
APPENDIX E:

Socioeconomic Study

Owensboro Outer Loop Study Environmental Justice Review

January 2021

Prepared for
Kentucky Transportation Cabinet – Division of Planning



Prepared by
Green River Area Development District



This report has been prepared in cooperation with or with financial assistance from all or several of the following public entities: Federal Transit Administration, Federal Highway Administration, Kentucky Transportation Cabinet, City of Owensboro, Kentucky, and Daviess County, Kentucky. This financial assistance notwithstanding, the contents of this report do not reflect the official views or policies of the funding agencies. Accuracy of the information presented herein is the responsibility of the Green River Area Development District, based upon project information submitted by sponsoring agencies.

Table of Contents

I. Introduction	1
II. What is Environmental Justice?.....	2
III. Methodology	2
IV. Census Data Analysis	3
V. Study Findings.....	5
A. Population by Persons of Minority Origin	6
B. Population by Persons 65 and Older	8
C. Population by Persons with Disabilities.....	10
D. Population by Persons Below Poverty Level.....	12
E. Population by Persons with Limited English Capability	14
VI. Conclusion	16
VII. Appendices	17

List of Tables

Study Area Map	1
Census Tracts in the Study Area	4
Block Groups in the Study Area.....	5
Population by Persons of Minority Origin (Map).....	6
Population by Persons of Minority Origin (Chart)	7
Population by Persons 65 and Older (Map)	8
Population by Persons 65 and Older (Chart).....	9
Population by Persons with Disabilities (Map).....	10
Population by Persons with Disabilities (Chart).....	11
Population by Persons Below Poverty Level (Map).....	12
Population by Persons Below Poverty Level (Chart)	13
Population by Persons with Limited English Capability (Map)	14
Population by Persons with Limited English Capability (Chart).....	15

Appendices

Appendix A: Affected Census Tract and Block Group Table	17
Appendix B: Study Methodology.....	17

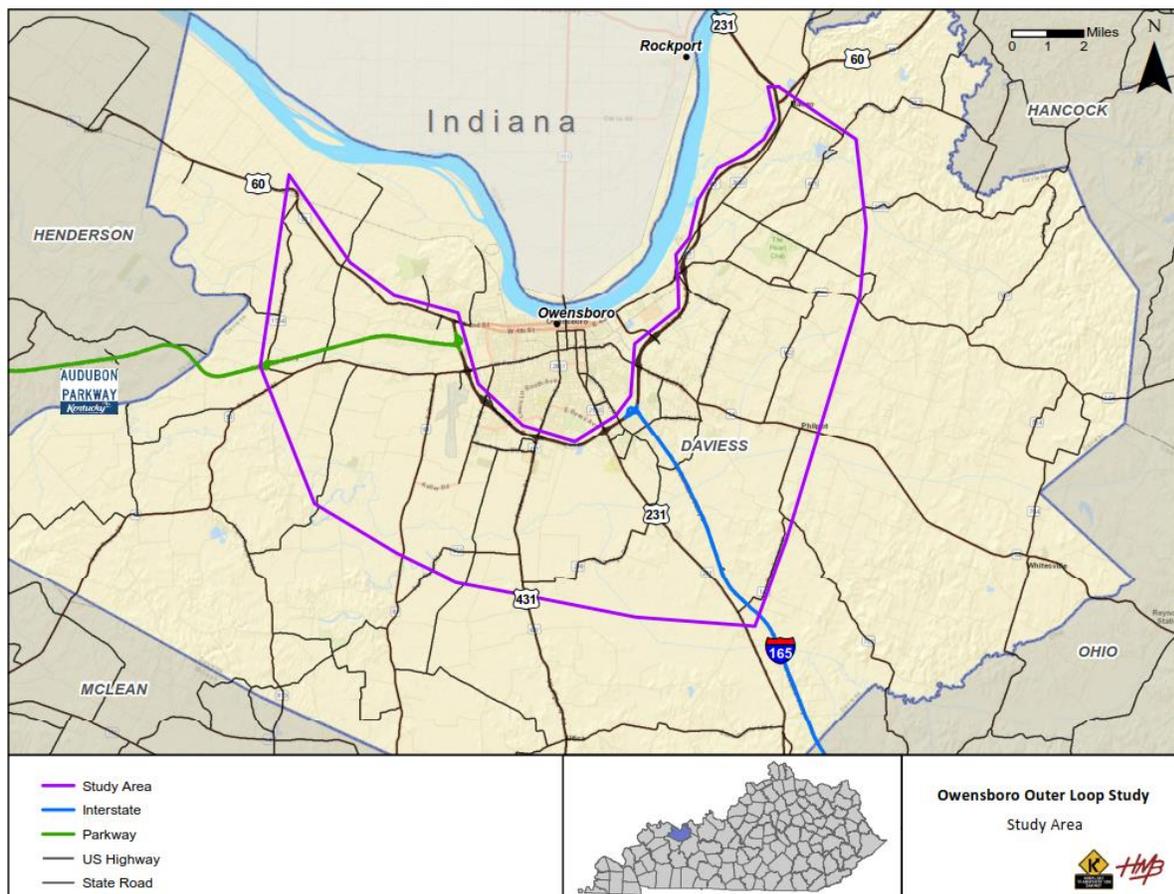
I. Introduction

This document includes a review of socioeconomic characteristics in a study area (**See map below**) for the Owensboro Outer Loop Feasibility Study, in the coverage area of the Owensboro-Daviess County Metropolitan Planning Organization (MPO) and the Green River Area Development District (GRADD). Data for this report comes from the 2014-2018 American Community Survey five-year estimate, using tables, charts and maps. The purpose of the report is to analyze the data and identify potential populations that may be displaced or adversely affected by the recommended improvements proposed in the study. Statistics are provided for minority, elderly, low-income, disabled and limited-English populations for the nation, state, county and Census Tract Block Groups in the project area.

