

**Northeastern Pennsylvania
Metropolitan Planning Organization**
Long-Range Transportation Plan

Appendix 4J
**Environmental Justice –
Benefits & Burdens Analysis**

Northeastern Pennsylvania Alliance

NEPA



www.nepa-alliance.org

Environmental Justice – Benefits & Burdens Analysis

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Environmental Justice – Benefits & Burdens Analysis

Background

Environmental Justice (EJ) is the overarching policy adopted in the United States for the “fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.”¹ This report summarizes the activities, analyses, and outcomes that were completed as a part of the NEPA MPO Long-Range Transportation Plan (LRTP) planning process in compliance with the EJ policy.

The following federal acts and executive orders define the principles of EJ, including the specific populations that are to be considered:

- *The Civil Rights Act of 1964, Title VI*, which prohibits discrimination on the basis of race, color, or national origin.
- *The Age Discrimination Act of 1975*, which prohibits discrimination on the basis of age.
- *The Americans with Disabilities Act of 1990*, along with the *Americans with Disabilities Act Amendments Act of 2008*, which prohibit discrimination on the basis of disabilities.
- *Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, which protects minority and low-income populations from disproportionately high and adverse impacts.
- *U.S. Department of Transportation (USDOT) EJ Order 5610.2(a)*
- *FHWA EJ Order 6640.23A*
- *Executive Order 13166 on Improving Access to Services for Persons with Limited English Proficiency (2000)*, which aims to improve access to services for persons who have limited English proficiency.

The foundation of EJ was established in *Title VI of the Civil Rights Acts of 1964*, which states:

No person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

Therefore, all recipients of Federal aid are required to certify, and the U.S. Department of Transportation (USDOT) must ensure, non-discrimination under *Title VI of the Civil Rights Act of 1964*. For the purposes of long-range transportation planning, Metropolitan

¹ U.S. EPA, Environmental Justice Webpage, <http://www.epa.gov/oecaerth/environmentaljustice/>, as accessed August 6, 2015.

Planning Organizations (MPOs) must specifically address EJ in the process of developing and advancing transportation programs and projects.

As a specific application of *Title VI, Executive Order 12898* requires Federal agencies and recipients of Federal aid to specifically consider the impacts of its programs on minority and low-income populations:

Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations and,

Each Federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information assessing and comparing environmental and human health risks borne by populations identified by race, national origin, or income. To the extent practical and appropriate, Federal agencies shall use this information to determine whether their programs, policies, and activities have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.

In 2011, the Federal Highway Administration (FHWA) issued an *Environmental Justice Emerging Trends and Best Practices Guidebook*. In 2012, the USDOT issued *Order 5610.2(a) Final DOT Environmental Justice Order* and FHWA issued *Order 6640.23A FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. In 2015, FHWA issued an *Environmental Justice Reference Guide*. These documents highlight three main EJ objectives:

- To identify, address, minimize, mitigate and (preferably) avoid disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process. This objective is met by providing public involvement opportunities and dissemination of information, including meaningful access to public information concerning human health or environmental impacts. In addition, solicitation of input from affected minority and low-income populations is required when considering alternatives during the planning and development of transportation infrastructure investments.
- To ensure that no person—particularly those of minority or low-income populations—is excluded from participating in, denied the benefits of, or in any other way subjected to discrimination under any program or activity receiving federal assistance.

As defined by the USDOT *Final Environmental Justice Order*, adverse effects means “... the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to:

- Bodily impairment, infirmity, illness or death
- Air, noise, and water pollution and soil contamination
- Destruction or disruption of man-made or natural resources
- Destruction or diminution of aesthetic values
- Destruction or disruption of community cohesion or a community’s economic vitality, destruction or disruption of the availability of public and private facilities and services
- Vibration
- Adverse employment effects; displacement of persons, businesses, farms or nonprofit organizations
- Increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community
- The denial of, reduction in, or significant delay in the receipt of benefits of DOT programs, policies or activities.”

Disproportionately high and adverse effect on minority and low-income populations means an adverse effect that is: A) predominantly borne by a minority population and/or a low-income population; or B) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

Identification of Minority, Low-Income and Other Traditionally Underserved Populations

In response to the identified EJ policies, a distributive geographic analysis was conducted to identify the locations and concentrations of minority, low-income and other traditionally underserved populations (TUP). The demographic profile describes the social composition of the NEPA MPO Region and illustrates how demographic patterns vary spatially.

The identification of these populations is essential to establishing effective strategies for engaging them in the transportation planning process. When meaningful opportunities for interaction are established, the transportation planning process can effectively draw upon the perspectives of communities to identify existing transportation needs, localized deficiencies, and the demand for transportation services. Mapping of these populations not only provides a baseline for assessing impacts of the transportation investment program, but also aids in the development of an effective public involvement program.

To demonstrate and substantially comply with the intent of *Title VI* and *Executive Order 12898*, the transportation planning process must also establish measures for assessing the Long-Range Transportation Plan and verifying that equitable access and mobility improvements are included in the Transportation Improvement Program (TIP). As such, the mapping and datasets created through this exercise culminate in the “Benefits and Burdens Analysis”—the intent of which is to provide a measureable assessment of the transportation program’s equity across the region’s various populations.

Distributive Analysis Methodology

Datasets and mapping were assembled as a baseline inventory of demographic attributes for the following populations that are traditionally underserved by the transportation system:

- Minority
- Low-Income (In-Poverty)
- Senior (Elderly)
- Disabled
- Those with Limited English Proficiency (LEP)
- Those with no personal vehicle available (zero-vehicle households)
- Female head of household with child

The primary and most comprehensive data source for information on these populations was the U.S. Census Bureau (2009-2013 American Community Survey 5-Year Estimates), while data from the Department of Education’s National School Lunch program was used to supplement and provide a more current data source for identifying low-income populations.

U.S. Census Data

Using a Geographic Information System (GIS), spatial and demographic data from the U.S. Census Bureau were compiled at the county and census tract level of detail. **Table 1** provides a summary of the 2009-2013 U.S. Census American Community Survey (ACS) data at the county and NEPA MPO levels.

Census data at the tract level was chosen for use in all distributive analyses. Mapping of census data was completed individually for each population according to the concentration of the population within each geographic area (tract or county).

Table 1. Profile of Traditionally Underserved Populations in the NEPA MPO Region

	NEPA MPO Region					
	Carbon County	Monroe County	Pike County	Schuylkill County	Total Population	Regional Threshold (Average Concentration)
<u>Data Universe</u> : Total Population	65,074	168,947	22,613	147,700	438,900	
Minority Population ¹	4,298	51,206	9,970	10,507	75,981	17.3%
Senior Population ²	11,908	22,613	10,111	27,095	71,727	16.3%
<u>Data Universe</u> : Total Population for whom Poverty Status is determined	64,107	165,394	56,449	140,278	426,228	
Low-Income Population ³	7,440	19,790	5,119	17,946	50,295	11.8%
<u>Data Universe</u> : Total Population Age 5 or Older	61,832	160,701	54,663	140,231	417,427	
Limited English Proficiency Population ⁴	680	7,071	1,804	2,103	11,658	2.8%
<u>Data Universe</u> : Total Civilian Non-Institutionalized Population	64,326	167,783	56,768	140,986	429,863	
Disabled Population ⁵	11,000	22,158	8,255	24,258	65,671	15.3%
<u>Data Universe</u> : Total Households	25,903	58,875	21,581	59,658	166,017	
Zero Vehicle Households ⁶	2,177	3,073	989	5,799	12,038	7.3%
Female Head of Household with own Children ⁷	1,687	4,144	1,150	3,349	10,330	6.2%

Source: U.S. Census Bureau, American Community Survey (ACS), 5-Year Estimates (2009-2013)

Notes:

¹ Race: Table B03002 Minority Population – Calculated as “Total Population” minus “Not Hispanic or Latino: White Alone”

² Senior Population: Table S0103, ACS Population 65 Years and Over in the United States – Value given as “Total Population: 65 years and over”.

³ Low-Income Population: Table S1701, Poverty Status in the Past 12 Months – Value given as “Population for whom poverty status is determined: Below poverty level”.

⁴ Limited English Proficiency Population: Table S1601, Language Spoken At Home – Value given as “Population 5 years and over: Language other than English: Speak English less than ‘very well’”.

⁵ Disabled Population: Table S1810, Disability Characteristics – Value given as “Total civilian non-Institutionalized population: With a disability”.

⁶ Zero Vehicle Households: Table B08201, Household Size by Vehicles Available – Value given as “Total Households: No vehicle available”.

⁷ Female Head of Household with Children: Table DP02, Selected Social Characteristics in the United States, Households by Type – Value given as “Family households: Female householder, no husband present family: With own children under 18 years”.

Minority Populations

The FHWA and USDOT EJ Orders define a “minority” individual as a person who is: (1) Black: a person having origins in any of the black racial groups of Africa; (2) Hispanic or Latino: a person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race; (3) Asian American: a person having origins in any of the original peoples of the Far East, Southeast Asia or the Indian subcontinent; (4) American Indian and Alaskan Native: a person having origins in any of the original people of North America, South America (including Central America), and who maintains cultural identification through Tribal affiliation or community recognition; or (5) Native Hawaiian and Other Pacific Islander: a person having origins in any of the original peoples of Hawaii, Guam, Samoa or other Pacific Islands.

Table 2 summarizes the race characteristics for the NEPA MPO Region and the percentage of the total population that belongs to a minority population. The NEPA MPO regional average for minority population was found to be 17.3% based on the 2009-2013 American Community Survey 5-Year Estimates.

Table 2. Racial Populations in the NEPA MPO Region

County	Total Population	White alone	Black alone	Hispanic or Latino	American Indian and Alaskan Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some other race alone	Two or more races	% Minority
Carbon	65,074	60,776	854	2,308	85	295	0	97	659	6.6
Monroe	168,947	117,741	20,542	22,919	331	3,431	55	491	3,437	30.3
Pike	57,179	47,209	2,875	5,320	32	514	15	100	1,114	17.4
Schuylkill	147,700	137,193	3,705	4,432	51	836	0	18	1,465	7.1
Total	438,900	362,919	27,976	34,979	500	5,076	70	706	6,675	17.3

Source: U.S. Census Bureau, 2009-2013 ACS 5-Year Estimates. Table B03002, Hispanic or Latino Origin by Race.

As illustrated in **Figure 1, Minority Population – Environmental Justice**, the higher percentages of minority populations are located in the following locations: Penn Forest Township, Carbon County; Chestnuthill Township, Coolbaugh Township, Delaware Water Gap Borough, East Stroudsburg Borough, Jackson Township, Middle Smithfield Township, Mt. Pocono Borough, Paradise Township, Pocono Township, Price Township, Smithfield Township Stroud Township, Stroudsburg Borough, Tobyhanna Township and Tunkhannock Township, Monroe County; Blooming Grove Township (includes the Pike County Jail, which may increase minority population – inmate population of 267 as of June 2015) and Lehman Township, Pike County; and Butler Township, Girardville Borough, Gordon Borough, Mahanoy Township (includes the State Correctional Institute Mahanoy, which may increase the minority population –

inmate population of 2,473 as of June 2015), City of Pottsville, Ryan Township and Shenandoah Borough, Schuylkill County.

