

2019

LAWRENCE COUNTY US 422 AND SR 65 CORRIDOR STUDY

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BACKGROUND

Introduction

Study Purpose

This pilot study builds off information contained in the recently adopted Lawrence County Comprehensive Plan and the Shenango Township Municipal Comprehensive Plan to develop corridor-level strategic plans for two key corridors – US 422 and SR 65. The US 422 study corridor stretches from I-79 west to the US Business 422 (Butler Avenue) intersection with SR 65. The SR 65 study corridor begins at the US 422 corridor and continues to SR 388 ([Exhibit 1 – Study Area](#)). The study was funded through the Southwestern Pennsylvania Commission, Lawrence County Planning and Community Development, and Shenango Township.

In many cases, municipalities do not have detailed enough planning in place to be able to identify specific needs at a corridor level. The purpose of this study is to document the community's desires for transportation improvements so they may be considered for inclusion as part of the PennDOT Connects process when major and minor improvements are completed along the US 422 and SR 65 corridors.

PennDOT Connects Policy

PennDOT Connects policy is being implemented to strengthen the link between community planning and project development. PennDOT Districts, counties, and Metropolitan Planning Organizations (MPOs) and Rural Planning Organizations (RPOs) are being asked to collaborate with local municipalities earlier in the project development process in order to better identify needs surrounding safety, freight, transit, stormwater, pedestrians, bicyclists, planned development, and other factors.

The current PennDOT Connects form is provided in [Appendix A – PennDOT Connects](#) for reference.

Steering Committee Involvement

A Steering Committee consisting of a broad cross section of local stakeholders was established to guide the development of the study. The Steering Committee was comprised of members from the following organizations:

- Southwestern Pennsylvania Commission
- Lawrence County Planning and Community Development
- Shenango Township Supervisors
- Shenango Area School District
- Lawrence County Public Participation Panel
- Lawrence County Community Action Partnership
- Pennsylvania American Water
- New Castle Area Transit Authority
- PennDOT District 11-0
- Local business and property owners

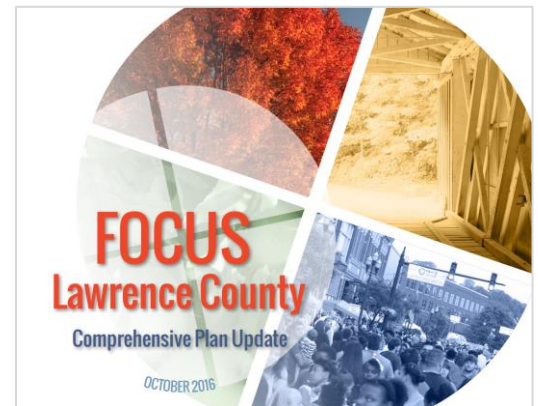
Four Steering Committee meetings were conducted from February to June 2018. (The topics covered at each of the meetings are below.)

1. **Project Understanding** – at this session, the project team asked for input on issues and opportunities in the study area, considering all modes of transportation, freight, stormwater, and land use. Some preliminary project solutions were developed as a result of this discussion.
2. **Preliminary Alternatives** – at this session, the team discussed findings from the field view and developed preliminary alternatives, brainstormed additional solutions, and documented their consensus.
3. **Alternative Selection** – at this session, the team reviewed and agreed upon the combined refined alternatives as preferred alternatives and previewed the draft report outline.
4. **Implementation Plan** – at this session, the team reviewed the draft report as well as discussed next steps for the MPO and local officials as well as public outreach strategy post-study.

Literature Review

Existing planning documents were gathered and reviewed to understand current planning issues and future transportation and land use desires for the community. The full literature review memo can be found in [Appendix B – Literature Review Memo](#). These documents included:

- Lawrence County Comprehensive Plan Update (2016)
- Lawrence County Greenways Plan Update (2017)
- Lawrence County 2015 Hazard Mitigation Plan (2016)
- Lawrence County Stormwater Management Plan, Volumes I-III (2007)
- Shenango Township Comprehensive Development Plan (2017)
- Shenango Township Zoning Ordinance (2001)



The Lawrence County Comprehensive Plan Update was reviewed as part of this study

Goals and Objectives

The literature review and meetings with local officials and the Steering Committee led to the development of a set of guiding goals and objectives for the study. The guiding principles can be summarized as a need for mobility and accessibility, especially for students and the elderly, a desire to enhance quality of life and retain residents, and foster sustainable economic development along the corridors.

Goals and Objectives:

- Develop and maintain **clean and safe facilities** that meet the needs of **all users** in the community
- Improve **public transportation access** and connectivity to the surrounding region
- Implement **multimodal connections**, especially by improving the safety and viability of pedestrian and bicycle infrastructure

- Promote **healthy communities** by improving access to parks and recreation
- Encourage **smart growth** by developing diverse housing alternatives and businesses in areas already served by adequate infrastructure

Transportation Planning Process

Transportation projects are planned for the future through the planning process. The process typically sees projects starting out as concepts in a study or through public input, then become included in the regional 20-year horizon Long Range Transportation Plan (LRTP), and eventually move onto the 4-year horizon Transportation Improvement Program (TIP). The TIP is where project funds are programmed, and all projects that make it onto the TIP must undergo the PennDOT Connects process to identify municipal needs or concerns that could be included during the project delivery process.



Goal: Better Communities and Mobility Powered through Collaboration

PennDOT Connects:

- Builds partnerships that invest in sustainable transportation.
- Leverages resources to improve communities.
- Leads and innovates for a more livable Pennsylvania.
- Delivers projects that improve economic competitiveness, access to work, and over all quality of life.

How PennDOT Connects Works

PennDOT and our planning partners meet with local governments to discuss details for each project prior to developing project scopes and cost estimates.

All mobility needs are considered.

- | | |
|----------------------|-------------------------|
| • Bicycle | • Utilities |
| • Pedestrian | • Community health |
| • Transit | • Stormwater management |
| • Freight | • Green infrastructure |
| • Operations and ITS | |

PennDOT is... Investing in a community with each project. **Involving** communities at the beginning of the planning process. **Learning** what elements may be important to include in the project to support a community's vision.



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PUB 801 (3-17)

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LAWRENCE COUNTY



Population: 91,108



Households: 40,975

Average Size: 2.39



Land Area: 362.71 square miles



Median Household Income: \$45,764



Average Travel Time to Work: 22.8 minutes



Percentage of Households with No Vehicle: 9.5%



SHENANGO T O W N S H I P

Population: **7,479**



Households: **3,014**
Average Size: **2.48**

Land Area:
55.5 square miles



Median Household
Income: **\$52,155**

Average Travel
Time to Work:
22.9 Minutes



Percentage of
Households with
No Vehicle: **6.8%**

SLIPPERY ROCK T O W N S H I P

Population: **3,283**



Households: **1,273**
Average Size: **2.57**

Land Area:
30.06 square miles



Median Household
Income: **\$56,423**

Average Travel
Time to Work:
26 Minutes



Percentage of
Households with
No Vehicle: **3.8%**

C I T Y O F NEW CASTLE

Population: **23,273**



Households: **9,765**
Average Size: **2.3**

Land Area:
8.53 square miles



Median Household
Income: **\$31,557**

Average Travel
Time to Work:
19.9 Minutes



Percentage of
Households with
No Vehicle: **18.3%**

US 422 Operational Characteristics

US 422 is part of the National Highway System and functions as a key regional corridor through Indiana, Armstrong, Butler, and Lawrence Counties. The section within the study area lies between the Lawrence County line west of the I-79 interchange and the US 422 New Castle bypass. Further to the west, US 422 crosses I-376. The roadway is primarily a 3-lane facility with eastbound and westbound lanes divided by a two-way center turn lane, though it opens in certain sections to two lanes in each direction. Aggressive driving was a common concern throughout the corridor, and drivers were observed using these sections and non-marked areas as passing lanes.

The Average Annual Daily Traffic (AADT) ranges from approximately 11,000 to 14,000 vehicles per day (**Exhibit 2 – Average Daily Traffic Volumes**). The 11-mile stretch of roadway along US 422 is primarily unsignalized. There are full access interchanges with US 422 business, US 19, and I-79 to the east.

The **truck percentage** along the US 422 corridor ranges from 10-13%, high in comparison to other local roadways due to the proximity of large manufacturing and industrial sites directly adjacent to the corridor. Many sites have driveway access onto US 422. Truck volumes can be seen in **Exhibit 3 – Average Daily Truck Volumes**. The posted speed limit throughout the corridor ranges from 50 mph to 55 mph.

US 422 is also a key corridor for **transit usage** in Lawrence County, as New Castle Area Transit Authority (NCATA) hosts a large park-and-ride facility along US 422 that runs regular long-distance transit service from New Castle to the North Shore in Pittsburgh, departing at least hourly. NCATA buses do not make stops east of the park-and-ride facility along the US 422 corridor. However, NCATA runs more frequent buses along US 422 closer to New Castle on the western side of the study area.



US 422 Westbound Entering New Castle



US 422 Westbound Left-Turn Lane at Living Treasures Animal Park



NCATA Bus Dwells at the Park and Ride on US 422

US 422 Key Land Use Features

Key land use features along the US 422 corridor include tourism and recreation destinations such as McConnells Mill State Park, the North Country Trail, and Living Treasures Animal Park. Lawrence County is both a family-oriented and outdoors enthusiast destination as it is home to recreational opportunities including its own state park, and the regional network of state parks in neighboring counties such as Moraine State Park. It is important for quality of life and economic development through tourism to connect and improve access to these regional destinations.

The New Castle Area Transit Authority park-and-ride facility is located along the US 422 corridor and provides long-distance transit to access destinations and jobs in downtown Pittsburgh. The US 422 corridor sees a variety of adjacent large-scale industrial uses, with commercial retail development concentrated at the western end of the corridor in Shenango Township. A map of key land use features in the study area can be found in [Exhibit 4 – Key Land Use Features](#).

Flooding and stormwater management are important considerations for both corridors in the study area as flooding is common due to topography, soil types, and the corridor's proximity to rivers, creeks, and tributaries such as Slippery Rock Creek, Muddy Run, Hell Run, and Big Run, which feed into the Beaver River, Mahoning River, and Shenago River. A map denoting key streams, floodplains, and drainage issues can be seen in [Exhibit 5 – Water Resources](#).



Living Treasures Wild Animal Park



McConnells Mill State Park Entrance

SR 65 Operational Characteristics

SR 65 is a regional corridor that locally connects New Castle and Ellwood City with the Beaver and Ohio Valley communities. It is also referred to as the 65th Infantry Division Memorial Highway. The study corridor area stretches north from SR 388 to US 422, and changes in character as it approaches the City of New Castle.

The northern portion of the SR 65 corridor is 2-lane facility that runs through a well-established neighborhood in New Castle. SR 65 changes context into suburban commercial land use past the signalized interchange with US 422. In this section, SR 65 has turn lanes and traffic signals at intersections near Lawrence Village Plaza. To the south, the corridor land use becomes more rural, and is a 2-lane facility with intermittent passing lanes. The speed limit in the rural section of the corridor is 45 miles per hour, transitioning to 40 miles per hour near the intersection of Gardner Stop Road and 35 miles per hour near the US 422 interchange, with a school zone near Shenango High School.

AADT in the corridor ranges from approximately 11,750 vehicles per day north of the US 422 interchange and 4,500-7,000 vehicles per day south of the interchange.

SR 65 is also a key transit corridor for NCATA with multiple routes and frequent service. Pedestrians can be observed walking through the northern portion of the SR 65 corridor between Lawrence Village Plaza, Shenango High School, as well as several restaurants and places of employment. There are no dedicated pedestrian or bicycle facilities on the corridor in Shenango Township; however, sidewalks are present on both sides of the corridor within the City of New Castle.



SR 65 Southbound near US 422 Ramps



SR 65 Southbound near Lawrence Village Plaza



SR 65 Southbound south of Lawrence Village Plaza



Lawrence Village Plaza Storefronts

SR 65 Key Land Use Features

Key land use features on the SR 65 corridor include local tourism and recreation destinations such as Cascade Park, Forbush's Drive In frozen custard, and Haunted Hill View Manor. There is a distinct seasonality to these destinations, summer and fall are peak times for visitors.

The middle section of the SR 65 corridor south of the US 422 interchange is home to the Shenango Area High School which has direct access onto SR 65, as well as Shenango Elementary School which accesses SR 65 at Old Princeton Road traffic signal. The neighboring land uses to the high school include retail commercial and fast-food developments concentrated on both sides of SR 65, with a shopping development concentrated at Lawrence Village Plaza.



Shenango High School Entrance

The southern portion of the SR 65 corridor is rural residential in character, with a small business cluster focused at the intersection with SR 388 including a neighborhood grocery and barber shop. Further south, SR 65 intersects with Harmony Baptist Road, the site of a future trail crossing for the North Country Trail.

Local Connecting Route System & Land Use Context

Other locally significant routes were identified as part of this study due to their connectivity between the corridors of US 422 and SR 65. The roads are Frew Mill Road, Willowbrook Road, and Princeton Road.

Frew Mill Road (SR 1012) carries approximately 800 AADT through a primarily industrial and rural residential land use context. It is roughly parallel to US 422 to the north, and leads to the former Youth Development Center site, which has been acquired by the **Lawrence County Community Action Partnership** (LCCAP). LCCAP intends to develop this site into a community asset providing educational and recreational programs for youth and the community. Frew Mill Road also connects to the **Shenango Industrial Park**, and serves as a key connection to US 422 through Dougherty and Willowbrook Roads, where future industrial and commercial development is anticipated. Key land use features in the study area can be found in [Exhibit 4 – Key Land Use Features](#).



Lawrence County Community Action Partnership's New Campus

Old Princeton Road is a low-volume local roadway that provides service to a primarily residential suburban and rural area. It runs parallel to US 422 to the south and terminates at SR 65 to the west. It connects at various points to roadways that lead to the US 422 corridor.



LCCAP's Allied Coordinated Transportation Services (ACTS) Shuttle

Future Growth and Considerations

One motivation for the development of this strategic corridor study was to identify the potential sites for large developments and document local desires for accommodations in the transportation network to accommodate such sites in a sustainable way.

Another key consideration is growing development and increased jobs in Allegheny and Butler Counties may provide more residential and service employment demand in Lawrence County for residents who commute to Pittsburgh or neighboring counties.

Lawrence Village Plaza and the commercial areas along the SR 65 corridor are anticipated to see more investment and development as businesses locate to accessible storefronts and develop available land.



NCATA Bus

Currently, the Southwestern Pennsylvania Commission's long-range transportation plan identifies a \$25 million project for the reconstruction of a portion of the US 422 corridor, planned to begin by 2029 at the earliest. The considerations highlighted in this report are intended to summarize the context of the transportation system and desired improvements that could be incorporated early in the scoping process for minimal or no added cost.

SR 65 has undergone routine paving operations in recent years. The portion of SR 65 from Beaver Falls to SR 388 was repaved in 2017. The section of SR 65 from SR 388 to just south of the US 422 interchange was repaved in 2018.

In order to assist PennDOT, Shenango Township, and SPC with implementing desired changes from this study, the project team conducted field views to document observations and suggestions for the 2018 repaving project. The suggested pavement markings and signage improvements can be seen in [Appendix C – SR 65 Paving Notes](#).



Truck on SR 65 Southbound

The section of SR 65 just south of the US 422 interchange to the north will be repaved in the future.