This information is intended to assist 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 Low-Income Populations* (signed February 11, 1994). Executive Order 12898 states (in part):

“...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 low-income populations...”

The project study area is in Daviess County, with the northern boundary running along a portion of U.S. 60, looping around Owensboro, formerly known as the U.S. 60 Bypass. The study area extends south into the county, forming a rough U-shape around the city. Daviess County is in Western Kentucky and comprises 477 square miles.



II. 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 low-income 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 low-income 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 nonminority population and/or non-low-income population.

Elderly and disabled populations are not specifically recognized under the definition of an Environmental Justice community. However, the U.S. DOT specifically encourages the early examination of potential population 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 refers to any person aged 5 or older who reported speaking English less than “very well” as classified by the U.S. Census Bureau. The term “English proficient” refers to people who reported speaking English only or “very well.”

III. Methodology

The data was collected using the method outlined by the KYTC document “Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies” (**See Appendix B**). The demographics of the affected area should be defined using U.S. Census Bureau data and the percentages for minority, low-income, elderly,

disabled and limited-English populations should be compared to the Census Tracts and Block Groups, the county as a whole, the entire state and the United States.

The primary source of data for this report is the 2014-2018 U.S. Census Bureau American Community Survey five-year estimate. Data was drawn from these tables:

- S0101 – Age and Sex
- S1811 – Selected Economic Characteristics for the Civilian Noninstitutionalized Population by Disability Status
- B03002 – Hispanic or Latino Origin by Race
- B17021 – Poverty Status in the Past 12 Months by Living Arrangement
- B16004 – Language spoken at home for population ages 5 or older

The Census tables (**See Appendix A**) in this report include the total number and percentages for Minority, Elderly, Low-Income, Disabled and Limited-English Proficiency population levels for the census tract block group, county, state and nation. For this study, the threshold established was the Daviess County percentage for each population. For Population of Minority Origin, that threshold is **11.6** percent. The threshold for Population Living in Poverty is **16.1** percent. The threshold for Population 65 and older is **16.3** percent, while the threshold for Population with a Disability is **15.7** percent. The threshold for Limited-English Proficiency is **1.94** percent.

IV. Census Data Analysis

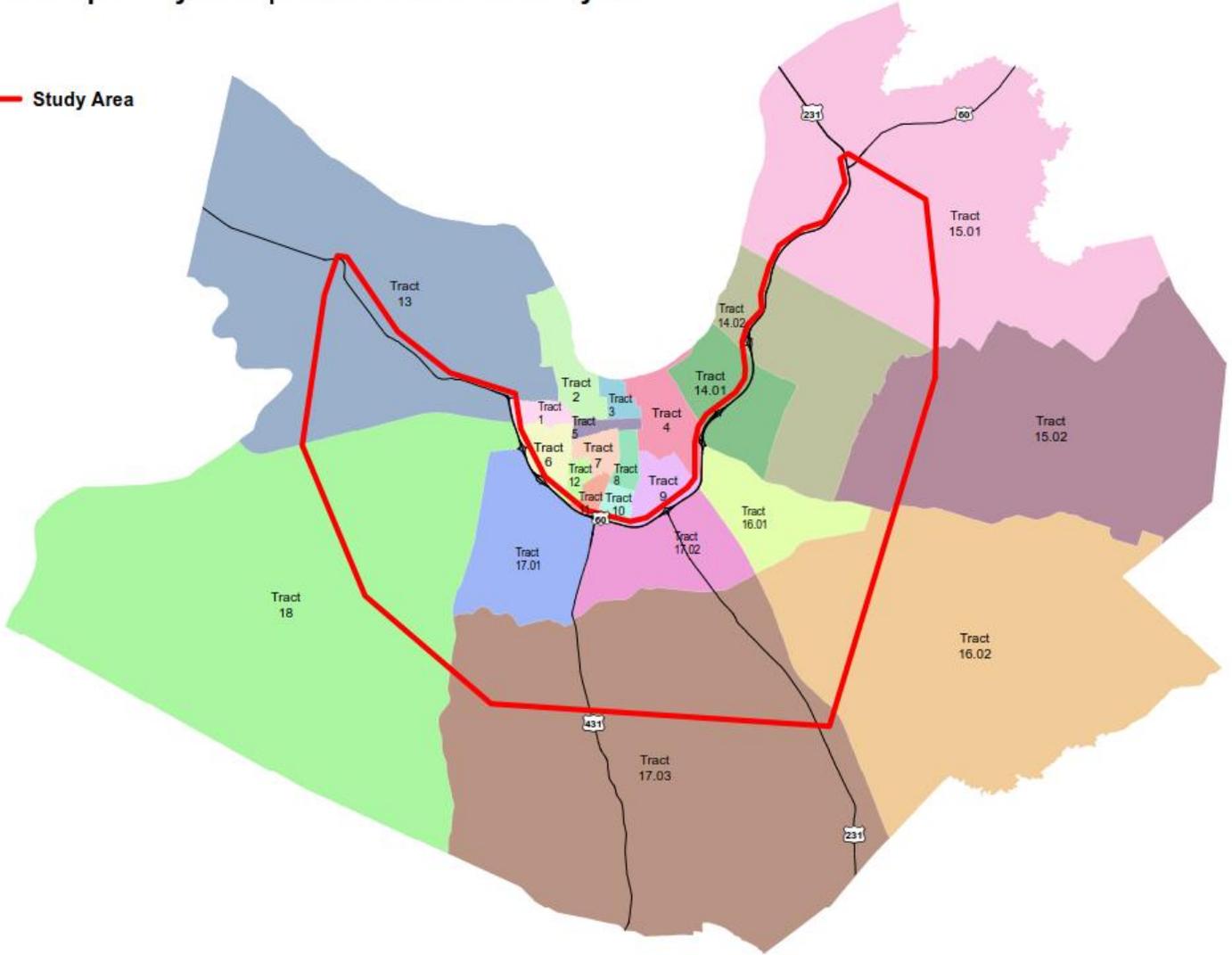
The U.S. Census Bureau defines geographical units as:

Census Tract – A small, relatively permanent statistical subdivision of a county or statistically equivalent entity delineated for data presentation purposes by a local group of census data users or the geographic staff of a regional census center in accordance with Census Bureau guidelines. Census Tracts generally contain between 1,000 and 8,000 people. Boundaries are delineated with the intention of being stable over many decades, so they generally follow relatively permanent visible features. They may also follow governmental unit boundaries and other invisible features in some instances; the boundary of a state or county is always a census tract boundary.

