



2019

# Transportation Justice Plan

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*Title VI of the Civil Rights Act*

*Environmental Justice*



*Language Assistance*

*Americans with Disabilities Act*

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Prepared by the staff of the

Wilmington Area Planning Council

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Waiting to add

1. Page numbers in TOC and in Chapter 5

# 2019 Transportation Justice Plan

A Title VI, Environmental Justice, Americans with Disabilities Act,  
and Language Assistance Plan for the WILMAPCO Region

Prepared by the staff of WILMAPCO

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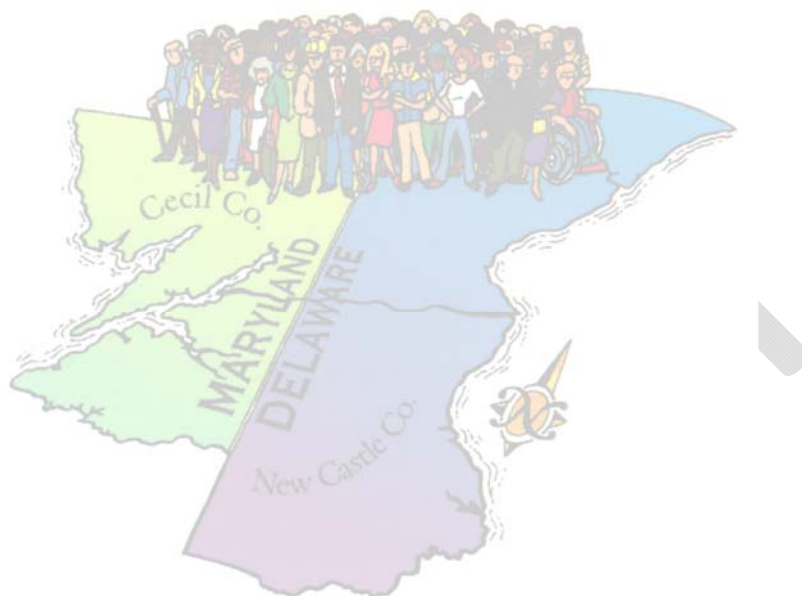
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## Who is WILMAPCO?

The Wilmington Area Planning Council (WILMAPCO) is the Metropolitan Planning Organization (MPO) for Cecil County, Maryland and New Castle County, Delaware. We are charged with planning and coordinating transportation investments for the Wilmington region.



The Wilmington region is home to more than 660,000 residents, most of whom (84%) live in New Castle County. Wilmington, a financial hub supporting a population of about 71,000, serves as the principal city. Urbanized development stretches outside of Wilmington along the I-95 corridor, from the Town of Elkton to the Pennsylvania border. Natural and rural landscapes, sprawling suburbs, and small towns blanket the rest of the region.

WILMAPCO's mission is to create the best transportation Plan for the region, one that meets all the requirements mandated by the Federal Clean Air Act and its Amendments (CAAA) and Fixing America's Surface Transportation Act (FAST).

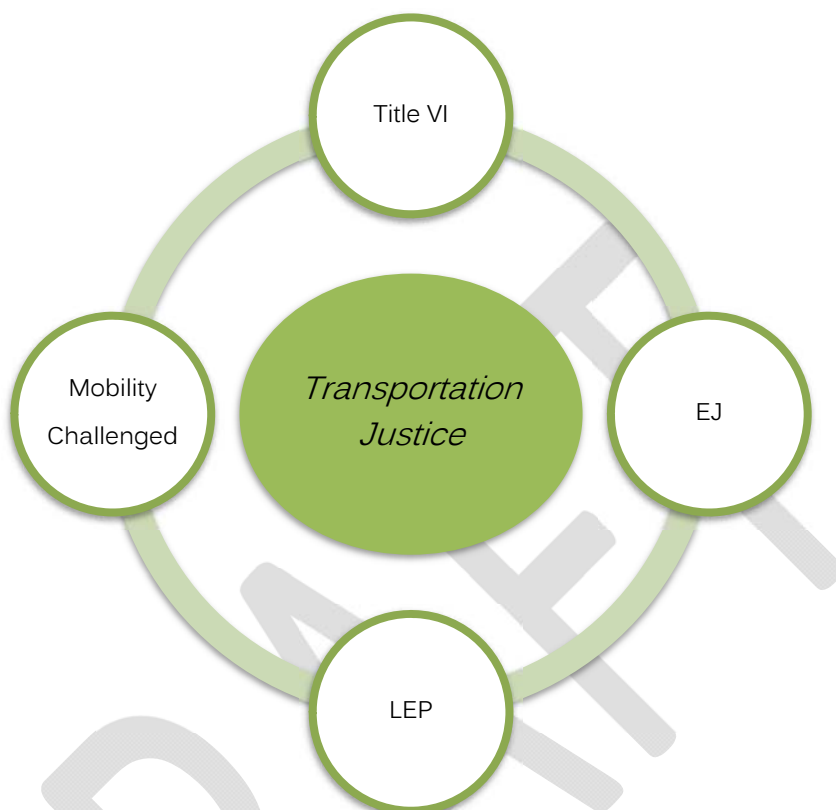
## Executive Summary

The *2019 Transportation Justice Plan* identifies key social inequities in the Wilmington region's transportation system. We examine the fairness and inclusivity of the existing and planned system, as well as our public engagement processes. Recommendations are made to overcome observed barriers and inequities.

The plan was guided by an ad hoc working group comprised of WILMAPCO staff, members of the WILMAPCO Public Advisory Committee, researchers from the University of Delaware, and officials from the Maryland and Delaware Departments of Transportation, and the Delaware Transit Corporation. The group met five times between September 2018 and August 2019. Numerous presentations were given to various WILMAPCO committees during that time period, as well.

This plan exceeds WILMAPCO's obligations under several federal statutes and initiatives: Title VI of the Civil Rights Act, Environmental Justice, Language Assistance, and the Americans with Disability Act. Simultaneously, it brings together and addresses these overlapping themes (sometimes with competing federal guidance) under an umbrella initiative that WILMAPCO henceforth calls Transportation Justice, or TJ.

## Transportation Justice – Towards a Comprehensive Approach



This Plan is broken into five chapters. These are:

1. **Background** – Details federal statutes and guidance for MPOs on these matters. Explains WILMAPCO's requirements, our history of addressing them, and the layout of the 2019 Plan.
2. **Title VI and Environmental Justice Analysis (low-income and minorities)** – Provides an overview of basic reporting requirements, a demographic profile, relevant findings from the regional public opinion survey, spatial analyses of social equity and connectivity, and public engagement strategies.

3. **Language Assistance (limited English proficient and low literacy)** – Considers ways to support the participation of people who do not speak English well and those who do not read well in our public participation processes.
4. **Mobility Challenged Analysis (people with disabilities, people who live in households without vehicles, and seniors)** – Includes WILMAPCO's ADA self-evaluation, a demographic profile, findings from public opinion surveys, and spatial connectivity analyses.
5. **Review of Recommendations** – Features a complete listing of recommendations from the Plan and next steps.

Chapters 2, 3, and 4 comprise the core of the Plan. Major findings and recommendations from these sections are summarized below.

## **Title VI and Environmental Justice Analysis**

With each recent passing decade, communities in the WILMAPCO region have become more reliant on private cars for travel. One hundred years ago, most residents lived within one city – Wilmington – and relied mainly on walking and public transit to travel. Today, most live in Wilmington's sprawling suburbs. These suburbs were rigidly zoned and spread apart, enabled by the mass production and use of private cars.

### Spatial Connectivity and Equity Analyses

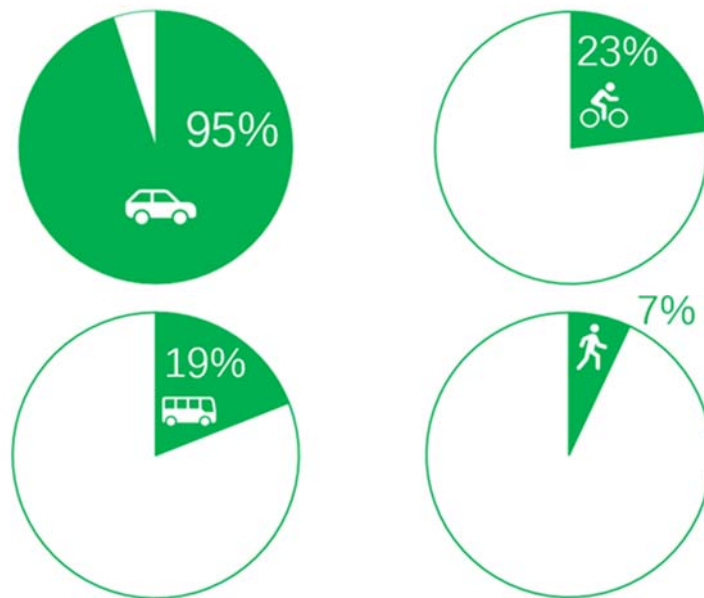
Alternatives to car travel – walking, biking, and public transit systems – are not a reasonable day-to-day choice for most. These systems are quite underdeveloped in the region. All have been stifled by decades of runaway sprawl and transportation spending programs focused on highway building.

The *2019 TJ Plan* features intensive connectivity analyses which illustrate the frailty of

these alternative systems. We measure reasonable connectivity on all modes from each household to nine key destinations, like supermarkets, low-wage employment, and libraries. Overall, we found that while 95% of homes were reasonably connected by car to destinations, on average, less than a quarter were reasonably connected to key places by alternative modes. And only 7% had good walking connections. This illustrates the near total absence of “complete community”/urbanist-style development in the region.

### Average Percentage of Households Connected to Destinations (Combined), by Mode

WILMAPCO Region



While car travel has provided an unprecedented level of independent travel for most families, people without cars often experience isolation. They are unable to travel to work, run errands, or visit friends in a reasonable walking, bicycling, or bus trip. More than half of residents who live in households without cars report travel difficulties in the region, according to a pair of recent surveys. Because of this, nearly all families have a car, or a second car, even if they cannot reasonably affordable them.

While we found that our low-income and minority communities were always equally or better connected to every destination on every mode than average, the extent of our car

dependence hits the poor hardest. Among those living in our most impoverished neighborhoods, only:

- 23% could easily reach a library by walking
- 50% could easily reach a low-wage job center by biking
- 52% could easily reach a medical center by bus

Moreover, most of our impoverished neighborhoods (94%) have unaffordable transportation costs for lower income residents. High poverty suburban households spend about a quarter of their budget on everyday travel, when a reasonable figure should be below 18%. That amounts to about \$3,000/year extra spent on transportation. As members of one struggling local family shared with WILMAPCO, “I can pay for my child’s medicine this month, but I also need car insurance, gas, and rent all in the same week. And it just doesn’t add up.”

We were also able to use our connectivity analyses to enhance the identification of food deserts. Food deserts are low-income areas some distance from healthy and affordable food. Federal food desert identification methodologies, however, are overly coarse and do not account for local public transit systems. The resulting vast tracts of land tabbed as “food deserts” lends itself to misdirected and unrefined food access interventions. The WILMAPCO approach uses finer-grained base demographic data, removes unpopulated areas, and adds consideration of the bus systems. This allows for more targeted policy and outcomes.

Beyond the connectivity of our system, much of the *2019 TJ Plan* is dedicated to spatial equity analyses. We began by updating our Environmental Justice (EJ) neighborhood identification process. Projects within our EJ neighborhoods are awarded points in WILMAPCO project prioritization processes. This is meant to support and speed their implementation. This year, census data are supplemented with subsidized housing development and local elementary school data. The result is a more nuanced analysis that better accounts for rural poverty.

About a dozen distinct indicators of transportation equity were analyzed in the plan. These indicators were considered for people with low incomes/impoverished

neighborhoods, blacks/black neighborhoods, and Hispanics/Hispanic neighborhoods. A chart below notes where equity concerns were present.

We identified concerns for blacks in more than half of the transportation equity indicators considered. Blacks were more likely than whites to report transportation access issues in our Public Opinion Survey (20% vs. 14%), along with less familiarity with WILMAPCO (19% vs. 38%). Black neighborhoods were found to be home to higher median traffic volumes (39% more than average), more pedestrian and bicycle crashes than expected (29% and 20% higher), fewer than expected EV public charging stations (only 2), and less than expected funding for community-based transportation projects (38% less). We also found that most of those commuting to work by transit were black (54%) – though blacks are a minority population (21%). Since about twice as much time is needed to reach work via transit versus a car trip, chronic public transit inefficiency is an equity concern.

Concerns were raised for people with low incomes in more than one-third of the indicators. Like blacks, those living in low-income households were more likely to report transportation access issues (47% vs. 10% of high-income residents) and unawareness of WILMAPCO (10% vs. 43% of high-income residents). Impoverished communities were also home to heavy traffic volumes (39% more than average), had fewer than expected public EV charging stations (only 1), and many had higher than reasonable spending on transportation and housing costs (55% are unaffordable).

We identified equity concerns for Hispanics in about a quarter of our equity indicators. Like blacks and people with low incomes, Hispanics reported less familiarity with WILMAPCO (18% vs. 38% of whites). Hispanic neighborhoods also had higher traffic volumes (58% more than average), and fewer public EV charging stations than expected (none so far).



We identified numerous transportation equity concerns in our region's black neighborhoods. These communities have not received their fair share of community transportation project spending, have more traffic than average, and have more crashes than we would expect.

Summary of Social Equity Concerns Uncovered, by Group

	Low-income/Poverty	Blacks	Hispanics
 Transportation Access (in General)	yes	yes	
 Neighborhood Transportation/Housing Costs	no, but of other concern		
 Neighborhood Connectivity			
 Travel Time from Neighborhoods			
 Travel Time on Public Transit (in general)		yes	
 Traffic Volumes	yes	yes	yes
 All Vehicle Crashes			
 Pedestrian and Bike Crashes		yes	
 Bike Level of Traffic Stress			
 Public Electric Vehicle Stations	yes	yes	yes
 Community Transportation Project Funding		yes	
 WILMAPCO Community Planning			
 Knowledge of WILMAPCO	yes	yes	yes

Taking these findings into consideration, the following major recommendations were offered:

- **Support Implementation of the 2050 Regional Transportation Plan (RTP)**  
The 2050 RTP features policy actions to achieve focused land development that would reduce our region's car dependence.
- **Overall Project Prioritization Process**  
Continue the same process for awarding/deducting points (1 - 3) for projects within Environmental Justice neighborhoods. However, provide +3 extra points for beneficial projects within Residential Black Concentrations (see the map in this section) to drive investment here.
- **TAP Project Prioritization Process**  
Continue the same process for awarding points (2) for projects within Environmental Justice neighborhoods. However, provide +2 points for beneficial projects within Residential Black Concentrations to drive investment here.
- **Pedestrian Priority Network Process**  
Continue the same process for awarding a point (1) for projects within Environmental Justice neighborhoods. However, provide +1 point for network segments within Residential Black Concentrations to acknowledge the need for improvements here.
- **WILMAPCO Sub-regional Studies**  
Continue to pursue new and follow-up localized studies within black neighborhoods.
- WILMAPCO will encourage and support the creation of a **City of Wilmington Pedestrian Safety Plan** to begin understanding and addressing the heavy number of pedestrian crashes in that city.
- Working with the City of Wilmington, WILMAPCO will help include safety as a key component of the **Draft City of Wilmington Bike Plan**
- WILMAPCO will conduct a study to **examine reducing transportation costs in unaffordable impoverished neighborhoods**. The study will recommend

improvements to bus routing and walking and bicycling networks, generally, in these places.

- WILMAPCO will conduct a study to **examine fixed-route bus performance/travel time improvements from black and impoverished neighborhoods to employment centers.**
- WILMAPCO will utilize the connectivity data, as practicable, in all future sub-regional and regional studies. **Improvements by walking, biking, and bus will be recommended to improve connectivity** from homes to key destinations.
- WILMAPCO will conduct a study to **examine food access improvements within WILMAPCO-defined food deserts with poor transit connectivity.**
- As the cost of EV ownership continues to sink, WILMAPCO will encourage public grants for EV charging stations to more strongly consider awards within low-income, black, and Hispanic neighborhoods.

### Public Engagement Strategies

While WILMAPCO has successfully begun engaging more low-income and minority residents, much more work is needed. Awareness of the agency is sharply divided by class and race. Only 10% of low-income residents are familiar with the agency – compared with 43% of high-income residents. Whites are about twice as likely to be familiar with WILMAPCO than blacks or Hispanics. And we have also never achieved equitable representation of minorities on the Public Advisory Committee.

A literature review of national best practices, along with taking stock of our experiences and lessons learned while working in low-income communities of color, informed a sweeping set of new policies. Highlights of the recommendations are reviewed below:

- As an agency, WILMAPCO will work to promote more inclusive organizational practices, cultural proficiency, and more.

- In regional studies, WILMAPCO will diversify outreach techniques, strive for equitable public participation (by race/class), build stronger relationships with minority cultural institutions, and more.
- In local studies, WILMAPCO will invest in relationship building, encourage local leadership in studies, acknowledge any past harm done by transportation and land use planning, strive for equitable and iterative participation, aim for community empowerment, and more.

### Language Assistance Plan

Another dimension of inclusive public engagement is involving those who do not speak or read English well. Fundamentally, no one should not be denied participation in WILMAPCO studies or activities based on their ability to communicate in spoken or written English. Chapter 3 of the *2019 TJ Plan* lays out ways WILMAPCO can provide language assistance to those who need it.

Firstly, WILMAPCO will support the comprehension of our documents, proposals, or activities for speakers of any language to obtain their feedback. We will only actively solicit feedback, however, from Spanish and Chinese speakers. There are thousands of speakers of Spanish and Chinese in our region who do not speak English very well. Their high numbers meet federal “safe harbor” threshold, which triggers extra consideration. Like speakers of Spanish and Chinese, WILMAPCO will proactively support the participation of those with limited reading comprehension skills. These individuals are mostly native English-speakers with limited schooling.

Our language assistance approach is broken into three tiers, with increasing intensity.

- **Tier 1**, the lowest level, is responsive outreach. It takes the form of language interpretation to anyone needing assistance. In general, while documents will not be translated to non-Spanish or Chinese languages, we will provide an oral interpretation of the document in any language from a professional interpreter and collect feedback. In addition, staff will proactively identify those with limited English proficiency or low literacy at workshops and endeavor to support their

participation, either at the event, or, afterwards with the support of an interpreter.

- o **Tier 2**, the medium level, is proactive engagement of Chinese speakers. Our documents will be human translated into Chinese upon request. When conducting local studies within Chinese-speaking neighborhood clusters, basic information about the plan will be human-translated into Chinese, Chinese-speakers will be encouraged to participate in the planning process, and Chinese interpreters will be on hand at workshops.
- o **Tier 3**, the highest level, is proactive engagement of both Spanish speakers (the region's dominant second language) and those with weak literacy skills.

Our documents will be human translated into Spanish upon request. When conducting local studies within Spanish-speaking neighborhood clusters, or if the study is regional in scope, basic information about the plan will be human-translated into Spanish, Spanish-speakers will be encouraged to participate, and Spanish interpreters will be available at workshops. In addition, WILMAPCO will consider hiring a Hispanic-centered public relations consultant to advise on culturally appropriate outreach strategies.

To support those with low-literacy, supplemental outreach (such as visual and oral-based feedback opportunities) will be considered with every study. These will be *required* in for local studies in neighborhoods with a high proportion of low literate adults, or if the study is regional in scope.

### **Mobility Challenged Analysis**

Our Mobility Challenged (MC) analysis considers the transportation needs of seniors, people with disabilities, and people who live in households without vehicles. Housed in Chapter 4, it begins with a review of basic reporting requirements (primarily an Americans with Disabilities Act, or ADA, self-evaluation), identifies our region's MC neighborhoods,

and dives back into an examination of connectivity analyses to uncover transportation gaps with these communities.

The results of our ADA self-evaluation were generally positive. Physical barriers to reach the WILMAPCO office are nearly free of concern and agency policies are supportive of those with disabilities. However, WILMAPCO should be doing a better job communicating our commitment to supporting the involvement of people with disabilities. We should be including notices which say so for workshops, events, and, in general, our planning process. In addition, frontline communication from WILMAPCO – such as presentations and our website – should be built with the needs of those with visual disabilities in mind.

Like our low-income and minority communities, MC communities often encounter challenges with the transportation system. This is especially true of those who live in households without vehicles and the disabled. Both must negotiate a system primarily designed for private car travel by able adults. More than half of those who live in households without vehicles (54%) reported at least some difficulty with travel in the most recent WILMAPCO Public Opinion Survey, and so too did nearly one third (30%) of those with disabilities. These figures can be contrasted against the average resident response of 17%. While seniors (whether disabled or not) did not report travel difficulties much different from the average resident, they have other mobility concerns. These include: the increased risk of social isolation as driving ability decreases, and a higher risk of death/injury from crashes due to their increasingly frail bodies.

This chapter's spatial analyses begin by identifying new MC neighborhoods. Like EJ neighborhoods, MC neighborhoods are awarded points in WILMAPCO project prioritization processes with the goal of supporting local project implementation. The identification process is entirely based on census block group level data. This year, greater weight is placed on places with higher proportions of zero car households, in step with findings from a pair of local public opinion surveys.

Next, we return to the regional connectivity analyses introduced in the second chapter. Bus, walking, and bicycle connectivity is generally weak across the region, as discussed earlier. Connectivity from places with concentrations of seniors and disabled neighborhoods to key destinations was sometimes even below that low average. For

example, those living in senior concentrations had below average walking connectivity to supermarkets, low-wage employment centers, medical centers, and community centers.

The MC chapter closes with an update to our Age-Restricted Communities Connectivity Analyses (ARCCA). ARCCA classifies the level of bus and walking connectivity to our 99 existing and planned suburban age-restricted developments (where one must be an older adult to live).

Our fixed-route bus systems were generally poorly linked to these places. Only about 1 in 5 were on a relatively good frequency bus line. Some age restricted developments are simply too far from existing routes to be easily reached. This is the case for 15% in New Castle County and 49% in Cecil County. The good news, however, is that many could be reached with relatively minor adjustments to the bus system. This is true for 49% of the communities in New Castle County and 18% of those in Cecil County.

Walking connectivity around suburban age restricted communities were also found to be quite limited. In New Castle County, only 9% had solid pedestrian connections to surrounding destinations. In Cecil County, the figure was higher – but still low – at 27%. As for most of the rest, given their long distance from surrounding destinations, future walking connections were unlikely, or only possible in future decades. Positively, around 1 in 5 could be linked into nearby destinations with relatively minor improvements.

Taking these findings and concerns into account, several recommendations were made in this Chapter:

1. Strive to improve physical access to the WILMAPCO suite, via an ADA accessible door near the elevators.
2. Better communicate our commitment to supporting people with disabilities participate in the transportation planning process.
3. Ensure that frontline communications (visual presentations, public meeting participation, and website) consider the needs of people with disabilities.

4. WILMAPCO will consider conducting a study to **examine connectivity improvements to supermarkets, pharmacies, and other key destinations from senior and disabled concentrations**. This study will identify areas for the siting of new facilities and/or bus, bike, and walking connections to existing destinations.
5. WILMAPCO will consider conducting a study to **examine walking and transit improvements from suburban age-restricted communities classified with a “short term improvement” possible in the ARCCA analysis**. Profiles of the communities and possible walking and/or transit improvements will be outlined.

### Next Steps

Implementation of the *2019 TJ Plan* will begin immediately. Policy changes proposed will be enacted by WILMAPCO, follow-up studies will be considered, and analyses will be enhanced through other studies. Staff will remain abreast of new federal regulations and guidance related to Title VI, Environmental Justice, language assistance, and the Americans with Disabilities Act, and other initiatives of interest to this work. All these initiatives will be folded into an updated TJ Report expected around 2022.

## Chapter 1

### Background

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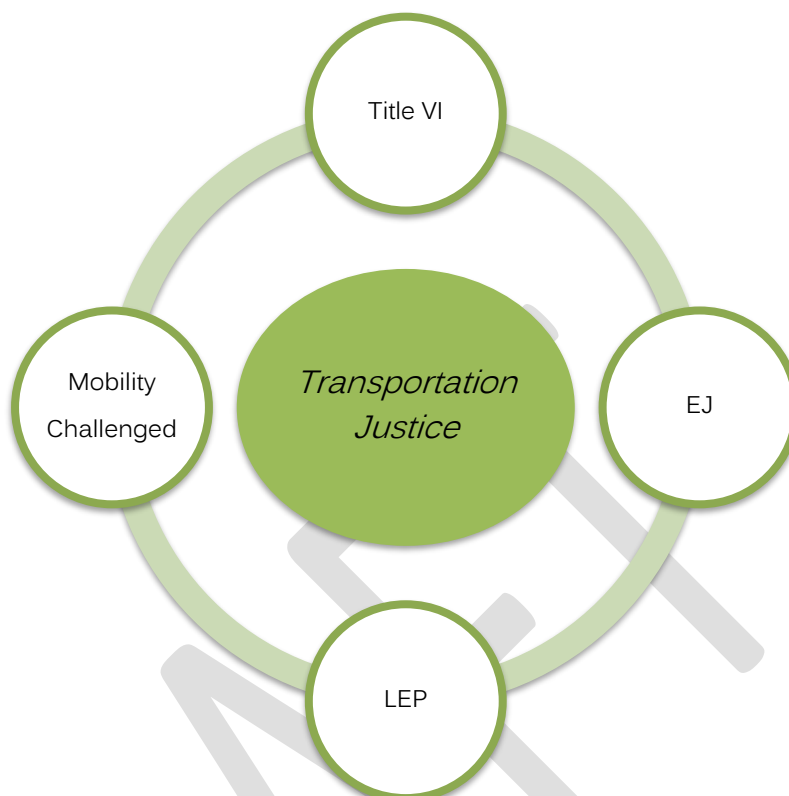
Some populations benefit more from our transportation system than others. About 5 in 10 of our region's low-income residents experience at least some difficulty traveling day-to-day. The same is true for only about 1 in 10 of high-income residents. Ethnic and racial minorities are often underrepresented in our planning processes; neighborhoods with concentrations of minority residents are chronically underfunded with transportation dollars.

This Transportation Justice (TJ) plan provides a fresh and comprehensive update of WILMAPCO's equity and accessibility work, which aims to understand and tackle these and other transportation equity issues. It brings together previously separate efforts – the Environmental Justice (EJ), Title VI, Limited English Proficient (LEP), and the previous Transportation Justice initiatives – under the present umbrella plan. This plan aims to meet and surpass all federal requirements for addressing equity, while doing so in an efficient and more easily digestible manner.



Transportation Justice aims to create a socially equitable transportation system.

## Transportation Justice: Towards A Comprehensive Approach



**Title VI** – federal, non-discrimination statute from 1964's Civil Rights Act. WILMAPCO must ensure our operations and planning processes are nondiscriminatory. This include contracts with third-party firms, along with hiring and personnel policies, including DBE<sup>1</sup> assurances.

- **Populations**, by legal statute: race, color, and national origin. Additional populations, per Federal Highway Administration (FHWA) guidance: sex, age, disability, low-income, female-headed households with children and limited English proficient.
- **WILMAPCO requirements**: Title VI policy and program; demographic and mobility analyses.

<sup>1</sup> Disadvantaged Business Enterprises (DBEs) are state-certified for-profit small business concerns where socially and economically disadvantaged individuals own at least a 51% interest and control management and daily business operations. African Americans, Hispanics, Native Americans, Asian-Pacific and Subcontinent Asian Americans, and women are presumed to be socially and economically disadvantaged. Other individuals can be characterized as socially and economically disadvantaged on a case-by-case basis.

**Environmental Justice (EJ)** – an outgrowth of Title VI and backed by the non-legally binding Executive Order (EO) 12898, EJ entails ensuring the fair treatment and meaningful involvement of people from all races, cultures, and incomes.

- **Populations** (per EO): Low-income and ethnic and racial minorities.
- **WILMAPCO requirements:** *Fair treatment* - no group should bear a disproportionate share of transportation's benefits or burdens; *meaningful involvement* - facilitate involvement of those affected by proposed actions/policies.

**Limited English Proficient (LEP)** –supported by Title VI (under the national origins stipulation) and the non-legally binding EO 013166, WILMAPCO should endeavor to provide outreach to and involve those with limited English language skills.

- **Population** (per EO): People with limited English proficiency. Additional population (per FHWA): people with low literacy.
- **WILMAPCO requirements:** Provide reasonable access to language translation and interpretation services of WILMAPCO plans and materials.

**Mobility Challenged** – formally called, “Transportation Justice,” a WILMAPCO initiative to support improved mobility for other populations constrained by our transportation system. Legal statutes, such as 1990’s Americans with Disability Act (ADA), forbid discrimination against those with disabilities. The Age Discrimination Act (1975) forbids discrimination based on age.

- **Populations** (per federal Acts): people with disabilities and seniors (and those of all ages). Other population (per FHWA): people without vehicles.
- **WILMAPCO requirements:** Take affirmative steps to reasonably accommodate the disabled and those of all ages to ensure that their needs are equitably represented.

Transportation Justice is woven into the fabric of planning at WILMAPCO. It is incorporated into the project prioritization process, our public participation process, consultant contracts, and day-to-day business. The recent 2050 Regional Transportation Plan, our agency's principal plan, strengthened WILMAPCO's commitment to transportation equity. Several new policy actions were approved to address documented equity shortcomings in previous TJ plans and Regional Progress Reports.

This TJ plan addresses each of those actions and re-establishes performance measures. It is divided into the following sections:

#### **Title VI and Environmental Justice Analysis**

- Introduction
- Basic reporting requirements
- Demographic profile
- Public opinion survey
- Spatial analysis
- Public outreach
- Key recommendations

#### **Language Assistance Plan**

- Introduction
- Demographic Profile
- Spatial analysis
- Public outreach
- Key recommendations

#### **Mobility Challenged Analysis**

- Introduction
- ADA implementation
- Demographic profile
- Spatial analysis
- Public outreach
- Key recommendations

## Chapter 2

### Title VI and Environmental Justice

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WILMAPCO exceeds most of its Title VI requirements and is a national leader in incorporating social equity into the transportation planning process.

This chapter details the agency's Title VI and Environmental Justice initiatives. We will first examine many of our mandatory regulatory requirements, before turning to more in-depth analyses of how our region's racial and ethnic minority and low-income populations fare in the transportation system. Afterwards, we turn to ways to strengthen the inclusivity of our public outreach processes.

#### **Title VI: Basic Reporting Requirements**

MPOs must provide a variety of documentation to be considered in compliance with Title VI.

1. Title VI Certification and Assurance

This signed document can be found in the appendix.

2. Notice of Nondiscrimination Rights and Protections to Beneficiaries

The WILMAPCO "Title VI Policy Statement," complaint procedures, and complaint form are posted on the WILMAPCO website (<http://www.wilmapco.org/titlevi>) and in the WILMAPCO offices. In keeping with requirements for language assistance, as detailed in Chapter 3, these vital documents have been translated into both Spanish and Chinese.

3. MPO Endorsement

WILMAPCO's Council endorsed the present document on September 12, 2019. A copy of a signed Council resolution is in the appendix.

#### 4. Complaint Procedures

The WILMAPCO “Title VI Policy Statement,” complaint procedures, and complaint form are posted on the WILMAPCO website (<http://www.wilmapco.org/titlevi>) and within the WILMAPCO offices. In keeping with requirements for language assistance, as detailed in Chapter 3, these vital documents have been translated into both Spanish and Chinese.

#### 5. Title VI Investigations, Complaints, and Lawsuits

WILMAPCO has never been implicated in a Title VI investigation, complaint, or lawsuit.

#### 6. Language Assistance Plan

WILMAPCO’s Language Assistance Plan can be found in Chapter 3.

#### 7. Monitoring Subrecipients of MPO funds

Each year, WILMAPCO contracts work out to various private consultants and subconsultants. WILMAPCO collects information regarding their Disadvantaged Business Enterprise (DBE) status, and has the consultants agree to abide by all Title VI stipulations imposed on WILMAPCO from both FTA and FHWA through a signed contract. This contract is available in the appendix.

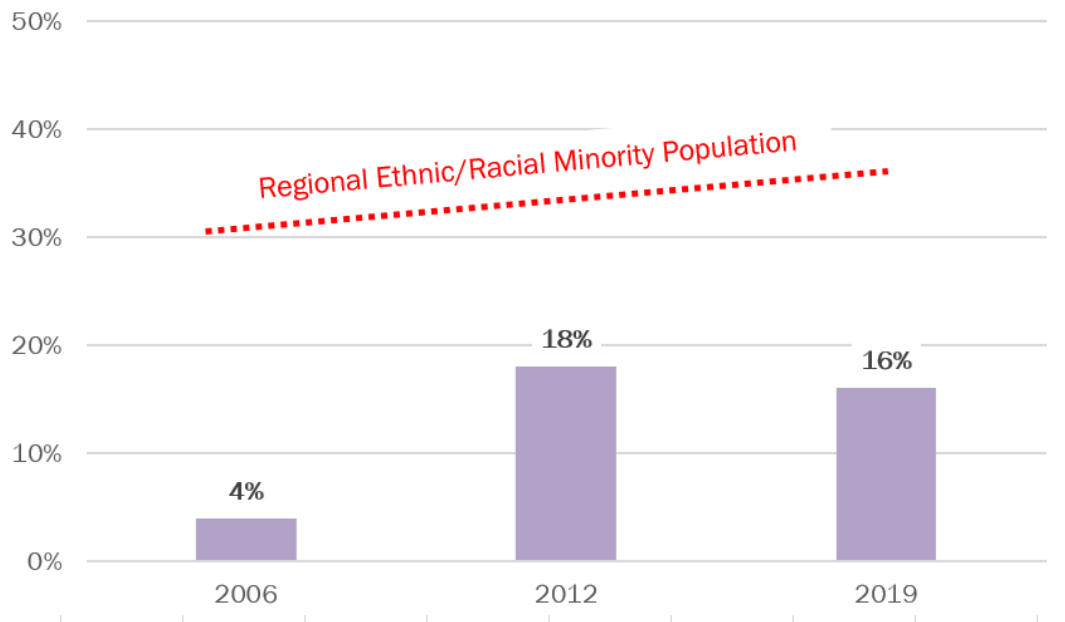
#### 8. Minority Representation on Planning Boards

Ethnic and racial minorities have long been underrepresented on WILMAPCO’s Public Advisory Committee (PAC<sup>2</sup>). As shown in the graph below, minority membership on that committee falls below what we expect, especially given the increasing proportion of minorities in the region’s population. To achieve equity, WILMAPCO must solidify new partnerships with communities and interests that represent our minority populations.

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<sup>2</sup> The 19-member PAC advises WILMAPCO staff and Council on matters of public involvement during its planning processes. Representatives belong to and represent various civic and community groups across the region. WILMAPCO actively recruits members of the PAC, unlike members of its Council and other committees.

### Ethnic/Racial Minority Representation on the WILMAPCO PAC



In addition to these eight requirements, WILMAPCO must also document a few others.

These requirements include providing demographic profiles of communities covered by Title VI, analyses of the distribution of federal funds, and identification of the “benefits and burdens” carried by Title VI groups. The following sections fulfill these requirements.

A final requirement is documentation of the agency’s Public Participation Plan (PPP). WILMAPCO’s PPP was last updated in 2010 and is available at this webpage: [www.wilmapco.org/ppp](http://www.wilmapco.org/ppp). The following sections will be offering updated engagement strategies for communities of color, which will, in turn, be folded into a forthcoming update of the PPP.

## Demographic Profile

The WILMAPCO region is becoming more ethnically and racially diverse. While non-Hispanic whites remain in the majority, their numbers are in steady decline. Since 2005, the number of whites fell by 22,000. This a proportional drop from 70% of the region's (growing) population in 2005 to 63% today<sup>3</sup>. In their place are more people of color.



The WILMAPCO region is becoming more racially and ethnically diverse.

The table on the next page details the ethnic/racial composition of the region today, along with other selected demographics of interest to the present plan.

Several minority communities can be found in the region. Non-Hispanic blacks, many decedents of mid-20<sup>th</sup> Century migrants from the American South to Wilmington, are the largest. About 137,500 call the region home (21% of the total population). Hispanics and non-Hispanic Asians, buoyed by migration streams stemming from more liberal 1960s national immigration policy, are the next two largest groups. Hispanics (mainly Mexican or Puerto Rican) number about 56,000 (or 9% of the population), while Asians (mainly Asian Indian and Chinese) sit at about 29,600 (or about 5% of the population). Some 13,200 residents (2%) say they belong to two or more races. Fewer than 3,000 residents identify with "some other race," or are American Indian/Alaskan Native or Native Hawaiian/Pacific Islander. New Castle County is home to most of this diversity. Cecil County, with 86% of its population identifying as non-Hispanic white, remains a much less racially and ethnically diverse place.

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<sup>3</sup> American Community Survey: 2005 – 2007 sample of your data vs. 2013 – 2017 sample data.

Demographic Profile of the WILMAPCO Region<sup>4</sup>

	WILMAPCO Region		New Castle County		Cecil County	
<i><b>RACIAL/ETHNIC BACKGROUND</b></i>						
White alone	414,894	63%	326,993	59%	87,900	86%
Black or African American alone	137,519	21%	130,912	24%	6,607	6%
Hispanic or Latino	55,999	9%	51,912	9%	4,087	4%
Asian alone	29,691	5%	28,383	5%	1,308	1%
Two or more races	13,224	2%	11,362	2%	1,862	2%
Some other race alone	1,477	0%	1,308	0%	169	0%
American Indian and Alaska Native alone	1,230	0%	997	0%	233	0%
Native Hawaiian and Other Pacific Islander alone	139	0%	130	0%	9	0%
<i><b>OTHER DEMOGRAPHICS</b></i>						
Seniors	90,136	14%	76,111	14%	14,025	14%
People with disabilities	72,926	11%	60,175	11%	12,751	13%
People living in poverty	71,546	11%	60,817	11%	10,729	11%
Female-headed households w/children	16,782	7%	14,681	7%	2,101	6%
Households without vehicles	16,468	6%	14,735	7%	1,733	5%
People with limited English proficiency	26,805	4%	25,289	5%	1,516	2%
People with low literacy	13,996	3%	11,826	3%	2,170	3%

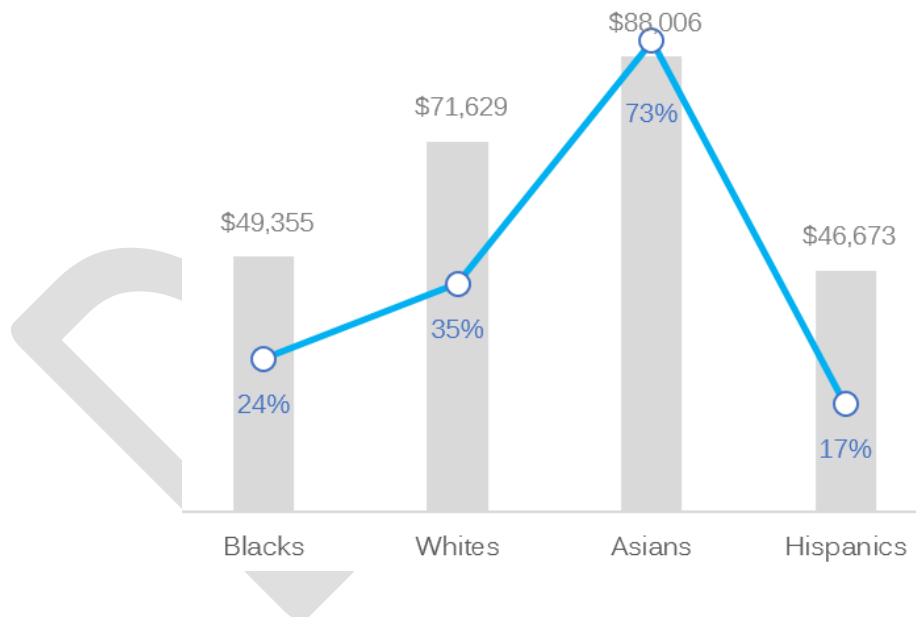
The remainder of this plan will focus only on the three largest ethnic/racial minority communities – blacks, Hispanics, and Asians. Each has created an enduring and positive cultural presence, often settling in numbers to particular places. Unfortunately, many MPOs and DOTs group all minority groups together in their Title VI/EJ analyses. But this is a flawed approach. It does not allow for the nuance needed in pinpointing impacts,

<sup>4</sup> These data are from the American Community Survey, from 2012-2016 sample data. "Seniors" are considered those aged 65 or more. People with limited English proficiency are those, 5 years of age and greater, that report speaking English "less than very well." People with low literacy are considered those, over age 25, who have not completed the ninth grade.

especially among Hispanic and Asian communities<sup>5</sup>. On the flip side, our other minority communities are either too generalized (in the case of multiracial individuals or those of some other race) or too small (in the case of Amerindians) to conduct meaningful transportation equity analyses. Focusing on these three largest communities – blacks, Hispanics, and Asians – enables a focused and nuanced approach.

Class differences are apparent between our ethnic and racial communities of interest. As shown in the graph below, Hispanics have the lowest median household income on average and their adults have the lowest levels of four-year degrees. Blacks have slightly higher incomes and education rates. Asians, meanwhile, have much higher income and advanced education rates – surpassing both the regional average and the whites.

**Median Annual Household Income and  
% of those >25 Years w/ a Bachelor's Degree or Better  
by Ethnic/Racial Group in the WILMAPCO Region, 2012-2016 ACS<sup>6</sup>**



<sup>5</sup> Given their relatively smaller sizes, impacts to Hispanics and Asians would be lost in this generalized approach. Areas of high minority presence would, as it played out, mostly be places home to many blacks – a population in our region greater in size than all other priority groups, combined. As Hispanics and Asians are equally protected under Civil Rights laws, this approach must be avoided.

<sup>6</sup> Data were unavailable for Hispanics in the 2012 – 2016 ACS. So, we used 2011 – 2015 ACS data here instead. Since the “WILMAPCO region” is not available as a Census geographic unit, a weighted average (based on the population of our two counties) was used to determine the median household income.

The firm, middle-class status of most of our region's Asians informs our interpretation of later equity analyses. For example, we will show that fewer Asian neighborhoods have affordable housing and transportation costs for a lower income household than average. But, given the greater spending power of the typical Asian household, this should not be viewed as a social equity concern. Nevertheless, Asians are still a minority population, protected by Title VI/EJ. And this makes sense in the arena of public outreach and language assistance. Much more must be done to support the inclusion of Asian Indian, Chinese, and other Asian communities. However, we must bear in mind the very different class status of Asians, regionally, when interpreting the results of our spatial analyses<sup>7</sup>.

Most of the other demographic groups presented in this profile are informational. An analysis of the needs of seniors, people with disabilities, and households without vehicle, which we define collectively as "mobility challenged," are presented in Chapter 4. Likewise, the needs of people with limited English proficiency and low literacy are explored later, in Chapter 3.

Female-headed households with children present are a protected group under FHWA's interpretation of Title VI. Nearly 17,000 households across the region, 7% of all our households, fall within this classification. While too many of these families face well-documented economic challenges, WILMAPCO was unable to identify independent mobility concerns. Therefore, they are not included in the spatial analysis section presented in this chapter or the next. However, we do include specific recommendations to better involve female-headed households with children in the public engagement section that concludes this chapter.

We consider low-income residents to be those living in poverty. People with low-income are a protected group according to FHWA's Title VI guidance and are covered under federal EJ regulations. Some 71,500 people (11% of the total regional population) live in poverty. That's about the same number of residents in the City of Wilmington. This population has well documented transportation needs and will be considered alongside blacks, Hispanics, and Asians in this chapter.

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<sup>7</sup> It is lamentable that ACS data on sub Asian groups (Chinese, Indian, Korean, Vietnamese, etc.) is so limited. Analyzing these groups, individually, (as with Latino subgroups) would better meet the spirit of Title VI/EJ. As it stands, however, we must proceed with these overly broad racial/ethnic categories which may mask important equity concerns.

## Findings from the 2018 Public Opinion Survey

WILMAPCO conducts a telephone-based Public Opinion Survey (POS) every four years. The survey explores ideas from residents about transportation needs and policies. Most importantly, the POS informs the development of the Regional Transportation Plan.



WILMAPCO conducts telephone surveys to understand public opinion.

A sample of 600 completed surveys is compiled to produce the results. This sample meets rigorous demographic quotas to ensure an accurate cross-section of our population is represented. These quotas were introduced after WILMAPCO's *2013 Environmental Justice Report* uncovered significant racial and ethnic sample bias in past WILMAPCO surveys. Besides presenting a clearer representation of regional opinion, the quotas also allow for statistically significant response comparisons across various groups. These comparisons provide a rich introduction to the transportation challenges that our Title VI and EJ communities often experience.

This section presents a series of findings from the public opinion survey where attitudes about the transportation system differ significantly among these populations. Note that Asians are not included here because of their small sample size.

### Interaction with the Transportation System

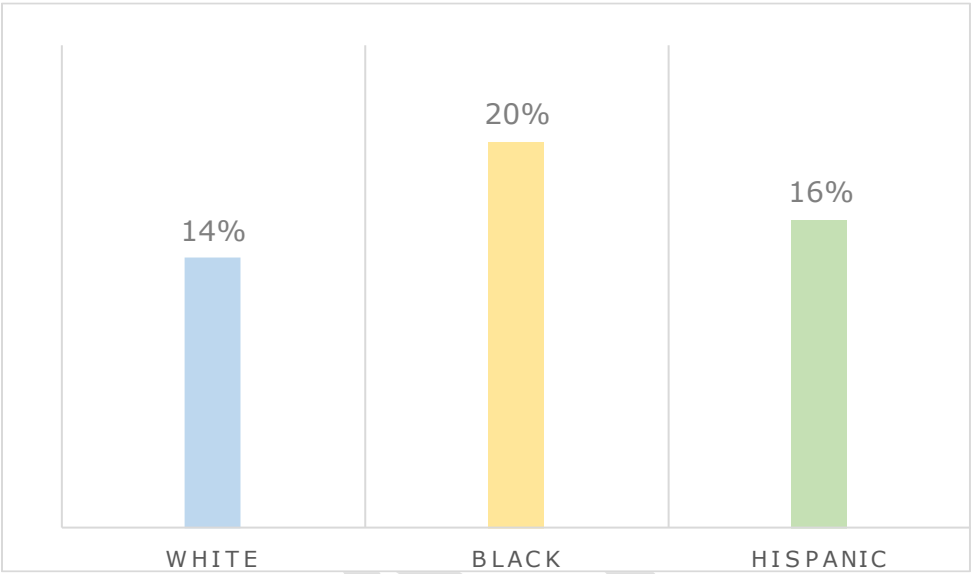
People with low-incomes and those belonging to ethnic and racial minority groups often experience the transportation system differently than the average resident. This section explores divergent, statistically significant responses to questions of access and need.

One basic measure of the system's performance is considering access to activities like grocery shopping, medical care, and family and social events. As shown in the following graphs, income and racial/ethnic differences impact transportation access to activities. Nearly half (47%) of those living in households earning less than \$25,000/year reported being kept from activities “at least some of the time” compared to about 20% of those making between \$25,000/year and \$100,000/year, and only 9% of the region’s highest-earning households. Racial differences were also evident. One in five blacks (20%) reported that transportation sometimes inhibited access to activities, compared to 14% of whites and 16% of Hispanics.

**Transportation Keeps Me from Activities at least Sometimes**  
by Annual Household Income



Transportation Keeps Me from Activities at least Sometimes  
by Race and Ethnicity



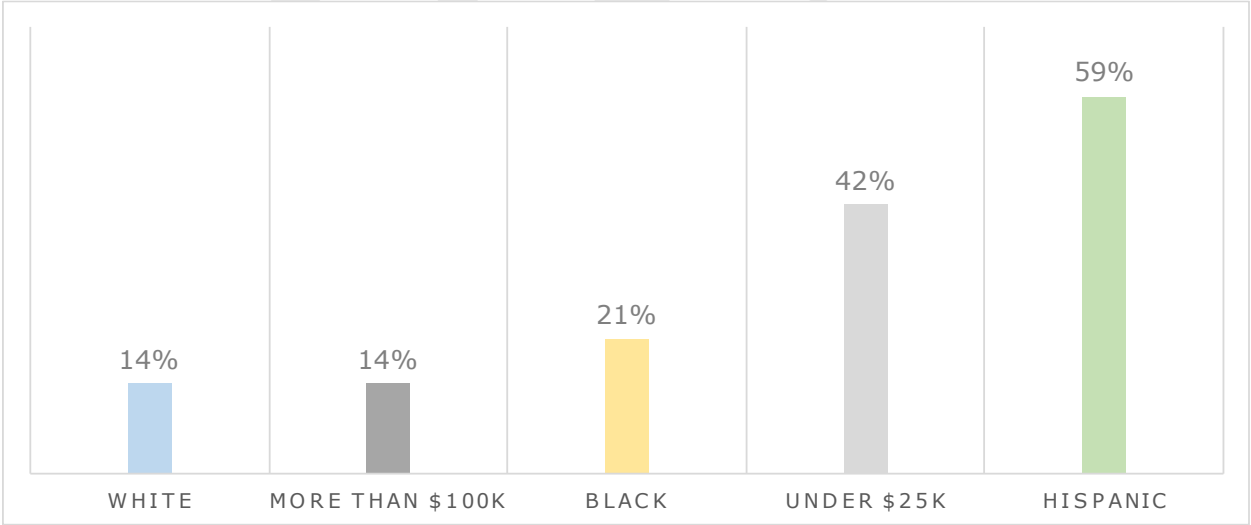
Results of a recent transportation survey from the University of Delaware’s Institute for Public Administration (IPA) largely jibe with these findings<sup>8</sup>. One question in that survey asked, “in the last six months, were you ever unable to travel due to lack of transportation?” Among survey takers from New Castle County, people with lower incomes were more likely to answer, “yes.” More than half (55%) of those who lived in households earning under \$25,000 reported travel difficulties – compared to only 18% of those from households earning more than \$100,000. Work was the top destination these lower income households were unable to access, followed by shops, social outings, and medical/dental appointments.

In the IPA survey, those who identified as black or Hispanic were also more likely to report transportation difficulties. While 24% of white survey-takers said they experienced travel interruptions, 37% of Hispanics and 40% of blacks did. Work, shops, and social outings were the main destinations these respondents were unable to reach.

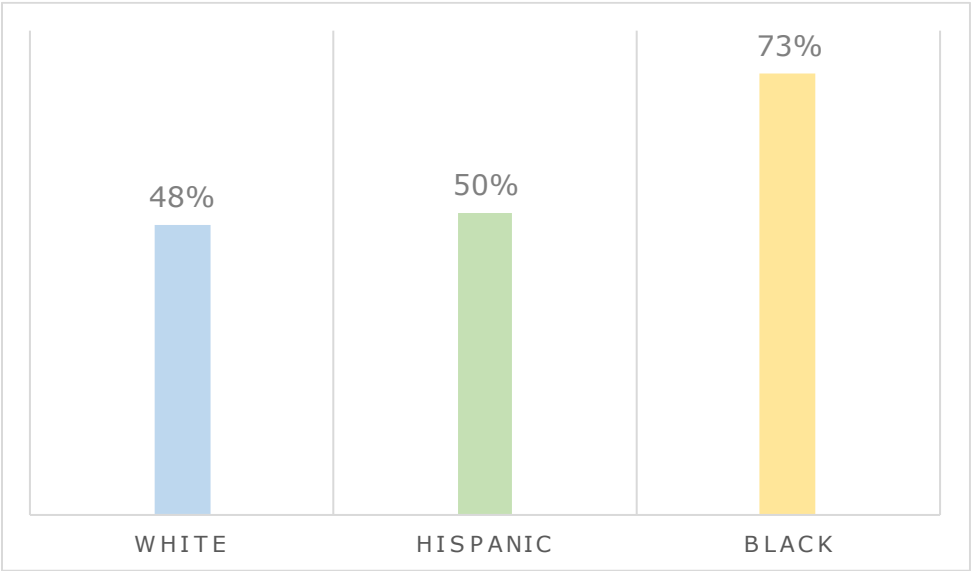
<sup>8</sup> This unscientific survey was commissioned by the Delaware Transit Corporation.

Most residents agreed in the WILMAPCO survey that the region’s public transit system needed strengthening. But there are significant variations in how well some residents feel the system works, and how important they say improvements are. Only 14% of whites and those earning over \$100,000/year said that the public transit system met the needs of residents “very well.” Poorer households and Hispanics generally had a better opinion about the state of public transit. About half of those earning under \$25,000/year (42%) and Hispanics (59%) thought that the public transit system met the needs of residents very well. Meanwhile, although blacks were slightly less critical of the public transit system than whites, they felt more strongly that improvements were needed. About ¾ of blacks (73%) said that bus and train service improvements were very important, compared to only half of whites (48%) and Hispanics (50%).

