesy RTC

CSX sold about 1,000 feet of this segment to Ronald Lane Inc., which has since expanded its property over the corridor and indicated that they will not reopen it for a trail. This property is situated along Wilsonburg Road, roughly between Limestone Run Road and Hanna Street, where the trail will need to be completed in the approximately 20-foot buffer between the Ronald Lane Inc. property and Wilsonburg Road. A physical barrier should be provided between the trail and automobile traffic. Several residents along this brief section utilize the 20-foot buffer next to the road for parking and will need to be consulted before an alignment is finalized. After the trail passes the Ronald Lane Inc. property, the trail can turn back toward the abandoned corridor on its way to the Wolf Summit trailhead.

The trail will also connect south to a future extension of the Harrison South Rail Trail. This study addresses the connection from the crossing at US 50 to a restaurant parking lot on Milford Street (see Table 27). Harrison County should continue studying how to connect the remaining 5.3 miles between the Oddfellows Cemetery and the existing Harrison South Rail Trail.





A rendering to show how signage, crosswalks and bollards could enhance the crossing experience at Milford Street | Photo courtesy NBAC

South from Clarksburg

From the bridges that are needed to cross the active CSX line and US 50, a trail spur will continue south to connect to the existing Harrison South Rail Trail. The 0.75-mile segment would run along an abandoned CSX line crossing Elk Creek. The existing bridge crossing the creek can be retrofitted for rail-trail use upon consultation with a licensed engineer to ensure structural soundness.

This segment will require two challenging at-grade road crossings at West Pike Street and Milford Street, as well as navigating around the parking lot of an adjacent restaurant. The trail will move adjacent to the parking lot along a gravel strip. The trail will utilize crosswalks to cross West Pike Street and Milford Street. The island in the center of the intersection will be utilized as a waiting area and can be landscaped accordingly.

Additional enhanced waiting areas will be located on either side of the road. Road signs to alert automobile traffic of the trail crossings will be placed at an appropriate distance for reaction time as well as immediately at the crossings. Additional suggestions could include the use of bollards, lighting and bench seating to activate the waiting areas.

TRAIL AND TRAILHEAD FACILITIES

Trailheads exist at both ends of the Clarksburg gap and are addressed in other segments. However, a formal trailhead would be useful in Adamston at the end of North 26th Street.

Table 27 – Proposed Connection from P2P Corridor Toward Harrison South Rail Trail			
Segment Name	Starting Point	Ending Point	Length (in Miles)
South from Clarksburg	US 50 crossing	Restaurant parking lot at Milford Street	0.75
		TOTAL	0.75



The bridge crossing Elk Creek could be retrofitted for bicycle and pedestrian trail use. | Photo courtesy RTC

PROPOSED EASEMENTS AND PROPERTY ACQUISITION

Four parcels are currently under negotiation for trail use to complete the gap between the Harrison North Rail Trail and the North Bend Rail Trail. There are only two property owners in this segment: CSX and Harrison County.

Table 29, on the next page, lists the parcels currently under negotiation for trail use to complete the gap between

the US 50 crossing and the Oddfellows Cemetery in Clarksburg for eventual connection to the Harrison South Rail Trail.

Harrison County has agreed to purchase the CSX parcels along this section. There are additional property owners along this segment with whom negotiations will also need to take place.

AT-GRADE ROAD CROSSINGS

Recommendations for at-grade crossing upgrades are in brackets.

- Wilsonburg Road uncontrolled [crosswalk and signage needed]
- Wilsonburg Road (at Wolf Summit trailhead) uncontrolled [crosswalk and signage needed]

Table 28 – Parcels Currently Under Negotiation or Agreement Along Clarksburg Trail Gap				
Description	Length (in Miles)	Acreage Appraised Value		
North 25th Street trailhead to crossing US 50 and West Fork River	0.7	Harrison County owns this section and is prepared to complete a trail.		
Crossing US 50 and West Fork River	0.2	CSX is unwilling to sell but may allow an easement between the US 50 bridge and the river.		
CSX WV-033-1077540 - West Fork River to CSX Mile Marker BA 304 (intersection of US 50 and US 19)	0.49	CSX is unwilling to sell due to close proximity to the active rail. A temporary on-road route could follow Adams Avenue.		
CSX WV-033-1077544 - CSX Mile Marker BA 304 to North Bend Rail Trail extension at Wolf Summit (Harrison County was awarded a Transportation Alternative grant in 2017 for acquisition of this parcel).	4.49	48.0 \$144,000		

Table 29 – Parcels Currently Under Negotiation or Agreement to Connect South to Harrison South Rail Trail				
Description	Length (in Miles)	Acreage	Appraised Value	
South from Clarksburg 1 • CSX WV-033-1077542 - Coleman Avenue to restaurant at Milford Street • Private owners	0.47	1.0 (CSX) 1.32 (private owners)	\$4,000 (CSX) \$5,280 (private owners)	
• CSX WV-033-1077542 - Restaurant at Milford Street to Oddfellows Cemetery • Private owners	0.28	0.7 (CSX) 1.57 (private owners)	\$3,500 (CSX) \$8,000 (private owners)	

OPINION OF PROBABLE COSTS

To complete the new trail segments, bridges and the recommended trail and trailhead upgrades, probable costs are estimated between \$3,152,159 and \$7,072,842 for the portion of the Clarksburg gap along the P2P corridor, including an additional 10 percent for design and engineering. Costs are broken down per element below. Separate cost estimates can be extrapolated from this information for the section connecting south to the Harrison South Rail Trail.

Opinion of Probable Trail Construction Costs

Cost estimates for trail construction assume that the trail will be built using asphalt to tie into the existing asphalt

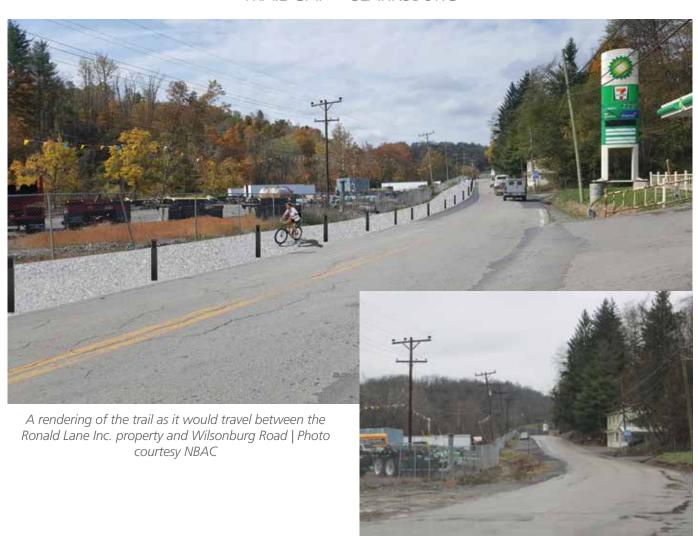
at the Harrison North Rail Trail and connect through Adamston. The trail would switch to crushed stone or a similar material where the CSX rail lines split for 4.5 miles to the connection with the North Bend Rail Trail.

Opinion of Probable Bridge Costs

Two entirely new bridges are required to complete this segment across US 50 and the West Fork River, while the existing bridge crossing the CSX tracks could be refurbished and retrofitted for bicycle and pedestrian use. There are also seven bridges along the section of the North Bend Rail Trail extension, the condition of which needs to be more formally assessed before any retrofitting estimates can be made.

Table 30 – Probable Trail Construction Costs for Clarksburg Trail Gap				
Type of Trail	Length (in Miles)	Low Estimate	High Estimate	
Crushed stone	4.5	\$483,360	\$1,487,428	
Asphalt	1.4	\$416,580	\$1,557,600	
	TOTAL	\$899,940	\$3,045,028	

Table 31 – Probable Bridge Costs for Clarksburg Trail Gap				
Description	Length	Low Estimate	High Estimate	
US 50 (new)	125 feet	\$300,000	\$450,000	
CSX railroad tracks (new/retrofit)	80 feet	\$192,000	\$288,000	
West Fork River (new)	300 feet	\$1,059,300	\$2,118,600	
North Bend Rail Trail extension bridges (7)	Addi	tional research is needed on the	ir condition.	
	TOTAL	\$1,551,300	\$2,856,600	



The trail is proposed to skirt the Ronald Lane Inc. property and reconnect to the abandoned corridor. |
Photo courtesy RTC

Opinion of Probable Slope Stabilization Costs

The slip between US 50 and the North 25th Street trailhead needs to be shored up before a trail can be constructed in this section.

Table 32 – Probable Slope Stabilization Costs for Clarksburg Trail Gap			
Description	Length	Low Estimate	High Estimate
Stabilize slope	1,000 feet	\$323,000	\$387,000
	TOTAL	\$323,000	\$387,000

Opinion of Probable Trail Separation Costs

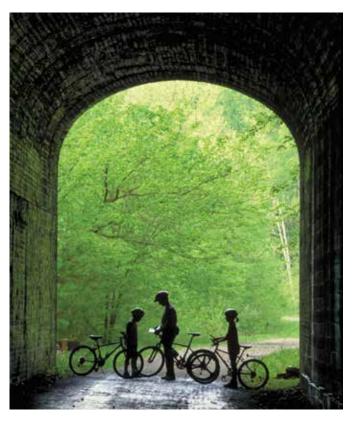
At the Ronald Lane Inc. property along Wilsonburg Road, the trail will be constructed along the edge of the property and public right-of-way. Some form of physical separation between the trail and automobiles is required. For a lower price, delineators could be used every 25 feet. Curb, a more secure and aesthetically pleasing option, could be provided for a higher price.

Opinion of Probable Trailhead Costs

A new trailhead should be constructed in Adamston, including a new parking lot, restroom and signage. Directional totems and signage should be placed at the North 25th Street trailhead and the new trailhead in Adamston, as well as at the bridge crossing US 50 and the new bridge crossing the West Fork River.

Table 33 – Probable Trail Separation Costs for Clarksburg Trail Gap				
Description	Length	Low Estimate	High Estimate	
Physical separation between trail and road at Ronald Lane Inc. property	1,000 feet	\$1,800 (delineators)	\$13,370 (curb)	
	TOTAL	\$1,800	\$13,370	

Table 34 – Probable Trailhead Costs for Clarksburg Trail Gap				
Description	Low Estimate	High Estimate		
New trailhead in Adamston (engineering, construction of parking lot, toilet, installation of toilet, signage and directional totem)	\$81,159	\$100,859		
Signage at North 25th Street trailhead and 2 bridges	\$900	\$12,000		
Directional totems at North 25th Street trailhead and 2 bridges	\$7,500	\$15,000		
TOTAL	\$89,559	\$127,859		



Trail users at the entrance to one of the 13 tunnels along the North Bend Rail Trail | Photo courtesy West Virginia State Parks



A mileage sign at the western extent of the North Bend Rail Trail | Photo courtesy RTC

NORTH BEND RAIL TRAIL

At 72 miles, the North Bend Rail Trail is the longest completed segment of the P2P corridor and one of the longest rail-trails in the country. The rail line was built by the Northwestern Virginia Railroad before the Civil War and was then sold to the Baltimore and Ohio Railroad. The line became part of CSX before being taken over by the West Virginia State Parks system in 1991. The trail now travels through 13 tunnels, 10 of which are passable, and crosses 36 bridges.

EXISTING CONDITION

The North Bend Rail Trail comprises a variety of surfaces throughout its 72 miles, including ballast, cinder, crushed stone, dirt, grass and gravel. The trail is single-track in some locations and double-track in others. The surface is smooth and even in some locations, though it needs leveling and resurfacing in others.

Trailheads of various levels of sophistication exist in 14 locations along the trail. Six of the trailheads (in bold below) are more formalized trailheads with signage and public parking, while the others serve as access points for the North Bend Rail Trail.

