APPENDIX D:
Socioeconomic Study

West Richmond Small Urban Area Study

SOCIOECONOMIC REPORT

DECEMBER 2023

Prepared by: Kentucky Transportation Cabinet (KYTC) – Division of Planning

Contents

Introduction

This report presents an overview of the findings for selected socioeconomic characteristics regarding the West Richmond Small Urban Area Study. The purpose of the study is to find ways to help improve accessibility and traffic flow through the Smiths Grove area. The study will center its attention on Richmond, specifically exploring Tates Creek Road and Barnes Mill Road segments west of I-75, including their respective interchanges with I-75.

The information in this report outlines 2016-2020 American Community Survey (ACS) statistics in and near the project area using tables, charts, and maps. The data presented in this document is intended to highlight areas of concern that will require additional analysis should any project be advanced to future phases. Statistics are provided for minority, elderly, poverty status, limited English proficiency (LEP), and disabled populations for the nation, state, counties and block groups located within the project area. This information is intended to aid the Kentucky Transportation Cabinet (KYTC) in making informed and prudent transportation decisions in the project area, especially with regard to the requirements of *Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Poverty status, Populations* (signed February 11, 1994). Executive Order 12898 states:

> "…each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its policies, and activities on minority populations and poverty status, populations…"

The planning study area is composed of the following Census Tract (CT) Block Groups (BG):

- Census Tract 101.03, Madison County, Block Group 1
- Census Tract 102.02, Madison County, Block Group 1
- Census Tract 106.01, Madison County, Block Group 1
- Census Tract 107.01, Madison County, Block Group 1
- Census Tract 107.02, Madison County, Block Group 1
- Census Tract 108.01, Madison County, Block Group 1
- Census Tract 108.02, Madison County, Block Group 1
- Census Tract 109.03, Madison County, Block Group 1

What is Environmental Justice?

The U.S. Department of Transportation (DOT) outlines three primary Environmental Justice Concepts as:

1. To avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority populations and poverty status, populations.
2. To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
3. To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority population and poverty status, populations.

The U.S. DOT order defines minority as:

1. Black (a person having origins in any of the black racial groups of Africa).
2. Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race).
3. Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); or
4. American Indian and Alaskan Native (a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition).

A minority population is "any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant geographically dispersed/transient persons…"

Low-income, is defined in U.S. DOT Order (5610.2) as "a person whose median household income is at or below the Department of Health and Human Services (HHS) poverty guidelines." A low-income population is "any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons…"

A disproportionately high and adverse effect on a minority or low-income population means an adverse effect that:

1. Is predominately borne by a minority population and/or low-income population or

2. Will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

Elderly and disabled populations (also used in this analysis) are not specifically recognized under the definition of an Environmental Justice community. However, the U.S. DOT specifically encourages the early examination of potential populations of the elderly, children, disabled, and other populations protected by the Title VI of the Civil Rights Act of 1964 and related nondiscrimination statuses.

Limited English proficiency (LEP) is a term used in the United States that refers to a person who is not fluent in the English language, often because it is not their native language. Both LEP and English-language learner (ELL) are terms used by the Office for Civil Rights, a sub-agency of the U.S. Department of Education.

Methodology

The data was collected using the method outlined by the KYTC document "Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies". The demographics of the affected area should be defined using U.S. Census Bureau data and the percentages for minorities, poverty status, elderly, LEP, and disabled populations should be compared to the Census tracts, the county, the entire state and the United States.

The primary source of data for this report is the 2016-2020 U.S. Census Bureau American Community Survey including tables:

- B01001 - Sex by Age
- B03002 - Hispanic or Latino Origin by Race
- B16004 - Age by Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over
- B17021 - Poverty Status of Individuals in the Past 12 Months by Living Arrangement
- S1811 – Selected Economic Characteristics for the Civilian Noninstitutionalized Population by Disability Status

The data presented in this document is intended to highlight areas of concern that will require additional analysis should any project be advanced to future phases.

The Census tables in this report include the total number and percentages for minorities, elderly, low-income, LEP, and disabled population levels for the census tract, counties, state, and nation. The project area is in one Area Development Districts: Bluegrass Area Development District. This report uses the population percentages for Madison County as the reference threshold for identifying target populations. The county numbers most likely provide a better snapshot of the overall population characteristics in the study area as opposed to the United States or state percentages.

The methodologies used in this planning document are appropriate for identifying possible areas of concern in small urban areas and potential project corridors. However, during future phases of project development a more detailed and robust analysis would be required for the NEPA documentation when

assessing the potential for adverse and disproportionate impacts to low-income and minority populations.

Study Findings

Richmond SUA Project Area:
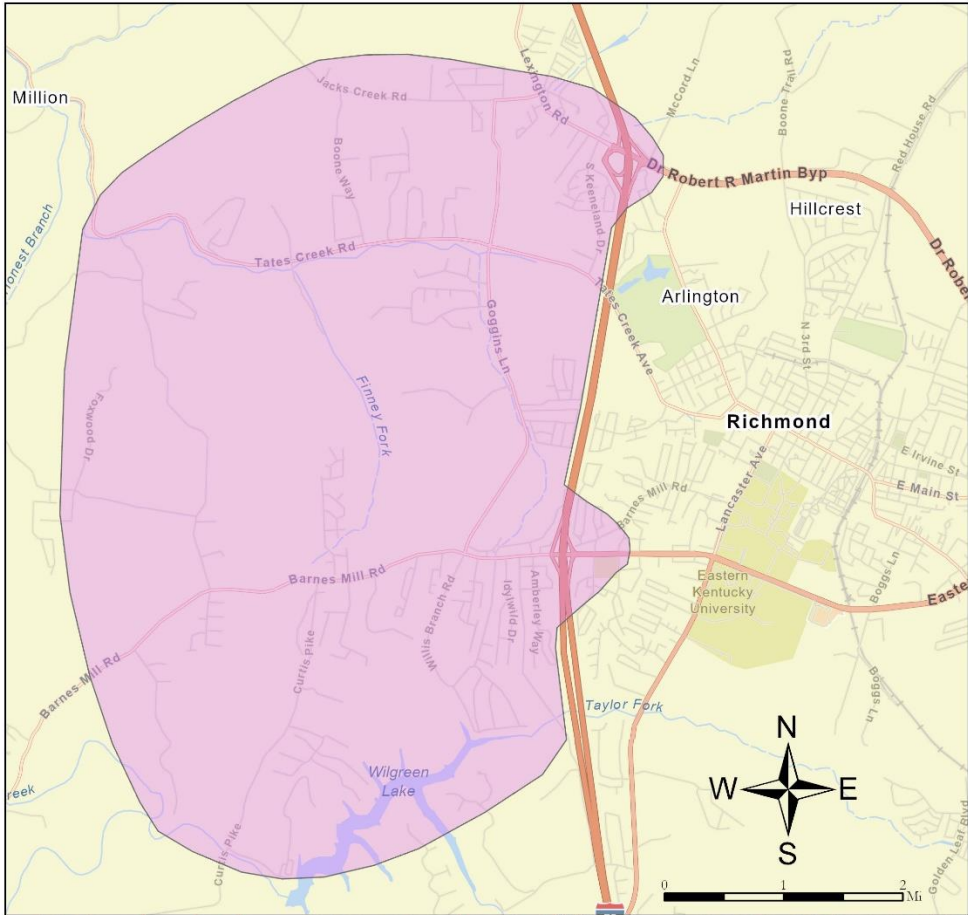
Richmond Socioeconomic Study Area Boundaries

