• While the railroad tracks and railroad ties have been removed along the entire length of the Cedar Hollow Segment, there are a number of places along the trail where obstructions exist due to fallen trees, encroaching vegetation and dumping by adjacent land owners. In one area, someone constructed a small dam across the trail that backs up stormwater along a portion of the trail just south of St. John’s Road. At certain locations along the trail, grading improvements will be needed to ensure stormwater flows off the trail surface properly instead of puddling on the trail as it does now.

• Determination of Path width and surfacing materials will be addressed during the subsequent engineering design phase.

• Options for crossing Indian Run Road, as a private road, will need to be researched and explored during the future design and engineering phases.

**Trail Specifications**

The surface and width of the walking path will be determined during the subsequent engineering and design phase and may include accommodating bicycles and pedestrians while also protecting natural resources and the scenic beauty along the spur. The accompanying graphic shown earlier illustrates conceptual specifications for converting the old railroad bridge over Route 202 to trail use.

Bridges of this size and type needed to span Swedesford Road vary widely in cost depending on the specifications required. For example, a steel bridge at the full trail width of 12’ that can accommodate a maintenance vehicle will be much more expensive than a bridge 8’ wide that is only planned for pedestrian and bicycle use.

**Trail Support Facilities**

• A trailhead that features a small group of benches at the junction between Cedar Hollow Trail Segment and Chester Valley Trail with wayfinding signs and an interpretive sign describing the former Warner Spur rail line.
• Directional signs pointing to pedestrian openings from the trail into each of the three Open Land Conservancy preserves along the trail route.
• An interpretive sign at the point where the Cedar Hollow Segment crosses Valley Creek.
CONNECTION BETWEEN THE CEDAR HOLLOW SEGMENT AND VALLEY CREEK SEGMENT

Trail Alignment, Type and Use

The Cedar Hollow Segment in Tredyffrin Township and the Valley Creek Segment along Route 29 in East Whiteland Township will run parallel to each other approximately 1.25 miles apart. Undeveloped land between the northern end of the Cedar Hollow Segment and the northern end of the Valley Creek Segment in East Whiteland’s Valley Creek Park provides the opportunity to link these two components of the Patriots Path with a 12' wide, paved multi-use trail.
As described previously, the northern terminus of the Cedar Hollow Segment is on the Church Road side of the Forcine Concrete property. From this point, the connection between the two spur trails would begin by constructing a decorative crosswalk across Church Road to enter cleared but undeveloped land at the east end of the Atwater Business Park site. Atwater is an office campus development that fronts on Route 29. The developer of the Atwater Business Park plans in the future to construct additional office space on the site. He has expressed interest in coordinating with East Whiteland Township about the appropriate mix of trail corridor and other open space that should be preserved as part of the site’s longer range development.

Once the trail enters the eastern side of the Atwater property, it should turn in the southwestern direction to skirt the edge of a former quarry on-site now called Atwater Lake. In this vicinity, the trail begins to climb a grade. Two scenic overlooks are proposed that will look down upon the old quarry. From there, the trail should proceed southward through a wooded portion of the Atwater site. As the trail approaches Valley Creek, it should turn due west (still remaining on Atwater property) to parallel the course of Valley Creek into the grounds of Valley Creek Park. Once inside the park, the trail should proceed across open meadow to the park’s natural amphitheater area and main parking lot.

Road Crossings

Church Road is the only road crossing involved in the connection between Cedar Hollow Segment and Valley Creek Segment. This should be a decorative crossing. Beyond that, removable bollards should be placed at the edge of the Atwater property that will let pedestrians and bike riders in but keep unauthorized vehicles out.

Trail Links to Adjacent Locations

Between Atwater Lake and Valley Creek, the portion of the Atwater property through which this trail connection could pass is adjacent to the historic St. Peters Church and Cemetery property on St. Peters Road. Provided church authorities are amenable, a short path link should be established to bring trail users to this site. The church and cemetery are situated in an attractive wooded setting and listed on the National Register of Historic Places.

