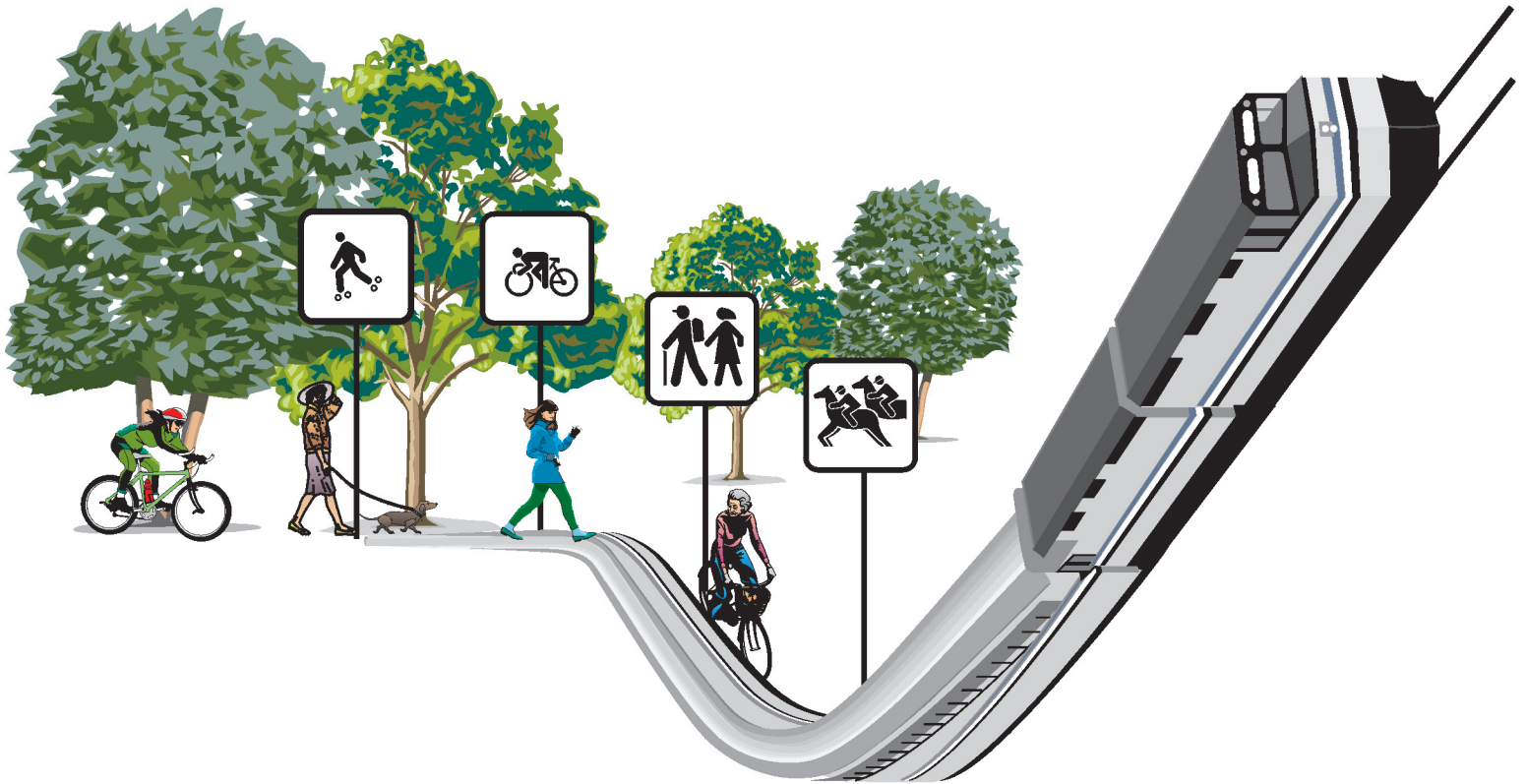


CHESTER CREEK RAIL-TRAIL FEASIBILITY STUDY



FINAL REPORT

PREPARED FOR
**FRIENDS OF THE CHESTER CREEK BRANCH
RAIL-TRAIL**

May 10, 2002

PREPARED BY

BVE BRANDYWINE VALLEY ENGINEERS
A DIVISION OF VOLLMER ASSOCIATES LLP

ACKNOWLEDGMENTS

The Feasibility Study was the result of the effort of many people and organizations.

Funding for this Feasibility Study came from a variety of sources. This project was financed in part by a Keystone Recreation, Park and Conservation Fund Program Grant from the Pennsylvania Department of Conservation and Natural Resources, Bureau of Recreation and Conservation. Additional funding came from a Community Development Block Grant provided by Delaware County, a grant from the William Penn Foundation, and the generous support of the members of the Friends of the Chester Creek Branch, and Chester Ridley Crum Watersheds Association.

The Delaware County Planning Department provided some of the information establishing the basis for this Feasibility Study. Special thanks go to John Pickett, Tom Schaffer, and Mike Farrell for their assistance. Without their assistance, knowledge and depth of information this Study would have been difficult, if not impossible, to complete.

Additional important information was provided by the Delaware Valley Regional Planning Commission, without personal citation.

This study owes its genesis to the collective and singular efforts of the Chester Ridley Crum Watershed Association (CRC). This local, not-for-profit, organization provided the infrastructure necessary to complete this project. Many thanks go to Judith Auten, Carl DuPoldt, Marshall Hamilton, Mike Judge, Doris McGovern, Andy Saul and all of the CRC members for their wise counsel, endless evenings reviewing all of the information for this project, and support.

Thanks also go to the members of the Friends of the Chester Creek Branch (Friends) whose financial, informational, and logistical support were invaluable. Valerie Fusco, Ira Josephs, Mike Judge, Gordon Laubach, Jeanette MacNeille, and Barry Pinkowicz have been key to the completion of this Study. In addition the members of Friends were the people keeping us going. The members of this local, not-for-profit, organization have all shared a dream for Delaware County for the past several years. Dreams do become reality, and for Delaware County the reality of creating a trail in the heart of the County would benefit all of its citizens. Hopefully, this Study is only the first step in bringing this dream to reality.

A Study like this cannot proceed without support from the local community and indeed many local organizations supported this work. These organizations include the Boy Scouts of America, Troop 292; Buck Ridge Ski Club, Delaware County Field & Stream Association, Delaware Valley Bicycle Club, High Meadow Civic Association, and Middletown Township Land Conservancy.

In addition, Resolutions of Support for completing the Study from Aston and Middletown Townships were crucial to getting the study started. Also, Aston, Chester, and Middletown Townships each graciously provided facilities for several public meetings.

Thanks go also to all of the local citizens who participated in the public portion of the Study. Many of you took time to attend meetings, fill out surveys, and tell us what you thought. All of this was appreciated and is vital to the project, and our democracy.

Finally, this Study could not have been completed without the support, guidance, and tutelage of Anthony, Quinn, and Valerie Fusco. Their help was so integral, this Study is dedicated to them.

I'd like to close the acknowledgments with a quote from William Least Heat Moon's 1982 Classic Book, "Blue Highways"¹. In this quote he was talking about individuals, but I believe this quote also has eloquent poignancy for communities. It is the heart of what we are talking about in this Study.

"A human being is not a waxen rubbing, a lifeless imprint taken from some great stony face. Rather he is a Minuteman or a dog soldier at liberty to use the inclinations of the past as he sees fit. He is free to perceive the matrix, and, within his limits, change from it. By seeing both the futility in trying to relive the old life and the danger in trying to obliterate, man can gain the capacity to make anew. His very form depends not on repetition but upon variation from old patterns."

Thanks for your interest, and thanks for caring about your community.

Mike Fusco,
President,
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¹ "Blue Highways", by William Least Heat Moon, 1982, Fawcett Crest Books, published by Ballantine Books

Chester Creek Rail Trail Feasibility Study

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EXECUTIVE SUMMARY

The Feasibility Study for the Chester Creek Branch Rails to Trails Conversion was undertaken in December of 1998 with a field inventory of the entire six and one-half mile corridor. The corridor begins at the intersection of U.S. Route 1 and the old Wawa Train Station in Chester Heights Borough. The trail continues along the out-of-service rail line for the Chester Creek Branch and crosses local streets and state highways by both at-grade and overpass structures, before terminating at the Historic Caleb Pusey Plantation in Upland Borough. The field inventory provided the means by which we established some of the obstacles to overcome in the creation of this trail along with the incredible recreation and inter-modal transportation opportunity it presents.

One of the most important aspects of the study from the onset was the Legal Feasibility for utilizing the rail corridor. We performed a deed analysis of all adjoining property owners along the corridor to establish the type of ownership mentioned for the railroad. The deeds were categorized into groups with increasing degrees of potential conflict. Only seven of the one hundred eighty were not found. There are six properties that have encroached upon the corridor for various business ventures and one area in particular where the damage from Hurricanes Agnes and Floyd were so extensive that additional right of way will be required. It is our recommendation that an application for railbanking be developed to reserve the use of the right of way for a trail. Toward this end, representatives of the Friends of the Chester Creek Branch have continued their negotiations with SEPTA for the permission to use the right of way for a trail conversion. The negotiations have been productive, however, to date they have not concluded.

In order to establish the focus of the remaining issues several public meetings were conducted. The initial meeting we held exclusively for the adjacent property owners as the population most directly impacted by the project. The second was held with the general public invited. During each meeting a list of questions and concerns was obtained. This list was summarized to consolidate the types and frequency of questions asked. We also distributed, and made available on the "Friends" website, a questionnaire for those attendees unwilling to stand and speak publicly. The responses to the questionnaires were also categorized. The majority of the concerns related to security, safety, ownership and liability. Each of these items is covered in detail in the report. Our preferred alternative for the development of the corridor is to have SEPTA maintain ownership and provide Delaware County with a lease for the use as a trail. This would allow for consistency in policing and maintenance with County Park Rangers as the trail traverses multiple municipalities (i.e. Chester Heights Borough, Middletown Township, Aston Township, Chester Township and Upland Borough).

There are various environmental and design issues that would need to be addressed in moving the project forward. The most serious of these is the wash out area downstream of the Parkmount Road overpass. Here additional right of way may be required. Another issue is the existence of the Southwest Delaware County Municipal Authority wastewater treatment plant and the incinerator and landfill that are located between Bridgewater Road and Upland Road. Unlike the security concerns of the adjacent property owners in the more undisturbed sections of

the trail, care will need to be taken to protect the users of the trail in this southern section from any hazardous substances emitted from those land uses. There are also the 7 at-grade crossings and 8 bridge structures that will require special design considerations for the safety of the users. The former underpass at Knowlton Road will also require reconstruction. We recommend that an emergency response plan be developed for the entire corridor. This should be considered prior to the completion of preliminary design so that the structures all have the appropriate emergency access capacity.

Another particularly important aspect of this corridor is the potential of the section between Lenni Road and U. S. Route 1 to be utilized as a rail with trail. Amtrak currently uses this section to transport ballast from the Glen Mills quarry. There is also a proposal to restore passenger and/or nighttime freight service. Through studies conducted by the US Department of Transportation, it was found that a well-designed trail with proper barriers should not increase the liability. SEPTA would need to be a consultant to any design process for this section of the trail.

We have prepared cost estimates for the development of the trail, in sections, for funding purposes. The sections are between Baltimore Pike and Mount Road, between Mount Road and Creek Road and between Creek Road and Upland Road. The figures are in Table 5 on Page 31. Other related project costs are for acquisition of additional right of way and title clearance, and annual costs for operation, maintenance and security.

In conclusion, we have found that there are no major impediments to the creation of a trail from the out of service rail corridor. Although there have been concerns related to the adjacent property owners security and privacy, the survey results indicate that there is general community support for the project.

I. PROJECT LOCATION AND BACKGROUND

The proposed Chester Creek Rail Trail would use the right of way for the Chester Creek Branch rail line in Delaware County, Pennsylvania. This six and one-half mile corridor generally follows and occasionally crosses Chester Creek from its northern terminus at Baltimore Pike in Middletown Township to its southern terminus at Upland Road in Chester Township (see **Figure 1**). In addition to Middletown and Chester townships, the corridor traverses through or adjacent to Aston Township and Chester Heights, Brookhaven, and Upland boroughs.

A. Rail Corridor History

The Chester Creek Branch, originally part of the Pennsylvania Railroad, was constructed shortly after the Civil War and parallels the scenic Chester Creek. The railroad served the interests of local businesses and created opportunities for new ventures as it traversed the gently rolling hills and mature wooded areas of the Chester Creek Valley. During the Industrial Revolution, mills, factories, and warehouses located adjacent to the rail while new communities sprouted near rail depots.

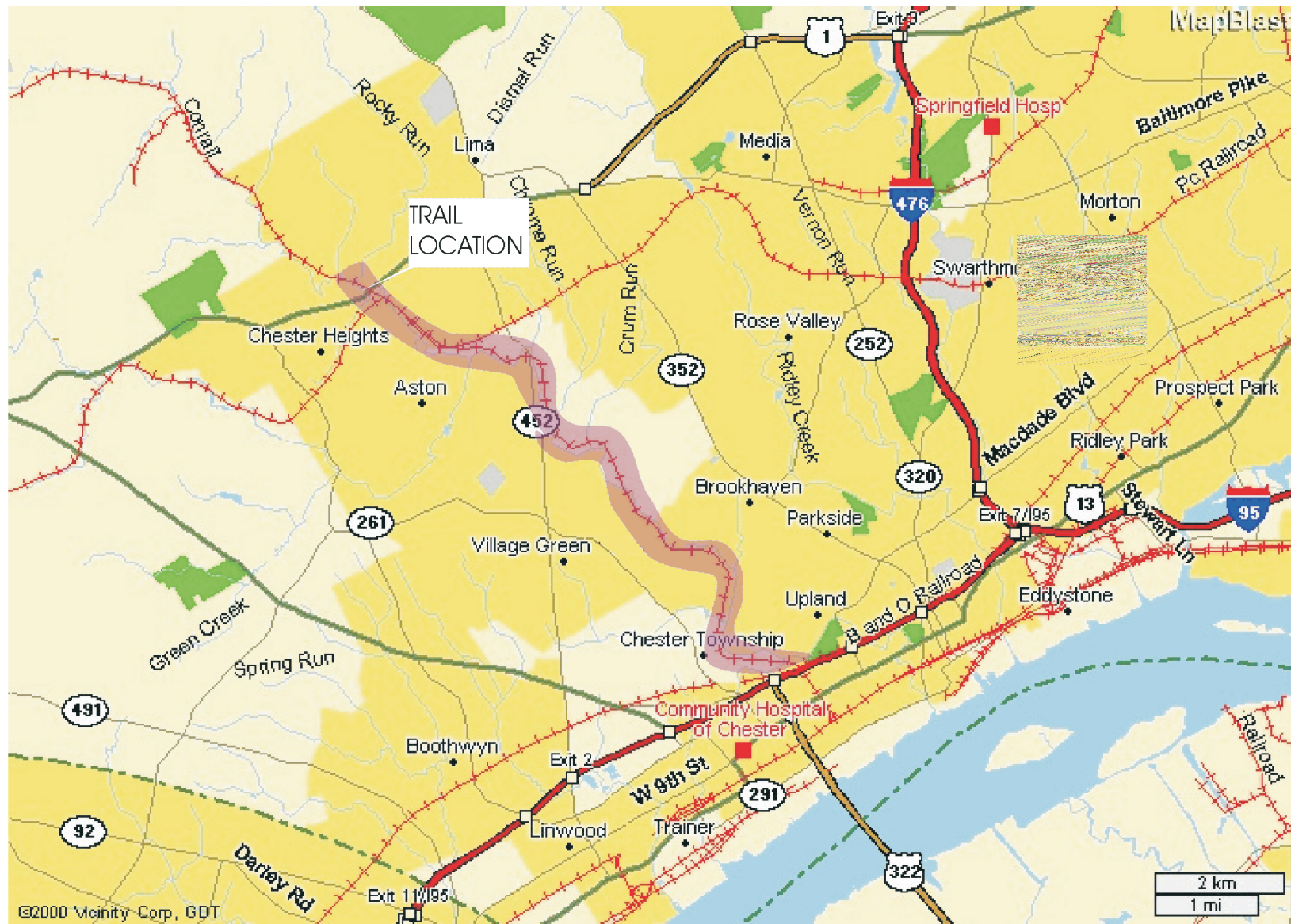
As modes of transportation diversified, patterns of development changed. With the advancement of the automobile and the interstate highway system, rail service fell out of demand, and many Chester Creek businesses relocated. After the Chester Creek Branch sustained severe flood damage during Hurricane Agnes in 1972, service on the line was discontinued. The line became part of Conrail in the 1970's. SEPTA assumed ownership in 1979, along with other rail lines in the area, such as the R3 West Chester Line.

Since service was discontinued, much of the rail corridor has become overgrown. Many of the bridges, however, remain intact, and, in most locations, the tracks and the ties were never removed (although they are not always visible). Meanwhile, many former industrial use buildings along the corridor have been adapted to residences and businesses, or have been preserved as historical sites and recreational areas.

B. Rail Trail Development Background

Throughout the United States, there has been a growing emphasis on alternative modes of transportation, such as bicycles and walking, and on recreational trails. Conversion of unused rail corridors to multi-use trails, known as rail-trails, has been growing. Rail-trail projects are typically developed and maintained by local, county, state, or federal agencies in partnership with non-profit citizen groups.

Since the fall of 1994, several citizen groups in Delaware County organized the Friends of the Chester Creek Branch and laid the groundwork to convert the old Chester Creek Branch rail line to a multi-use trail. The Friends of the Chester Creek Branch were originally incorporated as part of the Chester-Ridley-Crum (CRC) Watershed Association, a not-for-profit organization. In the summer of 1997, the Friends of the Chester Creek Branch ("Friends") incorporated separately as a not-for-profit organization dedicated primarily to the completion of the Chester Creek Rail-Trail Project. They contacted SEPTA to discuss the possibility of converting the rail corridor to a multi-use trail.



CHESTER CREEK RAIL TRAIL FEASIBILITY STUDY

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LOCATION
MAP

FIGURE 1

In February 1996, the “Friends” prepared *The “Chester Creek Branch” Rail-Trail Project: Converting a historic, abandoned railway to a multi-use trail, while preserving valuable green space for Delaware County.*” This document was a compilation of information on their Mission, an introduction to the rail-trail project, common questions about rail-trail projects, a CRC Report on Chester Creek, the impacts of rail-trails, trail effects on property value and crime, and the costs of driving.

The initial terminal points for the Chester Creek Rail Trail were Caleb Pusey Historic Site at the southern end and Lenni Road at the northern end. However, the Chester Creek Branch rail line continued up to the old Wawa Station at Baltimore Pike, which is the current northern terminus of the project.

C. Community Interest

Both Aston and Middletown Townships have expressed support for the general concept of the Chester Creek Rail Trail, reserving, of course, the right to review the project as further details are developed. Middletown Township, which currently has a number of other trails within its boundary, has expressed interest in developing their portion of the trail on their own, even if the other sections cannot be completed. The section of rail corridor between Mount Alverno Road and Knowlton Road has been partially cleared and posted by Middletown Township for passive recreation use. Aston Township, in a prior grant application for a bicycle loop through the central part of the Township, has indicated a desire to connect this proposed loop with the proposed rail-trail.

The Middletown Township Land Conservancy has expressed support for the conversion of the unused rail to a hiking trail. They added that “the rails to trails concept is consistent with their stated goals of encouraging the preservation of open space in Middletown Township and surrounding communities for the passive recreational enjoyment of the public.”

The Delaware County Field and Stream Association, located in Brookhaven, has endorsed the concept of the Chester Creek Rail Trail project. The rail trail project was deemed consistent with their goal of sportsmanship, conservation, and enjoyment of the outdoors.

As part of a grant application for funding for their studies, the “Friends” presented a petition with almost 250 signatures showing community support of the rail trail concept.

II. LEGAL FEASIBILITY

A major issue in the conversion of rail corridors to multi-use trails is the ownership of the corridor. When the railroads were built in the 1800's, they did not always purchase the right of way as a fee simple deed. Sometimes, they obtained easements to use the corridor from the adjacent property owners. In addition, many of the properties have changed hands several times and the subsequent legal title of the properties has become cloudy.

Independent of this study, SEPTA had performed their own investigation of the ownership status of the corridor. This study was designed to build upon the information obtained from SEPTA. For the purposes of this study, copies of all available deeds along the corridor were obtained and reviewed.

SEPTA provided copies of right of way and track maps that illustrate the entire right of way for the Chester Creek Branch by metes and bounds from Upland Borough to the old Wawa Station at US 1 in Chester Heights Borough. The Philadelphia Baltimore & Washington Railroad last updated these maps in 1955. SEPTA also provided documentation of their historic search of how the right of way was obtained (fee, simple deed, easement, etc).

Because of the varying methods of acquisition and the time in which it was acquired there is no one singular document that shows clear title to the entire corridor.

A. Deed Review

This portion of the study was intended to build upon the information obtained by SEPTA. Delaware County Courthouse records were searched to obtain every available deed for properties adjacent to the corridor. These deeds were reviewed and categorized into groups identifying the type of reference made to the railroad. Of the approximately 180 adjacent properties, 7 deeds were not found, 148 referenced the Right of Way adjacent to the property and 25 made reference to the existence of the Right of Way through the property without definition of its boundary. Of the most concern were the deeds not found. Further research revealed that several of the properties for which deeds weren't found were the subject of recent Land Development and Subdivision Applications in both Middletown and Aston Townships. In all of these cases, there is a depiction of an existing Right of Way for the rail line.

Due to the lack of current information on those remaining properties, for which plans and deeds aren't available, there may be additional title search information necessary to establish clear ownership. These properties are listed by Tax Parcel Number and current owner in [Appendix A](#).

B. Ownership Issues

The Delaware County Tax Maps show portions of the Corridor as "Abandoned Railroad Right of Way". The term "abandoned" was of great concern to establishing ownership. It is believed that whomever prepared the maps was intending to make reference to the out of service status of the rail line itself and not as a legal term.

