
EMERALD VIEW PARK TRAIL PLAN

THE MOUNT WASHINGTON COMMUNITY DEVELOPMENT CORPORATION



JANUARY 2010

Prologue

The Emerald View Park Trail Plan is a 235-acre verdant oasis that flanks the slopes of Mount Washington. The Park's wooded hillsides are some of the most photographed that can be found in urban America, and the Park is the City's most visited park luring more than one million visitors annually. Most are drawn to the promenade situated at the top of Mount Washington's north slope because of the breath-taking Downtown Pittsburgh views and the emerald strands of the City's three rivers. However, some adventurous sightseers and many neighborhood residents visit the Byway Park because of its lesser known but equally stunning features – its trails, forests and wildlife. Collectively, this triad creates a wilderness unlike any found in western Pennsylvania. Within it, residents walk their dogs, hikers connect with nature, bikers catch an adrenalin rush and poets seek inspiration.

The Park's wilderness is the type of place that we all need; and therein lies the most amazing secret – it's not a far-away place. The Park is literally within the shadows of downtown skyscrapers and within a few city blocks of more than 60,000 residents. The Emerald View Park Trail Plan may never be as large as Frick Park nor will it rival Ohiopyle State Park's natural wonders. However, people love the place because it's so accessible, so diverse, so therapeutic – so improbable. It's for these reasons that the Park's restoration and enhancement is needed to protect it from its vulnerabilities and to continue to provide a place for all of us.

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Background

The Emerald View Park Trail Plan was created in 2005 by a unanimous vote of the Pittsburgh City Council and was declared Pittsburgh's fifth regional park in 2007 by Mayor Ravenstahl. Totalling over 235 acres, and growing, the Park includes multiple National Historic Landmarks, a State-designated Scenic Byway, several developed neighborhood parks as well as extensive tracts of wooded hillsides that surround the neighborhoods of Allentown, Mt. Washington and Duquesne Heights.

Former mining activities on the mountain resulted in the clear-cutting of large portions of the existing hillside forest and reduced much of the area into a barren wasteland. As mining activities eventually ceased, the once denuded hillsides were left to reforest over time. The overall Park is currently formed by several large contiguous and non-contiguous parcels as well as a patchwork of greenways, utility corridors, easements and right-of-ways. The Park stretches from Grand View Park, through the 'Saddle' and along the Grandview Overlook areas, around the Duquesne Heights Greenway to Olympia Park and along the PA Route 51 corridor to Mount Washington Park and the South Busway.

Purpose of the Trail Plan

The City and the Mount Washington Community Development Corporation (MWCDC) recognize that the Emerald View Park Trail Plan is an opportunity to advance Pittsburgh's overall "green renaissance." The Park can become an economic generator by providing an amenity which attracts

visitors, businesses and residents to invest in the three neighborhoods as well as boost property values within the hilltop neighborhoods. The Park can also provide recreational amenities which promote both physical and spiritual health and increase social capital while decreasing crime. Today, within the Park, there are over 10 miles of trails - many of which can serve as the foundation for additional recreational and leisure opportunities. Moreover, the Park can serve as a vital environmental asset which stabilizes the steep slopes, reduces urban runoff and filters groundwater, decreases heat effects of the urban environment, absorbs airborne pollutants and provides valuable habitat for wildlife.

Public Involvement

Through focus groups and public forums, the public was involved extensively throughout the trail planning process. The continuous community involvement allowed MW/CDC to collect input/feedback from potential stakeholders. The public's feedback and concerns were taken into consideration and, when possible, incorporated into the final Trail Plan and its subsequent implementation strategy.

Key Opportunities and Challenges

A series of opportunities and challenges to the trail network's development emerged as the Trail Plan was conceptualized. These factors included:

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- Numerous regional destinations or trail connections such as Station Square, the Three Rivers Heritage Trail, Beechview-Seldom Seen Greenway and the Great Allegheny Passage, lie within close proximity to Mt. Washington.
- Roughly 97% of the hilltop's residents are located within 1/3 of mile of the Byway Park.
- There are several unique geological, cultural and historical features throughout the Park and in its abutting neighborhoods. These features include Civil War sites, coke ovens, mines and cliffs.
- Springs, seeps, rock outcrops, steep slopes and dirt bikes create unique obstacles to trail development, maintenance and use.
- There are several existing transient encampments within the Park; moreover, there are numerous locations where homeless congregate throughout the day.
- The existing woodlands suffer from a long history of dumping as well as the impacts of invasive plants.
- Providing safe pedestrian and bicycle links across and along heavily trafficked roadways such as Shaler, Woodruff, Grandview and East Sycamore Streets are a challenge.

Goals

A 'goal' embodies the desired outcome or achievement from an idea toward which effort is directed. Collectively, the Trail Plan's goals are as follows:

- #1 To establish connections between the trail network and other regional/city trails as well

as destinations, local commercial districts, recreational amenities and neighborhoods.

#2 To create a trail network that provides a multitude of experiences for various recreational users at all ages, skill levels and during all seasons.

#3 To develop a sustainable trail network that coincides with the Park's established ecological goals.

Vision for the Trail Plan

The vision for the Park's trail system is to develop a continuous Main Trail circumscribing the three neighborhoods and a series of Secondary Trail loops that directly connect to the area's residential areas, commercial nodes and cultural destinations. Upon completion, the trail network will stretch over 19 miles in length. The Main Trail, approximately 9 miles long, provides walker, hikers and bikers with a variety of trail experiences including urban promenades, natural open space areas, manicured parklands, etc... All major trailheads and parking areas are located within close proximity to the Main Trail. The Secondary Trails provide users with additional experiences including neighborhood streetscapes, "wilderness" areas and unique environmental features accessible only via boardwalks.

Several "context-specific" trail typologies or types will be combined to create both the Main and Secondary Trails. These typologies are distinguished by their construction materials, width and gradients. Consequently, the typologies provide a range of accessibility levels that uniquely

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challenge users both physically and mentally. The trail network will be developed with the intent of providing opportunities to interpret the neighborhoods' natural resources and cultural heritage, particularly its unique natural features, distinct historic landmarks and potential art installations.

Finally, a comprehensive signage system will assist pedestrians, bicyclists, motorists, tourists, etc. in locating trails, destinations, overlooks, designated interpretive areas and other important park information. The system consists of primary site identity signs, boundary signage, vehicular/on-street directional signs, trailhead sign panels, neighborhood amenity signs, interpretive signs and trail directional signs.

Costs and Phasing

Due to its scale and complexity, the trail network, as envisioned in the Trail Plan, will need to occur over a period of time. For this reason, the Trail Plan has been broken into 10 construction or implementation phases which most likely will span over a 17-19 year timeframe. Within any given phase, there are multiple projects that often can be completed independently from one another as funding or demand may dictate.

The initial phases are situated adjacent to existing park facilities and allow new trails to build upon the existing infrastructure as well as established neighborhood access. Therefore, the initial phases propose the construction of a series of small demonstration projects. These lower cost installations are designed to be quickly constructed and anticipate hands-on community involvement.

The following summary table outlines the general or “ballpark” costs for developing the overall trail network. The cost projections assume that all work will be completed by a qualified Trail Contractor with skilled construction laborers. This would include all work involving construction of trailhead parking areas, concrete construction and rehabilitation work, trail/road crossing construction, major signage installation, etc. However, where appropriate, untrained and/or unskilled volunteer labor can be utilized to reduce the cost of implementation.

Anticipated Development Costs by Phase

	Cost	Duration
Phase 1	\$143,000	1 Year
Phase 2	\$332,000	2 Years
Phase 3	\$243,000	1 Year
Phase 4	\$296,000	2 Years
Phase 5	\$908,000	3-4 Years
Phase 6	\$443,000	3-4 Years
Phase 7	\$381,000	2 Years
Phase 8	\$185,000	1 Year
Phase 9	\$92,000	1 Year
Phase 10	\$57,000	1 Year
Total:	\$3,080,000	17-19 Years

Closing Thoughts

The Trail Plan for the Emerald View Park Trail Plan represents the next logical step in Pittsburgh’s “green renaissance” journey. Several American cities such as Portland, Austin, Boulder and Asheville are revered for their physical settings and their commitment towards recreation and resource conservation. However, none of these cities has the opportunity that Pittsburgh possesses – a vibrant urban woodland as its front door. Nowhere in urban America can one find or experience a place like this Park. The small investment in the Trail Plan’s implementation will pay countless physical, ecological, economic and spiritual dividends to residents and tourist alike.

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Emerald View Park Trail Plan

The Emerald View Park Trail Plan was created in 2005 by a unanimous vote of the Pittsburgh City Council, and was declared Pittsburgh's Fifth Regional Park in 2007 by Mayor Ravenstahl. Totalling over 235 acres, the Park includes multiple National Historic Landmarks, a State designated Scenic Byway, several developed City Parks, as well as extensive tracts of wooded hillsides that surround the neighborhoods of Allentown, Mt. Washington and Duquesne Heights. The Park currently hosts over one million visitors annually who are drawn to the mountain to partake in the spectacular views of Downtown Pittsburgh and the adjacent river valleys. In most cases, the best vantage points are from atop Grandview Park and along Grandview Avenue. At its nearest point, the Park is approximately 2,000 feet from Station Square and the Great Allegheny Passage. Both destinations generate major tourism activity and further strengthen the vibrancy of the adjoining neighborhood.

In addition to the Park's large tourism draw, it serves as both an active and passive recreational amenity for neighborhood residents who utilize the various park facilities. Furthermore, the wooded hillsides of the Emerald View Park Trail Plan form an iconic "green" backdrop to Downtown, which is unique among American cities and reputed internationally.

The City and the Mount Washington Community Development Corporation (MWCDC) have recognized that the further enhancement and development of the Emerald View Park Trail Plan is

an opportunity to further Pittsburgh’s overall ‘green renaissance’ by transforming formerly industrial land into a premier regional park, to enhance Pittsburgh’s image and goals as a walkable city, as well as to provide a multitude of positive economic, health, cultural, social and environmental amenities/benefits to the region, City and surrounding “hilltop” neighborhoods. The future direct connections to the Great Allegheny Passage, one of Pennsylvania’s mega-greenways furthers the economic development potential that the Park can provide both the hilltop neighborhoods and the City. The Park can become an economic generator by providing an amenity which will attract visitors, businesses and residents to invest in the area, as well as boosting property values within the neighborhoods. The Park can also provide various recreational amenities which promote both physical and mental health, and increase social capital while decreasing crime. Finally, the Park can serve as a vital environmental asset which can stabilize the steep slopes, reduce urban runoff and filter groundwater, decrease the effects of the urban heat and wind shields, absorb airborne pollutants, and provide valuable habitat for native vegetation and fauna.

Consequently, the Emerald View Park Trail Plan is an opportunity to expand upon the work that began with the Western Pennsylvania Conservancy’s Master Implementation Plan and then followed by work done by Duquesne University. In this latter work, the University’s Psychology Department reviewed the impact of trails on local communities and hosted focus groups to discuss concerns about trails within the Park. The MWCDC can take strides in reaching the Park’s potential by creating a comprehensive trail

network, that provides a unique recreation and conservation resource within an urban area and which will have vast appeal to visitors, developers, businesses, as well as new and existing residents. Based upon the existing work by WPC, MW CDC and Duquesne University, the Trail Plan will provide the basis for the further advancement of regional and local recreation and conservation implementation initiatives within the Pittsburgh area.

Overview

The following section describes the general conventions guiding the data collection and analysis process used to develop the Emerald View Park Trail Plan. The process is generally described in chronological order and was iterative in nature. The overall goals and key assumptions for the planning process were continually revisited to permit reflection, refinement and synthesis of information.

In order to develop a comprehensive plan for the Emerald View Park Trail Plan trail network, first, the existing trail network was evaluated. This evaluation consisted of multiple field visits in which the Project Team walked the existing trails and, when necessary, scouted or “blazed” new trails. These field visits provided invaluable



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information regarding the current condition of the trails and surrounding woodlands, where connections were needed and existing natural and cultural assets which can be showcased as part of the trail network. From this evaluation, the Team was able to determine the opportunities and obstacles related to the development of a comprehensive trail network.

Next, the Project Team, with input from the MWDC and the public, developed a “vision” for the overall trail network. This vision included the development of one (1) continuous trail loop that circumnavigates/circumscribes the neighborhoods of Allentown, Mt. Washington and Duquesne Heights, as well as a series of secondary loops that bisect the continuous trail loop and provide linkages to various major nodes within and adjoining the Park. These nodes include existing commercial districts, neighborhood and cultural destinations. In developing these various trail loops, necessary links to “fill in the gaps” of the existing network, as well as entirely new connections were identified and then field “verified”. This was achieved by walking the new connections and recording these paths using Global Positioning System (GPS) devices. Coordinates of these potential links were then transformed into mapped routes. Once the optimal connections had been determined, the Project Team evaluated the trail network as a whole, including existing and proposed trails. The Team worked to determine which trails were most desirable and which should be eliminated because of long-term maintenance and operational issues. The outcome of this process produced the Trail Plan. Once the comprehensive trail network was established, the Project Team

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devised an implementation strategy that optimizes development. This implementation strategy includes a Phasing Plan, a project specific timetable and needed financial investments for prototypical trail improvements, as well as a series of recommendations regarding the trail network. This implementation strategy will provide MW CDC with the tools and information to take the next steps and begin short-term construction projects on the trail network, as well as the means to achieve the long-term goals of the trail network.

The public was involved extensively throughout this process through focus groups and public forums. This continuous participation provided the opportunity to acquire local input/feedback from potential stakeholders as well as from the direct beneficiaries and users of the trail network. Feedback and concerns from these public sources were taken into consideration and when possible incorporated into the final Trail Plan and Implementation Strategy.

The following narrative provides an introduction to the Emerald View Park Trail Plan, which unites the neighborhoods of Allentown, Mt. Washington and Duquesne Heights, and describes the general natural/geological characteristics, as well as cultural history/ development which has shaped the current state of the Park.

Existing Conditions

The Emerald View Park is geologically characterized by steep northern slopes with areas of exposed bedrock rising 390' from the Monongahela River valley, and then sloping more gradually down the southern side of the mountain 290' to the Saw Mill Run Valley. Originally named 'Coal Hill'; the mountain which now includes the neighborhoods of Allentown, Mt. Washington and Duquesne Heights developed along with the growth of Pittsburgh's industries during the later 1700's and throughout the 1800's. The "hilltop", originally utilized for agriculture, was settled during this period largely by immigrant populations of local mine and mill workers, resulting in vibrant and diverse neighborhoods. Many of the neighborhoods' iconic features such as the inclines, including the Monongahela (1870) and Duquesne (1877) Inclines were constructed during the boom of the Industrial Revolution. Coal mines and sandstone quarries were located along the steep hillsides where there was easy access to the valuable natural resources. Mining activities resulted in the clear-cutting of much of the existing hillside forest, and reduced much of the mountain into a barren wasteland. As mining activities slowed and eventually ceased, the once barren hillsides were left to grow wild, and along with limited

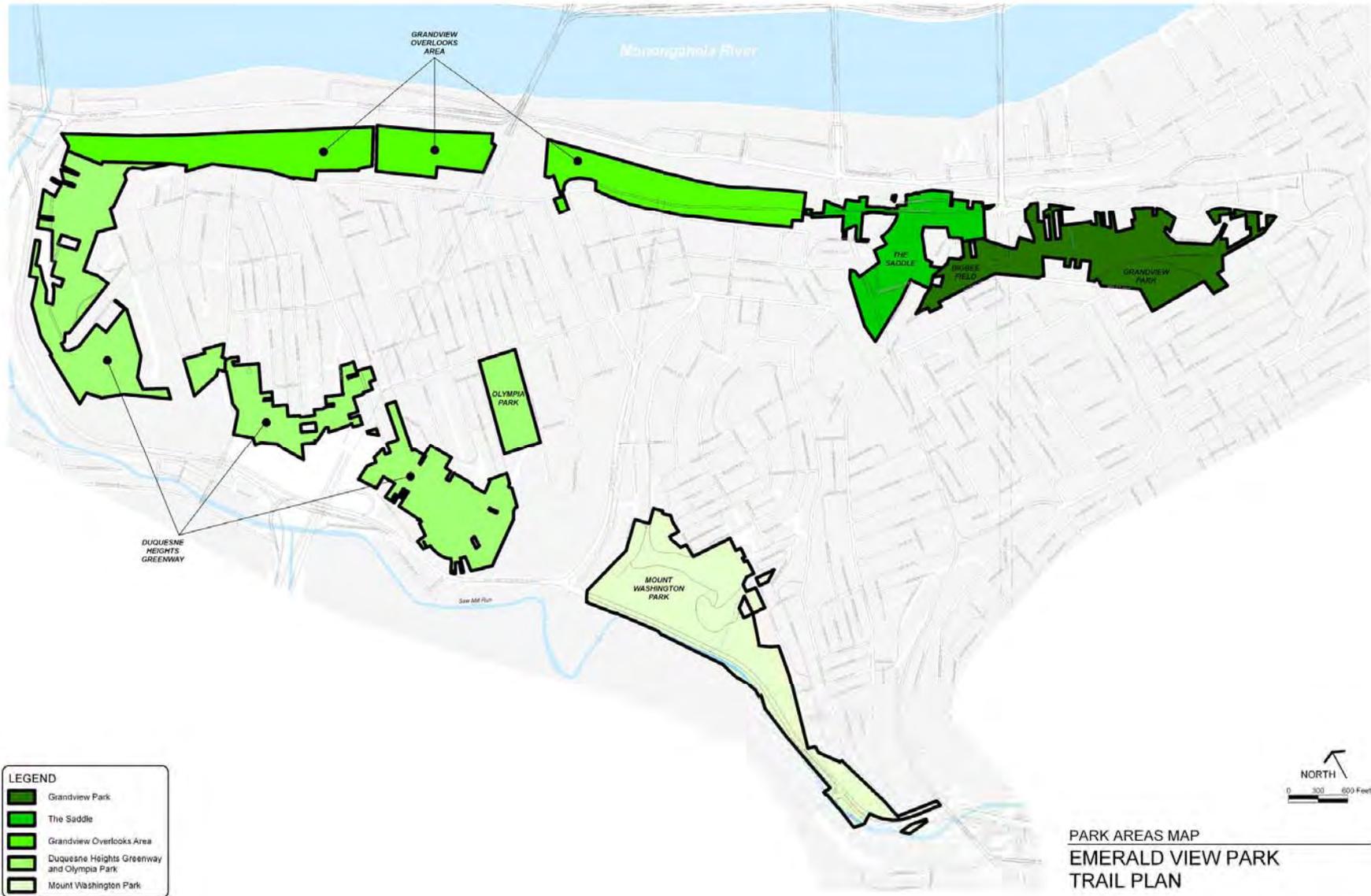
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reforestation efforts, slowly reforested over time.

The overall Park is currently formed by several large non-contiguous parcels including greenways, utility corridors, easements and right-of-ways. The Park comprises over 235 acres of these reforested hillsides from Grandview Park, through the 'Saddle' and along the Grandview Overlooks Area, around the Duquesne Heights Greenway to Olympia Park, and along the PA Route 51 corridor to Mount Washington Park and the South Busway.

For presentation purposes, the Park is geographically broken into the aforementioned five (5) distinct areas. These areas are described in greater detail as they pertain: first, to the unique natural/geological characteristics of each area, and second, to the characteristics and condition of the existing trail network in each area. The areas are as follows:

- Grandview Park
- The Saddle
- Grandview Overlooks Area
- Duquesne Heights Greenway and Olympia Park
- Mount Washington Park



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Image 1 Outcrop in Grandview Park



Image 2 Bigbee Field overlooking Downtown Pittsburgh.

Grandview Park: This area includes Grandview Park and surrounding woodlands, from McLain Street in the east to William Street in the west.

The area is generally situated on moderately sloping terrain with loose clay/shale soils. There are some areas with exposed sandstone bedrock outcrops, as well as steep narrow drainage ravines. The main developed portion of Grandview Park is situated on the high ground overlooking Downtown Pittsburgh and includes manicured lawn areas, paved pathways, sandstone walls/stairs, a playground, basketball court and an amphitheatre which has recently undergone some limited renovations. A satellite of this developed area is the existing Bigbee Field which is located on the top of the hillside adjacent to Bigbee Street and includes a partially enclosed active recreation field which is sometimes informally used as a dog park.

The MWCDC is actively conducting native view and forest restoration in the Bigbee Field area. The largely undeveloped portions of the Park are predominantly woodlands located on the slopes below the Park's developed areas, and are characterized by small to medium sized third generation forests. The trees generally grow close together and form a dense canopy. Due to this dense canopy, there is little direct sunlight and almost no understory growth throughout much of the area.

The Saddle: This area is generally described as the woodlands bound by Grandview Park in the east and Wyoming Street in the west, and includes a portion of the State's Grand View Scenic Byway along Sycamore Street. The area is defined by a

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naturally occurring topological feature called a “saddle” with moderately sloping terrain and loose clay/shale soils. The remaining woodlands are similar to those in the Grandview Park area, characterized by densely wooded third generation forest with little undergrowth. A tornado touched down in the Saddle area in 1998 and severely damaged large areas of the forest. The damage allowed several invasive species, such as knotweed and grape vine, to take hold and currently dominate large areas within the surrounding woodlands. The Saddle is also littered with dump sites, architectural ruins and remnants of past mining and coke producing activities.

Grandview Overlooks Area: This area includes the northern slopes of the mountain along the Monongahela River valley between the Saddle and the Duquesne Heights Greenway. This area includes the Wabash and Fort Pitt Tunnels, and Monongahela and Duquesne Inclines. In addition, the Grandview Avenue and P.J. McArdle Roadway sections of the State’s Grand View Scenic Byway are located in this area of the Park. The area is dominated by very steep terrain with loose rocky shale/clay soils punctuated with numerous sandstone bedrock outcrops and large exposed sandstone cliff faces. Aside from the cleared transportation corridors, formed by the various inclines and tunnels which ascend/burrow into the Overview Park’s slopes, the steep hillsides are largely forested with third generation maple forest. Unlike the woodlands in Grandview Park and the Saddle, the forests in the Grandview Overlooks Area are less dense and have moderate understory growth. The cleared transportation corridors are largely dominated by invasive species including



Image 3 View of Downtown Pittsburgh from Grandview Avenue



Image 4 View of the former 'Indian Trail' stairs climbing the face of the mountain.



