

Chapter 9: Financial Feasibility Analysis

9.1 Land acquisition or easements required for proposed trail system

The proposed trail system has been designed to take advantage of existing publicly owned parcels and right of ways. Many of the proposed trail alignments run within abandoned railroad right-of-ways which are currently owned by the Redevelopment Authority of Luzerne County. Therefore, the need to acquire easements from private land owners has been significantly reduced. Although agreements will be needed with each of the public entities involved, the acquisition of right of ways for the proposed trails will be much easier than if they were running through privately owned parcels.

Depending upon the property owner's willingness to work with the trail developers and the size of the property involved, there are numerous methods in which to cross a privately owned parcel with a public trail. In some cases, landowners may be willing to donate smaller properties to a 501C3 non-profit group to take advantage of Income Tax deductions, in other cases it may be necessary to purchase the property. Some of the more common methods for acquiring land for a public trail are outlined below:

Purchase: Land can be purchased outright by either a nonprofit or a public entity. This option may be the simplest, but it can prove costly.

Land Donations: A landowner can donate property to an agency or organization. Tax credits may be available for land donated for conservation purposes.

Bargain Sale: Sale of a property at less than the fair market value. The difference between a bargain sale price and fair market value often qualifies as a tax-deductible charitable contribution. You can use this method to avoid high capital gains taxes.

Easements: A landowner may grant a trail easement to a nonprofit organization or government to allow the nonprofit or government to construct or maintain a public trail on the private property. By donating or selling a trail easement, a landowner may provide their land for a public trail without having to subdivide the land or lose ownership and control of the land. The easement may address matters such as:

- Trail width and facilities
- Pathway Material
- Permitted Uses and Hours for Use
- Liability

Land Lease: In these cases, the land is rented from the landowner for a set amount of time. Leases can come from a variety of sources, including railroads, utility companies and public entities.

Access and Use Agreements Access and use agreements between a land owner and a greenway or trail operator specify how a portion of a property may be used. A landowner, for instance, may permit a hiking trail to be developed on his or her property but continue to use the property for forestry or farming. A landowner who opens his or her land for recreational use, without charging a fee is protected from liability by the Pennsylvania Recreational Use of Land and Water Act of 1994 (Pa. Stat. Ann. Tit. 68, §§ 477-1 to 477-8) and supporting

case law. The landowner may also be indemnified under a greenway or trail organization's insurance program.

Table 9-1 below contains detail about each of the properties which the proposed trail will cross. Due to the preliminary nature of this study, private property owners have not yet been contacted to discuss their willingness to participate in the project. However, two meetings with the Redevelopment Authority of Luzerne County have confirmed the Authorities willingness to participate in this trail project.

Table 9-1. Trail Easements required for proposed trail system outside of existing road right-of-ways.

<u>Property ID</u>	<u>Owner</u>	<u>Distance</u>	<u>Total Area (20' ROW)</u>
<u>Parsons Trail: Section I - Miners Memorial Park to Parsons Park</u>			
73G10SE2004001000	Robert Letinski	150 ft	0.07 acres
73G10SE2003001000	Theresa Wojekoski	145 ft	0.07 acres
73G10SE2003002000			
50G10 00A00F000	Redevelopment Authority of Luzerne County	700 ft	0.32 acres
73H10 00A0A1000			
73G10SE202301A000	Penn Lee Complex LLC	900 ft	0.41 acres
73G10SE2013013000	Pine Ridge Estates LLC	380 ft	0.17 acres
73G10SE403A001000			
73G10SE301001A000	Ownership Unknown	120 ft	0.06 acres
73G10SE312A001000	PPL Electric Utilities Corp	1100 ft	0.50 acres
73G10SE312A01A000			
73H10NE200101A000			
73H10NE2011VAR000			
<u>Parsons Trail: Section II - Parsons Park to Luzerne County National Recreation Trail</u>			
73H10NE1002028000	Primitive Methodist Church	245 ft	0.11 acres
73H10NE100228A000	Answini Angelo & Carol	155 ft	0.07 acres
73H10NE1017000000	Redevelopment Authority of Luzerne County	2000 ft	0.92 acres
73H10NE102511A000			
73H10 00A0A1000			
73H10NE400604A000	City Of Wilkes Barre	2000 ft	0.92 acres
73H10NE101001A000			
** Ownership of several parcels within the abandoned ROW between Railroad and Govier Streets is unknown. However, it is assumed that they are owned by either the City or the Redevelopment Authority.			
<u>Plains Trail</u>			
50G10NE301007A000	Polish American Vet Home Association	2200 ft	1.01 acres
73H10NW2007001000	City Of Wilkes Barre	7000 ft	3.21 acres
73G10SE107A001000			
73G10SE4009001000			
73H9 00A00A000	D & H Railway Company	175 ft	0.08 acres
73G10SE1001012000	Dolores Seasock	170 ft	0.08 acres