Low-Income Populations

Executive Order 12898 on Environmental Justice and the USDOT *Final Order on Environmental Justice* specifically identify low-income populations as a group to be considered in the LRTP when identifying and addressing the impacts of the TIP. USDOT defines “low-income populations” as those having a median household income that is at or below the Department of Health and Human Services’ poverty guidelines. Since information from the U.S. Census Bureau informs these guidelines, the Census’s “In-Poverty Status” indicator was used to identify low-income populations.²

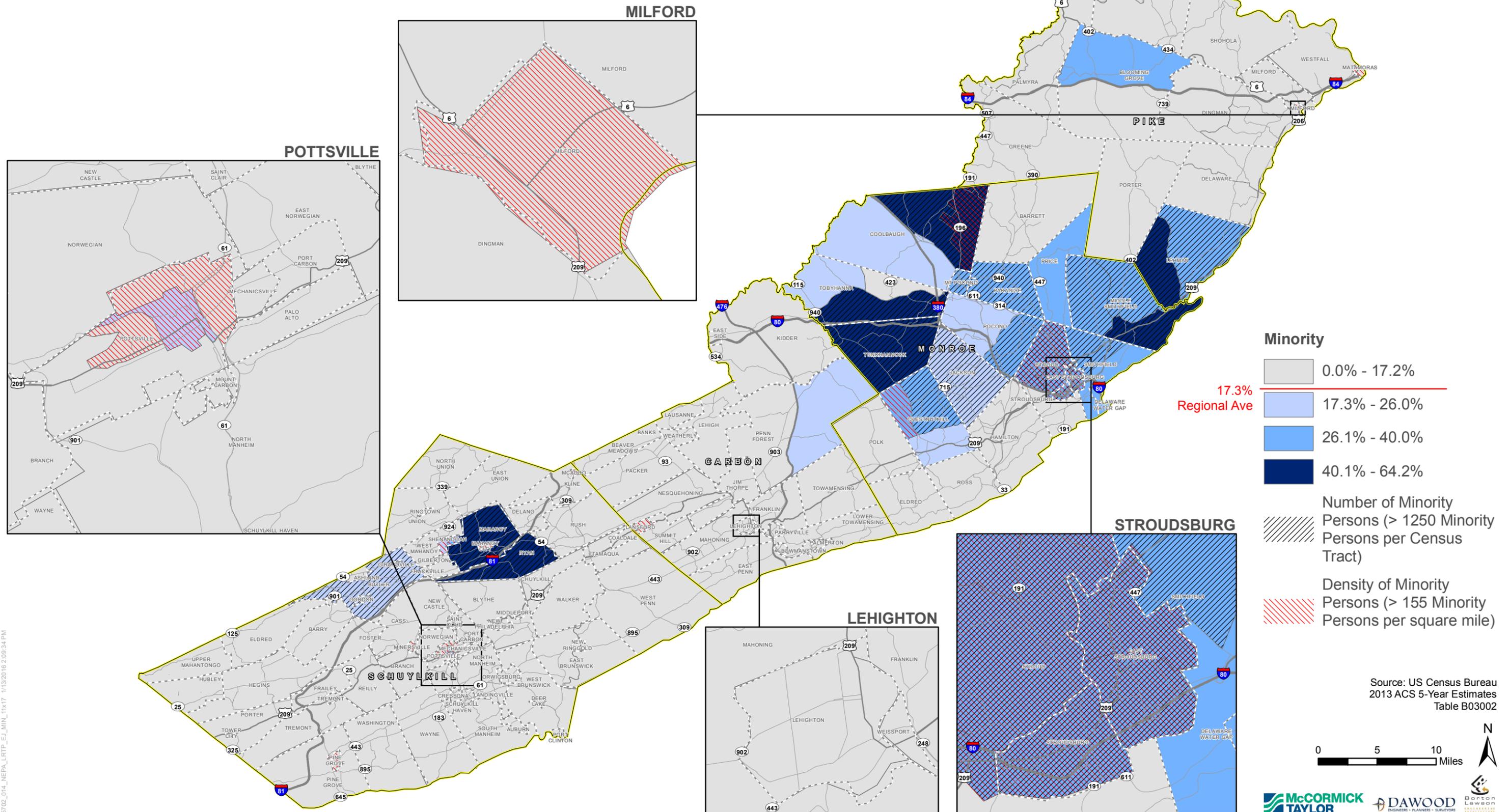
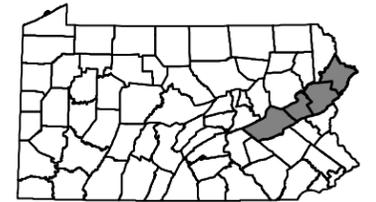
Table 3 gives the NEPA MPO Region low-income population and the percentage of the population below the poverty level, according to data from the 2009-2013 ACS 5-Year Estimates. To prevent bias, the percentage below poverty level is calculated using the “Population for which Poverty Status is determined”. The Census determination of poverty level is based on family size, composition and income. If a family’s total income is less than the threshold for that family type, then every person in the family is considered to be “in-poverty”. While the income thresholds do not vary by geographic region, they are updated annually according to the Consumer Price Index. The NEPA MPO regional concentration for low-income persons was found to be 11.8%.

Table 3. Low-Income Populations in the NEPA MPO Region			
County	Total Population (for which poverty status is determined)	# of Persons Below Poverty Level	% Below Poverty Level
Carbon	64,107	7,440	11.6
Monroe	165,394	19,790	12.0
Pike	56,449	5,119	9.1
Schuylkill	140,278	17,946	12.8
Total	426,228	50,295	11.8
Source: U.S. Census Bureau, 2009-2013 ACS, 5-Year Estimates. Table S1701, Poverty Status in the Past 12 Months – Value given as “Population for whom poverty status is determined: Below poverty level”			

² In-poverty status serves as a proxy for identifying persons and households with low-income. Therefore, the terms “in-poverty” and “low-income” may be used interchangeably.

MINORITY POPULATION - ENVIRONMENTAL JUSTICE

FIGURE 1



As illustrated in **Figure 2, Below Poverty Level – Environmental Justice**, the largest low-income populations are generally located in Stroudsburg Township, Monroe County and Coaldale Borough, City of Pottsville, Shenandoah Borough and Tamaqua Borough in Schuylkill County.

More recent data was obtained from the Pennsylvania Department of Education’s Free and Reduced Price Lunch Program as a secondary indicator of low-income populations. The National School Lunch Program (NSLP), a federal and state reimbursement program, provides eligible students with free or reduced price lunches. To receive a reduced price lunch, household income must be below 185 percent of the federal poverty level and to receive a free lunch, household income must fall below 100 percent of the federal poverty level. NSLP eligibility data by school and school district is updated yearly and can be helpful in understanding a current view of poverty across the region.

Any public school, intermediate unit, charter school, area vocational technical or career technology school, public residential child care institution or tax exempt non-public school or residential child care institution may apply to be an NSLP sponsor.³

The eligibility criteria are annually established by the United States Department of Agriculture (USDA). The USDA issued new federal guidelines for 2014 for free and reduced price lunches as shown in **Table 4**⁴.

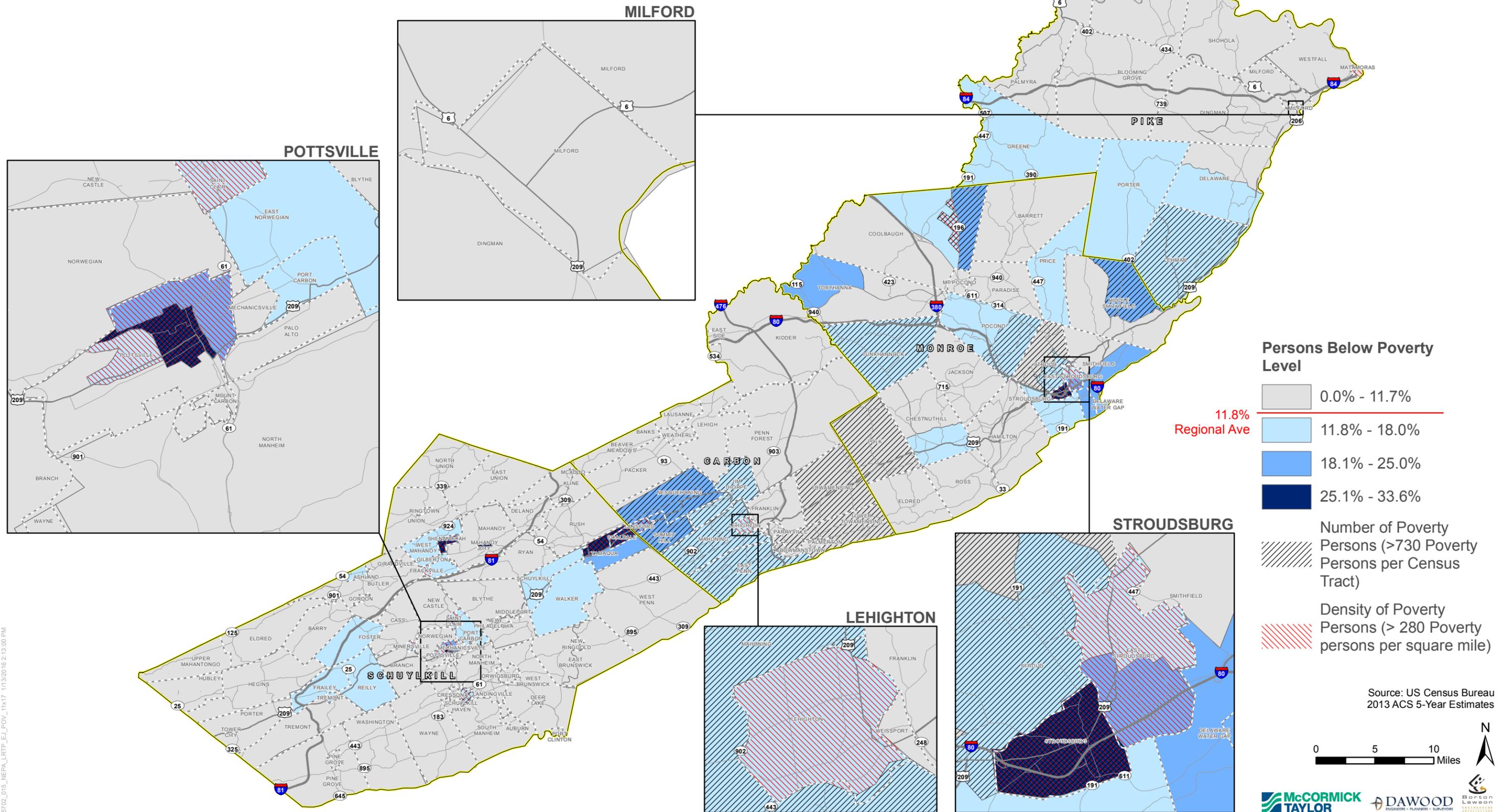
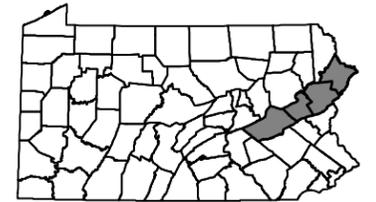
Table 4. Annual Income – NSLP Eligibility Guidelines Effective July 1, 2014 – June 30, 2015		
Family Size	Free Meals or Milk	Reduced Price Meals
	(100% of Poverty Guidelines)	(185% of Poverty Guidelines)
One	\$11,670	\$21,590
Two	\$15,730	\$29,101
Three	\$19,790	\$36,612
Four	\$23,850	\$44,123
Five	\$27,910	\$51,634
Six	\$31,970	\$59,145
Seven	\$36,030	\$66,656
Eight	\$40,090	\$74,167
Each additional family member add	+ \$4,060	+ \$7,511
Source: USDA Food and Nutrition Service, School Meals, Income Eligibility Guidelines		

³ Department of Education, Food and Nutrition Programs, National School Lunch Program.

⁴ Federal Register <http://www.gpo.gov/fdsys/pkg/FR-2014-03-05/pdf/2014-04788.pdf>, accessed August 7, 2015.

