



# MERCER COUNTY REGIONAL PLANNING COMMISSION

## Final Report

## US Route 19 Corridor Study Mercer County Regional Planning Commission

*June 2011*

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GCCA  
*(Land Use Planning and Ordinance Preparation)*

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*(Public Involvement)*

### Prepared for:

Mercer County Regional Planning Commission

### In cooperation with:

Mercer Borough

East Lackawannock Township

Mercer County

PennDOT District 1-0, Oil City, Pennsylvania

### Acknowledgements

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**Mercer County Board of Commissioners**  
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**Mercer Borough**  
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## Executive Summary

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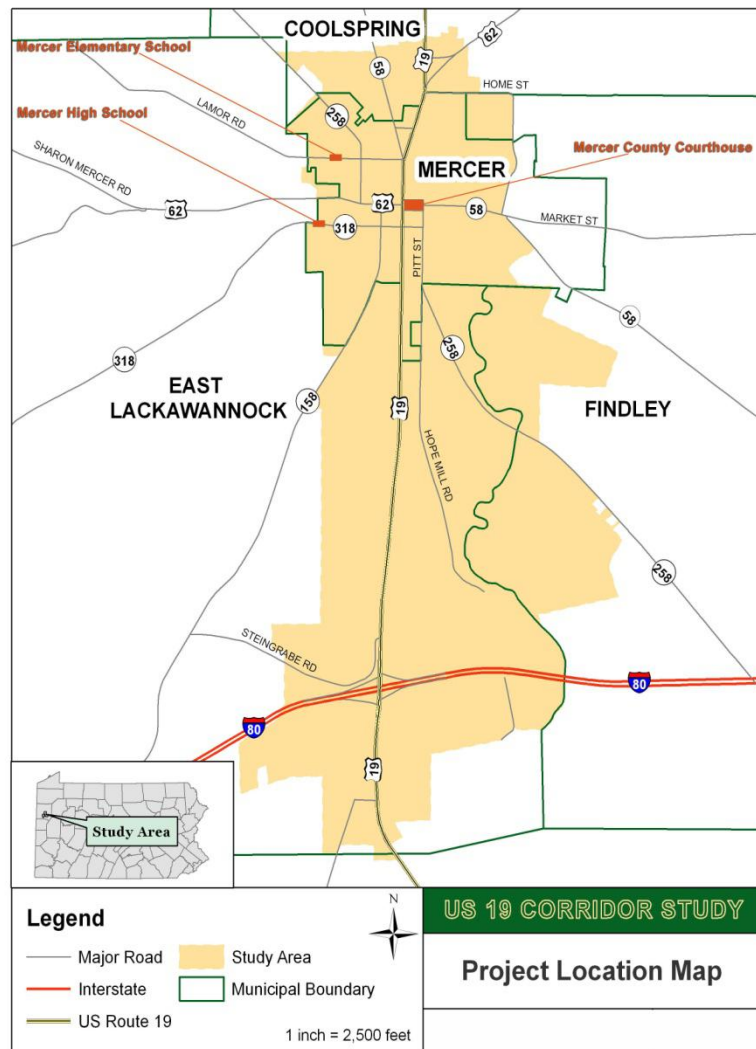
Concerns related to increased traffic conflicts, pedestrian safety, and mobility on the US Route 19 Corridor within Mercer Borough and East Lackawannock Township were identified by the Shenango Valley Area Transportation Study (SVATS) Metropolitan Planning Organization (MPO) following the completion of the Mercer Regional Multi-Municipal Comprehensive Plan (2005). The MPO found that the convergence of several well-traveled roadways (US 62, SR 58, SR 258), high levels of commercial truck traffic, out-dated traffic signals, and confusing intersection designs created difficulties for motorists and pedestrians. Funding was awarded through the Pennsylvania Community Transportation Initiative (PCTI) to complete a corridor study based on Smart Transportation principles. The purpose was to improve the existing conditions for all modes of travel along the corridor, enhancing the quality of life for residents, and strengthening the economic vitality of the project area.

### Study Area

The US Route 19 Corridor study area is situated in Mercer County and encompasses portions of East Lackawannock Township and Mercer Borough. The southern edge of the study area begins at the East Lackawannock Township border with Springfield Township and extends north through Mercer Borough to East Franklin Road in Coolspring Township. The project corridor is approximately four miles in length and the study area varies from a half a mile to 1 ½ miles in width.

The entire study area has excellent regional access thanks to the I-80 Interchange and close proximity to I-79, which is located approximately five miles to the east. Although US Route 19 ultimately connects Lake Erie to the Gulf of Mexico, most of the through traffic has shifted to I-79. The traffic volumes within the study area range from 3,300 vehicles per day south of I-80 to 12,000 within Mercer Borough.

*Project Location Map*



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## Project Goals and Objectives

The primary focus of the US Route 19 Corridor Study was to improve the existing conditions for all modes of travel along the US Route 19 Corridor, enhance the quality of life for residents, and strengthen the economic vitality of the project area.

Several different methods were used to gather public opinions about existing conditions and potential improvements, including oversight from a Project Advisory Committee, guidance from a Stakeholder Committee, two public surveys, and feedback from two public meetings. Based upon the information received as a result of this community engagement, the following goals were developed to guide the study and ultimately determine the success of the project:

### **1. Enhance Motorized Travel**

- ❖ Reduce congestion and enhance access to the central business district
- ❖ Improve traffic patterns and reduce conflicts
- ❖ Determine the most efficient travel pattern for heavy trucks
- ❖ Improve incident management for detours from Interstate 80

### **2. Provide a multi-modal transportation network**

- ❖ Improve the maintenance and connectivity of the sidewalk network

### **3. Ensure safe and efficient access throughout the project area**

- ❖ Correct and better manage parking
- ❖ Establish an access management plan for US Route 19
- ❖ Mitigate points of conflict and address safety concerns at intersections

### **4. Manage land use**

- ❖ Capitalize upon the I-80 Interchange and other regional attractions to support economic development goals
- ❖ Enhance the Victorian atmosphere of Mercer Borough
- ❖ Direct land uses to encourage context appropriate in-fill within the Borough and suitable new development in the Township

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## Project Area Concerns

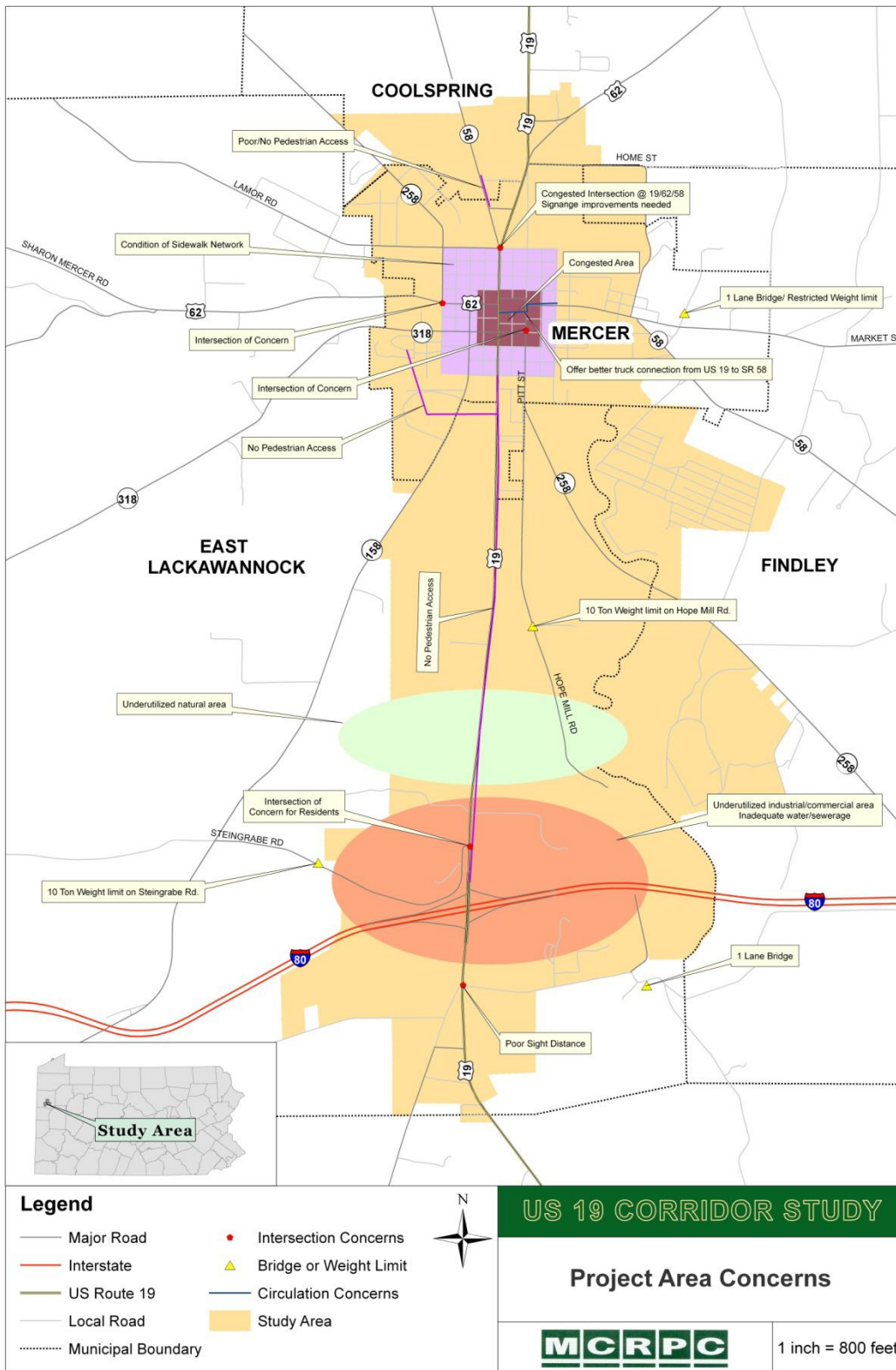
Project area concerns were identified through public input and field views of existing conditions. Public input was received from a range of interests such as emergency management officials, business owners, residents, developers, and elected officials. Based upon this information, the following project area concerns were identified:

- ❖ **Lack of pedestrian access**
- ❖ **Confusing and/or congested intersections**
- ❖ **Conflicts or congestion caused by commercial/heavy trucks**
- ❖ **Underutilized industrial/commercial/natural areas**

Field investigations were performed to document the deficiencies and to develop potential multi-modal transportation improvements.



## Project Area Concerns





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## Scenario Planning

Four development scenarios were prepared to determine how the transportation network might be influenced by various land use patterns and development intensities (Table 11). The scenario planning activities for the US Route 19 Corridor began with Scenario 1 where public infrastructure (primarily sanitary sewer) was assumed to remain status quo with no significant new service areas. The extension of public sewerage influences Scenarios 2 and 3. Scenario 4 provides a full-build projection coupled with high-impact land use development at the I-80 interchange.

**Table: Planning Scenarios**

Development Type	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Dwelling Units	20	22	65	66
Commercial Development	5,000 Square Feet	35,000 Square Feet	40,000 Square Feet	40,000 Square Feet
Industrial Development	0	50,000 Square Feet	55,000 Square Feet	55,000 Square Feet
Big Box/Destination Retail	0	0	0	500,000

The scenarios were all evaluated to determine their impact on the transportation system and to determine what level of transportation improvements would be required to achieve acceptable operations.



*Four development scenarios were investigated including a “Smart Growth” option, which was chosen as the preferred scenario.*

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## Land Use Alternatives

A variety of community planning tools exist to help Mercer Borough and East Lackawannock Township meet the project goals and objectives and achieve the preferred Land Use Scenario (sewer extension from the Borough to I-80 with Smart Growth). Local governments have a variety of options available to control both use and development styles depending upon community goals for the future. For instance, the Township has more undeveloped land along US Route 19 than the borough and should employ different methods to achieve their goals such as the development of the I-80 interchange and land use patterns that allow interconnections and reduce unnecessary access points along the corridor. Conversely, the Borough must focus on appropriate infill development and aesthetic considerations to preserve the Victorian-era structures in Mercer, which should be viewed as a regional asset and not just a Borough resource.

Both regulatory and voluntary methods were explored to help the Borough and Township achieve their goals. Concepts presented to the public, stakeholders and PAC included zoning amendments, tax incentives, façade improvement programs, historic designation, the enactment of an official map, and access and parking management strategies. Based upon the land use goals of the communities, input from the public, and guidance from the PAC, locally preferred recommendations were identified.

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## Transportation Alternatives

Based on the outcomes of the scenario planning process transportation alternatives were evaluated that will accommodate the planned future growth while meeting the project’s goals and objectives. Public perceptions of existing conditions and support for specific alternatives were determined during public meetings, stakeholder interviews, agency coordination, and Project Advisory Committee meetings.

The alternatives were grouped into the following categories:

- ❖ **Traffic Congestion**
- ❖ **Safety Improvements and Upgrades**
- ❖ **Heavy Truck Conflicts**
- ❖ **Multimodal Improvements**

The key steps in the development and evaluation of alternatives included:

1. **Understanding the Context**
2. **Determining the Needs**
3. **Defining the Project Purpose**
4. **Screening the Alternatives**
5. **Involving Agencies and the Public**

## Implementation Plan

The US Route 19 Corridor Study applied FHWA/FTA procedural guidance to link community planning to the National Environmental Policy Act (NEPA) process. The purpose of linking planning to NEPA is to facilitate the project development process, involve the public and stakeholders early, reduce project development costs, and reduce unforeseen circumstances that can delay projects.

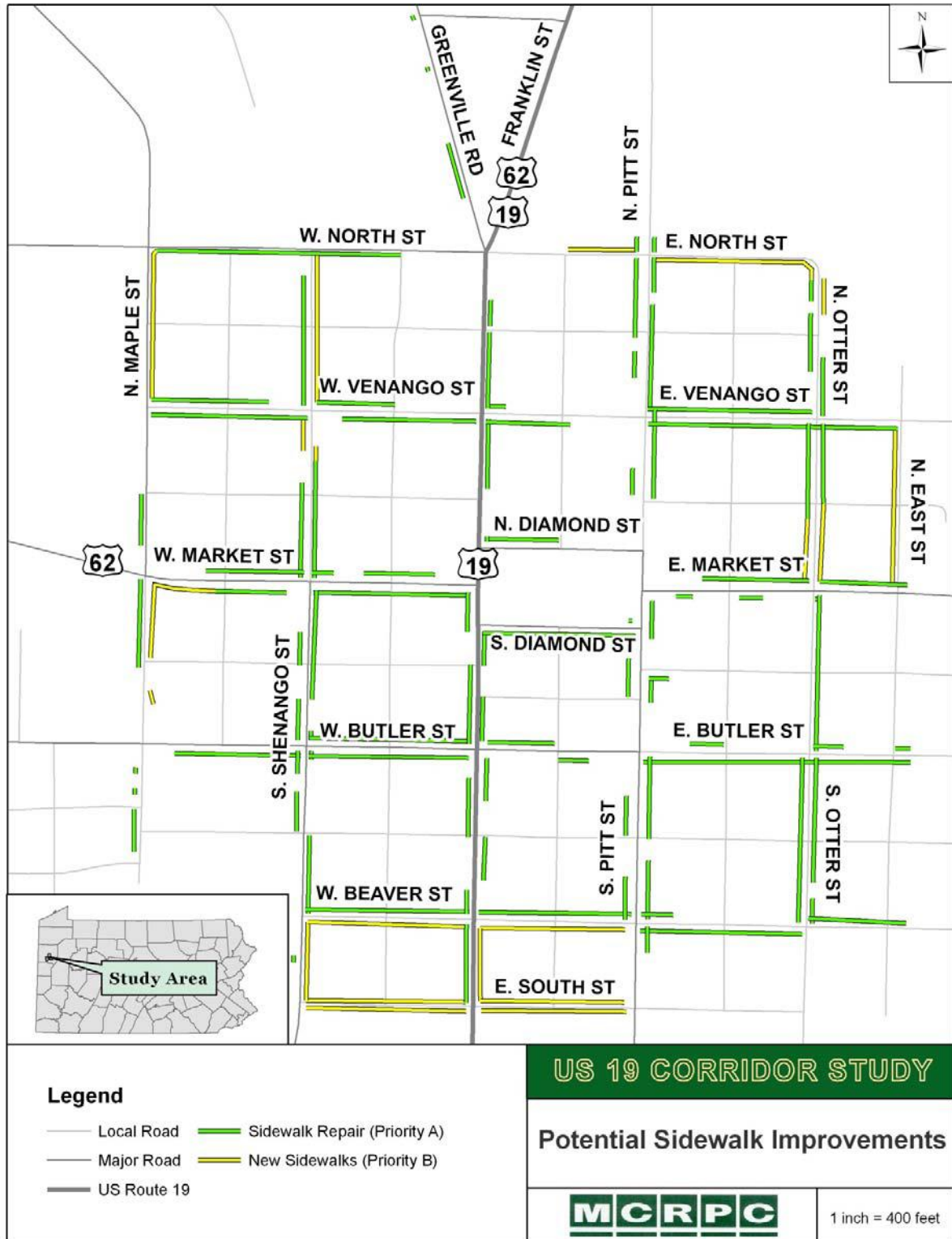
The recommendations were prioritized first based upon need and then ease of implementation. The implementation plan includes an opinion of probable cost that is based upon a planning level investigation of the proposed improvements. For each project, a responsible party was identified that would be considered the project champion.

It should be noted that the conceptual cost estimates were developed using reasonable quantity, unit-price, and related assumptions for the anticipated improvement and do not account for three potentially significant categories— right-of-way, utilities, and environmental impacts or related mitigation requirements. It is anticipated that costs associated with any one of those categories will need to be addressed during subsequent project scoping or preliminary design stages for any given improvement.

**Table: Project Implementation**

Map Key	Project Name/Action	Responsible Party	Opinion of Probable Cost	Priority Rating	Page Numbers
<b>Traffic Congestion</b>					
TC-1, 2	Retime Traffic Signals	Mercer Borough	\$181,000	A	83, 102, 108-109
TC-2	Traffic redirection at 5-legged intersection (prohibit US 19 North Bound Left, E North Street one-way entrance only)	Mercer Borough	\$169,000	A	83-85, 102, 110-111
TC-3	Traffic redirection on North and South Diamond Streets	Mercer Borough	\$250,000	A	86, 102, 112-113
TC-4	New connection to Hope Mill Rd	East Lackawannock Township	\$4,180,000	A	114-115
TC-5	Turn Lane on US 19 between Beaver and South Streets	Mercer Borough	\$120,000	C	88, 102, 116-117
<b>Heavy Truck Conflicts</b>					
HTC-1	Truck route to Market via Butler & Pitt Street	Mercer Borough, PennDOT	\$360,000	A	93-94, 102, 118-119
HTC-2,3	Truck Route to SR 158 via Steingrabe Road Option 1: On alignment, Option 2: Off alignment	East Lackawannock Township, PennDOT	\$3,620,000 to \$4,960,000	B	94, 102, 120-123
<b>Safety Improvements</b>					
SI-1,2	Sight Improvements @ Old Mercer Road/Drake Road Option 1: Realignment, Option 2: Reconstruction	East Lackawannock Township, PennDOT	\$620,000 to \$2,040,000	A	89-92, 102, 124-127
SI-3	All way stop @ Butler St and Pitt St	Mercer Borough	\$5,000	B	93, 102, 128-129
SI-4	Study for improvement @ Steingrabe Rd & US 19	East Lackawannock Township, PennDOT	\$30,000	B	93, 102, 130-131
<b>Multi-Modal Improvements</b>					
MM-1	Construct sidewalk to Walt's Grocery Store	Mercer Borough, Coolspring Township, Store Owner	\$77,000	A	95, 102, 132-133
MM-2	Repair deficient sidewalks	Mercer Borough, Residents, Business Owners	\$1,980,000	A	95, 102, 134-135
MM-3	Construct sidewalk to Dairy Queen	East Lackawannock Township, Store Owner	\$260,000	B	95, 102, 136-137
MM-4	Construct new sidewalks to complete network (shown on Potential Sidewalk Improvements Map)	Mercer Borough, Residents, Business Owners	\$700,000	B	95, 102, 138-139
MM-5	Widen shoulders on SR 158 from Beaver St to I-80	East Lackawannock Township, PennDOT	\$7,550,000	C	95, 102, 140-141
MM-6	Hope Mill Road - Hiker/Biker Trail	Mercer Borough, East Lackawannock Township, Mercer County Trails Assoc.	\$1,760,000	C	95, 102, 142-143
<b>Land Use</b>					
-	Adopt Recommended Zoning Amendments and Land Use Regulations	Borough Township	Nominal	A	74
-	Adopt Traditional Neighborhood Development District	Borough Township	Nominal	A	74-75
-	Adopt Facade Improvement Program	Borough	Nominal	A	77
-	Adopt Official Map	Township	Nominal	A	78-79
-	Adopt Access Management Tools	Borough Township	Nominal	A	80
-	Explore feasibility of establishing a Parking Authority	Borough	Nominal	A	81
<p>* Responsible party is identified for conceptual planning purposes only and does not imply an existing formal commitments of binding agreements.</p> <p>*** Priority ratings are assigned as "A" for immediate, "B" for short to mid-term, and "C" for long-term</p> <p>**** Estimates are intended for conceptual use only, are based on year 2010 dollars, and include 25% contingency, 20-35% engineering, 15% temporary traffic control &amp; mobilization, and 12% construction inspection costs. They do not include potentially substantial costs related to right-of-way, utilities, and environmental impacts or related mitigation.</p>					

Figure: Potential Sidewalk Improvements





## 1.0 Project Introduction

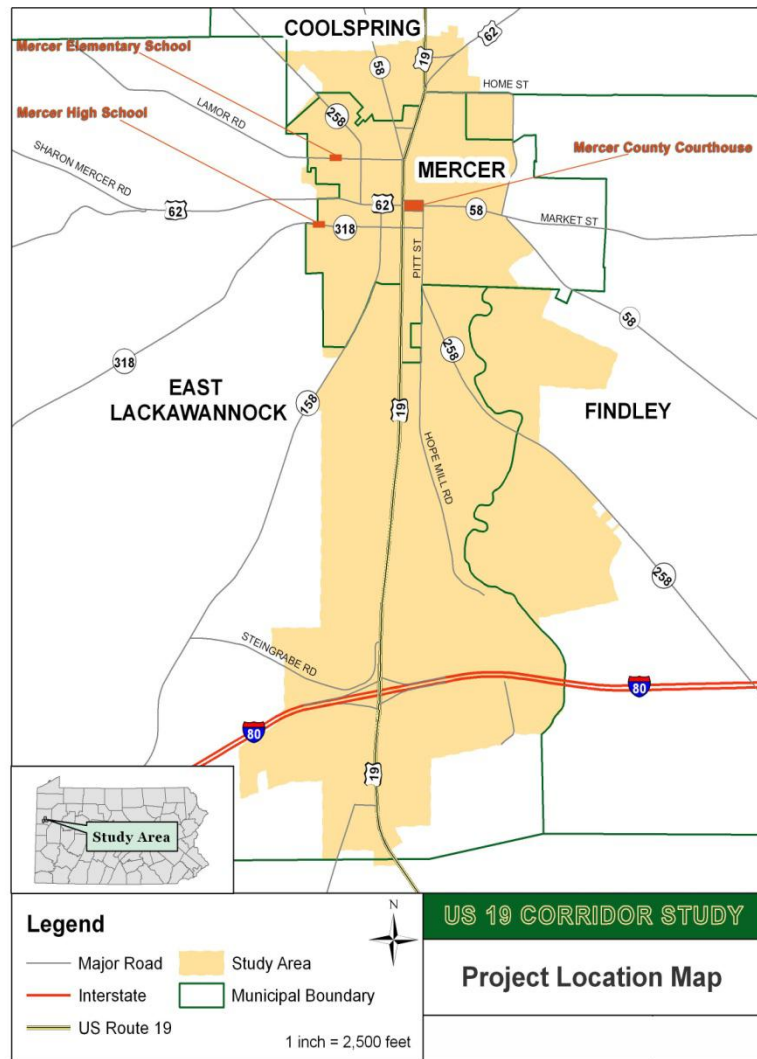
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### Study Area

The US Route 19 Corridor study area is situated in Mercer County and encompasses portions of East Lackawannock Township and Mercer Borough (Shown in Figure 1). The southern edge of the study area begins at the East Lackawannock Township border with Springfield Township and extends north through Mercer Borough to East Franklin Road in Coolspring Township (Figure 1). The project corridor is approximately four miles in length and the study area varies from a half a mile to 1 ½ miles in width to capture the development network of roadways that contribute to the travel demands and quality of life of the US Route 19 Corridor.

The entire study area has excellent regional access thanks to the I-80 Interchange and close proximity to I-79, which is located approximately five miles to the east. Although US Route 19 ultimately connects Lake Erie to the Gulf of Mexico, most of the through traffic has shifted to I-79. The traffic volumes within the study area range from 3,300 vehicles per day south of I-80 to 12,000 within Mercer Borough.

Figure 1: Project Location Map







## Roadway Characteristics

US Route 19 is classified as a Minor Arterial according to the Federal Functional Classification. However, this classification does little to convey the characteristics of the roadway and its surrounding land use context. The land use characteristics of US Route 19 transition from a Rural to Suburban Corridor in East Lackawannock Township to a Town/Village Center in Mercer Borough. The corresponding Smart Transportation Roadway Categories (Table 1) range from Community Arterial to a Community Collector and would be a Main Street for the segments within Mercer Borough.

**Table 1: US Route 19 Smart Transportation Roadway Categories**

Roadway Class	Roadway Type	Desired Operating Speed (mph)	Average Trip Length (mi)	Volume	Intersection Spacing	Traditional Functional Classification
Arterial	Regional	30-55	15-35	10000-40000	660-1320	Principal Arterial
Arterial	Community	25-55	7-25	5000-25000	300-1320	Minor Arterial
Collector	Community	25-55	5-10	5000-15000	300-660	Major Collector
Collector	Neighborhood	25-35	<7	<6000	300-660	Minor Collector
Local	Local	20-30	<5	<3000	200-660	

Within the project area, the land uses along US Route 19 are varied. The road assumes different characteristics with each style of use, from a country road...



*Rural Roadway*



*Interchange Development*

...to a busy commercial intersection near the commercial and industrial development at the I-80 interchange. Travelers experience more congestion within the Borough as vehicles approach the central business district and confluence of US 19, US 62, SR 58, and SR 258.

The Main Street concept translates to how a roadway functions as an “anchor” to a community by its role and contribution to the character of a community. For instance, the Main Street concept includes a roadway that offers a sense of place through its land uses, architectural form, and design. A Main Street roadway has a supporting sidewalk network with...



*Suburban Corridor*



*Main Street/Town Center*

...an active pedestrian atmosphere. Typically, the surrounding land uses will include retail shops, restaurants, municipal buildings, libraries, etc. Building design is usually high density with a close orientation to the street creating a “street face” and offering a human scale to the built environment. In other words, Mercer Borough is a great example of a Main Street Community.

## Project Goals and Objectives

The primary focus of the US Route 19 Corridor Study was to improve the existing conditions for all modes of travel along the US Route 19 Corridor, enhance the quality of life for residents, and strengthen the economic vitality of the project area. To complete this task, it was necessary to challenge local residents, business owners, elected officials, and stakeholders to answer the following questions:

- ❖ **How should this area develop over time?**
- ❖ **What should the corridor look like in the future?**
- ❖ **How should the transportation system operate?**

Several different methods were used to gather public opinions about existing conditions and potential improvements, including oversight from a Project Advisory Committee, guidance from a Stakeholder Committee, two public surveys, and feedback from two public meetings. Based upon the information received as a result of this community engagement, the following goals were developed to guide the study and ultimately determine the success of the project:

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- ❖ Enhance the Victorian atmosphere of Mercer Borough
- ❖ Direct land uses to encourage context appropriate in-fill within the Borough and suitable new development in the Township







Public Meetings

Two public meetings were held for the project. The first public meeting was held in the Mercer Area High School and the second meeting was held at the Mercer United Methodist Church. Both included a presentation to discuss the project, review project goals, and present findings and recommendations.

The first public meeting was attended by approximately 20 people. A discussion was held related to the ability to walk in and around downtown Mercer Borough. The working session that followed the formal presentation was structured to examine concerns regarding pedestrian mobility, land use, and traffic congestion. Map stations were positioned around the room to help people identify specific locations of concern, which were then mapped and presented at subsequent meetings.

**US Route 19 Corridor Study**

**Concerned about congestion?  
Tired of looking for a place to park?  
Tell us about it!**

**WHAT:** US Route 19 Corridor Study Public Meeting  
**WHEN:** Wednesday June 30, 2010 at 6:00 PM  
**WHERE:** Mercer Area High School in the LGI Room (Large Group Instruction Room)  
**WHY:** Tell us your future development goals and concerns with traffic and area roads in Mercer Borough and East Lackawannock Township

**PROJECT SPONSOR:** The Mercer County Regional Planning Commission & PennDOT District 1-0  
**FUNDING:** Pennsylvania Community Transportation Initiative

Project Contacts:  
 Matt Stewart (MCRPC): 724-981-2412, x 3206  
 Erin Wiley Moyers (PennDOT): 814-678-7006  
 Scott Thompson-Graves (WR&A): 724-779-7940

*Public Meeting Flyer*

The second public meeting was geared to present potential solutions to identified deficiencies. It was attended by approximately 15 people. At this meeting, citizens were asked for their opinions of future land use scenarios. Four scenarios with potential traffic impacts were presented for discussion. Overwhelmingly, the response was to invest in public infrastructure to support new development at the I-80 interchange.



*Public meeting*

## Personal Travel Survey

To understand the personal travel patterns of users of the US Route 19 Corridor, two separate travel surveys were conducted – an Online Personal Travel Survey and an Intercept Survey. Both surveys included questions related to specific travel habits as well as general information about the transportation system.

### Online Survey

The Online Survey was made available to the public from April 13 through May 2, 2010. To encourage participation, each person who completed the survey was entered into a drawing for a \$200 cash prize. A total of 128 Online Surveys were completed. These surveys have been included on the CD-ROM.

### Intercept Survey

An Intercept Survey was developed to supplement the data gathered via the Online Survey. Over 100 Intercept Surveys were completed. The Intercept Surveys were conducted at the following locations:

1. Subway
2. Country Fair Market
3. US Post Office
4. Family Dollar
5. Pizza Joes
6. Sheetz
7. Sapore Restaurant
8. Mercer Library
9. McDonalds
10. Burger King
11. Buy n' Fly
12. Dairy Queen
13. Walt's Grocery Store

#### Online Survey Highlights

- 37.5% of respondents live within the project area
- 67.2% of respondents are employed within the project area
- Concerns with intersections and the condition of sidewalks contribute to a feeling that children do not have safe access to walk to school
- 75% rated the corridor poor to very poor for ease of walking & bicycling
  - Limitations to walking include poor sidewalk network & safety concerns due to traffic
  - People were most likely to walk to the park, to restaurants, or to shop
- 58% rated the availability of parking poor to very poor
- 82% rated the condition of the highway network as adequate to good

#### Intercept Survey Highlights

- Confusing intersections and speeding on local roads are the primary traffic concerns
- 45% of respondents will walk if the trip is 15 minutes or less
- People are most likely to walk from work to:
  - The bank, a restaurant, or the Post Office





## Population

The project area reflects a population trend common in Pennsylvania with a borough that is experiencing population decline and a township with a growing population base. Since 1970, there has been a population loss of almost 14 percent in Mercer Borough. On the other hand, East Lackawannock Township experienced a population increase of almost 30 percent. On a positive note, while the Borough has lost population, the loss has moderated over the past two decades.

**Table 2: Population – 1970 to 2010**

Municipality	1970	1980	1990	2000	2010	Change %
Mercer Borough	2,773	2,532	2,444	2,391	2,002	-27.8%
East Lackawannock Township	1,314	1,709	1,606	1,701	1,682	28.0%
Total	4,087	4,241	4,050	4,092	3,684	-9.9%

Sources: 2005 Mercer Regional Multi-Municipal Comprehensive Plan and 2010 US Census

Overall, the population of East Lackawannock Township of Mercer Borough declined by 10% from 2000 to 2010. At the same time the population of Pennsylvania increased by 3% and the United States increased by 10%.