Table 9-1. Trail Easements (continued)

<u>Property ID</u>	<u>Owner</u>	<u>Distance</u>	<u>Total Area (20' ROW)</u>
<u>East End Trail & Bikeway</u>			
<i>This entire trail / bikeway is proposed within existing public right of ways.</i>			
<u>Sherman Street Trail & Bikeway</u>			
73H10SW123A01A000	Seymour & Evelyn Holtzman	1050 ft	0.48 acres
<u>Newtown Rail Trail</u>			
7319SE2 00400100	Donald D. Scalfer	170 ft	0.08 acres
2519 00A113000	Earth Conservancy	1850 ft	0.85 acres
Rail Grade from Hazle St. to Gilligan St.	UNKNOWN	1125 ft	0.52 acres
<u>Carey Avenue Connector Trail</u>			
7319NE1 16A01C00	Redevelopment Authority of Wilkes Barre	235 ft	0.11 acres
7319 00A001000	Redevelopment Authority of Luzerne County	3100 ft	1.42 acres
7319NE1 01901E00	City of Wilkes Barre	680 ft	0.31 acres
<u>Wilkes-Barre Train Station Connector Trail</u>			
73H9SE3 03300100	Rev J Carrol McCormick, Bishop	250 ft	0.11 acres
73H9SE3 03601600			
73H9SE3 03300100			
73H9SE3 03200100	Wilkes Barre Farmers Market	230 ft	0.11 acres
<u>Miner Park Connector Trail</u>			
73H9 00A00A000	D & H Railway Company	105 ft	0.05 acres
73H9SW4 017001000	City of Wilkes Barre	610 ft	0.28 acres
<u>Flood Elementary School Connector Trail</u>			
<i>This trail route will follow existing sidewalks within the public right-of-way.</i>			

9.2 Cost estimates for developing the trail and for proposed facilities

Table 9-2. Cost estimates for developing the Parsons Trail.

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
PARSONS TRAIL: SECTION I - Miners Memorial Park to Parsons Park				
Proposed Design:				
Pathway Surface				
5500 feet of 10' crushed stone trail	LF	5500	\$25.00	\$137,500.00
1500 feet of sidewalk along Mayock St. <i>(to be completed by developer)</i>	-	-	-	-
Bike Route/Share The Road Signs - Mayock Street	EA	6	\$ 125.00	<u>\$750.00</u>
			Subtotal	\$138,250.00
<u>Intersections and Access Points</u>				
Mayock Street				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$6,800.00
East Main Street				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$6,800.00
Gardner Street				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$6,800.00

Scott Street

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	<u>\$250.00</u>
Existing "3 Way" Stop			Subtotal	\$3,250.00

Auxiliary Facilities

Parking / Trail Heads

Trailhead Signage Kiosk - Miner Memorial and Parsons Parks	EA	2	\$3,000.00	<u>\$6,000.00</u>
			Subtotal	\$6,000.00

PARSONS TRAIL: SECTION II - Parsons Park to Luzerne Co. National Recreation Trail

Proposed Design:

Pathway Surface

5950 feet of 10' crushed stone trail	LF	5950	\$25.00	\$148,750.00
1100 feet sidewalk 5 feet wide	LF	100	\$40.00	<u>\$4,000.00</u>
			Subtotal	\$152,750.00

Intersections and Access Points

Trethaway Avenue

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	<u>\$250.00</u>
			Subtotal	\$3,250.00