The Atwater office campus currently has its own pathway system to which our proposed trail connection should link.
AN INFORMAL CONNECTION

Open space permanently preserved by two non-profit organizations in the immediate area of the Patriots Path creates the unique opportunity to experience a journey on foot through some of the Tredyffrin-East Whiteland region’s most unspoiled natural area. No paved paths are proposed through this existing green ribbon. It is not envisioned as part of the Patriots Path system and it is not suited for bicycle travel. However, people interested in a hike through a truly natural setting should be made aware of an existing opportunity to travel from the northern end of the Cedar Hollow Segment to East Whiteland’s Valley Creek Park via an informal footpath that closely parallels Valley Creek.

This trek begins just south of the intersection of St. John’s Road and Church Road at the Open Land Conservancy’s Cedar Hollow Preserve. By following the walking paths within this preserve, hikers can make their way a short distance south to a point on Church Road just opposite Bulls Run Road. While nominally a Tredyffrin Township right-of-way, Bulls Run Road is a short gravel stub road that primarily serves just one property: a single-family detached home situated adjacent to where the road terminates less than one-quarter mile from its intersection with Church Road. The non-profit Trout Unlimited holds an easement directly alongside Valley Creek that extends from the foot of Bulls Run Road to Valley Creek Park, a distance of approximately 1.1 miles. A narrow, dirt footpath that follows the twists and turns of Valley Creek through a hardwood forest runs the entire length of this easement. In addition to its natural amenities, crumbled foundations and other archeological remnants of a farm that once operated there are visible at points along this walk.

Special Design Problems

Most of the Patriots Path system will be established along former rail lines or along existing road rights-of-way. As a former heavy industrial site, the Atwater property presents certain design challenges not encountered along these other, improved corridors. These matters include the following:

- Certain large stormwater drainage swales cross the proposed trail route
- Topography is steep in certain areas near the former quarry
- Running a trail near a deep, watered quarry raises security and safety concerns that need to be adequately addressed.
The connection between two Patriots Path trail segments made possible by using the Atwater property and the stunning scenic views afforded by the former quarry are unique opportunities. At the same time, building a trail across the Atwater property in the manner proposed will require more engineering than most other sections of the Patriots Path system.

**Trail Specifications**

The entire length of the connection between the Cedar Hollow Segment and the Valley Creek Segment should be a paved multi-use trail at the full 12’ width.

**Trail Support Facilities**

The following support facilities should be installed along the connection between Cedar Hollow Segment and Valley Creek Segment:

- Directional/wayfinding signs to Valley Creek Park
- Trail crossing warning signs along the trail and Church Road at and in advance of the crossing
- A sign warning bike riders to dismount and walk bikes across Church Road if needed
- Stormwater culverts that cross drainage swales on the Atwater property
- Scenic overlook areas of Atwater Lake with safety railings, seating, trash receptacles and interpretive signs about the former quarry
- Interpretive signage for historic St. Peters Church and Cemetery
- Directional/wayfinding signs to the Cedar Hollow Segment from the Valley Creek Segment and to the Valley Creek Segment (from the Cedar Hollow Segment).
THE VALLEY CREEK SEGMENT

Trail Alignment, Type and Use

The Valley Creek Segment of the Patriots Path trail system is in East Whiteland Township along Route 29. This trail section begins at the point where the Chester Valley Trail intersects the west side of Route 29. It extends to Valley Creek Park, which is East Whiteland’s largest Township-owned recreation site. The entire length of the Valley Creek Segment is envisioned as a multi-use trail for both pedestrians and bike riders.

In overall distance, the Valley Creek Segment is a short section of trail. However, along its 1.0-mile length adjacent to Route 29, the Valley Creek Segment parallels one of the most heavily traveled portions of four-lane roadway in the Great Valley region. The Route 29 interchange of Route 202, the Great Valley Corporate Center, and the large mixed use Uptown Worthington development (now under construction) are each major generators of vehicular traffic to this very busy, highly congested area.
Approaching from the west, the Chester Valley Trail right-of-way intersects Route 29 a short distance south of Lindenwood Drive. When completed, the Chester Valley Trail will cross Route 29 at-grade between Lindenwood Drive and Matthews Road on the south side of this intersection. From there, the Chester Valley Trail is being slightly rerouted from its original right-of-way to become part of the internal path and road system being built through the Uptown Worthington development.