Block Group – A statistical subdivision of a Census Tract. A Block Group consists of all tabulation blocks whose numbers begin with the same digit in a Census Tract. Block Groups generally contain between 300 and 3,000 people, with an optimum size of 1,500 people.

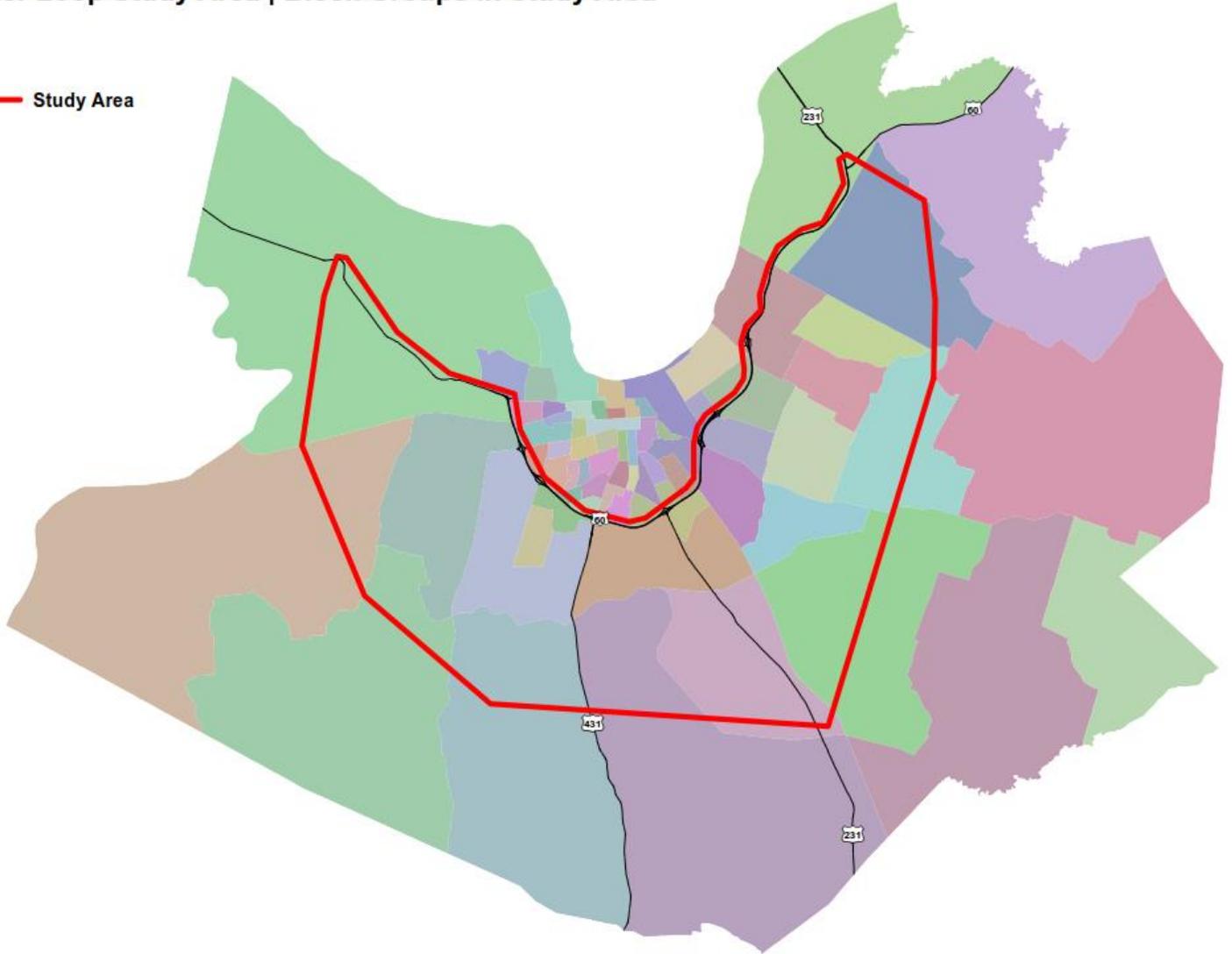
Outer Loop Study Area | Census Tracts in Study Area