Matson Avenue

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$6,800.00

George Avenue

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$6,800.00

Wilkes-Barre Boulevard

Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	<u>\$1,000.00</u>
			Subtotal	\$1,000.00

Structures

60'± pre-fabricated steel bridge over Laurel Run	EA	1	\$300,000.00	\$300,000.00
250'± cantilevered boardwalk under Route 309 overpasses	LF	250	\$270.00	<u>\$67,500.00</u>
			Subtotal	\$367,500.00

Auxiliary Facilities

Parking / Trail Heads

Trailhead Signage Kiosk - Pennsylvania Ave	EA	1	\$3,000.00	<u>\$3,000.00</u>
			Subtotal	\$3,000.00

Grand Subtotal				\$846,500.00
Contingency			20%	\$169,300.00
Engineering				<u>\$203,160.00</u>

GRAND TOTAL PARSONS TRAIL \$1,218,960.00

Table 9-3. Cost estimates for developing the Plains Trail and proposed facilities

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
PLAINS TRAIL				
Proposed Design:				
Pathway Surface				
1.85 miles of 10' crushed stone trail	LF	9800	\$25.00	<u>\$245,000.00</u>
			Subtotal	\$245,000.00
<u>Intersections and Access Points</u>				
Miller Street				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$6,800.00
Johnson Street				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$6,800.00
<u>Structures</u>				
100'± Pedestrian Bridge over Mill Creek	EA	1	\$425,000.00	<u>\$425,000.00</u>
			Subtotal	\$425,000.00
<u>Auxiliary Facilities</u>				
Trailhead Signage Kiosk - Hollenback Park, Polish American Veterans Club and Solomon Plains Educational Complex	EA	3	\$3,000.00	<u>\$9,000.00</u>
			Subtotal	\$9,000.00
			Grand Subtotal	\$692,600.00
			Contingency	20% \$138,520.00
			Engineering	<u>\$166,224.00</u>
			GRAND TOTAL PLAINS TRAIL	\$997,344.00

Table 9-4. Cost estimates for developing the East End Trail & Bikeway.

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
EAST END TRAIL & BIKEWAY – 0.6 miles				
Proposed Design:				
1100 feet sidewalk 5 feet wide	LF	140	\$40.00	<u>\$5,600.00</u>
			Subtotal	\$5,600.00
<u>Intersections and Access Points</u>				
Kidder Street				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	<u>\$250.00</u>
			Subtotal	\$3,250.00
Scott Street				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	<u>\$250.00</u>
			Subtotal	\$3,250.00
Schoolhouse Lane				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	<u>\$250.00</u>
			Subtotal	\$3,250.00
Mundy Street				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	<u>\$250.00</u>
			Subtotal	\$3,250.00
Pine Street				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	<u>\$250.00</u>
			Subtotal	\$3,250.00
Worrall Street				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	<u>\$250.00</u>
			Subtotal	\$3,250.00
Hillard Street				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	<u>\$250.00</u>
			Subtotal	\$3,250.00
Chapel Street				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	<u>\$250.00</u>
			Subtotal	\$3,250.00

Stevens Road

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	<u>\$250.00</u>
			Subtotal	\$3,250.00

Auxiliary Facilities

Trailhead Signage Kiosk - Coal Street Park	EA	1	\$3,000.00	<u>\$3,000.00</u>
			Subtotal	\$3,000.00

			Grand Subtotal	\$37,850.00
			Contingency	20% \$7,570.00
			Engineering	<u>\$9,084.00</u>
			GRAND TOTAL EAST END TRAIL & BIKEWAY	\$54,504.00

Table 9-5. Cost estimates for developing the Sherman Street Trail & Bikeway.