Kentucky Transportation Cabinet, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, HERE, Garmin, NGA, USGS, NPS

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Census Tract 101.03
Block Group 1

Census Tract 107.01
Block Group 1

Census Tract 102.02
Block Group 1

Census Tract 108.01
Block Group 1

Census Tract 107.02
Block Group 1

Census Tract 106.01
Block Group 1

Census Tract 108.02
Block Group 1

Census Tract 109.03
Block Group 1

Richmond

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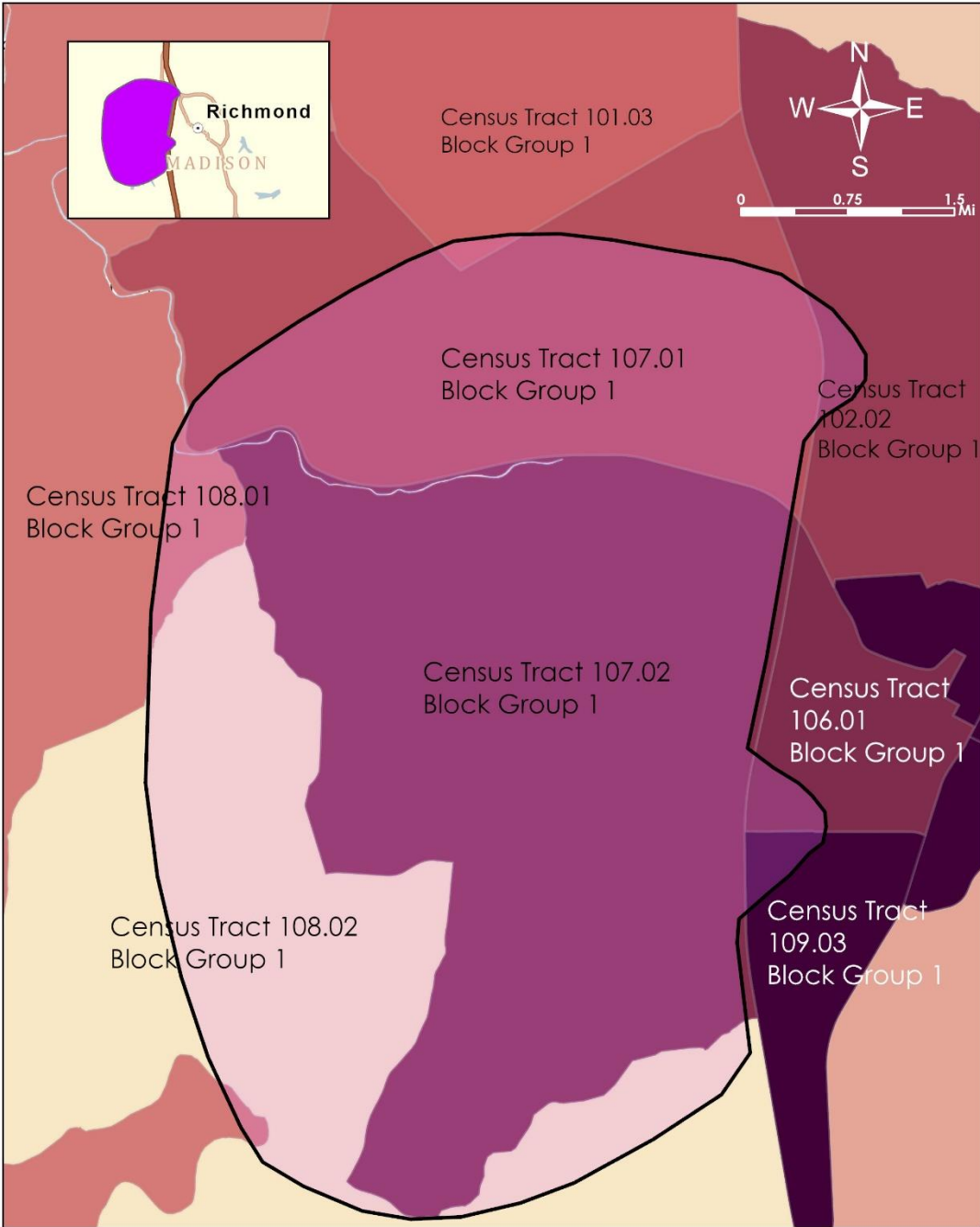
Richmond Socioeconomic Study Census Block Groups

Kentucky Transportation Cabinet, Esri, HERE, Garmin,
SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS,
USDA, Esri, HERE, Garmin, NGA, USGS, NPS

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Hispanic or Latino Population:

Richmond Socioeconomic
Study Hispanic or Latino Population

Source: 2022 American Community Survey Table B03002

Kentucky Transportation Cabinet, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, HERE, Garmin, NGA, USGS, NPS
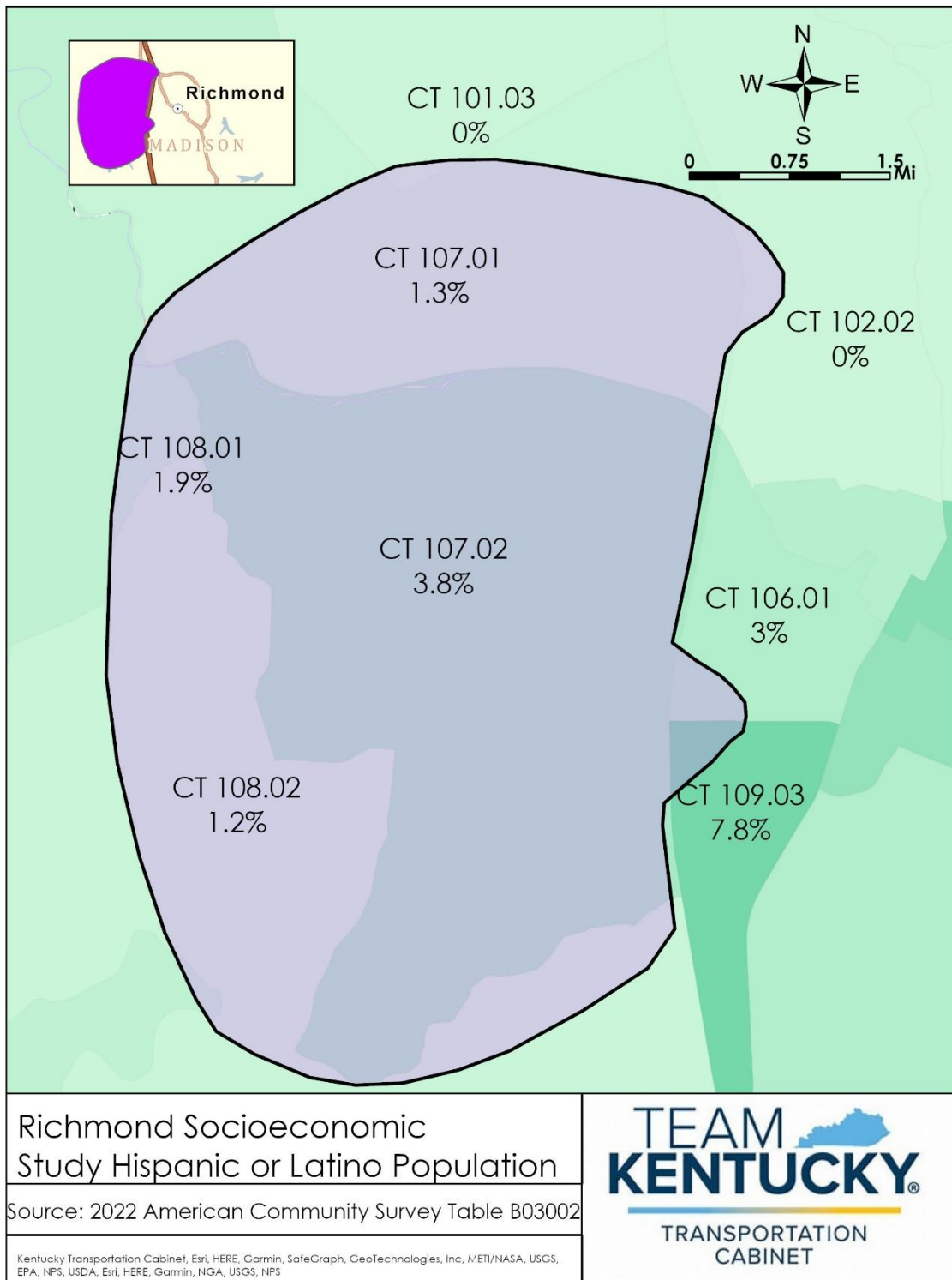
People with Hispanic or Latino origins in the United States make up 19.07% of the population, but in Kentucky that percentage drops significantly to just 4.15%. Madison county's population of racial minorities has a slightly lower percentage compared to Kentucky with the percentage being 2.65%. In the project area, the graph above shows Census Tract 109.03 BG (7.8%), CT 107.02 (3.8%), and CT 106.01 (3%) have the highest percentages of Hispanic or Latino origin within the project area.

CT 101.03, 107.01, and 107.02 have high numbers of minority population that are non-Hispanic or Latino. This is an important factor to consider when creating solutions to serve underrepresented individuals.

Richmond Study Area Minority Demographics breakdown by Census Tract:

Population by Persons Below Poverty Level:

Richmond Socioeconomic Study Poverty Status

Source: 2022 American Community Survey Table B17021

Kentucky Transportation Cabinet, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, HERE, Garmin, NGA, USGS, NPS
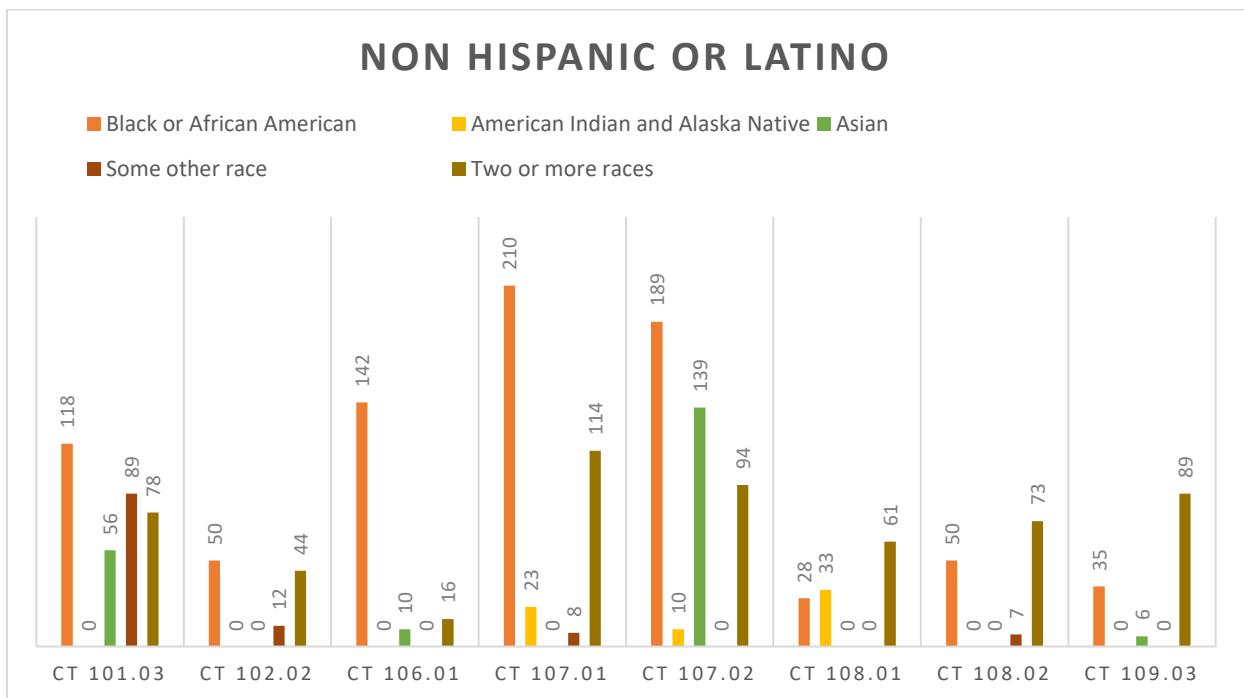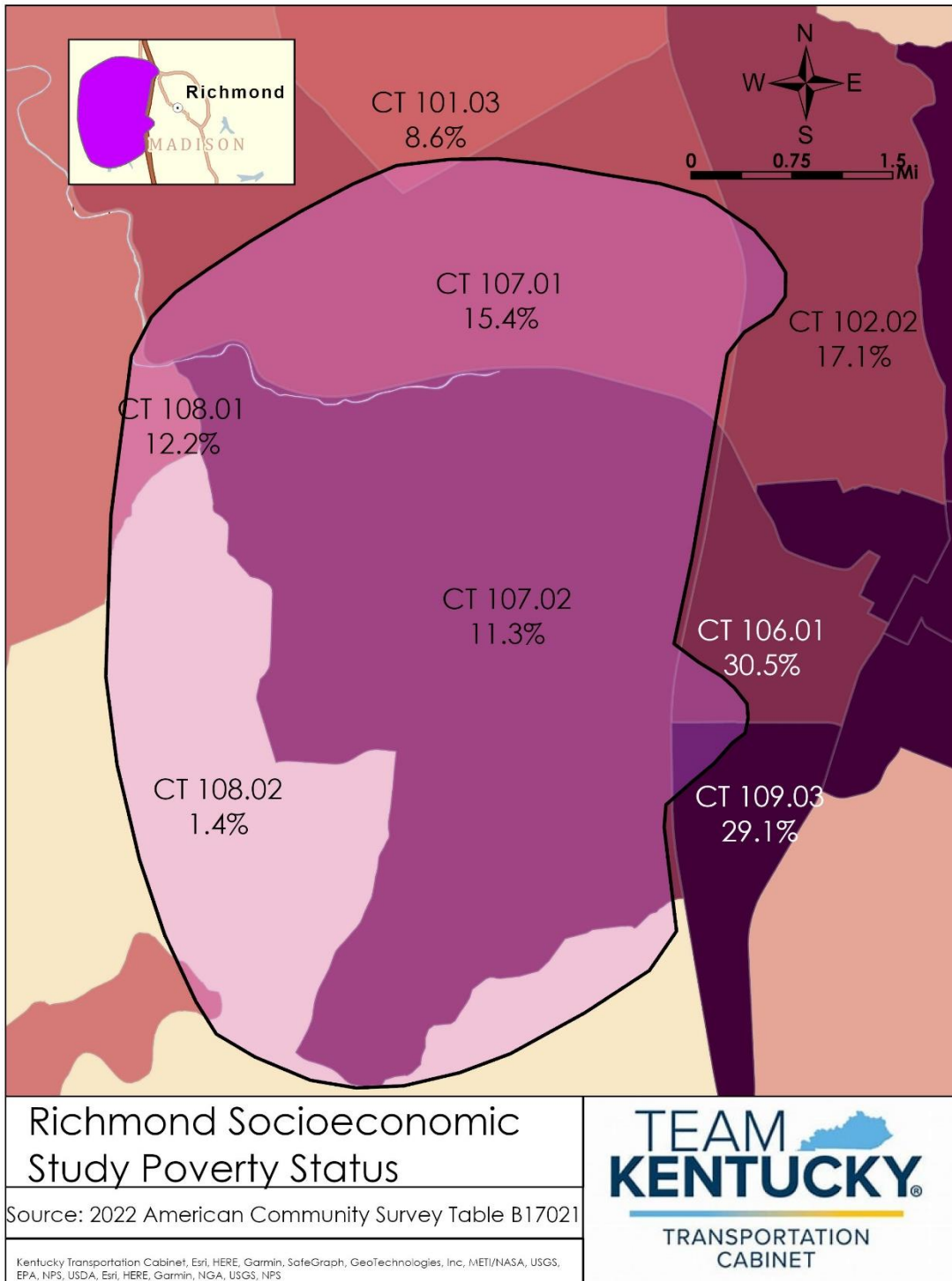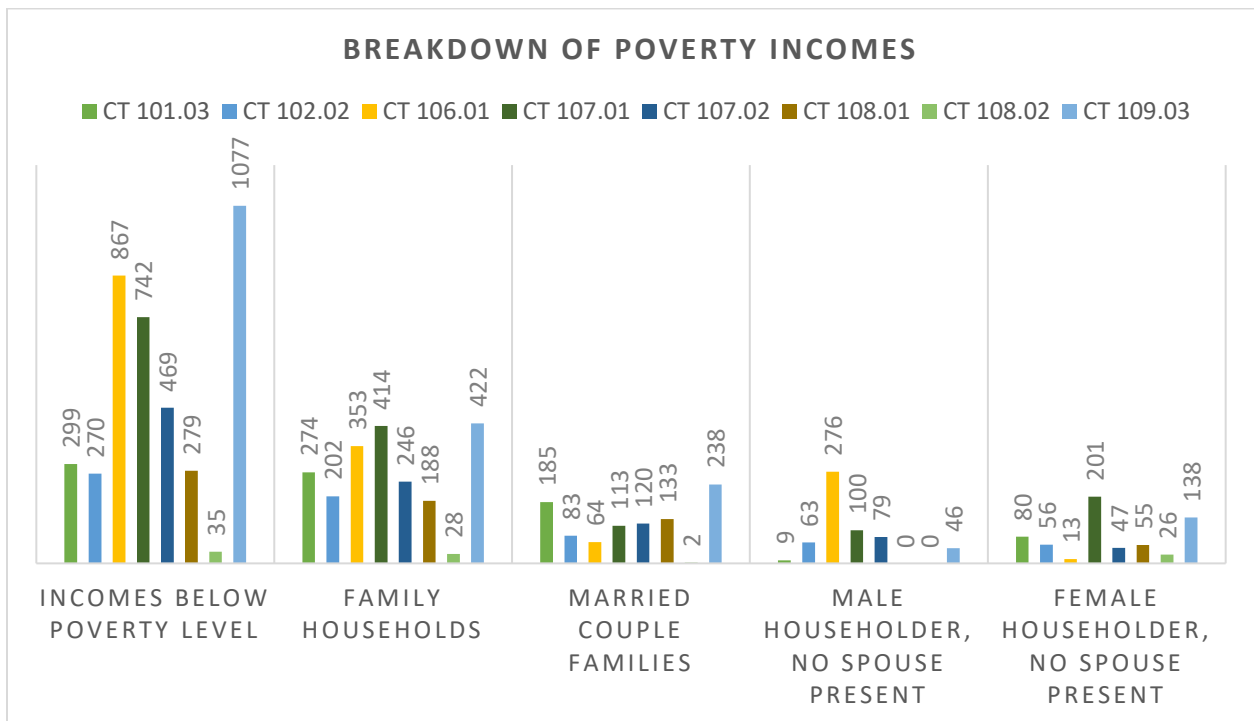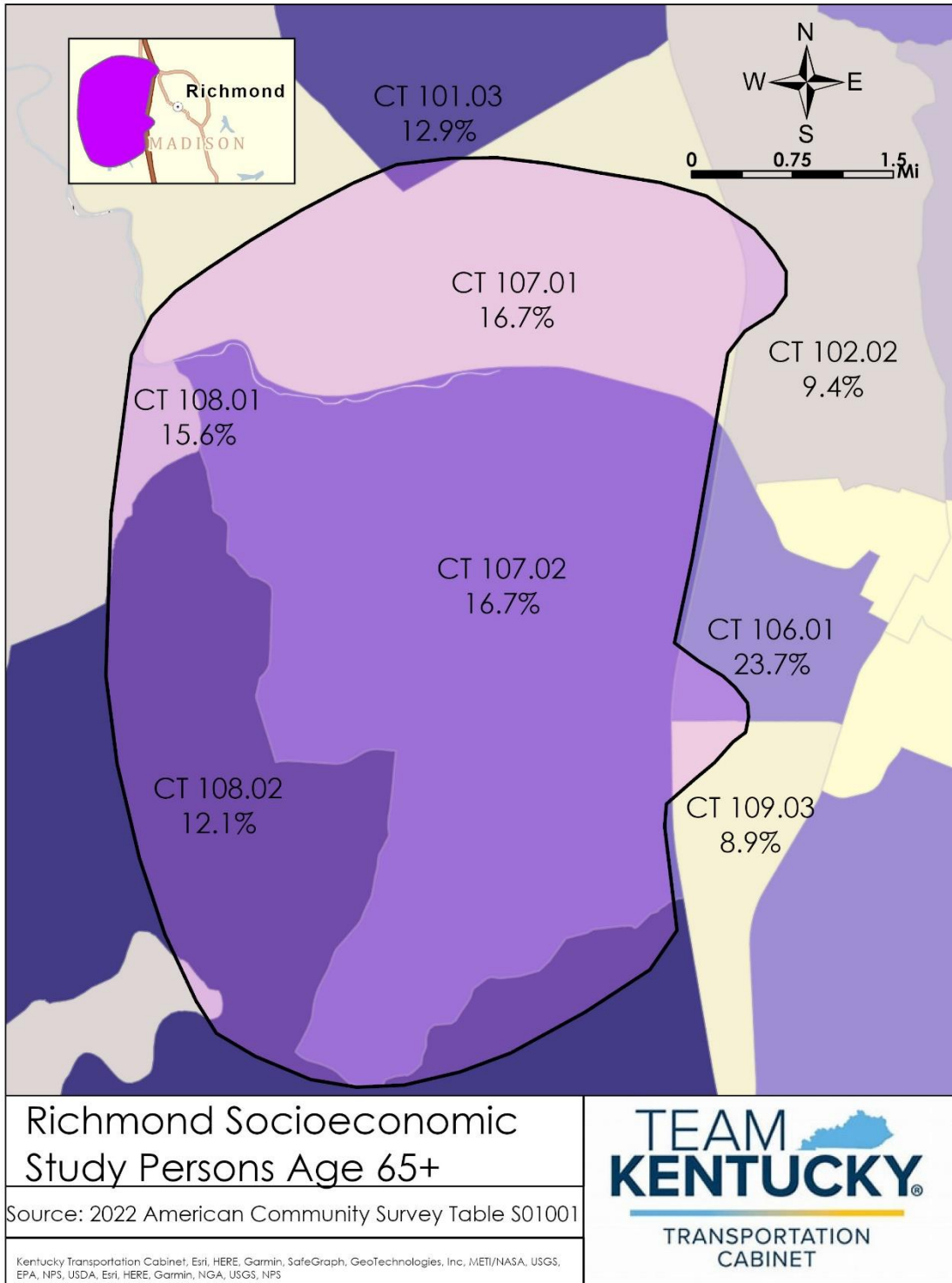
The percentage of persons living below the poverty level in Kentucky (16.61%) is higher than that of the United States (12.53%). Madison County (15.36%) has a lower level of poverty compared to Kentucky (16.61%), but still higher than the United States (12.53%). The City of Richmond's levels of poverty are drastically higher than the national percentage with 24.26% of its citizens living below the poverty level. CT 106.01 has the highest percentages of citizens living below the poverty line with 30.5% of the population in poverty. Conversely, CT 108.02 has the lowest percentage of those living beneath the poverty level with only 1.4% of the population.