Another program overlapping this study is SPC's Regional Traffic Signal Program. SPC offers signal upgrade assistance to municipalities with a low local match. During the study process the project team documented signal observations and needed improvements and prepared cost estimates and an application to apply for funding to upgrade the signals along SR 65. The upgrades are still listed in this report as desired improvements, as the specific project awards have not been announced at the time of this study.

Overall Study Recommendations

Study recommendations uncovered through Steering Committee involvement and field observations are grouped according to the corridor (**Exhibit 6 – Corridor Focus Areas**). Recommendations for improvements along the corridors are as follows:

- US 422 corridor, from east to west
- SR 65 corridor, from north to south
- Other corridors (Frew Mill Road, Willowbrook Road, and Old Princeton Road)

The following sections of the report include the focus area with an Existing Conditions and Desired Improvements map. The Existing Conditions is intended as an overview of the key focus area along the corridor, highlighting images of field work, observations, and other comments about current needs. The Desired Improvements section is intended to document and visualize the future improvements.

A summary table precedes the suite of corridor maps with a compilation of the recommendations, located on pages 24, 56, and 82. They contain the project identification number referenced within this report, the name of the project, a short description, the page of the report on which its related maps can be found, an estimated cost, potential funding sources, and responsible parties to plan, implement, or deliver the recommendations.

It should be noted that all cost estimates in this study are planning-level estimates, and should be thoroughly reviewed, vetted and



US 422 Merge Area at Rose Point



SR 65 at SR 388



Frew Mill Road Bridge

cross-referenced with environmental data and field views prior to beginning any project as is good practice.

Also, conceptual alternatives and pavement markings presented in this report are included to illustrate potential alternatives. Actual design and implementation of projects and pavement markings should follow all applicable state and federal standards and guidelines.

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EXHIBIT 1 – STUDY AREA



EXHIBIT 2 – AVERAGE DAILY TRAFFIC VOLUMES

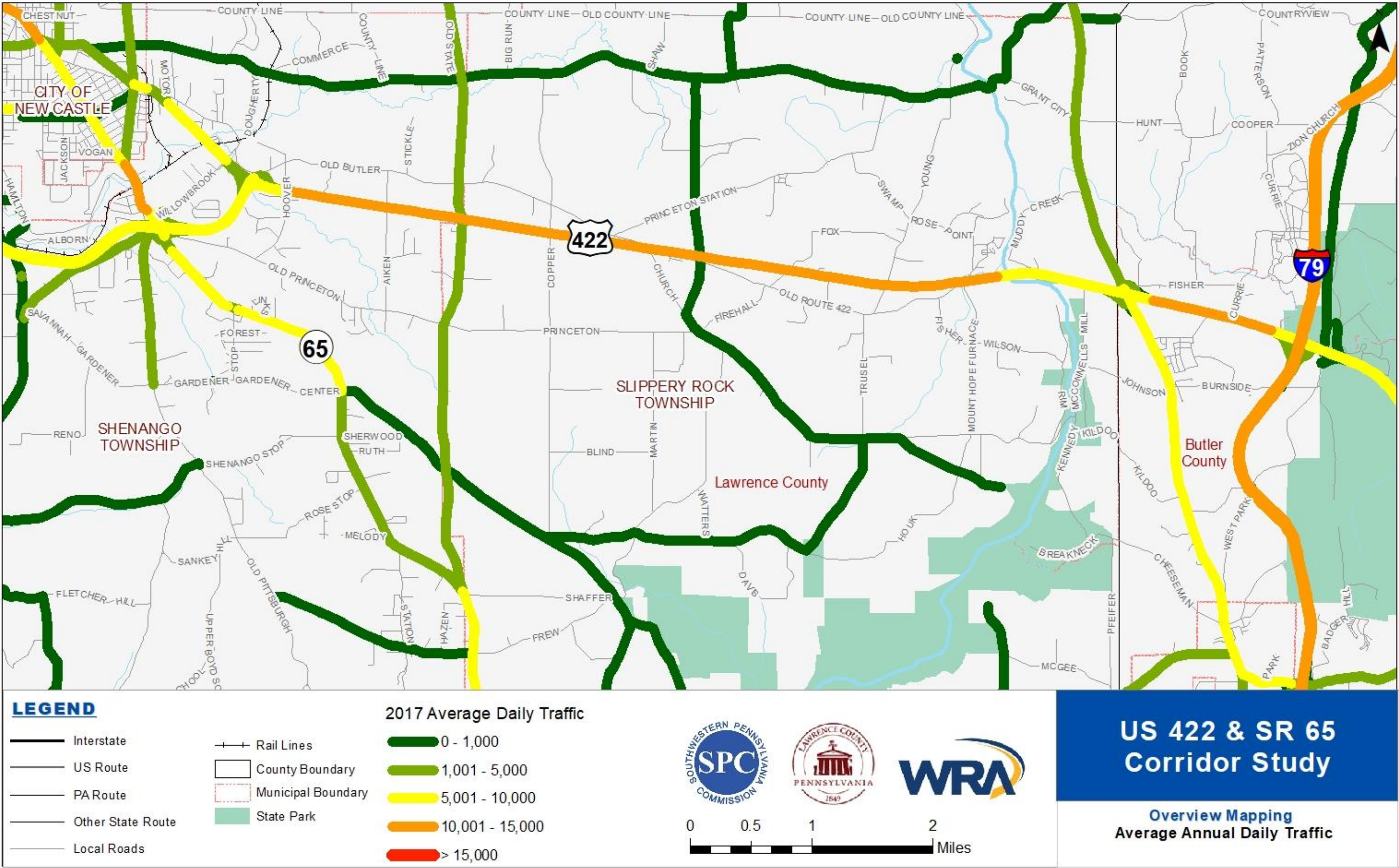
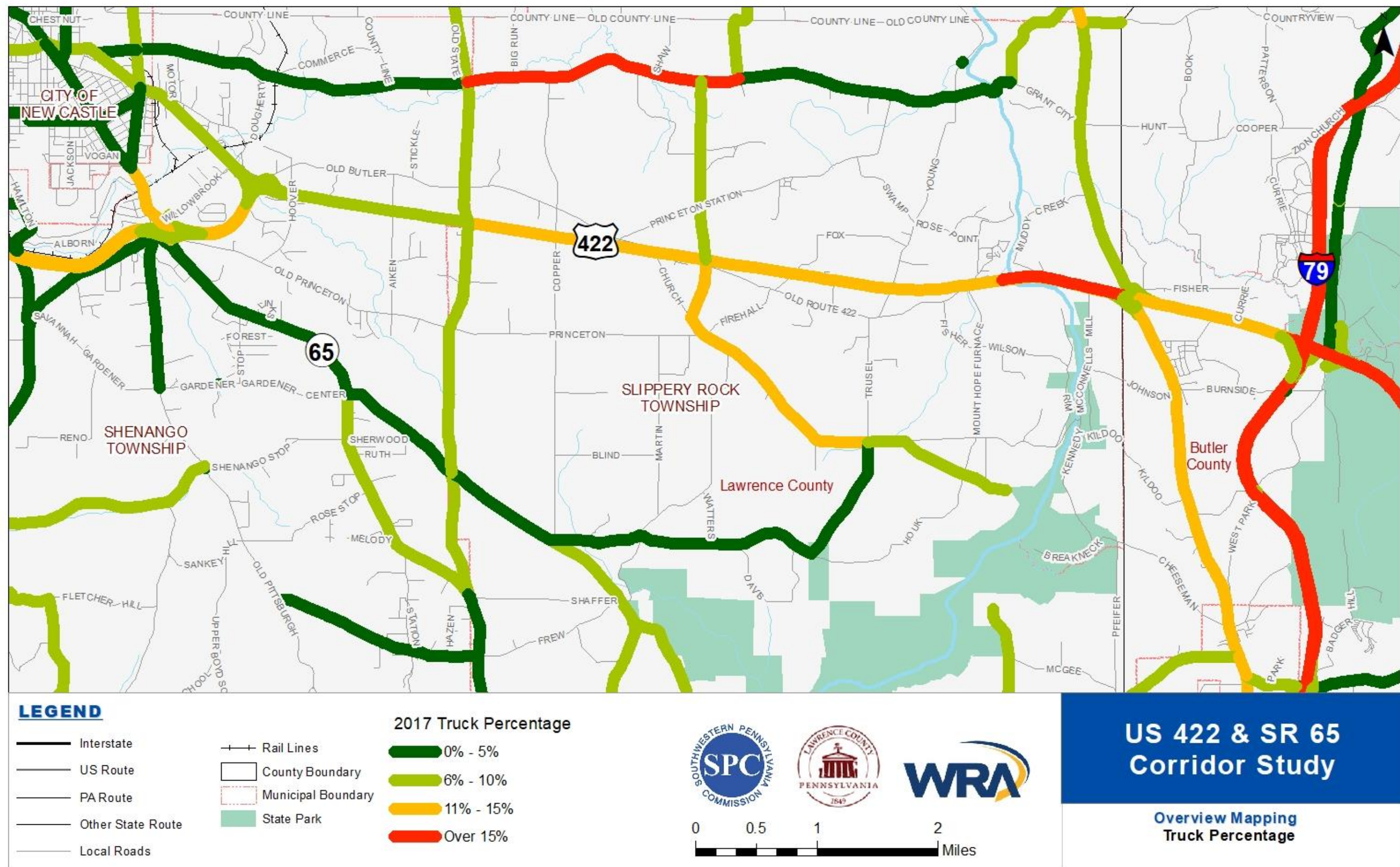


EXHIBIT 3 – AVERAGE DAILY TRUCK VOLUMES





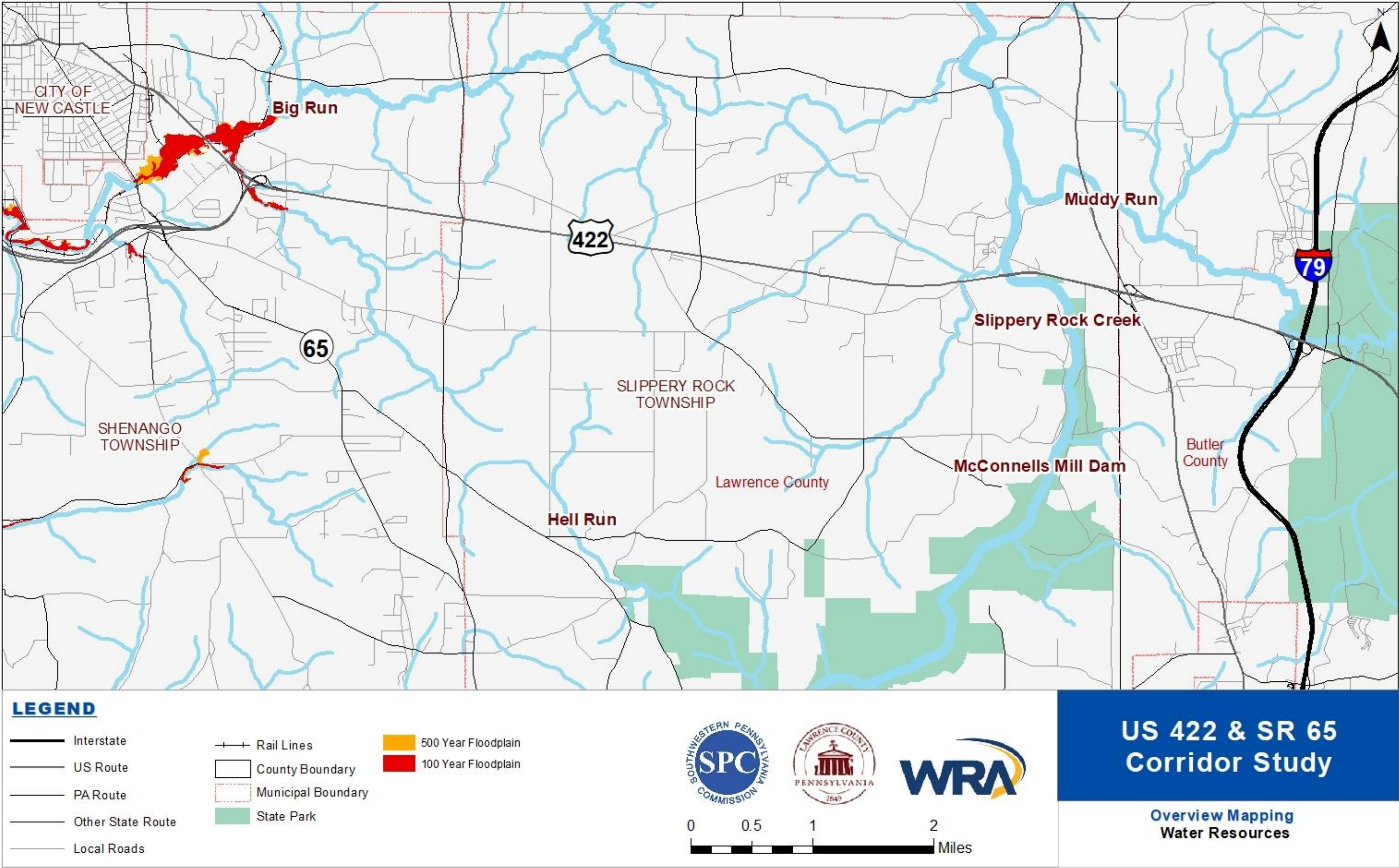
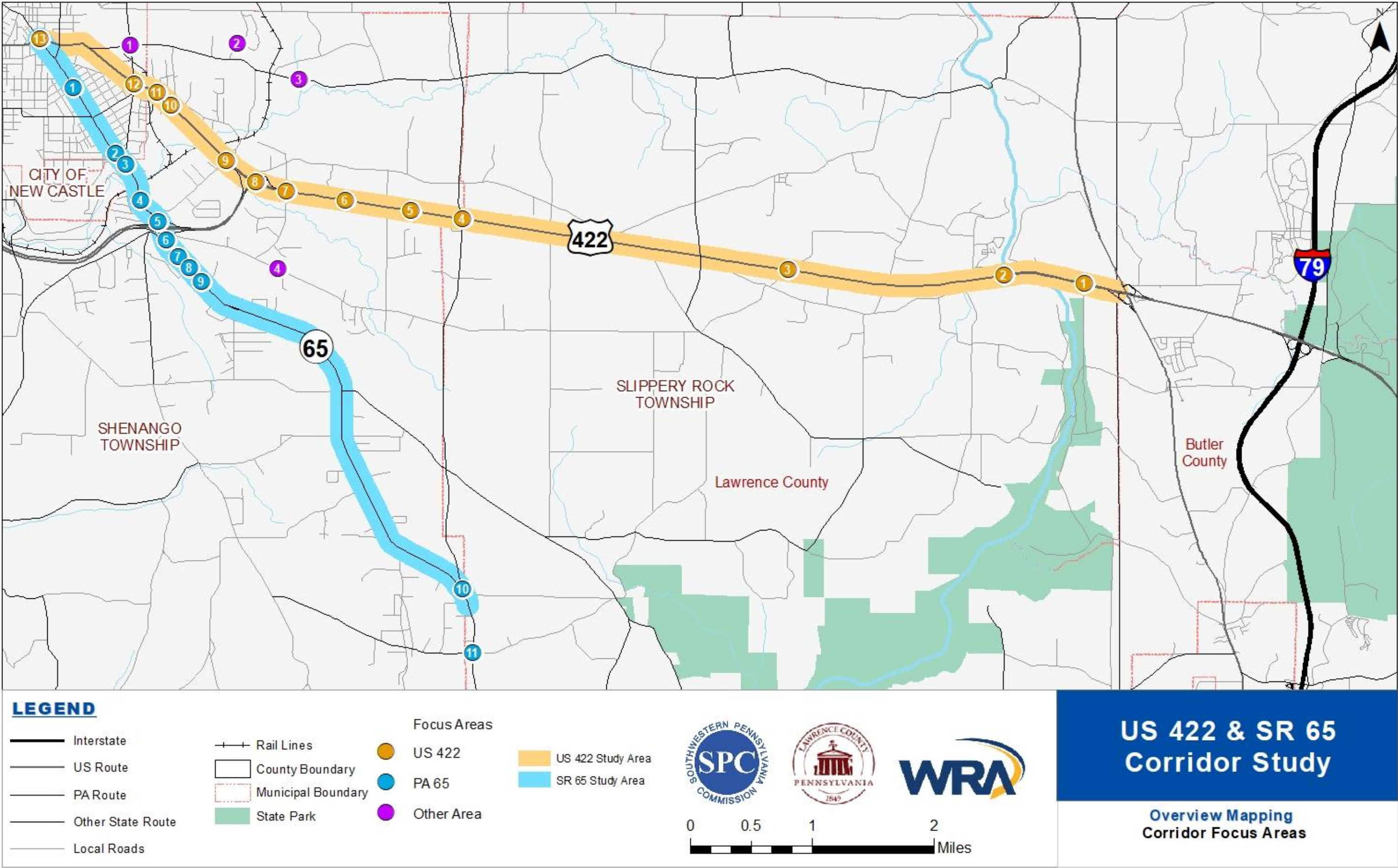
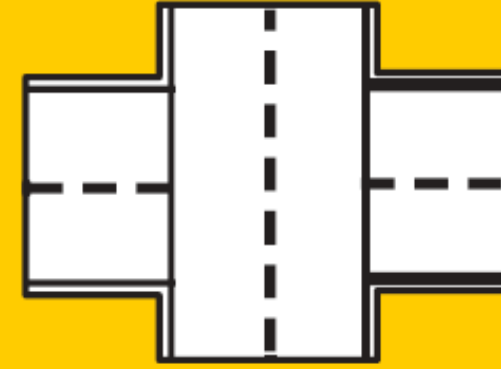