 Study Area



Outer Loop Study Area | Block Groups in Study Area

— Study Area



V. Study Findings

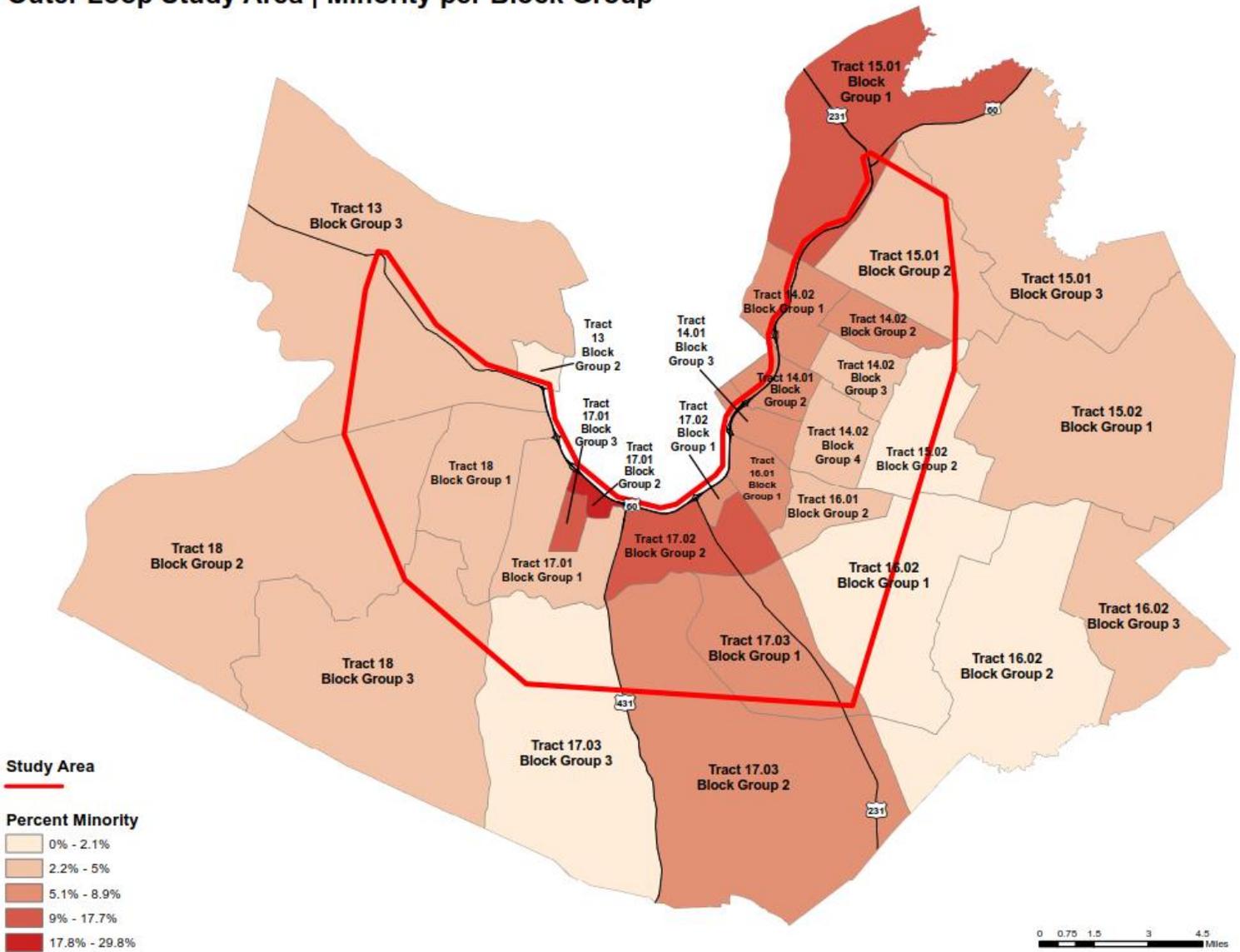
According to the 2014-2018 U.S. Census Bureau American Community Survey five-year estimate, Daviess County is home to 99,937 people. The County is divided into 18 Census Tracts. Eleven Census Tracts are included in the study area, either wholly or a portion. There are 29 Block Groups in the study area. The population of the study area is 40,037, with the greatest population in Census Tract 16.01, Block Group 1 – 3,396 people. The least populated Block Group is Census Tract 14.02, Block Group 1, which has just 801 residents.

A. Population by Persons of Minority Origin

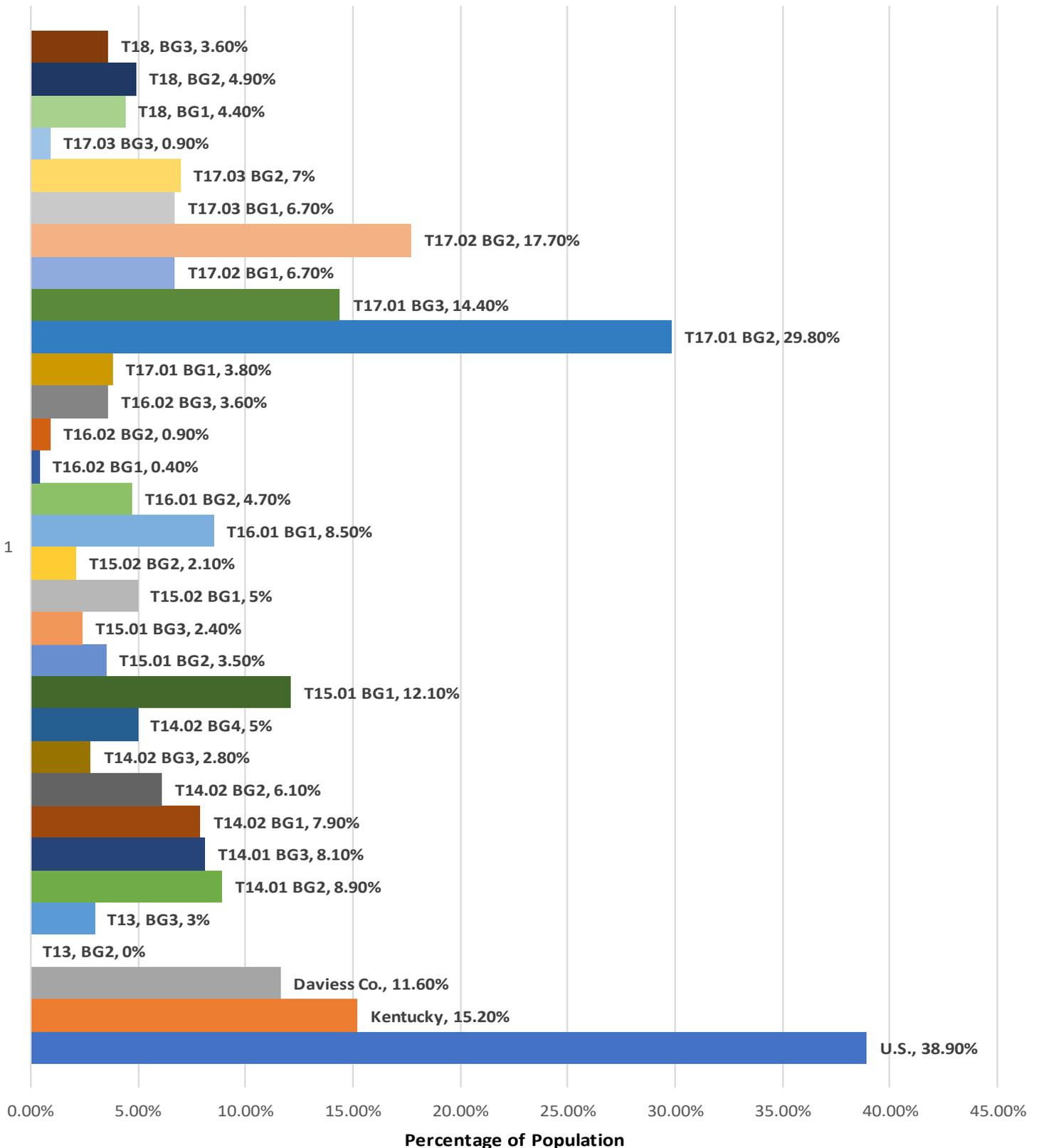
Racial minorities make up 38.9 percent of the United States population, but just 15.2 percent of Kentucky’s population. Daviess County displays an even lower percentage, with 11.6 percent of residents identifying as a minority, according to the 2014-2018 US Census Bureau American Community Survey five-year estimate. Four Block Groups out of the 29 studied exceeded that 11.6 percent threshold:

- Tract 17.01, Block Group 2 represented the highest minority population at 29.8 percent.
- Tract 17.02, Block Group 2 at 17.7 percent.
- Tract 17.01, Block Group 3 at 14.4 percent.
- Tract 15.01, Block Group 1 at 12.1 percent.

Outer Loop Study Area | Minority per Block Group



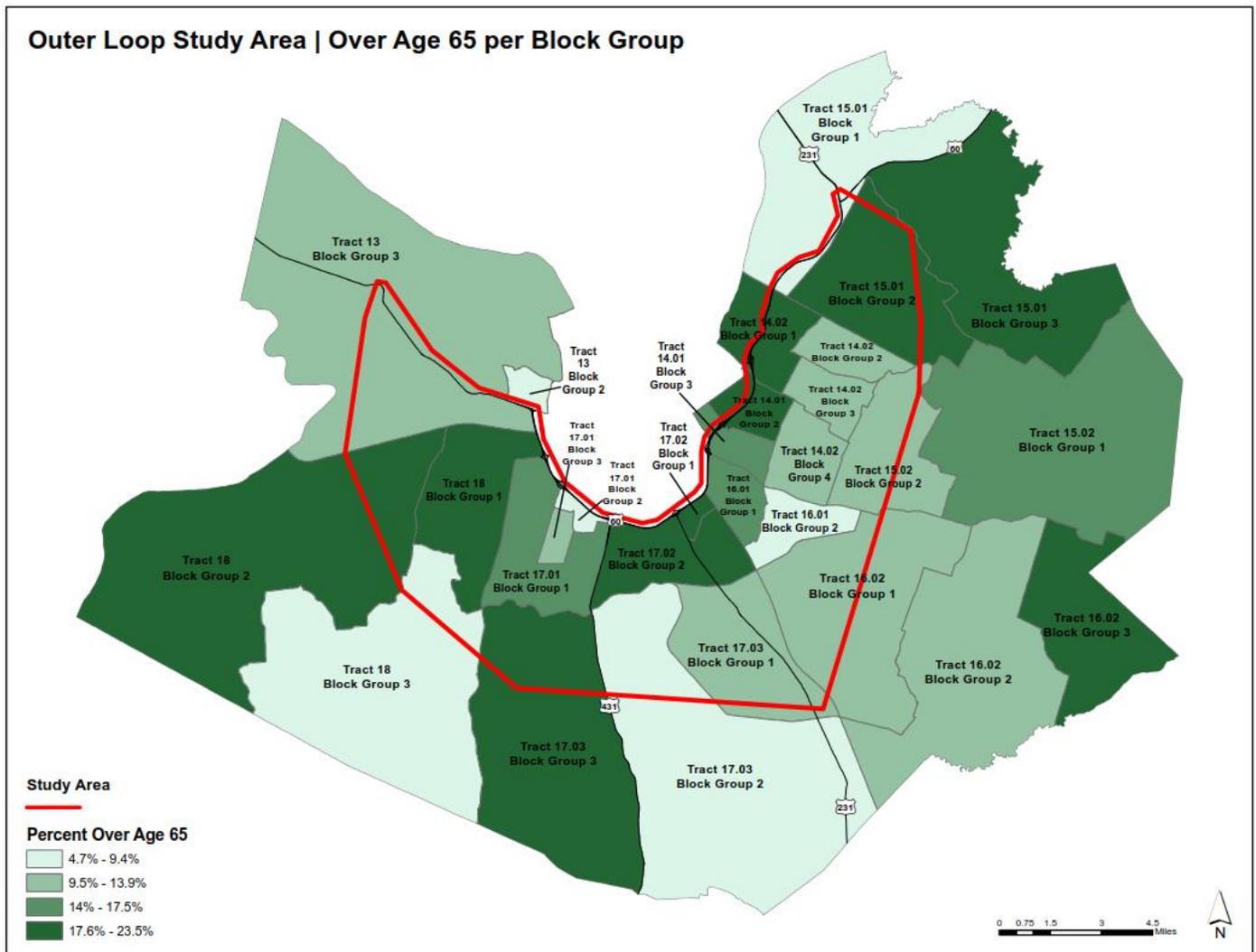
Percentage of Population of Racial Minority Origin

