APPENDIX

APPENDIX

TABLE OF CONTENTS

LIST OF MAPS

LIST OF TABLES

LIST OF FIGURES

LIST OF PHOTOS

APPENDIX – INVENTORY AND ANALYSIS

I. RESOURCE INVENTORY

The SRT Master Plan Resource Inventory includes background information concerning the proposed trail corridor, including natural, historic and scenic resources. It also includes site analysis together with a series of maps, which provides data that may affect SRT alignment.

A. SITE SURVEY- TRAIL SECTION BASE MAPS

Topographic data from Chester County's Geographic Information System (GIS) was utilized to prepare the existing conditions/site analysis maps for the trail Master Plan. Map 1A shows the trail corridor project area and is keyed to seven (7) individual maps for designated trail segments. Maps 1B through 7B, "Existing Conditions/Site Analysis" show the trail corridor's natural features, topography and improvements.

1. Location.

As recommended in the Borough's *Strategic Plan for the French Creek Corridor,* the proposed SRT corridor should follow the southern bank of the French Creek through the Borough until the area of Paradise Street. After it crosses to the north side of French Creek, the SRT turns north and follows a railroad right-of-way to the northwest corner of the Borough. The corridor then turns west and crosses into East Pikeland Township over Township Line Road. A large portion of the corridor area will be contained within the site of the French Creek Center redevelopment project, which was once the site of the Phoenix Iron and Steel Company, in operation from the late 1700's to the 1980's. In 2002, the Borough approved the French Creek Center Master Plan and when fully developed, this redevelopment project will include a mix of residential, retail, office, light industrial uses and open space, which will be adjacent to the French Creek and will contain sections of the proposed SRT.

2. Adjacent Existing Uses.

Land uses along the trail corridor vary greatly. At the east end of the SRT corridor, adjacent uses include retail/commercial properties along Bridge Street. This area includes a laundromat, toy store, and restaurant (the Mansion House). Moving west along the trail corridor is the vacant, historic Superintendent's Building, also on Bridge Street, which is proposed for mixed use redevelopment. A trail segment has already been constructed from the Superintendent's Building west to Main Street. Just west of Main Street is located the historic Foundry Building which is currently under renovation and also proposed for mixed use redevelopment. A trail segment has already been constructed on this tract from Main Street and extending to Bridge Street. Residential dwellings are found along Nailer's Row, east of the Gay Street Bridge and south of the Foundry Building. Commercial/retail uses are found west of Gay Street along Bridge Street. A new office building is under construction on Bridge Street, west of Taylor Alley, and continuing west along Bridge Street, more commercial uses are found, including Barto Pool and Spa and Morgan Foods. The abandoned Weiland Meat Packing Plant is located west of these businesses. The trail corridor also passes to the rear of several manufacturing uses before it crosses to the north side of French Creek. At this point, the trail corridor is adjacent to the French Creek Center redevelopment site discussed above, which is currently vacant, but which will contain office and residential uses in this area.

Travelling north, land uses to the west include the Pollock Corporation (recycling plant), the Moose Lodge, the Ukrainian Catholic Church, a cemetery, Trinity Roman Catholic Church, and PennDOT and PECO right-of-way lands. Uses to the east include Polychem (industrial), residential uses and PennDOT and PECO right-of-way lands.

3. Proposed Adjacent Redevelopment and Infrastructure Projects.

Certain SRT segments have been or will be developed through new land development and infrastructure projects proposed along the French Creek. Proposed and recently completed land developments and private and public infrastructure projects which contributed to trail development are described below.

French Creek Center

As discussed above, portions of the proposed 120-acre French Creek Center (FCC) mixed-use redevelopment project will contain segments of the SRT, which will be constructed as part of the land development process.

Gateway Project

Within the FCC project is the Gateway Project, proposed to include several retail and commercial buildings. The Gateway Project will be located northeast of the intersection of Starr Street, Bridge Street, and the proposed French Creek Parkway. A section of the SRT will travel through this area.

Superintendent's Building

Also mentioned above, the Superintendent's Building parcel is located at the northwest corner of the intersection of Starr Street, Bridge Street, and the proposed French Creek Parkway. The Superintendent's Building is proposed for reuse as a restaurant and office building. The SRT will travel through the northern portion of this parcel.

Foundry Redevelopment Project

The Foundry Building parcel, located on the south side of French Creek, contains a structure from the former iron and steel industry that dates back to the late 1700's. A trail segment was constructed as part of the Foundry Building redevelopment project. The trail runs along the northern portion of the tract, just south of the French Creek. It is anticipated that a portion of the Foundry Building will contain a visitor's center.

4. Historic Resources.

Several historic resources from the past iron and steel industry are located along the SRT corridor, and are described below and shown in a series of photographs.

Foundry Building

Photo 1 shows the Foundry Building to the left and the SRT to the right. The Foundry Building is considered the most significant historic feature of the corridor, and has been under renovation for several years.

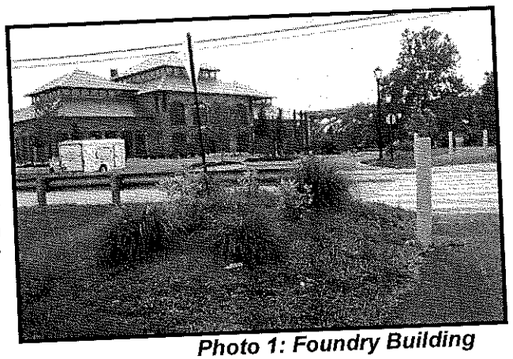

Photo 1: Foundry Building

Phoenix Column Bridge

The Phoenix Column Bridge spans the French Creek just north of the Foundry Building and dates back to the 1800's. Depending upon its structural integrity, this bridge may be utilized as a creek crossing in the regional trail system. Photo 2 shows the Column Bridge; the Gay Street Bridge is behind it.

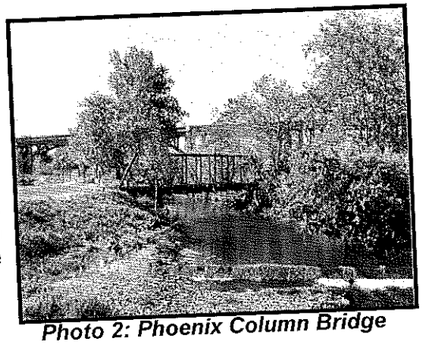

Photo 2: Phoenix Column Bridge

Smoke Stack and Flywheel
Two (2) remaining artifacts from the former iron and steel operation are shown in Photo 3, the flywheel and the brick smokestack, which are located on the north side of French Creek, east of Paradise Street. These artifacts will be incorporated into the design of French Creek Center redevelopment project proposed for this site.

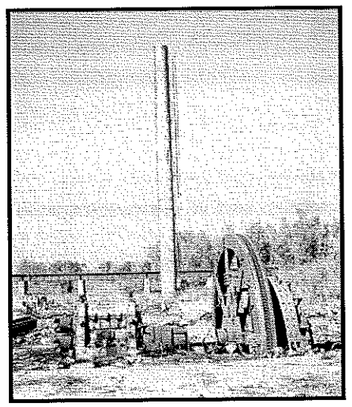

Photo 3: Smokestack and Flywheel

Railroad Tunnel

Another significant historic resource located along the SRT corridor is the Pennsylvania Railroad tunnel located below Fillmore Street. The stone tunnel dates back to the late 1800's, is not in use, needs repair and is partially under water.

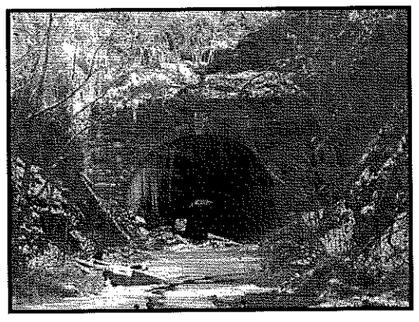

Photo 4: Railroad Tunnel

5. Environmental Resources.

Slopes

The site survey includes topographic contours at 5-foot intervals. Slopes identified as greater than 15% are unsuited for trail development. Steep slopes are found along the south side of French Creek and result from prior industrial operations and long term stream bank erosion.

Soil Types

Made Lands

The majority of the soil types in the portion of the SRT corridor adjacent to French Creek are Made Lands (Me). Made lands are defined as "areas in which the soil has been covered by other materials or from which the soil has been disturbed or removed to provide materials for urban or industrial development"[1] and typically do not resemble the original soils of the area. Made lands result from the previous iron and steel industries in operation in this area for over 200 years.

Penn Series

The Penn soil series comprises the remainder of the soils in the SRT corridor. Penn soils are composed of shallow to moderately deep, well-drained soils of uplands. Most areas containing these soils are relatively level or gently sloping.[2]

Hydric Soils

A portion of the trail corridor soils are also hydric, or wet, soils. These soils exhibit high water tables, have poor drainage, and are found within floodplain and wetland areas. They are generally located within low-lying areas and occasionally in upland depressions.[3] Primarily hydric soils are found immediately adjacent to French Creek.

