

Pennsylvania Community Transportation Initiative

Program Evaluation and Review of Round 1 Projects



PUB 738 (09-12)





The Smart Transportation philosophy is about partnering to build great communities for future generations of Pennsylvanians by linking transportation investments with land use planning and decision-making.



Introduction

The Pennsylvania Department of Transportation (PennDOT) introduced the Pennsylvania Community Transportation Initiative (PCTI) in 2009. The program is part of PennDOT's Smart Transportation program, which funds transportation planning and construction projects that:

- demonstrate creative and efficient ways of addressing various transportation challenges, and
- help communities better integrate transportation with local planning and goals.

The first round of PCTI funding was announced in May 2009 and more than \$57 million was awarded to 47 projects (28 construction projects and 19 planning studies). A second round of funding was announced in January 2011 and another 41 planning and construction projects were awarded a total of \$24.7 million.

An evaluation of the Round 1 PCTI projects was initiated by PennDOT in spring 2012 to identify successes and challenges in the implementation of each project and summarize the lessons learned. Telephone interviews were conducted with all project sponsors to hear firsthand their experiences regarding the implementation of each individual project and to allow for comment on the overall program. In addition, each metropolitan planning organization/rural planning organization (MPO/RPO) and PennDOT District was contacted through e-mail correspondence and requested to provide their perspective on all projects within their area.

The project profiles contained in this report were developed based on the interview responses and information provided by the MPO/RPO and PennDOT. Eighty-five percent of these projects have been completed and the majority of the remaining projects are nearing completion. The PCTI program has been very well received by the project sponsors. Many project sponsors indicated that they believed the program to be successful and inquired as to whether a future round of funding will be announced. Some project sponsors identified various challenges or barriers to implementation, some of which have been addressed prior to Round 2 of PCTI funding.



The PCTI program addresses transportation problems and supports community goals through strong local partnerships.



Comments from Project Sponsors

"The PCTI program should continue in some way, shape, or form. A future funding round should give priority to phased projects that were funded in the past rounds of PCTI."

"PennDOT did a good job reviewing the initial contract and getting everything set up for us. Overall it has been a positive experience and a good project."

"Without PCTI this project likely would not have happened for many years. This funding source allowed the project to be completed in a very quick timeframe."

"Smart Transportation and the PCTI program are good efforts of PennDOT. Continue the message for local governments and the public to hear. It would be a shame for either to discontinue."

"Very strong supporter and excited about the program. Already received funding for a different project. PCTI is a good way for PennDOT to approach projects."

"A positive experience—would like to see another round of PCTI in the future. PennDOT's emphasis was on the financial books and PennDOT auditors have visited the township office."

"The study went smoothly and the administrative work was fairly easy (project funds were administered through the MPO). Without PCTI there would not have been available resources for this type of study (park-and-ride study)."

"The complexity and time required to retain consultant services through the MPO was significantly less than what would be required if PennDOT was the sponsor, and therefore helped us get the project under way much more quickly once activities were started. Because PCTI was a new program, issues came up concerning the consultant selection process and reimbursement language. It took a lot of time to resolve these issues."

"PCTI program improvements could include more opportunities to simplify the design/construction process. The level of design details required for a small project seemed to add unnecessary complexity."

"Since the project did not go through the MPO, it took quite a bit of time to get the consultant on board."

"It was very difficult for the City to follow the PennDOT Consultant Selection Process. It took over a year to get a consultant under contract."

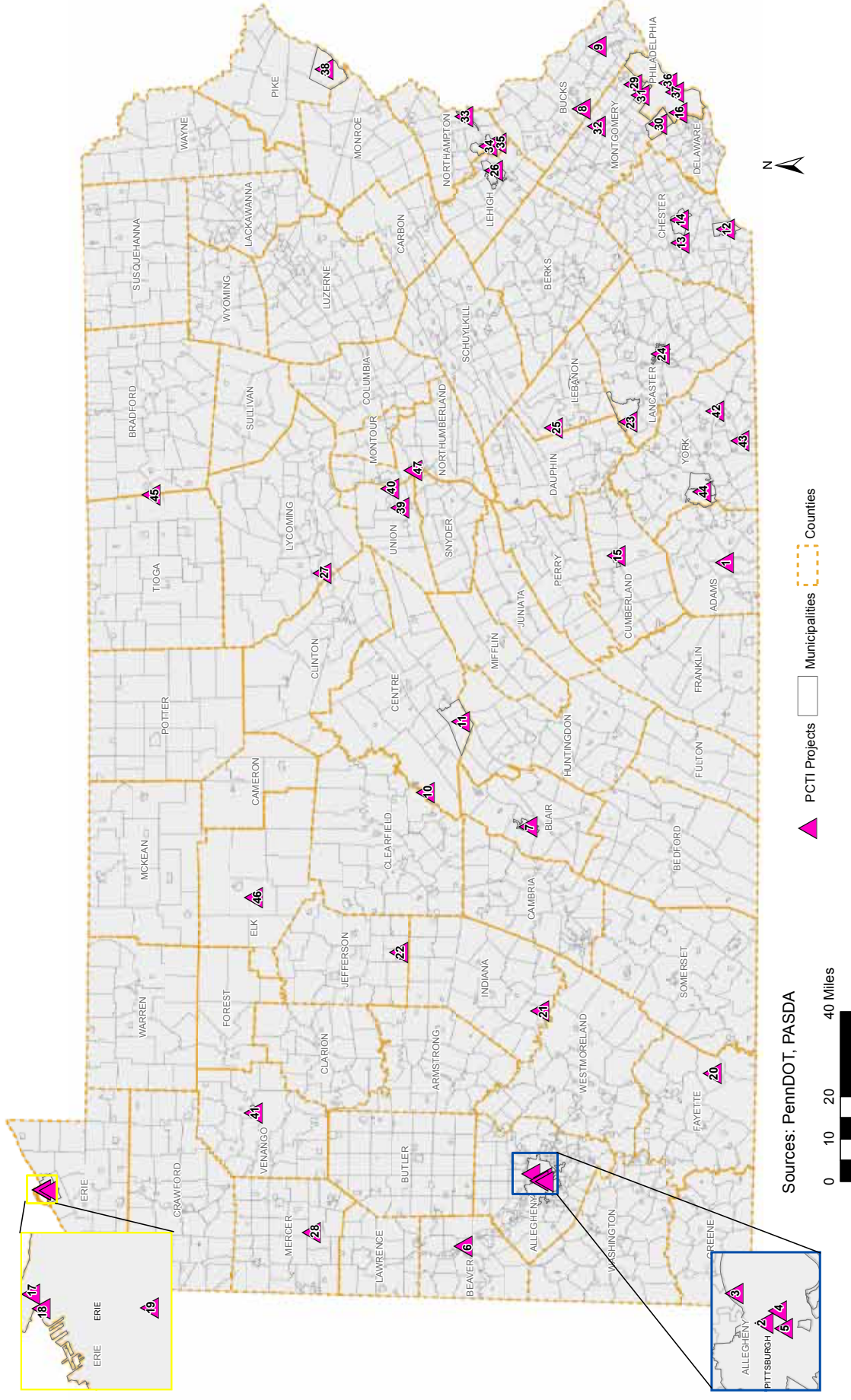
"Need to make sure that there is enough time between awarding the funding to the sponsors and the bid lettings, especially when there are complex design items such as environmental issues."

"Once the project was bid, the locals had to come up with additional funds to cover the actual bid amounts or delete planned work."

"Suggest a kick-off meeting with the entire team of all PennDOT staff and local staff to clarify expectations of all project players."

Round 1 PCTI Project Locations

Numbers correspond to list on following page, which links to numbered descriptions.



Round 1 PCTI Project List

Adams County

1. [Gettysburg – Steinwehr District Safety and Streetscape Improvements](#)

Allegheny County

2. [ActiveAllegheny Plan](#)
3. [North Park Trails Enhancement](#)
4. [Pedestrian Safety Mobility Study](#)
5. [Wood Street Corridor Upgrades and Enhancements](#)

Beaver County

6. [Rochester Roundabout](#)

Blair County

7. [Bike and Pedestrian Pathway – Penn State Altoona Campus to Downtown Altoona](#)

Bucks County

8. [Chalfont Borough Smart Transportation Project](#)
9. [Newtown Borough Integrated Transportation and Circulation Study](#)

Centre County

10. [Moshannon Valley Park-and-Ride Study](#)
11. [Old Gatesburg Road Extension](#)

Chester County

12. [Baltimore Pike and Newark Road Corridor Study](#)
13. [Brandywine Creek Trail Feasibility Study](#)
14. [Marshalltown Gateway and Pedestrian Project](#)

Cumberland County

15. [Downtown Carlisle Traffic Safety and Mobility Project](#)

Delaware County

16. [Millbourne Train Station Area Improvements](#)

Round 1 PCTI Project List, cont'd.

Erie County

- 17. [Bayfront Mobility Initiative](#)
- 18. [Port of Erie Freight/Shipping Business Plan](#)
- 19. [Union Square Redevelopment](#)

Fayette County

- 20. [Ohiopyle Borough Smart Transportation Initiative](#)

Indiana County

- 21. [Blairsville Diamond Square/Market Street Improvement](#)

Jefferson County

- 22. [Punxsutawney Transit Facility Enhancement & Mobility Improvement Project](#)

Lancaster County

- 23. [Elizabethtown Regional Traffic Signal Synchronization](#)
- 24. [Queen Street Station – Phase II](#)

Lebanon County

- 25. [Lebanon Transit Park-and-Ride Lot](#)

Lehigh County

- 26. [Lehigh Valley Waterfront Transportation/Land Use Master Plan](#)

Lycoming County

- 27. [Pine Creek Rail Trail/Jersey Shore Trail Connector](#)

Mercer County

- 28. [U.S. Route 19 Corridor Study](#)

Montgomery County

- 29. [Abington Noble Station TOD Planning](#)
- 30. [Cynwyd Trail and Station Access Improvements](#)
- 31. [Glenside Commercial District, Phase III Construction Project](#)
- 32. [Wood and Vine Street Connector](#)

Round 1 PCTI Project List, cont'd.

Northampton County

- 33. [Larry Holmes Drive Traffic Calming](#)
- 34. [South Bethlehem Greenway Phase III](#)
- 35. [Walkable Communities Initiative](#)

Philadelphia County

- 36. [Temple University Station](#)
- 37. [Vine Street Expressway Enhancement Project](#)

Pike County

- 38. [Bushkill Village Conservation Plan](#)

Union County

- 39. [Buffalo Valley Rail Trail](#)
- 40. [U.S. Route 15 Corridor Study](#)

Venango County

- 41. [Oil City Smart Transportation Study](#)

York County

- 42. [Felton Borough Main Street Corridor Planning Initiative](#)
- 43. [Southern York County Park-and-Ride Study](#)
- 44. [U.S. Route 30 Access Management Study](#)

Multiple Counties

Bradford and Tioga Counties

- 45. [Implementation of Municipal Mobility Plans – Modal Operations Rehabilitation](#)

Cameron, Clearfield, Elk, Jefferson, McKean, and Potter Counties

- 46. [Common Ground Web-Based Planning Tool](#)

Northumberland, Snyder, and Union Counties

- 47. [Lake Augusta Gateway Corridor Study](#)



Streetscape enhancements included safety improvements such as this crosswalk.

“Businesses have started staying open longer for tourist business as a result of streetscape enhancements.”

1. Gettysburg - Steinwehr District Safety and Streetscape Improvements

Gettysburg, Adams County

This project provides safety and streetscape improvements within the Steinwehr District in the Borough of Gettysburg.

- Approximately 6 months for construction
- Completed
- \$2,500,000 in PCTI funding, an additional \$3.5 million in Public Lands Highway Discretionary Funds (PLHD) will be used for Phase II

Project Benefits and Successes

Prior to the streetscape improvements, the Steinwehr District had a dated look and was not inviting to pedestrians or visitors to the Gettysburg National Military Park. The district encompasses Steinwehr Avenue from Baltimore Street to Long Lane, the first two blocks of Baltimore Pike from its intersection with Steinwehr Avenue, and the first two blocks of Taneytown Road and Washington Street from their intersection with Steinwehr Avenue. The uninviting appearance of the district, coupled with the recent move of the park's Visitor Center and Museum, led to the decline of the area. Community leaders and property owners within the district identified a need for a collaborative, forward-thinking revitalization effort. The streetscape enhancement and safety project was identified as a smart solution. The project included installation of traffic calming measures, brick sidewalks, historic lighting, street trees, benches, trash receptacles, and crosswalks with added safety features. Overall, tourists and visitors are happy with the streetscape improvements. Businesses have responded to the increase in tourism activity and started staying open longer. During construction, project administration assistance provided by PennDOT was excellent. The Borough was greatly appreciative of the quick reimbursement timeframes.

**“It will take the local
residents some time
to get used to the new
traffic calming measures.”**

Challenges and Lessons Learned

Sanitary system and stormwater design issues were identified and all sanitary lines in the project area had to be reconstructed due to stormwater improvements required by PennDOT. Unfortunately, these utility costs were not accounted for when application was made for PCTI funding. The utilities costs have been included in the PLHD grant request for Phase II. In addition, PennDOT required the Borough Engineer to participate in project team meetings, which were not budgeted for by the Borough as part of the project. In hindsight, holding a kick-off meeting and sitting down with the entire team of all PennDOT project staff and local staff to clarify expectations of all project players would have been greatly beneficial.



Deteriorating pedestrian facilities existed throughout the Steinwehr District.



The brick sidewalk design helps unify and renew the look and feel of the Steinwehr District.



“ActiveAllegheny shows how the region can be more sustainable and how people can have more transportation options and lead healthier lifestyles.”

2. ActiveAllegheny Plan

Allegheny County

ActiveAllegheny is the county’s first comprehensive active transportation plan outlining sustainable travel choices to a range of destinations. The plan implements the county’s Comprehensive Plan, *AlleghenyPlaces*, by providing a detailed plan for integrating walking and bicycling into the county’s existing transportation system.

- One year to complete study
- Completed
- \$300,000 in PCTI funding

Project Benefits and Successes

Active travel modes such as biking and walking lead to healthier lifestyles, fuel savings, and reduced air pollution. The *ActiveAllegheny* plan identifies and prioritizes active transportation action items to enhance the county’s comprehensive plan. It provides a blueprint for improved access and more sustainable travel choices to connect people to communities, work sites, transit, schools, and other destinations. *ActiveAllegheny* contains five focus areas:

1. Bike Allegheny (enhanced bicycling opportunities)
2. Walk and Roll Allegheny (pedestrian travel and ADA accessibility)
3. Other Active Transportation Opportunities (access for other non-traditional travel modes such as kayaks and skateboards)
4. Complete the Street (prototypical examples for three projects in the county)
5. Action for Active Transportation (guidance to implement action items outlined in the plan)

The development of the plan included public outreach through meetings, Facebook and Twitter, the Green and Innovation Fair, and the creation of a [website](#). Implementation of the plan has begun. Bicycle racks are now on all Port Authority buses, and grates and scuppers on every Allegheny County-owned bridge have been updated to be bicycle-friendly.