To a large extent, the changes to population are dictated by age patterns. This is obvious in the “graying” of western Pennsylvania. According to Census 2000, the median age in 2000 was 37.4 years for Mercer and 40.3 years for East Lackawannock. As most children are born of women aged between 25 and 35, these demographic age characteristics are important. Recent data obtained from the Pennsylvania Department of Health, Vital Statistics, demonstrates local trends. Data from 2004-2008 shows a natural increase of children ages four and above in East Lackawannock Township, while the Borough saw 26 more deaths than births. Thus, without considering migration factors, the study area is experiencing a slow natural population loss.

**Table 3: Population Projections – 2000 to 2020**

Municipality	2000	2010	2020	Change %
Mercer Borough	2,391	2,362	2,377	0.6%
East Lackawannock Township	1,701	1,684	1,616	-5.0%
Total	4,092	4,046	3,993	-2.4%

Source: 2005 Mercer Regional Multi-Municipal Comprehensive Plan

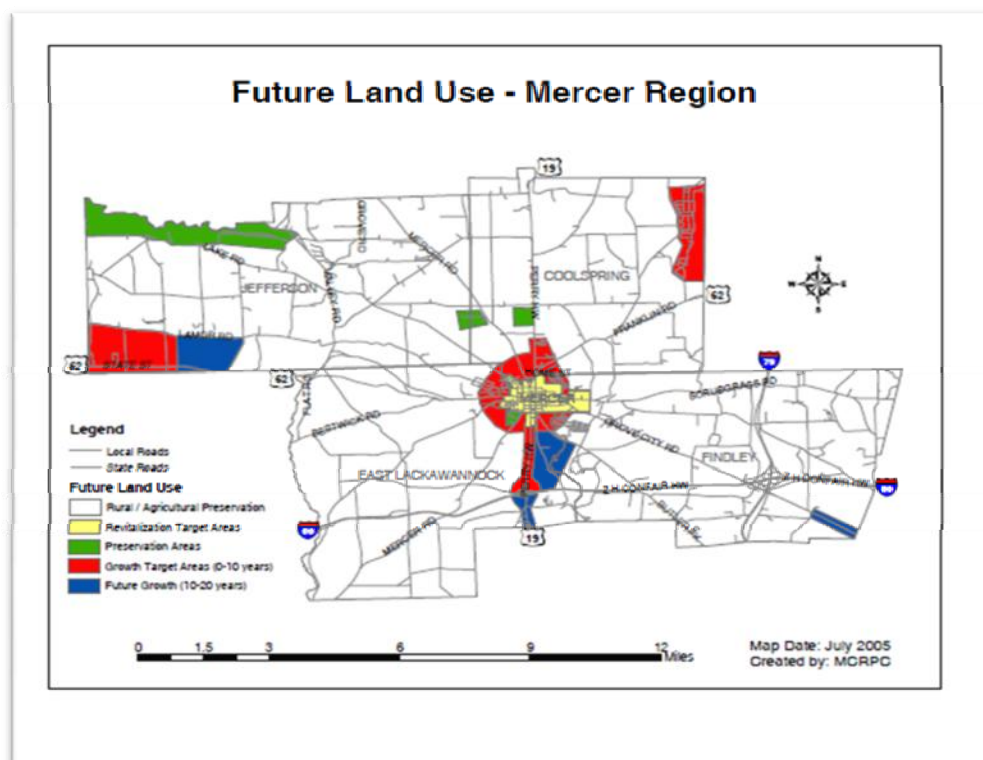


## Land Use Planning and Regulations

In 2005, the Townships of Coolspring, East Lackawannock, Findley, and Jefferson joined with Mercer Borough to adopt the Mercer Regional Multi-Municipal Plan. The Multi-Municipal Comprehensive Plan serves as the guiding policy document for these municipalities. The Future Land Use Plan outlined the desired development pattern and included the following use categories:

- ❖ Rural/Agricultural Areas
- ❖ Revitalization Areas
- ❖ Open Space Preservation Areas
- ❖ Growth Target Areas (0-10 Years)
- ❖ Future Growth Areas (10-20 Years)

*Figure 2: Multi-Municipal Comprehensive Plan Future Land Use*



The Borough of Mercer is identified as a Revitalization Area. Downtown Mercer was described as a high-priority for revitalization “to ensure its long-term viability and its place as the centerpiece, not only of the Region, but the County as a whole.” The residential areas of the Borough were noted as “worthy of preservation,” and characterized as “quaint” and reminiscent of “historic Victorian.”

The area immediately surrounding the Borough, including parts of Coolspring, Findley, and East Lackawannock Townships, are designated Growth Target Areas. This includes the US Route 19 Corridor, from Mercer Borough to the US Route 19/I-80 North Interchange quadrants. To the east of the US Route 19 Corridor and south of the interchange, the land is designated as “Future Growth” (10 to 20 years). To the west, future land use is designated as Rural/Agricultural. This same designation surrounds the Growth Target Areas.



unit of measurement that standardizes all land use types to the level of demand created by a single-family housing unit.

All effluent is to be transported to the Mercer Sewer Treatment Plant.

### Zoning

Mercer Borough’s Zoning Ordinance was last updated in 2002. The Borough has zoned the area around the Court House Square as C-1 Commercial, “Town Center.” This district provides for a variety of retail and commercial uses, along with “dwellings above the first floor.” To the immediate north, along US Route 19 and in the southern sector on US Route 19, is the C-2 General Commercial Area, which provides for retail and commercial uses. The primary difference is lot size. There is no fixed lot size for the C-1 District, while the C-2 District requires a minimum 10,000 square foot lot. Figure 3 represents the zoning districts for Mercer Borough.

The central area is surrounded by R-3, R-2, and R-1, which are all residential zoning districts. Areas along Scrubgrass Road are designated as Interstate Industrial, while the “P-O” Planned Opportunity District is in the northeast quadrant of the Borough.

**Table 4: Zoning District Lots – Mercer Borough**

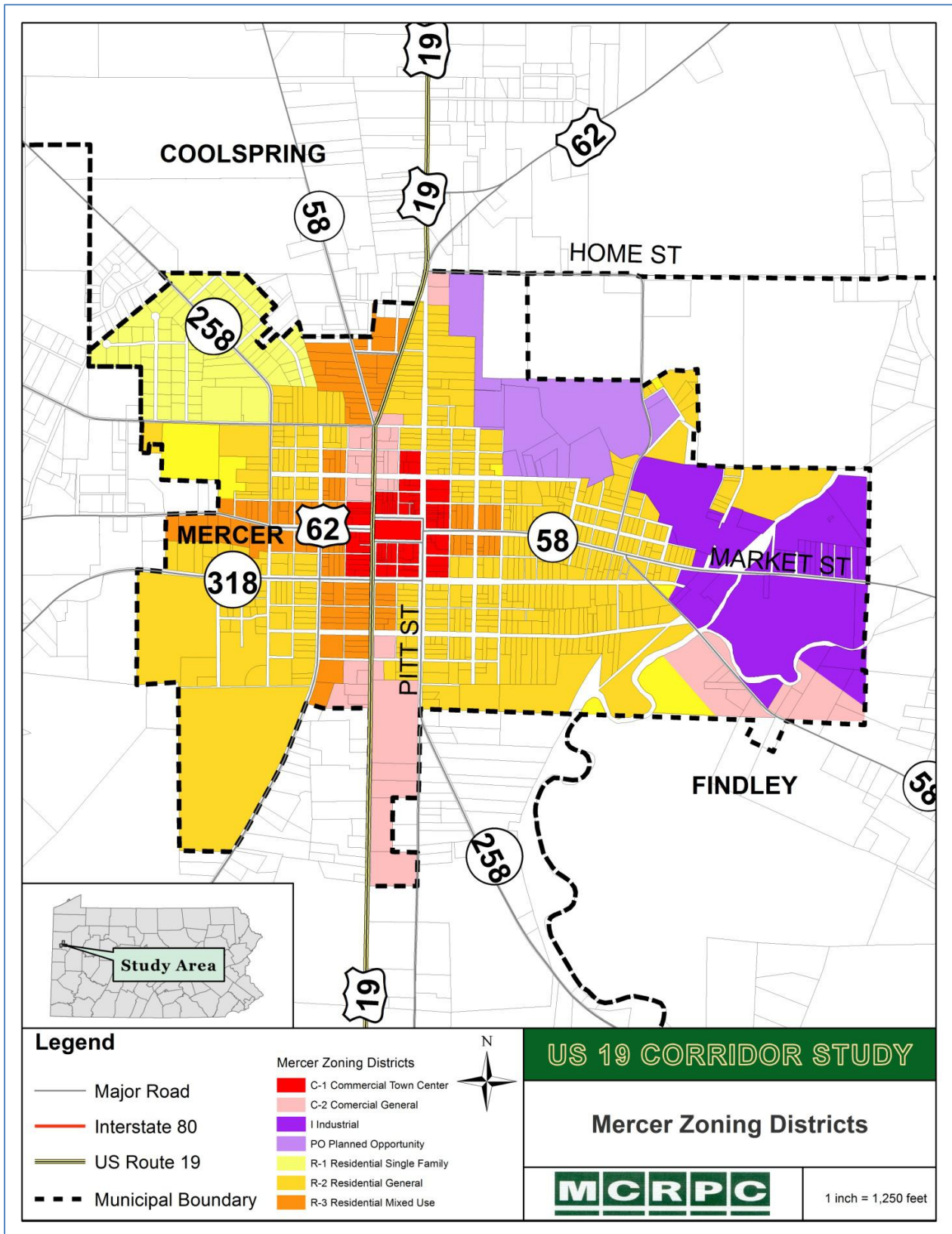
District	Lot Size	Width	Front Yard*	Side Yard	Residential Density**
C-1	N/A	NA	NA	NA	NA
C-2	10,000 Square Feet	100 Feet	75 Feet	10 Feet	NA
I	10,000 Square Feet	100 Feet	75 Feet	Varies	NA
R-1	7,200 Square Feet	60 Feet	75 Feet	10 Feet	6 DU/Acre
R-2 and R-3	6,000 Square Feet	60 Feet	NA	10 Feet	7.3+

\* Computed from the centerline of the street

\*\* Residential density in dwelling units per acre

*Note: The “P-O” District allows for a wide variety of uses, primarily from the R-2 and R-2 Districts, with specific controls.*

Figure 3: Mercer Borough Zoning



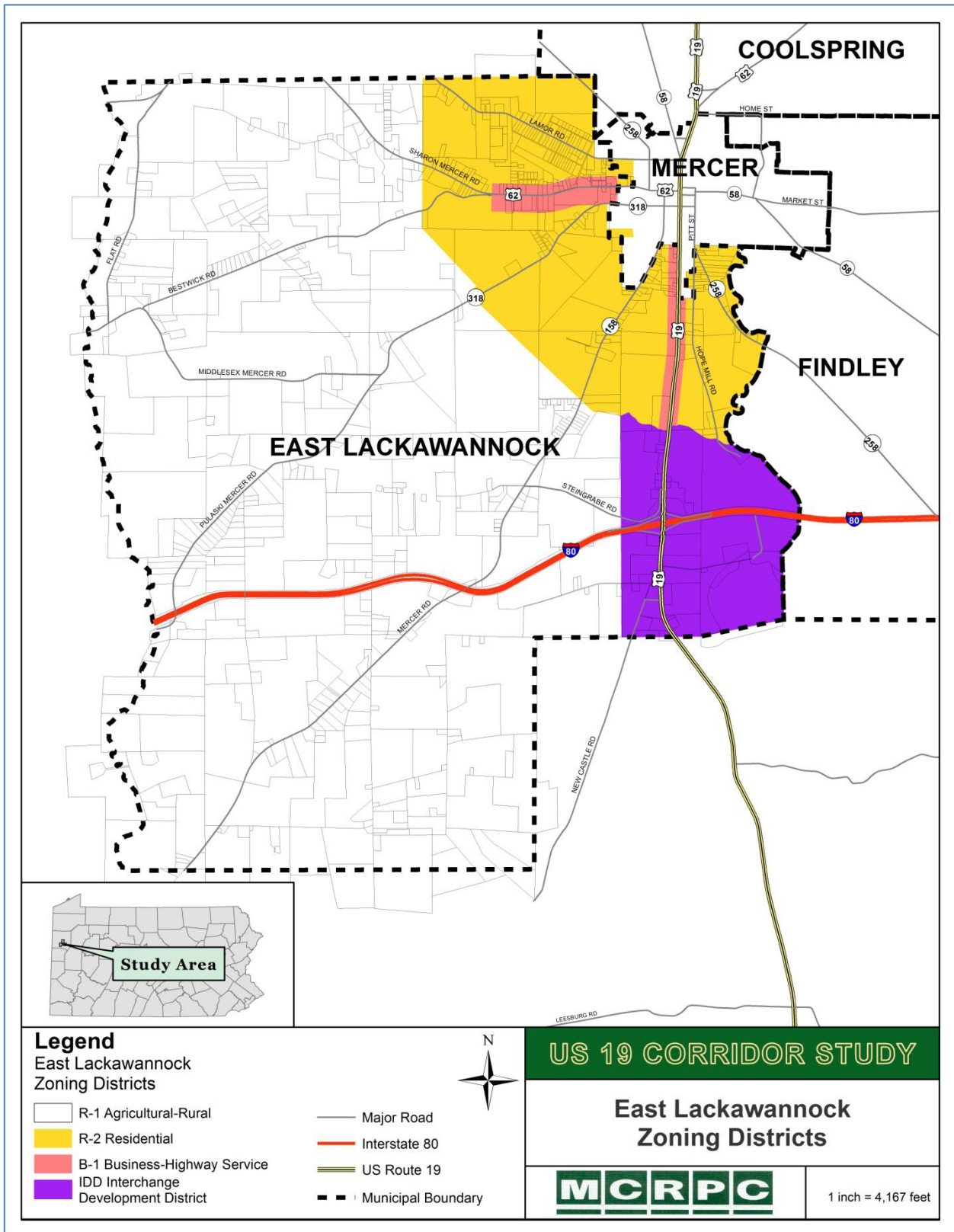
The Zoning Ordinance for East Lackawannock dates back to 1965 (shown in Figure 4). The Township has created a “General Business District-B-1,” which is located south of Mercer Borough and abuts the Interchange Development District. The Interchange district straddles US Route 19 extending south to the border with Springfield Township. To the west of the Interchange Development District is the Agricultural-Residential District. The B-1 General Business District has a uniform depth of 400 feet to the west of US Route 19 and 275 feet east of the highway between the Interchange District and the Borough of Mercer. The B-1, General Business Zone, allows for a variety of offices, restaurants, medical services, personal services, automotive services, and one- and two-family dwellings. The Interchange Development Zone permits a very wide range of commercial, retail, motels, truck and auto-related activities, as well as the usual light industrial activities and “any other equivalent use.” Beyond the strip of B-1 businesses, both east and west of US Route 19, there is the R-2 Residential District. This district permits residential, farming, schools, some outdoor recreation (golf courses), and hospitals.

**Table 5: Zoning District Lots – East Lackawannock Township**

District	Lot Size	Width	Front Yard*	Side Yard	Residential Density**
R-1	20,000 Square Feet	125 Feet	100 Feet	20 Feet	2.2 DU/Acre
			75 Feet		
R-2	25,000 Square Feet	125 Feet	100 Feet	20 Feet	1.7 DU/Acre
			75 Feet		
B-1	15,000 Square Feet Water and Sewer	100 Feet		10 Feet	
	25,000 Square Feet On-Lot	125 Feet	75 Feet	20 Feet	2 to 3 DU/Acre
IDD	20,000 Square Feet	NA	100 Feet	NA	NA
* Measured from road centerline					
** In dwelling units per acre					
<i>Note: For on-lot systems, SEO approval is needed; density is usually under one dwelling unit per acre. Most of the Township, in the study area, uses on-lot septic.</i>					



Figure 4: East Lackawannock Zoning





## Land Development Trends

Building permit data from Mercer Borough and East Lackawannock Township was reviewed to understand land development trends. The Borough can be described as fully developed with very limited opportunities for new construction. The Township is experiencing some residential growth, but it is scattered, not focused. The two traditional engines of growth are the economy and sewerage and water services. The lack of sewerage service is seen as a major impediment to development in the US Route 19 corridor, especially at the Interchange.

### East Lackawannock

Permit data from 2006 to 2010 shows that the Township, on average, issued 17 building permits a year. However, for the most part, these are pole buildings, decks, barns, and residential additions, with only two to three single-family homes built per year. During the past four years, only one appears in the study area (on New Hope Road); the balance are scattered in rural areas. A permit of interest includes a new water tower for Acqua (2009) on Route 62, now under construction.

### Mercer Borough

Permit data from Mercer Borough includes activity from 2006 to 2009 with the majority of developments mirroring those of the Township – decks, garages, and residential additions. Five residential dwellings were built, but two of these were replacements. Two were built by “Habitat for Humanity.” That organization intends to build another home—as a demolition replacement. The Medicine Shoppe strip plaza on US Route 19 (South Street) and East Beaver Street was constructed in 2008, as was an addition to the Mercer Forge Corporation. To date, the Medicine Shoppe is the only tenant of the plaza. Local real estate sources report that the Borough’s existing home sales in the area have been steady. The Borough of Mercer is considered as essentially “built out.”



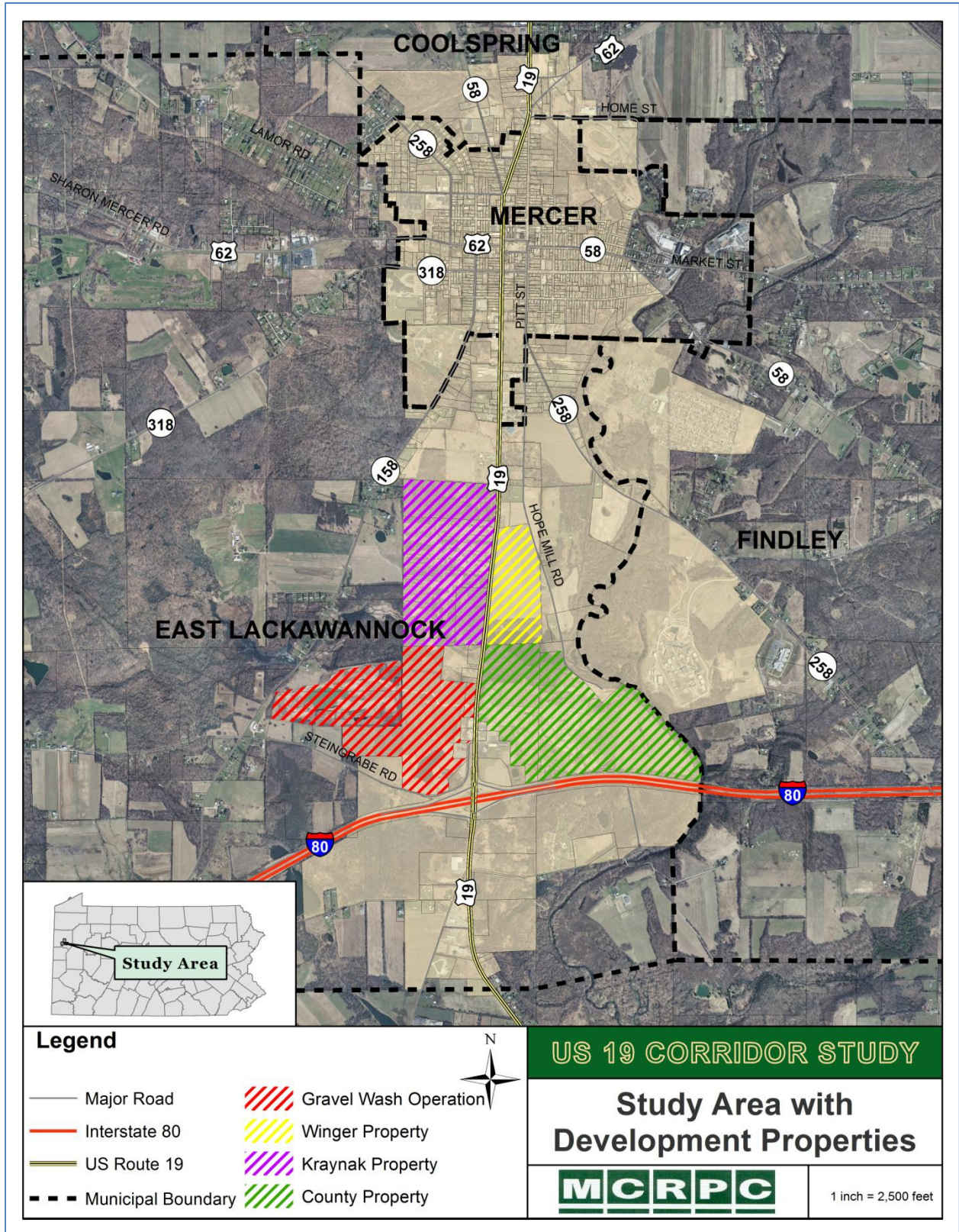
### Development Potential

Within the study area are four sizeable parcels that have high potential for future development. All four properties are located in East Lackawannock Township adjacent to US Route 19. The parcels total approximately 640 acres (Figure 5). The county owned property is currently the subject of a market study and environmental assessment to determine economic development opportunities and constraints. According to real estate professionals, the owners of the Kraynak and Winger properties have expressed interest in development and/or selling. The property where the Gravel Washing Operation was recently in operation was recently placed into bankruptcy and the ownership and status is unknown.

**Table 6: Development Opportunities**

Potential Development Properties			
Ownership	Name	Acreage	Existing Land Use
Public	Mercer County	221	Industrial/Mineral Extraction
Private	Kraynak	156.8	Forested/Open Space
Private	Winger	65.2	Open Space
Private	Unknown	186.9	Gravel Wash Operation

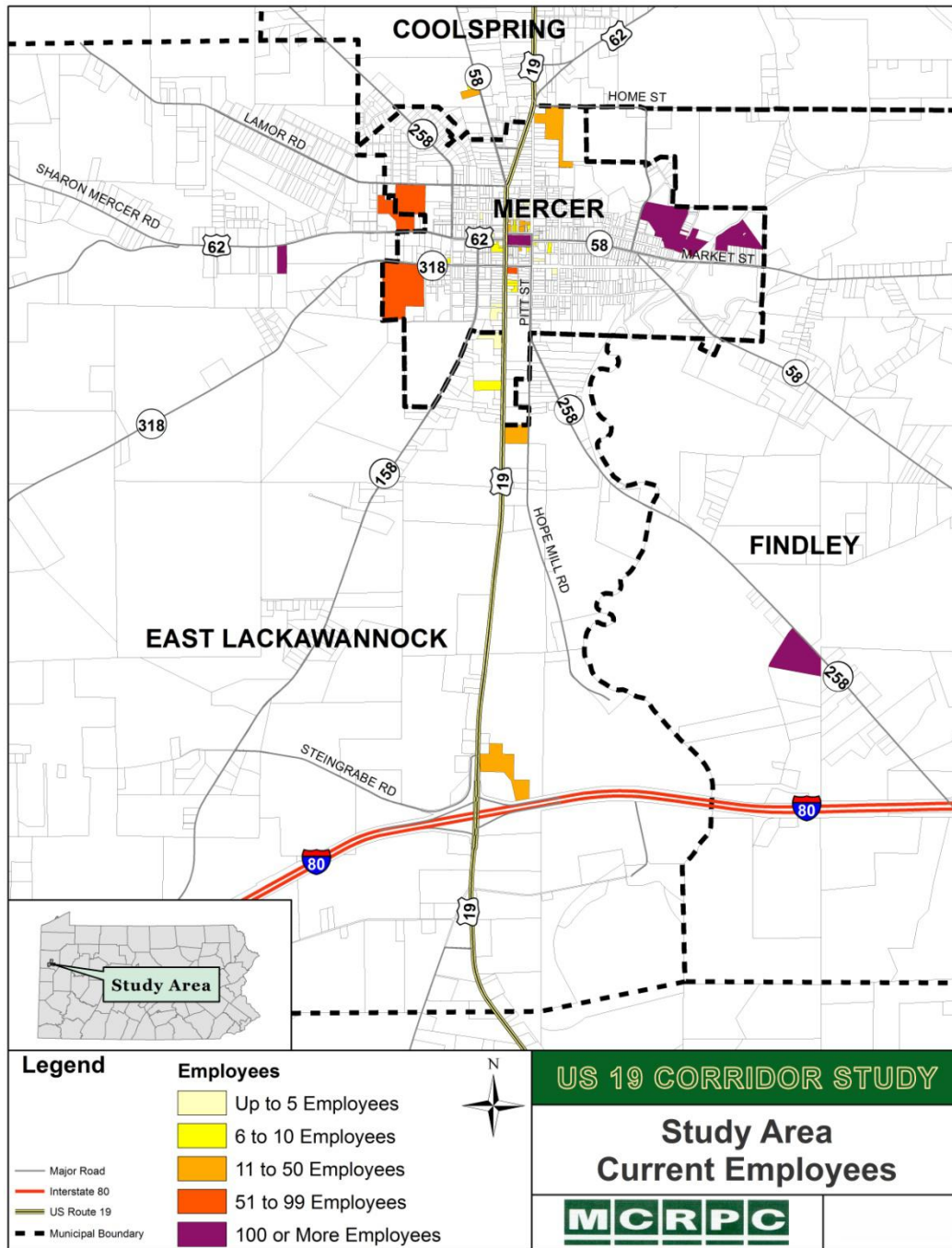
Figure 5: Development Opportunities



## Major Employers and Facilities

Facilities contributing to the level of traffic on area roadways include major employers located within East Lackawannock Township and Mercer Borough (Figure 6). Various employers were contacted to document existing employment levels and identify future plans that might affect the transportation network.

Figure 6: Major Employers and Facilities











## Traffic / Transportation Conditions

### Data Collection

Field surveys were conducted to observe and document general transportation conditions for all modes of travel throughout the study area, including existing geometric conditions, traffic signal operations, and basic field observations. Global Positioning System (GPS) point data was also collected using hand-held equipment to identify the exact location of the following within the US Route 19 study area:

- ❖ Sidewalk begin / end points
- ❖ Bicycle lane begin / end points
- ❖ Driveway locations
- ❖ Bus stop locations
- ❖ Posted speed limit boundaries

The GPS point data was overlaid onto a model of the study area in geographic information systems (GIS) format. Points in the GIS model were then connected to display where each of the elements listed above were located within the study area.

Automatic Traffic Recorders (ATRs) were used to collect hourly traffic volumes and vehicle classifications in various locations within the study area. Each ATR station recorded data in both directions of travel for a minimum of five consecutive days per location. Five ATR stations were located throughout the study area (Table 7, Figure 7, Appendix B).

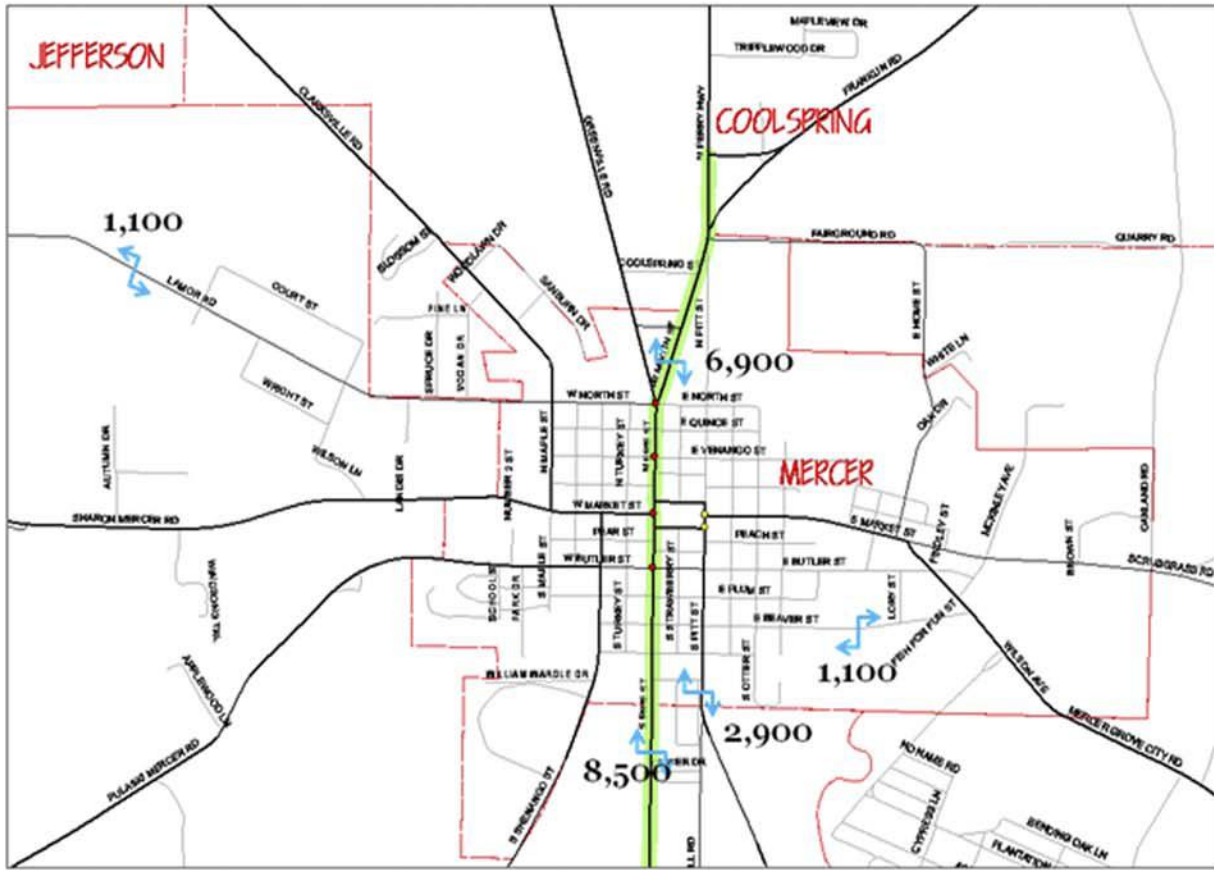


*GPS Data Collection*

**Table 7: ATR Data – Existing AADT Summary**

Location	AADT
Site 1: East Beaver St, East of East St	<b>1,100</b>
Site 2: Lamor Rd, West of Court St	<b>1,100</b>
Site 3: S Pitt St, South of Beaver St	<b>2,900</b>
Site 4: US Route 19, South of W South St	<b>8,500</b>
Site 5: US Route 19, South of Coolspring St	<b>6,900</b>

Figure 7: ATR Data – Existing AADT Summary



The total percentage of heavy vehicles throughout the study area ranges from approximately 3% to 13%. A further breakdown of that total shows that buses account for approximately 1%, single-unit trucks account for up to 8%, while tractor-trailer trucks account for less than 5% of the overall weekday traffic volume.