EXHIBIT 6 – CORRIDOR FOCUS AREAS





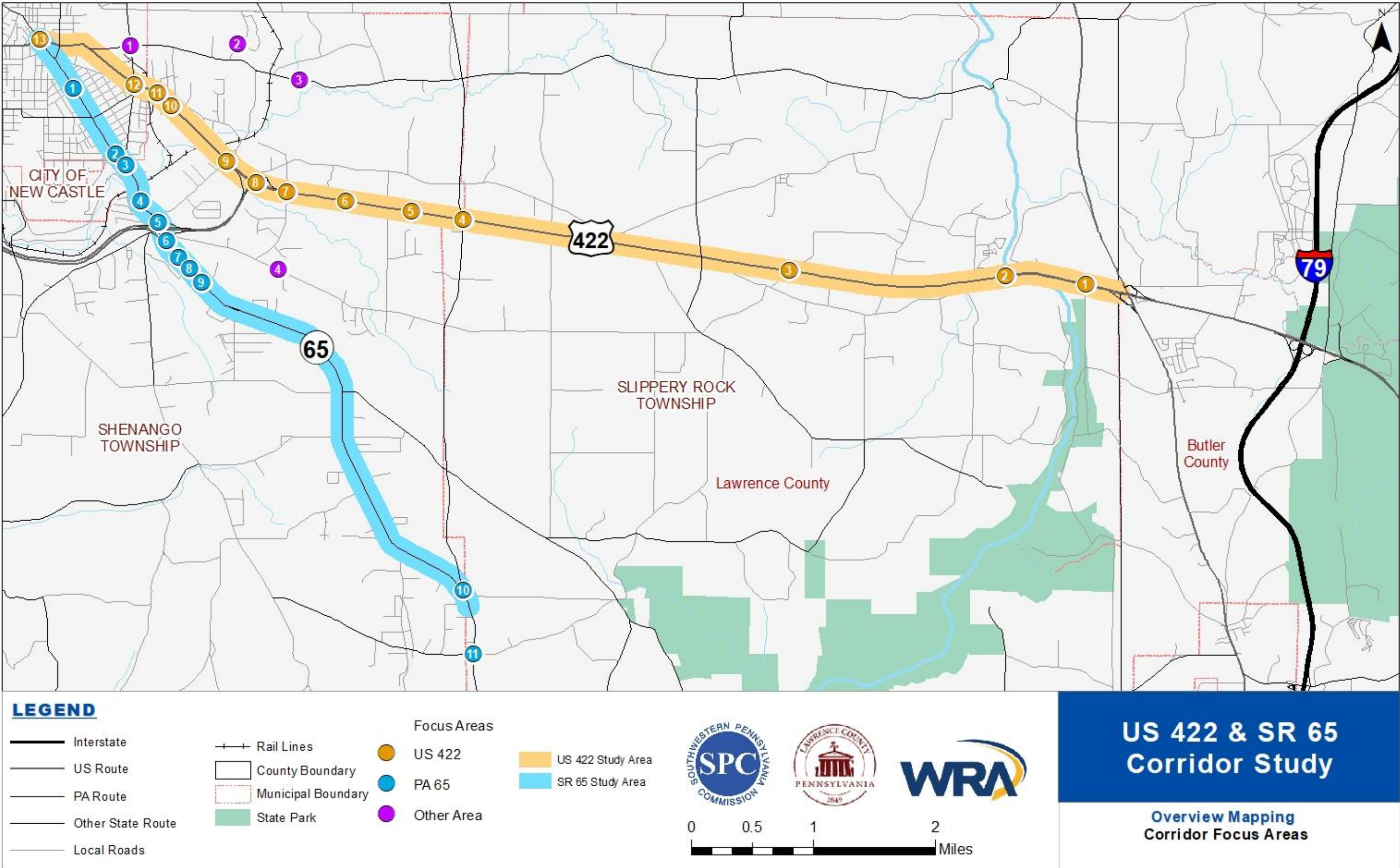
US 422 Corridor



US 422 Recommendations

ID	Location (and Link)	Short Description	Page	Estimated Cost	Potential Funding	Responsible
1	1 - US 422 at McConnell’s Mill State Park	Add left turn lane along US 422 and improve park signage	26	\$8,000	U	PennDOT
2	2 - US 422 at Rose Point	Improve merge signage and pavement markings	28	\$1,500	U, M	PennDOT
3	3 - US 422 at Fox Road	Install watch for pedestrians sign and private shuttle	30	\$1,000	U, P	PennDOT, Private
4	4 - US 422 at SR 388	Install roundabout or realign intersection, access management	32	\$62,000	U, M, O	PennDOT
5	5 - US 422 Park and Ride	Install benches and electronics for real-time transit location	34	\$20,000	D, E, Q, U	NCATA
6	6 - US 422 at Potential Development Site	Install traffic signal, consolidate access points for nearby industrial sites	36	\$300,000	P, V	PennDOT, Private Developer, Township
7	7 - US 422 at Hoover Road	Realign left-turn lanes and improve pavement markings	38	\$3,000	U, M	PennDOT
8	8 - US 422 at On/Off Ramps	Install acceleration lanes	40	\$125,000	M, O, U	PennDOT
9	9 - US 422 at Willowbrook Rd	Realign left-turn lanes and improve pavement markings	42	\$3,500	M, O, U	Township and PennDOT
10	10 - US 422 from Giant Eagle to Cascade St	Install sidewalks	44	\$140,000	A, D, E, H, I, P, R, U	Township and PennDOT
11	11 - US 422 at Old Butler Rd	Realign intersection	46	\$90,000	M, O, U, E	PennDOT
12	12 - US 422 at S Cascade St (5-leg)	Signal upgrades; long term consider roundabout or cul-de-sac Adams Street	48	\$500,000	A, B, C, M, L, N	PennDOT
13	13 - US 422 at SR 65 / Taylor Street	Signal upgrades; access management	50	\$60,000	A, V, M, U	PennDOT, SPC
14	14 - US 422 Corridor-wide	Make a consistent three lane section with center turn lane	52	*varies, done as part of scheduled maintenance	M, O, U	PennDOT

US 422 Corridor Recommendations Overview Map



1 - US 422 at McConnell's Mill State Park

Existing Conditions





2 - US 422 at Rose Point

Existing Conditions





3 - US 422 at Fox Road

Existing Conditions









5 - US 422 Park and Ride

Existing Conditions





6 - US 422 at Potential Development Site

Existing Conditions





7 - US 422 at Hoover Road

Existing Conditions





8 - US 422 at On/Off Ramps

Existing Conditions





9 - US 422 at Willowbrook Rd

Existing Conditions





10 - US 422 from Giant Eagle to Cascade St

Existing Conditions





11 - US 422 at Old Butler Rd

Existing Conditions





12 - US 422 at S Cascade St (5-leg)

Existing Conditions





13 - US 422 at SR 65 / Taylor Street

Existing Conditions





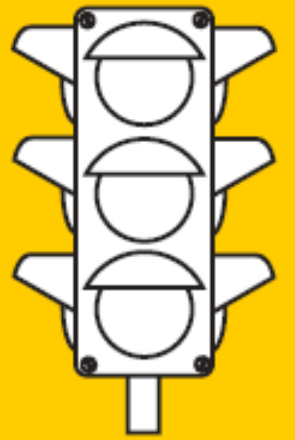
14 - US 422 Corridor-wide

Existing Conditions





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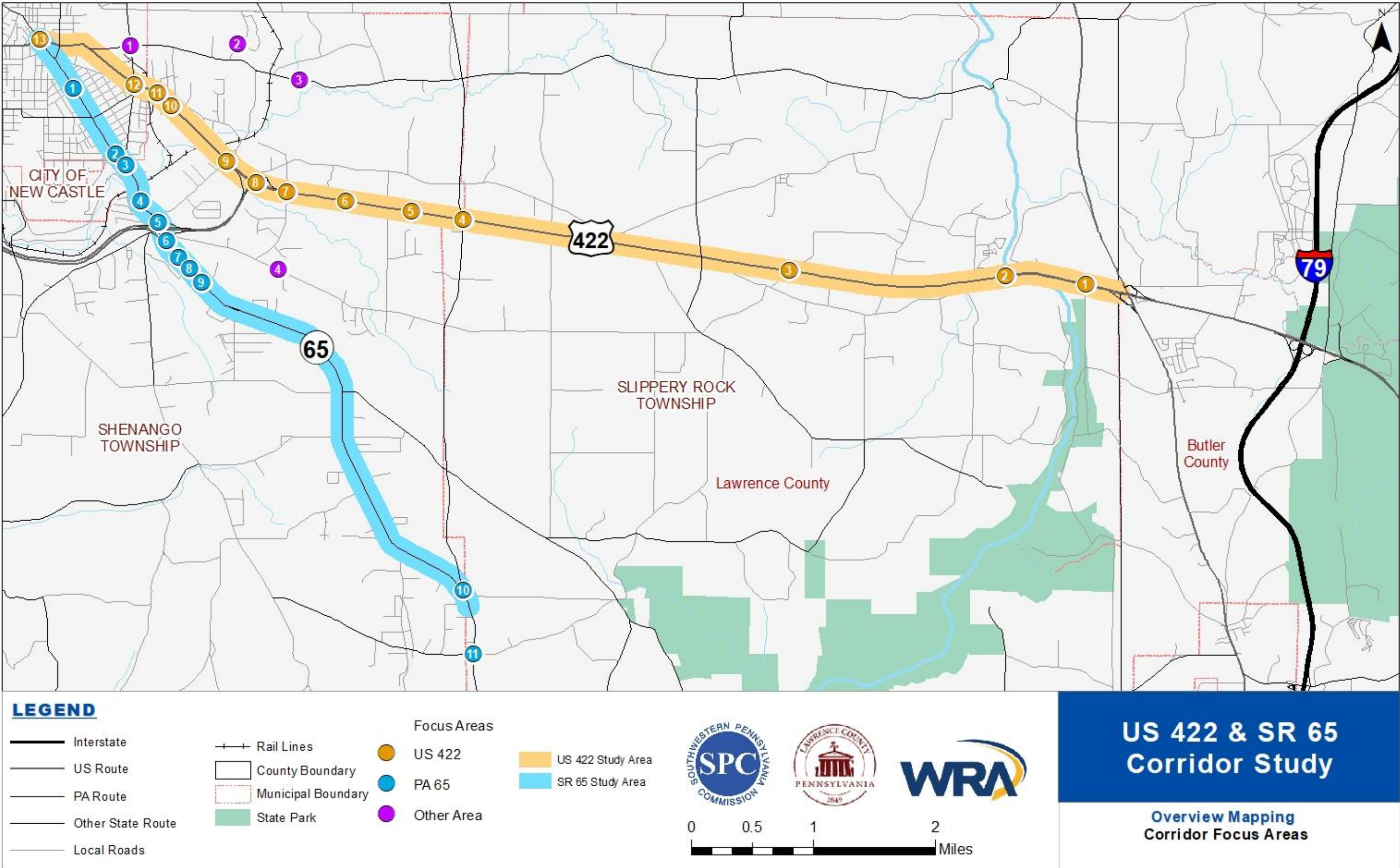


SR 65 Corridor

SR 65 Corridor Recommendations

ID	Name	Short Description	Page	Estimated Cost	Potential Funding	Responsible
1	1 - SR 65 Intersection Realignments	Realign intersections to come together at 90 degree angles as needed	58	*ranges	M, U, V	PennDOT
2	2 - SR 65 at S Cascade Street	Realign intersection to come to a 90 degree angle	60	\$350,000	M, Q	PennDOT
3	3 - SR 65 at Cascade Park	Install sidewalks within park along SR 65, consolidate entrances, and revitalize gateway treatment	62	\$70,000	D, E, F, H, M, U, V	Township, multi-municipal
4	4 - SR 65 at Potential Development Site	Install roundabout if warranted and include sidewalk connections outside of development	64	\$4,000,000	M,P, U, R	Township, private developer, PennDOT
5	5 - SR 65 Signals	Upgrade signal equipment, detection, coordination, and pedestrian amenities	66	\$120,000	A, B, C, D, E, H, I, R,U	PennDOT, SPC, Township
6	6 – SR 65 near McDonald’s	Restripe pavement markings and add signage to clearly indicate drop left-turn lane	68	\$3,000	A, U	PennDOT
7	7 – SR 65 From High School to North	Add sidewalks along SR 65 from the high school north to Cascade Park	70	\$250,000	D, E, H, I, Q, U	PennDOT
8	8 – Shenango High School Property	Add sidewalks and crosswalks on high school property	72	\$30,000	D, E, H, I, U, V	School District
9	9 – SR 65 along Lawrence Village Plaza	Add sidewalks and bus pull-offs within and around the Lawrence Village Plaza on SR 65	74	\$120,000	D, E, H, I, P, Q, U, V	PennDOT, Private, Township
10	10 – SR 65 at SR 388	Install roundabout if warranted, or realign intersection to reduce skew angle	76	\$3,000,000	M, U, V	PennDOT
11	11 – SR 65 at Harmony Baptist Rd	Install trail crossing signs and pavement markings for the North Country Trail	78	\$3,000	D, E, F,G, H, I	PennDOT, DCNR