“The project empowered park users to think differently about what type of improvement projects could be accomplished in the park.”

3. North Park Trails Enhancement

McCandless, Hampton, and Pine Townships, Allegheny County

This construction project includes a network of trails for pedestrians and bicyclists in Allegheny County’s North Park to improve the safety of pedestrians and bicyclists in the park while emphasizing healthy natural surroundings for park users.

- Approximately six months for construction
- Completed
- \$580,000 in PCTI funding

Project Benefits and Successes

The project included modifying one four-lane road, Babcock Boulevard, to a two- or three-lane street with traffic calming methods such as turn pockets and a landscaped median.

The project empowered park users to think differently about what type of improvement projects could be accomplished in the park. In addition to the original planned construction of a pedestrian/bicycle trail and traffic calming methods, two traffic signal upgrades were included at the intersections of Babcock Boulevard with Ingomar Road and Babcock Boulevard with Pearce Mill Road. These intersection upgrades greatly improved safety for bicyclists, pedestrians, and motorists. The project significantly improved safety for all road users without any negative impacts on intersection level of service. Overall travel efficiency along Babcock Boulevard has been maintained.

When the application for PCTI funding was made available, County staff had just completed a “road diet” seminar provided by PennDOT. The seminar taught the importance of matching road design to its usage. This project applied some of the learned road diet concepts.

Challenges and Lessons Learned

The project sponsor noted that a future PCTI program should allow more time to conduct a study prior to construction in order to make a better application and more accurate cost estimate. More funding provided through the PCTI program would also enable communities to complete projects as planned. For aesthetic reasons the County would have preferred to have used wood-faced guiderail with steel posts instead of the typical steel face with beam guiderail, but unfortunately funding constraints prevented its usage.



“This was a collaborative effort with discussions on how multimodal mobility affects the entire community.”

4. Pedestrian Safety Mobility Study

Pittsburgh, Allegheny County

The study looked at the needs of the surrounding neighborhood to accommodate mobility access for businesses, cultural institutions, two private high schools, a significant transit corridor, and a growing cycling community.

- One-year study
- Completed
- \$150,000 in PCTI funding

Project Benefits and Successes

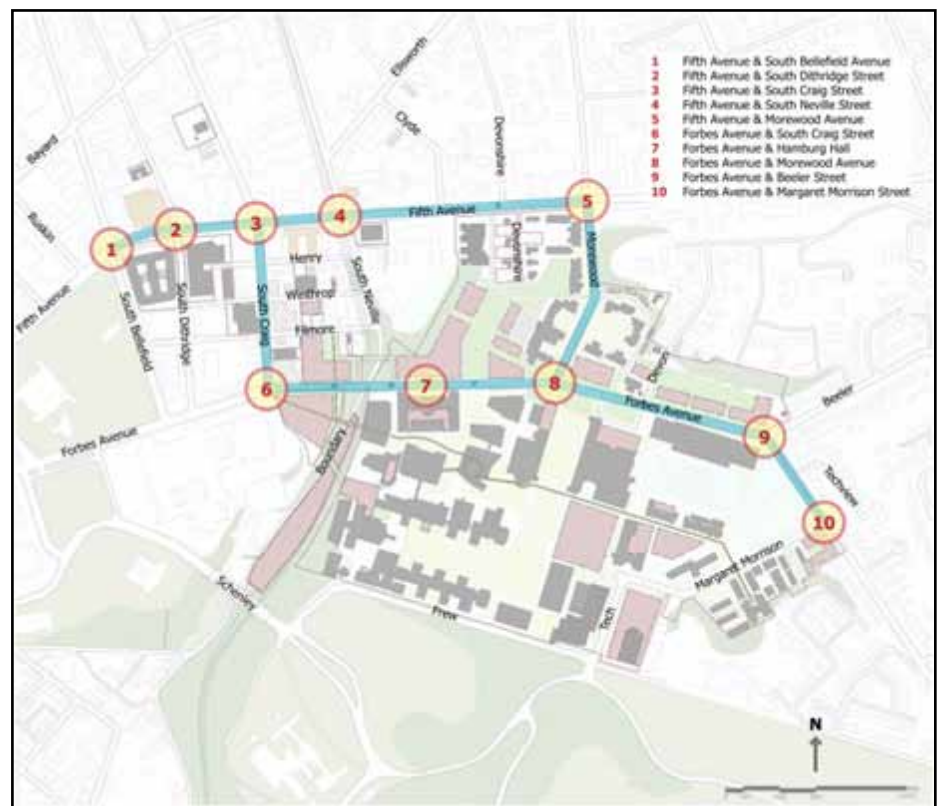
The Oakland Transportation Management Association/Carnegie Mellon University [Pedestrian Safety Mobility Study](#) addressed the impact of different transportation modes on pedestrian safety and mobility along Fifth Avenue and Forbes Avenue, the main arterials that extend through the Carnegie Mellon University (CMU) campus and connect Oakland to the eastern neighborhoods of Shadyside and Squirrel Hill. The two avenues serve as important inter-campus connections, yet also act as barriers to the campus. The study also examined South Craig Street and Moorewood Avenue, which serve as important pedestrian and vehicular connectors between the arterial streets and the campus community.

This study was a collaborative effort by institutions, community groups, residents, and other stakeholders to be engaged in discussions and plans that addressed not only pedestrian safety but looked at various modes of transportation to understand how mobility impacts the entire community. Public outreach was a significant part of this effort. A community stakeholders' committee was established to guide the study and an initial community meeting included an overview of the project purpose and some basic study goals. The community was also given the opportunity to provide feedback to help define the mobility challenges and other

known related transportation issues within the study area. CMU hosted more than 20 meetings to present their institutional master plan, which included the PCTI Oakland/CMU Pedestrian Safety Mobility Study.

Challenges and Lessons Learned

After the final report was published, one particular recommendation caused a great deal of concern among local residents. An important lesson was learned from this experience. A community presentation should have been conducted to review the final draft version of the report to get feedback on proposed recommendations and outcomes before the final report was published. Another lesson presented itself with administering PCTI as a new funding program. There were a number of administrative issues that occurred concerning the consultant selection process and the reimbursement agreement, which caused a delay in initiating the start of the study.



Study Area and CMU Master Plan for development

The project meets ADA requirements and completes the street enhancement.



“This project achieved all three goals of safety, consistency, and an attractive environment.”

5. Wood Street Corridor Upgrades and Enhancements

Pittsburgh, Allegheny County

This construction project includes milling and resurfacing of streets, installation of accessible sidewalks and curbs, addition of distinctive pedestrian-scaled street lighting, and new and efficient signaling systems.

- Anticipated 21-month construction duration
- Under way
- \$3,950,000 in PCTI funding and additional grant funds from the Heinz Endowment for design costs

Project Benefits and Successes

The project, at the intersections of Wood Street with Boulevard of the Allies and Third Avenue in the City of Pittsburgh, achieved the three main goals—Safety, Consistency, and Attractive Environment—identified at the start by the local residential and business community, including Point Park University. Overall safety for both vehicular and pedestrian traffic has been greatly improved with better lighting, enhanced signaling and controls at intersections, as well as even and well-marked paving surfaces for roads, sidewalks, and crosswalks. The design of the project provided consistency in materials and systems used. The physical environment has been updated and made much more attractive through the use of high-quality, long-lasting materials and plantings.

There were numerous meetings prior to the start of the construction project. A continual dialogue took place to keep all stakeholders in the community—especially those immediately adjacent to the project—informed on issues such as schedule, constraints, circulation, and building access.

Challenges and Lessons Learned

Most of the project challenges were clearly identified in the discovery and design phases. The different sidewalk conditions and the vaults below

Wood Street Corridor Upgrades and Enhancements, cont'd.

required various solutions that were addressed through the construction documents. The largest challenge was the need for Wood Street to remain open during construction. Construction had to be halted at numerous times due to special events such as the Pittsburgh Marathon, the Great Race, and parades that used the streets within the project area. The project duration was longer than a typical project due to these constraints.



During construction - Conestoga Building vault partially complete roof removal.



The project design elements such as the inlaid street names add a high quality touch.

Travel lanes approaching and exiting the almost completed roundabout



“This project is giving the community a sense of pride. More businesses are popping up in the downtown area as a result of the roundabout.”

6. Rochester Roundabout

City of Rochester, Beaver County

This project involved the construction of a roundabout for a six-legged intersection with intermodal components.

- Two-year construction project
- Completed
- \$1.8 million in PCTI funding, \$460,000 in Beaver County Transit Authority funding for pre-construction work and right-of-way purchases

Project Benefits and Successes

Rochester is an economically depressed community in need of revitalization. This street project is giving the community a renewed sense of pride. More businesses are popping up in the downtown area since the construction of the roundabout. The community is also more pedestrian- and bike-friendly because of the project. The roundabout provides improved safety, congestion reduction, increased mobility and connectivity of the streets, energy savings, reduction in pollution, and enhanced aesthetics. The new design will reduce costs significantly through lower annual maintenance and life cycle replacement costs.

The project sponsor, Beaver County Transit Authority (BCTA), is very pleased with the final outcome. The transit system works considerably better from an operations and customer standpoint. Buses are able to travel through the downtown area with far fewer delays since there is no more waiting in traffic at the intersection, which translates to operational savings. Safety is improved for buses and all vehicles with the removal of what was a high crash intersection.

Considerable public involvement was conducted over the course of project development. More than 17 meetings were held. The community was

involved through public hearings, a steering committee, meetings with county commissioners, and several presentations to local groups.

Challenges and Lessons Learned

Dealing with local politics can be challenging—it's important to communicate early and often. Other lessons were learned along the way. The biggest lesson is to budget better. The quality of landscaping had to be reduced due to insufficient funds. The project sponsor also suggested that PennDOT disclose what costs need to be budgeted and accounted for in the awarding of future PCTI funds. In addition, the project sponsor believes that construction management should have been handled by PennDOT rather than BCTA as there was a lot of financial risk for BCTA during construction.



Construction of the roundabout



Pedestrians are safely accommodated into the design of the roundabout.

The new multi-use pathway provides the opportunity for active forms of transportation.



“The bicycle and pedestrian path provides a multimodal solution for the transportation corridor.”

7. Bike and Pedestrian Pathway – Penn State Altoona Campus to Downtown Altoona

Altoona, Blair County

The project involved construction of a bike and pedestrian pathway along Juniata Gap Road to connect Altoona’s Penn State Campus, located in the northwest section of the city, to Penn State’s downtown facilities. Bicycle route signs were also installed along the 2.7-mile connection between Penn State Campus and downtown Altoona.

- Approximately one year for construction
- Completed
- \$300,000 in PCTI funding

Project Benefits and Successes

The new multi-use pathway provides safe travel through residential and light industrial areas for bicyclists and pedestrians from Penn State Altoona Campus to downtown Altoona. Penn State’s expansion in the downtown area and the growth of regional medical services play a major role in downtown revitalization. The new bicycle/pedestrian facility provides an important connection for students and other residents. The project also supports local efforts of the 2010 Campaign for Active Transportation to raise awareness and provide the opportunity for active and alternative forms of transportation.

Coordination of project schedules allowed for a one-half-mile section of the bicycle/pedestrian path on one side of Juniata Gap Road to be constructed by PennDOT as part of a planned road improvement project. Bike path signs were also installed by the city throughout the entire 2.7-mile route. The project provided a nice enhancement overall for the neighboring community.



“The project entails pedestrian safety improvements with connections to schools, community, and transit.”

This project has improved pedestrian circulation along U.S. Route 202 entering Chalfont from New Britain.

8. Chalfont Borough Smart Transportation Project

Chalfont Borough, New Britain Township, Bucks County

This construction effort involved the installation of three projects aimed at increasing pedestrian circulation in Chalfont and improving access to key destinations, including schools and the Chalfont Train Station.

- Eight-month construction project
- Completed
- \$463,405 in PCTI funding, \$97,000 in Bucks County Open Space funding

Project Benefits and Successes

Work included construction of sidewalks and crosswalks along and across U.S. Route 202 between the Chalfont/New Britain boundary and the Pine Run Elementary School in New Britain, a trail network linking U.S. Route 202 with two parks (Twin Streams and Blue Jay) and the Unami Middle School, as well as two public parking lots to provide increased opportunities for residents to use public transit. Finally, the project included the promotion of the new trailway and sidewalks through a “Thursday Night Walks” program to help residents understand the benefits of being a pedestrian-friendly community.

The most significant benefit was providing a new accessway into Blue Jay Park, which is located on a 20-acre parcel that Chalfont acquired in 2007. Borough officials noted that most Chalfont residents were not aware that this park existed. This project served as a way of promoting a new recreational opportunity for residents, while making it easier to access.

The trail has received frequent positive feedback from residents who were able to take advantage of the new access to Blue Jay Park. In the winter the trail was used for cross-country skiing. Residents have taken advantage of the new pedestrian accommodations along and across U.S. Route 202 to patronize businesses along the corridor.

Challenges and Lessons Learned

The most significant challenge was weather-related delays that extended the construction schedule. The contractor did not account for the potential for significant rain during construction, therefore the project was completed later than anticipated. Another concern was that the original estimate from the project engineer was lower than each of the construction bids that were received. However, PennDOT agreed to cover the additional funding necessary to ensure that the complete project was constructed. Borough staff also noted that PennDOT's Engineering and Construction Management System (ECMS) was challenging to learn, but made the project easier once that hurdle was overcome.



*Chalfont Train Station is a key destination
within the borough.*

The study investigated transportation solutions that focus on the safety of pedestrians and bicyclists throughout the borough.



“Newtown Borough is a walkable community by design, however, pedestrians face safety hazards when venturing out on our streets, caused by increased traffic volume, speeding, and aggressive drivers.”

9. Newtown Borough Integrated Transportation and Circulation Study

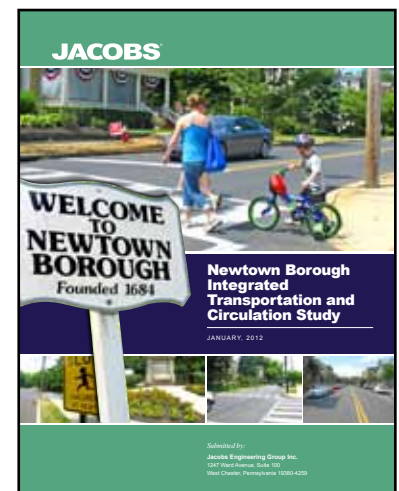
Newtown, Bucks County

This study identified potential improvements to enhance pedestrian, bicycle, and vehicle safety and mobility.