Table 8: ATR Data – Existing Vehicle Classification Summary

Location	Passenger Vehicles	Total Heavy Vehicles	Bus	Single-Unit Trucks	Tractor-Trailer Trucks
East Beaver St, East of East St	96.8%	3.2%	0.0%	3.1%	0.1%
Lamor Rd, West of Court St	90.9%	9.1%	0.9%	8.0%	0.2%
S Pitt St, South of Beaver St	91.4%	8.6%	1.0%	7.1%	0.5%
US 19, South of W South St	87.1%	12.9%	1.9%	6.4%	4.6%
US 19, South of Coolspring St	89.0%	11.0%	1.1%	7.2%	2.7%



Figure 8: Mercer Borough Intersection Turning Movement Count (TMC) Locations

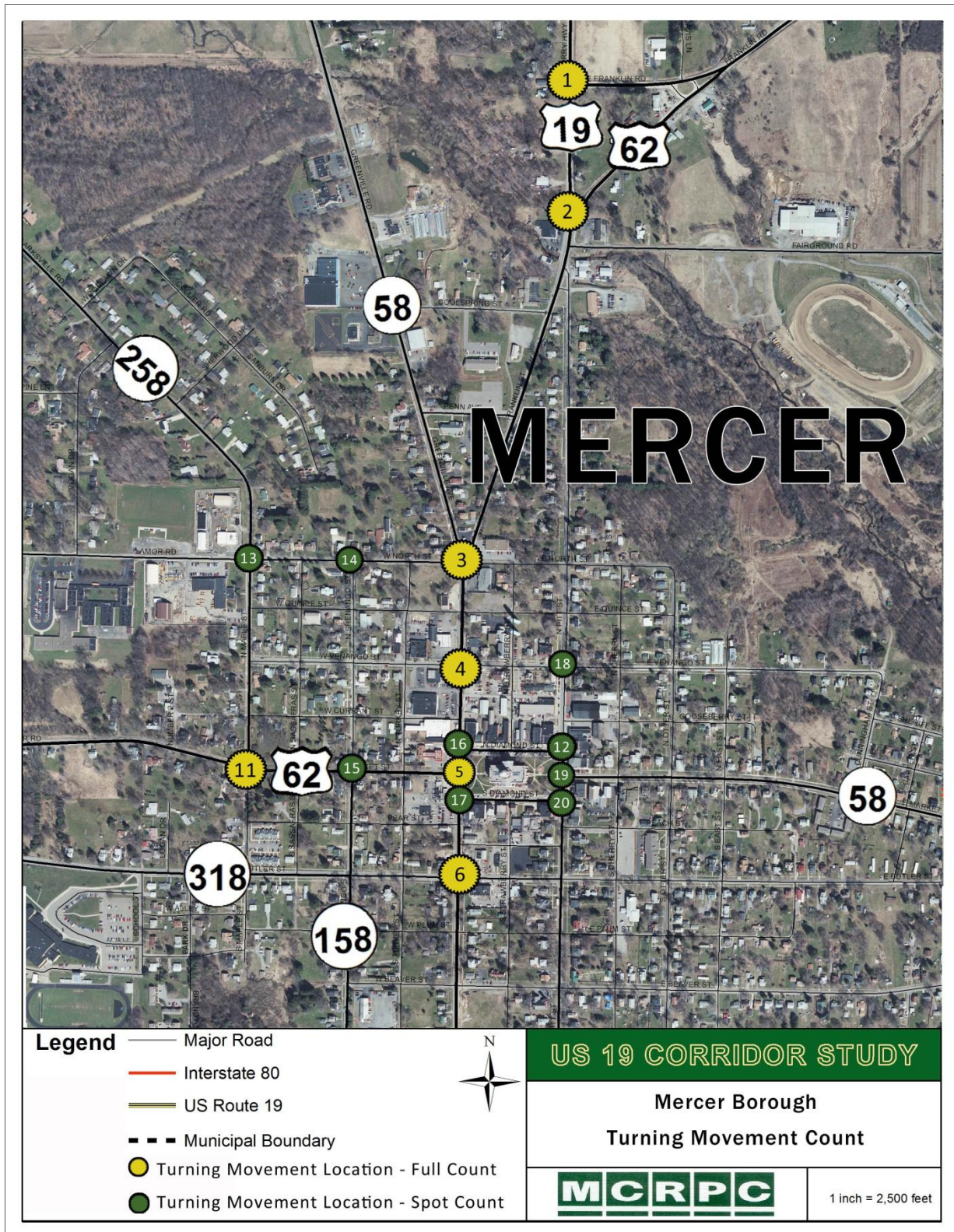


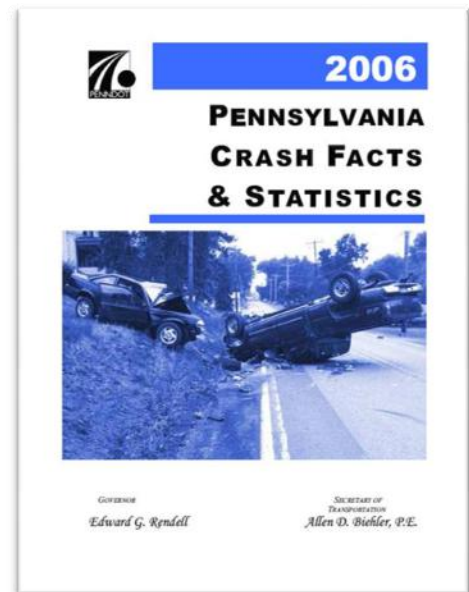
Figure 9: East Lackawannock Intersection Turning Movement Count (TMC) Locations



## Safety

Historical crash data for select corridors within the study area was supplied by PennDOT for the three-year period from 1/1/2007 through 12/31/2009. Crash locations were plotted onto maps of the project area based on roadway segment and offset data included in the crash reports. Data was then reviewed and compiled to locate any notable crash clusters, calculate and compare crash rates, and identify any trends in the crash statistics based on crash type, condition, or probable cause. The following roads were included in the crash analyses:

- US Route 19/CoolSpring Street
- US Route 19/US 62/SR 58/Lamor Rd/North St. (5-legged)
- US Route 19/Venango Street
- US Route 19/US 62
- US Route 19/East Butler Street
- US Route 19/Beaver Street
- US Route 19/Steingrabe Road
- US 62/SR 258/Maple Street
- US 62/Steingrabe Road
- SR 58/Otter Street
- SR 58/Beaver Street
- SR 58/Shaffer Street



*PennDOT Publication*

Based on the crash data, no statistically significant crashes have been reported. It is important to note that only reportable crashes available in PennDOT's database were reviewed as part of this study. A "reportable crash" is defined by PennDOT's *2006 Pennsylvania Crash Facts & Statistics* booklet as "a crash resulting in a death within 30 days of the crash; or injury in any degree, to any person involved; or crashes resulting in damage to any vehicle serious enough to require towing." Based on anecdotal evidence, additional minor, "non-reportable" or unreported crashes may have occurred. If so, it would be expected that those crashes have or follow characteristics similar to the data that was reviewed and, as such, would be addressed or improved by the same set of alternatives or recommendations developed throughout this study.

### Traffic Operations

To quantify traffic operations, a capacity analysis was conducted using Synchro software. The Synchro model accounts for input such as turning movement volumes, lane arrangements, type of intersection control, traffic signal timing, etc., to estimate intersection capacity, delay, and level of service (LOS) in accordance with standard procedures outlined in the Transportation Research Board’s (TRB’s) “Highway Capacity Manual.”

Intersection LOS is a letter grade based on the average delay per vehicle due to the traffic control in place at an intersection. Letter grades range from A through F, with LOS A representing the best operating conditions and LOS F representing the worst. Generally, an acceptable range of operations is defined as LOS C or better in rural areas and LOS D or better in urban areas. These criteria are specific to intersection control type based on the notion that higher levels of delay are generally expected and accepted at signalized intersections, whereas motorists’ tolerance of delay at unsignalized intersections is typically lower.

**Table 9: Intersection Level of Service (LOS) Criteria**

LOS	Control Delay (Seconds)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

Synchro analyses were conducted for the four existing signalized intersections and 18 unsignalized intersections in the study area for typical morning and afternoon rush hours. As the PM peak period was found to be the worst condition of the two study scenarios, it was used as the primary factor for the US Route 19 Corridor Study.

**Table 10: LOS Table for PM Existing Conditions**

Signalized Operations		Number of Existing Intersections
Acceptable	Overall LOS A, B, or C	3
Marginal	Overall LOS D	1
Failing	Overall LOS E or F	0
Unsignalized Operations		Number of Existing Intersections
Acceptable	Side-Street LOS A, B, or C	18
Marginal	Side-Street LOS D	0
Failing	Side-Street LOS E or F	0

Figure 10: Mercer Borough Level of Service PM Existing Conditions

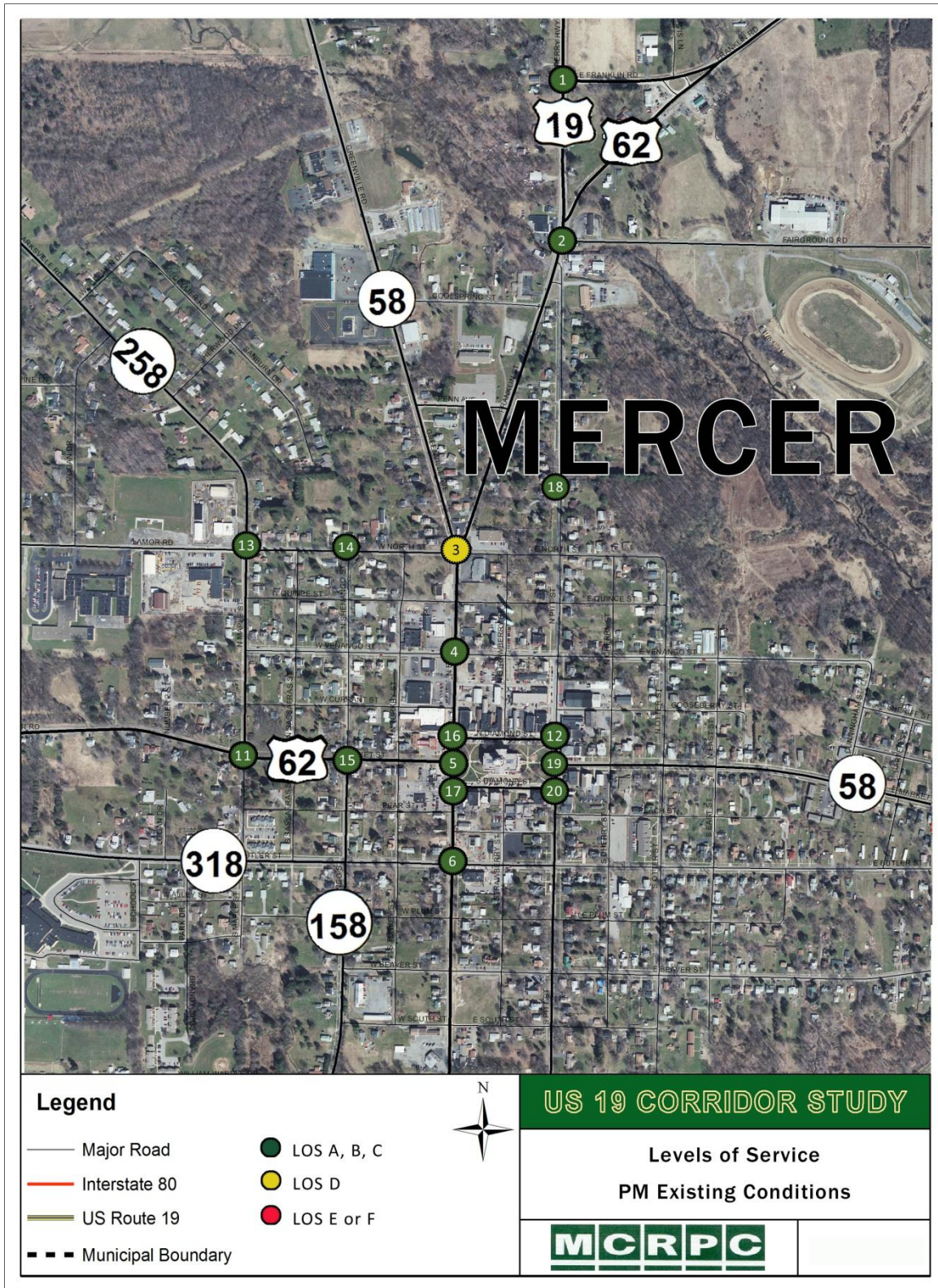




Figure 11: East Lackawannock Level of Service PM Existing Conditions

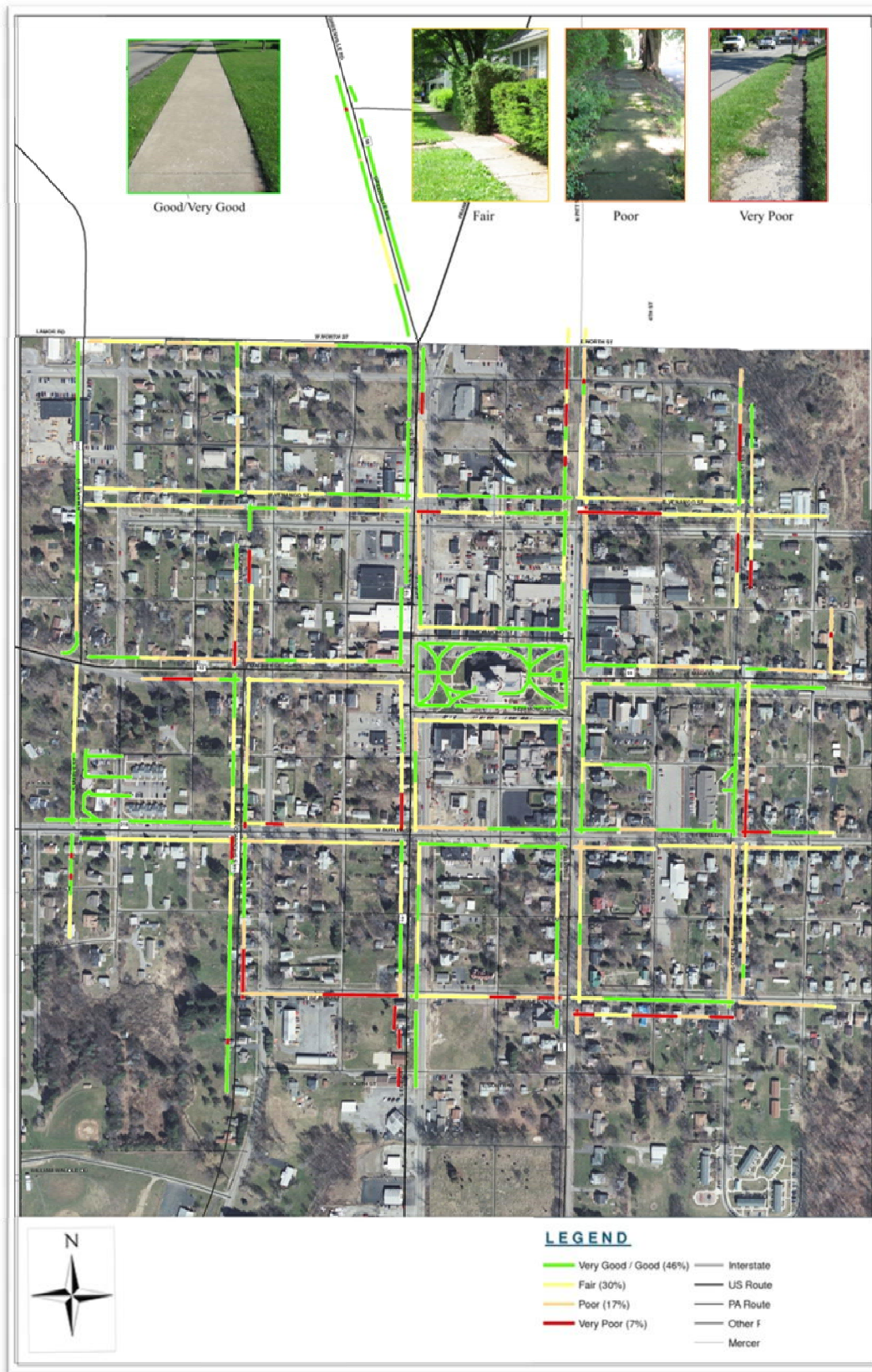


## Pedestrian Transportation Network

Mercer Borough has a well-developed sidewalk network. Sidewalks are present within most of the three to five block area surrounding the town center, although there are gaps and locations where the sidewalk is in poor condition. An assessment of the condition of the sidewalk network was conducted through a pedestrian network audit. Field surveys were conducted on just over 44,000 feet of sidewalks to gather data related to sidewalk widths, surface conditions, crosswalks, and obstructions. Sidewalk conditions were mapped (Figure 9) and rated on a scale of 1 (very good) to 5 (very poor) as follows:

1. Very Good: Sidewalk has a minimum width of 4 feet, maintenance / condition is good, curb ramps present
2. Good: Sidewalk has a minimum width of 3-4 feet, no curb ramps, surface is cracked in some areas
3. Fair: Sidewalk has a minimum width of 3-4 feet, no curb ramps, some heaving and cracked surface
4. Poor: Sidewalk width less than 3 feet, no curb ramps, significant heaving and cracked surface
5. Very Poor: Sidewalk width less than 3 feet, no curb ramps, significant heaving and cracked surface, portions missing, obstructions present

Figure 12: Sidewalk Conditions



Using this assessment, the sidewalk network in Mercer Borough was found to have a significant percent of its sidewalks in a deteriorated condition, although 72 percent were documented to be in fair condition or better.

- Good-Very Good = 44% or 19,415 feet
- Fair = 28% or 12,511 ft
- Poor = 17% or 7,358 ft
- Very Poor = 7% or 3,146 ft
- Missing = 4% or 1,641 ft



*Very Poor*



*Poor*



*Fair*



*Good/Very Good*

The quantitative analysis of Mercer Borough's pedestrian network helped to verify existing conditions. However, the need for improving connectivity was documented using the online and intercept surveys and during meetings with the public and stakeholders. For instance, the online and intercept surveys demonstrated that people feel it is difficult to walk or bicycle in Mercer Borough. People indicated that they like to walk for both exercise and recreation but expressed concerns regarding the condition of the sidewalks. Additionally, it was noted that children were not encouraged to walk to school due to fear of unsafe intersections and other safety concerns related to traffic.

*By reviewing the physical condition of the sidewalk network to this level of detail, Mercer Borough can begin to estimate the level of investment needed to improve connectivity.*


The sidewalk assessment was coupled with an investigation of the connectivity of pedestrian destinations. Desired pedestrian destinations were identified through public meetings, surveys, and interviews. The Central Business District was identified as the area that receives the highest amount of foot traffic, which is no surprise given the density of personal services, retail destinations, and number of employers. The majority of survey respondents who work in the borough stated that they prefer to walk during lunch for shopping or other personal trips as long as they can do so within a 15 minute time period. Residents also noted other destinations including the Dairy Queen, Walt's Grocery Store, Mercer Area High School, Mercer Area Elementary School, and Brandy Springs Park.

Each of these destination areas was mapped to determine which fell within the 15 minute "walkshed" identified in the project surveys, which was centered on the business district (Figure 13). The pedestrian destinations were reviewed based upon the condition of the sidewalk network to determine if people can easily walk to their desired destination. Using the desired pedestrian connections coupled with the sidewalk conditions assessment, the following priority improvement locations were identified:

1. Shenango Street
2. W. Butler Street
3. W. Market Street
4. W. Venango Street
5. W. North Street
6. S. Pitt Street
7. Hope Mill Rd
8. West Beaver Street
9. West South Street

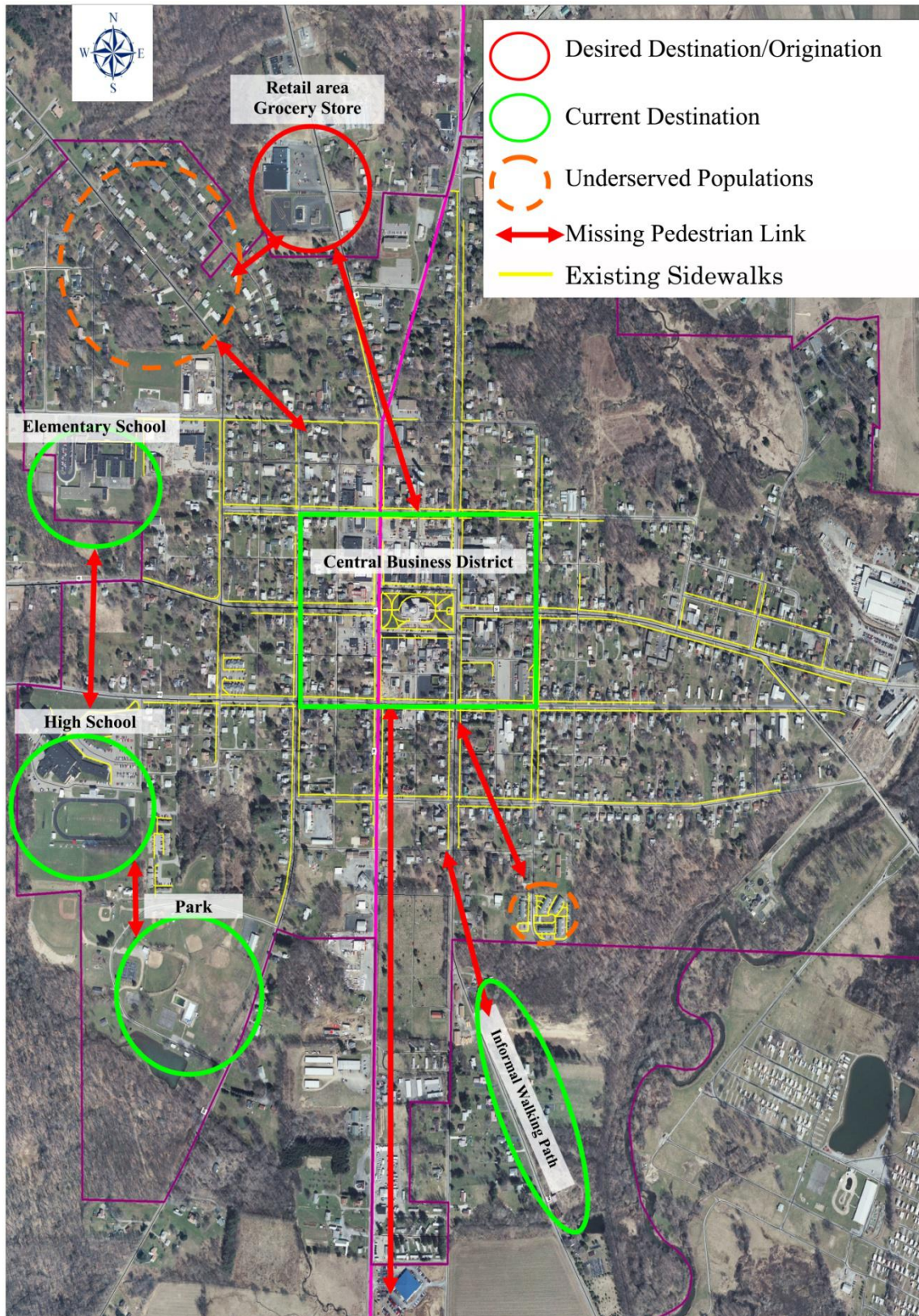
This dual assessment generated the following priority new pedestrian links:

1. Connection to Walt's Grocery store
2. Connection south along US Route 19 to Dairy Queen
3. Connection between High School and Mercer Borough Park



*Residents, workers, and visitors to Mercer Borough overwhelmingly expressed their desire to be able to walk around town for shopping, recreation, and exercise.*

Figure 13: Pedestrian Destinations





Mercer Borough enforces parking rules through a parking officer who conducts regular patrols of all parking areas. Within a six month period from January through June 2010, violations generated just over \$6,000 in fines.

A parking occupancy survey was conducted to determine parking utilization on the roadways adjacent to the courthouse. Data collection for the survey was completed on separate occasions in order to capture typical and peak use of parking areas (Figure 14). Typical use was defined as an average day when court was not in session, and peak use was defined as when court was in session. Two peak use counts were taken to capture different court volume days. The Parking Survey included counts during the AM, Mid-day, and PM peak hours to establish the current demand for parking and circulation within the Central Business District. The parking area locations are as follows:

- Lot A: Parking lot on US 19
- Lot B: Street parking along US 19
- Lot C: Street parking along US 19
- Lot D: Street parking along E. Venango St
- Lot E: Parking lot on E. Venango St
- Lot F: Street parking along E. Venango St
- Lot G: Parking lot on Blackberry St
- Lot H: Street parking along N. Diamond St
- Lot I: Street parking along N. Diamond St
- Lot J: Street parking along N. Diamond St
- Lot K: Street parking along S. Diamond St
- Lot L: Street parking along E. Butler St
- Lot M: Street parking along E. Butler St
- Lot O: Street parking along E. Butler St
- Lot P: Street parking along Pitt St
- Lot Q: Street parking along Pitt St
- Lot R: Street parking along Pitt St
- Lot S: Street parking along Pitt St
- Lot T: Street parking along Pitt St
- Lot U: Street parking along Pitt St





Figure 14: Public Parking Usage

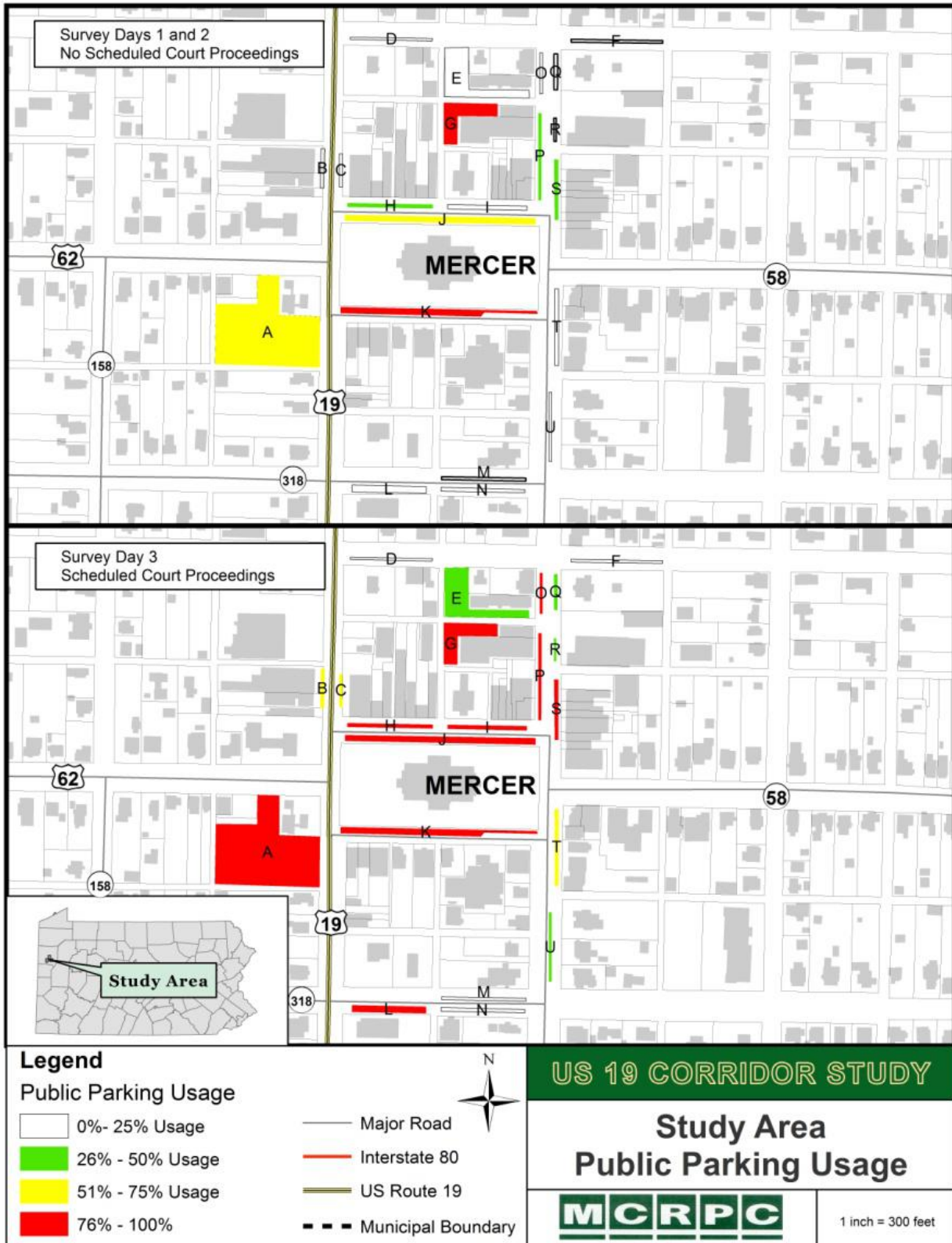
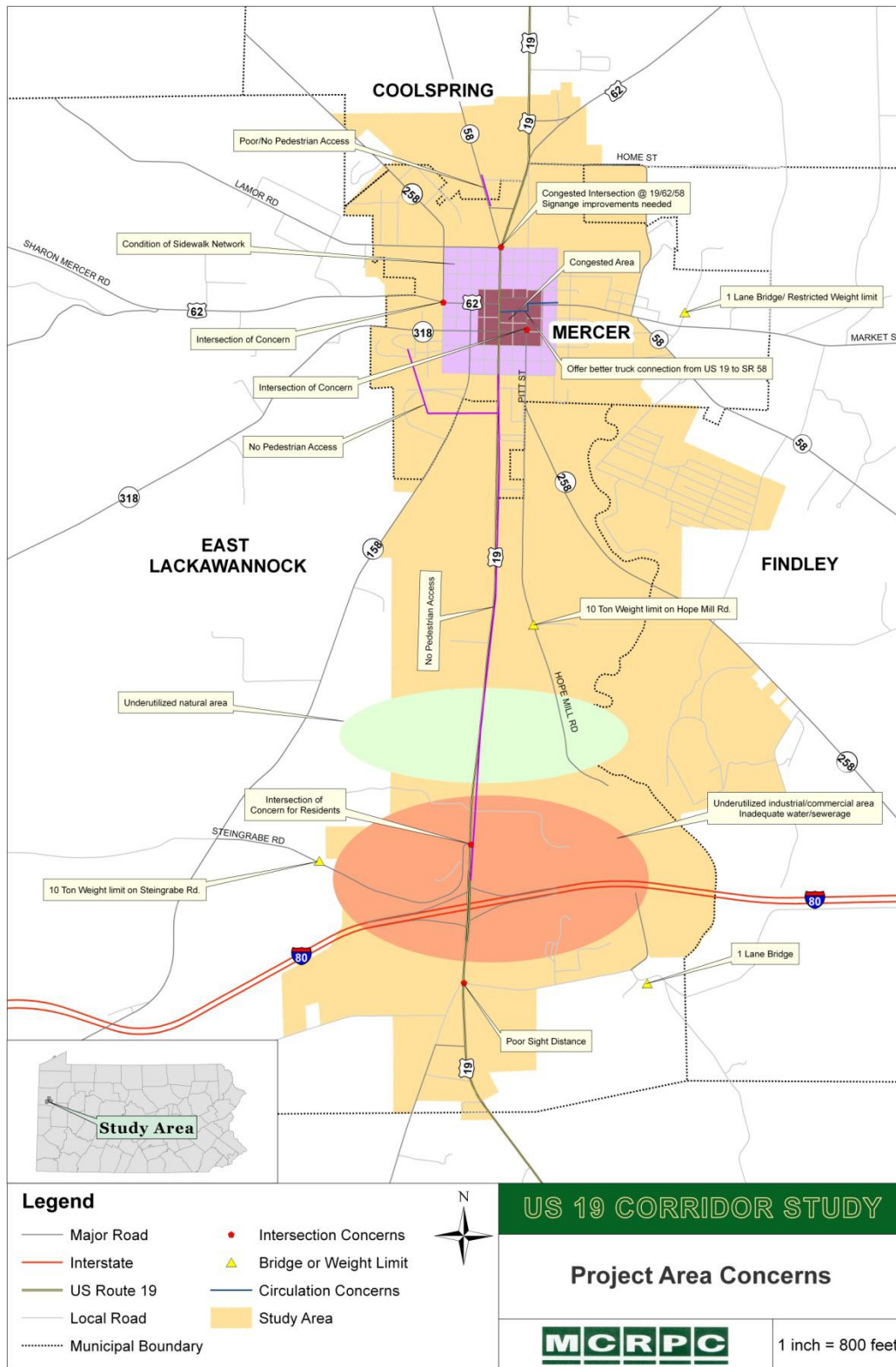




Figure 15: Project Area Concerns



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## 3.0 Future Conditions

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### Establishment of Future Baseline

An integral aspect of establishing future baseline conditions is to predict future land use trends based on current land use regulations, past development trends, available land, access to transportation infrastructure, and access to utilities. The US Route 19 Corridor Study evaluated four land use scenarios. These scenarios were evaluated assuming the “no-build” transportation conditions that would result if no improvements were made to the existing road or pedestrian network.

The scenarios make both short-term (immediate to 5 year) and long-term (20-year) assumptions. Short-term assumptions are driven by existing market conditions and regional development patterns while long-term assumptions are influenced by local goals for development. For instance, commercial and industrial development are most likely to occur near the I-80 interchange area but the inventory of existing commercial and industrial real estate must be absorbed before new development can be expected.