The Valley Creek Segment of the trail should begin on the west side of Route 29 at Lindenwood Drive. Along the west side of Route 29, the trail should utilize well-marked road shoulder to get from Lindenwood Drive to the bridge that carries Route 29 over Route 202. This bridge is currently being reconstructed. When reconstruction is finished, the bridge will include a sidewalk on its west side that can accommodate the trail. Between Lindenwood Drive and the bridge, the trail must also cross the off-ramp from northbound Route 202 to Route 29.
On the north side of the bridge carrying Route 29 over Route 202, the Valley Creek Segment can resume use of road shoulder on the west side of Route 29 to advance the trail to Swedesford Road, which is the next road the trail must cross. Trail users crossing Swedesford Road will be assisted by the concrete island that currently exists in the middle of this intersection to help control vehicular traffic. This island will provide a safe place of refuge for pedestrians to pause before completing the crossing.

The next leg of the trail is between Swedesford Road and Liberty Boulevard. A large office building occupies that entire stretch of Route 29 frontage. The trail can utilize a widened version of the existing sidewalk/trail that currently runs along that whole frontage from Swedesford Road to Liberty Boulevard.

Still on the west side of Route 29, the trail should cross from the south side to the north side of Liberty Boulevard and continue to Valley Stream Parkway on new sidewalk being built as part of a new phase of Great Valley Corporate Center. The trail should then cross at grade from the west side to the east side of Route 29. Once on the east side of Route 29, the trail should cross Valley Stream Parkway and utilize road shoulder again to reach the entrance driveway to East Whiteland Township’s Valley Creek Park.

### Road Crossings

The Valley Creek Segment of the Patriots Path will require five road crossings on the west side of Route 29:

- Lindenwood Drive
- The off-ramp from northbound Route 202 to Route 29
- Swedesford Road
- Liberty Boulevard
- The trail will then cross from the west side of Route 29 to the east side. On the east side of Route 29, the trail will then need to cross Valley Stream Parkway.

Lindenwood Drive is a well-landscaped, two-way driveway in and out of Valleybrooke Corporate Center, a moderate-sized office park. The road crossings at the Route 202 off-ramp, Swedesford Road, and Liberty Boulevard are each at high traffic intersections. At the intersection of Route 29 and Liberty Boulevard, there needs to be a crossing. Across Route 29 in the east-west direction, a crossing should be established at Valley Stream Parkway, which is an access way in and out of the Valley Creek Corporate Center. No further crossings will be required before terminating the trail at the driveway of Valley Creek Park.
Each crossing identified above should receive the decorative design treatment discussed elsewhere in this plan. Because it is an at-grade crossing of a major roadway, the Route 29 east-west crossing should be larger and more pronounced than the other crossings along this segment.

**Trail Links To Adjacent Locations**

The Route 29 corridor along the Valley Creek Segment is highly developed and still growing. The potential exists to connect the trail to several adjacent locations:

- A utility right-of-way exists directly across Route 29 from the driveway of Valley Creek Park. Some of the area within this right-of-way is steeply sloped. However, this short right-of-way could provide a direct connection westward to the offices, residential neighborhoods and other locations in the vicinity of the Old Morehall Road and Lapp Road intersection.

- Uptown Worthington is situated in the southeast quadrant of the intersection of Route 29 and Matthews Road. A trail loop that also includes the portion of the Chester Valley Trail to be built through that development would be possible.

- Just north of Valley Stream Parkway, the Valley Creek Segment runs right by the existing part of the Great Valley Corporate Center located on the east side of Route 29. It would be logical to tie the trail into the pathway/sidewalk/open space system already established within that development. In addition, there is a privately-owned softball field called Siemens Field in this part of the Great Valley Corporate Center. The field is situated on a parcel directly adjacent to Valley Creek Park. A short offshoot path should be built there to provide an easily walkable link between Siemens Field and Valley Creek Park.

- An additional phase of the Great Valley Corporate Center is being developed on the west side of Route 29 between Liberty Boulevard and Valley Stream Parkway. The Valley Creek Segment should include a link to the internal sidewalk/path system being constructed as part of this new office park development.
Special Design Problems

The majority of the proposed Valley Creek Segment will need to be along the shoulders of Route 29. These shoulders are wide enough in nearly all places to establish a 10' to 12' trail. The primary problem is how best to separate this trail from the adjacent vehicular travel lanes on Route 29. This is an important concern because of the significant daily volume of higher speed car and truck traffic that runs along this heavily traveled roadway. The safest solution will be to mark the pavement along the trail lane and separate the trail from adjacent vehicular lanes by means of a raised reflective marker and white thermo-plastic paint stripe. The raised marker should be placed on the vehicular side of the paint stripe.