BELOW POVERTY LEVEL - ENVIRONMENTAL JUSTICE

FIGURE 2



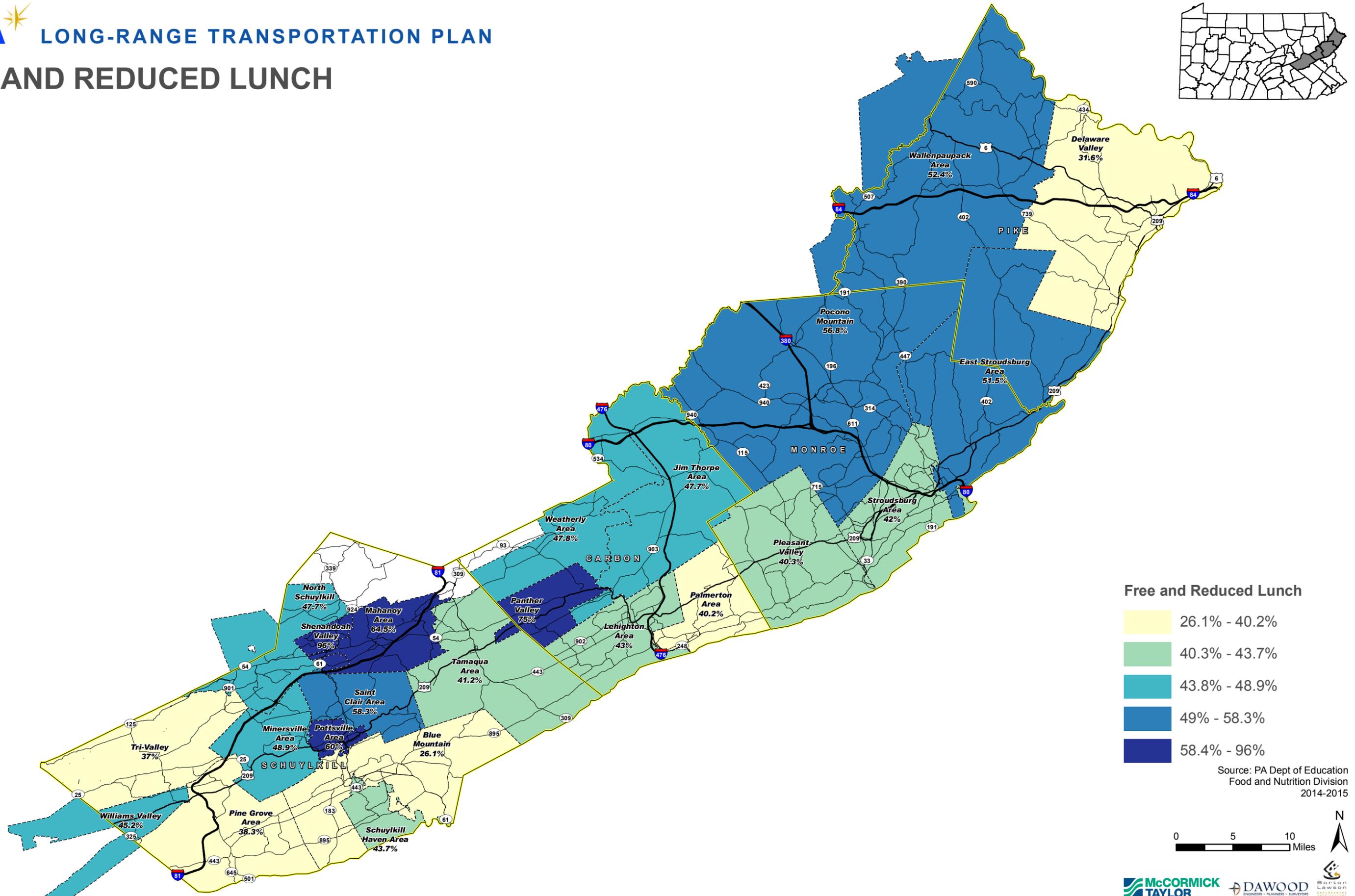
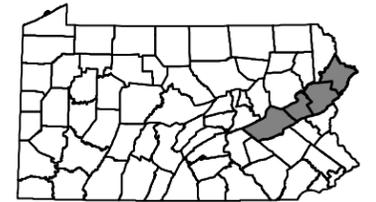
The results showed that 47.3 percent (regional average) of the total students enrolled in public schools are eligible for free and reduced price lunch. The regional average was used as a threshold for identifying those school districts with a disproportionately high percentage of students who are eligible for the free and reduced price lunch program (**Figure 3, Free and Reduced Lunch**). The school districts and their percent free/reduced lunches are listed in **Table 5**.

Table 5. Percent Eligible for Free & Reduced Priced Lunches – NEPA MPO Region Public School Districts, 2014-15		
School District	County	Percent Eligible
Carbon Career & Technical Institute	Carbon	49.2
Jim Thorpe Area	Carbon	47.7
Lehigh Area	Carbon	43.0
Palmerton Area	Carbon	40.2
Panther Valley	Carbon	75.0
Weatherly Area	Carbon	47.8
East Stroudsburg	Monroe	51.5
Monroe Career & Technical Institute	Monroe	43.7
Pleasant Valley	Monroe	40.3
Pocono Mountain	Monroe	56.8
Stroudsburg Area	Monroe	42.0
Delaware Valley	Pike	31.6
Wallenpaupack Area	Pike	52.4
Blue Mountain	Schuylkill	26.1
Gillingham Charter School	Schuylkill	74.1
Mahanoy Area	Schuylkill	64.5
Minersville Area	Schuylkill	48.9
North Schuylkill	Schuylkill	47.7
Pine Grove Area	Schuylkill	38.3
Pottsville Area	Schuylkill	60.0
Saint Clair Area	Schuylkill	58.3
Schuylkill Haven Area	Schuylkill	43.7
Schuylkill IU 29	Schuylkill	100.0
Schuylkill Technology Centers	Schuylkill	53.7
Shenandoah Valley	Schuylkill	95.8
Tamaqua Area	Schuylkill	41.2
Tri-Valley	Schuylkill	37.0
Williams Valley	Schuylkill	45.2

Source: National School Lunch Program, 2015 <http://www.education.pa.gov/Teachers%20-%20Administrators/Food-Nutrition/Pages/National-School-Lunch-Program-Reports.aspx#.VioW7MuFOUk>

FREE AND REDUCED LUNCH

FIGURE 3



Free and Reduced Lunch

- 26.1% - 40.2%
- 40.3% - 43.7%
- 43.8% - 48.9%
- 49% - 58.3%
- 58.4% - 96%

Source: PA Dept of Education
 Food and Nutrition Division
 2014-2015



Senior Population

The *Age Discrimination Act of 1975*, which prohibits discrimination on the basis of age, states:

No person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under, any program or activity receiving Federal financial assistance.

For the purposes of this LRTP, the application of this Act is made for the senior (elderly) population—persons age 65 and over. The population of the United States is aging rapidly, with the median age increasing from 28 in 1970 to 35 in 2000 and 37.2 in 2010. In the coming decades covered by this LRTP, cumulative advances in medicine and nutrition as well as improvements in environmental quality are anticipated to promote this trend, and the senior population will continue to expand.

Table 6 gives the NEPA MPO senior population and the percentage of the population for ages 65 and over. Data from the 2013 ACS 5-Year estimate indicates that Pennsylvania has one of the highest percentages of senior persons in the United States at 15.7 percent, ranking fourth in the country. Carbon, Pike and Schuylkill counties have a percentage of seniors that is above the Pennsylvania average.

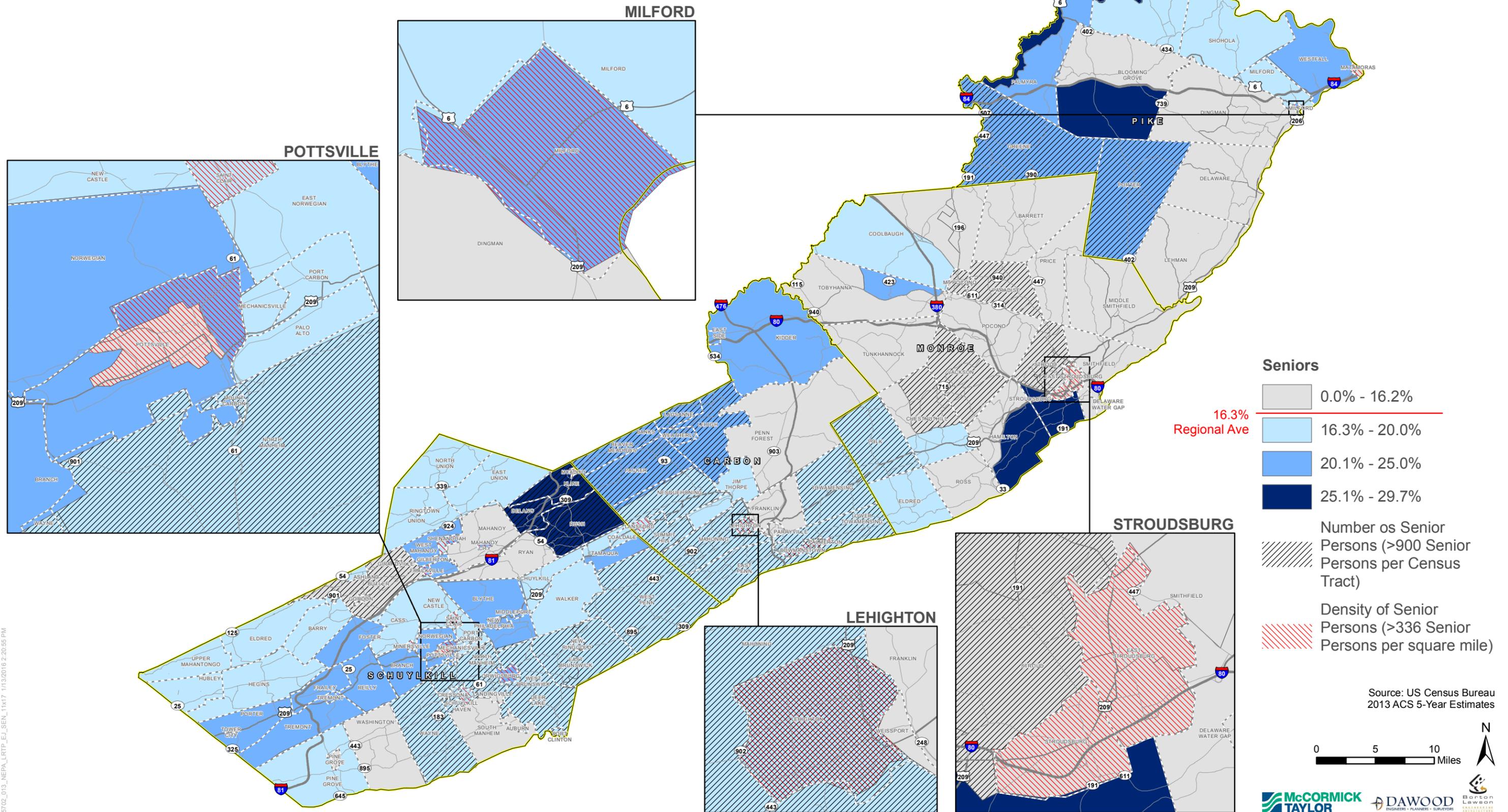
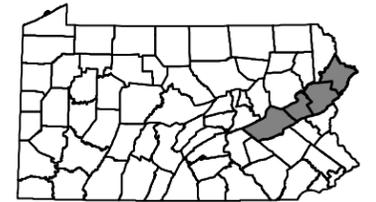
County	Total Population	Age 65 & over	% of Population 65 & over
Carbon	65,074	11,908	18.3
Monroe	168,947	22,613	13.4
Pike	57,179	10,111	17.7
Schuylkill	147,700	27,095	18.3
Total	438,900	71,727	16.3

Source: U.S. Census Bureau, American Community Survey (ACS), 5-Year Estimates (2009-2013). Senior Population: Table S0103, ACS Population 65 Years and Over in the United States – Value given as “Total Population: 65 years and over”.

As illustrated in **Figure 4, Seniors (65+ Population)**, senior populations (age 65 and over) are somewhat dispersed throughout the NEPA MPO Region, but the highest populations are generally found in Hamilton Township and Stroud Township, Monroe County; Blooming Grove Township, Lackawaxen Township and Palmyra Township, Pike County; and Delano Township, Kline Township, the City of Pottsville and Rush Township, Schuylkill County.

SENIORS (65+ POPULATION)

FIGURE 4



Disabled Population

The *Americans with Disabilities Act of 1990* (ADA), along with the *Americans with Disabilities Act Amendments Act of 2008*, prohibit discrimination on the basis of disabilities. The term “disability” means, with respect to an individual:

- A physical or mental impairment that substantially limits one or more major life activities of such individual;
- A record of such an impairment; or
- Being regarded as having such an impairment, which includes the circumstance where an individual has been subjected to actions prohibited under the ADA Act because of an actual or perceived physical or mental impairment.