### Future Year Traffic Projections

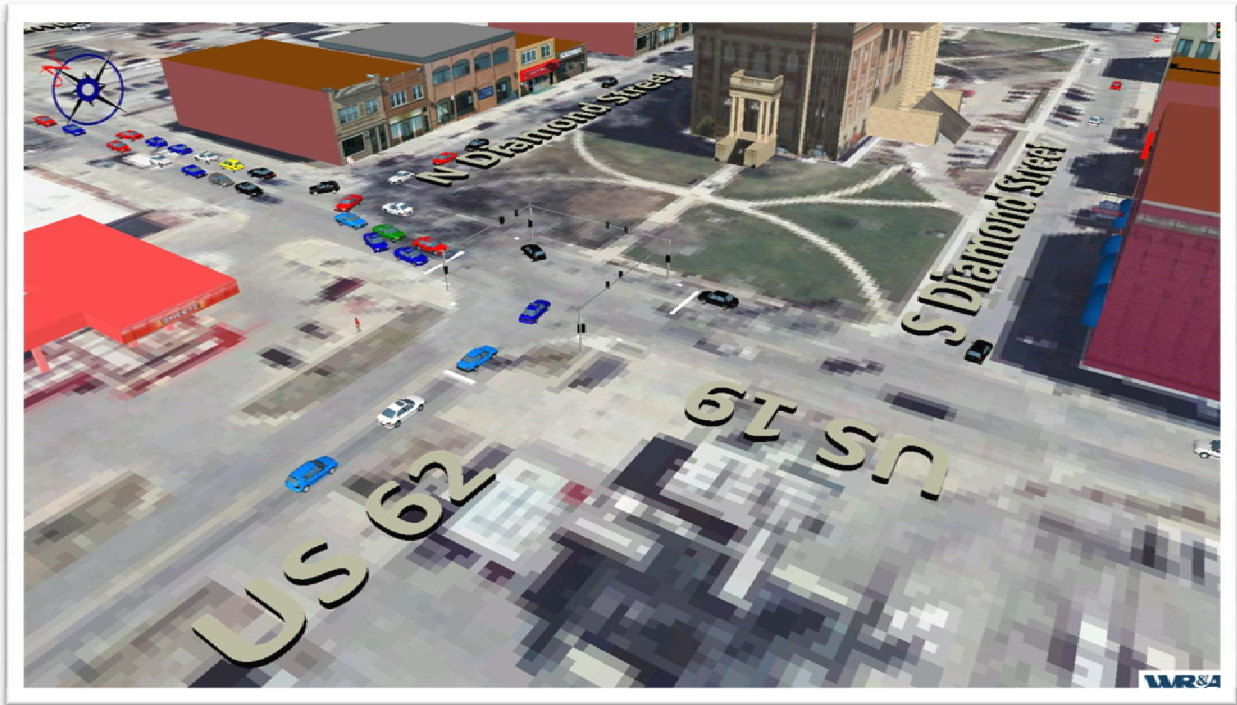
In order to assess the future traffic conditions and develop improvement alternatives, the existing land use and projected development plans must first be translated into a set of future traffic projections. For this project, the “existing” or base-year 2010 traffic data was projected to a design-year of 2030. The future volumes were developed using a multi-step process:

1. Develop the base-year travel demand model.
2. Establish background traffic growth due to conditions outside the study area.
3. Establish internal traffic growth due to future development within the study area.
4. Combine the background and internal traffic growth to project total 2030 volumes.

A base year 2010 travel demand model was created to evaluate the roadways and intersections throughout the study area. To model the existing roadway network, MCRPC’s Geographic Information System (GIS) data covering Mercer Borough and East Lackawannock Township within the study area was field verified and converted into the model’s transportation network. The calibrated base-year model was used to evaluate the impact that future year changes in background traffic or study area development have on the transportation network.

A project specific micro simulation model of the study area was developed to analyze the transportation impacts of the existing roadway and sidewalk network and the impacts of the future land use scenarios. The micro simulation model was able to assist in determining multimodal operations by modeling the usage and impacts of vehicles, buses, pedestrians, and heavy trucks at the same time, directly accounting for their interactions with one another. This model was also used to display the alternatives

to the public, visually presenting existing conditions and the transportation impacts of various land use scenarios.



*VISSIM microsimulation of peak hour turning movements*

*The microsimulation model was used to evaluate the transportation impacts of transportation improvements and development scenarios.*

## Scenario Planning

Four development scenarios were prepared to determine how the transportation network might be influenced by various land use patterns and development intensities (Table 11). The scenario planning activities for the US Route 19 Corridor began with Scenario 1 where public infrastructure (primarily sanitary sewer) was assumed to remain status quo with no significant new service areas. The extension of public sewerage influences Scenarios 2 and 3. Scenario 4 provides a full-build projection coupled with high-impact land use development at the I-80 interchange.

**Table 11: Planning Scenarios**

Development Type	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Dwelling Units	20	22	65	66
Commercial Development	5,000 Square Feet	35,000 Square Feet	40,000 Square Feet	40,000 Square Feet
Industrial Development	0	50,000 Square Feet	55,000 Square Feet	55,000 Square Feet
Big Box/Destination Retail	0	0	0	500,000

The scenarios were all evaluated to determine their impact on the transportation system and to determine what level of transportation improvements would be required to achieve acceptable operations.

*Four development scenarios were investigated including a “Smart Growth” option, which was chosen as the preferred scenario.*

Scenario 1

Scenario 1 (shown in Figure 16) assumes that minimal growth will occur including single family residential or small scale commercial development. This scenario estimates that, over the 20-year projection period, approximately 20 new dwelling units will be built in the Mercer area. New units in the study area will likely be the result of limited new construction, or, in the Borough, as a result of the conversion of existing single unit dwellings to multi-family properties. Scenario 1 projects a limited amount of commercial development along US Route 19 or as adaptive reuse/redevelopment of properties within Mercer Borough.

The growth in traffic volumes and associated impact on traffic operations generally tracks the assumed development trend (Table 12, Figures 17 & 18).

**Table 12: LOS Table for 2030 Scenario 1 PM Conditions**

Signalized Operations		Number of Existing Intersections
Acceptable	Overall LOS A, B, or C	2
Marginal	Overall LOS D	0
Failing	Overall LOS E or F	2
Unsignalized Operations		Number of Existing Intersections
Acceptable	Side-Street LOS A, B, or C	13
Marginal	Side-Street LOS D	2
Failing	Side-Street LOS E or F	3



Figure 16: Scenario 1

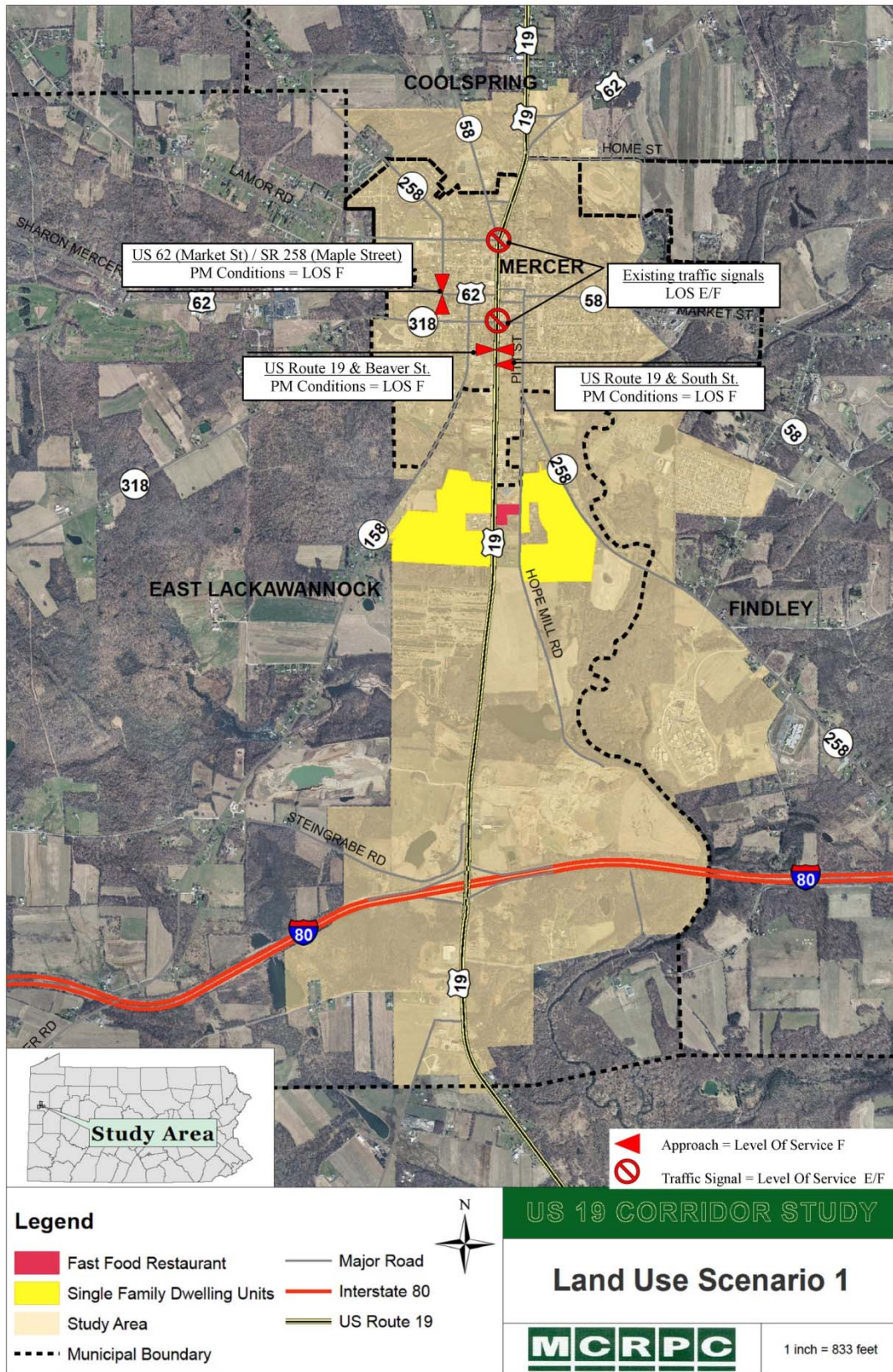


Figure 17: Mercer Borough Level of Service PM – Scenario 1

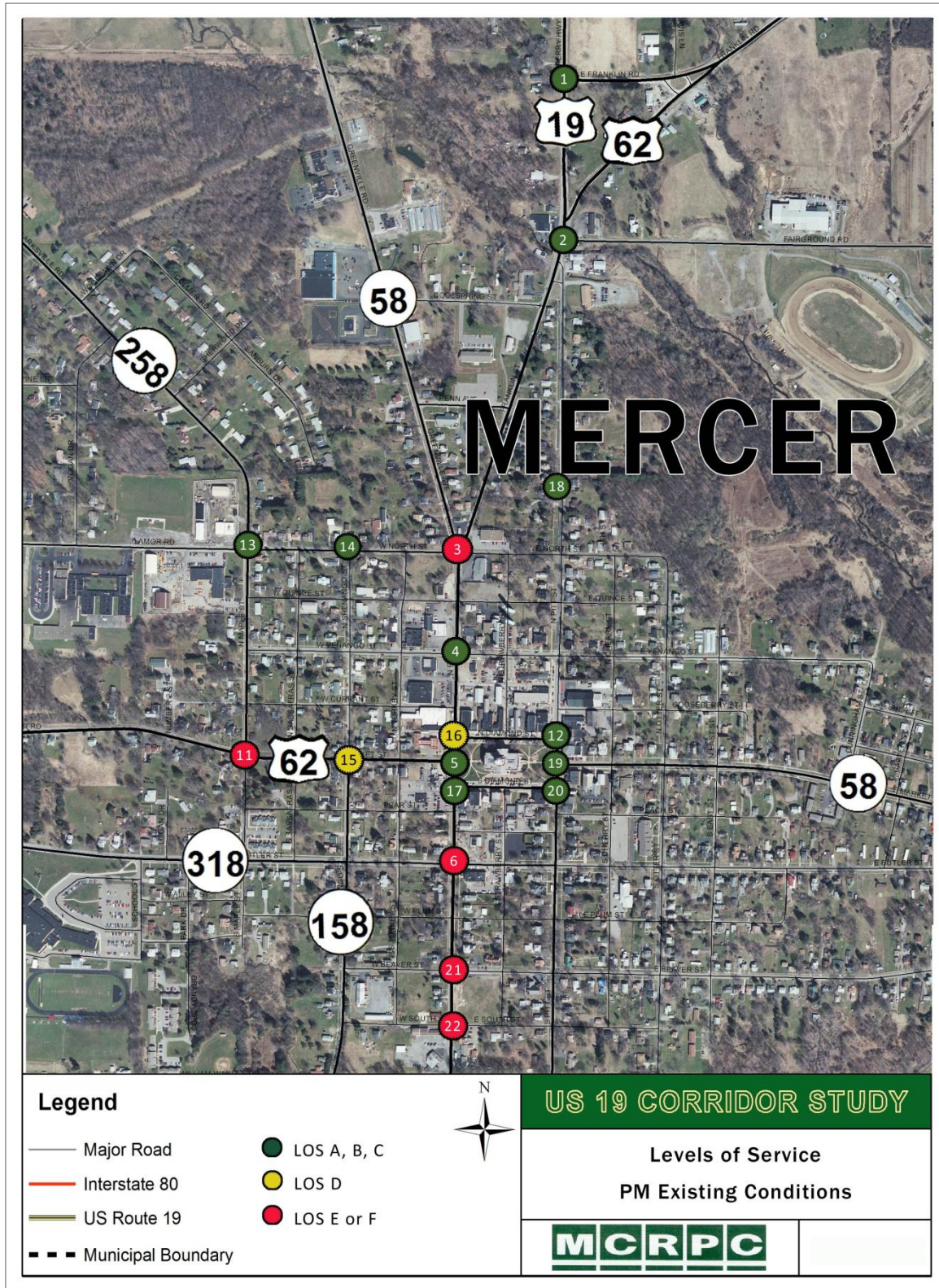
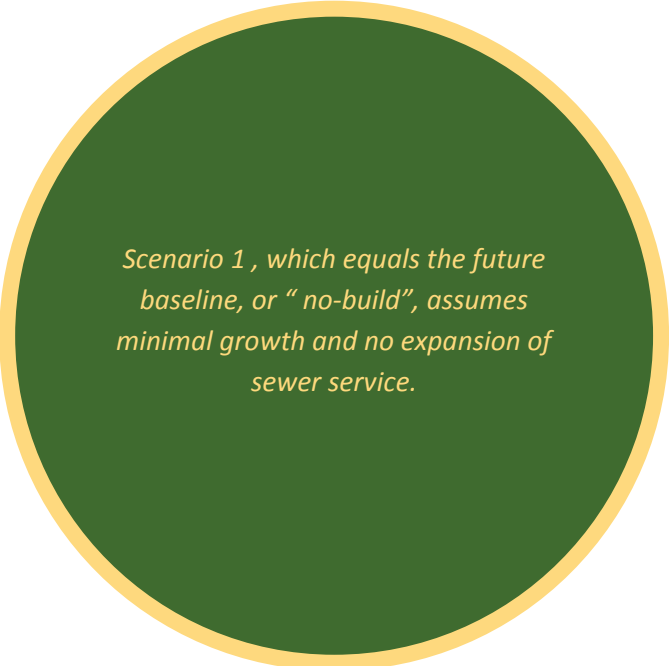


Figure 18: East Lackawannock Level of Service PM – Scenario 1



Two traffic signals are expected to operate at an overall LOS E/F. Three of the unsignalized intersections are expected to have approaches that fail, including the US 62/Market Street intersection which was highlighted as a key intersection of concern by the public.



*Scenario 1, which equals the future baseline, or “no-build”, assumes minimal growth and no expansion of sewer service.*

Scenario 2

Scenario 2 (shown in Figure 19) assumes that public sewerage is made available at the I-80 Interchange. For this scenario the developed area of the interchange is served by a public treatment system, but service does not expand beyond this immediate area. No dramatic change in the pattern of residential development occurs with only 22 new residential dwelling units. Conversely, commercial development increases with 35,000 square feet of new commercial development. This new development would be consistent with highway commercial uses such as fast-food restaurants, a motel, branch bank, family restaurant, etc. Scenario 2 assumes that no large-scale retail (i.e., big box) is built due to the presence of competitive retail in Grove City and Sharon/Hermitage. Scenario 2 assumes some industrial development (50,000 sq. ft.) that would be either transportation-oriented (due to the Interstate proximity) or light industrial, with a potential of some associated office development. This scenario integrates the preliminary findings of an economic analysis of County-owned property located at the interchange to support flex space (single story building with warehouse serving light manufacturing industries). This growth in development has a similar growth in traffic volumes and associated impact on traffic operations (Table 13, Figures 20 & 21).

**Table 13: LOS Table for 2030 Scenario 2 PM Conditions**

Signalized Operations		Number of Existing Intersections
Acceptable	Overall LOS A, B, or C	1
Marginal	Overall LOS D	1
Failing	Overall LOS E or F	2
Unsignalized Operations		Number of Existing Intersections
Acceptable	Side-Street LOS A, B, or C	13
Marginal	Side-Street LOS D	2
Failing	Side-Street LOS E or F	3

Figure 19: Scenario 2

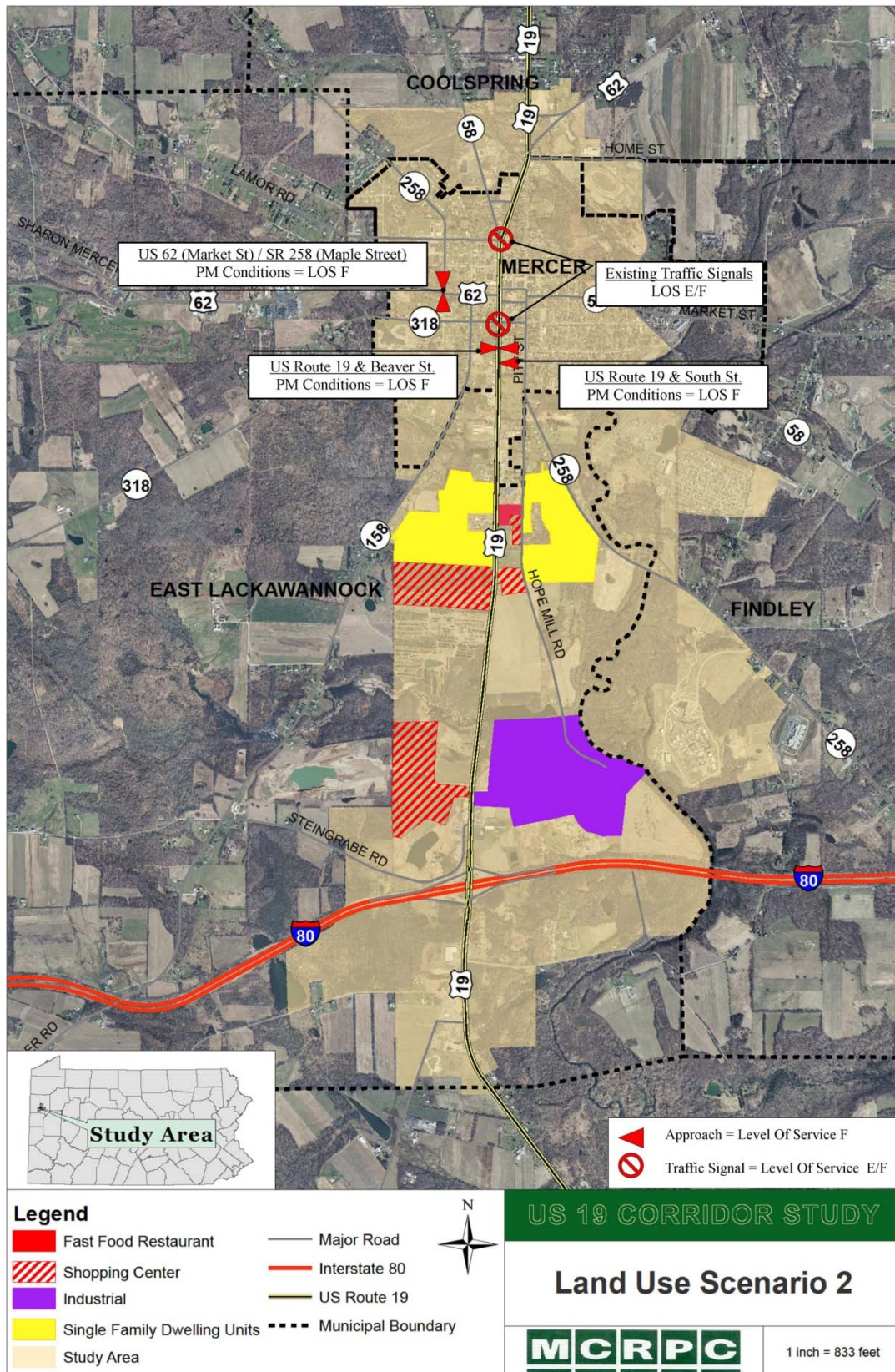


Figure 20: Mercer Borough Level of Service PM – Scenario 2

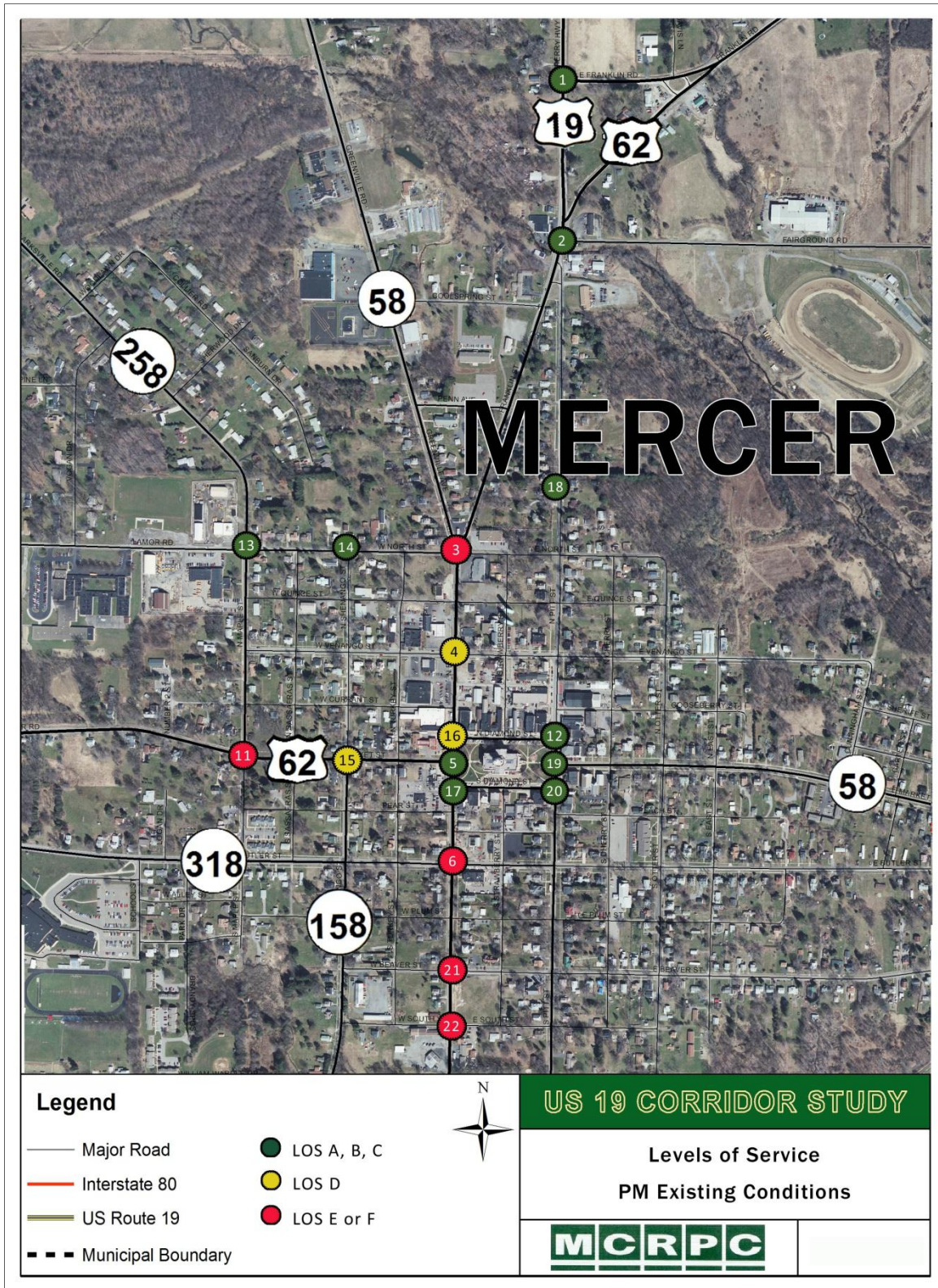


Figure 21: East Lackawannock Level of Service PM – Scenario 2









The level of traffic generated under both alternatives studied for Scenario 3 produces a similar growth in traffic volumes and associated impact on traffic operations (Table 14, Figures 23 & 24):

**Table 14: LOS Table for 2030 Scenario 3 PM Conditions**

Signalized Operations		Number of Existing Intersections
Acceptable	Overall LOS A, B, or C	1
Marginal	Overall LOS D	0
Failing	Overall LOS E or F	3
Unsignalized Operations		Number of Existing Intersections
Acceptable	Side-Street LOS A, B, or C	13
Marginal	Side-Street LOS D	3
Failing	Side-Street LOS E or F	4

Note: Additional study intersection includes Butler Street at Pitt Street and future development driveway at US Route 19

Figure 22: Scenario 3

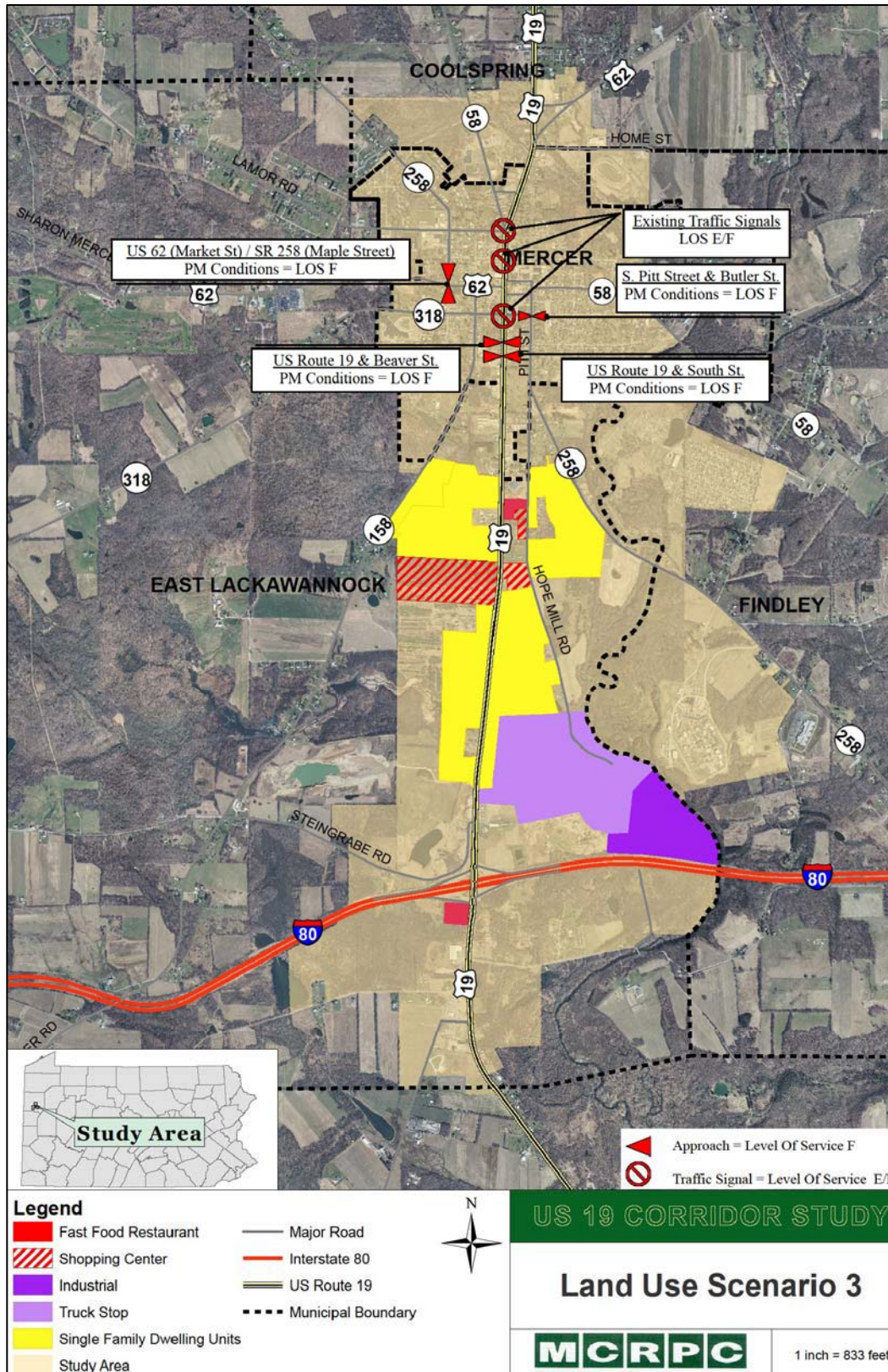


Figure 23: Mercer Borough Level of Service PM – Scenario 3

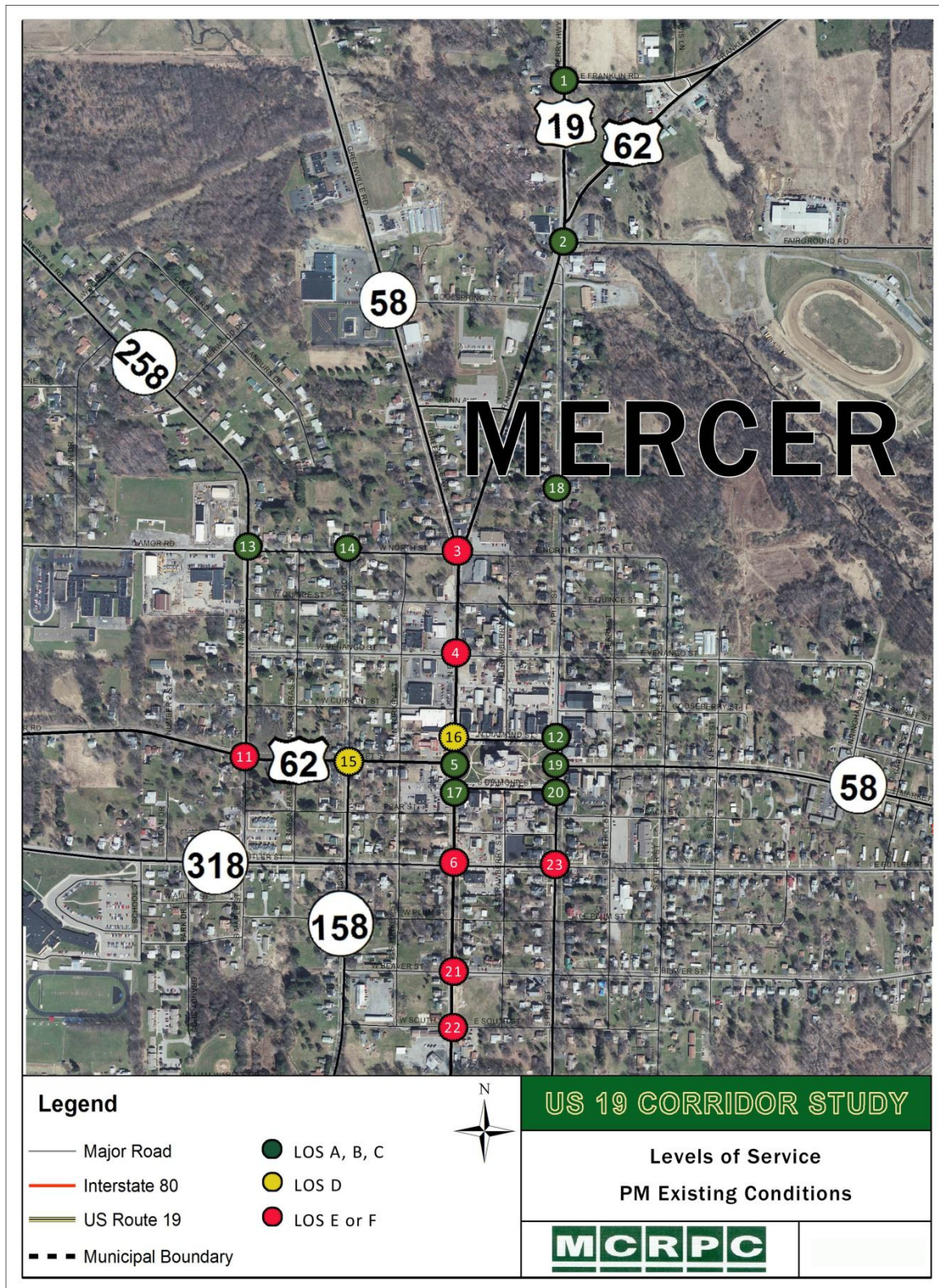


Figure 24: East Lackawannock Level of Service PM – Scenario 3





Scenario 4

Scenario 4 (shown in Figure 25) represents a “what if” situation coupled with the land development pattern shown in Scenario 3. The inclusion of a large-scale retail development such as Wal-Mart or destination retail such as a Bass Pro shop at the I-80 Interchange was added to gauge the traffic impacts that would be anticipated if a major retail store was constructed in the interchange area. Given the accessibility afforded by an interchange along an Interstate coupled with the proximity of I-79 to the east, such development would be feasible if the proper infrastructure were in place and economic conditions improved. This scenario was developed to determine what additional improvements would be necessary beyond Scenario 3 with the additional development. The level of traffic generated under Scenario 4 produces higher traffic volumes and has a higher associated impact on traffic operations especially for unsignalized intersections (Table 15, Figures 26 & 27).