- Mile marker 70.9 (Wolf Summit) Parking
- Mile marker 66.6 (Bristol) Rest area, toilet, shelter, camping
- Mile marker 65 (Salem) Parking, services in town
- Mile marker 54.2 (Smithburg) Parking, picnic tables, shelter, camping
- Mile marker 51.5 (West Union) Parking, services in town
- Mile marker 50 (Near Central Station) Rest area, toilet, shelter, camping
- Mile marker 42.1 (Toll Gate) Parking



Equestrian users along the North Bend Rail Trail | Photo courtesy West Virginia State Parks

- Mile marker 38.7 (Pennsboro) Parking, services in town
- Mile marker 33.4 (Ellenboro) Parking, services in town
- Mile marker 28.9 (North Bend State Park) Parking, restrooms, camping, food (within the state park)
- Mile marker 26 (Cairo) Parking, services in town (including a bike shop)
- Mile marker 18.8 (Petroleum) Parking, picnic tables, toilet, shelter, fire ring, camping
- Mile marker 11.8 (Walker) Parking
- Mile marker 0.9 (Parkersburg Happy Valley) Signage

TRAIL IMPROVEMENT RECOMMENDATIONS

The North Bend Rail Trail is an amazing amenity for North Central West Virginia, but it has suffered from a lack of investment in continued maintenance. The trail has not been fully resurfaced since it was first built, and North Bend State Park staff nobly operate under triage mode to address immediate concerns.

In 2017, WVDOT awarded a \$1 million grant to ditch and resurface 12 miles of the North Bend Rail Trail from the Doddridge–Ritchie county line to the crossing of US 50 in Smithburg. The trail was ditched to 12 inches in some places, and three types of gravel were added and rolled to form a base and surface. The grant was very helpful in bringing this section of the North Bend Rail Trail to a state of good repair, and funding should be secured and set aside to fully resurface the remainder of the trail soon.

The current state of each of the bridges and tunnels along the North Bend Rail Trail should also be documented in a future effort, and their upkeep should be added to the list of priorities for funding.



Standing water and ruts along sections of the North Bend Rail Trail | Photo courtesy West Virginia State Parks

OPINION OF PROBABLE COSTS

To complete the recommended trail and trailhead upgrades to the North Bend Rail Trail, probable costs are estimated between \$601,434 and \$5,577,000, including an additional 10 percent for design and engineering. Costs are broken down per element below. Continued maintenance costs for bridges and tunnels are not included in this list, but should be further explored and programmed.

Opinion of Probable Resurfacing Costs

A full resurfacing of the North Bend Rail Trail would improve the trail user experience. Twelve miles of trail in Doddridge County were recently resurfaced, and the remaining 60 miles should be resurfaced soon. Note that width variants are not included in the cost estimates as the North Bend Rail Trail is the same width throughout.

Table 35 – Probable Resurfacing Costs for North Bend Rail Trail			
Type of Trail	Length (in Miles)	Low Estimate	High Estimate
Crushed stone	60	\$511,758	\$5,000,000
	TOTAL	\$511,758	\$5,000,000

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Construction crews resurfacing the North Bend Rail Trail in Smithburg, West Virginia, in 2017 | Photo courtesy West Virginia State Parks

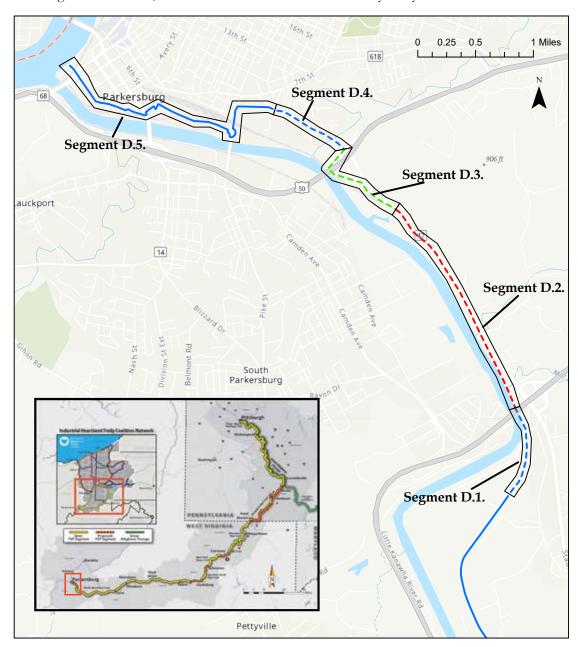
Opinion of Probable Trailhead Costs

Fourteen trailheads and a sufficient number of amenities for trail users exist along the North Bend Rail Trail, in conjunction with the towns that the trail passes through. However, trailheads could benefit from directional totems like those along the Mon River Trail System to direct people to services along the trail, especially in towns. The estimates below factor in two directional totems at seven trailheads (the six with formal parking areas and Happy Valley).

Table 36 – Probable Trailhead Costs for North Bend Rail Trail			
Description	Low Estimate	High Estimate	
Directional totems (14)	\$35,000	\$70,000	
TOTAL	\$35,000	\$70,000	

TRAIL GAP - PARKERSBURG

The final segment of the P2P corridor extends 5.2 miles from the western end of the North Bend Rail Trail to Point Park in Parkersburg along the Ohio River. Parkersburg and Wood County are investing in continuing the trail north along the Ohio River, which is not addressed in this feasibility study.



Segment Map - Parkersburg Trail Gap

P2P Route --- Planned/Gap, Publicly-Owned
--- Planned/Gap, Acquisition Pending
--- Planned/Gap, Potential Route Identified

TRAIL CHARACTERISTICS AND RECOMMENDED ALIGNMENT

The 5.2 miles of the gap extending into Parkersburg can be divided into five distinct segments. Once the trail is completed, the North Bend Rail Trail and Little Kanawha Connector Trail will come together at the end of North Bend State Park at I-77.

North Bend Rail Trail Extension

West Virginia State Parks owns the 0.8 mile of corridor between the Happy Valley trailhead parking lot at the end of the existing North Bend Rail Trail and the eastern extent of I-77. This section of trail will be straightforward to complete, except for a slip on the western side of the I-77 bridge that will require shoring before the trail can be completed.

I-77 to Debarr Trucking

CSX owns the 1.9-mile segment of rail in a state of disuse between I-77 and the driveway at DeBarr Trucking. CSX is willing to sell this portion of unused rail, and completed an appraisal with the project team that came in at \$279,000. Once the project team secures the funding and acquires this segment of corridor from CSX, the trail can connect to the North Bend Rail Trail extension.

Debarr Trucking to Corning Park

CSX also owns the 0.45 mile of rail line between DeBarr Trucking and Corning Park. CSX is unwilling to part with the remaining rail line to Corning Park, which would have been an incredible connection for this trail. To complete this section, a trail will need to be constructed in the strip of land between the rail line and State Route 47/Staunton Turnpike to the Park and Ride just east of US 50. From the Park and Ride, the trail will head west down the hill under US 50 and skirt along the Wincore Windows property.

Table 37 –	Table 37 – Proposed Trail Segments Along Parkersburg Trail Gap					
Segment	Segment Name	Starting Point	Ending Point	Length (in Miles)		
D.1.	North Bend Rail Trail extension	Happy Valley trailhead parking	I-77	0.8		
D.2.	I-77 to DeBarr Trucking	I-77	DeBarr Trucking	1.9		
D.3.	DeBarr Trucking to Corning Park	DeBarr Trucking	Corning Park at Kenner Street	0.5		
D.4.	State Route 47/Staunton Turnpike	Corning Park at Kenner Street	Mary Street	0.3		
D.5.	Little Kanawha Connector Trail (partially completed)	Mary Street	Point Park	1.7		
			TOTAL	5.2		

There are some topographical challenges, but Wincore and WVDOT have expressed willingness to work creatively to complete this section of trail, as it is a safer solution than routing the trail entirely onto State Route 47/Staunton Turnpike, where it would have to interact with two dangerous US 50 ramps. At Wincore, the trail will head north toward State Route 47/Staunton Turnpike, where the trail will utilize the existing shoulder space on the south side of the road to Corning Park at Kenner Street.

State Route 47/Staunton Turnpike (Corning Park at Kenner Street to Mary Street)

From Corning Park at Kenner Street, the trail will follow State Route 47/Staunton Turnpike, which is approximately 35 feet wide with parking on one side of the road and sidewalks on both sides. Options to connect the trail to Mary Street include:

- Widening the sidewalk on the south side of State Route 47/Staunton Turnpike to 8 feet wide (or narrower in isolated locations where necessary).
- Removing on-street parking, relocating the street centerline and painting two-way bike lanes on the south side of State Route 47/Staunton Turnpike with delineator posts every 25 feet.

Little Kanawha Connector Trail

The Little Kanawha Connector Trail is a partially complete trail that makes the final connection for the P2P corridor into Parkersburg's Point Park. The Little Kanawha Connector Trail currently starts at the intersection of Mary Street and State Route 47/Staunton Turnpike and weaves through Parkersburg until it reaches the terminus at Point Park. The trail has been upgraded in several areas, including an 8-foot-wide concrete shared-use path along Mary Street, trail crossings under the East Street Bridge and 5th Street Bridge, and bike lanes on 2nd Street and Depot Street.

Parkersburg has completed significant work to bring this trail up to a usable standard, and additional investments will make it an attractive connection into the terminus of the P2P corridor. It is important to upgrade this section of trail, as it travels through a highly urbanized area and interacts with automobile traffic on a much greater scale



The two-way bike lane along Depot Street should have some type of physical separation from moving traffic. | Photo courtesy RTC



The utility pole in the center of the ramp at 2nd Street should be relocated. | Photo courtesy RTC

than the rest of the P2P corridor. These investments should:

- Provide an element of physical separation from traffic on the shared-use path on East Street (e.g., a railing) and widen by 1 to 2 feet.
- Provide an element of physical separation from traffic on the two-way bike lane on Depot Street (e.g., installing delineator posts every 25 feet or adding curb to make the trail usable by pedestrians as well).
- Upgrade the two-way bike lane on Depot Street at the railroad crossing by adding additional pavement to fully separate non-motorized traffic (widening the road by 10 feet for about 100 feet in length to make the trail separate).
- Provide additional signage and sharrows on the onstreet portions of trail on Harris Street and Gale Avenue.
- Provide additional signage at the trail crossing under the 5th Street Bridge.
- Provide additional signage at trail crossings with city streets (4th Street, 3rd Street and 2nd Street).
- Relocate the utility pole at the ramp onto the trail at 2nd Street.
- Reinstate the protected bike lanes on 2nd Street through a two-directional bike lane protected by onstreet parking or a similarly protected facility.
- Provide additional signage and sharrows on 2nd Street between Juliana Avenue (where the bike lanes end) and Point Park.
- Repave roughly 2,000 feet of the trail.

TRAIL AND TRAILHEAD FACILITIES

Three existing parking lots provide logical trailheads for the Parkersburg gap: Point Park, Corning Park and the US 50 Park and Ride. These trailheads will need signage and map kiosks to designate them as formal trailheads for the Little Kanawha Connector Trail.

There is a North Bend Rail Trail sign at the trail crossing with Happy Valley Road, but no dedicated parking at this location. The sewer utility adjacent to the trail crossing has expressed willingness to dedicate some land for a parking lot, and additional negotiations should be undertaken to make this an official trailhead. Restrooms currently exist at Point Park and Corning Park and would also be advisable at a future expanded Happy Valley trailhead. Corning Park has a boat launch into the Little Kanawha River, which would be a convenient connection to the Ohio River.



The railroad crossing at Depot Street renders the bike lane unusable. The roadway should be widened where possible to ensure clear passing width for all users. |

Photo courtesy RTC



Protected bike lanes that were previously located on 2nd Street should be reinstated. | Photo courtesy RTC

AT-GRADE ROAD CROSSINGS

Recommendations for at-grade crossing upgrades are in brackets.

 Camden Street - minor street stop-controlled [crosswalk and signage needed]

PROPOSED EASEMENTS AND PROPERTY ACQUISITION

West Virginia State Parks owns the right-of-way to extend the North Bend Rail Trail to I-77. There, the trail

will connect to a rail corridor owned by CSX. The first 1.85 miles of rail line (to DeBarr Trucking) are no longer in use by CSX, which is a willing seller and has appraised this section at \$279,000. WVDOT has indicated that it would allow the trail to be built along the right-of-way of State Route 47/Staunton Turnpike and extended through the Park and Ride property to the underpass of US 50. From there, Wincore Windows has consented to the trail being built along the outside of its property. The last section of trail before the Little Kanawha Connector Trail would be built along State Route 47/Staunton Turnpike, which has excess right-of-way that could likely be converted to trail without further property acquisition or easements.

Five parcels are currently under negotiation for trail use to complete the gap between the western end of the North Bend Rail Trail to Point Park in Parkersburg (see below).