The *ADA Amendments Act of 2008* were enacted to provide “a clear and comprehensive national mandate for the elimination of discrimination” and “clear, strong, consistent, enforceable standards addressing discrimination.” In doing so, the ADA Amendments Act rejects several Supreme Court rulings that limit the scope of protection provided under the ADA.

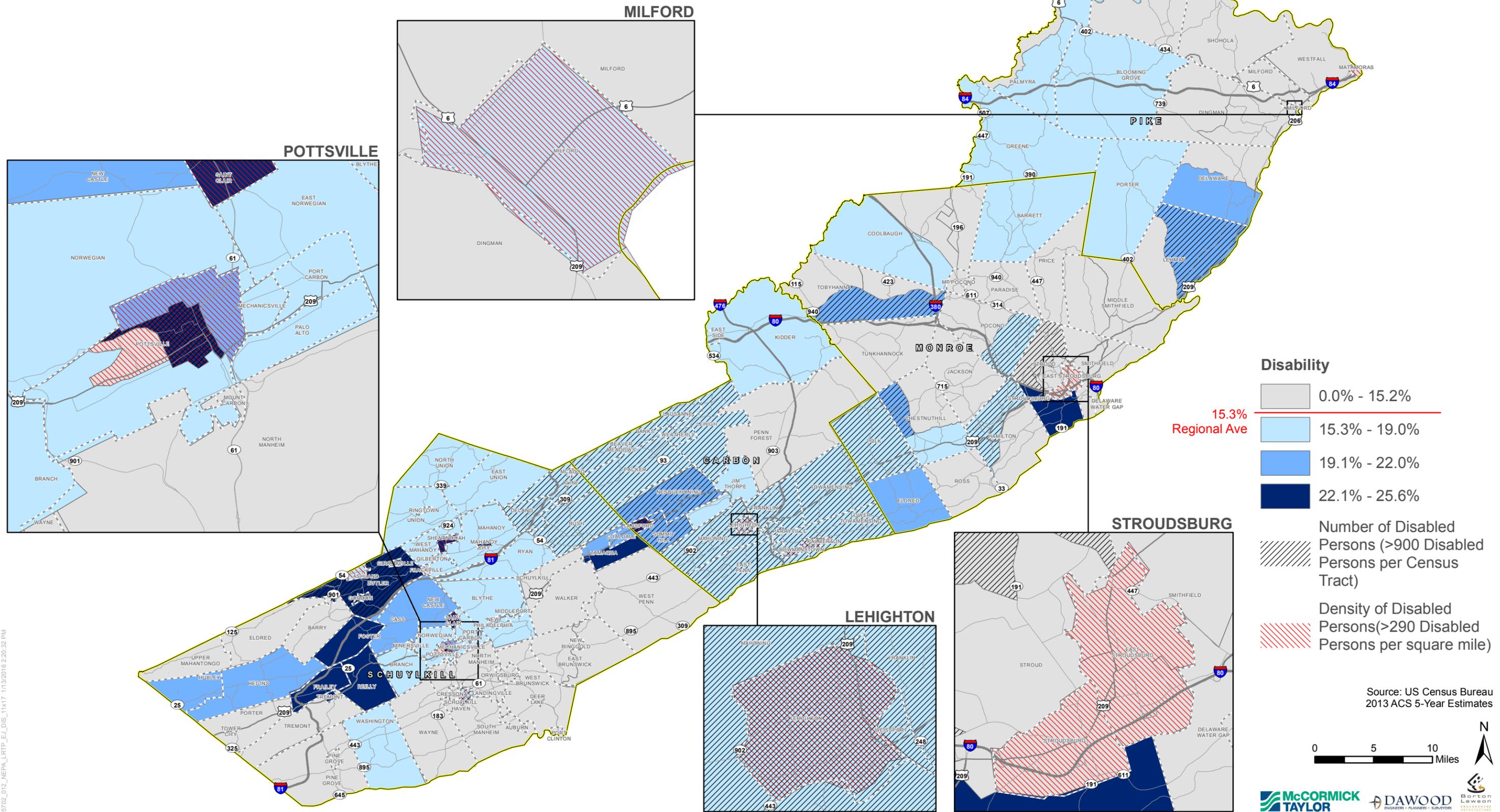
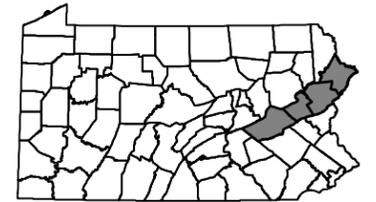
Table 7 gives the NEPA MPO Region disabled population according to data from the 2009-2013 ACS 5-Year estimates. The MPO regional average for disabled persons was found to be 15.3 percent.

County	Civilian Non-Institutionalized Population	# of Persons with a Disability	% Disabled
Carbon	64,326	11,000	17.1
Monroe	167,783	22,158	13.2
Pike	56,768	8,255	14.5
Schuylkill	140,986	24,258	17.2
Total	429,863	65,671	15.3

Source: ACS, 2013 5-Year Estimates, Disabled Population: Table S1810, Disability Characteristics – Value given as “Total civilian non-institutionalized population: With a disability”.

As illustrated in **Figure 5, Disabled Population**, areas with the largest disabled population include Lansford Borough, Carbon County and the following locations in Schuylkill County: Butler Township, Foster Township, Frailey Township, Girardville Borough, Gordon Borough, City of Pottsville, Reilly Township, Saint Clair Borough, Shenandoah Borough, Tamaqua Borough, and Tremont Borough. This pattern may be related to the presence of group homes or nursing homes in these areas.

DISABLED POPULATION
FIGURE 5



Disability

- 0.0% - 15.2%
- 15.3% - 19.0%
- 19.1% - 22.0%
- 22.1% - 25.6%

Number of Disabled Persons (>900 Disabled Persons per Census Tract)

Density of Disabled Persons (>290 Disabled Persons per square mile)

15.3%
Regional Ave

Source: US Census Bureau
 2013 ACS 5-Year Estimates



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Limited English Proficiency Population

Executive Order 13166 on Improving Access to Services for Persons with Limited English Proficiency (LEP) aims “to improve access to federally-conducted and federally-assisted programs and activities for persons who, as a result of national origin, are limited in their English proficiency.”⁵ Individual with LEP are those who have a limited ability to read, write, speak or understand the English language. For the purpose of this analysis, LEP persons include those who speak the English language “less than very well,” as classified by the Census. The ability to speak English is based upon self-reporting or upon an answer given by another member of the household.

Table 8 presents the LEP population and the percentage of the population with LEP (persons age five and over), according to data from the ACS 2013 5-Year estimates. The NEPA MPO regional average for LEP persons is 2.8 percent.

Table 8. Limited English Proficiency Population in the NEPA MPO Region			
County	Total Population: Age 5 & over	# of Persons who Speak English less than "Very Well": Age 5 & over	% of Persons who Speak English less than "Very Well": Age 5 & over
Carbon	61,832	680	1.1
Monroe	160,701	7,071	4.4
Pike	54,663	1,804	3.3
Schuylkill	140,231	2,103	1.5
Total	417,427	11,658	2.8

Source: U.S. Census Bureau, ACS, 5-Year Estimates (2009-2013). Limited English Proficiency Population: Table S1601, Language Spoken At Home – Value given as “Population 5 years and over: Language other than English: Speak English less than ‘very well’”.

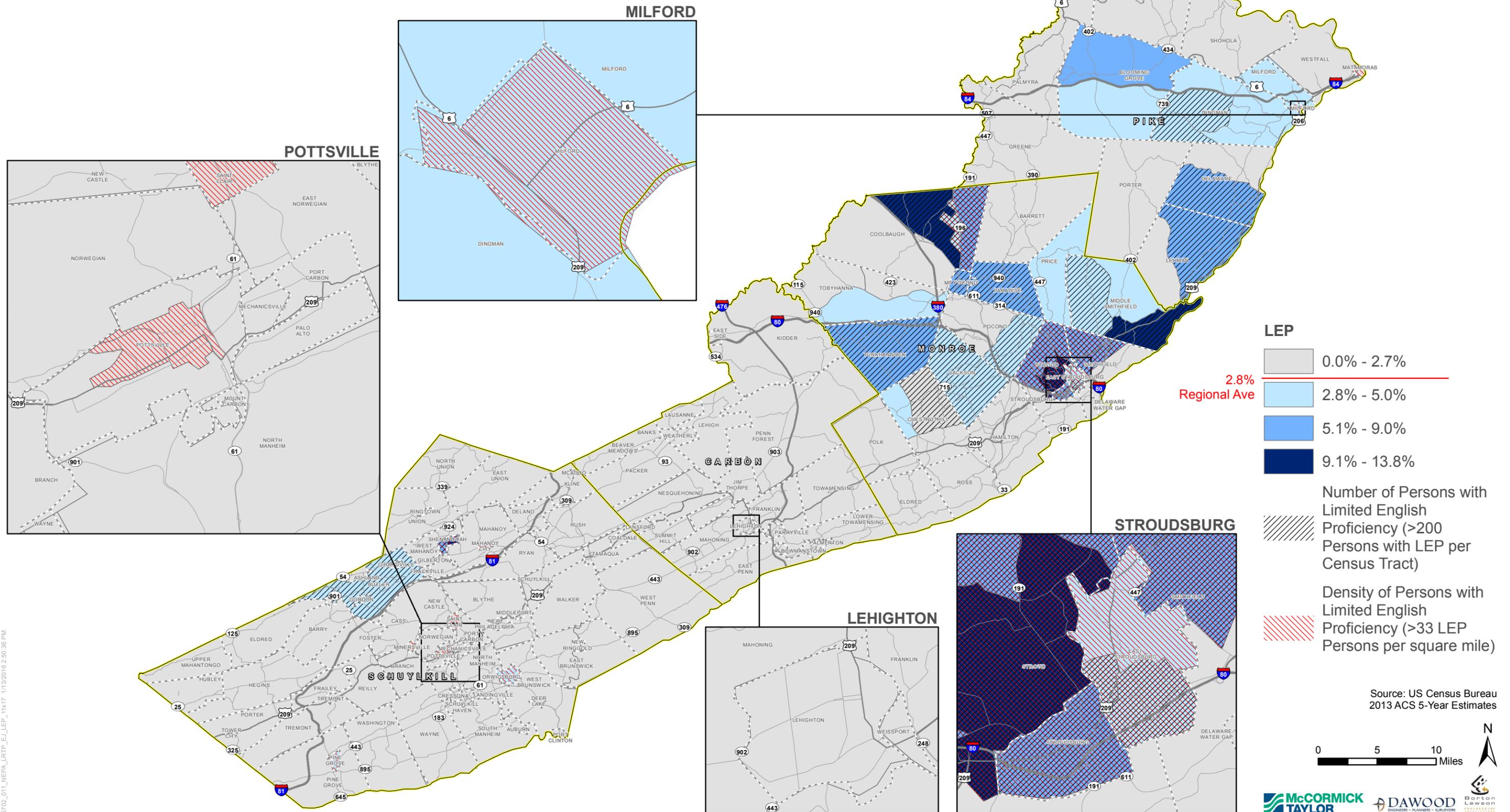
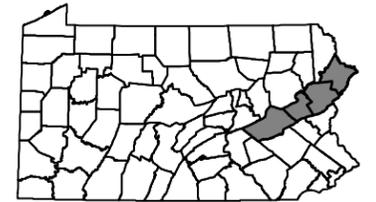
In navigating the transportation system, an LEP person may be limited in his or her ability to read and understand signs, interpret advisory radio messages and decipher transit schedules. In addition, LEP adults tend to be lower income earners and more dependent on public transportation.

For the most part, the LEP population of the region is small, both in comparison to the total population (2.8% regionally) and to other TUPs. As illustrated in **Figure 6, Limited English Proficiency**, the largest LEP populations are located in Coolbaugh Township, Middle Smithfield Township, Mt. Pocono Borough, Paradise Township, Smithfield Township, Stroud Township and Tunkhannock Township in Monroe County; Blooming Grove Township, Delaware Township and Lehman Township in Pike County; and Shenandoah Borough in Schuylkill County.