Trail Specifications

On the west side of Route 29, the trail will use both road and shoulder and a widened version of existing and planned sidewalk. On the east side of Route 29 the trail will be built along road shoulder. Based on the specific section concerned, the trail should be between 8' and 12' in width.

Typical Section of Route 29 (looking north)
Trail Support Facilities

• For parking and restrooms, trail users along the Valley Creek Segment can use the facilities at Valley Creek Park. Signs directing users to these facilities should be posted at both ends of this trail segment.

• A four-way stop/pedestrian-only phase should be added to the traffic signals at each signalized intersection where a trail crossing will occur: Lindenwood Drive, Swedesford Road, Liberty Boulevard, and Valley Stream Parkway.

• Signs identifying the Valley Creek Segment of the Patriots Path trail system should be added at both ends of this trail leg (at Valley Creek Park and at Lindenwood Drive).

• The approaches in both directions to all road crossings will require signage.

• Signs identifying the trail route will be helpful, especially at the Route 29 east-west crossing.

• The feasibility of establishing a trailhead near the entrance to the new Uptown Worthington development should be explored.
THE MALVERN SEGMENT

Trail Alignment, Type and Use

The Malvern Segment of the Patriots Path system will extend from the point where the Chester Valley Trail intersects Route 29 in East Whiteland Township to the Paoli Battlefield and Randolph Woods, two public open spaces in Malvern Borough. The 1.4- mile Malvern Segment is the only part of the Patriots Path trail that will extend south of the Chester Valley Trail. All other parts of the system will be north of the Chester Valley Trail. The Malvern Segment will be designed for both bike riders and pedestrians. For most of its length, the Malvern Segment will accommodate both types of users side-by-side. However, pedestrians will need to be separated from bike riders in some short sections.
The Malvern Segment will begin in East Whiteland Township on the east side of Route 29 at the point where the Chester Valley Trail will cross Route 29 and enter the Uptown Worthington development. Southward along the east side of Route 29, the trail (for both pedestrians and bike riders) should be established on the new sidewalk now under construction from Uptown Worthington to Wyeth Drive.

To augment the new sidewalk being provided to Wyeth Drive, the developer of the hotel project at Route 29 and Route 30 is constructing sidewalk on the east side of Route 29 between Wyeth Drive to Route 30. Thus, the trail can be accommodated on Route 29 on sidewalk all the way from the entrance of Uptown Worthington to Route 30.
Route 29 terminates at Route 30. The signalized intersection of Route 29 and Route 30 brings together two highly traveled four lane roadways. From the east side of Route 29, the trail should extend southward across Route 30, via an existing concrete traffic island, to a parking lot that serves a small commercial office building situated on the south side of Route 30.

An elevated portion of the Norfolk Southern Railroad runs across the back of this parking lot. Years ago, Route 29 (Old Morehall Road) extended through a tunnel constructed beneath this elevated rail line. The tunnel is now blocked from road bed to ceiling with fill and the entrances to both sides of the tunnel are overgrown with vegetation. Hopefully, railroad officials and other relevant parties can work together to get this tunnel unblocked and reopened for future trail use.

The tunnel emerges on the south side of the railroad embankment to a parcel now used for access and parking by the adjacent General Warren Inne. This historic restaurant fronts on Old Lancaster Pike and is located in what today is a residential neighborhood. It was a well known landmark during the American Revolutionary War era.
From the General Warren Inne, the Patriots Path should run on the north side of Old Lancaster Pike to Old Lincoln Highway on new sidewalk being constructed there by the developer of an approved office park at the northwest corner of Old Lancaster Pike and Old Lincoln Highway.

Beginning at the intersection of Old Lancaster Pike and Old Lincoln Highway, the trail should travel southward along the west side of Old Lincoln Highway across the East Whiteland Township - Malvern Borough boundary to Bridge Street in Malvern Borough.
Old Lincoln Highway is somewhat steep in this area but has a wide road shoulder. If repaved and striped that shoulder can accommodate both bike riders and pedestrians from Old Lancaster Pike to Bridge Street. Some of that distance currently contains sidewalks.