**The Public Transit System Meets the Needs of Residents “Very Well”**  
by Race and Ethnicity and Annual Household Income

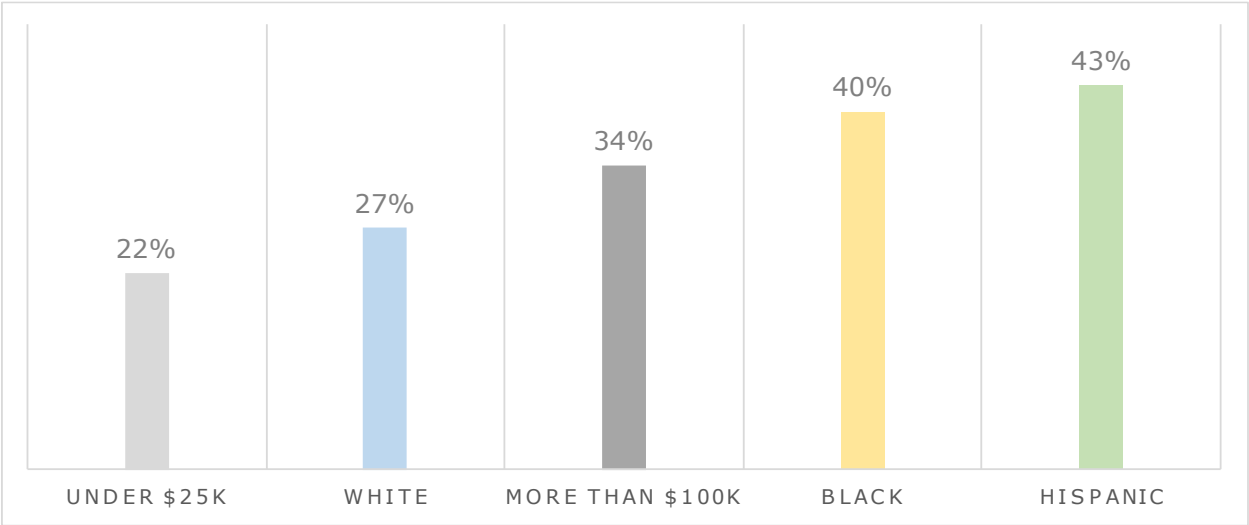


Improving Bus and Train Service is “Very Important”  
by Race and Ethnicity



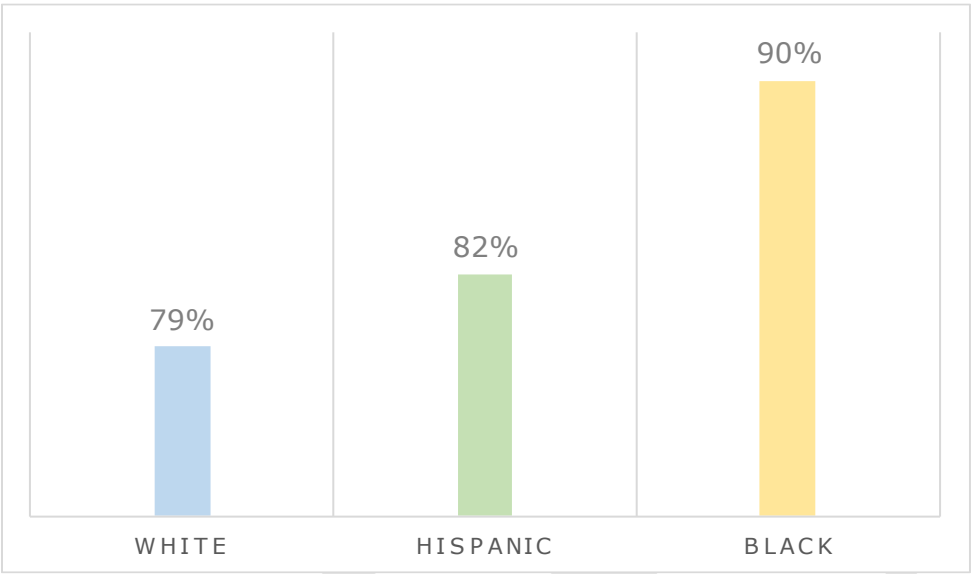
Most survey participants believed that the transportation system met the needs of bicyclists at least somewhat well. About one-third overall, however, said that it does not meet the needs of bicyclists at all. Blacks and Hispanics were more likely to agree with this sentiment. Just under half of blacks (40%) and Hispanics (43%) felt that the needs of bicyclists were not at all met, compared to about one-quarter (27%) of whites. Those with higher incomes are also more likely to feel negatively about the state of bicycle transportation, compared to those with lower incomes.

The Transportation System Does Not at All Meet the Needs of Bicyclists  
by Race and Ethnicity and Annual Household Income

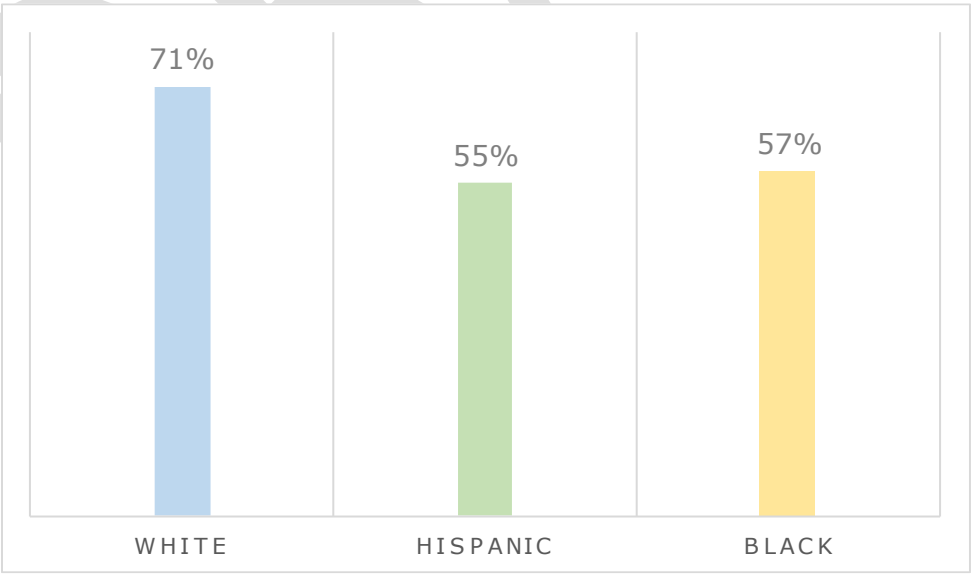


Our region's residents are in strong agreement that neighborhoods should be linked together by the transportation system, and to other destinations. More than 8 in 10 agree, including 90% of blacks surveyed. WILMAPCO believes that supporting mixed use land development and channeling new development and transportation projects into areas of high population and employment (while limiting growth in rural areas) is a first step to realizing this objective. All residents (100%) agree that mixed-use development is at least sometimes appropriate. And more than half of our survey takers (67% overall) agree with the concept of concentrating development and transportation projects. The survey revealed, however, that blacks and Hispanics were cooler to this idea than whites. Just over half (57% of blacks and 55% of Hispanics) agreed with the approach, compared to 71% of whites.

Connecting Neighborhoods Together and to Other Destinations is Important  
by Race and Ethnicity



Development and Transportation Projects should be Concentrated to  
High Population/Employment Areas; Limit Rural Transportation Projects  
by Race and Ethnicity



## Spatial Analysis

People from Title VI and EJ groups have settled in different neighborhoods across the WILMAPCO region. This section will map these locations and, later, use them as a foundation to analyze various equities of the transportation planning process and the transportation system.

### Concentrations of Blacks, Hispanics, Asians, Whites and People Living in Poverty

This section begins with a series of maps detailing the varying intensities of our Title VI and EJ groups in different places<sup>9</sup>. These thematic maps show five levels of population intensity. The two highest include neighborhoods (census block groups) with above the regional average and those more than double the regional average. Below are some observations from this initial map series.

**Blacks** – are concentrated in the City of Wilmington, particularly in neighborhoods east of I-95. Predominantly black neighborhoods can also be found along US 13 and US 40 as they traverse New Castle and Bear.

**Population Thresholds:** Regional average - 21%; Double regional average – 41%

**Hispanics** – are concentrated in the City of Wilmington, particularly in neighborhoods west of I-95. Major Hispanic neighborhoods can also be found along SR 2 and SR 4 between Wilmington and Newark and along US 13 and US 40, linking Wilmington to New Castle and Bear.

**Population Thresholds:** Regional average – 8.6%; Double regional average – 17.1%

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<sup>9</sup> All data are from the American Community Survey, 2012-2016 sample. Finding intense concentrations of these groups is important. As we will show, these neighborhood concentrations allow us to examine how equitably past and planned transportation investments have been made and, objectively, just how equitably the transportation system itself functions. A map showing concentrations of white neighborhoods is also presented for comparative purposes. Because whites comprise more than half the region's population, we instead chose an analysis threshold of 90% to flag places with the most non-Hispanic whites.

**Asians** – are concentrated in a variety of communities across northern New Castle County, mostly outside the City of Wilmington (except for the Wilmington Riverfront). Asians are also notable in neighborhoods west of SR 896 from Newark south to the Chesapeake and Delaware Canal, in the Pike Creek area along SR 7, in and around the Christiana area, and east of US 202 north of Wilmington.

**Population Thresholds:** Regional average – 4.5%; Double regional average – 9.1%

**Whites** – are concentrated in Cecil County, especially outside of Perryville and Elkton, and in northern New Castle County, especially north of SR 2 and in communities north of the City of Wilmington.

**Population Thresholds:** Regional average – 63.4%; Regional analysis threshold – 90%

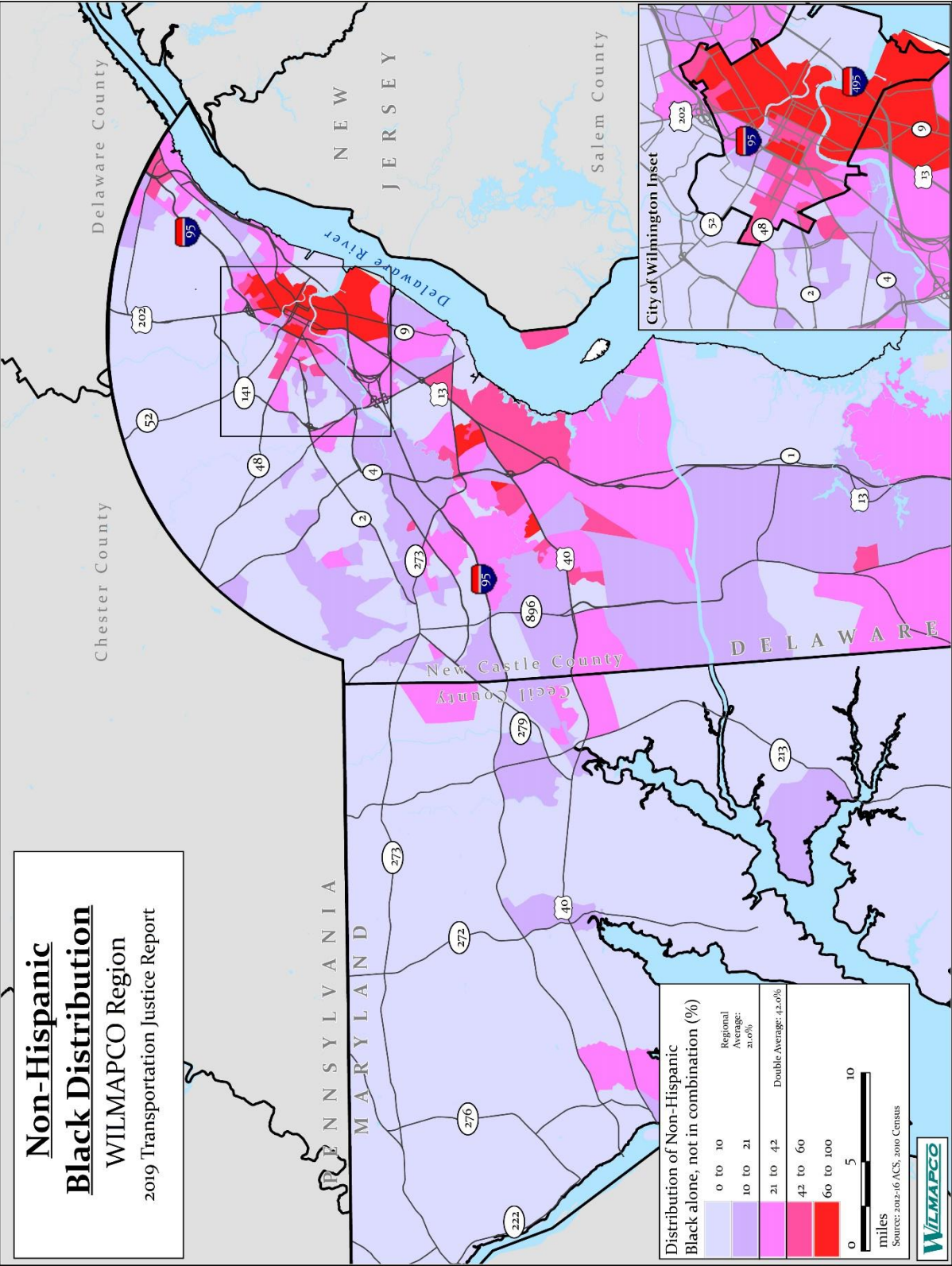


The Chapel Hill area north of Newark has one of the highest concentrations of non-Hispanic whites in the region. Nearly 99% of its 600 residents are white.

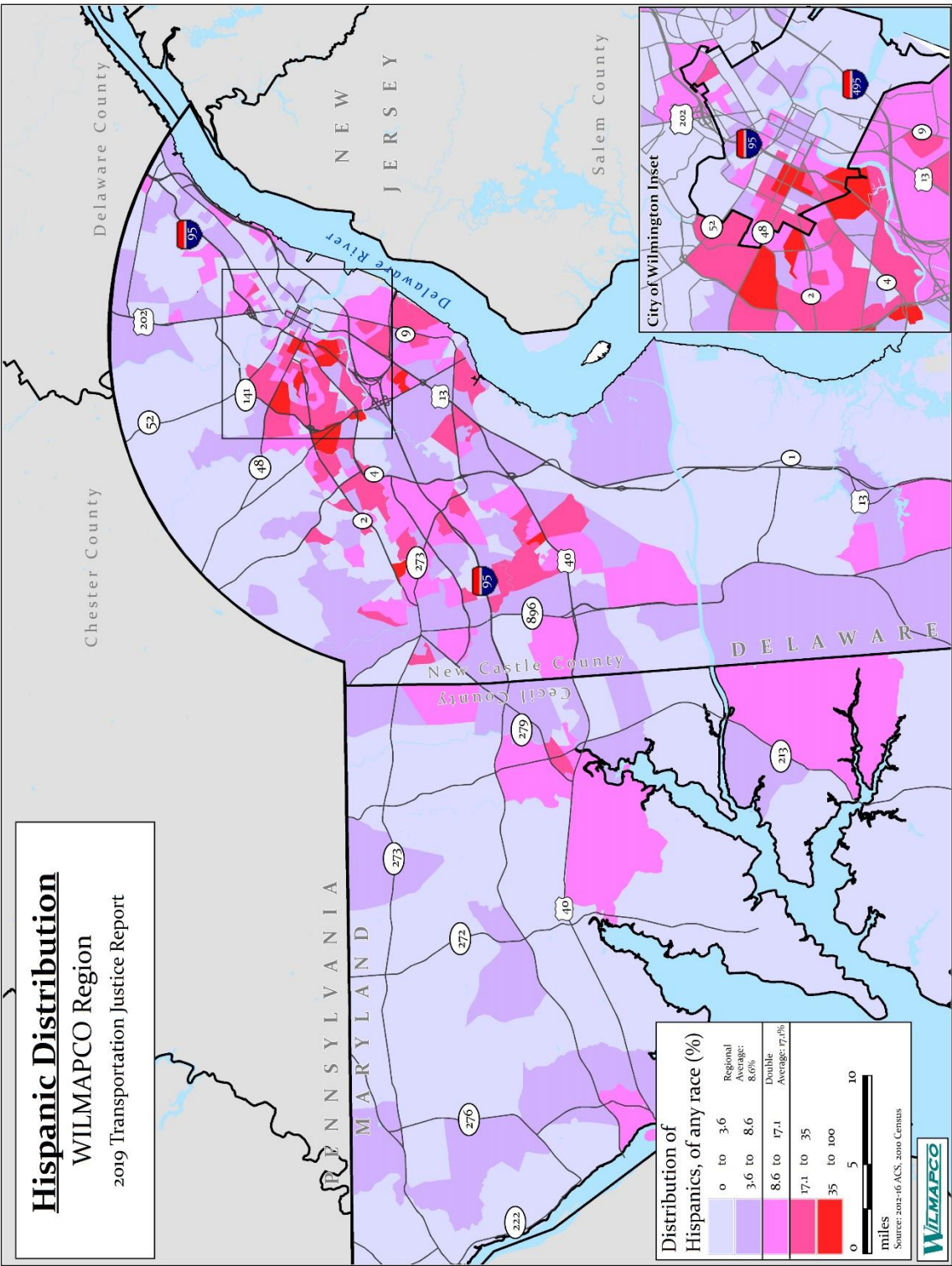
**People living in Poverty** – are concentrated in many communities, mostly stretching along the I-95 corridor from Elkton to Wilmington. The densest pockets of poverty exist in the City of Wilmington, along SR 4 and SR 48 as they enter the city, and in the neighborhoods sandwiched between I-95 and I-495.

**Population Thresholds:** Regional average – 11.2%; Regional analysis threshold – 22.5%

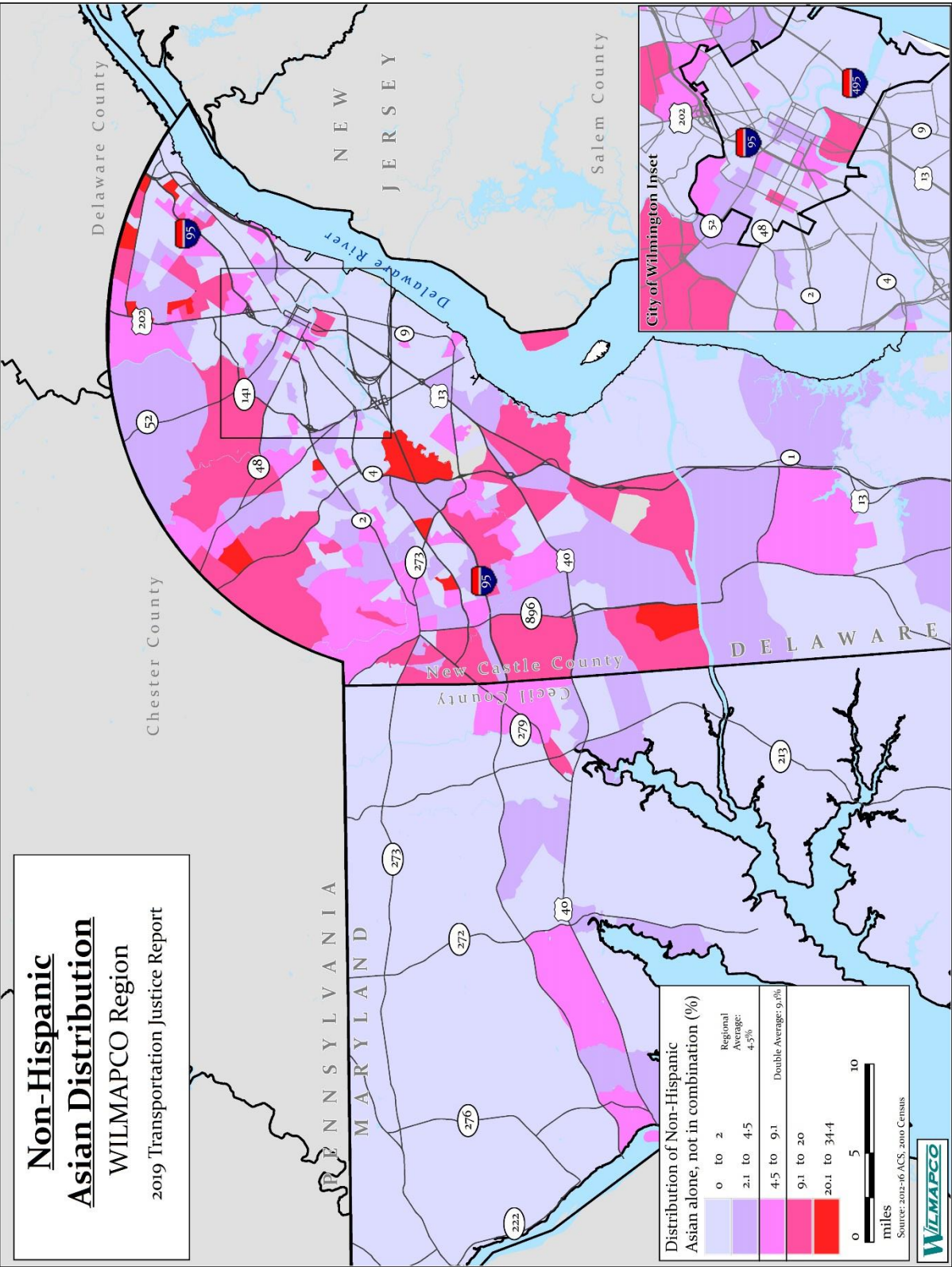
Black Population Distribution in the WILMAPCO Region



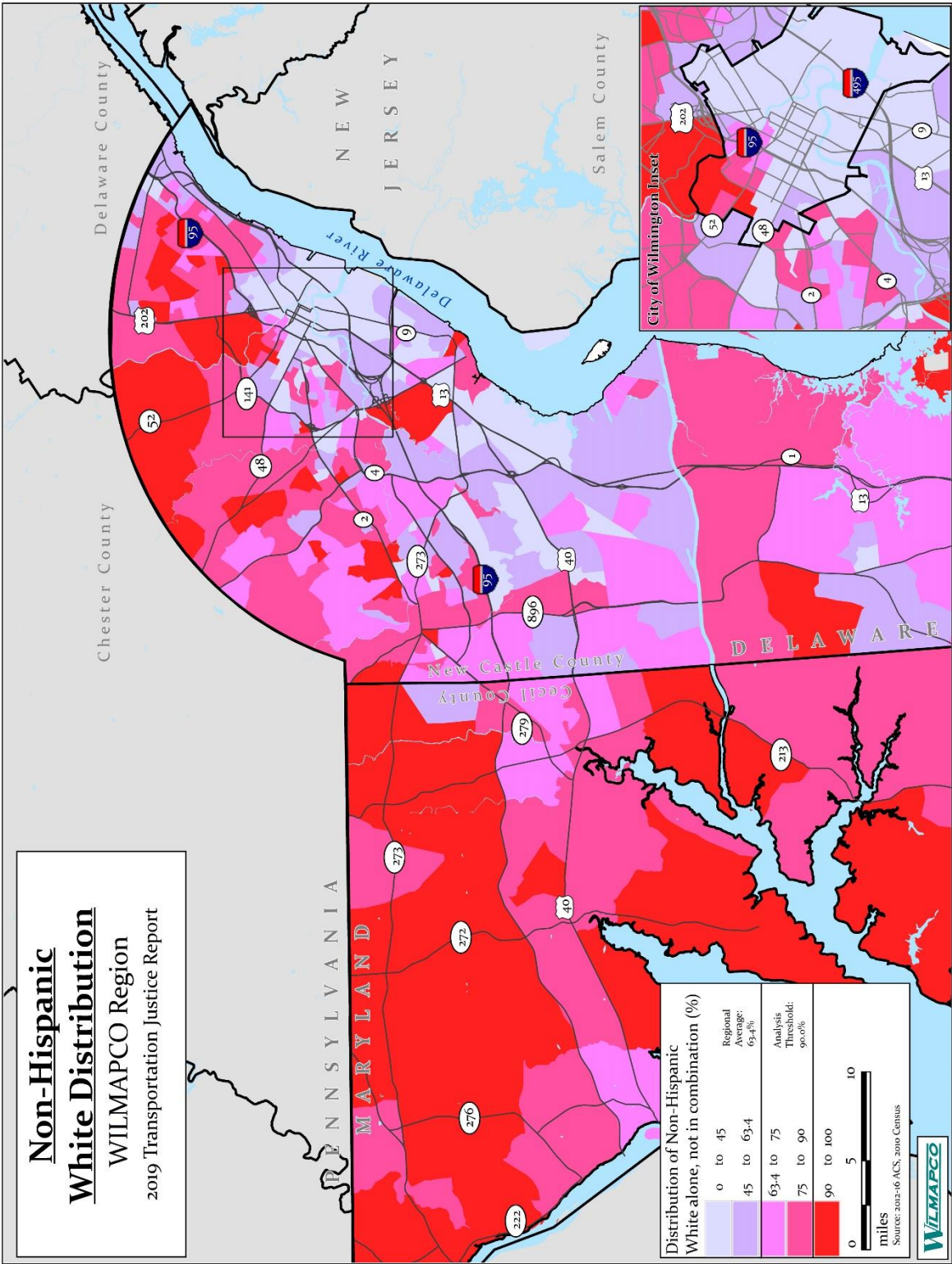
Hispanic Population Distribution in the WILMAPCO Region



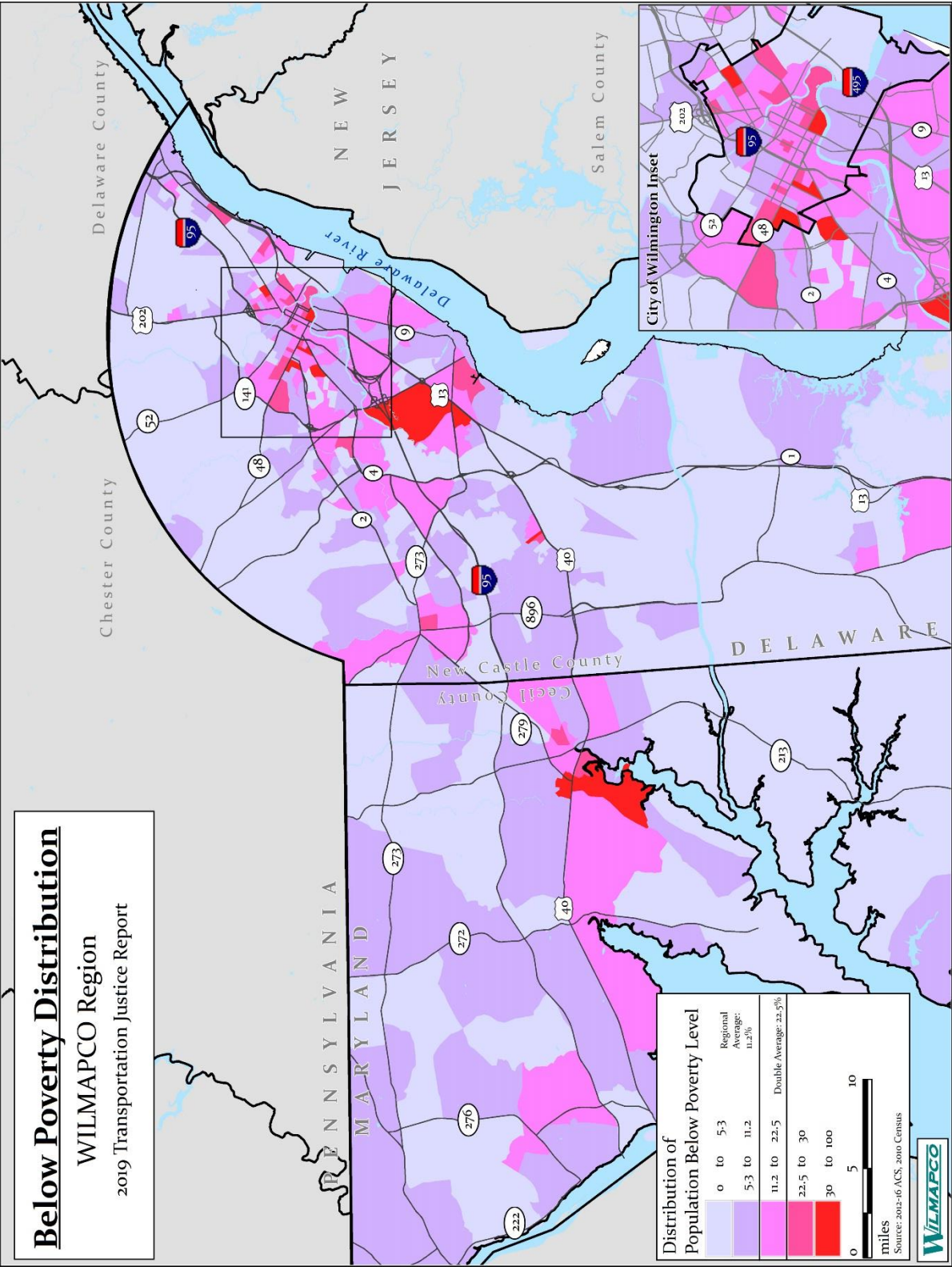
Asian Population Distribution in the WILMAPCO Region



White Population Distribution in the WILMAPCO Region

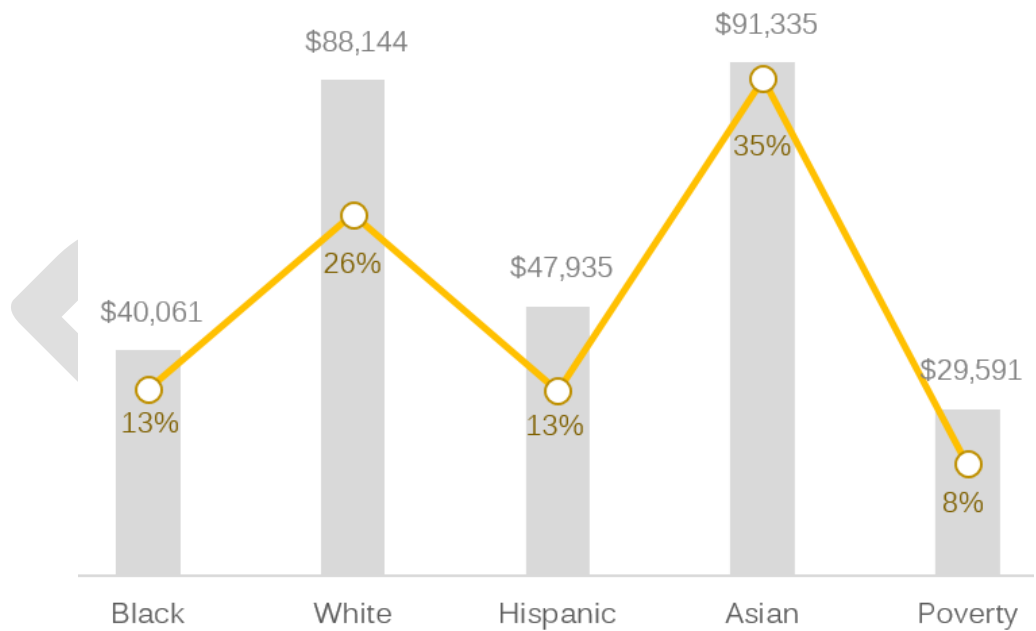


Population in Poverty Distribution in the WILMAPCO Region



As shown in the graph below, key social class differences are apparent between our areas of concentration. Note that a similar graph earlier showed differences between our ethnic and racial groups. This one considers the class makeup of the total population (regardless of their background) that live in an area of concentration. Our high poverty areas have the lowest levels of income and advanced education, while black and Hispanic concentrations show slightly higher levels of both measures. Comparatively, white concentrations have much higher levels of income and advanced education than black, Hispanic, or high poverty areas. Asian concentrations, meanwhile, boast the highest levels of income and advanced education of all the groups considered.

**Median Annual Household Income and  
% of those >25 Years w/ a Bachelor's Degree or Better**  
by Ethnic/Racial and Poverty Concentration in the WILMAPCO Region, 2012-2016 ACS



## EJ Neighborhoods

For more than 15 years, WILMAPCO has identified EJ neighborhoods (or areas) to measure transportation equity, support project prioritization, and meet federal guidance. EJ neighborhoods represent concentrations of racial and ethnic minority and low-income populations. Our methodology for identifying EJ areas has evolved over time but has relied exclusively on data from the Census/ACS. While we continue to lean heavily on these data to identify this iteration of EJ neighborhoods, we supplement them with affordable housing development locations and elementary school demographic data. The result is a more robust EJ neighborhood identification process<sup>10</sup>.

While our present study moves away from using EJ neighborhoods in our spatial equity analyses in favor of even more nuanced approaches, EJ neighborhoods will continue to strongly influence policy at WILMAPCO. Project prioritization is perhaps the most important area. Projects within significant EJ neighborhoods currently can be awarded or penalized three points in our overall project prioritization process (out of 36 possible points), while those within moderate EJ neighborhoods can be awarded or penalized one point. Projects outside of EJ areas, or expressway maintenance projects which passed through EJ neighborhoods, generally receive zero points<sup>11</sup>.

The following page lists the different ways a place can be designated as a moderate or significant EJ neighborhood. These areas come to be defined via their demographic/socio-economic makeup according to the 2012-2016 ACS, their being part of a large affordable housing development, or, the demographic/socio-economic makeup of a public elementary school's feeder zone.

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<sup>10</sup> Principally, our new approach is better able to account for rural poverty – a typical shortcoming of solely census-based approaches.

<sup>11</sup> Projects very rarely are penalized for EJ within our project prioritization process. However, one case in the past was a planned interstate interchange within an EJ area. WILMAPCO docked three points from that project, which never materialized, on the grounds it would introduce more noise and pollution and traffic into the community. See [www.wilmapco.org/priority](http://www.wilmapco.org/priority) for more information.

### Moderate EJ Neighborhoods Identification Paths

#### Census Block Group

- Poverty >Regional Average (RA), and
- Blacks or Hispanics or Asians 3x RA, or
- Racial/ethnic minorities 2x RA, or Poverty 2x RA

#### Affordable Housing

- Development with 25-99 units

#### Public School Feeder

- Not covered by census block group analysis, and
- Low income students >RA, and
- Blacks or Hispanics or Asians 3x RA, or
- Racial/ethnic minorities 2x RA or low income students 2x RA

### Significant EJ Neighborhoods Identification Paths

#### Census Block Group

- Poverty 2x >Regional Average (RA), and
- Blacks or Hispanics or Asians 3x RA, or
- Racial/ethnic minorities >90%, or Poverty 3x RA

#### Affordable Housing

- Development with more than 99 units

#### Public School Feeder

- Not covered by census block group analysis, and
- Low income students 2x >RA, and
- Blacks or Hispanics or Asians 3x RA, or
- Racial/ethnic minorities >90% or low income students 3x RA

**Our first level of the EJ neighborhood identification process utilizes census data.** Our foundational analysis, here we pulled census block groups home to a high percentage of racial and ethnic minorities or people living in poverty – either standing alone or in combination – and called them EJ neighborhoods. More stringent benchmarks were applied to distinguish significant from moderate EJ neighborhoods. Next, we trimmed non-residential portions of these neighborhoods away, leaving only formally inhabited places. As an important note, while portions of the City of Newark register as an EJ area with this methodology, we exclude them due to high University of Delaware student presence that artificially inflates the number of poor households<sup>12</sup>.

**A second level of EJ identification used affordable housing development data.** We obtained a point level file in New Castle County from the Delaware State Housing Authority. We created a field in the data, accessible as part of their 2016 Preservation Inventory, to represent the number of affordable housing units at that development<sup>13</sup>. Later, we converted the points to polygons by identifying and tagging the appropriate nearby tax parcels.

In Cecil County, we built upon our existing Section 8 housing GIS file used in the *2013 Environmental Justice Plan*, with more detailed data from Maryland Housing Search ([www.socialserve.com](http://www.socialserve.com)). We found housing developments that either accepted rental vouchers or were income based rental developments. Units were assigned to each record through an examination of developer websites and parcel data on file.

Once complete, we assigned an EJ designation to these places. Affordable housing developments in New Castle County and Cecil County were given moderate EJ status if they had between 25 and 99 units. If a development had 100 or more units, it was designated as a significant EJ area.

**A third and final level of EJ designation examined school socio-economic data.** In New Castle County, we began by pulling third grade public elementary school feeder zones from FirstMap. We next created data fields for the percentage of low-income students and ethnic/racial minority students for each school, via data from the Delaware

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<sup>12</sup> The rationale here, per WILMAPCO Council, is that heavy university student presence in that city inadvertently inflates poverty levels. While University of Delaware students are not without transportation challenges, they also enjoy privileges (such as a private bus service) not afforded to the general public.

<sup>13</sup> Total affordable units = Sum of “Subunits,” “Non-LIHTC\_Income Restricted” and “IncRestricted (tax credits).”

Department of Education. In Cecil County, we had to first create an elementary school feeder zone GIS file<sup>14</sup>. Next, we populated its data fields with the percentage of low-income students and ethnic and racial minority students, according to data from Cecil County Public Schools.

With the school feeder zones drawn and populated with data, our next step was to identify EJ school feeder zones. We ran each of the zones through the exact analysis used to identify the census block groups as EJ areas. This gave us eight significant EJ school zones in the region, all in Wilmington, and two outside that city (Castle Hills south of Wilmington and Gilpin Manor in Elkton).

From here we overlaid these places with our census identified EJ areas and affordable housing developments. We found that each of New Castle County's EJ school zones also contained census defined significant (and moderate) EJ area(s). Therefore, we took no further steps to formally class these zones as EJ areas. We assumed that most of the school's EJ population was captured already by the smaller-scale census analysis.

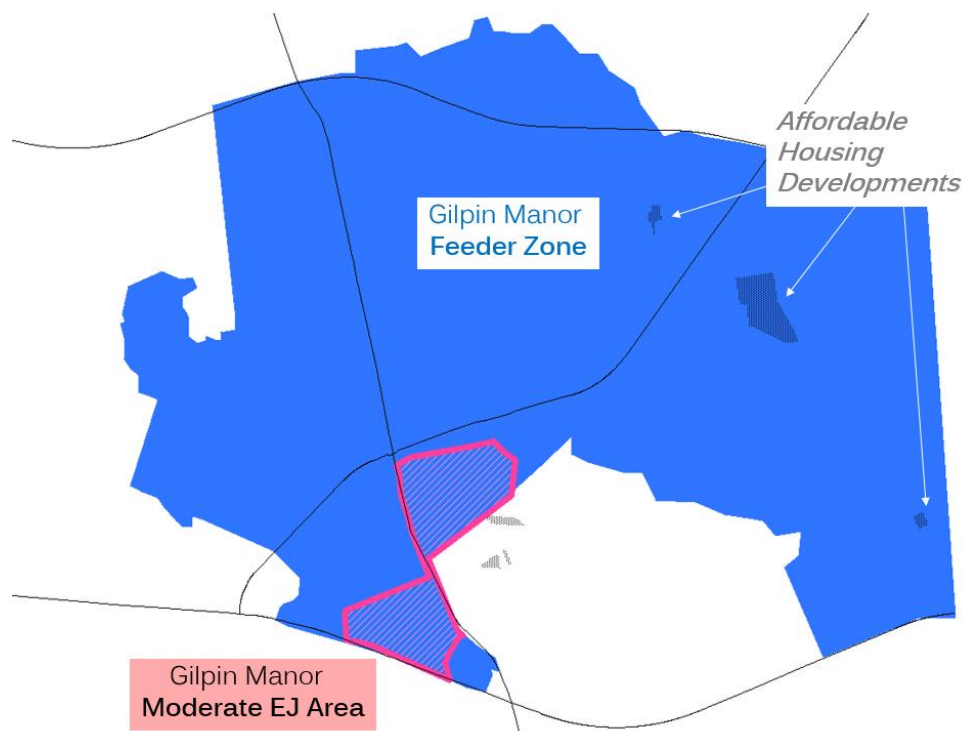
This was not true of the Gilpin Manor feeder zone in Cecil County. While the zone did contain significant EJ affordable housing developments, it did not have a census designated EJ area.

We took a few steps to carve out and formally classify a Gilpin Manor moderate EJ area. As the trigger for the zone's inclusion as an EJ area was its high rate of free/reduced lunches for students (80.5%), we began this approach by overlaying poverty rates by census block group. We found a pair of block groups on the southern side of the zone with relatively high rates of poverty (17% and 22%). Other parts of the zone had much lower poverty rates. We traced out a revised zone which included the Gilpin Manor feeder zone within those two high poverty block groups. From there, we removed non-residential uses and were left with our final Gilpin Manor moderate EJ area.

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<sup>14</sup> A Cecil County school feeder zone GIS file was unavailable from local government. Using web searches, however, we uncovered these data at [www.schooldigger.com](http://www.schooldigger.com) and [www.maryland.hometownlocator.com](http://www.maryland.hometownlocator.com). We traced out the rougher zones from the former site as first level analysis. Later, when we began to focus closely on the Gilpin Manor zone in Elkton, we traced its boundary from the more nuanced latter website.

### The Gilpin Manor Moderate EJ Area



A moderate EJ area (in pink) was created in Elkton by examining public elementary school socio-economic data and census poverty rates.

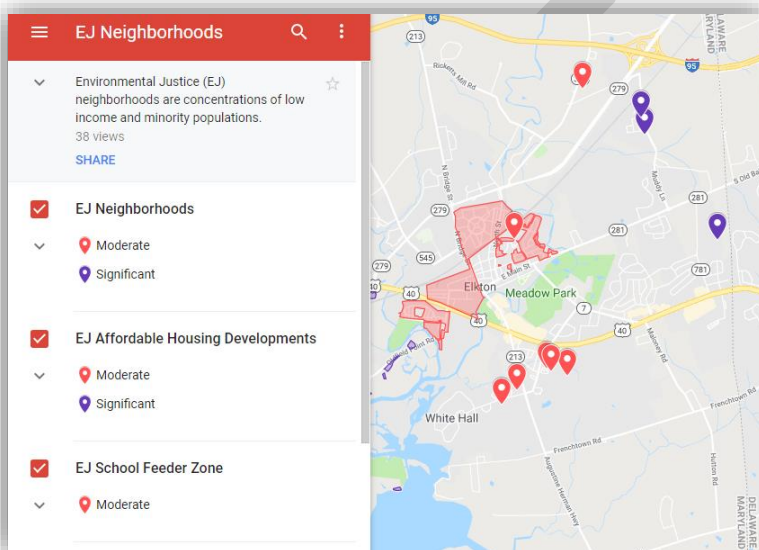
The map on the following page identifies our region's EJ neighborhoods. The heaviest concentrations lie within and around the City of Wilmington, and nearby at the US 13/US 40 split in Bear. Smaller pockets of EJ neighborhoods also appear across the region. These includes clusters along the I-95 corridor in Elkton and Prices Corner, as well as in parts of rural towns like Chesapeake City and Rising Sun.



## Interactive Maps

### Environmental Justice Neighborhoods

See all the identified EJ areas and neighborhood concentrations and zoom into your neighborhood. Interactive maps are available on the WILMAPCO website. Visit [www.wilmapco.org/tj](http://www.wilmapco.org/tj).



## Social Determinants of Health

### WILMAPCO's Approach

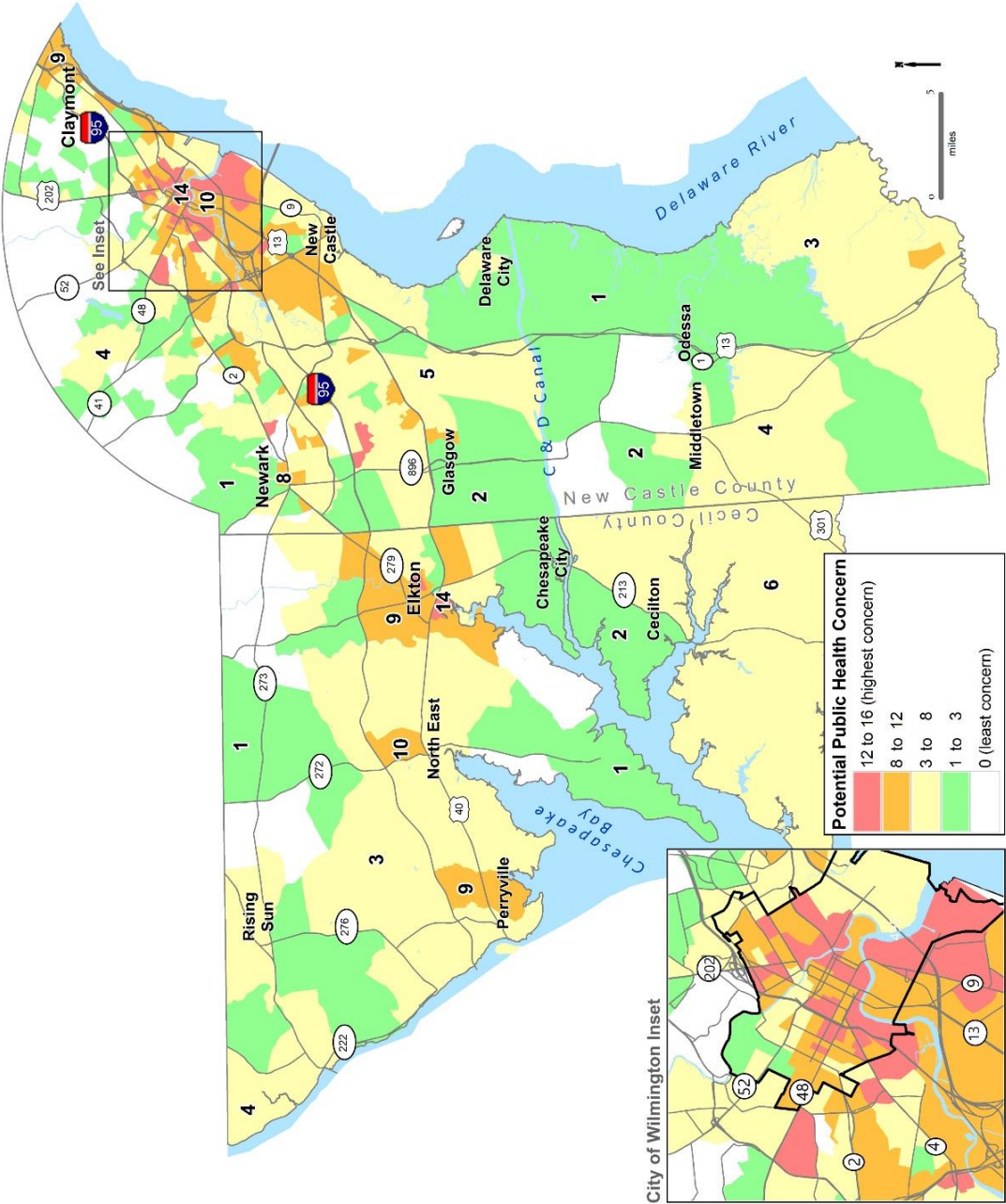
Social Determinants of Health (SDOH) are the conditions in which people live, work, and age that impact their personal health. People living in communities with lower education, limited healthy food access, high unemployment, high poverty, and high racial minority segregation, for example, have generally poorer health that is independent of genetic predispositions. The Route 9 Master Plan Monitoring Committee developed a methodology for classifying neighborhoods based on their level of SDOH concern. WILMAPCO has taken that methodology and applied it at a regional level.

The methodology examines eight quantitative SDOH indicators: poverty rate, high school graduation rate, minority segregation, employment rate, homeownership rate, householder tenure, percentage of single parent households, and food desert status. Each neighborhood (census block group) receives up to two points for each factor. The sum of these eight scores is a neighborhood's final SDOH score. A higher score indicates a greater public health concern.

The map on the following page shows SDOH results at the regional level. There are strong and obvious correlations between our Environmental Justice neighborhoods and neighborhoods with public health concerns. Planning within EJ communities should always examine ways to improve community health.

For more information on our SDOH analysis, see the SDOH data report at: <http://www.wilmapco.org/data-reports>

Social Determinants of Health Analysis  
WILMAPCO Region



### Affordability Equity Analysis

We begin our social equity analyses by examining how affordable it is to live within areas of racial/ethnic and poverty concentration.

We first isolated the heaviest concentrations of our racial/ethnic population groups and people living in poverty. We flagged neighborhoods (block groups) that are home to double or more the regional average percentage of blacks, Hispanics, Asians, people living in poverty, and whites (for comparative purposes) in the 2012-2016 ACS<sup>15</sup>. These are the concentrations of those populations.

Next, we turned to data on file from the Center for Neighborhood Technology to understand the affordability of living in neighborhoods throughout the region<sup>16</sup>. The data show, for each neighborhood, what the average lower income household<sup>17</sup> would spend on both housing and transportation (the two biggest line items in typical household budgets of North Americans) in that area. For housing, spending 30% or less of the household budget is considered affordable; for transportation, the figure is 18%. Combining the two, a spend of 48% or less on transportation and housing is considered affordable. The resulting analysis is shown on the following page.

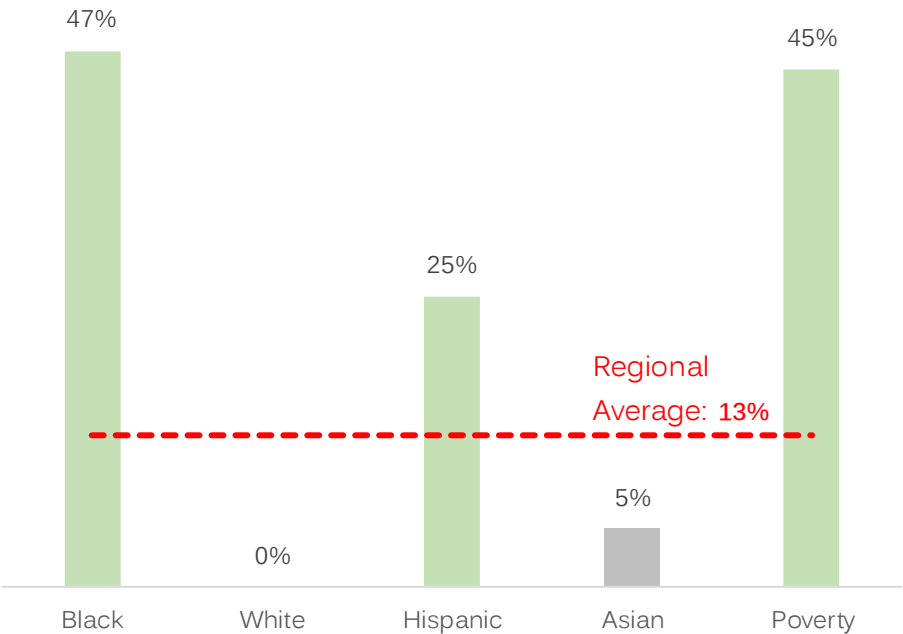
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<sup>15</sup> Because non-Hispanic whites are the majority racial group regionally, we cannot double their average to identify white concentrations. Instead, we flag block groups home to 90% or more whites and consider them the concentrated areas. For concentrations below poverty, we use individuals below poverty for analysis years after 2010 and households below poverty for the 2010 analysis year and before. The whites, blacks, and Asians considered in this Plan all identified themselves as non-Hispanic.

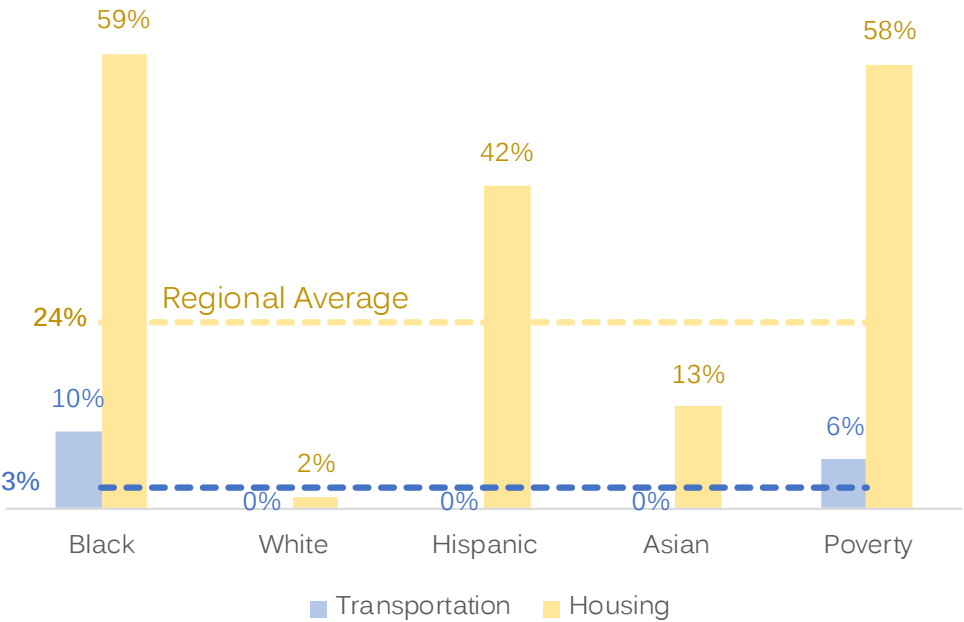
<sup>16</sup> See this data report: [http://www.wilmapco.org/data/TranspHousingCosts\\_DataReport.pdf](http://www.wilmapco.org/data/TranspHousingCosts_DataReport.pdf)

<sup>17</sup> Lower income household is defined here as a household earning 80% of the median regional household income.

Neighborhoods with Affordable Transportation + Housing Costs  
within Group Concentrations for Lower Income Households



Neighborhoods with Affordable Costs  
within Group Concentrations for Lower Income Households



Based on our analysis, only 13% of neighborhoods within the WILMAPCO region are affordable for lower income households. This figure is considered our equity benchmark. Nearly half of neighborhoods within black concentrations and poverty concentrations are affordable; a quarter of Hispanic concentrations are affordable. Both then easily meet our equity benchmark. Only 5% of Asian concentrations are affordable, which misses the equity benchmark. Asians, however, generally have higher incomes than the average resident in this region. Therefore, we do not consider inequities cause for concern.