Image 5 View of the Spring- The Southern end of Shaler Street as it cascades over exposed rock faces

knotweed, brambles and multi-flora rose. There are also several existing cultural resources in the Mt. Washington area. In addition to the historic inclines, there are the spectacular views of Downtown Pittsburgh, evidence of past mining and quarrying activities and remnants of the historic 'Indian Trail' stairs which led from the northern terminus of Shaler Street to West Carson Street at the base of Mt. Washington. The MWCDC currently has two active viewsheds and native forest restoration sites along Grandview Avenue.

Duquesne Heights Greenway and Olympia Park:

This area includes the Duquesne Heights Greenway, from the West End Bridge along the PA Route 51 corridor, to Olympia Park. The area is characterized by moderately sloping hillsides with stable shale/clay soils and occasional sandstone bedrock outcrops and exposed sandstone cliffs. There are also a few large 'wet weather' drainage ravines which are located along the PA Route 51 corridor. In addition to the drainage ravines, there are a few springs which run down the south face of Mt. Washington. One runs from the area south of Fingal Street and terminates with a vertical cascade over exposed sandstone cliffs into a marshy area near the Shaler Street/PA Route 51 overpass. This spring is not currently located within the Park boundary. The other is located in the area south of the Meta Street terminus.

The existing Olympia Park includes manicured lawn areas, playgrounds, basketball/sport courts, multi-purpose active recreation fields and a historic building that requires renovation. The wooded hillsides are a mix of second and third generation forest with moderate understory growth. These

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“better” quality forests are crisscrossed with utility corridors which are dominated by invasive brambles and multi-flora rose. These same invasives can also be found sporadically throughout the woodlands. There are also a few historic small scale dump sites within the woodlands.

Mount Washington Park: This area includes Mt. Washington Park, also known as Dilworth Park, and the surrounding woodlands along the PA Route 51 corridor bound by Woodruff Street to the west and the South Busway to the east. The area is characterized by moderate to gentle sloping hillsides with stable clay soils. There are a few sandstone bedrock outcrops, along with exposed rock faces along PA Route 51. There is also an existing ‘wet’ weather drainage-way emanating from a spring in the area of Chess Street and flowing to PA Route 51. Mt. Washington Park includes a couple of ball fields, a basketball court and playground facility, as well as a historic building which currently houses the Pittsburgh Boxing Club. The forested area surrounding the Park is predominately second generation forest with a healthy understory; however there are sporadic colonies of multi-flora rose. As in the Saddle, the area is also dotted with dump sites. However, the dump sites in the Mt. Washington Park area are historic and their scale is significantly larger than those found in the Saddle.



Image 6 Typical debris found at one of the illegal dump sites near Mount Washington Park.

Existing Trail Network

There are currently over 10.4 miles of existing trails within the Emerald View Park Trail Plan. These trails exist primarily as local neighborhood pedestrian and bicycle connections and generally

consist of existing sidewalks, old roadways (paper streets), footpaths and utility corridors. In some areas the existing trails form strategic connections and are in good condition, while in other areas there are too many trails which make poor connections, and others which exhibit severe drainage and erosion issues. The existing condition of the trail network by area is as follows:



Image 7 Brush debris placed along the trail in Grandview Park in an attempt to stabilize the slope.

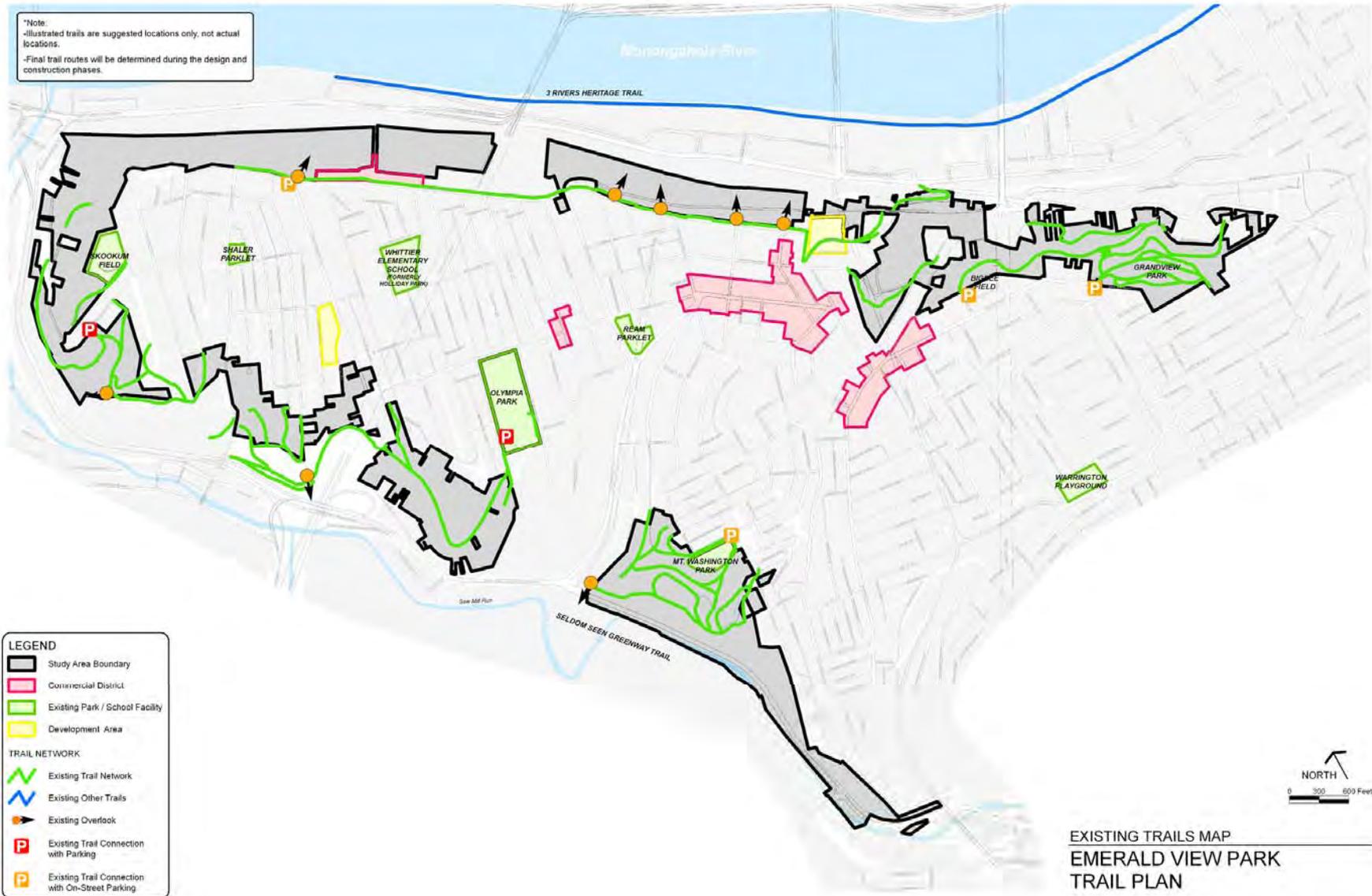
Grandview Park: There are several types of existing trails in Grandview Park. There are asphalt paths, as well as a paved access road in the main developed portion of the Park. The asphalt paths are approximately 4' wide and traverse the hillside to provide access to the existing water towers. In addition to these refined trails, there are several well defined earthen trails on the wooded hillsides which are accessed by an old sandstone staircase which requires repairs. One of these earthen trails connects the main Grandview Park area to Bigbee Field to the west. These earthen paths are generally well worn and have wide trail surfaces which appear to follow old road benches. However, due to the lack of understory described previously, there are some areas along the trail which have experienced erosion and bank stabilization problems. These problems are often most severe where the trail crosses the existing drainage-ways. In addition to erosion issues, there are a few seep areas along the trail which cause consistently wet/muddy areas of tread. In the existing trails in the Grandview Park area are well established, stable and in relatively good condition.

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The Saddle: As in Grandview Park, there are several types of existing trails found within the Saddle area. However, these trails are not as well defined and are disconnected from the Park's other trails. There are a few earthen trails, historic Pittsburgh stairs and existing sidewalks. The earthen trails are generally narrow overgrown footpaths, like those between Cola Street and East Sycamore Street. The earthen trails which are not well established tend to have loose soil compaction and are more susceptible to erosion. There is also an existing sidewalk from East Carson Street to the P.J. McArdle Roadway overpass on E. Sycamore Street. At this point, the sidewalk ends, and the next pedestrian connection is made at the Vinecliff Street stairs which links the central portion of East Sycamore Street to Wyoming Avenue and Grandview Avenue. This is a major pedestrian route which is currently disconnected and poses several safety hazards for pedestrians, cyclists and motorists who travel this route. In addition, the existing Vinecliff Street stairs are in a state of disrepair. There is also an existing footpath in the Vinecliff Street stairs area which leads to an overlook of Downtown on the bluff east of the 'Edge' property. A large homeless encampment can be found at this overlook area. The Saddle also has several areas in which large amounts of trash and debris have been dumped over a long period of time. These dumps have grown into major environmental, aesthetic and safety issues as related to future development of the trail network.



Image 8 The top of the Vinecliff Street stairs.



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Image 9 View of Downtown Pittsburgh from the bluff to the east of the 'edge' property.



Image 10 The Monongahela Incline at East Carson Street.



Image 11 Sidewalk and railing condition along Grandview Avenue at the terminus of Shaler Street.

Grandview Overlooks Area: The trail network in the Grandview Overlooks Area consists solely of the Grandview Avenue and P.J. McArdle Roadway sidewalks, as well as the two inclines. The existing Grandview Avenue sidewalk between P.J. McArdle Roadway and Wyoming Avenues is a wide promenade with four existing overlooks which provide spectacular views of Downtown from several different vantage points. This promenade has a decorative railing and dated light fixtures. There is currently a plan and funding in place to replace these light fixtures within the next year or two. In addition, the One Grandview Avenue project which is proposed for the old 'Edge' restaurant site is to be an iconic hotel and residential development with a large semi-public plaza at the Grandview Avenue level, and adjacent to the Monongahela Incline. Access to pedestrians and hikers will be encouraged thru a system of proposed trails and stairs thru the property which will connect to the Vinecliff Street stairs and trails in the Saddle. The Monongahela Incline also provides a connection from Grandview Avenue to Carson Street and Station Square.

The Grandview Avenue sidewalk from P.J. McArdle Roadway to Republic Street is a standard sidewalk width and passes through 'Restaurant Row', also known as the Duquesne Heights business district. The Duquesne Incline provides a connection to West Carson Street in this area. There is also a decorative railing along this portion of sidewalk. However it is different than the railing between P.J. McArdle Roadway and Wyoming Avenue. The sidewalk and railing in this area, particularly between Shaler Street and Republic Street, has

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experienced significant deterioration which urgently needs to be repaired.

An existing statue at the terminus of Sweetbriar Street speaks to the area's colorful history, and although there are no existing trails along the slopes of the Grandview Overlooks area, there are visible remnants of the historic 'Indian Trail' stairs which traversed the slopes from Shaler Street to the base of the Duquesne Incline near West Carson Street. The P.J. McArdle Roadway sidewalk is a major pedestrian connection from the top of the mountain to the Liberty Bridge and Downtown, and includes "Jersey" style barriers as well as a decorative railing along its length. However, the "Jersey" barriers, which are not included in the original construction, have caused several drainage issues and has caused the railing to suffer from severe deterioration which may now pose a safety hazard to pedestrians and cyclists.



Image 12 Goyasuta and George Washington statue along Grandview Avenue at the end of Sweetbriar Street.

Duquesne Heights Greenway and Olympia Park: There are several extensive trails throughout the Duquesne Heights Greenway and Olympia Park areas, particularly along the southern slopes of the mountain. These trails are primarily well defined natural surface trails which follow old road cuts, natural topographic benches, utility corridors and neighborhood footpaths. Despite the substantial number of trails, the network is still disconnected, and broken primarily by the main vehicular arteries of Shaler and Woodruff Streets which transverse the slopes in a north-south fashion. There is an existing parking area off of Greenleaf Street which currently serves as the trail networks main trailhead.



Image 13 The existing trail head into the Duquesne Heights Greenway adjacent to Greenleaf Street.



Image 14 A view from above the south entrance of the Fort Pitt Tunnel along a trail near Augusta Street.



Image 15 Severe erosion, typical along some trails in the Mount Washington Park area.

However, there is no signage to indicate this. There is also a small parking area attached to Olympia Park which can provide access to the trail network, however there is no signage to indicate this either. There are two natural overlooks in the Duquesne Heights areas, one near the Greenleaf Street trailhead which provides views of the West End neighborhood, and another off of Augusta Street which provides a unique view of the Fort Pitt Tunnel as it enters the southern face of the mountain. In addition to the natural overlooks, there are several seeps and natural spring crossings which occur along the existing trails in both the Duquesne Heights and Olympia Park areas.

Mount Washington Park: There are several well-defined earthen trails in the Mt. Washington Park areas. The trails on the upper slopes closest to the Park are along wide, old road beds. There are several trails in this area which have severe erosion problems. These problems are the result of a combination of poor trail location, uncontrolled stormwater discharge and pervasive motocross or motorized dirt bike use. The trails along the lower slopes are generally narrow footpaths. An impromptu or informal overlook exists which enjoys a commanding view of the Woodruff Street/PA Route 51 intersection, and provides views of the Beechview-Seldom Seen Greenway, generally simply referred to as Seldom Seen which is situated on the southern side of the PA Route 51 corridor.

In addition to the public lands which constitute the Emerald View Park Trail Plan, the existing trail network also includes undefined links and connections within the existing neighborhoods and

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commercial districts on top of the mountain, as well as links and connections to other destinations and trail networks outside of Mt. Washington. These connections occur on existing sidewalks and roadways.

Recent Improvements

The MWCDC has recently undertaken several implementation-related initiatives within the Emerald View Park. These generally include the expansion and enhancement of the trail network, as well as the improvement of the quality of environment and experience along the network. The MWCDC partnered with the Allegheny Land Trust in 2008 to purchase 11 acres, and is currently looking to acquire an additional 17 acres of lands adjacent to the Park. Utilizing FHWA funding, the MWCDC is working with PennDOT to design and install directional and informational signage along the Emerald View Park. There are currently several select native forest restoration projects in the areas of Bigbee Field and the slopes of the Grandview Overlooks Area below the Grandview Avenue sidewalk between Shaler Street and Sweetbriar Street, and between Maple Terrace and the Monongahela Incline. The MWCDC has also formed a partnership with the Student Conservation Association (SCA) and the local Department of Public Works district to work on several restoration/trail improvement initiatives. These initiatives include the removal of dead trees from the trail areas, as well as extensive efforts in the Grandview and Mt. Washington Parks to remedy erosion problems, eliminate seeps, provide drainage crossings and construct/restore trail stairs.



Image 16 Evidence of motorized dirt bike use in the Mount Washington Park area.



Image 17 A native forest restoration site adjacent to Bigbee Field.



Image 18 A stone drainage crossing and paved trail built by the SCA in the Mount Washington Park area.

In addition, the MWDCDC has been working with Venture Outdoors[®] and other partners to organize and facilitate trail hikes, festivals and events to encourage the public to engage with the park and park related activities.

Overview

The process for identifying the future trail network opportunities and challenges that exist in Emerald View Park Trail Plan builds upon the field reconnaissance, a series of background maps, related technical research and public outreach activities. Opportunities generally represent situations where there is the potential to capitalize on the existing conditions or to promote, enhance and/or expand the existing trail network. Challenges generally represent a situation where the existing conditions pose a “threat” to the promotion, enhancement and/or expansion of the trail network. The opportunities and challenges are taken into consideration and guide the master planning efforts in a way that the Trail Plan may capitalize upon opportunities and resolve or mitigate challenges.

Opportunities

1. Due to the unique features of Mt. Washington and its status as a major tourist destination, there is an opportunity to create a trail network that directly connects to the Great Allegheny Passage. This will create a trail network which has regional appeal and significance, as well as serve the needs of neighborhood residents on an everyday basis.
2. The Regional Park can be leveraged to gain the economic benefits and attract additional visitors, potentially from the Great Allegheny Passage as well as to entice these visitors to extend their stay in the neighborhoods and utilize the neighborhood business districts. There is also the potential to market the Park as

an amenity/incentive to attract developers, businesses and new residents to the hilltop and adjoining neighborhoods

3. The existing hilltop neighborhood business districts are in close proximity to the existing trails; businesses can capitalize on trail use through the formation of connections between the trails and the business districts.
4. Due to the Park's urban location and proximity to other regional and City trail systems, connections can be formed to various City destinations and other regionally oriented trail systems including one of Pennsylvania's mega-greenways. This includes connections to Station Square, Pittsburgh's South Side and West End neighborhoods, as well as the Three Rivers Heritage Trail, Seldom Seen Greenway Trails and the Great Allegheny Passage.
5. There is an opportunity to promote the physical and psychological benefits of trail use among visitors and neighborhood users alike based on the recreational amenities which will be provided by the Park.
6. There are several unique geological, cultural and historical features throughout the Park and in its abutting neighborhoods. These features can be highlighted by the trail network and utilized to form a distinct trail identity among the other regional parks and trails.
7. The City of Pittsburgh along with the Pittsburgh Parks Conservancy has developed standardized trail typologies and signage through the

OPPORTUNITIES AND CHALLENGES

Regional Parks Master Plan and Signage System Master Design Guidelines. These standards can be utilized and integrated into the Park development. The furthered use of these standards will also reinforce the identity of the Park and its place within Pittsburgh's parks system.

8. Many commuters, including pedestrians and cyclists, currently use the Vinecliff Stairs and East Sycamore Street, as well as P.J. McArdle Roadway, to connect to East Carson Street, the Liberty Bridge, Pittsburgh's South Side and Downtown. This route can be further enhanced, developed and reinforced, particularly through the implementation of various safety measures to make it a safer route for pedestrians and cyclists.
9. As a result of the continuous wooded hillsides which wrap around the mountain, a continuous trail network which circumnavigates the entire mountain can be constructed.
10. Due to the unique shape of the Park, which roughly envelops the hilltop neighborhoods, roughly 97% of hilltop residents are no more than 1/3 of mile, or 1,700', or a 12 minute walk away from the Park. In addition, several existing neighborhood streets terminate at the boundary of the Park. Several neighborhood connections can be formed through the development of trailheads and neighborhood trail connections at the terminus of key streets.

11. A “grass roots” trail movement can be developed which could encourage community ownership of the trails and promote increased social capital through resident involvement in Park and trail related activities.
12. The widely variable terrain and elevation change that exists in the Park can be capitalized upon to provide various types of multi-use trails with various levels of difficulty.
13. The existing soils throughout the Park are relatively stable and exhibit good compaction characteristics, providing an opportunity to develop sustainable natural surface trails.
14. The natural topography of the Park provides picturesque vistas of Downtown, as well as views of the surrounding areas which can be leveraged through the enhancement of existing overlooks and the development of additional overlooks.
15. The MWDC can promote and expand its ecological sustainability initiatives by developing a trail network which is aligned with these goals and initiatives.
16. There are existing undeveloped lands adjacent to the Park which could be acquired to improve the connectivity of the existing park, as well as opportunities to expand the trail network and highlight the unique features of those additional lands.

OPPORTUNITIES AND CHALLENGES

Challenges

1. Natural features such as steep slopes, cliffs, rock outcrops and water courses can pose construction and safety issues.
2. A balance needs to be developed between allowing trail users to interpret natural, cultural and historic resources, while at the same time protecting these resources.
3. The condition of the existing forest in some areas does not provide for an optimal trail experience.
4. There are currently existing trail issues such as seeps, erosion and motorized bikes which pose trail stability issues.
5. There are several existing transient encampments within the Park. Moreover, there are numerous areas where homeless people congregate during the day.
6. The area suffers from a long history of dumping in the woodlands which now comprise a good portion of the Park's acreage.
7. Some areas of woodland have been severely impacted by invasive plant species.
8. Trail development will need to be delicately balanced with the concerns of neighboring residents.

9. Providing safe pedestrian and bicycle links across and along heavily trafficked roadways such as Shaler, Woodruff, Grandview and East Sycamore Streets is a challenge.
10. Cooperative agreements may be required with private land owners and public agencies to gain access to land which provide important links in the trail network.

GOALS AND VISION

Goals

A 'goal' embodies the desired outcome or achievement from an idea toward which effort is directed. Collectively, the identified goals for the Emerald View Park Trail Plan represent the desired intent of the City of Pittsburgh, the MWCDC and general public to enhance and expand the existing trail network, and work in tandem with the MWCDC's Park's overall planning goals. Specific goals of the Trail Plan include:

1. To establish connections between the trail network and other regional/city trails, including the Great Allegheny Passage as well as destinations, local commercial districts, recreational amenities, and neighborhoods.
2. To create a trail network that will provide a multitude of experiences for various recreational users at all ages, skill levels and during all seasons.
3. To develop a sustainable trail network that coincides with the ecological goals for the Park.

Vision

A 'vision' is the vivid conception of the anticipated achievements of the Emerald View Park Trail Plan's goals. In other words, it is a description of the desired trail network's physical character and key elements which will allow the completed network to achieve all of the Plan's goals. The overall vision for the trail network is to develop a regionally unique, self-sustaining trail network, including a *Main Trail* which links Grandview Park to Mount

Washington Park by circumnavigating/ circumscribing the wooded slopes of the mountain around the Duquesne Heights Greenway. In addition to the *Main Trail*, the network will include a series of *Secondary Trails* focused around the existing neighborhood Parks. These *Secondary Trails* will provide additional trail loops and connections to other regional and neighborhood amenities including the Great Allegheny Passage. Several “context-specific” trail typologies will be utilized throughout the network to provide desired levels of access for multiple uses, as well as vary the users’ experiences and levels of challenge. The trail network as a whole will also be developed with the intent of providing users the opportunity to interpret the neighborhoods’ natural resources and cultural heritage to the maximum extent possible, including highlighting unique natural features, distinct historic landmarks, and potential art installations.