Like the importance of percentages, it's important to look at individual numbers. The graph below shows high numbers of those living below the poverty level in CT 109.03, 106.01, and 107.01,

BREAKDOWN OF POVERTY INCOMES

Legend: CT 101.03 · CT 102.02 · CT 106.01 · CT 107.01 · CT 107.02 · CT 108.01 · CT 108.02 · CT 109.03

Category	CT 101.03	CT 102.02	CT 106.01	CT 107.01	CT 107.02	CT 108.01	CT 108.02	CT 109.03
INCOMES BELOW POVERTY LEVEL	299	270	867	742	469	279	35	1077
FAMILY HOUSEHOLDS	274	202	353	414	246	188	28	422
MARRIED COUPLE FAMILIES	185	83	64	113	120	133	2	238
MALE HOUSEHOLDER, NO SPOUSE PRESENT	9	63	276	100	79	0	0	46
FEMALE HOUSEHOLDER, NO SPOUSE PRESENT	80	56	13	201	47	55	26	138

Population by Persons Age 65 Years and Older:

Richmond Socioeconomic Study Persons Age 65+
Source: 2022 American Community Survey Table S01001

Kentucky Transportation Cabinet, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, HERE, Garmin, NGA, USGS, NPS

*Due to lack of available map, the colors do not accurately represent the data.

CT MALE POPULATION AGE 65+

Legend: 65 and 66 years | 67 to 69 years | 70 to 74 years | 75 to 79 years | 80 to 84 years | 85 years and over

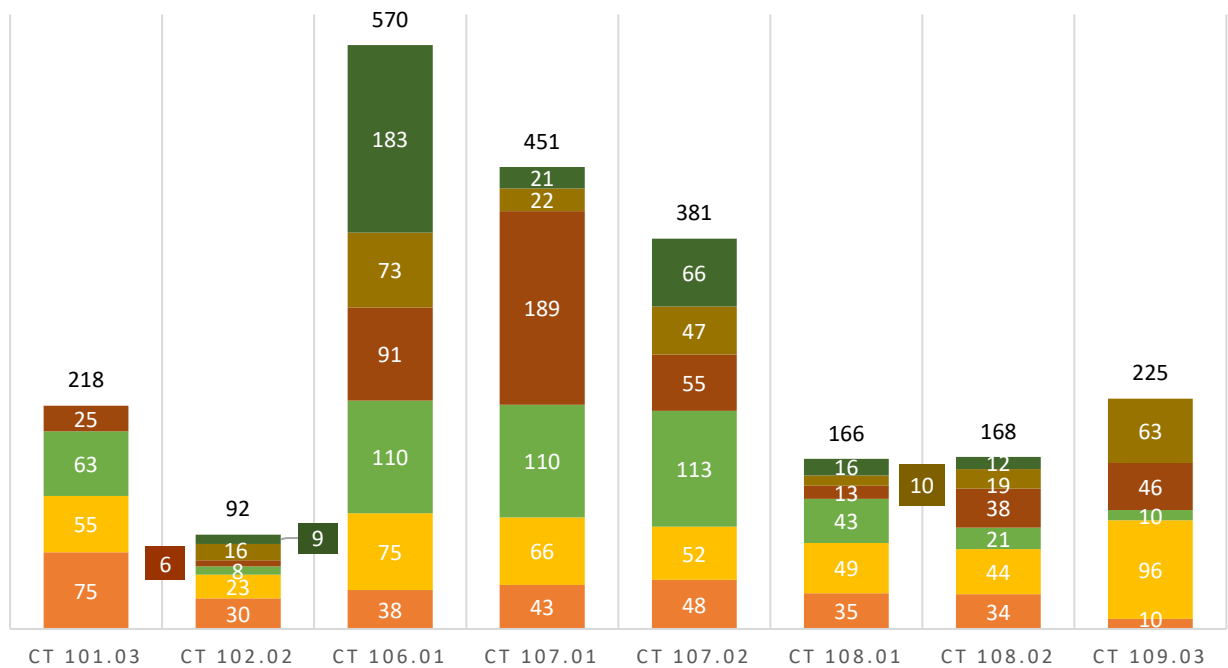| CT 101.03	CT 102.02	CT 106.01	CT 107.01	CT 107.02	CT 108.01	CT 108.02	CT 109.03
240	**56**	**318**	**355**	**314**	**189**	**131**	**103**
23	22	107	38	42	60	9	12
92	15	67	65	8	35	56	26
53	19	43	110	111	47	27	31
72		22	36	88	47	29	34
		56	106	57	10	10	
		23		8			