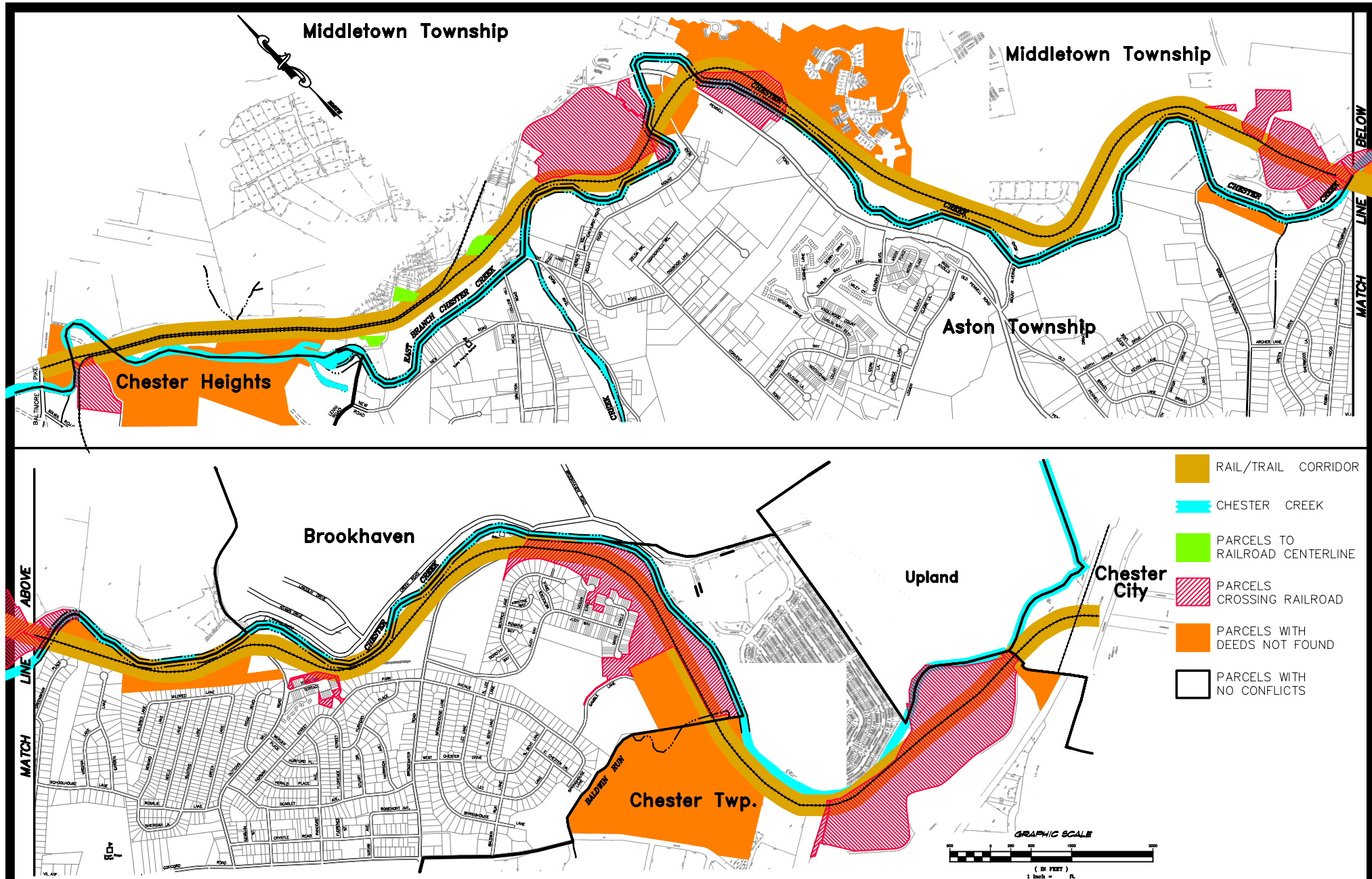
As rail service is already discontinued, formal “abandonment” of the right of way would require approval of the Surface Transportation Board. The original acquisition of the right of way by Conrail was part of a federal action consolidating the assets of numerous bankrupt railroads. There is no documentation on record that this abandonment was ever initiated for any portion of the right of way.

Congress amended the National Trails System Act in 1983 to establish a Railbanking Program. Railbanking is a mechanism for the “Friends” to assure that abandonment of the corridor would not be possible. While there have not been any indications that SEPTA is proposing to abandon the corridor, the process of requesting railbanking would appear to provide some level of insurance to the preservation of the corridor for trail use.

From the deed review, the properties along the rail corridor have been divided into four categories:

- **Parcels to Railroad Centerline:** Parcels described to centerline of the railroad without defining metes and bounds of railroad right of way
- **Parcels Crossing Railroad:** Parcels that contain lands on both sides of the railroad right of way without defining exclusion.
- **Parcels With Deeds Not Found:** Parcels with no deeds found. At least two of these are plotted on tax maps with the railroad right of way shown.
- **Parcels With No Conflicts:** Parcels with no conflict with the railroad right of way

Figure 2 identifies those areas along the corridor that fall into each category.



CHESTER CREEK RAIL TRAIL FEASIBILITY STUDY

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PROPERTY OWNERSHIP ISSUES

FIGURE 2

III. PHYSICAL INVENTORY AND RIGHT OF WAY ASSESSMENT

In December 1998, the entire Chester Creek Branch corridor was walked, except for some small areas that were not accessible. During this field view, various environmental and physical features of the corridor were observed. In March 1999, a structural engineer conducted a cursory review of each bridge structure. The results of these studies are shown in Study Corridor **Figures 3** and **4** and described in the remainder of this section. **Figure 3** includes environmental features such as historic sites, hazardous materials, wetlands, streams, land use/cover, etc. **Figure 4** includes alignment issues such as bridges, grade crossings, right of way encroachments, washouts, etc. Due to concerns regarding the potential impact of Hurricane Floyd in September of 1999, an additional field inspection was conducted on the majority of the corridor in January 2002. The overall characteristics of the corridor remain the same, however the flood has impacted severe washout areas described in the following sections.

A. Trail Characteristics

This section will discuss the overall trail characteristics, by segment. The information related to a specific environmental feature is also discussed in the appropriate sections. The corridor generally runs in a northwest to southeast direction; for this report, it will be referred to as north and south.

For most of its six and one-half mile length, wooded areas surround the corridor. Where there are breaks in the woods, there are frequently scenic views. The southern section of the corridor is adjacent to the Southwest Delaware County Wastewater Treatment Plant and the Delaware County Incinerator and Landfill.

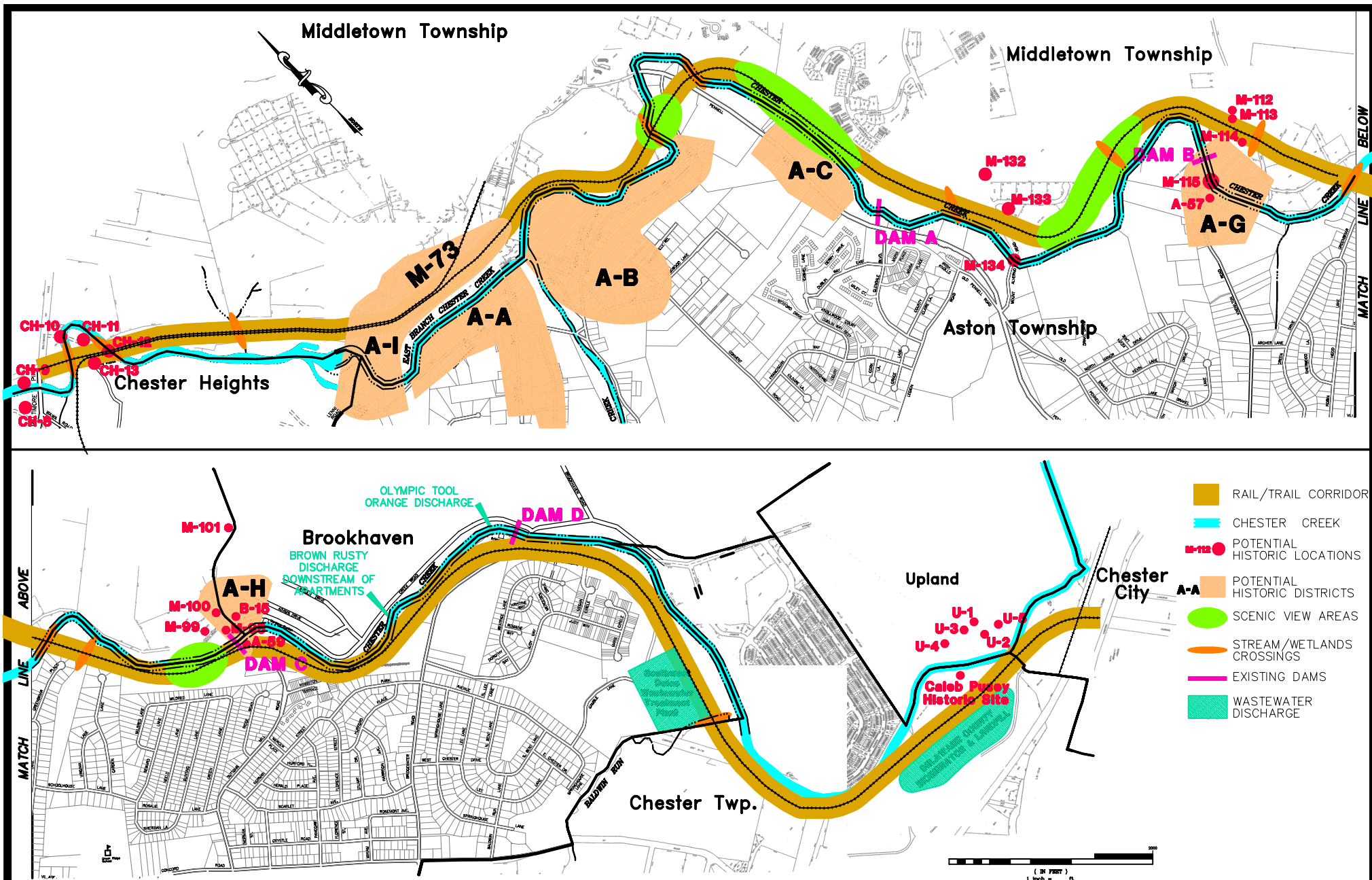
The condition of the trail varies throughout the corridor. In some locations, the rail is still in place while in others the rails have been pulled up and are scattered along the side of the corridor. Other sections of the corridor have washed out to the point that the corridor barely exists or has become severely overgrown. At a few locations, the adjacent property owners have incorporated the corridor into their property. All rails have been removed through at-grade road crossings. Each segment of the trail is discussed below; refer to **Figure 5** for the segment locations.

1. US 1 (Baltimore Pike) to Lenni Road

This section, approximately 4,300' long, shares the railbed with SEPTA's R3 West Chester Line. Currently, there is no passenger service on this line, although there is an occasional Amtrak train using it to get ballast from a quarry in Glen Mills. In 2000, SEPTA completed a feasibility study for the restoration of service on the R3 from Elwyn to Wawa. SEPTA is currently in the process of preparing a request for proposal for the preliminary engineering and environmental studies for this extension. If this service were restored, the Wawa Station would be improved and over 400 parking spaces provided.

In addition, Four States Railway Service, Inc. is in discussions with SEPTA





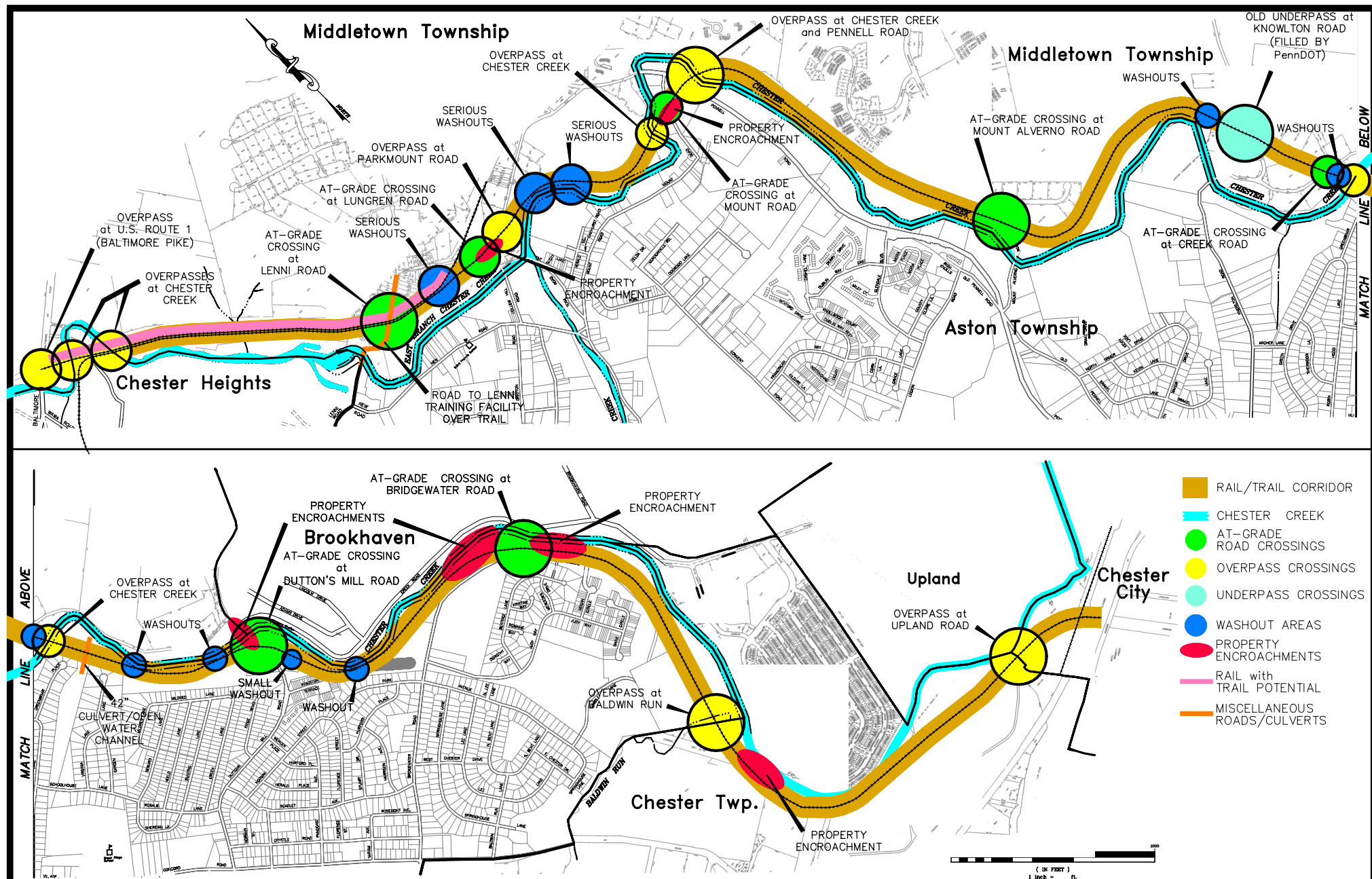
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PHYSICAL FEATURES MAP

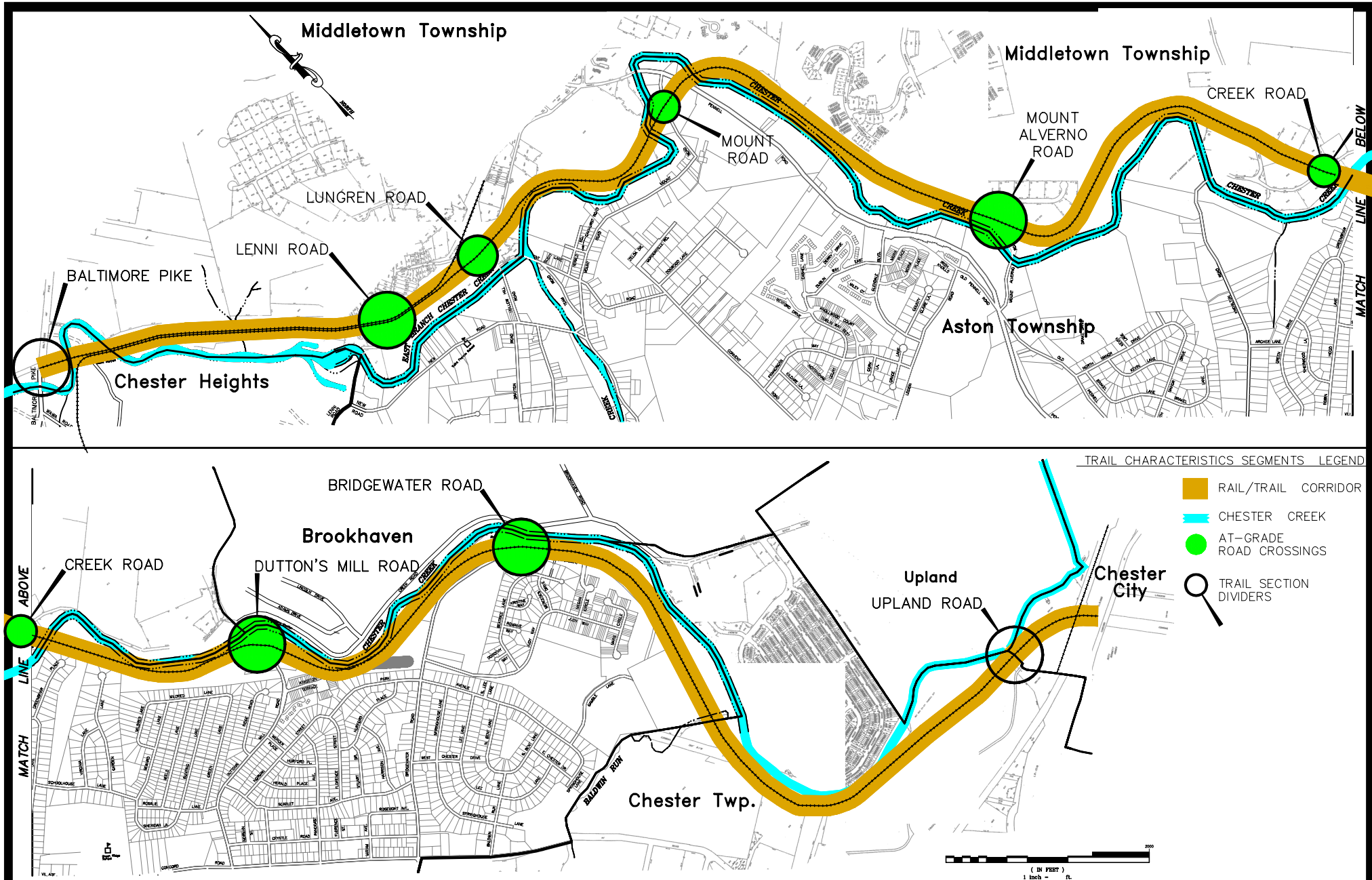
FIGURE 3



CHESTER CREEK RAIL TRAIL FEASIBILITY STUDY

ALIGNMENT ISSUES

FIGURE 4



CHESTER CREEK RAIL TRAIL FEASIBILITY STUDY

TRAIL CHARACTERISTICS SEGMENTS

regarding a possible lease of the West Chester Line from West Chester to Morton for nighttime freight service. These discussions include the possibility of using the Lenni Training Facility for maintenance and dispatching. This freight operation may also require additional track near Lenni for this service.

Access to the station and corridor is via Station Road. The County bridge that provides access from US 1 to the old parking area at the station is currently proposed to be repaired, due to poor condition. There is one residential property served by the bridge and access to the property upon the bridge removal has not yet been determined.

The R3 line comes from West Chester to the north, crosses over US 1, and then crosses Chester Creek twice within about 1000'. Between the first and second crossing of Chester Creek, the Octoraro Line comes from the west, turns towards the south and becomes the Chester Creek Branch. The rights of way for the West Chester and Chester Creek lines then run adjacent to each other to Lenni Road.

Chester Creek is the municipal boundary between Middletown Township and Chester Heights Borough. After crossing Chester Creek, the trail shifts from being on embankment to being partway up the slope of the valley wall, with hillside on the East side of the trail and embankment and the creek on the West side. The corridor accommodated four tracks in the past, although only one track is currently in place.

Approaching Lenni Road, on the East side of the tracks, is SEPTA's Lenni Training Facility. This facility is not currently used. The access road to the training facility is on the Chester Creek Branch right of way.

There is evidence, by way of markers, that fiber optic cable lines have been installed in this section of the corridor.

2. Lenni Road to Lungren Road

The Chester Creek trail crosses Lenni Road immediately west of the R3 grade crossing. This 1,370' section is in the midst of the Lenni-Parkmount Mill District, which is potentially eligible for the National Register of Historic Places. There are residential and industrial structures close to the right of way. The immediate area is not particularly scenic, although the view across Chester Creek towards Aston Township and St. Francis School is attractive. There is a large washout area approximately 1000' south of Lenni Road. There is a PECO Energy sub-station between the Chester Creek trail and the R3.



3. Lungren Road to Mount Road

The beginning of this 3,190' section is still part of the Lenni-Parkmount Mill District and passes immediately adjacent to the Diffusalite Co. It appears from our inspection that the building was constructed within a portion of the right of way. South of Diffusalite, the trail is heavily overgrown with trash and debris as the corridor approaches the Parkmount Road

overpass. There are also some PECO poles through the corridor. About one-quarter mile south of Lungren Road, there is a bend in the creek that has widened and washed out the bank upon which the rails were sitting. The rails can be seen dangling over the bank and into the creek. The flooding that occurred during Hurricane Floyd (September 1999) has further aggravated this condition.

Once beyond the washout, the area continues to be wooded, with some openings providing views into surrounding residential areas across an open field. St. Francis Church can still be seen to the north. The vegetation in the area includes oak, sycamore, ironwood and beech. There are some rock outcroppings in the area, although some are manmade.

Approaching Mount Road, the rail corridor continues to be wooded, with a scenic opening approaching a long trestle bridge crossing the creek. The creek is rocky at this location, creating some rapids. The historic Sunroc mill is within view, as are some houses on the hills.



4. Mount Road to Mount Alverno Road



This 4,850' section begins with parking and access for Novotni Brothers encroaching on the trail corridor. There is a bridge over both Pennell Road and Chester Creek, and then the corridor turns and runs parallel to Chester Creek on its east side. Across the creek from King's Mill, the rail corridor has some nice rock formations and outcroppings. There is also "white" noise as water falls down a small dam at the mill. Continuing south, there are nice views across the creek, overlooking King's Mill and the Aston-Middletown Little League Field and over to the hillside beyond Pennell Road. There are no major physical limitations in this section.