Vegetation

Immature trees, shrubs and weeds inhabit most of the trail corridor. Any quality trees present along the creek should be preserved where possible or replaced during trail development. Invasive weeds and vines should be removed and replanted with native plant species.

Wetlands and Floodplains

Floodplains and wetlands areas are found along the Schuylkill River and French Creek. Trail construction within wetland areas should be avoided where possible. Specifications for trail design within wetland areas are discussed later in this report.

Riparian Buffers

The Borough's Greenway Overlay District (Part 25 of the Zoning Ordinance) requires that no building, structure, parking area and/or any use other than public passive recreation is permitted within fifty (50) feet of the floodway and within one hundred (100) feet of the centerline of the floodway (the French Creek). These areas should remain undisturbed on both sides of French Creek except for the trail and trail amenities such as benches, footbridges and lighting.

6. Zoning.

Zoning districts within and adjacent to the trail project area are described below.

French Creek East

From the east, the trail corridor enters Phoenixville Borough from the Mont Clare Bridge over the Schuylkill River. This bridge connects Phoenixville to Upper Providence Township, Montgomery County (Photo 5). This trail segment lies within the French Creek East (FCE) zoning district. An SRT segment has been constructed along the eastern side of the Schuylkill River in the village of Mont Clare in Upper Providence Township, Montgomery County.

French Creek West

Gay Street marks the boundary between the French Creek East and French Creek West Districts. The south-central portion of the trail corridor passes though the French Creek West (FCW) zoning district.

Multi-Residential (MR) District

In the area of High Street, the trail corridor leaves the FCW district and enters the Multi-Residential (MR) District. This area of the Borough is also within the Performance Standard Subdivision Overlay District, which permits denser residential development and required public open space. Following the railroad right-of-way northward, the trail should enter the Light Industrial/ Commercial/ Office-1 (LI/C/O-1) District, which permits light industrial, commercial and office development projects.

Overlay Districts

The Unified Development (UD) overlay district permits master planned, mixed-use land development projects. The Borough approved a master plan for the redevelopment of approximately 120 acres within this district for the French Creek Center project, which is proposed to include residential, retail, office and light industrial components. The eastern and central trail segments are also within the Downtown Historic District, National Register Historic District and the Greenway Overlay District, which restricts construction within its boundaries. Portions of the trail corridor adjacent to French Creek are also located in the Borough's Floodplain District.

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[1] *Soil Survey of Chester and Delaware Counties, May 1963, p. 87.*
[2] *Soil Survey of Chester and Delaware Counties, May 1963, p. 94.*
[3] *Phoenixville Strategic Plan, 2nd Draft, December 1999, p. 1-3.*

B. SITE ANALYSIS

A site analysis was conducted to help determine the best route for the SRT through Phoenixville. Maps 1B through 7B show the site analysis for each trail section.

1. Opportunities for Trail Development.

The redevelopment projects proposed along the south side of the French Creek are excellent opportunities to work with private developers to construct SRT segments. The projects include the Foundry Building (Main Street), and French Creek Center, including the Gateway Project (Bridge Street at Starr Street). Additionally, the Borough has constructed a trail section concurrent with the installation of a new sewer interceptor south of the French Creek and east of Main Street.

An opportunity for the SRT to cross from the south side of French Creek to the north is available in the reuse of the abandoned Paradise Street bridge. This bridge once carried vehicular traffic, but is barricaded to prevent use. The bridge could be refurbished for pedestrian use only and provide a way for the SRT to cross to the north side of French Creek.

2. Trail Development Constraints.

One constraint facing SRT construction in the Borough is the possible development of the Schuylkill Valley Metro (SVM) commuter rail line. Although the SVM would provide for multi-modal travel opportunities to and from the Borough, development of the SRT and the SVM may necessitate sharing the railroad right-of-way, which may affect trail design. Currently, however it is anticipated that development of the SVM will not affect SRT development.

3. Site Advantages.

The juxtaposition of much of the SRT corridor and French Creek provides an excellent opportunity for passive recreation while preserving French Creek, one of the area's prime environmental resources. Traveling west from the Mont Clare Bridge, the SRT will parallel and provide views of French Creek through the Borough, until the SRT turns north near High Street, away from the creek. Also, the Superintendent's and Foundry Buildings will provide opportunities for interpretation of the former iron and steel industries and will add historic value to the trail, as will the steel site artifacts, such as the flywheel. The Foundry Building will likely include a visitors center which will help describe and interpret the history of the iron and steel industries in the Borough.

Another site advantage for the SRT is its location within one of Chester County's revitalizing, historic boroughs, which may attract potential trail users.

The SRT will also link to other proposed trails, including the PICTA trail, the High Street trail and the French Creek Trail. Trail connections to existing and proposed sidewalks are described below and will provide opportunities for trail users to access the Borough's central business district, historic resources and parks.

4. Site Disadvantages.

Site disadvantages are also associated with French Creek. Portions of the trail may be constructed in the floodplain and wetland areas which may present design challenges. In areas where stream banks have eroded, the SRT must be constructed at the top of the slope, at some distance above the creek.

5. Site Analysis of Trail Sections.

The SRT corridor was divided into seven (7) segments for the purposes of site analysis, mapping and conceptual design. Maps 3A through 3G show these trail segments at a scale of one inch equal to 100 feet (1"=100'). The maps show the corridor beginning in the eastern end of the Borough at the railroad bridge across the Schuylkill River and ending in the northwest corner of the Borough at Township Line Road. A site analysis has been prepared for each portion of the trail corridor, and is set forth below. Trail section length, property owners, proposed alignment, slope conditions and potential engineering issues (other than stormwater management) are described.

Trail Segment 1-Map 1B

Total Trail Section Length:
1,577 feet

Property Owners:
Phoenix Property Group:1,160 feet, Phoenixville Borough: 123 feet, Bridge Street right-of-way: 294 feet

Proposed Trail Route:
The first SRT segment begins in the Bridge Street right-of-way at the Mont Clare Bridge. It runs beneath the active railroad line, then turns northeast for 500 feet, within the PPG "Gateway" parcel. The trail should then turn west and follow the south side of French Creek. It should then run southwest along the creek for about 500 feet, and should then cross beneath the future French Creek Parkway and at grade. The SRT should continue southwest for roughly another 110 feet, turn northwest, and continue to run west along French Creek.

Slopes:
Steep slopes are located at the beginning of the SRT, just west of the Schuylkill River. The southern bank of the French Creek is steep along the entire trail section.

Crossing/Engineering Issues:
Trail crossings beneath the active Reading Railroad line and the future French Creek Parkway.

Historic Resources:
Superintendent's Building, Sewer Pump House

Views:
Views of the creek west of French Creek Parkway

Buffering:
The proposed parking lot in French Creek Center should be buffered from the SRT.

Trailheads and Sidewalk Access:
One trailhead (1) located within the sewer pump house parcel on Bridge Street. Sidewalks connections from Bridge Street and French Creek Parkway.

Trail Segment 2-Map 2B

Total Trail Section Length:
1,833 feet

Property Owners:
PPG: 770 feet, Phoenixville Area Economic Development Corporation (PAEDCO): 647 feet, Valley Forge Railways (VFR): 416 feet

Proposed Trail Route:
An existing trail segment extends from the Superintendent's Building west along French Creek, crosses Main Street at grade, runs through the Foundry parcel, travels southwest and passes beneath the Gay Street Bridge and terminates at Taylor Alley. The proposed portion of this trail segment will cross the future Reeves Crossing at grade and run through VFR land.

Slopes:
The creek bank is somewhat steep along the entire trail section.

Crossing/Engineering Issues:
Trail crosses the future Reeves Crossing (Taylor Alley)

Historic Resources:
Foundry Building and Phoenix Column Bridge

Views:
Views of creek at Main Street and of Foundry Building

Buffering:
Landscaping and shade trees should be installed east of Main Street where none currently exist.

Trailheads and Sidewalk Access:
Two trailheads-one at the Foundry Building and one at Reeves Crossing/Taylor Alley. Sidewalk connections from Main Street and from Bridge Street at Reeves Crossing.

SCHUYLKILL RIVER TRAIL SITE ANALYSIS

Trail Section	Segment Length	Property Owners	Proposed Route	Existing Slopes	Potential Engineering Issues	Historic Resources	Trailheads
1	1,587 ft.	Bridge Street - 294' Phoenixville Borough- 123' PPG-1,170'	The trail runs E-W, next to Bridge St., turns NE in PPG land. Trail turns W, runs along S side of French Creek. Then runs SW along creek, passes under future French Creek Parkway. Continues SW, turns NW, along creek.	A portion of steep slopes is located at the beginning of the trail, just west of the river, and the creek bank is steep along the entire trail section.	- Pass beneath active RR line, and under French Creek Parkway. - Accomodate trail on Mont Clare Bridge	- Superintendent's building - Sewer pump house	Bridge St. Trailhead

SCHUYLKILL RIVER

FUTURE FRENCH CREEK PARKWAY

PROPOSED)

PHOENIX IRON CANAL TRAIL (PROPOSED)

FRENCH CREEK

PHOENIX PROPERTY GROUP 15-9-15.7

PENNSYLVANIA LINES LLC 15-10-8

NORFOLK - SOUTHERN R.R.