The successful implementation of the trail network will attract tourists to Pittsburgh and allow visitors to use the trail network to connect to significant cultural and historical features, the local business districts, as well as other destinations in Pittsburgh. The trail network will also provide a valuable resource to entice other city residents and mountain bike enthusiasts from Greater Pittsburgh to experience a unique “urban wilderness” during the weekends. Finally, as a resource for the residents of Allentown, Mt. Washington and Duquesne Heights as a source of recreation for morning and evening walks/rides, weekend day hikes/rides, as well as a potential commuter resource to Downtown and other Pittsburgh neighborhoods.

Overview

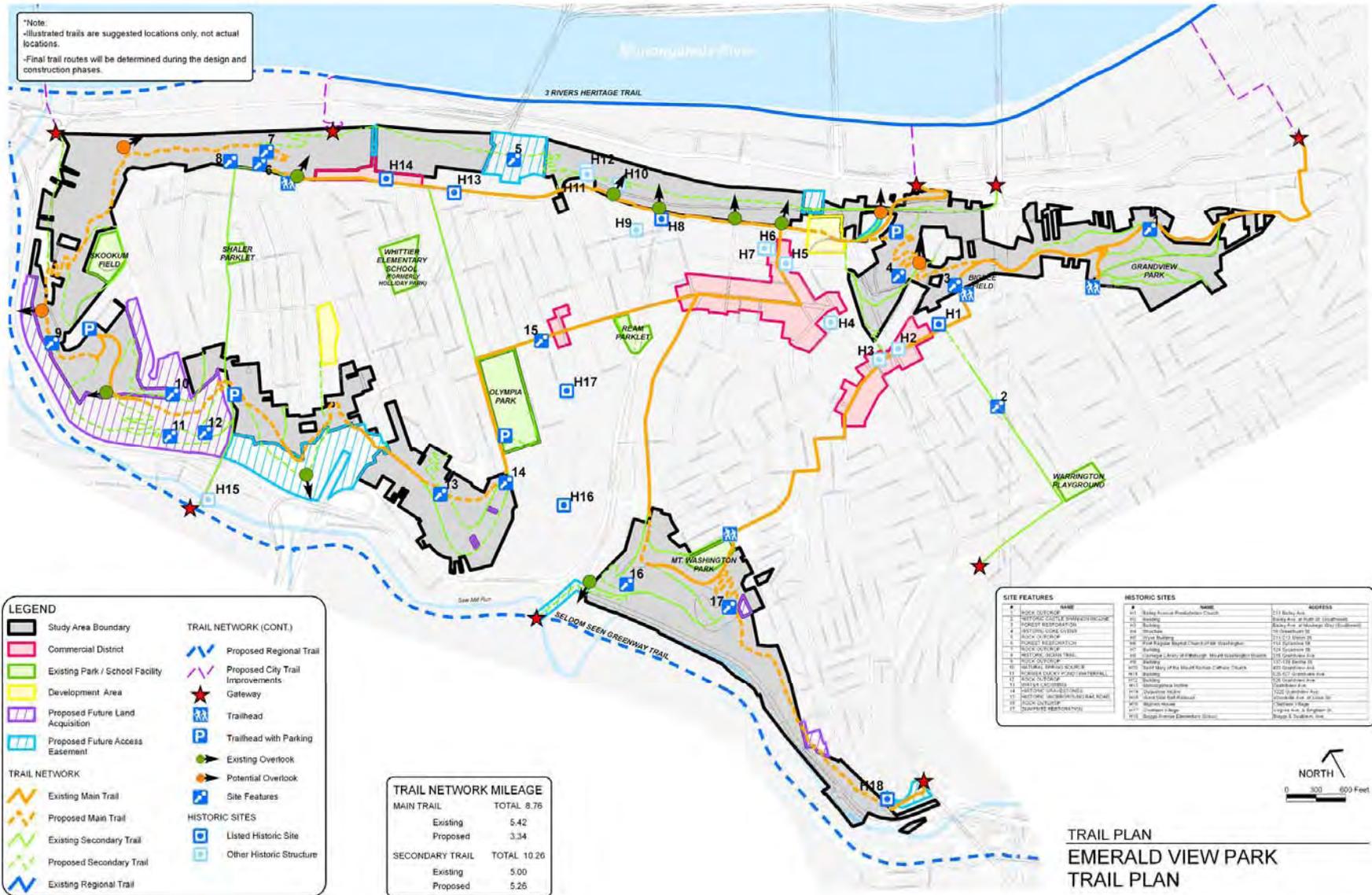
The following Trail Plan is the graphic representation of the proposed trail network which coincides with the previously described 'vision' and achieves the Plan's goals to the greatest extent possible. The Plan illustrates the approximate corridor locations of the proposed Main and Secondary Trails. The exact location of these trails may vary dependent upon future trail design, specific site constraints and other construction realities. The Plan also includes existing natural and cultural resources which are highlighted by the trail network, as well as major gateways and connections to other destinations and resources. Finally, the Plan illustrates proposed future land acquisitions and access easements which can be utilized to further enhance trail connectivity, as well as provide the opportunity for trail expansion.

Main Trail

This is the Main Trail or the 'mainline' trail which will provide a continuous linkage or thread from Grandview Park, along the Grandview Overlooks Area and around the Duquesne Heights Greenway to Olympia Park, and then to Mount Washington Park before connecting back to Grandview Park.

Secondary Trails

These trails form connections to other regional/city destinations, as well as loops or short connectors that consist of several trail types and skill levels within each distinct neighborhood adjacent to the Emerald View Park Trail Plan. The loops will focus primarily on the existing neighborhood parks and trailheads,



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and build upon their existing trail infrastructure. These loops will also provide the opportunity to form intra-neighborhood connections which currently don't exist. These connections will create access points to the maximum number of neighborhood users as possible, and get more people on the trails. Maximizing trail use achieves numerous objectives including, establishing or "wearing in" the trail, deterring crime, improving trail safety and stimulating additional trail use through public awareness and appreciation.

Proposed New Trails

The primary purpose of many of the proposed new trails is to "fill in the gaps" between the existing trails. They also provide connections to other regional destinations and recreational resources. In addition to providing connections, several of the proposed trails form the 'trail loops' which will provide visitors with a variety of experiences, as well as levels of difficulty and exercise throughout the trail network.

Abandoned Existing Trails

In some areas throughout the existing trail network there are too many trails, as well as trails which don't make the "right" or appropriate connections. Moreover, some of these trails exhibit irreparable erosion damage, slope instability, etc. For these reasons, some of these "problematic" trails have been realigned or relocated, or in some cases abandoned entirely in the Trail Plan. Abandoned trails are expected to be returned or restored to their native vegetative states by turning the soil along the trail tread, scattering leaf and wood debris in a

natural fashion, and seeding and planting the exposed soils with native grasses and/or wildflowers.

Trail Typologies & Improvements

A typology is a systematic classification of a series of elements. This generally refers to the construction material/construction methodology, or character of a specific trail as it pertains to the Trail Plan. The philosophy behind the trail typologies outlined within the Pittsburgh Regional Parks Master Plan serves as the basis for the trail typologies which were ultimately defined for the Emerald View Park Trail Plan. However, these typologies have been customized to address context specific conditions, desired access and challenge level, as well as public input, which are unique to the Park. The identified typologies for the Grand View Scenic Byways Park trail network include:

1. 5-8' wide Concrete City Sidewalk and Shared Roadway;
2. 10-12' wide Concrete City Walkways and Shared Roadway;
3. 16-18" wide Narrow Woodland Path;
4. 2-3' wide Woodland Path; and
5. 5-6' Wooden Boardwalk

Type 1: Concrete City Sidewalk (5-8' wide); this includes the construction of new and/or rehabilitation of existing concrete sidewalks. The newly constructed sidewalk will be 5-8' wide, depending on the dimensional limitations of any given site and should be a minimum of a 5" deep

slab; plain reinforced concrete with a 6" aggregate sub-base. The slopes of the sidewalks are expected to be constructed to meet ADA accessibility standards where practical or possible. The existing sidewalks will be renovated/maintained as appropriately needed. This includes, power washing and cleaning concrete to remove loose debris, patching holes and cracks, as well as deteriorated surfaces, and any other maintenance generally associated with the rehabilitation of the existing sidewalks. This typology also includes the placement of any new and/or the rehabilitation of any bike/vehicular pavement parking or symbols and placement of any pedestrian signage; destination, street, etc. along the streets (site appropriate signage is described later in this section).



Image 19 Typical concrete City sidewalk along Shaler Street.



Image 20 Share the roadway markings in Alexandria, VA

Type 2: Concrete City Walkway (10-12' wide); this includes the construction of new and/or the rehabilitation of existing concrete walkways. The newly constructed sidewalk will be 10-12' wide, depending on the dimensional limitations of the area and should be constructed of a 6" deep slab; plain reinforced concrete with a 6" to 8" aggregate sub-base. The slopes of the sidewalks again are Type 2: Concrete City Walkway (10-12' wide); this includes the construction of new and/or the rehabilitation of existing concrete walkways. The newly constructed sidewalk will be 10-12' wide, depending on the dimensional limitations of the area and should be constructed of a 6" deep slab; plain reinforced concrete with a 6" to 8" aggregate sub-base. The slopes of the sidewalks again are expected to be constructed to meet ADA accessibility standards where practical or possible.

The existing sidewalks will be renovated/ maintained as appropriately needed. This includes, power washing and cleaning concrete to remove loose debris, patching holes and deteriorated surfaces, and any other maintenance included with rehabbing the existing sidewalks. This typology also includes the placement of any new and/or rehabilitation of any bike/vehicular pavement parking or symbols and placement of any pedestrian signage; destination, street, etc. along the streets (site appropriate signage is described later in this section).

Type 3: Narrow Woodland Path (16-18" wide); this includes the construction of new and/or rehabilitation of existing narrow woodland paths. These paths will be constructed utilizing the cut/fill method in which approximately one half of the desired trail bench is cut into the hillside; and the excavated material is then placed on the downhill side of the trail as fill to form the remainder of the bench. The newly constructed narrow woodland path will be 16-18" wide, depending on the site dimensional limitations of each general trail corridor and will be constructed using existing earthen material obtained on-site or packed mulch material appropriate for trail construction. The slopes of the woodland paths will vary depending on the site conditions. The trail will have sharp bends, dips, hills, challenging slopes, etc. This trail typology is suitable for mountain biking, hiking, jogging, nature seeing, etc. Moreover, this typology also includes the placement of any pedestrian trail signage at particular trail intersections (site appropriate signage is described later in this section).

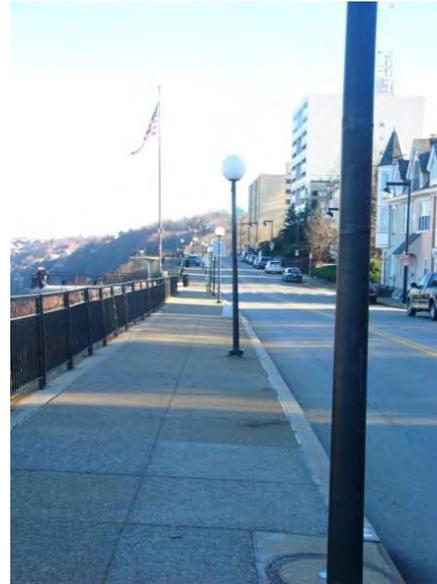
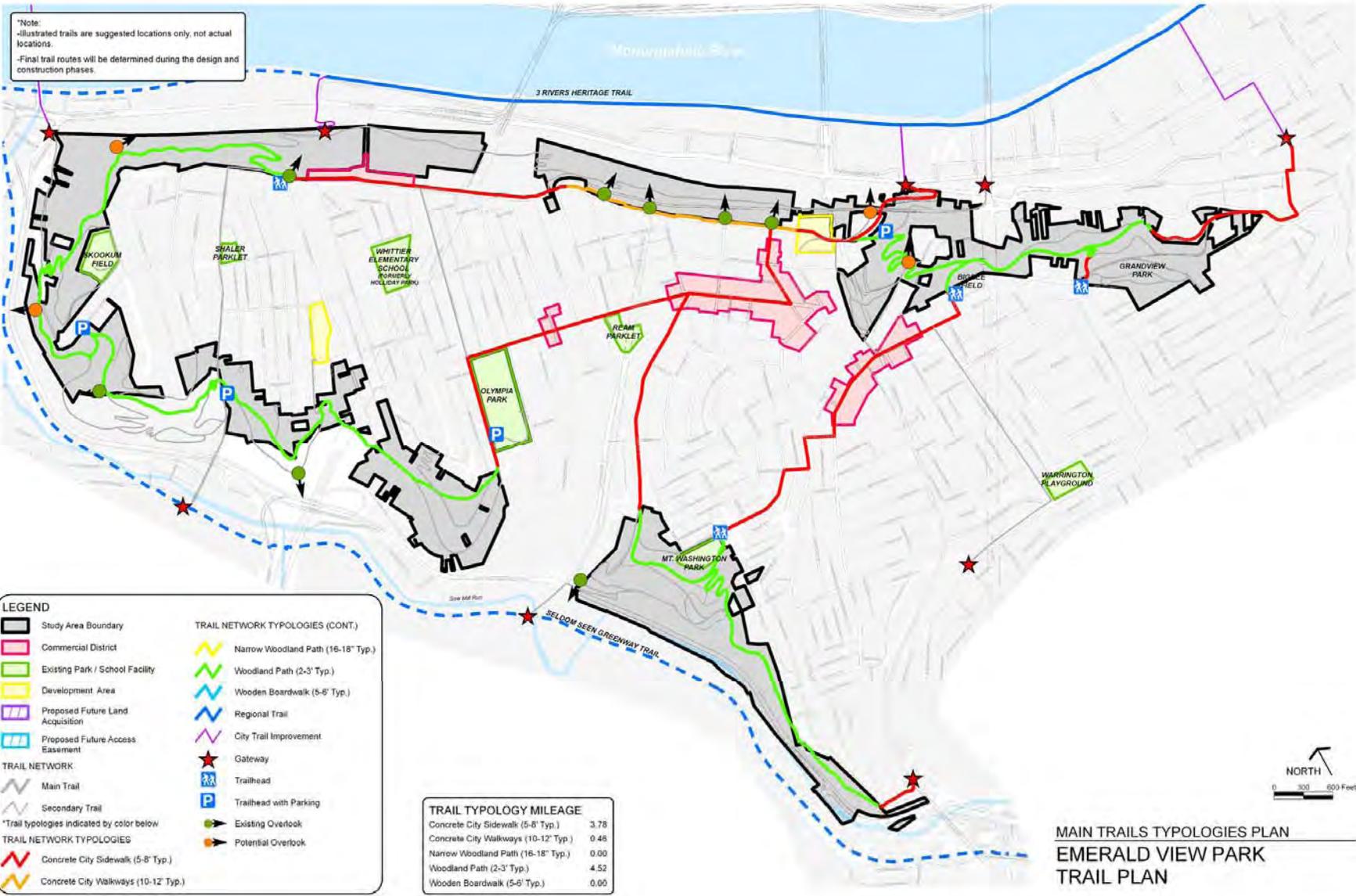


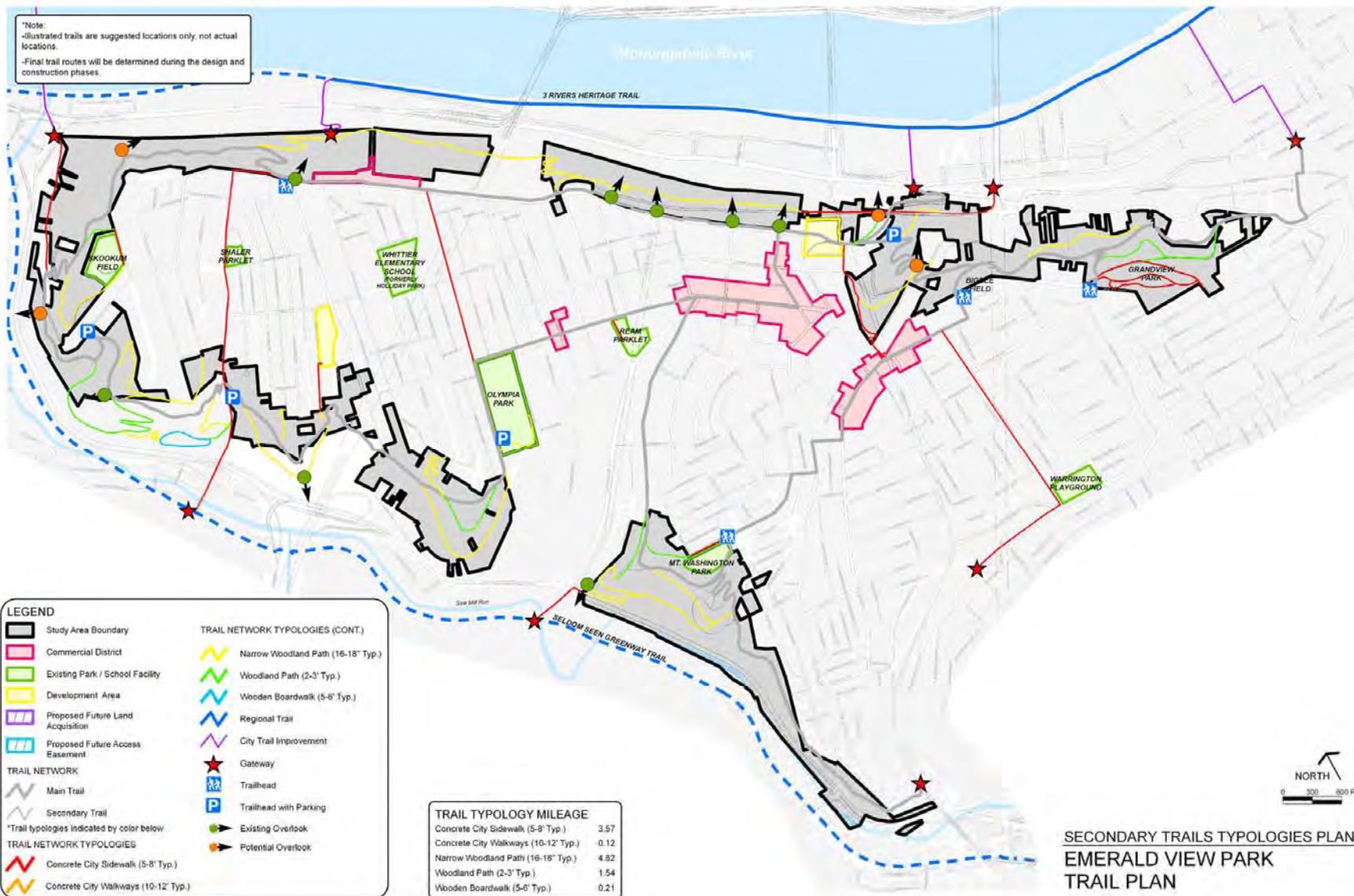
Image 22 City walkway along Grandview Avenue from Wyoming Avenue to PJ McArdle Roadway.

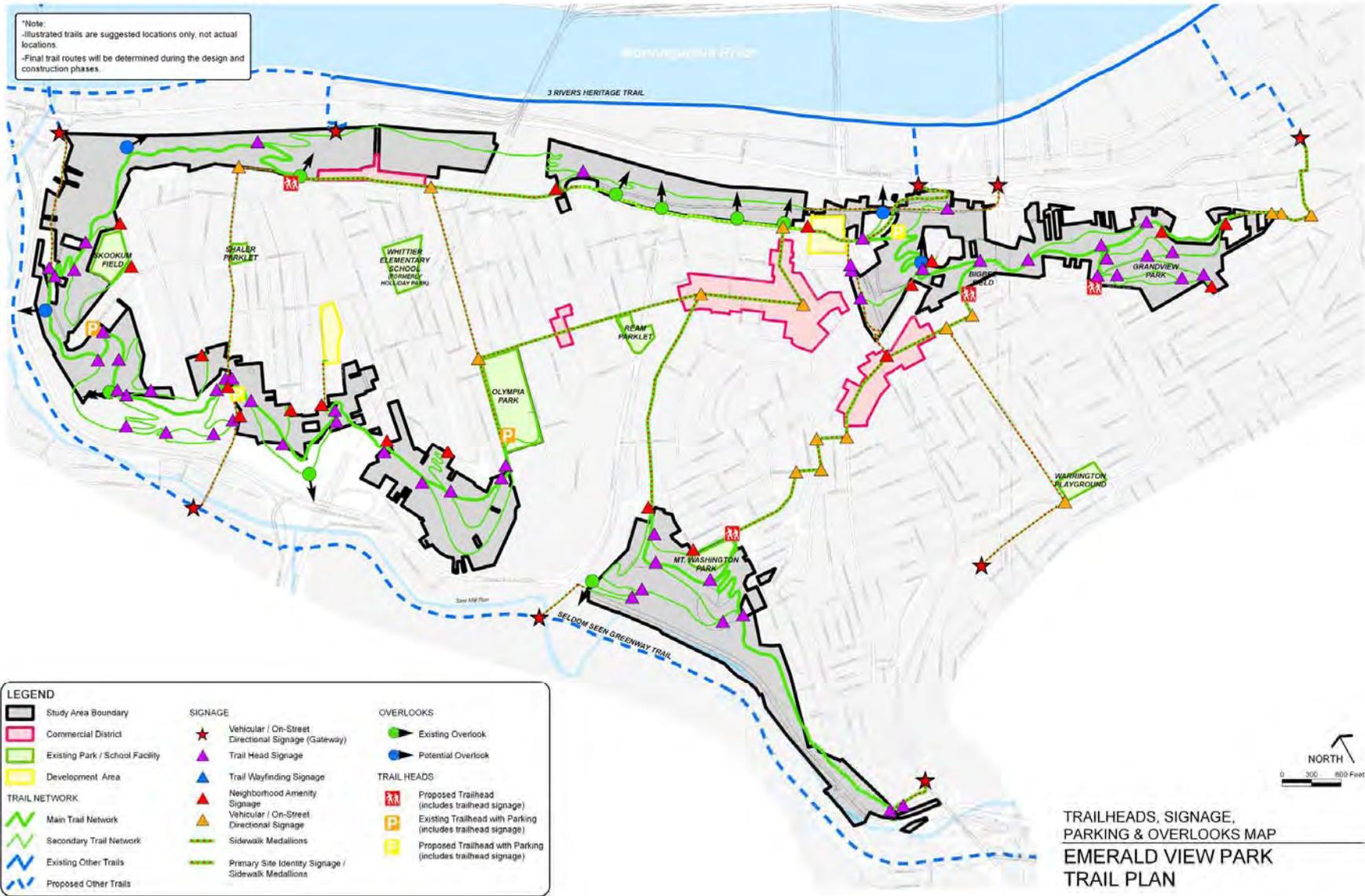


Image 21 A narrow woodland path along the Appalachian Trail.