5. Mount Alverno Road to Creek Road

At the beginning of this 4,990' section, south of Mount Alverno Road, the corridor abuts the edge of the Old Mill Pointe development, with houses built on the side hill overlooking the trail. The trail itself is fairly wooded, with the creek sometimes in view. Middletown Township, during the subdivision process, ensured the right of way would be left for possible trail use. Township personnel spent two weeks clearing the area along the tracks to allow for access from the development. Signs are now posted indicating Middletown Township's intent for passive recreation use of this section of the corridor.



At Knowlton Road, the rail corridor is approximately 15' below the road elevation. The original Knowlton Road bridge over the corridor was filled in by PennDOT, rather than replace a bridge over an unused rail corridor. Between Knowlton Road and Creek Road, the corridor runs along residential property lines and while overgrown, is in good condition. There are two minor washout areas between Knowlton and Creek Roads and a more significant washout approximately 1000 feet north of Knowlton Road.



6. Creek Road to Dutton's Mill Road

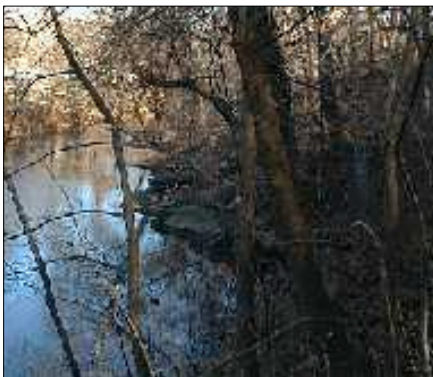
This 3,065' section runs very close to Chester Creek, which provides scenic views of the Creek, but also has resulted in several small washouts. The major trestle bridge crossing of Chester Creek near Creek Road is still intact. In the area between Creek Road and Chester Creek, the rail corridor is higher than the residences along Creek Road. This would be a concern for the privacy of these residents.



The area is generally wooded. The rail corridor is relatively high above the creek between Creek Road and Chester Creek, and then goes through a section of rock with exposed rock on both sides.

There is evidence of existing trails and clearings along the rail line showing that the area is currently in use in an informal manner. There is also a Southwest Delaware County Municipal Authority siphon chamber in this section that requires access for inspection and maintenance purposes.

7. Dutton's Mill Road to Bridgewater Road



At the beginning of this 3,870' section, Endless Pools appears to have encroached upon the rail corridor. South of Endless Pools, the rails become evident again, in an area of heavy brush. Through much of the rest of this section, the corridor is very close to the creek, with some washouts and areas where the corridor has essentially disappeared due to erosion from the creek. In other locations, the corridor is as much as 20' higher than the creek.

As in some other areas of the corridor, there are dramatic rock outcroppings. The vegetation is thicker hardwoods, with little underbrush. Approaching Bridgewater Road, Giant Concrete appears to have encroached on the rail corridor right of way. There are semi-trailers, dumpsters, building bricks, and gravel, dirt, and sand bins on what would appear to have been the corridor.



8. Bridgewater Road to Upland Road



At Bridgewater Road, it appears that the access to the Southwest Delaware County Wastewater Treatment Plant is over the rail corridor for a short distance. Much of this 8,325' section is lowland area, with lots of weeds, scrub trees and shrubs. It is also dominated by the wastewater treatment plant and the Delaware County Incinerator and Landfill. Even when these facilities are not in view, the smells and sounds are obvious. As the corridor approaches Upland Road, the vegetation

changes to hardwood and is more scenic.

B. Environmental Features

1. Land Use/Land Cover

Most of the rail corridor is currently unused and covered with vegetation. There are a few areas where adjacent businesses appear to have encroached on the rail corridor for their operations. These include:

- Roadway to SEPTA's Lenni Training Facility, north of Lenni Road
- Diffusalite Company, south of Lungren Road
- Novotni Brothers between Mount Road and Pennell Road
- Endless Pools at Dutton's Mill Road
- Giant Concrete at Bridgewater Road
- Access road to Southwest Delaware County Wastewater Treatment Plant



2. Wetlands, Streams, Floodplains, Floodways

The National Wetland Inventory Maps for the length of the corridor were evaluated. There are ten locations where the trail crosses a mapped wetland, including six crossings of the Chester Creek. At numerous places along the proposed trail, the railroad subgrade has washed out or collapsed due to drainage of stormwater runoff or erosion of the creek bank. In some areas, the creek has encroached on the original rail corridor, while in other areas, a new stream crossing would be required.



Any encroachment or crossing of a wetland or stream would need to be evaluated to avoid, minimize, or mitigate any impact and would require a permit from the PA Department of Environmental Protection and U.S. Army Corps of Engineers. However, based on the review conducted, any eroded areas of the bank to be restored, or utility crossings to be provided, could be permitted under Federal and State General Permits, which should not be difficult to obtain under current regulations.

The National Flood Insurance Program Flood Boundary and Floodway Maps for the corridor were reviewed. The rail corridor generally parallels Chester Creek, and therefore travels in and out of the floodplain, depending upon how close the rail was to the creek and its elevation above the creek. From Wawa to Lenni, the corridor is generally not in the floodplain. Between Lenni Road and Dutton's Mill Road, the rail corridor crosses in and out of the floodplain several times, sometimes parallel to and sometimes crossing the floodplain. South of Dutton's Mill Road, the corridor is mostly in the floodplain. Final design will need to be careful to protect the trail from erosion due to flooding, as well as to not adversely effect the floodplain in downstream locations.





3. Vegetation and Wildlife

North of Lenni Road, the corridor is fairly open, although surrounded by wooded areas. This section of the corridor is also part of SEPTA's West Chester Line, which is used occasionally by Amtrak. South of Lenni Road, the corridor is generally overgrown with some type of vegetation, except at creek or road crossings and where adjacent businesses have encroached on the corridor. The vegetation varies,

depending upon location with respect to the creek and highland versus lowland areas. The highland areas include sycamore, tulip poplar, beech and willow oak, and possibly some ironwood. The lowland forest areas include a lot of sycamore, some ash, and an abundance of Multiflora Rose. Some of the areas are hardwood forests, while others are more of a shrub/scrub area, with a few trees and lots of weeds. In response to a request for a check of the Pennsylvania Natural Diversity Index (PNDI) database, the PA Fish and Boat Commission indicated the possible presence of two threatened or endangered species. The bog turtle (*Clemmys Muhlenbergii*) is a federally protected threatened species, while it is considered endangered by Pennsylvania. The red-bellied turtle (*Pseudemys Rubriventris*) is considered threatened in Pennsylvania. Detailed studies of the respective habitats of these two turtle species will be required.

4. Hazardous Materials

A detailed survey for hazardous materials was not conducted. However, two discharge locations were observed. At both locations, there is an orange discharge, with the color and texture indicative of high iron concentrations. The first location is from a corrugated metal pipe approximately 500 feet from the Olympic Tool building on Bridgewater Road. The orange discharge is most concentrated at the pipe invert, diluting as it heads downstream. The second location is downslope from a landfill and incinerator operated by the Delaware County Solid Waste Authority. It is not possible to know from the site observation the exact sources of these discharges. However, the most likely sources are Olympic Tool and the landfill, respectively.



5. Washout Areas

There are a number of washout areas, where the railroad subgrade has washed out or collapsed due to drainage of stormwater runoff or erosion of the creek bank. In some areas, the creek has encroached on the original rail corridor, while in other areas, a new stream crossing would be required.



The large washout just south of Parkmount Road is of particular concern because the trail at this point is pinched between the Chester Creek and a scrub/shrub wetland. Segments of the rail itself are suspended over the washed out area. Just to the north and south of Knowlton Road there are washout areas due to erosion from drainage. There are also several between Creek and Dutton's Mill Road and Dutton's Mill Road and Bridgewater Road.

C. Bridges and Road Crossings

1. Bridges

A cursory inspection of the six bridges along the corridor was conducted in March 1999. Most of these bridges are currently open deck and many do not have any type of parapet protection. They will therefore need to be retrofitted with a deck and railings added. It appears that the structures will not need to be strengthened to support foot or bike traffic. If the emergency response plan, discussed in a later section of this report, requires emergency vehicles to be able to use the structures, additional width would be required with more substantial retrofitting, including installation of guardrails, barriers, etc.

The structures inventoried include:

- ***Railroad over Baltimore Pike***: This is a single span, through girder bridge with concrete deck in fair to good condition. The bridge provides room for two railroad tracks, one of which is currently an active rail line.
- ***Railroad over Chester Creek (Wawa)***: There are two bridges over Chester Creek south of Baltimore Pike. They are both open deck girder bridges in poor to fair condition. The northern one is a single span while the southern one has two spans. Both bridges were initially designed to carry two tracks, one of which is currently an active rail line.
- ***Railroad over Parkmount Road***: This is a single span, steel girder bridge with an open deck. The structure is in fair condition.
- ***Railroad over Chester Creek (Approaching Mount Road)***: This is a two span, steel girder bridge, with an open deck. The structure is in fair condition.
- ***Railroad over Chester Creek and Pennell Road***: This is a four span, steel girder bridge with an open deck. The structure is in poor to fair condition. The span over Pennell Road has a large (2 foot by 1 foot) hole in the web of each girder. The eastern end of this span appears to be supported by a timber brace, which requires closer inspection to determine how it is actually supported.
- ***Knowlton Road***: The previous bridge structure was removed and the railroad cut filled in. A new bridge would have to be designed in accordance with current PennDOT standards. Maintenance and protection of traffic during construction could be problematic.
- ***Railroad over Chester Creek (adjacent to Creek Road)***: This is a single span, steel girder bridge. The south end has a large washed out section of embankment.
- ***Railroad over Upland Road***: This is a single span bridge with concrete deck. It is in good condition.

2. At-Grade Road Crossings

There are currently seven at-grade crossings of the existing rail corridor. With the exception of a 1400' spacing between Lenni and Lungren Roads, they are approximately 3000' to 5000' feet apart. Starting at the north, these crossings are:

- Lenni Road (SR 3032)
- Lungren Road (Middletown Township)
- Mount Road (Aston Township)
- Mount Alverno Road (Middletown Township)
- Creek Road (SR 3015)
- Dutton's Mill Road (SR 3020)
- Bridgewater Road (SR 3018)

These are generally low to medium volume roadways.

D. Utilities

Information about the project was provided to the utility companies through the PA One Call System notification performed in 1999. The utilities responding included: PECO Energy, Philadelphia Suburban Water Company, Chester Water Authority, Bell Atlantic, Delaware County Regional Water Quality Authority, AT&T, Teppco, Middletown Township, Sun Pipe Line Company, Mobil Pipeline Corporation, Columbia Gas Transmission Corporation, Buckeye Pipe Line Company, Texas Eastern Transmission Corporation, ARCO Pipe Line Company. Some of the utilities provided incomplete information, while others indicated that they were either clear of conflict or provided locations of their facilities.

From the information sent by the pipeline companies, any crossings of the rail corridor and pipelines are perpendicular, and it appears that there are no pipelines running along the corridor. This would be expected, as the rail line would have been in active service when these pipelines were built. The locations of water are critical for providing comfort stations along the trail. As noted later in the design section, water service would be available at several locations along the corridor.

E. Historic Inventory

The Delaware County Planning Department was contacted for information on historic surveys that have been conducted locally within the study area. In the late 1970's and early 1980's, municipal historic surveys were conducted in each of the municipalities in the study area. Municipal properties were viewed and preliminarily assessed. Based on these surveys, some properties were identified as potential historic resources. However, a number of the properties were not studied sufficiently to make a determination as to potential eligibility. A Determination of Eligibility Report by a recognized historian, with submission to and review by the Pennsylvania Historic and Museum Commission (PHMC), would be required to make that determination. The current status of potential historic resources along the corridor is shown in **Figure 3** and [Table 1](#).

While there are a number of resources identified, it is anticipated that these properties are at a sufficient distance from the rail right of way that they would not be effected by the project. However, analysis by an historian, with review and approval by PHMC, would be required as part of the project.

The focus of the study has been on historic resources and the potential interest to trail users, not on the archaeological possibilities that are commonly found along waterways. Future efforts may need Phase I archaeological studies, with additional studies determined from the results of the Phase I efforts. However, archaeological studies such as this do not normally limit projects, although there may be some costs incurred in artifact recovery, if necessary.

F. Scenic Views and Outlooks

The northern part of the corridor (Baltimore Pike to Mount Road) runs through older residential and industrial areas, with few scenic views. However, there are sections where there is an attractive view across the creek to the hillside south of the corridor, with the steeple of St. Francis church visible. Approaching Mount Road, the corridor is wooded, with some scenic openings. At Mount Road, there is a scenic view of the Creek and the long trestle bridge crossing it.



From Mount Road to Bridgewater Road, the corridor is generally wooded, with some scenic views of the creek. There are occasional sections where the corridor is adjacent to residential areas, but these are few and of short distance.

Between Bridgewater Road and Upland Road, the corridor continues to be wooded. However, there are no scenic views and the corridor passes by the Southwest Delaware County Wastewater Treatment Plant and the Delaware County Solid Waste Authority property. While in some areas the adjacent property owners may need to be protected from the noise and potential impacts from the conversion to a trail, this portion of the corridor would need to be designed to address the comfort and enjoyment of the trail users.

G. Soil Erosion and Drainage

The lack of maintenance on the out of service rail corridor has provided the opportunity for the natural drainage patterns to erode channels and create washout areas that will require correction. Those areas will need to be designed with appropriately sized culverts to pass storm flows without endangering the integrity of the trail. End walls and head walls will secure the slopes surrounding the culverts. For development of the trail, full compliance with PA Department of Environmental Protection Chapter 102 guidelines will be necessary, as well as permit compliance under state and federal wetland regulations.

Table 1 - Potential Historic Resources

Designation	Location	Comments
Aston Township		
A-G	Crozerville Mill District	
A-B	Rockdale Mill District	
A-C	Pennell Road Mill District	
A-G	Knowlton Mill District <ul style="list-style-type: none"> Dam – B *A-57: 449 Knowlton Road 	
*A-H	Dutton's Mill District <ul style="list-style-type: none"> Dam – C A-59: Dutton's Mill Road, Millworker's House 	Part of Dutton's Mill District in Middletown Township
*A-I	Parkmount Mill District	Part of M-73 (Parkmount Mill District)
Dam - A	South of Pennell Road Mill District	
Dam - D	Bridgewater Road	
Brookhaven Borough		
B-9	278 Bridgewater Road, "The Poplars"	
B-15	269 Dutton's Mill Road, Dutton Millowner's Mansion	
Chester Township		
C-2, 3	Toby Farms	
C-4		
Chester Heights Borough		
CH8	"Forge Hill," off Baltimore Pike at Chester Creek	
CH- 9	"Little Forge Hill," off Baltimore Pike at Chester Creek	
CH-10	1882 Bridge, Station Road at Chester Creek	Bridge scheduled to be removed by Del. Co. due to poor condition
CH-11	P. Kindt residence, Station Road	
CH-12	Octoraro Railroad Trestles, PRR	
CH-13	Wawa Station: Former station of Octorara/West Chester Line, PRR	
Middletown Township		
*M-73	Parkmount Mill District (aka Parkmount-Lenni Mill District)	Part of A-I (Parkmount Mill District)
	*Dutton's Mill District <ul style="list-style-type: none"> *M-98: 442 Dutton's Mill Road (old Mill) *M-99: 767 Creek Road *M-100: 193 Dutton's Mill Road *M-101: 274 Dutton's Mill Road 	Part of A-H (Dutton's Mill District)
	Knowlton Mill District <ul style="list-style-type: none"> M-112: 245 Knowlton Road M-113: 247 Knowlton Road M-114: 261 Knowlton Road *M-115: Knowlton Road at Chester Creek, stone bridge 	Part of A-G (Knowlton Mill District) Bridge has been replaced
M-132	657 Mt. Alverno Road	
*M-133	673 Mt. Alverno Road	
M-134	"Presbyterian Ford", Mt. Alverno Road	
Upland Borough		
U-1	15 Race Street, Caleb Pusey House	
U-2	Race St, Pennock Log House	
U-3	19 Race Street, 1849 Schoolhouse	
U-4	35-41 Race Street, Millhouses	
U-5	Race Street, Amish Corn Barn	
* Indicates considered worthy of further research. Lack of such designation is not definitive, i.e., sufficient work was not done to make the determination.		

H. Steep Slopes and Topography

The prior use of the area as a rail corridor lends itself to the development of a trail. With the exception of the eroded creek bank south of Parkmount Road, the washout areas can be rectified with installation of culverts. The rail corridor has a gentle slope, as rail lines were designed with minimal grade. In some areas, there are steep slopes adjacent to the right of way where the original construction cut through the valley.



IV. TRANSPORTATION NETWORK

A. Project Area

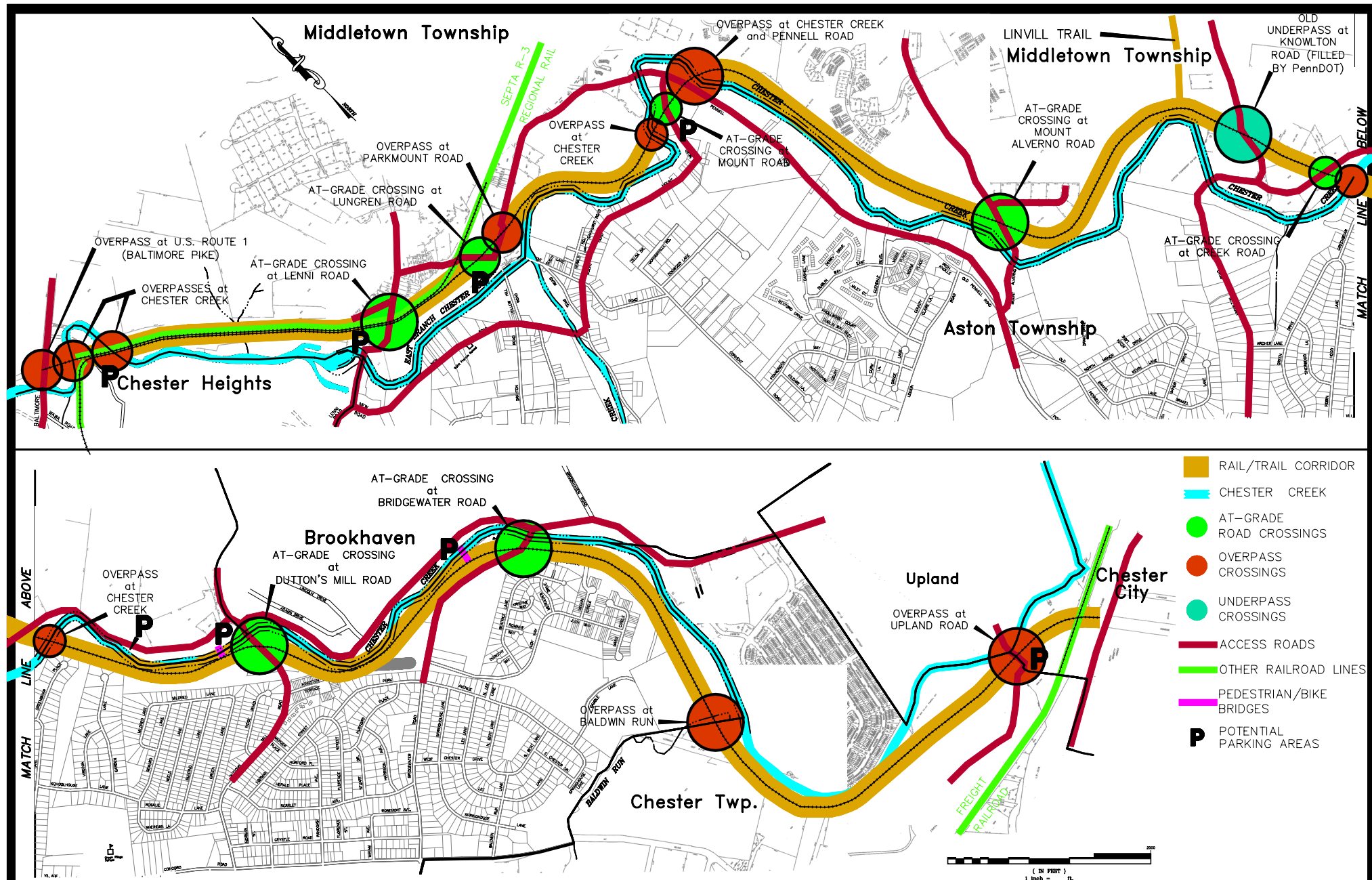
The transportation network in the immediate area of the rail corridor is shown in **Figure 6**. The parallel routes, road crossings, and other transportation facilities are shown. SEPTA's R3, West Chester Line entering the area from the east at Lenni and adjacent to the Chester Creek corridor from Lenni to Wawa. Amtrak currently uses this section of rail on an occasional basis to obtain ballast from Glen Mills Sand & Gravel, Inc. In addition, Four States Railway Service is discussing with SEPTA a possible lease of this rail line for nighttime freight operations. There is a CSX freight line parallel to I-95 south of the corridor.

The rail corridor is predominantly in Middletown and Aston Townships, Delaware County, and generally parallels Chester Creek. At the far northern limits, it passes through a small section of Chester Heights Borough at the old Wawa station on the R3 Line. It passes through a small section of Aston Township near Mount Road and then enters Aston Township again when it crosses Chester Creek south of Creek Road. It stays in Aston Township from there until Baldwin Run, where it enters Chester Township.

Chester Creek is the boundary between a number of the municipalities, with Middletown Township, Brookhaven Borough, and Upland Borough on the east side of the creek and Chester Heights Borough, Aston Township, and Chester Township on the west side. The only exception is the Toby Farms section of Chester Township, which is east of the creek. Therefore, while the rail corridor is not within the municipal boundaries of Brookhaven or Upland, they are immediately adjacent to the corridor.

B. Estimated Usage

There is no established methodology for estimating rail-trail usage. Some of the variables which effect usage include: population adjacent to trail, use of the trail for commuting or shopping, compatible land uses, scenic value, trail amenities, and public awareness of the trail. Several trail operators or planners were contacted to determine demand estimate methodology and usage data. The Montgomery County Planning Commission indicated that they tried to devise a methodology and came to the conclusion that, within the limits of their study, there was not a valid methodology. PENNDOT has not prepared any estimates for the Radnor Rail-Trail. FHWA has been fairly liberal in not requiring such estimates, recognizing that there is no established methodology for completing valid estimates.