Table 38 – Parcels Currently Un	der Negotiation or A	Agreemen	t Along Parke	rsburg Trail Gap
Description	Owner	Length (in Miles)	Acreage	Appraised Value
North Bend Rail Trail extension - Happy Valley trailhead to I-77	West Virginia State Parks	0.8	commit	State already owns and is ted to building this section.
CSX WV-107-1075378 - I-77 to Browns Asphalt Paving	CSX	1.1	12.61	\$200,000
CSX WV-107-1082997 - Browns Asphalt Paving to DeBarr Trucking	CSX	0.75	4.55	\$79,000
DeBarr Trucking to Corning Park	CSX/WVDOT/Wincore	1.0	this section; use	ons are ongoing to complete excess right-of-way on State toute 47/Staunton Turnpike.
Corning Park to Mary Street/ Little Kanawha Connector Trail	WVDOT	0.4		se excess right-of-way from ute 47/Staunton Turnpike.

OPINION OF PROBABLE COSTS

To complete the new trail segments and the recommended trail and trailhead upgrades, probable costs are estimated between \$1,284,349 and \$5,171,223, including an additional 10 percent for design and engineering. Costs are broken down per element below.

eastern extent of the gap to where the trail turns onto State Route 47/Staunton Turnpike from Corning Park at Kenner Street. Option 2 includes surfacing the trail with asphalt, which is the preferred surface type of Wood County. Both options include surfacing the trail with asphalt or concrete along State Route 47/Staunton Turnpike until it connects to the existing trail on Mary Street.

Opinion of Probable Trail Construction Costs

The following cost estimates for trail construction provide two options. Option 1 includes surfacing the trail with crushed stone or similar material to the North Bend Rail Trail from the

Opinion of Probable Slope Stabilization Costs

The slip along the western side of the I-77 bridge will need to be shored up before trail construction can begin.

Table 39 – Probable Trail Construction Costs for Parkersburg Trail Gap				
Option 1	Length (in Miles)	Low Estimate	High Estimate	
Crushed stone	3.3	\$395,661	\$1,151,548	
Asphalt	0.4	\$112,458	\$450,348	
	Option 1 TOTAL	\$508,120	\$1,601,896	
Option 2	Length (in Miles)	Low Estimate	High Estimate	
Asphalt	3.7	\$951,717	\$3,489,838	
	Option 2 TOTAL	\$951,717	\$3,489,838	

Table 40 – Probable Slope Stabilization Costs for Parkersburg Trail Gap			
Description Length Low Estimate High Estima			
Stabilize slope	1,000 feet	\$323,000	\$387,000
	TOTAL	\$323,000	\$387,000

Opinion of Probable Street Crossings Costs

As the trail crosses several roads and major driveways, crosswalks and additional signage should be added to increase the trail's visibility. Crosswalks are necessary where the trail will cross Camden Street and 3rd Street, and crossing signage should be placed on each approach of the trail intersecting a major driveway (i.e., DeBarr Trucking).

Note: Enhanced crosswalks and signage will be needed if the trail is required to be temporarily routed along State Route 47/Staunton Turnpike, with at-grade crossings at the US 50 ramps.

Opinion of Probable Trailhead Costs

As indicated earlier, there are four logical places for trailheads along the Parkersburg gap. All of them have parking lots and would only need signage to reinforce their use as a trailhead. A toilet would also be advisable at the Happy Valley trailhead.

Table 41 – Probable Street Crossing Costs for Parkersburg Trail Gap			
Description	Low Estimate	High Estimate	
Crosswalks (2)	\$768	\$3,000	
Crossing signage (10 signs)	\$1,500	\$20,000	
TOTAL	\$2,268	\$23,000	

Table 42 – Probable Trailhead Costs for Parkersburg Trail Gap			
Description	Low Estimate	High Estimate	
Toilet (at Happy Valley trailhead)	\$20,000	\$25,000	
Trailhead signage	\$600	\$8,000	
Trailhead totems	\$10,000	\$20,000	
TOTAL	\$30,600	\$53,000	

Opinion of Probable Little Kanawha Connector Trail Improvement Costs

The Little Kanawha Connector Trail is an established trail, but some targeted investments would make it a safer, attractive and more useful facility. The suggestions below would significantly improve the trail connection into Parkersburg and likely increase its perceived safety and use.

ts	Table 43 – Probable Little Kanawha Connector Trail Improvement Costs		
High Estimate	Low Estimate	Description	
\$193,604	\$82,275	Widening East Street path to 8 feet wide	
\$168,000	\$74,441	Providing physical separation (railing) from trail on East Street	
\$53,117 (new curb/median separation)	\$4,955 (replace delineator posts)	Providing physical separation from bike lanes on Depot Street	
\$176,313	\$70,164	Upgrade where bike lanes cross railroad on Depot Street (widen road by 10 feet over 100-foot section)	
\$48,000	\$3,600	Provide additional signage on Harris Street, Gale Avenue, 5th Street, 4th Street, 3rd Street and 2nd Street (24 signs)	
\$4,200	\$3,600	Provide sharrows on Harris Street, Gale Avenue and 2nd Street (12 sharrows)	
\$2,000	\$1,000	Reinstate protected bike lanes on 2nd Street	
\$5,000	\$0	Relocate utility pole at 2nd Street trail entrance	
\$98,040	\$63,567	Repave sections of existing trail (roughly 2,000 feet of asphalt)	
\$748,274	\$303,602	TOTAL	

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SEGMENT ANALYSIS COST ESTIMATE SUMMARIES

COST ESTIMATE SUMMARIES

Completing a trail along the entire P2P corridor, including upgrading existing trails, is estimated to cost between \$12,427,253 and \$38,944,485, as shown in Table 44. These planning estimates will provide local jurisdictions, the state of West Virginia and funders an idea of the fundraising effort that will be required to complete this trail.

Table 45 outlines the cost estimates by segment for sections of new trail only. Funding for new trail can sometimes be easier to acquire than funding for regular maintenance and resurfacing. This table shows that between \$8,717,441 and \$26,343,373 is needed to construct new trail and complete the trail gaps along the P2P corridor.

Table 44 – Cost Estimates by Segment,	New Trail and Existing Trail	Upgrades
Segment Name	Low Estimate	High Estimate
Mon River Trails and Marion County Trails	\$1,484,334	\$3,923,248
Trail Gap – Fairmont	\$3,336,615	\$11,058,085
West Fork River Trail	\$1,544,290	\$2,449,300
Trail Gap – Shinnston to Spelter	\$944,318	\$3,041,223
Harrison North Rail Trail	\$79,754	\$651,564
Trail Gap – Clarksburg	\$3,152,159	\$7,072,842
North Bend Rail Trail	\$601,434	\$5,577,000
Trail Gap – Parkersburg	\$1,284,349	\$5,171,223
PROJECT TOTAL	\$12,427,253	\$38,944,485

Table 45 – Cost Estimates by Segment, New Trail Only				
Segment Name	Low Estimate	High Estimate		
Trail Gap – Fairmont	\$3,336,615	\$11,058,085		
Trail Gap – Shinnston to Spelter	\$944,318	\$3,041,223		
Trail Gap – Clarksburg	\$3,152,159	\$7,072,842		
Trail Gap – Parkersburg	\$1,284,349	\$5,171,223		
PROJECT TOTAL	\$8,717,441	\$26,343,372		

SEGMENT ANALYSIS COST ESTIMATE SUMMARIES

Table 46 breaks down the cost of new trail and existing trail upgrades by county. Harrison County has the greatest length of new trail to be built, but the trail through Marion County has a higher cost estimate because of the length of the bridge crossing the Monongahela River through Fairmont.

Table 47 breaks down the cost of only new trail segments by county. The only new trail work to be completed is in Marion, Harrison and Wood counties.

Table 46 – Cost Estimates by County, New Trail and Existing Trail Upgrades					
County	Low Estimate	High Estimate			
Monongalia County	\$1,452,076	\$3,731,582			
Marion County	\$4,733,533	\$13,209,055			
Harrison County	\$4,423,154	\$11,937,622			
Doddridge County	\$169,876	\$835,996			
Ritchie County	\$239,984	\$2,654,661			
Wood County	\$1,408,630	\$6,575,57 0			
PROJECT TOTAL	\$12,427,253	\$38,944,485			

Table 47 – Cost Estimates by County, New Trail Only					
County	Low Estimate	High Estimate			
Monongalia County					
Marion County	\$3,336,615	\$11,058,085			
Harrison County	\$4,096,477	\$10,114,065			
Doddridge County					
Ritchie County					
Wood County	\$1,284,349	\$5,171,223			
PROJECT TOTAL	\$8,717,441	\$26,343,373			

SEGMENT ANALYSIS COST ESTIMATE SUMMARIES



The North Bend Rails to Trails Foundation is located in Cairo, W.Va. | Photo courtesy RTC

Table 48, below, identifies the known property acquisition costs to date per trail gap. Most of the known acquisition costs are CSX parcels for which appraisals were completed in 2017. Acquisition costs are not included in the cost estimates above and will need to be updated as other properties and easements are negotiated.

Table 48 – Acquisition Costs				
Segment Na	me Acquisition Costs (as currently known)			
Trail Gap – Fairn	nont \$546,500			
Trail Gap – Shinnston to Sp	elter TBD			
Trail Gap – Clarks	surg \$165,000 (+ \$7,500 for southern spur)			
Trail Gap – Parkers	purg \$279,000			
PROJECT TO	AL \$990,500 (\$998,000 including spurs)			

SEGMENT ANALYSIS ENVIRONMENTAL ASSESSMENT

ENVIRONMENTAL ASSESSMENT

Communities developing rail-trails occasionally have to deal with known, potential or perceived environmental contamination along the corridor. Fortunately, contamination does not necessarily prevent the development of rail-trails if appropriate steps are taken to ensure the safety of trail users.

Historic use of the railroad corridors that make up the P2P route indicate that common contaminants such as creosote, lead and arsenic may be present throughout the corridor. Communities acquiring former railroad corridors for P2P trail development may need to take some of the following steps—with help from a qualified professional—prior to property acquisition and trail construction:

- Conduct due diligence and inventory potential hazards along the corridor. This could include a Phase I and Phase II environmental assessment.
- Analyze the potential adverse health effects caused by found substances.
- Determine what, if any, mitigation steps need to be taken, and examine the risks and benefits of remedial alternatives.
- Provide information needed by regulators and the public.

- Design and route the trail to avoid dangers.
- Follow state and federal laws.
- Create a comprehensive management plan that includes risk management for the open trail.
- Designate a qualified person to regularly inspect the trail to identify potential hazards.
- Use signage and fencing, where needed, to protect trail users.

CSX has specific environmental requirements that preclude any corridor sale. Based on recent experiences of fulfilling these requirements for other West Virginia rail-trail projects, we estimate a cost of \$5,000 per mile for necessary environmental assessment work, which includes soil sampling and a soil management plan for reducing exposure during construction and beyond. RTC is committed to working with our partners, like NBAC, to help facilitate and expedite this process for corridor purchases within the P2P.

GETTING THERE

RECOMMENDED ACTIONS TO COMPLETE THE WEST VIRGINIA SECTION OF THE P2P CORRIDOR

This section builds from specific recommendations included in the Segment Analysis, presenting high-level strategies to fully develop the P2P trail in West Virginia and begin capturing the benefits of trail tourism as outlined in the "I Heart Trails Tourism Strategy" (2016).⁴² A segment-by-segment "closer look" summarizes necessary steps and actions for gap-filling. Finally, focused recommendations related to Trail Towns are presented, beginning with a brief case study of how one P2P community, Shinnston, is beginning this work.

The steps it takes to build a rail-trail are usually consistent, whether the route is 2 miles or 200 miles. However, as many partners within IHTC already know, the time it takes to get there can vary widely depending on existing conditions, community support, political will and availability of funds. And in the case of the P2P corridor, the "easy" work has already been done: More than 120 of the 150 trail miles in the West Virginia segment of the P2P corridor are open, due to the persistence and dedicated efforts of hundreds of trail advocates over the past 30 years. A coordinated, sustained effort to secure funding for the acquisition, design and construction of the remaining gaps could produce a fully connected 150-mile trail in North Central West Virginia in as few as five years.