SR 65 Corridor Recommendations Overview Map



1 - SR 65 Intersection Realignments

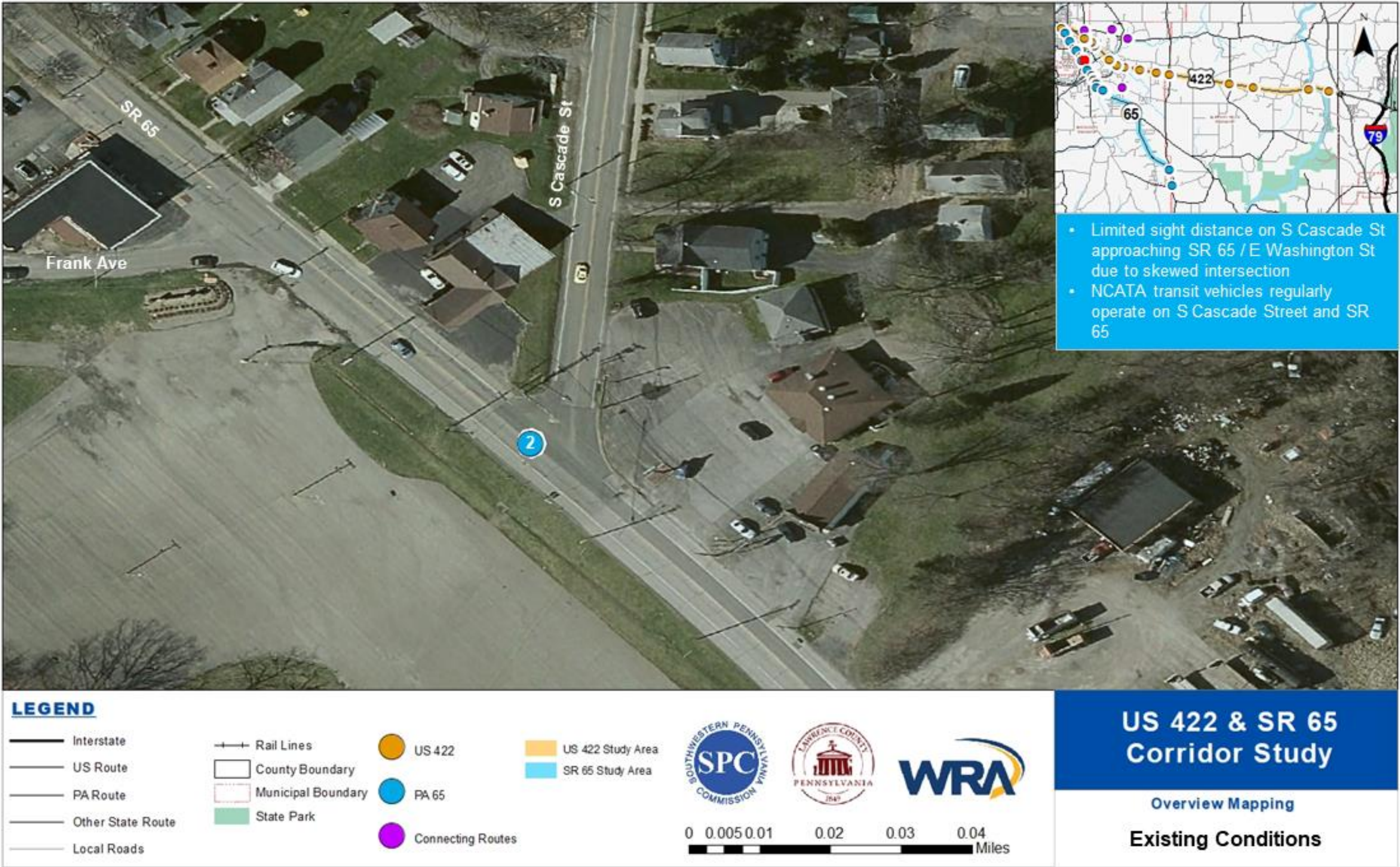
Existing Conditions





2 - SR 65 at S Cascade Street

Existing Conditions





3 - SR 65 at Cascade Park

Existing Conditions





4 - SR 65 at Potential Development Site

Existing Conditions





5 - SR 65 Signals

Existing Conditions





6 – SR 65 near McDonald's

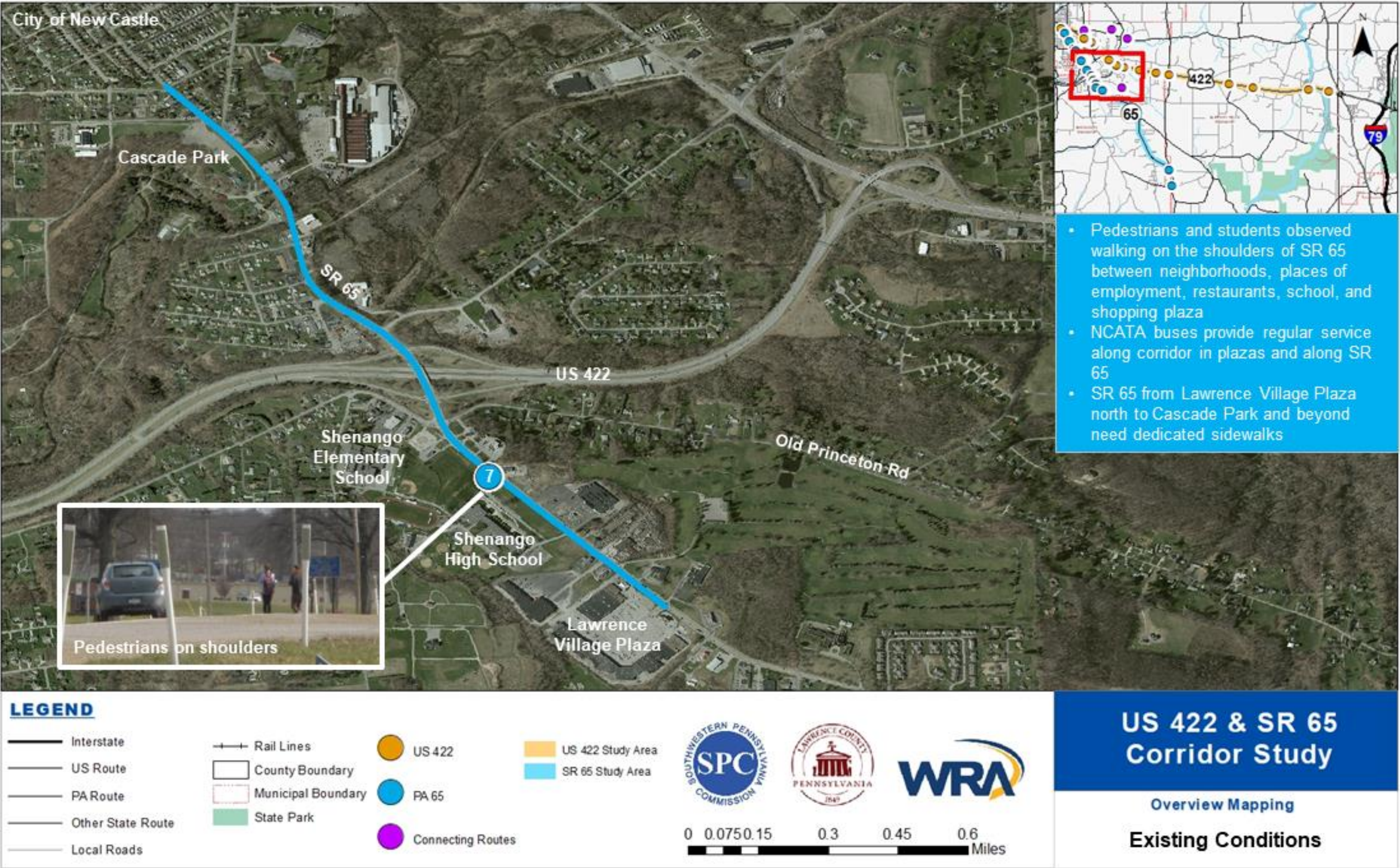
Existing Conditions

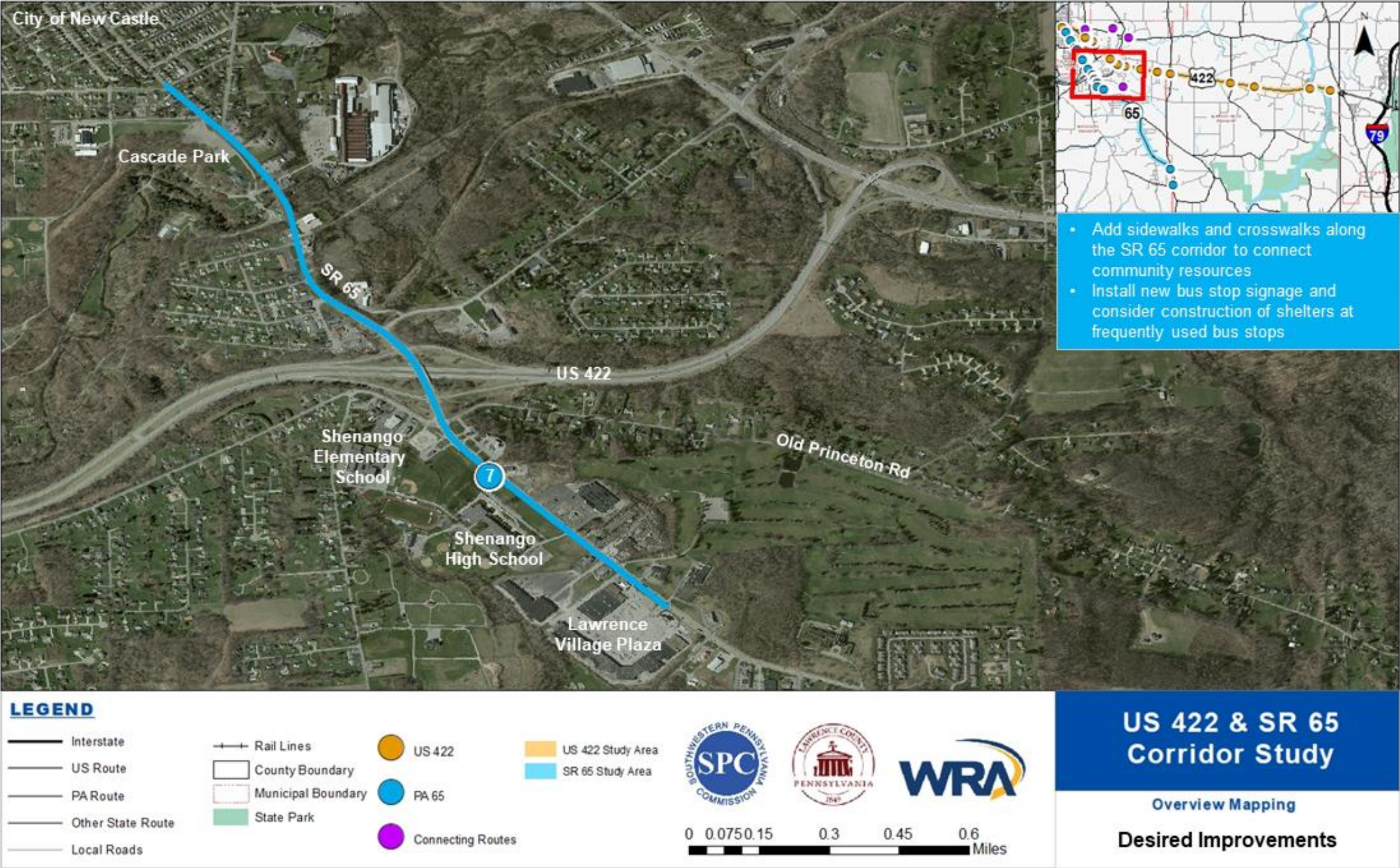




7 – SR 65 From High School to North

Existing Conditions





Existing Conditions



- Shenango High School experiences high pedestrian traffic during football games and other events
- Lacking sidewalks to connect to SR 65 to north or to Lawrence Village Plaza
- Internal crosswalks need to be restriped
- Traffic turning left onto NB SR 65 sometimes difficult at unsignalized intersection during rush hour



Crossing to student parking lot

Lawrence Village Plaza

LEGEND

-  Interstate
 US Route
 PA Route
 Other State Route
 Local Roads
-  Rail Lines
 County Boundary
 Municipal Boundary
 State Park
-  US 422
 PA 65
 Connecting Routes
-  US 422 Study Area
 SR 65 Study Area



0 0.02 0.04 0.08 0.12 0.16 Miles

US 422 & SR 65
Corridor Study

Overview Mapping

Existing Conditions



9 – SR 65 along Lawrence Village Plaza

Existing Conditions









11 – SR 65 at Harmony Baptist Rd

Existing Conditions





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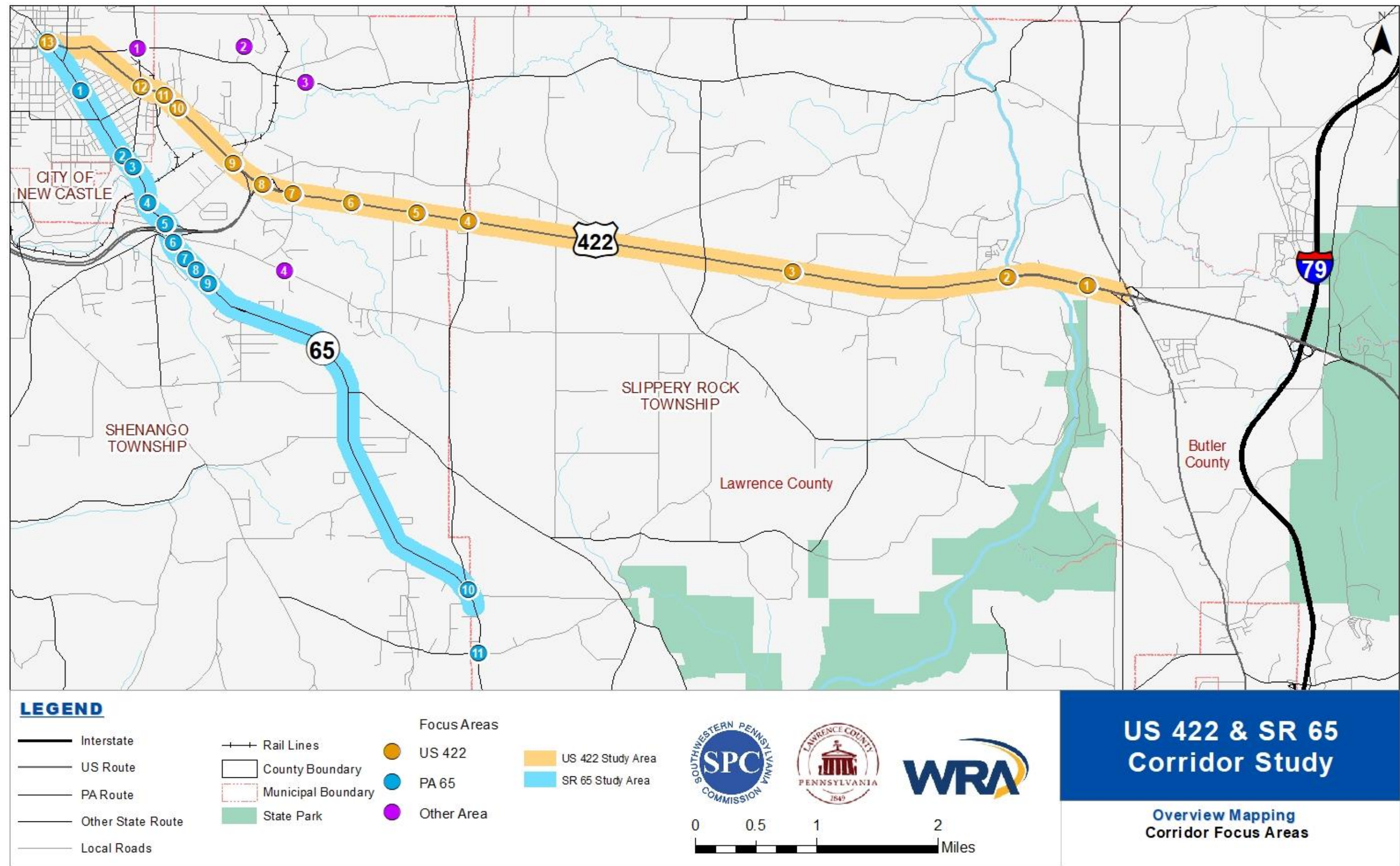