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
SHERMAN STREET TRAIL & BIKEWAY – 2.14 miles				
Proposed Design:				
3,025 feet 10' wide paved trail	LF	3,025	\$35.00	<u>\$105,875.00</u>
			Subtotal	\$105,875.00
<u>Intersections and Access Points</u>				
Market Street				
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$3,800.00
Wilkes-Barre Boulevard				
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$3,800.00
Coal Street				
Directional Signage	EA	4	\$125.00	<u>\$500.00</u>
			Subtotal	\$500.00
Amber Lane				
Directional Signage	EA	2	\$125.00	<u>\$250.00</u>
			Subtotal	\$250.00
Rose Lane				
Directional Signage	EA	2	\$125.00	<u>\$250.00</u>
			Subtotal	\$250.00
Puritan Lane				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	<u>\$250.00</u>
			Subtotal	\$3,250.00
Northampton Street				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	<u>\$250.00</u>
			Subtotal	\$3,250.00
Reese Street				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	<u>\$250.00</u>
			Subtotal	\$3,250.00

South Street

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	4	\$125.00	\$500.00
			Subtotal	\$3,500.00

Howard Street

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	\$250.00
			Subtotal	\$3,250.00

Metcalf Street

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	\$250.00
			Subtotal	\$3,250.00

Lehigh Street

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	\$250.00
			Subtotal	\$3,250.00

Dana Street

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	4	\$125.00	\$500.00
			Subtotal	\$3,500.00

Moyallen Street

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	\$250.00
			Subtotal	\$3,250.00

Stanton Street

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	\$250.00
			Subtotal	\$3,250.00

Blackman Street

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	\$250.00
			Subtotal	\$3,250.00

Auxiliary Facilities

Trailhead Signage Kiosk - Coal Street Park	EA	1	\$3,000.00	\$3,000.00
			Subtotal	\$3,000.00

Grand Subtotal				\$153,725.00
Contingency			20%	\$30,745.00
Engineering				\$36,894.00
GRAND TOTAL SHERMAN STREET TRAIL & BIKEWAY				\$221,364.00

Table 9-6. Cost estimates for developing the Newtown Rail Trail.

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
NEWTOWN RAIL TRAIL – 0.75 miles				
Proposed Design:				
4000 feet of 10' crushed stone trail	LF	4000	\$25.00	<u>\$100,000.00</u>
			Subtotal	\$100,000.00
<u>Intersections and Access Points</u>				
McLean Street				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$6,800.00
W. Liberty				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$6,800.00
<u>Auxiliary Facilities</u>				
Trailhead Signage Kiosk - Both Ends	EA	2	\$3,000.00	<u>\$6,000.00</u>
			Subtotal	\$6,000.00
			Grand Subtotal	\$119,600.00
			Contingency 20%	\$23,920.00
			Engineering	<u>\$28,704.00</u>
			GRAND TOTAL NEWTOWN RAIL TRAIL	\$172,224.00

Table 9-7. Cost estimates for developing the Wilkes-Barre Train Station Connector Trail.

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
Wilkes-Barre Train Station Connector Trail – 0.4 miles				
Proposed Design:				
Trail Pavement Marking St. Nickolas Church Parking Lot.	LS	1	\$5,000.00	\$5,000.00
			Subtotal	\$5,000.00
<u>Intersections and Access Points</u>				
Pennsylvania Boulevard				
Directional Signage	EA	2	\$125.00	\$250.00
			Subtotal	\$250.00
<u>Auxiliary Facilities</u>				
Trailhead Signage Kiosk - Train Station	EA	1	\$3,000.00	\$3,000.00
			Subtotal	\$3,000.00
			Grand Subtotal	\$8,250.00
			Contingency	20%
				\$1,650.00
			Engineering	\$1,980.00
GRAND TOTAL WILKES-BARRE TRAIN STATION CONNECTOR TRAIL				\$11,880.00

Table 9-8. Cost estimates for developing the Carey Avenue Connector Trail.