A BIRD'S-EYE VIEW OF WHAT IT WILL TAKE TO BRING THE TRAIL TO LIFE

RTC and other partners in and outside of West Virginia will continue providing guidance, technical assistance, strategic planning and other resources to local trail groups and governmental entities as they work to complete their sections of the P2P corridor.

The following recommendations apply across the entire West Virginia P2P corridor and include actions that may be taken by local trail groups or the P2P Corridor Working Group.

RECOMMENDED ACTIONS TO COMPLETE THE WEST VIRGINIA SECTION OF THE P2P CORRIDOR

- Continue advocating for trail funding, construction and maintenance at the local, regional and state level.
- Enlarge the stakeholder network, engaging underrepresented sectors of the community as well as the business and industry sector, tourism and economic development organizations, and appropriate state agencies.
- Develop a communications plan for the P2P corridor.
- Pilot an assessment of communities along the trail for tourism readiness and destination appeal.
- Keep local initiatives actively engaged with the P2P and IHTC initiatives.
- Advocate for, and participate in, the development of a statewide trail network, a statewide trail conference in 2019 and an update of the statewide trail plan.
- Encourage state legislators to organize and participate in a Legislative Trails Caucus in the West Virginia Legislature, similar to the one being developed in the Ohio Legislature.⁴³
- Explore, in cooperation with agency heads and legislators, potential sources of funding at the state level for trail development and maintenance.
- Continue to explore, along with NBAC and the West Virginia Department of Environmental Protection (WVDEP), ways to make the environmental assessment process more cost-efficient.

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^{42. &}quot;I Heart Trails Tourism Strategy," Rails-to-Trails Conservancy, accessed March 23, 2018. https://www.railstotrails.org/resource-library/resources/i-heart-trails-tourism-strategy.

^{43.} Ohio Legislative Trails Caucus," Rails-to-Trails Conservancy, accessed April 5, 2018. https://www.railstotrails.org/policy/building-active-transportation-systems/active-transportation-policy-hub/pages/ohio-legislative-trails-caucus/.

A coordinated, sustained effort to secure funding for the acquisition, design and construction of the remaining gaps could produce a fully connected 150-mile trail in North Central West Virginia in as few as five years.

COUNTY-LEVEL STEPS TO COMPLETE THE WEST VIRGINIA SECTION OF THE P2P CORRIDOR

1) Local team building

The first step with any trail project is to have a diverse, inclusive and committed team that works well together.

2) Broad community engagement

Being intentional about informing and engaging the broader community is critical to recruiting volunteers, raising money and developing strategic partnerships. This step is also necessary to establish an advocacy base for funding, construction and maintenance. A well-thought-out and implemented public relations plan can enhance engagement and support.

3) Acquisition of—or a permanent easement through—"gap" corridor parcels

Understanding the status of the corridor and other needed parcels and gaining control of this real estate is obviously crucial, whether it is through acquisition, donation or establishment of an easement.

4) An environmental assessment of the parcels to be acquired from CSX

Environmental assessment is required by CSX prior to its sale of any parcel and is part of the due diligence of any trail project. Mitigation and/or remediation will occur as needed during trail design and construction.

5) Design and cost estimates for trail construction

A fully engineered trail design, with construction cost estimates, is required prior to construction and is often an eligibility requirement for federal and state funding programs. Design guidance for planned P2P trails is outlined in Appendix B (page 94).

6) Construction of the trail and related amenities

A properly designed and constructed trail will provide a better, safer experience for trail users, and will be easier and less expensive to maintain.

7) A plan for maintenance

Trails require maintenance, from mowing to surface repair and amenity and signage upgrades. It is critical to have a plan for maintenance, as well as an organization or entity committed to executing that plan.

A COUNTY-BY-COUNTY LOOK AT WHAT IT WILL TAKE TO BRING THE TRAIL TO LIFE

As a lead IHTC partner, RTC will work with local communities and state agencies to advance trail development and close the gaps along the P2P corridor, following the steps identified on page 75 to successfully complete the trail. All remaining gaps are in Wood, Harrison and Marion counties. This section provides a closer look at the status of the work in each county and recommendations for advancing that work.

WOOD COUNTY

1) Local team building

Leadership for trail development in Wood County is provided by the Wood County Alternative Transportation Council (WCATC), an arm of county government that includes representatives of organizations, governmental entities and interest groups invested in a variety of trails. This strong team meets regularly and is responsive to opportunities and technical assistance.

Recommendations

• Continue assessing WCATC's membership to fill gaps in representation and ensure that all its members are active and engaged.

GETTING THERE

2) Broad community engagement

One WCATC member conducts outreach by speaking with civic organizations, and another promotes trail work in the county through traditional media.

Recommendations

- Expand the number of WCATC members who are willing to speak with civic organizations.
- Update talking points and ensure they are used in presentations.
- Identify a volunteer to manage WCATC's social media presence.
- Establish newsletter capacity and maintain the established WCATC Facebook page.
- Consider an annual public meeting that updates citizens on the trail work and provides the community with input and feedback opportunities.

3) Acquisition of—or a permanent easement through—"gap" corridor parcels

A collaboration of WCATC, the Wood County Commission, the North Bend Rails to Trails Foundation and the Mid-Ohio Valley Regional Council resulted in an application for federal Transportation Alternatives (TA) grant funding to acquire approximately 1.6 miles of CSX corridor from I-77 toward the West Virginia Division of Highways Park and Ride near the intersection of US 50 and State Route 47/Staunton Turnpike. The application, submitted in January 2018, also includes design work for the 1.6 miles and the 0.8-mile section of the North Bend Rail Trail from I-77 to the Happy Valley trailhead near Parkersburg.

Recommendations

- Engage legislators from Wood County to petition WVDOT for approval of the TA grant proposal.
- Keep potential match funders informed of progress and reconvene them when the TA proposal is approved.
- Convene a work session that includes WCATC, WVDOT and relevant private property owners to determine connectivity options for:
 - Connecting the North Bend Rail Trail to the Park and Ride for US 50 and State Route 47/ Staunton Turnpike.
 - Extending a trail from the Park and Ride to Corning Park in Parkersburg.
- Work closely with the city of Parkersburg to implement the improvements recommended in the Segment Analysis to connect Corning Park to Point Park.

4) An environmental assessment of the parcels to be acquired from CSX

CSX requires an environmental assessment to be completed before transactions can be finalized.

Recommendations

 Engage NBAC and WVDEP to help identify and apply for funding to cover the environmental assessment costs. Such engagement should begin now to ensure the assessment can be done in a timely fashion once the acquisition funding is approved.

5) Design and cost estimates for trail construction

The design and cost estimation work for the 2.4-mile extension of the North Bend Rail Trail, from the Happy Valley trailhead to the end of the CSX parcel being acquired, was included in the TA grant proposal submitted in January 2018.

Recommendations

- Work with WVDOT to select an engineering firm from the department's approved vendor list.
- Work with the selected firm to develop a process for engaging the public around input on the design work.
- Work with the city of Parkersburg to begin design work connecting the North Bend Rail Trail extension to Corning Park and Point Park.

6) Construction of the trail and related amenities

Construction of the 2.4-mile extension of the North Bend Rail Trail will require funding and project management coordination.

Recommendations

- Host a public meeting once the design work is complete to unveil the trail's design and build support for raising the required local match.
- Develop and submit a TA grant by WCATC, the Mid-Ohio Valley Council, Wood County Commission and the North Bend Rails to Trails Foundation as soon as possible after the design and cost estimates are available.
- Identify which of the various partner organizations will serve as project manager during the construction phase.

7) A plan for maintenance

Long-term maintenance plans help trail managers plan for routine maintenance tasks and anticipate less frequent, but significant maintenance needs that will ensure trail user accessibility and safety.

Recommendations

 Develop a long-term maintenance plan between the North Bend Rails to Trails Foundation, Wood County Commission and the city of Parkersburg to ensure consistent, sustainable and routine maintenance.

HARRISON COUNTY

These recommendations include parts of the Harrison County trail system that are not a part of the P2P corridor, but which connect to it and are included in the county's plans.

1) Local team building

In recent years, Harrison County has built a partnership between the county commission and the Harrison Rail Trails (HRT) group.

Recommendations

- Strengthen the working relationship between the Harrison County Commission, HRT and leadership of the county's municipalities affected by trails; most notably, Salem, Clarksburg and Shinnston.
- Keep these groups engaged with the P2P Corridor Working Group and, conversely, ensure mutual representation at each group's meetings.

2) Broad community engagement

The four community workshops held in association with the Harrison Rail-Trails Connectivity Plan engaged more than 150 people, and HRT events such as Opening Day for Trails, Spooky Tales on the Rail Trails, Tails & Trails, and other organized walks and rides engage hundreds more. The HRT Facebook page is well maintained.

Recommendations

- Continue the many HRT activities surrounding the county's rail-trails.
- Maintain HRT's Facebook presence.
- Expand HRT's network of volunteers and board members who can share the workload in managing outreach activities.
- Strengthen relationships with media, both traditional (e.g., newspaper, radio and TV) and online (e.g., Connect-Clarksburg, Connect-Bridgeport, etc.).

3) Acquisition of—or a permanent easement through—"gap" corridor parcels

The Wolf Summit to Adamston corridor segment has been appraised, an agreement has been reached with CSX and a grant covering 80 percent of the acquisition has been awarded. The Harrison County Commission has agreed to provide the 20 percent match. CSX has agreed to sell its parcels north and south of the restaurant in downtown Clarksburg, and the commission has agreed to purchase those outright. The Chemours Company has agreed to donate a 0.8-mile section of corridor from Spelter south to the Harrison North Rail Trail.

Recommendations

- Continue encouraging WVDOT to accelerate the acquisition grant process for the CSX parcels in Harrison County.
- Modify the acquisition contract with CSX to include all available Harrison County parcels in one contract (a total of \$151,500).
- Upon reaching agreement with Chemours on the value of its donation, execute the donation documents within 60 days of agreement.
- Working with the county, develop a plan for securing the privately held parcels north and south of the restaurant, either through donation, acquisition or easement, and implement that plan.
- Develop and present a formal proposal to CSX to develop the trail from Coleman Avenue, along the edge of CSX's property between Coleman Avenue and the former Anchor Hocking property, to the bridges over the CSX's active lines and US 50.
- Continue researching ownership of the corridor parcels between Shinnston and Spelter.
- Complete property owner packets containing information about the trail, including trail benefits and how property owners can allow the trail to traverse their property.
- Through a partnership between RTC, the city of Shinnston and the Harrison County Commission, develop strategies for approaching each property owner about connecting the trail through their property.

4) An environmental assessment of the parcels to be acquired from CSX

Harrison County has experience working closely with state and federal environmental agencies to assess and remediate sites adjacent to former railroad corridors.

Recommendations

 Working with WVDEP, NBAC and the county, develop a strategy to fund the environmental assessments of all available CSX parcels in Harrison County, and apply for those funds in the fall of 2018.

5) Design and cost estimates for trail construction

Design was not requested as a part of the application for acquisition funding for the Wolf Summit to Adamston extension.

Recommendations

- Request that WVDOT include design in the grant contract and notice to proceed for the acquisition of the available CSX parcels in Harrison County.
- Should that not be possible, submit a Letter of Intent to Apply and a full application for that design work in the fall of 2018.
- Once control of the corridors north and south of the restaurant is secured, pursue design funding, either through the Harrison County Commission or WVDOT, including design for construction of the bridge over Elk Creek on the existing superstructure.

6) Construction of the trail and related amenities

The Harrison County Commission was awarded a construction grant for approximately 4 miles of trail from Mount Clare north toward Veteran's Memorial Park. The West Virginia Community Development Hub was awarded a grant for upgrades and repairs to sections of the Harrison North Rail Trail. Both grants are several years old. HRT has been awarded a grant that covers a portion of the cost to fill large pond-like holes in the Harrison North Rail Trail, and the Harrison County Commission is considering providing the rest of the funding needed to repair those holes. The county has also applied for federal Recreational Trails Program (RTP) grant funding for upgrades to the Harrison North Rail Trail, with a match coming from the

GETTING THERE

Harrison County Commission. In addition, Shinnston has a \$200,000 TA grant in place for improvements to the West Fork River Trail in and north of Shinnston.