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In order for the trail to be constructed, trees (4" d.b.h. or less) may need to be removed if there is no other means of placing the trail to avoid the tree, minor pruning will need to be performed and a "Ditch Witch" type motorized implement could be used in areas that are easily accessible to form the trail.



Image 23 The universal assessable trail.

Type 4: Woodland Path (2-3' wide); this includes the construction of new and/or rehabilitation of existing old road beds into woodland paths constructed with existing earthen material or packed mulch appropriate for trail construction. The newly constructed woodland path will be 2-3' wide, depending on the site dimensional limitations. Where there is an existing paved road bed, the existing asphalt should be removed from the site, and the road base should be turned and mixed with topsoil prior to seeding. A shade tolerant fescue seed mix should be used to restore understory growth and help define the desired trail width. These trails will be constructed / rehabilitated to provide earthen or mulch ADA accessible challenge areas. A trail of this type can be used for biking, hiking, jogging, nature seeing, etc. This typology also includes the placement of any pedestrian trail signage at particular trail intersections (site appropriate signage is described later in this section). In order for the trail to be constructed, trees (4" d.b.h. or less) may need to be removed, minor pruning will need to be performed and a "Ditch Witch" type implement would be recommended for more intensive earthwork activities.

Type 5: Boardwalk (5-6' wide); this includes the construction of new boardwalk. The newly constructed boardwalk will be 5-6' wide, depending on the site dimension limitations, with a 4-6" curb rail or toe kick, and will be elevated approximately 12-18" off the ground. The boardwalk will be constructed using treated materials purchased at a local lumber yard and placed or fixed to basic concrete footings installed into the ground to at least a 36"-40" depth. Most importantly, the boardwalk will be constructed to be ADA accessible to promote universal accessibility; consequently, the boardwalk can be used for observing the "Ducky Pond", witnessing water cascading down the rock cliffs, nature seeing, etc. This typology also includes the placement of any pedestrian interpretive signage (site appropriate signage is described later in this section).



Image 24 A boardwalk type trail The Shenandoah National Park, VA

Improvements

A successful trail network also includes several trail support facilities and amenities. Examples of such facilities and amenities that have been identified as integral elements to the Trail Plan are:

1. Trailheads;
2. Signage;
3. Overlooks; and
4. Safety Measures.

Below are general descriptions of these support facilities and amenities, as well as accompanying examples from other successful trail networks.



Image 25 Trailhead at Bear Run Nature Preserve, Fayette County, PA

Trailheads: This includes the construction of a new and/or rehabilitation of existing trailheads. The trailheads will include a gravel or paved parking area with landscape improvements such as decorative fencing and ornamental plantings which designate it as a trailhead. The development of trailheads will also include any signage, trail network maps, safety features and/or other important park information (site appropriate signage is described later in this section). A typical trailhead should be constructed to accommodate an average of 5-10 vehicles at one time such as those proposed adjacent to Olympia and Mount Washington Parks. There are a few locations within the trail network where larger trailheads could be designated to accommodate up to 20 vehicles such as those proposed adjacent to East Sycamore Street, Greenleaf Street and the southern end of Shaler Street. The trailheads proposed adjacent to Grandview Park, Bigbee Field and the northern end of Sweetbriar Street will not include any additional parking beyond available on-street parking.

Signage: This includes the installation of new signage. A comprehensive signage system will assist pedestrians, bicyclists, motorists, tourists, etc. in locating trails, destinations, overlooks, designated interpretive areas, and other important park information. The system consists of primary site identity signs, boundary signage, vehicular/on-street directional signs, trailhead sign panels, neighborhood amenity signs, interpretive signs and trail directional signs. Finally, the adopted signage system should be based on the Pittsburgh Signage System Master Design Guidelines. This will establish and maintain a uniform character or “brand” between the Emerald View Park Trail Plan and the four other regional parks.

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Primary Site Identity Signage – These signs will be located along the enhanced portion of Grandview Avenue from P.J. McArdle Roadway to Wyoming Avenue. The banners should be placed at intervals of approximately 100'. Individual banners can advertise the Park, or denote a specific point of interest such as the inclines.

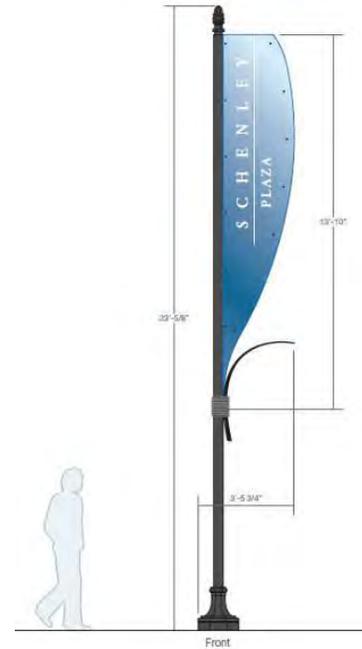


Image 26 Pittsburgh Signage System - Primary Site Identity Signage

Boundary Signage – These signs will be located along the entrances to the neighborhood parks at roughly 100' intervals, including Grandview, Olympia and Mount Washington Parks, as well as the main trailhead connection to the Duquesne Heights Greenway on Greenleaf Street.

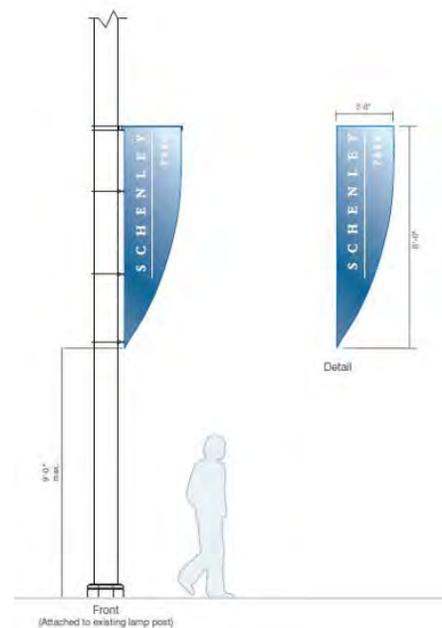


Image 27 Pittsburgh Signage System - Boundary Signage

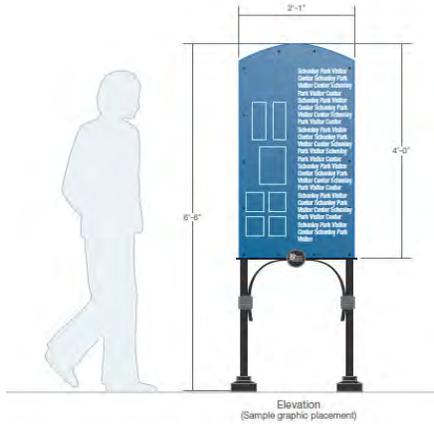


Image 28 Pittsburgh Signage System - Trailhead Signage

Trailhead Signage – Located at each trailhead, these signs will display a map of the Park and trails, as well as park rules and regulations. In addition, these signs can be used as a kiosk to provide take away trail maps, house a visitor log, or provide general information about the park.



Image 29 Pittsburgh Signage System - Vehicular/On-Street Directional Signage

Vehicular / On-Street Directional Signage – Located at entrances to the trail system from surrounding areas and at major street intersections, these signs will provide trail directional information for motorist, cyclists and pedestrian, as well as raise awareness of the Park and trail network.

Sidewalk Medallions – In addition to the vehicular/on-street signage, sidewalk medallions will be located at intervals of between 60' and 80' within the sidewalks to demarkate the trail routes along street corridors. These medallions will also further reinforce the branding of the Park and trail network.

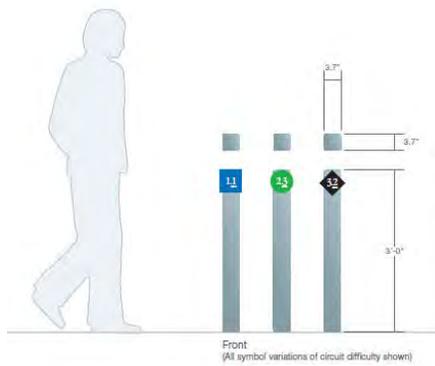


Image 30 A sidewalk medallion along the freedom trail in Boston, MA

Neighborhood Amenity Signage – These signs will be located at the terminus of a street where a connection to the trail system occurs to signify the park and trail entrance.

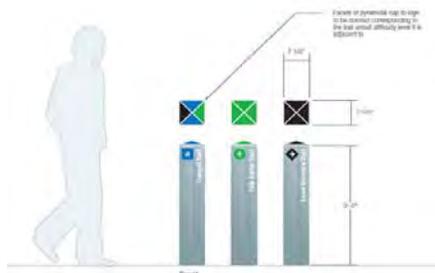


Image 31 Pittsburgh Signage System – Neighborhood Amenity Signage



Trail Wayfinding Signage – Located at trail intersections in undeveloped wooded areas. These signs will indicate trail names and directions.

Image 32 Pittsburgh Signage System - Trail Wayfinding Signage.



Trail Mile Markers – These markers will be placed along the trail routes to indicate distance traveled from a given point of origin. These markers will also correspond to the individual trails for which they are assigned.

Image 33 Pittsburgh Signage System - Trail Mile Marker

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Interpretive Signage – Interpretive signs will be located at key points along the trail route or at overlooks to display information regarding key features which may be located along the trail, such as historical information, specific events, or environmental and ecological information related to a natural or man-made feature located near the trail.

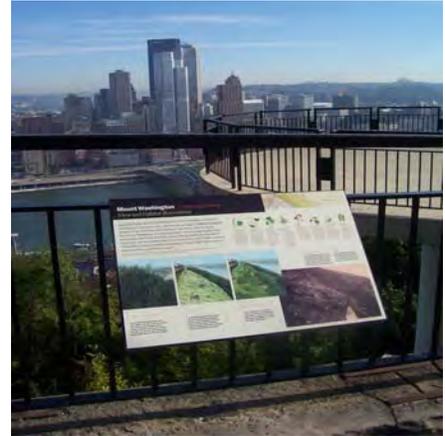


Image 34 Interpretive signage along Grandview Avenue in Pittsburgh

Overlooks: Overlooks should consist of a small cleared area which includes a vista for capturing unique views. Within an overlook area, amenities such as interpretive signage and benches should be installed. These overlooks are an opportunity to create a small destination along the trails for taking photos, a place to escape and read a book, or for quiet contemplation, rather than a place that will become a large tourist draw.



Image 35 A stone walled overlook in Bear Mountain State Park, NY



Image 36 A wooden overlook in the Adirondack Park, NY



Image 37 A multi-purpose trail crossing along the Milford-Kensington Trail in Michigan

Safety Measures: Safety measures will consist of protective crosswalks where the trail network crosses Shaler and Woodward Street. Provided along the street will be vehicular signage to warn motorists of pedestrian crossing, and trail signage to warn pedestrian/bicyclists that they are approaching vehicular traffic. In addition, some areas along the trails may require safety fencing due to steep grades and proximity to hazardous areas, such as the areas overlooking the north and south entrances of the Fort Pitt Tunnel.



Image 38 Typical vehicular trail crossing signage



Image 39 Typical 8' Vinyl Coated Chain Link Safety Fence

Principles

A ‘principle’ is an adopted rule or method for application in action. The principles outlined for the implementation of the Emerald View Park Trail Plan should be viewed as guidelines with which the City of Pittsburgh and the MWCDC (the Emerald View Park Trail Plan co-stewards) should move forward in realizing the development and goals of the Park’s trail network. These recommendations are aimed to guide efficient and sustainable trail development, build a “brand” or identity for the trail network, foster community ownership, serve as a basis for maintaining a high quality of life for residents, promote trail safety, foster partnerships with a range of stakeholders from the public to private sectors, as well as establish the trail network as a generator of economic opportunities. Specific principles of the Emerald View Park Trail Plan are:

1. Design the trail network based on thoughtful context-sensitive trail design prior to conducting construction/restoration activities. For example:
 - a. Aligning the design of new trails with the current ecological goals of the MWCDC to minimize the impact of the trail network on the ecological health of the forests throughout the Park.
 - b. Utilizing, where possible, low impact construction techniques and optimizing the use of found building materials.
 - c. Avoiding obstacles such as steep slopes, boulders, cliffs, trees, wet areas, etc. whenever possible.

- d. Designing trails with proper drainage, including avoiding blazing trails perpendicular to the slope, as well as incorporating drainage “dips” every 30’ to 40’.
- e. Minimizing the use of drainage culverts where possible due to long-term maintenance issues. In most circumstances, water can flow across the trail surface. However, if drainage improvements are required, reinforcing the trail surface with erosion tolerant materials such as stone.
- f. Abandoning existing trails which have been compromised by severe erosion and drainage issues.
- g. Constructing trails in areas with loose soils through compaction as much as possible.
- h. Avoiding the need to construct trail structures such as steps, retaining walls, stone paving, etc.

Following these recommendations will result in sustainable trails which will reduce short-term construction or capital expenditures, and long-term maintenance costs.

- 2. Enhance the ecological health and experience of the trail network through forest restoration activities where appropriate. For example:
 - a. Undertaking measures to remove/eliminate invasive species such as multi-flora rose, grape vine, knotweed, brambles, etc.

- b. Conducting selective thinning to remove dense clusters of immature trees (less than 4" d.b.h.) and select medium sized trees to allow light filtration through the canopy, reduce nutrient competition and allow larger trees to reach full maturity.
- c. Removing dead or dying trees, as well as excessive dead wood or "forest litter" on the ground in key areas such as the Saddle where there is an overabundance of debris. Excessive "forest litter" can hinder the re-establishment of some native species.
- d. Restoring the understory forest with native shrub and groundcover species.
- e. Removing trash and debris as the trail network is developed.

These activities, along with regular maintenance, will produce a healthy forest with a mix of mature, medium-sized, and small trees with an understory of shrubs and groundcover vegetation.

- 3. Establish a multitude of trail types which are appropriate to context specific conditions and achieve trail connectivity objectives, as well as trails which provide the maximum variety of experience. This includes:
 - a. Developing trails which pass along the most beautiful, unique and dramatic places within the Park.
 - b. Providing variety by designing trails with different scales, alignment, gentle ups and downs, ins and outs, etc.

- c. Creating trails for a variety of users, including neighborhood walkers/joggers, dog walkers, day hikers, mountain bikers, etc.
- d. Designing trails with varying degrees of difficulty, including ADA accessible trails, ADA challenge trails, able bodied challenge trails, fitness trails, etc.
- e. Locating ADA and less challenging trails immediately adjacent to the existing parks and trailheads, while locating the more challenging trails towards the interior of the Park lands.
- f. Providing trails which can provide year round function including maintained commuter routes, snowshoeing and cross-country skiing trails, etc.
- g. Incorporating shared roadway markings along trail routes through the neighborhoods to provide safe routes for cyclists, while maintaining the limited on-street parking.

Creating a comprehensive trail network which accommodates a wide range of users will promote a greater level of use of the network. This will help establish trails, raise trail awareness, as well as reduce crime and vandalism along the trails. In addition, the diverse user groups could provide an expansive source of volunteers for development and maintenance initiatives.

- 4. Provide and highlight features unique to the Park which will attract users to the trails, both locally and within the Greater Pittsburgh region. For example:

- a. Leveraging views of Downtown and other aesthetic areas through the development and maintenance of overlooks.
- b. Showcasing natural features such as rock outcrops, cliffs, large or unique trees, water courses, etc. which add interest to the trail experience.
- c. Celebrating cultural and historical features such as historical landmarks, remnants of the area's industrial past, and the rediscovery of "lost" historical features such as the 'Indian Trail'.
- d. Incorporating art into the trail network which will provide an ever changing experience as the interpretation will change with the seasons and over time.
- e. Coordinating and hosting unique regional events such as annual walks/races, mountain biking events, historical tours, etc.

By highlighting the features which are unique to the Park, the MW CDC will be able to distinguish this trail network from other similar amenities in the region. It is this uniqueness which will attract users to the trail network, and subsequently open opportunities to capitalize on the economies of trail use.

5. Protect natural, cultural and historic features while providing the opportunity for interpretations. This can be achieved by allowing users to view these features, but discourage direct interaction by utilizing various physical and visual barriers.

6. Develop and expand the trail network slowly and incrementally at first, and then allow it to evolve over time based upon user needs and demands. This will allow the early phases of implementation to serve as demonstrations of what the desired trail network could be, while minimizing the risk of expanding the network too quickly and having some trails be underutilized. Once these early phase trails become established and widely used, the network can be expanded without the risk of being underutilized. In addition, trails should be allowed to evolve over time to respond to actual usage patterns or demands. For example, a narrow footpath may be allowed to evolve into a wider trail based upon trail use, etc.
7. Build community ownership in the trail network by building public awareness of the proposed trail network, promoting direct community participation in the development and evolution of the network. This can be accomplished in several way, such as:
 - a. Continuing to host, and expand community events which incorporate or revolve around the trail network.
 - b. Hosting trail tours to introduce the trail network to residents who may not be aware of the existence or the extent of the trails.
 - c. Utilizing community based volunteer labor to construct and maintain as many trails as possible.

- d. Training a staff member or select volunteer leaders formally about trail construction and maintenance. It is these individuals who will then be responsible for the design/layout of natural surface trails in the Park, as well as leading volunteer crews during trail construction.
 - e. Involving the “movers and shakers” of the Mt. Washington community in the early trail developments, and allowing them to be the ones to truly establish the first trails.
 - f. Heightening public awareness and interest by celebrating and advertising the construction and opening of new trails through “ribbon cutting” type events.
8. Form connections to the neighborhoods as well as other destinations throughout the City and region to provide trail access to as many users as possible. This can be achieved by:
- a. Providing several, appropriate neighborhood trail connections.
 - b. Creating a spur connection to the Great Allegheny Passage and the Three Rivers Heritage Trail near 9th Street in the South Side.
 - c. Developing neighborhood trailheads with parking for 2 to 3 vehicles.
 - d. Establishing connections to other regional trail networks such as the Seldom Seen Greenway trail network and the future Ohio River Trail. This includes the establishment of a trail connection from Shaler Street down the face of

Mt. Washington, and bridging over or tunneling beneath the existing Norfolk Southern Railroad corridor to connect to West Carson Street. It also includes establishing a connection across the Rohrich overpass to the Seldom Seen Greenway, and down Shaler Street to Woodville Avenue towards the West End (at least for cyclists).

- e. Providing a continuous commuter route from the top of Mt. Washington, down Sycamore Street to East Carson Street and the Smithfield Street Bridge.
- f. Restoring safe walkways along P.J. McArdle Roadway to the Liberty Bridge and Downtown.
- g. Reinforcing the existing connection from Grandview Park to Pittsburgh's popular South Side (10th Street).
- h. Creating large network trailheads for 10 to 20 vehicles which will provide parking and access for users from Greater Pittsburgh.

Providing as much access as possible will help new trails establish quickly, as well as promote trails safety. Vandalism and crime are less likely to be pervasive on well established and highly utilized trails.

- 9. Promote trail 'branding' to develop a sense of trail identity which will differentiate this trail network from other regional networks. This can be accomplished by:

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- a. Incorporating a hierarchal signage system, based upon the Pittsburgh Signage System Master Design Guidelines, into the trail network which will provide for destination, trailhead, wayfinding and interpretive signage. Signage should be provided at every trailhead, neighborhood connection, trail intersection, as well as periodically along the trail when it follows an existing roadway.
- b. Utilizing a unified 'family' of signs throughout the entire park, including existing and proposed facilities.
- c. Incorporating a logo into the signage design which speaks to the trail network.
- d. Establishing a single name for the entire length of the Main Trail, even when the trail may be discontinuous in the early phases of development. This will reinforce the trail's arterial nature, establish it as a 'long-distance' trail and act as the defining anchor for the overall trail network.
- e. Developing names for all other existing and proposed trails within the park which evoke the desired perceived image of the trail network, Park and Mt. Washington as a whole.
- f. Allowing the residents and trail users to participate in the naming of the trails.

10. Facilitate partnerships with a range of stakeholders from the public and private sectors to assist with and promote the development of the trail network. This may include:
 - a. Expanding cooperative partnerships with existing trail organizations such as the Pittsburgh Trail Advocacy Group and Bike PGH. These organizations can assist with the construction and maintenance of trails, as well as provide a user base to help establish and promote the trails.
 - b. Maintaining a cooperative partnership with the Student Conservation Association. The students will be able to assist with the construction and maintenance of the trails, while being provided with the opportunity to gain valuable hands-on experience.
 - c. Partnering with existing and potential private entities that would benefit from the development of the trail network. This could include a private developer who would be willing to assist with development if the trails were in close proximity to their project, etc.