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
CAREY AVENUE CONNECTOR TRAIL – 1.5 miles				
Proposed Design:				
6,650 Feet 10' wide crushed gravel trail	LF	\$ 25.00	\$6,650.00	<u>\$166,250.00</u>
			Subtotal	\$166,250.00
<u>Intersections and Access Points</u>				
S. Main Street				
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$3,800.00
S. Franklin Avenue				
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$3,800.00
Barney Street				
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$3,800.00
Horton Street				
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$3,800.00
W. Division Street				
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$3,800.00
Intersection of West End Rd, Carey Ave, Sans Souci Parkway and Oxford Street.				
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$3,800.00

West End Road at Lyndwood Avenue

Directional Signage	EA	4	\$125.00	\$500.00
			Subtotal	\$500.00

Lyndwood Avenue

Directional Signage	EA	4	\$125.00	\$500.00
			Subtotal	\$500.00

Goeringer Avenue

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	\$250.00
			Subtotal	\$3,250.00

Auxiliary Facilities

Trailhead Signage Kiosk - Carey Avenue Bridge	EA	1	\$3,000.00	\$3,000.00
			Subtotal	\$3,000.00

Grand Subtotal				\$196,300.00
Contingency			20%	\$39,260.00
Engineering				\$ 47,112.00
GRAND TOTAL CAREY AVENUE TRAIL				\$ 282,672.00

Table 9-9. Cost estimates for developing the Miners Park Connector Trail.

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
MINER PARK CONNECTOR TRAIL – 0.47 miles				
<u>Intersections and Access Points</u>				
Finwood Avenue				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	\$250.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	<u>\$2,000.00</u>
			Subtotal	\$5,250.00
Plymouth Avenue				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	\$250.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	<u>\$2,000.00</u>
			Subtotal	\$5,250.00
Dagobert Street				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	\$250.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	<u>\$2,000.00</u>
			Subtotal	\$5,250.00
Gordon Avenue				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	\$250.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	<u>\$2,000.00</u>
			Subtotal	\$5,250.00
<u>Auxiliary Facilities</u>				
Trailhead Signage Kiosk - Gordon Ave Park and Miner Park	EA	2	\$3,000.00	<u>\$6,000.00</u>
			Subtotal	\$6,000.00
	Grand Subtotal			\$27,000.00
	Contingency		20%	\$5,400.00
	Engineering			<u>\$6,480.00</u>
GRAND TOTAL MINER PARK CONNECTOR TRAIL				\$38,880.00

Table 9-10. Cost estimates for developing the Flood Elementary School Connector Trail.

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
Flood Elementary School Connector Trail – 0.1 miles				
<u>Intersections and Access Points</u>				
Wyoming Street				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Directional Signage	EA	2	\$125.00	\$250.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	<u>\$2,000.00</u>
			Subtotal	\$5,250.00
<u>Auxiliary Facilities</u>				
Trailhead Signage Kiosk - Flood Elementary School	EA	1	\$3,000.00	<u>\$3,000.00</u>
			Subtotal	\$3,000.00
			Grand Subtotal	\$8,250.00
			Contingency 20%	\$1,650.00
			Engineering	<u>\$1,980.00</u>
			GRAND TOTAL MINER PARK CONNECTOR TRAIL	\$11,880.00

9.3 Phased implementation plan

The Wilkes-Barre Trail Master Plan is based upon numerous existing, planned and proposed trails. Many of the proposed trails are dependent upon construction of three previously planned trails, the Luzerne County National Recreation Trail, the D&L Black Diamond Trail and the Ridge to River Trail. Based upon existing trail connections, land acquisition feasibility, and construction costs, implementation of the Wilkes-Barre Trail Master Plan is recommended as follows:

PHASE I: Luzerne County National Recreation Trail & D&L Black Diamond Trail (*Wilkes-Barre Sections*)

Running through the center of Wilkes-Barre, parallel to the Susquehanna River, the Luzerne County National Recreation Trail and the D&L Black Diamond Trail form the “spine” of the proposed city trail system. These two trails will meet near the geographic center of the city at the Wilkes-Barre Train Station. To facilitate the implementation of the Trail Master Plan, coordination between the Redevelopment Authority of Luzerne County and the Anthracite Scenic Trails Association will be needed to expedite the completion of the Wilkes-Barre portions of these two trails.

PHASE II: Ridge to River Trail (*Wilkes-Barre Section*) & **Wilkes-Barre Train Station Connector Trail**

Once the Wilkes-Barre segments of the Black Diamond and National Recreation Trails have been completed, signage along South Street should be installed to delineate the Wilkes-Barre section of the Ridge to River Trail. This trail provides the most direct and safest route to River Commons. This phase of the Trail Plan should also include establishment of the Wilkes-Barre Train Station Connector Trail to provide a connection between the Ridge to River and the Black Diamond Trails.