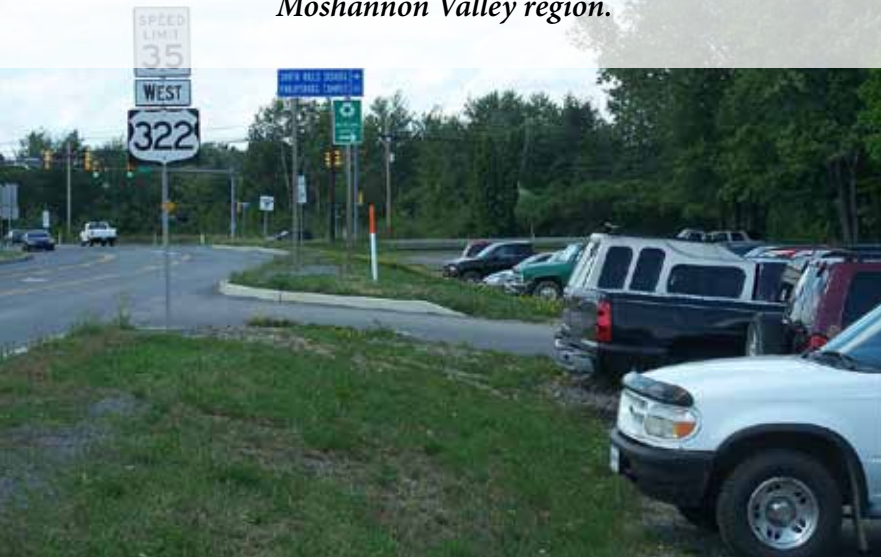
- Approximately one-year planning study
- Completed
- \$30,000 in PCTI funding

Project Benefits and Successes

The Newtown Borough Integrated Transportation and Circulation Study examined the traffic patterns and crash data for roadways within the borough. Stakeholder input and a mapping exercise conducted with local residents helped identify pedestrian, bicycle, and vehicle circulation concerns. Traffic safety and congestion locations were also identified. A Roadway Smart Transportation Classification was developed to match land use context with roadway functional classification. This information was used to identify tailored recommendations for nearly 20 roadways in the borough. Five high priority locations were selected for early implementation and will provide a significant improvement at a relatively low cost. A toolbox of strategies to accommodate pedestrians and bicycles at various recommended locations was also developed.



Informal park-and-ride lots are found throughout the Moshannon Valley region.



“Don’t begin with a predetermined park-and-ride lot location in mind—focus on a sufficiently large study area, cast a wide net for potential sites, and examine each in sufficient detail. What you learn about your predetermined sites and others may surprise you.”

10. Moshannon Valley Park-and-Ride Study

Greater Philipsburg Area (Rush, Morris, and Decatur Townships and the Boroughs of Philipsburg, Chester Hill, and Osceola Mills), Clearfield and Centre Counties

The study identified potential park-and-ride lot sites to provide commuter bus, carpool, and vanpool service in the Moshannon Valley.

- Approximately two-year study
- Completed
- \$100,000 in PCTI funding with a \$10,000 federal/state match

Project Benefits and Successes

Park-and-ride as well as “park-and-pool” activity is already taking place in the Moshannon Valley at a series of informal locations. However, as these are not official park-and-rides, prospects for long-term use, liability issues, and responsibility for maintenance are ambiguous. The Moshannon Valley Park-and-Ride Lot Study identified potential park-and-ride lot sites to provide commuter bus, carpool, and vanpool service in the Moshannon Valley (Philipsburg Borough and Rush Township in Centre County; Morris and Decatur Townships and the Boroughs of Chester Hill and Osceola Mills in Clearfield County). The study examined the feasibility of each potential site and identified general site issues that may promote or preclude construction activities.

This project brought park-and-ride activity into the public eye so that community needs and preferences could be discussed in an open forum. The primary means of accomplishing this was the stakeholder involvement process. Every step of the study—from initial site identification, through ranking of sites and identification of “fatal flaws,” to the development of a proposed package of reasonable site locations—was driven by local knowledge. Having good origin-destination and travel demand data available to support decisions was also imperative.

Moshannon Valley Park-and-Ride Study, cont'd.

The project engaged two regional planning partners, two transit providers, two county governments, PennDOT District 2-0 and Central Office, six municipalities, and a host of other stakeholders to formulate a plan of action that reflects local needs and priorities. Keeping a wide variety of stakeholders informed and engaged was critical to a successful outcome—ultimately, additional funds were used to augment stakeholder activities and help create a better product. Moreover, the general public was engaged in the project through a public meeting, survey, and promotional materials on various stakeholder websites.

Close coordination with PennDOT District 2-0 through the entire process was essential. The District participated in consultant selection, and provided oversight throughout the study to ensure that no key elements were overlooked that would impact implementation of the recommendations. Without this partnership, sponsors of a planning study like this may run the risk of developing recommendations that cannot be implemented.

Challenges and Lessons Learned

One noteworthy challenge with the use of PCTI funds is the requirement to request a funding amount at the beginning of the process and running the risk of having to negotiate a scope down to that amount if the applicant has underestimated the appropriate level of funding needed for the desired scope. Some flexibility should be built into the funding amount so that while a scope and cost are being finalized, the sponsor could add or subtract work tasks based on input from the consultant team, and help reduce the costs associated with project management.

Construction of the new modern roundabout. This design feature will provide traffic calming and blend well into the new TND community.



“It was refreshing to see the PennDOT District allow the use of Smart Transportation guidelines to allow greater flexibility in the design for certain road widths and provisions for pedestrians and transit.”

11. Old Gatesburg Road Extension

Ferguson Township, Centre County

This project involved the construction of a collector road between two arterials to connect two neighborhoods as part of a planned Traditional Neighborhood Development.

- Approximately one year for construction
- Completed and opened to traffic on 11/11/11 at 11:11am
- \$2,970,000 in PCTI funding, approximately \$630,000 in local funds (engineering/design & construction)

Project Benefits and Successes

The new 1.3-mile roadway connects an existing neighborhood with a proposed traditional neighborhood development (TND). The new road has been designed to be attractive and help complement the sense of community to be offered with the new TND. Traffic calming is enforced along this stretch of roadway with features such as on-street parking and the township's first modern roundabout. The TND surrounding the road project required this transportation project to include context-sensitive design and provisions for pedestrian and transit needs. Multi-use paths and sidewalks were provided, where appropriate.

Successful partnerships were key to this effort. The project sponsor found it refreshing to see the PennDOT District 2-0 staff allow the use of Smart Transportation guidelines to allow greater flexibility in the design. PennDOT also offered a peer review of the roundabout design to ensure that all vehicles would be accommodated. A partnership with the developer of the project area allowed for cost-sharing opportunities, and coordination with the local transit agency ensured that public transportation was considered in the design of the project.

Old Gatesburg Road Extension, cont'd.

Challenges and Lessons Learned

Working with multiple stakeholders and using federal funds introduced some complexities. It took several weeks to obtain various approvals, which resulted in schedule concerns. The reimbursement payment process through PennDOT made timely payment of the contractor difficult. All in all, it was still a positive experience and the township was pleased with the entire process and the final product.



Existing conditions along much of Baltimore Pike do not accommodate pedestrians.

“The project provided a good road map for future work in the corridor.”

12. Baltimore Pike and Newark Road Corridor Study

New Garden Township, Chester County

The Baltimore Pike Corridor Study provided a unified framework and vision for transportation and land use in the corridor, which includes parts of the boroughs of Avondale and Kennett Square and the townships of New Garden and Kennett.

- 18-month planning project
- Completed
- \$200,000 in PCTI funding, \$34,000 township funds

Project Benefits and Successes

The study allowed the township to highlight the needs and challenges that the project corridor faces today and into the future. It also provides an implementation road map for future work in the corridor while guiding future development to consider how highway access impacts pedestrian and bicycle circulation. Existing traffic issues are expected to increase with the future construction of a new elementary school and new industrial and commercial developments proposed along the corridor.

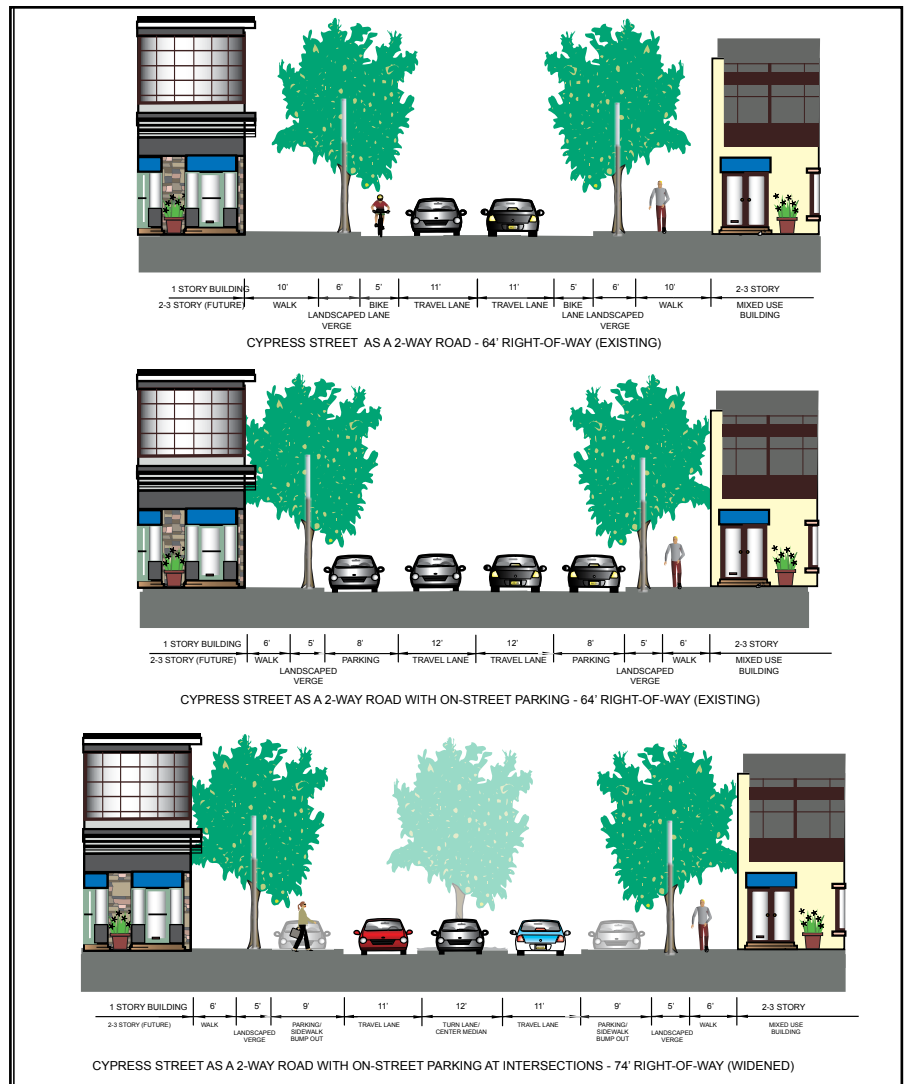
The land use and transportation recommendations identified through the study work together and support each other. Two such recommendations are intersection improvements at Baltimore Pike and Newark Road to provide transportation benefits and support the prospect of “infill” development in the village and its expansion to the northeast, and a two-way West Cypress Street to provide a walkable, mixed-use environment at the West Baltimore Pike-West Cypress Street-Scarlet Road area.

Ultimately, the project aimed to maximize the potential for developer investment along the corridor while ensuring that the adjacent transportation network is sufficient to manage motorized and non-motorized traffic growth. Several public meetings were well attended, indicating

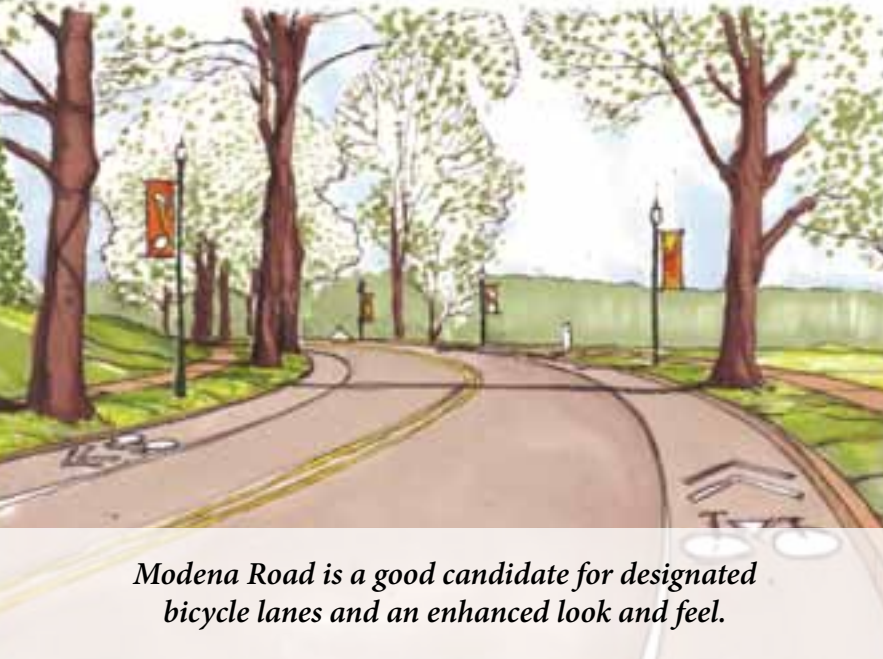
that community members are interested in guiding the future of the two corridors.

Challenges and Lessons Learned

One of the most significant challenges that the township identified is the significant expense of implementing the study recommendations. Township staff also noted that while it is important to have community input during the project, it is equally important to convey to stakeholders that planning projects like this are focused on long-term improvements, as opposed to short-term fixes to existing problems.



Study recommendations include cross sections such as the three alternatives for Cypress Street.



Modena Road is a good candidate for designated bicycle lanes and an enhanced look and feel.

“Reaching out to different organizations is going to be a real benefit in the long run. Now we don’t have to reinvent the wheel with every new project.”

13. Brandywine Creek Trail Feasibility Study

Boroughs of Coatesville, South Coatesville, and Modena, Chester County

This planning project consisted of a feasibility study for the construction of a multi-use trail along Brandywine Creek, First Avenue, and Modena Road within the three neighboring municipalities of Coatesville, South Coatesville, and Modena.

- Approximately 20-month study
- Completed
- \$50,000 in PCTI funding

Project Benefits and Successes

This collaborative effort of the three municipalities has identified opportunities to increase foot and bicycle traffic, help with revitalization efforts, and improve the sense of community. The future implementation of recommendations from this study along with other ongoing and future community efforts should lead to an increase in pedestrian and bicycle traffic that benefits local businesses. Improving the pedestrian and bicycle network will encourage people to come into the community.