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11. Forming connections with the local business districts, as well as to other regional trail networks and destinations to encourage economic investment, as well as promoting the trail network as an amenity which can attract new investment. This can be accomplished by:
 - a. Bringing trail users into the neighborhood commercial districts and promoting businesses as “pit stops” or destinations along the trail. This may include businesses such as ice cream and coffee shops, or small restaurants.
 - b. Encouraging new business development by promoting trail associated businesses such as restaurants, sandwich shops, bike shops, bed and breakfast establishments, etc.
 - c. Branding and advertising the trail network as an amenity which could entice a developer to locate a new project within Mt. Washington due to its proximity to such an amenity.

The implementation of these recommendations will foster the successful development of the trails network.

Phasing

A comprehensive trail network such as the one proposed in the Trail Plan, will need to be implemented over time due to its large scale and complexity. For this reason, the Trail Plan has been broken into multiple construction or implementation phases. The initial phases are situated adjacent to the existing park facilities and allow new trails to build upon the existing infrastructure and established neighborhood access points. In general, the intent of the phasing is to allow the MW CDC to complete an initial demonstration trail which can be constructed quickly and at a low cost, have the trail become established and successful, and then build upon those initial successes in subsequent phases. Phasing has also been designed so that less intensive projects are implemented first, allowing the MW CDC to secure funding and design for more intensive projects. For the purposes of this Plan, there are 10 phases which roughly span an estimated twenty year period to implement. In addition, within each phase, there are multiple projects that often can be completed independently from one another as funding or demand may dictate.

Below is a broad description of the major aspects of each phase. Individual projects within each phase are outlined in greater detail in the Project Log included later in this section. It is assumed that all appropriate trail signage will be installed at the time of trail development, and that the trails in a particular phase should become established and well worn prior to implementation of subsequent phases. In addition to the trail developments which

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are outlined in each phase, it is assumed that the MWDC will also conduct forest restoration activities in conjunction with, and anticipation of trail development.

Phase 1: The first phase of implementation will be to construct/renovate a couple of trails throughout the Park which will serve as demonstrations of the types of trails which are desired. This includes the renovation/construction of *Woodland Path* type trails in Olympia Park area. This phase also includes the development of a key *Woodland Path* type portion of the *Main Trail* that forms a connection from Grandview Avenue at the northern end of Sweetbriar Street, around the west end of the Grandview Overlooks Area and Duquesne Heights Greenway to the Skookum Field area.

Phase 2: This phase builds upon the trails developed in *Phase 1*. This includes the signage of existing paved trails and renovation of *Woodland Paths* in Grandview Park which connect to Roanoke Street, the development of a *Narrow Woodland Path* loop in the Olympia Park area, and the extension of the *Phase 1 Woodland Paths* west of Skookum Field across the western end Greenleaf Street and the Duquesne Heights Greenway to the Duquesne Heights Greenway trailhead adjacent to the eastern end of Greenleaf Street. In addition, multiple overlooks will be constructed along this new section of trail, highlighting views of the West End. An overlook will also be developed adjacent to the Phase 1 trail. From this proposed vantage point, visitors will be able to view The Point and Downtown from an almost straight on angle, a unique vista unlike any other in the City. The Duquesne Heights Greenway trailhead will be

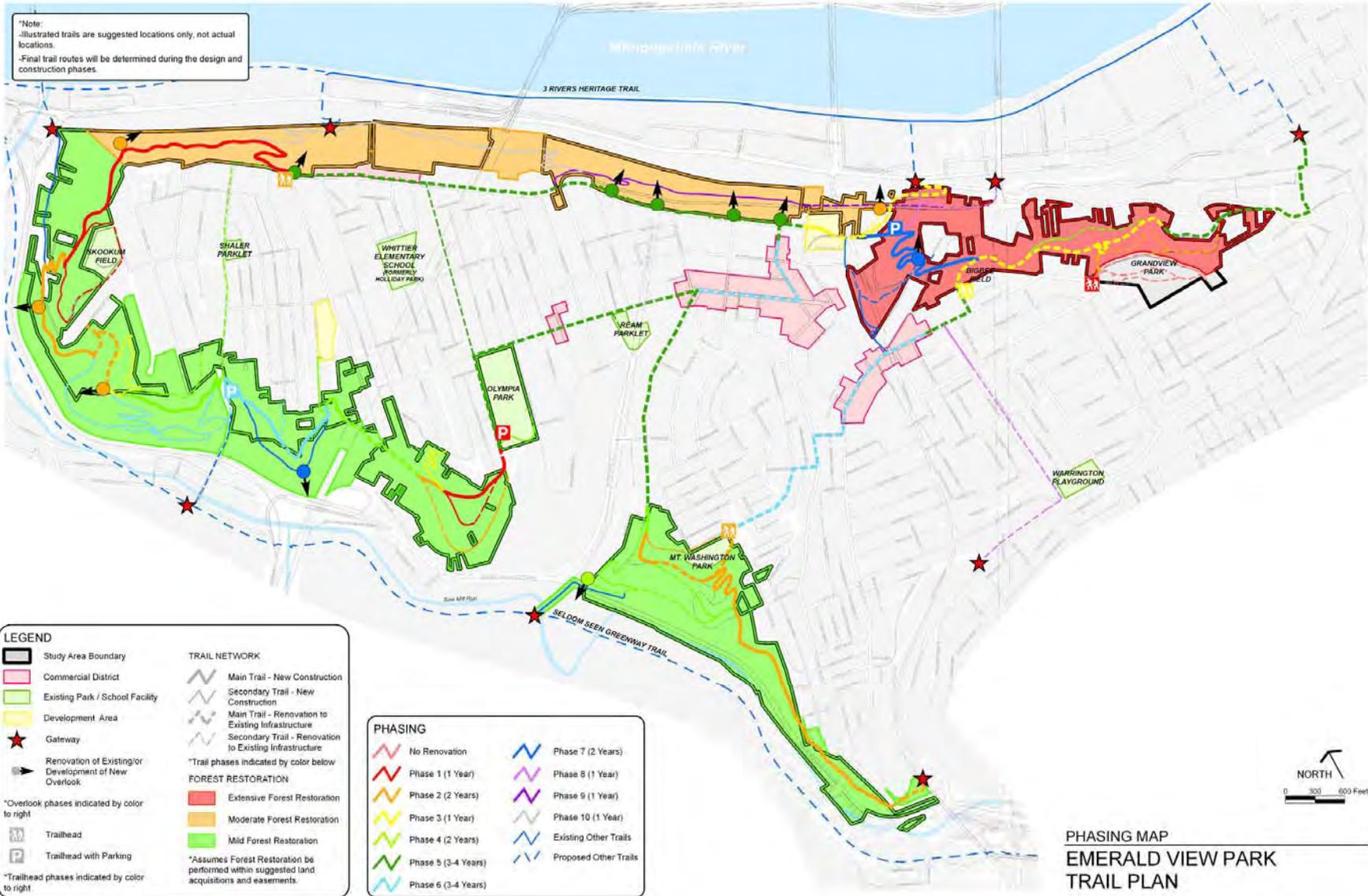
renovated and established as one of the Emerald View Park Trail Plan's main trailheads with parking for up to 20 vehicles. A formal trailhead will also be developed at the terminus of Sweetbriar Street at Grandview Avenue, as well as at the entrance to Mount Washington Park. However, these trailheads will not include designated parking areas. Trails will also be renovated and constructed in the Mount Washington Park area. This includes a *Woodland Path* which encircles the developed portion of the Park, as well as a key connection from this trail loop to the Palm Garden stop along the South Busway.

Phase 3: Several integral connections are reinforced and developed as part of Phase 3 construction. The main renovation project will be to repair and enhance the existing *Woodland Path* which connects Bigbee Field to the main portion of Grandview Park. This trail renovation also includes a neighborhood connection to the western end of Roanoke Street. Phase 3 also includes the enhancement of a primary commuter link from the east end of Grandview Avenue to East Carson Street, the Smithfield Street Bridge and the Great Allegheny Passage via the Vinecliff Street stairs and East Sycamore Street. This commuter link includes the renovation of the existing Vinecliff Street Stairs and the extension of the sidewalk along East Sycamore Street, from the P.J. McArdle overpass to the Vinecliff Street stairs. The route enhancements will also include shared road markings on East Sycamore Street for cyclists. In addition to the route renovation efforts, a proposed access easement should be obtained to the existing Downtown overlook on the bluff east of the 'Edge' property.

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Subsequently, this overlook would be formally developed at that time. Phase 3 also includes the development of a *Narrow Woodland Path* loop to the east of the Duquesne Heights Greenway trailhead, and a neighborhood connection linking Oneida Street to the trail loops in the Olympia Park area.

Phase 4: This phase again focuses on the expansion of additional trail loops spurring established trails, as well as several additional neighborhood connections. Included in this phase is the renovation/construction of a final *Narrow Woodland Path* loop in the Grandview Park area, as well as several *Narrow Woodland Path* loops in the Mount Washington Park area. The trail development in the Mount Washington Park area also includes the formal development of an overlook which offers views of the Seldom Seen Greenway from the area north of the Rohrich/PA Route 51 overpass. There are also several additional neighborhood connections which are made, including connections to Republic Street and “lower” Shaler Street from the trails in the Duquesne Heights Greenway trailhead area, connection to the southern ends of Wyola Street and Sweetbriar Street from the trails in the Olympia Park area, as well as a connection from the trails in the Mount Washington Park area to Grace Street. Finally, this phase includes sidewalk renovations, the installation of sidewalk medallions and shared road markings along Shaler Street to Grandview Avenue and the trailhead at the terminus of Sweetbriar Street, providing a unified neighborhood loop network on the west end of the mountain.



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Phase 5: Phase 5 includes the renovation and enhancement of several inter-neighborhood trails which follow existing roadways, as well as links from the trails into the existing neighborhood business districts. These improvement efforts include an integral connection from Roanoke Street to the existing stairs off of Arlington Avenue which connect to Tenth Street and the Allegheny Passage via Ninth Street in Pittsburgh's vibrant South Side, as well as a connection from the Bigbee Field trailhead to the Boggs/Bailey Business District. A connection from Grandview Avenue to the Shiloh/Virginia Business District is also made, in addition to improvements along the entire length of Grandview Avenue, inclusive of the Duquesne Heights Business District. Furthermore, connections will be made along Grace Street to the west end of the Shiloh/Virginia Business District and then west along Virginia Avenue to Hallock Street. From this intersection, improvement will be made along the length of Hallock Street connection south to the Olympia Park trailhead, and north to Grandview Avenue.

Phase 6: Additional on-street connections are made in Phase 6 through the Shiloh/Virginia Business District, as well as a connection through the Boggs/Bailey Business district south to Mount Washington Park. In addition to these on-street connections, a *Woodland Path* connection is developed linking the trails in the Duquesne Heights Greenway trailhead area to those in the Olympia Field area. A spur from this link trail will form a neighborhood connection to Orlena Way, as well as provide a major Park trailhead just off the southern end of Shaler Street. Multiple trail loops are also constructed during this phase to the west of

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Shaler Street and south of the previously developed trails. This includes the development of a universally accessible boardwalk proposed in this area that navigates visitors through the natural marsh area which is fed by a natural spring as it cascades over exposed shale cliffs and the former “Ducky” pond.

Phase 7: This phase includes the development of a final *Narrow Woodland Path* loop in the Duquesne Heights Greenway south of Wilmar Street. This trail will include an overlook which provides interesting views of the PA Route 19 and PA Route 51 interchange, as well as views of the southern entrance to the Fort Pitt Tunnel. Phase 7 will also establish the initial trail enhancements and development in the Saddle area. This “delay” of trail development in this area is to allow for the implementation of more intensive woodland restoration and management activities prior to trail construction. Developments in the Saddle include a major Park trailhead adjacent to East Sycamore Street as well as a Woodland Path linking the Vinecliff Street stairs to the trails adjacent to Bigbee Field. This trail link is the final link to be made in the Main Trail, thus establishing a continuous trail route around the entire mountain. A Narrow Woodland Path will connect Neff and Cola streets, and include an overlook of the Grant Street area of Downtown. A formal concrete sidewalk will also be constructed in the Saddle to connect the Boggs/Bailey Business District to the proposed hotel/condo development to be located on the site of the current ‘Edge’ property. Finally, this phase also includes multiple trail extensions that provide regional connections. These connections include the trail crossing on Greenleaf Street down to the

West End Circle, as well as connections south along Shaler Street and across the Rohrich/PA Route 51 overpass to the existing and proposed trails that run along the Seldom Seen Greenway.

Phase 8: As part of Phase 8 construction, a connection will be made from Bailey Avenue down Haberman Avenue, along the former Castle Shannon Incline corridor, and west along Warrington Avenue to the Port Authority's South Hills Junction. This link further enhances the connections between the City's multiple transportation systems, thus expanding the "reach" of the Park's trail network. A connection will also be formed from the trailhead in the Saddle, beneath the P.J. McArdle Roadway overpass, and then climbing along the retaining wall that supports the roadway until the trail ties into the sidewalk. This will provide access to the Liberty Bridge and an alternate route to Downtown.

Phase 9: This phase includes the renovation of the P.J. McArdle Roadway sidewalk from the trail connection made in the overpass area during Phase 8, to the west of where the Monongahela Incline crosses above the street. At this point, a *Narrow Earthen Path* will be developed which parallels the roadway to the west along the steep wooded hillside, connecting to Grandview Avenue.

Phase 10: This final phase includes the "re-establishment" of the former 'Indian Trail' that traversed the face of the mountain from the Duquesne Incline to the West Carson Street area. Due to the existing railroad corridor along the base of the mountain, this new trail will not initially connect directly to West Carson Street, instead

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paralleling the railroad to the east and eventually climbing back up the mountain face and connecting to the trail adjacent to the P.J. McArdle Roadway that was constructed in the previous phase.

In addition to the various projects described throughout these phases of development, there are still other projects that can be completed to enhance the trail network. Other such projects may include a bridge crossing across Shaler Street, or a tunnel connection from the base of the 'Indian Trail' to West Carson Street and the Three Rivers Heritage Trail beneath the existing railroad. However, due to the extreme costs for these developments and lengthy time horizons, these types of projects have not been included in the current phasing of the Trail Plan.

Costs

The following summary outlines the general or "ballpark" costs for implementing the Trail Plan. The core of these costs is the construction of trail improvements and is summarized in a Project Log. This Log includes typical contractor unit costs, material quantities and total estimated costs on a specific project by project basis for each phase of construction. The material quantities presented in the Log are representative estimates of the trail location corridors as illustrated in the Trail Plan. These corridors are suggested based upon limited field evaluations and are subject to change based on further in-depth field work and actual trail alignments. Subsequently, each total project cost has been estimated utilizing these suggested corridors and may vary dependent upon actual

construction conditions. The Log also assumes that all work will be completed by a qualified Trail Contractor with skilled construction laborers needed to perform several tasks associated with the implementation of the trail network. This would include all work involving construction of trailhead parking areas, concrete construction and rehabilitation work, trail road crossing construction, major signage installation, etc. However, where appropriate, untrained and/or unskilled volunteer labor can be utilized, which can cut construction costs by 75% in some cases. This could include the development of natural surface trails along moderate grades, installation of minor trail signage, forest restoration activities, installation of ornamental planting at trailheads and minor trail maintenance. Further cost savings can be achieved through the use of on-site materials such as timber, stones, dirt, etc.

In addition to the Project Log, a general cost analysis for each trail typology has been included so that costs associated with any potential project which is not specific to the Log can be estimated.

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Emerald View Park Trail Plan – Project Log

Trail Network Components	Unit ¹	Common Contractor ² Unit Cost	Quantity ³	Total Costs
Phase 1 (1 Year)			Subtotal Phase 1:	\$143,476
Project 1 - Grandview Overlooks Area/Duquesne Heights Greenway; Loops from the northern most end of Sweetbriar St. (Guyasuta & George Washington Statue) in Grandview Overlooks Area to Rutledge St. (northern end of Skookum Field) in the Duquesne Heights Greenway.				
a. Training Fees; includes 5-day training workshop and trail working log	LS	\$15,400.00	1	\$15,400
b. Woodland Path; 2-3' wide	LF	\$12.50	3,800	\$47,500
c. Tree Removal-2 trees (4" dbh or less) ⁴	Per 1/4 mile	\$100.00	2.9	\$288
d. Tree Pruning-4 trees (minor trimming) ⁵	Per 1/4 mile	\$25.00	2.9	\$72
e. New Trail Blazing ⁶	LF	\$0.25	3,800	\$950
f. Trailhead Signage	EA	\$4,000.00	1	\$4,000
g. Neighborhood Amenity Signage	EA	\$1,800.00	1	\$1,800
Shrubs; includes soil amendments and backfill	EA	\$35.00	5	\$175
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	400	\$1,200
Shredded Bark Landscape Mulch	SF	\$0.90	400	\$360
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	1,600	\$800
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	12	\$264
h. Design & Engineering Drawings ⁷	LS	\$4,600.00	1	\$4,600
i. Construction Oversight	LS	\$1,240.00	1	\$1,240
			Subtotal Project 1:	\$78,649
Project 2 - Duquesne Heights Greenway; Joins Phase 1 Project 1 trail @ northwest corner of Skookum Field & loops around Skookum Field before reconnecting with Phase 1 Project 1 trail @ Rutledge St.				
a. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	400	\$15,680
b. Narrow Woodland Path; 16-18" wide	LF	\$10.00	700	\$7,000
c. Restoration of Narrow Woodland Path; 16-18" wide	LF	\$4.50	800	\$3,600
d. Woodland Path; 2-3' wide	LF	\$12.50	400	\$5,000
e. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	0.8	\$83
f. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	1.4	\$36
g. New Trail Blazing	LF	\$0.25	1,100	\$275
h. Trail Wayfinding Signage	EA	\$600.00	1	\$600
i. Neighborhood Amenity Signage	EA	\$1,800.00	1	\$1,800
Shrubs; includes soil amendments and backfill	EA	\$35.00	5	\$175
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	400	\$1,200
Shredded Bark Landscape Mulch	SF	\$0.90	400	\$360
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	1,600	\$800
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	12	\$264
j. Construction Oversight	LS	\$740.00	1	\$740
			Subtotal Project 2:	\$37,613
Project 3 - Duquesne Heights Greenway; Loops from the southwestern corner of Olympia Park down into the Duquesne Heights Greenway before reconnecting with itself.				
a. Woodland Path; 2-3' wide	LF	\$12.50	1,200	\$15,000
b. Restoration of Woodland Path; 2-3' wide	LF	\$6.00	800	\$4,800
c. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	0.9	\$91
d. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	1.5	\$38
e. New Trail Blazing	LF	\$0.25	1,200	\$300
f. Trailhead Improvement @ Olympia Park				
Ornamental Trees; 1-1/2" cal; includes soil amendments and backfill	EA	\$250.00	1	\$250
Shrubs; includes soil amendments and backfill	EA	\$35.00	4	\$140
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	150	\$450
Shredded Bark Landscape Mulch	SF	\$0.90	150	\$135
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	150	\$75
Chain Link Fence (8' tall vinyl coated)	LF	\$40.00	20	\$800
g. Trailhead Signage	EA	\$4,000.00	1	\$4,000
h. Trail Wayfinding Signage	EA	\$600.00	1	\$600
i. Construction Oversight	LS	\$535.00	1	\$535
			Subtotal Project 3:	\$27,214
Phase 2 (2 Years)			Subtotal Phase 2:	\$332,137
Project 1 - Duquesne Heights Greenway; Joins Phase 1 Project 2 trail near western side of Skookum Field, meanders down & across Greenleaf St., continues along the edge of Greenleaf St. running southward, before terminating @ Greenleaf St. trailhead.				
a. Woodland Path; 2-3' wide	LF	\$12.50	2,000	\$25,000
b. Restoration of Woodland Path; 2-3' wide	LF	\$6.00	300	\$1,800