Community Corridors

Community Corridor Recommendations

ID	Location	Short Description	Page	Cost Estimate	Potential Funding	Responsible
1	1 – Cascade Street at Frew Mill Road	Install cross traffic does not stop sign and intersection ahead pavement markings	84	\$1,000	A, U, V	PennDOT, Municipality
2	2 – Frew Mill Road Trail	Construct a trail separated from vehicular traffic connecting New Castle to LCCAP Campus	86	\$110,000	D, E, F,G, H, I, P, U	PennDOT, Municipality, LCCAP
3	3 – Frew Mill Road Bridge	Replace one-lane bridge with a two-lane bridge	88	*	M, N, P, U	PennDOT
4	4 – Old Princeton Road	Install pavement markings to reduce speeds and speed minder	90	\$100,000	A, N	Municipality

Community Corridors Recommendations Overview Map



1 – Cascade Street at Frew Mill Road

Existing Conditions





2 – Frew Mill Road Trail

Existing Conditions





3 – Frew Mill Road Bridge

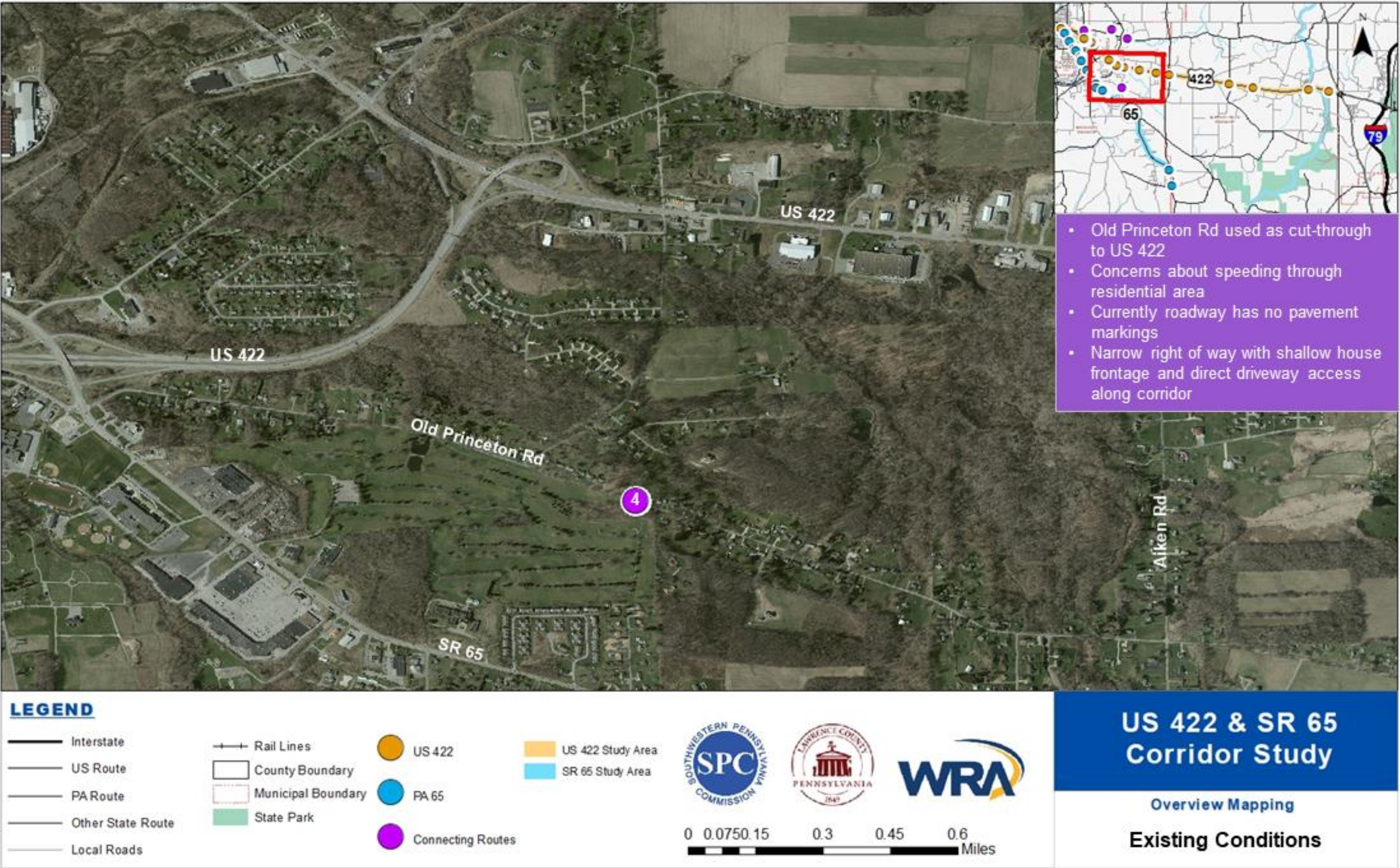
Existing Conditions





4 – Old Princeton Road

Existing Conditions





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POLICY RECOMMENDATIONS

P1 – Aggressive Driving Enforcement Program

This policy is recommended to work with the Shenango Township Police to start a regular aggressive driving enforcement program throughout the US 422 and SR 65 corridors. There are particular areas in need of enforcement for passing, speeding, reckless driving, red-light running. These areas include:

- US 422 at Rose Point merge
- US 422 near Living Treasures Animal Park
- US 422 at Hoover Road
- US 422 at Willowbrook Road
- US 422 at SR 388 near Sheetz signal
- SR 65 near Shenango High School
- SR 65 near Forbush's Drive In

P2 – Lawrence Village Plaza Access Sharing Agreements

This policy is recommended to encourage businesses to sign access sharing agreements in order to reduce the number of driveways, and share maintenance costs. The municipality could educate its business owners of the advantages of access sharing (improved safety, reduced maintenance costs, better traffic flow) and prepare an off-the-shelf sample agreement for business owners to sign as development occurs within the township.

P3 – SR 65 Access Management Plan

This policy recommends adding a written ordinance that future development along the corridors would be at a designated point and completed through an access road. This policy is similar to policy P2 in that it aims to improve safety by reducing vehicular and pedestrian conflict points and limits direct access.

Land use controls can be enacted by county and local governments to protect and enhance the corridors and roadways within the study area. Properly administered, they can positively affect the volume and flow of traffic. These controls apply to new development or suggested major changes to existing sites, or where future growth is anticipated.

Three basic zoning and subdivision techniques can be applied to support the study area and its communities. These are zoning setbacks, residential-commercial cluster zones, and feeder street regulations.

- Setback Regulations prescribe minimum distances for locating buildings away from highway right-of-way. These regulations can reserve adequate space for future widening, improvements, and relocations of the roadway.
- Residential-commercial cluster zones entice compact development patterns and prevent strip development. These ordinances encourage high density development by requiring several

adjoining sites to share access to nearby corridors. Conflicts with traffic are minimized, and the existing highway capacity and safety are retained.

- Feeder street regulations present the most effective means to protect corridors from encroachment by new subdivisions. These ordinances limit the number of access streets from a subdivision onto corridors. Such ordinances also coordinate the location of feeder streets serving adjacent developments, and appropriate street widths and grades can also be specified.

PennDOT Connects offers free training on transportation and land use planning topics through their online [PennDOT Connects Support Hub](#), which explains how to request training, the various training modules, and how to register as a PennDOT Connects user account. Within the Support Hub are various technical sheets and brochures on best practices for growth and access management to use within the study area.



PennDOT Connects Municipal Training for Transportation and Land Use Planning

Does new development or old growth patterns in your community hinder the ability of cars, trucks, bikes and pedestrians to move about safely and efficiently? Are you prepared to advocate for your municipality to maintain or improve your community character? Are you seeking funding sources to support transportation projects? PennDOT Connects is ready to provide personalized training to support your efforts and to connect you with the people to build a transportation partnership.

PennDOT Connects offers free training on transportation and land use planning topics. The goal of the training is to assist with your planning efforts and help your municipality and PennDOT partner during transportation projects. You may select a preset training or choose among the submodules to create a training session that meets your needs. Each training explains the planning topic, provides resources, gives examples, and offers next steps. A PennDOT Connects technical expert will come to your community FREE OF CHARGE to deliver the training and facilitate discussions on how these planning concepts may be used in your community.



How to Request Training

Go to [paconnects.org](#), register as a user, and enter a request for assistance, or you may call 717-710-2090 or email PAConnects@pa.gov to request training. Describe the training you would like to have presented and a PennDOT Connects representative will contact you to review the details and select a date. Your role is to provide the facility and invite the participants. PennDOT Connects will provide the technical expert free of charge. Invitees may be from within your municipality or a group of municipalities.

Training Modules

- Improving Safety
- Maintaining or Improving Community Character
- Funding the Maintenance of the Existing Transportation System
- Improving Mobility and Efficiency
- Encouraging Multimodal Transportation
- Accommodating Growth within the Transportation and Natural Environments
- PennDOT Connects – Powered by Communities
- Local Safety Road Plan (LSRP)
- Planning for Bicycle, Trails, and Greenways
- Integrating Transportation and Land Use in Comprehensive Plans

What is PennDOT Connects?

The PennDOT Connects policy, initiated by Secretary of Transportation Leslie S. Richards as a top priority, makes changes to the project development process to enhance transportation planning. It requires communities to have meaningful opportunities for engagement in the initial stages of the planning process with PennDOT and the regional planning partners. A more strategic approach to engagement will ensure that local priorities and issues are effectively considered as transportation needs and investments are planned and developed. The result is improved decision making, better investments, and greater local impacts.

For more information:
717-710-2090
paconnects@pa.gov

P4 – Sidewalk Improvement Program

The policy recommends adopting a sidewalk improvement program. The first step towards implementing this policy would be to perform an inventory of sidewalk and crosswalk existence, pedestrian push buttons and signals, sidewalk condition, and curb ramps. The municipalities would then develop a prioritization process to improve and add sidewalks and crosswalks at key locations; a good starting point would be to upgrade sidewalks and complete the sidewalk network near and between community resources and serving populations such as children and the elderly. The improvements could be funded through routine maintenance or by applications to specific multimodal funding programs at the federal and state level. This policy would currently involve the City of New Castle as it is more urbanized and has the most sidewalks in the study area. As the Townships develop and build sidewalks, it is recommended to record the extents of the new sidewalk network and conduct inventories of condition at regular intervals.



New Concrete Sidewalk

APPENDIX A – PENNDOT CONNECTS & PLAN IMPLEMENTATION

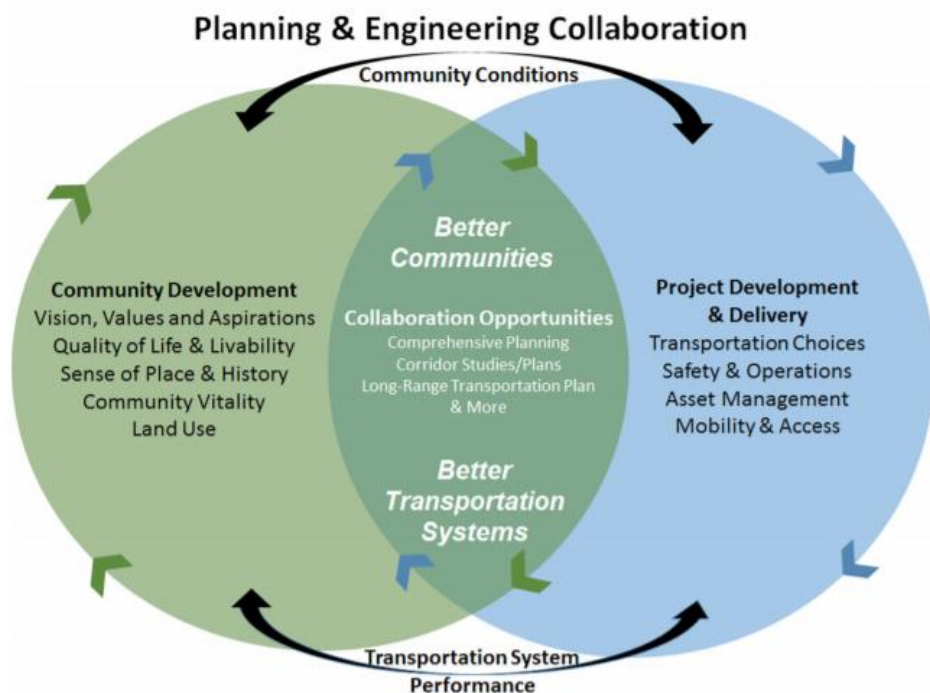


The main purpose of the study is to document the community's and Lawrence County's desires for multimodal transportation improvements along two key corridors, US 422 and SR 65, for their consideration and inclusion as part of the PennDOT Connects Planning Process. The priorities identified in this study were compiled with input from a broad spectrum of local stakeholders and therefore should be considered when major and minor improvements are completed within the study area.

There are mainly two conduits for the county, agencies, and communities to achieve the vision and objectives identified in this study. One is through the PennDOT Connects process, the other through the completion of locally driven and locally administered projects; both opportunities are explained further below.

PennDOT Connects –

The PennDOT Connects policy makes changes to the project development process to enhance transportation planning. It requires communities to have meaningful opportunities for engagement in the initial stages of the planning process with PennDOT and planning partners such as SPC. A more strategic approach to engagement will ensure that local priorities and issues are effectively considered as transportation needs and investments are planned and developed. The result is improved decision making, better investments, and greater local impacts.