CHESTER CREEK RAIL TRAIL FEASIBILITY STUDY



TRANSPORTATION NETWORK

Several trail operators in Chester, Delaware, and Montgomery Counties were contacted for information. The PA Field Office of the Rails-to-Trails Conservancy was also contacted. No single contact had sufficient information upon which to base an estimate. However, by combining some of the data, a broad range of anticipated demand was obtained.

According to the PA Field Office of the Rails-to-Trails Conservancy, the average annual usage for all trails in Pennsylvania was 41,200 users, while non-asphalt trails had 32,400 average annual users. Monthly user counts from the Struble Trail in Chester County were obtained for 1998. These counts indicated an annual usage of at least 21,000 users; given the count methodology, the usage is probably a bit higher than stated. From the Struble Trail data, the percent usage for each month was determined.

The Montgomery County Planning Commission provided data on seasonal counts they have taken over the past several years on the Montgomery County portion of the Schuylkill River Trail. These counts were conducted during spring, summer, and/or fall over the past few years, including a Sunday, Tuesday, and Friday during each season. Based on this data, it was assumed that the usage on five weekdays equals the usage on two weekend days.

As stated earlier, there are many variables that can effect usage of the trail. Therefore, it is not possible to say that the usage on any given trail will be comparable to another. However, by using the annual usage on the Struble Trail and the Pennsylvania average, a range of possible usage can be estimated.

Estimated monthly usage was obtained by applying the monthly percentage information to both the 21,000 annual Struble Trail users and the 41,200 average annual Pennsylvania trail users (all trail surfaces). Further calculations provided average weekday and average weekend day usage.

The estimated usage ranges are shown in [Table 2](#).

Table 2 - Estimated Daily Trail Usage

	Winter	Summer
Weekday	20 to 40	85 to 165
Weekend day	50 to 100	210 to 420

Based on the experience of other trails, the types of users will vary. Potential uses include walking, jogging/running, bicycling, inline skating, and access to fishing locations. If connections are provided to retail areas, some users near the trail may use it for shopping. Walking can include those hiking long portions of the trail, young families with children, and those in wheelchairs. Some people will use the trail for multiple uses, e.g., sometimes walking and other times on bicycle. Some trails have been used for local walk-a-thons or other community events.

C. Access Locations and Parking Facilities

As noted earlier, there are seven at-grade crossings along the trail corridor. However, as most people would need to drive to the trail, parking would need to be provided at most access points. Not all of the at-grade crossing locations are amenable to providing this parking, and it appears that none of them could provide it in the existing right of way, i.e., additional property would need to be acquired.

A cursory review of the land uses near the at-grade crossings indicates that it may be possible to provide parking at Lenni Road, Lungren Road, Mount Road, Creek Road and Upland Road. The potential parking areas are shown in *Figure 6*.

In addition, parking may be possible at two locations along Creek Road, one north of Dutton's Mill Road (opposite the entrance to Delaware County Field and Stream Association) and the other north of Bridgewater Road opposite the Brookhaven Swim Club and the Four Seasons Fitness Club. Both of these locations would require new pedestrian/bicycle bridges over Chester Creek. The Bridgewater Road location would provide the largest parking area of any noted along the corridor.

It may also be possible to provide parking at the old Wawa Station at the northern terminus of the study corridor. As noted earlier, Delaware County proposes to remove the Station Road Bridge that provides access to the Wawa Station, although some accommodation of the existing property using the bridge will need to be made. SEPTA is also exploring the feasibility of restoring service to the R3 line between Elwyn and Wawa. As part of this, a parking lot of approximately 400 spaces is proposed. While it appears that most of those spaces will be needed for the daily commuters, space should be available on weekends for use by trail users.

D. Connections To Other Modes Of Travel

The trail corridor connects to the existing Linvill Trail in Middletown Township and SEPTA bus route 116 travels along Dutton's Mill Road on route to Granite Run Mall. With the advent of buses providing bike racks, the possibility of a connection to the trail would appear to only involve the introduction of an additional stop for the route. If SEPTA were to restore service to the R3 Line between Elwyn and Wawa, there would also be a connection to the regional rail system. However, that would also require use of the corridor between Lenni and Wawa by both the regional rail trains and the Chester Creek Rail Trail. While dual use of trails is possible and has been done in other parts of the country, proper design and separation are critical. It may be possible to extend the trail northward across Baltimore Pike and connect with the Darlington Trail. However, if rail service were restored, a separate trail bridge over Baltimore Pike would be needed, as trail users would not be able to use the existing bridge.

Aston Township has made application under the Congestion Mitigation and Air Quality (CMAQ) program for a bike loop around the center of the Township (Dutton's Mill Road, Concord Road, and Pancoast Road) with possible connections to the proposed rail trail along Knowlton Road and Dutton's Mill Road. At the present time, the project has been postponed.

V. TRAIL IMPACTS ON THE SURROUNDING COMMUNITY

The impacts of a trail on the surrounding community are a major concern to all involved in planning any trail. Detailed studies related to these issues are not part of the scope of this study. However, available information on the impact of trails in other areas has been collected and is discussed in this section.

A. Security Impacts

The issue of security relates to both the trail users and adjacent property owners. The Rails-Trails Conservancy has conducted numerous studies that demonstrate that trails are as safe as any other location of a community. Safety of the bikers/pedestrians is greater on a trail than on a street, particularly the heavier volume streets that would be used for longer distance biking.

Operators of local trails in Chester and Montgomery Counties have indicated that their experience is consistent with the Rails-Trails studies.

In 1992, the U.S. Department of the Interior, National Park Service, Rivers, Trails, and Conservation Assistance Program, in cooperation with The Pennsylvania State University, School of Hotel, Restaurant and Recreation Management, Leisure Studies Program, completed *The Impacts of Rail-Trails: A Study of the Users and Property Owners from Three Trails*. (This study will be referred to as the NPS/Penn State study.) In this study, they surveyed users and adjacent property owners along three diverse trails in different parts of the country. The findings include:

- Most trail users lived nearby and visited frequently.
- Users reported no serious complaints with any of the trails.
- Trail neighbors had experienced relatively few problems related to the trails.
- Problems reported most by landowners were unleashed and roaming pets, illegal motor vehicle use, and litter.
- Problems that were most likely to have increased since the opening of the trail included noise from the trail, loss of privacy, and illegal motor vehicle use.
- The majority of owners reported:
 - no increase in problems since the trails had been established,
 - that living near the trails was better than they had expected it to be,
 - living near the trails was better than living near the unused railroad lines before the trails were constructed.

There are several important aspects related to having a safe facility. The trail must be properly designed and maintained. As with any public facility, if there is not proper maintenance and it falls into disrepair, the users don't help to maintain it (e.g., pick up their own litter). In addition, the more a trail is used, the safer it is. Frequent patrols by rangers or local police are also important. If potential loiterers or criminals believe that a police officer or passer-by will see them, they are less likely to commit a criminal act.

No one can guarantee that a trail will be crime-free, or can anyone make that claim for any other part of a community. Discussions with local trail operators have indicated that trails are their lower crime areas, not higher. This includes the Schuylkill River Trail that runs through Norristown and other higher crime areas. It is difficult for large-scale burglaries to take place along a trail, as transportation of the goods is difficult. It is also difficult to make a quick get-away on a trail and there are no alternate routes once on the trail.

B. Economic Impacts

The NPS/Penn State study also provided information on the rail-trails' economic effects, particularly the effect on property values. The NPS Rivers, Trails, and Conservation Assistance Program also completed a report titled *Economic Impacts of Protecting Rivers, Trails and Greenway Corridors*.

The effect of a trail on property values is obviously a major concern of the adjacent property owners. There are many variables that effect property values, and it can be difficult to isolate the effects of trails or other open space. However, both of these reports indicated that, in general, the proximity to open space and trails does not have a negative impact on property values. The NPS/Penn State study reported that of those who had purchased property along the trails after the trails had been constructed, the

majority reported that the trails either had no effect on the property's appeal or added to its appeal. Landowners along the trails reported that their proximity to the trails had not adversely affected the desirability or values of their properties.

The NPS Economic Impact study summarized information from numerous statistical studies. These had similar results as the NPS/Penn State study. In some of the studies, property values immediately adjacent to greenbelts and trails were higher than for properties further away. It was stated that some high use areas may have a negative influence on adjacent properties, but could still have a positive influence on properties farther away. The proposed Chester Creek Rail Trail is not anticipated to be a high use area.

Higher property values can also have a positive impact on tax revenues for the local taxing authorities.

There can also be a positive economic impact from increased recreational spending by trail users. While it may not be feasible for the Chester Creek Rail Trail, some trails provide amenities at the trail heads, such as refreshment stands or equipment rentals, which contribute to the local economy. If connections can be made between the Chester Creek Rail Trail and other trails or roadways connecting to retail areas, there would be a greater impact on the local economy.

VI. TRAIL DEVELOPMENT AND OPERATION

There are numerous issues to be considered in the development and operation of any trail. The first issue to be considered is who will own, operate, maintain, and provide security for the trail. The safety of trail users and trail neighbors is also a major concern. The costs of developing and maintaining the trail, as well as funding sources for these costs, need to be identified. And finally, a schedule for developing and constructing the trail needs to be determined.

A. Survey of Regional Trail Operators

Contacts were made with owners and operators of existing trails in the area. The circumstances for each trail are different in terms of right of way ownership, operations, maintenance, and security. The information obtained is summarized in [Table 3](#) and discussed further in this section. As noted in [Table 3](#), the arrangement of ownership of the right of way, ownership of the trail amenities, operation/maintenance of the trail, and security can vary, depending upon the conditions of each area.

Table 3 - Lead Agency for Development, Construction, and Operations

	ROW Ownership	Development/ Construction	Operation/ Maintenance	Security
Schuylkill River Trail (Montgomery Co.)	County	County Parks & Planning	County Parks & Planning	County Parks
Other Trails in Montgomery Co. Trail Network	Varies: County, on-road, utilities, state	County Parks & Planning	County Parks & Planning	County Parks and/or local municipality
Local Tie-ins to Montgomery Co. Trail Network	Varies: Municipality, on-road, utilities	Municipality or "Friends of.."	Municipality or "Friends of.."	Municipality
York County Trail (20 miles long)	York Co.; MA & PA Railroad ⁵	Rail/Trail Authority ¹	County Parks Dept ²	County Parks Dept ²
Leiper-Smedley Trail (Del Co)	Nether Providence	Nether Providence	Nether Providence	Nether Providence
Struble Trail (Ches Co)	County	County Parks	County Parks	County Parks
Chester Valley Trail (Chester Co)	PennDOT & Chester County	County Parks	County Parks	County Parks
Chester Co. Local Trails	Municipality ³	Municipality ³	Municipality ³	Municipality ³
Radnor Twp Rail/Trail (Del Co)	PennDOT	PennDOT/Radnor ⁴	Radnor Twp	Radnor Twp

Notes:

¹ York County Rail/Trail Authority

² Primarily from budgeted funds, with some grants

³ Chester County provides grants to local municipalities to operate and own trails.

⁴ Transportation Enhancement Funding, ISTEA/TEA-21

⁵ Maryland and Pennsylvania Railroad. Last 1.5 miles of ROW. Dual use with freight. Not built as of January 2000.

B. Ownership

There are two separate issues related to ownership of a trail: who owns the right of way and who owns, develops, and constructs the trail. These can be the same entity, or one entity can lease the right of way from another. The various entities to consider are a municipality, a county, an authority, the state, utilities, or a local group (such as Friends of the Chester Creek Branch). In both Chester and Montgomery Counties, the County is developing the main trails (such as the Chester Valley Trail and the Montgomery County Trail Network) and encouraging the local municipalities to develop connections to the network. They are also working to connect the County trails to the trails in adjacent counties.

The York County Rail/Trail Authority is a nine-member panel, elected by the County Commissioners. The Commissioners attempt to maintain a balance of interests on the Authority, including railroad aficionados, trail users, and local municipal representation. As the trail travels through 11 municipalities, it is not possible to have one representative from each municipality on the Authority.

SEPTA staff has indicated that they would not sell the right of way for the trail; however, they are amenable to discussions of leasing the corridor. As the Chester Creek Rail Trail would travel through several municipalities, the most desirable alternative would be to have Delaware County, through the Parks Department, be the lessee of the right of way. If the County will not be the lessee, it is recommended that a multi-municipal authority be created.

C. Operation and Maintenance

It is generally preferred that a single agency design, operate and maintain a trail. This helps to maintain a homogenous look and feel throughout the length of the trail and consistent maintenance and security. It also provides a single agency responsible for dealing with problems or concerns of users and trail neighbors.

According to a 1992 survey by the Rails-to-Trails Conservancy, almost 25 percent of rail-trails are managed at the county level. This is particularly true when the corridor traverses several municipalities.

From the survey of local trails, the operation and maintenance of the larger trails tends to be the county parks department, with the smaller, municipal trails operated and maintained by the respective municipality. In Montgomery County, there are some local “Friends of...” groups that may operate and maintain the local trails.

It is recommended that Delaware County, through the Parks Department, construct, operate, and maintain the trail. If the County will not agree to this, the multi-municipality authority could construct, operate, and maintain it.

D. Security

The provision of security for the trails usually remains with the entity that operates and maintains the trail. Even in locations where the County patrols and provides security, the local municipal police

forces, particularly those with bike patrols, will include the trail as part of their regular “beat”. It can also be used as a means of transportation around the municipality.

It is recommended that Delaware County be the lead agency for providing security along the trail. However, the police agencies for the various municipalities should include the trail as part of their normal police functions.

E. Funding

There are numerous sources of funding for both the construction and operation/maintenance of trails, including:

- Federal/State Transportation Funds
- County Budget
- Municipal Contributions
- Friends of the Chester Creek Rail-Trail
- Cash and In-Kind Services
- Foundations
- Utilities

Federal and state funds are available from TEA-21 programs, such as PennDOT’s Transportation Enhancements and Congestion Mitigation and Air Quality (CMAQ) programs, and PA Department of Conservation and Natural Resources’ Recreational Trails Program.

As with other larger, multi-municipal trails in the area, County funding is a possibility. This funding would most likely be part of the Parks Department budget. In addition, the local municipalities along the corridor could provide some funding, proportional to the proximity of the trail to their population centers.

“Friends of...” groups have been successful in northeast and southwest Pennsylvania in setting up and working on trails. While these groups may not have a significant source of direct funding, they can be a conduit for receiving donations, either cash or in-kind services, from local users and/or businesses. This may require designation as a 501(c)3 charitable organization.

Various grants are available for trails such as this. The York County Rail-Trail Authority has used several grants to support their operations. Some of the grants require that the trail operate with a paid coordinator.

In some locations, local utilities are interested in using the rail corridors for their infrastructure, which could include fiber-optic, cable, telephone, or electric lines. The lease of the right of way by these utility lines can provide a source of steady, long-term funding. However, as SEPTA staff has indicated that they would desire to maintain ownership of the right of way, any utility lease benefits would most likely go to SEPTA.

Funding for the trail will most likely need to be a combination of funding sources. The Federal, State, and County funding should be considered first, and then the extent of additional funding that is required could be determined.

VII. PUBLIC PARTICIPATION

A multi-faceted public participation program was conducted as part of this project. A Citizens Advisory Committee was formed. A series of public meetings were held in February and March 1999, with a second series in November 1999. A questionnaire was distributed, asking residents various questions on rail-trails in general and this proposed trail.

A. Citizens Advisory Committee

The Citizens Advisory Committee was composed of a broad cross-section of local officials and residents from the various communities through which the rail corridor travels. A list of the members of the committee is included in [Appendix B](#).

B. Public Meetings

A mailing list of the property owners along the entire rail corridor was developed. All known property owners were invited to a special public meeting on February 16, 1999.

A public meeting was held at the Aston Township Municipal Building on March 2, 1999. The questionnaire, discussed in more detail in the next section, was distributed.

In November, another series of public meetings were held. Presentations were made to the Northly Middle School and Pennell Middle School Parent-Teacher Leagues on November 9 and October 19, respectively. A formal presentation was given at a general public meeting on November 10 at the Chester Township Municipal Building. At these meetings, the results of the questionnaire and the studies to date were presented, while also responding to questions posed by the public at the previous public meetings or through the questionnaire.

The questions and comments asked at the February and March public meetings were summarized into nine categories, with some further summarized into sub-categories. These categories are: Security (Trail Users' Safety, Property Owners' Safety, General), Environmental/Sanitary, Other Trails, Planning, Construction, Financial, Traffic, Support/Opposition, Miscellaneous. The detailed list of questions and comments is included in [Appendix B](#); these issues and concerns were considered throughout the studies.

C. Questionnaire

A questionnaire was developed to assess the public's knowledge of rail-trails in general and their opinion on a rail-trail in this corridor. A copy of the questionnaire is included in [Appendix B](#). The responses to the questions related to knowledge and use of trails (questions 1-6) are shown in [Table 4](#).

Table 4 - Responses to Questionnaire

Question	Yes	No
Are you familiar with the Rail-to-Trail concept?	64%	36%
Had you heard of any Rail-to-Trail projects prior to this questionnaire?	56%	44%
Had you heard about the Chester Creek Branch Rail-Trail Project prior to this questionnaire?	40%	60%
Have you ever used a Rail-Trail? How did you use the Rail-Trail?	20%	80%
Non-motorized commuting	0%	
Bicycling	60%	
Walking	60%	
Running	40%	
Have you ever used other types of multi-use trails, such as the loop trail at Ridley Creek State Park?	50%	50%
If the Chester Creek Branch Rail-Trail is built, do you think you would use it?	60%	40%
If yes, what would you use it for?		
Non-motorized commuting	7%	
Bicycling	80%	
Walking	93%	
Running	33%	
Horseback riding	7%	
* Sum of responses greater than 100% due to multiple uses by some respondents		

Questions 7 and 8 of the questionnaire asked what issues or concerns the respondents had about the project. The issues expressed were categorized into five categories. The list below indicates the concerns and the number of respondents expressing that concern:

Security:

Police Protection (8)
Privacy & Trespassing (6)
Safety (3)
Unauthorized Use (3)
Crime (5)

Environmental/Sanitary:

Public Health (3)
Pollution (3)
Noise (4)
Wild Animal Habitats (1)
Dangerous Embankments (2)

Operation/Maintenance:

Starting Point of Trail (1)
Time of use (3)
Emergency Access (1)
Perimeter Fencing (3)
Upkeep (4)
Rest Areas (1)
Emergency Phones (1)
Access Areas (4)
Lights (1)
Volume of People (2)
Designated Walk/Bike Area (2)
Anticipated Usage (2)
Planned Surfacing (2)

Financial:

Investment of Property (1)
Liability (4)
Damage Reimbursement (4)
Repair Costs of RR & Bridge (1)
Assets of "Friends" Portfolio (1)
State & Local Taxes (3)
Property Values (2)
Legal Owners (3)
Who Pays for Land (4)

Traffic:

Dangerous Crossover Roads (3)
Traffic Impact & Regulations (3)
Parking (3)

Other information requested by the respondents, and the number asking that question, includes:

- Dollar Value of Contract (2)
- Environmental Impact Study (1)
- What will be Result of Study (1)
- Copies of Contract (2)
- Who are the "Friends"? (2)
- Why Meeting in Middletown, not Aston? (1)
- Completion Date (1)
- Info on Other Trails in State (1)

As with the questions and comments at the public meetings, these issues and concerns were considered throughout the studies.

VIII. TRAIL CONCEPT PLAN

The Pennsylvania Department of Transportation does not currently have any design standards for multi-use trails. However, there are a number of publications that include various concepts for design. A primary source was *Pennsylvania Pedestrian and Bicyclist Safety and Accommodation*, prepared for a series of seminars which PennDOT conducted in 1998. While this was prepared for PennDOT and provides guidance on designing trails, it is not considered a design standard. Other sources include *Trails for the Twenty-First Century*, edited by Karen-Lee Ryan, Rails to Trails Conservancy, and *Implementing Bicycle Improvements at the Local Level*, by the Institute of Transportation Engineers.

A. Design Standards

The design elements considered include surface materials, cross section, design speed, grade, vertical and horizontal clearances, and grade crossings. Each of these elements is discussed in this section.

Before developing design standards, it is necessary to determine the types of users on the trail. It has been assumed that the trail should be designed to accommodate almost all types of potential users, excluding equestrian. This includes slower users (walkers, families with baby strollers, and wheelchair users) and faster users (bicyclists and inline skaters). These are sometimes referred to as heels and wheels, respectively, although recognizing that wheel chairs and baby strollers do have wheels.

1. Surface Material

Various types of surface materials can be used on multi-use trails, which can be divided into three types: hard surfaces (soil cement, granular stone, asphalt, and concrete), soft surfaces (natural and wood chips), and recycled materials. While asphalt and concrete are more expensive than the other surfaces, it provides a better surface for users on wheels, whether bike, inline skates, baby strollers, or wheelchairs. They also require less maintenance than the other surfaces. Asphalt is the recommended surface as it is less expensive than concrete and is not as hard a surface. A geotextile fabric should be included between the subgrade and the subbase. This fabric reinforces the structural qualities of the subgrade and subbase, helps prevent weed growth, and improves drainage.

It is recommended that the shoulder be a different material than the main trail, to keep people from using it as part of the trail. While it takes a bit more maintenance than asphalt, either soil cement or compacted granular stone should be used for the shoulders.

2. Vertical and Horizontal Clearances

Proper vertical and horizontal clearances are important for the safety of trail users. The vertical clearance to obstructions should be a minimum of eight feet. For psychological purposes, a 10-foot clearance may be desirable. The minimum horizontal clearance on both sides of the trail is 2 feet, although four feet is desirable to provide distance from trees, poles, walls, fences, etc. A six-foot lateral separation is desirable from any embankment that would create difficulties for trail users. If this is not possible, a positive barrier such as dense shrubbery or fence should be provided. Culverts and other drainage and piping should be extended laterally at least 10 feet from the edge of the path.

3. Typical Cross Section

Based on the current literature, a trail that accommodates both heels and wheels should provide a minimum width of 10 feet, with a 12-foot width preferred. For the Chester Creek Rail Trail, the proposed typical cross section includes a five-foot pedestrian lane; a one-foot painted separation buffer, a six-foot bicycle lane, and three-foot shoulders on both sides. Each portion of the path would be bi-directional. (See **Figure 7**). Where physical or right of way conditions do not permit, the cross section can be reduced to two-foot shoulder, a five-foot lane for bikes, and five-foot lane for pedestrians. **Figure 8** indicates how the typical trail section might look.