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Trail Network Components	Unit ¹	Common Contractor ² Unit Cost	Quantity ³	Total Costs
c. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	1.5	\$152
d. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	1.7	\$44
e. New Trail Blazing	LF	\$0.25	2,000	\$500
f. Construction of Road Crossing @ Greenleaf St.; includes painting of roadway striping/crossing, construction of an 8' high chain link vinyl fence or a 4' high split rail fence, two (2) road crossing signs and two (2) trail wayfinding signs.	EA	\$8,000.00	1	\$8,000
g. Trail Wayfinding Signage	EA	\$600.00	2	\$1,200
h. Design & Engineering Drawings; road crossing @ Greenleaf St.	LS	\$2,940.00	1	\$2,940
i. Construction Oversight	LS	\$800.00	1	\$800
			Subtotal Project 1:	\$40,435
Project 2 - Duquesne Heights Greenway; Trailhead @ southern end of Greenleaf St. terminating Phase 2 Project 1 trail.				
a. Trailhead @ Greenleaf St. ⁸				
Site Earthwork (includes 8" deep earthwork)	SF	\$0.10	5,120	\$512
Aggregate Paving (includes 8" deep aggregate)	SF	\$0.75	5,120	\$3,840
Shade Trees; 3" cal.; includes soil amendments and backfill	EA	\$350.00	2	\$700
Ornamental Trees; 1-1/2" cal; includes soil amendments and backfill	EA	\$250.00	4	\$1,000
Shrubs; includes soil amendments and backfill	EA	\$35.00	10	\$350
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	800	\$2,400
"No-Mow" Seeding	AC	\$5,000.00	0.2	\$1,000
Lawn seeding	SF	\$0.25	2,400	\$600
Shredded Bark Landscape Mulch	SF	\$0.90	800	\$720
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	3,200	\$1,600
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	200	\$4,400
Trailhead Signage	EA	\$4,000.00	1	\$4,000
Boundary Signage	EA	\$1,500.00	2	\$3,000
b. Design & Engineering Drawings	LS	\$1,930.00	1	\$1,930
c. Construction Oversight	LS	\$525.00	1	\$525
			Subtotal Project 2:	\$26,577
Project 3 - Duquesne Heights Greenway; Joins Phase 2 Project 1 trail @ Greenleaf St. trailhead and runs in a southward direction before terminating @ the overlook within the Duquesne Heights Greenway.				
a. Restoration of Woodland Path; 2-3' wide	LF	\$6.00	800	\$4,800
b. Overlook in the Duquesne Heights Greenway				
Site Clearing (10x10' area)	SF	\$10.00	100	\$1,000
Tree Removal-4 trees (4" dbh or less)	EA	\$50.00	4.0	\$200
Tree Pruning-10 trees (minor trimming)	EA	\$12.50	10.0	\$125
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	30	\$660
Wood Bench (constructed from on-site materials)	EA	\$75.00	2	\$150
Interpretive Signage	EA	\$2,500.00	1	\$2,500
c. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	0.6	\$15
d. Trail Wayfinding Signage	EA	\$600.00	1	\$600
e. Construction Oversight	LS	\$205.00	1	\$205
			Subtotal Project 3:	\$10,255
Project 4 - Duquesne Heights Greenway; Overlook along Phase 2 Project 1 trail @ Greenleaf St. in the Duquesne Heights Greenway overlooking West End Circle.				
a. Overlook in the Duquesne Heights Greenway overlooking West End Circle				
Site Clearing (10x10' area)	SF	\$10.00	100	\$1,000
Tree Removal-4 trees (4" dbh or less)	EA	\$50.00	4.0	\$200
Tree Pruning-10 trees (minor trimming)	EA	\$12.50	10.0	\$125
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	30	\$660
Wood Bench (constructed from on-site materials)	EA	\$75.00	2	\$150
Interpretive Signage	EA	\$2,500.00	1	\$2,500
b. Construction Oversight	LS	\$95.00	1	\$95
			Subtotal Project 4:	\$4,730
Project 5 - Grandview Overlooks Area; Overlook along Phase 1 Project 1 trail in Grandview Overlooks Area overlooking Point State Park.				
a. Woodland Path; 2-3' wide	LF	\$12.50	100	\$1,250
b. Overlook in Grandview Overlooks Area overlooking Point State Park				
Site Clearing (10x10' area)	SF	\$10.00	100	\$1,000
Tree Removal-4 trees (4" dbh or less)	EA	\$50.00	4.0	\$200
Tree Pruning-10 trees (minor trimming)	EA	\$12.50	10.0	\$125
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	30	\$660
Wood Bench (constructed from on-site materials)	EA	\$75.00	2	\$150
Interpretive Signage	EA	\$2,500.00	1	\$2,500

PHASING AND COSTS

Trail Network Components	Unit ¹	Common Contractor ² Unit Cost	Quantity ³	Total Costs
c. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	0.1	\$8
d. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	0.1	\$2
e. New Trail Blazing	LF	\$0.25	100	\$25
f. Construction Oversight	LS	\$120.00	1	\$120
Subtotal Project 5:				\$6,039
Project 6 - Grandview Overlooks Area; Trailhead @ intersection of Sweetbriar St. & Grandview Ave.				
a. Trailhead Improvement @ intersection of Sweetbriar St. & Grandview Overlooks Area				
Ornamental Trees; 1-1/2" cal; includes soil amendments and backfill	EA	\$250.00	1	\$250
Shrubs; includes soil amendments and backfill	EA	\$35.00	4	\$140
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	150	\$450
Shredded Bark Landscape Mulch	SF	\$0.90	150	\$135
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	150	\$75
Chain Link Fence (8' tall vinyl coated)	LF	\$40.00	20	\$800
b. Construction Oversight	LS	\$40.00	1	\$40
Subtotal Project 6:				\$1,890
Project 7 - Duquesne Heights Greenway; Joins Phase 1 Project 2 trail near Olympia Park & loops down and around into the Duquesne Heights Greenway before reconnecting with Phase 1 Project 3 trail to the west.				
a. Narrow Woodland Path; 16-18" wide	LF	\$10.00	1,000	\$10,000
b. Restoration of Narrow Woodland Path; 16-18" wide	LF	\$4.50	900	\$4,050
c. Woodland Path; 2-3' wide	LF	\$12.50	300	\$3,750
d. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	1.0	\$98
e. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	1.7	\$42
f. New Trail Blazing	LF	\$0.25	1,300	\$325
g. Trail Wayfinding Signage	EA	\$600.00	2	\$1,200
h. Construction Oversight	LS	\$390.00	1	\$390
Subtotal Project 7:				\$19,855
Project 8 - Grandview Park; Loops from Allen St. on the western side of Grandview Park, runs eastward, before reconnecting with Allen St. toward the middle of Grandview Park.				
a. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	300	\$11,760
b. Restoration of Woodland Path; 2-3' wide	LF	\$6.00	1,100	\$6,600
c. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	0.8	\$21
d. Trailhead Improvement @ Grandview Park				
Ornamental Trees; 1-1/2" cal; includes soil amendments and backfill	EA	\$250.00	1	\$250
Shrubs; includes soil amendments and backfill	EA	\$35.00	4	\$140
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	150	\$450
Shredded Bark Landscape Mulch	SF	\$0.90	150	\$135
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	150	\$75
Chain Link Fence (8' tall vinyl coated)	LF	\$40.00	20	\$800
e. Restoration of Existing Sandstone Staircase	LF	\$175.00	200	\$35,000
f. Trailhead Signage	EA	\$4,000.00	1	\$4,000
g. Trail Wayfinding Signage	EA	\$600.00	5	\$3,000
h. Neighborhood Amenity Signage	EA	\$1,800.00	1	\$1,800
Shrubs; includes soil amendments and backfill	EA	\$35.00	5	\$175
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	400	\$1,200
Shredded Bark Landscape Mulch	SF	\$0.90	400	\$360
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	1,600	\$800
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	12	\$264
i. Boundary Signage	EA	\$1,500.00	2	\$3,000
j. Construction Oversight	LS	\$1,400.00	1	\$1,400
Subtotal Project 8:				\$71,230
Project 9 - Grandview Park; Joins Phase 2 Project 8 trail to the east, runs northerly, before connecting with Roanoke St.				
a. Restoration of Woodland Path; 2-3' wide	LF	\$6.00	700	\$4,200
b. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	0.5	\$13
c. Trail Wayfinding Signage	EA	\$600.00	1	\$600
d. Neighborhood Amenity Signage	EA	\$1,800.00	1	\$1,800
Shrubs; includes soil amendments and backfill	EA	\$35.00	5	\$175
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	400	\$1,200
Shredded Bark Landscape Mulch	SF	\$0.90	400	\$360
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	1,600	\$800
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	12	\$264

PHASING AND COSTS

Trail Network Components	Unit ¹	Common Contractor ² Unit Cost	Quantity ³	Total Costs
e. Construction Oversight	LS	\$190.00	1	\$190
Subtotal Project 9:				\$9,602
Project 10 - Mount Washington Park; Loops from the northeastern edge of Mount Washington Park, down around the western edge of the ball fields, before reconnecting with itself @ Norton St.				
a. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	500	\$19,600
b. Woodland Path; 2-3' wide	LF	\$12.50	600	\$7,500
c. Restoration of Woodland Path; 2-3' wide	LF	\$6.00	1,500	\$9,000
d. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	0.5	\$45
e. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	1.6	\$40
f. New Trail Blazing	LF	\$0.25	600	\$150
g. Trailhead Improvement @ Mount Washington Park				
Ornamental Trees; 1-1/2" cal; includes soil amendments and backfill	EA	\$250.00	1	\$250
Shrubs; includes soil amendments and backfill	EA	\$35.00	4	\$140
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	150	\$450
Shredded Bark Landscape Mulch	SF	\$0.90	150	\$135
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	150	\$75
Chain Link Fence (8' tall vinyl coated)	LF	\$40.00	20	\$800
h. Trailhead Signage	EA	\$4,000.00	1	\$4,000
i. Neighborhood Amenity Signage	EA	\$1,800.00	1	\$1,800
Shrubs; includes soil amendments and backfill	EA	\$35.00	5	\$175
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	400	\$1,200
Shredded Bark Landscape Mulch	SF	\$0.90	400	\$360
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	1,600	\$800
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	12	\$264
j. Boundary Signage	EA	\$1,500.00	4	\$6,000
k. Construction Oversight	LS	\$1,060.00	1	\$1,060
Subtotal Project 10:				\$53,844
Project 11 - Mount Washington Park; Joins Phase 2 Project 10 trail @ southeastward edge, runs southeastward down along the edge of Mount Washington Park, before connecting with South Busway.				
a. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	200	\$7,840
b. Woodland Path; 2-3' wide	LF	\$12.50	3,900	\$48,750
c. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	3.0	\$295
d. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	3.0	\$74
e. Concrete Stairs crossing Boggs Ave.; assumes 6' wide; 6" riser; 1' tread; 6' landing	LF	\$250.00	35	\$8,750
f. New Trail Blazing	LF	\$0.25	3,900	\$975
g. Sidewalk Medallions; 60' o.c. and on all street corners/intersections	EA	\$150.00	8	\$1,200
h. Trail Wayfinding Signage	EA	\$600.00	3	\$1,800
i. Vehicular / On-Street Directional Signage (Gateway Signs)	EA	\$2,500.00	1	\$2,500
j. Design & Engineering Drawings; road crossing @ Boggs Ave.	LS	\$5,775.00	1.0	\$5,775
k. Construction of Road Crossing @ Boggs Ave. ; includes painting of roadway striping/crossing, construction of an 8' high chain link vinyl fence or a 4' high split rail fence, two (2) road crossing signs and two (2) trail wayfinding signs.	LS	\$8,000.00	1.0	\$8,000
l. Construction Oversight	LS	\$1,720.00	1	\$1,720
Subtotal Project 11:				\$87,679
Subtotal Phase 3:				\$242,789
Phase 3 (1 Year)				
Project 1 - Duquesne Heights Greenway; Joins Phase 2 Project 3 trail and loops around before reconnecting with Phase 2 Project 3 trail @ overlook.				
a. Narrow Woodland Path; 16-18" wide	LF	\$10.00	1,200	\$12,000
b. Restoration of Woodland Path; 2-3' wide	LF	\$6.00	150	\$900
c. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	0.9	\$91
d. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	1.0	\$26
e. New Trail Blazing	LF	\$0.25	1,200	\$300
f. Trail Wayfinding Signage	EA	\$600.00	2	\$1,200
Subtotal Project 1:				\$14,516
Project 2 - Duquesne Heights Greenway; Joins Phase 1 Project 3 trail & Phase 2 Project 7 trail to the west, meanders northwards before connecting onto Oneida St. @ neighborhood connection.				
a. Narrow Woodland Path; 16-18" wide	LF	\$10.00	1,000	\$10,000
b. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	0.8	\$76
c. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	0.8	\$19
d. New Trail Blazing	LF	\$0.25	1,000	\$250

PHASING AND COSTS

Trail Network Components	Unit ¹	Common Contractor ² Unit Cost	Quantity ³	Total Costs
e. Trail Wayfinding Signage	EA	\$600.00	1	\$600
f. Neighborhood Amenity Signage	EA	\$1,800.00	1	\$1,800
Shrubs; includes soil amendments and backfill	EA	\$35.00	5	\$175
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	400	\$1,200
Shredded Bark Landscape Mulch	SF	\$0.90	400	\$360
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	1,600	\$800
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	12	\$264
Subtotal Project 2:				\$15,544
Project 3 - Grandview Park; Joins trailhead @ Bigbee Field, runs eastward, before connecting with western end of Roanoke St @ the edge of the Park Boundary.				
a. Restoration of Woodland Path; 2-3' wide	LF	\$6.00	2,500	\$15,000
b. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	1.9	\$47
c. Trailhead Improvement @ Bigbee Field				
Ornamental Trees; 1-1/2" cal; includes soil amendments and backfill	EA	\$250.00	1	\$250
Shrubs; includes soil amendments and backfill	EA	\$35.00	4	\$140
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	150	\$450
Shredded Bark Landscape Mulch	SF	\$0.90	150	\$135
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	150	\$75
Chain Link Fence (8' tall vinyl coated)	LF	\$40.00	20	\$800
d. Trailhead Signage	EA	\$4,000.00	1	\$4,000
e. Neighborhood Amenity Signage	EA	\$1,800.00	1	\$1,800
Shrubs; includes soil amendments and backfill	EA	\$35.00	5	\$175
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	400	\$1,200
Shredded Bark Landscape Mulch	SF	\$0.90	400	\$360
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	1,600	\$800
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	12	\$264
Subtotal Project 3:				\$25,496
Project 4 - Grandview Park; Joins Phase 2 Project 8 trail with Phase 3 Project 3 trail in Grandview Park.				
a. Restoration of Woodland Path; 2-3' wide	LF	\$6.00	200	\$1,200
b. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	0.2	\$4
c. Trail Wayfinding Signage	EA	\$600.00	2	\$1,200
Subtotal Project 4:				\$2,404
Project 5 - The Saddle; Connects Grandview Ave., down Vinecliff Stairs, along E. Sycamore St. and onto E. Carson St.				
a. New Concrete City Walkway; 5-8' wide (6" deep; plain reinforced concrete, 6" aggregate sub-base) ⁹	LF	\$50.64	800	\$40,512
b. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	1,300	\$50,960
c. Restoration of Woodland Path; 2-3' wide	LF	\$6.00	350	\$2,100
d. Restoration of Existing Concrete Staircase; Vinecliff Stairs	LF	\$175.00	350	\$61,250
e. Sidewalk Medallions; 60' o.c. and on all street corners/intersections	EA	\$150.00	32	\$4,800
f. Shared Roadway Marking	Per 1/4 mile	\$125.00	1.0	\$123
g. Neighborhood Amenity Signage	EA	\$1,800.00	1	\$1,800
Shrubs; includes soil amendments and backfill	EA	\$35.00	5	\$175
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	400	\$1,200
Shredded Bark Landscape Mulch	SF	\$0.90	400	\$360
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	1,600	\$800
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	12	\$264
h. Vehicular / On-Street Directional Signage (Gateway Signs)	EA	\$2,500.00	1	\$2,500
i. Design & Engineering Drawings	LS	\$13,350.00	1.0	\$13,350
Subtotal Project 5:				\$180,194
Project 6 - The Saddle; Overlook @ E. Sycamore St. overlooking downtown along Phase 3 Project 5 trail.				
a. Overlook @ E. Sycamore St.				
Site Clearing (10x10' area)	SF	\$10.00	100	\$1,000
Tree Removal-4 trees (4" dbh or less)	EA	\$50.00	4.0	\$200
Tree Pruning-10 trees (minor trimming)	EA	\$12.50	10.0	\$125
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	30	\$660
Wood Bench (constructed from on-site materials)	EA	\$75.00	2	\$150
Interpretive Signage	EA	\$2,500.00	1	\$2,500
Subtotal Project 6:				\$4,635
Phase 4 (2 Years)				Subtotal Phase 4:
Subtotal Phase 4:				\$295,535
Project 1 - Duquesne Heights Greenway; Joins Phase 3 Project 1 trail to the east, runs eastward down and across Shaler St.				
a. Woodland Path; 2-3' wide	LF	\$12.50	1,250	\$15,625

Trail Network Components	Unit ¹	Common Contractor ² Unit Cost	Quantity ³	Total Costs
b. Restoration of Woodland Path; 2-3' wide	LF	\$6.00	150	\$900
c. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	0.9	\$95
d. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	1.1	\$27
e. New Trail Blazing	LF	\$0.25	1,250	\$313
f. Trail Wayfinding Signage	EA	\$600.00	1	\$600
g. Neighborhood Amenity Signage	EA	\$1,800.00	1	\$1,800
Shrubs; includes soil amendments and backfill	EA	\$35.00	5	\$175
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	400	\$1,200
Shredded Bark Landscape Mulch	SF	\$0.90	400	\$360
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	1,600	\$800
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	12	\$264
h. Design & Engineering Drawings; road crossing @ Shaler St.	LS	\$1,775.00	1	\$1,775
i. Construction of Road Crossing @ Shaler St. ; includes painting of roadway striping/crossing, construction of an 8' high chain link vinyl fence or a 4' high split rail fence, two (2) road crossing signs and two (2) trail wayfinding signs.	EA	\$8,000.00	1	\$8,000
Subtotal Project 1:				\$31,933
Project 2 - Duquesne Heights Greenway; Joins Phase 3 Project 1 trail to the east, runs eastward up and around to Republic St. @ neighborhood connection.				
a. Narrow Woodland Path; 16-18" wide	LF	\$10.00	400	\$4,000
b. Restoration of Narrow Woodland Path; 16-18" wide	LF	\$4.50	600	\$2,700
c. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	0.3	\$30
d. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	0.8	\$19
e. New Trail Blazing	LF	\$0.25	400	\$100
f. Trail Wayfinding Signage	EA	\$600.00	1	\$600
g. Neighborhood Amenity Signage	EA	\$1,800.00	1	\$1,800
Shrubs; includes soil amendments and backfill	EA	\$35.00	5	\$175
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	400	\$1,200
Shredded Bark Landscape Mulch	SF	\$0.90	400	\$360
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	1,600	\$800
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	12	\$264
Subtotal Project 2:				\$12,048
Project 3 - Shaler St.; Connects Phase 4 Project 1 trail @ Shaler St., runs northward to Grandview Ave., before connecting eastward with Phase 1 Project 1 trail & Phase 2 Project 6 trailhead.				
a. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	3,000	\$117,600
b. Sidewalk Medallions; 60' o.c. and on all street corners/intersections	EA	\$150.00	47	\$7,050
c. Shared Roadway Marking	Per 1/4 mile	\$125.00	2.3	\$284
d. Overlook @ Sweetbriar St. in Grandview Overlooks Area				
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	30	\$660
Wood Bench (constructed from on-site materials)	EA	\$75.00	2	\$150
Interpretive Signage	EA	\$2,500.00	1	\$2,500
e. Vehicular / On-Street Directional Signage	EA	\$2,500.00	1	\$2,500
Subtotal Project 3:				\$130,744
Project 4 - Duquesne Heights Greenway; Joins Phase 2 Project 7 trail to the west, runs northwesterly, before reaching the development area along Wyola St.				
a. New Concrete City Walkway; 5-8' wide (6" deep; plain reinforced concrete, 6" aggregate sub-base)9	LF	\$50.64	500	\$25,320
b. Restoration of Narrow Woodland Path; 16-18" wide	LF	\$4.50	150	\$675
c. Woodland Path; 2-3' wide	LF	\$12.50	400	\$5,000
d. Restoration of Woodland Path; 2-3' wide	LF	\$6.00	900	\$5,400
e. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	0.3	\$30
f. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	1.1	\$27
g. New Trail Blazing	LF	\$0.25	400	\$100
h. Sidewalk Medallions; 60' o.c. and on all street corners/intersections	EA	\$150.00	8	\$1,200
i. Trail Wayfinding Signage	EA	\$600.00	1	\$600
j. Neighborhood Amenity Signage	EA	\$1,800.00	2	\$3,600
Shrubs; includes soil amendments and backfill	EA	\$35.00	5	\$175
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	400	\$1,200
Shredded Bark Landscape Mulch	SF	\$0.90	400	\$360
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	1,600	\$800
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	12	\$264
k. Chain Link Fence (8' tall vinyl coated)	LF	\$40.00	150	\$6,000

PHASING AND COSTS

Trail Network Components	Unit ¹	Common Contractor ² Unit Cost	Quantity ³	Total Costs
I. Design & Engineering Drawings; trail crossing over Fort Pitt Tunnel	LS	\$4,060.00	1.0	\$4,060
			Subtotal Project 4:	\$54,812
Project 5 - Olympia Park; Joins Phase 1 Project 3 trail @ the intersection of Hallock St. & the southwestern corner of Olympia Park, runs eastward toward Olympia Rd., before reconnecting northwards with Olympia Park.				
a. Narrow Woodland Path; 16-18" wide	LF	\$10.00	600	\$6,000
b. Restoration of Narrow Woodland Path; 16-18" wide	LF	\$4.50	200	\$900
c. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	0.5	\$45
d. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	0.6	\$15
e. New Trail Blazing	LF	\$0.25	600	\$150
			Subtotal Project 5:	\$7,111
Project 6 - Mount Washington Park; Joins Phase 2 Project 10 trail to the west, runs northwards up to Grace St., runs southward and eastward down the lower side of Mount Washington Park, before reaching Phase 2 Project 11 trail.				
a. Narrow Woodland Path; 16-18" wide	LF	\$10.00	1,300	\$13,000
b. Restoration of Narrow Woodland Path; 16-18" wide	LF	\$4.50	650	\$2,925
c. Woodland Path; 2-3' wide	LF	\$12.50	275	\$3,438
d. Restoration of Woodland Path; 2-3' wide	LF	\$6.00	675	\$4,050
e. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	1.2	\$119
f. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	2.2	\$55
g. New Trail Blazing	LF	\$0.25	1,575	\$394
h. Trail Wayfinding Signage	EA	\$600.00	2	\$1,200
i. Neighborhood Amenity Signage	EA	\$1,800.00	1	\$1,800
Shrubs; includes soil amendments and backfill	EA	\$35.00	5	\$175
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	400	\$1,200
Shredded Bark Landscape Mulch	SF	\$0.90	400	\$360
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	1,600	\$800
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	12	\$264
			Subtotal Project 6:	\$29,779
Project 7 - Mount Washington Park; Joins Phase 4 Project 6 trail in the southwest, runs westward, before reaching overlook @ Republic St.				
a. Narrow Woodland Path; 16-18" wide	LF	\$10.00	500	\$5,000
b. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	0.4	\$38
c. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	0.4	\$9
d. Overlook @ Rubicon St. in Mount Washington Park				
Site Clearing (10x10' area)	SF	\$10.00	100	\$1,000
Tree Removal-4 trees (4" dbh or less)	EA	\$50.00	4.0	\$200
Tree Pruning-10 trees (minor trimming)	EA	\$12.50	10.0	\$125
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	30	\$660
Wood Bench (constructed from on-site materials)	EA	\$75.00	2	\$150
Interpretive Signage	EA	\$2,500.00	1	\$2,500
e. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	0.0	\$2
f. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	0.0	\$1
g. New Trail Blazing	LF	\$0.25	30	\$8
h. Trail Wayfinding Signage	EA	\$600.00	1	\$600
			Subtotal Project 7:	\$10,293
Project 8 - Mount Washington Park; Joins Phase 2 Project 10 trail in the southwest, runs southeastward, before reaching Phase 4 Project 6 trail.				
a. Narrow Woodland Path; 16-18" wide	LF	\$10.00	600	\$6,000
b. Restoration of Narrow Woodland Path; 16-18" wide	LF	\$4.50	250	\$1,125
c. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	0.5	\$45
d. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	0.6	\$16
e. New Trail Blazing	LF	\$0.25	600	\$150
f. Trail Wayfinding Signage	EA	\$600.00	2	\$1,200
			Subtotal Project 8:	\$8,537
Project 9 - Grandview Park; Joins Phase 3 Project 3 trail @ western end of Roanoke St., runs westward, before reaching Phase 3 Project 3 trail.				
a. Narrow Woodland Path; 16-18" wide	LF	\$10.00	550	\$5,500
b. Restoration of Narrow Woodland Path; 16-18" wide	LF	\$4.50	750	\$3,375
c. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	0.4	\$42
d. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	1.0	\$25
e. New Trail Blazing	LF	\$0.25	550	\$138
f. Trail Wayfinding Signage	EA	\$600.00	2	\$1,200
			Subtotal Project 9:	\$10,279
			Subtotal Phase 5:	\$908,053
Phase 5 (3-4 Years)				
Project 1 - Grandview Ave.; Joins Phase 3 Project 5 trail @ east end of Grandview Ave., runs westward along Grandview Ave., before terminating @ PJ McArdle Roadway.				