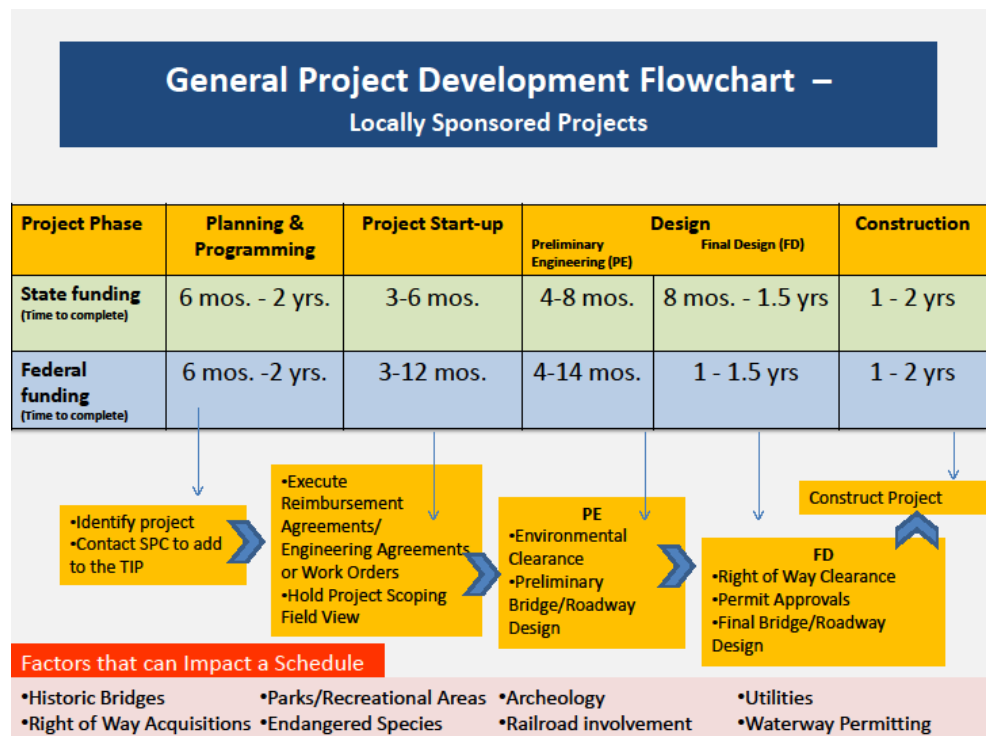
Through PennDOT Connects, resources are being provided to support municipalities' understanding of:

- The integration of transportation and land use planning in transportation project development;
- The integration of transportation and land use in comprehensive plans and/or corridor plans; and,
- The implementation tools available to improve the transportation and land use connection.

PennDOT Connects is about better communities and better transportation systems. These complementary goals are accomplished when communities, planning partners, and PennDOT work together. The graphic below shows how municipal responsibilities for Community Development should dovetail with PennDOT responsibilities for Project Development & Delivery. The overlapping section lists a few of the collaboration opportunities to make this happen. The [PennDOT Connects Support Hub](#) provides a better understanding of the Connects initiative, and free technical assistance and training opportunities on a wide range of topics.

Locally Administered Projects

Generally, a “Local Project” is a project on transportation facility owned/operated by a local government. Local projects can include a project owned by a municipality or governmental agency that is funded through the region’s Transportation Improvement Program. PennDOT’s [Publication 740, Local Project Delivery Manual](#), provides an overview of the required processes and timeframe (see graphic to the right) for delivering local projects using federal and/or state funding and the. Early understanding of these requirements by local project sponsors helps to streamline the overall process by saving time, reducing omissions, and making efficient use of funds.

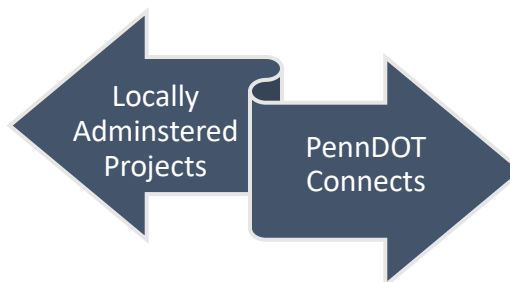


Tips for Local Project Sponsors:

- ✓ Become a PennDOT ECMS Business Partner
- ✓ Follow the proper consultant selection process
- ✓ Utilize a consultant that has previous experience with similar projects and PennDOT procedures
- ✓ Become educated – Review PennDOT’s Local Project Delivery Manual, Publication 740
- ✓ Contact your local PennDOT District Office, County Planning Department, or SPC

Locally Administered Projects

- Coordinate with SPC, PennDOT, and County Planning
- Apply for Funds (project specific)
- Assume project administration responsibilities
- Select Consultant
- Execute Agreements
 - Reimbursement Agreement
 - Engineering Agreement
- Follow state & federal guidelines
 - Preliminary Engineering
 - Environmental Clearance
 - Final Design
 - Right of Way/Utilities/Permits
 - Construction



PennDOT Connects

- PennDOT or county project in your community is already on TIP
- Attend PennDOT Connects and scoping meetings
- Discuss local plans and priorities in project location
- Discuss desired project elements
- Discuss local match (project specific)
- Maintenance Agreements (project specific)

Regional Long Range Plan and Transportation Improvement Program – The regional Long-Range Transportation and Development Plan (LRP) is the mechanism for connecting the Regional Vision to the region's official, coordinated implementation program of projects and actions. The Long-Range Plan prioritizes programs and projects that have been developed to address the region's pressing needs to maintain, preserve and optimize our existing transportation assets for the sustainability of the region's economic competitiveness and the vitality of our communities.

The Transportation Improvement Program (TIP) is the delivery mechanism for advancing transportation investments identified in the LRP. The TIP is updated every two years and sets the schedule for all of the highest priority transportation project and program investments to be advanced over the next four-year period. As the region's short-term investment strategy, the TIP is the first stage of the LRP. In most instances, once on the TIP, funding for specific projects (or project phases) is obligated and projects proceed into the project development process which may include environmental review, design, utilities, right-of-way acquisition, and ultimately construction.

While the TIP is updated every two years, the LRP is updated every four years and contains a 25-year horizon describing the overall vision of the region's transportation system, as well as a program of fiscally-constrained transportation projects, programs and initiatives that the region believes there will be sufficient funds to implement to advance the vision and goals of the LRP.

Municipalities should engage in the development process of both the LRP and the TIP to ensure their input and recommendations are considered when these important regional documents are updated.

At the time of this study, SPC had completed the 2019 – 2022 Transportation Improvement Plan and is in the process of developing the 2019 – 2045 Long Range Plan. Upon review of the existing planning documents, as well as [PennDOT's Twelve Year Plan](#), the projects listed below are programmed and within the corridor study area. Local governments should investigate how to complete or implement the corridor

recommendations in concert with the planned PennDOT projects. Local governments should also note that the TIP, PennDOT's Twelve Year Plan, and the Long Range Plan are dynamic – projects can be removed or their scope, schedule, and budget can be altered at any time to reflect the needs of the region's transportation network.

Based on the preliminary assessments within the study, it is recommended that further concept development and designs, and refined costs estimates are completed for larger scale projects. Once these are completed, the focus should turn to the upcoming programming and funding needs of certain projects. A recommendation area that was noted by the Steering Committee for needing immediate improvements and would benefit from further concept development is US 422 at Willowbrook Road, Recommendation # 9. Furthermore, municipalities should begin researching right-of-way along the corridors and consider acquiring property needed for desired improvements.

The projects below and on the following page are currently programmed on PennDOT's Twelve Year Program (TYP) and are ideal examples of collaboration opportunities through the PennDOT Connects process.

SR 65 Corridor:

- Project: PA 65/East Washington Street
 - MPMS #: 91768
 - Year Programmed: 2nd 4 years (2023 – 2026)
 - Project Narrative: 2" mill and overlay on SR 65, from East Washington Street in New Castle to Old Princeton Road in Shenango Township, Lawrence County.
 - Project Length : 3.02 Miles
 - Project Location: [PennDOT One MAP](#)
 - Corridor Recommendations Project ID's: SR 65 # 1 – 8

US 422 Corridor:

- Project: US 422/Line Ave – New Butler
 - MPMS #: 79449
 - Year Programmed: 2nd 4 years (2023 – 2026)
 - Project Narrative: Reconstruction on SR 422 (Benjamin Franklin Highway) from Line Ave to New Butler Road in Shenango Township
 - Project Length : 1.94 Miles
 - Project Location: [PennDOT One MAP](#)
 - Corridor Recommendations Project ID's: SR 65 # 5,6 & US 422 # 7 – 9

Community Corridors:

- SR 1007 (Cascade St.) Pavement Reconstruction
 - MPMS #: 91767
 - Year Programmed: 3rd 4 years (2027 – 2030)
 - Project Narrative: Pavement Reconstruction – SR 1007 from SR 65 to SR 2004 in the City of New Castle
 - Project Length : 0.98 Miles
 - Project Location: [PennDOT One MAP](#)
 - Corridor Recommendations Project ID's: Community Corridors # 1, US 422 # 12, & SR 65 # 2 – 3
- Frew Mill Road (SR 1012) Bridge
 - MPMS #: 81639
 - Year Programmed: 2nd 4 years (2023 – 2026)
 - Project Narrative: Bridge replacement on SR 1012/Frew Mill Road, from Bridge over Big Run to Young Road, Shenango and Slippery Rock Township
 - Project Length : 0.56 Miles
 - Project Location: [PennDOT One MAP](#)
 - Corridor Recommendations Project ID's: Community Corridors # 2 – 3

Other Projects in Proximity to Study Area:

- Hogue Road Resurfacing
 - MPMS #: 100925
 - Year Programmed: 3rd 4 years (2027 – 2030)
 - Project Narrative: Resurface on Hogue Road from Ellwood Road to Heinz Camp Road in Slippery Rock Township
 - Project Length : 1.79 Miles
 - Project Location: [PennDOT One MAP](#)
 - Corridor Recommendations Project ID's: Small Town and Rural Multimodal Networks (Appendix D)
- Fairview School Road Resurfacing
 - MPMS #: 100926
 - Year Programmed: 3rd 4 years (2027 – 2030)
 - Project Narrative: Resurface on Fairview School Road from Center Church Road to Mill Bridge Road in Slippery Rock Township
 - Project Length : 3.33 Miles
 - Project Location: [PennDOT One MAP](#)
 - Corridor Recommendations Project ID's: Small Town and Rural Multimodal Networks (Appendix D)
- McConnell Mill Rd Bridge
 - MPMS #: 29531
 - Year Programmed: 3rd 4 years (2027 – 2030)
 - Project Narrative: Bridge Replacement – Located on SR 2013, McConnell Mill Road, Bridge over Branch of Slippery Rock Creek, Slippery Rock Township
 - Project Length : 0.29 Miles
 - Project Location: [PennDOT One MAP](#)
 - Corridor Recommendations Project ID's: Small Town and Rural Multimodal Networks (Appendix D)



Project Initiation Form

Meeting Date:

The Project Initiation Form should be completed in conjunction with the Level 2 Screening Form. Process Leads and/or Planners should complete the Project Initiation Form to document coordination with local planners. Please select the Level 2 Screening Form tab to identify the location, title, purpose, and need. Upon saving this information will populate onto the Project Initiation Form.

Project Name:

Project Location:

Project Purpose:

Project Need:

Short Project Description and Scope:

Every transportation project should begin its life as a project that improves safety, mobility, and accessibility for all users: drivers, pedestrians, bicyclists, transit passengers, freight carriers, and area residents and businesses. Early scoping should ensure that the design and development process clearly documents considerations that meet as many objectives as reasonably possible, including maintenance considerations. If the decision is made to not include specific considerations in the project scope, those decisions should be documented, as well. The following sections document various considerations related to these objectives. Supportive web maps are available as a resource for those completing this form on [MPMS IQ](#).



Project Initiation Form

Pedestrians

Dedicated pedestrian facilities should be evaluated for all highway projects. Depending on the project's context, these may include elements like a multiuse trail, sidewalk, and crosswalks with supportive elements like flashing beacons. In rural areas, a wider shoulder can serve as a very basic pedestrian path.

Pedestrian facilities to be considered (Document any maintenance considerations discussed):

- ☐ Shared roadway/wide shoulder
- ☐ Sidewalks
- ☐ Crosswalks
- ☐ Pedestrian Signalization
- ☐ Multi-use trail
- ☐ Additional element(s):

Pedestrian facilities will NOT be accommodated because (at least one):

- ☐ Location is greater than .25 mile from any existing pedestrian facility or public transit stop, and is not recommended for a pedestrian connection in any local, county, or regional plan.
- ☐ Location has unique site constraints, such as steep slopes.
- ☐ Safer pedestrian accommodations would drastically increase the overall anticipated project cost (in such cases, consider opportunities to ensure future pedestrian accommodations are not precluded by the design).
- ☐ Additional reasons(s) and notes:



Project Initiation Form

Bicyclists

Bicycle mobility should be evaluated for all highway projects. Depending on the project's context, improvements may include elements like a multiuse trail, protected bicycle lane, striped bicycle lane (standard or buffered), sharrows, and supportive elements like dashed pavement markings in conflict areas and bicycle detection at traffic signals. In rural areas, a marked shoulder can serve as a very basic bicycle connection, provided it is supplemented with pavement markings in conflict areas as necessary.

Bicycle facilities to be considered (Document any maintenance considerations discussed):

- ☐ Multi-use trail
- ☐ Protected bike lane
- ☐ Striped bike lane (buffered or standard)
- ☐ Marked shoulder with supplemental pavement markings
- ☐ Additional element(s):

Bicycle facilities will NOT be accommodated because (at least one):

- ☐ Location is greater than .25 mile from any existing pedestrian facility or public transit stop, and is not recommended for a bicycle connection in any local, county, regional, or state plan.
- ☐ Location has unique site constraints, such as steep slopes.
- ☐ Safe bicycle accommodations would drastically increase the overall anticipated project cost (in such cases, consider opportunities to ensure future bicycle accommodations are not precluded by the design).
- ☐ Additional reasons(s) and notes:



Project Initiation Form

Public Transit

Public transit needs should be evaluated for all highway projects. Depending on the project's context and the nature of area transit service (if any), these may include elements like improved bus stops, sidewalks or other pedestrian ways (see 1.) providing access to stops and stations, transit curb extensions, bus pullouts that are long enough for efficient transit operations, signal schemes that accommodate transit preferentially, or other elements.

Public transit improvements to be considered:

- ☐ Improved bus stops
- ☐ Sidewalks or pedestrianways providing access to stops or stations
- ☐ Transit curb extensions or bus pullouts
- ☐ Other transit-preferential elements, including signal treatments
- ☐ Additional element(s):

Public transit improvements will NOT be accommodated because (at least one):

- ☐ Location is not served by any public transit routes and no new service is identified in any public transit agency plans.
- ☐ Location has unique site constraints, such as steep slopes.
- ☐ Improved public transit accommodations would drastically increase the overall anticipated project cost (in such cases, consider opportunities to ensure future public transit improvements are not precluded by the design).
- ☐ Additional reasons(s) and notes:



Project Initiation Form

TSMO & ITS Enhancements

Transportation Systems Management and Operations (TSMO) and Intelligent Transportation Systems (ITS) Enhancements should be evaluated for all highway projects. Depending on the project's context and the nature of the needs (if any), this category would include elements necessary to mitigate these issues. For example, there are a wide variety of solutions to address congestion including traffic signal improvements, traffic incident management, active traffic management, and integrated corridor management.