⁵ Executive Order 13166 of August 11, 2000, *Improving Access to Services for Persons with Limited English Proficiency*.

LIMITED ENGLISH PROFICIENCY

FIGURE 6



Zero-Vehicle Households

Households and persons without access to a personal vehicle, while not protected under a Federal Act or Executive Order, are considered in this analysis as a traditionally underserved population. Zero-vehicle households are those without direct ownership of an automobile and tend to be highly transit-dependent.

In most instances, the distribution of zero-vehicle households directly mirrors the distribution of persons in poverty. However, some exceptions are noted. Unlike the direct impact that poverty has on the choice of transportation options, not owning a vehicle may be a personal decision, rather than an economic one.

Table 9 gives the NEPA MPO regional distribution and percentage of zero-vehicle households, according to data from the 2013 ACS 5-Year Estimates. The percentage of households without access to a personal vehicle is 7.3 percent for the NEPA MPO Region, as compared to the national average of 9.1 percent. The Pennsylvania average is 11.5 percent.

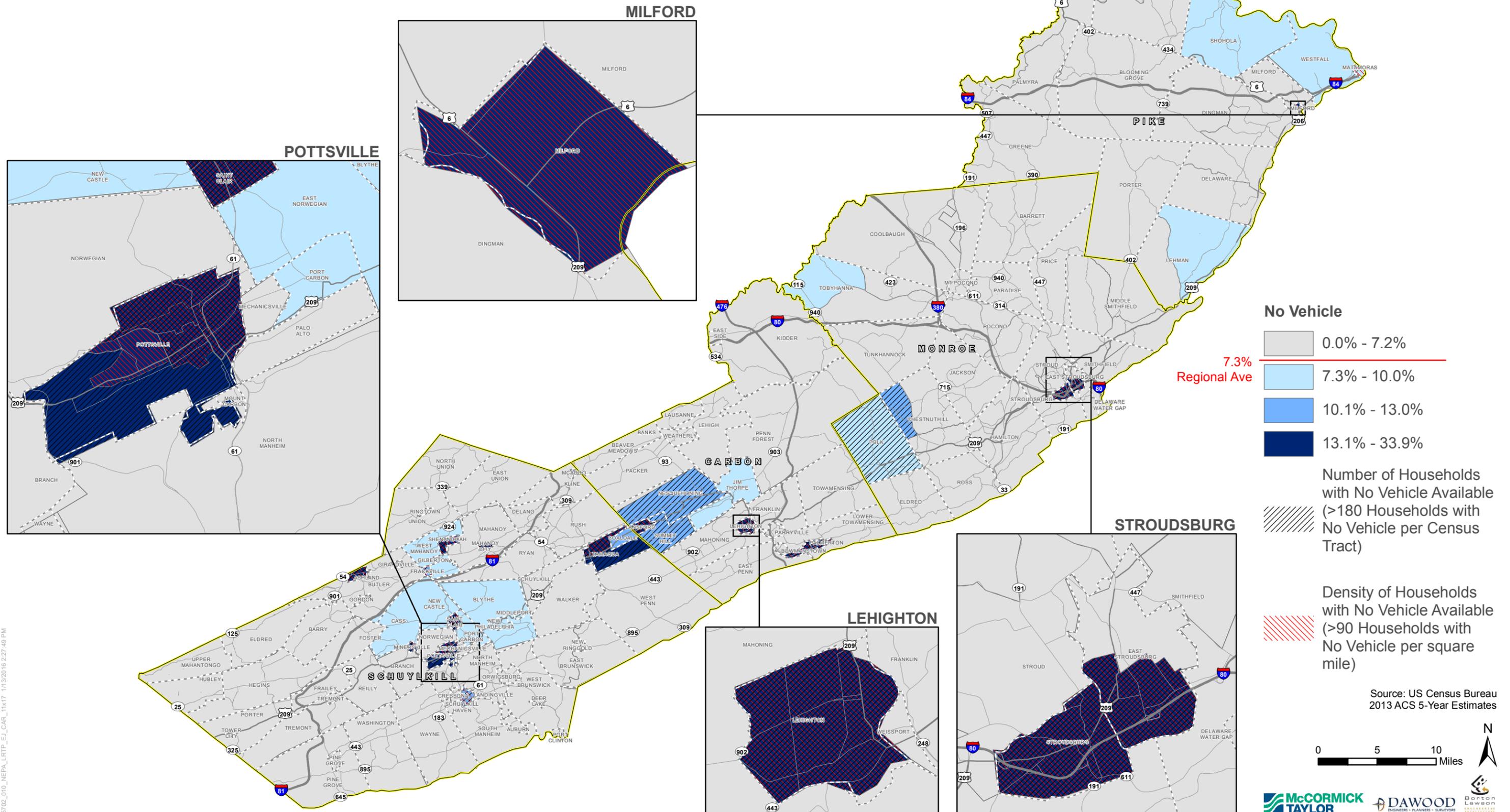
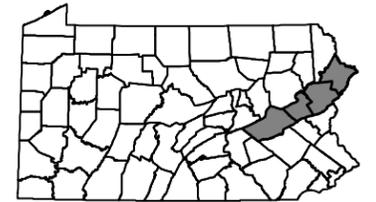
County	Total Households	Zero Vehicle Households	% of Households with Zero Vehicles Available
Carbon	25,903	2,177	8.4
Monroe	58,875	3,073	5.2
Pike	21,581	989	4.6
Schuylkill	59,658	5,799	9.7
Total	166,017	12,038	7.3

Source: U.S. Census Bureau, American Community Survey, 5-year Estimate (2009-2013). Table B08201, Household Size by Vehicles Available – Value given as “Total Households: No vehicle available”.

As illustrated in **Figure 7, No Vehicle Households**, the areas with the highest concentration of zero-vehicle households are focused in Lansford Borough, Lehighton Borough and Palmerton Borough, Carbon County; East Stroudsburg Borough and Stroudsburg Borough, Monroe County; Milford Township, Pike County; and Ashland Borough, Minersville Borough, City of Pottsville, Saint Clair Borough, Shenandoah Borough and Tamaqua Borough, Schuylkill County.

NO VEHICLE HOUSEHOLDS

FIGURE 7



Benefits and Burdens Analysis

The Benefits and Burdens Analysis provides feedback on the equity of the TIP, and examines the impact that it has on minority and low income populations⁶ and identifies any disproportionate impacts.

Benefits are the positive impacts from investment such as enhancements in transportation services/options, increases in public safety, congestion relief, increased economic vitality, reduced travel times, etc. Burdens, on the other hand, are the adverse effects of investment such as pollution (noise and air), disruption of community cohesion, displacement of persons or businesses, destruction or decrease of economic vitality, adverse employment effects, decline in tax base or property values, diminished esthetics, disruption of businesses, parking/access to transit, congestion, or the denial, delay or reduction of receipt of benefits.

No standardized methodology and set of performance measures has been established for assessing benefits and burdens. Rather, the FHWA/FTA certification review process seeks evidence that MPOs have established an analytic process for assessing the regional benefits and burdens of transportation system investments, with specific consideration as to how these effects are distributed among different socio-economic groups. This includes evidence that there is a data collection process and that the analytical process seeks to assess the benefit and impact distributions of the investments included in the TIP and LRTP.⁷

Analysis Framework

The framework for the Benefits and Burdens Analysis is essentially a “before-and-after” comparison in which baseline and forecasted performance measures are overlaid and evaluated relative to the geographic distribution populations. Performance measures often include commuter travel times, roadway safety and quality of transportation services. Baseline information establishes the primary comparison point and is typically available through existing data sources.

As a forward-looking methodology that will help to inform future updates of the LRTP, the Benefits and Burdens Analysis consists of the following two elements:

- *Development of Baseline Performance Measures* – A baseline set of performance measures, based on existing datasets and sources (e.g., U.S.

⁶ While multiple EJ and traditionally underserved populations have been identified in this plan, it is important to note that the Benefits and Burdens Analysis was based solely on the geographic location of Minority and In-Poverty Populations. This determination was used under advisement of the specific application of *Executive Order 12898 on Environmental Justice*.

⁷ Federal Highway Administration, *Environmental Justice Reference Guide*, April, 1 2015.

Census, PennDOT, etc.), are developed to establish a comparison point for evaluating the future progress of transportation equity. For future updates of the LRTP, updated datasets from the same sources may be accessed and an assessment of the plan's equity may be performed.⁸

- *Assessment of Transportation Investment Plan Equity* –The location of planned, future transportation projects and the amount of their investment can be mapped and evaluated in relation to minority and low-income populations. This evaluation will provide the primary criteria used to assess the equity of the LRTP.

The intent of the comparisons made in this analysis is to judge how well the benefits and burdens generated by the LRTP projects are balanced between areas with high concentrations of minority and low-income populations, and all other areas of the NEPA MPO Region. For the purposes of the Benefits and Burdens Analysis, the following language will be used when referring to areas with high concentrations of minority and low-income populations:

“High minority” refers to census tracts that have a concentration of minority persons that is greater than or equal to the NEPA MPO regional average of 17.3 percent.

“High in-poverty” refers to census tracts that have a concentration of low-income persons that is greater than or equal to the NEPA MPO regional average of 11.8 percent.

As such, the identification of minority and low-income populations is fundamental to the Benefits & Burdens Analysis. For reference purposes, **Table 10** provides statistics and a brief review of how minority and low-income populations were identified at the census tract level according to the regional averages. The populations are listed according to population “categories” that were applied in summarizing the Benefits & Burdens performance measures. Finally, cross-tabulations of total, minority and low-income populations are given to further clarify the distribution of population across the NEPA MPO Region. **Figure 8, Tracts that Exceed the Regional Threshold for: Minority and Below Poverty**, offers a geographic representation of these locations.

The ultimate outcome of this analysis is to ensure comparative transportation equity across the region, with all areas receiving an appropriate share of benefits and burdens. The result of this analysis will lend itself to the selection and prioritization of LRTP projects.

⁸ If a regional travel demand model is developed for future LRTP updates, the data contained in the current LRTP document will still be useful in both drawing comparisons and calibrating the travel demand model.

Table 10. Population Categories and Benchmarks for Benefits & Burdens Analysis of Performance Measures						
Population Area Category	Definition	Number of Census Tracts	Population Distribution Benchmarks			
			Total Population for Minority	Minority Population	Total Population for whom Poverty Status is Determined	In-Poverty Population
High Minority Only	>= 17.3% Minority Population	14 (13.6%)	80,158	24,930 (31.1%)	74,650	5,702 (7.6%)
High In-Poverty Only	>= 11.8% In-Poverty Population	24 (23.3%)	91,535	5,040 (5.5%)	89,732	15,155 (16.9%)
Both High Minority and High In Poverty	>= 17.3% Minority Population AND >= 11.8% In-Poverty Population	20 (19.4%)	95,272	35,316 (37.1%)	92,269	16,695 (18.1%)
Neither High Minority nor High In-Poverty	< 17.3% Minority Population AND < 11.8% In-Poverty Population	45 (43.7%)	171,935	10,695 (6.2%)	169,577	12,473 (7.5%)
NEPA MPO Region Total		103	438,900	75,981 (17.3%)	426,228	50,025 (11.7%)

Source: U.S. Census Bureau, 2013 American Community Survey 5-Year Estimates.