PHASING AND COSTS

Trail Network Components	Unit ¹	Common Contractor ² Unit Cost	Quantity ³	Total Costs
a. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	150	\$5,880
b. Restoration of Existing Concrete City Walkways; 10-12' wide (includes patching and maintenance)	LF	\$58.80	2,400	\$141,120
c. Sidewalk Medallions; 60' o.c. and on all street corners/intersections	EA	\$150.00	44	\$6,600
d. Shared Roadway Marking	Per 1/4 mile	\$125.00	1.9	\$241
e. Vehicular / On-Street Directional Signage	EA	\$2,500.00	1	\$2,500
f. Primary Site Identity Signage; 100' o.c.	EA	\$6,000.00	22	\$132,000
Subtotal Project 1:				\$288,341
Project 2 - Grandview Ave.; Joins Phase 5 Project 1 trail @ intersection of PJ McArdle Roadway & Grandview Ave., runs westward along Grandview Ave., before connecting with Phase 1 Project 1 trail & Phase 4 Project 3 trail.				
a. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	2,900	\$113,680
b. Sidewalk Medallions; 60' o.c. and on all street corners/intersections	EA	\$150.00	44	\$6,600
c. Shared Roadway Marking	Per 1/4 mile	\$125.00	2.2	\$275
Subtotal Project 2:				\$120,555
Project 3 - Hallock St./Virginia St./Grace St.; Joins Phase 1 Project 3 trail @ intersection of Hallock St. and southwestern corner of Olympia Park, runs northward up Hallock St., eastward along Virginia Ave., southward along Grace St., before connecting with Phase 4 Project 6 trail.				
a. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	5,900	\$231,280
b. Sidewalk Medallions; 60' o.c. and on all street corners/intersections	EA	\$150.00	99	\$14,850
c. Shared Roadway Marking	Per 1/4 mile	\$125.00	4.5	\$559
d. Vehicular / On-Street Directional Signage	EA	\$2,500.00	2	\$5,000
Subtotal Project 3:				\$251,689
Project 4 - Hallock St.; Joins Phase 5 Project 3 trail @ intersection of Hallock St. & Virginia Ave. (northeast corner of Olympia Park), runs northward along Hallock St., before connecting with Phase 5 Project 2 trail @ Grandview Ave.				
a. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	1,800	\$70,560
b. Sidewalk Medallions; 60' o.c. and on all street corners/intersections	EA	\$150.00	30	\$4,500
c. Shared Roadway Marking	Per 1/4 mile	\$125.00	1.4	\$170
d. Vehicular / On-Street Directional Signage	EA	\$2,500.00	1	\$2,500
Subtotal Project 4:				\$77,730
Project 5 - Bailey Ave./Aline St.; Joins Phase 3 Project 3 trail @ Bigbee Field trailhead, runs southward on Aline St., westward on Bailey Ave., before terminating @ beginning of Commercial District.				
a. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	800	\$31,360
b. Sidewalk Medallions; 60' o.c. and on all street corners/intersections	EA	\$150.00	14	\$2,100
c. Shared Roadway Marking	Per 1/4 mile	\$125.00	0.6	\$76
d. Vehicular / On-Street Directional Signage	EA	\$2,500.00	1	\$2,500
Subtotal Project 5:				\$36,036
Project 6 - Roanoke St./10th St. in South Side; Joins Phase 3 Project 3 trail @ western end of Roanoke St., runs eastward along Roanoke St., crosses Arlington Ave. eastward along Hartford Ave., northward down concrete staircase, crossing railroad bridge, before connecting with 10th St. in the South Side.				
a. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	2,500	\$98,000
b. Sidewalk Medallions; 60' o.c. and on all street corners/intersections	EA	\$150.00	31	\$4,650
c. Shared Roadway Marking	Per 1/4 mile	\$125.00	1.9	\$237
d. Vehicular / On-Street Directional Signage	EA	\$2,500.00	3	\$7,500
e. Vehicular / On-Street Directional Signage (Gateway Signs)	EA	\$2,500.00	1	\$2,500
f. Restoration of Existing Concrete Staircase	LF	\$175.00	20	\$3,500
g. Design & Engineering Drawings; road crossing @ Arlington Ave.	LS	\$9,315.00	1	\$9,315
h. Construction of Road Crossing @ Arlington Ave. ; includes painting of roadway striping/crossing, construction of an 8' high chain link vinyl fence or a 4' high split rail fence, two (2) road crossing signs and two (2) trail wayfinding signs.	EA	\$8,000.00	1	\$8,000
Subtotal Project 6:				\$133,702
Phase 6 (3-4 Years)				\$442,800
Project 1 - Virginia Ave./Shiloh St.; Joins Phase 5 Project 3 trail @ intersection of Virginia Ave. & Kearsarge St., runs eastward into Commercial District on Virginia Ave., northwards on Shiloh St., before connecting with Phase 5 Project 1 trail at Grandview Ave.				
a. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	1,750	\$68,600
b. Sidewalk Medallions; 60' o.c. and on all street corners/intersections	EA	\$150.00	28	\$4,200
c. Shared Roadway Marking	Per 1/4 mile	\$125.00	1.3	\$166

PHASING AND COSTS

Trail Network Components	Unit ¹	Common Contractor ² Unit Cost	Quantity ³	Total Costs
d. Vehicular / On-Street Directional Signage	EA	\$2,500.00	1	\$2,500
Subtotal Project 1:				\$75,466
Project 2 - Bailey Ave./Norton St.; Joins Phase 5 Project 5 trail @ eastern edge of Commercial District on Bailey Ave., runs westward on Bailey Ave., southward on Boggs Ave., westward on Whitworth St., southward on Southern Ave., westward on Sandwich St., southwestward on Norton St., before connecting with Phase 2 Project 10 trail/trailhead.				
a. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	3,250	\$127,400
b. Sidewalk Medallions; 60' o.c. and on all street corners/intersections	EA	\$150.00	57	\$8,550
c. Shared Roadway Marking	Per 1/4 mile	\$125.00	2.5	\$308
d. Vehicular / On-Street Directional Signage	EA	\$2,500.00	4	\$10,000
Subtotal Project 2:				\$146,258
Project 3 - Duquesne Heights Greenway; Joins Phase 2 Project 1 trailhead, loops down & around toward Rt. 51, before meandering back up to the overlook @ Phase 2 Project 3 trail.				
a. Woodland Path; 2-3' wide	LF	\$12.50	2,700	\$33,750
b. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	2.0	\$205
c. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	2.0	\$51
d. New Trail Blazing	LF	\$0.25	2,700	\$675
e. Trail Wayfinding Signage	EA	\$600.00	2	\$1,200
Subtotal Project 3:				\$35,881
Project 4 - Duquesne Heights Greenway; Joins Phase 4 Project 1 trail/road crossing @ Shaler St., runs southeastward, before connecting northeastward up to Phase 4 Project 4 trail @ Wyola St.				
a. Woodland Path; 2-3' wide	LF	\$12.50	1,600	\$20,000
b. Restoration of Woodland Path; 2-3' wide	LF	\$6.00	200	\$1,200
c. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	1.2	\$121
d. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	1.4	\$34
e. New Trail Blazing	LF	\$0.25	1,600	\$400
f. Trail Wayfinding Signage	EA	\$600.00	2	\$1,200
Subtotal Project 4:				\$22,955
Project 5 - Shaler St.; Trailhead @ intersection of Shaler St., Phase 4 Project 1 trail and Phase 6 Project 4 trail.				
a. Trailhead with parking @ Shaler St. in the Duquesne Heights Greenway				
Site Earthwork (includes 8" deep earthwork)	SF	\$0.10	5,120	\$512
Aggregate Paving (includes 8" deep aggregate)	SF	\$0.75	5,120	\$3,840
Shade Trees; 3" cal.; includes soil amendments and backfill	EA	\$350.00	2	\$700
Ornamental Trees; 1-1/2" cal; includes soil amendments and backfill	EA	\$250.00	4	\$1,000
Shrubs; includes soil amendments and backfill	EA	\$35.00	10	\$350
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	800	\$2,400
"No-Mow" Seeding	AC	\$5,000.00	0.2	\$1,000
Lawn seeding	SF	\$0.25	2,400	\$600
Shredded Bark Landscape Mulch	SF	\$0.90	800	\$720
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	3,200	\$1,600
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	200	\$4,400
Trailhead Signage	EA	\$4,000.00	1	\$4,000
Subtotal Project 5:				\$21,122
Project 6 - Duquesne Heights Greenway; Joins Phase 4 Project 1 trail near Shaler St., runs southward, before connecting with Phase 6 Project 5 trailhead on Shaler St.				
a. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	500	\$19,600
b. Narrow Woodland Path; 16-18" wide	LF	\$10.00	700	\$7,000
c. Restoration of Woodland Path; 2-3' wide	LF	\$6.00	300	\$1,800
d. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	0.5	\$53
e. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	0.8	\$19
f. New Trail Blazing	LF	\$0.25	700	\$175
g. Sidewalk Medallions; 60' o.c. and on all street corners/intersections	EA	\$150.00	6	\$900
h. Shared Roadway Marking	Per 1/4 mile	\$125.00	0.4	\$47
i. Trail Wayfinding Signage	EA	\$600.00	2	\$1,200
j. Neighborhood Amenity Signage	EA	\$1,800.00	1	\$1,800
Shrubs; includes soil amendments and backfill	EA	\$35.00	5	\$175
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	400	\$1,200
Shredded Bark Landscape Mulch	SF	\$0.90	400	\$360
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	1,600	\$800
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	12	\$264
Subtotal Project 6:				\$35,393

PHASING AND COSTS

Trail Network Components	Unit ¹	Common Contractor ² Unit Cost	Quantity ³	Total Costs
Project 7 - Duquesne Heights Greenway; Joins Phase 6 Project 3 trail, runs eastward down around Ducky Pond before connecting with Phase 6 Project 6 trail @ Shaler St.				
a. Narrow Woodland Path; 16-18" wide	LF	\$10.00	650	\$6,500
b. New Boardwalk 5' wide (3" x 12" framing, 3" decking, wood posts & crossbracing)	LF	\$75.00	1,100	\$82,500
c. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	1.3	\$133
d. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	1.3	\$33
e. New Trail Blazing	LF	\$0.25	1,750	\$438
f. Trail Wayfinding Signage	EA	\$600.00	3	\$1,800
g. Design & Engineering Drawings; boardwalk and earthen trail	LS	\$7,315.00	1.0	\$7,315
Subtotal Project 7:				\$98,718
Project 8 - Duquesne Heights Greenway; Joins Phase 6 Project 4 trail, runs northward, before connecting with Orlena Way @ neighborhood connection.				
a. Restoration of Narrow Woodland Path; 16-18" wide	LF	\$4.50	400	\$1,800
b. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	0.3	\$8
c. Trail Wayfinding Signage	EA	\$600.00	1	\$600
d. Neighborhood Amenity Signage	EA	\$1,800.00	1	\$1,800
Shrubs; includes soil amendments and backfill	EA	\$35.00	5	\$175
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	400	\$1,200
Shredded Bark Landscape Mulch	SF	\$0.90	400	\$360
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	1,600	\$800
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	12	\$264
Subtotal Project 8:				\$7,007
Phase 7 (2 Years)				\$380,849
Project 1 - Duquesne Heights Greenway; Joins Phase 2 Project 4 trail @ Greenleaf St., runs northward down Greenleaf St., before terminating @ the West End Circle.				
a. New Concrete City Walkway; 5-8' wide (6" deep; plain reinforced concrete, 6" aggregate sub-base)	LF	\$50.64	1,500	\$75,960
b. Sidewalk Medallions; 60' o.c. and on all street corners/intersections	EA	\$150.00	23	\$3,450
c. Shared Roadway Marking	Per 1/4 mile	\$125.00	1.1	\$142
d. Vehicular / On-Street Directional Signage (Gateway Signs)	EA	\$2,500.00	1	\$2,500
e. Trail Wayfinding Signage	EA	\$600.00	1	\$600
f. Design & Engineering Drawings; new concrete paving along Greenleaf St.	LS	\$6,615.00	1	\$6,615
Subtotal Project 1:				\$89,267
Project 2 - Shaler St./Minnotte Sq.; Joins Phase 6 Project 6 trail @ Shaler St., runs southward along Shaler St./Minnotte Sq., before connecting with the Seldom Seen Greenway.				
a. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	1,050	\$41,160
b. Sidewalk Medallions; 60' o.c. and on all street corners/intersections	EA	\$150.00	16	\$2,400
c. Shared Roadway Marking	Per 1/4 mile	\$125.00	0.8	\$99
d. Vehicular / On-Street Directional Signage (Gateway Signs)	EA	\$2,500.00	1	\$2,500
Subtotal Project 2:				\$46,159
Project 3 - Duquesne Heights Greenway; Joins Phase 6 Project 4 trail, runs southeastward to overlook, before running northeastward and connecting with Phase 6 Project 4 trail.				
a. Narrow Woodland Path; 16-18" wide	LF	\$10.00	1,600	\$16,000
b. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	1.2	\$121
c. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	1.2	\$30
d. Overlook in the Duquesne Heights Greenway overlooking Seldom Seen Greenway Trail				
Site Clearing (10x10' area)	SF	\$10.00	100	\$1,000
Tree Removal-4 trees (4" dbh or less)	EA	\$50.00	4.0	\$200
Tree Pruning-10 trees (minor trimming)	EA	\$12.50	10.0	\$125
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	30	\$660
Wood Bench (constructed from on-site materials)	EA	\$75.00	2	\$150
Interpretive Signage	EA	\$2,500.00	1	\$2,500
e. New Trail Blazing	LF	\$0.25	1,600	\$400
f. Trail Wayfinding Signage	EA	\$600.00	2	\$1,200
Subtotal Project 3:				\$22,387
Project 4 - Mount Washington Park; Joins Phase 4 Project 7 trail, runs westward, southward @ Wabash Tunnel Road, before connecting with the Seldom Seen Greenway.				
a. New Concrete City Walkway; 5-8' wide (6" deep; plain reinforced concrete, 6" aggregate sub-base)	LF	\$50.64	650	\$32,916
b. Narrow Woodland Path; 16-18" wide	LF	\$10.00	500	\$5,000
c. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	0.4	\$38

PHASING AND COSTS

Trail Network Components	Unit ¹	Common Contractor ² Unit Cost	Quantity ³	Total Costs
d. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	0.4	\$9
e. New Trail Blazing	LF	\$0.25	500	\$125
f. Sidewalk Medallions; 60" o.c. and on all street corners/intersections	EA	\$150.00	11	\$1,650
g. Vehicular / On-Street Directional Signage (Gateway Signs)	EA	\$2,500.00	1	\$2,500
h. Trail Wayfinding Signage	EA	\$600.00	1	\$600
i. Design & Engineering Drawings; road crossing @	LS	\$3,430.00	1.0	\$3,430
Subtotal Project 4:				\$46,268
Project 5 - The Saddle; Joins Vinecliff Stairs of Phase 3 Project 5 trail, runs southward across E. Sycamore St., before connecting with Phase 6 Project 2 trail in the Commercial District @ Bailey St.				
a. New Concrete City Walkway; 5-8' wide (6" deep; plain reinforced concrete, 6" aggregate sub-base)	LF	\$50.64	1,150	\$58,236
b. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	350	\$13,720
c. Sidewalk Medallions; 60" o.c. and on all street corners/intersections	EA	\$150.00	26	\$3,900
d. Trail Wayfinding Signage	EA	\$600.00	2	\$1,200
e. Neighborhood Amenity Signage	EA	\$1,800.00	1	\$1,800
Shrubs; includes soil amendments and backfill	EA	\$35.00	5	\$175
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	400	\$1,200
Shredded Bark Landscape Mulch	SF	\$0.90	400	\$360
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	1,600	\$800
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	12	\$264
f. Design & Engineering Drawings; new concrete paving and road crossing @ E. Sycamore St.	LS	\$6,535.00	1.0	\$6,535
g. Construction of Road Crossing @ E. Sycamore St. ; includes painting of roadway striping/crossing, construction of an 8' high chain link vinyl fence or a 4' high split rail fence, two (2) road crossing signs and two (2) trail wayfinding signs.	EA	\$8,000.00	1	\$8,000
Subtotal Project 5:				\$96,190
Project 6 - The Saddle; Joins Phase 3 Project 3 trail @ Bigbee Field, runs northeastward down across Cola St. before meandering down and connecting with Phase 3 Project 5 trail @ E. Sycamore St.				
a. Woodland Path; 2-3' wide	LF	\$12.50	2,300	\$28,750
b. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	1.7	\$174
c. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	1.7	\$44
d. New Trail Blazing	LF	\$0.25	2,300	\$575
e. Trail Wayfinding Signage	EA	\$600.00	2	\$1,200
f. Design & Engineering Drawings; road crossing @ Cola St.	LS	\$2,460.00	1.0	\$2,460
g. Construction of Road Crossing @ Cola St. ; includes painting of roadway striping/crossing, construction of an 8' high chain link vinyl fence or a 4' high split rail fence, two (2) road crossing signs and two (2) trail wayfinding signs.	EA	\$8,000.00	1	\$8,000
Subtotal Project 6:				\$41,203
Project 7 - The Saddle; Joins Phase 7 Project 5 trail, runs eastward down across Phase 7 Project 6 trail, before connecting @ Cola St.				
a. Restoration of Narrow Woodland Path; 16-18" wide	LF	\$4.50	1,000	\$4,500
b. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	0.8	\$19
c. Trail Wayfinding Signage	EA	\$600.00	2	\$1,200
d. Neighborhood Amenity Signage	EA	\$1,800.00	2	\$3,600
Shrubs; includes soil amendments and backfill	EA	\$35.00	5	\$175
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	400	\$1,200
Shredded Bark Landscape Mulch	SF	\$0.90	400	\$360
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	1,600	\$800
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	12	\$264
Subtotal Project 7:				\$12,118
Project 8 - The Saddle; Trailhead in the Saddle @ intersection of Phase 7 Project 6 trail & Phase 8 Project 1 trail.				
a. Trailhead in The Saddle				
Site Earthwork (includes 8" deep earthwork)	SF	\$0.10	5,120	\$512
Aggregate Paving (includes 8" deep aggregate)	SF	\$0.75	5,120	\$3,840
Shade Trees; 3" cal.; includes soil amendments and backfill	EA	\$350.00	2	\$700
Ornamental Trees; 1-1/2" cal; includes soil amendments and backfill	EA	\$250.00	4	\$1,000
Shrubs; includes soil amendments and backfill	EA	\$35.00	10	\$350
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	800	\$2,400
"No-Mow" Seeding	AC	\$5,000.00	0.2	\$1,000
Lawn seeding	SF	\$0.25	2,400	\$600
Shredded Bark Landscape Mulch	SF	\$0.90	800	\$720