Recommendations

- Secure a notice to proceed from WVDOT for construction of trail from Mount Clare north to Veteran's Memorial Park, complete the design work in progress, develop and distribute a Request for Proposals (RFP) for construction and hire a contractor to complete the project.
- While securing control of sections north and south of the restaurant, begin conversations with the county and city about their willingness to assist with construction, what work they will want to contract out and how to fund the construction.
- Secure bids for repairing the large pond-like holes in the Harrison North Rail Trail, request the necessary additional funding to complete the project from the Harrison County Commission and approve a contractor for construction.
- Continue urging WVDOT to transfer the Harrison North Rail Trail upgrades and repairs grant from the West Virginia Community Development Hub to the Harrison County Commission. Secure a notice to proceed once the transfer is complete, develop and disseminate an RFP, and hire a contractor to execute the work.
- Work with the Shinnston city manager to secure a notice to proceed, complete any necessary design work, and develop and disseminate an RFP for the work.
- Contact Harrison County's legislative delegation to inform them of the awarded and pending TA and RTP grants and ask that they advocate for:
 moving the awarded grants along, and
 approving the pending proposals.
- Once the acquisition of the Wolf Summit to Adamston extension and the design phase are complete, submit a TA application via Harrison County Commission for construction of that section.

7) A plan for maintenance

The county has submitted an RTP proposal to fund a portion of the cost of a backhoe with the appropriate attachments for trail maintenance. If successful, the Harrison County Commission is likely to provide the balance of the funding. However, identifying the resources and manpower to properly maintain the county's rail-trails will remain a challenge.

Recommendations

 HRT should work with the county to identify strategies for sustained maintenance of all railtrails in Harrison County and develop a long-term maintenance plan to ensure consistent, sustainable and routine maintenance.

MARION COUNTY

1) Local team building

The Friends of Marion County Trails and Waterways is an organization supporting and advocating for development of trails in the county, including rail-trails. The organization works closely with Marion County Parks and Recreation Commission (MCPARC) to advance this work. The Friends group meets occasionally as needed. MCPARC is currently involved in several projects that are straining its capacity; as those projects are completed, MCPARC will increase its involvement in the rail-trail work.

Recommendations

- Identify resources for an additional part-time or full-time MCPARC staff person who is focused on trail development in the county.
- Reinstate regularly scheduled Friends of Marion County Trails and Waterways meetings.
- Keep these groups engaged with the P2P Corridor Working Group and, conversely, ensure mutual representation at each group's meetings.

2) Broad community engagement

The Friends group does a good job of keeping elected officials informed and hosts regular events concerning the P2P corridor and future sections of rail-trail.

Recommendations

- Resume regular Friends activities this spring to engage more citizens and raise awareness of Marion County Trails projects.
- Expand the number of presentations that Friends volunteers make to civic organizations in the region.
- Consider a community-wide informational meeting when the TA grant for acquisition of the CSX parcels becomes public.

3) Acquisition of—or a permanent easement through—"gap" corridor parcels

MCPARC has applied for TA funding to acquire three parcels from CSX that are necessary for the P2P corridor and the sections needed to connect it throughout Fairmont. MCPARC is also in negotiations with several private property owners, including a private developer, to bring the rail-trail through their property.

Recommendations

- Contact the Marion County state legislative delegation to seek their support and advocacy for the TA proposal with WVDOT officials.
- Once the TA award for the available CSX parcels is secured, step up negotiations with private property owners to establish easements for the trail through their property.
- Continue to partner with the private developer (via MCPARC) to secure their help in developing the trail along Hickman Run.

4) An environmental assessment of the parcels to be acquired from CSX

NBAC applied in the fall of 2017 for funding through the EPA to conduct environmental assessments on a number of potentially compromised sites in the Fairmont area, including the CSX parcels needed for the P2P corridor. These awards are expected to be announced in May or June 2018.

Recommendations

 Continue the close partnership between the city and NBAC in using the expected funds to complete the CSX assessments in an effective, efficient and timely manner.

5) Design and cost estimates for trail construction

In its application for TA funds to acquire the three CSX parcels along the P2P corridor, MCPARC also applied for funding of the design work on those sections of rail-trail that are needed to complete the P2P corridor through Fairmont, including a necessary bike and pedestrian lane on the bridge connecting Merchant Street to downtown.

Recommendations

- Should the design funding be approved, consider having the partner organizations working on railtrail development host a public meeting with the selected engineering firm to receive public input.
- Engage the private developer near Hickman Run and other private property owners who are willing to grant easements for the trail to ensure that their needs and concerns are addressed.
- Continue exploring options for trails that could connect to the P2P corridor from other parts of Fairmont.

6) Construction of the trail and related amenities

Should the acquisition of the three CSX parcels and the negotiations with private property owners be successful and the design work completed in time, MCPARC is expected to begin trail construction using its own equipment and staff.

Recommendations

 Consider having MCPARC apply for TA construction funding in late 2019 for those aspects of construction that cannot be completed in-house.

7) A plan for maintenance

Marion County is very fortunate that MCPARC has the capacity and necessary equipment to maintain the rail-trail system in the county.

Recommendations

 Groups and trail managers in other P2P corridor communities that face maintenance challenges could benefit from understanding more about how MCPARC's structure, budget and relationship with other municipal service providers facilitate trail maintenance.

GETTING THERE



Shinnston residents participate in a walking assessment of their community. | Photo by Amy Camp

TRAIL TOWN RECOMMENDATIONS

As presented in the Introduction, whether a community along the P2P corridor currently connects to an existing trail or is situated on a current "gap," there are valuable lessons and tools from the Trail Town model that all communities should use and incorporate to best leverage trail benefits. These recommendations highlight Trail Town steps that one P2P corridor community is already taking and present suggested action items and resources for all potential P2P Trail Towns.

CASE STUDY: SHINNSTON (POPULATION 2,161)

From 2016 to 2017, our partners at the Pennsylvania Environmental Council collaborated with local organizations to host community meetings and walking assessment exercises in eight IHTC communities. Shinnston, at the junction of the West Fork River Trail and Harrison North Rail Trail, was the first to be assessed, in September 2016.

The Shinnston community meeting drew more than 30 local and regional residents to learn more about connecting to the area's rail-trails. Of those, 21 completed a walking assessment of the downtown area to evaluate trail connections, the availability of business services and other opportunities for improvement. Among the most common improvement areas were:

- · Bike racks
- Signs (directional signs between trail and town, mainly)
- Benches
- Town gateway points

The people of Shinnston had two options following their community assessment in 2016: They could accept the results of the assessment and continue with "business as usual," or they could act on some of the themes that emerged. What resulted from the community was a wayfinding sign plan with signs directing people to the trail, as well as from the trail into the business district. A driving factor of this plan was the attendance of the town mayor, who heard the need for improved signage at the meeting and committed to addressing the issue. The signage work continues, as do other trail improvements.

EVERY ASSESSED COMMUNITY SHARES THESE IMPROVEMENT NEEDS

Shinnston was not alone in the improvement areas listed above. All eight communities assessed over the past two years identified the lack of bike racks, signs, benches and town gateway points as the main opportunities for improvement. In fact, these items are consistently identified in trail communities anywhere that undertake a town walking assessment.

The good news is that these physical improvements are entirely feasible for a community that is earnest in adopting a Trail Town approach. If a community wants to take steps to connect to its trails, it ensures that these kinds of physical amenities exist. Here's why:

Bike racks: Whether at the trailhead or along Main Street, having a place to securely park bikes sends a welcoming message. Imagine if there were no vehicular parking in a community; would people be likely to stop in town?

Signs: Directional signs to and from the trail into town are the primary way a community indicates that:
1) the trail is an asset, and 2) there is reason for people to travel between trail and town. Trail user surveys often identify lack of adequate signage as an impediment to enjoyable trips.

Benches: Both along the trail and in town, benches send a message that encourages trail users to stay awhile and enjoy the area. They extend a warm welcome to visitors while improving residents' experiences.

Town gateway points: An eye-catching gateway, whether a sign, mural, sculpture or other structure, signifies a sense of arrival. Communities generally have a town gateway that is oriented to motorists. A quality gateway is informational, celebratory and engaging—an initial cue pertaining to the community's vibrancy. The same should be considered from the perspective of the trail, the front door to your town for trail users passing through.



Then-Shinnston Mayor Sam DeMarco addresses residents at the 2016 community meeting. | Photo by Amy Camp

BEYOND BENCHES AND BIKE RACKS (AND SIGNS AND GATEWAYS)

What if a community takes the steps to address some of these widely accepted physical improvement opportunities? What is the actual impact? If done well, at minimum, these amenities can contribute to a sense of place and vibrancy. They indicate that this is a place worth caring for and celebrating. Such amenities indicate that trail users are celebrated and welcomed.

But step back for a moment and imagine that a town of any size improves the gateway into town from the trail. What kind of community would a trail user find upon arrival? So much of a Trail Town's success has to do with what exists in town, after someone has walked through the front door. A culture that embraces and celebrates the trail and its users, and a community that is committed to keeping a tidy, cared for, engaging business district, is one that is most likely to experience the boost that comes with activating the trail economy.

GETTING THERE

Questions to Consider

- Does the community foster a culture of hospitality, one that warmly welcomes both residents and visitors into town? Is this culture perpetuated by those who interact with customers?
- Does the business district feel distinct or special? Are the businesses and buildings cared for?
- Do people feel safe crossing the street or biking through town?
- Do business hours and services meet the needs of visiting trail users as well as the needs of local residents?
- Is there a "buzz" about the community, or a general sense of vibrancy? Is it the kind of place that feels celebrated?

As you address these questions, consider another: If a picture is worth a thousand words, why do we have so few strong trail photos? Imagery is powerful, and your town and trail will need compelling images to use in marketing and promotional materials.

One local resource you can mobilize are your photographers. Either through a photo contest or by commissioning a professional photographer, both your trail and town will benefit by having a catalog of trail photos at the ready. We recommend developing a shot list of must-have images, ranging from iconic locations along your trail to trail users meandering through town and frequenting local businesses. You can then provide these photos to your local visitors bureau, chamber of commerce, media and others who can send the message that trails are an important and enjoyable part of the community.

MOBILIZE YOUR COMMUNITY

Creating a welcoming, trail-user-friendly community involves engaging everyone. It requires transparency and inclusiveness. It also requires strategic outreach to key individuals and organizations who can bring value to the Trail Town work, or who could be an obstacle if not engaged early on. Broad civic engagement also builds a volunteer base, identifies and recruits financial supporters, creates heightened awareness and enthusiasm for the work, and builds trust in the community.

The following resources can help you mobilize your community to leverage the potential of the P2P corridor:

- IHTC's P2P Corridor Working Group meets regularly and provides a community of peers and experts committed to completing the P2P trails and leveraging them for community benefit. Join in on the quarterly meetings or conference calls by contacting RTC at ihtc@railstotrails.org.
- RTC, in addition to helping lead IHTC, provides coaching and technical assistance to help communities mobilize and take steps to be more trail-user-friendly.
- The Progress Fund, a Community Development Financial Institution (CDFI) that implemented the Trail Town Program® along the Great Allegheny Passage (GAP) and other western Pennsylvania trails, recently released a Trail Town Guide. 44 The guide shares insights based on the Progress Fund's 10-plus years operating the Trail Town Program®. The Progress Fund also makes business loans throughout West Virginia.
- The West Virginia Community Development Hub has several community development programs and opportunities, as well as a vibrant online presence that provides information, ideas, inspiration and guidance. Join the Hub's extensive and diverse network at wwhub.org.
- Project for Public Spaces, a global nonprofit that considers itself the "town square" of the placemaking movement, encourages citizen-led improvement projects that are "lighter, quicker, cheaper." The nonprofit recommends that places activate to just "do something"—even if it's a temporary improvement or installation—to help strengthen sense of place and build momentum and engagement. Learn more at www.pps.org.
- The West Virginia Center for Civic Life is a nonprofit focused on training communities to engage their citizens, talk with one another more productively and turn that talk into action. Connect with them at wvciviclife.org.
- Your local partners are perhaps the most important resources you have. These might include local government, economic development authorities, chambers of commerce, convention and visitors bureaus, local nonprofits and local businesses, among others.

[&]quot;Trail Town Guide," The Progress Fund, accessed March 23, 2018. https://www.trailtowns.org/guide.

Planning for trail connections—even before a trail is complete—empowers communities to take full advantage of their trails.

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YOUR TRAIL ISN'T READY, BUT YOUR COMMUNITY IS. NOW WHAT?