Development of Equity & Environmental Justice Performance Measures

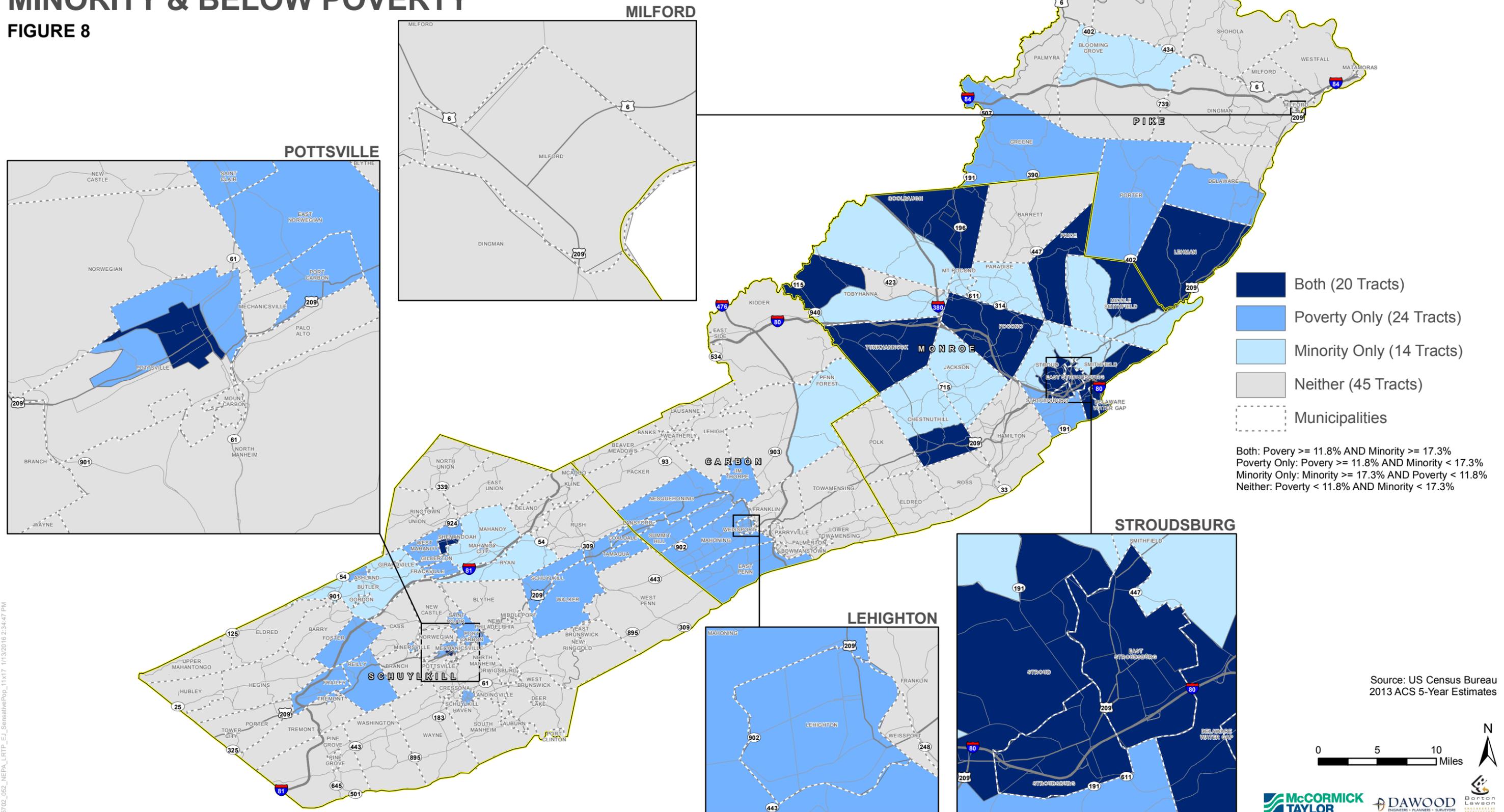
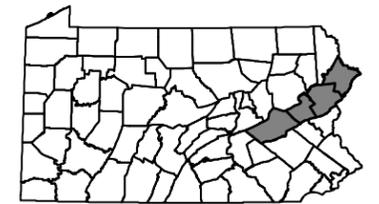
A set of performance measures was generated to gauge the advancement of transportation equity and Environmental Justice, and included the following:

- Transportation service levels
- Transportation mobility
- Transportation funding

The performance measurements were designed to be replicable using readily available data sources so that transportation equity considerations may be tracked in subsequent updates of the LRTP.

TRACTS THAT EXCEED THE REGIONAL THRESHOLD FOR: MINORITY & BELOW POVERTY

FIGURE 8



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Transportation Service Levels

Performance measures related to transportation service levels were selected to broadly evaluate the frequency of use, availability, safety and service levels provided by the most prevalent modes of personal transportation—automobile, transit and walking.

Travel Mode to Work

The use of different modes for travel to work was investigated, using U.S. Census data to evaluate the availability and diversity of travel modes used in areas with higher concentrations of minority and in-poverty persons. **Table 11** summarizes the mode use data by total commuters and the percentage of the total commuters who use each mode.

Population Area Category	Total Commuters (Workers Age 16 +)	Car, Truck, or Van		Public Transit	Bicycle	Walk	Work at Home	Other
		Drove Alone	Carpool					
High Minority Only	33,466	26,126	3,402	1,771	42	468	1,424	233
		78.1%	10.2%	5.3%	0.1%	1.4%	4.3%	0.7%
High In-Poverty Only	36,878	29,743	3,702	232	39	1,847	927	388
		80.7%	10.0%	0.6%	0.1%	5.0%	2.5%	1.1%
Both High Minority and High In-Poverty	38,435	29,662	4,368	1,475	31	1,359	1,286	254
		77.2%	11.4%	3.8%	0.1%	3.5%	3.3%	0.7%
Neither High Minority nor High In-Poverty	78,605	64,715	7,780	581	38	2,164	2,649	678
		82.3%	9.9%	0.7%	0.04%	2.8%	2.1%	0.9%
NEPA MPO Region Total	187,384	150,246	19,252	4,059	150	5,838	6,286	1,553
		80.2%	10.3%	2.2%	0.1%	3.1%	3.4%	0.8%

Source: U.S. Census Bureau, 2013 American Community Survey, 5-Year Estimates, Table B08006.

Clearly, the automobile (e.g., car, truck or van) dominates all other modes for trips to work, with more than 90 percent of all commuters choosing to drive alone or carpool using an automobile. High minority areas showed the greatest use of public transit and the least amount of walkers, but otherwise had very similar mode use characteristics to those areas without high concentrations of minority or low-income populations. High in-poverty areas showed the greatest use of walking, but also had the lowest concentration of public transit use. As compared to the automobile, transit usage was low across all areas, with the highest usage happening in high minority and both high minority and in-poverty areas.

Roadway Condition

The condition of roadways within high minority and high in-poverty areas was evaluated according to International Roughness Index (IRI) data obtained through PennDOT's Multimodal Project Management System Intelligent Query (MPMS IQ). **Table 12** gives the mileage and percentage of state-owned roadway by IRI Quality Range.

Population Area Category	Total Roadway Mileage	Roadway Mileage within IRI Quality Range			
		Excellent	Good	Fair	Poor
High Minority Only	324.5	52.8	91.7	77.9	102.1
		16.3%	28.3%	24.0%	31.5%
High In-Poverty Only	288.1	57.7	80.7	67.0	82.7
		20.0%	28.0%	23.3%	28.7%
Both High Minority and High In-Poverty	239.0	34.0	95.3	46.9	62.8
		14.2%	40.0%	19.6%	26.3%
Neither High Minority nor High In-Poverty	1068.6	175.1	312.9	251.8	328.8
		16.4%	29.3%	23.6%	30.8%
NEPA MPO Region Total	1,920.2	319.6	580.6	443.6	576.4
		16.6%	30.2%	23.1%	30.0%

Source: Sums based on clipping the MPMS IQ IRI data (April 2015) by Census Tract.

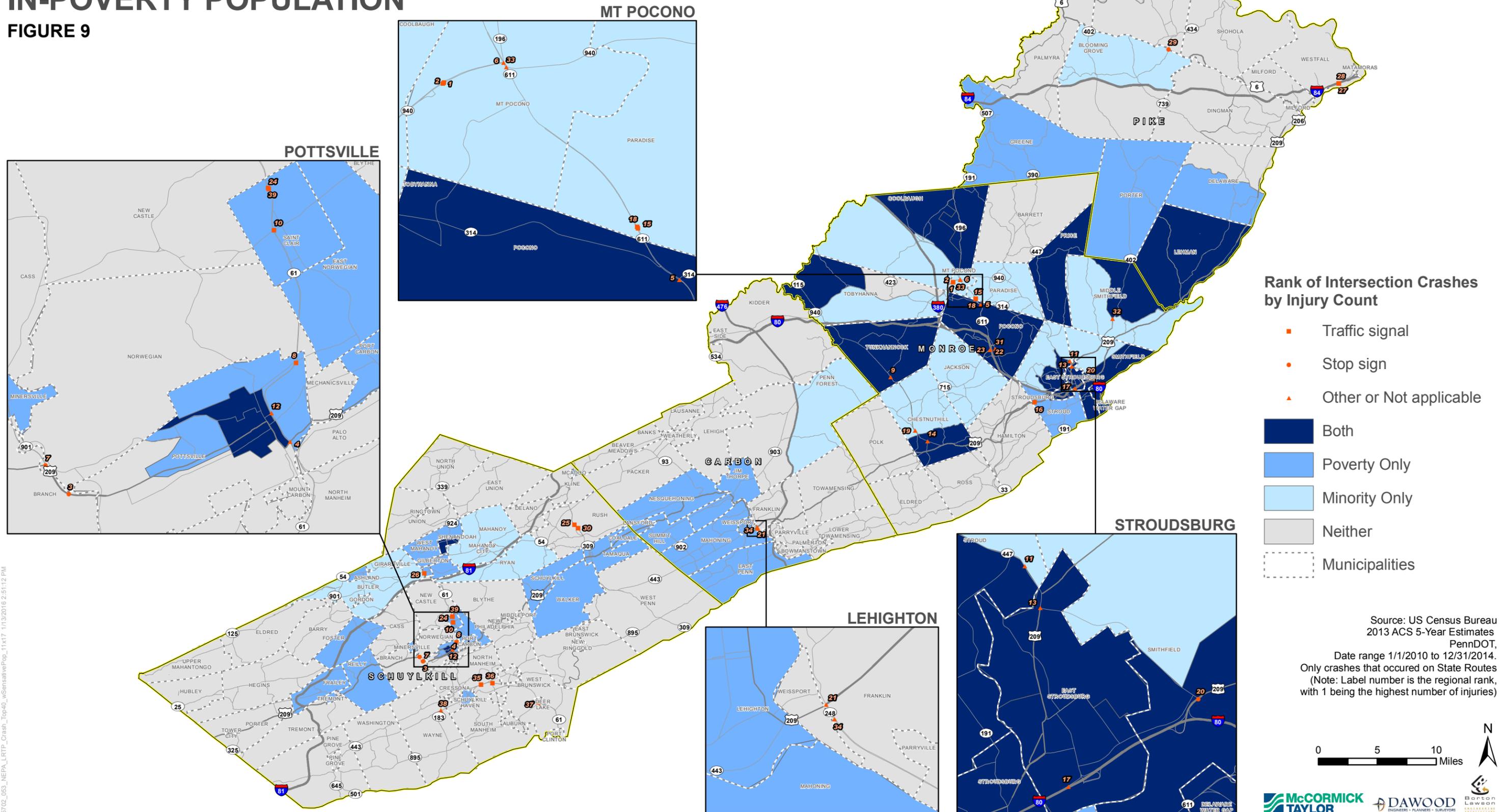
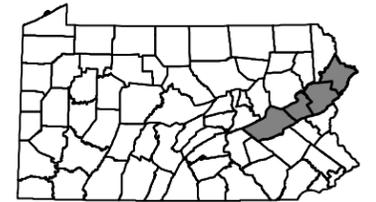
In general, the proportions of mileage for each Quality Range are consistent across most areas. The excellent condition rating is the lowest in the both high minority and high in-poverty area; however, the same area has the highest good condition rating. The highest percentage of mileage with a poor condition rating is located in the neither high minority nor high in-poverty area.

Vehicular & Pedestrian Safety

Vehicular and pedestrian safety in the vicinity of minority and low-income populations was evaluated by overlaying crash history data provided by PennDOT Districts 4 and 5 with the distributive U.S. Census data mapping. The crash history data included reportable crashes for the 5-year period from January 2010 to December 2014. The highest intersection crashes were identified by sampling the crash data within 100 feet of any intersection and ranking the top 40 locations in the region according to the number of fatal/injury crashes. **Figure 9, Top 40 Intersection Crashes & High-Minority and In-Poverty Population**, illustrates top intersection crash locations within high minority and in-poverty areas.