**Table 15: LOS Table for 2030 Scenario 4 Conditions**

Signalized Operations		Number of Existing Intersections
Acceptable	Overall LOS A, B, or C	1
Marginal	Overall LOS D	0
Failing	Overall LOS E or F	4
Unsignalized Operations		Number of Existing Intersections
Acceptable	Side-Street LOS A, B, or C	9
Marginal	Side-Street LOS D	1
Failing	Side-Street LOS E or F	9

Note: Additional study intersections include Butler Street at Pitt Street and future development driveway at US Route 19



Figure 25: Scenario 4

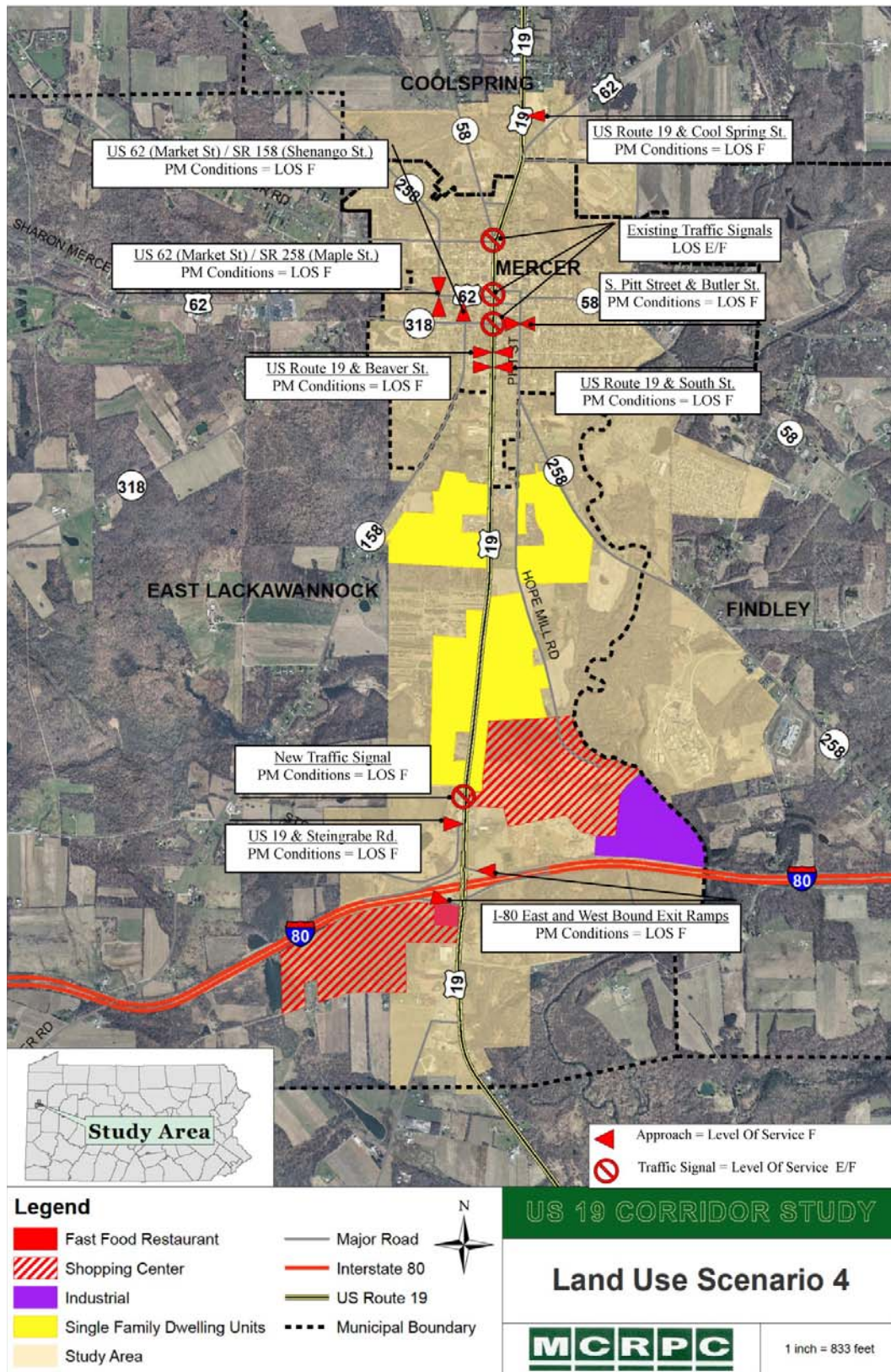


Figure 26: Mercer Borough Level of Service PM – Scenario 4

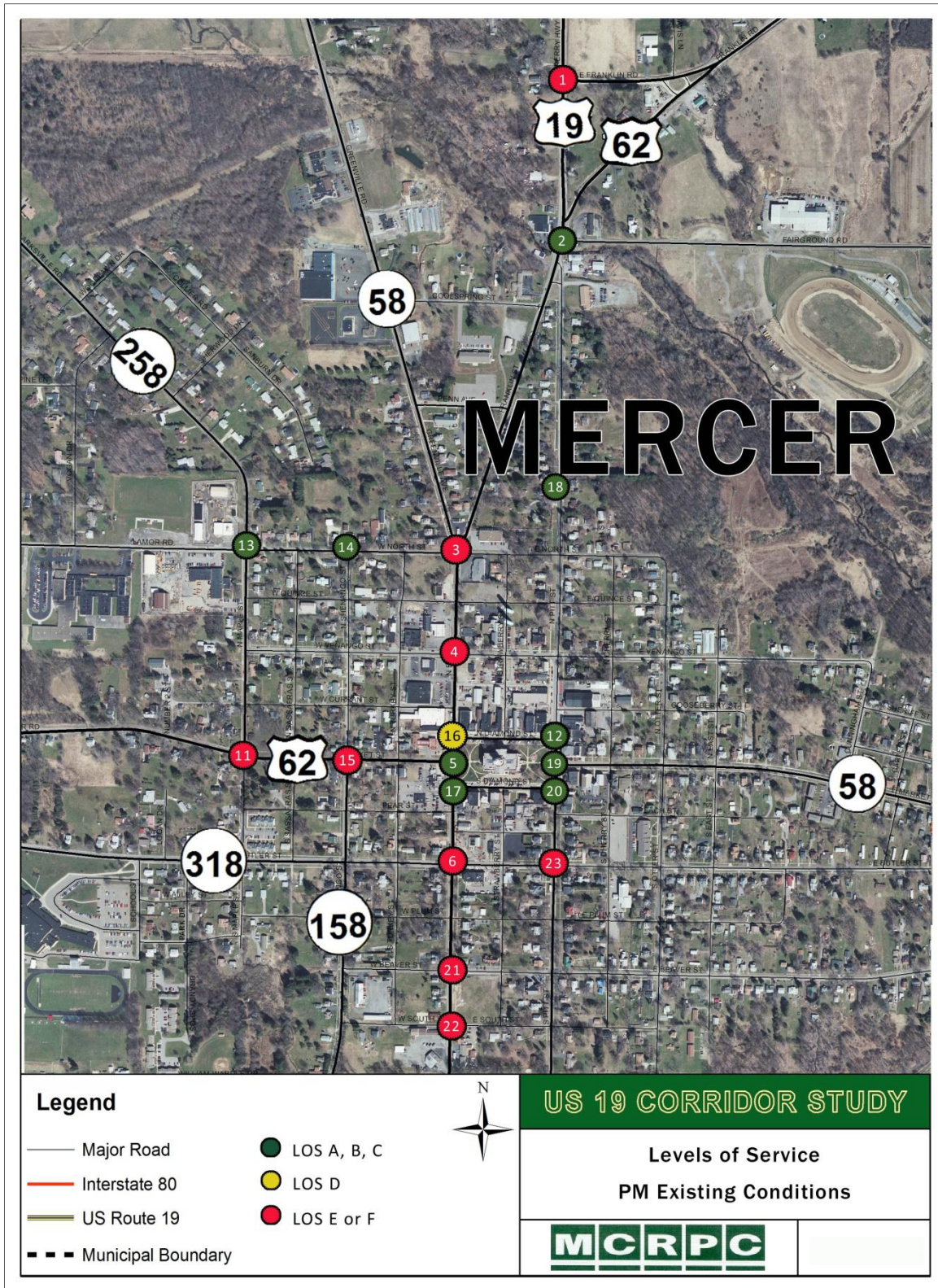


Figure 27: East Lackawannock Level of Service PM – Scenario 4

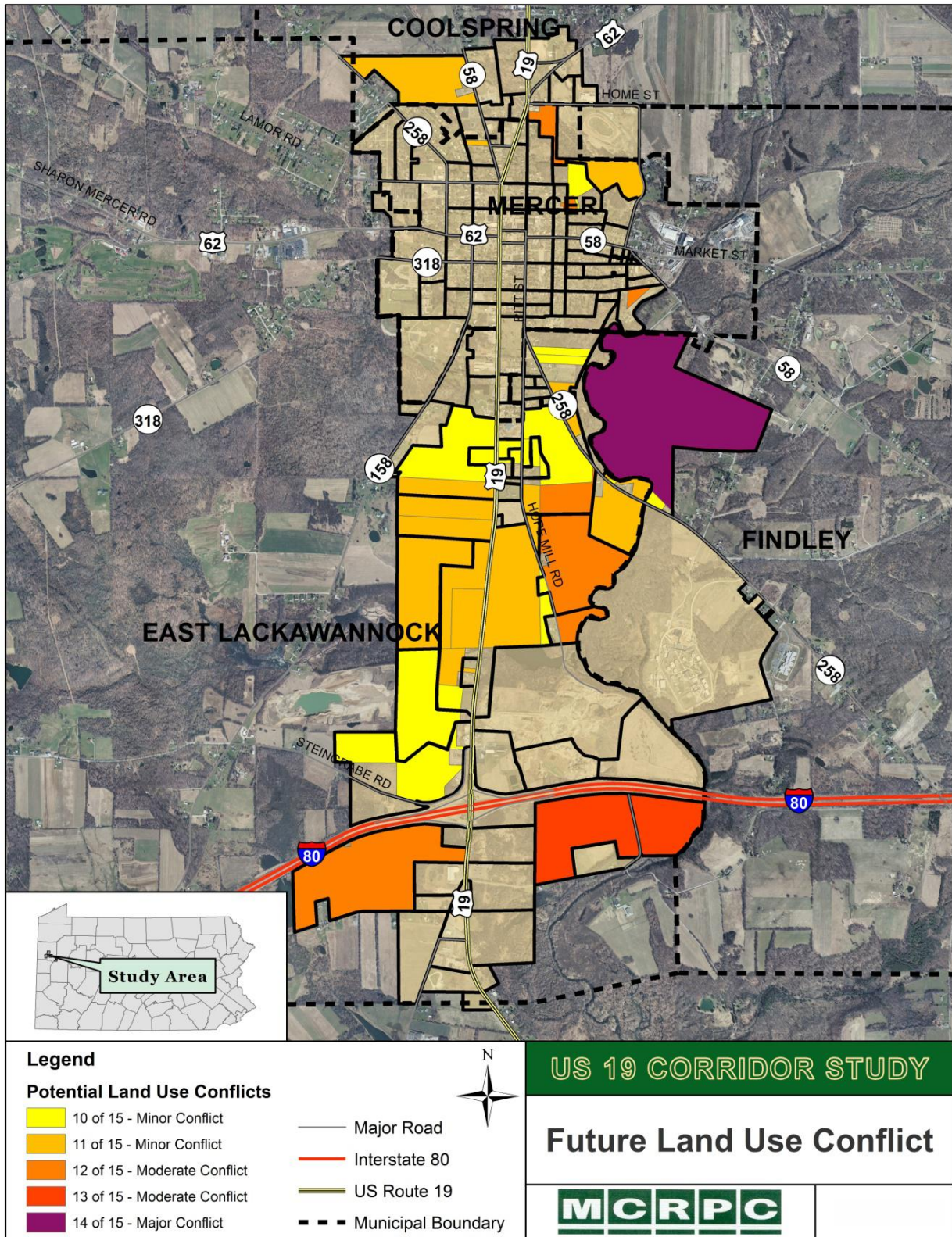


Under Scenario 4, traffic operations at three signals located on US Route 19 in Mercer Borough would operate at a LOS E/F. The intersection of US 62 / Market Street and SR 258 / Maple Street declines to a LOS F for both the northbound and southbound approaches of Maple Street to US 62.

1. The operations of the intersections of US Route 19 at Beaver Street and US Route 19 and South Street declines to a LOS F
2. Increased traffic levels on Pitt Street under Scenario 4 create a failing operational level of service at the intersection of Butler Street and South Pitt Street
3. Vehicles exiting Steingrabe Road onto US Route 19 experience increased delays, which results in a LOS F at this intersection primarily due to the additional retail development assumed under Scenario 4
4. Traffic levels rise at both I-80 exit ramps onto US Route 19 and create failing approaches for both the east and west bound exit ramps



Figure 28: Future Land Use Conflict



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## 4.0 Alternatives Analyses and Implementation Plan

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Both land use and transportation alternatives were developed to meet the project's goals and objectives. The alternatives were then presented to the PAC, the community stakeholders, and the general public, to determine a set of locally preferred alternatives that will help them address existing deficiencies and achieve their long term vision for the corridor.

### Land Use Alternatives

A variety of community planning tools exist to help Mercer Borough and East Lackawannock Township meet the project goals and objectives and achieve land use Scenario 3B (sewer extension from the Borough to I-80 with Smart Growth). Local governments have a variety of options available to control both use and development styles depending upon community goals for the future. For instance, the Township has more undeveloped land along US Route 19 than the borough and should employ different methods to achieve their goals such as the development of the I-80 interchange and land use patterns that allow interconnections and reduce unnecessary access points along the corridor. Conversely, the Borough must focus on appropriate infill development and aesthetic considerations to preserve the Victorian-era structures in Mercer, which should be viewed as a regional asset and not just a Borough resource.

Both regulatory and voluntary methods were explored to help the Borough and Township achieve their goals. Concepts presented to the public, stakeholders and PAC included zoning amendments, tax incentives, façade improvement programs, historic designation, the enactment of an official map, and access and parking management strategies. Based upon the land use goals of the communities, input from the public, and guidance from the PAC, locally preferred recommendations were identified. The following section summarizes the options explored.



*Recommendations include actions to encourage appropriate infill development within the Borough and suitable new development patterns in the Township*

Zoning

*Zoning Amendments*

Both Mercer Borough and East Lackawannock have enacted zoning ordinances and can use these as tools to achieve their goals for the future development of the project area. Specific recommendations for each municipal ordinance are included in Appendix A and address aspects such as access management for US Route 19, suitable new development for the Township, and encouraging appropriate infill development for the Borough.

Community preservation was a commonly heard theme throughout the study process and therefore it will be important for the elected officials to understand that Zoning Ordinance updates should focus on maintaining the traditional small town atmosphere of Mercer Borough while protecting the agricultural heritage and supporting economic development goals for development at the interchange in East Lackawannock Township. In summary, recommended land use regulations include:

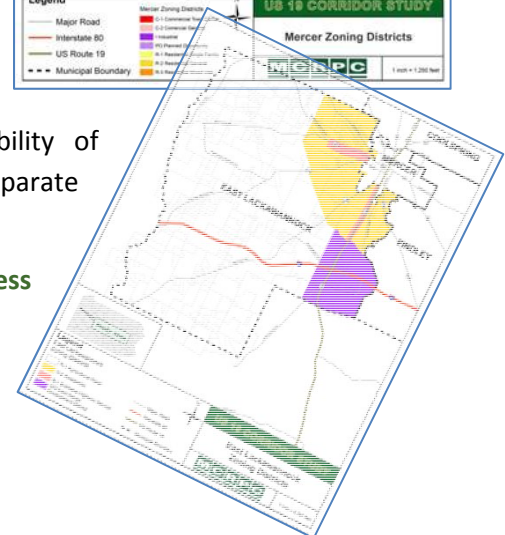
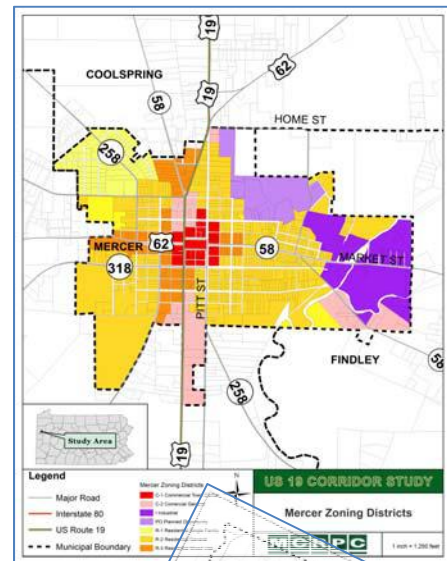
- ❖ Buildings in the retail core should maintain the “street face” by keeping buildings close to the sidewalk with parking at the rear or side of buildings
- ❖ Within the downtown area, residential uses should be encouraged for upper floors in order to maintain the integrity of the commercial main street
- ❖ Traditional neighborhood standards should be applied in the districts surrounding the commercial core
- ❖ Design standards for landscaping and lighting should be considered especially within the commercial core
- ❖ Access management standards should be applied along US Route 19

This recommendation meets the project’s goals and objectives and is supported as the locally preferred alternative.

*TND - Traditional Neighborhood Development District*

This is a zoning element (Article VI) but is governed by Article VII-A of the Planning Code. Its purpose is to allow flexibility of development, especially in urban areas, and it can be either a separate zoning district or an overlay zone. Benefits include:

- ❖ Walkable, connected neighborhoods, requiring less vehicle travel
- ❖ Mixed-use development
- ❖ Retaining residents and providing housing options
- ❖ Focus on open spaces and community
- ❖ Allow some development flexibility



For Mercer Borough, a key element is that the TND approach also allows for a design manual, which could be focused on Victorian design. The design manual need not be an elaborate one. For example,



photos of local buildings that are good examples of that era could be used. It should provide a clear understanding of what the criteria developers should follow. This process also allows for a voluntary sketch plan presentation to encourage early interaction between the developer and the community. Sketch plans are less detailed than preliminary and final plans and most often include conceptual aspects of the development or subdivision, which allows the developer and municipality to discuss the project early on before significant expense is involved in finalizing the plan.

As East Lackawannock Township has no subdivision and land development ordinance of its own, the TND approach is the most practical way to guide quality residential development along the Route 19 corridor. A TND could be adopted as a regular zoning district or as an overlay zone, at the option of the Township and would be recommended for the area of either the "Winger property" or the "Tree Farm" (Kraynak) property, or perhaps both. This proposed TND amendment for the Township is blended with the TND concepts suggested for Mercer Borough, with a noticeable exception. Primarily, it is residential in nature only. Given the proximity of existing commercial areas in both the Township and the Borough, a mixed-use development is not warranted.

*Special Note: During the 2010 Legislative Session the Pennsylvania General Assembly adopted Act 111. It will become effective in January of 2011. The act allows communities to also adopt TNDs and TND design manuals in the SALDO. For Mercer Borough this is yet another land use option, the Township does not have its own SALDO (See Sections 702-A and 708-A of the amended article).*

This recommendation meets the project's goals and objectives and is supported as the locally preferred alternative.

**Applying principles of Traditional Neighborhood Development would help the Borough and Township to achieve the desired development scenario and enhance community character.**







Municipalities facing development pressures or that are concerned with particular transportation issues similar to those identified through the US Route 19 Corridor Study would benefit from an Official Map. This regulatory option would be applicable to East Lackawannock in particular to support the recommendations and potential improvements associated with Scenario 3. With an Official Map, the Township can support the development of the County-Owned land located at the I-80 interchange. Aspects such as the pedestrian facilities, paving the shoulders of State Route 158, or the new connector road to Hope Mill Road would each be appropriate to identify through an Official Map.

The Official Map should not be confused with a taking of land from private ownership, but rather it allows the municipality to convey their future development goals and establish the means by which this can occur. The Department of Community and Economic Development (DCED), Center for Local Government Services can provide technical assistance to municipalities that wish to investigate this option further. Contacts and additional information can be accessed at the DCED website at <http://www.newpa.com/>.

This recommendation meets the project’s goals and objectives and is supported as the locally preferred alternative.

An official map will provide the legal means to reserve land for a future road connection linking US Route 19 and Hope Mill Road.

## Access Management

Access Management tools support improved traffic patterns and reduce the likelihood of vehicle crashes. Successful access management strategies include (source: <http://www.accessmanagement.info> FHWA Document Number FHWA-OP-03-066):

- ❖ **Increasing spacing between signals and interchanges;**
- ❖ **Driveway location, spacing, and design;**
- ❖ **Use of exclusive turning lanes;**
- ❖ **Median treatments, including two-way left turn lanes (TWLTL) that allow turn movements in multiple directions from a center lane and raised medians that prevent movements across a roadway;**
- ❖ **Use of service and frontage roads; and**
- ❖ **Land use policies that limit right-of-way access to highways**

Both Mercer Borough and East Lackawannock Township could benefit from these techniques and specific suggestions for amendment updates can be found in Appendix A.

This recommendation meets the project's goals and objectives and is supported as the locally preferred alternative.

## Parking Management

The availability of parking was repeatedly identified as a priority concern by residents and business owners. Public input revealed a concern about parking availability, especially in the central business district and at locations surrounding the courthouse. The ability to establish an authority is given under the Municipality Authority Act of 1945. An authority is an entity established separately from the municipal governing body and acts independently of the municipality. An authority has many powers including the ability to own land, borrow money, or issue bonds to finance projects. The Department of Community and Economic Development (DCED), Center for Local Government Services can provide technical assistance to municipalities that wish to investigate this option further. Contacts and additional information can be accessed at the DCED website at <http://www.newpa.com/>. It is recommended that the Borough continue exploring the feasibility of establishing a Parking Authority to oversee and better manage parking for the municipality.

This recommendation meets the project's goals and objectives and is supported as the locally preferred alternative.



*Borough Parking*



*Parking around Courthouse Square*

## Transportation Alternatives

Based on the outcomes of the scenario planning process transportation alternatives were evaluated that will accommodate the planned future growth while meeting the project's goals and objectives. Public perceptions of existing conditions and support for specific alternatives were determined during public meetings, stakeholder interviews, agency coordination, and Project Advisory Committee meetings.

The alternatives were grouped into the following categories:

- ❖ **Traffic Congestion**
- ❖ **Safety Improvements and Upgrades**
- ❖ **Heavy Truck Conflicts**
- ❖ **Multimodal Improvements**

The key steps in the development and evaluation of alternatives included:

1. **Understanding the Context**
2. **Determining the Needs**
3. **Defining the Project Purpose**
4. **Screening the Alternatives**
5. **Involving Agencies and the Public**

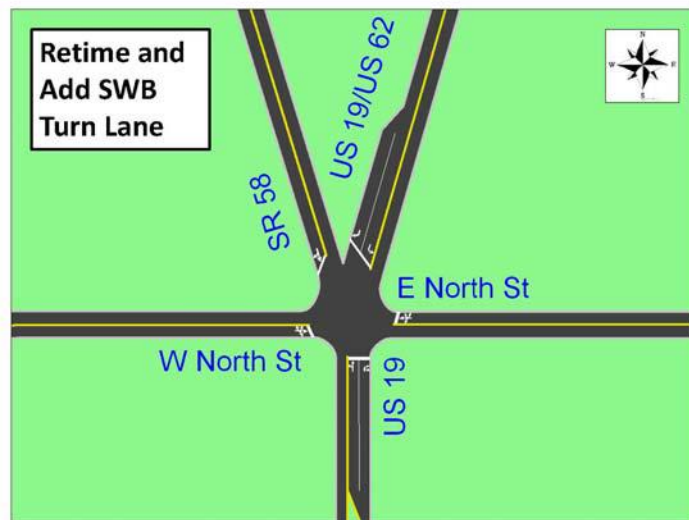






Option 1 &amp; 2

For Option 3 (retime the signal and add a turn lane on the southbound US Route 19/US Route 62 approach) the pros would be reduced congestion to an overall LOS D under the preferred land use scenario. The cons would be right of way impacts, construction cost, and community/business impacts. This alternative meets the project's goals and objectives.



Option 3

For Option 4 (retime the signal and make West North street one-way away from US Route 19) the pros would be no right of way impacts or physical changes, minimal community/business impacts, and reduction in congestion to an overall LOS C. The cons would be potential traffic diversion to neighboring roadways and impacts to school traffic on West North Street. Also, the eastbound left turning traffic on West North Street would most likely divert Venango Street and would result in additional congestion along Venango Street. This alternative meets the project's goals and objectives.



Option 4

For Option 5 (retime the signal and make East North Street one-way away from US Route 19 plus prohibit left turns from US Route 19 onto West North Street) the pros would be no right of way impacts or physical changes, minimal community/business impacts, and reduction in congestion (overall LOS D). The cons would be potential traffic diversion to neighboring roadways. This alternative meets the project’s goals and objectives.



Option 5

Based upon input from the public and PAC, Option 5 was the locally preferred alternative.

*North and South Diamond Streets (TC-3)*

To mitigate the deficiencies at North and South Diamond Streets, three alternatives were studied: (1) no build, (2) Signalize both North and South Diamond Streets and (3) Switch the direction of traffic on North and South Diamond Streets. These alternatives were evaluated from an operations perspective using the projected traffic volumes from the preferred land use scenario.

For Option 1 (no-build), the pros would be no right-of-way impacts or construction costs. The cons would be no reduction in delay and the continuation of the difficulty turning from North Diamond Street onto US Route 62 westbound. This alternative does not meet the project’s goals and objectives.

For Option 2 (North and South Diamond Street Signals) the pros would be facilitation of traffic moving from North Diamond Street onto US Route 62 westbound. The cons would be excessive queuing that would result from having three very closely spaced traffic signals. For example, traffic heading northbound during the PM peak hour along US Route 19 at the intersection of South Diamond Street and US Route 19 would extend past Butler Street. The congestion would also nearly double on US Route 62 heading eastbound, US Route 19 heading southbound, and along North Diamond Street heading westbound. This alternative does not meet the project’s goals and objectives.



Option 2

Option 3 (Switch the direction of traffic on North and South Diamond Streets) North Diamond Street would be one way eastbound (away from US Route 19) and South Diamond Street would be one way westbound (toward US Route 19). The pros would be an improvement in safety and delay for traffic from Diamond Street to US Route 62 (traffic would make a right turn onto US Route 19 rather than a left turn) and reduction in delay for most traffic. The new travel times from the switch would be as follows:

- ❖ **US 62 to Diamond Street – decreases from 54 seconds to 38 seconds**
- ❖ **Diamond Street to US 62 – decreases from 42 seconds to 25 seconds**
- ❖ **US 19 Southbound to Diamond St – decreases from 30 seconds to 18 seconds**
- ❖ **US 19 Northbound to Diamond St – increases from 2 seconds to 15 seconds**



*Option 3/Preferred*

The cons would include the cost of construction and short term driver confusion as motorists adjust to the change in direction. This alternative meets the project’s goals and objectives.

Based upon input from the public and PAC, the switching of the direction of traffic on North and South Diamond Streets was the locally preferred alternative.



## Safety Improvements and Upgrades

The crash history for the past three years was reviewed and first responders were interviewed at stakeholder meetings in order to determine points of conflict and safety concerns at intersections. The following locations were identified as safety concerns along the corridor:

- ❖ **The US Route 19 intersection with Mercer-New Castle Road and Old Mercer Road in East Lackawannock Township has limited sight distance and was identified by the Amish community as their top safety and operational concern along the corridor.**
- ❖ **The intersection of Butler Street and Pitt Street has sight obstructions and was identified as an intersection of concern by local law enforcement and emergency responders.**
- ❖ **The intersection of Steingrabe Road and US Route 19 was identified by the public, local businesses, and local law enforcement as an intersection of concern. Confusing traffic patterns, various points of access, and sight obstructions contribute to potential distractions, which can lead to crashes.**

### *Mercer-New Castle Road and Old Mercer Road at US 19 (SI-1 & SI-2)*

The alternatives that were studied include: (1) no build, (2) installing a flashing beacon and signs, (3) prohibiting turns from New-Castle Mercer Road and Drake Road and install median along US Route 19 to allow U-turns for Old Mercer Road, (4) Prohibit left turns from using New-Castle Mercer Road and Drake Road and realign Old Mercer Road, (5) reconstruct US Route 19 to improve sight distance.

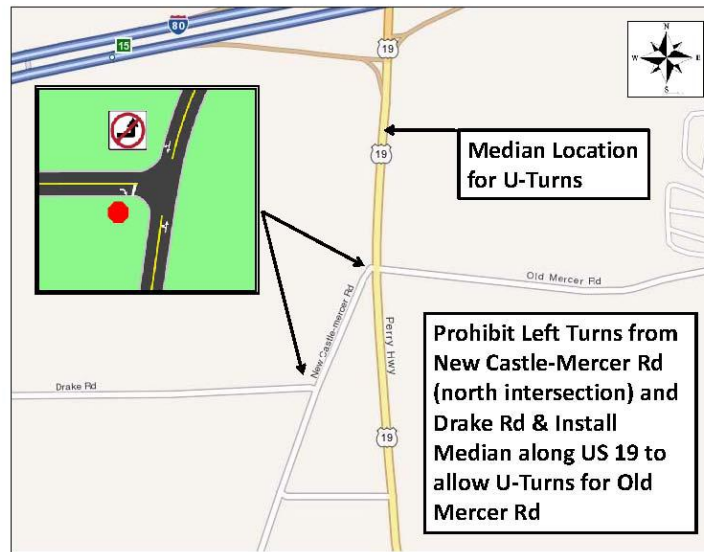
For Option 1 (no build), the pros would be no right of way impacts or physical changes. The cons would be that the intersection will still pose a safety hazard. This alternative does not meet the project's goals and objectives.



Option 1







Option 3

For Option 4 (Prohibit left turns from using New-Castle Mercer Road and Drake Road and realign Old Mercer Road) at the intersection of New Castle Mercer Road, left turns would be prohibited at both New Castle-Mercer Road and Drake Road onto US Route 19 re-routed to the southern connection of New Castle-Mercer Road and US Route 19. Old Mercer Road would be realigned to the southern connection of New-Castle Mercer Road and US Route 19. This would simplify the intersection and improve sight distance. The pros of this alternative would be improvement in safety. The cons would be moderate to high costs and environmental impacts. This alternative meets the project’s goals and objectives.



Option 4

For Option 5 (reconstruct US Route 19 to improve sight distance), the sight distance at the intersection of US Route 19 with New Castle-Mercer Road/Old Mercer Road would be improved by reconstructing US Route 19 to reduce the rise in the road. The pros would be that all turning movements are allowed as

they are today and the overall safety of the intersection would be improved. The cons would be a high cost and environmental impacts. This alternative meets the project's goals and objectives.



*Option 5*

The fourth and fifth options were the locally preferred alternatives to mitigate. Further study should occur during preliminary design to determine which option has the least impact and is the most cost effective solution once right-of-way and utility costs are determined.