CT FEMALE POPULATION AGE 65+

Legend: 65 and 66 years | 67 to 69 years | 70 to 74 years | 75 to 79 years | 80 to 84 years | 85 years and over

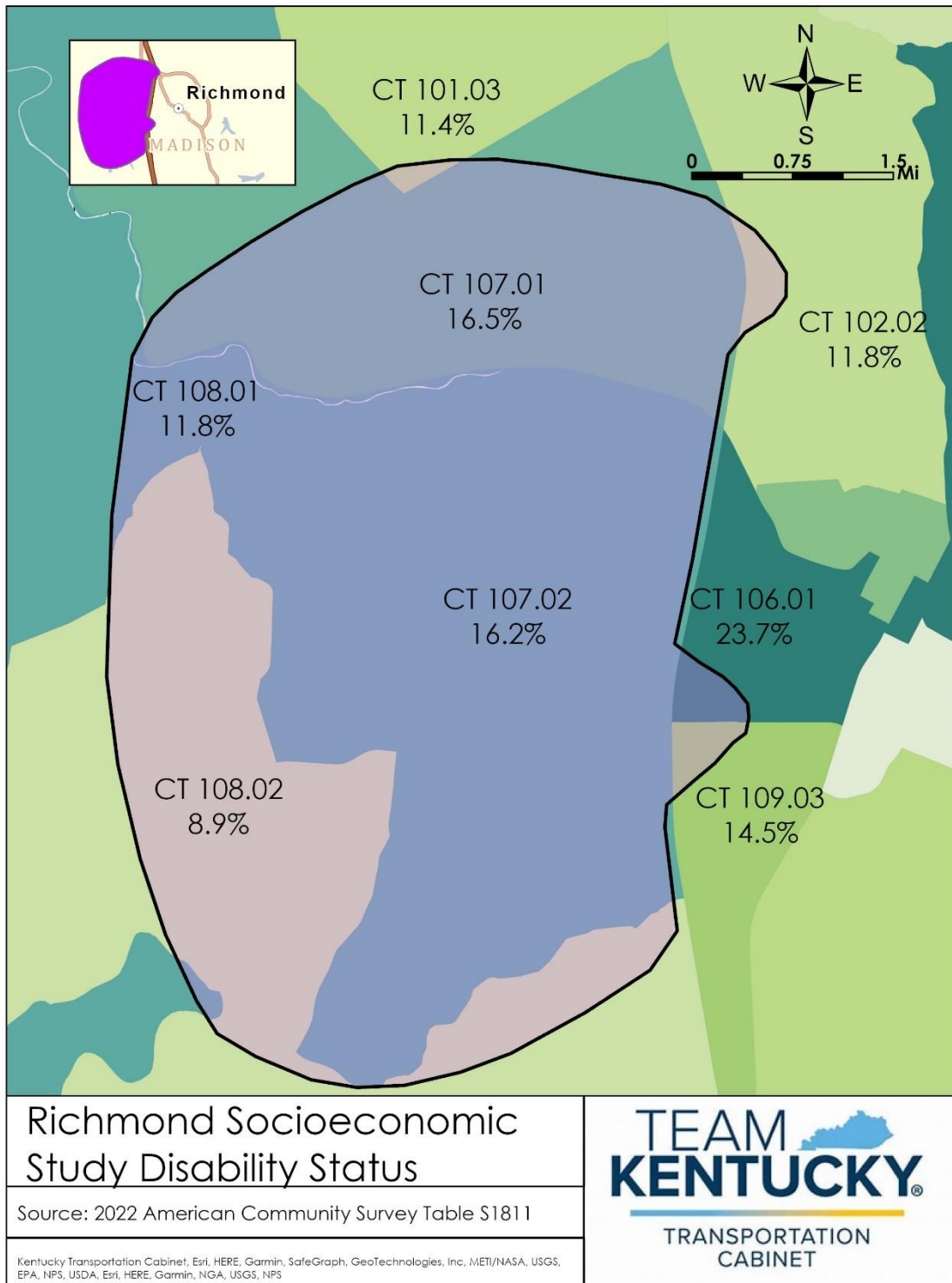| CT 101.03	CT 102.02	CT 106.01	CT 107.01	CT 107.02	CT 108.01	CT 108.02	CT 109.03
218	**92**	**570**	**451**	**381**	**166**	**168**	**225**
25	9	183	21	66	16	12	63
63	16	21	22	47	13	19	46
55	6	73	189	55	43	38	10
75	8	91	110	113	49	21	96
	23	110	66	52	35	44	10
	30	75	43	48	10	34	
		38					