TSMO and ITS Enhancements to be considered:

- ☐ There are multiple types of emergency vehicles responding on this roadway
- ☐ There is a future vision/plan of transportation operations and ITS enhancements on this roadway
- ☐ This roadway is designated as an official detour route for a Limited Access facility, or is the nearest parallel route to a principal arterial or transit corridor
- ☐ Traffic signals on this roadway are connected, or enhancements to connectivity are being considered
- ☐ Additional element(s):

TSMO and ITS Enhancements will NOT be accommodated because (at least one):

- ☐ Congestion is currently not an issue within the project's limits or adjacent to its limits
- ☐ No opportunities currently exist to improve traffic signal operations
- ☐ No opportunities currently exist to connect fiber to PennDOT's TMC
- ☐ Improved accommodations would drastically increase the overall anticipated project cost (in such cases, consider opportunities to ensure TSMO and ITS Enhancements are not precluded by the design)
- ☐ Additional reasons(s) and notes:



Project Initiation Form

Freight/Economic Activity/ Manufacturing (Trucking, Rail, Ports, Pipeline)

Freight transportation needs such as those arising from truck operations should be evaluated for all highway projects. Depending on the project's context and the nature of area freight generators and operations, these may include considerations like vertical clearances, bridge weight allowances, pavement design, turning radii, intersection geometry, signage, pavement markings, highway-railroad grade crossings, designated pull/off waiting areas, alternate access, and traffic control devices.

Freight considerations:

- ☐ Freight operators currently use this roadway
- ☐ There are existing freight generators adjacent to this facility
- ☐ This project is a designated NHS intermodal freight connector and/or serves a concentration of freight generators like industrial parks.
- ☐ There is a future vision/plan for freight operations on this transportation facility
- ☐ Additional element(s):

Freight improvements will NOT be accommodated because (at least one):

- ☐ Location is currently not used by any freight operators, there are no significant adjacent freight facilities, and no new operations are identified in any development or freight plans.
- ☐ Improved freight accommodations would drastically increase the overall anticipated project cost (in such cases, consider opportunities to ensure future freight improvements are not precluded by the design)
- ☐ Improved freight accommodations would pose significant conflict with other modes.
- ☐ Additional reasons(s) and notes:



Project Initiation Form

Stormwater and Green Infrastructure

Many stormwater retention and infiltration options are available to address flooding and drainage issues within the limits of a project. These may include elements like rain gardens, vegetated bioretention areas (retention basins), vegetated swales, vegetated infiltration gardens, storm water tree trenches, permeable pavements, etc.

Stormwater and Green Infrastructure to be considered (including appropriate maintenance agreements):

- ☐ Rain garden
- ☐ Vegetation bioretention areas
- ☐ Vegetated swales
- ☐ Vegetated infiltration gardens
- ☐ Appropriate stormwater elements to be determined. Determination on specific elements to be made during project design
- ☐ Additional element(s):

Other improvements will NOT be accommodated because (at least one):

- ☐ Stormwater is currently not an issue within the project's limits or adjacent to its limits.
- ☐ Improved accommodations would drastically increase the overall anticipated project cost (in such cases, consider opportunities to ensure other improvements are not precluded by the design)
- ☐ Additional reasons(s) and notes:



Project Initiation Form

Other

(Utilities, Health, Community/Cultural Events, etc.)

Other needs should be evaluated for all highway projects. Depending on the project's context and the nature of the needs (if any), this category would include elements necessary to mitigate these issues. Utilities may be present in the area of a proposed project and there may be opportunities to incorporate them into the project or the need to move them to a new location. There may be opportunities for a project to improve public health through transportation by increasing physical activity, decreasing air and noise pollution, and increasing access to goods and services that support public health.

Other improvements to be considered and maintenance considerations have been made:

- ☐ Utility Relocation
- ☐ Public Health Improvements (increasing physical activity, decreasing air and noise pollution, increasing access to good and services that support public health)
- ☐ Timing of Community/Cultural Events will be considered during construction
- ☐ Additional element(s):

Other improvements will NOT be accommodated because (at least one):

- ☐ Utilities are currently not an issue within the project's limits or adjacent to its limits.
- ☐ No opportunities currently exist to improve healthy living within the project's limits or adjacent to its limits.
- ☐ Improved accommodations would drastically increase the overall anticipated project cost (in such cases, consider opportunities to ensure other improvements are not precluded by the design)
- ☐ No Community/Cultural Events currently take place within the project's limits and no known events are planned for the future
- ☐ Additional reasons(s) and notes:



Project Initiation Form

Public Controversy

Anticipated substantial public controversy surrounding the project should be considered. Examples of reasons for public controversy include residential and commercial displacements, long detour routes, long construction times, and impacts to environmental, historic or community resources. Identifying potential public controversy early allows for the identification of increased public involvement measures during project scoping.

Public controversy is anticipated because:

- ☐ Likely residential and/or commercial displacements
- ☐ Long detour route/long construction time
- ☐ Business impacts
- ☐ Impacts to environmental, historic or community resources
- ☐ Other:

Public controversy is NOT anticipated (at least one):

- ☐ Construction impacts will be minimal
- ☐ No/minimal detour involved
- ☐ No/minimal displacements
- ☐ Additional reasons(s) and notes:



Project Initiation Form

Source/References

Please list any source or reference documentation used in completing this form, along with any organizations or individuals that were consulted during the project analysis process. Include websites, studies, concept plans, etc. that were used to support the information on this form. Specifically identify any existing plans that include the project or the recommended additions to the project.

Sources/References Consulted:

Organizations/Individuals Consulted:



Project Initiation Form

(Attach copies of any local or additional information. See attached Additional Notes at end of this form)

Completed By:

Date:

Phone:

Email:

Reviewed by MPO:

Date:

Reviewed by PennDOT District:

Date:

Reviewed by PennDOT Program Center:

Date:

ADDITIONAL NOTES:

APPENDIX B – LITERATURE REVIEW MEMO

Documents Reviewed

WRA conducted a literature review of existing county and municipal planning documents to identify guiding principles and future needs as part of the US 422 and SR 65 Corridor Study. Specific attention was paid to overarching goals, land use and transportation issues, and specific projects and recommendations relating to the US 422 and SR 65 corridors. The documents reviewed consist of the following:

- Lawrence County Comprehensive Plan Update (October 2016)
- Lawrence County Greenways Plan Update (June 2017)
- Lawrence County 2015 Hazard Mitigation Plan (January 2016)
- Lawrence County Stormwater Management Plan, Volumes I-III (June 2007)
- Shenango Township Comprehensive Development Plan (March 2017)
- Shenango Township Zoning Ordinance (October 2001)

Literature Review

Countywide Context

Both US 422 and SR 65 serve as key roadways that provide access to the surrounding region and make Lawrence County a desirable place to live and locate businesses. The County's economic prosperity directly relates to the transportation system's ability to meet the needs of employers, workers, and residents alike. According to the Lawrence County Comprehensive Plan Update, the County has four vision areas which focus on improving urban town centers, transportation connections, quality of life, and sustainability. The two study corridors are noteworthy for advancing these four vision areas due to their location within the greater New Castle area, proximity to state parks, and role as transit and freight connectors. The US 422 corridor is characterized as a light industrial area, while the SR 65 corridor contains a major shopping district that includes the Lawrence Village Plaza and numerous restaurants. The New Castle Area Transit Authority (NCATA) provides fixed-route transit along both corridors and a Park & Ride site on US 422 in Shenango Township. Both corridors are also identified as future growth areas, with multiple potential development sites and anticipated growth of the nearby New Castle Development Industrial Park.

Lawrence County highlights several guiding principles within their Comprehensive Plan and Greenways Plan that can be applied to the US 422 and SR 65 corridors, including the following:

- Develop and maintain the existing transportation system to encourage future growth and development in the County
- Improve key roadways within the County as multimodal corridors to accommodate pedestrians and bicyclists
- Improve alternatives to driving (e.g., transit, walking) to advance equity in access for senior citizens and low-income households
- Expand the County's network of land trails
- Promote healthy communities through active transportation corridors
- Improve access to greenways and outdoor recreation facilities

Transit

The county and municipal planning documents emphasize the importance of expanding transit, pedestrian, and bicycle connectivity throughout the area. The following transit-related concerns were identified for the US 422 and SR 65 corridors:

- The County hopes to improve public transportation service from underserved areas in New Castle to major outdoor recreation areas, such as McConnell's Mill State Park.

- The 2015 Southwestern Pennsylvania Public Transit-Human Services Coordinated Transportation Plan Update identified the New Castle Development Industrial Park as a geographic gap in transit because the Industrial Park does not fall within a half-mile of transit.
- A transit connection opportunity exists between Mahoning County, OH and Lawrence County via the US 422 NCATA route in Lawrence County and the Western Reserve Transit Authority (WRTA) routes to Youngstown.
- SPC's Long Range Plan (LRP) includes Phase 1 (2015-2018) projects for the NCATA, such as facility maintenance, garage/office equipment, maintenance and security equipment, purchase of diesel/electric hybrid buses, and traveler information system.

Bicycle & Pedestrian

Lawrence County seeks to improve bicycle and pedestrian accessibility. The following bicycle and pedestrian-related points were identified for the US 422 and SR 65 corridors:

- Neither US 422 nor SR 65 is a designated BicyclePA route. A need exists to improve shoulders along state routes to better accommodate cyclists within the County.
- The New Castle - Shenango Bike Trail includes on-road connection between Shenango Township and Shenango School District facilities via SR 65.
- Core communities including the City of New Castle are encouraged to develop municipal biking and walking plans.

Hazard Mitigation

Superfund Amendments and Reauthorization Act (SARA) Facilities that manufacture or store hazardous materials are located in the City of New Castle and Shenango Township. These sites, as well as the major transportation routes used to access them, are susceptible to hazardous material incidents that may involve toxic chemicals, radioactive materials, infectious substances, and hazardous wastes. Hazardous material releases and accidents can occur along transportation routes and can cause injury, death, and contamination of air, water, and soils. Both US 422 and SR 65 are heavily traveled by commercial vehicles that transport hazardous materials. As a result, these corridors are vulnerable to accidents involving hazardous materials.

Future Projects, Development, and Growth

Municipal and county planning documents identified the following future developments, projects, and growth areas within the US 422 and SR 65 study area:

- The 2010 Lawrence County Comprehensive Plan update identified the New Castle Rail corridor as a priority site consisting of 224 acres within New Castle. Its connections to Route 18, Route 422, I-376, and the New Castle Industrial Railroad make it desirable for development.
- The Greater New Castle Area is a designated growth area that includes the City and surrounding suburban areas in Shenango Township.
- Future growth areas include US 422 east of the City of New Castle from Shenango Township to the County border, which serves as a major transit route to Pittsburgh, and SR 65 from Shenango Township to Ellwood City and Ellport Boroughs.
- US 422, Business 422 and the northern stretch of SR 65 are potential sites for private sector commercial and industrial development. Neighborhood-scale retail, services, or restaurants may develop on the southern end of the SR 65 corridor due to its proximity to residential neighborhoods.
- Designated growth areas are recommended along the US 422 and SR 65 corridors to encourage infill development.

SPC's Long Range Plan (LRP) identifies the following improvement projects along the study corridors:

- US 422 Reconstruction (long-term 2027-2040; \$25 million)
- US 422 Eastbound Bridge Replacement (long-term 2027-2040; \$7.5 million)

- Phase 1 projects for NCATA including facility management, garage and office equipment, maintenance/security equipment, purchase of diesel/electric hybrid buses, traveler info system (2015-2018)
- SR 65 corridor improvements were not identified as a potential project within reasonably expected funding and will need significant new resources to proceed.

Preliminary Goals and Objectives

Based on the documents reviewed, WRA identified the following preliminary goals and objectives to use as guidance for the US 422 and SR 65 Corridor Study:

1. **Safety for All Users** - Develop and maintain clean, safe facilities that meet the needs of all users in the community
2. **Accessibility & Connectivity** - Improve connectivity within and to the surrounding region for public transportation, personal vehicles, and freight
3. **Multimodal Connections** - Implement multimodal connections, especially by improving the safety and viability of pedestrian and bicycle infrastructure
4. **Quality of Life** - Promote healthy communities by improving access to parks and recreation
5. **Smart Growth** - Target growth by developing diverse housing alternatives and businesses in areas already served by adequate infrastructure

The project team reviewed and agreed upon these goals and objectives during the project's first Steering Committee meeting on February 22, 2018.

APPENDIX C – SR 65 PAVING NOTES

Representatives from WRA and Markosky Engineering Group conducted field observations along the SR 65 corridor from approximately Old Princeton Road to SR 388 on Wednesday June 6, 2018 to document pavement marking recommendations for the upcoming PennDOT SR 65 repaving project.

PennDOT has included these recommendations as part of the repaving effort.

Methods of observation included video logs, photographs, and written observation. The following pavement marking recommendations are based on issues identified along the corridor:

1. Throughout the corridor, existing pavement markings are generally worn and should be replaced. Where crosswalks are needed, high visibility (Piano Style) crosswalks should be established.
2. There is currently no designated YIELD control for traffic entering SR 388 from SR 65. Neither SR 65 SB traffic turning left onto SR 388 or SR 65 NB traffic exiting onto SR 388 are required to yield to each other. Consideration should be given to adding a YIELD sign for traffic on SR 65 NB exiting onto SR 388. SR 65 NB traffic has a clear line of sight to see left turning traffic. Once left turning traffic begin their maneuver they lose their line of sight to the approaching NB traffic. There is a duplication of 45 MPH Speed Limit Signs on SR 388 NB. If the Department agrees with this recommendation, the speed limit sign nearest the merge point could be removed and a YIELD sign added. The location of the speed limit sign is at a good location for the YIELD sign and the post is in good shape.



SR 65 Northbound to SR 388 Intersection

Speed Limit Sign Could Hold Yield Sign For Clarity

3. The warning markings (SLOW CURVE ARROW) on SR 65 NB/SB approaching the intersection of SR 388 are worn and should be reestablished.
4. SR 65 near Forbush's appears to be a passing zone with broken yellow pavement markings and NO PASSING ZONE signage where the markings transition in the southbound direction. The passing zone and related signage should be removed. *it was determined after the field view that temporary double yellow pavement markings were installed to remove the passing zone last year, but have since worn off, revealing the durable thermoplastic paint beneath with passing zone markings.



Forbush's on SR 65



SR 65 Double Yellow Pavement Markings Worn, Revealing Old Passing Zone Pavement Markings Underneath

5. Side streets along SR 65, including Garden Center Road and Sherwood Stop, have sight distance issues when turning onto SR 65. The advance-warning intersection "SLOW + +" markings approaching these intersections have been largely worn away and should be repainted.
6. From approximately Garden Stop Road to Kittery Ridge Drive, medians are currently striped using a single yellow line and should be restriped with two-way barrier lines. The transverse median markings should be repainted. Many of the existing left-turn pockets in this area are also missing left arrow and "ONLY" markings.
7. Signals along SR 65 including those at the Lawrence Village Plaza entrances currently have pedestrian signal heads and push buttons, so high visibility crosswalks (Piano Style) should be added at these intersections accordingly to accommodate pedestrian traffic generated from Shenango High School and Lawrence Village Plaza.



Pedestrians using SR 65 Southbound Shoulder towards Lawrence Village Plaza

APPENDIX D – MULTIMODAL NETWORKS IN SMALL TOWNS AND RURAL COMMUNITIES

To improve their residents' safety, accessibility, and health, rural communities must consider active transportation opportunities during the planning and design of future community and roadway improvements. To assist communities through this endeavor, the FHWA created a resource for transportation practitioners and community leaders in small towns and rural communities. The [Small Town and Rural Multimodal Networks](#) document applies existing national design guidelines in a rural setting and highlights small town and rural case studies. It addresses challenges specific to rural areas, recognizes how many rural roadways are operating today, and focuses on opportunities to make incremental improvements despite the geographic, fiscal, and other challenges that many rural communities face. The communities within the Study Area, Lawrence County, and all of its municipalities can use this design resource and idea book to support safe, accessible, comfortable, and active travel for people of all ages and abilities.