Where the trail is adjacent to a steep slope, proper protection must be provided. Ideally, a 12-foot distance should be provided between the edge of pavement and the embankment, with a 4'-6" high transparent fence at the top of the embankment, as shown in **Figure 9**. A typical detail of such a fence is shown in **Figure 10**.

From Lenni to Wawa, the trail is adjacent to an active rail line. At this time, the line is used infrequently; however, greater use is possible in the future. This rail with trail condition is not as desirable as completely separate facilities; however, with proper design, it can be safely accommodated. A minimum 15-foot distance should be provided between the center of the active tracks and a seven-foot high fence at the edge of the trail shoulder, as shown in **Figure 11**. The fence should be decorative but able to protect trail users from ballast and other materials kicked-up by trains.

4. Grade, Design Speed, and Cross Slope

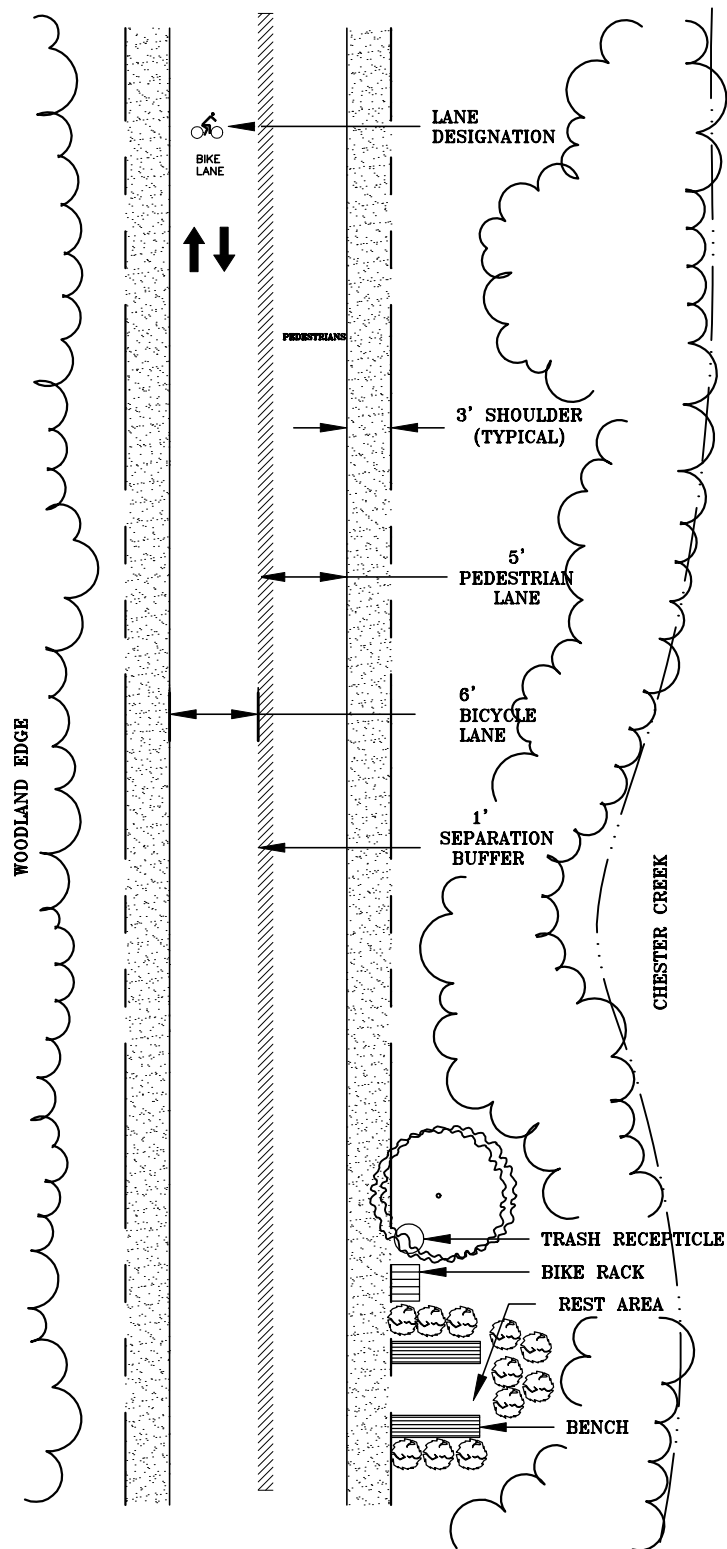
In general, the minimum design speed for a multi-use trail is 20 mph. There are situations where a greater or lower design speed is recommended. A higher design speed is recommended on grades greater than four percent or where high prevailing tailwinds exist. As a former rail corridor, the grade is relatively flat, (railroads are generally built on a 2% grade or less) and high tailwinds are not anticipated. The maximum grade considered desirable is five percent, which again is not a problem along this corridor. A lower design speed is recommended on unpaved paths, where bicyclists tend to ride slower, which does not apply in this project.

At a design speed of 20 mph, the minimum horizontal curve radius is 95 feet. The cross slope should be two percent. This is the minimum necessary to encourage adequate drainage and the maximum which can be handled by wheelchairs or 3-wheeled bicycles. Sloping in one direction, rather than crowning, is preferred for the sake of the trail users. A smooth pavement is critical to prevent water ponding and ice formation.

5. Roadway Intersections

Intersections of the trail with the highway network are important considerations. The trail will be less visible to motorists than an intersection with another roadway, and trail users will have become accustomed to not paying attention to traffic. Advance warning, both signs and paving materials, should be provided for motorists and trail users. A typical at-grade intersection plan is shown in **Figure 12**. This typical plan provides advanced warning signs for motorists and trail users, as well as a STOP sign for trail users.

On the trail, the pavement changes to include a combined asphalt/brick pavement at the approaches to the intersection, with an all-brick paving through the intersection. This brick paving would also help



CHESTER CREEK RAIL TRAIL FEASIBILITY STUDY

TYPICAL PATH DETAIL

FIGURE 7



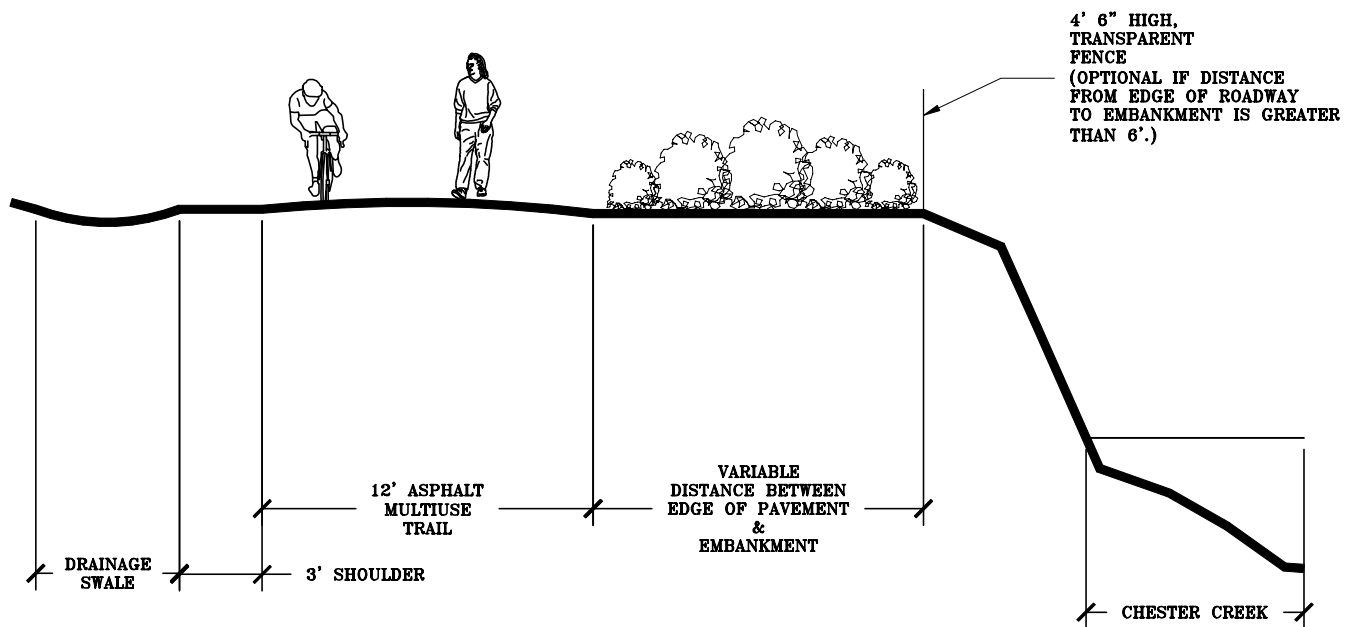
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FEASIBILITY STUDY*

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*TYPICAL TRAIL
SECTION*

FIGURE 8



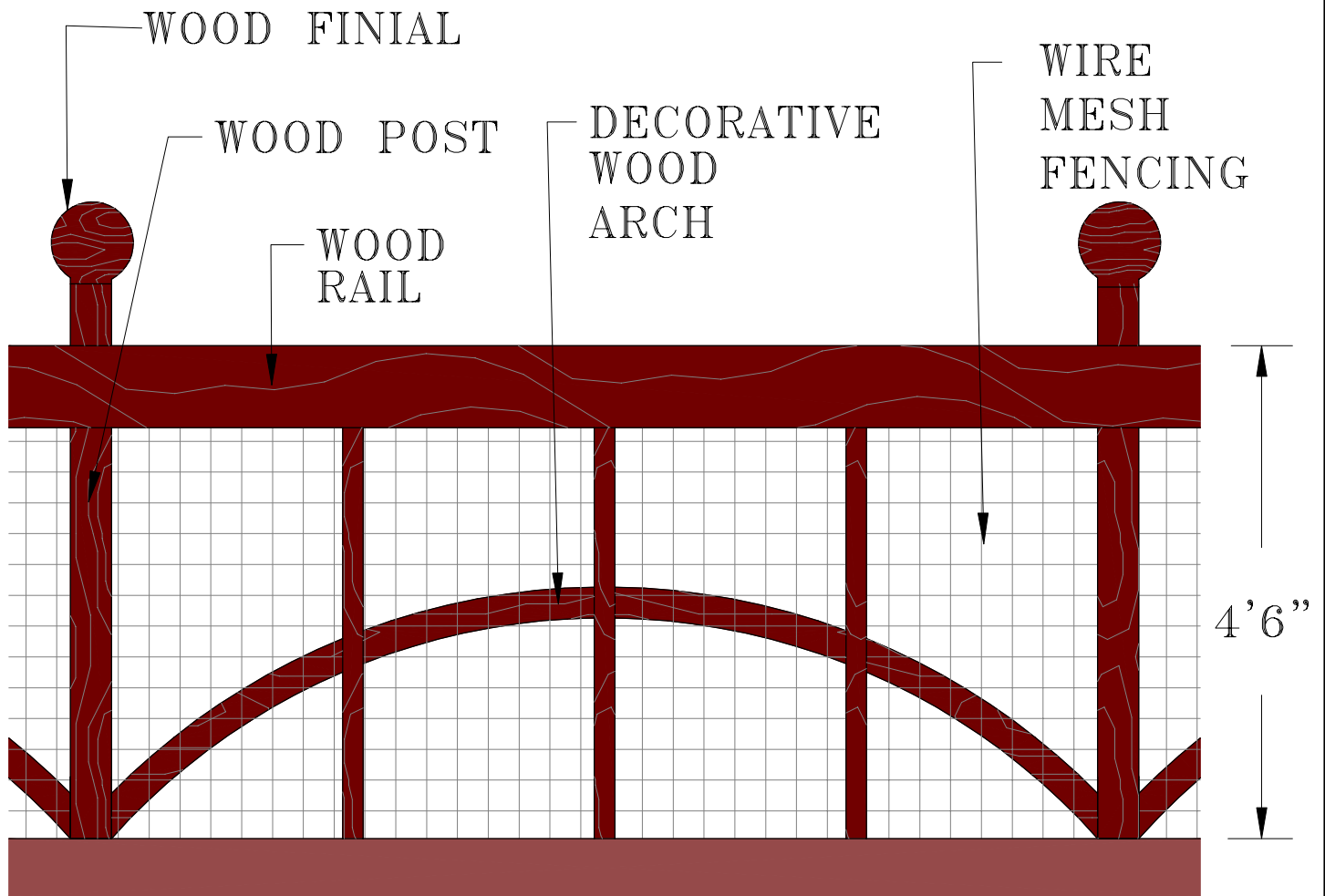
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STEEP SLOPE CROSS SECTION

FIGURE 9



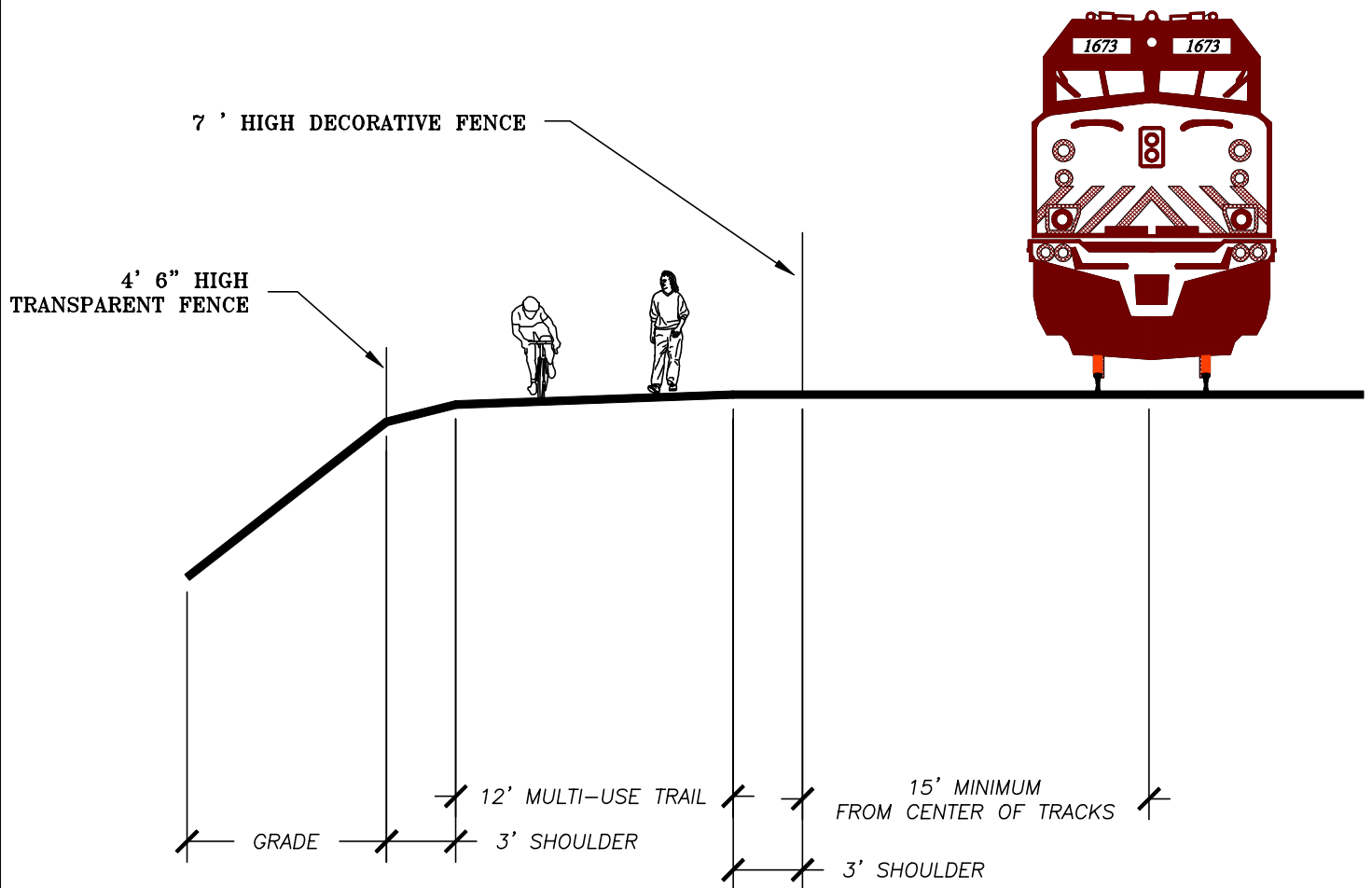
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FENCE DETAIL

FIGURE 10



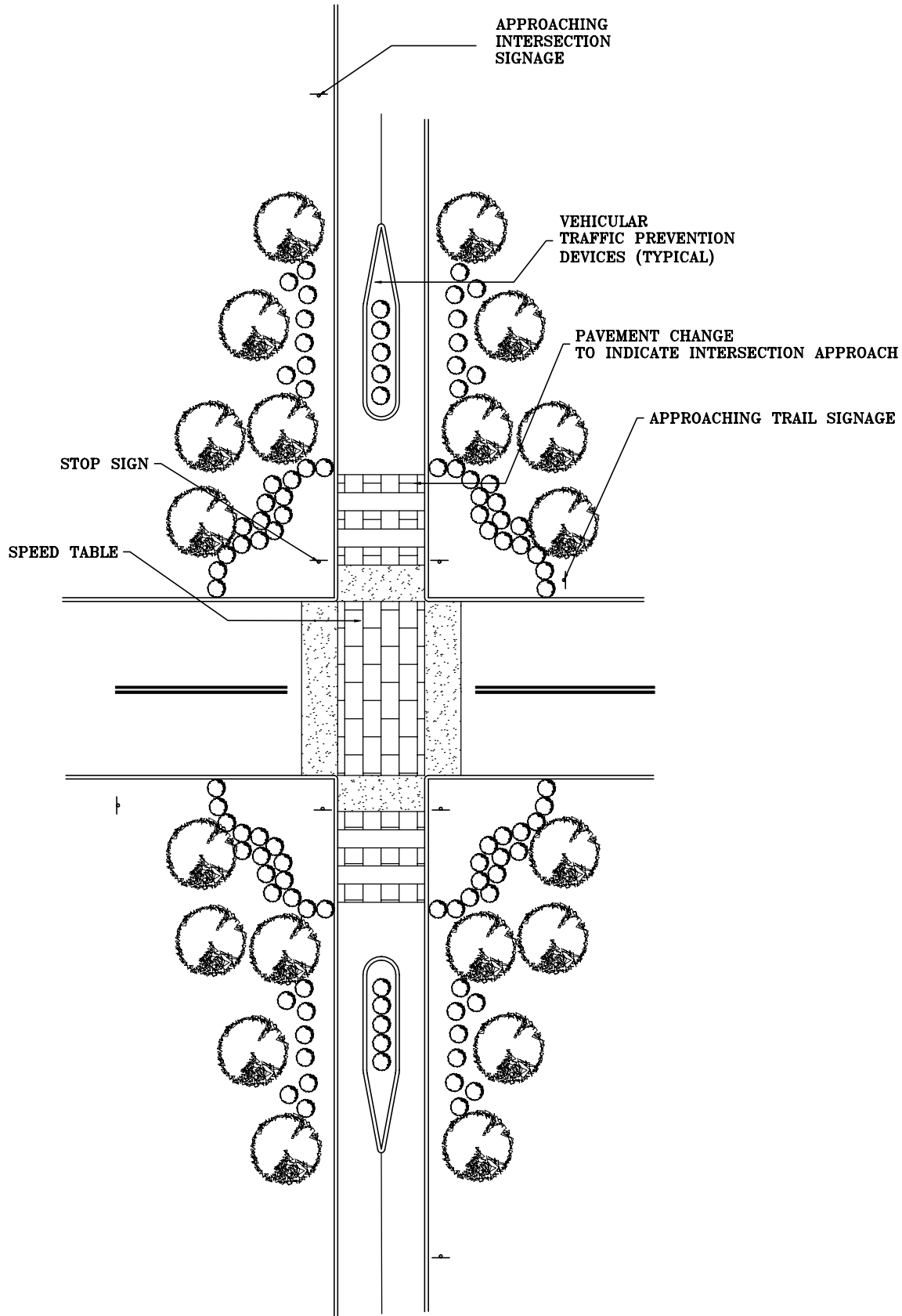
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RAIL WITH TRAIL CROSS SECTION

FIGURE 11



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FEASIBILITY STUDY**

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**AT GRADE
INTERSECTION PLAN**

FIGURE 12

motorists and trail users identify the trail crossing. PENNDOT approval of the brick paving in state highways will be needed. If approval is not granted, other possible methods of demarcating the trail crossing include using concrete instead of asphalt, painting, or zebra-style crosswalk markings.

In addition, it is proposed that a speed table be used through the intersection. A speed table is a section of roadway that is raised slightly above the normal roadway elevation, with a gentle slope on either side. The table would be flat for the entire width of the trail crossing. Speed tables help to slow down motorists without the negative impacts of speed bumps or speed humps. The cross streets along the trail are low to medium volume roadways, with Dutton's Mill Road and Bridgewater Roads having the greater volumes, and are generally major emergency response routes. Because of the width of the flat section (table) between the upgrade and downgrade of the device, emergency vehicles can proceed safely and with minimal delay.

It is also important to design the crossing to prevent motorists from entering the trail, while at the same time allowing emergency vehicles to proceed. Bollards in the middle of the path have often been used; however, they provide a hazard to bicyclists and slow down emergency response. Instead, a short median is placed in the middle of the trail, with low shrubs or other plantings. These should be designed to allow emergency vehicles to ride over or straddle them, yet make them uninviting for motorists. The typical cross section for these traffic prevention devices is shown in *Figure 13*.