Sometimes a community is energized before the actual trail is completed or connected to town. In such situations, communities can take this as an opportunity to be thoughtful and strategic in their approach to connecting trail and town. In Salmon, Idaho (population 3,055), a local nonprofit worked with the Citizens' Institute on Rural Design (CIRD) to lead a multi-day workshop to plan for a connector trail that would bring nearby campground guests into the community. Without a foot of trail on the ground, the community gathered for an important conversation on how trails and tourism could best serve the town. Learn more from CIRD at www.rural-design.org.

In St. Joseph, Illinois (population 3,990), an organization planning the 24.5-mile Kickapoo Rail Trail hosted a Trail Town workshop and walking assessment in advance of the trail's completion. This early step in understanding trail readiness enabled the community to be proactive rather than reactive.

Communities along the Appalachian Trail and North Country Trail seeking Trail Town designation are expected to incorporate the trails to their master plans, zoning ordinances and recreation plans. In West Virginia, communities could advocate to prioritize trails and other community enhancement projects in local, regional and statewide plans mentioned in the Plan Review, or push for capital budget support of these important projects (e.g., sidewalks between trail and town, or bike lanes for bridge rehabilitation projects).

Some tangible steps that communities and small businesses can take to plan for trails include installing bike racks and inviting nearby trail users to visit. Installing bike racks throughout town sends a message to both residents and visitors that cyclists are valued, whether or not a trail is in place. If a trail is nearby and your town has something to offer travelers, make an effort to invite trail users for a visit. Many trail users travel to the trail by car and enjoy visiting nearby attractions.

What is a community to do before the trail connects? Think of it as: 1) plan, 2) install (bike racks, sidewalks, public art, etc.) and 3) invite (visitors to stop in). Planning for trail connections—even before a trail is complete—empowers communities to take full advantage of their trails.

MINI CASE STUDY: CONFLUENCE, PA— COMMUNITY RALLIES AROUND ITS TRAIL

Confluence, Pennsylvania (population 745), located along the GAP, has not always been a Trail Town. The community is positioned at the end of the first completed section of the GAP, which opened in 1986. A number of residents were skeptical early on. But one small business success story and one friendly cyclist encounter at a time, Confluence has experienced a culture shift. The attitude toward the trail and its users has shifted so much that the Confluence Tourism Association now lists seven bedand-breakfasts, 16 guest houses and two campgrounds on its website—in a town of 745 people. The community has come to value the trail and take steps to ensure that it remains connected.

WHAT ABOUT YOUR TOWN?

The Trail Town approach has helped communities with populations ranging from 60 to 60,000. The breadth and depth of initiatives certainly depends upon local capacity and, as always, the energy and resources of the people involved.

There is no secret formula for helping your town become a Trail Town. There is no step-by-step process that always works. Every town must, to some degree, find its own way forward. But two things are critical no matter what: 1) bringing the community together, and 2) getting down to work.

Begin with this in mind: do what you can, with what you have, where you are, now.

CONCLUSION

No matter what the subject, feasibility studies pose an inherent question: is this project realistic and possible? In this instance, the question becomes: is it possible to develop the P2P corridor as a seamlessly connected rail-trail? RTC's answer, backed by decades of rail-trail experience, is a resounding YES! Acquiring gap segments, designing and constructing the trail, then maintaining, promoting and connecting the trail to nearby communities will not come without challenges. Continued coordination among the strong partners that make up the P2P Corridor Working Group, along with support from state agencies, local elected officials, decision-makers, and—most importantly—community members from along the corridor, will be at the core of this project's success. In reflecting on the totality of the P2P feasibility, several observations present themselves.

WHAT WILL WE HAVE?

The fourth longest rail-trail in the U.S. would emerge from a fully developed rail-trail on the P2P corridor. This will make the P2P corridor a tourism destination for cyclists and a major piece of outdoor recreation infrastructure in northern West Virginia.

WHY DOES IT MATTER?

Completion of the P2P corridor would present opportunities to develop Trail Towns and fuel local economic and community development in West Virginia. And it will make our communities better places to live and do business.

WHAT WILL IT TAKE?

Closing the gaps will take a coordinated effort among community organizations; trail advocates; and local, county and state government. This work must involve volunteers, professionals, trail cheerleaders and decision-makers. Collaboration will be critical.

WHEN WILL IT HAPPEN?

The timeline for closing the gaps could range between five and 20 years. This work requires patience and persistence. Focused efforts and investment could help shorten the development timeline and expedite economic and community benefits.

WHAT IS THE PURPOSE OF THIS FEASIBILITY STUDY?

This study serves as a road map and toolbox for getting it done. It provides information on the opportunities and challenges we face as we close the gaps and develop the P2P corridor in West Virginia. It identifies short-term and long-term actions that will be required for success and provides how-to guidance for achieving those actions.

WHAT CAN YOU DO?

No matter who you are or what your skills and interests are, there is a role for you. Whether you are a trail builder, trail user or trail advocate; an economic developer, community developer, tourism professional or volunteer; an elected official, organizational leader or just someone with time and energy, we need you to join the P2P movement and help make this rail-trail happen.

Join us: learn more at www.railstotrails.org/p2p

APPENDICES

APPENDIX A – COST ESTIMATION VALUES AND SOURCES

COST ESTIMATION VALUES AND SOURCES

RTC staff sought costs from a variety of projects to inform the estimates in this report, giving preference to more recent projects and those in the West Virginia and Appalachian regions. Where recent and/or local examples were not available, staff used estimates from a resource compiled by the Pedestrian and Bicycle Information Center in 2013 titled "Costs for Pedestrian and Bicyclist Infrastructure Improvements." This spreadsheet presents costs from actual projects completed around the country, broken down into individual parts. Wherever this report uses costs older than 2015, RTC staff added additional dollars to account for inflation, per calculations presented in the spreadsheet. Segment totals in the Segment Analysis

(page 23) reflect an additional 10 percent to account for design and engineering costs, which are not included in the values below.

TRAIL CONSTRUCTION

Trail construction is the main element of each project and accounts for most of the cost. While asphalt provides a smoother trail surface, it tends to be more expensive than crushed stone. The most recent cost estimates show that the cost of asphalt varies by a factor of 4 and can be upwards of \$1 million per mile, while the cost of crushed stone varies by a factor of 3 and is closer to \$300,000 per mile.

Table 49 –	Table 49 – Trail Construction Cost Estimates, Low and High							
	Price per Mile (Low)	Source (Low)	Price per Mile (High)	Source (High)				
Asphalt	\$283,272	Mass., 2010 - Wareham Bike Path Feasibility Study	\$1,084,000	Va., 2009 - Transportation & Mobility Planning Division Statewide Planning Level Cost Estimates				
Crushed stone	\$105,191	W.Va. 2015 - Harrison County	\$326,095	Fla., 2011 - D-3 Preliminary Estimates Section Costs, Annual Roadway Construction Costs				

BRIDGES

Bridges are the most difficult element of trail building for which to accurately estimate costs. Each bridge is unique in its length, width and materials and requires significant engineering. Project managers should engage certified engineers as soon as possible to create more accurate cost estimates before and during the design process.

Table 50 – Brid	Table 50 – Bridge Cost Estimates, Low and High						
	Price per Linear Foot (Low)	Source (Low)	Price per Linear Foot (High)	Source (High)			
Major bridge	\$3,531	Va., 2015 - Potterfield Bridge Cost	\$7,062	Va., 2015 - Potterfield Bridge Cost			
Minor bridge	\$2,400	W.Va., 2016 - Thrasher Estimate	\$3,600	W.Va., 2016 - Thrasher Estimate			
Retrofit bridge	\$558	W.Va., 2014 - Hatfield McCoy CSX Bridge Conversion	\$872	W.Va., 2014 - Hatfield McCoy CSX Bridge Conversion			
Boardwalk	\$166.75	Ala., 2010 - Bids.com	\$496.62	Ala., 2010 - Bids.com			
Large creek crossing	\$91,014	Vt., 2010 - Report on Shared and Sidewalk Unit Costs	\$138,091	Vt., 2010 - Report on Shared and Sidewalk Unit Costs			
Small creek crossing	\$45,5 07	Vt., 2010 - Report on Shared and Sidewalk Unit Costs	\$69,045	Vt., 2010 - Report on Shared and Sidewalk Unit Costs			

STREET CROSSINGS

Where trails cross public streets, treatments need to be provided to increase visibility and awareness of the crossing. These treatments include crosswalks, signs and bollards.

Table 51 – St	Table 51 – Street Crossing Cost Estimates, Low and High						
	Price per Linear Foot (Low)	Source (Low)	Price per Linear Foot (High)	Source (High)			
Crosswalks	\$384	Ore., 2008 - Eugene Pedestrian and Bicycle Facility Design Toolkit	\$1,500	Neb., 2010 - Bids.com			
Signs	\$150	Calif., 2010 - Lake Tahoe Region Bicycle and Pedestrian Plan	\$2,000	Calif., 2010 - Lake Tahoe Region Bicycle and Pedestrian Plan			
Bollards	\$500	Pa., 2017 - Gibson-Thomas Engineering Sheepskin Estimates	\$1,500	Mass., 2010 - Bids.com			
Warning beacons	\$15,000 per pair	Pa., 2017 - Gibson-Thomas Engineering Sheepskin Estimates	\$15,000	Pa., 2017 - Gibson-Thomas Engineering Sheepskin Estimates			

TRAILHEADS

There are several trailheads along the P2P corridor that could use a few additional improvements for public usability. New trailheads are also needed at several locations. These trailheads can be added or upgraded using elements included in the cost estimates below.

Table 52 – Tra	Table 52 – Trailhead Cost Estimates, Low and High						
	Price per Linear Foot (Low)	Source (Low)	Price per Linear Foot (High)	Source (High)			
Directional totems	\$2,500	W.Va., 2014 - Mon River Trail Cost	\$5,000	W.Va., 2014 - Mon River Trail Cost			
Toilet	\$20,000	W.Va., 2014 - Mon River Trail Cost	\$25,000	W.Va., 2014 - Mon River Trail Cost			
Benches	\$600	N.C., 2007 - Norwood Pedestrian Plan	\$2,000	Colo., 2011 - Wheat Ridge Bicycle and Pedestrian Conceptual Design and Cost Estimates			
Trailhead signage	\$150	Calif., 2010 - Lake Tahoe Region Bicycle and Pedestrian Plan	\$2,000	Calif., 2010 - Lake Tahoe Region Bicycle and Pedestrian Plan			
Parking area	\$35,000	W.Va., 2014 - Mon River Trail Cost	\$50,000	W.Va., 2014 - Mon River Trail Cost			

FENCING

Where fencing is needed to assuage private property owners when a new trail is built adjacent to their property, it is typically constructed using chain-link fencing at about 6 feet high. More attractive fencing options are available for a higher price, and trail managers are encouraged to pursue those options for a more aesthetically pleasing screening technique.

RESURFACING

The cost estimates for resurfacing asphalt trails and the high estimate for crushed stone trails are shown on a per-mile basis. The low estimates for resurfacing crushed stone trails use a price per ton of crushed stone, which also includes delivery and compaction. The Deckers Creek Trail resurfacing project showed that approximately 315 tons of crushed stone were needed to resurface 1 mile of trail, which is how the estimates in this report were gathered (see Table 54).

7	Table 53 – Fencing Cost Estimates, Low and High						
		Price per Linear Foot (Low)	Source (Low)	Price per Linear Foot (High)	Source (High)		
	Fencing (6-foot-high, chain-link)	\$15.25	Ind., 2016 - bids.com	\$48.50	Ind., 2016 - bids.com		

Table 54 – Trail Resurfacing Cost Estimates, Low and High						
	Price per Linear Foot (Low)	Source (Low)	Price per Linear Foot (High)	Source (High)		
Asphalt, 10 feet wide	\$118,093	N.C., 2007 - Norwood Pedestrian Plan	\$167,746	N.C., 2007 - Norwood Pedestrian Plan		
Asphalt, 12 feet wide	\$141,711	N.C., 2007 - Norwood Pedestrian Plan	\$201,295	N.C., 2007 - Norwood Pedestrian Plan		
Crushed stone	\$8,532 (\$27/ton x 316 tons/mile)	W.Va., 2016 - Deckers Creek Resurfacing	\$83,333	W.Va., 2016 - North Bend Rail Trail Resurfacing		

PHYSICAL SEPARATION

Where the trail is directly adjacent to the roadway, some type of physical separation is strongly encouraged to increase the real and perceived safety for trail users. Curb and railing are two physical improvements that can be used to increase safety, depending on the height and location of the trail in relation to the road. Delineators are also an option, though they provide less protection from moving

traffic as they are designed to bend on impact with a vehicle.