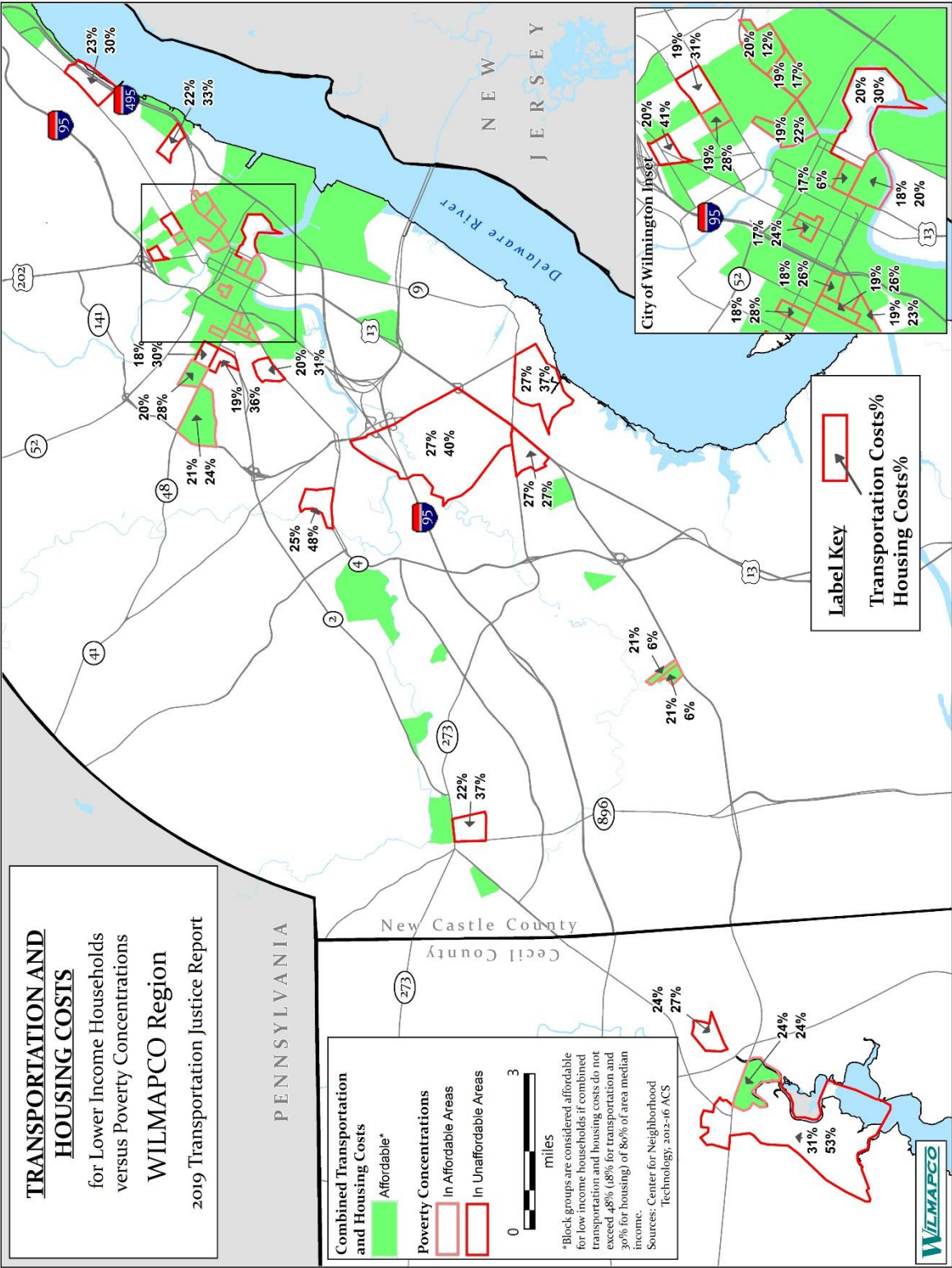
Because of our prevailing car dependency, transportation costs are particularly high across the region. Only 3% of neighborhoods have affordable transportation costs for a lower income household. Within black concentrations, 10% of neighborhoods do; within high poverty areas 6% do. No white, Hispanic, or Asian concentrations have a neighborhood with affordable transportation costs.

While this analysis did not uncover any major inequities between our groups, its overall results are troubling. Housing and transportation costs are simply too high for too many lower income households.

Less than half (45%) of high poverty neighborhoods have affordable combined transportation and housing costs, as shown on the following map. That means that the average lower income household is likely spending more than they should in over half of these poorest of our communities, which leaves less funding for health food, education, and quality of life improvements.

Transportation expenses are a big reason some of these places are so unaffordable. All told, only 6% of high poverty concentrations have affordable transportation costs compared to 58% with affordable housing costs. In a quarter of cases, in fact, the transportation costs of living in a high poverty neighborhood exceed housing costs.

Transportation and Housing Costs for Lower Income Households  
within Poverty Concentrations



### Donte and Dee's Story:

#### The Cost of High Transportation and Household Expenses

Donte and Dee have made numerous sacrifices in trying to build a good life for their young family. Their story presented in this section helps illustrate some of the challenges that too many lower-income residents face due to the high cost of transportation, housing, and other basic expenses.



A year ago, Donte and Dee and their young child lived in an \$850/month, two-bedroom apartment in Wilmington. It was so small, they remember with a smile, that the refrigerator could not fit in the kitchen. Both worked outside the city – Donte at a warehouse in Elkton and Dee at a call center in Exton – as they struggled to find employment that was closer. Each made a separate, 45 minute drive each morning to their jobs in these suburban towns. This situation worked for a while – until Donte's car broke down.

Four months previously, Donte bought his car for \$950 cash. "It was a deathtrap," says Dee, shaking her head slowly. A wheel sprung loose one day when Donte pushed it to 60 miles per hour, bringing it to a screeching halt on the highway. Thankfully, no one was injured, but the vehicle was totaled.

Without a car to get to work, and without money to buy a new one, Dee had to step in. She would wake early in the morning and drive Donte to his grandmother's house nearby. From there, Donte drove his grandmother's car to his job in Elkton. Dee, meanwhile, went back to their apartment and caught an extra hour of sleep before starting the drive to her job in Exton. After his workday was finished, Donte would drive back to his grandmother's house and wait for hours for Dee to come around to collect him. "I was spending a lot of time with my grandma," Donte chuckled. Exhausted, most days they were in bed by 7:30 PM.

"The drive to Exton just wasn't worth it," Dee remembered. So, Dee quit and became a babysitter. She made better money and did not need to travel as much. Unfortunately, just as their load was easing, Dee injured her shoulder on the job. She would be out of work for months. Donte's work proved too irregular to support the family. Some weeks he would work 10 hours a day, while others only three. The couple knew a drastic change was needed. Problems at their apartment compelled them to make it.

While Donte and Dee always had issues with their Brooklyn-based landlord, things came to a head one early morning. Police raided the apartment below them, kicking in a door which served as the point of entry to both apartments from the street in the process. After the raid, the police left the door unhinged, leaving both apartments unsecured. Despite calls from Donte and Dee, the landlord refused to step in and fix it. With their financial situation already spiraling out of control, this was the last straw.

Donte and Dee moved in with family in Middletown. The move has helped the family get back on its feet and start saving for the future. The couple talks excitedly about plans to rent a house in Wilmington soon and buy a second car. But, beyond losing their independence, the move to Middletown came with additional sacrifices.



Today, Donte and Dee both work as delivery drivers for the same company in Newark. The work is steadier for Donte and has allowed Dee to ease back into employment. Since they have only one car, Dee accompanies Donte throughout his full shift, which begins at 11 AM, until her shift begins at 5 PM. Both of their shifts end when all deliveries are made.

Both view the public bus as a non-option and very unreliable. “If we had to take a bus somewhere nine times out of 10 it would take us an entire hour and we would be late for everything,” says Dee.

While quality time with loved ones is priceless, the one car situation severely restricts what Dee can do with her day. Beyond this daily struggle, Donte and Dee have made major life sacrifices as they survived on low wage work in the Wilmington region. College has been put off, as has their marriage and desire to expand their family.

Reflecting on their situation, and that of others in their situation, the couple say:

*. . .it's really hard to save for your bills, take care of the home, and go to work.*

*I can pay for my child's medicine this month, but I also need car insurance, gas, and rent all in the same week. And it doesn't add up. A lot of jobs don't pay you that much.*

*It seems like no matter how hard you try to get where you got to go to where you can survive. . .the system always pulls you back down and keeps you into it.*

## Connectivity Analysis

Working with the University of Delaware's Center for Applied Demography and Survey Research (CADSR) we analyzed our region's transportation connectivity<sup>18</sup>. Connectivity to nine destination types from every housing unit in the region was determined for walking, bicycling, transit, and car trips. Neighborhoods (census block groups) are classed based on the collective level of housing unit connectivity *to at least one destination within these destination types*<sup>19</sup>. The analysis provides a rich survey of regional connectivity—or, as it more commonly turned out, dis-connectivity. Further still, it enabled us to consider transportation connectivity through the lens of social equity.

## *Methodology*

As shown in the graphic below, nine key destination types were identified. These were places our Transportation Justice Work Group felt were important for people (especially from EJ and/or MC communities) to be able to reach. Geographic Information System (GIS) data were developed for each destination type – pinpointing all supermarkets, pharmacies, hospitals, etc. Most of these data were derived from existing data on file at CADSR, while other files were built through web-browsing in 2018. WILMAPCO supplied the locations of low-wage employment centers<sup>20</sup>.

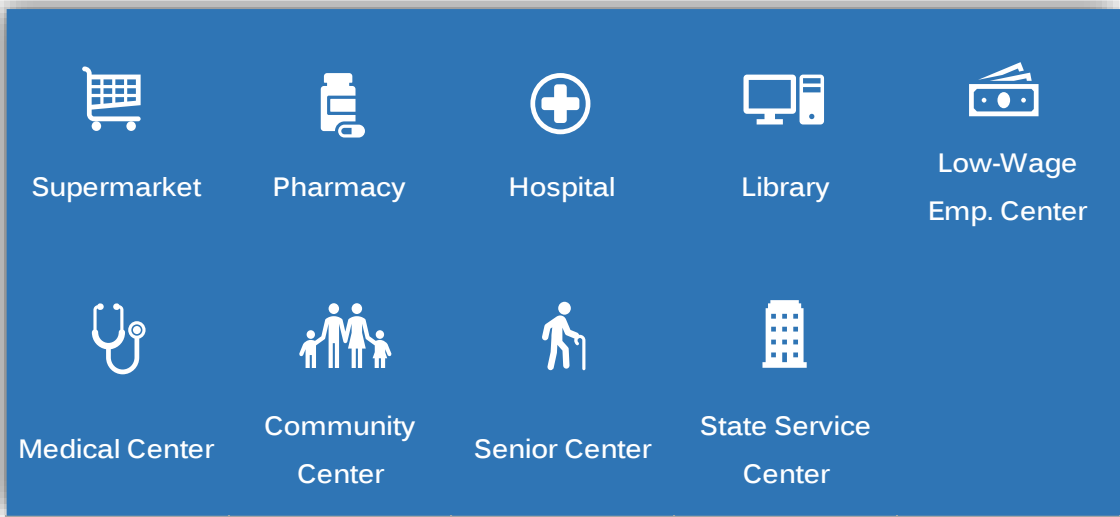
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<sup>18</sup> This work builds upon an earlier WILMAPCO/CADSR connectivity analysis featured in the *2015 Transportation Justice Plan*. In 2015, we considered walking, biking, bus, and car connectivity from MC areas (then called TJ) to supermarkets, libraries, senior centers, and low-wage employment centers. Advances in computer processing power and geospatial infrastructure data enabled a much finer-grained analysis for this Plan.

<sup>19</sup> The classes used in our mapping analysis, vary from completely disconnected (0% of housing units connected to at least one destination, per destination type), to having “weak” connections (1%-74%), “strong” connections (75%-99%), or complete (100%) connections.

<sup>20</sup> Our method for identifying the low-wage employment centers begins with isolating the industries with the lowest prevailing wages. In our region these are: trade, transportation and utility jobs; leisure and hospitality jobs; and retail and warehousing jobs. Next, we find Traffic Analysis Zones (TAZs) with many jobs in one or more of these industries. Then, using air photos and atlases, we identify major places within those TAZs that are likely generating those jobs.





Key Destinations



Connectivity to these destinations was measured on four travel modes – walking, biking, public transit, and by car. A housing unit was marked “connected” to a destination type by walking or biking when a person could reach at least one of the destinations (in that type) within an easy 10-minute walk or ride. Connected housing units on public transit had to reach destinations on a 30-minute door-to-door (house to destination) peak hour, fixed-route bus trip. No more than 10 minutes of that trip could be spent walking along an easy route. Car connected housing units were those within a 15-minute car ride, along any road, between the housing unit and destination.

More details about the ins and outs of this analysis are available in the appendix.

### Connectivity Definitions, by Mode<sup>21</sup>

	<b>Walking</b> 10 minute walk along subdivision streets, trails, or sidewalk
	<b>Biking</b> 10 minute ride along a route with low traffic stress
	<b>Transit</b> 30 minute door-to-door peak trip; no more than 10 minutes walking
	<b>Car</b> 15 minute ride along any road

The final product of our connectivity analysis is the percentage of connected housing units, by mode and destination type, within each block group. Because we also know the total number of housing units within each block group, we also were able to produce corresponding regional level connectivity statistics.

For mapping purposes, we classed the block groups based on their level of connectivity for each mode and destination type. Here are the classifications:

- **None** = 0% of housing units connected
- **Weak** = 1% to 74% of housing units connected
- **Strong** = 75% to 99% of housing units connected
- **Connected** = 100% of housing units connected

To illustrate how the analysis is built consider the diagram below. This considers hypothetical walking access to libraries. Housing units within an easy 10-minute walk to at least one library are marked “connected.” Next, let’s say within one block group (or neighborhood) 50% of housing units are connected to libraries by walking. With 50%

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<sup>21</sup> Additional details about how these accessibilities were calculated are available in the appendix.

connectivity, that block group is classed as a “weak” connection. Comparatively, neighboring block groups are classed as having no connections (0% connectivity), strong connectivity (75% – 99% housing unit connectivity) or connected (100% housing unit connectivity). These analyses are repeated for each block group for each mode and each destination type in the region.

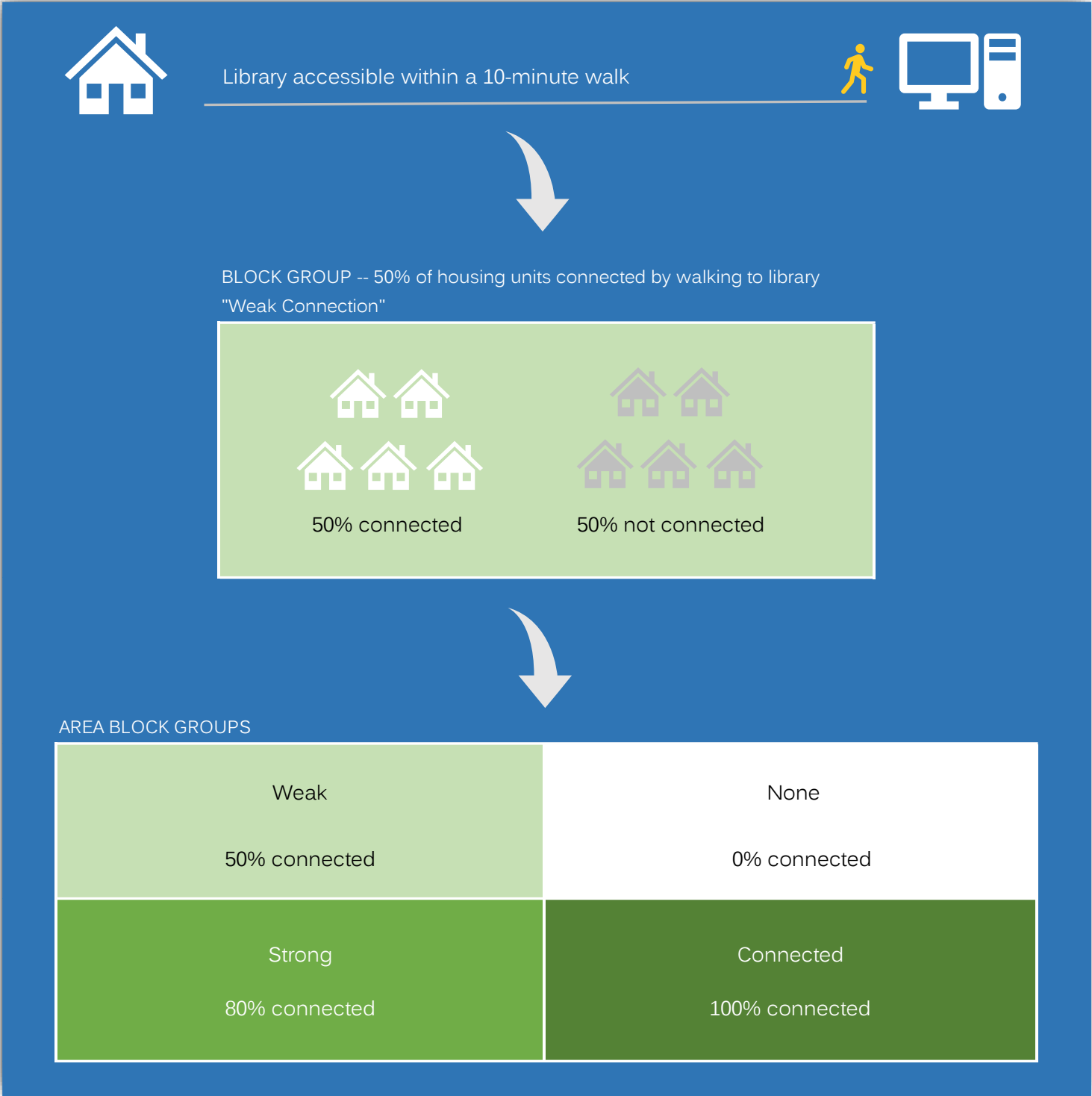
A couple words of caution are necessary here. First, just because we mark a housing unit or census block group as having a good connection, it does not mean that that connection is used. In too many of our urban communities, crime and the threat of crime keeps families from walking and bicycling more. A pharmacy down the street, or the park or school a few blocks away, are sometimes not accessible because of safety. We hope that future iterations of our connectivity analysis will be sensitive to this.

Finally, while we took pains to ensure that the destinations were as complete as possible, errors are possible and change (to destinations and transportation infrastructure) are inevitable. The destinations are places that change by the month, as does the transportation infrastructure that surrounds and links to them. Therefore, instead of viewing this analysis as a single study, view it as a “living” analysis. It will naturally transform as destinations and infrastructure change and errors are identified and corrected<sup>22</sup>.

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<sup>22</sup> Indeed, weeks after we wrapped up the analyses for this section, a handful of slight errors were spotted for several block groups. We discuss how these were accounted for in the appendix.

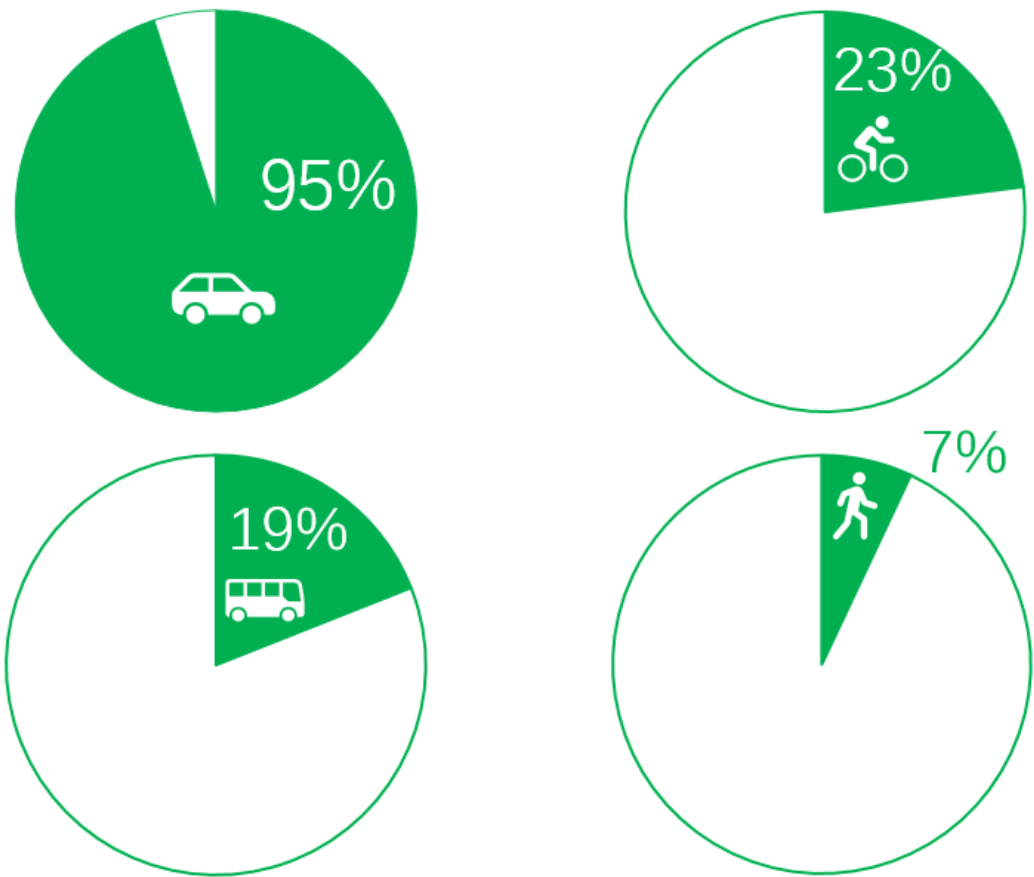
Hypothetical Connectivity Diagram – Walking to Libraries



Overall Connectivity Results

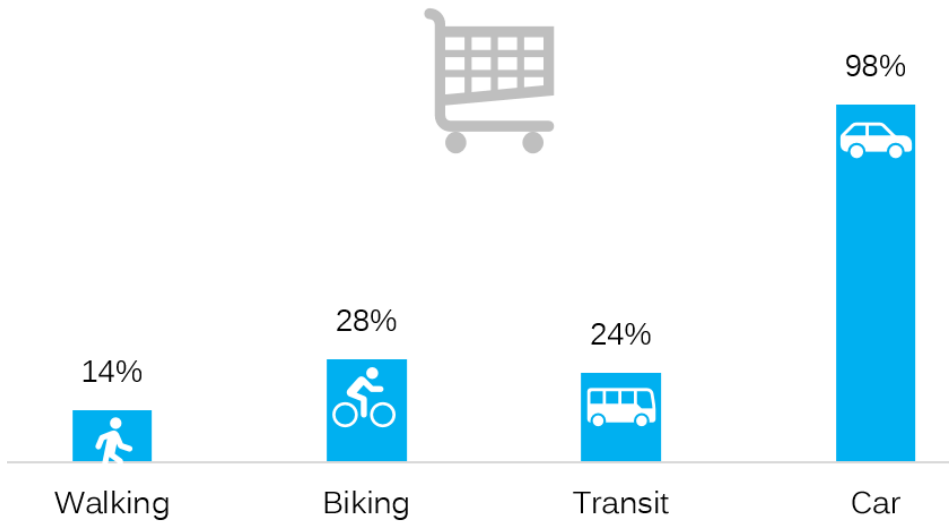
Our analysis results show just how extremely car dependent the WILMAPCO region has become. An overall average of 95% of homes are connected to all combined destination types by car. By contrast, less than a quarter of homes have good connections, on average, to destinations by other modes. Average good bike connectivity (23%) from homes to destinations outpaces average transit connectivity (19%). Both beat out average walking connectivity. Fewer than one in ten (7%) of homes have good walking connections to destinations on average.

Average Percentage of Households Connected to Destinations (Combined), by Mode  
WILMAPCO Region

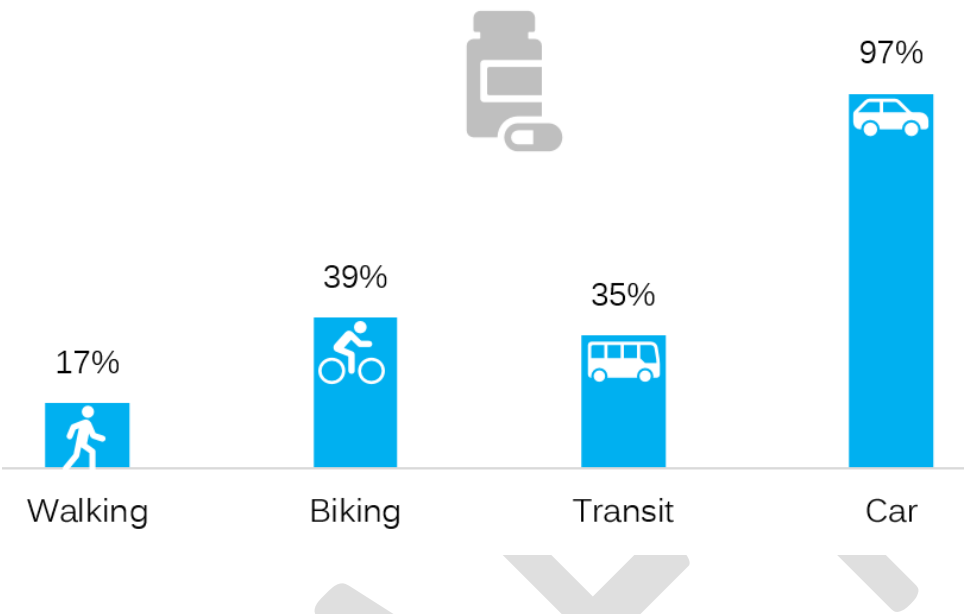


More detailed results, by destination type, are found in the graphs below. These show the percentage of homes across the WILMAPCO region that are connected to at least one of the destinations, within each type, by each mode.

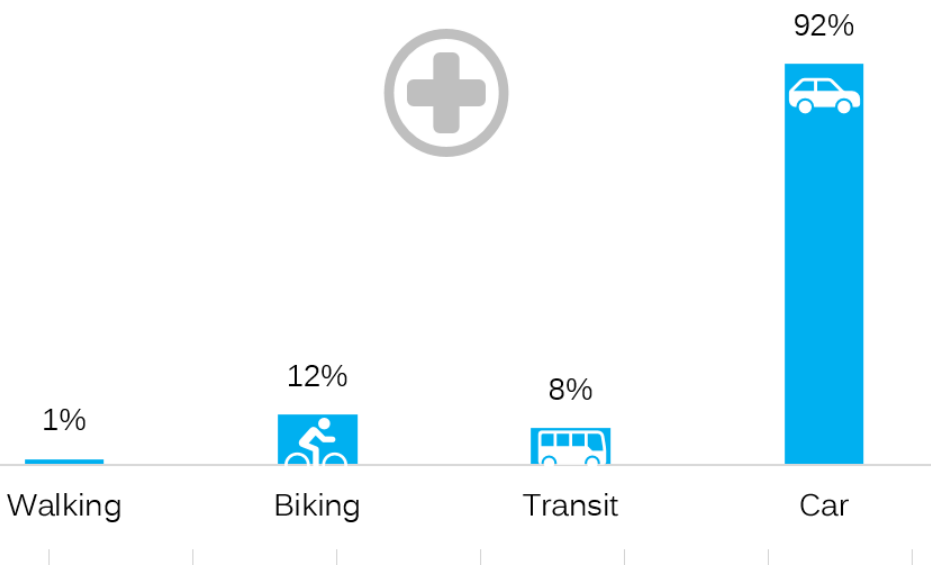
Supermarket Connectivity



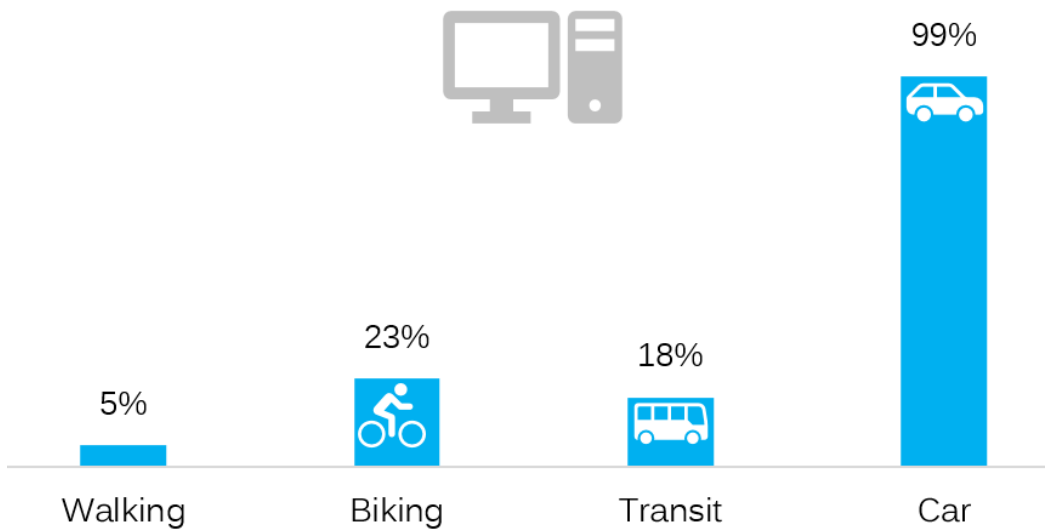
### Pharmacy Connectivity



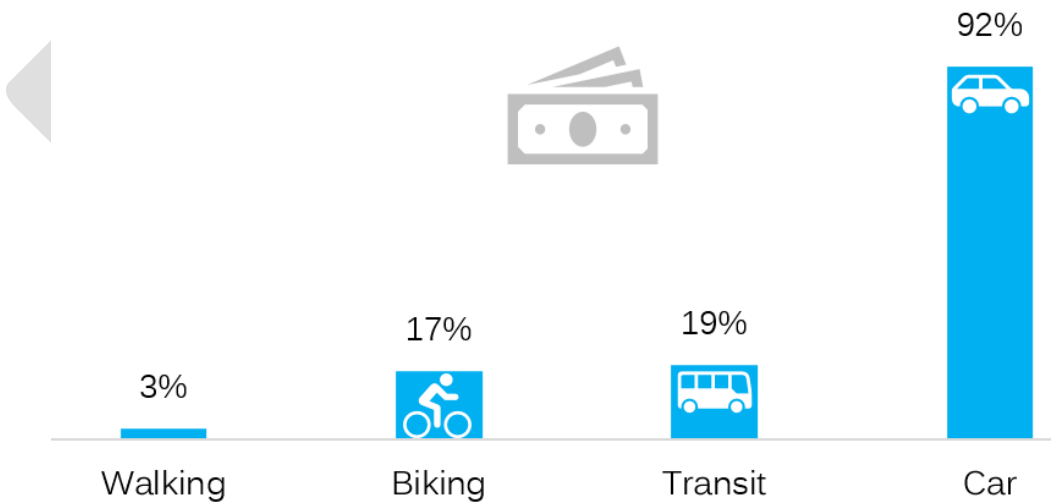
### Hospital Connectivity



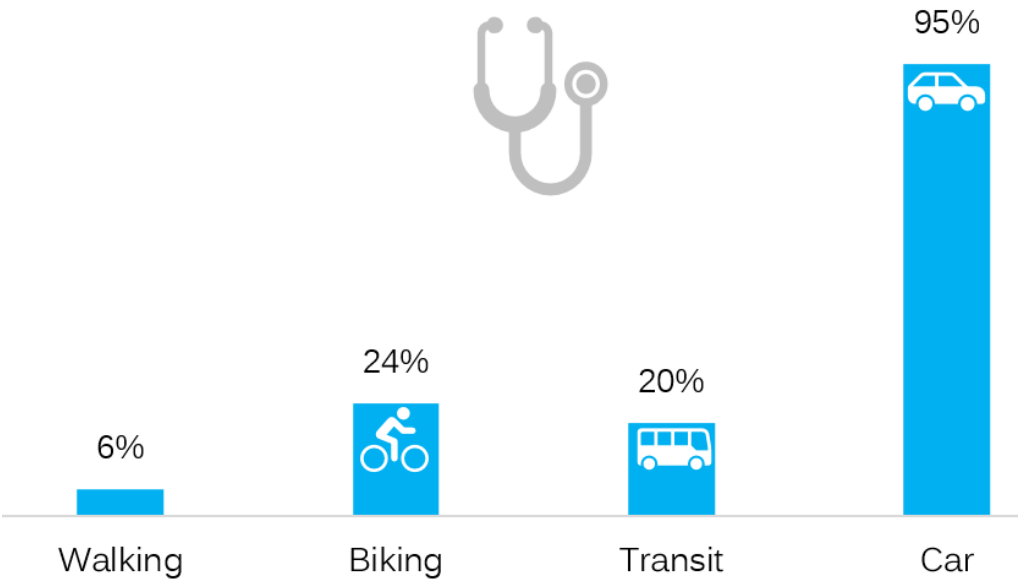
### Library Connectivity



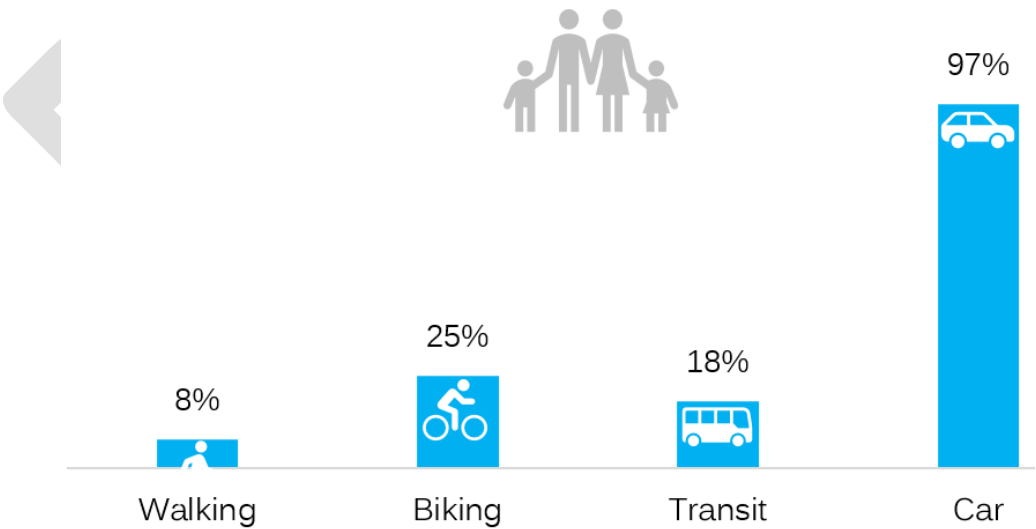
### Low-Wage Employment Center Connectivity



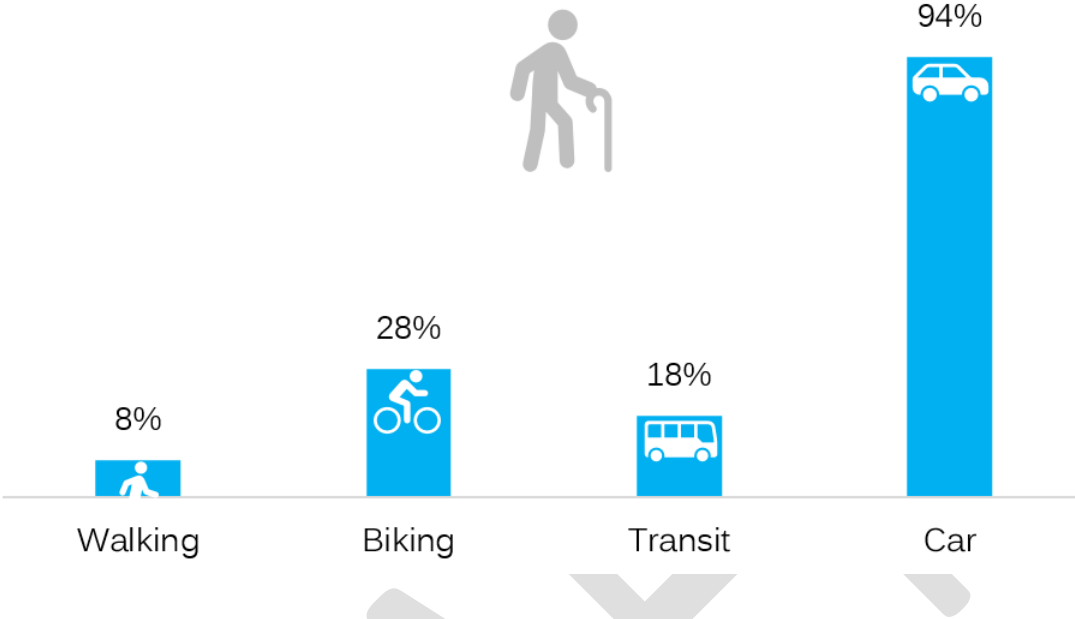
Medical Center Connectivity



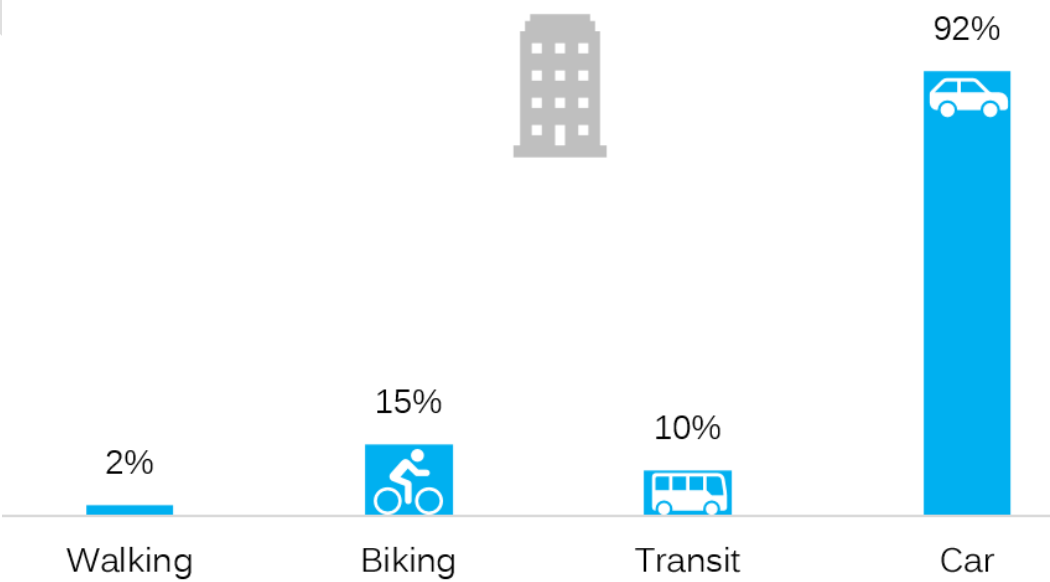
Community Center Connectivity



### Senior Center Connectivity



### State Service Center Connectivity



The limited map series found on the following pages illustrates the connectivity analysis at the neighborhood level. We consider access analyses to specific destination types on a specific mode as examples only. Interactive maps, available at [www.wilmapco.org/tj](http://www.wilmapco.org/tj), house our complete spatial analyses.

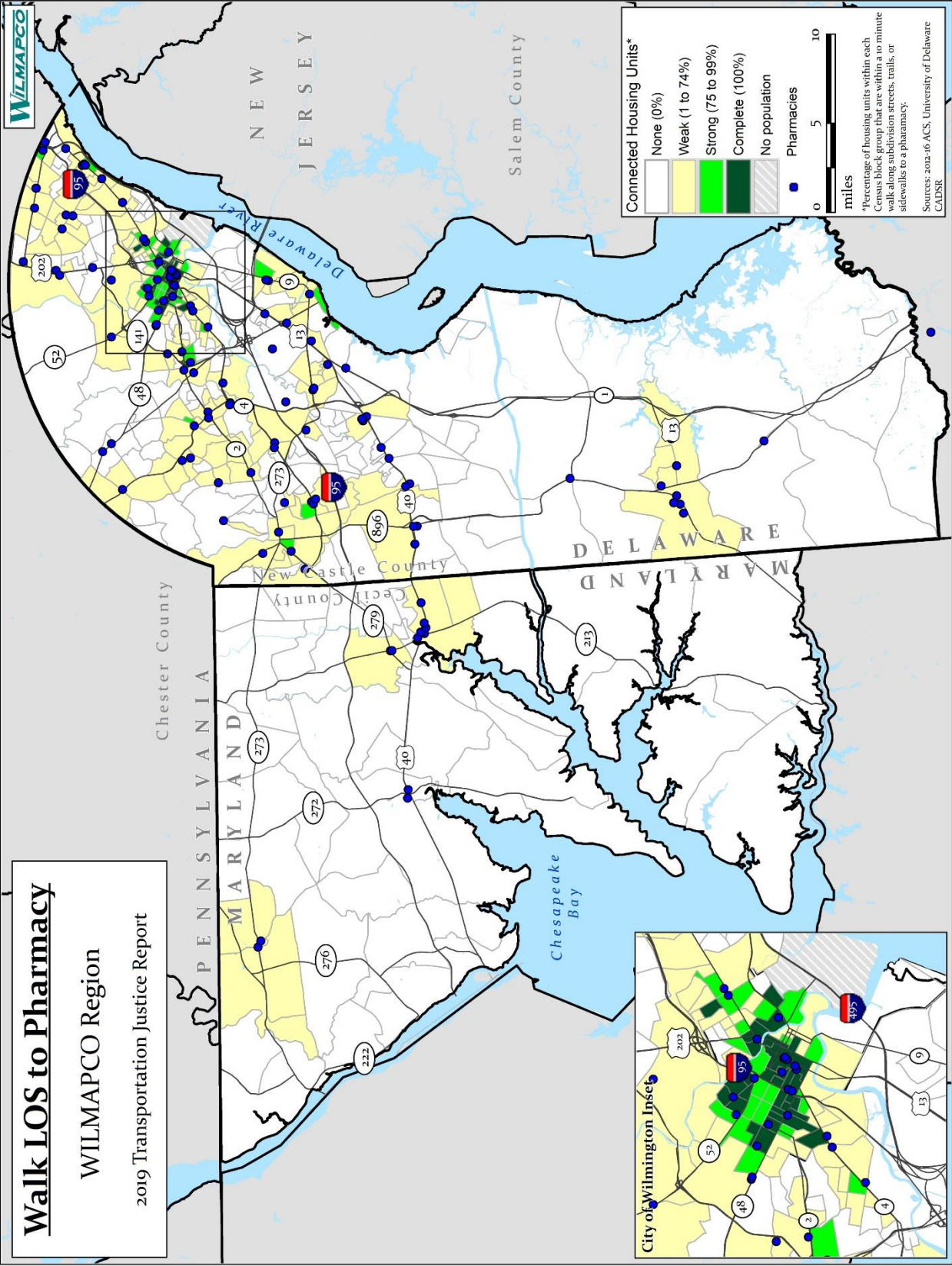
The first map examines walking connectivity to pharmacies. Only neighborhoods in parts of Wilmington had complete connections to pharmacies (100% of housing units within that neighborhood were within a 10-minute easy walk to at least one pharmacy). Strong neighborhood connections to pharmacies (where >75% of homes were within an easy walk to a pharmacy) were identified elsewhere in Wilmington, and a handful of neighborhoods scattered along the I-95 corridor in New Castle County. Many more neighborhoods had weak walking connections to pharmacies (where 1 – 75% of homes were within an easy walk to a pharmacy). These were identified along major roads between Elkton and Claymont, along with communities around Rising Sun and Middletown. Other neighborhoods and places were disconnected (0% of housing units connected) from pharmacies by walking.

A second map illustrates bike connectivity to libraries. Much of Wilmington is fully connected to at least one library by biking. Some neighborhoods around suburban libraries, meanwhile, have strong to complete connections. Libraries in rural areas mostly have weak to no connectivity via bicycle to surrounding communities.

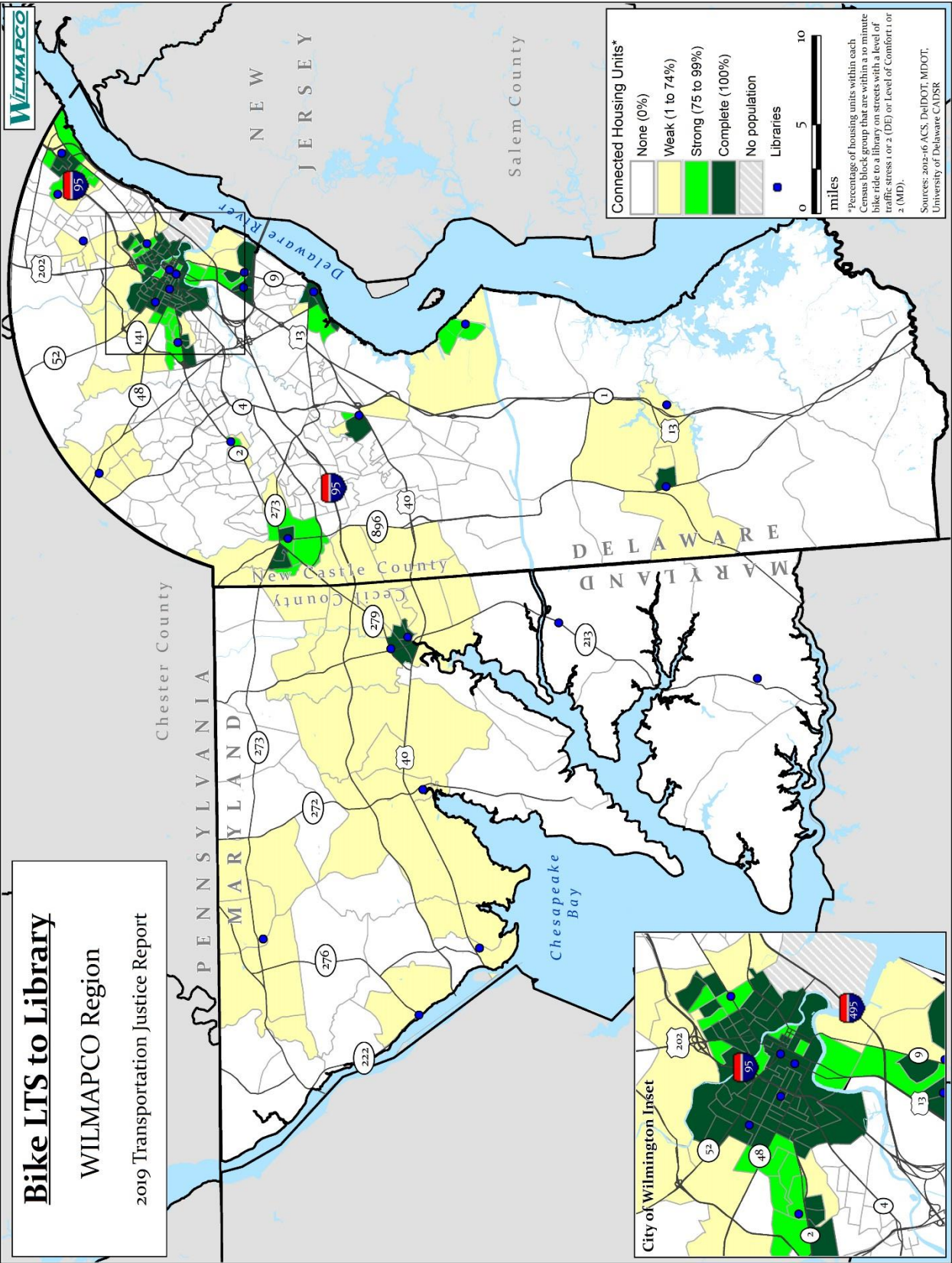
A third map shows transit connectivity to supermarkets. Portions of Wilmington and Elkton have strong to complete good transit connectivity to supermarkets. Meanwhile, many communities along the I-95 corridor stretching from Perryville to Claymont have weak to strong connectivity on transit to supermarkets. Apart from Middletown, our outer suburbs and rural areas lack good transit connectivity to supermarkets.

The fourth and final map in this series considers car access to medical centers. Most neighborhoods have complete to strong connections. Primary exceptions are areas along the Chesapeake Bay in Cecil County, which show weak to no connections.

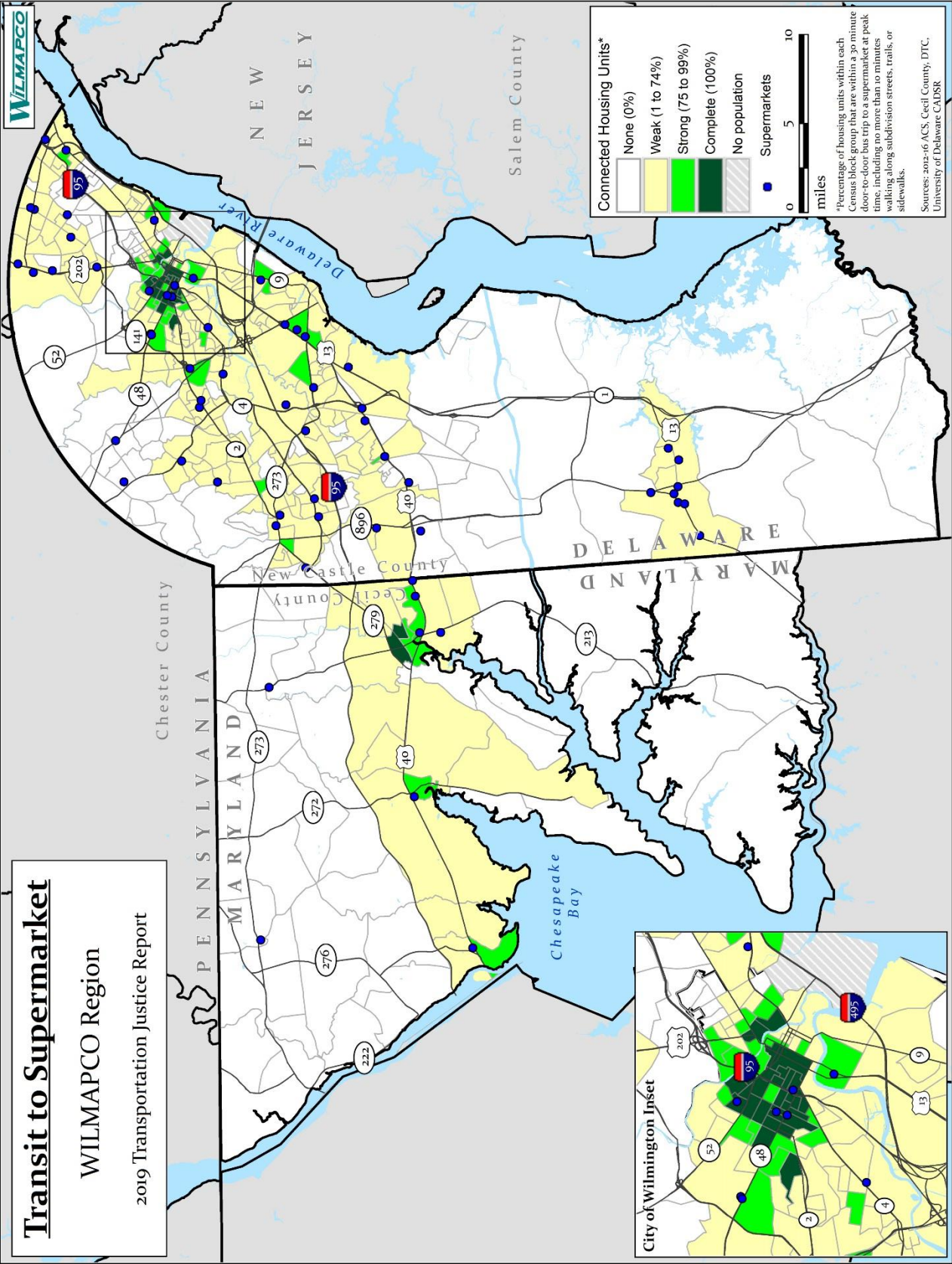
Walk to Pharmacy Connectivity



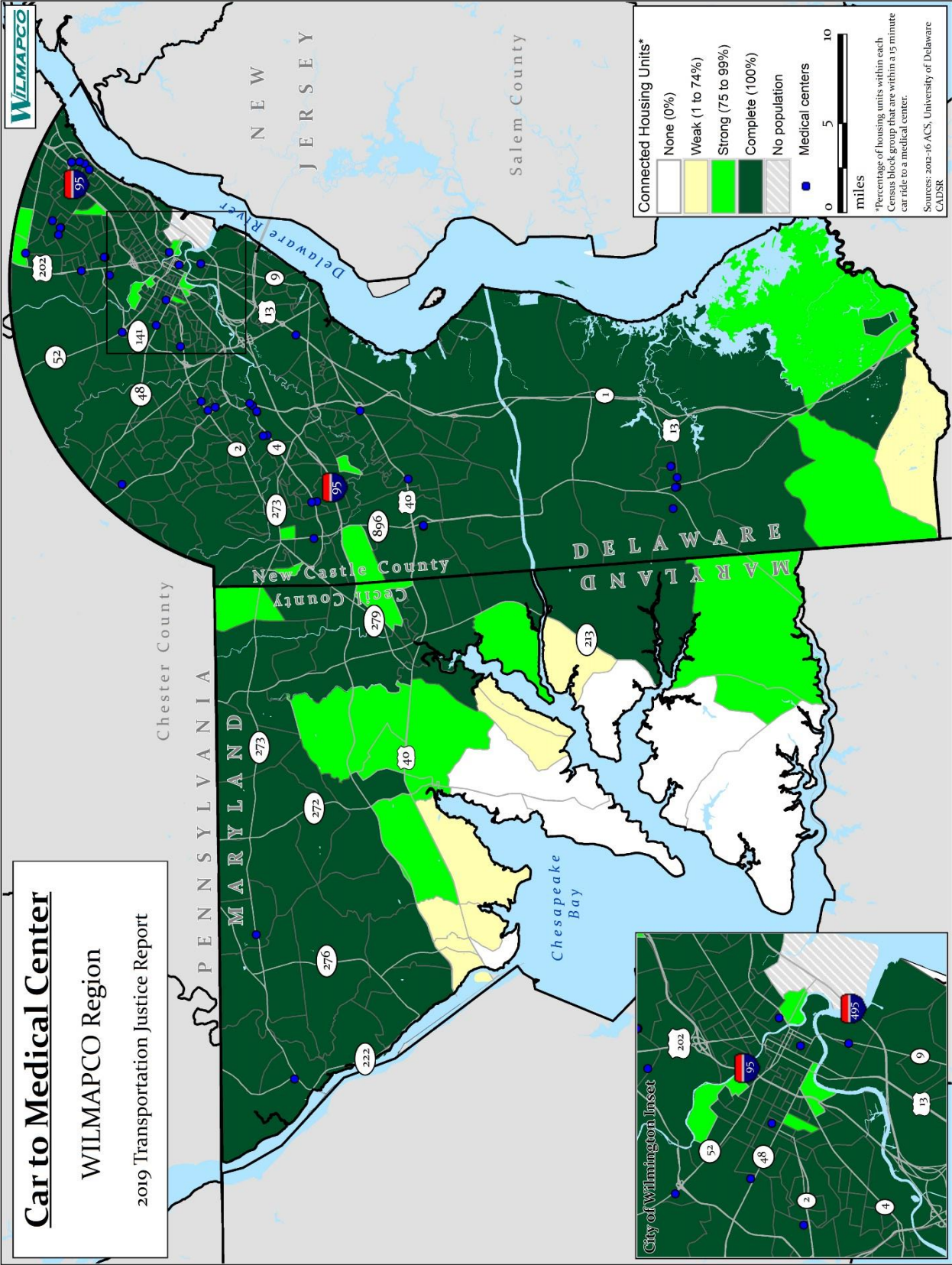
Bike to Library Connectivity



Transit to Supermarket Connectivity



Car to Medical Center Connectivity

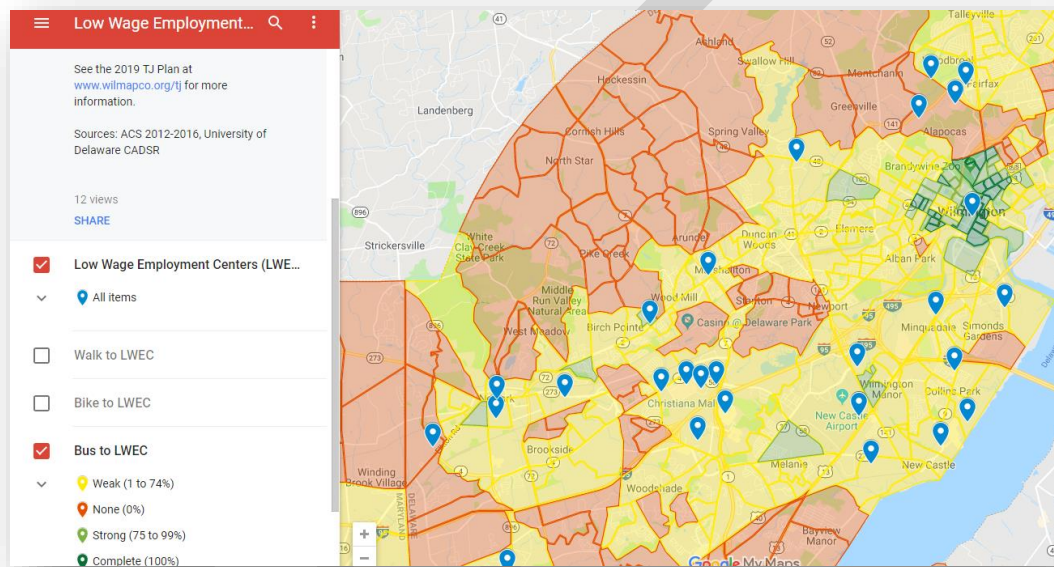


## Interactive Maps

### Connectivity Analysis

See the full spatial analysis of regional connectivity and zoom into your neighborhood. Interactive maps are available on the WILMAPCO website.