PHASING AND COSTS

Trail Network Components	Unit ¹	Common Contractor ² Unit Cost	Quantity ³	Total Costs
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	3,200	\$1,600
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	200	\$4,400
Trailhead Signage	EA	\$4,000.00	1	\$4,000
Boundary Signage	EA	\$1,500.00	1	\$1,500
Subtotal Project 8:				\$22,622
Project 9 - The Saddle; Overlook in the Saddle @ intersection of Cola St., Phase 7 Project 6 trail and Phase 7 Project 7 trail.				
a. Overlook @ Cola St.				
Site Clearing (10x10' area)	SF	\$10.00	100	\$1,000
Tree Removal-4 trees (4" dbh or less)	EA	\$50.00	4.0	\$200
Tree Pruning-10 trees (minor trimming)	EA	\$12.50	10.0	\$125
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	30	\$660
Wood Bench (constructed from on-site materials)	EA	\$75.00	2	\$150
Interpretive Signage	EA	\$2,500.00	1	\$2,500
Subtotal Project 9:				\$4,635
Phase 8 (1 Year)				Subtotal Phase 8: \$185,266
Project 1 - The Saddle; Joins Phase 7 Project 6 trail @ Phase 7 Project 8 trailhead, runs northeastward onto PJ McArdle Roadway, eastward on PJ McArdle Roadway, before terminating at Liberty Bridge.				
a. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	700	\$27,440
b. Narrow Woodland Path; 16-18" wide	LF	\$10.00	700	\$7,000
c. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	0.5	\$53
d. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	0.5	\$13
e. New Trail Blazing	LF	\$0.25	700	\$175
f. Sidewalk Medallions; 60' o.c. and on all street corners/intersections	EA	\$150.00	12	\$1,800
g. Shared Roadway Marking	Per 1/4 mile	\$125.00	0.5	\$66
h. Vehicular / On-Street Directional Signage (Gateway Signs)	EA	\$2,500.00	1	\$2,500
i. Trail Wayfinding Signage	EA	\$600.00	1	\$600
Subtotal Project 1:				\$39,648
Project 2 - Haberman Ave./E. Warrington Ave.; Joins Phase 5 Project 5 trail @ intersection of Bailey Ave. & alley between Haberman Ave. & Cushman St., runs southward along alley into Haberman Ave., continues southward on Haberman Ave., westward along E. Warrington Ave., before terminating @ Montooth St.				
a. New Concrete City Walkway; 5-8' wide (6" deep; plain reinforced concrete, 6" aggregate sub-base)	LF	\$50.64	550	\$27,852
b. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	2,600	\$101,920
c. Sidewalk Medallions; 60' o.c. and on all street corners/intersections	EA	\$150.00	54	\$8,100
d. Shared Roadway Marking	Per 1/4 mile	\$125.00	2.0	\$246
e. Vehicular / On-Street Directional Signage (Gateway Signs)	EA	\$2,500.00	1	\$2,500
f. Vehicular / On-Street Directional Signage	EA	\$2,500.00	2	\$5,000
Subtotal Project 2:				\$145,618
Phase 9 (1 Year)				Subtotal Phase 9: \$91,712
Project 1 - The Saddle/Grandview Overlooks Area; Joins Phase 8 Project 1 trail @ PJ McArdle Roadway, runs westward along PJ McArdle Roadway, veers off onto trail, before connecting with Phase 5 Project 1 @ intersection of Grandview Ave. & PJ McArdle Roadway.				
a. Restoration of Existing Concrete City Sidewalks; 5-8' wide (includes patching and maintenance)	LF	\$39.20	1,375	\$53,900
b. Narrow Woodland Path; 16-18" wide	LF	\$10.00	2,850	\$28,500
c. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	2.2	\$216
d. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	2.2	\$54
e. New Trail Blazing	LF	\$0.25	2,850	\$713
f. Sidewalk Medallions; 60' o.c. and on all street corners/intersections	EA	\$150.00	24	\$3,600
g. Shared Roadway Marking	Per 1/4 mile	\$125.00	1.0	\$130
h. Neighborhood Amenity Signage	EA	\$1,800.00	1	\$1,800
Shrubs; includes soil amendments and backfill	EA	\$35.00	5	\$175
Groundcover/Ornamental Grass; includes soil amendments and backfill	SF	\$3.00	400	\$1,200
Shredded Bark Landscape Mulch	SF	\$0.90	400	\$360
Topsoil at 4" in depth; includes soils amendments	SF	\$0.50	1,600	\$800
Split Rail Fencing (includes 2 rails and 4"x4"posts @ 6'-0" o.c., 4' high)	LF	\$22.00	12	\$264
Subtotal Project 1:				\$91,712
Phase 10 (1 Year)				Subtotal Phase 10: \$56,937
Project 1 - Grandview Overlooks Area; Joins Phase 9 Project 1 trail near intersection of PJ McArdle Roadway & Grandview Ave., runs westward along slope of Grandview Overlooks Area under Duquesne Incline, before connecting with Phase 1 Project 1 trail.				
a. Narrow Woodland Path; 16-18" wide	LF	\$10.00	4,400	\$44,000
b. Tree Removal-2 trees (4" dbh or less)	Per 1/4 mile	\$100.00	3.3	\$333

PHASING AND COSTS

Trail Network Components	Unit ¹	Common Contractor ² Unit Cost	Quantity ³	Total Costs
c. Tree Pruning-4 trees (minor trimming)	Per 1/4 mile	\$25.00	3.3	\$83
d. New Trail Blazing	LF	\$0.25	4,400	\$1,100
e. Trail Wayfinding Signage	EA	\$600.00	2	\$1,200
f. Chain Link Fence (8' tall vinyl coated)	LF	\$40.00	150	\$6,000
g. Design & Engineering Drawings; new earthen trail	LS	\$4,220.00	1.0	\$4,220
Subtotal Project 1:				\$56,937
Hard Costs Subtotal:				\$3,079,553
Soft Costs				Subtotal Soft Costs:
				\$246,364
a. Contingency Costs (5% of hard costs)				\$153,978
b. Mobilization/demobilization (3% of hard costs)				\$92,387
Grand Total:				\$3,325,918

General Notes

- 1 Key to Abbreviations: EA (Each); LF (Linear Feet); SF (Square Feet); AC (Acres); CY (Cubic Yards);
- 2 Contractor unit costs include material, labor, overhead and profit;
- 3 Quantities have been estimated and scaled from plotted base maps and do not match exactly with distances calculated using GIS. Quantities will need to be verified in the field by contractor on a project to project basis.
- 4 Assumes removal of 4" dbh or less trees based upon a per 1/4 mile basis;
- 5 Assumes minor trimming of vegetation based upon a per 1/4 mile basis;
- 6 Assumes blazing approximately 1/2 mile of trail per 4 hours. Includes finding alternative trail locations, flagging and mapping coordinates with GPS;
- 7 Assumes total costs will be approximately 8% of particular project construction costs;
- 8 Assumes that all trailheads with parking, trailheads without parking and overlooks are standardized. Actual calculations and quantities will need to be verified in the field during design and construction phases.
- 9 Trail widths are based upon an average width; may change based upon site conditions and ADA accessible standards.

General Estimated Construction Costs by Trail Typology

Outlined below are estimated construction costs for new construction and/or rehabilitation of the trail network by trail typology type. All costs are based on a quarter (1/4) mile long increment and are reflective of the typical width associated to that typology. These costs represent typical pricing for construction and renovation completed by a qualified trail contractor. Once again, some of these costs can be reduced by utilizing volunteer labor and found materials where appropriate.

Type 1 (New Construction): Concrete City Sidewalk (5-8' wide) and Shared Roadway:
\$67,000

Assumptions: Skilled construction laborers will be performing this work; includes the construction of new concrete sidewalks and placement of any bike/vehicular pavement markings or symbols.

Type 1 (Restoration): Concrete City Sidewalk (5-8' wide) and Shared Roadway:
\$52,000

Assumptions: Skilled construction laborers will be performing this work; includes the restoration of existing concrete sidewalks and/or touch-up of any bike/vehicular pavement markings or symbols.

Type 2 (Restoration): Concrete Walkway (10-12' wide) and Shared Roadway:
\$78,000

PHASING AND COSTS

Assumptions: Skilled construction laborers will be performing this work; includes the restoration of existing concrete sidewalks and/or touch-up of any bike/vehicular pavement markings or symbols. It is assumed that no new Concrete Walkways will be constructed as part of the trail network.

Type 3 (New Construction): Narrow Woodland Path (16-18" wide):
\$13,655

Assumptions: Skilled construction laborers will be performing this work; includes trail blazing, removal of an average of 2 trees per quarter (1/4) mile, tree pruning an average of 4 trees per quarter (1/4) mile, and the construction of new narrow woodland paths.

Type 3 (Restoration): Narrow Woodland Path (16-18" wide):
\$5,940

Assumptions: Skilled construction laborers will be performing this work; includes the restoration of existing narrow woodland paths and tree pruning an average of 4 trees per quarter (1/4) mile.

Type 4 (New Construction): Woodland Path (2-3' wide):
\$16,955

Assumptions: Skilled construction laborers will be performing this work; includes trail blazing, removal of an average of 4 trees per quarter (1/4) mile, tree pruning an average of 8 trees per quarter (1/4) mile, and the construction of new woodland paths.

Type 4 (Restoration): Woodland Path (2-3' wide):
\$7,920

Assumptions: Skilled construction laborers will be performing this work; includes the restoration of existing woodland paths and tree pruning an average of 8 trees per quarter (1/4) mile.

Type 5 (New Construction): Boardwalk (5-6' wide):
\$100,525

Assumptions: Skilled construction laborers will be performing this work; includes boardwalk design and construction drawings, removal of an average of 4 trees per quarter (1/4) mile, tree pruning an average of 8 trees per quarter (1/4) mile, and the construction of new boardwalks.

Overview

A key component to the implementation of the Trail Plan is funding. Outlined in the following section is a listing of potential funding sources which can be utilized to assist with the implementation of various aspects of the Trail Plan. This listing focuses generally on publicly sponsored funding sources or grant programs. In many cases, these sources can be combined with other funding or matched to sources including private grants from philanthropic foundations. The alphabetical listing does not address private philanthropic funding opportunities which may be utilized. The private philanthropic sources tend to be less regular and are not as reliable a source of seeking money to initiate a project. It should be noted that many of these funding sources are administered on an annual basis with annual submission deadlines, and are not necessarily guaranteed from one year to the next.

Communities Putting Prevention to Work

Agency: Centers for Disease Control and Prevention (CDC)

Program Goals: To create healthier communities through sustainable, proven, population-based approaches such as broad-based policy, systems, organizational and environmental changes in communities and schools.

Program Restrictions: Urban areas: The official local health department (or its bona fide agent), or its equivalent, as designated by the mayor, county executive, or other equivalent governmental official, will serve as the lead/fiduciary agent for an

urban area application. For this announcement, the term “urban area” is defined as a local health department that serves a jurisdiction with a population more than 500,000 and up to 1 million people.

Use of Funds or Support: The implementations of programs and facilities which promote health and physical fitness.

Contact: Centers for Disease Control and Prevention
1600 Clifton Rd. Atlanta, GA 30333

Phone: 1-800-232-4636

Website: www.cdc.gov

Community Conservation Partnerships Programs (C2P2)

Agency: Department of Conservation and Natural Resources (DCNR)

Program Goals: To develop and sustain partnerships with communities, non-profits and other organizations for recreation and conservation projects and purposes. The Bureau of Recreation and Conservation is responsible for fostering, facilitating and nurturing the great majority of these partnerships through technical assistance and grant funding from the Community Conservation Partnerships Programs.

Program Restrictions: See DCNR grant application manual for the Community Conservation Partnerships Program, as program restrictions vary by project or application type.

Use of Funds: 1) Planning, Technical Assistance, Education and Training; 2) Acquisition Projects:

FUNDING

Park and Recreation Areas, Greenways, Trails and Natural and Critical Habitat Areas; 3) Development Projects: Park and Recreation Areas, Park Rehabilitation and Development, Greenways and Trails, Pennsylvania Recreational Trails

Contact: Kathy Frankel, PA DCNR, Southwest Field Office, 1405 State Office Building, 300 Liberty Avenue, Pittsburgh, PA 15222

Phone: 1-412-565-7803

Website: www.dcnr.state.pa.us

Community Development Block Grants (CDBG)

Agency: U.S. Department of Housing and Urban Development

Program Goals: To provide a flexible source of annual grant funds for local governments nationwide: funds that they, with the participation of local citizens, can devote to the activities that best serve their own particular development priorities, provided that these projects either 1) benefit low and moderate income persons; 2) prevent or eliminate slums or blight; or 3) meet other urgent community development needs.

Program Restrictions: Low and moderate income persons (generally defined as members of a family earning no more than 80% of the area's median income) benefit most directly and most often from CDBG funds for activities that principally benefit low and moderate income persons.

Use of Funds or Support: Building public facilities and improvements, such as streets, sidewalks, signage and recreational facilities.

Contact: Allegheny County, Department of Economic Development, 425 Sixth Avenue, Suite 800, Pittsburgh, PA 15219 Phone: 1-412-350-1000

Community Improvement Grants

Agency: Pennsylvania Urban and Community Forestry Department

Program Goals: Focus is to support "greening" partnerships linking grassroots organizations, local community groups, and natural resource experts in support of community resource and natural resource management.

Use of Funds or Support: Encourages partnerships with and between diverse organizations and groups. Supports local improvement projects, as well as tree planting projects in parks, greenbelts and community public spaces.

Contact: Allegheny County Cooperative Extension, 400 North Lexington Street, Pittsburgh, PA 15208

Phone: 1-412-473-2540

Email: AlleghenyExt@psu.edu

Website: allegheny.extension.psu.edu

Conservation Reserve Program (CRP)

Agency: Natural Resources Conservation Service

Program Goals: Designed to reduce erosion on sensitive lands, CRP also improves soil and water, and provides significant wildlife habitat.

Program Restrictions: Applications are for 10 and 15 year contracts.

FUNDING

Use of Funds or Support: The CRP offers cost-share assistance to establish approved groundcover on eligible cropland. (Could be used to establish native groundcovers in exposed areas of the Byway Park)

Contact: Pennsylvania Natural Resource Conservation Service, One Credit Union Place, Suite 340, Harrisburg, PA 17110

Phone: 1-717-237-2100

Fax: 1-717-237-2238

Website:

<http://www.pa.nrcs.usda.gov/programs/crp.html>

Elm Street

Agency: Pennsylvania Department of Community and Economic Development (DCED)

Program Goals: To provide planning, technical assistance and physical improvements to residential and mixed use areas in proximity to central business districts.

Program Restrictions: Municipalities; Redevelopment Authorities; Non-profit Main Street Organizations; Economic Development Organizations; Neighborhood Improvement districts.

Use of Funds: Revitalization of residential and mixed use neighborhoods, including streets, sidewalks, street trees, signage, etc.

Contact: DCED Southwest Regional Office, 1403A State Office Building, 300 Liberty Avenue, Pittsburgh, PA 15222

Phone: 1-800-379-7448

Home Town Streets

Agency: Pennsylvania Department of Transportation (PennDOT)

Program Goals: Home Town Streets will include a variety of streetscape improvements that are vital to re-establishing downtown and commercial centers. These projects will include activities undertaken within a defined “downtown” area that collectively enhance that environment and promote positive interactions with people in the area. Projects may include sidewalk improvements, planters, benches, street lighting, pedestrian crossings, transit bus shelters, traffic calming, bicycle amenities, kiosks, signage and other visual elements.

Program Restrictions: This program will not fund costs related to buildings or their facades or personnel costs related to a Main Street manager. Improvements such as general street paving and stormwater management structures will normally need to seek other avenues of funding. Traffic signals are not intended to be funded by this program. However, in some cases, it may be appropriate to combine these types of improvements in a Home Town Streets project with other funding.

Use of Funds: Revitalization of neighborhood commercial center including streets, sidewalks, street trees, signage, etc.

Contact: Jim Vataur, 2550 Oakland Avenue, P.O. Box 429, Indiana, Pa 15701
Phone: 1-724-357-2082

FUNDING

Website:

www.dot.state.pa.us/PennDOT/Bureaus/CPDM/Prod/Saferoute.nsf

Kodak American Greenways Awards Program

Agency: The Conservation Fund and Eastman Kodak Company

Program Goals: Provide seed money to stimulate greenway planning and design. Supports pioneering work in linking the nation's natural areas, historic sites, parks, and open space.

Program Restrictions: Grant recipients are selected according to criteria that include: importance of the project to local greenway development efforts; demonstrated community support for the project; extent to which the grant will result in matching funds or other support from public or private sources; likelihood of tangible results; capacity of the organization to complete the project.

Use of Funds or Support: Planning and Implementation

Contact: Leigh Anne McDonald, American Greenways Coordinator, The Conservation Fund, 1800 North Kent Street, Suite 1120,

Arlington, VA 22209

Phone: 1-703-525-6300

Email: lmcdonald@conservationfund.org

Land and Water Conservation Fund (LWCF) Grants

Agency: Land and Water Conservation Fund

Program Goals: To provide park and recreation opportunities to residents throughout the United

States, to allow communities to acquire and build a variety of park and recreation facilities, including trails. Funds are annually distributed by the National Park Service through the Pennsylvania Department of Conservation and Natural Resources (DCNR).

Program Restrictions: Communities must match LWCF grants with 50% of the local project costs through in-kind services or cash. All projects funded by the LWCF grants must be exclusively for recreation purposes, into perpetuity. Grants are administered through the DCNR Community Conservation Partnerships Program (C2P2).

Use of Funds or Support: Planning and investment in an existing park system.

Contact: U.S. Department of the Interior, National Park Service, Recreation Programs Room, MIB-MS 3622, 1849 C Street NW, Washington, DC 20240

Phone: 1-202-565-1200

Website: www.ncrc.nps.gov/lwcf/

Lowe's Charitable and Educational Foundation

Agency: Lowe's Home Improvement Corporation

Program Goals: Education. Community improvement projects such as projects at parks and other public areas, housing for underprivileged citizens, and innovative environmental issues.

Program Restrictions: Organizations that may qualify to receive funding through the Matching Grant Program are 501(c)(3) non-profit organizations.

FUNDING

Contact: The Foundation only accepts grant applications submitted online through the website.

Website:

www.easy2.com/cm/lowe/foundation/intro.asp

National Recreational Trails Fund Act (NRTFA)

Agency: PA Department of Conservation and Natural Resources (DCNR) - administered through the Community Conservation Partnerships Program (C2P2)

Program Goals: The recreational trails program provides funds to develop and maintain recreational trails for motorized and non-motorized recreational trail use. The program funding represents a portion of the revenue received by the Federal Highway Trust Fund from the federal motor fuel excise tax paid by users of off-road recreational vehicles.

Program Restrictions: A component of TEA21, matching requirements for the Pennsylvania Recreational Trails Program Grants are 80% federal money, up to a maximum of \$150,000, and 20% non-federal money. However, acquisition projects will require a 50/50 match. "Soft match" is permitted from any project sponsor, whether private or public money. ("Soft match" includes credit for donations of funds, materials, services, or new right-of-way).

Use of Funds or Support: The department must distribute funding among motorized, non-motorized, and diverse trail use as follows: 40% minimum for diverse trail use, 30% minimum for non-motorized recreation, and 30% minimum for motorized recreation. The Commonwealth may also use up to 5% of its funds for the operation of

educational programs to promote safety and environmental protection related to the use of recreational trails. The department will also consider projects that provide for the redesign, reconstruction, non-routine maintenance, or relocation of recreational trails to benefit the natural environment.

Contact: Kathy Frankel, PA DCNR, Southwest Regional Field Office, 1405 State Office Building, 300 Liberty Avenue, Pittsburgh, PA 15222

Phone: 1-412-565-7803

Website: www.dcnr.state.pa.us

Pennsylvania Conservation Corps

Agency: Pennsylvania Department of Labor and Industry

Program Goals: This program provides work experience, job training, and educational opportunities to young adults while accomplishing conservation, recreation, historic preservation, and urban revitalization work on public lands.

Program Restrictions: The project sponsors receive the services of a Pennsylvania Conservation Corps crew, fully paid, for one year. Sponsors can also receive up to \$20,000 for needed materials and contracted services. Sponsors must provide a 25% cash match on material and contracted services costs.

Use of Funds or Support: Funds may be used for materials and contracted services needed to complete approved projects.

FUNDING

Contact: Lou Scott, Director, 1304 Labor and Industry Building, 7th and Forester Streets, Harrisburg, PA 17120
Phone: 1-717-783-6385
Website: www.dli.state.pa.us

Safe Routes to School

Agency: U.S. Department of Transportation Federal Highway Administration

Program Goals: Improve safety and encourage more children to safely walk and bicycle to school. In the process, programs are working to reduce traffic congestion and improve health and the environment, making communities more livable for everyone.

Use of Funds or Support: SRTS programs examine conditions around schools and conduct projects and activities that work to improve safety and reduce traffic and air pollution in the vicinity of schools. As a result, these programs help make bicycling and walking to school safer and more appealing transportation choices thus encouraging a healthy and active lifestyle from an early age.

Contact: Center for Program Development and Management, 400 North Street, 6th Floor, Harrisburg, PA 17120
Phone: 1-717-787-8065
Website: www.saferoutesinfo.org

Surface Transportation Program (STP) Funds

Agency: PA Department of Transportation, Federal Highway Administration

Program Goals: These funds can be used for bicycle and pedestrian facility construction or non-construction project such as brochures, public service announcements and route maps. The projects related to bicycle and pedestrian transportation must be part of the long range transportation plan. These funds are controlled by the Metropolitan Planning Organization (MPO) in the Transportation Improvement Program.

Program Restrictions: Expands STP eligibilities to specifically include the following: sodium acetate/formate, or other environmentally acceptable, minimally corrosive anti-icing and de-icing compositions; programs to reduce extreme cold starts; environmental restoration and pollution abatement projects, including retrofit or construction of stormwater treatment facilities (limited to 20% of total cost of 3R-type transportation projects); natural habitat mitigation, but specifies that if wetland or natural habitat mitigation is within service area of a mitigation bank, preference will be given to use the bank; privately owned vehicles and facilities that are used to provide intercity passenger service by bus; modifications of existing public sidewalks (regardless of whether the sidewalk is on a Federal-aid highway right-of-way), to comply with the requirements of the Americans with Disabilities Act; infrastructure based intelligent transportation system capital improvements

FUNDING

Use of Funds or Support: Transportation, planning and railroad crossing improvements

Contact: Jim Vataur, 2550 Oakland Avenue, P.O. Box 429, Indiana, Pa 15701
Phone: 1-724-357-2082

Transportation Equity Act for the 21st Century (TEA21)

Agency: Federal Highway Administration

Program Goals: The primary source of federal funding for greenways and trails is through the Transportation Equity Act of 1998 (TEA21), formerly the Intermodal Surface Transportation Efficiency Act (ISTEA). ISTEA provided millions of dollars in funding for bicycle and pedestrian transportation projects across the country and will provide millions more as TEA21. There are many sections of TEA21 that support the development of bicycle and pedestrian corridors. The Pennsylvania Department of Transportation (PennDOT) can utilize funding from any of these subsets of TEA21 and should be contacted for further details.

Use of Funds or Support: Safety and Transportation Enhancements

Contact: Southwestern Pennsylvania Commission
Phone: 1-412-391-5590
Website: www.fhwa.dot.gov/tea21/