SLOPE STABILIZATION

There are two sections along the corridor in West Virginia that will require slope stabilization before a trail can be constructed: one in Clarksburg and one in Parkersburg. Both sections are approximately 1,000 feet in length. Stabilization services could be donated by a local construction firm, an energy utility or the National Guard, which would render these estimates moot. The estimate below (see Table 56) is taken from a road stabilization project and is likely inflated compared to the actual costs of stabilizing a slope to construct a trail.

Table 55 – Trail Separation Cost Estimates, Low and High					
	Price per Linear Foot (Low)	Source (Low)	Price per Linear Foot (High)	Source (High)	
Concrete curb	\$6.55	Ga., 2010 - Bids.com	\$13.37	Iowa, 2010 - Bids.com	
Railing	\$88.62	Colo., 2010 - Bids.com	\$200	Idaho, 2010 - Average Unit Prices for Standard Bid Items	
Delineators	\$45	U.S., 2017 - Uline.com	\$75	U.S., 2017 - Uline.com	

Table 56 – Slope Stabilization Cost Estimates, Low and High					
Price per Source Price per Linear Linear Foot (Low) Foot (High)					
Stabilize slope	\$323	Wash., 2001 - Chelan County Road Project Estimate	\$387	Wash., 2001 - Chelan County Road Project Estimate	

OTHER

Other trail amenities that would enhance the P2P corridor include relocating utility poles out of the trail pathway, adding sharrows to on-street sections, and widening roadways and pathways to better accommodate trail traffic.

Table 57 – Other Trail Amenity Cost Estimates, Low and High						
	Price per Linear Foot (Low)	Source (Low)	Price per Linear Foot (High)	Source (High)		
Relocate utility pole	\$4,000	U.S., 2017 - gardenweb.com	\$5,000	U.S., 2017 - gardenweb.com		
Add sharrows	\$300	Md., 2015 - Rockville Bikeway Project Bids	\$375	Pa., 2017 - Gibson- Thomas Engineering Sheepskin Estimates		
Widen roadway (additional 10 feet)	\$101.64	Ohio, 2010 - Bids.com	\$813.13	Ohio, 2010 - Bids.com		
Widen concrete path (additional 3 feet)	\$18.76	Ohio, 2010 - Bids.com	\$58.97	Ohio, 2010 - Bids.com		

APPENDIX B - DESIGN GUIDANCE

DESIGN GUIDANCE

Not all trails are alike. Some trails take travelers through quiet, forested areas without population centers for miles, while others navigate urban and commercial areas and require occasional interactions with automobiles. As such, trails need to be designed accordingly. This section highlights some of the design guidance for trails along the P2P corridor. RTC encourages individual jurisdictions and trail managers to work with local trail users to design a trail that best suits their needs, pulling from the suggested guidance below.

Additional guidance is available in a variety of documents, including (listed by most recent):

- "Small Town and Rural Multimodal Networks"— Federal Highway Administration (FHWA), 2016
- "Urban Bikeway Design Guide"—National Association of City Transportation Officials (NACTO), 2014
- "Guide for the Development of Bicycle Facilities"— American Association of State Highway and Transportation Officials (AASHTO), 2012

- "Public Rights-of-Way Accessibility Guidelines"— United States Access Board, 2007
- "Guide for the Planning, Design, and Operation of Pedestrian Facilities"—AASHTO, 2004
- "Trails for the Twenty-First Century: Planning, Design, and Management Manual for Multi-Use Trails"—RTC, 2001

TRAIL CONSTRUCTION

A trail should be a minimum width of 10 to 12 feet in urban areas and places with more bicycle traffic. A width of 8 feet is allowable only in short, physically constrained segments. There should also be a 2-foot shoulder on each side of the path that allows for clearance of signposts and other vertical elements.

Choosing a trail surface depends on several factors, including accessibility, desired character (urban or rural), available funding and stormwater management. Table 58, below, is adapted from "Trails for the Twenty-First Century" and provides the life span, advantages and disadvantages of each surface material type.

Table 58 – Lifespan and Characteristics of Trail Surface Types							
Surface Material	Life Span	Advantages	Disadvantages				
Asphalt	7-15 years	Hard, smooth surface; supports most types of use; all-weather; smooth surface to comply with the Americans with Disabilities Act (ADA) access guidelines; low maintenance	High installation and repair costs; not a natural surface; heavy construction vehicles need access; requires stormwater management consideration				
Concrete	20+ years	Hard, smooth surface; supports most types of use; all-weather; smooth surface to comply with ADA access guidelines; low maintenance	High installation and repair costs; not a natural surface; heavy construction vehicles need access; requires stormwater management consideration				
Granular/ crushed stone	7-10 years	Soft but firm surface; natural material; moderate cost; supports most types of use	Surface can rut and erode with heavy rainfall; regular maintenance needed to keep a consistent surface; replenishing stone may be a long-term expense				
Native soil	Depends on local conditions and use	Natural material; lowest cost; low maintenance; easiest for volunteers to build and maintain	Dusty; ruts when wet; not an all-weather surface; can be uneven and bumpy; possibly not accessible				

APPENDIX B - DESIGN GUIDANCE



The bridge crossing Elk Creek in Clarksburg, West Virginia, can be retrofitted for bicycle and pedestrian use. | Photo courtesy RTC

Additional surface types (wood chips, recycled materials, etc.) are not explored in Table 58, as they do not meet the goal of maintaining an open trail for walking and biking in all but the worst of conditions at a reasonable price.

For more details on surface types and subsurface requirements, see Chapter 3 – Designing Your Trail in "Trails for the Twenty-First Century."

BRIDGES

Railroads were often built in the most direct line possible, frequently spanning rivers, creeks and other bodies of water. If a trail manager is lucky, the railroad will have left old bridges intact after abandoning the line. Such bridges are often in some state of disrepair but only need moderate upgrades to be made usable for non-motorized trail use. A certified structural engineer will be able to determine what, if any, upgrades are needed to ensure bridge stability for years to come.

Retrofitting a former rail bridge requires additional precautions for trail users. If the railroad is officially abandoned, the railroad ties and any ballast should be removed, and a new surface added to the bridge. If the railroad is railbanked, a wooden structure can be created to fit

on top of the existing rail lines to save the step of potentially reinstalling rail in the future. Trail bridges also require adding some type of railing or low walls, if they do not exist already, to prevent users from slipping off the bridge.

If a trail needs to cross a body of water where a bridge has been removed or never existed, several options exist. A new bridge could be constructed, depending on access, available funds and environmental constraints. If the crossing is small, an older bridge or similar structure no longer in service may possibly be repurposed as a bridge at a fraction of the price of a new bridge. A certified structural engineer should be consulted to ensure the integrity of bridges old and new.

TRAILHEADS

Trail users need to be able to access the trail from a variety of locations. Successful trails make these access points convenient and attractive. Parking lots should be provided at major trail access points, featuring clearly defined entrances, exits and parking spaces. For planning purposes, parking lots should be planned for 300 to 350 square feet per parking space, with at least one larger, accessible space for users with disabilities.

APPENDIX B - DESIGN GUIDANCE



MUTCD signs W11-2, W11-15, W11-15P and W16-7P should be used at locations where the trail crosses a public roadway. | Photo courtesy FHWA



An example of a flashing beacon to alert drivers of the presence of crossing pedestrians | Photo courtesy Institute of Transportation Engineers

Public restrooms are another important component of trailheads. Major access points would benefit from the development of full-service restrooms with running water and flushing toilets where possible. At smaller trailheads or places where plumbing is not practicable, portable toilets are a convenient option. Water fountains are also encouraged at locations with access to plumbing. Where plumbing is not possible, trails can use signs pointing users to nearby parks or businesses that agree to provide water to trail users.

Where possible, benches and shelters should be provided as resting and gathering areas for trail users. Benches are ideally placed in the shade. Shelters should be at least 3 to 5 feet from the trail's edge and include picnic tables. Bike racks are advised at trailheads, particularly those with shelters and restrooms. Secure bike racks that allow users to lock the frame of their bicycle are inexpensive. Such racks include the popular "u"-shaped racks. Artistic racks bearing the shapes of a local feature are a great way to incorporate public art to the trail experience.

Other important trailhead elements include signage indicating that the trailhead exists and outlining rules and etiquette for trail users. Maps let trail users know where they are in the system and where they can find amenities like bike shops, restaurants and lodging. Maps can take the form of

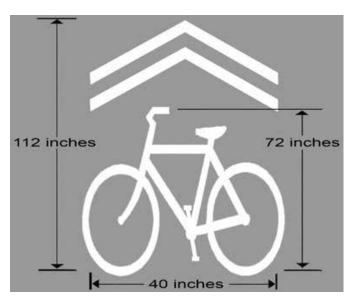
paper maps held in some type of box or a laminated/protected map on a kiosk. Landscaping is also important to make the trailhead an attractive and desirable place to spend time.

STREET CROSSINGS

Trails occasionally must cross public streets with various speeds and traffic v

olumes. Ensuring that these crossings are well marked and visible is important to maintaining safety and a positive experience for trail users.

Except in areas with extremely low traffic volumes, crosswalks are highly encouraged at locations where the trail crosses a public street. Crosswalks should be of the ladder variety, rather than two parallel lines, to be visible from a standard approaching vehicle. Manual on Uniform Traffic Control Devices (MUTCD) signs W11-2, W11-15, W11-15P and W16-7P should be used to warn approaching vehicles of the crossing location. W11-15P signs should also be used on the trail to warn trail users of the upcoming crossing.



Sharrows can be used on low-volume, low-speed roads where there is no off-street trail option | Courtesy FHWA

In locations with a combination of particularly high speeds (35 to 40 mph or above) and high traffic volumes, median-enhanced crosswalks should be used. The median should be at least 8 feet wide to allow for a person on a bicycle to queue. Rectangular rapid flashing beacons should also be considered where sight lines make the crossing less visible. Medians and flashing beacons are what the FHWA calls "Proven Safety Countermeasures" and should be seriously considered, particularly at crossings in urban areas like Parkersburg, Clarksburg and Fairmont.

The FHWA also provides guidance on visual obstructions at trail crossings, stating that: "Landscaping, barriers, or other visual obstructions should be low to provide unobstructed sight of the crossings from [a] major street. Both motorists and path users should have a clear and unobstructed view of each other at intersections and driveways."

At locations where the trail crosses over or under public streets, signage should be provided to indicate the name of the road being crossed. Small location signs can provide trail users a better clue as to where they are and make the experience more user-friendly.

ON-STREET SECTIONS

At certain points along the P2P corridor, the trail will need to either briefly share the road with vehicles or run directly alongside vehicles. Sharing the road on a trail like this is only an option for very brief stretches where off-street connections are unavailable. In those cases, sidewalks, bike lanes and/or sharrows should be provided to accommodate all users.

Sidewalks should maintain a minimum of 5 feet of clearance, free from obstructions such as signs and utility poles, to ensure safe passage by wheelchair users. Sidewalks should also be at a level grade and of a smooth surface.

Bike lanes should be provided where possible to encourage people to ride their bicycles on the street rather than the sidewalk, where bicyclists experience conflicts with pedestrians, are less visible, and are more likely to get into a crash with turning motor vehicle traffic. Bike lanes are separated lanes within the roadway, often designated by paint, and should be a minimum of 5 feet wide. Where possible, bike lanes should also be protected from moving traffic. Protection can be provided through measures including parked vehicles, flexible delineator posts, hard bollards or raised curbs. Physical protection can continue the trail-like experience for a bicyclist using on-street sections.

Where bike lanes are not possible, shared-lane markings should be utilized. Sharrows provide visual placement cues to both bicyclists and drivers to prevent conflicts on the roadway. Additional signage indicating the trail or corridor name should also be used to indicate shared-use bike routes.

Guidance on the design and placement of bike lanes and sharrows can be found in the FHWA "Guide for the Development of Bicycle Facilities" or the NACTO "Urban Bikeway Design Guide."