PASSES UNDERNEATH BRIDGE

ROAD UNDERPASS

8' SIDE TRAIL

STILLMAN 15-10-6

BRIDGE STREET TRAILHEAD

SUPERINTENDANT'S BUILDING

BRIDGE ST.

NORTH

SOURCES:
- DETAILED TOPO & FRENCH CK. CTR. PLANS, LUDGATE ENGINEERS, 2001.
- PARCEL BOUNDARIES, 5' CONTOUR TOPO, AIR PHOTOS, CHESTER COUNTY LAND RECORDS, 2004.
- FRENCH CK (PARADISE ST. EAST) & PICTA TRAILS, RBA, 2003.
- NORTHERN RELIEF RT. ALTERNATIVES, ROA, 2004.

SCHUYLKILL RIVER TRAIL MASTER PLAN

EXISTING CONDITIONS / SITE ANALYSIS

TRAIL SEGMENT 1

Date: 6/21/05	Map #18	Scale: 1"= 100'
Project No.: 1042.02.07	Drawn by: TWB	Checked by: ROA

RAY OTT & ASSOCIATES
PLANNING AND LANDSCAPE ARCHITECTURE
17 SOUTH CHURCH STREET
WEST CHESTER, PA 19382
610.429.9993

SCHUYLKILL RIVER TRAIL SITE ANALYSIS

Trail Section	Segment Length	Property Owners	Proposed Route	Existing Slopes	Potential Engineering Issues	Historic Resources	Trailheads
2	1,816 ft.	PPG-770' PAEDCO-647' Valley Forge Railways-399'	Trail runs NW along creek, turns W, crosses Main St. Enters Foundry site, runs W. Turns SW, passes under Gay St. Bridge, crosses future Reeves Crossing.	The creek bank is somewhat steep along the entire trail section.	- Pass beneath Gay Street Bridge - Cross proposed Reeves - Crossing street at Grade.	Foundry	Foundry

SOURCES:
- DETAILED TOPO & FRENCH CK. CTR. PLANS, LUDGATE ENGINEERS, 2001.
- PARCEL BOUNDARIES, 5' CONTOUR TOPO, AIR PHOTOS, CHESTER COUNTY LAND RECORDS, 2004.
- FRENCH CK (PARADISE ST. EAST) & PICTA TRAILS, RBA, 2003.
- NORTHERN RELIEF RT. ALTERNATIVES, ROA, 2004.

PROPOSED FRENCH CREEK PARKWAY

FRENCH CREEK

PHOENIX IRON CANAL TRAIL (PROPO

8' SIDE TRAIL

FRENCH CREEK TRAIL (PROPOSED)

PHOENIX COLUMN BRIDGE

ROAD CROSSING

FOUNDRY TRAILHEAD

PHOENIXVILLE AREA ECONOMIC DEV CORP 15-9-11

PHOENIX PROPERTY GROUP 15-9-15.7

PROPOSED FRENCH CREEK PARKWAY

PROPOSED RIVER ROAD

PHOENIX PROPERTY GROUP 15-9-98

FORMER VALLEY FORGE RAILWAYS 15-9-99

GAY ST. BRIDGE

MAIN ST.

W. MILL ST.

REEVES CROSSING TRAILHEAD

ROAD CROSSING

BRIDGE ST.

NORTH

SCHUYLKILL RIVER TRAIL MASTER PLAN

EXISTING CONDITIONS / SITE ANALYSIS

TRAIL SEGMENT 2

Date: 6/21/05	Map #2B	Scale: 1"= 100'
Project No.: 1042.02.07	Drawn by: TWB	Checked by: ROA

RAY OTT & ASSOCIATES
PLANNING AND LANDSCAPE ARCHITECTURE
17 SOUTH CHURCH STREET
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SCHUYLKILL RIVER TRAIL SITE ANALYSIS

Trail Section	Segment Length	Property Owners	Proposed Route	Existing Slopes	Potential Engineering Issues	Historic Resources	Trailheads
3	2,173 ft.	Valley Forge Railways- 1,987' PPG-186'	From Reeves Crossing, trail runs SW along creek, then turns W for about Turns NW, reenters PPG land.	The creek bank is somewhat steep along the entire trail section.	None.	None.	20' Borough access easement W of DJ building

PROPOSED
FENCH CREEK CENTER
ROADWAY NETWORK

RENOVATE EXISTING PARADISE ST. BRIDGE

PROPOSED FRENCH CREEK PARKWAY

PROPOSED STREET

PROPOSED STREET

REEVES CROSSING

DISTRICT JUSTICE COURT

BRIDGE ST.

FRENCH CREEK TRAIL (PROPOSED)

FRENCH CREEK

ROW ACCESS

8' SIDE TRAIL

PROPOSED RIVER ROAD

FORMER VALLEY FORGE RAILWAYS 15-8-12

CHURCH ST.

NORTH

SOURCES:
- DETAILED TOPO & FRENCH CK. CTR. PLANS, LUDGATE ENGINEERS, 2001.
- PARCEL BOUNDARIES, 5' CONTOUR TOPO, AIR PHOTOS, CHESTER COUNTY LAND RECORDS, 2004.
- FRENCH CK (PARADISE ST. EAST) & PICTA TRAILS, RBA, 2003.
- NORTHERN RELIEF RT. ALTERNATIVES, ROA, 2004.

SCHUYLKILL RIVER TRAIL MASTER PLAN

EXISTING CONDITIONS / SITE ANALYSIS

TRAIL SEGMENT 3

Date: 6/21/05	Map #3B	Scale: 1"= 100'
Project No.: 1042.02.07	Drawn by: TWB	Checked by: ROA

RAY OTT & ASSOCIATES
PLANNING AND LANDSCAPE ARCHITECTURE
17 SOUTH CHURCH STREET
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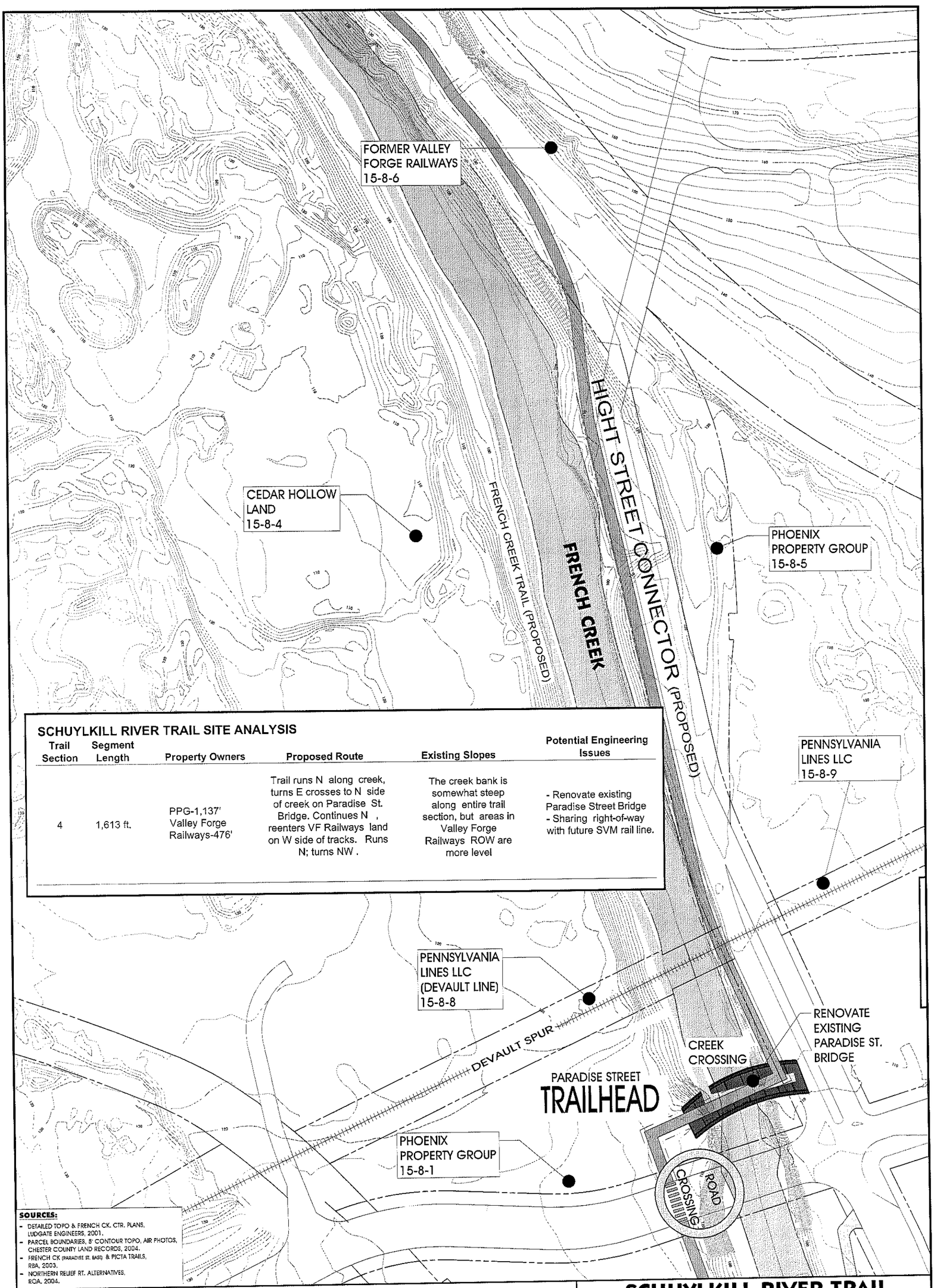