TOP 40 INTERSECTION CRASHES & HIGH MINORITY AND IN-POVERTY POPULATION

FIGURE 9

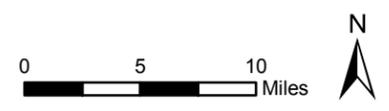


Rank of Intersection Crashes by Injury Count

- Traffic signal
- Stop sign
- ▲ Other or Not applicable

- Both
- Poverty Only
- Minority Only
- Neither
- Municipalities

Source: US Census Bureau
 2013 ACS 5-Year Estimates
 PennDOT,
 Date range 1/1/2010 to 12/31/2014.
 Only crashes that occurred on State Routes
 (Note: Label number is the regional rank,
 with 1 being the highest number of injuries)



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Table 13 gives a comparison of the number of census tracts and population in the vicinity of the top intersection crash locations. When examining the location of intersection crash locations, high minority and both high minority and high in-poverty areas tend to be more impacted by the intersection crash locations, as compared with other areas of the NEPA MPO Region. The areas that have high minority and high poverty areas are also generally the more populated areas of the region and have larger overall populations as well as higher traffic volumes. Both of these factors likely contribute to the higher rates of intersection crashes.

Table 13. Top 40 Crash Intersections near Minority & In-Poverty Areas vs. Other Areas in the NEPA MPO Region					
Population Area Category	Total Tracts	Total Population	Number of Intersections with Crashes within Tracts	Total Crashes within Tracts	Number of Crashes per 1,000 Persons Living in the Census Tract
High Minority Only	14	80,158	48	645	8
High In-Poverty Only	24	91,535	27	354	3.9
Both High Minority and High In-Poverty	20	95,272	77	980	10.3
Neither High Minority nor High In-Poverty	45	171,935	68	843	4.9
NEPA MPO Region Total	103	438,900	220	2,822	6.4
Source: PennDOT Crash Intersection Cluster Report (Date range 1/1/2010 to 12/31/2014, only crashes that occurred on State Routes)					

Similar to the analysis of intersection crashes, **Table 14** describes the number of tracts and population in the vicinity of pedestrian crashes. Pedestrian crashes appear to occur at a higher rate in high in-poverty and both high minority and high in-poverty areas compared to other areas of the NEPA MPO Region. Pedestrian fatalities appear to occur at significantly greater rates in high-minority areas compared to other areas. The areas that have high minority and high poverty areas are also generally the more populated areas of the region and also have higher traffic volumes. Both of these factors likely contribute to the higher rates of pedestrian crashes.



Table 14. Pedestrian Crashes near Minority & In-Poverty Areas vs. Other Areas in the NEPA MPO Region

Population Area Category	Total Tracts	Total Population	Number of Pedestrian Crashes	Number of Pedestrian Crashes per 1,000 persons	Number of Fatal Pedestrian Crashes
High Minority Only	14	80,158	37	0.5	10
					27%
High In-Poverty Only	24	91,535	96	1	10
					10.4%
Both High Minority and High In-Poverty	20	95,272	98	1	10
					10.2%
Neither High Minority nor High In-Poverty	45	171,935	68	0.4	7
					10.3%
NEPA MPO Region Total	103	438,900	299	0.7	37
					12.4%
Source: PennDOT Pedestrian Crash Segment Report (Date range 1/1/2010 to 12/31/2014, Only crashes that occurred on State Routes)					

Transportation Mobility

Mobility performance measures were selected to gauge the transportation system’s ability to efficiently move persons from origins to destinations throughout the NEPA MPO Region.

Travel Time to Work

U.S. Census ACS data regarding travel time to work was used to measure relative mobility throughout the region. **Table 15** describes the journey-to-work travel times for census tracts according to census determined ranges. The final column of **Table 15** gives an estimate of “Weighted Travel Time” for each Population Area Category. Travel times for high minority and both high minority and in-poverty areas are higher than those for other areas of the region. Both of these areas also had the largest percentages of travel times greater than 89 minutes. One possible explanation for this result is that the areas of high minority and high poverty generally have larger populations and higher traffic volumes, which can lead to increased travel times. Additionally, there may be a lack of jobs in these areas, which causes people to be willing to undergo a longer work commute.



Table 15. Travel Time to Work for Minority and In-Poverty Areas vs. Other Areas in the NEPA MPO Region

Population Area Category	Total Workers (Age 16+)	< 10 min.	10-19 min.	20-29 min.	30-44 min.	45-59 min.	60-89 min.	> 89 min.	Weighted Avg. Travel Time ¹
High Minority Only	32,042	3,498	7,740	5,338	4,160	2,776	3,488	5,042	44.4
		10.9%	24.2%	16.7%	13.0%	8.7%	10.9%	15.7%	
High In-Poverty Only	35,951	6,761	10,379	5,371	5,714	3,688	2,661	1,377	30.0
		18.8%	28.9%	14.9%	15.9%	10.3%	7.4%	3.8%	
Both High Minority and High In-Poverty	37,149	5,381	8,726	5,882	5,733	2,937	3,055	5,435	41.4
		14.5%	23.5%	15.8%	15.4%	7.9%	8.2%	14.6%	
Neither High Minority nor High In-Poverty	75,956	11,013	19,380	12,948	14,029	8,068	5,727	4,791	34.1
		14.5%	25.5%	17.0%	18.5%	10.6%	7.5%	6.3%	
NEPA MPO Region Total	181,098	26,653	46,225	29,539	29,636	17,469	14,931	16,645	36.6
		14.7%	25.5%	16.3%	16.4%	9.6%	8.2%	9.2%	

Source: U.S. Census Bureau, ACS, 2013 5-Year Estimates, Table B08012.

Notes:

¹ Weighted Average Travel Time calculated by multiplying the number of commuters by the average time for each range. For the >89 minute range, a travel time of 120 minutes was assumed. The sum across all ranges was divided by the total number of commuters.

The travel times and range distribution are somewhat biased by the travel mode share. **Table 16** gives journey-to-work travel time by public transportation versus other modes. For all travel time ranges, except for 30-44, high minority and in-poverty areas have a somewhat higher proportion of trips made by public transit as compared to the NEPA MPO Region as a whole. It should also be noted that based on the evaluation of travel mode (**Table 11**), high minority and in-poverty areas had a higher proportion of trips made by walking, which is certainly a slower mode of transportation.



Table 16. Travel Time to Work by Mode for Minority and In-Poverty Areas vs. Other Areas in the NEPA MPO Region

Population Area Category	Total Workers (Age 16+)	Total Workers that take Public Transit	< 30 min.		30-44 min.		45-59 min.		> 60 min.	
			Public Transit	Modes other than Public Transit	Public Transit	Modes other than Public Transit	Public Transit	Modes other than Public Transit	Public Transit	Modes other than Public Transit
High Minority Only	32,042	1,771	257	16,319	0	4,160	19	2,757	1,495	7,035
		5.5%	0.8%	50.9%	0%	13.0%	0.1%	8.6%	4.7%	22.0%
High In-Poverty Only	35,951	232	27	22,484	73	5,641	0	3,688	132	3,906
		0.6%	0.08%	62.5%	0.2%	15.7%	0%	10.3%	0.4%	10.9%
Both High Minority and High In-Poverty	37,149	1,475	166	19,823	145	5,588	19	2,918	1,145	7,345
		4.0%	0.4%	53.4%	0.4%	15.0%	0.1%	7.9%	3.1%	19.8%
Neither High Minority nor High In-Poverty	75,956	581	109	43,232	19	14,010	23	8,045	430	10,088
		0.8%	0.1%	56.9%	0.03%	18.4%	0.03%	10.6%	0.6%	13.3%
NEPA MPO Region Total	181,098	4,059	559	101,858	237	29,399	61	17,408	3,202	28,374
		2.2%	0.3%	56.2%	0.1%	16.2%	0.03%	9.6%	1.8%	15.7%

Source: U.S. Census Bureau, ACS, 2013 5-Year Estimates, Table B08134.

Transportation Funding

Fundamentally, the principles of Environmental Justice are aimed at preventing the denial of, reduction in or significant delay in the receipt of benefits by minority and low-income populations. The establishment of transportation funding as a performance measure is consistent with this principle by supporting the evaluation of funding priorities considered for the LRTP, including the 4-year TIP. Mapping and analyzing transportation funding can assist in making the prioritization process more open, transparent and accountable to the public. In developing this funding performance measure, the core issue is whether or not the number and types of projects and the total project investment are equitably distributed throughout the NEPA MPO Region.

Transportation funding as a performance measure is appealing, particularly for its simplicity, but there are limitations that must be acknowledged. “Benefits” cannot always be effectively ascribed to a specific location. For example, many significant projects, such as transit vehicle replacements and non-specific line item funding programs for bridges and roadway projects (e.g., Congestion Mitigation and Air Quality Program) cannot be readily mapped to specific locations, yet they may deliver significant benefits to traditionally underserved populations. In addition, transportation projects that can be “mapped” to areas without high concentrations of minority or low-income persons could be projects of critical regional and economic significance, including improvements to interstate facilities and major arterial corridors. Such projects benefit all travelers, not

just local populations, by improving access to employment and activity centers.⁹ At the same time, transportation projects that deliver benefits for regional travelers may also create burdens for populations in immediate proximity to the right-of-way in the form of noise, air quality, safety for pedestrians or drivers, etc. These burdens or adverse impacts may not be fully understood until preliminary design alignments and concepts are being examined.¹⁰

Equity Assessment of the Existing TIP

Patterns of transportation investment spending from the existing TIP were compared to those in the proposed TIP to consider the distributional effects for minority and low-income populations. As shown in **Table 17**, the locatable projects from the existing TIP for the NEPA MPO Region have a total value of **\$260,357,675**. This TIP is weighted heavily toward spending on bridge improvements and construction, consistent with the current statewide priority to address structurally-deficient bridges. Project priorities may change once the problems with structurally-deficient bridges are addressed.

Figure 10, TIP Projects and High Minority and In-Poverty Population, illustrates the geographic proximity between different TIP project types and high minority and high in-poverty areas. **Table 17** summarizes the dollar value of the projects according to the project type and the geographic proximity to high minority and in-poverty populations. There was a total investment of approximately \$29 million (11 percent of the TIP) in high minority areas and \$28 million (11 percent of the TIP) in high in-poverty areas and \$113 million (43 percent of the TIP) in both high minority and high in-poverty areas.

⁹ The extent of these benefits would be measureable through the use of a regional travel demand model, a tool which is not currently available for the NEPA MPO region.

¹⁰ Environmental Justice is a topic requiring additional environmental study in the NEPA/Project Development stage.

Project Category	Population Area Category				NEPA MPO Region Total
	High Minority Only	In-Poverty Only	Both High Minority and High In-Poverty	Neither High Minority nor High In-Poverty	
BRIDGE	\$12,853,840	\$13,082,729	\$21,017,840	\$55,017,685	\$101,972,094
	12.6%	12.8%	54.0%	54.0%	
HIGHWAY/GENERAL	\$2,652,827	\$7,678,722	\$36,847,571	\$28,169,442	\$75,348,562
	3.5%	10.2%	48.9%	37.4%	
SAFETY	\$12,792,066	\$6,900,474	\$29,510,422	\$6,646,584	\$55,849,546
	22.9%	12.4%	52.8%	11.9%	
CONGESTION	0	0	\$25,551,907	0	\$25,551,907
			100.0%		
ENHANCEMENT	\$410,738	0	0	\$461,725	\$872,463
	47.1%			52.9%	
RAIL GRADE CROSSING	0	\$57,289	0	\$546,679	\$603,968
		9.5%		90.5%	
INTELLIGENT TRANS. SYSTEM	0	0	0	\$159,135	\$159,135
				100.0%	
Total Projects with Location Information	\$28,709,471	\$27,719,214	\$112,927,740	\$91,001,250	\$260,357,675
	11.0%	10.3%	43.4%	35.0%	
*The total for projects with no location information is \$29,373,440. The location of the project was based on the project's center point relative to the census tract.					
Source: PennDOT District 4 and District 5 TIP (2015-2018); PennDOT MPMS IQ.					