The study helped the municipalities take a new look at the strengths and challenges in the community and examine different ways to work with what they have. One such example is a local steel mill that reminds us to embrace the industrial heritage of the area. This is an educational opportunity—to talk about the entire life cycle of a product—and therefore discussions were initiated with the school district about their involvement and how outcomes of this study can be beneficial for them.

Challenges and Lessons Learned

Public engagement was an important element to the success of this study. At times it is a challenge to get people to turn out to the public meetings so that you can get the feedback early enough in the process.

Brandywine Creek Trail Feasibility Study, cont'd.

The project sponsor learned that working with existing organizations with similar missions will result in successful community engagement. A public meeting to get feedback from residents on some of the initial proposals was held early in the process and residents from all three municipalities participated in the public meetings.

Some coordination challenges were faced along the way due to the complexities in scheduling meetings among all three municipalities. Sometimes getting all three together at the same time was difficult. Financing the implementation of the study recommendations is also going to be a challenge.



Modena Road



Modena Road design option with enhanced bicycle and pedestrian accommodation



*Sidewalk improvements have enhanced
Marshalltown's streetscape.*

*"This project will pay dividends
that we will see for generations."*

14. Marshalltown Gateway and Pedestrian Project

West Bradford Township, Chester County

This construction project created a walkable streetscape along a 0.75-mile section of roadway within the historic village of Marshalltown.

- 13-month construction project
- Completed
- \$2 million in PCTI funding, \$430,000 in Township funds

Project Benefits and Successes

The project created a uniform sidewalk system, and included traffic calming elements, pedestrian crosswalks, and roadside improvements. The project also created a new stormwater system that eliminated a significant drainage issue along the roadway. A key element of the project was maintaining the historic nature of Marshalltown while updating the roadway network to serve vehicular, pedestrian, and bicycle traffic.

Together, these improvements transform the streetscape within the historic village and serves as a gateway into Marshalltown. The project significantly improved safety for vehicle, bicycle, and pedestrian users through traffic calming and stormwater improvements. The project also created a sense of place, re-establishing Marshalltown as a destination for visitors. The project included public outreach to impacted property owners every few weeks, ensuring that construction impacts to property owners were minimized.

Challenges and Lessons Learned

The most significant challenge involved construction in a narrow cartway within a historic village. Also, dealing with affected property owners could have been a significant challenge, but the outreach program

Marshalltown Gateway and Pedestrian Project, cont'd.

ensured that they were kept in the loop. The project was delayed due to complications in executing the reimbursement agreement because the municipality was unfamiliar with the PCTI program administrative requirements.



*Highly visible crosswalks in Marshalltown
improve pedestrian safety without detracting
from the historic nature of the village.*

The road diet project reduced the travel lanes from four to two lanes which allowed for the addition of bicycle lanes on both sides of the street.



“One of the goals for this “Road Diet” project was to recapture the small town feeling in the downtown area.”

15. Downtown Carlisle Traffic Safety and Mobility Project

Carlisle, Cumberland County

The project involved the construction of multimodal transportation improvements in downtown Carlisle to enhance the safety and mobility of the existing transportation network.

- Approximately one year for construction
- Completed
- \$2,826,000 in PCTI funding, \$225,000 in local funding

Project Benefits and Successes

Before application was made for PCTI funding, the multifaceted group of project stakeholders—which included the Carlisle Area Health and Wellness Foundation, Cumberland County, and Dickinson College—set goals for this project. The initial goals were to calm traffic, reduce truck traffic, improve parking safety, reduce noise and air pollution, improve pedestrian/bicyclist safety, and return the small town feeling back to downtown Carlisle. The project has been successful in meeting these goals. About 10 meetings were held prior to development of the project scope to obtain input on design before going to bid for construction.

The project was on the drawing board for more than two years. Construction commenced in April 2011 with the reduction of the existing four lanes of Hanover and High streets to two travel lanes, a center turning lane, and bicycle lanes on each side. On-street parking remains on both sides of the street. A total of 23 new traffic signals with adaptive technology were installed. Each signal is fitted with cameras and synchronized. Emergency vehicle pre-emption detection systems have also been installed.

The combination of fewer lanes and parking and bicycle lanes helps slow traffic through the downtown, thus making it safer for pedestrians. Deco-

Downtown Carlisle Traffic Safety and Mobility Project, cont'd.

rative crosswalks were also installed at the intersections around the town square. The pedestrian and bicycle improvements completed as part of this project provide an important connection to the community-led initiative for a 10-mile network of bicycle lanes and walking trails in the surrounding region. The Borough provides information on bicycle safety and upcoming bicycling events to complement the new addition of bicycle lanes to the downtown.

Carlisle's Road Diet project was named "Project of the Year" by the Mid-Atlantic Section of the Institute of Transportation Engineers. Projects were judged on the complexity and uniqueness of the project, transportation benefits, project aesthetics, and significance of the project. The project also received the CABBIE Award (Clean Air Board Bold Innovator for the Environment) from the Clean Air Board of Central Pennsylvania for reducing vehicle emissions.

Challenges and Lessons Learned

Some public opposition and concern was voiced that the "road diet" would increase traffic congestion, especially during special events and detours that would move I-81 truck traffic from the highway through downtown Carlisle. In addition, the Borough noted that the required administrative paperwork for the PCTI funding reimbursement is a bit challenging for local government project sponsors.



Downtown Carlisle before the road diet



The PCTI program is helping to springboard recent improvements to the station area throughout the surrounding community.

“This project is transformative for the town.”

16. Millbourne Train Station Area Improvements

Millbourne Borough, Delaware County

This project assessed the potential for transit-oriented development (TOD) improvements between the Millbourne train station and Cobbs Creek, reviewed opportunities to enhance multimodal transportation, and reviewed existing streetscape plans for Market Street in the vicinity of the station.

- Eight-month planning project
- Completed
- \$35,000 in PCTI funding

Project Benefits and Successes

The project builds upon recently completed improvements to the Millbourne Station, the existing Cobbs Creek bicycle path, and existing plans to revitalize Market Street as a gateway within Upper Darby Township. The project developed a zoning and bicycle/pedestrian circulation plan for a large parcel that encompasses nearly 30 percent of the borough. The ultimate goal is to develop this area into a community-based TOD that will transform Millbourne. Part of the plan was an implementation-focused handbook for elected officials, including guidance on where to obtain funding, working with property owners, zoning concerns, and other issues that may arise in advancing this type of project. Given the size and density of Millbourne, public outreach served as a community-building exercise.

Challenges and Lessons Learned

The Borough was unfamiliar with much of the PCTI funding process, so there was a significant amount of preliminary research that had to be done to ensure all of the proper documentation was followed. Once the Borough was able to overcome this obstacle, they found that learning the process as part of this effort will be extremely valuable moving forward.

Millbourne Train Station Area Improvements, cont'd.

as they review future funding opportunities. Initially, the Borough was concerned that there would be partisan issues that might divide Borough and County officials, but that was not the case throughout this project, as both parties are aware of the value in moving this plan forward.



The Bayfront Mobility Initiative aims to take advantage of unobstructed views of Presque Isle Bay.



“BMI will provide additional transportation and recreational needs along Erie’s waterfront.”

17. Bayfront Mobility Initiative

City of Erie, Erie County

This portion of the overall initiative focuses on the development of roadway, parking, and transit improvements to make the Bayfront area more walkable.


- Seven-month construction project
- Ongoing (anticipated completion in January 2013)
- \$5 million in PCTI funding

Project Benefits and Successes

This construction project aims to improve the transportation network within Erie’s waterfront district as it continues to transition from its industrial heritage into a mixed-use district that includes residential, commercial, and recreational areas. The Erie-Western Pennsylvania Port Authority has partnered with numerous city, county, and statewide agencies, as well as private investors, to improve Erie’s waterfront as a vibrant place for its citizens to work, live, and play. The Bayfront Mobility Initiative (BMI) continues the implementation of improvements by creating a parking and transit “anchor” that includes a park-and-ride lot, mixed-use trails, and supporting businesses for commuters.

Challenges and Lessons Learned

PennDOT District 1-0 noted that the initial construction estimates following final design were higher than expected. A reexamination of the level of effort for this project ultimately resulted in a bid savings and a new project was generated from those savings.



The Melford International Terminal in Nova Scotia could become a gateway for container shipping services destined for the Port of Erie.

“The planning study created a better awareness of the needs of the Port Authority to attract development opportunities to the Port of Erie.”

18. Port of Erie Freight/Shipping Business Plan

City of Erie, Erie County

This planning project produced a business plan that identified goals and investment strategies to allow the Port of Erie to compete with the Port of Cleveland for existing and future Great Lakes container shipping services.

- Seven-month planning project
- Completed
- \$300,000 in PCTI funding

Project Benefits and Successes

Nova Scotia-based distribution firm Melford International is actively investigating opportunities to take advantage of Great Lakes ports as a distribution center for goods coming from Europe (via their Nova Scotia center) into the United States. Their eventual goal is to bypass larger Atlantic ports to accelerate overall delivery times. This plan assists the Port of Erie in identifying ways to increase its visibility as a key destination for goods within the Great Lakes region. Ultimately this is expected to lead to job creation and added economic vitality for the city, county, and region.

Challenges and Lessons Learned

PennDOT District 1-0 noted that the consultant selection process was lengthy.

Highly visible crosswalks enhance pedestrian safety at and around Union Square.



“The project and PCTI program ran smoothly and worked well.”

19. Union Square Redevelopment

City of Erie, Erie County

This project built upon previous efforts and focused on streetscape improvements for Union Square, including pedestrian improvements and landscaping.

- 15-month construction project
- Completed
- \$5 million in PCTI funding

Project Benefits and Successes

The 2006 Downtown Erie Revitalization Plan produced focused strategies for redeveloping Erie’s Downtown Improvement District, featuring targeted improvements at four key nodes, including the 12th Street Corridor. Simultaneously, PennDOT reviewed traffic flows along 12th Street, ultimately resulting in a shift from six to five lanes of traffic. In 2007 a design charrette was held to identify opportunities for Union Square, including commercial and residential units, recreational attractions, and transportation improvements. This PCTI project built upon these studies and improvements by focusing on streetscape improvements for Union Square, including pedestrian improvements (sidewalks, crosswalks, and signalization) and landscaping treatments.

The project significantly improves pedestrian traffic and circulation throughout midtown Erie. Improvements include curb extensions at crosswalks to shorten crossing lengths and make streets more narrow at intersections, which helps slow vehicular traffic to appropriate speeds for areas where pedestrian volumes are highest. Pedestrian-scaled lighting along sidewalks and at crosswalks is another significant improvement for non-motorized traffic circulation. Finally, numerous sidewalk locations that were in need of replacement were improved under this project.

Challenges and Lessons Learned

Public outreach may have adequately educated residents on the benefits of the project. Specifically, a news poll showed that 95 percent of the public was against some of the traffic calming improvements, believing that the removal of turning lanes would negatively impact traffic flow. A more proactive outreach and education program may have tempered the initial negative response to traffic calming in the study area.



Streetscaping elements like pedestrian-scaled lighting and street trees create a sense of place for this pedestrian corridor in Erie.



“The improvements will support the development of a new visitor center—a key element to continue to attract more than 1.5 million visitors to Ohiopyle State Park each year.”

20. Ohiopyle Borough Smart Transportation Initiative

Southwestern Pennsylvania Commission
Ohiopyle Borough, Fayette County

The project enhanced State Route 381 and made safety improvements for pedestrians, cyclists, and motorists.

- Six-month construction project
- Completed
- \$1,920,000 in PCTI funding

Project Benefits and Successes

The project has significantly enhanced PA Route 381 through Ohiopyle State Park and Ohiopyle Borough for vehicular, bicycle, and pedestrian traffic through the project area. The project included improvements to the southern and northern gateways into the borough and park, bike lanes, crosswalks, and traffic calming techniques. The introduction of these elements also allows for better management of tour bus traffic through this area by directing them to designated areas and minimizing their interaction with other modes of traffic. Finally, the project allows borough residents and park visitors to walk or bike between recreational, commercial, and residential areas without being forced to drive and re-park.

Challenges and Lessons Learned

When the original project bid came in below the approved PCTI funding amount, PennDOT withdrew the difference. Once construction began, unforeseen events took place that required additional funding that exceeded the original bid price but was still beneath the PCTI award. The Borough had to coordinate with PennDOT to recover these funds to pay for the unforeseen costs. In addition, the project impacted several local and state agencies, making coordination somewhat difficult at times.

Diamond Square has been re-established as a key focal point when entering Blairsville from the west.



“The project did everything the community was asking for in the business corridor.”

21. Blairsville Diamond Square/ Market Street Improvement

Blairsville Borough, Indiana County

This construction project involves pedestrian, traffic calming, and safety improvements at and around Diamond Square in Blairsville.

- 18-month construction project
- Expected completion October 2012
- \$2.5 million in PCTI funding

Project Benefits and Successes

The project addresses several circulation and safety concerns at the western gateway into the borough. Key elements of the project include improved pedestrian crossings and access to Diamond Square, reduced vehicular travel speeds as they enter the densely populated borough, and streetscaping measures. The project already greatly improves the appearance of the Market Street corridor within Blairsville’s Central Business District. It has recreated a sense of place within the borough and re-established Diamond Square as a community asset and destination. The streetscaping elements have significantly enhanced downtown Blairsville.

Challenges and Lessons Learned

In several locations, old coal chutes located within the borough had to be grouted to allow for the construction of new sidewalks. Two existing railroad lines created some concerns while construction was ongoing. Borough officials noted that the original PCTI award for \$3.1 million was above the low construction bid of \$2.5 million and indicated in the future they would include an addendum into the contract so that they could retain any additional funding to apply to other facets of the project.

Blairsville Diamond
Square/Market Street
Improvement, cont'd.



Sidewalk and crosswalk improvements are a key element for generating traffic in Blairsville's business district.



Local business owners have added to the streetscape improvements in Blairsville.



“The project eases traffic congestion and provides increased safety for pedestrians.”

22. Punxsutawney Transit Facility Enhancement & Mobility Improvement

Punxsutawney Borough, Jefferson County

This project upgraded a section of the local transportation grid to improve mobility and decrease congestion in the local road network. The road improvements were completed in tandem with ongoing construction of a \$1.5 million intermodal transit facility.