PHASE III: Parsons Trail

The Parsons Trail will connect three city parks and the communities of Parson and Miners Mill to downtown Wilkes-Barre. Construction of the Cross Valley Expressway had essentially cut this section of the city off from downtown and the river front. The proposed route under the Expressway will provide trail users with a safe way to get to other sections of the city. The trail will also provide the community with safe and convenient routes between Scouton Lee, Parsons and Miners Memorial Parks.

PHASE IV: East End Trail & Bikeway

The East End Trail and Bikeway will provide access to Coal Street Park from the communities of East End, Parsons and Miners Mill. Additional engineering studies will be required to assure traffic safety for this route. However, preliminary evaluations indicate that minimal improvements will be needed outside of signage to delineate the route.

PHASE V: Sherman Street Trail & Bikeway

The Sherman Street Trail & Bikeway will provide a safe route to school and access to Coal Street Park for G.A.R. Memorial High School and Murray Heights Elementary School. This trail will also intersect with the Ridge to River Trail to allow trail users to access the riverfront, Wilkes University and the Black Diamond Trail. Additional engineering studies will be required to assure traffic safety for this route. However, preliminary evaluations indicate that minimal improvements will be needed outside of signage to delineate the route.

PHASE VI: Plains Trail

The Plains Trail will connect the northern corner of the city into the trail system. Trail users will have direct access to the Solomon Plains Education Complex and Hollenback Park. The trail route includes a safe route under the Cross Valley Expressway and connection to the Luzerne County National Recreation Trail.

PHASE VII: Carey Avenue Connector Trail

The Carey Avenue Connector Trail will connect the western corner of the city into the trail system. The trail will also provide linkage between the Black Diamond Trail and the Luzerne County Levee Trail System. Trail users will also have direct access to the Carey Avenue Bridge which passes over the Susquehanna River and will connect into proposed trails of the western side of the river.

PHASE VIII: Newtown Rail Trail

The Newtown Rail Trail will run through the southern corner of the city and will provide a connection between the Sherman Street Trail & Bikeway and the Black Diamond Trail. This connection will create a key link for trail users who are looking for circular routes through the city.

PHASE IX: Miner Park Connector Trail

This minor connector trail will provide a link between the Luzerne County Levee Trail System, Miners Park, Kistler Elementary School and Meyers High School. Additional engineering studies will be required to assure traffic safety for this route. However, preliminary evaluations indicate that minimal improvements will be needed outside of signage to delineate the route.

9.4 Trail Management, Staffing and Maintenance Budgeting

This report discusses trails with significantly varied lengths and constructions types. Due to this variation, trail management, staffing and maintenance costs are difficult to estimate. Documentation published in 2005 by the Northeast Regional Office of the Rails To Trails Conservancy (RTC) documentation suggest that there are two general answers to why this is: 1. Costs to maintain individual trails may be contained within a larger budget for a park and recreation department; or, 2. Maintenance work is done by dedicated volunteer groups on an “as-needed” basis and minimal records are maintained.

RTC’s 2005 documentation is based upon a survey of 100 rail trails and provides a snapshot of where trail managers are focusing their maintenance resources. The detailed maintenance budgets provided indicate that the average annual maintenance costs, excluding resurfacing, range from \$6,559 per mile to \$9,172 per mile for government run trails. Our 2010 estimate, which includes a contingency for inflation and also includesg management and staffing, is just over \$8,150 per mile.

Maintenance costs vary depending upon the age of the trail, the type of trail constructed (crushed stone, asphalt, concrete), the number and types of structures (drainage facilities, bridges, fences, trail amenities) and the level and type of use of the trail. Maintenance of recently constructed trails or trails with minimal use may be limited to annual mowing, trimming and vegetation control with minimal costs for maintenance of the physical improvements. Conversely, older trails will require investments of a magnitude similar to their initial construction to provide the needed level of maintenance.