SCHUYLKILL RIVER TRAIL SITE ANALYSIS

Trail Section	Segment Length	Property Owners	Proposed Route	Existing Slopes	Potential Engineering Issues
4	1,613 ft.	PPG-1,137' Valley Forge Railways-476'	Trail runs N along creek, turns E crosses to N side of creek on Paradise St. Bridge. Continues N , reenters VF Railways land on W side of tracks. Runs N; turns NW .	The creek bank is somewhat steep along entire trail section, but areas in Valley Forge Railways ROW are more level	- Renovate existing Paradise Street Bridge - Sharing right-of-way with future SVM rail line.

SOURCES:

- DETAILED TOPO & FRENCH CK. CTR. PLANS, LUDGATE ENGINEERS, 2001.
- PARCEL BOUNDARIES, 5' CONTOUR TOPO, AIR PHOTOS, CHESTER COUNTY LAND RECORDS, 2004.
- FRENCH CK (PARADISE ST. EAST) & PICTA TRAILS, RBA, 2003.
- NORTHERN RELIEF RT. ALTERNATIVES, ROA, 2004.

NORTH

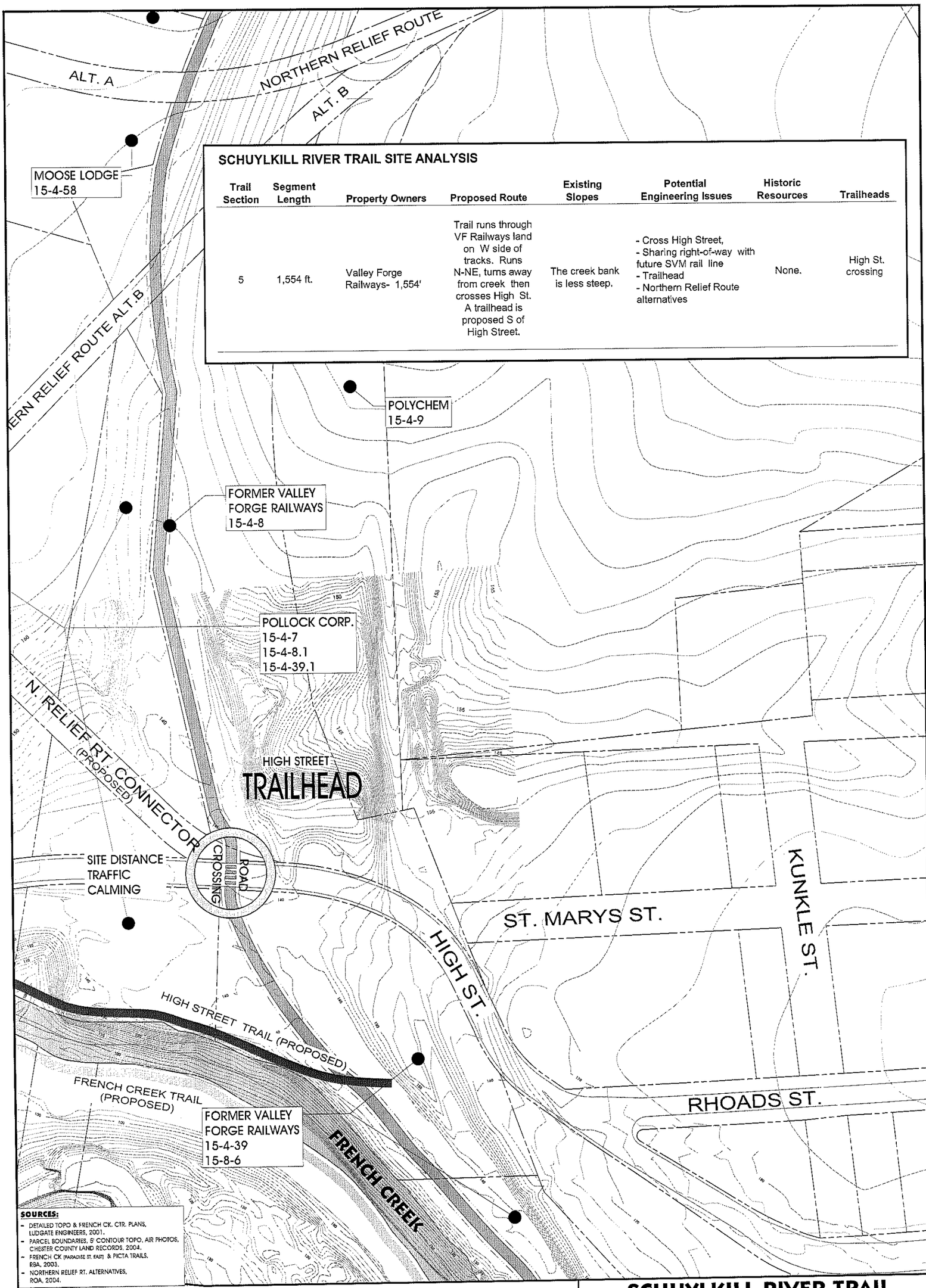
SCHUYLKILL RIVER TRAIL MASTER PLAN

EXISTING CONDITIONS / SITE ANALYSIS

TRAIL SEGMENT 4

Date: 6/21/05	Map #4B	Scale: 1"= 100'
Project No.: 1042.02.07	Drawn by: TWB	Checked by: RO

RAY OTT & ASSOCIATES
PLANNING AND LANDSCAPE ARCHITECTURE
17 SOUTH CHURCH STREET
WEST CHESTER, PA 19382
610.429.9993



SCHUYLKILL RIVER TRAIL SITE ANALYSIS

Trail Section	Segment Length	Property Owners	Proposed Route	Existing Slopes	Potential Engineering Issues	Historic Resources	Trailheads
5	1,554 ft.	Valley Forge Railways- 1,554'	Trail runs through VF Railways land on W side of tracks. Runs N-NE, turns away from creek then crosses High St. A trailhead is proposed S of High Street.	The creek bank is less steep.	- Cross High Street, - Sharing right-of-way with future SVM rail line - Trailhead - Northern Relief Route alternatives	None.	High St. crossing

SOURCES:

- DETAILED TOPO & FRENCH CK. CTR. PLANS, LUDGATE ENGINEERS, 2001.
- PARCEL BOUNDARIES, 5' CONTOUR TOPO, AIR PHOTOS, CHESTER COUNTY LAND RECORDS, 2004.
- FRENCH CK (PARADISE ST. EAST) & PICTA TRAILS, RBA, 2003.
- NORTHERN RELIEF RT. ALTERNATIVES, ROA, 2004.

SCHUYLKILL RIVER TRAIL MASTER PLAN

EXISTING CONDITIONS / SITE ANALYSIS

TRAIL SEGMENT 5

Date: 6/21/05	Map #5B	Scale: 1"= 100'
Project No.: 1042.02.07	Drawn by: TWB	Checked by: RO

NORTH

RAY OTT & ASSOCIATES
PLANNING AND LANDSCAPE ARCHITECTURE

17 SOUTH CHURCH STREET
WEST CHESTER, PA 19382
610.429.9993

SCHUYLKILL RIVER TRAIL SITE ANALYSIS

Trail Section	Segment Length	Property Owners	Proposed Route	Existing Slopes	Potential Engineering Issues	Historic Resources
6	1,465 ft.	Valley Forge Railways - 491' PA RR- 974'	Trail runs within Valey Forge Railways land on west side of tracks. It runs N-NE, and passes west side of railroad tunnel. Trail crosses W. Fillmore St.	Slopes are less steep.	- Cross W. Fillmore St. - Sharing right-of-way with future SVM rail line.	RR Tunnel

SOURCES:

- DETAILED TOPO & FRENCH CK. CTR. PLANS, LUDGATE ENGINEERS, 2001.
- PARCEL BOUNDARIES, 5' CONTOUR TOPO, AIR PHOTOS, CHESTER COUNTY LAND RECORDS, 2004.
- FRENCH CK (PARADISE ST. EAST) & PICTA TRAILS, RBA, 2003.
- NORTHERN RELIEF RT. ALTERNATIVES, ROA, 2004.