Visit [www.wilmapco.org/tj](http://www.wilmapco.org/tj).

















### Connectivity Results and Social Equity

We also examined the connectivity results through the lens of social equity. We analyzed if households within our Title VI/EJ neighborhood concentrations had weaker connectivity to destinations than average on the various transportation modes. They did not. In all cases, homes in our black, Hispanic, or high poverty neighborhood concentrations had equal or better connectivity to the destinations than average on every mode considered<sup>23</sup>. The tables below show these results. We include our housing units within white neighborhoods for comparison.











<sup>23</sup> Often, neighborhoods with concentrations of Asians showed below-average connectivity. We do not consider this an equity issue because, as discussed earlier, Asians in our region generally belong to higher social classes.

## Walking and Biking Connectivity, by Homes within Neighborhood Concentrations











									
Regional Average	14%	17%	1%	5%	3%	6%	8%	8%	2%
NEIGHBORHOODS									
Black	40%	40%	5%	22%	5%	16%	27%	28%	11%
White	2%	5%	0%	3%	0%	2%	1%	1%	0%
Hispanic	30%	28%	5%	11%	4%	12%	19%	17%	2%
Asian	14%	13%	1%	1%	4%	4%	3%	3%	1%
Poverty	44%	43%	4%	23%	11%	19%	28%	27%	8%

										
Regional Average	28%	39%	12%	23%	17%	24%	25%	28%	15%	
NEIGHBORHOODS										
Black	60%	71%	42%	63%	40%	60%	57%	63%	50%	
White	9%	14%	3%	8%	6%	12%	10%	9%	3%	
Hispanic	34%	60%	22%	35%	31%	27%	33%	41%	22%	
Asian	27%	35%	2%	15%	15%	18%	14%	15%	6%	
Poverty	61%	64%	53%	57%	50%	50%	60%	65%	54%	

## Transit and Car Connectivity, by Homes within Neighborhood Concentrations

										
Regional Average	24%	35%	8%	18%	19%	20%	18%	18%	18%	10%
<b>NEIGHBORHOODS</b>										
<b>Black</b>	47%	69%	16%	44%	39%	37%	46%	41%	25%	
<b>White</b>	7%	12%	3%	6%	4%	6%	6%	5%	2%	
<b>Hispanic</b>	42%	54%	17%	29%	32%	30%	37%	32%	15%	
<b>Asian</b>	22%	25%	5%	10%	16%	15%	6%	7%	4%	
<b>Poverty</b>	61%	71%	28%	58%	56%	52%	61%	62%	34%	

										
Regional Average	98%	97%	92%	99%	92%	95%	97%	94%	92%	
<b>NEIGHBORHOODS</b>										
<b>Black</b>	99%	99%	99%	99%	99%	99%	99%	99%	99%	
<b>White</b>	85%	84%	57%	98%	69%	73%	83%	75%	61%	
<b>Hispanic</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	
<b>Asian</b>	100%	100%	100%	100%	100%	100%	100%	100%	99%	
<b>Poverty</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	

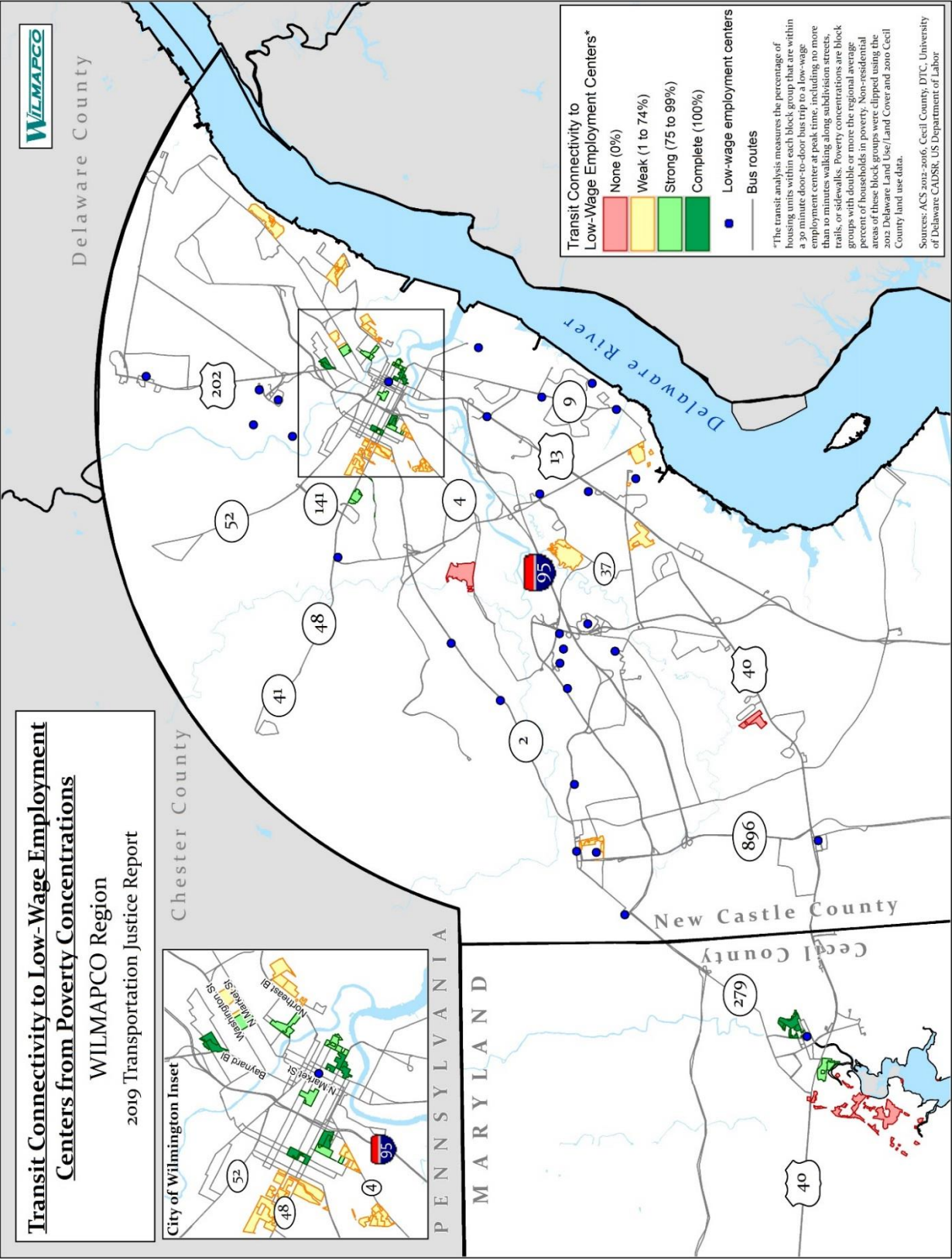
Since alternative transportation options are so weak in the WILMAPCO region, severe gaps exist from these Title VI/EJ neighborhoods (and indeed most neighborhoods) to key destinations by walking, bike, and bus. For example, more than half of those living in black neighborhoods (53%) cannot easily reach a supermarket by bus. Nine in ten (89%) residents of Hispanic neighborhoods are beyond easy walking distance to a library. And half (50%) of those from high poverty neighborhoods are not well connected to a single low-wage job center by bus. These are examples of challenges that should be explored by follow up regional and local analyses, with specific recommendations for improvements.

Diving further into our last example, consider the map on the following page. It shows bus connectivity from our high poverty neighborhoods to at least one low-wage employment center. While much of Wilmington and Elkton have strong to complete bus connections, connectivity in impoverished suburban neighborhoods have weak to no bus connectivity. These communities also often have above average transportation and/or housing costs. A follow up study should examine the practicality and local desirability of improving bus connections from these neighborhoods to job centers and other destinations.



The Washington Park area of New Castle has high poverty rates and weak bus connectivity to low-wage job centers.

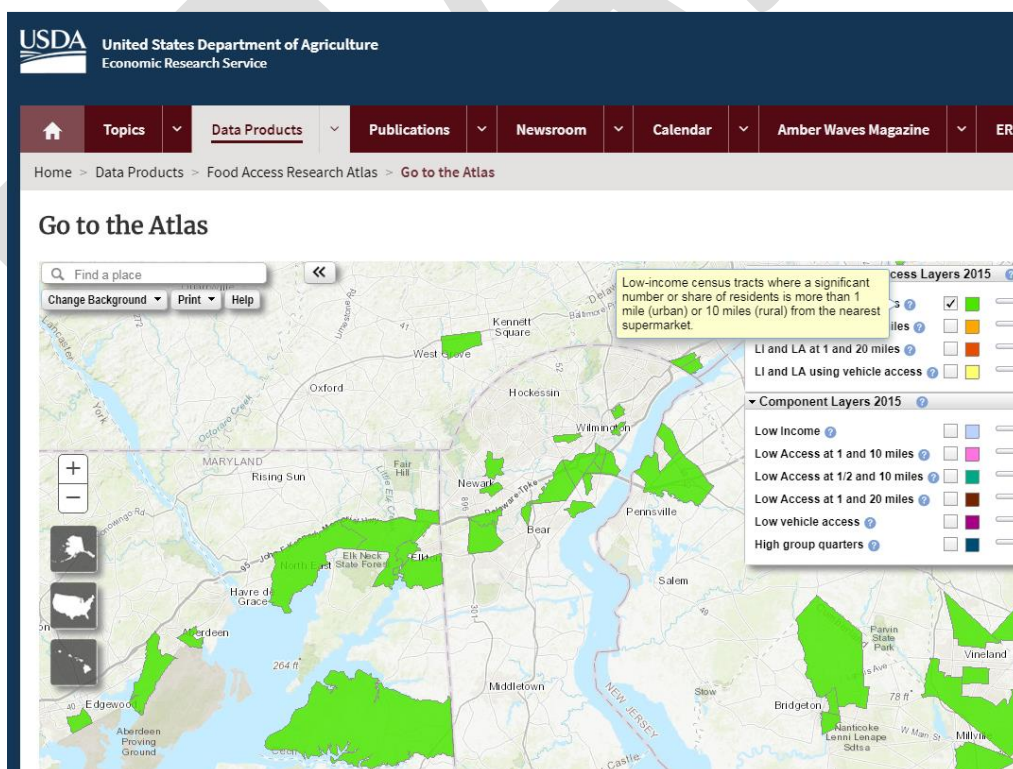
Transit Connectivity from High Poverty Areas to Low-Wage Job Centers



## WILMAPCO-defined Food Deserts

The results of our connectivity analysis allow us to take a more nuanced look at another important area of policy – food deserts. Food deserts are defined by the United States Department of Agriculture (USDA) as a census tract where the poverty rate is at least 20%, and 33% of its residents are more than one mile from a grocery store.

As WILMAPCO first pointed out in our *2013 Environmental Justice Report*, the USDA food desert identification methodology has underlying flaws. Census tracts are too large a demographic boundary to use for food desert designations – and indeed other important federal designations, such as *Opportunity Zones*. Census tracts are often home to many distinct neighborhoods with varying socio-economic conditions. They also often contain vast areas where people do not live such as industrial parks, agricultural fields, and open spaces. The USDA methodology also does not consider the existence of local bus systems. It assumes that people will only walk or drive to the store. The result is that, at best, policy interventions to support food deserts identified using the USDA methodology will lack focus. And, at worst, these interventions will be misguided and fall well short of supporting those most in need.



Official USDA food deserts are too broadly defined, opening the door for misdirected policy interventions.

(Source: Food Access Research Atlas)

To correct these flaws WILMAPCO has developed a separate process for identifying food deserts.

1. We begin by using the USDA food desert definition – 20% of residents below poverty and 33% of residents one mile from a grocery store – but apply it at the smaller block group and not tract level.
2. Next, we trimmed away places where people do not live, using local land use and land cover data.
3. Finally, we classed the identified food deserts based on their transit connectivity to supermarkets.

The map on the following page shows the resulting food deserts. All can be found along the I-95 corridor in the north of the region, roughly stretching from Elkton to Claymont. We class these food deserts by their level of connectivity to supermarkets on public transit – using the same analysis from the previous section.

Four food deserts were found to have no acceptable transit connectivity to supermarkets. These are: 1. Communities in and around the Riverview Place Apartments in Holly Oak, north of Wilmington; 2. Portions of the Eastlake community in Wilmington's Northeast; 3. The Murray Manor Trail Park west of Stanton; and 4. Fragmented residential parcels southwest of the Town of Elkton. Other food deserts were found to have weak, strong, or complete transit connectivity to supermarkets.



A transit poor food desert in the Eastlake section of Northeast Wilmington.

**Residential Food Deserts**  
WILMAPCO Region  
2019 Transportation Justice Report

**Food Deserts\* Transit Connectivity to Supermarket**

- None (0%)
- Weak (1 to 74%)
- Strong (75 to 99%)
- Complete (100%)
- Supermarkets
- Bus routes

\*Food deserts include residential areas of block groups with household poverty rates of at least 20% and at least 33% of the population one mile or farther from a grocery store. Non-residential areas of these block groups were clipped using the 2012 Delaware Land Use/Land Cover and 2010 Census Land use data. The transit analysis measures the percentage of housing units within each block group that are within a 30 minute door-to-door bus trip to a supermarket at peak time, including no more than 10 minutes walking along subdivision streets, trails, or sidewalks.

Sources: ACS 2012-2016, Aerial Information Systems, Cecil County, DTC, University of Delaware CADSR

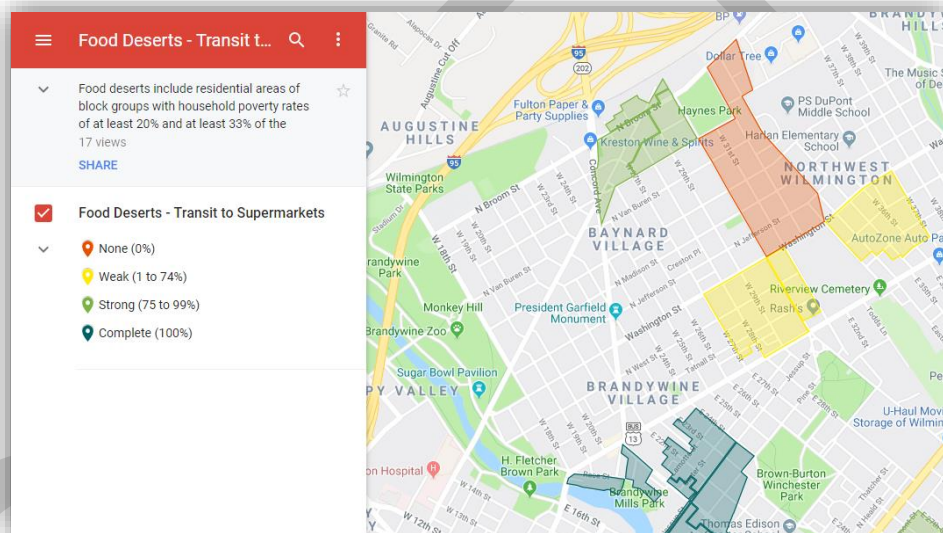
Additional analysis should be undertaken to identify potential improvements to transportation connectivity from these food deserts and/or the opportunities to encourage the placement of accessible supermarkets near them.

## Interactive Maps

### Food Deserts

See the all the WILMAPCO identified food deserts and zoom into your neighborhood. Interactive maps are available on the WILMAPCO website.

Visit [www.wilmapco.org/tj](http://www.wilmapco.org/tj).



### TIP Spending Equity Analysis

In this analysis we considered whether neighborhoods with heavy concentrations of racial/ethnic minorities and people living below poverty were receiving their “fair share” of transportation spending in the Transportation Improvement Program (TIP). The TIP is a listing of transportation projects maintained by WILMAPCO. For a transportation project to receive federal funding, it must be listed here. The list contains four years of planned project spending.

As with other analyses in this section, we begin by isolating the heaviest concentrations of our racial/ethnic population groups and people living in poverty<sup>24</sup>.

Next, we developed a Geographic Information Systems (GIS) dataset of TIP projects for the beginning TIP years of FY 2002, FY 2006, FY 2010, FY 2014, and FY 2018. Several assumptions and caveats must be noted:

- Some projects cannot be associated with a place, such as funding for the Rideshare program or bus replacements. These projects were excluded.
- Projects that occurred on expressways or railways (except train station area improvements) were also excluded. These projects are more regional than local transportation projects. In some cases, they can have a negative effect on the local population and should not be considered an improvement at all. For example, an interstate project located too closely to a community may encourage more traffic and noise and air pollution within that community. Excluding them entirely from the start resolves these issues while avoiding what would be a debatable project-by-project analysis of impacts.

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<sup>24</sup> We flagged block groups that are home to double or more the regional average percentage of blacks, Hispanics, Asians, people living in poverty, and whites (for comparative purposes) across three Census and American Community Surveys (ACS): 2000 Census, 2006-2010 ACS, and the 2012-2016 ACS. Because non-Hispanic whites are the majority racial group regionally, we cannot double their average to identify white concentrations. Instead, we flag block groups home to 90% or more whites and consider them the concentrated areas. For concentrations below poverty, we use individuals below poverty for analysis years after 2010 and households below poverty for the 2010 analysis year and before. Whites, blacks, and Asians are all considered non-Hispanic members of those groups.

- The costs for individual bridge projects are not always known, though their locations are. Instead, they are shown as a “grouped” project within the TIP. When this is the case, we assumed an equal spend across all grouped bridge projects in the region. So, if \$1 million was spent on 10 bridges, we assumed that \$100,000 was spent on each.

With these caveats taken into consideration, we were left with a listing of “community transportation projects” for each of the TIP years considered.

Next, we tallied the total population of the concentrations for each of the census years analyzed. We divided this number by the total regional population. The resulting figure became our “expected funding level” for community transportation projects, or equity benchmark. There was a different equity benchmark for each of the three census years analyzed.

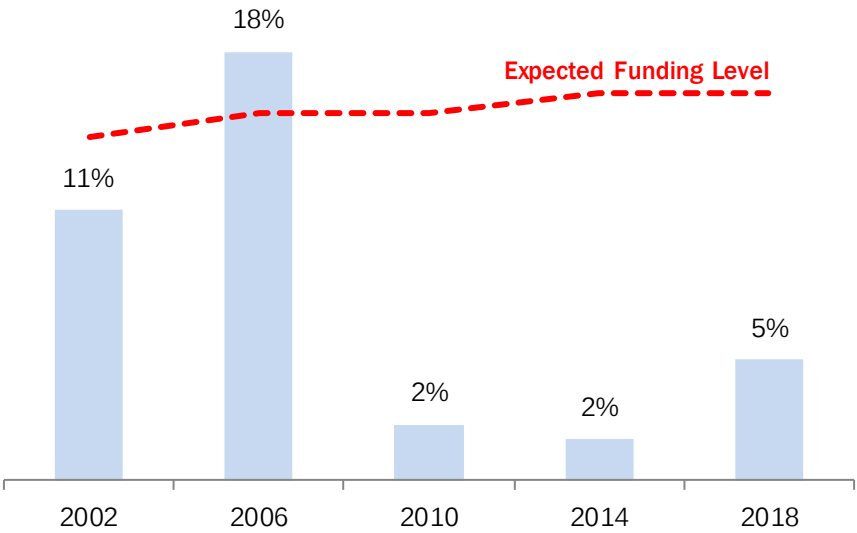
Then, we flagged community transportation projects within the concentrations for each TIP year. We calculated what percentage they represented of total transportation project funding (the community transportation projects plus the mappable projects we excluded at the start – expressways and railways) within a given concentration for that year<sup>25</sup>. These percentages were then compared to the equity benchmarks to measure community transportation project funding equity within the concentrations over time<sup>26</sup>. The results are shown on the following pages.

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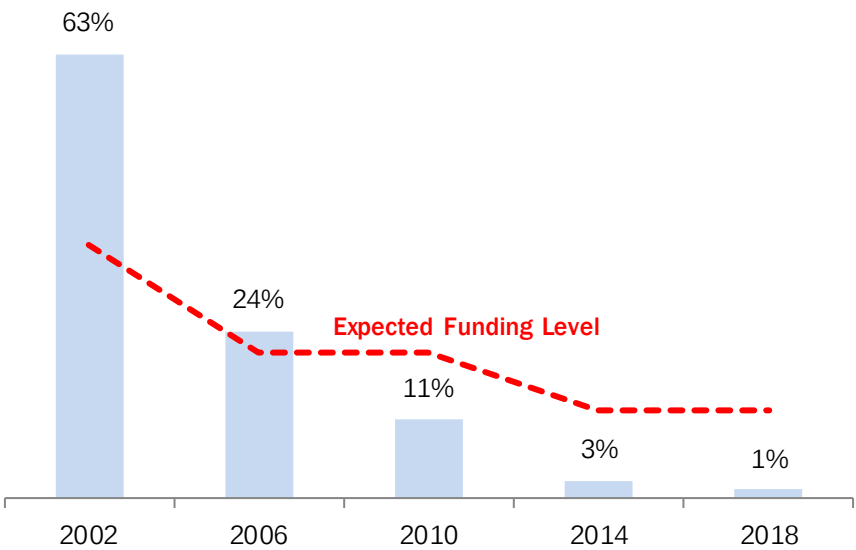
<sup>25</sup> We opted against comparing the total spend for community transportation projects within these concentrations against the total spend for all community transportation projects. Instead the selected approach compared against the total spend for all mappable transportation projects. Although the former is also a logical approach, the equity impact of heavy funding for regional expressway and railway projects away from EJ concentrations would have been masked. Compared against only the sum of all community transportation projects, black concentrations show a lesser, but still below what was expected spend (-7%), while the other concentrations show a much higher than expected spend.

<sup>26</sup> Equity benchmarks from certain census years were compared to community transportation projects from certain TIP years. The benchmarks from the 2000 Census were compared to the TIP projects in the 2002 analysis year. Meanwhile, benchmarks from the 2006 – 2010 ACS were compared to the TIP projects in the 2006 and 2010 TIP analysis years. Finally, benchmarks from the 2012 – 2016 ACS were compared to the 2014 and 2018 analysis years.

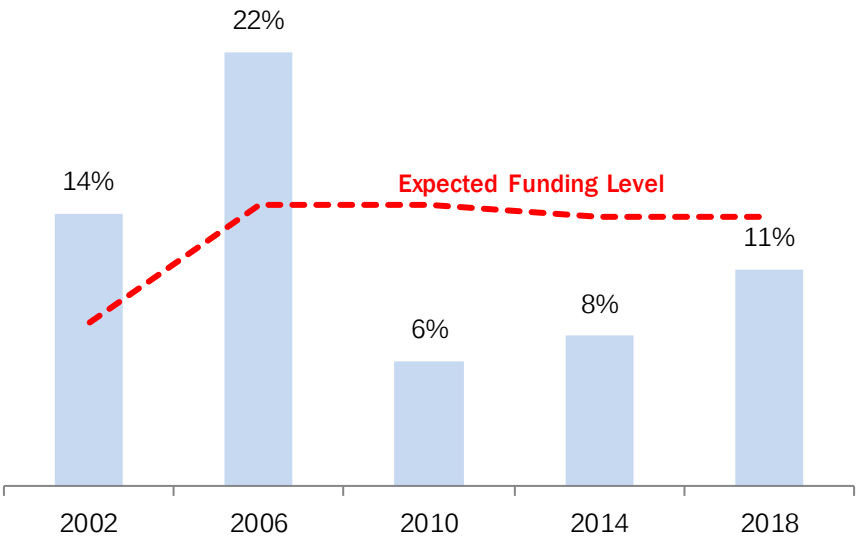
Black Concentrations - TIP Funding Equity



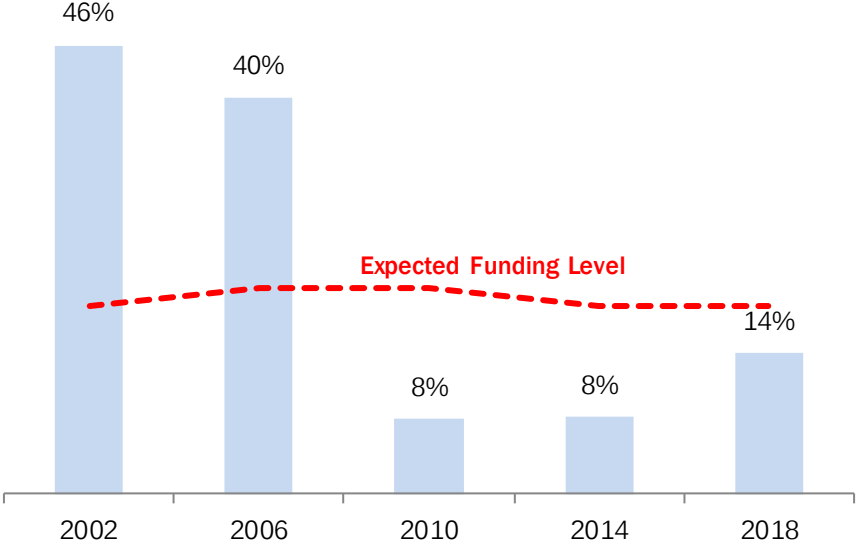
White Concentrations - TIP Funding Equity



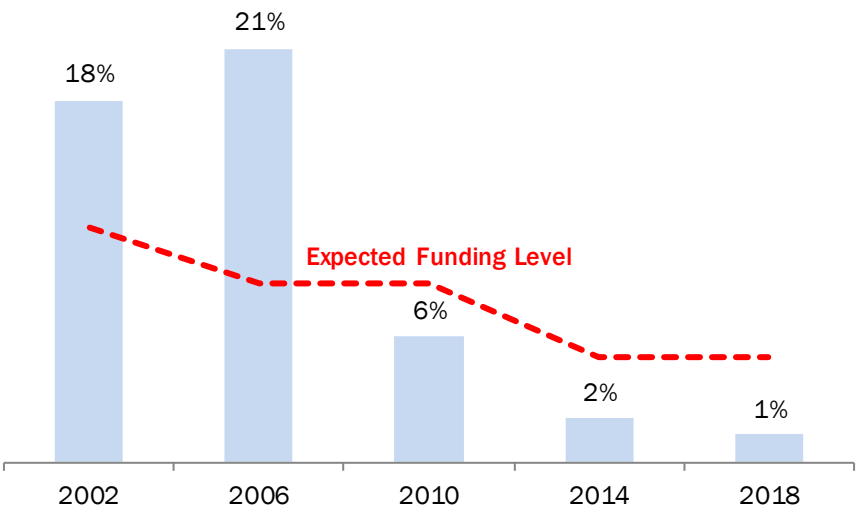
Hispanic Concentrations - TIP Funding Equity



Asian Concentrations - TIP Funding Equity

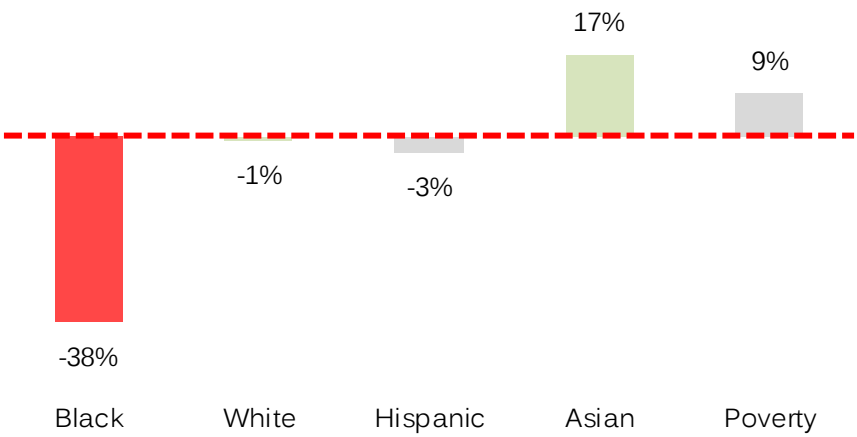


Poverty Concentrations - TIP Funding Equity



The graph below brings together this entire analysis into a single product. It shows the difference between the expected and actual funding levels each concentration received between the TIP years beginning in FY 2002 and FY 2018.

Deviation from Expected TIP Funding – FY 2002 to FY 2018



Disparities exist in transportation spending across racial concentrations. Concentrations of whites, Hispanics, and people living below poverty have, overall, received about the level of funding expected from community transportation projects. Black concentrations, however, have received 38% less funding than expected. Meanwhile, Asian concentrations received 17% more than expected. Each group will be discussed below.

**TIP Spending in Black Concentrations** was below what was expected – 38% less.

- Spending only met expected funding levels in the 2006 analysis year.
- While these concentrations account for about 16% of the total regional population today (up from 14% in 2000), only 2% of community TIP spending occurred there in the years 2010 and 2014 and only 5% in 2018.
- The map on the following page illustrates project spending within black concentrations in the FY 2018 – 2021 TIP. While many projects are within and along the borders of black concentrations, most were relatively inexpensive.

**TIP Spending in White Concentrations** met expected funding levels – 1% less.

- Heavy project spending occurred in these concentrations in the early 2000s.
- While project spending has since fallen dramatically, so too has the equity benchmark. This is the result of the increasing diversity of the region, with fewer places home to a greatly disproportionate number of whites. Today, these concentrations account for only 13% of the region's population, down from 36% in 2000.

**PROJECT FUNDING EQUITY**  
for Black Concentrations  
**WILMAPCO Region**  
2019 Transportation Justice Report

\*Community projects are projects that benefit the local community. Expressway and mainline rail projects are excluded.  
Bridge project costs are averages (\$427,000 each) based on the total FY2018-21 cost of areawide bridge replacement and rehabilitation.  
\*\*Black concentrations are block groups with double or more the regional average (21%) of Non-Hispanic Blacks. The total population within these block groups comprise 16% of the regional population, and projects within them comprise 5% of FY2018-21 TIP funding.

**FY2018 TIP Community Projects\***  
Project Costs FY2018-2021  
\$500k or less  
\$500k to \$5 million  
\$5 million or more  
Black Concentrations\*\*

0 5 10 miles

Sources: 2012-16 ACS, Socialserve, DE State Housing

**TIP Spending in Hispanic Concentrations** met expected funding levels – 3% less.

- Spending in Hispanic clusters exceeded expectations in the early 2000s, before dropping in 2010.
- Today, these concentrations account for about 14% of the region's population, up from 9% in 2000.

**TIP Spending in Asian Concentrations** exceeded expected funding levels – 17% more.

- Heavy community project spending occurred in Asian concentrations in the early 2000s, before dropping in 2010.
- While these concentrations account for around 20% the regional population, they nabbed 46% and 40% of community project spending in 2002 and 2006.

**TIP Spending in Poverty Concentrations** met expected funding levels – 9% more.

- Spending in high poverty clusters exceeded expectations in the early 2000s, before dropping in 2010.
- Like the white areas, the total population within poverty concentrations is falling. This has dragged down the equity benchmark. Today, these concentrations account for only about 5% of the region's population, down from 12% in 2000.

What is also evident, across all concentrations, is higher levels of funding in the earlier years of the analyses versus later years. This reflects a more general movement of project funding away from more diverse places in the region (Wilmington and the I-95 corridor) and to New Castle County's southern suburbs (south of US 40) in response to development pressures there. While major work on expressways accounts for much of this (US 301 and SR 1), it is also reflected in community transportation project spending.

In the FY 2018 TIP, for example, 15% of all community transportation project funding was slated for work south of US 40 vs. 5% in FY 2002.

Whatever the case, more funding should be driven into our black neighborhood concentrations to adjust these disparities.

### UPWP Studies Equity Analysis

We just showed how black neighborhoods received less than their fair share of community transportation project spending, while other neighborhoods concentrations of concern received close to what we might expect, or more, than their fair share of spending. This analysis examines potential disparities with how some transportation projects are developed – through the growing number of planning studies conducted by WILMAPCO.

These studies are listed and described in the annual Unified Planning Work Program (UPWP). Pulling all the UPWPs between the years 1999 and 2019, we sought to understand how the demographics of the areas studied jibed with regional demographics.

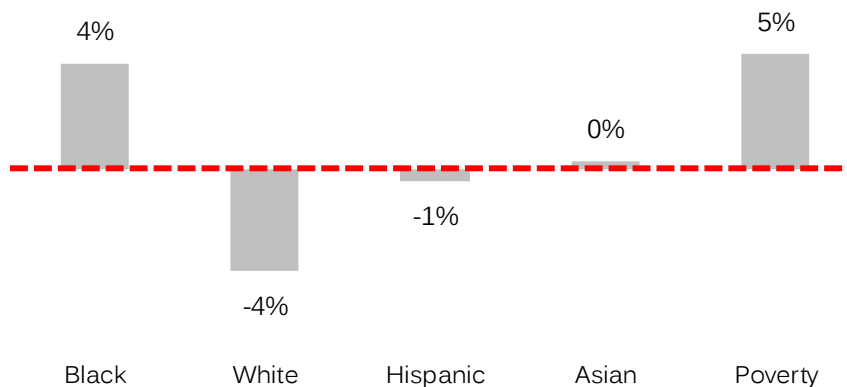
As a first level analysis we opted for broad demographic comparisons. For each UPWP year, we began by flagging all block groups covered by local (non-regional/non-county-level) studies during that year. Next, we calculated the average demographic makeup of studied block groups on that given year. These were compared to the regional averages for applicable census years to measure how well they stacked up to regional demographics<sup>27</sup>

The graph below presents the result of this analysis. No equity concerns are evident. The populations covered by WILMAPCO studies match quite well with the region's demographics. In the average study area, the average percentage of blacks were 4% higher than the regional average; whites 4% lower; Hispanics 1% lower; Asians exactly the regional average; and people living in poverty 5% higher than expected. All told, the average WILMAPCO local study area was slightly more diverse than the region.

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<sup>27</sup> We compared the UPWP years 1999 – 2004 to the 2000 Census; UPWP years 2008 – 2012 to the 2006 – 2010 ACS; UPWP years 2013 – 2019 to the 2012 – 2016 ACS. There were no local UPWP studies during the years 2005 – 2007.

### Deviation from Regional Demographic Composition in local WILMAPCO Studies, 1999 - 2019



Turning to the black concentrations, the table below lists which UPWP projects occurred within those neighborhoods. WILMAPCO engaged in more than two dozen studies within these communities since 1999. Most (60%) have occurred relatively recently – in 2013 or after – and should yet produce funded projects in these black neighborhoods.

### Local UPWP Studies with Black Concentrations

ID	Title	Year
1	New Castle Transportation Plan	1999
2	Edgemoor TOD	2003
3	Shipley Street Revitalization Plan	2004
4	Southbridge Circulation Study	2008
5	Wilmington Bike Plan	2008
6	Downtown Wilmington Circulation Study	2011
7	Port of Wilmington Truck Parking Study	2013
8	Wilmington Initiatives	2013
9	Route 40 Plan (NCC)	2014
10	Wilmington Transit Moving Forward	2014
11	North Claymont Area Master Plan	2017
12	Route 9 Corridor Master Plan	2017
13	SR 141 Transportation and Land Use Plan	2017
14	12th Street Connectory Study (in progress)	2019
15	7th Street Peninsula Study (in progress)	2019

#### Key:

- 2000 Census Black concentrations match 1999-2004 UPWP projects
- ACS 2006-2010 Black concentrations match 2008-2012 UPWP projects
- ACS 2012-2016 Black concentrations match 2013-2019 UPWP projects

### Aspiration List Projects

While projects within the UPWP studies are beginning to generate funded projects, others remain in the queue. Many of these unfunded projects have a place in our 2050 Regional Transportation Plan's (RTP) Aspiration List. The map on the following page identifies aspiration list projects within black concentrations.

The technical scores used within WILMAPCO's project prioritization process are also noted<sup>28</sup>. These scores vary widely from a 1 for a project on Old Porter Road in Bear to a 15/16 for unfunded project elements associated with the Route 9 Master Plan (some projects in that plan are funded). The median technical score for aspiration projects within black concentrations is 10. This matches the median technical score for funded ("constrained list") projects in the RTP. All told, five projects within black neighborhoods score equal to or more than 10.

These high-scoring projects within chronically underfunded areas should be considered strongly for implementation.

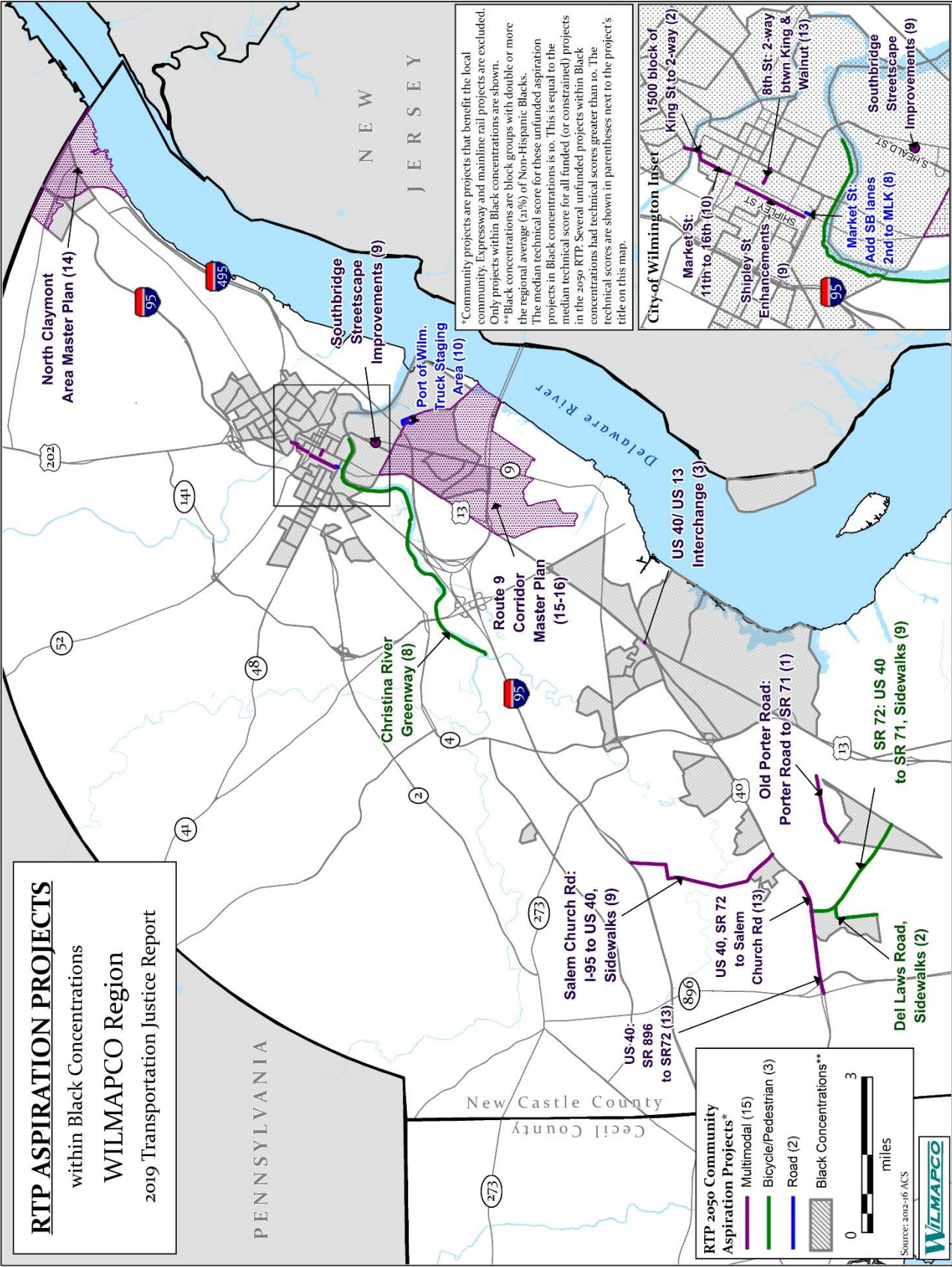


A handful of unfunded projects in black neighborhoods had high technical scores in the WILMAPCO project prioritization process.

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<sup>28</sup> WILMAPCO Project Prioritization Process: [www.wilmapco.org/priority](http://www.wilmapco.org/priority)

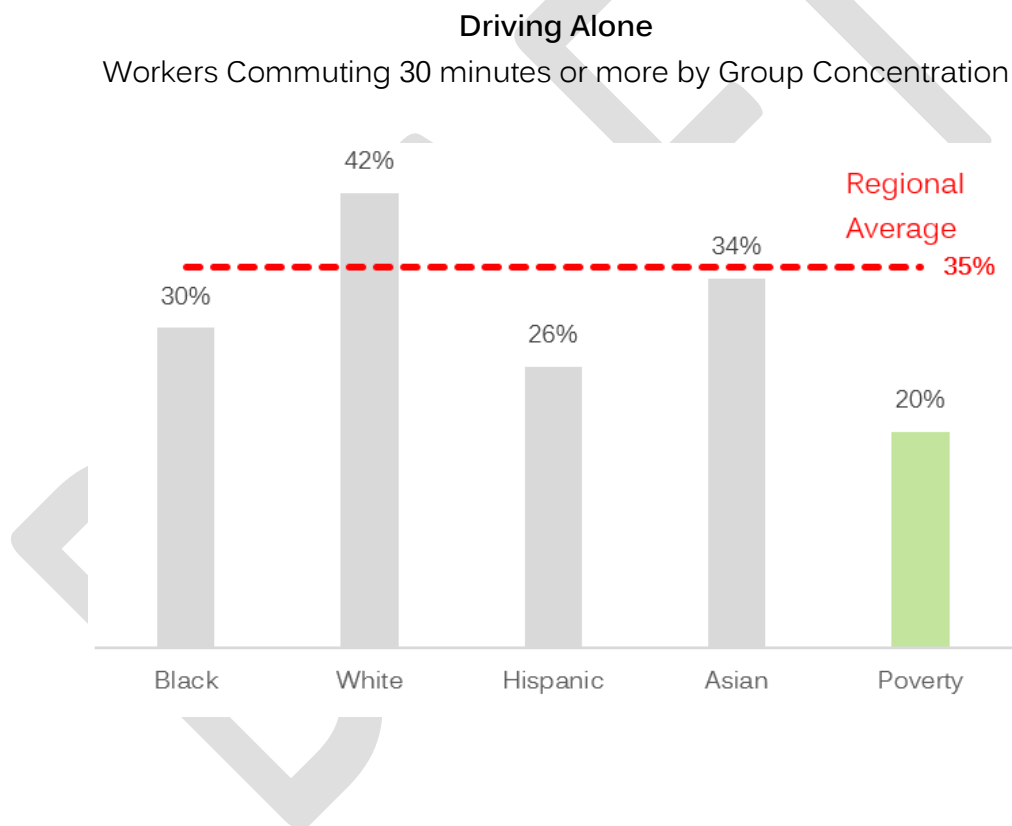
Unfunded RTP Projects within Black Concentrations



### Travel Time Equity Analysis

The time spent commuting to work is another dimension of transportation equity. We examine travel times in two different ways – within the group concentrations by mode and, later, more broadly.

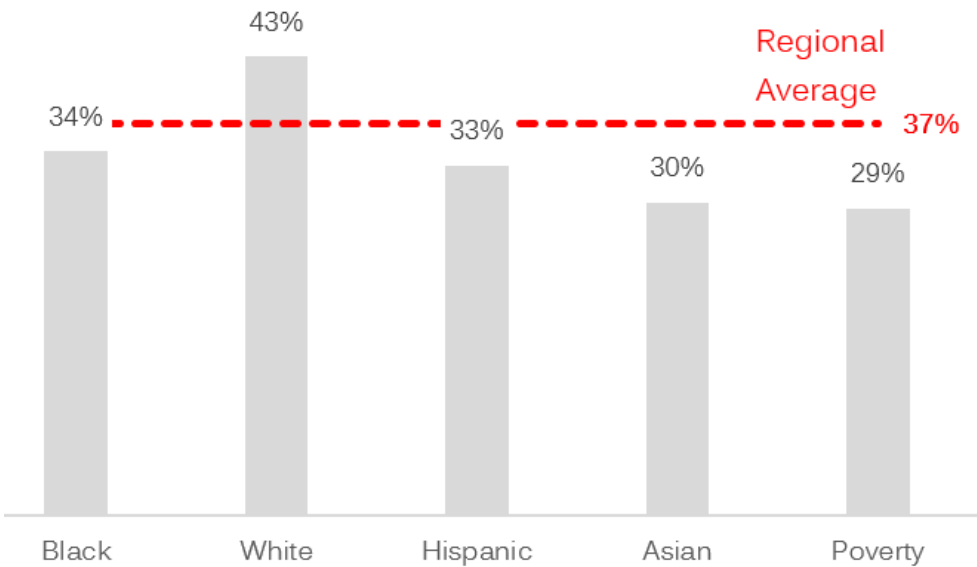
In our first analysis we examined the percentage of workers commuting 30 minutes or more, by individual modes, within our group concentrations<sup>29</sup>. The graphs below and on the following pages show the results.



<sup>29</sup> As the number of bicycle commuters is quite small at this level of geography, the ACS combines bicycle commutes with taxis and motorcycles and other modes of transportation. This makes these data unstable and potentially misleading, so we do not present them here. Still, we did examine the bike/other commutes >30 minutes for equity concerns. Across the region, 25% of these commutes were 30 minutes or more. That figure was lower within black, Hispanic, Asian and poverty concentrations.

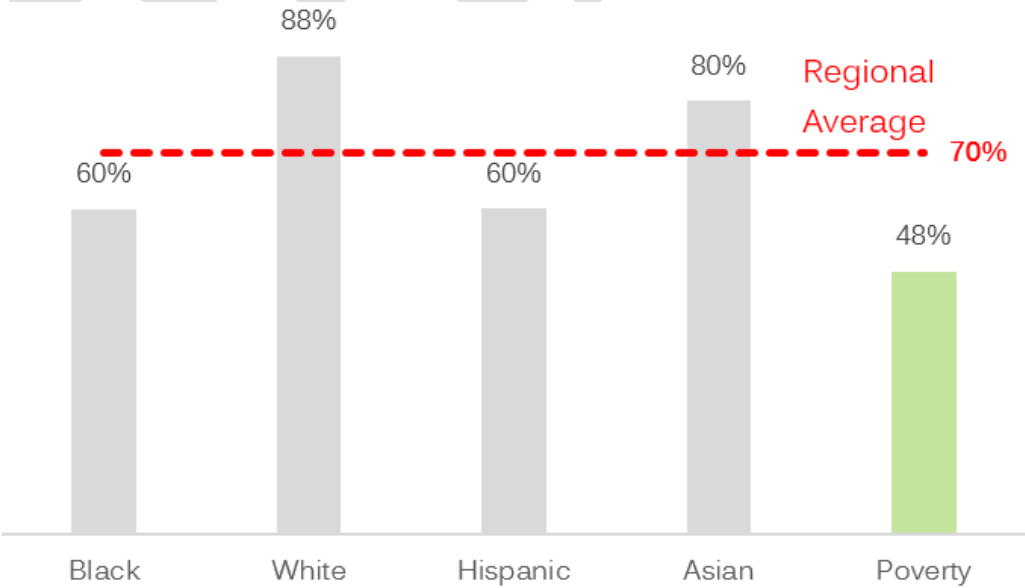
Carpooling

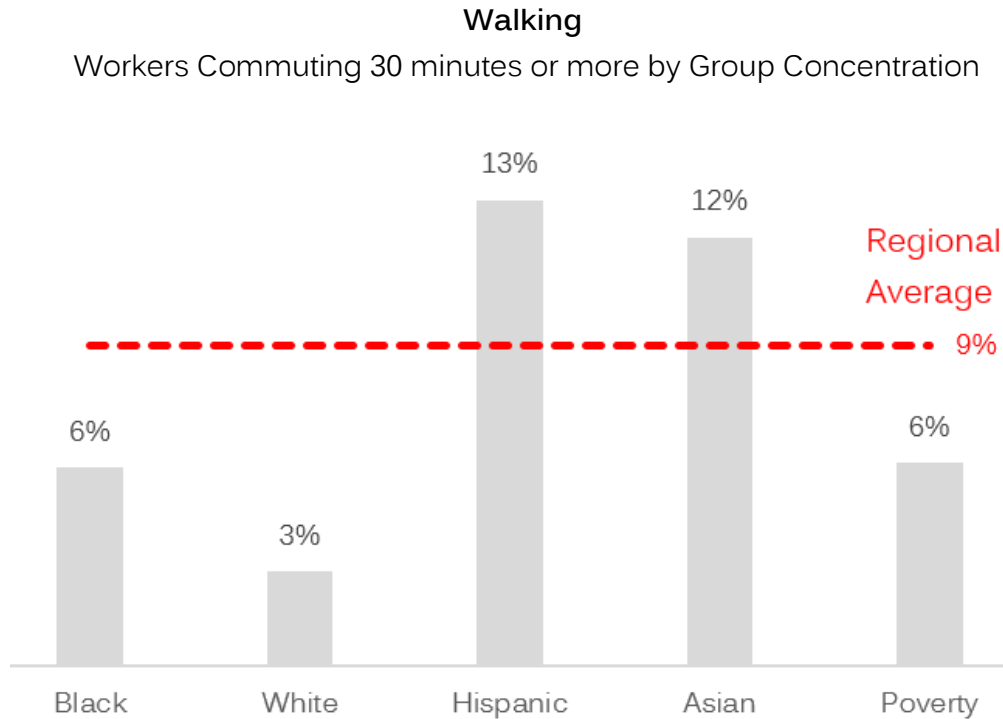
Workers Commuting 30 minutes or more by Group Concentration



Public Transit

Workers Commuting 30 minutes or more by Group Concentration





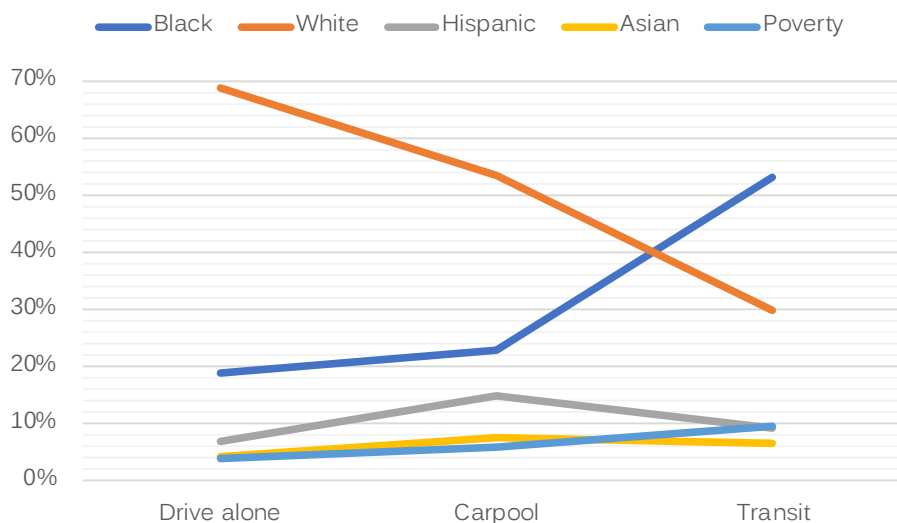
This first analysis did not reveal any equity concerns between the concentrations and by modes. In nearly all cases, a smaller proportion of workers within ethnic/racial and poverty concentrations commuted more than 30 minutes to work each day on the different modes compared to the regional average.

This was especially true within impoverished concentrations. Only 20% of their workers had long commutes by driving alone compared to the regional average of 35%. And less than half of workers from high poverty concentrations (48%) had long commutes by transit to their jobs, compared to 70% of regional workers.

In a second analysis, we examined the popularity of these different modes of transportation within each of our racial/ethnic and poverty groups against average travel times on those modes.

As shown in the first graph below, blacks comprise more than half (54%) of all workers commuting via public transit, while whites comprise less than a one-third (30%). This is remarkable as blacks constitute only 21% of the region's population, versus whites at 63%<sup>30</sup>. Variations between the other groups were quite minor, comparatively.