12
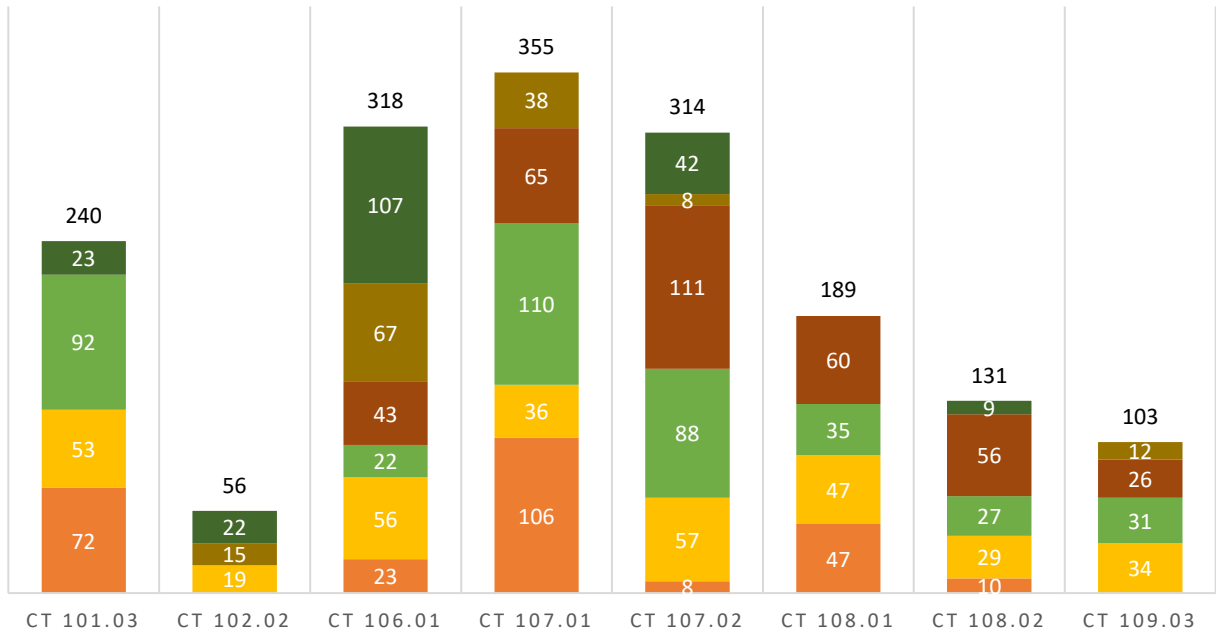
Kentucky's population of 65+ represents 17.5% of the total population. This number is very similar to the entire United States population, with 17.9% of the population being age 65+. On the smaller scale, Madison County's stats are 14.3% age 65+ in the county. Here is a breakdown of the numbers for the Census Tract's:

Percent of Population age 65+

United States	19.2%
Kentucky	17.5%
Madison County	14.3%
CT 101.03	12.9%
CT 102.02	9.4%
CT 106.01	23.7%
CT 107.01	16.7%
CT 107.02	16.7%
CT 108.01	15.6%
CT 108.02	12.1%
CT 109.03	8.9%

Population by Disability Status:

Richmond Socioeconomic Study Disability Status

Source: 2022 American Community Survey Table S1811

Kentucky Transportation Cabinet, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, HERE, Garmin, NGA, USGS, NPS

Kentucky had 21.06% percent of its population age 18 years and older with some type of disability. This is higher than the national percentage (15.6%). Data shows that the disability status in the project area ranges from 8.9% to 23.7%. CT 106.01 had the highest with 23.7%, this is the CT with the highest percentage of 65+ population. The numbers also reveal that minority races have a higher rate of disability. The population of persons over 16 years with a disability in Madison County (18%) is higher than that of the Nation and the percentage is lower than the state of Kentucky's percentage. Richmond (15.82%) data is slightly higher than the United States but remains lower than Kentucky.

Based on the ACS Table S1811, we can look at specific statistics relevant to a transportation study. Here is the data on the rate of commuters:

United States:

	Total Civilian Noninstitutionalized Population	With a Disability	No Disability
	Estimate	Estimate	Estimate
Car, truck, or van - drove alone	68.60%	65.10%	68.90%
Car, truck, or van - carpooled	8.60%	11.00%	8.50%
Public transportation	3.10%	3.60%	3.10%
Walked	2.30%	3.20%	2.30%
Taxicab, motorcycle, bicycle, or other means	2.00%	3.00%	1.90%
Worked from home	15.30%	14.10%	15.40%

Kentucky:

	Total Civilian Noninstitutionalized Population	With a Disability	No Disability
	Estimate	Estimate	Estimate
Car, truck, or van - drove alone	76.00%	70.40%	76.60%
Car, truck, or van - carpooled	9.90%	12.40%	9.60%
Public transportation	0.50%	0.90%	0.40%
Walked	1.70%	2.80%	1.60%
Taxicab, motorcycle, bicycle, or other means	1.40%	2.90%	1.20%
Worked from home	10.50%	10.70%	10.50%

Madison County:

	Total Civilian Noninstitutionalized Population	With a Disability	No Disability
	Estimate	Estimate	Estimate
Car, truck, or van - drove alone	79.10%	70.30%	80.00%
Car, truck, or van - carpooled	9.70%	14.70%	9.30%
Public transportation	0.10%	0.20%	0.10%
Walked	4.50%	5.90%	4.40%
Taxicab, motorcycle, bicycle, or other means	0.80%	2.10%	0.70%
Worked from home	5.70%	6.90%	5.60%

Based on these statistics, we conclude a higher rate of walkers and public transportation users across the United States, Kentucky, and Madison County. Proper accommodations for such modes of transportation should be made in areas with higher disability rates, specifically here in CT 106.01, 102.02, and 109.03.

Population Over 5 Years Old with Limited English Proficiency:

CT 101.03
0%

CT 107.01
0.68%

CT 102.02
0%

CT 108.01
0%

CT 107.02
0%

CT 106.01
0%

CT 108.02
0%

CT 109.03
0.49%

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Population over 5 with LEP

Source: 2022 American Community Survey Table B16004

Kentucky Transportation Cabinet, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, HERE, Garmin, NGA, USGS, NPS

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The Study Area's overall numbers are very low. All but two of the Census Tract's have a 0% Limited English Proficiency (LEP). CT 107.01 and 109.03 show 0.68% and 0.49%, respectively. These are number well below National (4.9%), State (2.4%), and even Madison County (1%). This concludes that the study area does not have a reasonable need to address these issues. The following graph show a more in depth look at the LEP numbers.

Age 5 to 17 with LEP			
	Madison County, Kentucky	**United States**	**Kentucky**
	Estimate	**Estimate**	**Estimate**
Total:	87,240	314,929,363	4,251,877
5 to 17 years:	14,277	53,967,403	744,447
Speak only English	13,597	42,395,802	690,376
Speak Spanish:	491	7,972,525	26,340
Speak English "not well"	17	507,461	973
Speak English "not at all"	0	128,990	409
Speak other Indo-European languages:	28	1,680,851	15,153
Speak English "not well"	0	101,613	1,062
Speak English "not at all"	0	29,161	146
Speak Asian and Pacific Island languages:	130	1,255,736	6,963
Speak English "not well"	0	74,614	420
Speak English "not at all"	0	5,323	74
Speak other languages:	31	662,489	5,615
Speak English "not well"	0	35,299	1,176
Speak English "not at all"	0	3,770	0