The sidewalk is already in place from Margaret Lane to Daisy Lane. Some sidewalk exists near Bridge Street. Otherwise, the road shoulder will suffice for trail purposes.

The segment of the Patriots Path from Bridge Street southward into the heart of Malvern Borough will have a distinctly different, urban character not found elsewhere in this trail system. The trail will be much narrower. It will be confined to existing sidewalks due to a narrow cartway without shoulders that is hemmed in on both sides by development. Pedestrian trail users will need to share the sidewalk with Malvern’s many other daily pedestrians. Bike riders will need to share the narrow roadway with motorists or signs could be posted directing them dismount and walk on the sidewalks rather than ride.

The recommended trail route from the intersection of Old Lincoln Highway and Bridge Street to the Malvern business district is along the west side of Bridge Street. The trail should be established on existing sidewalk there, including the sidewalk over the bridge that spans the SEPTA line.

Bridge Street terminates at King Street in downtown Malvern. Still using the sidewalk for commuters and shared use of the road cartway for bike riders, the trail should be established on both sides of King Street to Warren Avenue where it will turn southward. Trail users traveling along King Street from Bridge Street to Warren Avenue would use the north side of King Street. Trail users going the opposite direction (traveling along King Street from Warren Avenue towards Bridge Street) would use the south side of King Street.
At Warren Avenue, the trail would head southward towards First Avenue using the west side of Warren Avenue. At First Avenue, trail users will have two options:

- Turn right (westward) to go to the Paoli Battlefield and Paoli Memorial Grounds, or
- Turn left (eastward) to go to Randolph Woods, a Borough-owned passive open space site.

The route to Paoli Battlefield and Paoli Memorial Grounds should split according to mode of transport. Walkers should proceed along First Avenue on existing sidewalk past Quann Park to Powelton Avenue, turn left (southward) and join an existing footpath that runs along the perimeter of the Battlefield to Paoli Memorial Grounds.

From the intersection of Warren Avenue and First Avenue, bike riders should use the wide, low-traffic cartway of First Avenue to proceed past the Paoli Battlefield and access the Paoli Memorial Grounds at the western end of First Avenue. An informal footpath entrance has been worn into the Paoli Memorial Grounds at this location. It should be formalized to accommodate bike riders. If bike riders wish to visit the Paoli Battlefield once they have reached Paoli Memorial Park, they must then dismount because the footpath through the Paoli Battlefield is posted for walkers only.

As noted above, trail users at the intersection of Warren Avenue and First Avenue do not necessarily have to turn west to go to the Paoli Battlefield and/or the Paoli Memorial Grounds. Instead, they can go east to Randolph Woods. Bike riders can use that road’s low-traffic cartway. Pedestrians should be accommodated on sidewalk. That sidewalk exists on the north side of First Avenue for only one block: the block between Warren Avenue and Channing Avenue. Sidewalk will need to be constructed on the rest of the First Avenue stretch between Channing Avenue and the Ruthland Avenue entrance to Randolph Woods.
Trail Links To Adjacent Locations

The portion of Route 29 from Uptown Worthington southward to Route 30 is lined on both sides with commercial uses. There would seem to be little demand for connecting the trail to any of these parcels with the exception of the Wyeth Pharmaceuticals plant. The potential exists to provide an entry from the trail to this property via the sidewalk that exists along the south side of Wyeth Drive, the plant’s main driveway.

On the south side of Route 30 at its intersection with Route 29, there is an old driveway that leads westward to the New Century Shopping Plaza. This is a potential link for connecting trail users with nearby retail uses.

On the south side of the blocked tunnel through the Norfolk Southern Railroad embankment, the trail connects directly with property used by the General Warren Inne. In addition to its historical interest as a Revolutionary War era rest stop, this restaurant may attract trail users looking for a unique lunch or dinner location.

Old Lancaster Pike, Old Lincoln Highway and Bridge Street along the proposed trail route do not contain notable adjacent uses the trail should connect with, except for Rubino Park at Old Lincoln Highway and Bridge Street.