CARL
15-4-4

SLAVISH CEMETERY
15-4-51

SANECK
15-4-3

W. FILLMORE ST.

DUKE
15-4-54

NEIMCZUK
15-4-2

ROAD CROSSING

LOVE
15-4-55

BROWNLEE
15-4-1

UKRANIAN CATHOLIC CHURCH
15-4-56

FORMER VALLEY FORGE RAILWAYS
15-4-8

POLYCHEM
15-4-9

MOOSE LODGE
15-4-58

NORTHERN RELIEF ROUTE

ALT. A

ALT. B

NORTH

SCHUYLKILL RIVER TRAIL MASTER PLAN

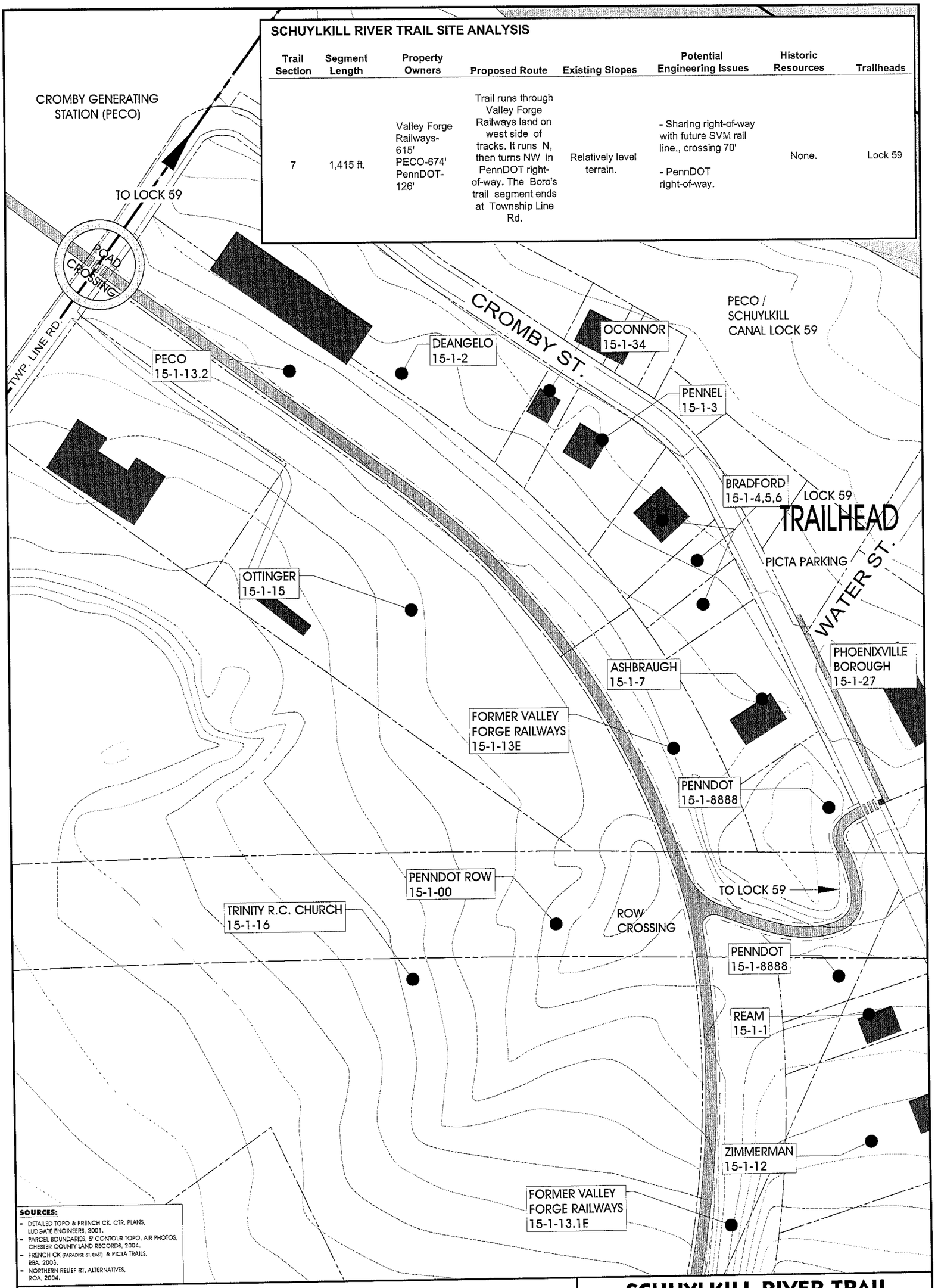
EXISTING CONDITIONS / SITE ANALYSIS

TRAIL SEGMENT 6

Date: 6/21/05	Map #6B	Scale: 1"= 100'
Project No.: 1042.02.07	Drawn by: TWB	Checked by: RO

RAY OTT & ASSOCIATES
PLANNING AND LANDSCAPE ARCHITECTURE

17 SOUTH CHURCH STREET
WEST CHESTER, PA 19382
610.429.9993



SCHUYLKILL RIVER TRAIL SITE ANALYSIS

Trail Section	Segment Length	Property Owners	Proposed Route	Existing Slopes	Potential Engineering Issues	Historic Resources	Trailheads
7	1,415 ft.	Valley Forge Railways- 615' PECO-674' PennDOT- 126'	Trail runs through Valley Forge Railways land on west side of tracks. It runs N, then turns NW in PennDOT right-of-way. The Boro's trail segment ends at Township Line Rd.	Relatively level terrain.	- Sharing right-of-way with future SVM rail line., crossing 70' - PennDOT right-of-way.	None.	Lock 59

SOURCES:
- DETAILED TOPO & FRENCH CK. CTR. PLANS, LUDGATE ENGINEERS, 2001.
- PARCEL BOUNDARIES, 5' CONTOUR TOPO, AIR PHOTOS, CHESTER COUNTY LAND RECORDS, 2004.
- FRENCH CK (PARADISE ST. EAST) & PICTA TRAILS, RRA, 2003.
- NORTHERN RELIEF RT. ALTERNATIVES, ROA, 2004.

NORTH

SCHUYLKILL RIVER TRAIL MASTER PLAN

EXISTING CONDITIONS / SITE ANALYSIS

TRAIL SEGMENT 7

Date: 6/21/05	Map #7B	Scale: 1"= 100'
Project No.: 1042.02.07	Drawn by: TWB	Checked by: RO

RAY OTT & ASSOCIATES
PLANNING AND LANDSCAPE ARCHITECTURE
17 SOUTH CHURCH STREET
WEST CHESTER, PA 19382
610.429.9993

Trail Segment 3-Map 3B

Total Trail Section Length:
1,979 feet

Property Owners:
VFR:1,793 feet, PPG:186 feet

Proposed Trail Route:
1,793 linear feet of trail should traverse VFR land formerly used for the now inactive VFR rail line. From Reeves Crossing, the SRT continues to run southwest along the creek for approximately 1,200 feet, until it turns west for approximately 600 feet. The trail then turns northwest and reenters PPG land.

Slopes:
The creek bank is somewhat steep along the entire trail section.

Crossing/Engineering Issues:
None

Historic Resources:
None

Views:
Views of creek at western edge of trail segment.

Buffering:
Landscaping and shade trees should be added where none currently exist.

Trailheads and Sidewalk Access:
No trailheads. West of the proposed District Justice office building tract, a 20-foot wide Borough easement will provide trail access from Bridge Street.

Trail Segment 4-Map 4B

Total Trail Section Length:
1,580 feet

Property Owners:
PPG: 1,104 feet; VFR: 476 feet

Proposed Trail Route:
The SRT should run north through PPG land, along French Creek, and turn east to the north side of French Creek over the Paradise Street Bridge (proposed for renovation). It should continue north for 400 feet, then reenter VFR land on the west side of the tracks. It should continue north for approximately 620 feet and then begin to turn northwest for roughly 200 feet.

Slopes:
The creek bank is generally steep along the entire trail section, however more level terrain is found within VFR land. SRT will cross approximately 40% slope in northern trail segment.

Crossing/Engineering Issues:
Creek crossing; possible right-of-way sharing with future SVM rail line; Paradise Street Bridge renovation, cross slopes.

Historic Resources:
Flywheel and smokestack

Views:
Views of creek from eastern side of creek after bridge crossing.

Buffering:
Landscaping and shade trees should be installed where none currently exist. Fence on east side of trail should be installed if SVM light rail project is implemented.