Table 9-11 is an annual budget for a “generic trail” with an assumed length of ten miles, two trail heads (at either end) with parking for ten passenger automobiles, 9 road crossings and trail amenities (picnic table, trash can, bike rack) at 1 mile intervals. No major structures (bridges, tunnels, or underpasses) are included. Routine annual maintenance is anticipated for landscaping and facilities and structures. For the purposes of this report, the trail is assumed to be at an age where resurfacing is required and is undertaken incrementally over a three year period.

Table 9-11. Sample budget for staffing and maintenance

MAINTENANCE ACTIVITY	FREQUENCY	UNIT	QUANTITY	UNIT COST	TOTAL COST
TRAIL SURFACE					
10' Wide Asphalt Trail					
1½" Overlay	Annual For 3 Years	SY	17,600	\$10.00	\$176,000.00
Crosswalk Maintenance (3/year)	Annual	EA	3	\$3,000.00	\$9,000.00
				Subtotal	\$185,000.00
10' Wide Crushed Stone Trail					
Resurface	Annual For 3 Years	SY	17,600	\$7.50	\$132,000.00
Crosswalk Maintenance (3/year)	Annual	EA	3	\$3,000.00	\$9,000.00
Re-Grading	Annual	EA	2	\$2,000.00	\$4,000.00
Pothole repair and other patches	Annual or As Required	LS	1	\$1,500.00	\$1,500.00
				Subtotal	\$146,500.00

LANDSCAPING

Keep trail-side land clear of trash and debris	Annual	LS	1	\$2,500.00	\$2,500.00
General maintenance of 10 car trailhead (litter clean-up, etc.)	Annual	LS	2	\$1,500.00	\$3,000.00
Mowing	Annual	LS	1	\$10,000.00	\$10,000.00
Leaf removal (If Required)	Annual	HRS	40	\$40.00	\$1,600.00
Tree pruning	Annual	HRS	40	\$40.00	\$1,600.00
Tree removal	Annual	LS	1	\$3,000.00	\$3,000.00
Invasive species removal	Annual	MI	10	\$100.00	\$1,000.00
Application of herbicides or pesticides	Annual	MI	10	\$150.00	\$1,500.00
Clearing of drainage channels and culverts	Annual or As Required	MI	10	\$105.00	<u>\$1,050.00</u>
				Subtotal	\$25,250.00

FACILITIES & STRUCTURES

Empty trash cans at trailheads and along trail	Annual	MI	10	\$200.00	\$2,000.00
Maintenance of informational kiosks (repairs, etc.)	Annual or As Required	EA	2	\$250.00	\$500.00
Maintenance of picnic tables, benches, etc.	Annual or As Required	LS	1	\$100.00	\$100.00
Repair/maintenance of signs	Annual or As Required	MI	203	\$10.00	\$2,030.00
Maintenance of lighting	Annual	EA	2	\$250.00	\$500.00
Maintenance of gates, bollards and fencing	Annual or As Required	MI	10	\$287.00	\$2,870.00
General bridge maintenance (minor deck/railing repair)	Annual	LS	1	\$1,500.00	\$1,500.00
Railroad at-grade crossing maintenance (inspection, signage, drainage)	Annual	LS	1	\$500.00	<u>\$500.00</u>
				Subtotal	\$10,000.00

Total Estimated Annual Costs with Asphalt Trail	\$220,250.00
Contingency 10%	\$22,025.00
Management / Staffing	<u>\$24,227.50</u>
Total	\$266,502.50

Total Estimated Annual Costs with Crushed Stone Trail	\$181,750.00
Contingency 10%	\$18,175.00
Management/Staffing	<u>\$19,992.50</u>
Total	\$219,917.50

9.5 Potential sources for capital and operating revenues

Historically, there has been trail acquisition/design/development funding opportunities available at the federal, state and local levels. Reductions in federal, state and local revenues have resulted in similar reductions in trail funding opportunities. All publically available funding sources have become very competitive. The greatest chance for success in securing public funds for trail projects will require applicants to identify, establish and build strategic public and private partnerships. These can be partnerships between federal, state and local governmental agencies, eligible non-profit trail groups, businesses and individuals from the private sector. Successful applicants will need to identify and begin building the partnerships as early in the funding process.