*Options 4 and 5 are preferred methods to address concerns with the intersection of US Route 19 and New Castle-Mercer Road/Old Mercer Road*





## Multi-Modal Improvements

In order to improve the maintenance and connectivity of the sidewalk network, reduce congestion, and enhance access to the central business district for pedestrians and bicyclists a variety of multi-modal alternatives were considered. Multimodal improvements are needed to improve connectivity and accessibility for alternative modes of travel and safety for horse-drawn buggy traffic. The lack of shoulders on state routes does not provide sufficient cart way to accommodate horse-drawn buggies and motorized vehicles. Pedestrians and bicyclists travel state routes, but there are no supporting amenities, which contributes to potential conflicts with motorized vehicles. The following problems were addressed and alternatives to address these multi-modal improvements were presented to the public (Figure 29):

- Walt's Grocery Store is located approximately 500 feet north of the Mercer Borough border and is where the majority of Mercer Borough residents shop for food. The grocery store is inaccessible for pedestrians because it lacks sidewalk connections to the borough. (MM-1)
- Mercer Borough has an existing sidewalk network with substandard or deteriorating surfaces (present in over 50 percent of the five block area surrounding the Courthouse), which creates unsafe travel for pedestrians and limits mobility. (MM-2)
- Pedestrians currently walk on US Route 19 to access the Dairy Queen, which creates conflicts with motorized vehicles. (MM-3)
- Mercer Borough has missing sidewalk segments, which limits pedestrian mobility. (MM-4)
- To access Mercer Borough, the Amish population travels SR 158, which has shoulders that are less than two feet in width and does not provide sufficient width to accommodate slower moving traffic such as horse drawn buggies or pedestrians. (MM-5) As an alternative a multi-use path could also be constructed.
- Hope Mill Road is used as an informal Hiker/Biker Trail but does not have adequate width to allow pedestrians and/or bicyclists to travel the road when motorized vehicles are present. (MM-6)





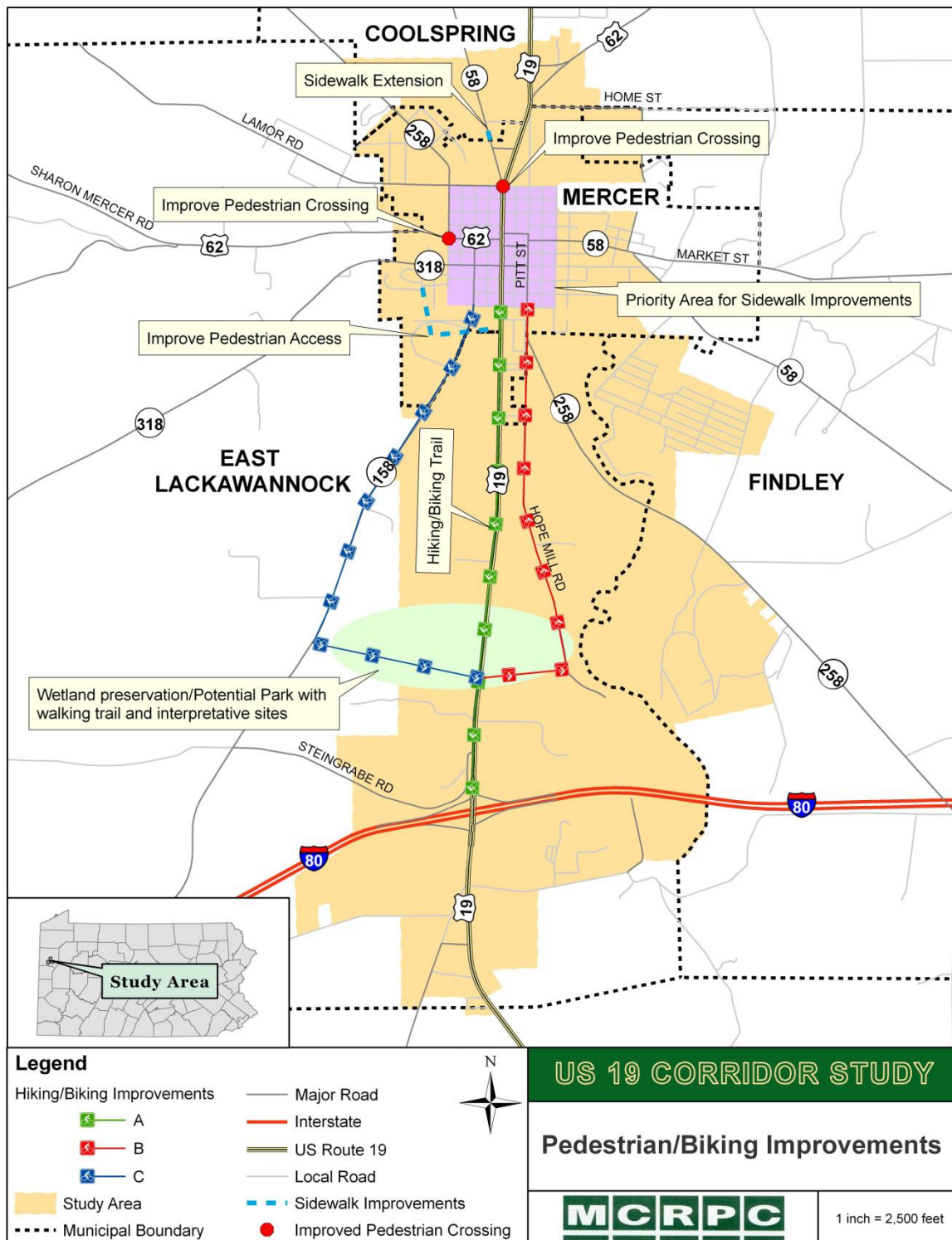
Identified improvements such as the multi-use paths and paving shoulders along State Route 158 or Hope Mill Road will enhance the existing bicycle network (Route A) and offer complementary connections to area attractions. Future efforts to improve conditions for bicyclists can be as simple as ensuring that the shoulders are paved and striped to allow room for cyclists to avoid vehicles – similar to the segments of the existing route in place today.



*PA Bike Route A*



Figure 29: Pedestrian/Biking Improvements





**Table 16: Project Implementation**

Map Key	Project Name/Action	Responsible Party	Opinion of Probable Cost	Priority Rating	Page Numbers
<b>Traffic Congestion</b>					
TC-1, 2	Retime Traffic Signals	Mercer Borough	\$181,000	A	83, 102, 108-109
TC-2	Traffic redirection at 5-legged intersection (prohibit US 19 North Bound Left, E North Street one-way entrance only)	Mercer Borough	\$169,000	A	83-85, 102, 110-111
TC-3	Traffic redirection on North and South Diamond Streets	Mercer Borough	\$250,000	A	86, 102, 112-113
TC-4	New connection to Hope Mill Rd	East Lackawannock Township	\$4,180,000	A	114-115
TC-5	Turn Lane on US 19 between Beaver and South Streets	Mercer Borough	\$120,000	C	88, 102, 116-117
<b>Heavy Truck Conflicts</b>					
HTC-1	Truck route to Market via Butler & Pitt Street	Mercer Borough, PennDOT	\$360,000	A	93-94, 102, 118-119
HTC-2,3	Truck Route to SR 158 via Steingrabe Road Option 1: On alignment, Option 2: Off alignment	East Lackawannock Township, PennDOT	\$3,620,000 to \$4,960,000	B	94, 102, 120-123
<b>Safety Improvements</b>					
SI-1,2	Sight Improvements @ Old Mercer Road/Drake Road Option 1: Realignment, Option 2: Reconstruction	East Lackawannock Township, PennDOT	\$620,000 to \$2,040,000	A	89-92, 102, 124-127
SI-3	All way stop @ Butler St and Pitt St	Mercer Borough	\$5,000	B	93, 102, 128-129
SI-4	Study for improvement @ Steingrabe Rd & US 19	East Lackawannock Township, PennDOT	\$30,000	B	93, 102, 130-131
<b>Multi-Modal Improvements</b>					
MM-1	Construct sidewalk to Walt's Grocery Store	Mercer Borough, Coolspring Township, Store Owner	\$77,000	A	95, 102, 132-133
MM-2	Repair deficient sidewalks	Mercer Borough, Residents, Business Owners	\$1,980,000	A	95, 102, 134-135
MM-3	Construct sidewalk to Dairy Queen	East Lackawannock Township, Store Owner	\$260,000	B	95, 102, 136-137
MM-4	Construct new sidewalks to complete network (shown on Potential Sidewalk Improvements Map)	Mercer Borough, Residents, Business Owners	\$700,000	B	95, 102, 138-139
MM-5	Widen shoulders on SR 158 from Beaver St to I-80	East Lackawannock Township, PennDOT	\$7,550,000	C	95, 102, 140-141
MM-6	Hope Mill Road - Hiker/Biker Trail	Mercer Borough, East Lackawannock Township, Mercer County Trails Assoc.	\$1,760,000	C	95, 102, 142-143
<b>Land Use</b>					
-	Adopt Recommended Zoning Amendments and Land Use Regulations	Borough Township	Nominal	A	74
-	Adopt Traditional Neighborhood Development District	Borough Township	Nominal	A	74-75
-	Adopt Facade Improvement Program	Borough	Nominal	A	77
-	Adopt Official Map	Township	Nominal	A	78-79
-	Adopt Access Management Tools	Borough Township	Nominal	A	80
-	Explore feasibility of establishing a Parking Authority	Borough	Nominal	A	81
<p>* Responsible party is identified for conceptual planning purposes only and does not imply an existing formal commitments of binding agreements.</p> <p>*** Priority ratings are assigned as "A" for immediate, "B" for short to mid-term, and "C" for long-term</p> <p>**** Estimates are intended for conceptual use only, are based on year 2010 dollars, and include 25% contingency, 20-35% engineering, 15% temporary traffic control &amp; mobilization, and 12% construction inspection costs. They do not include potentially substantial costs related to right-of-way, utilities, and environmental impacts or related mitigation.</p>					

Figure 30: Potential Improvements

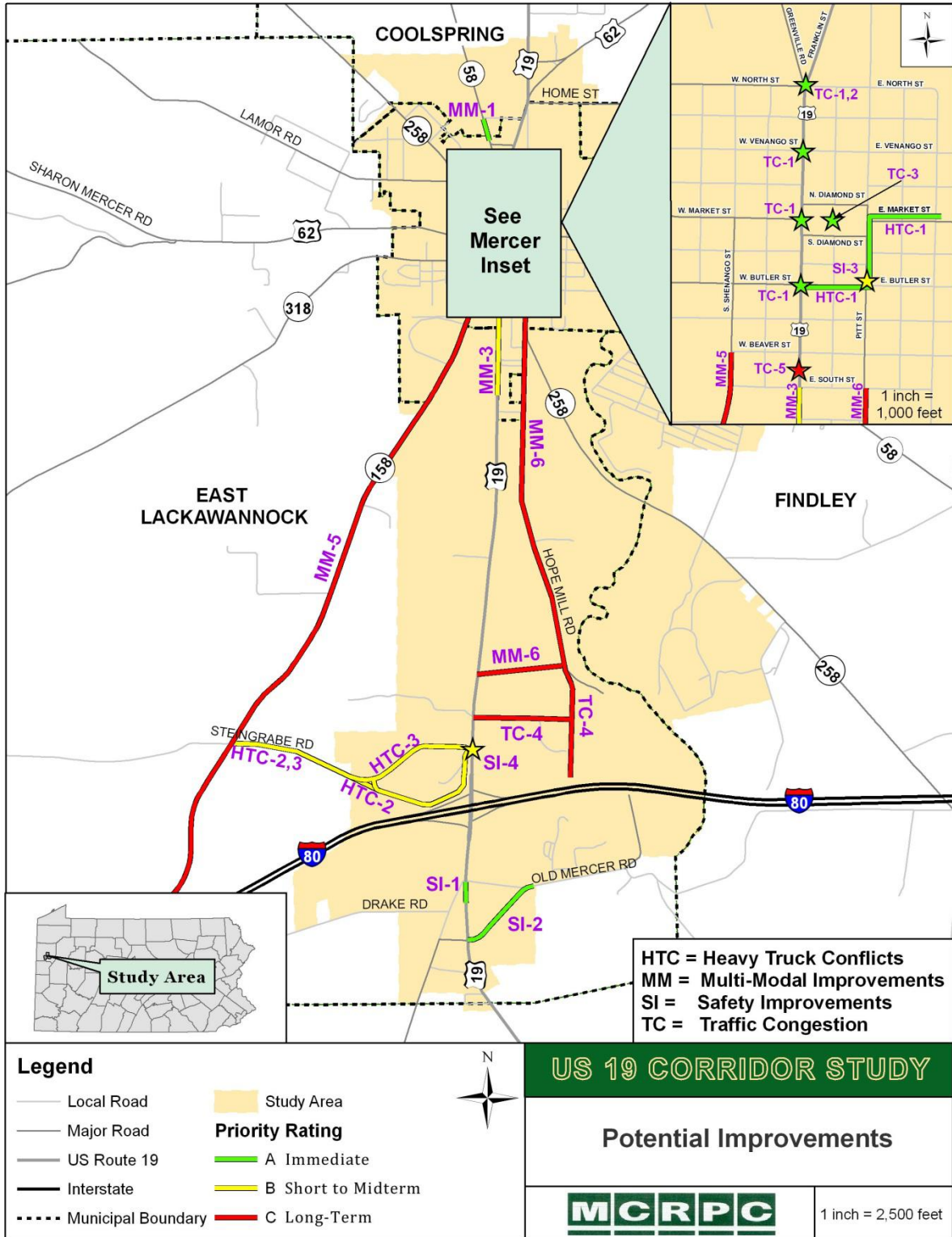
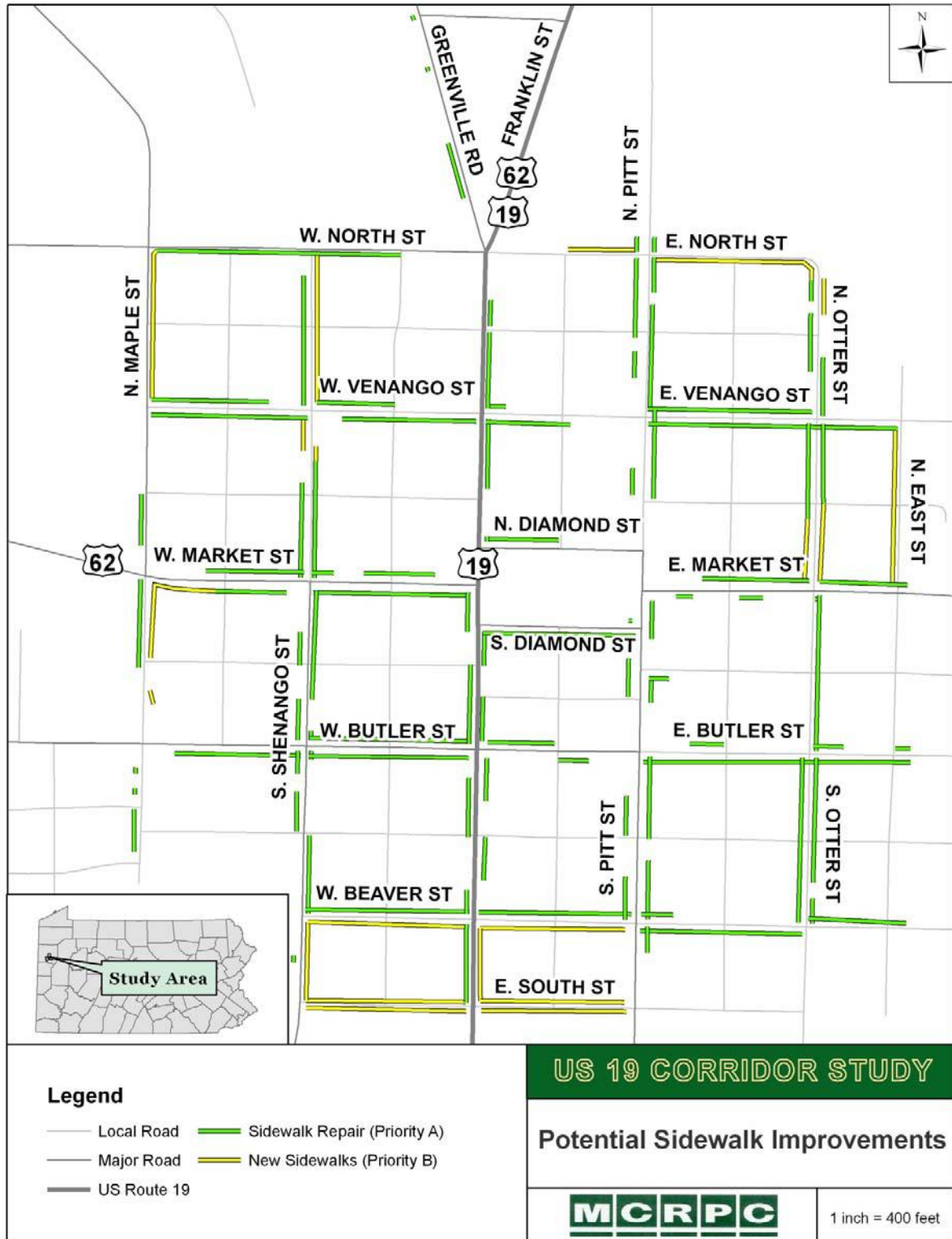


Figure 31: Potential Sidewalk Improvements



All locally preferred transportation alternatives are summarized on project implementation sheets. The sheets were based on PennDOT's level 2 project screening forms. The project implementation sheets can be found in Section 6.

## 5.0 Performance Evaluation

Once the Locally Preferred Alternative (LPA) was developed the overall plan for transportation and land use alternatives was evaluated to determine if it met the overall goals and objectives for the project.

The first step was to evaluate the performance of the selected improvements and preferred land use scenario, Scenario 3 with Smart Growth, from a traffic operations perspective (Table 17). The operations analysis was used to determine if the LPA would accommodate the preferred level of development without negatively impacting the quality of life for residents. These evaluations include the impact of improving the sidewalk and trail network which is projected to double the amount of pedestrian traffic and reduce peak hour congestion by 10% when compared to Scenario 3 without the LPA. By improving the sidewalk and trail networks, the roadway network will still maintain acceptable Levels of Service. It should be noted that the LPA condition assumes that all locally preferred alternatives are implemented.

**Table 17: Locally Preferred Alternative Operations (PM Conditions)**

		Scenario Conditions			
		Existing 2010	Scenario 1	Scenario 3	LPA
Signalized Operations		Number of Intersections			
Acceptable	Overall LOS A, B, or C	3	2	1	3
Marginal	Overall LOS D	1	0	0	1
Failing	Overall LOS E or F	0	2	3	0
Unsignalized Operations		Number of Intersections			
Acceptable	Side-Street LOS A, B, or C	18	13	13	15
Marginal	Side-Street LOS D	0	2	3	4
Failing	Side-Street LOS E or F	0	3	4	1

As can be seen, the LPA adequately handles the projected traffic volumes for the preferred land use scenario. With three traffic signals operating at LOS C or better and one operating at LOS D, the LPA improves traffic operations when compared to Scenario 1 (No-Build) and maintains the existing conditions. With fifteen unsignalized intersections operating at LOS C or better, four operating at LOS D, and one operating at LOS E or F, the LPA improves traffic operations when compared to Scenario 1 (No-Build) and slightly degrades when compared to the existing conditions.

The next step was to cross reference the proposed projects and actions to determine if each of the projects goals and objectives was met (Table 18). As can be seen, each goal and objective will be met when the plan is implemented so the plan meets the established performance targets.





Table 18: Performance Measures

Goal	Objective	Projects and Actions (Map Key)																				
		Upgrade and Retime Traffic Signals (TC-1,2)	Traffic Redirection at 5-legged intersection (TC-2)	Traffic Redirection at North and South Diamond Street (TC-3)	Turn Lane on US 19 between Beaver and South Streets (TC-5)	Truck Route to Market via Butler & Pitt Streets (HTC-1)	Truck Route to SR 158 via Steingrabe Road (HTC 2,3)	Sight Improvements @ Old Mercer Road/Drake Road (SI-1,2)	All Way Stop @ Butler Street and Pitt Street (SI-3)	Construct Sidewalk to Walt's Grocery Store (MM-1)	Repair Deficient Sidewalks (MM-2)	Construct Sidewalk to Dairy Queen (MM-3)	Construct New Sidewalks to Complete Network (MM-4)	Widen Shoulders on SR 158 from Beaver Street to I-80 (MM-5)	Hope Mill Road -Hiker/Biker Trail (MM-6)	Adopt recommended zoning amendments and land use regulations	Adopt traditional neighborhood development district (TND)	Adopt façade improvement program	Adopt official map	Adopt access management tools	Explore feasibility of establishing a parking authority	
Enhance motorized travel	Reduce congestion and enhance access to the central business district	X	X	X	X	X	X		X	X	X	X	X		X							
	Improve traffic patterns and reduce conflicts		X	X	X	X	X	X	X	X	X	X	X	X	X							
	Determine the most efficient travel pattern for heavy trucks					X	X															
	Improve incident management for detours from I-80	X																				
Provide a multi-modal transportation network	Improve the maintenance and connectivity of the sidewalk network		X							X	X	X	X	X	X							
Ensure safe and efficient access throughout the project area	Correct and better manage parking																				X	
	Establish an access management plan for Route 19																			X		
	Mitigate points of conflict and address safety concerns at intersections			X	X			X	X	X	X	X	X									
Manage land use	Capitalize upon the I-80 Interchange and other regional attractions to support economic development goals				X				X							X			X			
	Enhance the Victorian atmosphere of Mercer Borough																X	X				
	Direct land uses to encourage context appropriate in-fill within the Borough and suitable new development in Township															X		X				

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## 6.0 Project Implementation Sheets

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All locally preferred transportation alternatives are summarized on project implementation sheets. The sheets were based on PennDOT's level 2 project screening forms. The forms provide the following information:

- Project name/action
- Opinion of probable cost – assumed for further planning or engineering purposes
- Priority rating – “A” for immediate”, “B” for short to mid-term, “C” for long-term
- Responsible party – Project Champion; does not imply existing formal commitments or binding agreements
- Funding Source – Potential source of funding for project implementation
- Project partners – Cooperating agencies or bodies needed for project implementation/approval; does not imply existing formal commitments or binding agreements
- Purpose and need statements – Purpose is the reason for a project and need is data/statistics behind the purpose
- Associated goals/objectives of the project – developed in the beginning of the project and serves as a way to measure the plan's performance
- Project description – description of project needs and justification
- Land use transportation linkage – how land use ties into the transportation components of the corridor and study area
- Land use/economic development opportunity – potential economic opportunities created from the land use improvement recommendations
- Community issues and opportunities – describes potential impacts and opportunities for community growth and development
- Public agency involvement
- Environmental relations – any potential impacts to wetlands or agricultural resources
- Potential approach and solutions – the locally preferred alternative and solutions to mitigate existing deficiencies and/or areas of concern
- Other alternatives studied



# UPGRADE & RETUNE TRAFFIC SIGNALS

<b>Map Key:</b>	TC-1 (pages 83, 101, 102)
<b>Opinion of Probable Cost:</b>	\$181,000
<b>Priority Rating:</b>	A - Immediate
<b>Responsible Party:</b>	Mercer Borough
<b>Project Partners:</b>	PennDOT District 1, MCRPC
<b>Funding Source:</b>	CMAQ, TIP

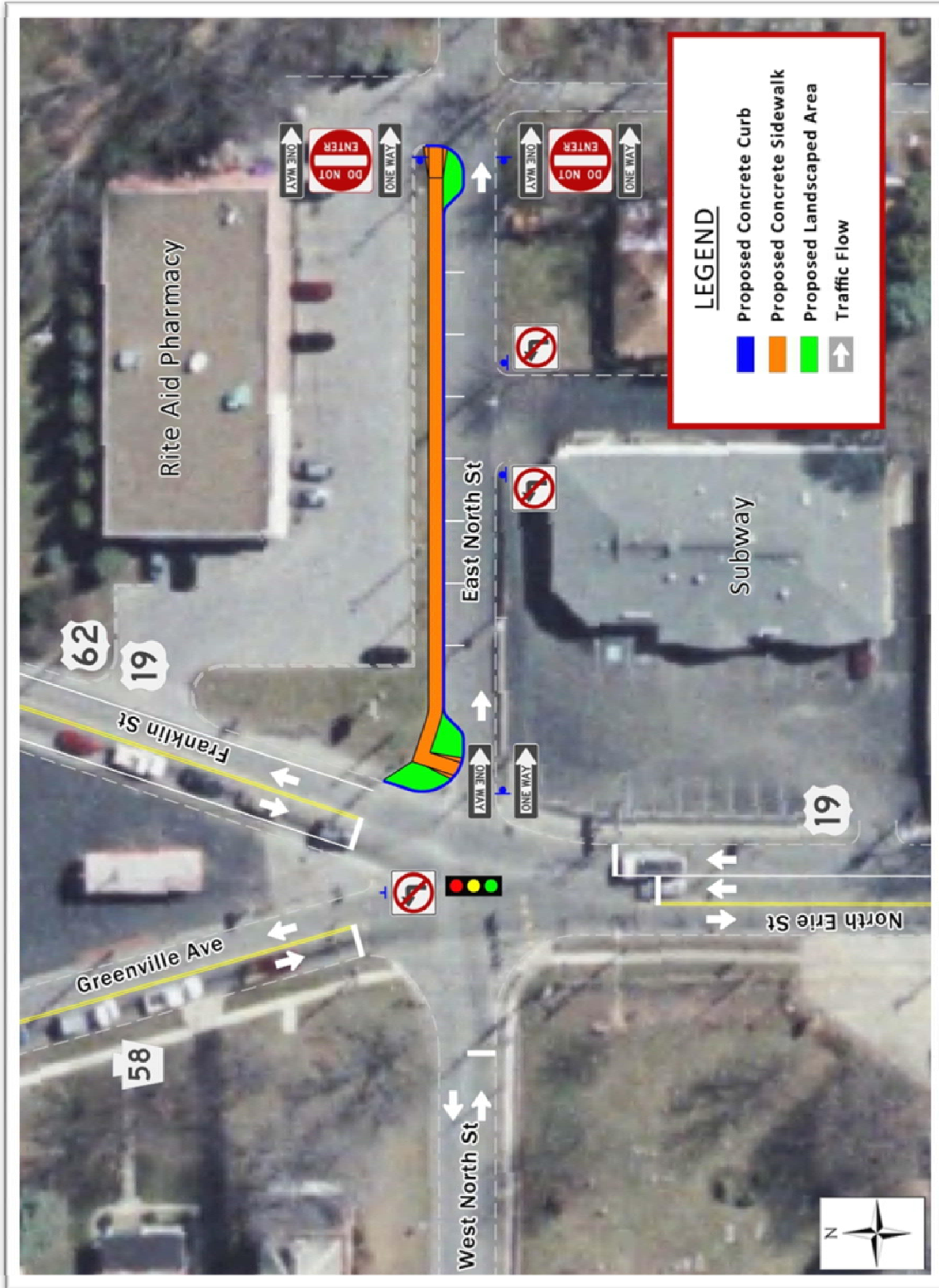
<b>Purpose:</b>	To alleviate congestion
<b>Need:</b>	The existing signals are not coordinated and contribute to traffic delays and unsafe traffic movements
<b>US 19 Study Goals &amp; Objectives:</b>	<b>Goal:</b> Enhance motorized travel <b>Objective:</b> Reduce congestion and enhance access to the central business district; Improve incident management for detours from I-80
<b>Location Description:</b>	Four traffic signals located along US 19 in Mercer Borough
<b>Project Description/Justification:</b>	Install closed loop signal system and retune four traffic signals/Traffic congestion at peak rush hours, Vehicles have trouble making turns
<b>Land Use Transportation Linkage:</b>	Town Center, mixed use
<b>Land Use/Economic Development Opportunity:</b>	Infrastructure efficiency improvement
<b>Community Issues &amp; Opportunities:</b>	Decrease delay and congestion
<b>Public Agency Involvement:</b>	Improve operational efficiency, improve system reliability
<b>Environmental Impact:</b>	N/A
<b>Potential Approach &amp; Solutions:</b>	Increased efficiency, change intersection operations, ITS, modify intersection control, intersection control improvements, adjust signal timing
<b>Alternative(s) Studied:</b>	None



**TRAFFIC  
REDIRECTION 5-  
LEGGED  
INTERSECTION**

<b>Map Key:</b>	TC-2 (pages 83-85, 101, 102)
<b>Opinion of Probable Cost:</b>	\$169,000
<b>Priority Rating:</b>	A- Immediate
<b>Responsible Party:</b>	Mercer Borough
<b>Project Partners:</b>	PennDOT District 1, MCRPC
<b>Funding Source:</b>	Safe Routes to School, CMAQ, TIP

<b>Purpose:</b>	To alleviate congestion
<b>Need:</b>	The current design configuration of the US 19 intersection with US 62, SR 58 and North Street (5-legged) creates confusion for drivers and contributes to travel time delays
<b>US 19 Study Goals &amp; Objectives:</b>	<b>Goal:</b> Enhance motorized travel; Provide a multi-modal transportation network <b>Objective:</b> Reduce congestion and enhance access to the central business district; Improve traffic patterns and reduce conflicts; Improve the maintenance and connectivity of the sidewalk network
<b>Location Description:</b>	The convergence of US 19, US 62, SR 58 and North Street in Mercer Borough
<b>Project Description/Justification:</b>	Retime traffic signals and make E. North Street one-way from US 19 plus prohibit left turns from US 19 onto W. North Street/Traffic congestion at peak rush hours; vehicles have trouble making turns
<b>Land Use Transportation Linkage:</b>	Town Center, mixed use
<b>Land Use/Economic Development Opportunity:</b>	Infrastructure efficiency improvement
<b>Community Issues &amp; Opportunities:</b>	Eliminates unneeded or unsafe traffic movements; decreases delay and congestion; improves safety
<b>Public Agency Involvement:</b>	Improve operational efficiency, improve system reliability
<b>Environmental Impact:</b>	N/A
<b>Potential Approach &amp; Solutions:</b>	Increased efficiency; modify intersection control, new pavement markings and signs; adjust signal timing
<b>Alternative(s) Studied:</b>	Option 1: No Build; Option 2: Retime Signals; Option 3: Retime signals and add a turn lane on southbound US 19/US 62 approach, Option 4: retime signals and make W. North Street one-way from US 19

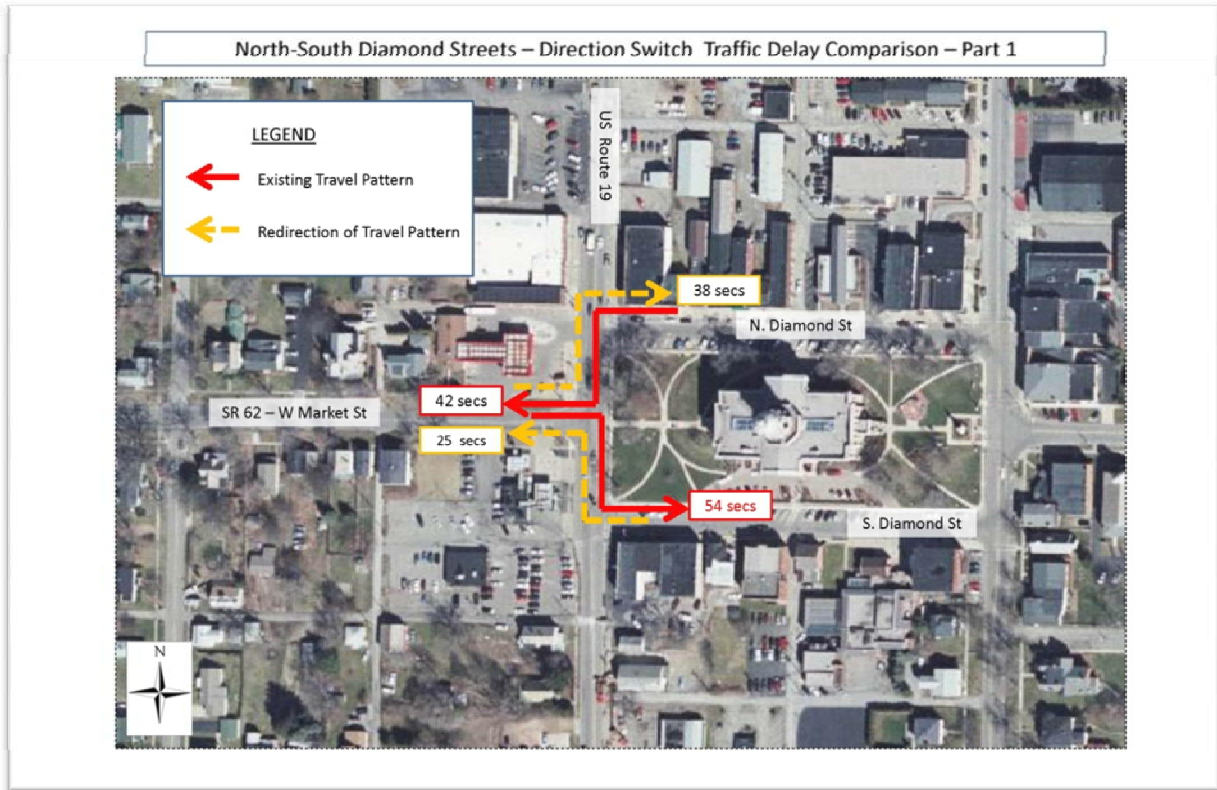


**TRAFFIC  
REDIRECTION  
NORTH AND SOUTH  
DIAMOND STREETS**

<b>Map Key:</b>	TC-3 (pages 86, 87 101, 102)
<b>Opinion of Probable Cost:</b>	\$250,000
<b>Priority Rating:</b>	A - Immediate
<b>Responsible Party:</b>	Mercer Borough
<b>Project Partners:</b>	PennDOT District 1, MCRPC
<b>Funding Source:</b>	TIP, CMAQ