Trailheads and Sidewalk Access:
No trailheads. Sidewalk connection from French Creek Parkway.

Trail Section 5-Map 5B

Total Trail Section Length:
1,551 feet

Property Owners:
VFR:1,551 feet

Proposed Trail Route:
The entire trail section length should continue on VFR land on the west side of the tracks. The trail should run north/northeast, turn away from French Creek, and cross High Street.

Slopes:
The creek bank is less steep in this area.

Crossing/Engineering Issues:
Road crossing, sharing right-of-way with SVM rail line, trailhead location, Northern relief route.

Historic Resources:
None

Views:
No significant views

Buffering:
Landscaping and shade trees should be installed where none currently exist.

Trailheads and Sidewalk Access:
High Street Trailhead on eastern side of trail; no sidewalk connections. High Street Trail intersects to the south.

Trail Section 6-Map 6B

Total Trail Section Length:
1,492 feet

Property Owners:
Pennsylvania Railroad Company (PRC):1,492 feet

Proposed Trail Route:
The SRT should traverse PRC land on the west side of the tracks. The trail should continue to run north/northeast, and should pass the railroad tunnel to the west, then cross West Fillmore Street.

Slopes:
Slopes are less steep in this area

Crossing/Engineering Issues:
Cross West Fillmore Street, possible right-of-way sharing with future SVM rail line.

Historic Resources:
Railroad tunnel

Views:
No significant views

Buffering:
Landscaping and shade trees should be installed where none currently exist. Fence

Trailheads and Sidewalk Access:
No trailheads and no sidewalk connections.

Trail Section 7-Map 7B

Total Trail Section Length:
1,390 feet

Property Owners:
PECO: 674 feet, VFR: 590, PennDOT: 126 feet

Proposed Trail Route:
The SRT should continue to traverse VFR land. The trail should run north, then turn northwest in the area of the PennDOT right-of-way. Phoenixville Borough's portion of the SRT will terminate at Township Line Road.

Slopes:
Relatively level terrain.

Crossing/Engineering Issues:
Sharing right-of-way with future SVM rail line, crossing PennDOT right-of-way.

Historic Resources:
None

Buffering:
Landscaping and shade trees should be installed where none currently exist.

Trailheads and Sidewalk Access:
Lock 59 Trailhead located east of trail, across Cromby Road, within tract owned by the Phoenixville Iron Canal Trail Association (PICTA). No sidewalk connections.

II. ENVIRONMENTAL SITE CONDITIONS AND RELATED TRAIL DESIGN ISSUES

A. EXISTING & FUTURE ENVIRONMENTAL INVESTIGATIONS

1. Existing Investigations.

Pennsylvania's Department of Environmental Protection's (DEP) Land Recycling Program oversees clean up of former industrial sites, and proposed future site use. DEP maintains a list of contaminated sites on its internet website that is updated daily. The following sites, which are discussed in more detail below, are on DEP's list and may affect the SRT:

- French Creek Center West-Proposed Phoenix Steel Foundry (clean up completed);
- French Creek Center East-Proposed Phoenix Steel Foundry (clean up in progress); and,
- Melchiorre Construction (cleanup in progress).[4]

The Environmental Protection Agency oversees cleanup of Superfund sites, which are contaminated areas included in this federal program. No Superfund sites are located in Phoenixville Borough.

French Creek Center West and East

The French Creek Center project proposes to redevelop roughly 120 acres along the French Creek. The project will include residential, commercial, office and open space. The SRT is proposed along the south side of French Creek. The Delta Organization/Phoenix Property Group, the current site owner, describes environmental conditions at the site in the following manner:

> Since the development of French Creek Center will occur on the site of a former steel mill, which site has been in industrial use for hundreds of years, there is an obvious concern regarding the possible existence of contaminants in the soil and groundwater at the site. Phoenix Property Group ("PPG") intends to use Pennsylvania's Land Recycling and Environmental Remediation Standards Act (referred to as "Act 2") as the primary vehicle to guide the cleanup of the site, and upon satisfactory completion of the cleanup, will obtain the state law environmental liability protections afforded by Act 2.
>
> Act 2 allows property owners and redevelopers to voluntarily clean-up property to one of three different standards: namely, a Background Standard, in which contaminants at a site are reduced to background levels; a Statewide Health Standard, in which contaminants at a site are cleaned up to meet published standards; or a Site Specific Standard, in which contaminants which remain at a site are shown, through a risk assessment, not to present an unreasonable risk to human health or the environment. For certain sites, Act 2 also allows the Pennsylvania Department of Environmental Protection (DEP) to enter into Special Industrial Area Agreements which sets forth the required remediation of the site prior to the remediation being performed.
>
> Once the appropriate cleanup standard is attained, and DEP approves the cleanup, Act 2 provides state environmental law liability protection for all of the contamination identified at a site. Importantly, this state environmental law liability protection covers not only current and future owners of the site, but also to redevelopers and tenants, other entities who participated in the cleanup, and successors or assigns of the above. Such liability protections are generally important when potential lenders are considering financing developments.
>
> Act 2 also sets forth a process which redevelopers can use to clean-up properties. The first step in this process is to characterize the contamination at a site, which is then presented in a report called a "Baseline Remedial Investigation." After consultation with DEP, a cleanup standard or standards are selected and the method to achieve the standard is set forth in a report called a "Remedial Work Plan." The Remedial Work Plan is then implemented to clean up the property, and thereafter post-cleanup sampling is taken to demonstrate that the cleanup has attained one of the Act 2 standards. The demonstration of attaining an Act 2 standard is set forth in the "Final Report," which is submitted to DEP for approval. Once DEP approves the Final Report, the state law environmental liability protections provided by Act 2 are obtained.
>
> With regard to the site for the French Creek Center, several Phase I site assessments have been completed, along with some Phase II site assessments and some remediations. The most recent, in depth environmental investigations have been performed on the eastern portion of the site. These investigations revealed that the soil contains arsenic and other metals and semi-volatiles in concentrations above Statewide Health Standards. These investigations also indicated that the groundwater does not appear to be significantly contaminated. Finally, these investigations identified localized "hot spots" (e.g., oily fluids in sumps and pits, shallow pockets of contaminated soil, etc.) which will need to be properly addressed. The results of the investigations concerning the eastern portion of the site have been presented to representatives of DEP, who agreed with PPG's approach of remediating the hot spots and capping, through the use of clean fill, the remaining soil contamination at the site.[5]

2. Future Environmental Investigations.

No other contaminated sites requiring clean up according to state or federal remediation standards are located within the Borough of Phoenixville's proposed SRT corridor. Therefore, future environmental investigations of sites within the proposed trail corridor are not anticipated.

B. ENVIRONMENTAL MITIGATION

Required environmental mitigation methods for the French Creek Center property are described below.

1. French Creek Center West and East.

French Creek Center states the following anticipated required remediation tactics for the French Creek Center site.

> The anticipated remediation strategy for the French Creek Center site includes the implementation of additional testing throughout the site in order to prepare an appropriate and comprehensive Baseline Remedial Investigation. After consultation with DEP, PPG will prepare a Remedial Work Plan which sets forth the measures PPG will take to clean up the site to Act 2 standards. At this time, it is believed that the selected remediation program will include the removal and/or remediation of "hot spots," and the capping, with clean fill or paving, of any soil found to be contaminated above statewide health standards. At all times, PPG intends to comply with Act 2 in order to receive the state law environmental liability protections afforded by Act 2.[6]

E. IMPLICATIONS FOR SRT DEVELOPMENT

PPG's property is subject to DEP's cleanup standards, which requires that the land be remediated to certain levels set by the state. This provides a level of assurance that the areas to contain the SRT will be constructed in land that has been properly mitigated.

[4] *Pennsylvania Department of Environmental Protection website, Land Recycling Program, December 2003.*

[5] *French Creek Center website, http://www.deltaorg.com/subpgs/environmental.html, 2003.*

[6] *French Creek Center website, http://www.deltaorg.com/subpgs/environmental.html, 2003.*

III. TRAIL DESIGN PARAMETERS

A. POTENTIAL TRAIL USERS

When fully implemented, Phoenixville Borough's SRT segment will be part of the Schuylkill River National Heritage Area that reaches from Philadelphia to Pottsville. Trail users will be comprised of both local residents and visitors from throughout the corridor area. All potential types of trail users for non-motorized trail systems should be accommodated in the trail design. Additionally, the majority of the trail should be designed in accordance with accessibility standards of the American with Disabilities Act (ADA).

1. User Types.

The SRT should be designed to accommodate several types of non-motorized uses. These uses are described in Table 1, together with basic recommended design parameters for each use type.