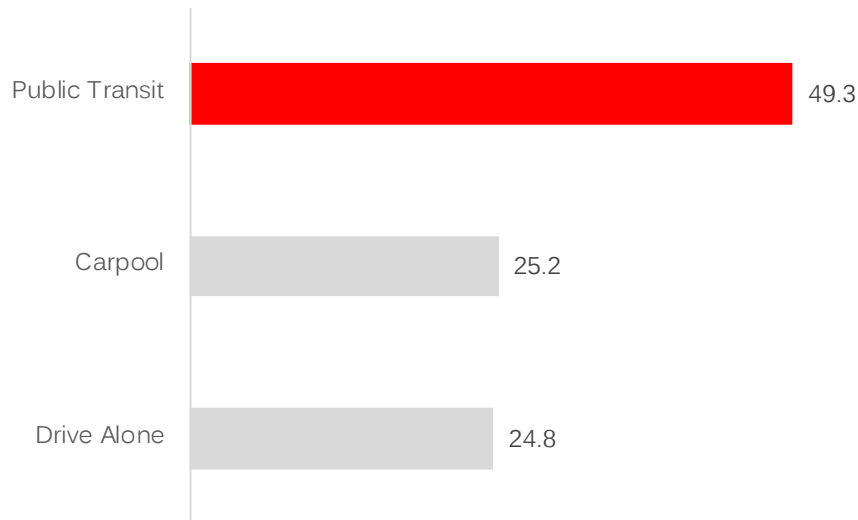
**Overall Demographic and Socio-Economic Makeup of Travel Modes to Work**  
WILMAPCO Region, 2012-2016



Regionally, in the 2012-2016 ACS, the median travel time to work on different modes varied considerably. As shown in the graph below, commuters spend nearly double the amount of time commuting on public transit versus car travel.

<sup>30</sup> This discrepancy helps shed light on the earlier cited data from our public opinion survey, which found that nearly  $\frac{3}{4}$  of blacks thought improvements to the bus and train service were "very important" compared to only half of whites.

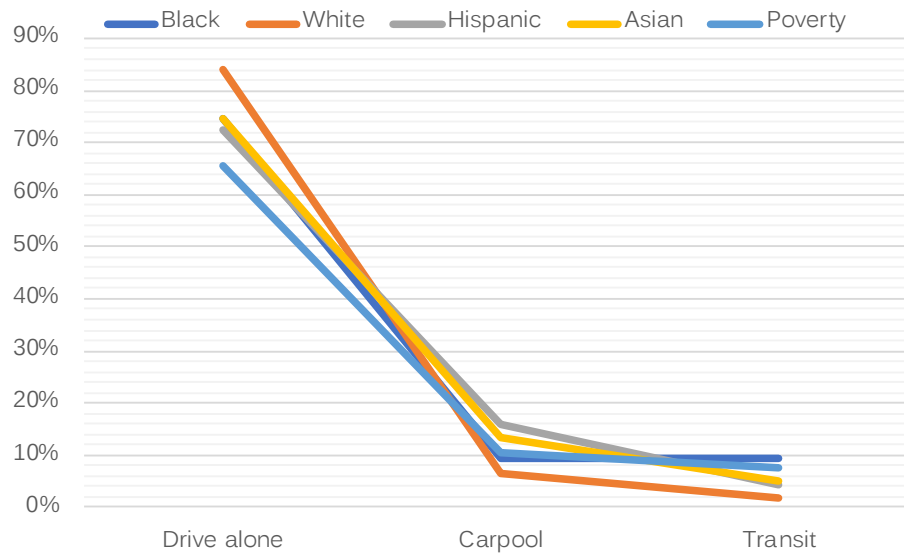
**Average Commute Times, in Minutes, by Mode**  
WILMAPCO Region, 2012-2016



We can say, then, that the long median travel time of public transit, along with the performance of that system generally, has a social equity dimension. Blacks will be, disproportionately, benefited or burdened by public transit investment and performance in our region. This includes being burdened by its currently high travel times.

While this is clearly an equity issue, a word of caution is needed. It must be remembered that the benefits or burdens of the public transit system will only principally impact those who chose, or are compelled, to take public transit and their families. While blacks lead all groups in terms of the percentage of workers who take public transit (shown in the graph below), like all other groups considered, 9 out of 10 blacks today travel to work by car.

### Commuter Mode Choice among Demographic and Socio-Economic Groupings WILMAPCO Region, 2012-2016

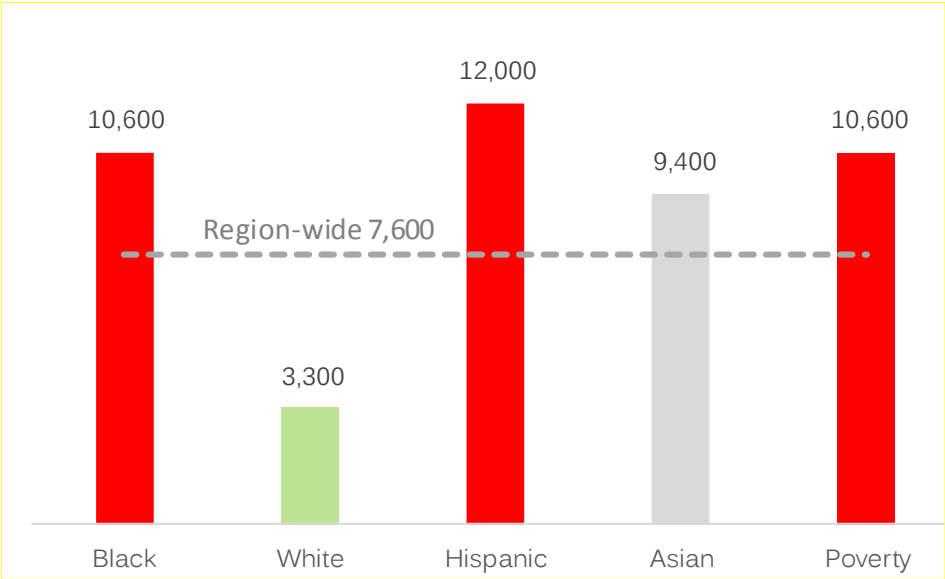


#### Traffic Volume Equity Analyses

Driving a car is far and away the most popular mode of travel in our region, in step with our car dependence. Traffic levels, however, vary by place. In this analysis we consider the median Average Annual Daily Traffic (AADT) in our areas of concentration.

As shown in the graph on the following page, the typical roadway in impoverished and racial/ethnic minority neighborhoods carries many more vehicles than the regional average. Meanwhile, the typical roadway within white concentrations sees much less traffic. More traffic has implications for higher localized pollution, noise, and safety concerns. This makes the discrepancy a transportation equity issue.

Median Roadway Traffic Levels within Areas of Concentration<sup>31</sup>  
WILMAPCO Region



Busy SR 4 and SR 141 link Newport, home to a major concentration of Hispanics, to the region.  
Air Photo: Microsoft 2019

<sup>31</sup> We identified the median AADT of roadway segments regionally and within group concentrations in this analysis. Traffic figures are rounded to the hundreds for cosmetic purposes. Data sources: MDOT, DelDOT, ACS.

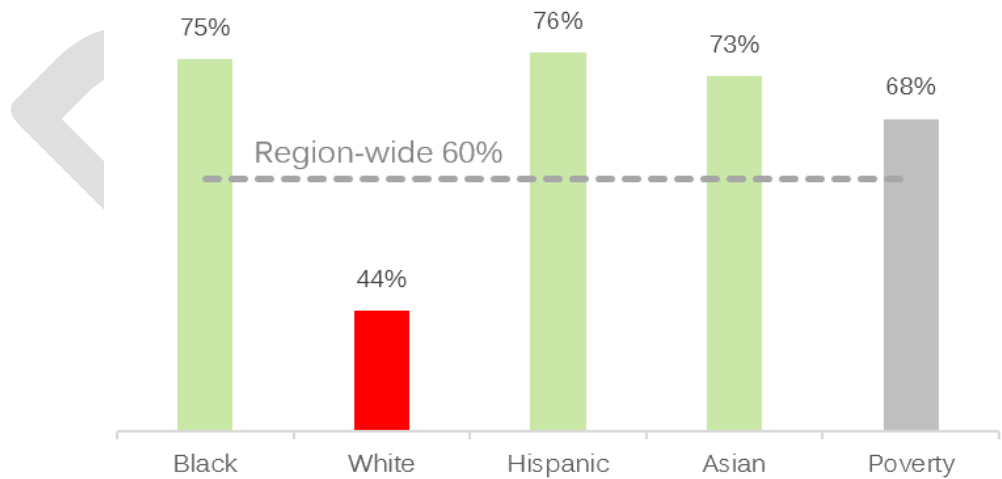
Bicycle Level of Traffic Stress Analysis

The analysis in this section explores what percentage of roads (excluding expressways) are low-stress for bicyclists region-wide and in our group concentrations.

Regionally, we found that 60% of all roads, regionally, have low traffic stress. These places are easy for just about any adolescent or adult to bike along. For impoverished and ethnic/racial minority neighborhoods, the figures are better. About ¾ of roads in black, Hispanic, and Asian neighborhoods are low-bike stress; 68% are low-stress in impoverished neighborhoods. Predominantly white neighborhoods, meanwhile, are generally more stressful for bicyclists. Less than half (44%) of roads in these communities have low bicycle stress.

Given the results of this analysis, bicycle level of traffic stress is not a transportation equity issue in our region.

**Low Traffic-Stressed Roadways for Bicyclists within Areas of Concentration<sup>32</sup>**  
WILMAPCO Region



<sup>32</sup> This analysis considers the latest data available from DelDOT and MDOT. We use Delaware’s Level of Traffic Stress (LTS) 1 and 2 and Maryland’s Level of Comfort levels 1 and 2 as low traffic stress. Data: DelDOT, MDOT, and ACS.

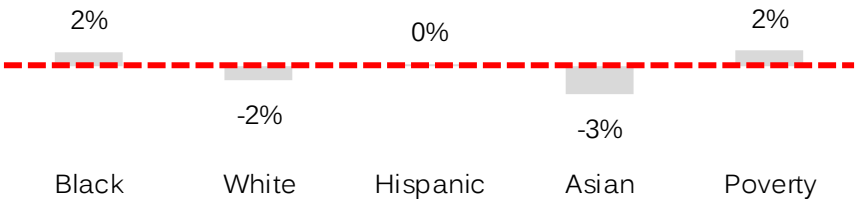
Crash Equity Analysis

In this analysis, we measured the equity of all road crashes, and pedestrian and bicycle crashes. Like the TIP equity analysis, we considered the number of crashes within our ethnic/racial concentrations against the population-based equity benchmarks of those concentrations. Only year 2016 data was used here, the latest we have on file.

The graphs below show these results. We consider the “deviation from expected” number of crashes here. This is simply a comparison of the actual number of crashes in the block group to its total population.

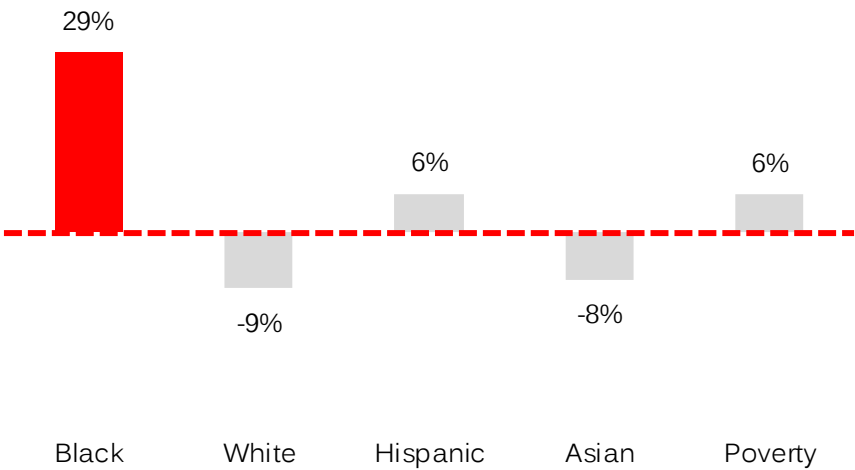
While crash rates for all crashes were close to what was expected in each of the concentrations (black and impoverished neighborhoods registered 2% higher than expected), we found significant elevations for pedestrian and bicycle crashes within black concentrations. Areas home to double or more the regional average of blacks had 29% more pedestrian crashes than expected and 20% more bicycle crashes than expected. High poverty areas also had an elevated number of bike crashes (10% more), while Asian areas had 11% less bike crashes than expected.

All Crashes  
Deviation from Expected by Group Concentrations, Year 2016



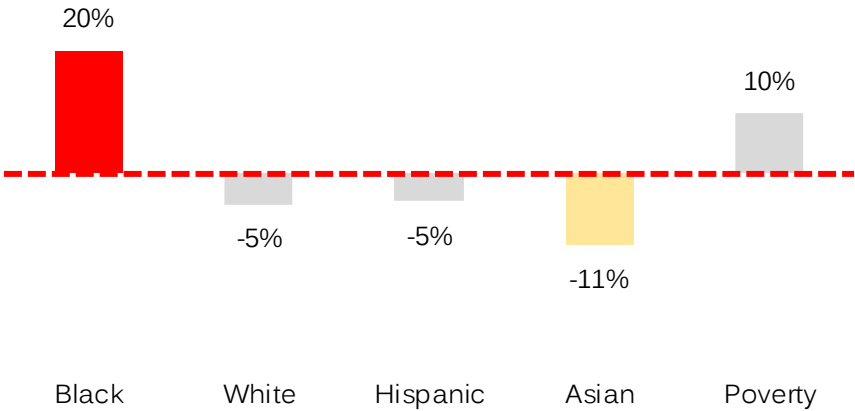
Pedestrian Crashes

Deviation from Expected by Group Concentrations, Year 2016



Bicycle Crashes

Deviation from Expected by Group Concentrations, Year 2016



Black concentrations were home to a disproportionate number of pedestrian and bicycle crashes in 2016. More than half (51%) of New Castle County's pedestrian crashes occurred in these communities that year and nearly half (41%) of its bicycle crashes. These figures are high when it is considered that only 16% of New Castle County's population is within a black concentration.

The maps on the following pages explore where these 142 pedestrian crashes and 19 bicycle crashes occurred. In both cases, most happened within and around the City of Wilmington, including the Downtown, West Center City, and the Northeast neighborhoods. About a dozen pedestrian crashes occurred in New Castle and Bear area suburbs, with a half dozen in the Route 9 suburbs just south of Wilmington. Bike crashes almost exclusively occurred within Wilmington.

Part of the explanation is that there is simply more walking and bicycling within Wilmington than compared to the region. And Wilmington, a majority black city, is home to much of our region's black neighborhood concentrations. Wilmington's relatively high neighborhood densities and strong transit services encourage more people to walk and bike to destinations. Comparatively, the busy highways, limited transit, and low-density development pattern are typical of our suburban neighborhoods discourage walking and bicycling. This is borne out by data from the American Community Survey, which show that a higher percentage of walking and bicycling commute trips occur in black neighborhoods -- especially those within Wilmington -- compared to the regional average.

**Commute to Work by Mode**  
Group Concentrations in 2012-2016 ACS

	<b>Walk</b>	<b>Bike/Other*</b>
<b>Regional Average</b>	2%	1%
<b>NEIGHBORHOOD CONCENTRATIONS</b>		
<b>Black</b>	4%	2%
<b>Black (in Wilmington only)</b>	7%	2%
<b>White</b>	1%	1%
<b>Hispanic</b>	2%	2%
<b>Asian</b>	2%	1%
<b>Poverty</b>	8%	3%

\*Other includes taxicabs and motorcycles

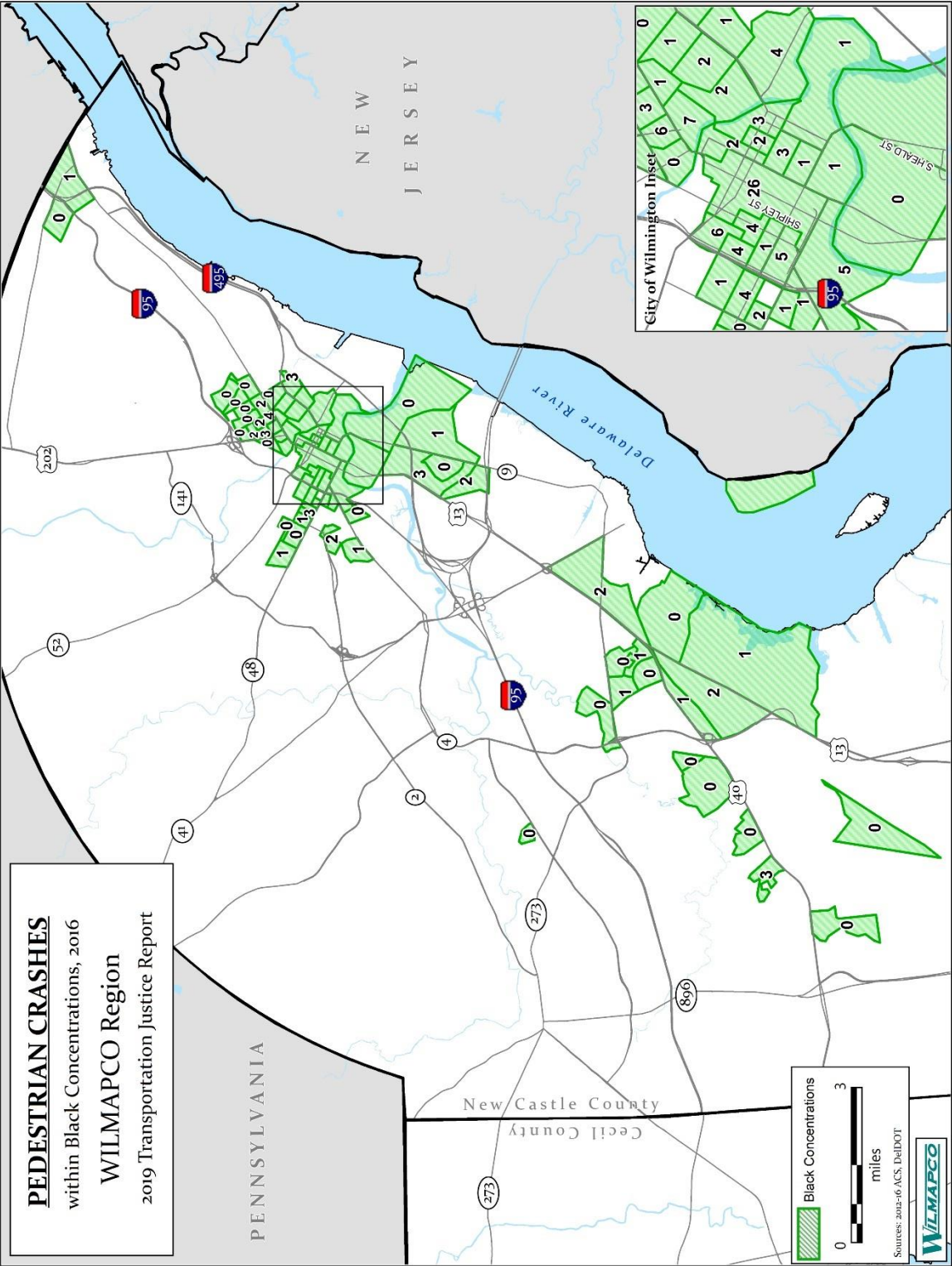
But that is only part of the explanation. Consider that high poverty neighborhoods have even higher rates of walking and bicycling commutes than black neighborhoods. And, while high poverty neighborhoods too had higher than expected rates of pedestrian and bicycle crashes in 2016, they were much lower than the disparities we found in black concentrations. Impoverished neighborhoods had a 6% higher rate of pedestrian crashes versus a 29% higher rate in black neighborhoods. Similarly, high poverty neighborhoods had a 10% higher rate of bicycle crashes than we would expect compared to a 20% higher rate in black neighborhoods.

Whatever the case or cause, the high number of crashes within Wilmington's black neighborhoods drive a need for bicycle and pedestrian safety improvement projects and initiatives there.



Crashes – especially bike and pedestrian crashes – are prevalent in Wilmington's black neighborhoods.

2016 Pedestrian Crashes within Black Concentrations

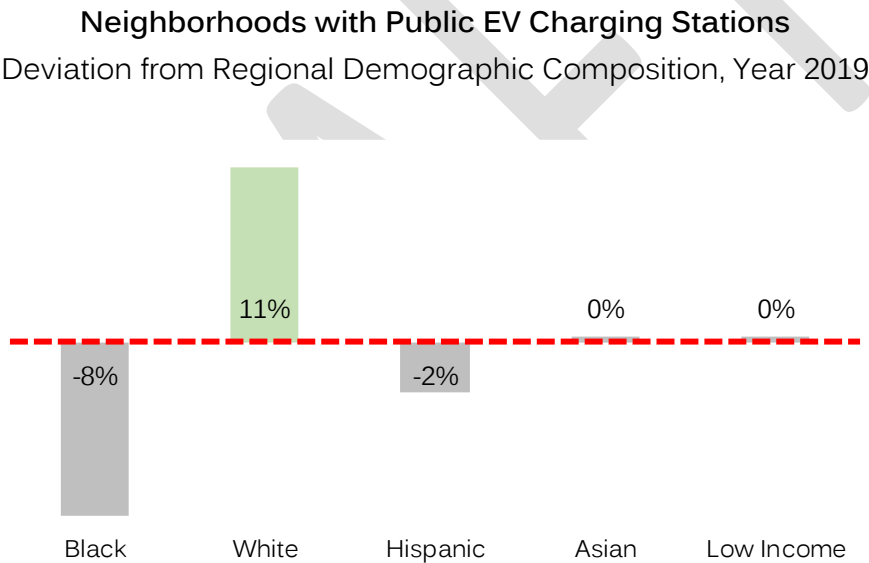


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Electric Vehicle Public Charging Location Equity Analysis

The WILMAPCO region is home to a growing number of public Electric Vehicle (EV) charging stations. In this analysis, we show that the current network of 21 public locations is not equitably distributed across the region.

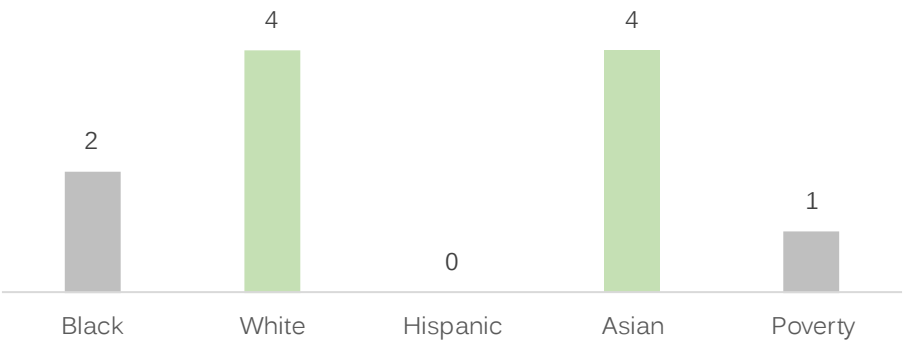
We began the analysis by flagging all block groups with an EV charging location, identified by the Alternative Fuels Data Center. Next, we calculated the average demographic makeup of the EV block groups with the latest data on file, the 2012-2016 ACS. As shown in the graph below, these were compared to the regional averages to measure how the demographic makeup stacked up to the region.



The average neighborhood (census block group) with a public EV station was less racially diverse than expected. EV neighborhoods had 11% more non-Hispanic whites and 8% fewer blacks than expected.

Diving deeper, we compared the raw number of public EV locations within our heavy ethnic/racial and poverty concentrations. While the white and Asian neighborhoods each had four charging locations, black neighborhoods only had two, high poverty neighborhoods one, and our Hispanic neighborhoods zero.

**Public EV Charging Locations**  
within Ethnic/Racial and Poverty Concentrations in 2019



As the cost of EV ownership will continue to sink, policy should encourage adding public EV charging stations in diverse areas. Currently, whites are more likely to have readier access to these chargers.



Policy should encourage the siting of public EV stations in more diverse places.

## Overview of Social Equity Concerns and Major Recommendations

We analyzed about a dozen distinct indicators of transportation equity in this and other sections of the Plan. These indicators were considered for people with low incomes/impoverished neighborhoods, blacks/black neighborhoods, and Hispanics/Hispanic neighborhoods. A chart on the following page identifies where equity concerns were identified.

We identified concerns for blacks in more than half of the transportation equity indicators considered. Blacks were more likely than the average resident to report transportation access issues in our Public Opinion Survey, along with less familiarity with WILMAPCO. Black neighborhoods were found to be home to heavier median traffic volumes, more pedestrian and bicycle crashes than expected, fewer than expected EV public charging stations, and less than expected funding for community-based transportation projects. We also found that most of those commuting to work by transit were black – though blacks are a minority population. Since about twice as much time is needed to reach work on transit versus a car trip, chronic public transit inefficiency is an equity concern.

Concerns were identified for people with low incomes in more than one-third of the indicators. Like blacks, those living in low-income households were more likely to report transportation access issues and unawareness of WILMAPCO. Impoverished communities were also home to heavy traffic volumes and had fewer than expected public EV charging stations. We also found that more than half (55%) of impoverished neighborhoods had unaffordable transportation and housing costs for lower-income households. This means that, in too many cases, families are spending more than they should on these basic costs.

We identified equity concerns for Hispanics in about a quarter of our equity indicators. Like blacks and people with low incomes, Hispanics reported less familiarity with WILMAPCO than average. Hispanic neighborhoods also had heavier traffic volumes and fewer public EV charging stations than expected.

Taking our equity findings into consideration, a series of major recommendations follows. Recommendations that seek to increase knowledge of WILMAPCO among all our Title VI/EJ communities are found in the following section and in Chapter 4.

Summary of Social Equity Concerns

	Low-income/Poverty	Blacks	Hispanics
 Transportation Access (in General)	yes	yes	
 Neighborhood Transportation/Housing Costs	no, but of other concern		
 Neighborhood Connectivity			
 Travel Time from Neighborhoods			
 Travel Time on Public Transit (in general)		yes	
 Traffic Volumes	yes	yes	yes
 All Vehicle Crashes			
 Pedestrian and Bike Crashes		yes	
 Bike Level of Traffic Stress			
 Public Electric Vehicle Stations	yes	yes	yes
 Community Transportation Project Funding		yes	
 WILMAPCO Community Planning			
 Knowledge of WILMAPCO	yes	yes	yes

## Major Recommendations

### 1. **Support Implementation of the 2050 Regional Transportation Plan (RTP)**

The 2050 RTP features policy actions to achieve focused land development that would reduce our region's car dependence.

### 2. **Overall Project Prioritization Process**

Continue the same process for awarding/deducting points (1 - 3) for projects within Environmental Justice neighborhoods. However, provide +3 extra points for beneficial projects within Residential Black Concentrations (see the map in this section) to drive investment here.

### 3. **TAP Project Prioritization Process**

Continue the same process for awarding points (2) for projects within Environmental Justice neighborhoods. However, provide +2 points for beneficial projects within Residential Black Concentrations to drive investment here.

### 4. **Pedestrian Priority Network Process**

Continue the same process for awarding/deducting a point (1) for projects within Environmental Justice neighborhoods. However, provide +1 point for network segments within Residential Black Concentrations to acknowledge the need for improvements here.

### 5. **WILMAPCO Sub-regional Studies**

Continue to pursue new and follow-up localized studies within black neighborhoods.

### 6. **WILMAPCO will encourage and support the creation of a City of Wilmington**

**Pedestrian Safety Plan** to begin understanding and addressing the heavy number of pedestrian crashes in that city.

### 7. **Working with the City of Wilmington, WILMAPCO will help include safety as a key component of the Draft City of Wilmington Bike Plan**

### 8. **WILMAPCO will conduct a study to examine reducing transportation costs in unaffordable impoverished neighborhoods.** The study will recommend

improvements to bus routing and walking and bicycling networks, generally, in these places.

9. WILMAPCO will conduct a study to **examine fixed-route bus performance/travel time improvements from black and impoverished neighborhoods to employment centers.**
10. WILMAPCO will utilize the connectivity data, as practicable, in all future sub-regional and regional studies. **Improvements by walking, biking, and bus will be recommended to improve connectivity** from homes to key destinations.
11. WILMAPCO will conduct a study to **examine food access improvements within WILMAPCO-defined food deserts with poor transit connectivity.**
12. As the cost of EV ownership continues to sink, WILMAPCO will encourage public grants for EV charging stations to more strongly consider awards within low-income, black, and Hispanic neighborhoods.



Food deserts with weak or absent bus access, like Murray Manor, should be examined for food access improvements.



## Review of Public Engagement and Recommendations for Improvement

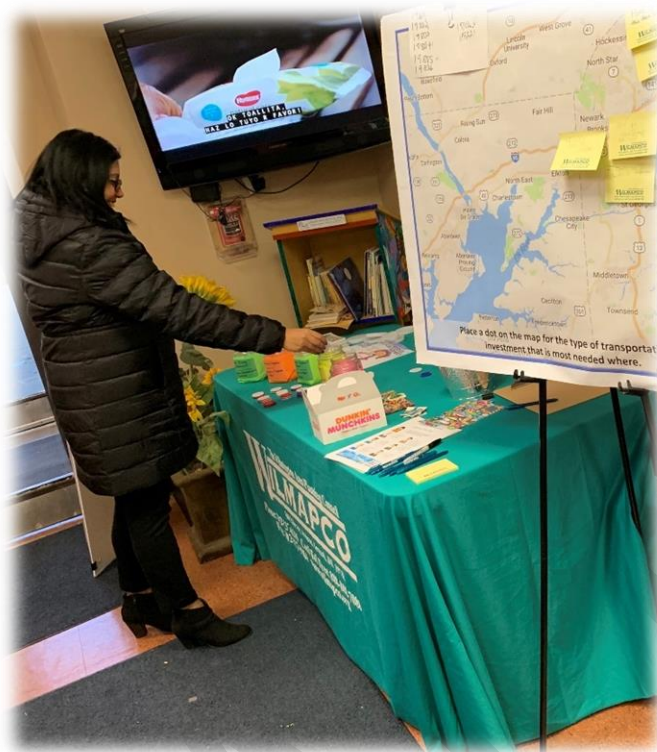
Black, Hispanic and low-income residents are less likely than the average resident to be familiar with WILMAPCO. Greater awareness of WILMAPCO (and subsequent greater participation in and support for various transportation planning efforts) would open the door to more and better transportation projects within these communities. Chronic lack of involvement has likely contributed to the reality that less transportation project spending occurs in black neighborhoods than we would expect, and the overall greater difficulties with mobility blacks and people with low incomes report.

WILMAPCO has strived to close this public awareness gap for more than a decade. Tailored outreach strategies and targeted events to minority and low-income communities were first prescribed in the *2008 Public Participation Plan*. These were subsequently amplified in both the *2009* and *2013 Environmental Justice Reports*. Although progress has been made, these efforts have not been enough to end socio-economic disparities in public awareness.

This section will begin with a review of positive steps we have taken during the past decade surrounding improved public engagement of minority and low-income individuals. We will then consider what we know is not working, before we rebuild a series of stronger recommendations to improve our public involvement processes.

### What has been working?

Strong public involvement has long been as an aspirational cornerstone to planning at WILMAPCO. We are known for developing close working relationships with local communities, running extensive public outreach campaigns, and effectively incorporating the feedback from them into our plans. We exceed federal requirements surrounding public outreach and, generally, expend more effort on engagement than many MPOs of a similar size.



WILMAPCO conducted a “popup” workshop at the Latin American Community Center as part of its outreach campaign for the 2050 Regional Transportation Plan (RTP). Extensive online surveying during the RTP’s outreach process engaged nearly 600 residents. But non-Hispanic whites were greatly overrepresented in the survey. This targeted workshop, along with a pair of others, was done to help reach more Hispanics.

Objectively, the *2017 Regional Progress Report* found that we had mostly hit our general outreach objectives in seven recent local plans. As the matrix below shows, only in a handful of cases was the local plan lacking in an aspect of good outreach.

## Review of Public Outreach Components of Recent WILMAPCO Plans

	Ardentown Paths Plan	Red Clay Valley Scenic Byway Standards	North Claymont Area Master Plan	Route 9 Corridor Master Plan	Route 141 Land Use and Transportation Plan	Glasgow Avenue Planning Study
Community representatives invited to participate in committees (businesses, etc.) engaged throughout planning process						
Webpage created						
Social media presence established						
Visioning workshop held early in the planning process						
Follow-up workshop(s) held						
Workshops held in ADA-accessible, convenient, and unimposing (nongovernmental, non-business) location						
Variety of visualization techniques used during workshop/outreach (written, graphic, oral, etc.)						
Variety of methods to collect public feedback (online, verbal, paper, etc.)						
At least two weeks notice given for all public workshops						
Wide advertisement for workshop notices: web, social media, flyers, radio, community events, etc.						
Workshops well attended						
Specific outreach and support to LEP and low-literacy populations, if present, in study area						
Specific outreach to low income and minority populations, if present, in study area						
Representative demographic/socio-economic community participation						
All workshop materials and draft plan posted to webpage for review						
PAC review of draft plan						
30 day public review period of draft plan						

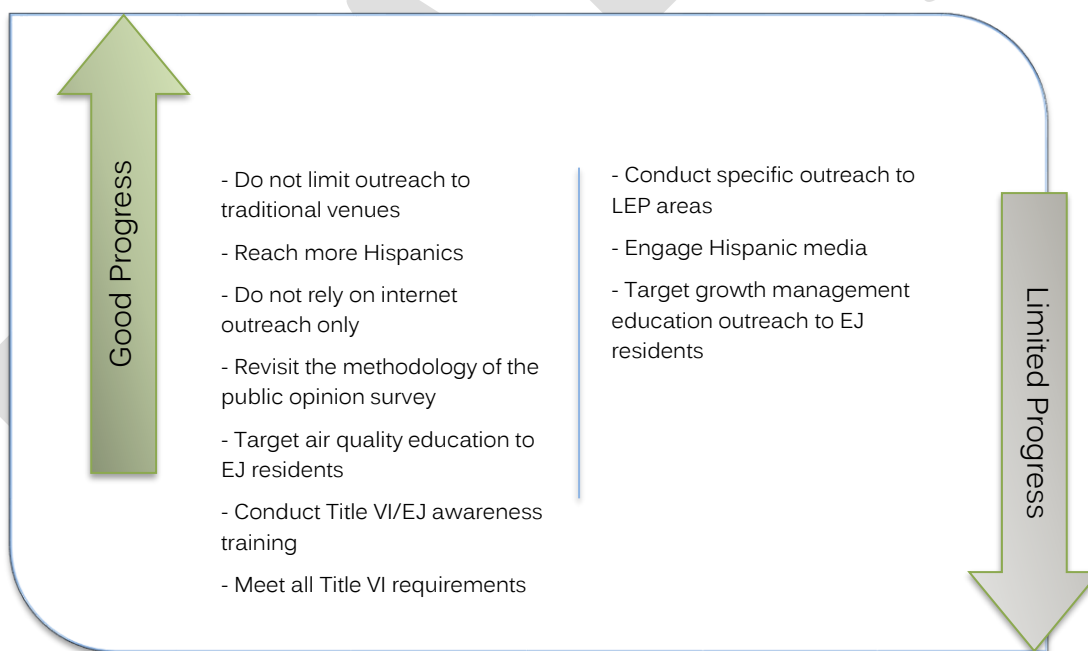
Cell Key
Grey: not relevant
Green: achieved
Yellow: Somewhat achieved
Red: not achieved

This good work extends to public participation and outreach to Title VI and EJ communities. The Progress Report found that WILMAPCO newsletter readership within EJ neighborhoods overtook the regional average readership in 2013, and then began to

outpace it. This was a direct result of more targeted events within EJ communities in the wake of the *2009 Environmental Justice Report*, which identified racial and class disparities in newsletter readership.

Additional positive steps have been taken over the past five years. As shown below, WILMAPCO is meeting six of the nine outreach recommendations made in the *2013 Environmental Justice Report*. WILMAPCO diversified its outreach venues, reached more Hispanics, employed a variety of outreach techniques, overhauled the regional public opinion survey's methodology to be more inclusive, participated in the Title VI and EJ trainings, and has successfully met all Title VI requirements.

### Meeting Title VI/EJ Outreach Recommendations from 2013 – Overview



## Meeting Title VI/EJ Outreach Recommendations from 2013 - Detail

<i>ID</i>	<i>Recommendation</i>	<i>Progress</i>	<i>Discussion</i>
1	Conduct specific outreach to LEP areas	Limited	No targeted outreach campaign to LEP areas was conducted. As detailed in the sub-regional study matrix earlier, a known LEP area was not accommodated in the North Claymont Area Master Plan. Outreach to the Chinese community, while attempted, was unsuccessful.
2	Do not limit outreach to traditional venues	Good	WILMAPCO has continued to diversify its outreach venues.
3	Reach more Hispanics	Good	Representative feedback by all communities present in local study areas was achieved. Targeted Spanish engagement occurred with the 2050 Regional Transportation Plan and the Route 9 Corridor Master Plan. Hispanic representation on the Public Advisory Committee grew.
4	Engage Hispanic media	Limited	WILMAPCO continues to send releases to local Hispanic media. This media list was expanded to cover all local Hispanic media outlets through stepped up coordination with the Delaware Hispanic Commission. We also explored a partnership with a local Hispanic magazine. However, stories have not been covered and the partnership with the magazine never materialized.
5	Do not rely on internet outreach only	Good	WILMAPCO regularly employs a variety of outreach techniques.
6	Revisit the methodology of the public opinion survey	Good	The methodology for conducting the WILMAPCO regional public opinion survey was revised to include demographic quotas to ensure a representative sample of low-income and minority individuals are participating. The <i>2013 Environmental Justice study</i> identified significant racial/ethnic sample biases in earlier opinion surveys.
7	Target growth management education outreach to EJ residents.	Limited	Targeted growth management outreach was not attempted.
8	Conduct Title VI/EJ awareness training	Good	WILMAPCO staff participate in local and national Title VI and EJ trainings and educational sessions.
9	Meet all Title VI requirements	Good	WILMAPCO has been found in compliance with Title VI.

Local WILMAPCO-supported initiatives in Wilmington and along the Route 9 corridor south of the city exemplify our commitment to improving quality of life within Title VI and EJ communities through partnership-building and good planning.

### South Wilmington Planning Network (SWPN)



The SWPN is a community/agency coalition in the Southbridge section of Wilmington. It has helped steer the implementation of the community's 2006 neighborhood plan. It successfully pressed for: improvements to public bus service, flood control projects, transportation connections to the Riverfront, more healthy food options, and limiting industrial growth around the community. Our Safe Routes to School Program in Southbridge, coordinated through the SWPN, was named a national best practice in a low-income community.

[www.swpn.org](http://www.swpn.org)

### Safe Routes to School Efforts in EJ Communities



Building on the success of the Safe Routes to School (SRTS) Program at Elbert-Palmer, WILMAPCO specifically targeted other SRTS efforts to other minority and low-income schools in Wilmington. Successful programs were run at Edison Charter and Stubbs Elementary, which included infrastructure improvements at Edison and educational encouragement at both schools. Students at Stubbs also received supplemental education on air quality issues in direct response to low levels of low income and minority awareness of air quality action days. Today, with the closure of Palmer and Stubbs imminent, WILMAPCO is helping to kickstart a new SRTS program at Bayard, which is poised to become the largest elementary and middle school in Wilmington's Westside after a planned restructuring.

### Route 9 Corridor Master Plan

The Route 9 Corridor Master Plan is a land use and transportation plan for communities along Route 9 near Wilmington, the city's first African American suburbs. Strong and innovative outreach ensured that the voices of residents from every neighborhood were heard, and that civic leaders were involved throughout the planning process. Today, a community/agency staffed Monitoring Committee is guiding the implementation of the plan. So far it has: developed a local transportation project prioritization process, spearheaded a now funded effort to have construction projects stemming from the plan include local labor quotas, pressed for the Memorial Drive Road Diet project, supported a pair of local Safe Routes to School Programs, helped guide the development of the Eden and Hamilton Park Environmental Concern/Relocation Survey, and provided continued engagement to the wider community.

[www.wilmapco.org/route9](http://www.wilmapco.org/route9)



### Earn-a-Bike Program

Bicycle commuting within low-income and minority communities in Wilmington could be more popular. WILMAPCO has partnered with the Urban Bike Project to help more young people begin to view the bicycle as an affordable and healthy form of transportation. Working in groups of about ten during a ten-week session, children from in and around the 19801-zip code build their own bikes from scratch and later learn safe riding techniques. Graduates of the program take their new bike home.



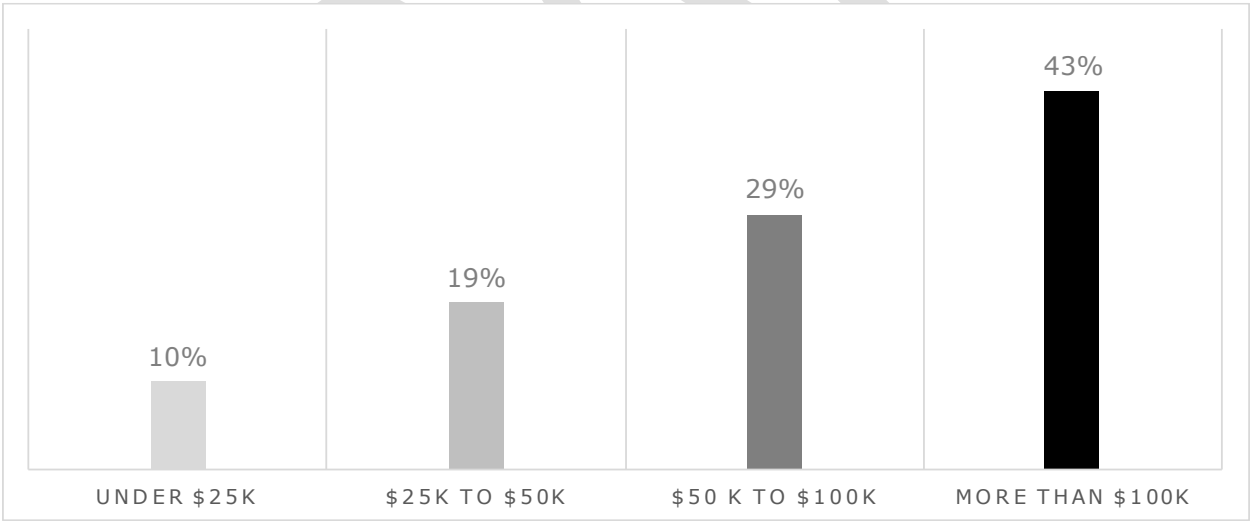
<http://www.urbanbikeproject.com/programs/kids-earn-a-bike-camp/for-schools-and-organizations>

What has not been working?

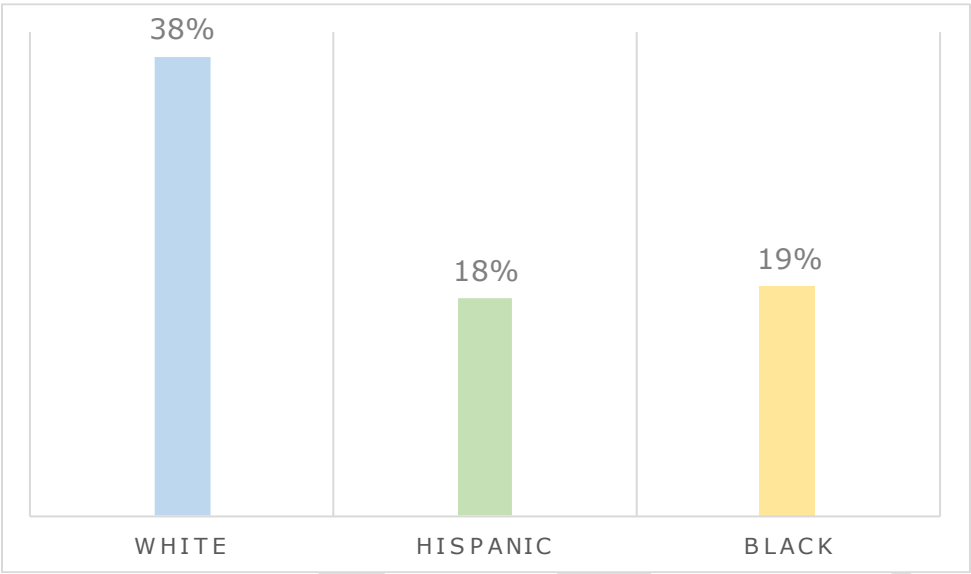
While WILMAPCO has made measurable strides to improve its public outreach – both generally and within Title VI/EJ communities – awareness of the agency remains sharply divided by race and class. We have struggled to have equitable representation of minorities on the Public Advisory Committee and showed limited progress in meeting a few recommendations from the *2013 Environmental Justice Report*.

People with lower-incomes and non-whites are less likely to be familiar with WILMAPCO. Only one in 10 residents in households making less than \$25,000/year had heard of the agency – compared to more than four out of 10 households earning more than \$100,000/year. Race/ethnicity was also a factor in awareness of WILMAPCO. While 38% of whites heard of WILMAPCO, less than 20% of blacks and Hispanics had.

**I have heard of WILMAPCO**  
by Annual Household Income

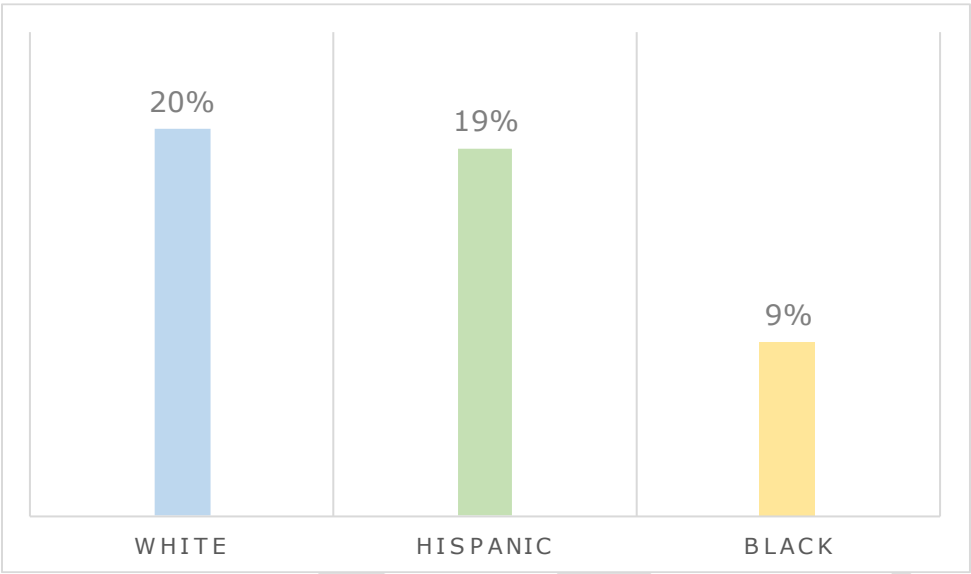


I have heard of WILMAPCO  
by Race and Ethnicity



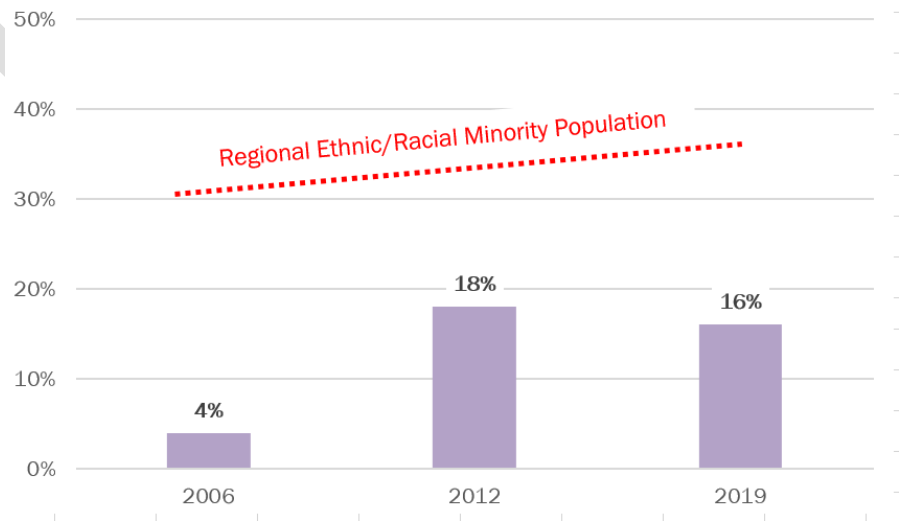
Awareness of Air Quality Action Days was also a trouble spot. These action days are promoted through the Delaware Air Quality Partnership, a group in which WILMAPCO is a key member. Action days are called when our air is particularly unhealthy. Outdoor activities should be reconsidered during action days – especially for sensitive groups like seniors, young people, and those with respiratory conditions. Only 9% of blacks had heard of air quality action days – compared to about 20% of whites and Hispanics.

I have heard of Air Quality Action Days  
by Race and Ethnicity



In addition to these public opinion survey results are other trouble spots. As shown earlier and in the graph below, non-white participation on the Public Advisory Committee (PAC) is, and has historically been, low. While Hispanic representation has increased in recent years, we have zero African American representatives currently on that body.

Ethnic/Racial Minority Representation on the WILMAPCO PAC



A few outreach recommendations stemming from the *2013 Environmental Justice Plan* have also seen limited progress. Outreach specific to LEP areas has been limited. It was attempted in the Route 9 Corridor Master Plan, but not in the North Claymont Area Master Plan though an LEP cluster was evident. Efforts to engage with Chinese American institutions – the Chinese American Community Center and a pair of Chinese churches – were attempted but were unsuccessful.

Similarly, efforts to better engage with Hispanic media were attempted. Promising discussions were held with *Delaware Hispano* (a leading Spanish local magazine) to support better coverage for our events. But these discussions broke down after the magazine pushed for paid advertising from WILMAPCO for better coverage, which we were unwilling to supply.

Finally, no or limited attempts were made to provide direct outreach to EJ residents regarding the benefits of growth management – funneling more intensive transportation and land development into growth areas.

#### Recommendations for moving forward

WILMAPCO has built a strong outreach program, one that is often sensitive to the needs of EJ and Title VI communities. We exceed federal standards in this arena and further improvements have been made during the past decade. Still, clear disparities endure.

WILMAPCO is not alone in facing these challenges. In fact, they are common to planning agencies across the United States. The American Planning Association recently released a guide for planning departments to support better engagement with diverse communities<sup>33</sup>. In a separate effort, the Urban Institute has considered approaches to engagement in communities impacted by trauma<sup>34</sup>. This section will lean heavily on these reports, as well as lessons we have learned over the years, to help shape our recommendations moving forward.

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<sup>33</sup> American Planning Association's PAS Report 593 "Planning with Diverse Communities." January 2019.

<sup>34</sup> The Urban Institute. "Trauma-Informed Community Building and Engagement." April 2018.

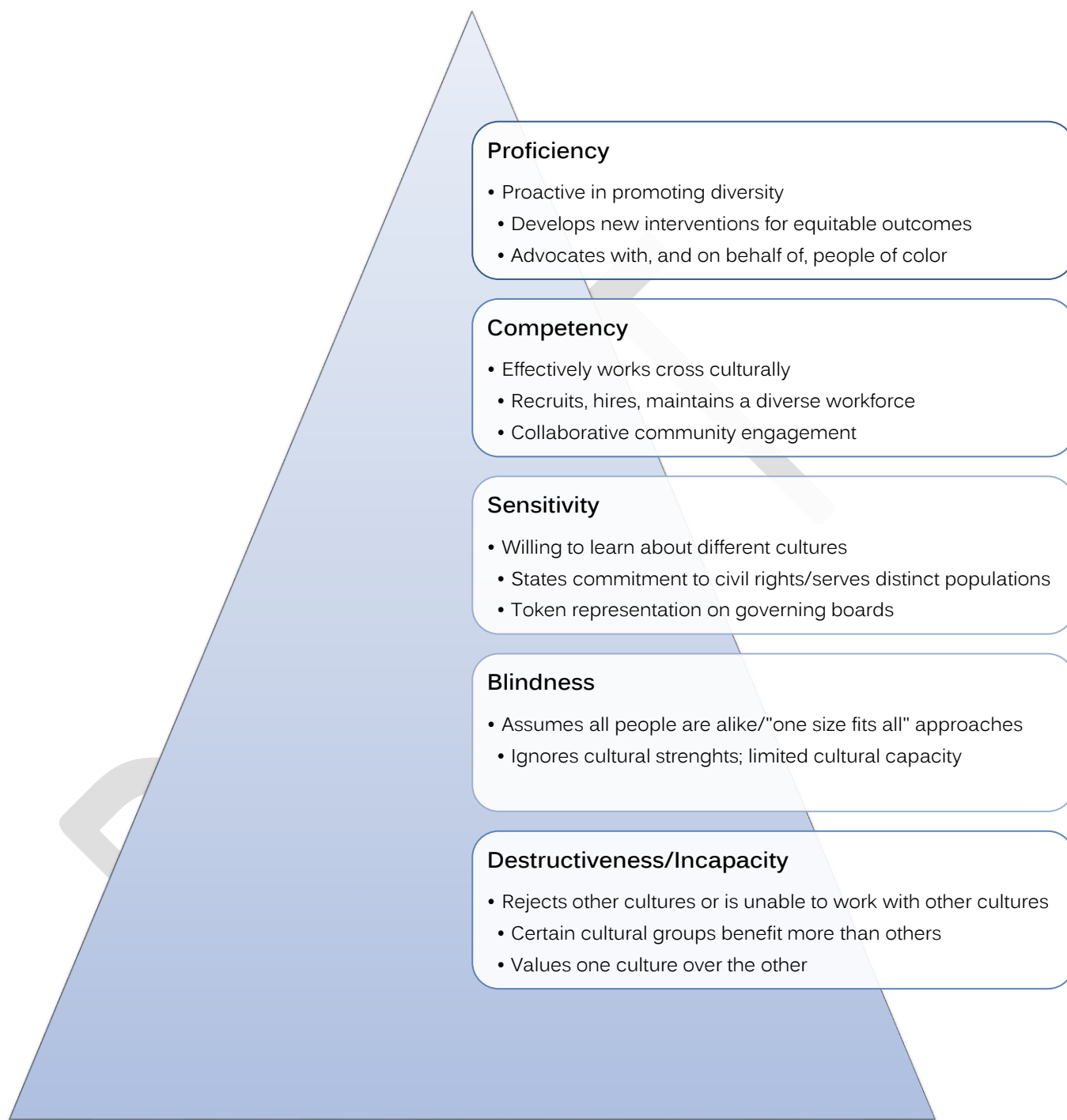
**WILMAPCO will strive to become a “cultural proficient” planning agency.** As shown in the graphic on the following page, cultural proficiency sits atop the “cultural competency continuum” – a theoretical approach first utilized in social work and, later, adapted to the health and planning professions. While we have achieved several actions indicative of cultural proficiency at different times, more consistent application is needed across all planning studies all the time.



Cultural proficiency acknowledges and integrates diversity. It works against the “one size fits all” approaches common in public engagement processes.