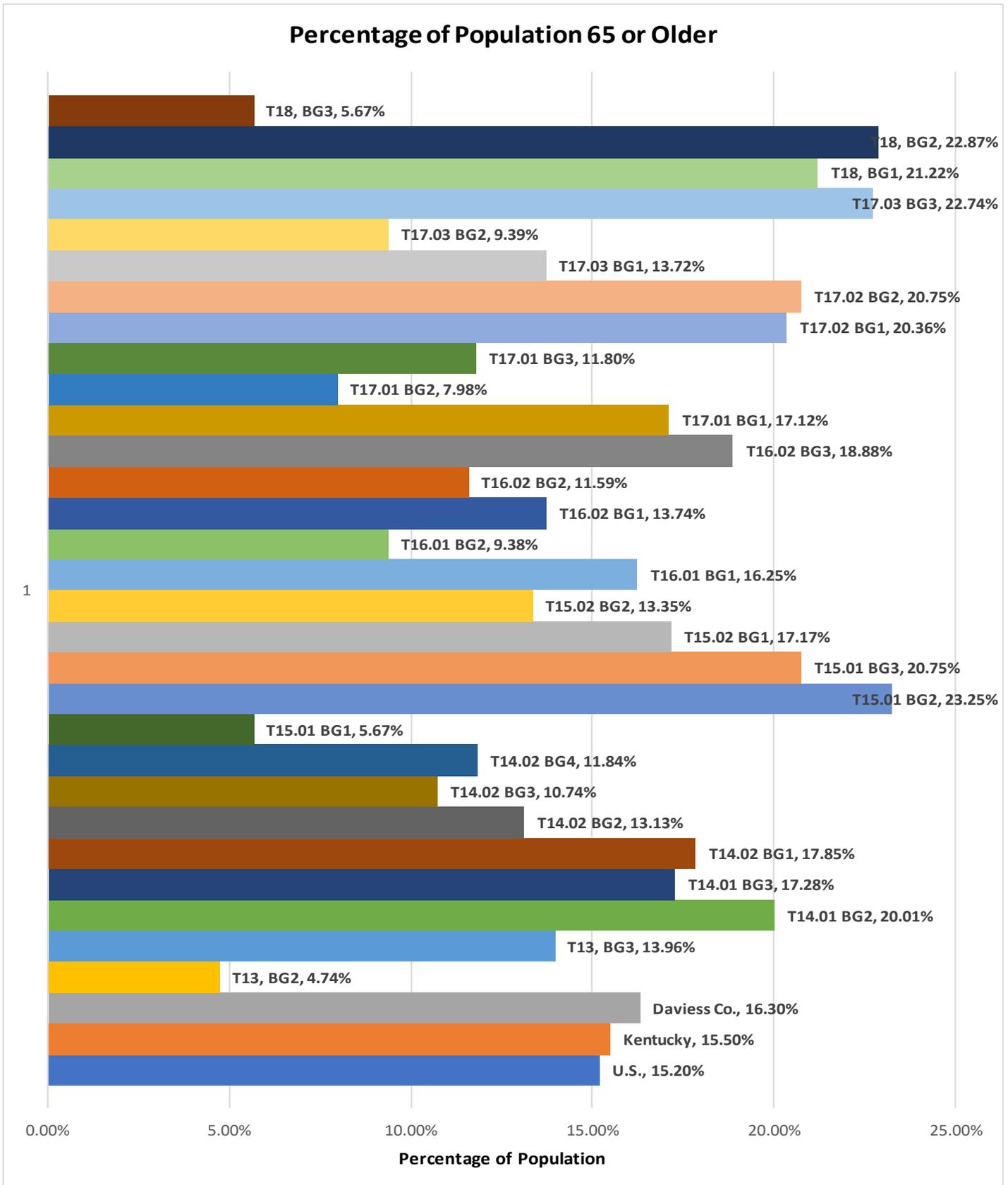


B. Population by Persons Ages 65 and Older

Daviess County is slightly above both the state and national percentages for residents 65 and older. The ACS study found that 16.3 percent of the county’s residents are 65 or older, while that percentage comprised 15.5 percent of Kentucky’s population and 15.2 percent of the population nationwide. Thirteen Block Groups out of the 29 studied exceeded the 16.3 percent threshold:

- Tract 15.01, Block Group 2 at 23.25 percent population 65 or older.
- Tract 18, Block Group 2 at 22.87 percent.
- Tract 17.03, Block Group 3 at 22.74 percent.
- Tract 18, Block Group 1 at 21.22 percent.
- Tract 17.02, Block Group 2 at 20.75 percent.
- Tract 15.01, Block Group 3 at 20.75 percent.
- Tract 17.02, Block Group 1 at 20.36 percent.
- Tract 14.01, Block Group 2 at 20.01 percent.
- Tract 16.02, Block Group 3 at 18.88 percent.
- Tract 14.02, Block Group 1 at 17.85 percent.
- Tract 14.01, Block Group 3 at 17.28 percent.
- Tract 15.02, Block Group 1 at 17.17 percent.
- Tract 17.01, Block Group 1 at 17.12 percent.