RESURFACING

Trails need to be resurfaced after the useful life of the original surface has passed. Natural surface trails (crushed stone, native soil, etc.) should be resurfaced every 20 years, while asphalt and concrete trails should be resurfaced every 10 years. Trails experiencing greater use or suffering the effects of significant weather or natural events should be resurfaced more frequently. The cost of resurfacing should be factored into the cost of trail construction and planned for by the trail's managing entity.

APPENDIX C - FUNDING SOURCES

FUNDING SOURCES

FEDERAL AND STATE FUNDING

Transportation Alternatives Set-Aside Program

FHWA, through WVDOT, administers the Transportation Alternatives Set-Aside Program (TAP). The program awards funding for nontraditional transportation projects, including design and construction of trails.

Eligible entities include local governments, regional transportation authorities, transit agencies, natural resource or public land agencies, school districts, local education agencies or schools, tribal governments, or any other local or regional governmental entity with responsibility for transportation or recreational trails (other than a metropolitan planning organization or state agency). State natural resources and public land entities are eligible. Aside from being an eligible entity, the project must have a relationship to surface transportation and "be one of the qualifying activities set by law," according to TAP.

Notably, there is no longer a maximum amount awarded by TAP grants. There is generally an 80/20 match requirement, meaning the grant covers 80 percent of costs, with the remaining 20 percent secured from another source. Match requirements may vary based upon the Appalachian Regional Commission's (ARC) county designation. If a county is classified as an ARC-distressed county or an ARC-at-risk county, the match requirement may increase to meet the needs of the county. The Intent to Apply is usually due in November, with the full application usually due in January. For more information, please refer to the TAP website or contact the TAP Program Coordinator at 304.558.3783.⁴⁵

Recreational Trails Program

FHWA also administers the Recreational Trails Program (RTP) through WVDOT. RTP provides funding opportunities for states to build and maintain trails and trail-related facilities. A Recreational Trails Advisory Board appointed by the governor typically reviews applications, then recommends awards to the state secretary of transportation.

Eligible entities include nonprofit organizations, local governments, regional transportation authorities, transit authorities, natural resource or public land agencies, school districts, local education agencies or schools, tribal governments, or any other local or regional governmental entity with responsibility for transportation or recreational trails (other than a metropolitan planning organization or state agency) that the state determines as eligible.

A maximum of \$150,000 is awarded under the RTP. There is generally an 80/20 match requirement, meaning the grant covers 80 percent of costs, with the remaining 20 percent secured from another source. Match requirements may vary based upon ARC county designation. If a county is classified as an ARC-distressed county or an ARC-atrisk county, the match requirement may increase to meet the needs of the county. The Intent to Apply is usually due in November, with full applications usually due in January. For more information, please refer to the RTP website or contact the RTP Grant Administration Unit Leader at 304.558.9292.46

Flex-E-Grant Program

The Flex-E-Grant program is a joint grant program administered through the West Virginia Development Office and ARC, with support from the Claude Worthington Benedum Foundation. The Flex-E-Grant program helps increase the capacity and leadership skills

^{45. &}quot;Transportation Alternatives Program (TAP)," West Virginia Department of Transportation, accessed March 23, 2018. http://transportation.wv.gov/highways/programplanning/planning/grant_administration/transportationalternativesprogram/Pages/default.aspx..

^{46. &}quot;Recreational Trails Fund Program (RTP)," West Virginia Department of Transportation, accessed March 23, 2018. http://transportation.wv.gov/highways/programplanning/planning/grant_administration/recreationaltrails/Pages/default.aspx.

APPENDIX C - FUNDING SOURCES

of individuals, institutions and communities throughout West Virginia. The program focuses specifically on assisting the state's ARC-designated distressed counties. In 2017, a Flex-E-Grant application workshop aided applicants throughout the grant application process.⁴⁷

Eligible applicants include nonprofit or other public agencies, colleges and universities (and their affiliates) that operate programs and/or curricula related to leadership or capacity-building activities; regional planning and development councils; or a combination of any of the above.

Grants are awarded up to \$10,000. The program states that requests exceeding \$10,000 in total project cost "may be considered for projects that can secure the required match and show significant economic and/or community development impact or address a significant and critical need." Match requirements are based upon West Virginia's ARC-designated distressed counties (please see the points below for further detail). The deadline for the Flex-E-Grant program is early- to mid-January. For more information, please refer to the Flex-E-Grant website or contact the West Virginia Development Office at 304.558.2234.

Guidelines on West Virginia's ARC-designated distressed counties:

- For projects in distressed counties, the maximum Flex-E-Grant participation rate will be 90 percent of the total project cost.
- For projects in at-risk counties, the maximum Flex-E-Grant participation rate will be 85 percent of the total project cost.
- For projects in transitional or competitive counties, the maximum participation rate will be 80 percent of the total project cost.
- For projects that contain a combination of distressed, at-risk and/or transitional counties, the following match guidelines apply:

- If the project area contains one at-risk county, the maximum Flex-E-Grant participation rate will be 85 percent of the total project cost.
- If the project area contains one transitional or competitive county, the maximum Flex-E-Grant participation rate will be 80 percent of the total project cost.

Land and Water Conservation Fund

The West Virginia Development Office administers the Land and Water Conservation Fund (LWCF) program. LWCF provides federal funding for acquisition or development of public outdoor recreational spaces.

Eligible entities include local government, independent park boards, commissions, districts and state government. Project proposals must be consistent with West Virginia's Statewide Comprehensive Outdoor Recreation Plan, or SCORP. Priority is given to proposals that include park renovations or expansions promoting active lifestyles, development of community cores, increased attraction and retention of visitors, development of trailheads, development of brownfield renewal efforts or preservation of natural areas to achieve community health objectives.

A maximum of \$400,000 is awarded by LWCF. There is a 50/50 match requirement, meaning the grant covers 50 percent of costs, with the remaining 50 percent secured from another source. The deadline to apply for the LWCF program is early- to mid-April. For more information, please refer to the LWCF website or contact the West Virginia Development Office at 800.982.3386 or 304.558.4010.⁴⁸

^{47. &}quot;Flex-E-Grant," West Virginia Department of Commerce, accessed March 23, 2018. http://www.wvcommerce.org/people/communityresources/financialresources/flexegrant/default.aspx.

^{48. &}quot;Land and Water Conservation Fund," West Virginia Department of Commerce, accessed March 23, 2018. http://www.wvcommerce.org/people/communityresources/infrastructure/landandwaterconservationfund/default.aspx.

APPENDIX C - FUNDING SOURCES

Economic Development Administration

Among the various programs administered by the U.S. Department of Commerce's Economic Development Administration (EDA) is the Public Works program. The investment program provides funding with the goal of empowering distressed communities to revitalize, expand and upgrade their physical infrastructure. Among other uses, EDA Public Works funds can help redevelop brownfield sites and increase eco-industrial development. The EDA also offers limited local technical assistance to distressed areas in times of need. Learn more at www.eda.gov.

PRIVATE FOUNDATIONS

Many foundations and companies provide grants for trail and greenway projects, open space preservation, community development and community health. To obtain larger contributions from foundations or corporations, you will need a full-fledged funding proposal that illustrates the community-wide value of the trail and describes how it will be developed and maintained. A few foundations that serve West Virginia communities in the P2P corridor include:

Benedum Foundation

http://benedum.org

Dominion Foundation

www.dominionenergy.com/community/dominionenergy-charitable-foundation

EQT Foundation

www.eqt.com/our-communities/eqt-foundation

APPENDIX D - RESOLUTION AND LETTER OF SUPPORT TEMPLATES

RESOLUTION TEMPLATE, FOR USE BY MUNICIPALITIES AND OTHER GOVERNMENTAL ENTITIES

Industrial Heartland Trails Coalition: A Resolution

Whereas, the **Industrial Heartland Trails Coalition** is working on a planned, multi-county, multi-state trail system (formerly known as P32+ Regional Trails Network). The trail network encompasses a 51-county, four-state area including West Virginia, Ohio, Pennsylvania and New York; and

Whereas, "trails" refer to shared-use paths (also known as rail-trails, greenways or pathways), defined as multiple-use transportation and recreation corridors typically allowing hiking, biking and other non-motorized uses to form active transportation networks; and

Whereas, the **Network** includes more than 1,500 miles of mapped trails, more than 50 percent of which are complete, including the renowned Great Allegheny Passage (GAP) trail from Pittsburgh, Pennsylvania, to Cumberland, Maryland; and

Whereas, the emerging Parkersburg-to-Pittsburgh corridor is key to this regional vision; and

Whereas, many communities, agencies and trail advocates in the region have taken a lead in planning and building local trails and greenways, efforts that can be greatly enhanced by being connected to a larger regional network of shared use paths; and

Whereas, the GAP trail has demonstrated that trails are significant economic generators, hosting more than 800,000 riders per year and generating more than \$40 million in direct annual spending by trail users; and

Whereas, property values of land parcels adjacent to and near regional shared-use paths have increased; and

Whereas, regional shared-use paths serve as a critical transportation corridor for residents, commuters and visitors; and

Whereas, regional shared-use paths contribute to active, healthy lifestyles for people of all ages and abilities; and

Whereas, shared-use paths foster the conversion of degraded, unproductive land to more productive land uses; and

Whereas, shared-use paths allow communities to celebrate and share their rich cultural heritage; and

Whereas, regional shared-use paths have become an important source of community and regional pride; and

Now, therefore, be it resolved, that the [city/county of	_, acting by its
Mayor/Commissioner and Council/Commission], will work collaboratively to support the vision of a	shared-use trail
system between communities along the Parkersburg-to-Pittsburgh corridor (P2P), closing the gaps and	d helping create
one of the longest connected systems of multiuse trails in the United States.	

Entered:		
Name, Title		
Name, Title		
Name, Title		
Attest:		
Name, Title		

APPENDIX D - RESOLUTION AND LETTER OF SUPPORT TEMPLATES

LETTER OF SUPPORT TEMPLATE, FOR USE BY NON-GOVERNMENTAL ORGANIZATIONS

[Letterhead if available]

[Date]

Dear Industrial Heartland Trails Coalition,

[Organization/agency name] is pleased to support the Industrial Heartland Trails Coalition's (IHTC) vision of a planned shared-use trail network encompassing a 51-county, four-state area including West Virginia, Ohio, Pennsylvania and New York. In particular, the emerging Parkersburg-to-Pittsburgh corridor (P2P) is key to this regional vision and our [organization's/agency's] mission of [....insert a statement about goals or mission that aligns with the IHTC project].

[Optional: Insert text that provides more description of your organization or agency's role in this project. Feel free to utilize the statements below, which were also used in the Resolution template.]

- Within this network, "trails" refer to shared-use paths (also known as rail-trails, greenways or pathways), defined as
 multiple-use transportation and recreation corridors typically allowing hiking, biking and other non-motorized uses to
 form active transportation networks.
- The trail network includes more than 1,500 miles of mapped trails, more than 50 percent of which are complete, including the renowned Great Allegheny Passage (GAP) trail from Pittsburgh, Pennsylvania, to Cumberland, Maryland.
- The emerging Parkersburg-to-Pittsburgh corridor is key to this regional vision.
- Many communities, agencies and trail advocates in the region have taken a lead in planning and building local trails and
 greenways, efforts which can be greatly enhanced by being connected to a larger regional network of shared-use paths.
- The GAP trail has demonstrated that trails are significant economic generators, hosting more than 800,000 users per
 year and generating more than \$40 million in direct annual spending by trail users.
- The benefits of these facilities are numerous and well documented. Many places have seen property values of land parcels adjacent to and near regional shared-use paths increase. These shared-use paths also serve as a critical transportation corridor for residents, commuters and visitors, contributing to active, healthy lifestyles for people of all ages and abilities. Trails also foster the conversion of degraded, unproductive land to more productive land uses and allow communities to celebrate and share their rich cultural heritage. Where developed, these trails have become an important source of community and regional pride.

[Name of organization/agency] fully supports and intends to work collaboratively with IHTC to advance the completion of a shared-use trail system between communities along the Parkersburg-to-Pittsburgh corridor, closing the gaps and helping create one of the longest connected systems of multiuse trails in the United States.

Sincerely,
[Name]
[Title]
[Organization/Agency]





railstotrails.org/ihtc