WILMAPCO will be proactive in promoting cultural diversity and seek opportunities to improve relationships with various cultures within the context of transportation planning.

### Simplified Cultural Competency Continuum<sup>35</sup>



<sup>35</sup> Adapted from the American Planning Association's PAS Report 593 "Planning with Diverse Communities." January 2019.

**WILMAPCO will strive to collaborate with and empower all communities, particularly low-income and minority communities, in the development and implementation of plans.** As shown on the graphic on the following page, levels of public participation can be identified and classified. While each is critical during planning processes, planning agencies often stop short of “collaborating” with or “empowering” the local community.

As plans are developed within low-income and minorities communities, their collective trauma too must be considered. This trauma is caused by exposure to chronic social inequities (poverty, racism, past broken promises, etc.) and related daily stressors, like violence. In response, many residents are mistrustful of new or unfamiliar planning processes. Consequently, proactive involvement may be low and resistance to the planning process can be high. As planners seek to collaborate and empower these communities, a sensitive, responsive, and dedicated approach to engagement is needed. The diagram that follows outlines key practices for trauma – informed community building and engagement.



The South Wilmington Planning Network successfully advocated for the more convenient routing of a bus through Southbridge, a recommendation stemming from a WILMAPCO community transportation plan. Today, the Route 8 bus gives residents another option to travel to jobs and destinations around the city.

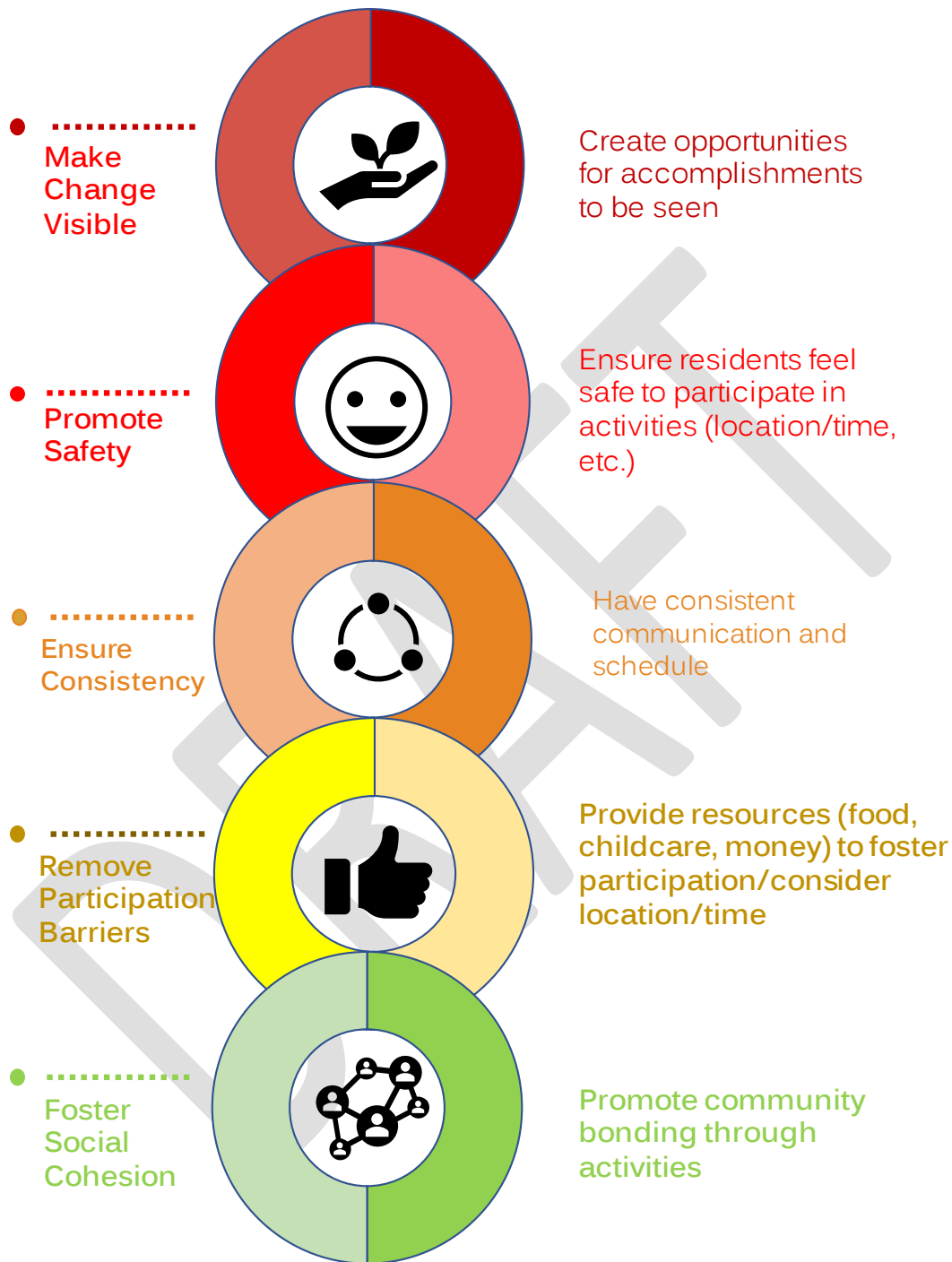
Spectrum of Public Participation<sup>36</sup>



<sup>36</sup> From the American Planning Association’s PAS Report 593 “Planning with Diverse Communities.” January 2019.

Practices of Trauma-Informed Community Building and Engagement<sup>37</sup>

<sup>37</sup> Adapted from the Urban Institute's "Practices of Trauma-Informed Community Building and Engagement," in *Trauma-Informed Community Building and Engagement*. April 2018.

Practices of Trauma-Informed Community Building and Engagement, continued<sup>38</sup>

<sup>38</sup> Adapted from the Urban Institute's "Practices of Trauma-Informed Community Building and Engagement," in *Trauma-Informed Community Building and Engagement*. April 2018.

### *Lessons from the Field*

#### **Partnering with the Communities along Route 9**

The Route 9 Corridor Master Plan is a land use and transportation plan for communities along Route 9 near Wilmington, the city's first African-American suburbs. The plan was requested by New Castle County, which identified the area as in need of revitalization. While the plan is today an exemplary case of outreach and empowering local leaders in the planning and decision-making process through joint government/community committees, the process to get there was rocky with several lessons learned. Five critical ones will be reviewed here.

First, WILMAPCO had a practice of not allowing local civic leaders on its plan's "management" committee. Instead, they were invited to participate on a parallel "advisory" committee. This did not sit well with local leadership. Already wary from years of mistrust with government, they considered the practice to be lacking in transparency. The civic leaders were particularly uncomfortable that planners were discussing the community without representatives from the community being present. WILMAPCO agreed and dissolved both committees and reformed them into a single "steering" committee, which guided the plan to completion.

A second issue involved comprehension of the plan. A draft was released for public comment following a major public workshop where feedback on the plan's recommendations was largely positive. Little additional feedback was received, and the steering committee adopted the study. When the steering committee later reformed into a monitoring committee months later to guide implementation, confusion reigned. Early meetings quickly became bogged down due to disagreement and limited comprehension of the plan.

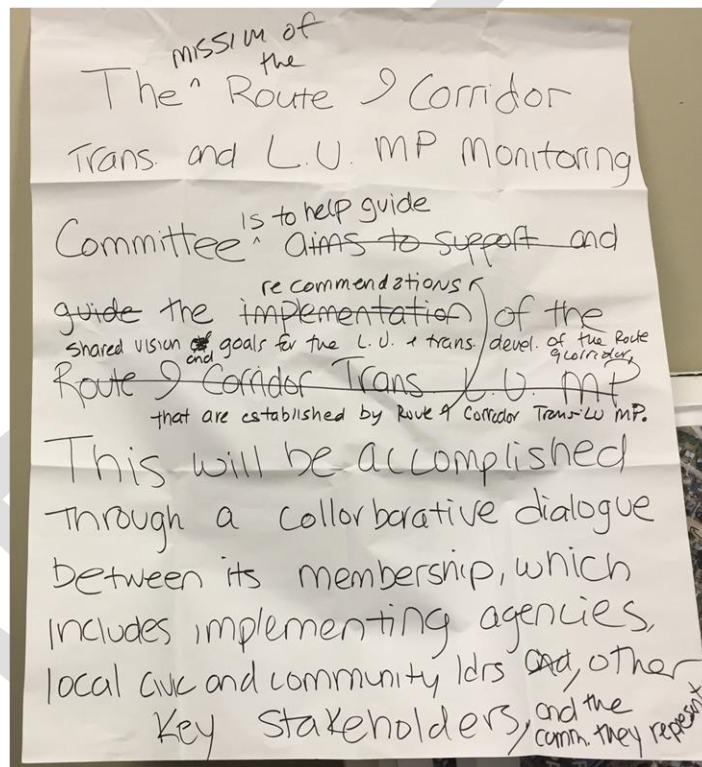
Early committee meetings and individual meetings were spent reviewing the plan's contents. Afterwards, most of the civic leaders found they were in general agreement with the plan's contents. Some simply needed extra time to review them and digest their context. The Monitoring Committee then realized more work was needed to support comprehension of the plan among residents. While casual surveying following adoption of the plan at community events showed extremely strong support for the plan's overall recommendations, civic leaders reported that comprehension was lacking. A subcommittee began raising awareness of the plan and a major workshop was held (a year after the plan's adoption) to review the plan.



Though well attended and positive, a public workshop on the plan's recommendations was not enough to greatly impact initial community comprehension of the plan.

In retrospect, while much effort was expended with engagement for *developing* the recommendations in the Route 9 Master Plan, and more engagement was promised as the recommendations proceeded, too little was done to initially review them or gauge community feedback. Behind schedule and over budget, WILMAPCO decided against conducting heavy outreach to review the recommendations -- beyond a public workshop and public comment period on the draft plan. While this level of engagement is typical of plans and positive feedback was received, more was needed.

A third lesson learned was to have clearly defined roles and responsibilities of committee members. Participation from different civic leaders was strong, but fluid in the early days of the monitoring committee. Additionally, the group included activists whose intentions to misrepresent the plan and disrupt its implementation process became clear with time.



Here is a working draft of the Monitoring Committee's mission statement.

Both issues contributed to difficult meetings and division. To achieve progress, the committee crafted mission and vision statements. These spelled out that the committee was behind the plan and was seeking to implement it through collaboration dialogue and action. These statements were and still are read out at the beginning of each meeting to provide direction for any new participants. As for the activists, the mission and vision statements helped them realize that the community leaders were firmly behind the plan, and they soon stopped attending meetings altogether.

A fourth lesson was increasing transparency and accountability. Meeting notes began to be more carefully taken, and companion audio recordings were posted online. It became impossible to say one thing at the monitoring committee and then something else at another meeting without risking being called to account.



The Monitoring Committee has been influential in pushing for the implementation of the Memorial Drive Road Diet, recommended in the Route 9 Master Plan.

A fifth lesson, and the most important, was investing in trust and relationship-building. Years of inattention from government had left some in the community suspicious of the plan's "real" intentions. Kindled by the activists from lesson three, untrue parallel narratives emerged that the plan was really meant to displace existing residents and bring in new business and new people with higher incomes.

Time, the development of positive relationships, as well as better defining roles and transparency, ultimately prevailed. As the monitoring committee pushed forward and began to make real impacts on implementation, community leaders recognized its value. Criticism waned and in its place came buy-in and encouragement.

This section makes recommendations for helping WILMAPCO achieve cultural proficiency and empower local communities. These will be divided into agency and regional level approaches, as well as approaches when working at the local level. These measures will be folded into our Public Participation Plan and measured, where possible, in our Regional Progress Reports. Recommendations to better support translation and interpretation into other languages can be found in our Language Assistance Chapter.

**1. As an agency, WILMAPCO will:**

- a. Develop organizational practices (i.e., hiring, workshop locations, language assistance, survey techniques) that integrate cultural groups of all ages
- b. Participate in cultural competency and Title VI/EJ training
- c. Advocate with, and on behalf of, people of color

**2. With regional-level studies and practices, WILMAPCO will:**

- a. Use diverse outreach methods to incorporate passive (i.e. workshop), active (i.e. street survey), and online engagement (i.e. Facebook) feedback<sup>39</sup>
- b. Strive for equitable public meetings and public participation
  - o Avoid government, university or religious buildings, gendered places, political places, or other venues that could be viewed as exclusionary for meeting venues; schools, libraries, and trusted community centers are better
  - o Provide childcare at all public meetings, especially to support female-headed households with children's participation
  - o Consider providing snacks or food<sup>40</sup> or other incentives to offset economic burdens of meeting attendance
  - o Choose meeting venues that are accessible by public buses

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<sup>39</sup> The 2018 Public Opinion Survey revealed engagement techniques that could be stressed within black and Hispanic communities. Some 81% of our black survey takers said that public meetings were an effective way to be engaged about projects. This figure can be compared to the lower regional average of 69%. For Hispanics, 72% identified radio advertising as an effective strategy to facilitate their engagement. This can be contrasted with the lower regional average of 62%.

<sup>40</sup> While it is currently against federal regulations to fund food costs at public meetings, WILMAPCO can and has worked with local partners to provide the food.

- o Work with the community to choose the best meeting time
- c. Provide easy-to-understand explanations of the planning and implementation processes
- d. Avoid jargon and technical terms without explanation
- e. Build relationships with African American, Latino, and Asian cultural institutions and media outlets
- f. Have equitable representation of minorities on the Public Advisory Committee
- g. Target air quality awareness outreach to low income and minority communities
- h. Continue to invest in a regional Public Opinion Survey with demographic quotas
  - o Allow self-identification of gender here and in other surveys
- i. Pursue equitable demographic public feedback, by race and class, for all regional studies



Our workshops are often well attended, but do not always draw a cross-section of society.

3. For all **sub-regional studies**, especially those with low-income and minority communities, WILMAPCO will:
- a. Invest in continuous relationship building with local leaders and the community
  - b. Partner with and work through trusted community-based organizations and local civic groups
  - c. Invite and encourage residents to participate with decision-making on a local study development and a post-study monitoring committee with:
    - o A representative cross-section of views within the community
    - o A clear mission
    - o Transparency and accountability
    - o A consistent schedule
  - d. Acknowledge any past harm done by transportation and land use decisions
  - e. Frame the plan in a way that is relevant to the local community
  - f. Never overpromise
  - g. Understand local community needs (such as workforce development and improved public safety) and seek to address those, as possible, through the planning process
  - h. Provide easy-to-understand explanations of the planning and implementation processes
  - i. Avoid jargon and technical terms without explanation
  - j. Celebrate area history and culture, where possible
  - k. Strive for equitable public meetings and iterative public participation
    - o Avoid government, university or religious buildings, gendered places, political places, or other venues that could be viewed as exclusionary for meeting venues; schools, libraries, and trusted community centers are better
    - o Make a feeling of personal safety at events a priority
    - o Promote community bonding
    - o Work with partners to provide childcare at all public meetings, especially to support female-headed households with children participation

- o Consider working with partners to provide snacks or food<sup>41</sup> or other incentives to offset economic burdens of meeting attendance
  - o Choose meeting venues that are accessible by public buses
  - o Work with the community to choose the best meeting time
  - o Work with, but do not rely on, the community to help promote the event
- l. Employ supplemental comprehensive outreach approaches, such as field and telephone surveys
  - m. Use, but do not rely entirely on, online or social media-driven outreach<sup>42</sup>
  - n. Empower community members to conduct surveys, facilitate meetings, and provide explanations
  - o. Create opportunities for accomplishments to be seen



Having childcare at workshops encourages community members with kids to come and actively participate.

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<sup>41</sup> While it is currently against federal regulations to fund food costs at meetings, WILMAPCO can and has worked with local partners to provide the food.

<sup>42</sup> According to the Pew Center for Research, Facebook is the most popular social media platform across racial and ethnic groups. About 7 in 10 whites, blacks, and Hispanics use the service. When working within black and Hispanic communities, planners should also consider supplementing Facebook with Instagram outreach. According to the national data, while only 21% of whites use Instagram, 47% of blacks and 38% of Hispanics do. Source: From the American Planning Association's PAS Report 593 "Planning with Diverse Communities." January 2019.

## Chapter 3

### Language Assistance Plan

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An increasing number of people in the WILMAPCO region do not speak English very well. Immigration from abroad has pushed the total number of those (over five years of age) reporting to speak English “less than very well” from 20,600 (or 3.8% of our population) at the turn of the Century to 26,800 (4.4%) today<sup>43</sup>. Federal guidance directs MPOs like WILMAPCO to take reasonable steps to help people with Limited English Proficiency (LEP) better participate in the transportation planning process.



People with limited English skills should be provided support to participate in our planning processes.

In addition, federal guidance suggests supporting those with low literacy. Across the region, 13,800 adults over age 25 (or about 3% of our population) have less than a 9<sup>th</sup> grade education<sup>44</sup>. While not ideal, for the purposes of this plan and in the absence of other, better data, WILMAPCO considers this cohort to possess “low literacy,” or LL. This population has been in decline, since 2000, falling by about 1,400 individuals.

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<sup>43</sup> Source: US Census

<sup>44</sup> Source: US Census

## Safe Harbor Provision

WILMAPCO must provide translation, interpretation, and outreach to LEP communities, while also taking care to not become overwhelmed by the task. Federal “safe harbor” regulations recognize the dilemma. They offer guidance to determine which languages and measures should be actively accommodated.

According to these provisions, an LEP language group that comprises either 5% of the total population of the region, or 1,000 people (whichever is less) requires specific attention. No single language group comprises 5% of the total population, regionally. Collectively, all LEP individuals (in total) fall under that figure.

As shown in the table on the following page, however, LEP individuals from two specific language groups exceed the 1,000 persons threshold. More than 15,000 Spanish speakers, regionally, report speaking English “less than very well.” The same is true for about 3,400 Chinese speakers. Broader language groupings – “Other Indo-European” and “Other Asian and Pacific Island” also met the threshold. But these groups are comprised of combinations of various languages that cannot be ascertained due to new data limitations with the Census<sup>45</sup>. People who speak French or Korean and have limited English ability also fall just under the threshold, but their numbers are slowly rising.

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<sup>45</sup> It is probable that speakers of Gujarati with limited English ability (marked at just under 850 people last year) have already, or will, cross the safe harbor threshold during the next few years. But speakers of this language are buried within the Census’ new classification scheme and cannot be identified.

### Those who Speak English “Less than Very Well,” by Language Group<sup>46</sup>

	<i>Speak English "Less Than Very Well"</i>		
	New Castle County	Cecil County	WILMAPCO Region
Spanish	14,500	827	15,327
Chinese (incl. Mandarin, Cantonese)	3,324	77	3,401
Other Indo-European	2,813	168	2,981
Other Asian and Pacific Island	1,224	132	1,356
French, Haitian, or Cajun	707	19	726
Korean	612	100	712
Russian, Polish, or other Slavic	439	143	582
Other and Unspecific	550	0	550
Vietnamese	433	0	433
Arabic	333	6	339
Tagalog (incl. Filipino)	179	40	219
German, or other West German	175	4	179

The maps on the following pages display the population distribution of LEP populations<sup>47</sup> and where clusters of LEP individuals<sup>48</sup> can be found. These clusters are home to a much higher than average local proportion of LEP and LL individuals. LEP clusters are further screened, using available Census data, to try and ascertain the predominant secondary language spoken within them.

<sup>46</sup> Source: 2012-2016 American Community Survey, 5-year estimates, population >5 years of age.

<sup>47</sup> The LEP population distribution was identified using data from the 2012 – 2016 American Community Survey. The “regional threshold” of 4.4% represents the percentage of LEP individuals, regionally, and the map shows block group variation from that average.

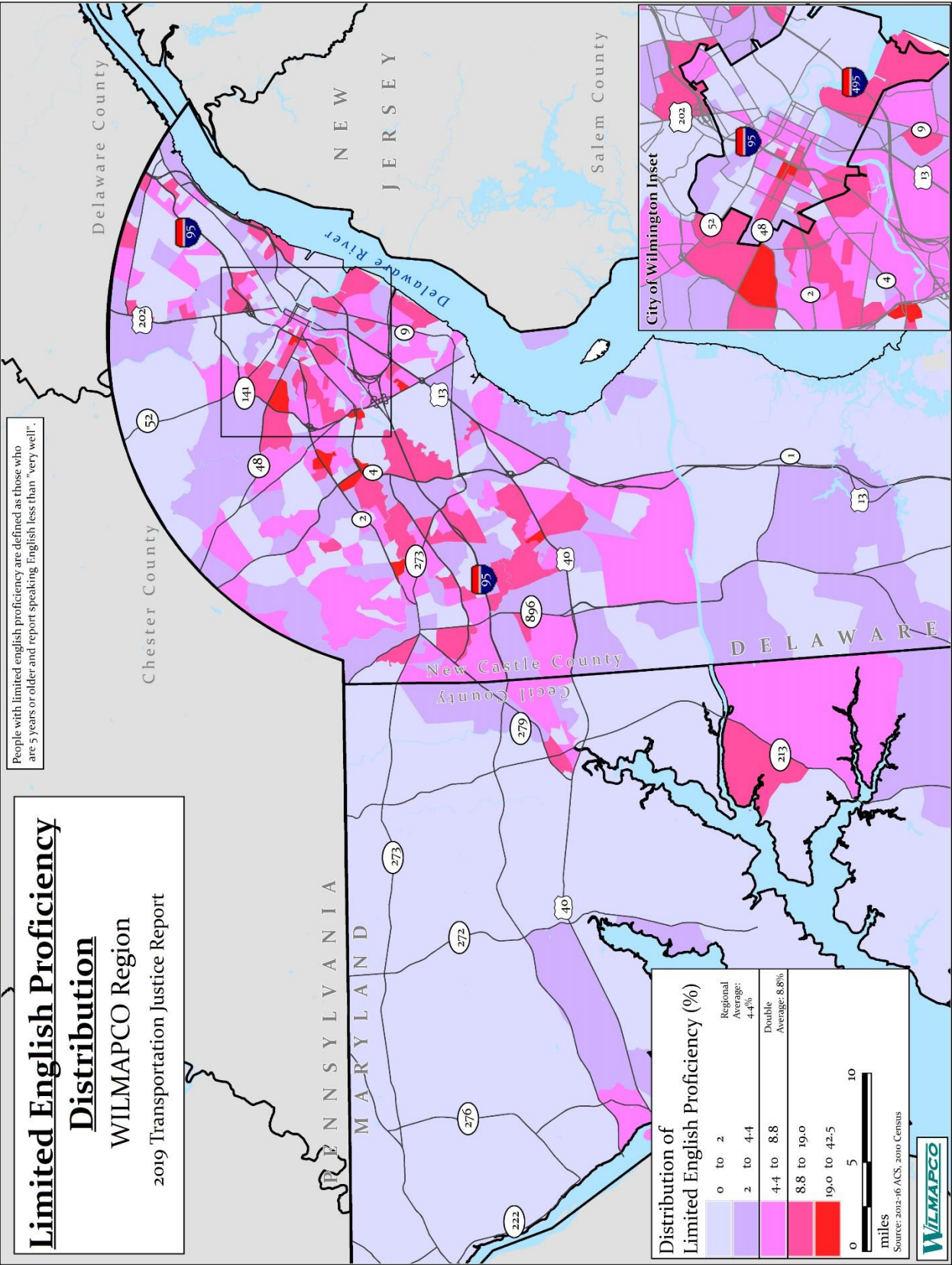
<sup>48</sup> LEP clusters are identified using data from the 2012-2016 American Community Survey. Clusters represent one or more block groups where the percentage of the population over 5 who speak English less than “Very Well” exceeds 3x the regional average, in addition to any adjoining block groups with a percentage of the population over 5 who speak English less than “Very Well” exceed 2x the regional average. The clusters are then screened at the block group and zip code levels to identify more specific language presence, using available racial/ethnic and language data. Finally, using land use data, non-residential parts of the clusters are trimmed away.

LEP clusters stretch across the I-95 corridor from Elkton to the Pennsylvania state line. Predominantly Spanish-speaking clusters have been identified in Wilmington's Westside, that city's western suburbs, in neighborhoods along the SR 2 corridor, and in the Bear area southeast of Newark. Asian speaking clusters of predominantly Chinese and Asian Indian languages (Gujarati, Hindi, Urdu) can largely be found within the City of Newark and in neighborhoods along the SR 4 and US 202 corridors. A handful of communities across the region include a heavy mixture of both Spanish and Asian LEP individuals.



Waterford Estates is within a Spanish LEP cluster. More than 200 people have some trouble speaking English here, which is about 11% of the cluster's population.

Limited English Proficient (LEP) Population Distribution





Two maps on the following pages show the population distribution of LL populations<sup>49</sup> and where clusters of LL individuals<sup>50</sup> can be found. Like LEP clusters, LL clusters are concentrated along the I-95 corridor in the north of the region. Unlike LEP clusters, concentrations of LL communities are more highly identifiable along the Route 9/US 13 corridors south of Wilmington.



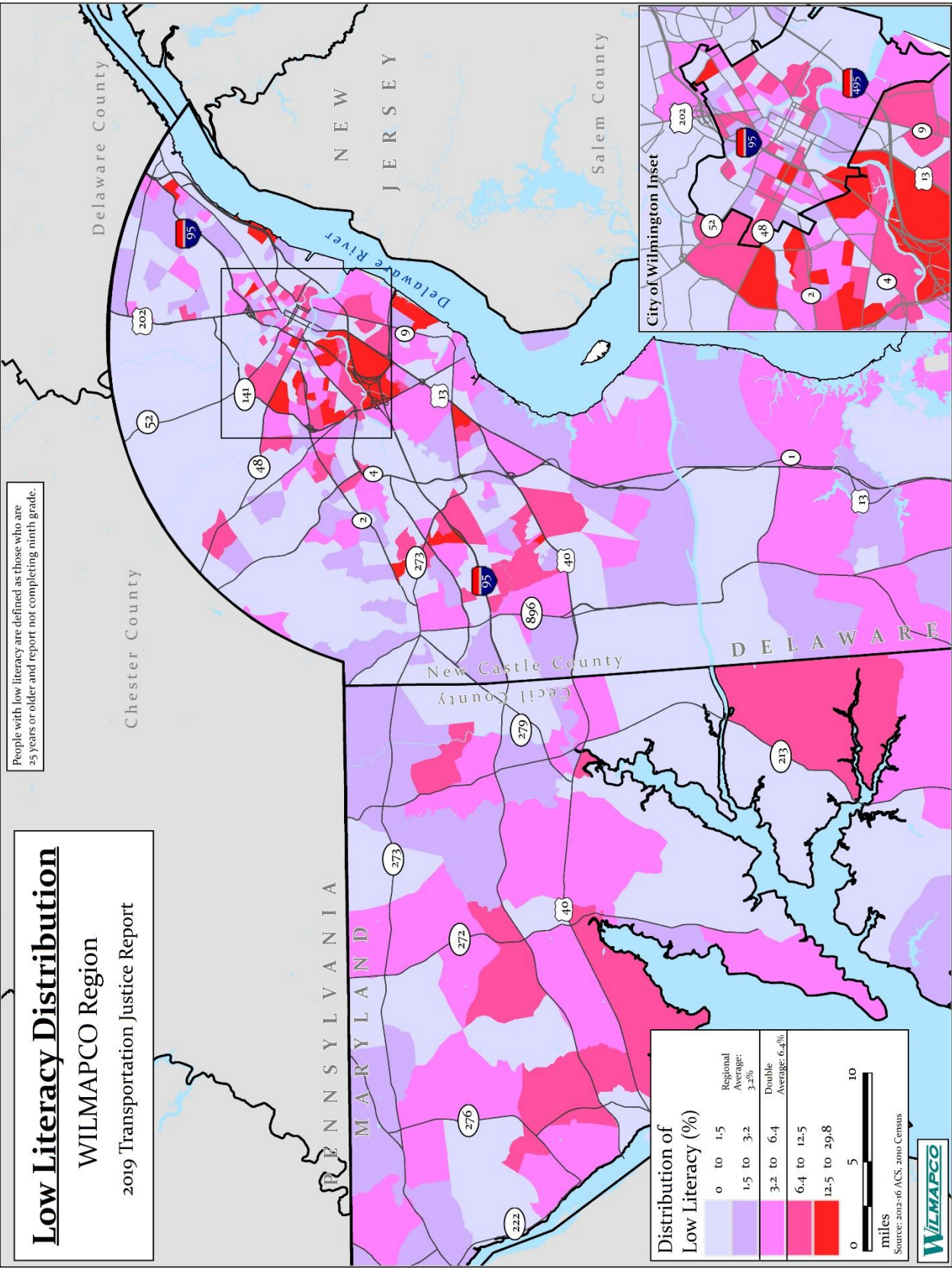
Neighborhoods around St. Paul's Church in Wilmington are home to the region's second-lowest literacy rate. More than 300 adults here (or about 1 in 5) have not completed the 9<sup>th</sup> grade.

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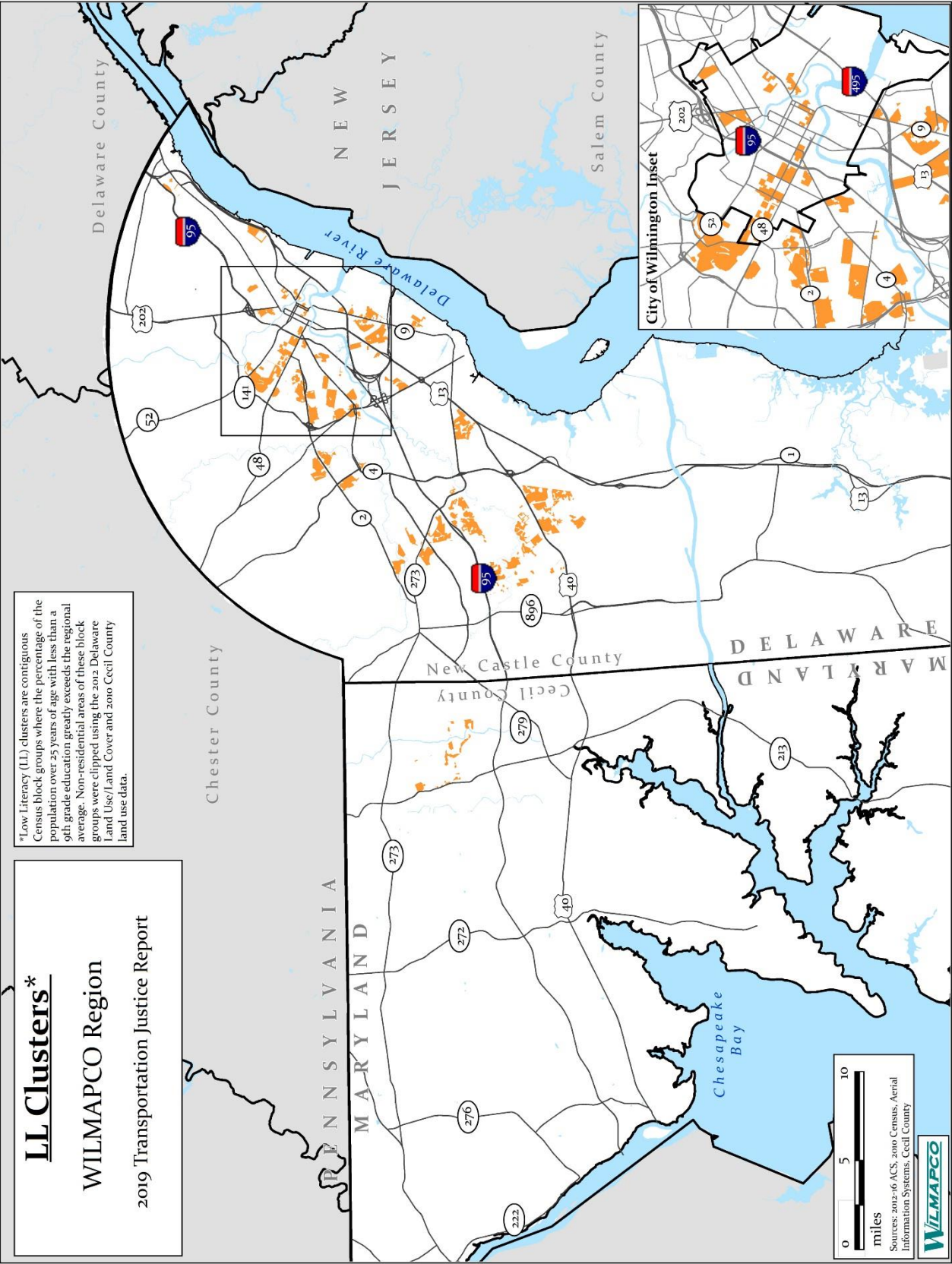
<sup>49</sup> The LL population distribution was identified using data from the 2012 – 2016 American Community Survey. The “regional threshold” of 3.2% represents the percentage of LL individuals, regionally, and the map shows block group variation from that average.

<sup>50</sup> LL clusters are identified using data from the 2012-2016 American Community Survey. Clusters represent one or more block groups where the percentage of the population over 25 with less than a 9<sup>th</sup> grade education exceeds 3x the regional average, in addition to any adjoining block groups with a percentage of the population over 25 with less than a 9<sup>th</sup> grade education exceeding 2x the regional average. Using land use data, non-residential parts of the clusters are trimmed away.

Low Literacy (LL) Population Distribution vs. Regional Threshold



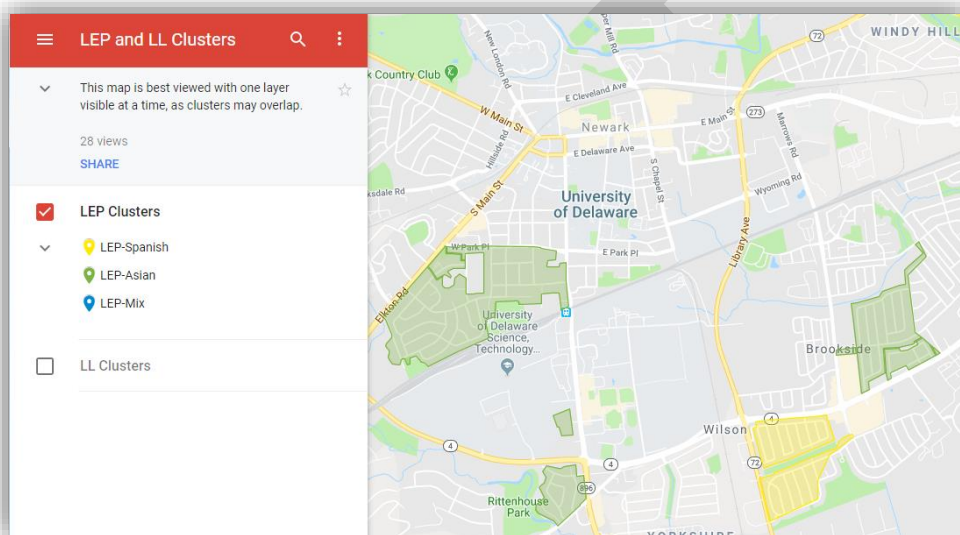
Low Literacy (LL) Neighborhood Clusters in the WILMAPCO Region



## Interactive Maps

### Limited English Proficiency and Low Literacy

See the Limited English Proficient and Low Literacy Neighborhood Clusters and zoom into your neighborhood. Interactive maps are available on the WILMAPCO website. Visit [www.wilmapco.org/tj](http://www.wilmapco.org/tj).



Federal guidance suggests a four-factor analysis to help determine appropriate language assistance measures. We apply that analysis below, considering both LEP and LL communities.

#### **Factor 1: The number or a portion of LEP persons eligible to be served or likely to be encountered by program, activity, or service**

Our region is home to 15,300 Spanish and 3,400 Chinese LEP speakers. Each meets the federal safe harbor threshold and, together, their populations comprise 7 in 10 of the region's LEP persons. Each of these 18,700 individuals is eligible to participate in our transportation planning processes at the regional and local levels.

The region is also home to 13,800 adults over age 25 with low literacy. Like LEP groups, all those with LL are eligible to participate in our planning processes.

## **Factor 2: The frequency with which LEP persons using a particular language encounter the MPO**

WILMAPCO hosts numerous in person and virtual workshops and open houses on any given year. We have proactively and successfully engaged Spanish speakers on various studies throughout the years. Most recently this has included the 2050 Regional Transportation Plan and the Route 9 Corridor Master Plan. It has only been through these proactive attempts – either because of an important regional study or a local study in an area with a concentration of Hispanics – that WILMAPCO has engaged and collected feedback from LEP Spanish speakers. While the agency's website is translatable into Spanish (via modern browsers) and we publicize general planning information to the Latin American Community Center and Hispanic media, no LEP Spanish speakers have attempted to engage with WILMAPCO outside of the proactive efforts<sup>51</sup>.

Proactive steps were taken to engage Chinese LEP communities following the *2013 Environmental Justice Report*. A local Chinese American Community Center and a pair of Chinese churches were approached to explore potential collaboration. These groups did not respond to WILMAPCO. While the agency's website is translatable into Chinese (via modern browsers), no LEP Chinese speakers have attempted to engage with WILMAPCO. We do not have data to ascertain Chinese familiarity with the agency.

People with LL are likely to encounter the MPO during its public workshops and events – particularly when they are held in places with LL concentrations. In step with our Public Participation Plan, WILMAPCO always strives to present information in a visually compelling way with limited jargon and multiple methods to provide feedback. In the Route 9 Master Plan's public involvement process, staff primarily engaged with residents

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<sup>51</sup> Hispanics (as a whole) are less familiar with WILMAPCO than the average white, non-Hispanic resident. Only 18% of Hispanics have heard of WILMAPCO compared to 38% of whites.

orally in the field and at workshops, as the area is home to LL concentrations. Like Hispanics, people with LL are likely to be, overall less familiar with WILMAPCO<sup>52</sup>.



Oral-based outreach with young people during the Route 9 Corridor Master Plan

### Factor 3: The nature and importance of the MPO's services

Transportation is important for everyone. It is the second-largest household expense (behind housing) and the connectivity or lack of connectivity it provides directly impacts both a person's livelihood and quality of life. It stands then that the opportunity to become involved in transportation planning – whether at the regional or local scales – is something that ought to be afforded to every resident, LEP or LL, or otherwise.

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<sup>52</sup> While we do not have data on the familiarity of the agency based on education, educational attainment is closely correlated with income. Only 10% of the region's low-income residents have heard of WILMAPCO, compared to 43% of our high-income residents.

**Factor 4: The MPO's resources and the cost of providing meaningful access to LEP persons**

WILMAPCO is an adequately funded MPO with solid fiscal standing. Our website is translatable to dozens of languages via modern web browsers. Costs for the on-call professional translation and interpretation services we employ (and use regularly) are reasonable. Providing proactive translation and interpretation services where the need does not meet the safe harbor policy is unreasonable and would quickly become costly.

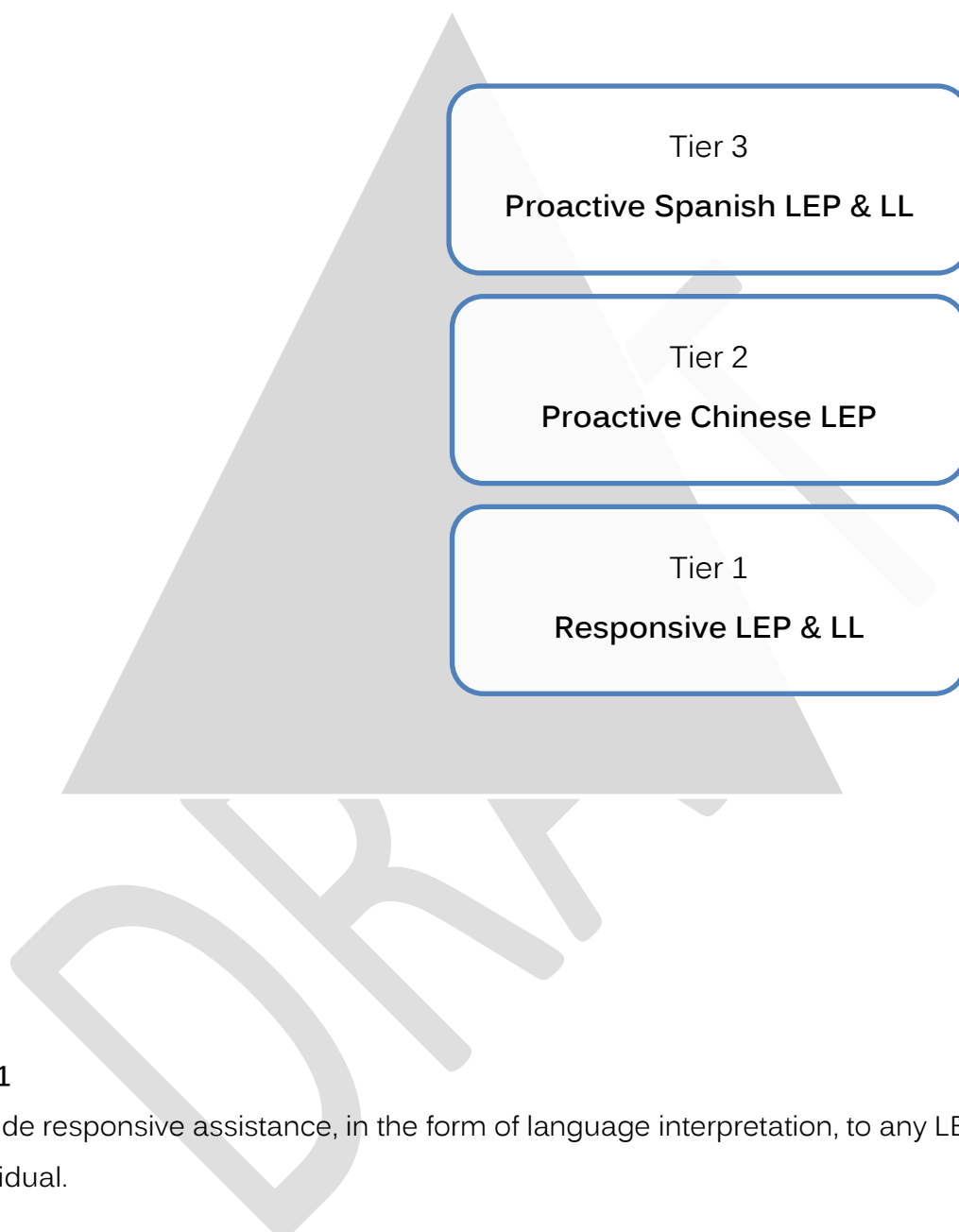
There is no cost to providing better opportunities for persons with LL to engage with WILMAPCO. Public-facing materials ought to be presented and feedback collected in multiple formats, including visual and oral-based engagement.

**Language Assistance Plan**

Considering the safe harbor provision and the results of the four-factor analysis, a language assistance plan is presented here to better support the engagement of people with LEP and LL. Much of this includes a continuation of existing agency practice. Additional recommendations are also made.

The plan is divided into "Tiers," from 1 to 3, of increasing effort, as shown below.

## Tiers of Language Assistance and Engagement



### Tier 1

Provide responsive assistance, in the form of language interpretation, to any LEP or LL individual.

1. Ensure the WILMAPCO website is translatable using mainstream web browsers or an e-translation app or service into as many languages as reasonable.
2. If requested, WILMAPCO will provide a professional interpretation of any document, presentation, meeting, or survey to LEP speakers of *any language*.

- a. Notice of this service will be posted within WILMAPCO's Title VI policy, which is posted on its website and in the WILMAPCO office. The statement will be available in the following five languages, each of whom have more than 500 speakers with limited English proficiency: Spanish, Chinese, Gujarati, French, and Korean.
  - b. The interpreter will collect thoughts and feedback of the LEP individual and convey those, through conversation, to staff who will be present either in person or virtually.
    - i. For live events, at least ten days' notice is required to ensure that an interpreter can be present.
3. At all public meetings, staff will identify individuals who do not appear to fully comprehend English. Staff will have language identification flashcards<sup>53</sup> available to assist, if necessary, with identifying the participant's primary language. These individuals will be referred to a professional interpreter on hand. If the interpreter does not speak the language of the individual, or if an interpreter is not there, follow-up arrangements will be made to contact the LEP individual through a proper interpreter to convey the meeting's message and collect their thoughts.

<input type="checkbox"/> 如果你能讀中文或講中文，請選擇此框。	7. Traditional Chinese
<input type="checkbox"/> Označite ovaj kvadratić ako čitate ili govorite hrvatski jezik.	8. Croatian
<input type="checkbox"/> Zaškrtněte tuto kolonku, pokud čtete a hovoříte česky.	9. Czech
<input type="checkbox"/> Kruis dit vakje aan als u Nederlands kunt lezen of spreken.	10. Dutch
<input type="checkbox"/> Mark this box if you read or speak English.	11. English
<input type="checkbox"/> اگر خواندن و نوشتن فارسی بلد هستید، این مربع را علامت بزنید.	12. Farsi

DB-3309 U.S. DEPARTMENT OF COMMERCE  
Economics and Statistics Administration  
U.S. CENSUS BUREAU

"I speak" flashcards, like this one, have been tested and used by the U.S. Census Bureau.

<sup>53</sup> <https://www.lep.gov/ISpeakCards2004.pdf>

4. While WILMAPCO will endeavor to proactively accommodate LL individuals during all planning processes, as described in Tier 3, staff will identify individuals who appear to have LL at public meetings and events.
  - a. Staff will describe, through conversation and any available graphics, the material being presented.
  - b. Staff will offer to collect any feedback from the individual orally, in lieu of any written survey.

## Tier 2

Provide proactive engagement to Chinese-speaking LEP individuals.

1. The WILMAPCO Title VI Policy, Complaint Form, and Complaint Procedures will be posted, in professionally human-translated Chinese, on the WILMAPCO website and in the WILMAPCO office.
2. A professionally human-translated<sup>54</sup> Chinese “about WILMAPCO” webpage will be created to share an overview of the agency’s function and opportunities to engage.
3. WILMAPCO plans will be professionally human-translated into Chinese upon request.
4. Staff will consult the LEP clusters map prior to embarking on any sub-regional study.
  - a. If that study is in an Asian-speaking LEP cluster, or a cluster of mixed Asian and Spanish LEP speakers, staff will endeavor to determine through local civic groups and nonprofits if Chinese is a dominant secondary language in the study area. If so:

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<sup>54</sup> While the accuracy of computer/automatic language translations have improved over time, errors in context persist. For that reason, a human translation is always preferred.

- i. Top level study materials will be provided in Chinese. These include human-translations of the study's purpose, any public event flyers, surveys, and contact information.
  - ii. Staff will partner with local institutions to encourage participation of Chinese LEP individuals, ideally through community-based events.
  - iii. A Chinese interpreter will be present at all major public meetings. Preference should be given to a local competent interpreter. In their absence, a professional outside interpreter should be utilized.
5. WILMAPCO will continue its efforts to partner with local Chinese American institutions, as well as explore partnerships with any local Chinese media.

### **Tier 3**

Provide proactive engagement to Spanish-speaking LEP individuals. Because Spanish is the region's dominant second language, with more than 15,000 of its speakers considered LEP, WILMAPCO will take further proactive steps to assist this community.

1. The WILMAPCO Title VI Policy, Complaint Form, and Complaint Procedures will be posted, in professional human-translated Spanish, on the WILMAPCO website and in the WILMAPCO office.
2. A professionally human-translated Spanish "about WILMAPCO" webpage will be created to share an overview of the agency's function and opportunities to engage.
3. MPO plans will be professionally human translated into Spanish upon request.
4. Staff will consult the LEP clusters map prior to embarking on any study.
  - a. If that study is in a Spanish-speaking LEP cluster, or a cluster of mixed Asian and Spanish LEP speakers, or is region-wide in scope:

- i. Top-level study materials will be provided in Spanish. These include human translations of the study's purpose, any public event flyers, major social media postings, surveys, and contact information.
  - ii. Staff will partner with local institutions to encourage participation of Spanish LEP individuals, ideally through community-based events.
  - iii. A Spanish interpreter will be present at all major public meetings. Preference should be given to a local competent interpreter. In their absence, a professional outside interpreter should be utilized.
  - iv. WILMAPCO will continue to build its partnerships with the Latin American Community Center (LACC) and the Delaware Hispanic Commission. Both groups can provide guidance and support in reaching area Hispanics.
- 5. WILMAPCO will continue to provide public notices to Spanish language media and endeavor to have its stories covered.
- 6. WILMAPCO will weigh the option of hiring a Hispanic-based public relations consultant to advise on effective, culturally relevant, outreach strategies.
- 7. Staff will consult the LL clusters map prior to embarking on any study.
  - a. If that study *is not* within an LL cluster:
    - i. Staff should consider providing supplemental outreach and feedback materials geared towards LL individuals. This includes visual and oral based outreach and feedback opportunities.
  - b. If that study *is* within a LL cluster, or is regional in scope:
    - i. Visual and/or oral based outreach and feedback opportunities must be incorporated throughout the public outreach process.



The entrance to the Glasgow Court Trail Park off US 40 is pictured above. About 50 adults (12.5%) in the community are low-literate, four times the county average.

### Next Steps

These language assistance efforts will be reviewed and will receive a fresh update during the next Transportation Justice Plan. In the meantime, staff will attend trainings and review any new federal guidance as they become available. This information will be disseminated to all members of WILMAPCO staff, as the MPO continues its work to meet the needs of its LEP and LL residents.

## Chapter 4

### Mobility Challenged Analysis

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Since 2007, WILMAPCO has considered the transportation needs of **seniors, people with disabilities, and people living in households without vehicles**. Like low-income and ethnic/racial minority residents, these populations too often have difficulty with travel. These three groups, which we call collectively, “Mobility Challenged” (MC), are all covered under FHWA’s interpretation of Environmental Justice; people with disabilities and seniors are protected by various federal laws.

This chapter will begin with a review of our agency’s compliance with those federal regulatory requirements. We then turn to an examination of how well MC groups fare in the transportation system, making recommendations along the way. Since social equity is not a major thrust of concerns for these populations, we keep these analyses to just connectivity concerns. Likewise, we do not present a dedicated section related to public outreach, as was done in the previous chapter. Instead, outreach recommendations which support the participation of MC groups can be found in the section below and in the final section of the Chapter 1.

#### Section 504/Title II: Basic Reporting Requirements

A pair of federal laws provide strong protection for people living with disabilities in the United States. Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act (ADA) of 1990 are specific to WILMAPCO, given its status as an instrument of local government. Our services, policies, and practices must be inclusive to people with disabilities.

Given our agency’s small size (under 50 employees), the key reporting requirement is the completion of an ADA self-evaluation. This is presented below. This ADA self-evaluation

underwent a public involvement process, which included review by WILMAPCO's committees and a general public comment as part of this TJ Plan.

### ADA Self-Evaluation

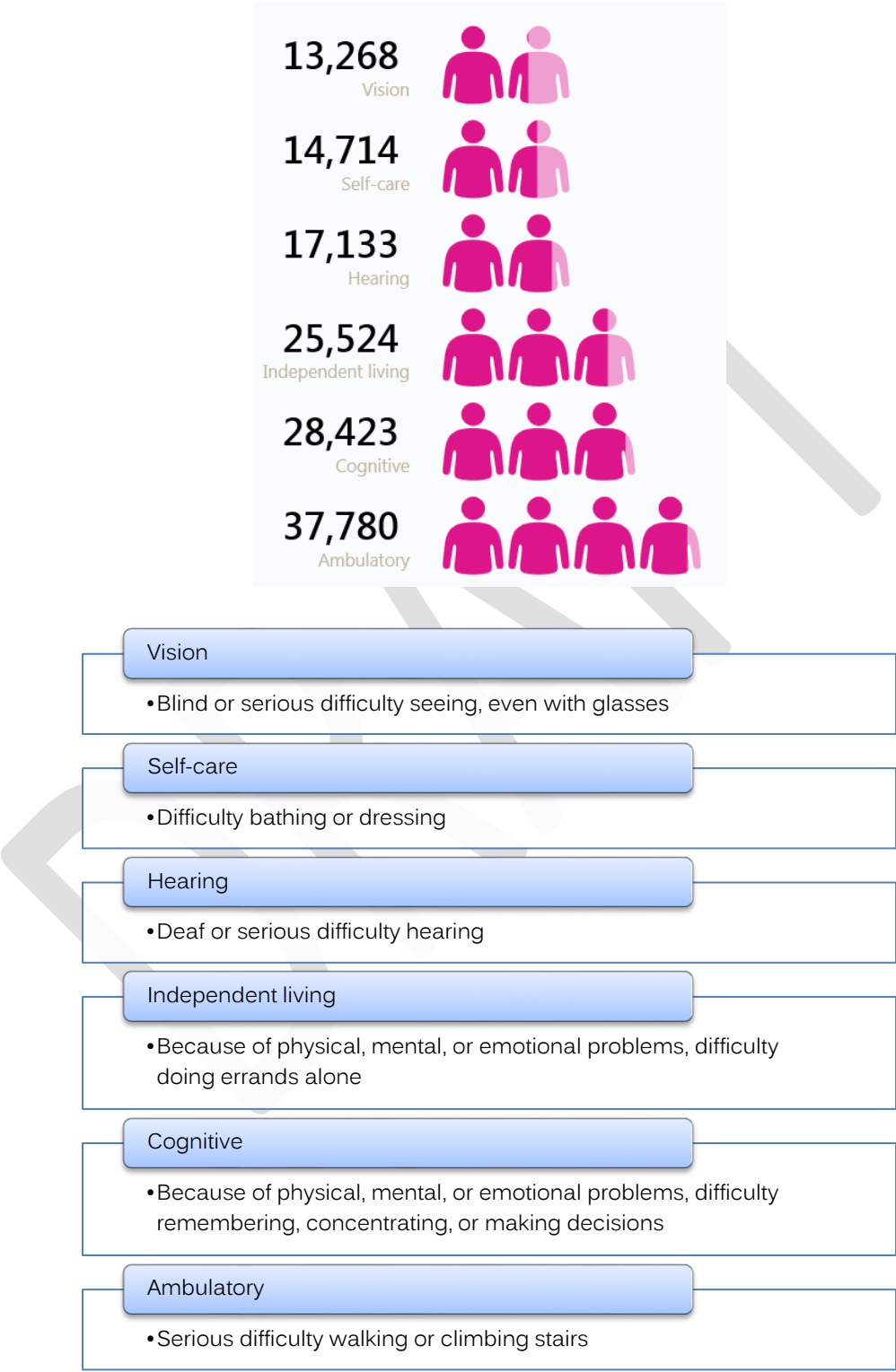
WILMAPCO serves as the Metropolitan Planning Organization (MPO) for the Wilmington, Delaware metropolitan region. This includes New Castle County, Delaware and Cecil County, Maryland. As the MPO, WILMAPCO engages in long range transportation planning, maintaining a listing of federally funded projects, and spearheading a congestion management process. We are also the lead agency on several other regional and local planning studies each year.