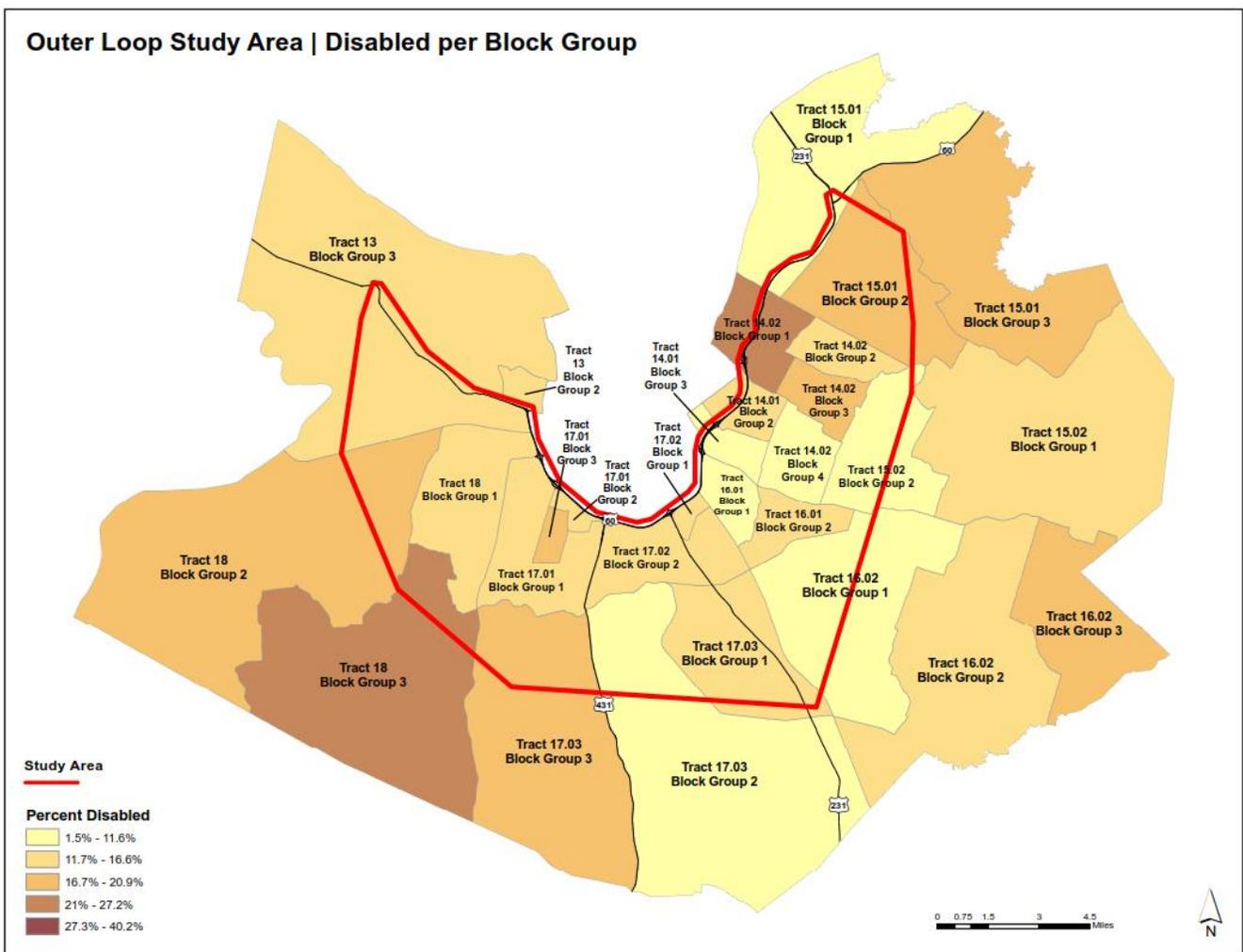




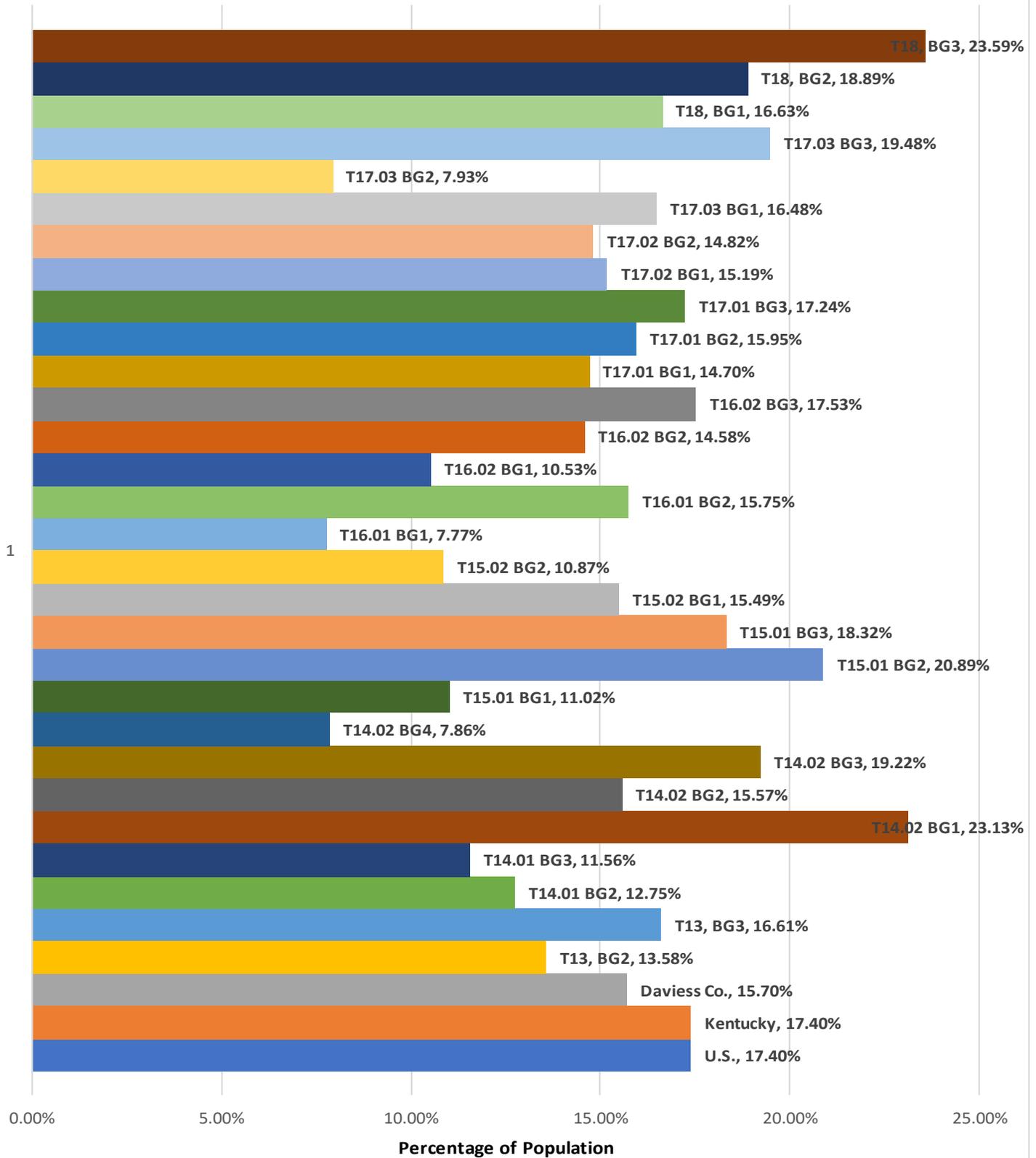
C. Population by Persons with Disabilities