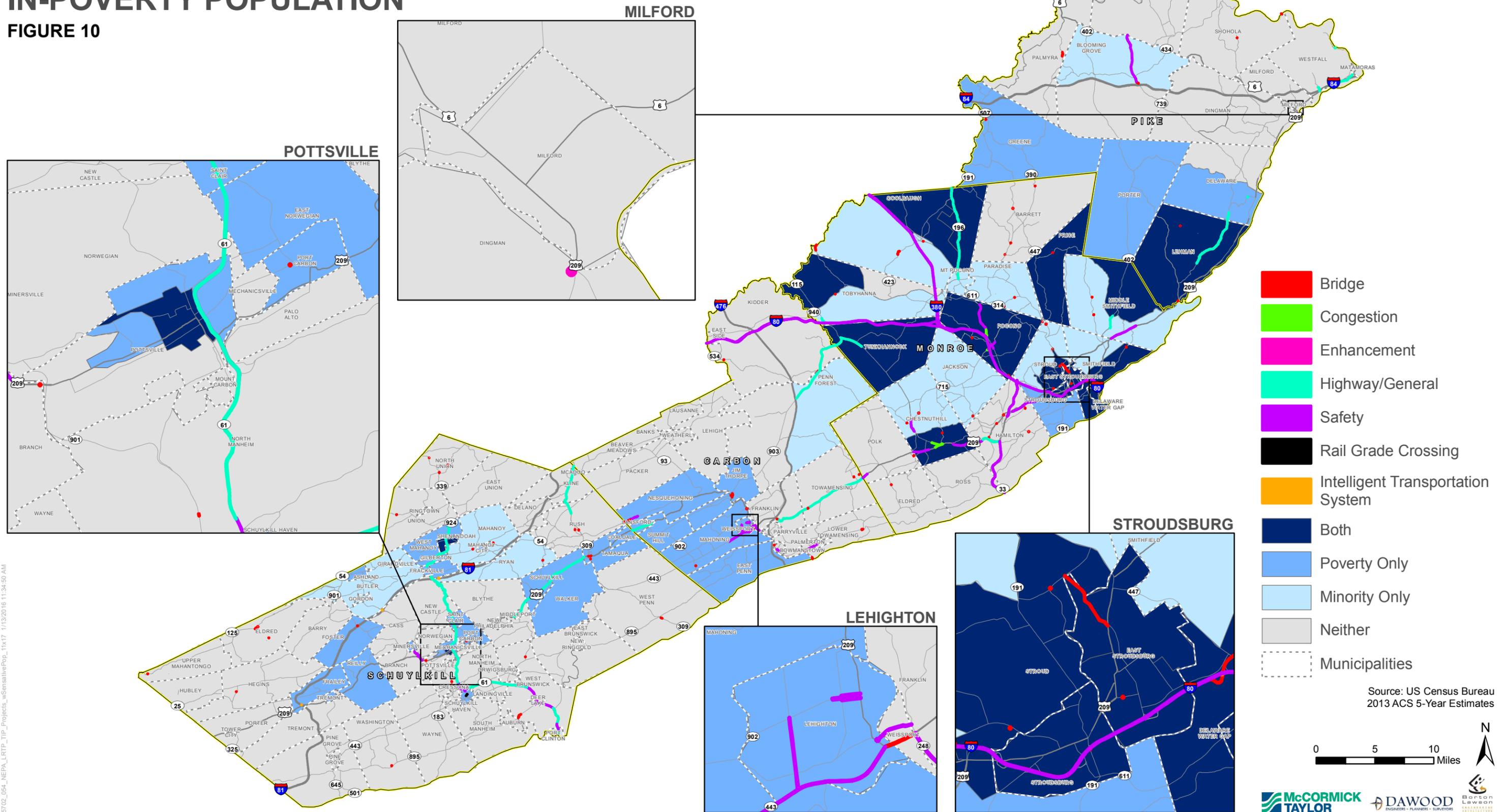
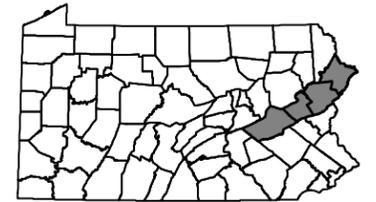
Equity Assessment of the Proposed TIP and LRTP

Two Environmental Justice Workshops were held on August 25, 2015 to gather input on transportation priorities and needs from representatives of minority, low-income and other traditionally underserved populations in the NEPA MPO Region. Specific project ideas were collected for consideration and prioritization in the LRTP.

Patterns of transportation investment spending for the proposed, fiscally-constrained LRTP for the NEPA MPO Region were considered to gauge the distributional effects on minority and low-income populations. As shown in **Table 18**, the locatable projects from the proposed LRTP (2015-2040) have a total value of \$752 million.

TIP PROJECTS AND HIGH MINORITY AND IN-POVERTY POPULATION

FIGURE 10



- Bridge
- Congestion
- Enhancement
- Highway/General
- Safety
- Rail Grade Crossing
- Intelligent Transportation System
- Both
- Poverty Only
- Minority Only
- Neither
- Municipalities

Source: US Census Bureau
 2013 ACS 5-Year Estimates



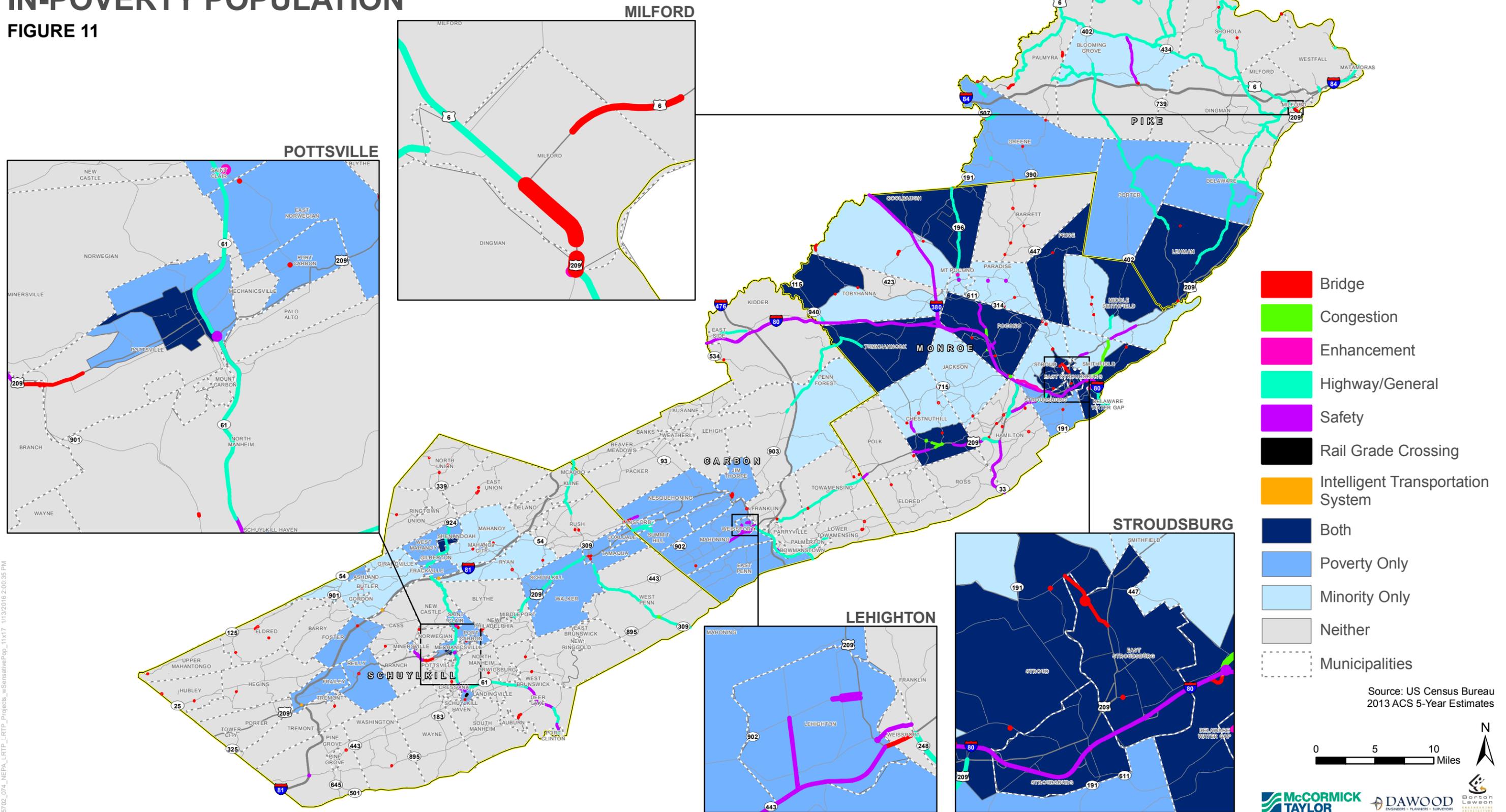
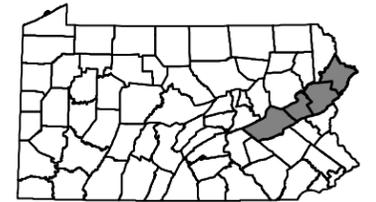
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Figure 11 illustrates the geographic proximity between different project types and high minority and high in-poverty areas. **Table 18** summarizes the dollar value of the projects according to the project type and the geographic proximity to high minority and in-poverty populations. The proposed LRTP invests \$95 million (13 percent of the plan) in high minority areas and \$153 million (20 percent of the plan) in high in-poverty areas. In addition, \$210 million (28 percent of the plan) is to be directed to areas with both high minority and in-poverty populations. The remaining \$294 million (39 percent of the plan) is directed to areas with neither high minority nor high in-poverty populations.

Table 18. Proposed Transportation Investment by Category by Proximity to High Minority and/or High In-Poverty Populations within the NEPA MPO Region (2015-2040) *					
Project Category	Population Area Category				
	High Minority Only	In-Poverty Only	Both High Minority and High In-Poverty	Neither High Minority nor High In-Poverty	NEPA MPO Region Total
BRIDGE	\$34,405,176	\$64,234,974	\$33,891,269	\$127,4057,937	\$259,933,953
	13.2%	24.7%	13.0%	49.0%	
HIGHWAY/ GENERAL	\$10,297,276	\$70,724,297	\$66,947,299	\$147,057,937	\$295,026,809
	3.5%	24.0%	22.7%	49.8%	
SAFETY	\$37,885,126	\$17,547,225	\$58,716,264	\$14,249,728	\$128,398,343
	29.5%	13.7%	45.7%	11.1%	
CONGESTION	0	0	\$40,072,527	\$3,240,000	\$43,312,527
			92.5%	7.5%	
ENHANCEMENT	\$12,060,738	\$697,000	\$10,410,000	\$461,725	\$23,629,463
	51.0%	2.9%	44.1%	2.0%	
RAIL GRADE CROSSING	0	\$57,289	0	\$546,679	\$603,968
		9.5%		90.5%	
INTELLIGENT TRANS. SYSTEM	0	0	0	\$1,113,945	\$1,113,945
				100.0%	
Total Projects with Location Information	\$94,648,316	\$153,260,785	\$210,037,359	\$294,072,548	\$752,019,008
	12.6%	20.4%	27.9%	39.1%	
<p>Projects funded through Line Item and Reserve funding are not locatable at this point in the planning process. Therefore, their proximity to High Minority and/or High In-Poverty populations could not be determined. The total for projects with no location information is \$113,407,319.</p> <p>Source: DRAFT NEPA MPO Long-Range Transportation Plan, 2016</p>					

LRTP PROJECTS AND HIGH MINORITY AND IN-POVERTY POPULATION

FIGURE 11



- Bridge
- Congestion
- Enhancement
- Highway/General
- Safety
- Rail Grade Crossing
- Intelligent Transportation System
- Both
- Poverty Only
- Minority Only
- Neither
- Municipalities

Source: US Census Bureau
 2013 ACS 5-Year Estimates



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