The WILMAPCO region is home to a population of about 644,000, of which about 73,000 (11%) report one or more disabilities. As shown on the following page, the most common of these are ambulatory disabilities. These issues make walking and/or climbing stairs seriously difficult or impossible. Cognitive disabilities, which impact judgment, are the next most common. These disability classes are followed by independent living, hearing, self-care, and vision disabilities.



More than 1 in 10 residents of the WILMAPCO region are disabled. More than half of these people with disabilities have ambulatory concerns, making getting around difficult or impossible.

Population with Disabilities, by Type  
in the WILMAPCO Region, 2012-2016 ACS



Each type of disability is protected by federal law. WILMAPCO must afford all people with disabilities equal opportunities to participate in our services, policies, and practices. These will be reviewed below.

### *Physical barriers*

WILMAPCO rents space in the Tower at STAR on the University of Delaware's southern campus in Newark, Delaware. Our suite on the eighth floor of that building is the site of staff offices, conference rooms, and regular monthly meetings. A newly constructed building, the Tower at STAR has ample parking for people with disabilities, access to/from local public transit, mostly accessible doors and elevators, and even wheelchairs for those who need them on its first level.

In the main, there are no obvious barriers preventing a person with a disability from reaching our suite through the southern entrance to the Tower, which is our primary access point. A door which is usually closed leading from the elevator to the suite is, however, may be a trouble spot for some people with disabilities to negotiate, especially upon exiting the suite, given its heavy weight. During business hours WILMAPCO's front office staff are usually within sight of that door. They could reasonably assist someone who could not enter or exit. Further examination to make this door easier to use independently for those with disabilities should be undertaken.

WILMAPCO has stated policy to only hold outside public meetings in ADA accessible buildings served by nearby public transit<sup>55</sup>. This policy is always followed.

### *Agency policies*

Other agency policies that prohibit discrimination based on disability are also in our books. Our Metropolitan Transportation Planning Process Self-Certification letter states that our planning processes are completed in accordance with Section 504 of the Rehabilitation Act of 1973, along with the Older Americans Act, which prohibit discrimination based on disability or age. Our Equal Employment Opportunity policy

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<sup>55</sup> See the Public Participation Plan: [www.wilmapco.org/ppp](http://www.wilmapco.org/ppp).

mostly discusses ways to support the nondiscriminatory recruitment of minority employees. But it also includes an opening clause which states all employment decisions are made without regard to, among other things, age and “physical or mental handicap which can reasonably be accommodated.” Additionally, our agreement with FHWA and FTA to allocate and administer funding, along with our third-party agreements with consultants, all include clauses that stipulate the need to work within federal laws. These include the nondiscrimination of people with disabilities. Finally, and most concretely, our Title VI/Nondiscrimination Assurance Statement stipulates compliance with the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. It states:

WILMAPCO further assures that in accordance with the Acts, the Regulations, and other pertinent directives, circulars, policy, memoranda, and/or guidance, it will promptly take any measures to ensure that:

*No person in the United States shall on the grounds of race, color, national origin, sex, age, or disability, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in any program or activity which is administered by WILMAPCO, regardless of the funding source.*

### *Communication*

While WILMAPCO's anti-discrimination policies based on disability are strong, we should be doing a better job communicating our commitment to help people with disabilities participate in planning processes. Electronic and paper-based public notices for meetings should always contain a note saying that, with notice, accommodations will be pursued to facilitate the participation of people with disabilities. A similar note should be placed on the home page and nondiscrimination page of the WILMAPCO website, in our electronic newsletter, in social media blasts, and in key print documents, such as our “Transporter” newsletter. Below are template statements that can be used, or tailored to fit the circumstance:

### Notice for Workshops and Events

WILMAPCO encourages all members of the community to participate in this event. If, because of a disability, you require special assistance please let us know.

Contact our office at: [wilmapco@wilmapco.org](mailto:wilmapco@wilmapco.org) or 302-737-6205 no later than three business days before the event. We will endeavor to provide a service to help meet your needs.

### General Notice

WILMAPCO encourages all members of the community to participate in our transportation planning processes. If, because of a disability, you require special assistance to participate in our activities, review documentation, or to otherwise get involved, please let us know. Contact our office at: [wilmapco@wilmapco.org](mailto:wilmapco@wilmapco.org) or 302-737-6205. We will endeavor to provide a service to help meet your needs.

WILMAPCO should always provide reasonable accommodations for those with disabilities. These accommodations should be made on a case-by-case basis, based on the need(s) of the individual making the request. With appropriate notice, having a sign language interpreter at meetings, or providing readers for the visually impaired, are examples of reasonable accommodations.



All outside WILMAPCO meetings, such as this public workshop, are held in locations accessible to people with disabilities.

In addition, front line communications from WILMAPCO should consider the needs of people with disabilities.

- Visual presentations made in PowerPoint, or maps or posters we may use for a public meeting, should minimize small text and have good color contrast.
- Staff at public meetings should note if a person with disabilities is present (even without advanced notice) and take steps to facilitate their participation, if necessary.
- Additionally, a review of the accessibility of the WILMAPCO website should be undertaken for those with visual disabilities.

Grievance procedures for those who feel their needs were not adequately addressed by WILMAPCO are not currently in place. WILMAPCO should consider developing these in the future, though they are not required given the agency's small size.

### *Training*

As with other federal mandates which guide work at WILMAPCO, staff must stay up to date on guidance regarding our implementation of ADA. Staff will attend regular trainings to stay fresh on new legal interpretations and MPO requirements.

### **Demographic Profile**

According to Census and American Community Survey data, even though the WILMAPCO region is becoming older, fewer people are reporting disabilities. And, fewer and fewer households are without cars.

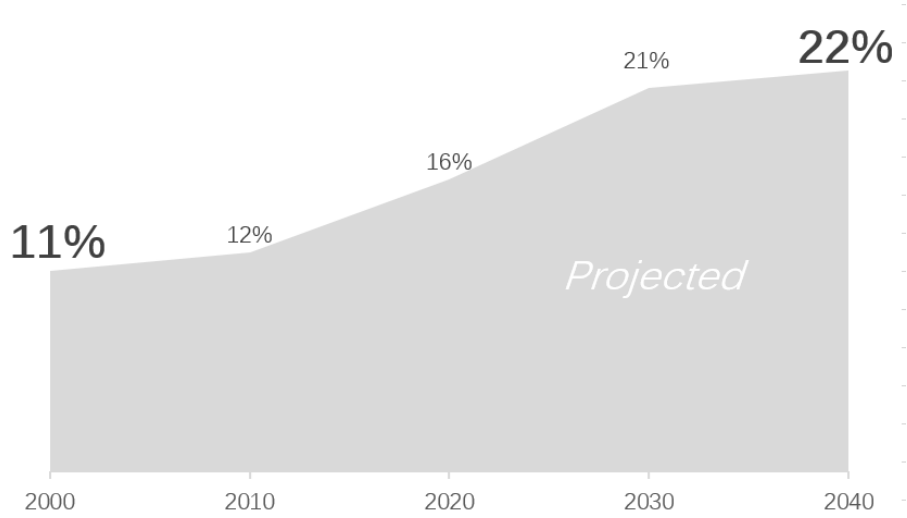
The senior population, or those aged 65 years or more, continue to grow. Today there are more than 90,000 seniors in the WILMAPCO region – some 14% of our population. That's up from about 67,000 seniors in 2000 – about 11% of the region's population then. Projections indicate that, by 2030, seniors will account for 21% of our population. During the 2030s, all else being equal, the senior share of our population will continue to increase slightly, edging towards 22% by 2040<sup>56</sup>.

Many seniors also have disabilities. As shown in the graph below, as a person ages, their chances of becoming disabled too increases. Nearly a quarter (22%) of those between 65 and 74 are disabled; about half (44%) of those over age 75 are disabled. With the projected increasing proportion of seniors during the next couple of decades, it stands to reason, that the proportion of people with disabilities will grow too.

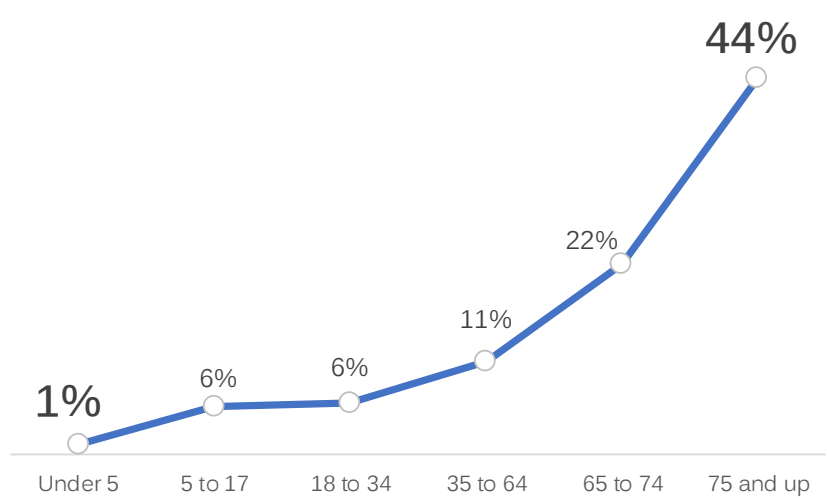
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<sup>56</sup> These projections are based on data from the Delaware Population Consortium and the Maryland Planning Department.

**Percent of Population more than 65 Years**  
WILMAPCO Region, American Community Survey and Projections<sup>57</sup>



**Percent of Age Group with Disabilities**  
WILMAPCO Region, 2013-2017 ACS



<sup>57</sup> These projections are based on data from the Delaware Population Consortium and the Maryland Planning Department.

However, the number of people with disabilities has been in decline. In 2000, some 92,000 WILMAPCO region residents over five years of age had a disability, or 17% of the population. By 2010, some 71,700 residents over five had a disability (12.1%). By 2015, that figure sunk to some 70,700 (or 11.6% of the population). The rather dramatic drop since 2000 may well be due, at least in part, to a change with how the American Community Survey asked about disability, beginning in 2008<sup>58</sup>. More labor-intensive employment, such as manufacturing has also been in the decline during the past half-century, which may also play a part.

In step with the region's increasing suburban sprawl and car dependence, the proportion of households without vehicles has been in steady decline. At the turn-of-the-century, some 18,500 regional households were without cars, or 8% of all households. Today, this is true of 16,400 households, or 6% of all households.

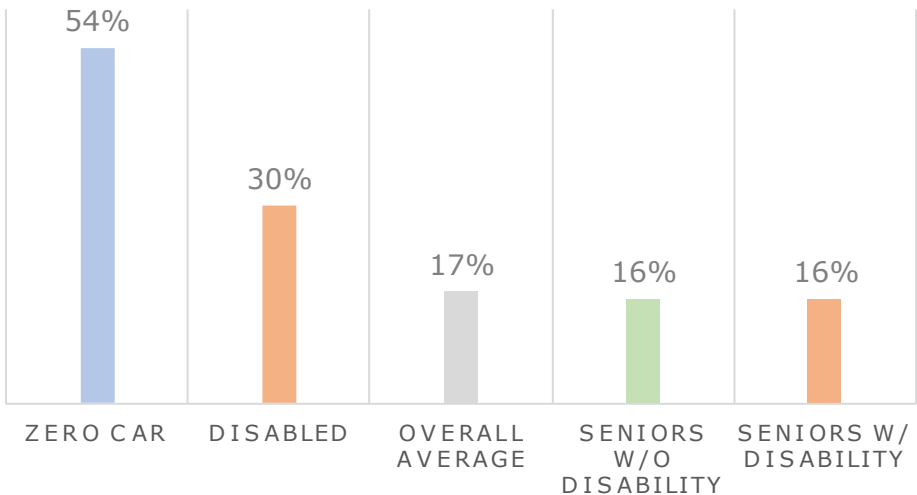
### Findings from Public Opinion Surveys

In our 2018 Public Opinion Survey, we found that people who lived in households without vehicles were much more likely than average to report difficulties with the transportation system. As shown in the graph below, more than half (54%) of people who lived in a household without a car reported that transportation kept them from activities (like grocery shopping, medical care, family and social events) at least some of the time. That figure is more than triple the regional average, 17%.

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<sup>58</sup> See this working paper for more information: <https://www.census.gov/library/working-papers/2009/demo/brault-01.html>.

Transportation Keeps me from Activities at Least Sometimes  
2018 WILMAPCO Public Opinion Survey

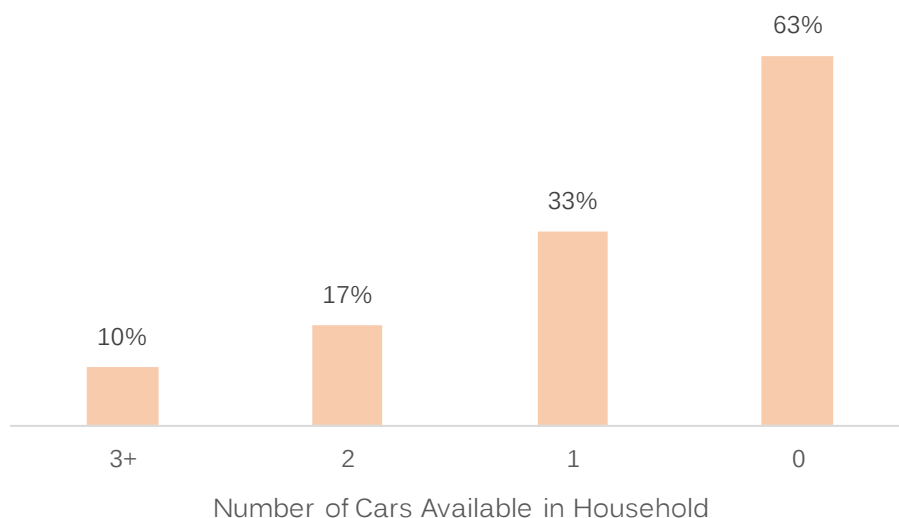


Results of a recent transportation survey from the University of Delaware's Institute for Public Administration (IPA) largely jibe with these findings<sup>59</sup>. In the IPA survey, there is a strong correlation between the number of available cars in a household and the ease of mobility. One question asked, "in the last six months, were you ever unable to travel due to lack of transportation?" As graphed below, some 63% of respondents from zero-car households said "yes," compared to only 10% of those living in households with three or more cars. Key travel destinations out of reach for zero-car households were: work, social outings, and shops.

<sup>59</sup> This unscientific survey was commissioned by the Delaware Transit Corporation.

## Unable to Travel during the Past Six Months due to Lack of Transportation

IPA Survey, New Castle County Respondents

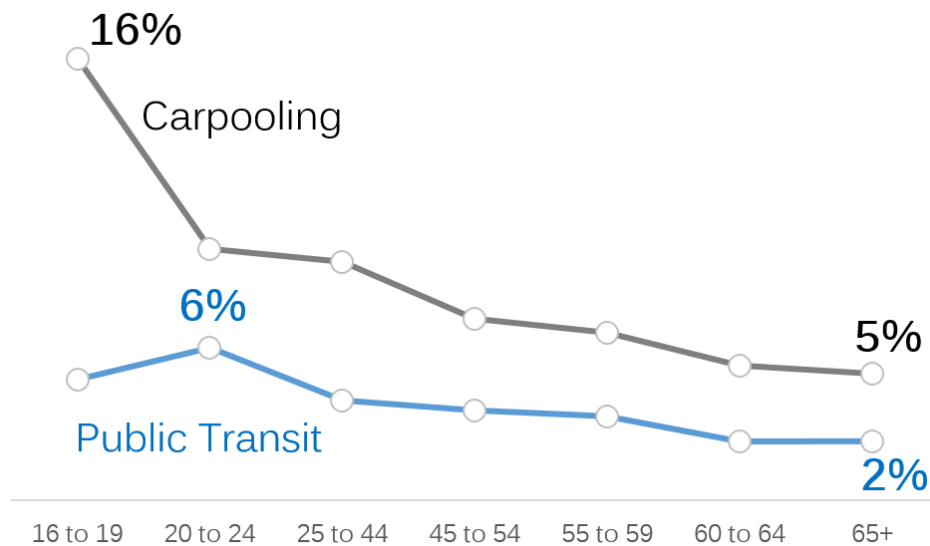


Nearly one-third (30%) of people with disabilities reported difficulty getting around in the WILMAPCO Public Opinion Survey – nearly double the regional average. In the IPA survey, too, people with disabilities struggled more. Nearly half (48%) of people with disabilities said that they were unable to travel during the past half year due to lack of transportation. This figure can be contrasted with 25% for people without disabilities who took the survey. For people with disabilities, medical/dental appointments, social outings, shops, and work were the destinations most commonly out-of-reach.

The WILMAPCO survey found that few seniors – whether disabled or not – reported difficulties with the system. A shade under the regional average, 16%, of both nondisabled and disabled seniors had trouble reaching activities. The IPA survey largely confirms these findings. Some 27% of seniors said that they experienced transportation difficulties during the past six months, which was the average for all survey takers. Part of the explanation may be that driving rates among seniors, at least those who still work, are relatively high. About 85% of senior workers drive alone to work compared to the 81% regional average. Rates of carpooling and public transit use decline among workers with age.

### Carpooling and Public Transit Commute to Work by Age

WILMAPCO Region, 2013-2017 ACS



Seniors, however, still have special transportation needs. As many seniors lose the ability or confidence to drive with age, they risk social isolation. And, due to increasing fragility of our bodies with time, older seniors have an increased risk of injury/death from vehicle crashes. For these reasons, we still consider seniors to be a mobility-challenged population.

#### Spatial Analysis

Seniors, people living in households without vehicles, and, to some extent, people with disabilities have settled in different neighborhoods across the WILMAPCO region. This section first maps these clusters. We then identify our moderate and significant Mobility Challenged (MC) neighborhoods, using them as a jumping off point to assess transportation connectivity.

### Concentrations of seniors, people with disabilities, and households without vehicles

This section begins with a series of maps detailing the varying intensities of our MC community settlement across the region<sup>60</sup>.

**Seniors** – are most heavily concentrated in neighborhoods in northern New Castle County, north of I-95.

**Population Thresholds:** Regional average – 13.8%; Double regional average – 27.6%

**People with disabilities** – are the least concentrated of the groups in this plan. Only a couple clusters are evident in Northeast Wilmington and the Claymont area.

**Population Thresholds:** Regional average – 11.3 %; Double regional average – 22.6%

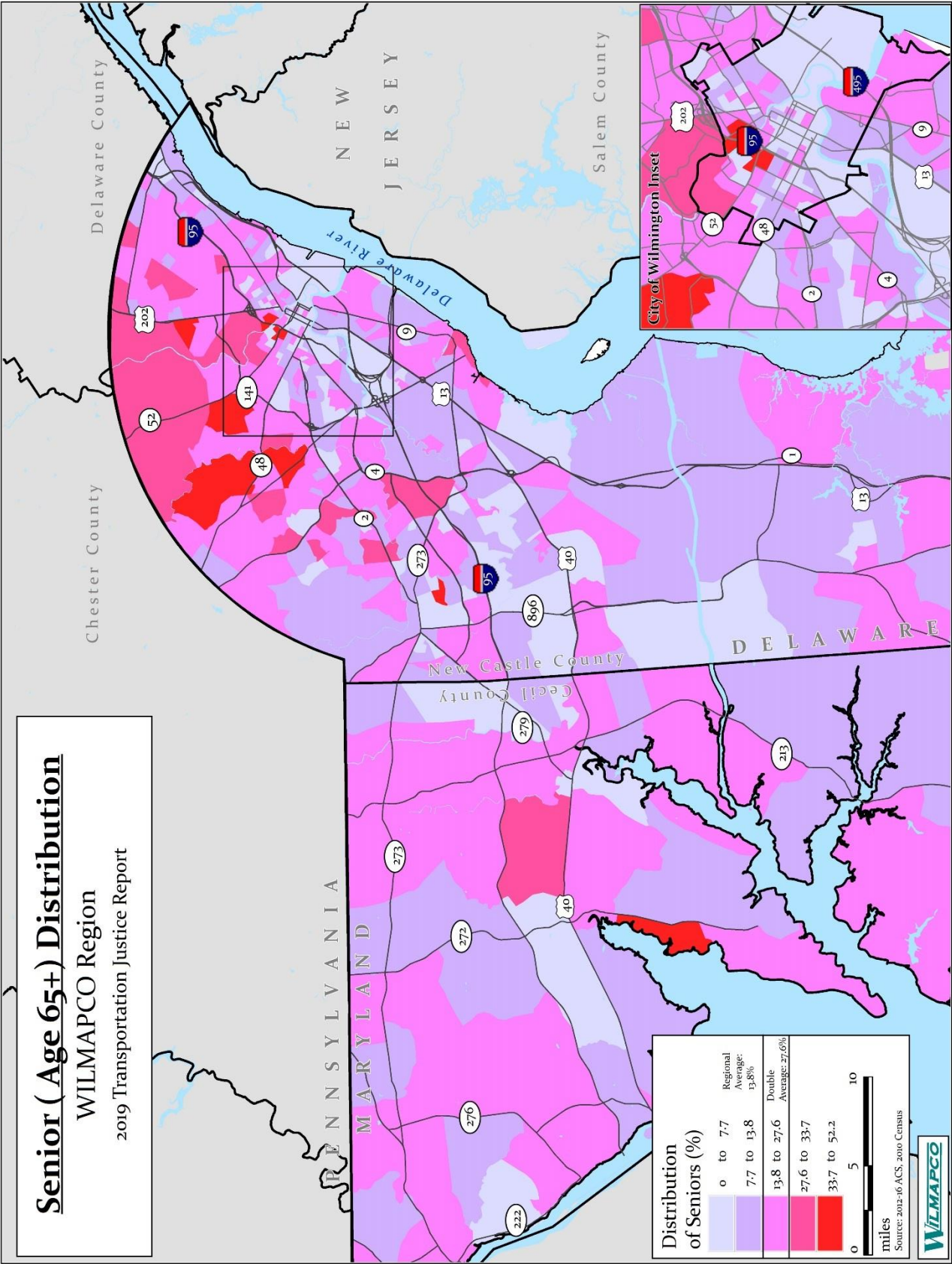
**Households without vehicles** – are concentrated along the I-95 corridor, from North East to the Delaware/Pennsylvania border. Wilmington is home to the heaviest clusters.

**Population Thresholds:** Regional average – 6.3%; Double regional average – 12.5%

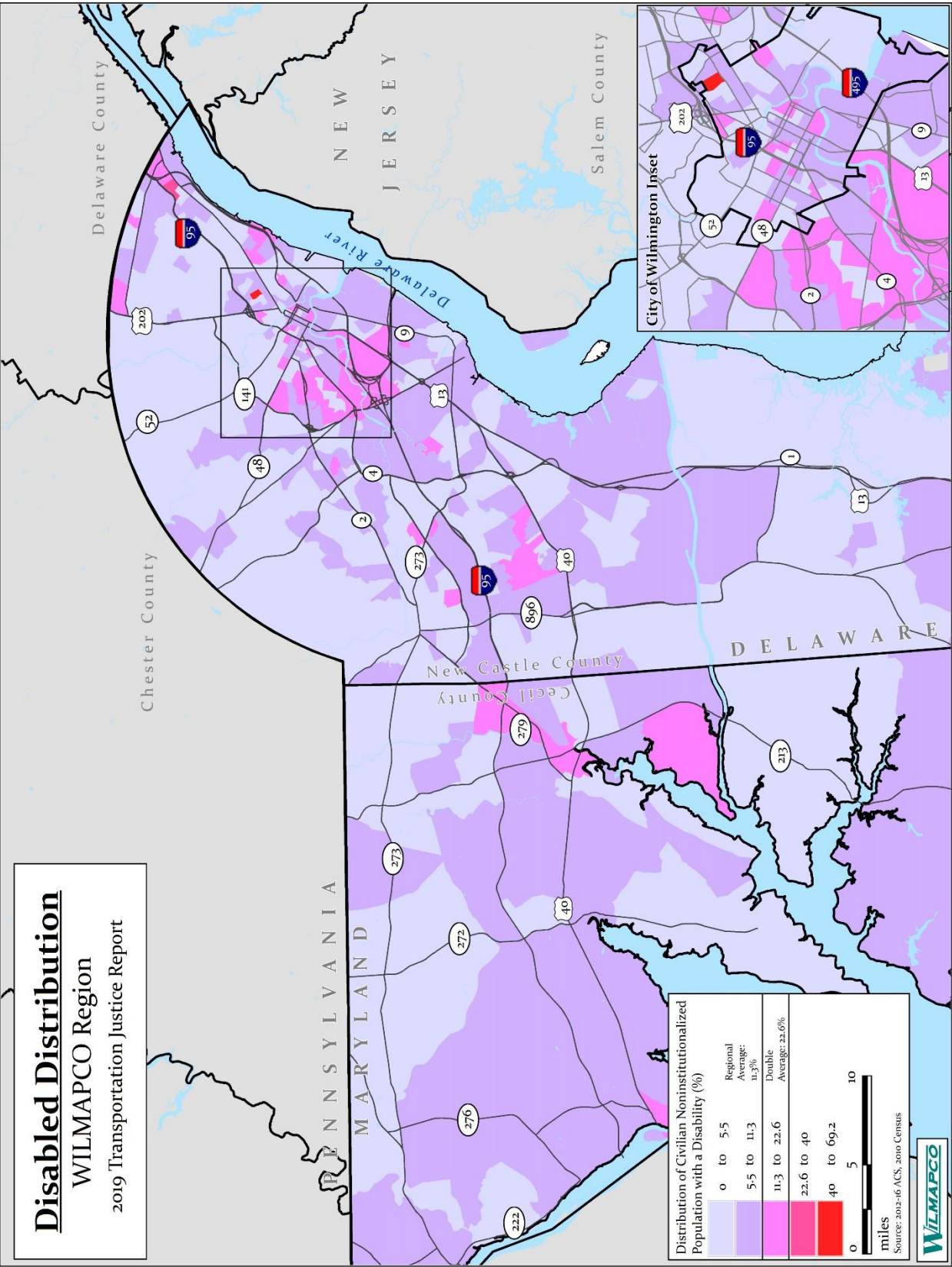
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<sup>60</sup> All data are from the American Community Survey, 2012 – 2016 sample.

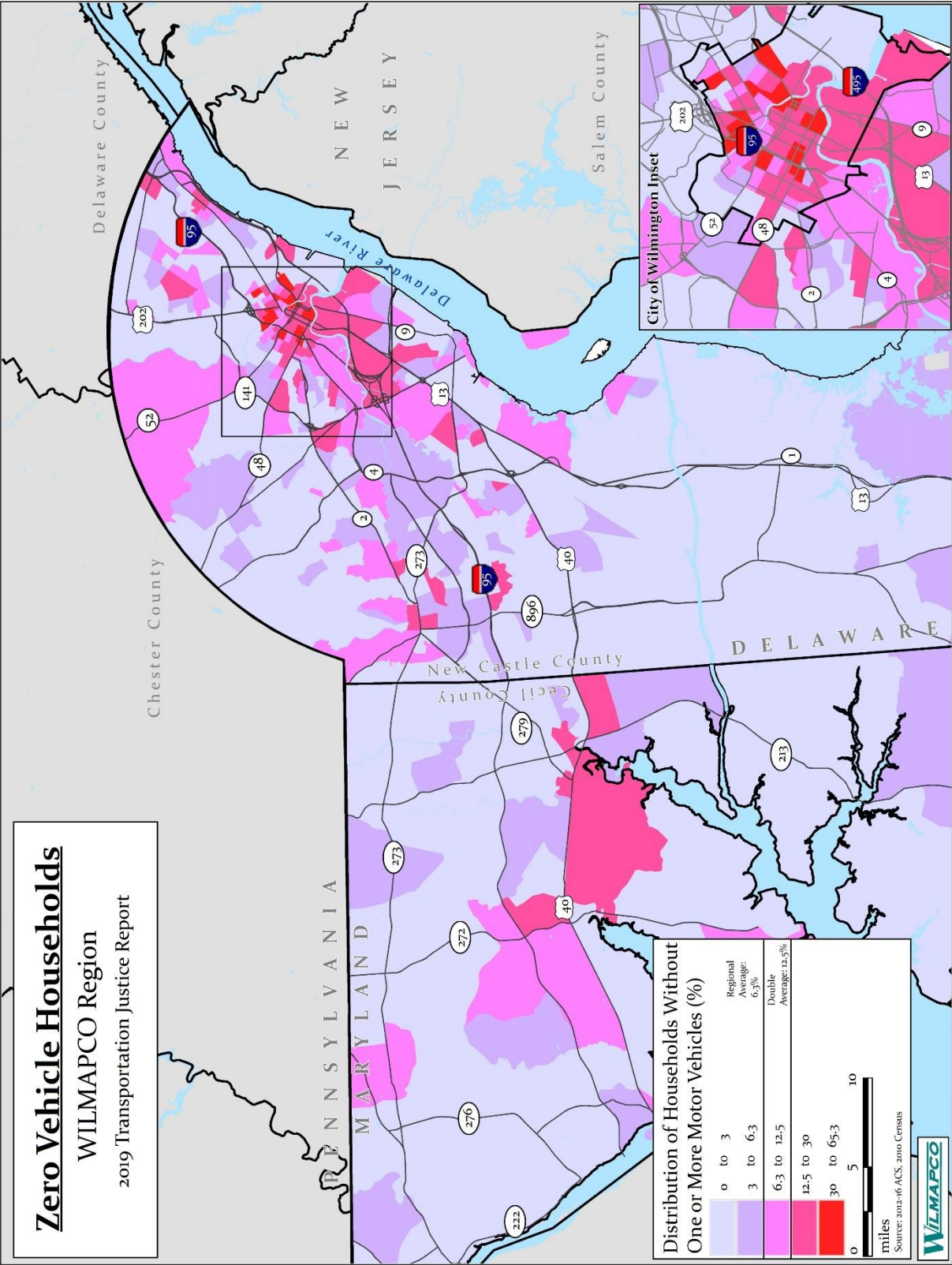
Senior Population Distribution in the WILMAPCO Region



Disabled Population Distribution in the WILMAPCO Region



Households without Vehicles Distribution in the WILMAPCO Region



### MC Neighborhoods

For more than a decade, WILMAPCO has identified Mobility Challenged (MC) neighborhoods (or areas) to measure transportation accessibility/connectivity and for use in our project prioritization process<sup>61</sup>. MC neighborhoods represent concentrations of seniors, people with disabilities, and households without vehicles. Like EJ areas, they feature in our overall project prioritization process. Beneficial projects within significant MC neighborhoods receive three extra points in our project prioritization process, while those within moderate MC neighborhoods net one extra point.

The present plan tweaks the identification process for MC areas. We now require the presence of a high proportion of households without vehicles as a prerequisite for becoming an MC area, as shown in the bubbles below. This is in step with results from our public opinion survey and the IPA survey, which found that households without vehicles were the most transportation challenged of our demographics – even more so than our lowest-income households. The data used in this MC area identification process comes from the 2012-16 ACS. After block groups are flagged as moderate or significant MC, formally uninhabited areas are trimmed away using local land use/land cover data.

MC neighborhoods span across the northern tier of our region. In Cecil County, they are found along the US 40 corridor, with significant concentrations in Elkton. In neighboring New Castle County, they principally stretch along the I-95 corridor with particularly heavy concentrations within the City of Wilmington. Clusters of moderate MC areas are also evident in the hills northwest of Wilmington around Hockessin.

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<sup>61</sup> These were formerly called Transportation Justice (TJ) neighborhoods and were first identified in our *2007 Transportation Justice Study*.

### Moderate MC Neighborhoods Identification Path

#### Census Block Group

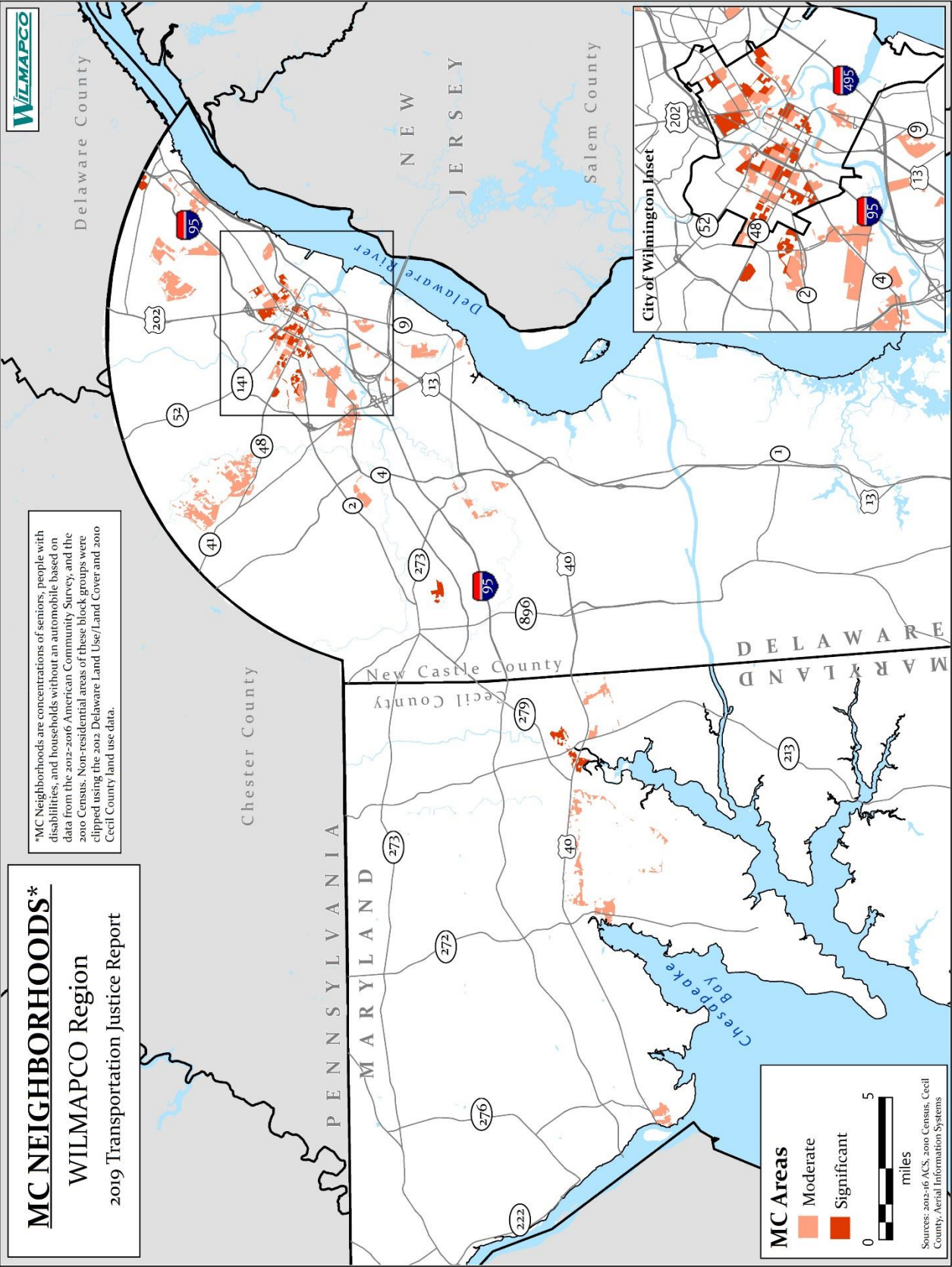
- HHs without vehicles >2x the regional avg., and
- Disabled >regional avg., or
- Seniors >regional avg., or
- HHs without vehicles >3x the regional avg.
- Disabled >3x the regional avg.
- Seniors >3x the regional avg.

### Significant MC Neighborhoods Identification Path

#### Census Block Group

- HHs without vehicles >3x the regional avg., and
- Disabled >regional avg., or
- Seniors >regional avg. or

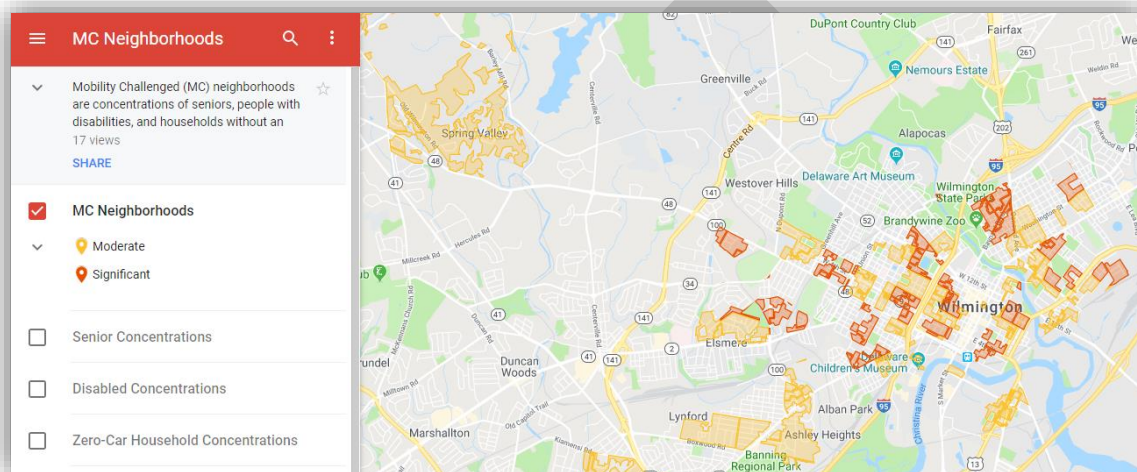
Mobility Challenged (MC) Neighborhoods in the WILMAPCO Region



## Interactive Maps

### Mobility Challenged Neighborhoods

See all the identified MC areas and neighborhood concentrations and zoom into your neighborhood. Interactive maps are available on the WILMAPCO website. Visit [www.wilmapco.org/tj](http://www.wilmapco.org/tj).
























## Connectivity Analysis

We examined connectivity from housing units in neighborhoods with heavy concentrations of seniors, people with disabilities, and people living in households without vehicles to key destinations. The methodology used for this analysis follows that from the Title VI/EJ chapter.

Unlike our Title VI/EJ communities, we found that people living in senior and disabled neighborhood concentrations often had more limited transportation connectivity than average. The graphic below shows the areas of concerns. People living in neighborhood concentrations of zero-car households had better-than-average connectivity than average. And people living in all our neighborhoods of interest had better-than-average connectivity by car.

### Transportation Connectivity Concerns by Neighborhood Concentration

		 Supermarket	 Pharmacy	 Hospital	 Library	 Low-Wage Emp. Center	 Medical Center	 Community Center	 Senior Center	 State Service Center
NEIGHBORHOOD CONCENTRATION										
Seniors			—					—		
Disabled				—		—	—	—	—	
Zero-car Households	—	—	—	—	—	—	—	—	—	





















People from neighborhoods with a high proportion of seniors had weaker-than-average walking, biking, and transit connections to various destinations. Specifically, supermarkets, low-wage employment centers, medical centers, community centers, and state service centers showed limited walking connections. Libraries, community centers, and state service centers, meanwhile, had weak bicycling connections. Supermarkets, pharmacies, low-wage job centers, medical centers, and community centers all had weaker than average bus connectivity from senior neighborhood concentrations.

Those living in the two neighborhoods home to a high proportion of disabled residents (residences of people with disabilities are generally spatially dispersed) also showed weak transportation connectivity to several destination types. Supermarkets, hospitals, and low-wage job centers had especially limited walking connections. Supermarkets and low-wage job centers, meanwhile, had poor bicycling connectivity from the homes of people within these neighborhoods. Finally, supermarkets, pharmacies, hospitals, and low-wage job centers had below average transit connectivity to and from households within our high disability neighborhoods.

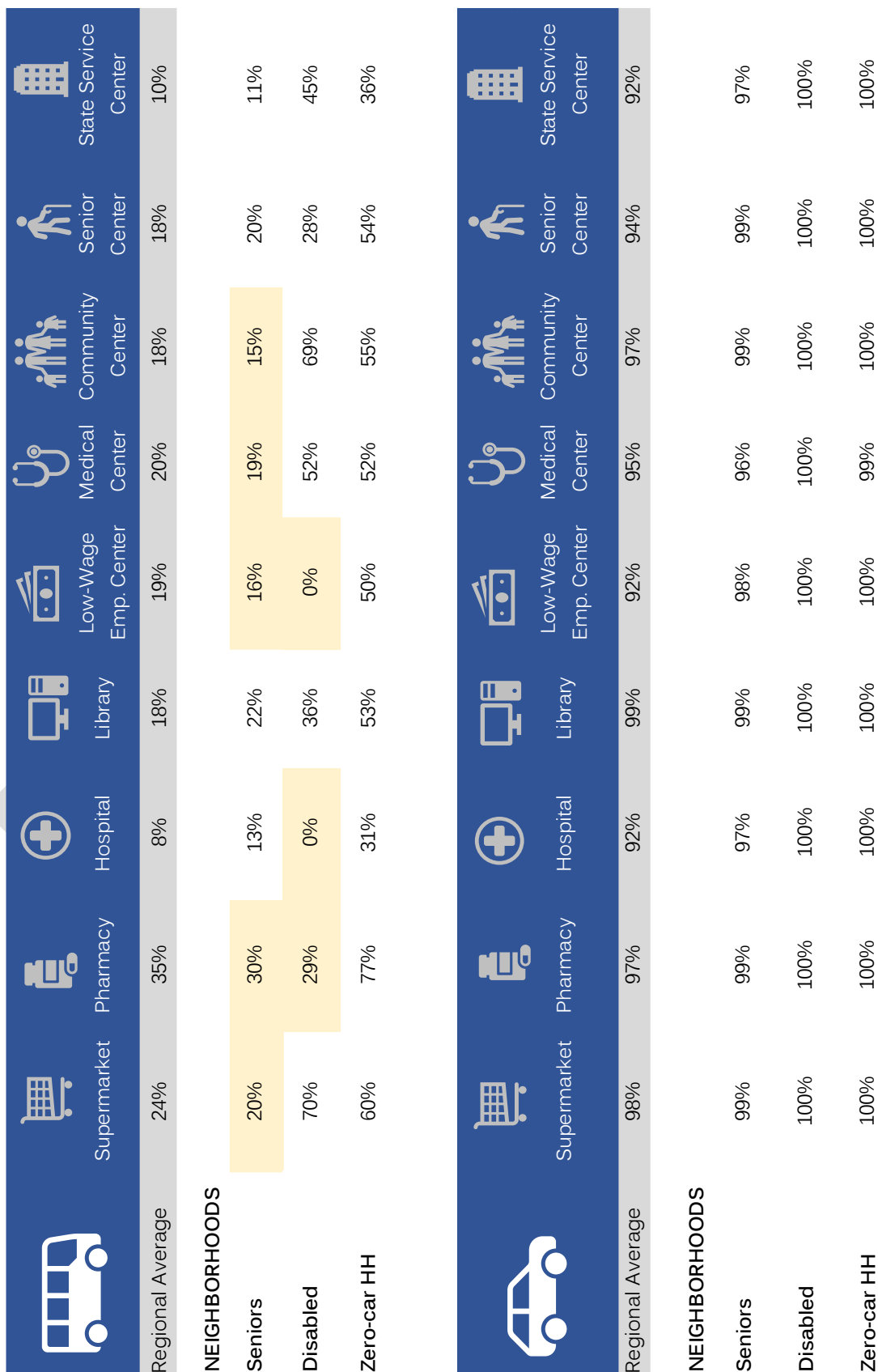
The tables that follow provide more detailed analysis results. While the destinations identified above had weaker than average connectivity, we must continue to stress that given the broken and frail walking, bicycling, and transit networks in our region, major connectivity gaps exist for most households across the region. That includes people living in neighborhoods home to a high proportion of seniors, disabled, and zero car households. Consider these facts: 91% of homes in senior concentrations cannot easily walk to a senior center; low-wage job centers are out of easy reach via fixed-route transit for 100% of homes in neighborhoods with concentrations of disabled residents; 44% of homes in zero-car household concentrations cannot easily bike to a community center. These are examples of challenges that should be explored by follow up regional and local analyses, with specific recommendations for improvements.

The example map below shows transit connectivity from neighborhoods with concentrations of seniors to medical centers. While senior neighborhoods within the cities of Wilmington and New Castle had strong to complete transit connectivity to medical centers, suburban senior communities did not. Inner suburban senior communities mostly showed weak transit connections, while those in outlying suburbs and rural areas had no connectivity. While it is certainly impractical to place transit lines everywhere, this and other analyses would help begin a process to more strategically guide bus routing in inner suburban communities. Follow up studies should examine the practicality and local desirability of improving walking, biking, and transit connections from these neighborhoods to medical centers and other destinations.

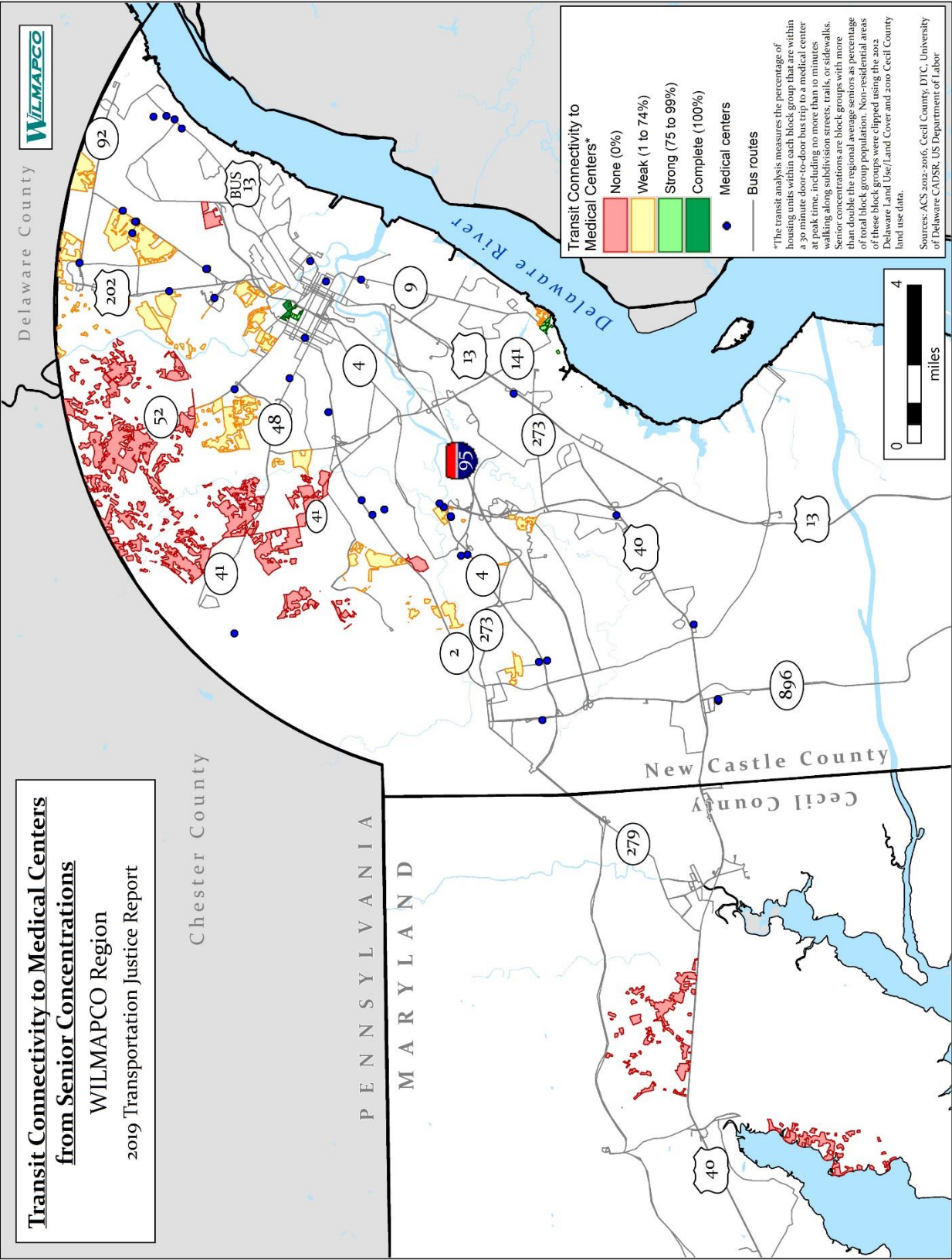
## Walking and Biking Connectivity, by Homes within Neighborhood Concentrations

									
	Supermarket	Pharmacy	Hospital	Library	Low-Wage Emp. Center	Medical Center	Community Center	Senior Center	State Service Center
Regional Average	14%	17%	1%	5%	3%	6%	8%	8%	2%
NEIGHBORHOODS									
Seniors	8%	19%	3%	7%	1%	2%	3%	9%	0%
Disabled	73%	22%	0%	36%	0%	46%	63%	25%	46%
Zero-car HH	38%	47%	8%	20%	7%	18%	28%	35%	12%
									
	Supermarket	Pharmacy	Hospital	Library	Low-Wage Emp. Center	Medical Center	Community Center	Senior Center	State Service Center
Regional Average	28%	39%	12%	23%	17%	24%	25%	28%	15%
NEIGHBORHOODS									
Seniors	31%	47%	14%	22%	20%	30%	21%	30%	14%
Disabled	80%	100%	22%	100%	0%	100%	100%	100%	100%
Zero-car HH	48%	70%	43%	56%	47%	51%	56%	64%	47%

## Transit and Car Connectivity, by Homes within Neighborhood Concentrations



Transit to Medical Center Connectivity, from Senior Neighborhoods

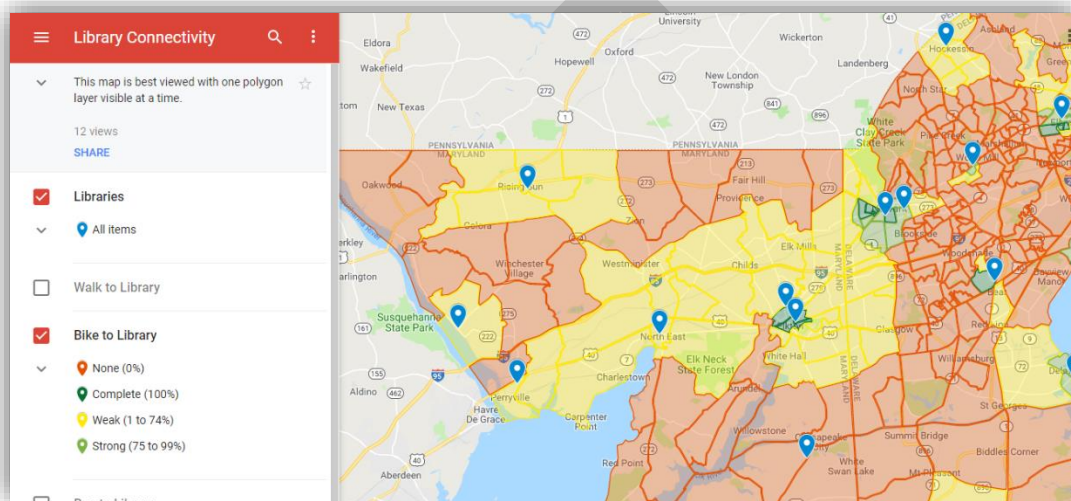


## Interactive Maps

### Connectivity Analysis

See the full spatial analysis of regional connectivity and zoom into your neighborhood. Interactive maps are available on the WILMAPCO website.

Visit [www.wilmapco.org/tj](http://www.wilmapco.org/tj).



### Existing and Planned Age-Restricted Communities Connectivity Analysis

WILMAPCO has long tracked the placement of suburban age-restricted communities and analyzed their connectivity to bus and pedestrian infrastructure. Age-restricted communities are developments where all or most residents must be over 55 years. Working with researchers at Bucknell University, we formalized a connectivity analysis begun in 2011 known as ARCCA (Age-Restricted Communities Connectivity Analysis)<sup>62</sup>.

The present section identifies our suburban-age restricted communities (age-restricted communities outside of the City of Wilmington) updates the ARCCA methodology, and then takes a fresh look at bus and walking connectivity to these places.

WILMAPCO has long called for age-restricted communities to be encouraged to locate nearby good public transit and within walking distance to key destinations. New infrastructure (sidewalks, bike lanes, bus shelters, etc.) to bus stops and nearby places should be built when the development is constructed. These links will provide senior residents with more transportation choices.

The WILMAPCO region is home to 99 existing and planned age-restricted communities. These developments have appeared in just about every corner of the region – although they are scarce in southern Cecil County and the far southern reaches of New Castle County. The map and corresponding table that follow show their locations.

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<sup>62</sup> See our Age-Restricted Communities Data Report: [http://www.wilmapco.org/data/Report11\\_Age-Restricted\\_Communities.pdf](http://www.wilmapco.org/data/Report11_Age-Restricted_Communities.pdf), along with the journal article below for more information:

Michelle Oswald Beiler, Ben Seketa, and William Swiatek. "Investigating transit and pedestrian accessibility for age-restricted communities using spatial analysis." *International Journal of Sustainable Transportation*. Volume 10, 2016 – issue 10.