- 12-month design and construction project
- Completed
- \$607,200 in PCTI funding

Project Benefits and Successes

The road improvement project is located adjacent to a new intermodal bus terminal which is currently under construction. The transit facility will replace vacant and dilapidated buildings in the community's downtown area and promote investment in the community's town center. The transit facility and mobility improvement project involved a partnership between the state (Department of Community and Economic Development, which contributed \$75,000 toward demolition costs); local government (Borough of Punxsutawney); the regional transit authority, Area Transit Authority (ATA), which serves the six-county North Central region; and the Punxsutawney Regional Development Corporation (PRDC), which has committed \$25,000 toward demolition costs. Additional partners included the Jefferson County Housing Authority and three private property owners who have provided land to facilitate street widening and the construction of the new bus terminal. The new road network improves vehicular circulation and alleviates congestion by shifting travel patterns from one-way circulation to two-way circulation, and the upgrades to pedestrian and traffic signals improve safety.

Punxsutawney Transit Facility Enhancement & Mobility Project, cont'd.

“PCTI allows flexibility to respond to development issues that cannot always be planned for through the normal Transportation Improvement Program process.”

This project was taken from concept to completion in about two years, including the time it took for the Borough to go through the consultant selection process. The road improvements were successfully scheduled to coordinate with the construction of the new intermodal transit facility.



Signal and crosswalk improvements improve pedestrian circulation in Punxsutawney.



The Punxsutawney Bus Terminal will be a major destination for pedestrian and vehicular traffic.



Signal upgrade and improvements at the center of downtown Elizabethtown

“This project has provided a successful solution to a longstanding region-wide issue.”

23. Elizabethtown Regional Traffic Signal Synchronization

Elizabethtown Borough and West Donegal and Mt. Joy Townships, Lancaster County

This project involved the upgrade of 15 existing traffic signals and the installation of one new signal within three municipalities to enable synchronization and improve traffic flow. Pedestrian signals, sidewalks, and crosswalks were also provided to promote safe intermodal connections.

- Approximately one year for construction
- Completed
- \$292,000 in PCTI funding, additional local funds for the design phase

Project Benefits and Successes

Traffic congestion was identified as one of the top issues in the 2010 regional comprehensive plan that covers the three municipalities. Traffic signal improvements include synchronization and compatibility between the municipalities; signal head upgrades, emergency pre-emption, and video surveillance at some intersections; and a central computer to monitor traffic conditions. In addition, a new section of sidewalk was installed to provide a pedestrian connection between a large residential neighborhood and Elizabethtown Borough. These improvements will improve safety and help facilitate traffic flow and reduce the backlog of vehicles along Route 230, Route 743, and Cloverleaf Road.

Challenges and Lessons Learned

The final product was a success; however, this project experienced some administrative challenges. Navigating the process with the first round of PCTI as a new program and understanding timeframes was difficult for the project sponsor. Unexpected engineering costs and additional work occurred on the sponsor's end as a result of PennDOT requiring the project to be locally let.

Elizabethtown Regional
Traffic Signal
Synchronization, cont'd.



*New sidewalks installed as part of
intersection improvements
at Route 743 and
Mount Gretna Road.*



*Conditions before sidewalk installation at
Route 743 and Mount Gretna Road*



*After sidewalk installation at Route 743 and
Mount Gretna Road*



“It is expected that the expansion of the Queen Street Station will encourage transit-oriented development (residential and retail land uses) surrounding the transit station.”

24. Queen Street Station – Phase II

City of Lancaster, Lancaster County

This joint public/private development construction project involved the expansion of the existing transit terminal, construction of a commuter parking facility, and streetscape improvements that include pedestrian/bicycle amenities.

- 30-month construction timeframe for PCTI-funded phase
- Completed
- \$2 million in PCTI funding (total project cost was \$19 million)

Project Benefits and Successes

The Phase II expansion of the Red Rose Transit Authority's (RRTA's) Queen Street Station, which opened in August 2005, included the construction of a 400-450 space parking garage, incidental retail/lease space on the ground level, three additional bus berths along Christian Street, and the lease/sale of air rights over the parking structure for residential and/or commercial space that may potentially increase transit usage. The new facility replaced an existing surface parking lot in the heart of downtown with a multimodal transit station that provides opportunities for joint development in downtown. The location of new Queen Street Station, at the corner of East Chestnut Street and North Queen Street, is the same location where the Pennsylvania Railroad built its Lancaster Station in 1860. RRTA included some of the architectural motifs from the old train station in the design of the new facility. The project included added space for bicycle users and streetscape amenities along Queen and Chestnut Streets to improve the area for pedestrians. One aim of the project was to encourage transit-oriented development, including retail and residential uses throughout the area surrounding the transit station.

This project is an excellent example of a public/private effort that promotes livable cities and enhances other development projects in down-

Queen Street Station – Phase II, cont'd.

town Lancaster, such as the convention center and the new Academy of Music. There were many participants during project development, including the Lancaster Museum of Art, the City of Lancaster, the Lancaster Parking Authority, and RRTA, plus involvement from the Lancaster Downtown Investment District and Redevelopment Authority.

Challenges and Lessons Learned

The weak economy presented the biggest challenge in securing a developer for the commercial space.



Perspective from the corner of Chestnut and Queen Streets



“Keeping all decision-makers and stakeholders “in the loop” was the key to getting this done and remaining on schedule.”

25. Lebanon Transit Park-and-Ride Lot

East Hanover Township/Fort Indiantown Gap, Lebanon County

This PCTI effort involved the construction of a new park-and-ride facility to expand commuting options for the Schuylkill County, eastern Berks County, and northern Lebanon County workforce traveling to downtown Harrisburg.

- Approximately one-year construction effort
- Completed
- \$660,000 in PCTI funding, \$960,000 highway funding, and \$100,000 in Lebanon Transit funding

Project Benefits and Successes

The newly constructed park-and-ride lot was initially conceived in the Lebanon Transit Business Plan and complements the local development plans for East Hanover Township. Several locations were evaluated, including an existing informal parking area. Numerous meetings were held with key stakeholders and public comment was provided to help direct the outcome of the project. The park-and-ride lot offers area residents another option to travel to work in Harrisburg safely, efficiently, and economically.

The project included features such as security cameras, bicycle parking racks, lighting, and technology providing real-time information on bus arrivals and departures. Two parking areas were constructed on the property to accommodate carpoolers/vanpoolers as well as express bus service customers. In addition, the lot is located on the U.S. Army property of Fort Indiantown Gap and is used on weekends as overflow parking for special military ceremonies and funerals. Improvements were made to a nearby intersection and the road located at the vicinity of the park-and-ride lot to correct existing safety issues and better accommodate turning buses and pedestrian/bicycle traffic.

Lebanon Transit Park-and-Ride Lot, cont'd.

Challenges and Lessons Learned

The project site is located near streams and several wetlands and required environmental clearance involving the wetlands, stormwater management, and a “species of concern” during project development. The appropriate federal and state resource agencies met on site with Lebanon Transit, Lebanon County Planning Department staff, and the design engineer to determine what was needed to keep the project moving forward. It was carefully designed to address stormwater runoff and erosion/sediment control during and after construction. The landscaping features all native species and was designed to minimize required maintenance at the site.



Carpool and vanpool parking lot



Existing river crossings in Allentown lack a sense of place for the community.

“The completion of the project will give us direction on how the waterfront should be developed.”

26. Lehigh Valley Waterfront Transportation/Land Use Master Plan

City of Allentown, Lehigh County

This planning project focused on the future of Allentown’s waterfront as it transitions from its industrial roots to a redeveloped commercial, residential, and recreational destination.

- Nine-month planning project
- Completed
- \$300,000 in PCTI funding

Project Benefits and Successes

The project focused on the western bank of the Lehigh River from the Tilghman Street Bridge south to the Hamilton Street Bridge. Ultimately the aim is to promote public use of the riverfront, link the riverfront to adjacent residential neighborhoods, and attract new businesses to the re-development zones along the river.

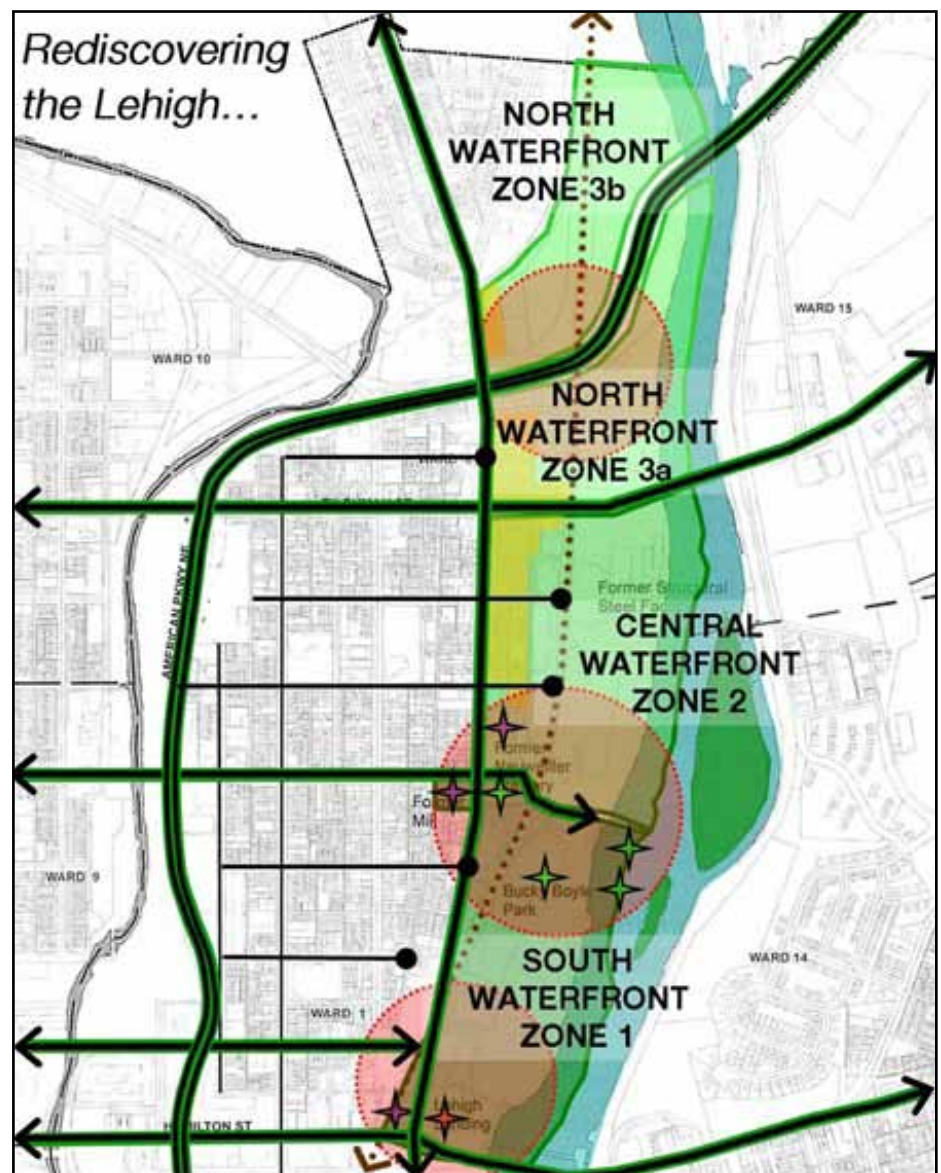
The most significant benefit is the creation of a master plan for the city’s waterfront area, which will guide how the waterfront will be developed, including the implementation of transportation and land use projects. A review of the public outreach program indicated that each successive public meeting showed an increase in attendance, with 120 residents participating in the fourth meeting. This indicates that local residents are excited about recapturing the riverfront for public use. Finally, the master plan promotes projects that have already been completed along the riverfront, while indicating locations where the existing transportation network may be insufficient to maximize future redevelopment projects.

Challenges and Lessons Learned

PennDOT District staff noted that city officials were unfamiliar with the PennDOT consultant selection process, which delayed completion of the

Lehigh Valley Waterfront Transportation/Land Use Master Plan, cont'd.

project. There was a significant learning curve for many parties involved in the project progress. However, once the contracting issues were overcome, the study proceeded with no significant challenges.



This schematic indicates how important linkages are between Allentown's waterfront and adjacent neighborhoods.

Start of the new trail connector at the Jersey Shore parking lot and access to the Pine Creek Rail Trail



“The Pine Creek Rail Trail is a significant amenity for the community, and the connector project continues to spur revitalization efforts throughout areas of downtown Jersey Shore.”

27. Pine Creek Rail Trail/Jersey Shore Trail Connector

Borough of Jersey Shore, Lycoming County

The 1.5-mile trail extension/connector project connects the Pine Creek Rail Trail to a planned riverfront park and boat launch area in the Borough of Jersey Shore.

- Nine-month construction phase
- Completed
- \$427,000 in PCTI funding, \$352,000 in state funding (DCNR), and \$50,000 in private funding (First Community Foundation)

Project Benefits and Successes

The Pine Creek Rail Trail, a 62-mile nationally recognized trail, is a significant asset to the Jersey Shore community and region. The project included enhancements to the borough to serve as a gateway to the Pine Creek Rail Trail and the “Pennsylvania Wilds” region. The trail extension complements both the Borough of Jersey Shore revitalization and Pennsylvania Wilds program goals. Prior to the trail extension, trail users needed to travel by vehicle to reach the trailhead. The new section of trail now allows pedestrians and bicyclists to access the trail directly by foot or bike from downtown Jersey Shore. The project also enhances revitalization efforts throughout other areas of downtown Jersey Shore. Trail-oriented businesses are beginning to locate within the borough.

The trail extension is a rail-with-trail section. The Borough worked closely and successfully with the SEDA-COG Rail Authority to ensure safety for trail users and to agree on maintenance responsibilities. Grade separation, fencing barriers, and signage at the rail crossing were included in the trail design.

Challenges and Lessons Learned

The trail connector has added tremendous value as a gateway to the Jersey Shore community as well as the overall Pennsylvania Wilds region. However, some lessons were learned along the way during the design and construction of the project. The accelerated construction schedule that was attached to the PCTI funding did not allow for adequate design review time. Design errors were identified at the start of the construction phase, which delayed the project and ultimately increased the overall project cost. It is important to provide appropriate oversight during the design process and to allow for sufficient design review to keep the project on budget.



The new trail connector is located next to an active rail line.



The study identified congested and confusing intersections as one of the primary issues of concern.

“PCTI is a good way for PennDOT to approach projects.”

28. U.S. Route 19 Corridor Study

Mercer Borough and East Lackawannock Township, Mercer County

This corridor planning study reviewed traffic signal coordination and pedestrian improvements as a way to manage and optimize the circulation of multiple modes of traffic along U.S. Route 19 (Perry Highway).