Age 18 to 64 with LEP			
	Madison County, Kentucky	**United States**	**Kentucky**
	Estimate	**Estimate**	**Estimate**
Total:	87,240	314,929,363	4,251,877
18 to 64 years:	60,265	203,139,645	2,716,317
Speak only English	57,837	154,409,107	2,536,198
Speak Spanish:	1,116	29,658,708	86,924
Speak English "not well"	129	4,529,776	15,720
Speak English "not at all"	14	2,479,559	7,090
Speak other Indo-European languages:	614	8,269,060	41,917
Speak English "not well"	13	630,335	2,231
Speak English "not at all"	0	142,617	545
Speak Asian and Pacific Island languages:	451	7,952,117	29,075
Speak English "not well"	108	1,045,576	3,730
Speak English "not at all"	15	227,364	962
Speak other languages:	247	2,850,653	22,203
Speak English "not well"	0	223,901	4,168
Speak English "not at all"	0	58,334	968

|	Age 65+ with LEP		
	Madison County, Kentucky	United States	Kentucky
	Estimate	Estimate	Estimate
Total:	87,240	314,929,363	4,251,877
65 years and over:	12,698	57,822,315	791,113
Speak only English	12,353	48,882,668	772,782
Speak Spanish:	90	4,401,305	5,456
Speak English "not well"	52	931,948	1,032
Speak English "not at all"	0	746,643	787
Speak other Indo-European languages:	178	2,132,019	6,772
Speak English "not well"	0	347,024	1,020
Speak English "not at all"	0	134,430	455
Speak Asian and Pacific Island languages:	77	2,001,328	4,928
Speak English "not well"	0	543,702	1,278
Speak English "not at all"	0	256,986	332
Speak other languages:	0	404,995	1,175
Speak English "not well"	0	56,381	244
Speak English "not at all"	0	28,161	202

Conclusion

Census Tract 106.01 and 109.03 were repeating areas of interest. CT 106.01 has the highest rate of

persons age 65+, poverty, and disability. The study area doesn't cover much of these census tracts areas. So, what should be focused on within the study area is the interchanges of I-75 and Barnes Mill Road and I-75 and Tates Creek Road. CT 106.01 and 109.03 have a dense housing population, making it important to service these areas where possible. This means ensuring the interchange can accommodate all forms of transportation, especially micro-mobility solutions. This will accommodate all persons travelling east to west of the major interchange.
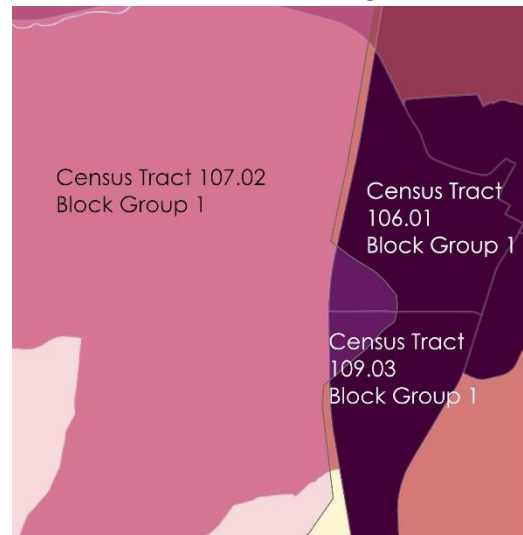
Attention should also be made to Barnes Mill Road, as all accommodations made for travelers at the interchange should continue where possible throughout the road. When planning improvements for these roads, please consider the following recommendations:

1. Public Transit Accessibility- making sure people can travel using multiple modes of transportation if desired. Richmond does have existing transit routes servicing Barnes Mill Road and a major shopping center west of the interchange. Ensuring the existing stations are accessible to all travelers is key.
2. Transit Route Optimization- process of determining the most efficient route for all mode of transportation.
3. Affordability Measures- making transit affordable for all travelers.
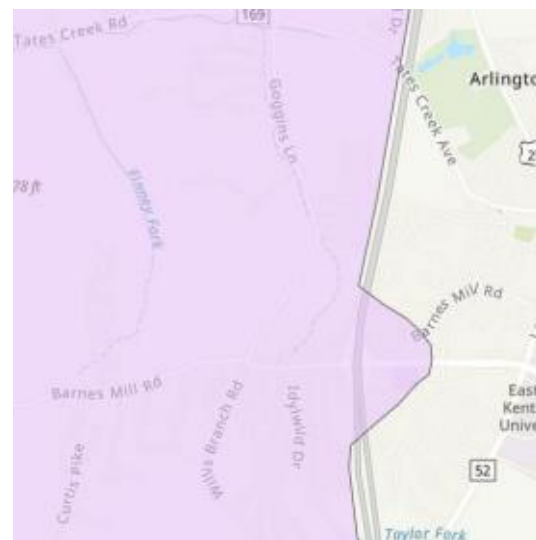
Overall, most of the study area:

- Shows low rates of minority representation.
- On par with national average of poverty rate.
- High representation of persons age 65+.
- Slightly higher disability rate compared to national average.
- Very low rate of persons 5+ with Limited English Proficiency.

During future phases of project development, a more detailed and robust analysis would be required for the NEPA documentation when assessing the potential for adverse and disproportionate impacts to those with disabilities, poverty status, and minority populations.

Appendix: Methodology from KYTC

METHODOLOGY FOR ASSESSING
UNDERSERVED POPULATIONS INCLUDING ENVIRONMENTAL JUSTICE,
TITLE VI, AGE AND DISABILITY IN PLANNING STUDIES
Updated May 2022

Cover Page

Title: Insert specific study
type/area **Subtitle**:
Socioeconomic Study **Date**:
Author:

Analysis

Environmental Justice refers to the fair treatment of all people regardless of race, color, national origin or income. Specifically, agencies must demonstrate meaningful involvement with the above stated groups with respect to development, implementation and enforcement of environmental laws, regulations and policies. Environmental Justice analysis is undertaken for any study that may result in impacts on a minority and/or low-income population that has a federal nexus (funding or approval).

Additionally, KYTC works to identify potential populations of the Elderly, Disabled, Limited English Proficiency and Limited Transportation Options that may be impacted in or near the Affected Community (AC) should highway improvements take place in the future.

Examples of these studies include, but are not limited to:
- Corridor Studies
- Traffic Studies
- Small Urban Area Studies
- Feasibility Studies
- Interchange Justification Studies
- Interchange Modification Reports

Affected communities with potential environmental justice impacts are determined by locating populations of minority, low-income, elderly, disabled, and limited English proficiency and calculating their percentage in the area relative to a reference community of comparison (COC).

Communities of comparison:
- The county percentage
- Kentucky percentage
- Block groups within reasonable proximity of the study area
- United States
- ADD Region

The demographics of the study area should be defined using block group data accessed via the American Community Survey 5-year data. KYTC will work in conjunction with the State Data Center to provide pertinent spatial data on a yearly basis for the following, as the update schedule allows:

- Minority
- Low-income
- Elderly
- Disabled populations
- Limited English Proficiency