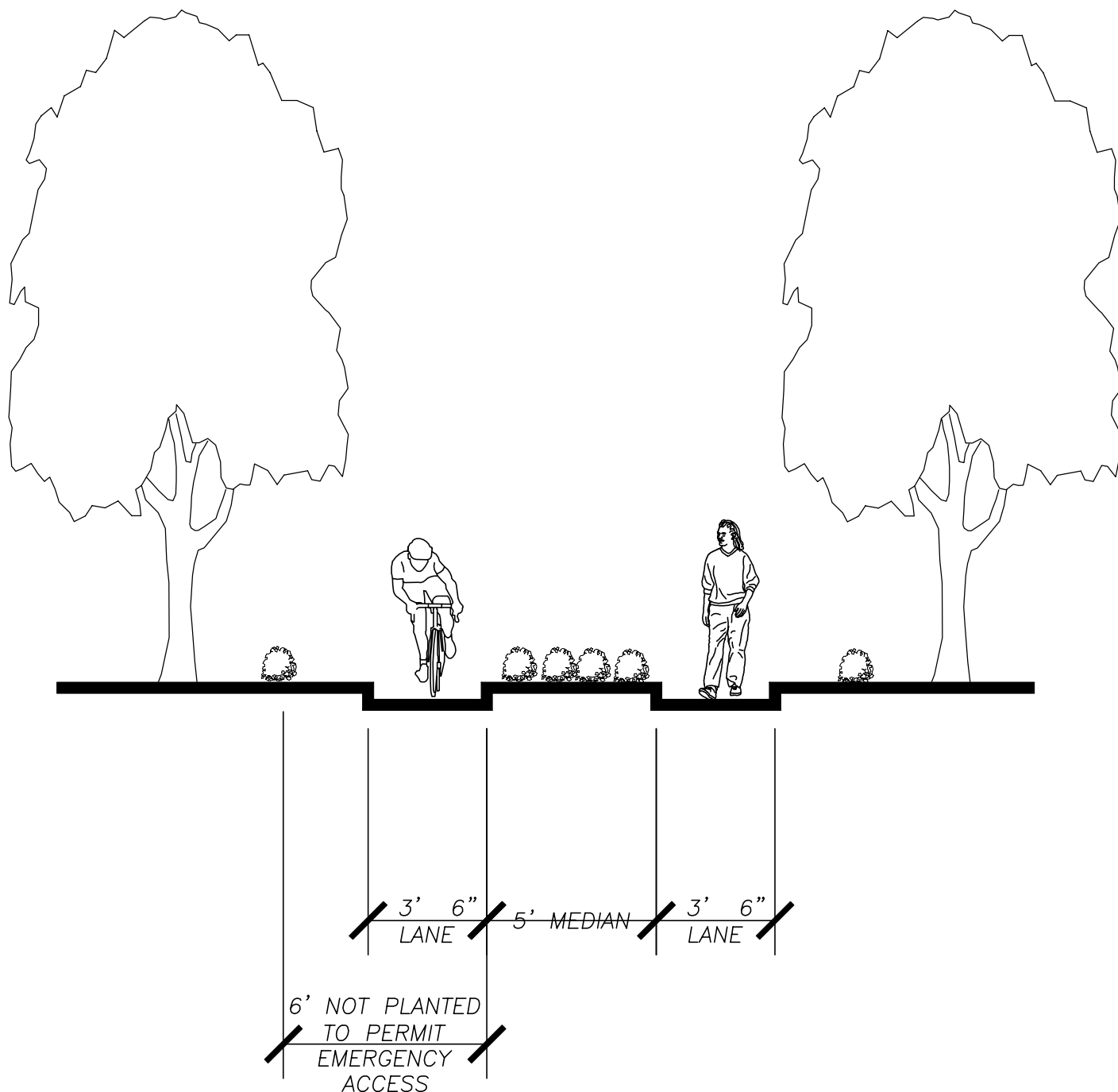
B. Design

The rail corridor was reviewed for possible locations for various design features. These features are discussed in this section, and the approximate locations are shown in *Figure 14*.

1. Trail Heads and Rest Stops

Trail heads are proposed near each of the parking areas. Currently, potential parking areas include: Wawa, Lenni Road, Lungren Road, Mount Road, Creek Road, north of Dutton's Mill Road, north of Bridgewater Road (across from Brookhaven Swim Club), and Upland Road. The Wawa and Upland Road areas would be the trail terminal points. At each of the trailheads, signs will be provided indicating trail parking (*Figure 15*); the beginning of the trail; information sign showing distances to various destinations (*Figure 16*); path usage, indicating which path should be used for bikes and pedestrians (*Figure 17*); and rules of trail etiquette (*Figure 18*).

At the trail heads and at selected locations along the trail, rest areas will be provided, as shown in *Figure 7*. These areas will be shaded and include benches, trash receptacles, and a bike rack. Water should be provided at locations where it is feasible and restroom facilities should be provided at one or two areas along the trail. A review of the utility information indicates that water could probably be provided at or near Lenni Road, Parkmount Road, Lungren Road, Mount Alverno Road, and Upland Road. Restroom facilities could probably be provided at Mount Alverno Road, which could be tied into a recently installed sewer system in the area. Restroom facilities may also be possible at Upland Road.

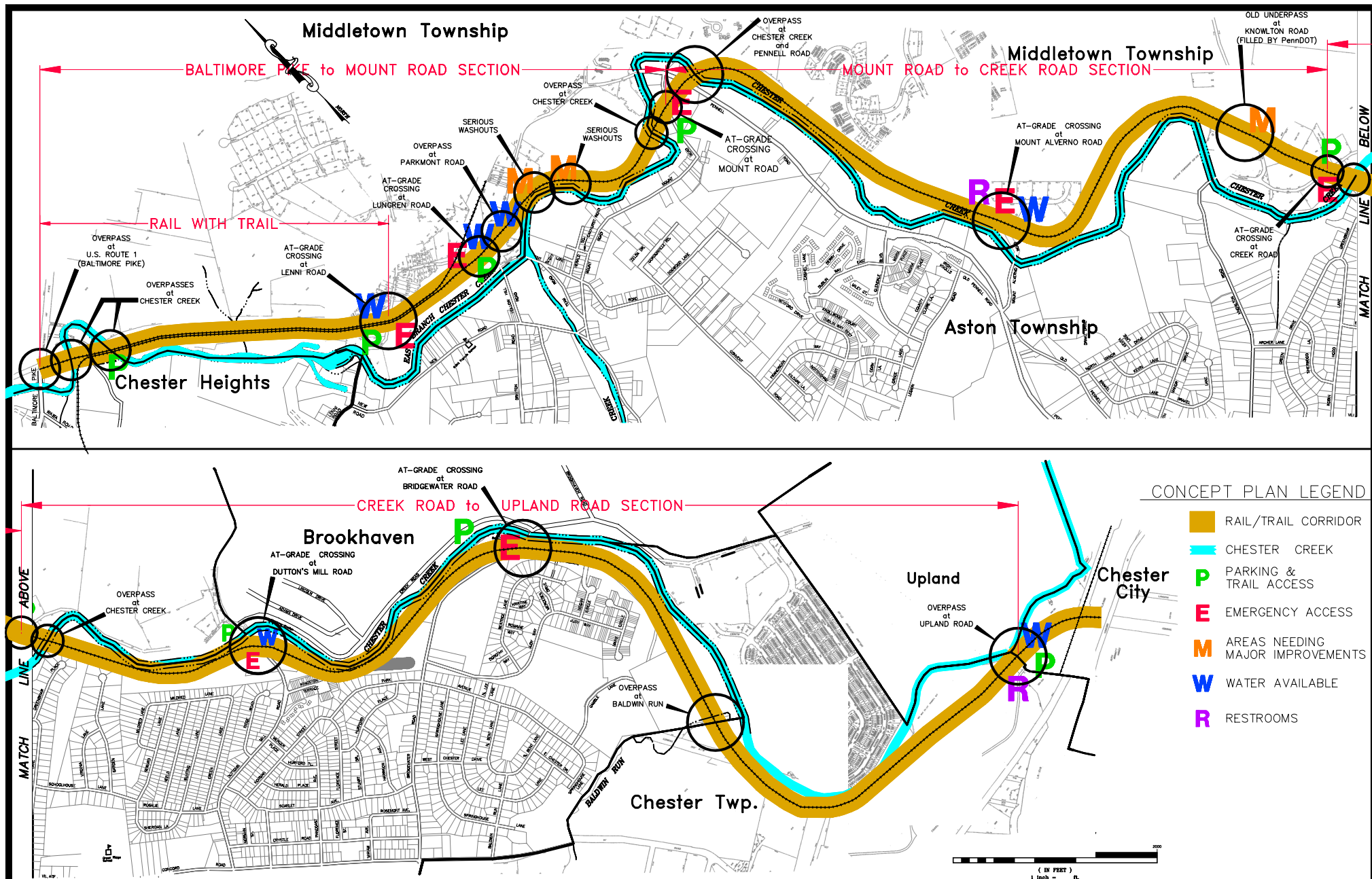


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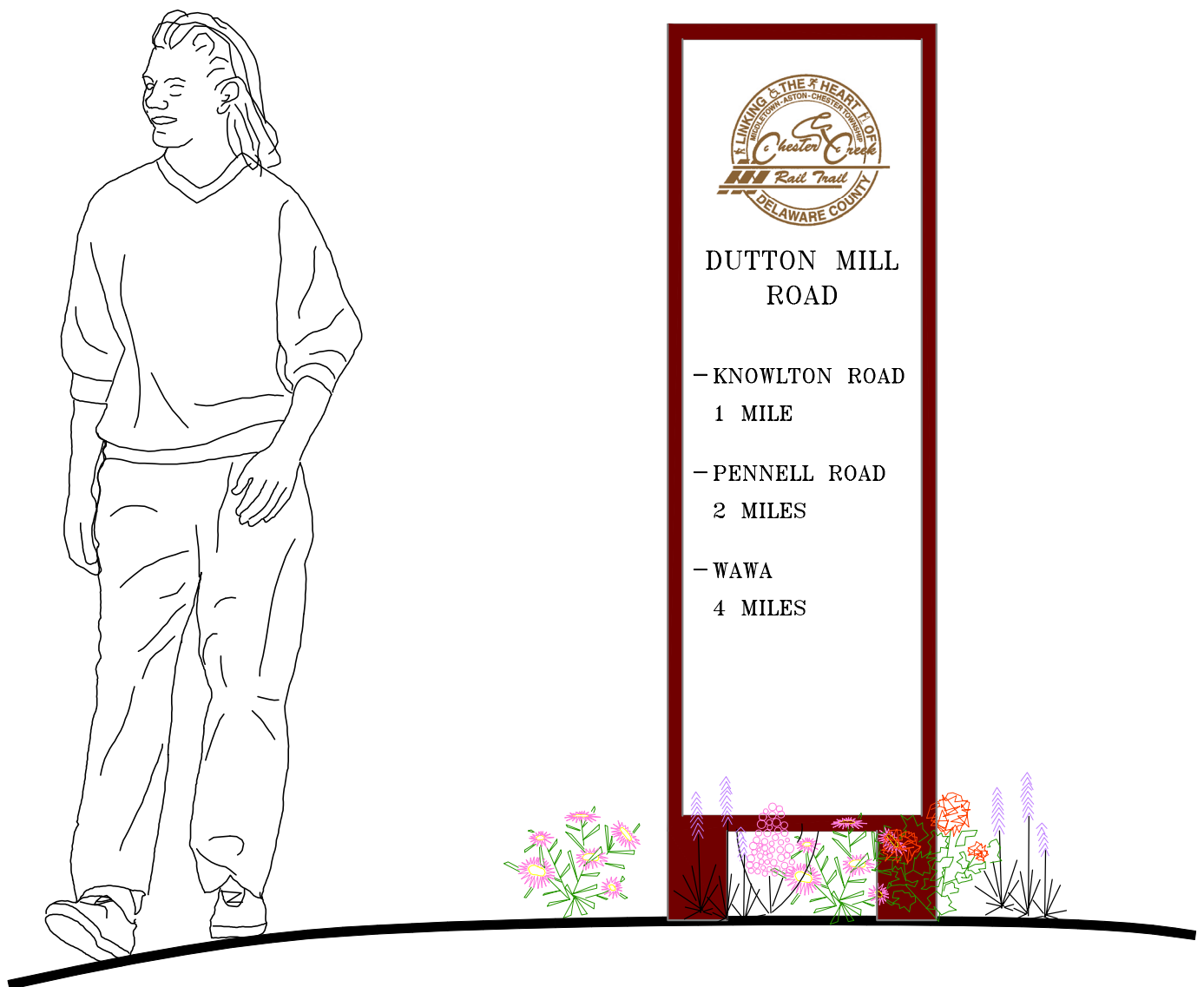
**AT GRADE
INTERSECTION
CROSS SECTION
FIGURE 13**





CHESTER CREEK RAIL TRAIL
FEASIBILITY STUDY

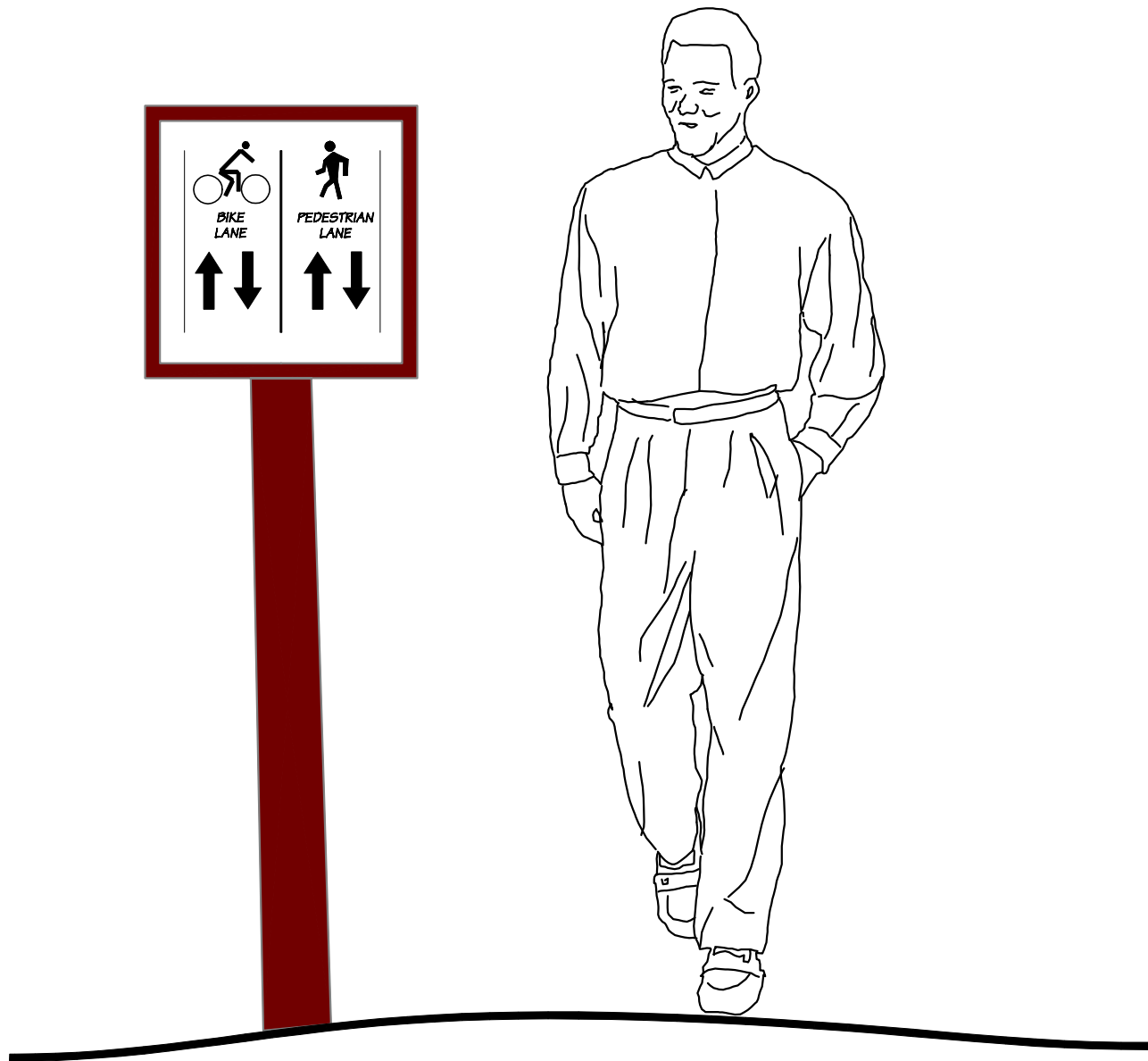
PARKING SIGN



CHESTER CREEK RAIL TRAIL FEASIBILITY STUDY

INFORMATIONAL SIGNAGE

FIGURE 16



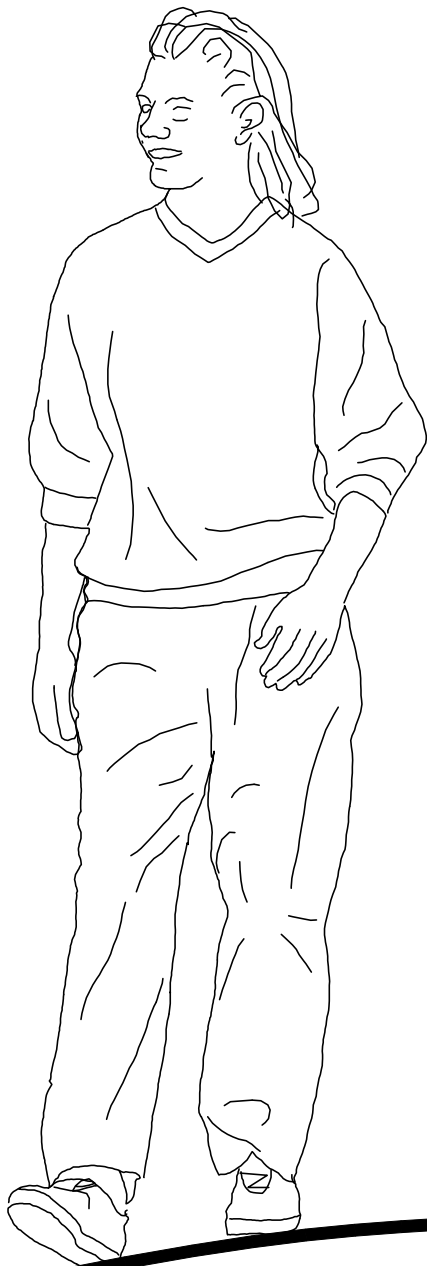
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FEASIBILITY STUDY**

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PATH SIGNAGE

FIGURE 17



RAIL TRAIL RULES OF ETIQUETTE

THE CHESTER CREEK
RAIL TRAIL
HAS BEEN DESIGNED
FOR A VARIETY OF USES.

TRAIL HOURS:

THE TRAIL IS OPEN FROM DAWN TO DUSK. DO
NOT USE AFTER DARK.

SHARE THE PATHWAY:

DIFFERENT TYPES OF USERS MAY BE ON THE
PATH. FOLLOW THE SIGNS AND KEEP ON YOUR
DESIGNATED PATHWAY.

RIDE SLOWLY:

TRAIL USERS MAY TRAVEL AT DIFFERENT SPEEDS.
BE CAREFUL OF SLOWER USERS ESPECIALLY
WHEN THERE ARE CROWDS.

KEEP RIGHT, EXCEPT
WHEN PASSING.

PASS ON LEFT AND
WARN OTHERS WHEN
PASSING:

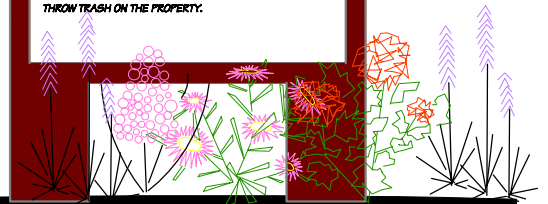
YIELD TO ONCOMING TRAFFIC.

BE COURTEOUS AND RESPECTFUL OF OTHER USERS:

USE THE TRASH RECEPTACLES ALONG THE TRAIL AND KEEP
NOISE LEVELS AT A RESPECTFUL LEVEL.

BE COURTEOUS AND RESPECTFUL OF ADJACENT PROPERTY:

DON'T TRESPASS ON PROPERTY ADJACENT TO THE TRAIL OR
THROW TRASH ON THE PROPERTY.



CHESTER CREEK RAIL TRAIL FEASIBILITY STUDY



ETIQUETTE SIGN DETAIL

FIGURE 18

2. Emergency Facilities and Access

Access to the trail by emergency providers will be important. During final design, detailed discussions should be held with the emergency providers in each municipality to prepare an emergency response plan. Among other things, this plan would determine the types of vehicles and approach routes each provider would use, as well as assuring that all areas of the trail can be reached.

The roadway intersections should be designed to allow access by emergency vehicles, yet discourage use by non-authorized motorized vehicles. The trail width and asphalt surface as identified will accommodate these vehicles. The overhead clearance should consider the types of vehicles anticipated.

One important consideration is the ability of the bridges to accommodate vehicles. A detailed inspection of the bridges will be necessary to determine whether each bridge can accommodate these vehicles and what would be required to allow deficient bridges to accommodate them. It may be cost prohibitive to upgrade some of the bridges to accommodate the weight and size of the vehicles. While this would mean that emergency vehicles couldn't travel the entire length of the trail, the emergency response plan should provide access from roadways on either side of the restricted bridge. For example, the four-span bridge over Pennell Road and Chester Creek would be expensive to upgrade and there would be convenient access to locations on either side of the bridge from Mount Road and from Mount Alverno Road.

3. Road and Creek Crossings

There are four bridges over creek crossings, four bridges over roadways, and one four-span bridge that crosses over a road and the creek. Based on a cursory overview of these bridges, it appears that they would not need strengthening to support foot or bicycle traffic. Most of these bridges are open deck and do not have any type of parapet protection. They will need to be retrofitted with a deck and railings/fencing added. The railings/fencing should be designed to prevent trail users from throwing objects onto the creek or roadway below.

Figure 19 shows how the bridge over Pennell Road and Chester Creek might look, with the girders painted and fencing added.

Three of the bridges, near Wawa, currently support an active rail line. These are discussed in more detail in the next section.

4. Rail with Trail

The section of the rail corridor between Lenni and Wawa currently provides service to Amtrak as they obtain ballast in Glen Mills. In addition, there is a proposal to restore passenger service on the line to Wawa, as well as a proposal to provide nighttime freight service. SEPTA staff has indicated that they want to maintain 60' of right of way to maintain the potential for two tracks to provide service to West Chester. The current feasibility study for this service restoration does include two tracks in the vicinity of the Wawa Station, starting about 200' south of the southern bridge over Chester Creek. If freight service is added, the Lenni Training Facility area may be used for dispatching, storage, and maintenance of the freight cars.

Rails-with-trails (RWT) are a growing phenomenon. Under a US Department of Transportation project, a draft report, *Rails-with-Trails: Lessons Learned; Literature Review, Current Practices, Conclusions*,



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*PENNELL ROAD
BRIDGE*

FIGURE 19

has been prepared to examine safety, design and liability issues associated with the development of shared use paths within or adjacent to active railroad rights of way. This project included the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), National Highway Traffic Safety Administration (NHTSA), and Federal Transit Administration (FTA).