- 15-month planning project
- Completed
- \$200,000 in PCTI funding

Project Benefits and Successes

The project created a blueprint for future construction investments and prioritized land use concerns, rather than simply focusing on the movement of vehicles. A portion of the project aimed to explore improvements to the roadway that would complement the character of adjacent land uses and the community as a whole, especially as it transitions from a rural context to a more densely developed area in Mercer Borough. The project allowed the two municipalities to work together with a cohesive vision for the four-mile corridor. Four project goals were identified:

1. Enhance motorized travel.
2. Provide a multimodal transportation network.
3. Ensure safe and efficient access throughout the project area.
4. Manage land use.

These goals were developed as a result of input from a Project Advisory Committee, Stakeholder Committee, two public surveys, and feedback from two public meetings. Outreach to the Amish community was highlighted as a significant benefit to make the project team aware of their unique issues and concerns surrounding traffic, parking, and safety within the corridor.

Challenges and Lessons Learned

Project area concerns were identified through public input and field views. The primary concerns identified included a lack of pedestrian access, congested and confusing intersections, traffic conflicts, and underutilized industrial/commercial/natural areas. These deficiencies were documented to develop potential multimodal transportation improvements. Four transportation and land use scenarios were developed to evaluate the impact of various land use patterns on the transportation system. Stakeholder meetings were at times confrontational and challenging, as project staff had to balance the needs of sound land use planning with the growth-centric interests of local business owners.



*Providing a multimodal transportation network
was one of the main goals of the study.*

The current linkage between Noble Station and this parking lot is via a single stairwell.



“We felt that the public involvement was a really positive process and that we were able to dialogue with community members.”

29. Abington Noble Station TOD Planning

Abington Township, Montgomery County

This effort prepared a plan for a transit-oriented development (TOD) center at the Noble Train Station on SEPTA’s West Trenton Line.

- 11-month planning project
- Completed
- \$275,000 in PCTI funding, \$25,000 in Township funds

Project Benefits and Successes

This plan included a review of highway connections to the Southeastern Pennsylvania Transportation Authority’s (SEPTA’s) Noble Station and an investigation of pedestrian and bicycle linkages, including improvements to streetscaping, sidewalks, lighting, and crosswalks. The study also reviewed a location for a commuter/shared-use parking structure that would support station use as well as new residential and commercial uses.

The project resulted in the collection of a significant amount of field data, including impacts to grading and circulation in the vicinity of the station. It was also important that the Township was able to complete the cost and gap financing analyses that would be necessary to push the project through to implementation. The public involvement portion of the project was largely completed via a charrette, which allowed the project team to directly interact with concerned citizens and answer questions.

Challenges and Lessons Learned

One of the most significant challenges was dealing with the fact that the planning process is time-consuming. The significant level of public input was extremely useful, as it brought several issues to light that may have

Abington Noble Station TOD Planning, cont'd.

been overlooked by the project team. However, it also led to an extended project schedule, as the project team attempted to review and address those comments.

The project team expected significant opposition from residents, given that parking structures can often be controversial. However, the charrette team included a graphic designer/landscape architect that was able to provide on-demand sketches of the structure from the perspective of concerned citizens. Once citizens were able to see an exact rendition of the structure from their residence, they were able to get a more detailed understanding of how the project would fit into their neighborhood.



This project aims to improve pedestrian conditions along key routes linking to Noble Station.



Cynwyd train station area prior to commencement of construction project. Anticipated completion date is December 2012.

“The project will result in an excellent trail with a beautiful trailhead.”

30. Cynwyd Trail and Station Access Improvements

Lower Merion Township, Montgomery County

This construction project will improve bicycle and pedestrian circulation, SEPTA station access, and emergency vehicle access.

- Anticipated eight-month construction phase
- Expected completion December 2012
- \$275,000 in PCTI funding, \$51,000 in Township funding

Project Benefits and Successes

This construction project will improve bicycle and pedestrian circulation between Cynwyd Station, which serves as the western terminus of SEPTA's Cynwyd Line, and the Cynwyd Trail, a linear park located in Bala Cynwyd. The project is also extending the existing station platform and provides ADA-accessible ramps. The new trail will provide direct connections between the station, adjacent parking lots, and the local downtown area. Finally, the project will provide emergency access for fire trucks and ambulances onto the trail.

One of the most significant benefits is that the project will provide a connection between an active rail line to a spur of the Schuylkill River Trail. The project will provide increased access for users who are unable to find a parking space in the undersized parking lots at the station. The significant amount of public involvement included televised public meetings and numerous walks. The local historical society has been involved with the maintenance of the station, which is a true asset to the area. The project also took advantage of a partnership with Villanova University to perform stormwater management tasks.

Challenges and Lessons Learned

The most significant obstacle that the Township identified was coordinating among the Federal Highway Administration (FHWA), SEPTA, and PennDOT. Coordination with the Pennsylvania Historic and Museum Commission was also challenging at times, as they were concerned with how the project would impact the station structure. The project was delayed significantly due to coordination issues between the project team and the railroad, which led to the project being completed more than two years behind schedule.



Conditions prior to construction



Stamped concrete crosswalks increase visibility for drivers.

“This was a good pedestrian project and gives people with disabilities access to our downtown.”

31. Glenside Commercial District, Phase III Construction Project

Cheltenham Township, Montgomery County

This construction project is the third and final phase of pedestrian improvements to a two-mile commercial corridor (Easton Road) within Glenside.

- Nine-month construction project
- Completed
- \$1.4 million in PCTI funding

Project Benefits and Successes

Phase III improvements to this 0.75-mile section of Easton Road between Springhouse Lane and Church Road complete the streetscape and continuity of the corridor, while providing improved pedestrian circulation and connectivity through sidewalks and highly visible crosswalks and medians. Further, traffic calming elements, including curb extensions and textured pavement, will further slow traffic throughout the commercial corridor. Streetscape elements along the corridor include pedestrian-scale lighting, street trees, banners, benches, and trash receptacles. The project also includes three new ADA-compliant bus shelters along the highly traveled transit corridor.

By completing a multi-phase corridor initiative, this project fulfilled a longstanding goal of making the Easton Road commercial corridor pedestrian friendly. The project also links Arcadia University students with the Glenside train station by means of a unified set of improvements that create a sense of place for the corridor. This was a goal of Arcadia University and provides students with direct access to regional rail to Philadelphia.

Challenges and Lessons Learned

The project team had design issues with pedestrian push buttons that did not initially meet ADA compliance. The signal design required a custom anchorage for the pedestrian push buttons, which was originally rejected by PennDOT. The engineer, contractor, and PennDOT had to collaborate to develop a design that was functional and ADA-compliant. The project used a consultant familiar with PennDOT, therefore the project was able to be designed and built on a tight schedule.



Wayfinding signage is an important element of a pedestrian-friendly community.



Improved streetscaping elements are apparent in Glenside, including benches, lighting, and brick pavers.

The proposed corridor improvements (shown in red) will provide an alternative route for vehicular traffic and create more pedestrian linkages in the vicinity of Lansdale Station.



“We are taking into consideration that people are not solely concerned with driving their cars. They also want to be able to walk—safely and with pleasant surroundings.”

32. Wood and Vine Street Connector

Lansdale Borough, Montgomery County

This construction project will improve traffic circulation and pedestrian mobility within Lansdale by rehabilitating portions of Wood and Vine Streets to enhance the overall local street network.

- 41-month construction project
- Estimated completion July 2014
- \$3.5 million in PCTI funding, local match will cover cost overages

Project Benefits and Successes

This project, along with several other transportation improvements at and in the vicinity of Lansdale Station, is part of an overall borough-wide focus on transit-oriented development. This project will provide an alternative route for vehicular traffic through the borough while bypassing crossings with the SEPTA Lansdale/Doylestown regional rail line. The project will directly link Lansdale’s central business district with several municipal service buildings, including the library, fire station, police station, post office, and Borough Hall. Improved streetscaping will further improve the overall sense of place within the borough. The project allowed the Borough to push forward other necessary improvements (sewer, water) that were completed prior to the transportation-related improvements.

Challenges and Lessons Learned

This project was one of the first PCTI projects to be pursued as a design-build project. Given that this is a new process for both the Borough and PennDOT, it has created challenges for the project engineer and contractor. The start of project design was delayed by several months because two roadways had to have their functional classification changed in order to be eligible for federal funding. Right-of-way issues have also delayed the project.



The intersection of Third Street with Larry Holmes Drive during construction of roadway improvements

“This context-sensitive roadway project will encourage reconstruction of vacant urban lots to provide more density and uses. People are thrilled.”

33. Larry Holmes Drive Traffic Calming

City of Easton, Northampton County

This project involved modifications to Larry Holmes Drive, including traffic calming, signal upgrades, streetscaping, and pedestrian and bicycle safety improvements to support local economic, community, and recreational development.

- Seven-month construction project
- Anticipated completion November 2012
- \$3.5 million in PCTI funding, \$250,000 in additional federal funding

Project Benefits and Successes

Transportation improvements along Larry Holmes Drive resulted in a complete overhaul of the entire street to facilitate pedestrian access and enhance the downtown area. These improvements relate directly to goals outlined in the comprehensive plan and downtown revitalization plan and are the implementation of recommendations identified through a previous walkability study conducted by the City’s Environmental Advisory Commission. The project provides an improved streetscape for the downtown area and was effectively coordinated with other related efforts, such as utility upgrades and the future intermodal facility that is planned for construction next year.

The residents and business owners in the area were provided with conceptual illustrations of the proposed improvements during the preliminary design phase. Most people were ecstatic about the plans. The road is being narrowed to fit better with the surrounding land use context and improve safety for pedestrian movement within the downtown and between the Southside and downtown neighborhoods. The road and streetscape improvements will help restore the multimodal character and vibrant downtown of years ago.

Larry Holmes Drive Traffic Calming, cont'd.

Challenges

As with similar construction projects that take place in a downtown area, communicating with adjacent property owners to avoid interruption with sidewalk and other work was somewhat of a challenge. Continual communication was key to keeping the project moving forward.



The South Bethlehem Greenway is a destination for residents and visitors in Bethlehem.

“This project connects several city neighborhoods and extends the greenway trail by one mile.”

34. South Bethlehem Greenway Phase III

City of Bethlehem, Northampton County

This construction project involved the completion of Phase III of the South Bethlehem Greenway, a rail-to-trail greenway that bisects the urban core of the city.

- Approximately 12-month construction project
- Completed
- \$1.64 million in PCTI funding, \$200,000 in DCNR funding, \$90,000 city bond

Project Benefits and Successes

The greenway runs along a former Norfolk Southern right-of-way that links Saucon Park with the Lehigh River. The project includes context-sensitive elements that take advantage of the area's historical and industrial character. The project was widely supported by residents and businesses that are linked or impacted by the project. While the project largely focused on the reuse of an abandoned railway, it also provided connections to existing residential and commercial areas, improving circulation and access opportunities for bicyclists and pedestrians in South Bethlehem. The project promotes numerous Smart Transportation elements, including safety for bicyclists and pedestrians, an improved level of service along South Bethlehem streets, linkages to proposed inter-modal sites, and improving the overall sense of place and quality of life within South Bethlehem.

Challenges and Lessons Learned

City stakeholders noted that the use of federal money introduces additional project documentation requirements, which can lead to some challenges when budgeting for a project. These regulations often forced the city to involve administrative staff and funding that may have been

South Bethlehem Greenway, cont'd.

better used on project-specific tasks. Further, they noted that state oversight via DCNR (or a similar alternative) may allow for the distribution of more funding directly to the construction of a project, rather than to fulfilling administrative requirements.

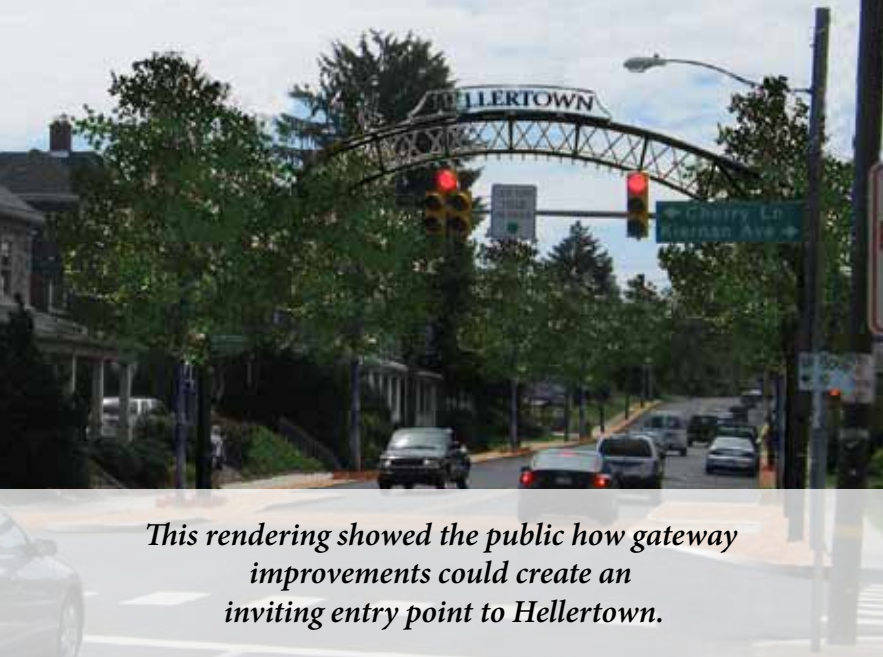
PennDOT District 5-0 noted that similar to other PCTI projects, the project sponsor's landscape architect was unfamiliar with ECMS, which PennDOT requires to bid a construction project. Therefore, the District spent a significant amount of staff time to assist the design team in preparing the bid package.



The construction of the Phase III of the South Bethlehem Greenway as completed in July 2012.



Previously completed sections of South Bethlehem Greenway create a multi-use path that provides off-road circulation south of the Lehigh River.



This rendering showed the public how gateway improvements could create an inviting entry point to Hellertown.

“The project provided an opportunity for our community to work with PennDOT and break down barriers.”

35. Walkable Communities Initiative

Hellertown Borough, Northampton County

This planning project involved the development of a multimodal plan aimed at improving bicycle, pedestrian, and transit opportunities in Hellertown.

- Eight-month planning project
- Completed
- \$90,500 in PCTI funding

Project Benefits and Successes

The project allowed the borough to develop a Walkability Study and Smart Transportation Plan involving a network of pedestrian, bicycle, and transit routes. The project aimed to ease traffic congestion within the borough by encouraging more frequent trips via non-motorized modes of transportation, ultimately improving the overall quality of life for residents. The project also focused on providing on- and off-road connections to link points of interest, including local schools, parks, commercial areas, and Lehigh University, among others.

One of the significant benefits of the project was an outreach program that included a brochure detailing the elements of the study, and a walking tour with the Borough Planning Commission that highlighted the need for the plan.

Following completion of the plan, the Borough reexamined and modified the existing zoning within the downtown area to streamline the potential implementation of recommendations for sidewalks, lighting, and overall pedestrian conditions.