Following is a summary of potential sources of public funding opportunities.

Federal Programs

Safe, Accountable, Efficient Transportation Equity Act— a Legacy for Users (SAFETEA-LU) **This program, currently awaiting reauthorization by the federal government, is the** former primary source of federal funding for trails and greenways. The Safe, Accountable, Efficient Transportation Equity Act— a Legacy for Users (SAFETEA-LU) is currently up for reauthorization under the Active Community Transportation Act.

The Active Community Transportation Act (“ACT Act”) of 2010, a marker bill to be incorporated into the federal transportation reauthorization when passed by Congress, will provide communities with concentrated investments to complete walking and bicycling networks to shift short driving trips to active transportation. By providing communities with the resources needed to build safe and connected non-motorized routes between the places where people live, work, learn, play and shop, the bill will provide cost-effective transportation choices for millions of Americans.

Community Development Block Grant Program

The U.S. Department of Housing and Urban Development (HUD) offers financial grants to communities for neighborhood revitalization, economic development, and improvements to community facilities and services, especially in low and moderate-income areas. Several communities have used HUD funds to develop greenways, including the Boulding Branch Greenway in High Point, North Carolina. Grants from this program range from \$50,000 to \$200,000 and are either made to municipalities or non-profits. There is no formal application process.

Land and Water Conservation Fund (LWCF) Grants

This federal funding source was established in 1965 to provide park and recreation opportunities to residents throughout the United States. Money for the fund comes from the sale or lease of nonrenewable resources, primarily federal offshore oil and gas leases and surplus federal land sales. LWCF funds are used by federal agencies to acquire additions to National Parks, Forests, and Wildlife Refuges. In the past, Congress has also appropriated LWCF monies for so-called "state-side" projects. These "state-side" LWCF grants can be used by communities to acquire and build a variety of park and recreation facilities, including trails and greenways. These funds are distributed by the National Park Service to the Pennsylvania Department of Conservation and

Natural Resources. They require a 50 percent match from the local project sponsor. In PA contact DCNR, Recreation and Conservation, 717-783-2659.

Rivers, Trails, and Conservation Assistance Program

The National Parks service operates this program aimed at conserving land and water resources for communities. Eligible projects include conservation plans for protecting these resources, trail development, and greenway development.

State Programs

DCNR C2P2 Community Recreation and Conservation

Description: Community Recreation and Conservation grants are awarded to municipalities and authorized nonprofit organizations for recreation, park and conservation projects. These include the rehabilitation and new development of parks and recreation facilities (development projects); acquisition of land for active or passive park and conservation purposes (acquisition projects); and planning for feasibility studies, trails studies, conservation plans, site development planning, and comprehensive recreation, greenway and open space planning . Most projects require a 50% match except for some technical assistance grants and development projects eligible as small community projects whose total project cost is \$60,000 or less. The small community development projects provide a municipal applicant with a population of 5,000 or less with an alternate method of funding with a focus on playground rehabilitation to meet current safety and accessibility standards.

This Grant Program is administered by the Bureau of Recreation and Conservation and is funded by Keystone Recreational Trails Land & Water Conservation Fund Growing Greener 1. Eligible applicants include county or municipal governments, higher educational and other educational Institutions and IRS 501(c)3 and/or PA Bureau of Charitable Organizations non-profits.

Other Programs

National Trails Fund

Created in 1998, American Hiking Society's National Trails Fund is the only privately supported national grants program providing funding to grassroots organizations working toward establishing, protecting and maintaining foot trails in America. National Trails Fund grants help give local organizations the resources they need to secure access, volunteers, tools, and materials to protect America's cherished hiking trails.

American Hiking Society's National Trails Fund is the only privately funded, national grants program dedicated solely to building and protecting hiking trails. Now in its eighth year, the fund has awarded nearly \$487,000 to 157 grassroots organizations all over the nation working to establish, protect and maintain foot trails in America. Awards range from \$500 to \$5,000 per project.

Eligible projects include those that have hikers as the primary constituency, secure trail lands, create visible and substantial access, improved hiker safety, avoidance of environmental damage, promote constituency building around specific trail projects and volunteer recruitment and support.