The draft report provides 21 RWT case studies, with 12 being existing trails and nine in the planning stages. Four of these case studies were in Pennsylvania: Schuylkill River Trail, Norristown; Lehigh River Gorge Trail, Jim Thorpe; Five Star Extension, Youngwood to East Huntingdon; and Three Rivers Heritage Trail, Pittsburgh. An additional case study was the Northeast Corridor Trail, Newark, DE. This latter trail is adjacent to Amtrak track, which is shared with commuter trains operated by SEPTA.

From this report, there were several common themes. Given the railroads' past experience in the courts, they are justifiably concerned with the liability of encouraging use of the land adjacent to their tracks. However, a well-designed trail, with appropriate barriers between the rail operations and the trail, should not increase liability. In some cases, there is actually a decrease in the incidences of trespassers on the rail property, as there was free access to the railroad before the trail and associated barriers are installed. The addition of the barrier channelizes any entry onto the active track to areas with positive crossing protection.

A second theme is the importance of the barrier. Barriers are not always installed along the entire length of all the RWT sections. In some cases, natural barriers are used to separate the rail and trail. Given the location of this proposed trail, a barrier would be recommended the entire length of the RWT section. The barrier that would be most appropriate to this project would be either a chain link fence or wrought iron picket fence. A chain link fence would be less expensive than the wrought iron picket fence, but they are not as aesthetically pleasing and are easily cut and vandalized.

The final theme to be highlighted is the involvement of the railroad. It is very clear that SEPTA must be involved in the design process from the beginning. Railroads are very formal organizations, and are subject to numerous laws, regulations, and governing authorities. Their involvement is critical to address their concerns about safety, liability, operations, and potential expansion from the initial stages of the design. It is important to realize that, as a bureaucratic organization, the process will not be quick. There are various organizational layers involved in the decision making process.

The two bridges over Chester Creek at Wawa were originally designed for two tracks, one of which is currently used. If passenger service were restored to the line, both bridges would be modified to include two tracks. The unused sections of both bridges are in very poor condition and not wide enough to accommodate the trail cross-section. In addition, using those bridges would put trail users too close to any trains using the tracks. Therefore, new pedestrian bridges would be recommended at this location. If the trail were extended north of Baltimore Pike to connect to the Darlington Trail, a new pedestrian bridge would be required over Baltimore Pike.

5. Security

Security on the trail will be critical. As stated elsewhere in this report, properly designed and patrolled trails are as safe, if not safer, than other parts of the community infrastructure.

Emergency phones should be provided at regular intervals along the trail. Where feasible, cellular phones should be used, with direct connections to the 911 system. In addition, solar-powered phones

would be desirable. However, in heavily wooded areas, there may not be sufficient access to direct sunlight, and battery power or a connection to a source of electricity may be required.

Fencing should be provided along the trail, preventing access to adjacent properties. This fencing should be of adequate strength and durability to fulfill its purpose, yet fit in with the aesthetics of the trail.

It is proposed that use of the trail be limited to daylight hours, with use prohibited between dusk and dawn. Lighting the length of the trail, while it may seem to provide security, is not recommended. Some studies have shown that lights simply expose a potential victim, while providing shadow for potential criminals.

Regular patrols of the trail, whether on foot or on bike, are critical. A number of jurisdictions have instituted bicycle patrols and have found them to be an effective community policing method.

C. Costs

A construction cost estimate for developing the trail has been prepared, which is summarized in [Table 5](#). The construction costs have been estimated for three distinct sections: Baltimore Pike to Mount Road, Mount Road to Creek Road, and Creek Road to Upland Road. The construction costs for the three sections range from approximately \$1.3 million for the section from Mount Road to Creek Road to \$1.8 million for the section from Creek Road to Upland Road. These costs include the soft costs of environmental studies and engineering and, for the section from Baltimore Pike to Mount Road, coordination with SEPTA for the rail-with-trail section. The total estimated construction cost for all three sections is approximately \$4.7 million.

Also included in [Table 5](#) is an estimate of other project costs, such as operations, maintenance, security, and right of way acquisition, for the overall project. The total costs for right of way acquisition and title clearance is estimated to be \$315,000, while the annual costs are estimated to be \$110,000 (in 2002 dollars).

Table 5 – Construction Cost Summary (2002 Dollars)

DESCRIPTION	Section 1 Baltimore Pike to Mount Road	Section 2 Mount Road to Creek Road	Section 3 Creek Road to Upland Road
At Grade Crossings	\$99,000.	\$66,000.	\$44,000.
Rehabilitation of Bridge Structures	260,700.*	447,700.**	346,500.***
Decorative Fences	90,900.	44,000.	30,000.
Transparent Fence	45,000.	----	72,000.
Parking Facilities	82,000.	----	138,000.
Rail Removal	87,700.	97,000.	150,000.
Trail Surfacing/Reconstruction	269,500.	235,400.	389,000.
Drainage Improvements	75,000.	62,000.	65,000.
Trail Amenities (bike racks, benches, etc.)	29,200.	32,400.	53,600.
Restroom Facilities	38,500.	----	27,500.
20% Contingency	215,500.	196,900.	263,100.
Sub-total Base Construction	\$1,293,000.	\$1,181,400.	\$1,578,700.
SOFT COSTS			
Environmental Assessment (3%)	\$38,800.	\$35,400.	\$47,400.
Engineering (10%)	\$129,300.	\$118,100.	\$157,900.
Coordination with SEPTA (Rail/Trail 8%)	\$103,400.	----	----
Total Construction Costs	\$1,564,500.	\$1,334,900.	\$1,784,000.
OTHER PROJECT COSTS			
Maintenance (per year)	\$27,500.		
Operations (per year)	\$38,500.		
Security (per year) part time County Parks	\$44,000.		
Acquisition of Additional Right of way	\$300,000.		
Title Clearance	\$15,000.		
* Includes three new Pedestrian Bridges across Baltimore Pike and Chester Creek. ** Includes reconstruction of Knowlton Road underpass. *** Includes potential Bridgewater Road and Brookhaven Swim Club Pedestrian Bridges.			

IX. SUMMARY AND RECOMMENDATIONS

The Chester Creek Branch rail corridor has the potential for being an attractive and functional transportation facility in the area. Traversing the old rail corridor from Baltimore Pike (US 1) at Wawa in Middletown Township to the Caleb Pusey Historic Site in Chester Township, it traverses through mostly wooded areas. In the northern portion of the corridor, it is adjacent to historic mill communities.

This feasibility study has not found any “fatal flaws” that would eliminate the possibility of development of the corridor as a rail trail. While the adjacent property owners have some legitimate concerns related to the development and design of the trail, survey results indicate there is general community support for it.

However, there are a number of significant issues that will need to be investigated in the environmental studies and final design.

A. Legal Issues

A detailed property survey and title search will be needed to clarify the property ownership issues. This study identified four different categories of ownership issues. Some deeds could not be found, while others indicated ownership to centerline of the railroad. The type of easement and/or ownership was not always found. An application for railbanking the corridor should be developed, which would include this detailed study.

Another issue is the encroachment of adjacent properties onto the corridor. There are six areas along the corridor where it appears that businesses adjacent to the corridor are using the right of way. In some cases, the apparent encroachment is simply landscaping and/or parking, which would not likely be a serious issue. However, in some of the cases, buildings may have been constructed on the rail right of way and/or the right of way is used extensively for storage of materials. Removal of these encroachments could have significant impact on the adjacent businesses.

Some additional property acquisitions or leases/easements may be required to provide parking at the proposed trail heads.

B. Development and Operations

SEPTA staff has indicated that they would maintain ownership of the right-of-way and would not be interested in selling it to the trail developer. As the trail traverses through several municipalities, and would be of benefit to people throughout Delaware County, it would be preferred that Delaware County be the lessee of the right of way, as well as design, construct, operate, and maintain the trail. This should be done in conjunction with the “Friends” and with input from the municipalities and other representative groups. The adjacent property owners in particular should be consulted throughout the design process.

The funding for the construction and operation of the trail would most likely be from a combination of sources, including Federal, State, County, municipal, and foundations. Donations, either cash or in-kind services, may also be available from various environmental and recreational organizations.

C. Environmental Issues

An environmental study will be required prior to completing preliminary and final design. Assuming that some federal funds will be used for the project, the requirements of the National Environmental Policy Act (NEPA) will need to be followed. There are three levels of NEPA environmental studies, Categorical Exclusion Evaluation (CEE), Environmental Assessment (EA), and Environmental Impact Statement (EIS), listed in increasing order of detail. An initial step would be to complete a scoping analysis of the project to determine the level of environmental study that will be needed. Based on this feasibility study, a CEE may be all that is required. However, if the project is deemed to be controversial, an EA or EIS could be required.

The major environmental issues revolve around water, including wetlands, streams, and erosion due to flooding or drainage. Not only do these have permitting issues, but erosion has claimed some of the right of way upon which the rails previously rested. Development of the trail will require either clearing additional land away from the stream (which may require additional right of way) or rebuilding the washed out embankment. In either case, proper slope stabilization and drainage will be required in the design.

Another significant environmental issue is the presence of the Southwest Delaware County Municipal Authority wastewater treatment plant, incinerator and landfill in the southern portion of the corridor. In this case, there is a need to protect the trail users from the negative impact of these existing land uses, rather than a need to protect the existing uses. Related to these existing land uses is the potential for hazardous wastes, as was noted by some discharges into the creek near these uses.

The development of the trail can have a beneficial impact on the environment, by maintaining the area in as a natural setting, providing a wide-range of recreational uses, and adding to the aesthetic beauty of the area.

D. Design Issues

Seven at-grade railroad crossings are proposed for the trail. These are low to medium volume roadways and, in general, safe crossings should be possible. However, the crossing at Bridgewater Road could be a problem. This area of Bridgewater Road is currently dangerous, as eastbound cars coming down the hill hit the bridge abutment. In addition, the road would cross the trail at an angle, which may hinder sight distance. One consideration would be to try to grade separate the location, possibly using a portion of the access for the treatment plant to get sufficient elevation to cross over Bridgewater Road. Other options should be considered in final design.

As stated earlier, an emergency response plan should be developed for the trail. One of the considerations in this plan should be whether the existing bridges need to be structurally upgraded to support emergency vehicles. From a cost perspective, it would be preferred if access can be provided to all areas from adjacent roadways without the need for crossing any of the bridges. However, it may be necessary in some of the more isolated areas to upgrade these bridges.

The section from Wawa to Lenni is adjacent to a semi-active rail line, with Amtrak using it occasionally at night. However, there are two proposals in discussion that would result in greater usage of the track.

This would result in what is referred to as rail with trail. With sufficient right of way and proper design, both rail and trail users can be accommodated.

The previous Knowlton Road Bridge over the rail corridor has been removed and the area filled in. Development of the trail would require that the fill is removed and a new bridge constructed. This would not appear to be a design problem; however, it will increase the cost of the project.

E. Security

Security of trail users and adjacent property owners is crucial to the success of the trail. As stated previously, the adjacent property owners should be consulted throughout the design process. Based on the experience of other trails, regular patrols, whether from County park rangers or local municipal police, is important in minimizing problems.

Fencing and emergency phone systems should be included in the final design. It is proposed that use of the trail be limited to daylight hours, for the safety of both adjacent residents and trail users.

APPENDIX A

ADJACENT PROPERTY OWNER INFORMATION

Parcel No.	Township/ Folio No.	Last Name	First Name	Address	Owner Address	City, State Zip
Map#	Parcel#	ASTON TOWNSHIP				
03-029		Weirich	Stephen			
03-091	02 00 01562 00	Lanexton	EW	? Mount Rd	668-A Mount Road	Aston, PA 19014-3012
03-092	02 00 01594 00	Pascall	Jeffrey	657 Mount Road	659 Mount Road	Aston, PA 19014-3012
03-093	02 00 01593 00	Edgar	Daniel & Phyllis	? Mount Rd	836 Hill Road	Aston, PA 19014-3012
03-094	02 00 01592 00	Edgar	Daniel & Phyllis	659-A000 Mount Road	836 Hill Road	Aston, PA 19014-3012
03-095	02 00 01591 00	Mercandante	Michele	664-B Mount Rd	664-B Mount Road	Aston, PA 19014-3012
03-096	02 00 01589 00	Rumford	George & Mary	666 Mount Road	2301 N. 9th Street	Phila, PA 19133
03-097	02 00 01587 00	Lanexton	Ralph & Dorothy	669 Mount Road	668-A Mount Road	Aston, PA 19014-3012
03-098	02 00 01588 00	Lanexton	Ralph & Dorothy	668-A Mount Road	668-A Mount Road	Aston, PA 19014-3012
03-099	02 00 01858 00	Dangelo Trenching & Construction	Sir or Madam	? Pennell Rd	9517 Hurty Ave	Conifer, CO 80433
03-101	02 00 02885 00	Essaf	George & June	2121 Lee Lane	2123 Lee Lane	Aston, PA 19014-3012
03-102	02 00 01563 00	Frانيا, Inc.	Sir or Madam	668 Mount Road	565 E. St. Andrews Dr.	Media, PA 19063
04-008	02 00 01886 00	King	Thomas & Dorothy	? Pennell Rd	68 Willits Way	Glen Mills, PA 19342
08-004		Ruszkay	Andrew			
08-005		Ruszkay	Andrew			
08-006		Snyder	Bruce			
08-009		Glen Mills Sand & Gravel	Sir or Madam			
08-030		Savoy	John			
08-031		Yorden	Stephen			
15-003						
15-023	02 00 01104 19	Huber	Edward & Mary	117 Greenbriar Place	119 Greenbriar Pl.	Aston, PA 19014-3012
15-024	02 00 01104 10	Buschman	Ralph	118 Greenbriar Place	120 Greenbriar Pl.	Aston, PA 19014-3012
15-025	02 00 01104 09	Cooper	David	116 Greenbriar Place	118 Greenbriar Pl.	Aston, PA 19014-3012
15-087	02 00 01104 15	Hurdle	Harvey	427 Garden Lane	427 Garden Lane	Aston, PA 19014-3012
15-088	02 00 01104 16	Smalec	Paul & Karen	429 Garden Lane	429 Garden Lane	Aston, PA 19014-3012
15-089	02 00 01044 17	Broomall	Vincent & Harrie	432 Garden Lane	432 Garden Lane	Aston, PA 19014-3012
15-148	02 00 01526 00	Chambers	John & Constance	100 Mildred Lane	100 Mildred Lane	Aston, PA 19014-3012
15-149	02 00 01525 00	Bernard	Joseph	98 Mildred Lane	98 Mildred Lane	Aston, PA 19014-3012
15-150	02 00 01524 00	McAndrew	Ralph	96 Mildred Lane	96 Mildred Lane	Aston, PA 19014-3012
15-151	02 00 01523 00	Kitto	Richard	94 Mildred Lane	94 Mildred Lane	Aston, PA 19014-3012
15-152	02 00 01522 00	Jenkins	Leslie	92 Mildred Lane	92 Mildred Lane	Aston, PA 19014-3012
15-153	02 00 01521 00	Marley	Edward	90 Mildred Lane	90 Mildred Lane	Aston, PA 19014-3012
15-154	02 00 01520 00	Harlon	Wendell	88 Mildred Lane	88 Mildred Lane	Aston, PA 19014-3012
15-155	02 00 01519 00	Mahoney	David & Theresa	86 Mildred Lane	86 Mildred Lane	Aston, PA 19014-3012
15-156	02 00 01518 00	Martorell	Michael & Wanda	84 Mildred Lane	84 Mildred Lane	Aston, PA 19014-3012
15-157	02 00 01517 00	Pennington	George & Sharon	82 Mildred Lane	82 Mildred Lane	Aston, PA 19014-3012
15-158	02 00 01516 00	Hilt	Michael & Patricia	80 Mildred Lane	80 Mildred Lane	Aston, PA 19014-3012
15-159						
15-160						
15-161	02 00 01514 00	Bennett	Russell	74 Mildred Lane	74 Mildred Lane	Aston, PA 19014-3012
15-162	02 00 01513 00	Mader	Ralf & Helen	72 Mildred Lane	72 Mildred Lane	Aston, PA 19014-3012
15-163	02 00 01512 00	Scruggs	Nan	70 Mildred Lane	70 Mildred Lane	Aston, PA 19014-3012
21-645	02 00 01511 00	Frame	Charles	68 Mildred Lane	68 Mildred Lane	Aston, PA 19014-3012
21-646	02 00 01510 00	Frederick	Wayne, & Willoughby, Albert	66 Mildred Lane	66 Mildred Lane	Aston, PA 19014-3012
21-647	02 00 01509 00	O' Brian	Dennis	64 Mildred Lane	64 Mildred Lane	Aston, PA 19014-3012
21-648	02 00 01508 01	Tapp	Edward	62 Mildred Lane	62 Mildred Lane	Aston, PA 19014-3012
21-649	02 00 01134 00	Sheeky	Patrick & George	60 Green Lane	60 Green Lane	Aston, PA 19014-3012
21-706	02 00 00881 00	Soderlund	Robert	? Dutton Mill Rd	PO Box 471	Glenolden, PA 19036
21-707		McCaulley	Hugh			
22-001		Aston Corp.	Sir or Madam			
22-002		Not Listed				
22-013	02 00 01297 37	Berry	Donna	64 Kingston Terrace	64 Kingston Terrace	Aston, PA 19014-3012
22-014	02 00 01297 36	Pewdo	Jean, & Furey, Thomas	62 Kingston Terrace	62 Kingston Terrace	Aston, PA 19014-3012
22-033	02 00 01822 00	Patrick	John & Emma	4775 Park Lane	4775 Park Lane	Aston, PA 19014-3012
22-034	02 00 01823 00	McHugh	Kevin	4765 Park Lane	4765 Park Lane	Aston, PA 19014-3012
22-035	02 00 01824 00	Trinkle	Thomas & Ruth	4755 Park Lane	4755 Park Lane	Aston, PA 19014-3012
22-036	02 00 01825 00	Hendry	John & Patricia	4745 Park Lane	4745 Park Lane	Aston, PA 19014-3012
22-037	02 00 01826 00	Schwarting	Thomas & Nancy	4735 Park Lane	4735 Park Lane	Aston, PA 19014-3012
22-038	02 00 01827 00	Snider	John & Sandra	4725 Park Lane	4725 Park Lane	Aston, PA 19014-3012
22-039	02 00 01828 00	Buck	Ronald & Nancy	4715 Park Lane	4715 Park Lane	Aston, PA 19014-3012

22-040	02 00 01829 00	Tureckie	Mary	4705 Park Lane	4705 Park Lane	Aston, PA 19014-3012
22-041	02 00 01830 00	Rigby	Marjorie	4695 Park Lane	4695 Park Lane	Aston, PA 19014-3012
22-042	02 00 01831 00	Saramma	Daniel and John	4665 Park Lane	4665 Park Lane	Aston, PA 19014-3012
22-043	02 00 01832 00	Henry	Kevin, Edward & Helen	4635 Park Lane	4635 Park Lane	Aston, PA 19014-3012
22-044	02 00 01833 00	Yolton	Ruth, & Glissman, Charles	4605 Park Lane	4605 Park Lane	Aston, PA 19014-3012
22-047	02 00 00118 00	Olympic Tool & Machine Corp	Sir or Madam	2100 Bridgewater Rd	2100 Bridgewater Rd.	Aston, PA 19014-3012
22-048	02 00 00119 00	Olympic Tool & Machine Corp	Sir or Madam	2100 Bridgewater Rd	2100 Bridgewater Rd.	Aston, PA 19014-3012
22-123	02 00 00121 00	Cherry	Garland	? Bridgewater Rd	PO Box 1670	Media, PA 19063
22-124	02 00 00120 00	Savoy	John	? Bridgewater Rd	PO Box 339	Claymont, DE 19703
22-125	02 00 00120 01	Savoy	John	? Bridgewater Rd	PO Box 339	Claymont, DE 19703
22-339	02 00 00014 76	Schicatano	Ralph & Regina	269 Beatrice Lane	269 Beatrice Lane	Aston, PA 19014-3012
22-340	02 00 00014 75	Masishin	Michael & Spencer, Donna	265 Beatrice Lane	265 Beatrice Lane	Aston, PA 19014-3012
22-341	02 00 00014 74	Doyle	Mark, Anne, & Paciola, David	261 Beatrice Lane	261 Beatrice Lane	Aston, PA 19014-3012
22-342	02 00 00014 73	Rully	William & Joan	257 Beatrice Lane	257 Beatrice Lane	Aston, PA 19014-3012
22-343	02 00 00014 71	Thiel	Raymond & Donna	253 Beatrice Lane	253 Beatrice Lane	Aston, PA 19014-3012
22-344	02 00 00014 70	Wilson	Patrick & Mary Jane	249 Beatrice Lane	249 Beatrice Lane	Aston, PA 19014-3012
22-345	02 00 00014 69	Kelly	John & Marilu	245 Beatrice Lane	245 Beatrice Lane	Aston, PA 19014-3012
22-346	02 00 00014 68	Nicholson	John	241 Beatrice Lane	241 Beatrice Lane	Aston, PA 19014-3012
22-347	02 00 00014 67	Silicato	Steven & Patricia	237 Beatrice Lane	237 Beatrice Lane	Aston, PA 19014-3012
22-429	02 00 01474 12	Delgiorno	William & Karen	185 Megan Circle	185 Megan Circle	Aston, PA 19014-3012
23-001	02 00 01474 11	Doyle	James & Joann	184 Megan Circle	184 Megan Circle	Aston, PA 19014-3012
23-002	02 00 01474 10	Ayers	James & Pauline	183 Megan Circle	183 Megan Circle	Aston, PA 19014-3012
23-003	02 00 01474 09	Weiler	Bradley	182 Megan Circle	182 Megan Circle	Aston, PA 19014-3012
23-004	02 00 01474 08	Bunner	Robert, & Mattero, Susan	181 Megan Circle	181 Megan Circle	Aston, PA 19014-3012
23-005	02 00 01474 07	Decolli	Vicotor, & Glisson, Jean	180 Megan Circle	180 Megan Circle	Aston, PA 19014-3012
23-006	02 00 01474 06	Federico	Darlene	179 Megan Circle	179 Megan Circle	Aston, PA 19014-3012
23-007	02 00 01451 41	Zolfaghari	Alexander, & Trosti, Sara	148 Marie Circle	148 Marie Circle	Aston, PA 19014-3012
23-008	02 00 01451 42	Shaner	June	147 Marie Circle	147 Marie Circle	Aston, PA 19014-3012
23-009	02 00 01451 43	Jacobs	Bromley & Denise	146 Marie Circle	146 Marie Circle	Aston, PA 19014-3012
23-010	02 00 01451 44	Torrens	Carrie	145 Marie Circle	145 Marie Circle	Aston, PA 19014-3012
23-011	02 00 01451 45	Tkacz	Gavin, & Pearson, Cheri	144 Marie Circle	144 Marie Circle	Aston, PA 19014-3012
23-012	02 00 01451 46	Borbidge	Jason, & Rees, Tina	143 Marie Circle	143 Marie Circle	Aston, PA 19014-3012
23-013	02 00 01451 47	Peake	Glenn	142 Marie Circle	142 Marie Circle	Aston, PA 19014-3012
23-014	02 00 01451 48	Zerfing	Valerie	141 Marie Circle	141 Marie Circle	Aston, PA 19014-3012
23-015	02 00 01451 49	Teitelbaum	Richard, & Bonfig, Kathleen	140 Marie Circle	140 Marie Circle	Aston, PA 19014-3012
23-016	02 00 01451 50	Plummer	William	139 Marie Circle	139 Marie Circle	Aston, PA 19014-3012
23-017	02 00 01451 51	Donovan	Elaine & Gerard	138 Marie Circle	138 Marie Circle	Aston, PA 19014-3012
23-018	02 00 01451 30	McNaughton	Robin	159 Marie Circle	159 Marie Circle	Aston, PA 19014-3012
23-019	02 00 01451 52	Bernardi	Michael & Judith	137 Marie Circle	137 Marie Circle	Aston, PA 19014-3012
23-087						
23-108						
27-100	02 00 02914 01	SW Del. County Municipal Sewage	Sir or Madam	? Concord Rd	Concord Road	Aston, PA 19014-3012
27-101	02 00 02914 00	Aston Township	Sir or Madam	? Bridgewater Rd	223 Pennell Road	Aston, PA 19014-3012
27-197		Aston Township	Sir or Madam			
			CHESTER TOWNSHIP			
04-002	07 00 00289 00	Sun Refining & Market Co.	Sir or Madam	? Concord Road	1801 Market St 10 Penn Center	Phila, PA 19103
04-003	07 00 00270 01	SW Del. County Municipal Authority	Sir or Madam	? Concord Road	? Concord Rd	Chester, PA 19014
	07 00 00263 00	Shaffer	Olive	53 Concord Road	53 Concord Rd	Chester, PA 19014
05-017	07 00 00585 72	Simmons	Jeffrey	1318 Powell Rd	1318 Powell Rd	Brookhaven, PA 19015
08-019	07 00 00236 00	Del. Coounty Incinerator Auth.	Sir or Madam	? Concord Rd	412 Edgmtont Ave	Chester, PA 19014
08-034-001	07 00 00835 00	PECO Energy Co.	Sir or Madam	? Incinerator Rd	2301 Market St, 6th Fl.	Phila., PA 19101
			CHESTER HEIGHTS			
	06 00 00128 00	Septa RR Dn	Sir or Madam	? Station Road	? Station Road	
05-018	06 00 00127 00	Kindt	Paul & Grace	? Station Road	1504 W. Baltimore Pike	Media, PA 19063
05-019	06 00 00079 00	Wilcox	Margaret	529 Station Road	529 Station Road	Wawa, PA 19063
05-020	06 00 00078 00	Keller	Edwin	? Station Road	? Station Road	
05-021	06 00 00034 00	Farrell	William & Mary	? Lenni Road	? Lenni Road	Lenni, PA 19052
06-001		Farrell	William & Mary			
10-010		WestLake Inv. Co.	Sir or Madam			