Challenges and Lessons Learned

An early challenge that was quickly overcome was a question about how PennDOT would use stakeholder input in the decision-making process. The Borough found that the PCTI program promoted collaboration between the community and PennDOT, ultimately improving the perception that borough residents had about PennDOT.

PennDOT District 5-0 noted that similar to other PCTI projects, the Borough was unfamiliar with the department's consultant selection procedures, which delayed the project. However, once the qualifications-based process was undertaken and a consultant was selected, the study progressed quickly.

Improvements around Temple University Station include pedestrian-scaled lighting, benches, and sidewalk pavers.



“This project is vastly improving pedestrian access to the region’s fourth-largest regional rail station.”

36. Temple University Station

City of Philadelphia, Philadelphia County

The project is focused on pedestrian circulation improvements, including reconstructed sidewalks, curb ramps, pedestrian-scaled lighting, and streetscaping elements.

- 18-month construction project
- Expected completion October 2012
- \$2.48 million in PCTI funding

Project Benefits and Successes

The project has significantly improved pedestrian circulation within the vicinity of the Temple University Regional Rail Station, which currently serves 12 SEPTA Regional Rail Lines and is the region’s fourth-largest regional rail station. Previously, pedestrians had to traverse a series of damaged or missing sidewalks. The replacement or repair of these sidewalks will encourage more people to walk to and from the station. Overall, the project will encourage further development as the site becomes the focus of a \$30 million transportation-oriented development (TOD) project around the station that is estimated to be completed in June 2013. In tandem with this project, the city resurfaced Berks Street in the vicinity of the station.

Challenges and Lessons Learned

ADA compliance requirements created several delays in the project for sidewalk and curb ramp design. It was difficult to keep the public interested and involved throughout the project, but that was largely because it was not a controversial project.



Improvements to lane designation aim to slow traffic and reduce driver confusion.

“Improving the street and the residential quality of the neighborhood should make the street more attractive for new private development.”

37. Vine Street Expressway Enhancement Project

City of Philadelphia, Philadelphia County

This construction project has improved pedestrian safety and circulation along and in the vicinity of the 900 block of Vine Street in Philadelphia’s Chinatown neighborhood.

- 13-month construction project
- Completed
- \$1,735,422 in PCTI funding

Project Benefits and Successes

The project is part of a series of improvements aimed at slowing vehicular traffic through traffic calming measures to create a more attractive and safer experience for pedestrians who must interact with higher-speed vehicles accessing the Vine Street Expressway. The aim was to shift from a vehicular-focused interchange to an intersection that provides necessary access for vehicles traveling to the Vine Street Expressway, while providing safe crossings and circulation for pedestrians traveling throughout Chinatown.

This project transformed an existing city street (Vine Street) from a high-speed entrance ramp onto the Vine Street Expressway to a grid network street that complements the context of surrounding city streets. The goals of the traffic calming elements are slower traffic, reduced vehicular volumes, increased pedestrian volumes, and an improved sense of place. Improved pedestrian conditions will significantly benefit the neighborhood as parts of Chinatown shift from more traditional industrial uses to residential areas. The improvements to pedestrian circulation within this area are viewed as a potential catalyst for further private sector investment into the community.

Challenges and Lessons Learned

The city empowered the local Community Development Corporation (CDC) to provide guidance on the improvements to the local community. This outreach minimized local opposition to the project by allowing for feedback to occur between the CDC and community members. It was noted that the City's internal process slightly delayed construction, and that future projects located within Philadelphia should schedule appropriate time for this level of review.



Textured pavement helps to slow traffic and create highly visible crosswalks.



Proposed adaptive reuse for the Turn Store, listed on the National Register of Historic Places

“This study aims to revitalize Bushkill’s village center.”

38. Bushkill Village Conservation Plan

Lehman Township, Pike County

This plan addresses transportation planning and land use issues and creates a blueprint for future investments to revitalize Bushkill Village in the context of a national park setting.

- 17-month planning project
- Completed
- \$160,000 in PCTI funding, additional DCNR funds

Project Benefits and Successes

Bushkill Village and Route 209 are the gateway into Pike County at the southern end of the Delaware Water Gap National Recreation Area (DEWA), but the historic location has languished as a significant destination as a result of a complex overlay of jurisdictions since most of the properties were acquired for the Tocks Island Dam project nearly 50 years ago. The plan focuses on revitalizing Bushkill Village within a “community context” and recommends several actions for transportation and land use improvements, as well as conservation of the existing national resources as a landmark cultural landscape. The Bushkill Village Conservation Plan is the outcome of an innovative partnership among Lehman Township, the National Park Service, and several state, regional, and local stakeholders.

The project creates context-sensitive design guidelines to ensure that future investments are appropriately scaled given Bushkill Village’s historical importance. It also focuses on intermodal connections, including trail connections, pedestrian improvements, wayfinding signs, DEWA visitor-focused services, and improved access to shuttle bus service to the park. Ultimately, the project created a comprehensive conservation plan for the village center that proposes a vision for the area, improvements to

Bushkill Village Conservation Plan, cont'd.



A view of the existing Peters House before the proposed intersection signalization. This corner will become the safe crossing location for visitors to move between the east and west, and the north and south quadrants of Bushkill Village.



A model view of the Peters House at the U.S. Route 209/Bushkill Falls Road intersection. The rendering shows the proposed signalization, pedestrian crosswalks, Market Pavilion, and streetscape improvements, including trees, sidewalks, fences (for pedestrian control), and ADA-accessible routes.

vehicular and pedestrian circulation, land use recommendations that focus on adaptive reuse of vacant buildings—including two buildings listed on the National Register of Historic Places, and an assessment of potential public-private partnerships to fund potential improvements.

Challenges and Lessons Learned

Existing historic buildings within the village center center remain vacant and the Bushkill Village Conservation Plan identifies potential adaptive resuses for both structures. The complexities of federal, state, and local regulations create a challenging environment for a shift in traditional land use and transportation policies within the village center.



A model of the preferred alternative for the Bushkill Village cultural landscape – This rendering shows the Turn Store and Peters House as historic village cornerstones along the U.S. Route 209 corridor. Other proposed features identify former village resources—such as pavilions to interpret the former Train Station, Grist Mill, and a “Market Pavilion”—that will re-establish a streetscape scale of the former commercial facades at this corner. Interpretive features will serve modern recreation, transportation, and economic uses.



LEFT: Existing view, Turn Store. The historic building is a strategic cultural resource. It is currently vacant, privately-owned, and “in-holding” within DEWA boundaries.



RIGHT: Turn Store proposed adaptive reuse. Improvements would support DEWA and Lehman Township recreation services and conserve village cultural resources.

Phase 1 of the BVRT included amenities such as benches, information signs, gates, and fencing.



“Without PCTI this project likely would not have happened for many years. PCTI allowed the project to be completed in a very quick timeframe.”

39. Buffalo Valley Rail Trail

Lewisburg and Mifflingburg Boroughs and East Buffalo and Buffalo Townships, Union County

This project involved construction of a 9.2-mile bicycle and pedestrian trail to link Lewisburg and Mifflinburg.

- Nine-month construction phase
- Completed
- \$3.7 million in PCTI funding for construction, \$350,000 in state (DCNR) funding for design

Project Benefits and Successes

This project involved the construction of Phase I of the Buffalo Valley Rail Trail (BVRT), a 9.2-mile bicycle and pedestrian trail located along a rail-banked section of the West Shore Railroad corridor. The new trail runs parallel to Route 45 and connects Union County’s two largest communities, Lewisburg and Mifflinburg. Phase II (not funded through PCTI) will consider extending the trail through downtown Lewisburg.

The trail provides an alternative form of transportation for the area and significantly improves safety for pedestrians and bicyclists by removing them from the U.S. Route 15 corridor. It is being used for commuting, errands, fitness, and fun by a wide variety of residents and visitors, including the local Mennonite community, and serves as a valued transportation facility. Within a few months of its opening, the BVRT had already proven to be a great asset to the community and the region with visitors coming to the area specifically to use the rail trail. Shortly after the trail opened, Bucknell students set up an automated counting device over a 20-day period and determined that the trail accommodates roughly 400 users a day.

Buffalo Valley Rail Trail, cont'd.



The project sponsor noted that the use of federal PCTI funds (and thus federal design standards) gave the sponsor confidence that the trail was designed and constructed correctly. They also noted that during design and construction, PennDOT District 3-0 staff were very prompt with reviews and approvals and helped keep the project on schedule. Union County staff provided invaluable project administration services.

Challenges and Lessons Learned

There was some initial opposition and resistance from property owners along the trail who were concerned about vandalism and trespassing. Public meetings and information mailings helped alleviate these concerns. It was important to give plenty of opportunities for residents to voice their opinions. Open lines of communication were an important element of this effort. Some people did not understand that PCTI funds were restricted for transportation-related needs and there was confusion as to why area state parks were potentially closing due to lack of funding. Meetings were essential to educate and inform the community.



Parking and a comfort station are provided for visitors accessing the rail trail.



Existing conditions on U.S. Route 15 do not safely accommodate pedestrians and lack visual appeal.

“This project brought all key stakeholders together for the first time to discuss problems and concerns related to the Route 15 corridor. A vision has now been created for the corridor as a result of input from these stakeholders and the community at large.”

40. U.S. Route 15 Corridor Study

Lewisburg Borough and East Buffalo Township, Union County

The study produced a vision that integrates land use and transportation along the 2.5-mile-long corridor.

- 13-month study
- Completed
- \$220,000 in PCTI funding, \$10,000 in local funding (equally contributed by Lewisburg and East Buffalo Township)

Project Benefits and Successes

U.S. Route 15 serves as a primary north-south artery for the North Central Pennsylvania region and provides essential transportation connections between numerous communities along the Susquehanna River. Within the planning study area this four-lane highway presents a barrier between downtown Lewisburg Borough and its neighborhoods on the western side of U.S. Route 15 and adjacent East Buffalo Township. The study was initiated to develop a comprehensive framework and vision that integrates the analysis of both land use and transportation issues along the 2.5-mile-long corridor. The study resulted in a transportation and land use master plan for the U.S. Route 15 corridor in the Lewisburg area between the Beagle Club/River Road intersection and the William Penn Drive intersection.

The plan focuses on improving mobility, safety, circulation, and quality of life and outlines recommendations that balance future traffic capacity demands within the context of existing and future land use conditions, community vision, and multimodal travel options. The plan created a vision for the U.S. Route 15 corridor by bringing key stakeholders together for the first time to discuss detailed problems and concerns. Residents in the area also provided essential input that translated to recommended so-

U.S. Route 15 Corridor Study, cont'd.



*Buffalo Road and U.S. Route 15 –
Before and After (rendering)*



*U.S. Route 15 Gateway Concept –
Before and After (rendering)*



lutions for the corridor. The final plan reflects a great deal of citizen input on recommended design improvements, including removing the center turning lane and establishing a green median/boulevard.

Other recommendations focus on reducing traffic congestion, improving safety for bicycle and pedestrian access at intersections and along U.S. 15, resolving the Buffalo Valley Rail Trail crossing location of U.S. 15, implementing aesthetic improvements along the corridor, providing a gateway to downtown Lewisburg, and providing for land use and zoning consistency between Lewisburg Borough and East Buffalo Township.

Challenges and Lessons Learned

Most business owners and residents were supportive of the study and recommended design elements, however, not everyone was fully on board with the concept of applying Smart Transportation/design flexibility and gateway-related signage in the master plan for the corridor. It took some time to find consensus on some of these design options. It was important to discuss these differences of opinion as several of the options presented would change the character of established neighborhoods. Beyond establishing a vision and master plan for the corridor, a study like this is always an eye opener for the public on the cost of transportation improvements. Changes don't happen overnight and the money isn't currently available to accomplish all improvements.



Route 62 through downtown Oil City

“PCTI provides an opportunity for the City to define and creatively respond to the unique land use and transportation needs of the southside business and commercial districts.”

41. Oil City Smart Transportation Study

City of Oil City, Venango County

The project resulted in planned infrastructure improvements and changes to city ordinances to encourage infill development and redevelopment.

- 12-month planning study
- Completed
- \$205,000 in PCTI funding

Project Benefits and Successes

The Smart Transportation Study for Oil City focused on U.S. Route 62, which traverses Oil City’s Southside Business District. U.S. Route 62 is the primary travel route through the southern portion of Oil City, therefore a comprehensive corridor plan for this roadway enables the city to prioritize improvements to benefit all users of the roadway and provide a toolbox for potential development and redevelopment.

The three-phased study reviewed existing conditions and analyzed future transportation and land use needs. Working alongside local officials, stakeholders, and citizens, the project team developed conceptual improvements at targeted locations within the corridor.

The project team used Synchro, a traffic simulation tool, at a public meeting to show how a roundabout would benefit the corridor. This helped illustrate the concept to local residents who were apprehensive about how it would impact traffic flow.

Challenges and Lessons Learned

Now that the study has been completed, finding funding sources to implement improvements will be a challenge. The city applied for implementation funds but was unsuccessful.

The planning study recommends a stamped concrete design on the apron in front of the Fire Company building to delineate a No Parking area.



“Although a unique and wonderful small town character already exists in Felton, the community seeks to enhance the cohesiveness of the Main Street corridor.”

42. Felton Borough Main Street Corridor Planning Initiative

Felton Borough, York County

The plan focuses on connectivity and traffic calming to create a safe transportation corridor.

- Approximately one-year planning study
- Completed
- \$35,000 in PCTI funding

Project Benefits and Successes

The purpose of the planning study was to create a plan for the Main Street corridor that incorporates both functional and aesthetic smart transportation street design. Main Street provides important connections to residential areas, park facilities, and other community assets. The overall goal of the plan is to create a safe transportation corridor in the heart of the borough that is shared by motorists, pedestrians, and bicyclists alike.

This study gave the Borough a good idea on what can be done on Main Street to reduce speeds. Recommendations include seven bulbouts located throughout the corridor for traffic calming, installation of a sidewalk along Main Street from the front of the Borough Office to High Street, accommodations for additional on-street parking, and a stamped concrete design in front of the Fire Company building to delineate a No Parking area and allow for safe entrance to the facility. Construction is expected to be conducted in five specific phases along the corridor and is estimated to cost \$1 million.

Felton Borough Main Street Corridor Planning Initiative, cont'd.

Challenges and Lessons Learned

The study included public outreach that culminated in a meeting held at the end of the study prior to adoption. All of the borough residents, especially residents and businesses located in the Main Street study area, were invited to attend. Engaging the public is crucial to learn what is suitable and to gain acceptance of a plan. A proposed new sidewalk along one side of the street was identified as a concern for property owners and therefore the sidewalk recommendation in front of those properties was removed from the study. Overall, the study process went smoothly. It is a good plan but the Borough will need to acquire grant money to implement the recommendations.