Table 1: Trail Users and Standards

	Trail User Type			
	Pedestrians	**Bicyclists**	**In-Line Skaters**	**Cross Country Skiiers**
Types	Includes walkers, hikers, joggers, runners, those with baby strollers, bird watchers, etc.	Includes commuters, recreational, touring, mountain bikers, elderly and the young	Beginners, and intemediate and advanced skaters	Beginners, and intemediate and advanced skiiers
Travel/ Design Speeds	3 to 7 mph	10-30 mph	10-30 mph	moderate
Tread Width	High Use: 6'-8'	Multi-Use Trails: 12'-14'	Multi-Use Trails: 12'-14'	Two-way: 7'
Vertical Clearance	7'	8' minimum	7'	7' feet above the snow level

Source: Trails for the Twenty-First Century, Rails-to-Trails Conservancy, 2001, pp. 55-59.

Table 1 indicates that maximum speeds for trail users can reach 30 mph for those using in-line skates and bicycles, and that the minimum width to accommodate such uses is twelve feet (12'). Vertical clearance for all users should be a minimum of seven feet (7'). Trail design standards are discussed in further in the following section.

B. GENERAL TRAIL DESIGN GUIDELINES

This section discusses design recommendations from several industry sources and examines general design concerns such as safety, landscaping, accessibility and trail design within the floodplain.

1. Multi-Use Trail Construction Specifications.

It is recommended that the SRT be paved, except for areas where the trail may cross wetland areas. Generally, the trail tread width should be eight to twelve feet (8'-12') wide and constructed of either bituminous asphalt, concrete or crushed stone ("quarry" or "crusher" fines). Table 2 provides a comparison of these surface types, which are discussed below.

Table 2: Trail Surface Comparison

Surface Material	Advantages	Disadvantages
Asphalt	Hard surface, supports most types of uses, all weather, does not erode, accomodates most users simultaneously, low maintenance	High installation cost, costly to repair, not a natural surface, freeze/ thaw can crack surface, heavy construction vehicles need access.
Concrete	Hardest surface, easy to form to site conditions, supports multiple use, lowest maintenance, resists freeze/thaw, best cold weather surface	High installation cost, costly to repair, not a natural looking surface, freeze/thaw can crack surface, heavy construction vehicles will need access.
Crusher Fines	Supports most uses, moerately priced, com-pliments the aesthetic appeal of historic transportation corridors	Does not support inline skaters and skateboard-ers, retains moisture. Vegetation may sprout within surface, stones must be replenished every 7-10 years

Source: Trails for the Twenty-First Century, Rails-to-Trails Conservancy, 2001, pp. 69-72.

Table 2 indicates that although asphalt and concrete have higher installation costs, both materials have maintenance benefits. Crusher fines are less costly to install but do not accommodate all user types, and vegetation growth within the trail tread is likely.

Table 3 provides a comparison of the recommended standards of various agencies, and indicates that two-foot (2') wide unpaved shoulders on both sides of the trail are typical. Paved trails should be accessible to pedestrians, bicyclists and those with disabilities.

Table 3: Design Specifications Comparison

	Design Manual		
Design Feature	**AASHTO**	**Trails for the 21st Century**	**Community Trails Handbook**
Paved Width	10 feet minimum	14 ft. (10 ft. min.)	12 feet
Shoulder	2 ft. min., 3 ft. preferred	2 ft. ea. side min.	2 ft. - 5 ft. cleared each side
Horizontal Clearance	3 ft. min., 6 ft. max.	7 feet	n/a
Vertical Clearance	8 ft. min, 10 ft. -underpasses	8 ft., 10 ft. min. for tunnels	8 feet
Maximum Grade	5%	5% max., 3% preferred	5% for ADA users
Horizontal Alignment	36 ft. curve radii/12 mph	n/a	n/a

Sources: Guide for the Development of Bicycle Facilities, AASHTO, 1999; Trails for the Twenty-First Century, Rails-to-Trails Conservancy, 2001; Community Trails Handbook, Brandywine Conservancy, 1997.

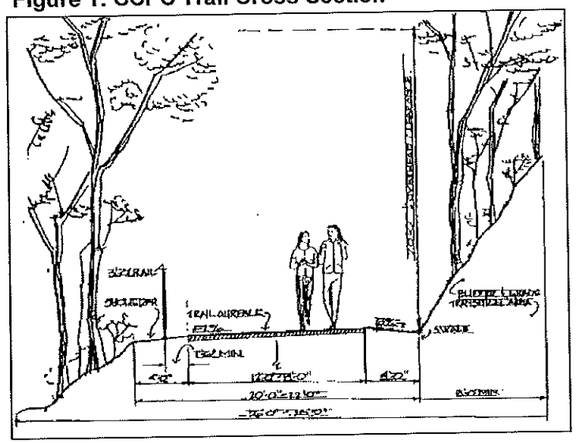
Chester County Planning Commission

Figure 1 shows the Chester County Planning Commission's (CCPC) cross section drawing for a multi-use trail. CCPC's trail construction standards for primary trails include the following recommendations:

- eight foot to ten foot (8'-10') trail tread
- two foot to four foot (2'-4') maintained shoulder
- twelve foot to fourteen foot (12'-14') landscaped buffer area

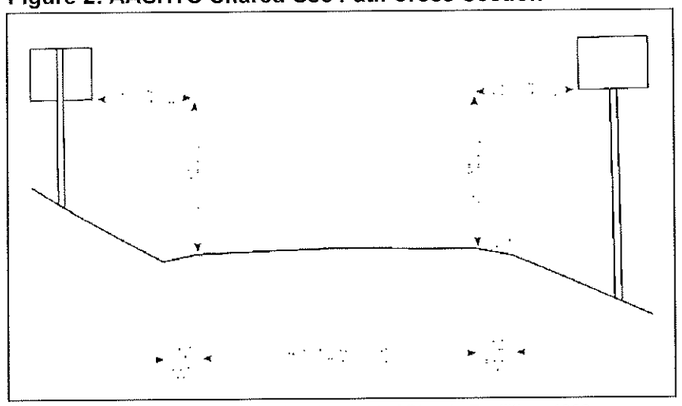
This design will provide for a total trail right-of-way width of 22' to 42'(Strategic Plan, CCPC, 1999).

Figure 1: CCPC Trail Cross Section



Source: Phoenixville Strategic Plan: French Creek Corridor & Downtown Business District, Phoenixville Borough, 1999, pp. 8-21 to 8-22.

Figure 2: AASHTO Shared Use Path Cross Section



Source: AASHTO, Guide for the development of Bicycle Facilities, 1999.

American Association of State Highway Transportation Officials

The American Association of State Highway Transportation Officials (AASHTO) provides construction specifications for "shared use paths" in its 1999 publication Guide for the Development of Bicycle Facilities. AASHTO describes shared use paths as "facilities on exclusive rights-of-way and with minimal cross flow by motor vehicles."[7] The purpose of shared use paths is to allow for simultaneous use by bicyclists, pedestrians, and in-line skaters. AASHTO's construction specifications for a two-way shared use path are described as follows:

- A minimum path width of ten feet (10')
- A minimum two-foot (2') graded shoulder area on both sides of the path, with a 1:6 maximum slope
- eight foot (8') vertical clearance
- No greater than 5% grade.

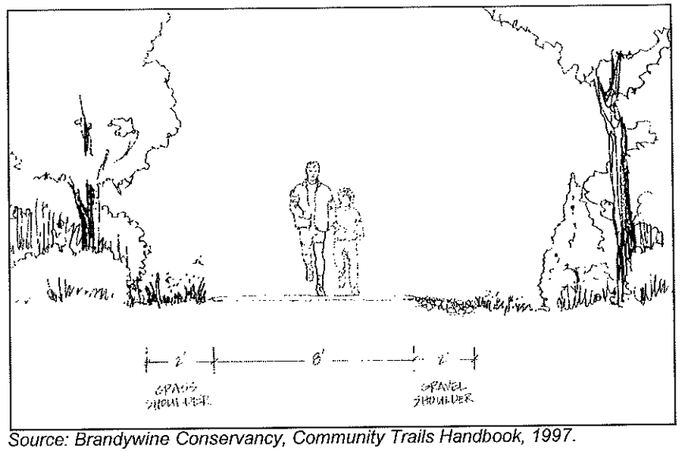
Figure 2 shows AASHTO's shared use path cross section, which includes the ten-foot (10') recommended trail tread with minimum three-foot (3') shoulders, and graded areas to promote drainage.

Brandywine Conservancy

Figure 3 shows the Brandywine Conservancy's typical trail cross section. Its 1997 publication Community Trails Handbook, provides recommended non-motorized trail use construction specifications, which are recommended for an urban community such as Phoenixville Borough. These recommendations are summarized below:

- twelve–foot (12') trail surface width
- eight-foot (8') vertical clearance
- two-foot to five-foot (2'-5') cleared shoulder area

Figure 3: Brandywine Conservancy Trail Cross Section



Source: Brandywine Conservancy, Community Trails Handbook, 1997.