		(WestLake Plastics)				
10-011		WestLake Inv. Co. (WestLake Plastics)	Sir or Madam			
10-013		Schoonmaker	Allen			
			MIDDLETOWN			
34-001		Wawa Dairy Farms	Sir or Madam			
34-002	27 00 00103 00	Sands	James	1442 Baltimore Pike	1442 Baltimore Pike	Media, PA 19063
35-001	27 00 01210 00	Weirich	Karl & William	345 Lenni Road	345 Lenni Road	Lenni, PA 19052
35-037		Weirich	Karl & William			
35-038	27 00 01209 00	Weirich	Karl & William	? Lenni Road (Quarry)	345 Lenni Road	Lenni, PA 19052
41-004	27 00 01225 00	Fuller	Kenneth	419 Station Road	419 Station Road	Lenni, PA 19052
41-005	27 00 01226 00	Fuller	Kenneth	421 Station Road	421 Station Road	Lenni, PA 19052
41-006	27 00 02607 00	Weirich	William & Gertrude	425 Station Road	211 HighLand Ave	Glen Riddle, PA 19037
41-007	27 00 02607 01	Weirich	William	427 Station Lane	427 Station Lane	Lenni, PA 19052
41-008	27 00 02608 00	Gane	James & Debbie	429 Station Lane	429 Station Lane	Lenni, PA 19052
41-009	27 00 02609 00	Spaulding	Jean	431 Station Lane	431 Station Lane	Lenni, PA 19052
41-010	27 00 02610 00	Harris	Cherrie	435 Station Road,	435 Station Road	Lenni, PA 19052
41-011	27 00 01230 00	Lane	George & Joan	423 Lenni Road	423 Lenni Road	Lenni, PA 19052
41-012	27 00 02003 00	Essaf	David	338 Parkmount Road	338 Parkmount Road	Glen Riddle, PA 19037
41-013	27 00 01231 00	PECO Energy Co.	Sir or Madam	? Lenni Rd	2301 Market Street	Phila, PA 19101
41-014	27 00 01222 00	Weiss	Lewis & Suki	? Lenni Rd	777 N Post Oak Road	Houston, TX 77024
41-015	27 00 01179 00	Lanei	James	457 Lenni Rd	457 Lenni Road	Lenni, PA 19052
41-016	27 00 01178 00	Lanei	James	455 Lenni Rd	455 Lenni Road	Lenni, PA 19052
41-016	27 00 01177 00	Lanei, James G.	James	451 Lenni Rd	451 Lenni Road	Lenni, PA 19052
41-016	27 00 01176 00	Lanei, James G.	James	453 Lenni Rd	453 Lenni Road	Lenni, PA 19052
41-016	27 00 01180 00	WestLake Inv. Co. (WestLake Plastics)	Sir or Madam	? W. Lenni Rd	? W. Lenni Rd	
41-017	27 00 02606 00	Sareyka	Steven & Lorrie	437 Station Road	437 Station Road	Lenni, PA 19052
41-018						
41-019	27 00 01173 00	Aldridge	Charles	414 Lenni Rd	414 Lenni Road	Lenni, PA 19052
41-020		Aldridge.	Charles			
41-021		Not Listed				
41-022		Beltz	Florence			
42-013	27 00 01994 00	Weirich	William	387 Parkmount Rd	387 Parkmount Road	Lenni, PA 19052
42-014	27 00 01988 00	Lenni Athletic Club	Sir or Madam	? Parkmount Rd	PO Box 141	Lenni, PA 19052
42-015	27 00 01989 00	Lenni Athletic Club	Sir or Madam	? Parkmount Rd	PO Box 141	Lenni, PA 19052
42-015-001	27 00 01995 00	Lenni Athletic Club	Sir or Madam	237 Lungren Rd	237 Lungren Road	Lenni, PA 19052
42-016	27 00 02002 00	Maguire	Stephen	245 Lungren Rd	PO Box 2056	Aston, PA 19014
42-017	27 00 01996 01	Middletown Twp.	Sir or Madam	? Parkmount Rd		
42-019		Rines	Stanley			
42-021		Blosenki	John			
42-026	27 00 02095 00	Glen Riddle Corp.	Sir or Madam	316 S. Pennell Rd	PO Box 7054	Dover, DE 19903
42-028	27 00 00741 00	Cottman	Brooke P. & Etal	236-E Glen Riddle Road	PO Box 439	Media, PA 19063
43-015	27 00 01306 65	Starnar	Barbara	236 Martins Lane	236 Martins Lane	Media, PA 19063
43-016	27 00 01306 64	Muetteries	Bonnie	238 Martins Lane	238 Martins Lane	Media, PA 19063
43-017	27 00 01306 63	Eves	Gorge & Shirley	240 Martins Lane	240 Martins Lane	Media, PA 19063
43-018	27 00 01306 62	Ebenreiter	John & Sharon	242 Martins Lane	242 Martins Lane	Media, PA 19063
43-019	27 00 00514 37	Vanucci	Dorothy	600 E. St. Andrews Dr.	600 E. St. Andrews Dr.	Media, PA 19063
43-079	27 00 02853 05	Janepchick	Joseph & Ann	612 W. St. Andrews Dr.	612 W. St. Andrews Dr.	Media, PA 19063
43-080	27 00 02853 06	McGrath	Gary & Suzanne	614 W. St. Andrews Dr.	614 W. St. Andrews Dr.	Media, PA 19063
43-081	27 00 02853 07	Bassett	Ralph & Anna	616 W. St. Andrews Dr.	616 W. St. Andrews Dr.	Media, PA 19063
43-082	27 00 02853 08	Earnest	John	618 W. St. Andrews Dr.	618 W. St. Andrews Dr.	Media, PA 19063
43-083	27 00 02853 09	Arnold	Todd & Lynn	620 W. St. Andrews Dr.	620 W. St. Andrews Dr.	Media, PA 19063
43-084	27 00 02853 10	Smith	Richard	622 W. St. Andrews Dr.	622 W. St. Andrews Dr.	Media, PA 19063
43-085	27 00 02853 11	Murphy	Eugene	624 W. St. Andrews Dr.	624 W. St. Andrews Dr.	Media, PA 19063
43-086	27 00 02853 12	McKeone	James & Catherine	626 W. St. Andrews Dr.	626 W. St. Andrews Dr.	Media, PA 19063
43-092	27 00 02853 02	Mirigliani	Vincent & Laura	638 W. St. Andrews Dr.	638 W. St. Andrews Dr.	Media, PA 19063
43-093	27 00 02853 01	Kaysen	Gary & Alexandria	640 W. St. Andrews Dr.	640 W. St. Andrews Dr.	Media, PA 19063
43-094	27 00 02045 00	King	Thomas & Dorothy	? S. Pennell Road	68 Willits Way	Glen Mills, PA 19063
43-150	27 00 02605 01	Glenoch Homes	Sir or Madam	? St. Andrews Dr.	PO Box 72	Elwyn, PA 19063
47-001	27 00 01822 00	Harmer	Philomena, & Danelli, Brian	630 Mt Alverno Road	630 Mt Alverno Road	Media, PA 19063
47-027	27 00 01822 01	Hewlings	Charles	636 Mt. Alverno Road	636 Mt. Alverno Road	Media, PA 19063
47-028	27 00 01822 02	Kravatz	Albert & Cynthia	642 Mt. Alverno Road	642 Mt. Alverno Road	Media, PA 19063
47-029	27 00 01822 03	Wright	Douglas & Marianne	650 Mt. Alverno Road	PO Box 4062	Elwyn, PA 19063
47-030	27 00 02045 00	Gaster	Donald & Mary Ann	635 Mt. Alverno Road	Paxon Hollow Road	Media, PA 19063
47-072	27 00 01821 00	Gaster	Donald & Mary Ann	637 Mt. Alverno Road	Paxon Hollow Road	Media, PA 19063
47-072-001						

47-074	27 00 01072 00	Linville Orchards	Sir or Madam	43 Knowlton Rd	137 W Knowlton Road	Media, PA 19063
48-010	27 00 01074 01	Linville	Paul & Margaret	137 W. Knowlton Rd	NOTE: HIDDEN HOLLOW SWIM CLUB	Media, PA 19063
48-010	27 00 01103 01	Middletown Twp.	Sir or Madam	? Linville Rd	27 N. Pennell Road	Lima, PA 19036
48-010	27 00 01074 00	Linville	Paul & Margaret	137 W. Knowlton Rd	137 W. Knowlton Road	Media, PA 19063
48-010	27 00 01103 00	Middletown Twp.	Sir or Madam	? Linville Rd	PO Box 157	Lima, PA 19037
48-010	27 00 01078 00	Bond	Michael & Julie Ann	245 W. Knowlton Rd	245 W. Knowlton Road	Media, PA 19065
48-013	27 00 01079 00	Shaw	William & Barbara	247 W. Knowlton Road	247 W. Knowlton Road	Media, PA 19065
48-014	27 00 01082 02	May	Robert & Theresa	257 W. Knowlton Rd	257 W. Knowlton Road	Media, PA 19063
48-015-003	27 00 01082 03	May	Robert & Theresa	257 W. Knowlton Rd	257 W. Knowlton Road	Media, PA 19063
48-015-003	27 00 01105 00	Verica	Joseph & Charron	242 W. Knowlton Road	242 W. Knowlton Road	Media, PA 19065
48-015-004	27 00 01082 01	May	Robert & Theresa	257 W. Knowlton Road	257 W. Knowlton Road	Media, PA 19063
48-016	27 00 00302 00	Golden	James	646 Chester Creek Road	646 Chester Creek Rd.	Brookhaven, PA 19015
48-020	27 00 00306 00	Kline	Bernard & Patricia	632 Creek Road	632 Creek Road	Brookhaven, PA 19015
51-003	27 00 00303 00	Golden	James	646 Creek Road	646 Creek Road	Brookhaven, PA 19015
51-004	27 00 01107 00	Penna RR-Conrail	Sir or Madam	? Knowlton Road	? Knowlton Rd	
51-005	27 00 00306 01	Kenworthy	Robert & Alice	620 Chester Creek Road	620 Chester Creek Rd.	Brookhaven, PA 19015
51-006		Barr	Francis			
51-007	27 00 00305 00	Spennato	Luciano, & Vadirle, Concette	612-617 Creek Road	612-617 Creek Road	Brookhaven, PA 19015
51-008	27 00 00299 01	Griggs	Ralph & Janet	249 Knowlton Road	249 Knowlton Road	Media, PA 19063
51-009	27 00 00299 00	Griggs	Ralph & Janet	641 Creek Road	641 Creek Road	Brookhaven, PA 19015
51-009-001	27 00 00300 00	Gargiule	Anthony & Margaret	643 Creek Road	643 Creek Road	Brookhaven, PA 19015
51-010						
51-010-001	27 00 00304 00	Schneider	Charles & Barbara	649 Chester Creek Road	649 Chester Creek Rd	Brookhaven, PA 19015
51-012		Grieco	Joseph			

APPENDIX B

COMMUNITY INVOLVEMENT DOCUMENTATION

Chester Creek Branch Rail-Trail Feasibility Study Questionnaire

Background information on this Chester Creek Branch Rail-Trail Feasibility Study is provided on the other side. Public input into the project is essential for the evaluation and design of an effective trail. Please answer the following questions and return this questionnaire to the address on the back. Feel free to add additional comments.

Please circle the appropriate response:

1. Had you heard of any Rail-to-Trail projects prior to this questionnaire? Yes No
2. Had you heard of the Chester Creek Branch Rail-Trail Project prior to this questionnaire? Yes No

If yes:

a. How did you know about it? _____

b. How long have you know about it? _____

3. Have you ever used a multiple use trail, such as a Rail-Trail? Yes No

If yes:

a. Approximately how often have you used a multiple use trail?

1 time 2-5 times 6-15 times more than 15 times

b. Was the use within the Philadelphia metropolitan area? Yes No

c. For what did you use the Rail-Trail (*circle all that apply*)?

Commuting Bicycling Walking Running Horseback Riding Cross country skiing
Other (*please specify*): _____

4. If this trail is built, do you think you would use it? Yes No

If yes:

a. What would you use it for (*circle all that apply*)?

Commuting Bicycling Walking Running Horseback Riding Cross country skiing
Other (*please specify*): _____

b. How often do you think you would use it?

Once a week More than once a week Once a month More than one a month

5. What issues do you want the Chester, Ridley, Crum Watersheds Association to consider as they evaluate the feasibility of the multiple use trail? *Add additional sheets of paper if desired*

Background

The Chester, Ridley, Crum Watersheds Association (CRC) is conducting a feasibility study of converting the former Chester Creek Branch of the Pennsylvania Railroad to a multiple use Rail-Trail. This 6.7-mile trail traverses parts of Middletown, Aston, and Chester Townships, connecting the inactive SEPTA R3 Wawa train station in Chester Heights with the historic Caleb Pusey Plantation in Upland. It would generally parallel Chester Creek.

The goal of the trail is to preserve green space along the Chester Creek, while allowing easy access to it. It is intended to provide a viable alternative to auto commuting and also provide for recreational uses such as bicycling, walking, running, horseback riding and cross country skiing.

Public input into the project is essential for the evaluation and design of an effective trail. Please answer the questions on the other side and return this questionnaire to the address below. Please feel free to add additional comments, using separate sheets if necessary.

Fold here so pre-printed address shows and tape closed

The Friends of the Chester Creek Branch
CRC Watersheds Association
P.O. Box 2313
Aston, PA 19014-0313

CHESTER CREEK BRANCH RAIL-TRAIL FEASIBILITY STUDY GROUP

NAME	Organization			
Mike Fusco	Friends of the Chester Creek Branch			
Marshall Hamilton	Chester, Ridley, Crum Watersheds Association			
John Pickett	Delaware County Planning Department			
Dick Lehr	Aston Township Municipal Building (Manager)			
Peter Bring	Aston Township Resident of 6 th Ward			
Bill Pisarek	Chester Township Municipal Building (Manager)			
Bruce Clark	Middletown Township Municipal Building (Manager)			
Stan Kadish	SEPTA Real Estate			
Ray Peden	Friends of Caleb Pusey Plantation			
Ira Josephs	Bike Club/Coalition			
Pete Schettler	Middletown Township Land Conservancy			
Dr. Martin Bergmann	8 Morton Avenue, Suite 304, Ridley, PA 19078			
Joseph Kennedy	Delaware County Field & Stream			
Dr. Kathy Hornberger	Dept. of Biology, Widener University			
Denise Plaugher	Aston Professional and Business Association			

The following summarizes the questions/comments asked at the Adjacent Property Owners Meeting on 2/16/99 and the Public Meeting on March 2, 1999.

SECURITY

Trail Users' Safety

1. Crime, privacy, and safety concerns? (Fire & Police)
2. Would you go to South end at night alone now?
3. What security measures and actual statistics are there documenting crime on trails?
4. Will solar phones and guards be used?
5. How will you provide safety along R-3 line?
6. How will safety be assured in wash out areas?
7. Offers safe place to ride a bike for kids.
8. Nighttime security – what is done to prevent crime during the evening?

Property Owners' Safety

9. How will privacy be maintained?
10. How can people be stopped from trespassing?
11. Property owner in Middletown adjacent to trail – concerned with safety.
12. Resident on trail – feels trail will stop the problems.

General

13. Will Brandywine Valley Engineers look at impact or potential security issues with Camp Upland and Aston Middletown Little League?
14. Due diligence – call other places to see if crime is an issue?
15. (Scoutmaster) – Cyclists go by his house and hikers – no problems, traveled bike trails in Europe, safer for kids.
16. Middletown resident – homeowner, expecting child, in favor of trail, runner and hiker, hundreds of miles has never seen crime or violence.
17. (Teenager) – All teenagers are not bad, molesters can be everywhere.

ENVIRONMENTAL/SANITARY

1. Trash, sanitary facilities?
2. Pollution (air and water impacts)?
3. Concern for alternatives to avoid sewage treatment plant or other businesses.
4. How will building trail help wildlife?
5. What impact will there be to fishing community?
6. Will there be environmental degradation if the rail line is removed completely, can they remain?
7. What will be done about impact to pools?
8. Smedley Park cleaned up; as it has been cleaned, it has encouraged people to keep it clean.

OTHER TRAILS

1. Are there other trails in high crime areas?
2. How many trails begin/end at public housing?
3. Do we really need another trail?
4. How many people use the Linville Trail, Darlington Trail?
5. Will construction mirror other trails?
6. Several people commented indicating their support and use of trail. One gentleman has had no problem with the Linville Trail – it's good exercise.
7. Can people walk other trails or can CRC get good documentation to show good trails?
8. What has happened to Rails which haven't been converted?
9. Pennypack Park in Northeast Phila. – unpaved and unmaintained – once paved (9 miles) real estate has turned around, much safer.

PLANNING

1. Can this be put to referendum?
2. What if one municipality did not approve plan?
3. Can study group be opened to more residents?
4. Can there be another meeting with adjacent property owners?
5. Who will report go to? How will it be presented?
6. If three (3) Township Commissioners vote against, will CRC force it on them?
7. Did we send information to businesses?
8. Will Web page provide updates?
9. Would we take a straw poll to see who is in favor or against?
10. Why weren't mailings done to everyone in Township?

CONSTRUCTION

1. Who set up Upland as Endpoint?
2. Will tracks be removed?
3. Will Knowlton Road underpass be reconstructed?
4. Is it possible to only construct a portion?

FINANCIAL

1. Who's going to pay?
2. What is property value impact?
3. Liability of adjacent owners?
4. What if deed states ownership is yours?
5. Can money be used somewhere else instead of here?
6. Finds it hard to believe the economic benefits in the fact sheet.

TRAFFIC

1. What about motorized vehicles, motorcycles, ATV's?
 - a. What is going to be done to stop dirt bikers and four wheelers?
 - b. What about trespass from children/people on dirt bikes?
2. Can SEPTA reactivate the line?
3. How will parking areas be located?
4. Why aren't bike paths on roads?
5. Will SEPTA maintain ownership of right-of-way?
6. How about traffic generated to get to the trail?
7. What safety measures will be used at grade crossings (ie. Dutton's Mill Road)?

SUPPORT/OPPOSITION COMMENTS

Support

1. Lives in Chadds Ford Township – all beauty with no access to walking.
2. Will attract better class of people to walk on the trail.
3. Need to find good things for kids to do which will discourage bad things.
4. Quality recreation brings quality people.
5. Not member of group or neighbor – sees this as an opportunity for recreation.
6. Scout leader – had to take kids hundreds of miles to enjoy the trails, would love to access a local trail.
7. Formal trails are far better than primitive ones created by kids.

Opposition

8. Why the need to disturb at all? Leave as is!
9. 50 pages from internet addressing issues which refute all good things presented.

MISCELLANEOUS

1. How will trail make things better for Aston Township?
2. How do we intend to address aesthetics in the more industrial areas? Can we show the good instead of the bad?
3. Hiking member – carry pair of clippers and bag for litter.