### Listing of Age-Restricted Communities, Cecil County

Map ID	Community
C-1	Abbey Manor I
C-2	Abbey Manor II
C-3	AllCare Assisted Living
C-4	AllCare Assisted Living at Perryville
C-5	Booth II
C-6	Canal Town Village
C-7	Caraway Manor
C-8	Caraway Manor at Brownfield
C-9	Cecil Woods
C-10	Chesapeake Elderly Apartments
C-11	Covenant Care
C-12	D & G Home Care I
C-13	D & G Home Care II
C-14	Earleton Village
C-15	Elkton Housing
C-16	Birchwood at Elkton
C-17	Fairgreen Senior Community
C-18	Fairview
C-19	Golden Legends
C-20	Hill Top Manor
C-21	Jeanette Weber Home
C-22	Liberty Gardens
C-23	Lowes Assisted Living Homes I
C-24	Lowes Assisted Living Homes II
C-25	McKinley Apartments
C-26	Montrose Senior Living
C-27	North Street Senior Residences
C-28	Richmond Hill Manor
C-29	Singerly Manor
C-30	Sunny Acres Bay
C-31	Upper Shore Aging Housing Corporation
C-32	Victoria Park at North East
C-33	Villas at Whitehall

## Listing of Age-Restricted Communities, Suburban New Castle County

Map ID	Community
N-1	Adare Village
N-2	Avon Commons/Asante Sana Village
N-3	Baymont Farms
N-4	Birchwood at Rodney Court
N-5	Briarcreek
N-6	Buford Manlove Gardens
N-7	Casapulla Farm
N-8	Cascades
N-9	Cavaliers Country Club Apartments
N-10	Centerville Point
N-11	Cloutier Court
N-12	Cokesbury Village
N-13	Columbia Place
N-14	Crooked Billet
N-15	Crossings at Christiana
N-16	Enclave at Stonyridge
N-17	Forwood Manor (72 beds)
N-18	Foulk Manor North
N-19	Fountainview Apartments
N-20	Liberty Terrace
N-21	Little Falls Village
N-22	Longmeadow
N-23	Marydale Retirement Village
N-24	Meridian Crossing
N-25	Methodist Country House
N-26	Methodist Country House-Phase 4
N-27	Millcroft Senior Living
N-28	Milltown Village
N-29	Odessa National
N-30	Paper Mill Falls
N-31	Pennfield
N-32	Phillips Mill
N-33	Ponds Bayberry

## Listing of Age-Restricted Communities, Suburban New Castle County (cont.)

Map ID	Community
N-34	Preserve at Robinson Farms
N-35	Red Lion -- South
N-36	Regency at Warren Tract/Middletown
N-37	River Club Apartments
N-38	Riverbend at Old New Castle
N-39	Rockland Place
N-40	Ryan Homes at Preserve at Deep Creek
N-41	Saw Mill Place
N-42	Shipley Manor
N-43	Silver Maple Farm
N-44	Spring Arbor
N-45	Springer Woods
N-46	Springmill
N-47	Steeple Glen
N-48	Stonegates
N-49	Summit of Hockessin
N-50	Sunrise Assisted Living of Wilmington
N-51	Traditions at Christiana
N-52	Traditions at Southridge
N-53	Vantage Point
N-54	Village of Brandywine
N-55	Village of Fox Meadow
N-56	Village of Hershey Run
N-57	Village of Jester Crossing
N-58	Village of Llangollen
N-59	Village of Long Creek
N-60	Village of Red Lion Creek
N-61	Village of Rocky Run
N-62	Vista at Red Lion
N-63	Wagoner's Row
N-64	Whispering Woods
N-65	Whitechapel Village
N-66	Woodlea

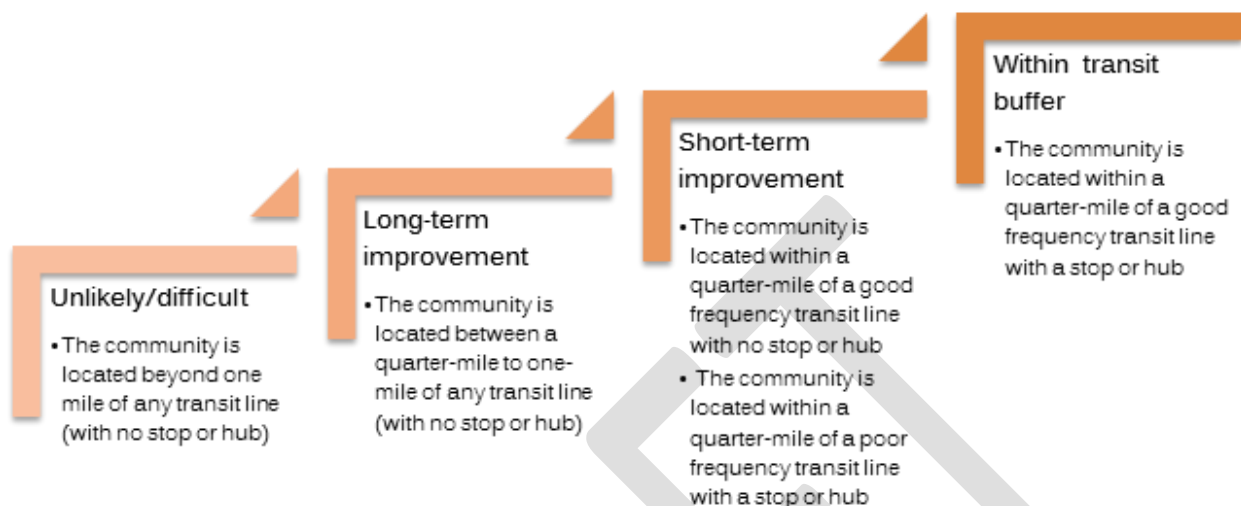
### Age-Restricted Communities Connectivity Analysis Methodology

ARCCA classifies the level of bus and walking connectivity to age-restricted communities. These are determined through a mix of quantitative spatial analyses and air photo analysis around age-restricted housing developments. While the criterion for walking connectivity has remained consistent since 2011, we tweaked the methodology for bus connectivity this year. The new methodology distinguishes between good and poor frequency bus routes.

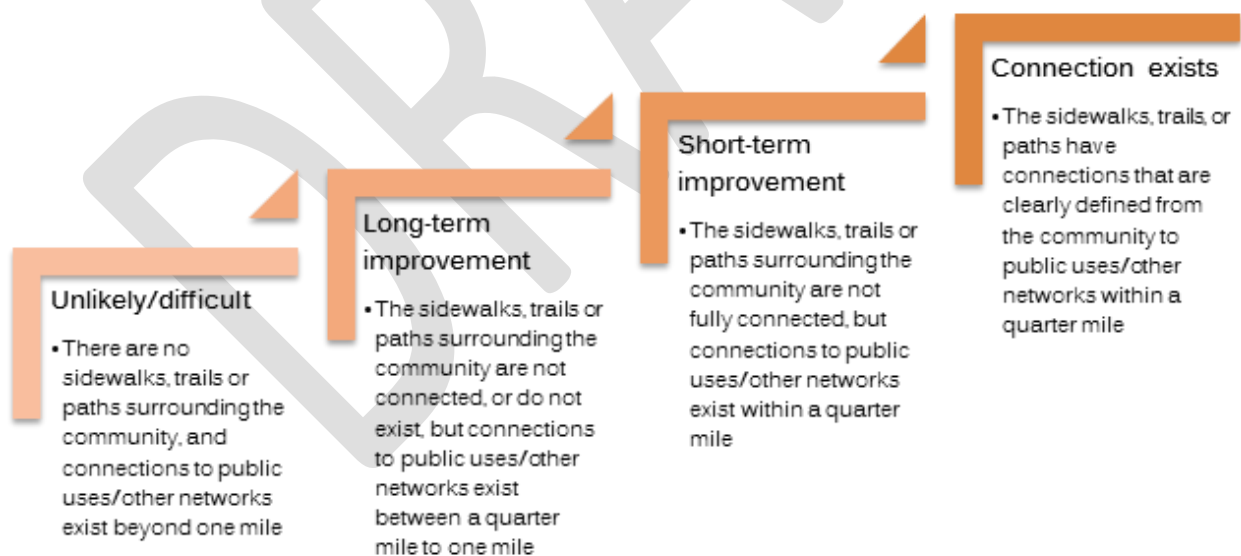
The transit classification scheme is shown on the following page. A community is given one of four improvement classifications. We say that the community is “within a transit buffer” if it is located within walking distance of a good frequency bus line, with a bus stop on that line. “Good frequency” is a relative term, but here it is a route that is operating every half-hour or better around mid-day in New Castle County, or an hour or better in Cecil County. These are good frequencies for our region’s bus system and places meeting that criteria are not flagged for transit improvements in this scheme. We say that a community requires a “short term improvement” if it is within walking distance of a good frequency bus line but lacks a stop on that line. Alternatively, the “short-term improvement” designation is given to those communities located within walking distance of a poor frequency (>30-minute in New Castle County frequency at mid-day or >1-hour in Cecil County at mid-day) transit line with a bus stop. “Long term improvements” are reserved for age-restricted communities that are nearby, but just outside walking distance to bus lines. Finally, “unlikely/difficult” improvements are reserved for communities that are beyond a mile of any bus line.

The ARCCA pedestrian classification scheme is also shown on the following page. We say that a “connection exists” to age-restricted communities if formal walking infrastructure links the community to nearby public places. A “short-term improvement,” meanwhile, is needed if walking connections are broken, but public destinations are within walking distance of the community. Communities are classed as “long-term improvements” if pedestrian connections to destinations exists between one quarter mile and one mile, but connections nearby the community are broken. Finally, “unlikely/difficult” improvements are reserved for developments without pedestrian infrastructure and where nearby destinations are beyond one mile.

## Public Transit ARCCA Classifications



## Pedestrian ARCCA Classifications



### Public Transit ARCCA Analysis

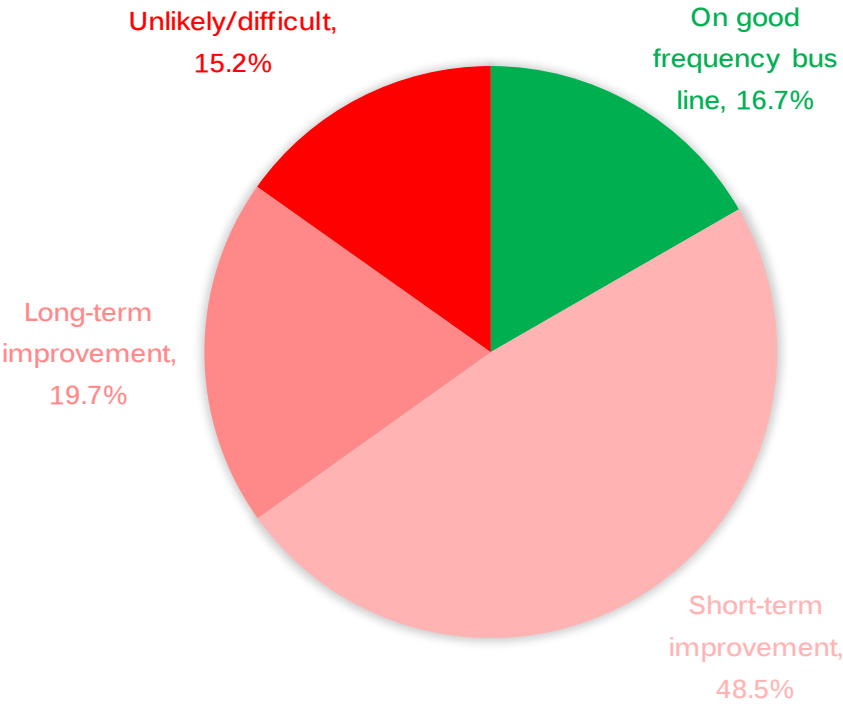
Our suburban existing and planned age-restricted communities are poorly linked to public bus systems. See the graphs and map on the following pages. In New Castle County, only 17% of communities had a good connection to a good frequency bus route. These places can be found along major highways linking Wilmington to the Greater Newark area. In Cecil County, this figure is about 21%, although the relative criteria for “good frequency” is much higher in that county given the weaker underlying bus system. Cecil County’s transit-connected age-restricted communities are exclusively found in Elkton. Meanwhile, 15% of existing and planned age-restricted communities in New Castle County are so isolated that a bus connection is unlikely or difficult. In Cecil County that figure is much higher. Half of communities (49%) are isolated. They are generally found in the fringes of New Castle County, and in western and southern Cecil County.



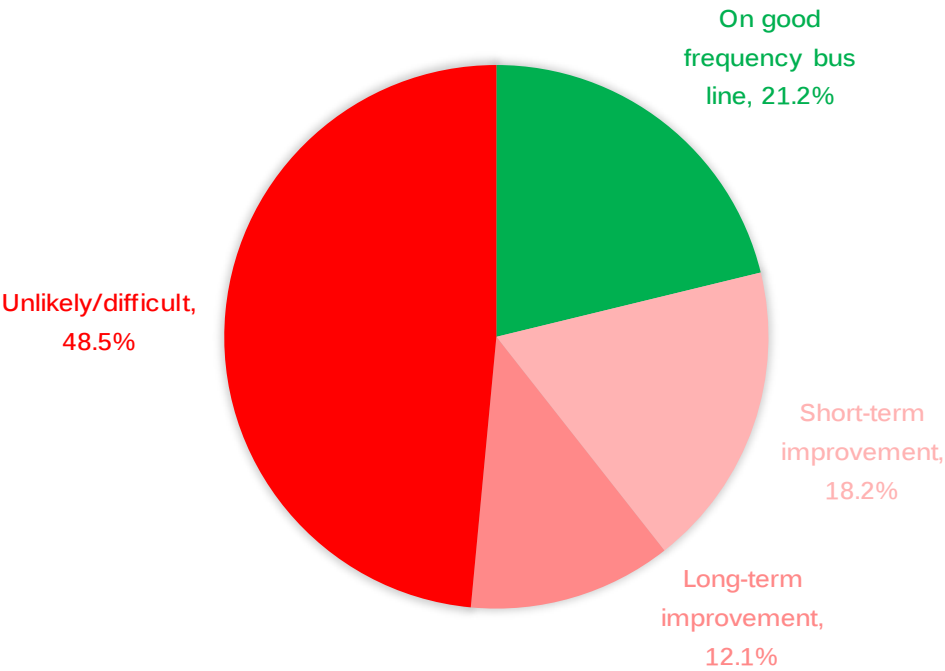
Short-term transit improvements are possible at this senior community in Newark.

The good news is that, for the rest of the age-restricted communities, connections to the bus networks are very possible. Indeed, in New Castle County, for about half of suburban age-restricted communities (49%), tweaks in service frequency, or minor adjustments in routing, would yield improvements to connectivity. The same is true for nearly 1 in 5 (18%) of age-restricted communities in Cecil County. Possible, but more intensive, adjustments to the bus systems are necessary to link to the remaining communities.

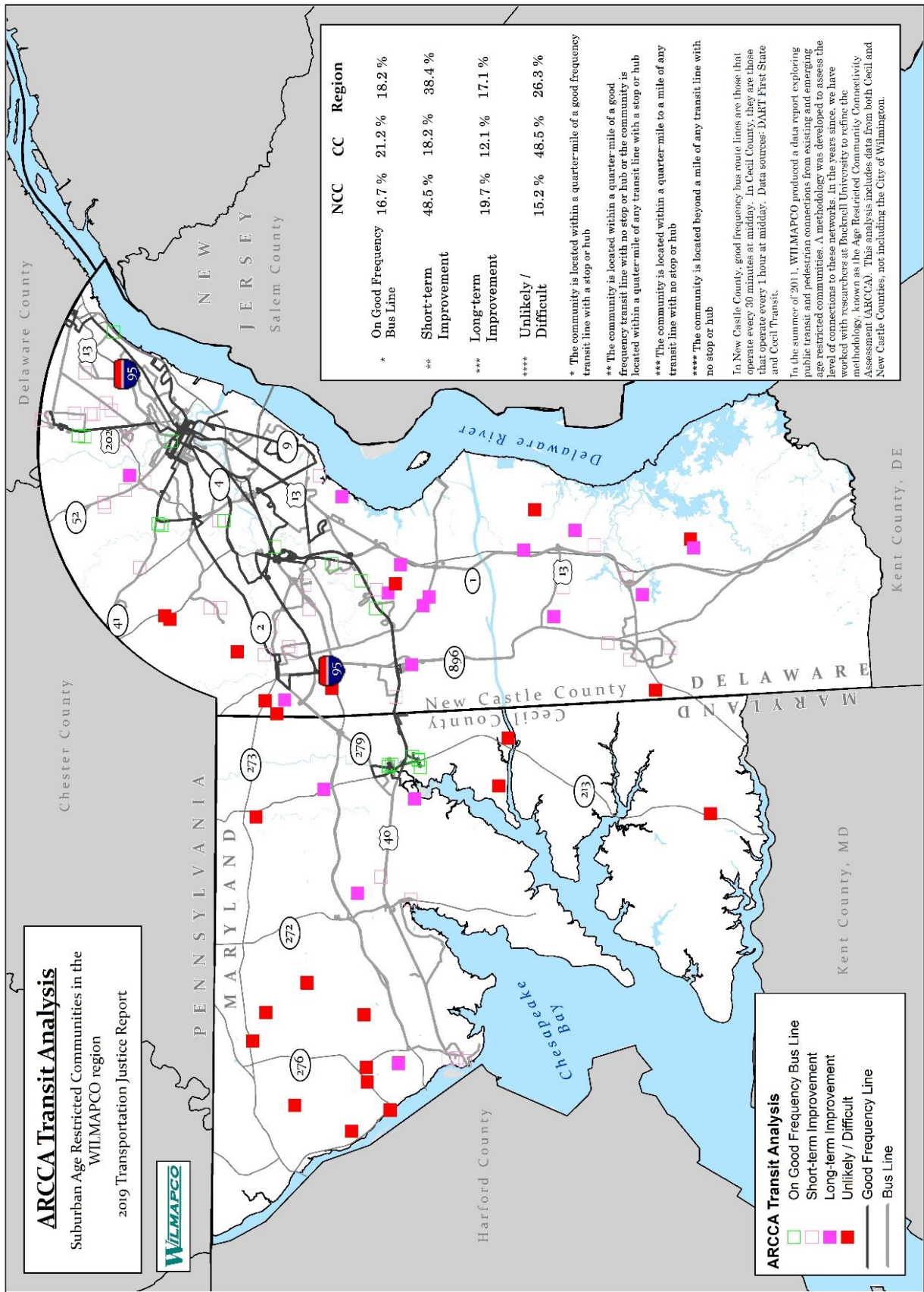
New Castle County - Transit ARCCA Analysis



Cecil County - Transit ARCCA Analysis



Public Transit ARCCA Analysis



### Pedestrian ARCCA Analysis

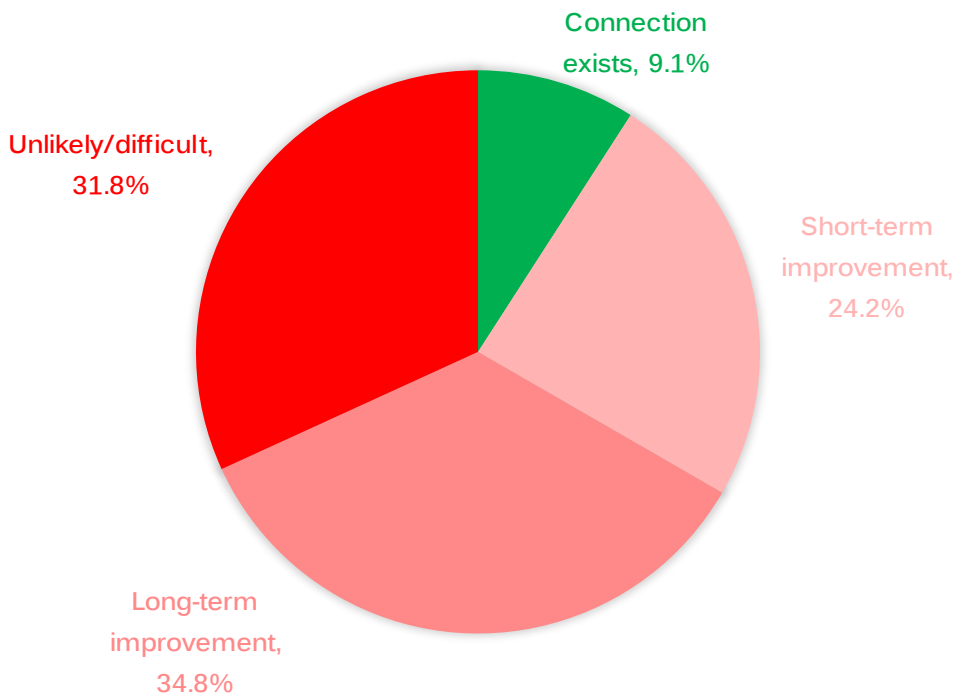
Walking connections around our suburban existing and planned age-restricted communities are also quite poor. In New Castle County, only 9% of these places had solid sidewalk connections to surrounding destinations. In Cecil County, the figure was higher, but still low, at 27%. More than a quarter of the communities in both counties (32% in New Castle County and 27% in Cecil County) were so isolated that walking links were unlikely or difficult. These communities were generally found to be north of Wilmington, south of US 40 in New Castle County, and north of US 40 in Cecil County, and in and around Chesapeake City.

For the rest of the communities, sidewalk and pathway links could more easily connect them to nearby destinations. In New Castle County, a quarter of the communities (24%) have missing links within only  $\frac{1}{4}$  mile of key destinations. About one-third (35%) meanwhile, have sidewalk gaps within one mile of nearby activities. In Cecil County, the comparative figures are 18% and 27%.

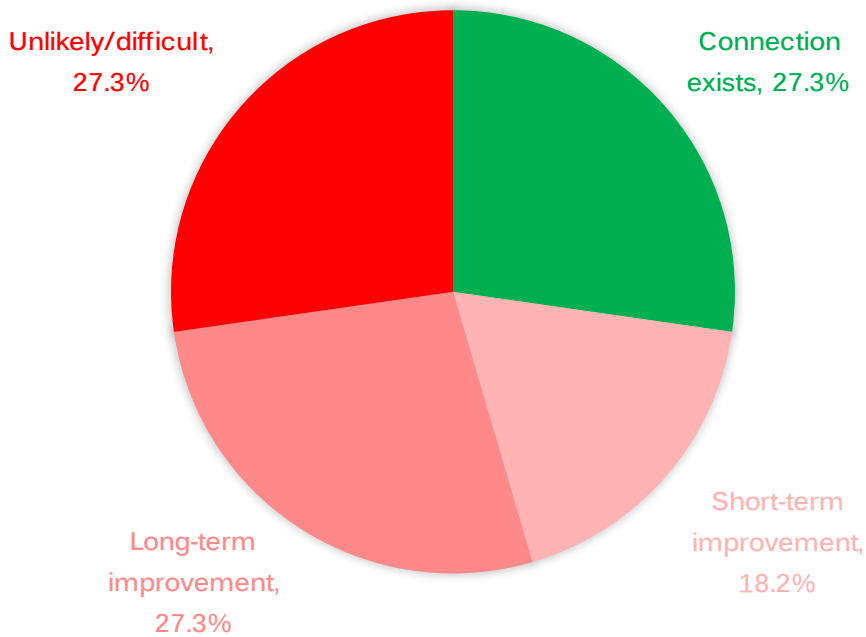


The Enclave at Stoneyridge community, just off US 40 in New Castle County, is within a stone's throw of bus stops, shopping, a pharmacy, and a local park. But sidewalk gaps exist to all those places.

New Castle County - Pedestrian ARCCA Analysis



Cecil County - Pedestrian ARCCA Analysis





**Enclave at Stoneyridge - Short-term Pedestrian Improvement**

The *Enclave at Stoneyridge* 55+ community is emblematic of fragmented development along our region's suburban corridors. While bus stops, a major supermarket, a pharmacy, a park, restaurants, and other destinations are all nearby, gaps in sidewalk prevent safe walking connections to all these places. Effectively isolated without the sidewalk links, the developer nevertheless advertises it as within "Walking Distance to Beck's Pond, Shopping & Bus Route [sic]" on its website. Seniors and their families unfamiliar with the area may well be misled by these claims. We classify *Enclave* as a "short-term improvement" in the ARCCA's pedestrian analysis. Sidewalk links to shopping and bus stops are feasible and could be quickly built.



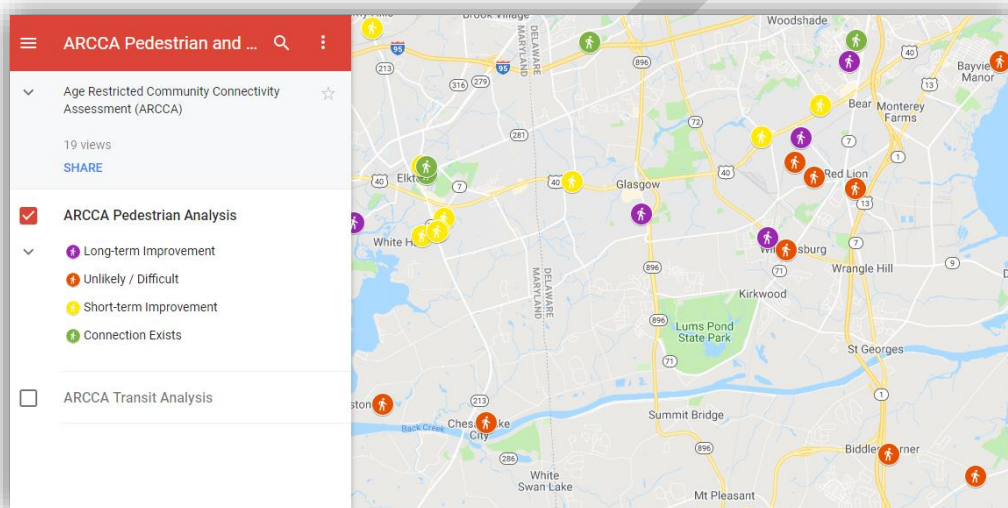
Located close to the U.S. 40 and Salem Church Road intersection, *Enclave* is missing formal walking infrastructure to a nearby pharmacy, bus stops, supermarket, park, and shopping.

Air photo: Microsoft

## Interactive Maps

### ARCCA

See the Age Restricted Community Connectivity Analysis (ARCCA) and zoom into your neighborhood. Interactive maps are available on the WILMAPCO website. Visit [www.wilmapco.org/tj](http://www.wilmapco.org/tj).



## Summary and Review of Recommendations

Several recommendations were made in this chapter. Early on, we identified ways to better comply with the Americans with Disabilities Act (ADA). Later, our spatial analyses highlight the need for both further study and action to improve connectivity from various MC neighborhood concentrations and suburban age-restricted communities.

### Major Recommendations

1. Further examine ADA access to the WILMAPCO suite from the elevator; request improvements from building owner if necessary.
2. Better communicate our commitment to supporting people with disabilities participate in the transportation planning process.
3. Ensure that frontline communications (visual presentations, public meeting participation, and website) consider the needs of people with disabilities.
4. WILMAPCO will consider conducting a study to **examine connectivity improvements to supermarkets, pharmacies, and other key destinations from senior and disabled concentrations**. This study will identify areas for the siting of new facilities and/or bus, bike, and walking connections to existing destinations.
5. WILMAPCO will consider conducting a study to **examine walking and transit improvements from suburban age-restricted communities classified with a “short term improvement” possible in the ARCCA analysis**. Profiles of the communities and possible walking and/or transit improvements will be outlined.

## Chapter 5

### Summary of Recommendations

Row	Recommendation Theme	Recommendation	Page
<b>Chapter 2: Title VI/Environmental Justice Analysis</b>			
1	Support Implementation of the 2050 Regional Transportation Plan (RTP)	The 2050 RTP features policy actions to achieve focused land development that would reduce our region's car dependence.	NOTE: PAGE NUMBERS WILL BE ADDED IN THE FINAL DRAFT OF THE REPORT
2	Overall Project Prioritization Process	Continue the same process for awarding/deducting points (1 - 3) for projects within Environmental Justice neighborhoods. However, provide +3 extra points for beneficial projects within Residential Black Concentrations (see the map in this section) to drive investment here.	
3	TAP Project Prioritization Process	Continue the same process for awarding points (2) for projects within Environmental Justice neighborhoods. However, provide +2 points for beneficial projects within Residential Black Concentrations to drive investment here.	
4	Pedestrian Priority Network Process	Continue the same process for awarding/deducting a point (1) for projects within Environmental Justice neighborhoods. However, provide +1 point for network segments within Residential Black Concentrations to acknowledge the need for improvements here.	

Row	Recommendation Theme	Recommendation	Page
<b>Chapter 2: Title VI/Environmental Justice Analysis</b>			
5	WILMAPCO Sub-regional Studies	Continue to pursue new and follow-up localized studies within black neighborhoods.	
6	City of Wilmington Pedestrian Safety Plan	WILMAPCO will encourage and support the creation of a City of Wilmington Pedestrian Safety Plan to begin understanding and addressing the heavy number of pedestrian crashes in that city.	
7	Draft City of Wilmington Bike Plan	Working with the City of Wilmington, WILMAPCO will help include safety as a key component of the Draft City of Wilmington Bike Plan, or pursue another planning effort to accomplish this.	
8	Reducing transportation costs in impoverished neighborhoods	WILMAPCO will conduct a study to examine reducing transportation costs in unaffordable impoverished neighborhoods. The study will recommend improvements to bus routing and walking and bicycling networks, generally, in these places.	
9	Fixed-route bus performance/travel time improvements from black and impoverished neighborhoods	WILMAPCO will conduct a study to examine fixed-route bus performance/travel time improvements from black and impoverished neighborhoods to employment centers.	

Row	Recommendation Theme	Recommendation	Page
<b>Chapter 2: Title VI/Environmental Justice Analysis</b>			
10	Improvements by walking, biking, and bus	WILMAPCO will utilize the connectivity data, as practicable, in all future sub-regional and regional studies. Improvements by walking, biking, and bus will be recommended to improve connectivity from homes to key destinations.	
11	Food access improvements within WILMAPCO-defined food deserts	WILMAPCO will conduct a study to examine food access improvements within WILMAPCO-defined food deserts with poor transit connectivity.	
12	Encourage public grants for EV charging stations	As the cost of EV ownership continues to sink, WILMAPCO will encourage public grants for EV charging stations to more strongly consider awards within low-income, black, and Hispanic neighborhoods.	
<i>As an agency, WILMAPCO will:</i>			
13	Agency engagement	Develop organizational practices (i.e., hiring, workshop locations, language assistance, survey techniques) that integrate cultural groups of all ages.	
14	Agency engagement	Participate in cultural competency and Title VI/EJ training.	
15	Agency engagement	Advocate with, and on behalf of, people of color	

Row	Recommendation Theme	Recommendation	Page
<b>Chapter 2: Title VI/Environmental Justice Analysis</b>			
<i>In regional-level studies, WILMAPCO will:</i>			
16	Regional engagement	Use diverse outreach methods to incorporate passive (i.e. workshop), active (i.e. street survey), and online engagement (i.e. Facebook) feedback.	
17	Regional engagement	Strive for equitable public meetings and public participation (provide childcare at all public meetings, only meet at trusted community centers, provide snacks or food as incentives, meeting at places along bus corridors and select a better meeting time).	
18	Regional engagement	Provide easy-to-understand explanations of the planning and implementation processes.	
19	Regional engagement	Avoid jargon and technical terms without explanation.	
20	Regional engagement	Build relationships with African American, Latino, and Asian cultural institutions and media outlets.	
21	Regional engagement	Have equitable representation of minorities on the Public Advisory Committee.	
22	Regional engagement	Target air quality awareness outreach to low income and minority communities.	

Row	Recommendation Theme	Recommendation	Page
<b>Chapter 2: Title VI/Environmental Justice Analysis</b>			
23	Regional engagement	Continue to invest in a regional Public Opinion Survey with demographic quotas and allow self-identification of gender here and in other surveys.	
24	Regional engagement	Pursue equitable demographic public feedback, by race and class, for all regional studies.	
<i>For all sub-regional studies WILMAPCO will:</i>			
25	Sub-regional engagement	Invest in continuous relationship building with local leaders and the community.	
26	Sub-regional engagement	Partner with and work through trusted community-based organizations and local civic groups.	
27	Sub-regional engagement	Invite and encourage residents to participate with decision-making on a local study development and a post-study monitoring committee with a representative cross-section of views within the community, a clear mission, Transparency and accountability, and a consistent schedule .	
28	Sub-regional engagement	Acknowledge any past harm done by transportation and land use decisions.	

Row	Recommendation Theme	Recommendation	Page
<b>Chapter 2: Title VI/Environmental Justice Analysis</b>			
29	Sub-regional engagement	Frame the plan in a way that is relevant to the local community.	
30	Sub-regional engagement	Never overpromise.	
31	Sub-regional engagement	Understand local community needs (such as workforce development and improved public safety) and seek to address those, as possible, through the planning process.	
32	Sub-regional engagement	Provide easy-to-understand explanations of the planning and implementation processes.	
33	Sub-regional engagement	Avoid jargon and technical terms without explanation.	
34	Sub-regional engagement	Celebrate area history and culture, where possible.	
Row	Recommendation Theme	Recommendation	Page
<b>Chapter 2: Title VI/Environmental Justice Analysis</b>			
35	Sub-regional engagement	Strive for equitable public meetings and iterative public participation (only meet at trusted community centers, make safety a priority, promote community bonding, provide childcare at all public meetings, promote events with the community.	
36	Sub-regional engagement	Employ supplemental comprehensive outreach approaches, such as field and telephone surveys.	
37	Sub-regional engagement	Use, but do not rely entirely on, online or social media-driven outreach.	
38	Sub-regional engagement	Empower community members to conduct surveys, facilitate meetings, and provide explanations.	
39	Sub-regional engagement	Create opportunities for accomplishments to be seen.	

Row	Recommendation Theme	Recommendation	Page
<b>Chapter 3: Language Assistance Plan</b>			
<i>Tiers of Language Assistance and Engagement:</i>			
40	<b>Tier 1: Responsive LEP &amp; LL</b>	Ensure the WILMAPCO website is translatable using mainstream web browsers or an e-translation app or service into as many languages as reasonable.	
41	<i>Tier 1: Responsive LEP &amp; LL</i>	If requested, WILMAPCO will provide a professional interpretation of any document, presentation, meeting, or survey to LEP speakers of any language (Spanish, Chinese, Gujarati, French, and Korean).	
42	<i>Tier 1: Responsive LEP &amp; LL</i>	The interpreter will collect thoughts and feedback of the LEP individual and convey those, through conversation, to staff who will be present either in person or virtually. Ten days' notice is required to ensure that an interpreter can be present.	

Row	Recommendation Theme	Recommendation	Page
<b>Chapter 3: Language Assistance Plan</b>			
43	<i>Tier 1: Responsive LEP &amp; LL</i>	At all public meetings, staff will identify individuals who do not appear to fully comprehend English. Staff will have language identification flashcards[1] available to assist, if necessary, with identifying the participant's primary language. These individuals will be referred to a professional interpreter on hand. If the interpreter does not speak the language of the individual, or if an interpreter is not there, follow-up arrangements will be made to contact the LEP individual through a proper interpreter to convey the meeting's message and collect their thoughts.	
44	<i>Tier 1: Responsive LEP &amp; LL</i>	While WILMAPCO will endeavor to proactively accommodate LL individuals during all planning processes, as described in Tier 3, staff will identify individuals who appear to have LL at public meetings and events.	
45	<i>Tier 1: Responsive LEP &amp; LL</i>	Staff will describe, through conversation and any available graphics, the material being presented.	

Row	Recommendation Theme	Recommendation	Page
<b>Chapter 3: Language Assistance Plan</b>			
46	<i>Tier 1: Responsive LEP &amp; LL</i>	Staff will offer to collect any feedback from the individual orally, in lieu of any written survey.	
47	<b>Tier 2: Proactive Chinese LEP</b>	The WILMAPCO Title VI Policy, Complaint Form, and Complaint Procedures will be posted, in professionally human-translated Chinese, on the WILMAPCO website and in the WILMAPCO office.	
48	<i>Tier 2: Proactive Chinese LEP</i>	A professionally human-translated Chinese “about WILMAPCO” webpage will be created to share an overview of the agency’s function and opportunities to engage.	
49	<i>Tier 2: Proactive Chinese LEP</i>	WILMAPCO plans will be professionally human-translated into Chinese upon request.	
50	<i>Tier 2: Proactive Chinese LEP</i>	Staff will consult the LEP clusters map prior to embarking on any sub-regional study.	

Row	Recommendation Theme	Recommendation	Page
<b>Chapter 3: Language Assistance Plan</b>			
51	<i>Tier 2: Proactive Chinese LEP</i>	If that study is in an Asian-speaking LEP cluster, or a cluster of mixed Asian and Spanish LEP speakers, staff will endeavor to determine – through local civic groups and nonprofits -- if Chinese is a dominant secondary language in the study area. If so materials will be provided in Chinese such as human-translations of the study's purpose, any public event flyers, surveys, and contact information. Staff will also encourage participation of Chinese LEP individuals, ideally through community events and a Chinese interpreter will be present at all major public meetings.	
52	<i>Tier 2: Proactive Chinese LEP</i>	WILMAPCO will continue its efforts to partner with local Chinese American institutions, as well as explore partnerships with any local Chinese media.	
53	<b>Tier 3: Proactive Spanish LEP &amp; LL</b>	The WILMAPCO Title VI Policy, Complaint Form, and Complaint Procedures will be posted, in professional human-translated Spanish, on the WILMAPCO website and in the WILMAPCO office.	

Row	Recommendation Theme	Recommendation	Page
<b>Chapter 3: Language Assistance Plan</b>			
54	<i>Tier 3: Proactive Spanish LEP &amp; LL</i>	A professionally human-translated Spanish “about WILMAPCO” webpage will be created to share an overview of the agency’s function and opportunities to engage.	
55	<i>Tier 3: Proactive Spanish LEP &amp; LL</i>	MPO plans will be professionally human translated into Spanish upon request.	
56	<i>Tier 3: Proactive Spanish LEP &amp; LL</i>	Staff will consult the LEP clusters map prior to embarking on any study. If that study is in a Spanish-speaking LEP cluster, or a cluster of mixed Asian and Spanish LEP speakers, or is region-wide in scope. Top level study materials will be provided in Spanish including human translations of the study’s purpose, any public event flyers, major social media postings, surveys, and contact information. Staff will also encourage participation of spanish LEP individuals, ideally through community events and a spanish interpreter will be present at all major public meetings. WILMAPCO will continue to build its partnerships with the Latin American Community Center (LACC) and the Delaware Hispanic Commission.	

Row	Recommendation Theme	Recommendation	Page
<b>Chapter 3: Proactive Spanish LEP &amp; LL</b>			
57	<i>Tier 3: Proactive Spanish LEP &amp; LL</i>	WILMAPCO will weigh the option of hiring a Hispanic-based public relations consultant to advise on effective, culturally relevant, outreach strategies.	
58	<i>Tier 3: Proactive Spanish LEP &amp; LL</i>	Staff will consult the LL clusters map prior to embarking on any study. If that study is <b>not</b> within an LL cluster, staff should consider providing supplemental outreach and feedback materials geared towards LL individuals. This includes visual and oral based outreach and feedback opportunities. If that study <b>is</b> within a LL cluster, or is regional in scope, visual and/or oral based outreach and feedback opportunities must be incorporated throughout the public outreach process.	

Row	Recommendation Theme	Recommendation	Page
<b>Chapter 4: Mobility Challenged Analysis</b>			
59	Improve ADA accessibility	Examine physical access to the WILMAPCO suite to pursue ADA accessibility.	
60	Support people with disabilities participate in the transportation	Better communicate our commitment to supporting people with disabilities participate in the transportation planning process.	
61	Communications consider the needs of people with disabilities	Ensure that frontline communications (visual presentations, public meeting participation, and website) consider the needs of people with disabilities.	
62	Examine connectivity improvements to food and pharmacies	WILMAPCO will consider conducting a study to examine connectivity improvements to supermarkets, pharmacies, and other key destinations from senior and disabled concentrations. This study will identify areas for the siting of new facilities and/or bus, bike, and walking connections to existing destinations.	
Row	Recommendation Theme	Recommendation	Page
<b>Chapter 4: Mobility Challenged Analysis</b>			
63	Examine walking and transit improvements from suburban age-restricted communities	WILMAPCO will consider conducting a study to examine walking and transit improvements from suburban age-restricted communities classified with a “short term improvement” possible in the ARCCA analysis. Profiles of the communities and possible walking and/or transit improvements will be outlined.	

Appendix

Council Resolution.....

Title VI Nondiscrimination Assurance .....

Sample Third Party Contract (monitoring subrecipients of MPO funds) .....

Connectivity Analyses Methodology .....

Connectivity Analyses – Post Analysis Edits.....

DRAFT

## Council Resolution

[to be added]

DRAFT

## Title VI Nondiscrimination Assurance

Please visit <http://www.wilmapco.org/titlevi/>  
to view the latest assurance statement

DRAFT

## Sample Third Party Contract

(monitoring subrecipients of MPO funds)

### WILMINGTON AREA PLANNING COUNCIL

#### AGREEMENT FOR PERFORMANCE OF WORK

IN SUPPORT OF TASK # MPO \_\_\_\_\_ ENTITLED

IN THE FY 2018 UPWP

This agreement is made by and between the Wilmington Area Planning Council, acting by and through John Sisson, Chairperson, with the management assistance of Tigist Zegeye, Executive Director, hereinafter referred to as "WILMAPCO", and \_\_\_\_\_ thereafter referred to as the "Contractor".

WHEREAS, WILMAPCO, as designated by the Governors of the States of Delaware and Maryland, is the Metropolitan Planning Organization (MPO) for the Wilmington Metropolitan Area, which includes Cecil County, Maryland and New Castle County, Delaware; and

WHEREAS, the federal regulations for Metropolitan Planning require that the MPO, in cooperation with participants in the planning process, develop an annual Unified Planning Work Program (UPWP); and

WHEREAS, the work and services mutually agreed to in this Agreement are necessary for the development and updating of the regional transportation plans and programs, as mandated under provisions of 23 U.S.C., Section 134, found in the current UPWP,

NOW, THEREFORE, in consideration of the mutual benefits accruing to each, WILMAPCO and the Contractor agree and covenant as follows:

The Contractor has agreed, and by these presents does agree with WILMAPCO, for consideration hereinafter mentioned, to work for WILMAPCO as hereinafter set forth.

#### SECTION 1 - GENERAL PROVISIONS

A. During the performance of this Agreement, all appropriate Federal and State laws, especially including all Civil Rights laws, shall be complied with by the Contractor. The provisions of Title 49 of the Code of Federal Regulations, Part 21.7, with respect to Title VI of the Civil Rights Act of 1964, are incorporated by reference and made a part of this Agreement.

B. Where the approval of WILMAPCO is indicated, the concurrence of the Federal Highway Administration and/or the Federal Transit Administration may also be deemed to be required if the Federal agencies so request.

C. All materials published, created by, or developed under or because of this agreement by WILMAPCO and the Contractor shall contain a credit reference such as "Prepared in cooperation with the United States Department of Transportation, Federal Highway Administration and Federal Transit Administration".

D. All records, including books, documents, papers, maps, data accounting records and other evidence pertaining to costs incurred relating to or arising out of this agreement, hereinafter referred to as "Records", shall be made available at any reasonable time and place for inspection, examination, or audit during the time of this Agreement and for three years after the final voucher payment has been made by WILMAPCO for this Agreement.

E. WILMAPCO and authorized representatives of the Federal government are herein authorized to review and to inspect all work and services, including all papers, books, documents, maps, accounts, source data, or the like, which shall be provided by the Contractor.

F. The Contractor shall be free to copyright any material created or developed under or because of this Agreement, with the provision that WILMAPCO, the Federal Transit Administration and the Federal Highway Administration reserve a royalty-free, non-exclusive and irrevocable license to reproduce, publish or otherwise use and to authorize others to use the material for approved purposes.

G. WILMAPCO is responsible for monitoring compliance of this agreement and the Contractor will provide monthly status reports (or other mutually agreed upon intervals) and other information and access for this purpose. The Contractor will invite WILMAPCO to participate in appropriate orientation, steering and operational meetings and committee memberships. The contractor will provide to WILMAPCO copies of pertinent concepts, drafts and other working documents in order to better involve and acquaint WILMAPCO with the operation, performance and substance of the Task.

H. Final products and results of the Task will be provided by the Contractor to WILMAPCO for integration with and support of WILMAPCO's plans and programs.

I. This Agreement may be terminated at any time for non-performance by any of the parties upon thirty (30) days written notice.

J. By initialing below, the Contractor accepts all applicable Federal Transit Administration (FTA) Requirements which govern this Agreement. These requirements are available electronically at: <http://www.wilmapco.org/titlevi>.

\_\_\_\_\_  
CONTRACTOR INITIALS

K. By initialing below, the Contractor accepts all applicable Federal Highway Administration (FHWA) and Requirements which govern this Agreement. These requirements can be found within the WILMAPCO Title VI/Nondiscrimination Assurance Statement, available electronically at: <http://www.wilmapco.org/titlevi>.

\_\_\_\_\_  
CONTRACTOR INITIALS

## SECTION 2 - SCOPE OF WORK

A. This Agreement constitutes the sole understanding by and between the Contractor and WILMAPCO, and nothing outside of this Agreement shall be construed as an alteration, modification, and/or revision hereof. This Agreement shall not be modified except in writing subscribed to by all parties.

B. The scope of work to be performed by the Contractor is attached hereto.

## SECTION 3 - SCHEDULES

A. Contractor's Schedule of Work and Services Compliance Dates:

Starting Date:        Upon execution of contract  
Completion Date:    \_\_\_\_\_ (unless extension is requested in writing)

B. "Status of Work" written reports are due to WILMAPCO at the end of each month following the starting date as well as upon completion, unless other mutually agreed upon intervals are stated in the Scope of Work.

C. Schedule of Payment

WILMAPCO will pay the Contractor periodically, subject to the following conditions:

- 1) The Contractor shall bill monthly the amount legitimately incurred by the Contractor to WILMAPCO. This invoice shall contain, at a minimum, a report on the work completed, a project status report indicating percent completion of project, and a budget status report indicating total budget, billings to date and remaining balance.
- 2) WILMAPCO shall have final approval over payment to the Contractor, based upon receipt of the work product(s) or component(s) thereof, as defined under Section 2 of this Agreement and as stipulated in the foregoing item #1.
- 3) Total compensation paid to the Contractor for the work and services as agreed to in this Agreement shall not exceed \_\_\_\_\_. All authorized out-of-pocket expenses will be borne by WILMAPCO.

IN WITNESS THEREOF, this Agreement made and entered into this \_\_\_\_ day of \_\_\_\_\_ shall be executed in triplicate.

FOR WILMAPCO

ATTEST: \_\_\_\_\_  
Tigist Zegeye,  
Executive Director

DATE: \_\_\_\_\_

FOR THE CONTRACTOR

ATTEST: \_\_\_\_\_

DATE: \_\_\_\_\_

# Connectivity Analyses Methodology

## Technical Detail from CADSR

### Calculating Accessibilities

#### Overview

Using CADSR routing networks the time to reach facilities was determined for various travel modes. This was done at the housing unit level for New Castle County and Cecil County. If a housing unit was within a certain specified travel time along permissible paths in the travel network for each mode, the housing unit was marked as accessible. From all housing units within each Census Block Group the percentage of housing units that were accessible was calculated for each block group and each category of destination.

#### Critical Facilities - Destinations

Accessibilities were calculated for the following facilities

- Medical Centers
- Hospitals
- Pharmacies
- Supermarkets
- State Service Centers
- Senior Centers
- Community Centers
- Libraries
- Low wage Employment Centers

These facilities were located using CADSR's destination files and web browsing.

#### Housing Units – Origins

CADSR maintains a housing unit file for New Castle County at the tax parcel level and these were used as origins. Residential housing units for Cecil County were obtained from tax parcel layers from State of Maryland GIS Clearinghouses.

#### Travel Network

CADSR maintains a multi-modal transportation network routing model that can calculate distances between specified origins and destinations subject to specifications on allowable paths. It includes all roads and paths. Road centerline data and routing for Cecil County were developed by CADSR from DelDOT Peninsula Travel Demand Model and centerline files from State of Maryland GIS Clearinghouses. The routing model assumes walking at a pace of 3 miles per hour, biking at 15 miles per hour, and car travel at road speed limits. Transit travel times were derived from published transit schedules for DART First State in Delaware and for Cecil County Maryland transit, the bus lines included the Glasgow Connection, Perryville Connection, Mid County Connection, Elkton-Newark Connection, and Commuter Connection.

#### Level of Service/Stress for Walking and Biking

Accessibility calculations were calculated first for walking and biking along any path between housing units and destinations. Another accessibility calculation was made that restricted travel depending on the level of service or level of stress of paths. For Cecil and New Castle County walking level of service restrictions, paths were limited to those with sidewalks or low speed suburban development streets.

CADSR's routing network for Delaware pedestrian travel was compiled over the last several years using DelDOT sidewalk layers, aerial photography, and road inventory data. For Cecil County, pedestrian paths were developed from aerial photography and road functional classification. A spring 2019 version of DelDOT's developing bicycle level of stress network was used to restrict allowable bicycling paths to the least stressful categories (level of stress 1 and 2). A description of bicycle level of traffic stress in Delaware is:

- 1) Safe for children to use, usually completely separated from auto traffic.
- 2) Tolerated by most mainstream adult populations of cyclists; roads with low volume and low speed auto traffic
- 3) Tolerated by riders who are enthused and confident; Heavy traffic with separated bike facility.
- 4) Only tolerated by strong and fearless riders; Cyclists must interact with high volumes or speeds of auto traffic.

A detailed level of stress or service designation for bicycling for Cecil County was not available. Paths for allowed bicycle level of service accessibility for Cecil County include trails, subdivision streets, or roads with 8 foot shoulders and traffic moving at less than 40 mph, and this was developed from road centerline information and aerial photography.

#### **Accessibility Specifications**

Accessibility was defined as follows:

For CAR:

15 minute car ride along any road

For Walk no restriction:

10 minute walk along any path available

For Bike no restriction

10 minute walk along any path available

FOR BIKE Level of Service (LOS)/ Level of Stress (LTS):

10-minute Bike Ride restricted to level of stress for Delaware 1 or 2 and for Cecil County bike travel restricted to trails, subdivision streets, or roads with 8 foot shoulders and traffic moving at less than 40mph.

Discussion - Many major roads have level of stress higher than 2 and the result in terms of network modeling creates many areas cut off from travel. Many of the critical destinations are located on major roads. In some cases large number of housing units are within reach of destinations except for small portions on major roads (50 or 100 meters for instance) . Likewise where a portion of a trip requires the crossing of an intersection or stressful portion of an otherwise stress free path. Main Street in Newark for instance is designated as a high stress segment yet it has a large and suitable biking facilities and students in proximity. Realistically in many cases cyclists could park their bike and walk for a small segment of the path to go to numerous destinations. Therefore the BIKE LOS/LTS network was joined with walking paths on local roads or where sidewalks are present for both counties, and a cyclist is permitted to get on an off a bike if it cuts down on diversion or allows access. The total trip time, the

sum of cycling portion and walking portion is still kept at 10 minutes. A result of this adjustment is that any destination that is accessible through a high level of service walk, is accessible in terms of BIKE LTS.

**FOR WALK LOS:**

10 minute walk, along subdivision streets, trails, or where sidewalk available. For this project as walking can occur in any direction, if one side of a road has sidewalks, both directions are considered to be served, and this is true for dual divided highways also.

**FOR TRANSIT:**

30 min. accessible door to door route bus trip. This includes the time needed to walk to and from a bus stop. Walking portions of the transit trip are limited to where paths have sidewalks, trails, or are on subdivision streets. DART First State routing is fairly complex when compared to Cecil County transit and for DART to calculate travel time a time of departure specification is necessary. In this project transit time at 8:30 and at 8:45 was determined and the minimum transit travel time was used. In future calculations another adjustment may be considered. In some cases a bus stop is located on a major road with no sidewalks. Examples are on Marsh Road in north Wilmington and portions of Route 40 in New Castle County. By restricting the walking portion of the transit trip to paths with sidewalk or subdivision streets some of these bus stops are deemed inaccessible though they due serve suburban communities and in some cases some amenities are present like platforms. In some cases the distance pedestrians must travel on shoulders are not far. Transit stops could be surveyed and in network models could be made accessible if with some rule they could be assigned to be accessible, for instance within 50 meters.

## Connectivity Analyses – Post Analysis Edits

The connectivity analyses presented in this Plan will be ever evolving. In the weeks following the calculations of regional accessibilities, a handful of minor errors were uncovered across several block groups. These errors mostly related to car access. They were not thought significant enough to recalculate regional figures, which would have been only ever so slightly impacted. We did, however, remake each impacted connectivity map presented in this plan, as well as impacted interactive maps. WILMAPCO will continue to work with CADSR to track errors and changes uncovered with the connectivity analyses, moving forward, and these will be incorporated into the next connectivity run and analyses.

Date	blkgrnm Updated	Changes
7/12/2019		0117003 Car 100% (all dest types), walk/walkLOS to pharmacy 10%
		0024002 Car 100% (all dest types)
		0123002 Car 100% (all dest types), walk/walkLOS to senior center add 15%, transit 100% (all dest types)
		0155021 Car 100% (all dest types), walk/walkLOS to community center add 20%
		0103002 Car 100% (all dest types), walk/walkLOS to medical center, senior center, and community center add 5%
		0144041 Car 100% (all dest types)
		0006011 Car 100% (all dest types), walk/walkLOS to library 100%
		0105025 bike/bikeLOS to supermarket 100%
		GIS table containing only the above changed BGs: tjbgrjun13v2_BGsUpdated_7-12-19.tab
		Updated maps images/workspaces: Car to Medical Center, Walk LOS to Pharmacy, Bike LTS to Library, Transit to Supermarket
		Updated GIS tables: transjustblkgrpmay20.tab, transjustblkgrpj13v2.tab
		Updated interactive maps: all 9 destination type maps
Date	File/Map Updated	Changes
7/29/2019	transjustdestfin.tab	Added Super G Market as supermarket destination near Route 9 and Stamm Blvd
	transdestapr2619.tab	"
	transdestapr2619_Supermarkets.tab	"
	Connectivity - Transit to Supermarket.jpg	Added blue dot for Super G Market
	Residential Food Deserts - Transit to Supermarket.jpg	Added blue dot for Super G Market
	Supermarket Connectivity Interactive Map	Added blue dot for Super G Market
Date	blkgrnm Updated	Changes
7/31/2019		0159001 Supermarket connectivity: transit 0.44; walk 0.76; walk LOS 0.76; bike 1; bike LOS 0
		0159002 Supermarket connectivity: transit 0.76; walk 0.1; walk LOS 0.1; bike 1; bike LOS 0
		0158022 Supermarket connectivity: transit 0.92; walk 0.83; walk LOS 0.83; bike 1; bike LOS 0
		Updated GIS tables: transjustblkgrpmay20.tab, transjustblkgrpj13v2.tab
		Updated Transit to Supermarket map
		Updated Supermarket Connectivity interactive map