Additionally, the Brandywine Conservancy recommends the use of crusher fines for trail surfacing, and states that they are "easy to handle, moderately priced, low maintenance and can accommodate a variety of users." However, they are not recommended for high speed bicycling and are unusable for in-line skaters.[8]

Engineers must be consulted during trail construction design, which will include the design of trail drainage. Proper drainage of surface and subsurface water is an important consideration in trail design, construction and management. Improper drainage will detrimentally impact the trail's surface and subgrade. Proper drainage reduces erosion, mitigates the impact of flooding, and maintains water quality. [9]

2. Trail Safety.

Providing a safe and secure trail will facilitate trail use. Primary trail safety issues concern lighting and visibility. The Brandywine Conservancy offers the following suggested practices regarding trail safety and security:

- A visually accessible trail deters crime; trails should be visible to and from nearby roads and buildings.
- Place parking facilities and trail access in areas of high visibility with an on-going human presence.
- Trail use should be limited to between sunrise and sunset to reduce visibility problems.
- Avoid or minimize road crossing and trail intersections.
- Grade crossings should be provided with signage, adequate visibility and crosswalk striping.[10]

Additional steps that can be taken to improve trail safety include installation of emergency call boxes and lighting. Lighting should be properly designed so as not to create shadows or cause glare. Lighting is already provided along the constructed section of the SRT within the Foundry parcel, and this type of lighting should be provided along the SRT where appropriate.

3. Landscaping.

Landscaping plays several roles in trail design. Proper landscaping can provide shade, block the wind, and contribute to trail safety. The Brandywine Conservancy recommends the following suggested practices regarding trail landscaping and vegetation:

- Leave at least a five-foot (5') groomed area adjacent to the trail to reduce potential hiding areas.
- Deciduous shade trees can be planted to reduce the temperature along the trail in the summer months.
- Evergreen trees can serve as wind blocks for the trail in the wintertime.
- Trails should provide for adequate access for safety patrols, both vehicular and bicycle.[11]

4. Accessibility.

The Borough wishes to provide trail access to all potential users, and because the SRT is a publicly funded trail it is required to provide access and accommodations to the physically disabled. In order to accommodate the physically disabled on the trail properly, the following design parameters should be followed:

- Wheelchair users prefer hard surface trails.
- Design minimum trail gradients at less than 5%.
- Wheelchair users require a 10' trail tread width.
- Provide trail gates, ramps and designated ADA parking areas at trailheads.[12]

[7] Guide for the Development of Bicycle Facilities, AASHTO, 1999, p. 33.

[8] Community Trails Handbook, The Brandywine Conservancy, 1997, pp. 52-53.
[9] Community Trails Handbook, The Brandywine Conservancy, 1997, p. 52.

[10] Community Trails Handbook, The Brandywine Conservancy, 1997, pp. 49-50.
[11] Community Trails Handbook, The Brandywine Conservancy, 1997, p. 49.
[12] Community Trails Handbook, The Brandywine Conservancy, 1997, p. 51.

All facilities that are intended to provide access or accommodation to the physically disabled must be designed in accordance with Americans with Disabilities Act (ADA) standards and requirements.

5. Trails in the Floodplain.

Some of Phoenixville Borough's SRT is proposed to be constructed within the French Creek floodplain. Because floodplains are sensitive environmental features, special care must be taken when disturbing these areas. The Brandywine Conservancy provides several basic rules to follow when designing trails within floodplains, as set forth below:

- Whenever possible, stay out of sensitive natural areas such as wetlands. Locate trails on the edge or adjacent to these areas.
- Limit crossing a floodplain by trails; position trails at the edge of floodplains, not at their core. If a crossing is required, use erosion resistant materials.
- If gravel, concrete, or asphalt is necessary for construction, remove an equal amount of floodplain material to maintain an unimpeded floodway.
- If trails must be constructed in wet areas, bridging or boardwalks should be used.
- When the crossing the watercourse, the bridge should span both the watercourse and the floodplain.
- Permitting may be required for construction activities within the floodplain.[13]

In general, the SRT will be designed to follow the top of bank of the French Creek, to avoid the need for benching (excavating to create a level area) the stream bank and to help avoid flooding problems. During the final design of the trail, engineers must be consulted to determine the best design of the trail within the floodplain.

C. GENERAL TRAILHEAD DESIGN GUIDELINES

Trailheads are areas from which the trail can be accessed. Certain amenities and support facilities, such as parking areas and restrooms, may be provided depending on the type of trailhead. General trailhead design guidelines from several sources are described below.

1. Phoenixville Strategic Plan: French Creek Corridor & Downtown Business District.

In 2000, the *Strategic Plan* was prepared to guide the redevelopment of the French Creek Corridor, and included recommendations for trailhead design. These recommendations are set forth below.

Trailheads will vary in complexity and in overall cost based on their location and potential level of use and function. Therefore, trailheads are separated into two categories: Major and Minor. A minor trailhead simply provides access to the trail with a minimum amount of amenities and serves a maximum of two trails. A major trailhead generally serves a minimum of two trails and is considered a focal point or primary feature. The Foundry Trailhead is the only facility...which is designated as a Major Trailhead.

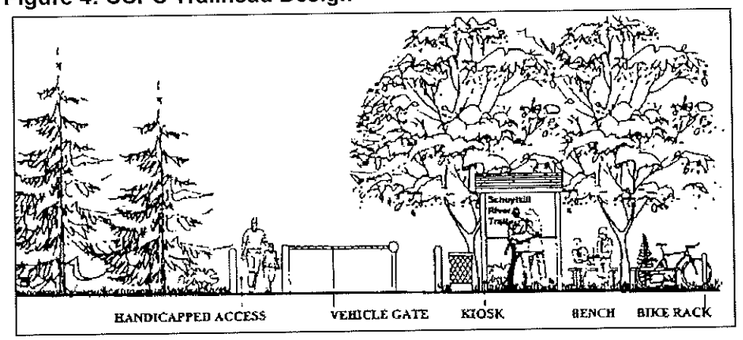
At a minimum, a trailhead should be equipped with the following facilities:

- Trash receptacles;
- Signage to direct potential trail users to and through the trail system;
- Connector trails or transition areas to the main trail to ensure safe merging by trail users;
- Gated vehicular barriers to prevent unauthorized access by motor vehicles, while still allowing access to trail maintenance vehicles or emergency vehicles; and,
- Handicapped access to the trail system including a gate with an appropriate width to accommodate a wheelchair and appropriate surface treatment and parking facilities within 100 feet.

The following facilities should be considered for implementation where a trailhead is designed as a major trailhead or primary feature (such as the Foundry Trailhead):

- Maneuvering room for vehicles, pedestrians, bicyclists, and associated recreational equipment;
- Parking stalls for automobiles and medium security bicycle racks;
- Information booths or kiosks;
- Drinking fountains;
- Landscape plants;
- Security fencing and lighting; and,
- Restrooms.[14]

Figure 4: CCPC Trailhead Design



Source: CCPC, Community Planning Handbook.

Figure 4 shows CCPC's recommended trailhead facilities, including a bike rack, information kiosk, benches, trash receptacles, bollards and landscaping.

2. Rails-to-Trails Conservancy.

In 2001, the Rails to Trails Conservancy published Trails for the Twenty-First Century, (TTFC) a guide for trail master planning. TTFC, like the *Strategic Plan*, recommends labeling trailheads as Major or Minor access points. TTFC recommends the following with regard to trailhead facilities:

- Locate major trailheads at heavily used access points;
- Link the trailhead to as many transportation systems as possible;
- Parking areas should be simple, designed in harmony with the surroundings and should contain one ADA-accessible space for every twenty-five (25) spaces;
- Water fountains spigot heights: 42" for adults, 36" for ADA access with 27" below the basin for wheelchair pull-up, 30" for children;
- Locate water fountains four (4) feet off the pathway;
- Locate benches according to views or protection from sun or wind;
- Make sure benches are installed so that rain and snow drains from the seat;
- Locate bike racks as close as possible to destinations without interfering with traffic flow; and,
- Locate picnic areas away from hazardous areas and so that they do not interfere with trail activities.

[13] Community Trails Handbook, *The Brandywine Conservancy, 1997, p. 48.*

[14] *Phoenixville Strategic Plan, Second Draft, December 1999, p. 8-23.*

Table 4 provides recommended facilities for both trailhead types. Major trailheads are recommended to provide parking, picnic and seating areas, in addition to the facilities listed in the table for minor trailhead facilities. Minor trailhead facilities should include a restroom, trash receptacles, tire pump and vending machines.

Table 4: Trailhead Facilities

Major Trailheads	Minor Trailheads
Sitting areas	Restrooms
Shade shelters	Drinking fountain
Picnic Areas	Phone
Informational Signage	Recycling receptacle
Interpretive Signage	Bike tire air pump
	Vending machines

[1] Trails for the Twenty-First Century, Rails-to-Trails Conservancy, 2001, p. 94.