<b>Purpose:</b>	To alleviate congestion
<b>Need:</b>	The existing traffic pattern on North and South Diamond Streets is inefficient and creates travel time delays and conflict at the intersection of North Diamond and US Route 19
<b>US 19 Study Goals &amp; Objectives:</b>	<b>Goal:</b> Enhance motorized travel; Ensure safe and efficient access throughout the project area <b>Objective:</b> Reduce congestion and enhance access to the central business district; Improve traffic patterns and reduce conflict; Mitigate points of conflict and address safety concerns at intersections
<b>Location Description:</b>	US 19 and North and South Diamond Streets (SR 58 and SR 258) surrounding courthouse square in Mercer Borough
<b>Project Description/Justification:</b>	Switch the direction of North and South Diamond Streets/Traffic congestion at peak rush hours; vehicles have trouble making turns
<b>Land Use Transportation Linkage:</b>	Town Center, mixed use
<b>Land Use/Economic Development Opportunity:</b>	Infrastructure efficiency improvement
<b>Community Issues &amp; Opportunities:</b>	Eliminates unneeded or unsafe traffic movements
<b>Public Agency Involvement:</b>	Improve operational efficiency, improve system reliability, improve connectivity on existing system, community development needs
<b>Environmental Impact:</b>	N/A
<b>Potential Approach &amp; Solutions:</b>	Increased efficiency; modify intersection control, new pavement markings and signs
<b>Alternative(s) Studied:</b>	Option 1: No Build, Option 2: North and South Diamond Street Signals





**ADOPT OFFICIAL MAP  
FOR  
NEW CONNECTION TO  
HOPE MILL ROAD**

<b>Map Key:</b>	TC-4 (pages 79, 101, 102)
<b>Opinion of Probable Cost:</b>	4,180,000 (Developer)/(East Lackawannock Township) Nominal
<b>Priority Rating:</b>	A - Immediate
<b>Responsible Party:</b>	East Lackawannock Township, Developer
<b>Project Partners:</b>	MCRPC, Mercer County
<b>Funding Source:</b>	General Fund

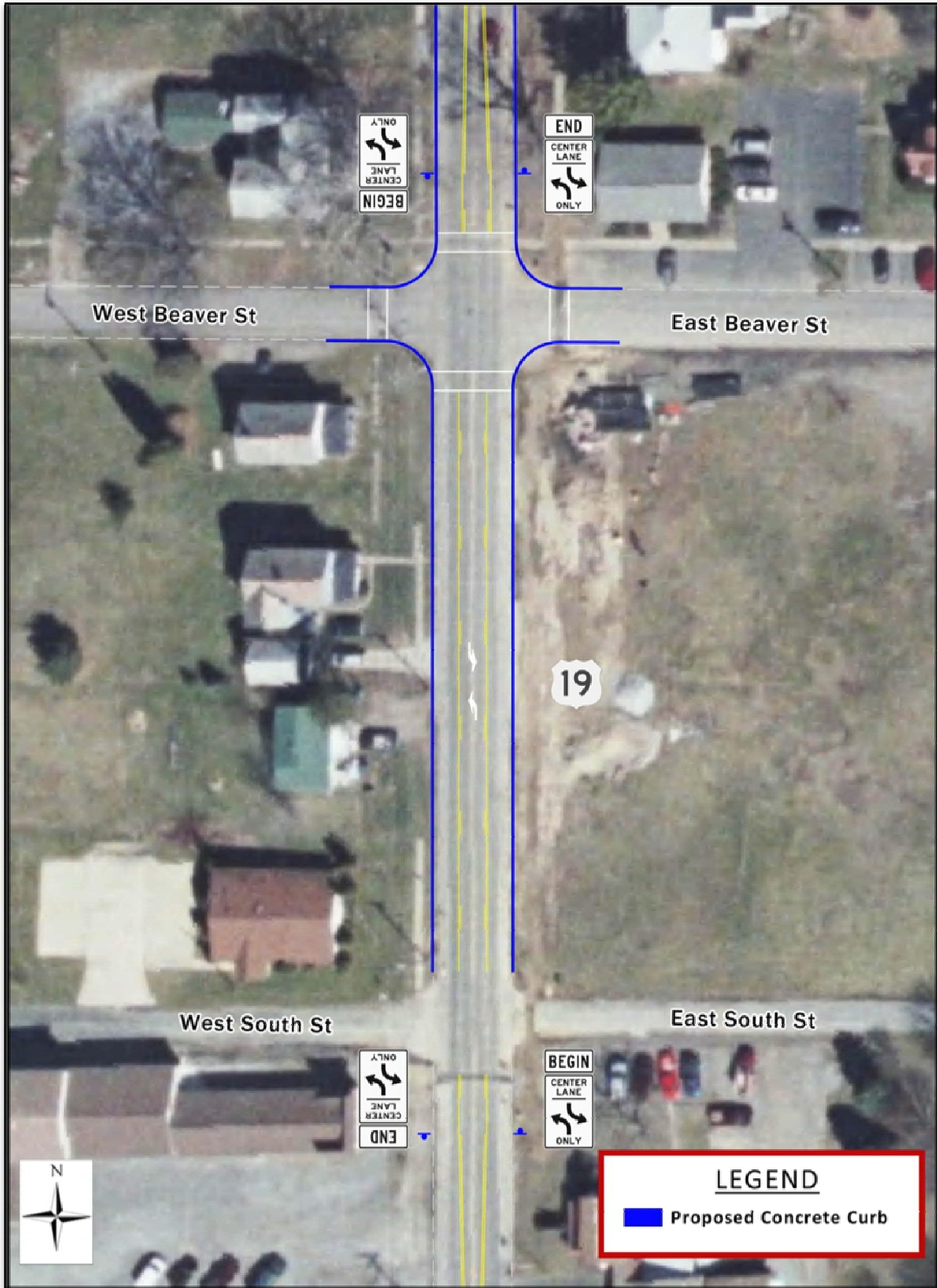
<b>Purpose:</b>	To alleviate congestion
<b>Need:</b>	Future development will overload the capacity of US Route 19 between I-80 and Mercer Borough
<b>US 19 Study Goals &amp; Objectives:</b>	<b>Goal:</b> Enhance motorized travel; Ensure safe and efficient access throughout the project area <b>Objective:</b> Reduce congestion and enhance access to the central business district; Mitigate points of conflict and address safety concerns at intersections
<b>Location Description:</b>	East Lackawannock Township at County owned property near interchange (existing use – quarry)
<b>Project Description/Justification:</b>	Adopt official map for new connection to Hope Mill road/Future traffic congestion at many times of day
<b>Land Use Transportation Linkage:</b>	Transition Area: I- 80 Interchange, commercial and industrial uses
<b>Land Use/Economic Development Opportunity:</b>	Redevelopment, infrastructure efficiency improvement
<b>Community Issues &amp; Opportunities:</b>	Support community projects
<b>Public Agency Involvement:</b>	Economic and community development needs
<b>Environmental Impact:</b>	Potential impacts to wetlands, potential impacts to agricultural resources
<b>Potential Approach &amp; Solutions:</b>	Industrial development access, increased efficiency, manage demand
<b>Alternative(s) Studied:</b>	None



**TURN LANE ON US ROUTE 19 BETWEEN BEAVER AND SOUTH STREETS**

<b>Map Key:</b>	TC-5 (pages 88, 101, 102)
<b>Opinion of Probable Cost:</b>	\$120,000
<b>Priority Rating:</b>	C - Long Term
<b>Responsible Party:</b>	Mercer Borough
<b>Project Partners:</b>	PennDOT District 1, MCRPC
<b>Funding Source:</b>	CMAQ, TIP

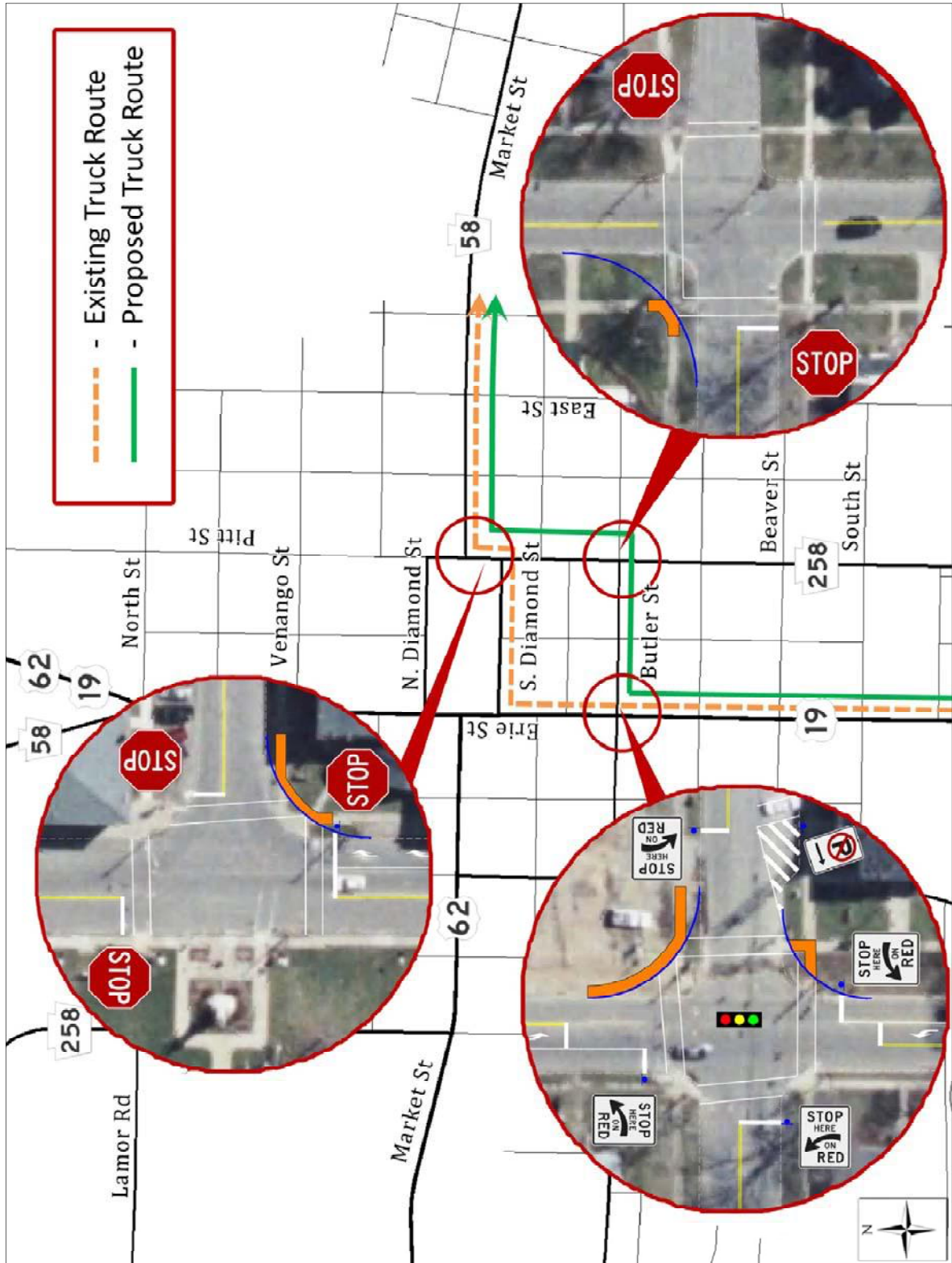
<b>Purpose:</b>	To alleviate congestion
<b>Need:</b>	Future development will result create congestion at intersections of US 19 with Beaver Street and South Street
<b>US 19 Study Goals &amp; Objectives:</b>	<b>Goal:</b> Enhance motorized travel; Ensure safe and efficient access throughout the project area; Manage land use <b>Objective:</b> Reduce congestion and enhance access to the central business district; Improve traffic patterns and reduce conflicts; Mitigate points of conflict and address safety concerns at intersections; Capitalize upon the I-80 interchange and other regional attractions to suport economic development goals
<b>Location Description:</b>	US 19 in Mercer Borough between Beaver and South Streets
<b>Project Description/Justification:</b>	Install two-way left turn lane on US 19 between Beaver and South Streets/Traffic congestion at peak rush hours; vehicles have trouble making turns
<b>Land Use Transportation Linkage:</b>	Town Center, mixed use
<b>Land Use/Economic Development Opportunity:</b>	Infrastructure efficiency improvement
<b>Community Issues &amp; Opportunities:</b>	Eliminates unneeded or unsafe traffic movements
<b>Public Agency Involvement:</b>	Improve operational efficiency, improve system reliability, improve connectivity on existing system, community development needs
<b>Environmental Impact:</b>	N/A
<b>Potential Approach &amp; Solutions:</b>	Modify intersection control, new pavement markings and signs, turning lanes, curbing
<b>Alternative(s) Studied:</b>	None



**TRUCK ROUTE TO MARKET STREET VIA BUTLER AND PITT STREET**

<b>Map Key:</b>	HTC-1 (93-94, 101, 102)
<b>Opinion of Probable Cost:</b>	\$360,000
<b>Priority Rating:</b>	A - Immediate
<b>Responsible Party:</b>	Mercer Borough, PennDOT
<b>Project Partners:</b>	MCRPC, Trucking companies
<b>Funding Source:</b>	TIP

<b>Purpose:</b>	To identify new truck routing options to alleviate the traffic burden on US Route 19 and reduce the number of Heavy Trucks traveling through the Central Business District in Mercer Borough
<b>Need:</b>	The convergence of several designated truck routes in Mercer Borough contributes to congestion, vehicle queuing and safety concerns
<b>US 19 Study Goals &amp; Objectives:</b>	<b>Goal:</b> Enhance Motorized Travel <b>Objective:</b> Reduce congestion and enhance access to the central business district; Improve traffic patterns and reduce conflicts; Determine the most efficient travel pattern for heavy trucks
<b>Location Description:</b>	Mercer Borough
<b>Project Description/Justification:</b>	Establish official truck route to SR58 (Market St) via Butler Street and Pitt Street/Traffic congestion at peak rush hours; vehicles have trouble making turns
<b>Land Use Transportation Linkage:</b>	Town Center, mixed use
<b>Land Use/Economic Development Opportunity:</b>	Infrastructure efficiency improvement
<b>Community Issues &amp; Opportunities:</b>	Eliminates unneeded or unsafe traffic movements
<b>Public Agency Involvement:</b>	Improve operational efficiency, improve connectivity on existing system
<b>Environmental Impact:</b>	N/A
<b>Potential Approach &amp; Solutions:</b>	Use alternate routes, modify intersection control, new pavement markings and signs, curbing
<b>Alternative(s) Studied:</b>	Option 1: No Build, Option 2: Truck Route via Beaver Street and Pitt Street

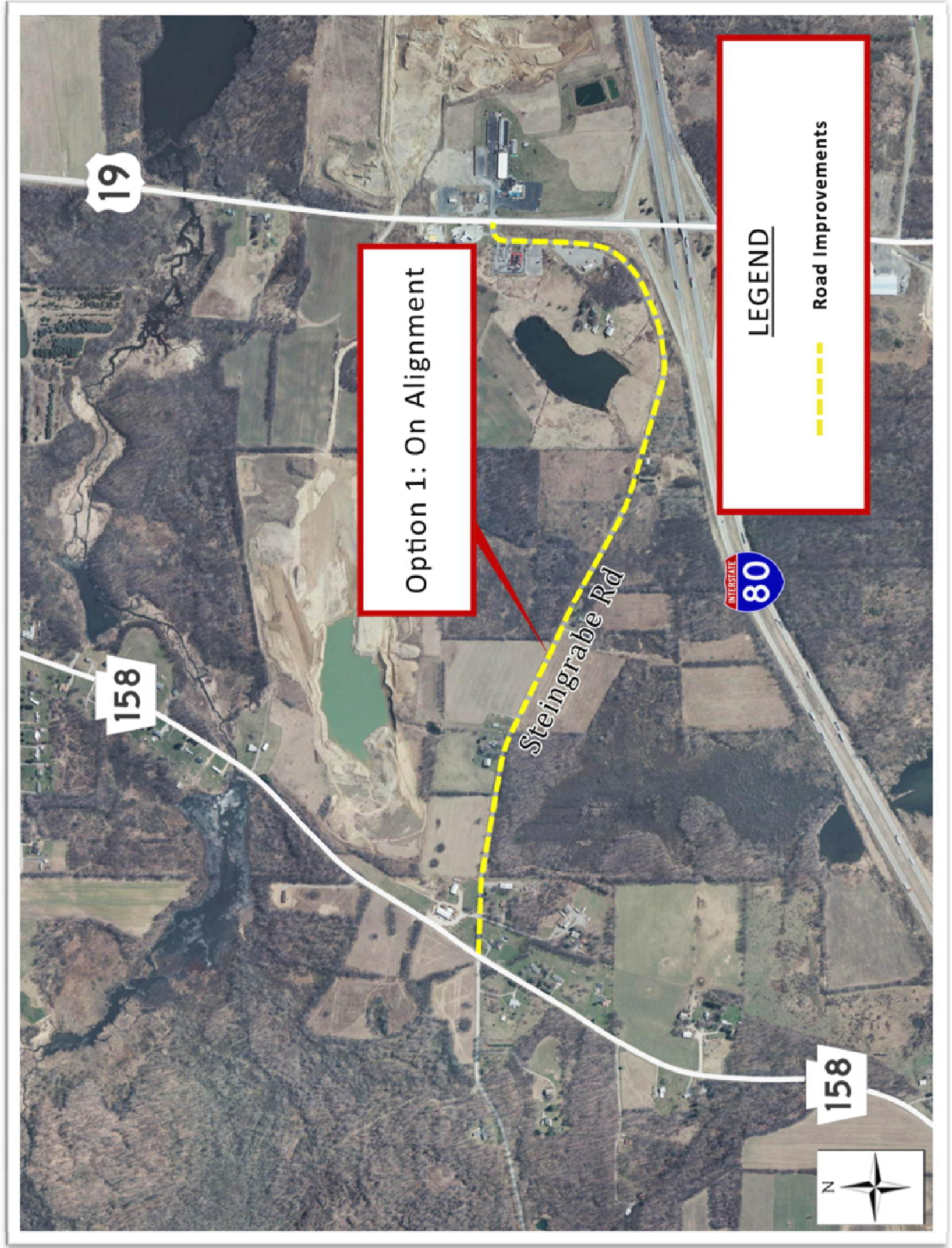


**TRUCK ROUTE TO SR 158 VIA  
STEINGRABE ROAD  
(OPTION 1: ON ALIGNMENT)**

<b>Map Key:</b>	HTC-2 (Alternative to HTC-3) (pages 94, 101, 102)
<b>Opinion of Probable Cost:</b>	\$3,620,000
<b>Priority Rating:</b>	B – Short to Mid-Term
<b>Responsible Party:</b>	East Lackawannock Township, PennDOT
<b>Project Partners:</b>	MCRPC, Trucking companies
<b>Funding Source:</b>	TIP

<b>Purpose:</b>	To identify new truck routing options to alleviate the traffic burden on US Route 19 and reduce the number of Heavy Trucks traveling through the Central Business District in Mercer Borough
<b>Need:</b>	The convergence of several designated truck routes in Mercer Borough contributes to congestion, vehicle queuing and safety concerns
<b>US 19 Study Goals &amp; Objectives:</b>	<b>Goal:</b> Enhance Motorized Travel <b>Objective:</b> Reduce congestion and enhance access to the central business district; Improve traffic patterns and reduce conflicts; Determine the most efficient travel pattern for heavy trucks
<b>Location Description:</b>	East Lackawannock Township near I-80 Interchange
<b>Project Description/Justification:</b>	Establish official truck route to SR 158 via Steingrabe Road and make necessary upgrades to Steingrabe Road to accommodate heavy trucks/Vehicles have trouble making turns, road condition, turning movement restrictions
<b>Land Use Transportation Linkage:</b>	Rural
<b>Land Use/Economic Development Opportunity:</b>	Infrastructure efficiency improvement
<b>Community Issues &amp; Opportunities:</b>	Eliminates unneeded or unsafe traffic movements, addresses community noise issues
<b>Public Agency Involvement:</b>	Improve operational efficiency, improve connectivity on existing system
<b>Environmental Impact:</b>	N/A
<b>Potential Approach &amp; Solutions:</b>	Roadway reconstruction, widening
<b>Alternative(s) Studied:</b>	Option 2: Off Alignment

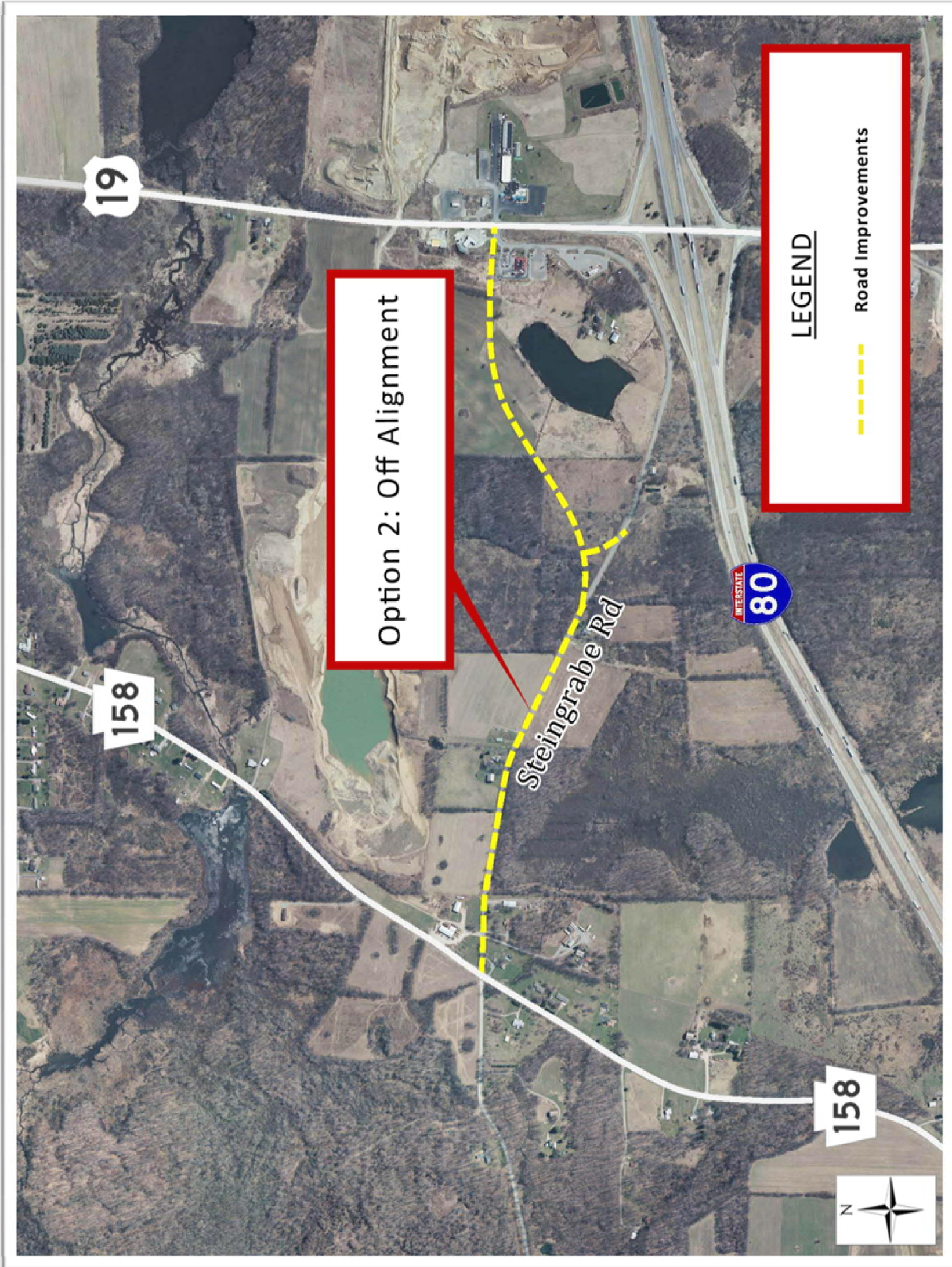




**TRUCK ROUTE TO SR 158 VIA  
STEINGRABE ROAD  
(OPTION 2: OFF ALIGNMENT)**

<b>Map Key:</b>	HTC-3 (Alternative to HTC2)(pages 94, 101, 102)
<b>Opinion of Probable Cost:</b>	\$4,960,000
<b>Priority Rating:</b>	B – Short to Mid-Term
<b>Responsible Party:</b>	East Lackawannock Township, PennDOT
<b>Project Partners:</b>	MCRPC, Trucking companies
<b>Funding Source:</b>	TIP

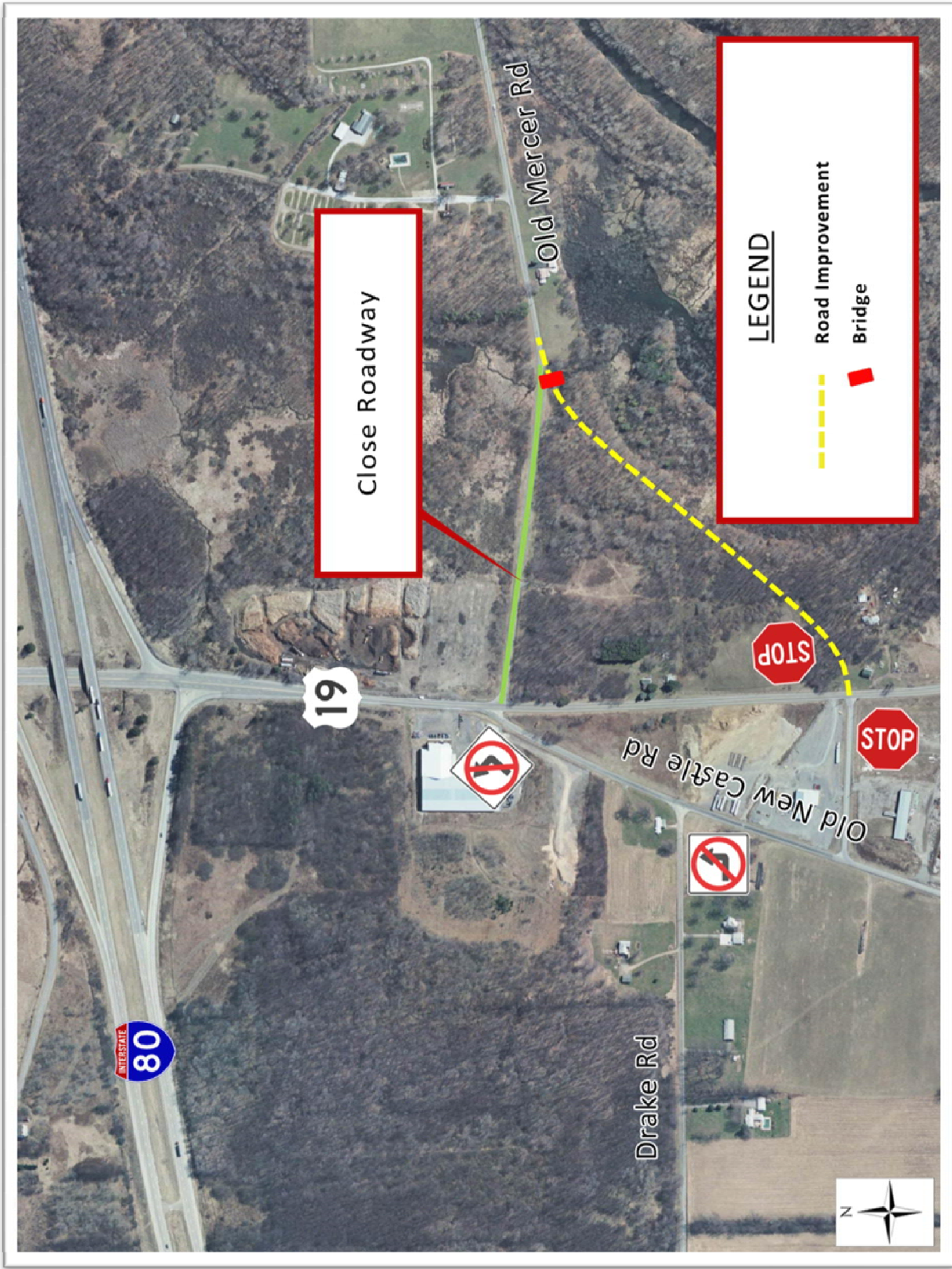
<b>Purpose:</b>	To identify new truck routing options to alleviate the traffic burden on US Route 19 and reduce the number of Heavy Trucks traveling through the Central Business District in Mercer Borough
<b>Need:</b>	The convergence of several designated truck routes in Mercer Borough contributes to congestion, vehicle queuing and safety concerns
<b>US 19 Study Goals &amp; Objectives:</b>	<b>Goal:</b> Enhance Motorized Travel <b>Objective:</b> Reduce congestion and enhance access to the central business district; Improve traffic patterns and reduce conflicts; Determine the most efficient travel pattern for heavy trucks
<b>Location Description:</b>	East Lackawannock Township near I-80 Interchange
<b>Project Description/Justification:</b>	Establish official truck route to SR 158 via Steingrabe Road and make necessary upgrades to Steingrabe Road to accommodate heavy trucks/Vehicles have trouble making turns, road condition, turning movement restrictions
<b>Land Use Transportation Linkage:</b>	Rural
<b>Land Use/Economic Development Opportunity:</b>	Infrastructure efficiency improvement
<b>Community Issues &amp; Opportunities:</b>	Eliminates unneeded or unsafe traffic movements, addresses community noise issues
<b>Public Agency Involvement:</b>	Improve operational efficiency, improve connectivity on existing system
<b>Environmental Impact:</b>	N/A
<b>Potential Approach &amp; Solutions:</b>	Roadway reconstruction and realignment, widening, change access
<b>Alternative(s) Studied:</b>	Option 1: On Alignment



**SIGHT IMPROVEMENTS @  
OLD MERCER ROAD/  
DRAKE ROAD (OPTION 4:  
REALIGNMENT)**

<b>Map Key:</b>	SI-1 (pages 89-92, 101, 102)
<b>Opinion of Probable Cost:</b>	\$2,040,000
<b>Priority Rating:</b>	A - Immediate
<b>Responsible Party:</b>	East Lackawannock Township, PennDOT
<b>Project Partners:</b>	MCRPC
<b>Funding Source:</b>	TIP

<b>Purpose:</b>	To improve the safety for the traveling public by reducing points of conflict and improving sight distance
<b>Need:</b>	Growing traffic levels, the presence of horse-drawn buggies and the number of Heavy Trucks traveling US Route 19 contribute to conflicts and safety concerns
<b>US 19 Study Goals &amp; Objectives:</b>	<b>Goal:</b> Enhance motorized travel; Ensure safe and efficient access throughout the project area <b>Objective:</b> Improve traffic patterns and reduce conflicts; Mitigate points of conflict and address safety concerns at intersections
<b>Location Description:</b>	East Lackawannock Township south of I-80 Interchange
<b>Project Description/Justification:</b>	Prohibit left turns from using New Castle-Mercer Road and Drake Road and realign Old Mercer Road/Serious traffic crashes occur, poor sight distance, traffic speeds
<b>Land Use Transportation Linkage:</b>	Rural
<b>Land Use/Economic Development Opportunity:</b>	Infrastructure efficiency improvement
<b>Community Issues &amp; Opportunities:</b>	Eliminates unneeded or unsafe traffic movements, enhances opportunities for underserved or environmental justice populations
<b>Public Agency Involvement:</b>	Fatal/serious injury crash reduction, improve connectivity on existing system, improve operational efficiency
<b>Environmental Impact:</b>	N/A
<b>Potential Approach &amp; Solutions:</b>	Roadway reconstruction and realignment, widening, change access
<b>Alternative(s) Studied:</b>	Option 1: No Build, Option 2: Install flashing beacon and signs, Option 3: Turn Restrictions, Option 5: Reconstruct US 19 to improve sight distance