Felton Borough initiated a study of its Main Street corridor in an effort to retain its small town charm.

Southern York County I-83 Park N Ride Study



January 2011

“Without PCTI there would not have been available resources for this type of study.”

43. Southern York County Park-and-Ride Study

York County

This study identified strategic locations for future park-and-ride lots for commuters using the rabbittransit Express Bus Service to Maryland and to complement the PA Commuter Services carpool/vanpool advocacy efforts.

- Approximately one-year study
- Completed
- \$100,000 in PCTI funding

Project Benefits and Successes

The study refined a good process for looking into future possible park-and-ride locations, including the evaluation of existing facility options. A previous park-and-ride location was determined without a study associated with it; however, the study process proved to be a better method of determining the best location. The study was very data-driven and examined five different exits on I-83 from exit 16 to the Maryland line. Data included drive time limits, current/future southbound commuter data, peak traffic counts, parking/ramp counts, customer input, and various location characteristics to narrow options.

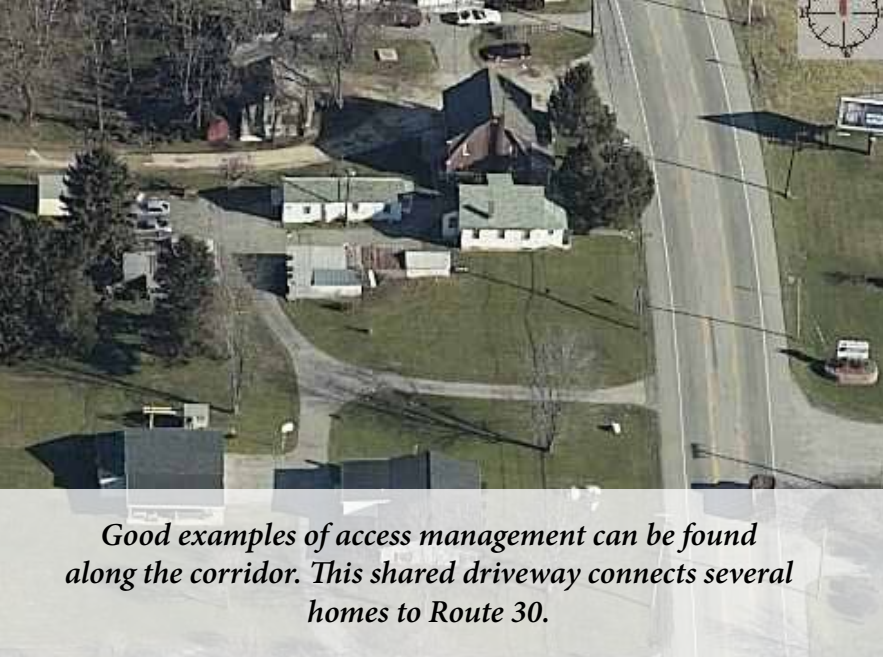
The study considered a number of in-process activities of rabbittransit and PA Commuter Services and lays the foundation for southbound commuter transportation to reach the next level. The study supports the York Area Metropolitan Planning Organization (YAMPO) goals of reducing the use of single-occupancy vehicles for commuting and supporting commuter bus service. Funding has also been set aside by YAMPO for implementation of the park-and-ride lot.

A robust online survey effort was conducted. Survey results from another relevant recent study were used to tailor questions for the survey designed

for this study. Two surveys fed information to the study and the public was further engaged through e-mail blasts, website announcements, and yard signs throughout the study area. Without PCTI there would not have been available resources for this type of study. The PCTI funds gave Rabbittransit and YAMPO the opportunity to do the necessary research to find the best park-and-ride locations. Rabbittransit is currently working with the Federal Transit Administration (FTA) and YAMPO to advance the implementation of the study.

Challenges and Lessons Learned

The study went smoothly and the administrative work was fairly easy. There were no real challenges other than a slight learning curve related to the field work. The study was short and focused which helped in sharing study progress with the project committee. One afterthought is that the study should not have been concluded with only the recommended six locations, but rather kept open to other possibilities for other commuter needs beyond the focus of this particular study. Acquisition of the land to construct the park-and-ride lot will be a challenge since multiple land uses compete for the available open space; however, the study may help jump-start future discussions.



Good examples of access management can be found along the corridor. This shared driveway connects several homes to Route 30.

“It’s important to seek support at the beginning of the process to build the level of commitment for implementation.”

44. U.S. Route 30 Access Management Study

Jackson and Paradise Townships, York County

The purpose of this study was to manage access points along the U.S. Route 30 corridor within Jackson and Paradise Townships in York County by identifying improvements that can be applied over time through local land use ordinances.

- Approximately 16-month study
- Completed
- \$100,000 in PCTI funding, in-kind services from York County Planning Commission

Project Benefits and Successes

The opportunities for increased land development activities in Jackson and Paradise Townships also spawn traffic access, safety, and capacity concerns along the U.S. Route 30 corridor. The access management study involved the identification of planning initiatives and regulatory requirements to enable the townships to properly manage access to new development. The need for access management along Route 30 was identified in the townships’ multimunicipal comprehensive plan and the York County MPO (YAMPO) Long-Range Transportation Plan. The York County Planning Commission conducted the study, which included background data collection and crash analysis, municipal/public outreach, and model ordinance development. Personal invitations were mailed to all property owners along the corridor and a public meeting was held early in the planning process. The meeting was well attended and included discussion and explanation on the objectives of the study. PennDOT’s Access Management Model Ordinances Handbook (Pub 574) was considered in the development of regulatory solutions. Tailored model land use/access regulations for the corridor were developed and provided to each of the townships. The model ordinance language was developed and Paradise Township adopted an access management ordinance in February 2012. To date, Jackson Township has not adopted an ordinance.

Challenges and Lessons Learned

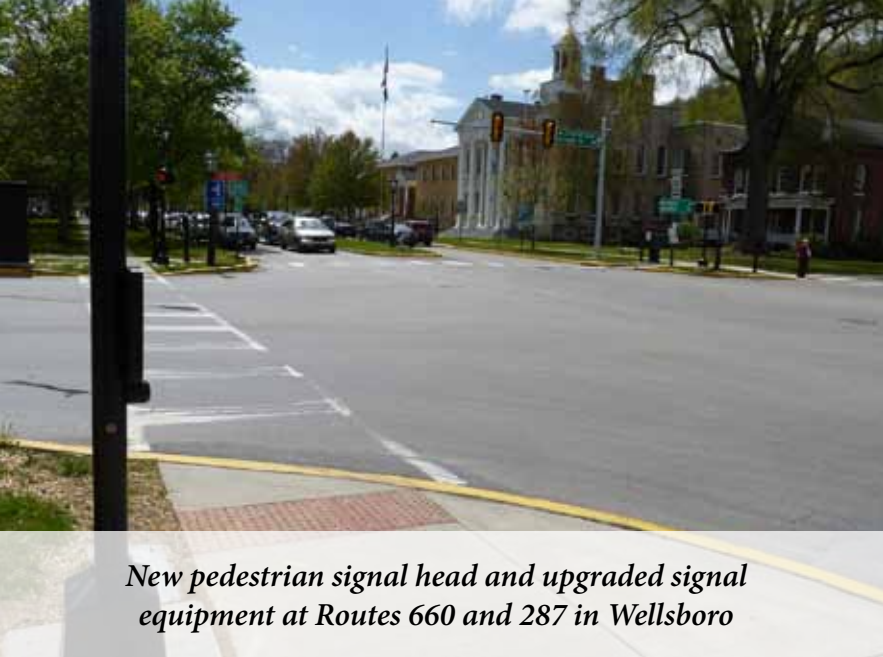
The Access Management study followed a good process and fit reasonably well within the goals of the PCTI program, however, more time was needed than anticipated to reevaluate and make changes as part of the ordinance development and adoption process. Some lessons learned include the need to seek more support from municipalities at the beginning of the process in order to build the required level of commitment for implementation. Planning staff gained a better understanding of ordinance adoption from the perspective of a rural municipality through working with Jackson Township. There was a level of public frustration regarding the need to conduct planning studies and develop local ordinances before constructing transportation improvements. It would have been beneficial for YAMPO to have put money aside to implement improvements identified through the study.



The model ordinance will help limit the number of access points along the commercial areas of Route 30.



The new Access Management Ordinance for Paradise Township contains a useful definition diagram.



New pedestrian signal head and upgraded signal equipment at Routes 660 and 287 in Wellsboro

“One unanticipated positive outcome of bringing the municipalities together for this project was that it helped facilitate discussions on how to work together to share equipment.”

45. Implementation of Municipal Mobility Plans – Modal Operations Rehabilitation

Wellsboro and Mansfield Boroughs and Richmond Township, Tioga County
Athens Township, Bradford County

This project addressed mobility issues in four municipalities by upgrading and installing traffic signals, installing pedestrian signal heads, and improving signal timing to accommodate all transportation modes.

- Approximately one year for installation and upgrade of traffic signals
- Completed
- \$1.2 million in PCTI funding

Project Benefits and Successes

This project addressed mobility issues in four municipalities that had been identified in various plans—the Elmira Street Mobility Plan, Mansfield Mobility Plan, and Wellsboro Mobility Plan. These plans identified the need for signal improvements to facilitate mobility throughout the region. In addition to upgraded signals, pedestrian signal heads, and improved signal timing, pre-emption for emergency vehicles and pedestrian crosswalk upgrades were added to the intersections to improve safety. Further, signals were installed at a previously unsignalized intersection in Wellsboro.

This region is in the heart of Marcellus shale natural gas drilling activity and traffic has increased significantly since the three mobility plan studies were finalized. Mobility issues are now even more urgent. The municipalities are now looking to update their comprehensive plans to reflect the impacts of the Marcellus shale industry.

Several meetings were held with the four municipalities to educate and obtain their support prior to application for the PCTI award. One unanticipated positive outcome of these meetings was that they helped facilitate discussions between the municipalities on how to work together to share equipment.

Implementation of Municipal Mobility Plans – Modal Operations Rehabilitation, cont'd.



*Elmira Street and Mile Lane
intersection improvements in
Athens Township*

Challenges and Lessons Learned

A few obstacles were met along the way and were corrected. Initially, neighboring land owners complained about the loud volume of the new audible pedestrian signal heads; the volume was accordingly adjusted. Another hurdle involved the new signalized intersection in Wellsboro. There were differing opinions on whether one arm of the intersection required a sidewalk. PennDOT installed a pedestrian facility; however, it did not meet the existing stamped concrete design found throughout the downtown area. PennDOT corrected the issue by installing a stamped concrete sidewalk. Lastly, drivers generally complained about the initial timing of the signals. The timing issue has been resolved through a series of adjustments.



*New pedestrian facilities at Elmira Street in
Athens Township*



The Common Ground tool identifies the region's assets for making better land use and transportation decisions.

“PCTI is a good program and the project created a good asset management site for the region.”

46. Common Ground Web-Based Planning Tool

North Central Regional Planning Commission
(Cameron, Clearfield, Elk, Jefferson, McKean, and Potter Counties)

This planning effort involved the identification of regional assets and the development of an interactive local asset management web-based tool.

- Two-year planning project
- Completed
- \$285,000 in PCTI funding

Project Benefits and Successes

The project resulted in a geographic information system (GIS)-based tool to assist the six-county region by providing baseline asset information (land use, transportation, and economic development data) over the long term. The website houses this data in one location, making it easier for local governments to access the data. The Common Ground website identifies existing and planned land uses surrounding the region's recently developed “core transportation system” and current and planned investments in water, sewer, and industrial development. Common Ground is an effective tool to assist local officials with planning decisions and to support regional coordination efforts.

Challenges and Lessons Learned

The implementation of the Common Ground website involved input and cooperation from various planning partners and transit agencies throughout the region. A few challenges were encountered along the way due to the large size of the region and the number of assets to be identified. Accessing local data was not easy, and inconsistencies in land use policies and regulations throughout the region proved to be an impediment. There was some resistance from the counties regarding making

Common Ground Web-Based Planning Tool, cont'd.

data available via the Internet. In hindsight, too much time was spent on gathering the digital land use data. It may have been best to maintain focus on the big picture rather than the minute details.

In the end, the hard work paid off and an effective asset management tool has been created to bring the region together.



“Smart Transportation and PCTI are great initiatives to incorporate community planning with transportation plans and investments. PennDOT staff provided a great presentation to the Task Force early in the study process on the principles of Smart Transportation, which was very valuable.”

47. Lake Augusta Gateway Corridor Study

Northumberland Borough, the City of Sunbury, and Upper Augusta Township in Northumberland County; Shamokin Dam Borough and Monroe Township in Snyder County; and Union Township in Union County

The Lake Augusta Gateway Corridor Study identified context-sensitive design solutions to alleviate congestion, mitigate safety issues, and beautify a 6.2-mile corridor along the Susquehanna River and adjacent communities.

- Approximately one-year study
- Completed
- \$125,000 in PCTI funding

Project Benefits and Successes

The project involves portions of U.S. Routes 11/15, U.S. Route 11, PA Route 147, and PA Route 61. The plan establishes a clear vision for the region and provides general principles to help shape the future of the corridor and the surrounding communities through the interconnectedness of transportation with land use, economic development, and recreational development. The planning process integrated the various goals of the communities along the corridor and serves as both a master plan and smart transportation plan for the Lake Augusta Corridor. PA Bike Route J currently runs along this section of U.S. Routes 11/15, but is a dangerous section for non-motorized traffic. The plan recommends a transportation focus on making safe pedestrian/bicycle connections among communities and providing improved access to the river. The plan also recommends:

- creating green space along the right-of-way as part of the Susquehanna Greenway system;
- reducing the number of travel lanes, where appropriate;
- increasing shoulder width;
- intersection enhancements;
- a river sports park for non-motorized boating activity;

Lake Augusta Gateway Corridor Study, cont'd.

- Shamokin Dam and Northumberland scenic parkway improvements; and
- other related near- and long-term recommendations.

The project was guided by a Task Force of more than 40 people representing all types of interests. Everyone worked well together and PennDOT staff provided a great presentation to the Task Force early in the study process on the principles of Smart Transportation, which was helpful.

Challenges and Lessons Learned

A complementary study involving the Route 61 corridor in the City of Sunbury ran concurrently, which allowed for coordination and integration of plans. Unfortunately, this was misunderstood by the local newspaper media and others to be a duplication of effort. One limitation of the study is that it did not examine the full range of transportation modes, and therefore is not fully multimodal. However, the study did address pedestrian/bicycle and roadways. Looking back, it would have been beneficial to have a component in the plan to consider transit to help alleviate congestion and enhance the community.



Lake Augusta (the Susquehanna River at Northumberland Borough and the City of Sunbury)