Once the trail reaches King Street in Malvern, there are a host of commercial and historic attractions for trail users to experience. In addition to the Paoli Battlefield, the Paoli Memorial Grounds and Randolph Woods, which are each noted above, these attractions include:

- The various eateries and other retail establishments found in Malvern’s downtown business district
- Burke Park at Warren Avenue and Roberts Lane
- Horace J. Quann Park at Warren Avenue and First Avenue.
- The Malvern Borough Municipal Building and Malvern Public Library at Warren Avenue and First Avenue.
Road Crossings

The Malvern Segment of the Patriots Path will require the following road crossings in order to follow the trail route described above:

- Route 29 & Wyeth Drive
- Route 29 & Route 30
- Old Lancaster Pike & Old Lincoln Highway
- Old Lincoln Highway & Daisy Lane
- Old Lincoln Highway & Margaret Lane
- Bridge Street & Broad Street
- Bridge Street & King Street
- King Street & Warren Avenue
- Warren Avenue & Roberts Lane
- Warren Avenue crossing First Avenue from the east side of Warren Avenue
- First Avenue crossing Warren Avenue from the south side of First Avenue
- First Avenue & Channing Avenue
- First Avenue & Woodland Avenue
- First Avenue & Church Street
- First Avenue & Ruthland Avenue
- First Avenue & Powelton Avenue
- First Avenue & Prospect Avenue
- First Avenue & Griffith Avenue
- First Avenue & Wayne Avenue

Each of these intersections should receive a decorative crossing. To the extent possible, these curb ramps should have detectable warnings that conform to Americans With Disabilities Act (ADA) regulations, as enforced by PennDOT.

Special Design Problems

The key to getting the Patriots Path from the intersection of Route 29 and Route 30 into Malvern Borough is the unblocking and use of the tunnel through the Norfolk Southern Railroad embankment that parallels Route 30. This will require close coordination with Norfolk Southern officials. The road crossing at the intersection of Route 29 and 30 will also require special attention because: a) it is a wide intersection; and b) it will require the use of an existing concrete traffic island to serve as a pedestrian refuge partway across the intersection.
Trail Specifications

Trail width will vary widely along Malvern Segment because several different streets are involved. Along Route 29, the sidewalk being constructed in association with the Uptown Worthington development can be from 8’ to 12’ wide depending on specific location. On Old Lancaster Pike the trail width will need to be as narrow as needed to deal with that road’s narrow and hilly cartway, steep slopes that exist near the edge of the current cartway, and the stone drainage swale that carries stormwater along parts of this road. On Old Lincoln Highway, sufficient road shoulder exists to build a sidewalk and bike lane in the 10’ wide range. On Bridge Street, King Street and Warren Avenue trail width will be confined to the width of the existing sidewalk on each of these streets. On First Avenue, somewhat more room is available on both sides of Warren Avenue to construct new sidewalks alongside the existing cartway.

*Typical Section of King Street (looking west)*
Trail Support Facilities

- More so than the other parts of the Patriots Path system, the Malvern Segment runs along several different roads. These range from an intensively used arterial (Route 30) to small, quiet residential streets in Malvern Borough near Randolph Woods. This trail segment involves several turns and much of it will need to be established on existing sidewalks. Consequently, the use of trail identification signs and trail pavement markings should be intensified in the Malvern Segment to clarify the course of the trail route.

- Randolph Woods and the Paoli Battlefield/Paoli Memorial Grounds tracts are the southern termini of the Patriots Path system. A trailhead should be established at Randolph Woods complete with parking spaces, bathroom facilities and an informational kiosk that contains maps of the Patriots Path system and related printed materials.

- Opportunities should be explored for using a portion of the parking area being constructed in the Uptown Worthington development for trail parking. Trail parking at both Uptown Worthington and Randolph Woods will establish parking at each end of the Malvern Segment.

- Excellent signs exist at the Paoli Battlefield and Paoli Memorial Grounds to interpret the events surrounding the Paoli Massacre. Other sites along the Malvern segment that offer opportunities for interpretive signage include the following:
  - The Norfolk Southern railroad tunnel
  - General Warren Inne
  - The National Bank of Malvern at the southwest corner of King Street and Warren Avenue
  - The First Baptist Church of Malvern and its cemetery on the east side of Warren Avenue between Roberts Lane and First Avenue.
  - The Malvern Borough Municipal Building and Malvern Public Library (a former school building)
  - Randolph Woods (environmental education signs)

- A directory sign should be erected to note the location of restaurants and other retail highlights along the King Street corridor in Malvern’s business district.