The *Small Town and Rural Multimodal Networks* guide is intended to:

- Provide a bridge between existing guidance on bicycle and pedestrian design and rural practice.
- Encourage innovation in the development of safe and appealing networks for bicycling and walking in small towns and rural areas.
- Provide examples of peer communities and project implementation that is appropriate for rural communities.

Why a Rural and Small Town Focused Guide?

There is a need and desire to make travel safer and more active in small and rural communities.

While rural places vary considerably in geographic scale and character, there are common issues that prevail:



Longer Non-local Trip Distances

Rural trip distances have been increasing.⁽ⁱ⁾



Health Disparities

Rural areas have higher rates of physical inactivity and chronic disease than urbanized areas.⁽ⁱⁱ⁾



Higher Crash Rates

While only 19 percent of the population lives in rural areas, 58 percent of all fatal crashes and 60 percent of traffic fatalities were recorded in rural regions.⁽ⁱⁱⁱ⁾



Income Disparities

Urban households earn 32 percent more in yearly income than rural households.^(iv)

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APPENDIX E – TRANSIT ROUTE MAPS (2018)

The New Castle Area Transit Authority (NCATA) runs regular weekday routes along US 422 and SR 65. Below is a table of the current 2018 transit routes and if they provide service along the SR 65 or US 422 corridor, or related corridor.

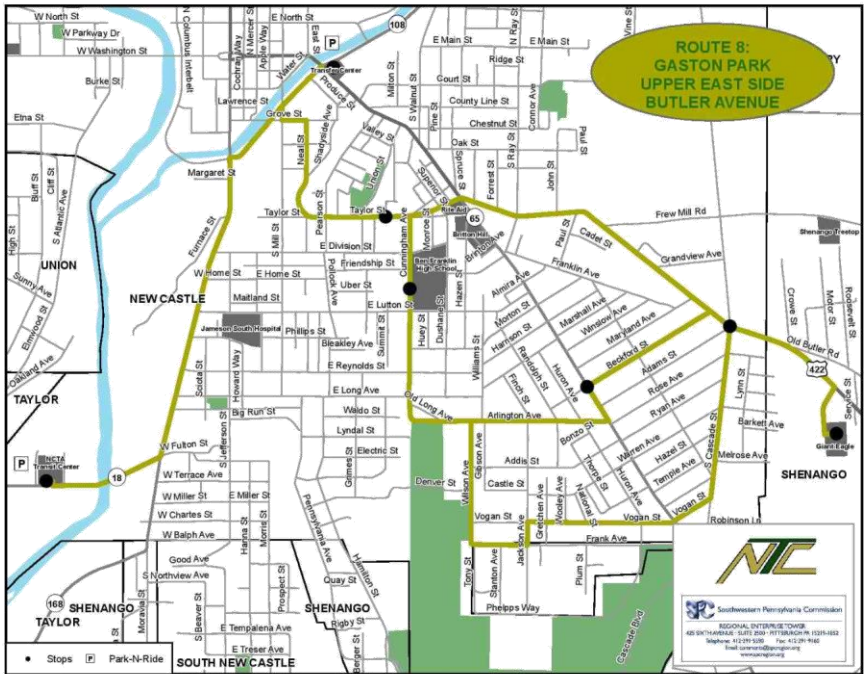
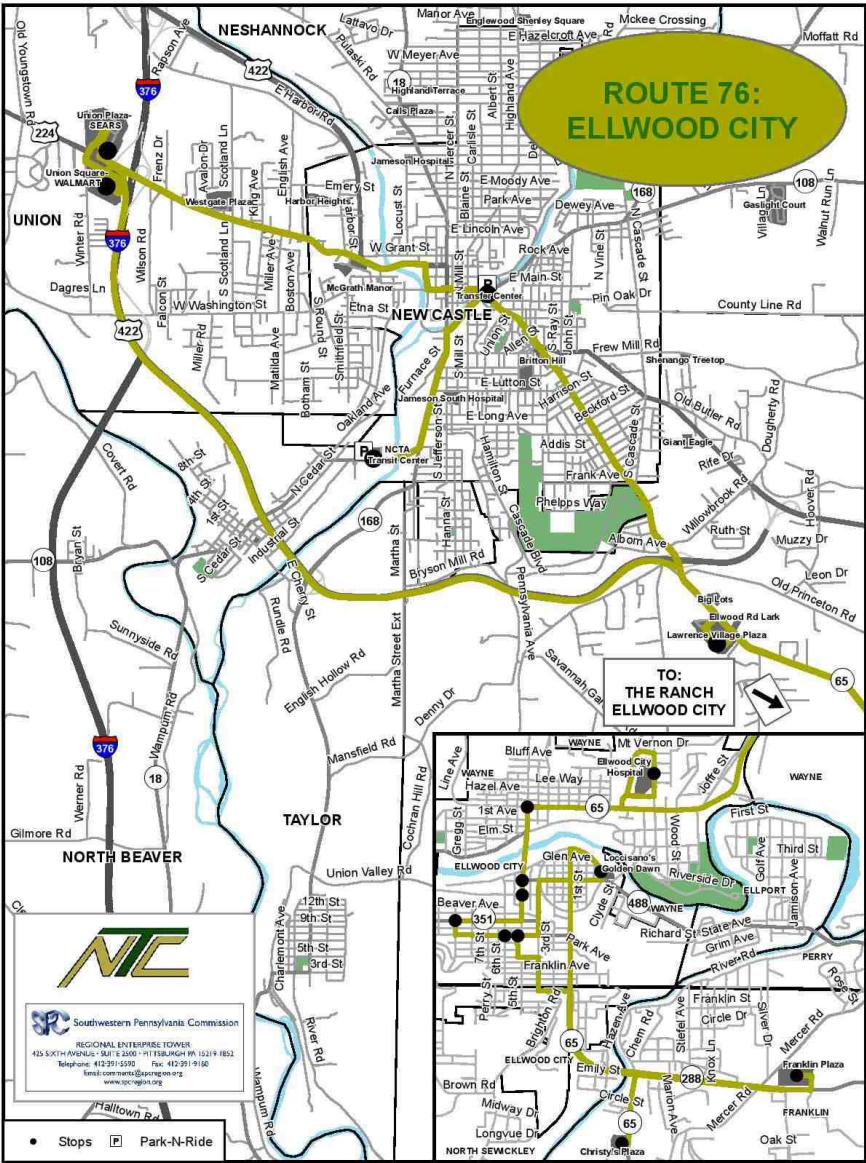
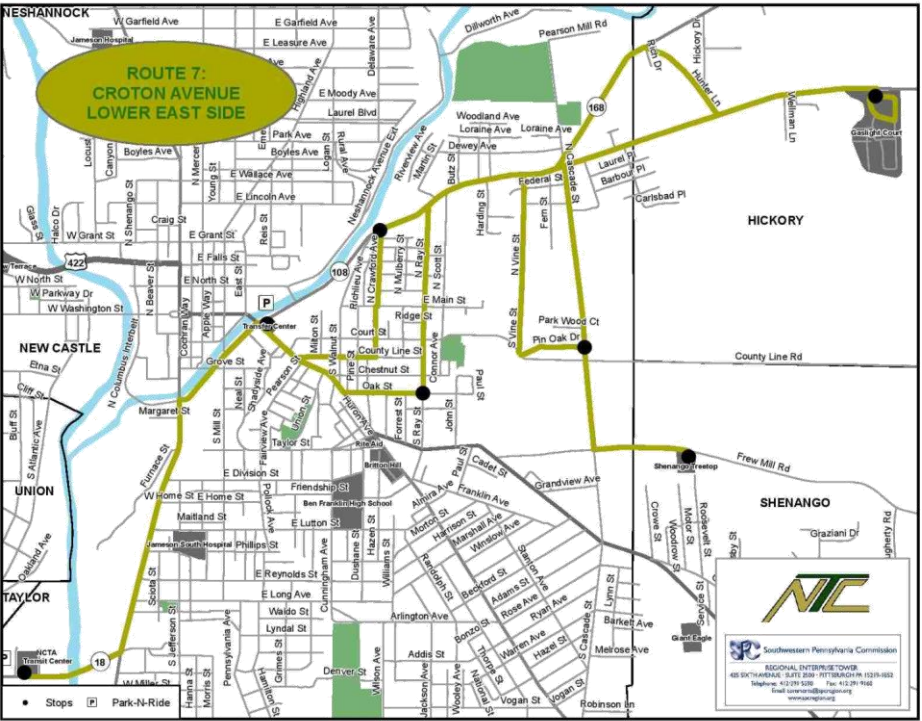
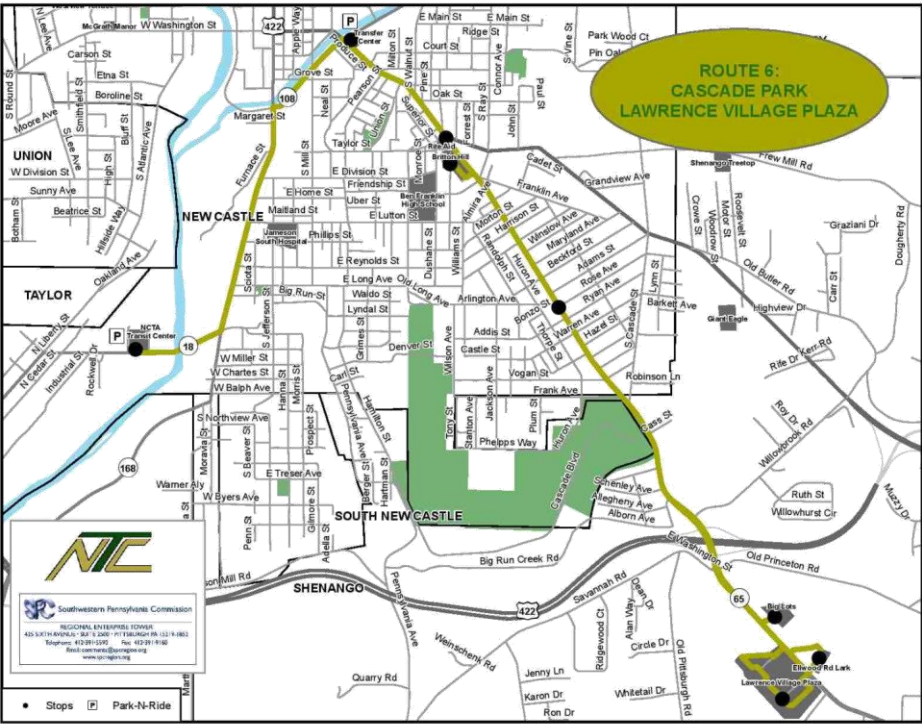
There are three routes that provide service along SR 65: routes 6, 8, and 76.

There are two routes that provide service along US 422: routes 8 and 71.

There is one route that provides service along a portion of Frew Mill Road, a regional connector between the two routes.

Route	Name	SR 65	US 422
1	Highland Avenue Shenley Square	no	no
2	North City / Neshannock Township	no	no
3	Wal-Mart / Union Township	no	no
4	Westside Mahoningtown	no	no
5	Southside / Moravia St	no	no
6	Cascade Park / Lawrence Village Plaza	yes	no
7	Croton Ave / Lower East Side*	no	no
8	Gaston Park / Upper East Side	yes	yes
11	Jefferson St	no	no
71	Pittsburgh	no	yes
75	New Wilmington / Volant	no	no
75	Grove City Outlets (Saturday)	no	no
76	Ellwood City	yes	no
81	Boyer / Iron Mountain	no	no
82	Hermitage / Kennedy (AM) and (PM)	no	no
91	Walmart / Villa Maria / Ohio Line	no	no

*Frew Mill Road



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APPENDIX F – POTENTIAL SOURCES OF FUNDING

To advance the plans and policies suggested within this document, available funding should be sought and secured and new partnerships should be created or enhanced. There are a number of funding programs available to complete the corridor enhancements and achieve the community vision outlined in the US 422 and SR 65 Corridor Study. These programs are available for roadway and property owners and range from federal and state funds to private dollars.

Decision makers and communities are more likely to advance a collaborative and comprehensive partnering project that improves mobility and safety on a regional corridor rather than within isolated communities. To justify the use of tightening regional transportation dollars and accelerate the completion of the recommended projects within the study, new partnerships will need to be created, and the partnerships will be required to pursue funding programs outside of and in conjunction with the regional Transportation Improvement Program (TIP) and employ policies and tools permitted for transportation investments.

Table A on the next page lists potential funding mechanisms available for roadway and property owners ranging from federal, state, and local funds to private dollars. The table includes:

- State and Federal Transportation funds through programs affiliated with the SPC TIP, including competitive TIP programs such as the Transportation Alternatives Set-Aside (TA) Program, Congestion Mitigation and Air Quality Improvement (CMAQ) Program, and the Highway Safety Improvement (HSIP) Program.
- Federal discretionary programs awarded on a competitive basis such as the BUILD and FASTLANE Programs, which anchor economic revitalization and job growth in communities; are nationally and regionally significant freight and highway projects that improve the safety, efficiency, and reliability of the movement of freight and people; and anchor economic revitalization and job growth in communities that will have a significant local or regional impact
- Statewide Discretionary Programs such as the PennDOT and DCED Multimodal Transportation Fund and the DCED Greenways Trails and Recreation Fund
- Traffic signal, safety improvement and congestion reduction programs such as the Regional Traffic Signal and the Green Light-Go Programs
- Developer funding agreements, Transportation Impact Fees and partnership opportunities with the private sector and developers

The Programs listed in the Program ID column in are matched with the Potential Funding columns listed on pages 24, 56, and 82.

Table A: Funding Programs

Program ID	Funding Program	Funding Cycle
A.	PennDOT Automated Red-Light Enforcement Program (ARLE)	Annual
B.	PennDOT Green Light-Go Program	Annual
C.	SPC Regional Traffic Signal Program	Varies
D.	PennDOT Multimodal Transportation Fund	Annual
E.	DCED Multimodal Transportation Fund	Annual
F.	DCNR Community Conservation Partnerships Program (C2P2)	Annual
G.	DCED Greenways, Trails, and Recreation Program	Annual
H.	SPC Transportation Alternatives Set-Aside Program	Biennial
I.	PennDOT Transportation Alternatives Set-Aside Program	Biennial
J.	Lawrence County CDGB Program	Annual
K.	DCED Keystone Communities Program	Annual
L.	SPC Congestion Mitigation & Air Quality Improvement (CMAQ) Program	Biennial
M.	SPC Transportation Improvement Program (TIP)	Biennial
N.	PennDOT Pennsylvania Infrastructure Bank (PIB)	Always Open
O.	Highway Safety Improvement Program (HSIP)	Biennial
P.	Partnering with Private Industry and Developers	N/A
Q.	PennDOT Consolidated Transit Grants	Biennial
R.	Transportation Impact Fees	N/A
S.	FHWA BUILD Program	Annual
T.	FHWA INFRA Program	Annual
U.	PennDOT Connects	N/A
V.	Municipal Policy Recommendations	N/A