**SIGHT IMPROVEMENTS @  
OLD MERCER ROAD/  
DRAKE ROAD (OPTION 5:  
RECONSTRUCTION)**

<b>Map Key:</b>	SI-2 (Alternative to SI-1) (pages 89-92, 101, 102)
<b>Opinion of Probable Cost:</b>	\$620,000
<b>Priority Rating:</b>	A - Immediate
<b>Responsible Party:</b>	East Lackawannock Township, PennDOT
<b>Project Partners:</b>	MCRPC
<b>Funding Source:</b>	TIP

<b>Purpose:</b>	To improve the safety for the traveling public by reducing points of conflict and improving sight distance
<b>Need:</b>	Growing traffic levels, the presence of horse-drawn buggies and the number of Heavy Trucks traveling US Route 19 contribute to conflicts and safety concerns
<b>US 19 Study Goals &amp; Objectives:</b>	<b>Goal:</b> Enhance motorized travel; Ensure safe and efficient access throughout the project area <b>Objective:</b> Improve traffic patterns and reduce conflicts; Mitigate points of conflict and address safety concerns at intersections
<b>Location Description:</b>	East Lackawannock Township south of I-80 Interchange
<b>Project Description/Justification:</b>	Reconstruct US 19 to improve sight distance at Old Mercer Road & Drake Road/Serious traffic crashes occur, poor sight distance, traffic speeds
<b>Land Use Transportation Linkage:</b>	Rural
<b>Land Use/Economic Development Opportunity:</b>	Infrastructure efficiency improvement
<b>Community Issues &amp; Opportunities:</b>	Eliminates unneeded or unsafe traffic movements, enhances opportunities for underserved or environmental justice populations
<b>Public Agency Involvement:</b>	Fatal/serious injury crash reduction, improve connectivity on existing system, improve operational efficiency
<b>Environmental Impact:</b>	N/A
<b>Potential Approach &amp; Solutions:</b>	Roadway reconstruction, widening, change access
<b>Alternative(s) Studied:</b>	Option 1: No Build, Option 2: Install flashing beacon and signs, Option 3: Turn Restrictions, Option 4: Prohibit left turns from using New Castle-Mercer Road and Drake Road and realign Old Mercer Road

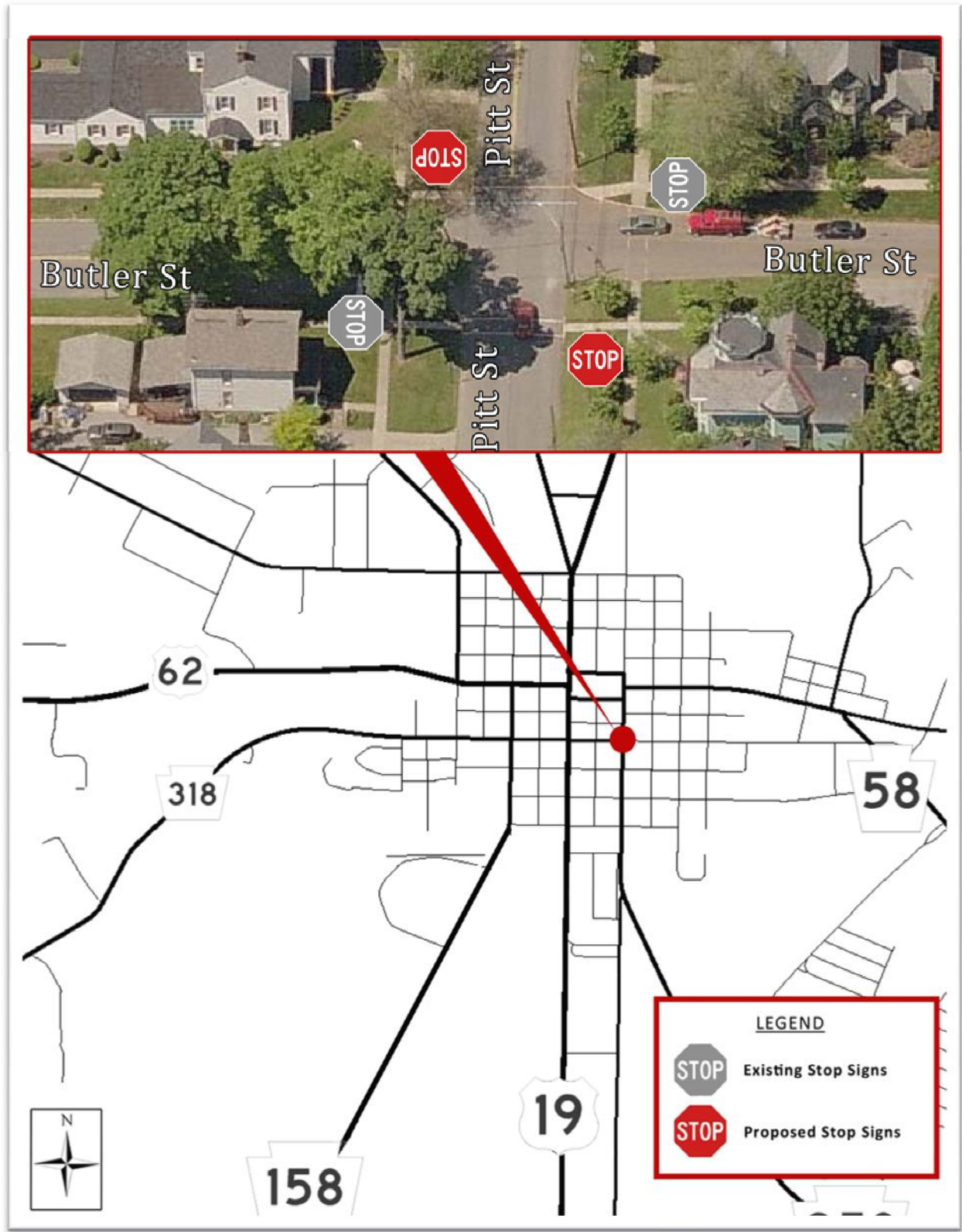


**ALL WAY STOP AT  
BUTLER STREET  
AND PITT STREET**

<b>Map Key:</b>	SI-3 (pages 93, 101, 102)
<b>Opinion of Probable Cost:</b>	\$5,000
<b>Priority Rating:</b>	B – Short to Mid-Term
<b>Responsible Party:</b>	Mercer Borough
<b>Project Partners:</b>	MCRPC, PennDOT
<b>Funding Source:</b>	Liquid Fuels, General Fund

<b>Purpose:</b>	To improve the safety for the traveling public by reducing points of conflict and improving sight distance
<b>Need:</b>	Identified as an intersection of concern by local law enforcement and emergency responders. Field verification of sight obstruction. Rising traffic levels from motorists avoiding Diamond Street will increase potential for crashes.
<b>US 19 Study Goals &amp; Objectives:</b>	<b>Goal:</b> Enhance Motorized Travel; Ensure safe and efficient access throughout the project area; Manage land use <b>Objective:</b> Reduce congestion and enhance access to the central business district; Improve traffic patterns and reduce conflicts; Mitigate points of conflict and address safety concerns at intersections; Capitalize upon the I-80 interchange and other regional attractions to support economic development goals
<b>Location Description:</b>	Mercer Borough
<b>Project Description/Justification:</b>	Install an all way stop at Butler Street and Pitt Street/Large number of crashes occur, poor sight distance, traffic speeds, there are poles and trees close to the road
<b>Land Use Transportation Linkage:</b>	Town/Village Neighborhood
<b>Land Use/Economic Development Opportunity:</b>	Infrastructure efficiency improvement
<b>Community Issues &amp; Opportunities:</b>	Eliminates unneeded or unsafe traffic movements
<b>Public Agency Involvement:</b>	Fatal/serious injury crash reduction, improve operational efficiency
<b>Environmental Impact:</b>	N/A
<b>Potential Approach &amp; Solutions:</b>	Modify intersection control, improve pedestrian/ADA elements
<b>Alternative(s) Studied:</b>	None





**STUDY OF  
IMPROVEMENTS AT  
STEINGRABE ROAD  
AND US ROUTE 19**

<b>Map Key:</b>	SI-4 (pages 93, 101, 102)
<b>Opinion of Probable Cost:</b>	\$30,000
<b>Priority Rating:</b>	B – Short to Mid-Term
<b>Responsible Party:</b>	East Lackawannock Township, PennDOT
<b>Project Partners:</b>	MCRPC
<b>Funding Source:</b>	TIP

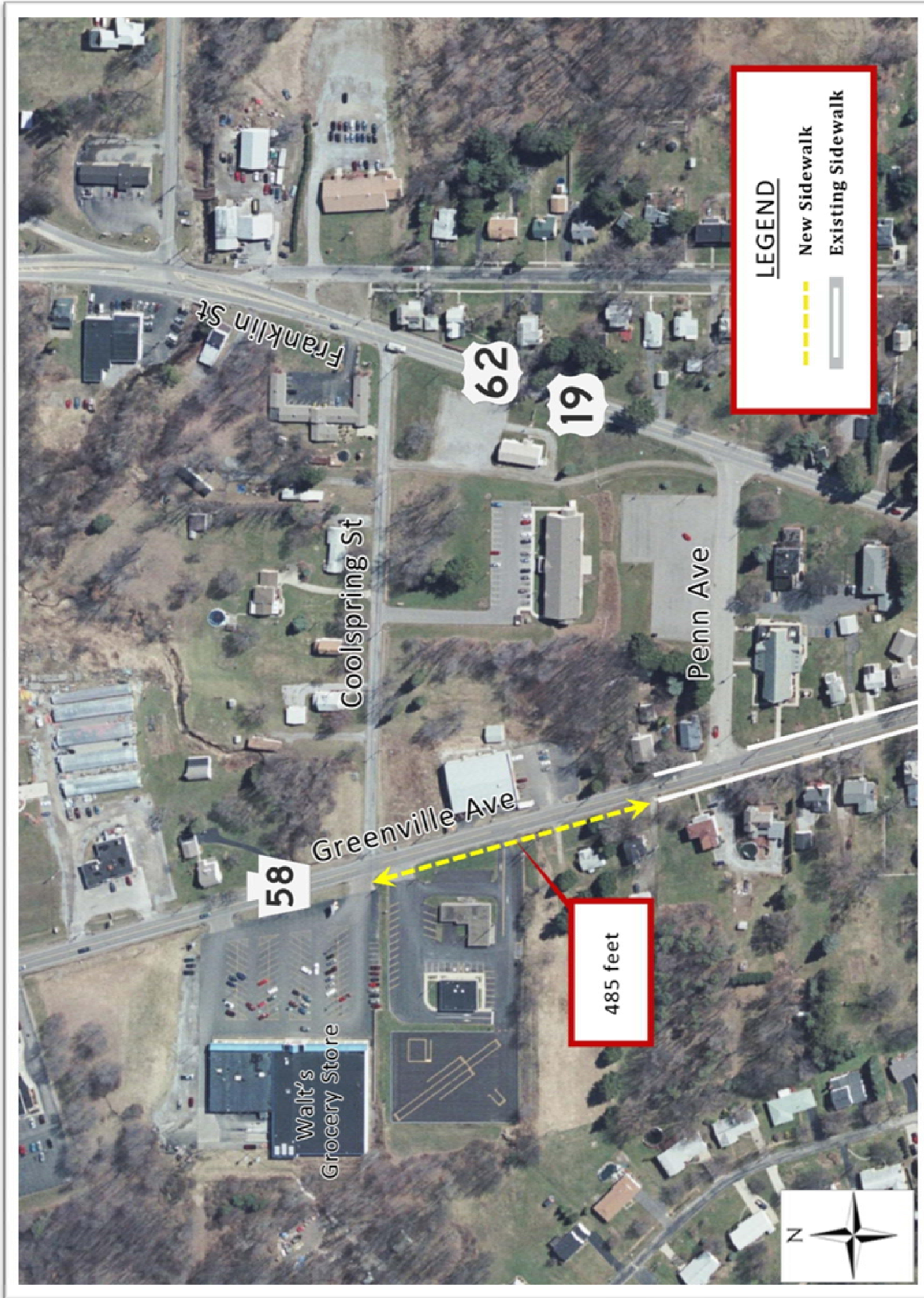
<b>Purpose:</b>	To improve the safety for the traveling public by reducing points of conflict and improving sight distance
<b>Need:</b>	Identified as an intersection of concern by the public, local businesses and local law enforcement. Confusing traffic patterns, various points of access, and sight obstructions contribute to potential distractions
<b>US 19 Study Goals &amp; Objectives:</b>	<b>Goal:</b> Enhance Motorized Travel <b>Objective:</b> Improve traffic patterns and reduce conflicts
<b>Location Description:</b>	East Lackawannock Township, north of I-80
<b>Project Description/Justification:</b>	Further detailed study of improvements at Steingrabe Road & US 19/Large number of crashes occur, poor sight distance, traffic speeds, sight obstructions present, many points of access
<b>Land Use Transportation Linkage:</b>	Rural
<b>Land Use/Economic Development Opportunity:</b>	Infrastructure efficiency improvement
<b>Community Issues &amp; Opportunities:</b>	Eliminates unneeded or unsafe traffic movements
<b>Public Agency Involvement:</b>	Fatal/serious injury crash reduction, improve operational efficiency
<b>Environmental Impact:</b>	N/A
<b>Potential Approach &amp; Solutions:</b>	Modify intersection control, remove roadside obstacle, intersection control improvements, enhance sight lines, new pavement markings/signs
<b>Alternative(s) Studied:</b>	None



**CONSTRUCT  
SIDEWALK TO WALT'S  
GROCERY STORE**

<b>Map Key:</b>	MM-1 (pages 95, 101, 102)
<b>Opinion of Probable Cost:</b>	\$77,000
<b>Priority Rating:</b>	A- Immediate
<b>Responsible Party:</b>	Mercer Borough, Coolspring Township, Store Owner
<b>Project Partners:</b>	MCRPC, PennDOT, DCNR
<b>Funding Source:</b>	TE, Safe Route to School, PCTI

<b>Purpose:</b>	To improve connectivity and accessibility for alternative modes of travel
<b>Need:</b>	Walt's Grocery Store is located approximately 500 feet north of the Mercer Borough border and is where the majority of Mercer Borough residents shop for food. The grocery store is inaccessible for pedestrians because it lacks sidewalk connections to town
<b>US 19 Study Goals &amp; Objectives:</b>	<b>Goal:</b> Enhance motorized travel and enable pedestrian access; Provide a multi-modal transportation network; Ensure safe and efficient access throughout the project area <b>Objective:</b> Reduce congestion and enhance access to the central business district; Improve traffic patterns and reduce conflicts; Improve the maintenance and connectivity of the sidewalk network; Mitigate points of conflict and address safety concerns at intersections
<b>Location Description:</b>	Mercer Borough and Coolspring Township
<b>Project Description/ Justification:</b>	Construct missing sidewalk connection to Walt's Grocery Store/ Road shoulders are not paved/wide enough, pedestrian facilities are lacking, bike and pedestrian interaction with vehicles is unsafe, alternates to vehicle travel are non-existent
<b>Land Use Transportation Linkage:</b>	Town/Village Neighborhood
<b>Land Use/Economic Development Opportunity:</b>	Enhancement of recreational opportunity
<b>Community Issues &amp; Opportunities:</b>	Enhances opportunities for underserved or environmental justice populations
<b>Public Agency Involvement:</b>	Improve connectivity on existing system
<b>Environmental Impact:</b>	N/A
<b>Potential Approach &amp; Solutions:</b>	Widening, improve road surface, new pavement markings/signs, improve pedestrian/ADA elements, bicycle improvements
<b>Alternative(s) Studied:</b>	None



**REPAIR DEFICIENT  
SIDEWALKS**

<b>Map Key:</b>	MM-2 (pages 95, 101, 102)
<b>Opinion of Probable Cost:</b>	\$1,980,000
<b>Priority Rating:</b>	A - Immediate
<b>Responsible Party:</b>	Mercer Borough, Residents, Business Owners
<b>Project Partners:</b>	MCRPC, PennDOT
<b>Funding Source:</b>	CDBG

<b>Purpose:</b>	To improve connectivity and accessibility for alternative modes of travel
<b>Need:</b>	The borough has an existing sidewalk network with substandard or deteriorating surfaces, which creates unsafe travel for pedestrian and limits mobility.
<b>US 19 Study Goals &amp; Objectives:</b>	<b>Goal:</b> Enhance motorized travel; Provide a multi-modal transportation network; Ensure safe and efficient access throughout the project area <b>Objective:</b> Reduce congestion and enhance access to the central business district; Improve traffic patterns and reduce conflicts; Improve the maintenance and connectivity of the sidewalk network; Mitigate points of conflict and address safety concerns at intersections
<b>Location Description:</b>	Mercer Borough
<b>Project Description/Justification:</b>	Repair deficient sidewalks/Pedestrian facilities are lacking
<b>Land Use Transportation Linkage:</b>	Town/Village Neighborhood
<b>Land Use/Economic Development Opportunity:</b>	Infrastructure efficiency improvement
<b>Community Issues &amp; Opportunities:</b>	Enhances opportunities for underserved or environmental justice populations, supports community projects/opportunity
<b>Public Agency Involvement:</b>	Improve connectivity on existing system
<b>Environmental Impact:</b>	N/A
<b>Potential Approach &amp; Solutions:</b>	Improve pedestrian/ADA elements
<b>Alternative(s) Studied:</b>	None



**CONSTRUCT  
SIDEWALK TO  
DAIRY QUEEN**

<b>Map Key:</b>	MM-3 (pages 95, 101, 102)
<b>Opinion of Probable Cost:</b>	\$260,000
<b>Priority Rating:</b>	B – Short to Mid-Term
<b>Responsible Party:</b>	East Lackawannock Township, Store Owner
<b>Project Partners:</b>	MCRPC, PennDOT
<b>Funding Source:</b>	TE, PCTI

<b>Purpose:</b>	To improve connectivity and accessibility for alternative modes of travel
<b>Need:</b>	Pedestrians currently walk on US Route 19 to access the Dairy Queen, which creates conflicts with motorized vehicles
<b>US 19 Study Goals &amp; Objectives:</b>	<b>Goal:</b> Enhance motorized travel; Provide a multi-modal transportation network; Ensure safe and efficient access throughout the project area <b>Objective:</b> Reduce congestion and enhance access to the central business district; Improve traffic patterns and reduce conflicts; Improve the maintenance and connectivity of the sidewalk network; Mitigate points of conflict and address safety concerns at intersections
<b>Location Description:</b>	East Lackawannock Township
<b>Project Description/Justification:</b>	Construct missing sidewalk connection to Dairy Queen along US 19/Pedestrian facilities are lacking
<b>Land Use Transportation Linkage:</b>	Suburban Corridor
<b>Land Use/Economic Development Opportunity:</b>	Infrastructure efficiency improvement
<b>Community Issues &amp; Opportunities:</b>	Enhances opportunities for underserved or environmental justice populations, supports community projects/opportunity
<b>Public Agency Involvement:</b>	Improve connectivity on existing system
<b>Environmental Impact:</b>	N/A
<b>Potential Approach &amp; Solutions:</b>	Improve pedestrian/ADA elements
<b>Alternative(s) Studied:</b>	None





**CONSTRUCT NEW  
SIDEWALKS TO  
COMPLETE  
NETWORK**

<b>Map Key:</b>	MM-4 (pages 95, 101, 102)
<b>Opinion of Probable Cost:</b>	\$700,000
<b>Priority Rating:</b>	B - Short to Mid-Term
<b>Responsible Party:</b>	Mercer Borough, Residents, Business Owners
<b>Project Partners:</b>	MCRPC, PennDOT
<b>Funding Source:</b>	PCTI, CDBG

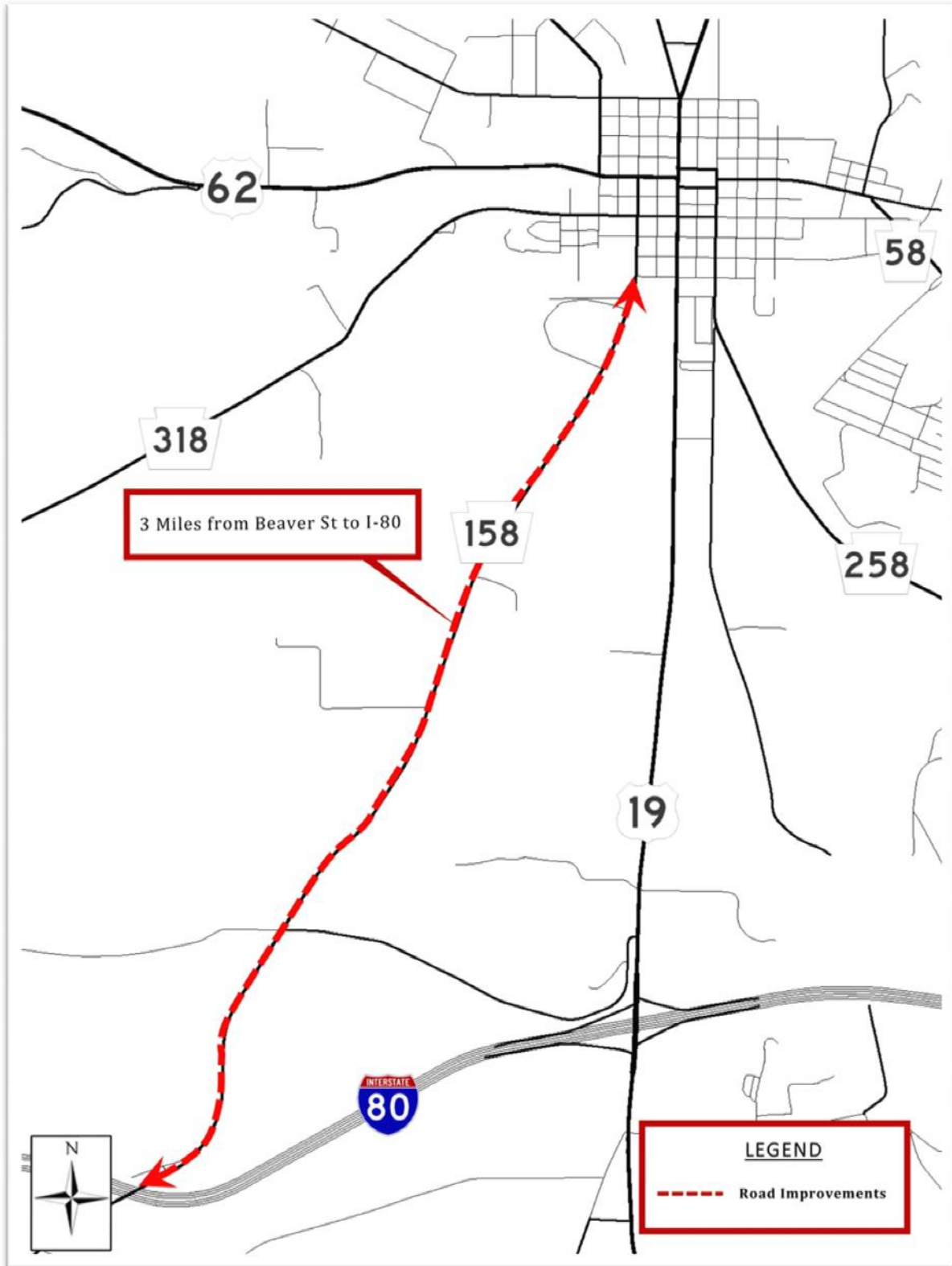
<b>Purpose:</b>	To improve connectivity and accessibility for alternative modes of travel
<b>Need:</b>	The borough has an existing pedestrian network with missing sidewalk segments, which creates a lack of connectivity for pedestrian and limits mobility.
<b>US 19 Study Goals &amp; Objectives:</b>	<b>Goal:</b> Enhance motorized travel; Provide a multi-modal transportation network; Ensure safe and efficient access throughout the project area <b>Objective:</b> Reduce congestion and enhance access to the central business district; Improve traffic patterns and reduce conflicts; Improve the maintenance and connectivity of the sidewalk network; Mitigate points of conflict and address safety concerns at intersections
<b>Location Description:</b>	Mercer Borough
<b>Project Description/Justification:</b>	Construct new sidewalks to complete pedestrian/bicycle network/Pedestrian facilities are lacking
<b>Land Use Transportation Linkage:</b>	Town/Village Neighborhood
<b>Land Use/Economic Development Opportunity:</b>	Infrastructure efficiency improvement
<b>Community Issues &amp; Opportunities:</b>	Enhances opportunities for underserved or environmental justice populations, supports community projects/opportunity
<b>Public Agency Involvement:</b>	Improve connectivity on existing system
<b>Environmental Impact:</b>	N/A
<b>Potential Approach &amp; Solutions:</b>	Improve pedestrian/ADA elements
<b>Alternative(s) Studied:</b>	None



**WIDEN SHOULDERS  
ON SR 158 FROM  
BEAVER STREET TO  
I-80**

<b>Map Key:</b>	MM-5 (pages 95, 101, 102)
<b>Opinion of Probable Cost:</b>	\$7,550,000
<b>Priority Rating:</b>	C – Long Term
<b>Responsible Party:</b>	East Lackawannock Township, PennDOT
<b>Project Partners:</b>	MCRPC
<b>Funding Source:</b>	TIP

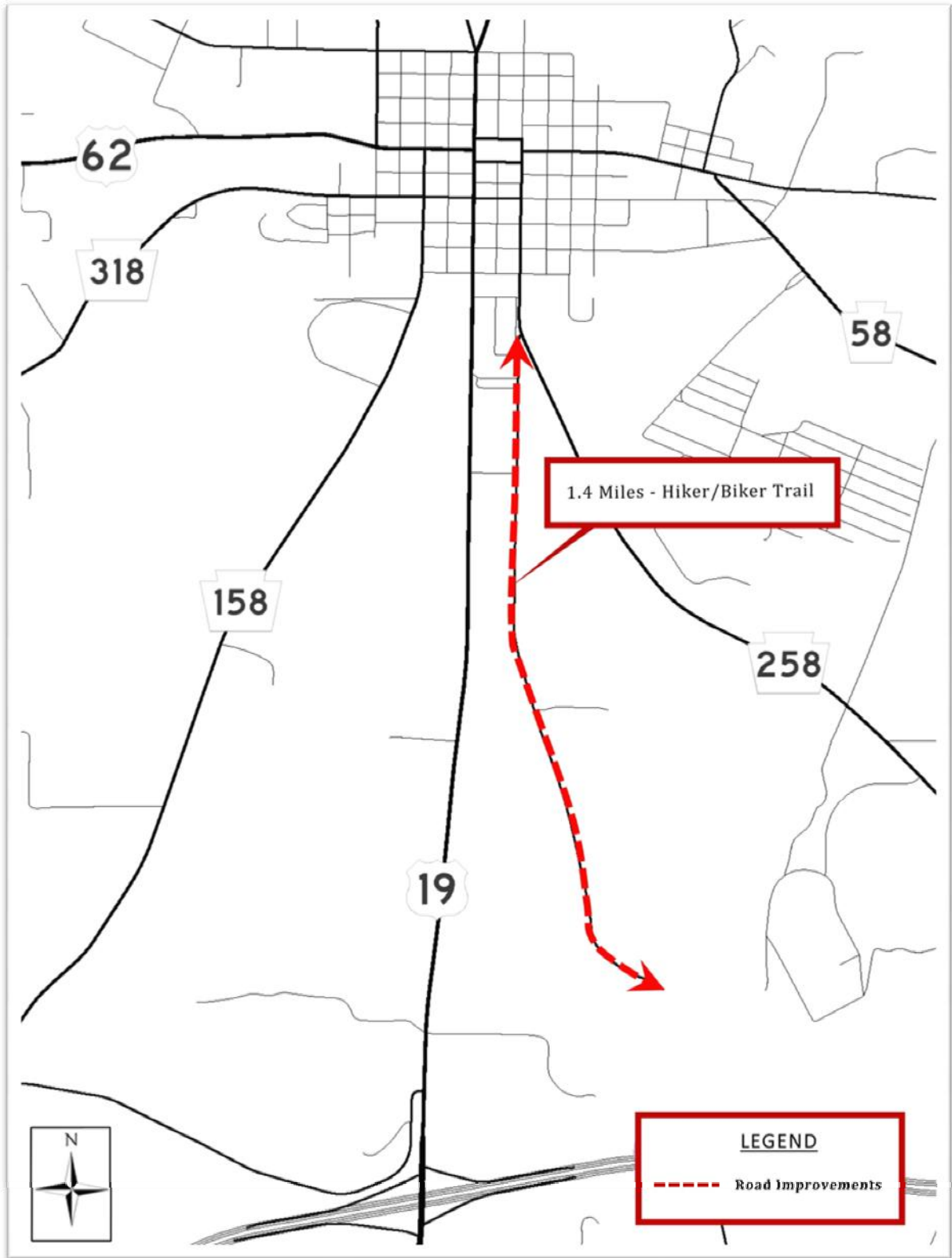
<b>Purpose:</b>	To improve connectivity and accessibility for alternative modes of travel and safety for horse-drawn buggy traffic
<b>Need:</b>	The lack of shoulders on state routes does not provide sufficient cartway to accommodate horse-drawn buggies and motorized vehicles. Pedestrians and bicyclists travel state routes, but there are no supporting amenities, which contributes to potential conflicts
<b>US 19 Study Goals &amp; Objectives:</b>	<b>Goal:</b> Enhance motorized travel; Provide a multi-modal transportation network <b>Objective:</b> Improve traffic patterns and reduce conflicts; Improve the maintenance and connectivity of the sidewalk network
<b>Location Description:</b>	East Lackawannock Township
<b>Project Description/Justification:</b>	Widen shoulders on SR 158 from Beaver Street to I-80/Road shoulders are not paved/wide enough, pedestrian facilities are lacking, bike and pedestrian interaction with vehicles is unsafe, alternates to vehicle travel are non-existent
<b>Land Use Transportation Linkage:</b>	Rural
<b>Land Use/Economic Development Opportunity:</b>	Enhancement of recreational opportunity, infrastructure efficiency improvements
<b>Community Issues &amp; Opportunities:</b>	Eliminates unsafe traffic movements, enhances opportunities for underserved or environmental justice populations
<b>Public Agency Involvement:</b>	Improve connectivity on existing system
<b>Environmental Impact:</b>	N/A
<b>Potential Approach &amp; Solutions:</b>	Widening, improve road surface, new pavement markings/signs, improve pedestrian/ADA elements, bicycle improvements
<b>Alternative(s) Studied:</b>	None



**HOPE MILL ROAD –  
HIKER/BIKER TRAIL**

<b>Map Key:</b>	MM-6 (pages 95, 101, 102)
<b>Opinion of Probable Cost:</b>	\$1,760,000
<b>Priority Rating:</b>	C – Long Term
<b>Responsible Party:</b>	Mercer Borough, East Lackawannock Township, Mercer County Trails Association
<b>Project Partners:</b>	MCRPC, PennDOT, DCNR
<b>Funding Source:</b>	TE, DCNR – Community Recreation & Conservation or Pennsylvania Recreational Trails, PCTI

<b>Purpose:</b>	To improve connectivity and accessibility for non-motorized modes of travel
<b>Need:</b>	Pedestrians and bicyclists travel state routes, but there are no supporting amenities, which contributes to potential conflicts with motorized vehicles.
<b>US 19 Study Goals &amp; Objectives:</b>	<b>Goal:</b> Enhance motorized travel; provide a multi-modal transportation network <b>Objective:</b> Reduce congestion and enhance access to the central business district; Improve traffic patterns and reduce conflicts; Improve the maintenance and connectivity of the sidewalk network
<b>Location Description:</b>	Mercer Borough and East Lackawannock Township
<b>Project Description/Justification:</b>	Build hiker/biker trail along Hope Mill Road/ Road shoulders are not paved/wide enough, pedestrian facilities are lacking, bike and pedestrian interaction with vehicles is unsafe, alternates to vehicle travel are non-existent
<b>Land Use Transportation Linkage:</b>	Rural
<b>Land Use/Economic Development Opportunity:</b>	Enhancement of recreational opportunity
<b>Community Issues &amp; Opportunities:</b>	Enhances opportunities for underserved or environmental justice populations
<b>Public Agency Involvement:</b>	Improve connectivity on existing system
<b>Environmental Impact:</b>	N/A
<b>Potential Approach &amp; Solutions:</b>	Widening, improve road surface, new pavement markings/signs, improve pedestrian/ADA elements, bicycle improvements
<b>Alternative(s) Studied:</b>	None



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