Daviess County is below both the state and national percentages for residents 16 and older living with a disability. Kentucky and the United States both reported that 17.4 percent of residents 16 or older have a disability. In Daviess County, that group represents 15.7 of the population. Fourteen Block Groups out of the 29 studied exceeded the 15.7 percent threshold:

- Tract 18, Block Group 3 at 23.59 percent residents with a disability.
- Tract 14.02, Block Group 1 at 23.13 percent.
- Tract 15.01, Block Group 2 at 20.89 percent.
- Tract 17.03, Block Group 3 at 19.48 percent.
- Tract 14.02, Block Group 3 at 19.22 percent.
- Tract 18, Block Group 2 at 18.89 percent.
- Tract 15.01, Block Group 3 at 18.32 percent.
- Tract 16.02, Block Group 3 at 17.53 percent.
- Tract 17.01, Block Group 3 at 17.24 percent.
- Tract 18, Block Group 1 at 16.63 percent.
- Tract 13, Block Group 3 at 16.61 percent.
- Tract 17.03, Block Group 1 at 16.48 percent.
- Tract 17.01, Block Group 2 at 15.95 percent.
- Tract 16.01, Block Group 2 at 15.75 percent.



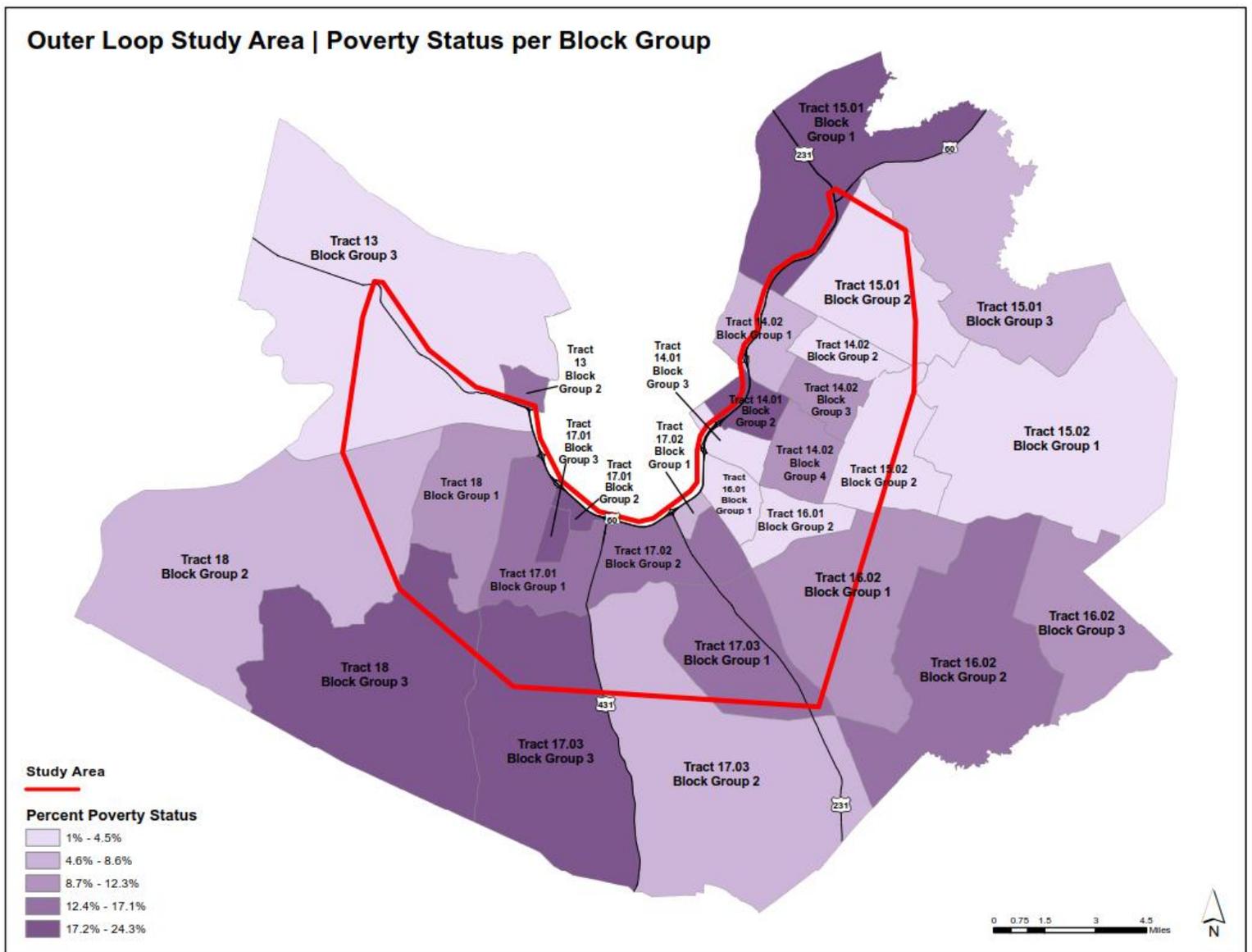
Percentage of Population with a Disability (16 and Older)



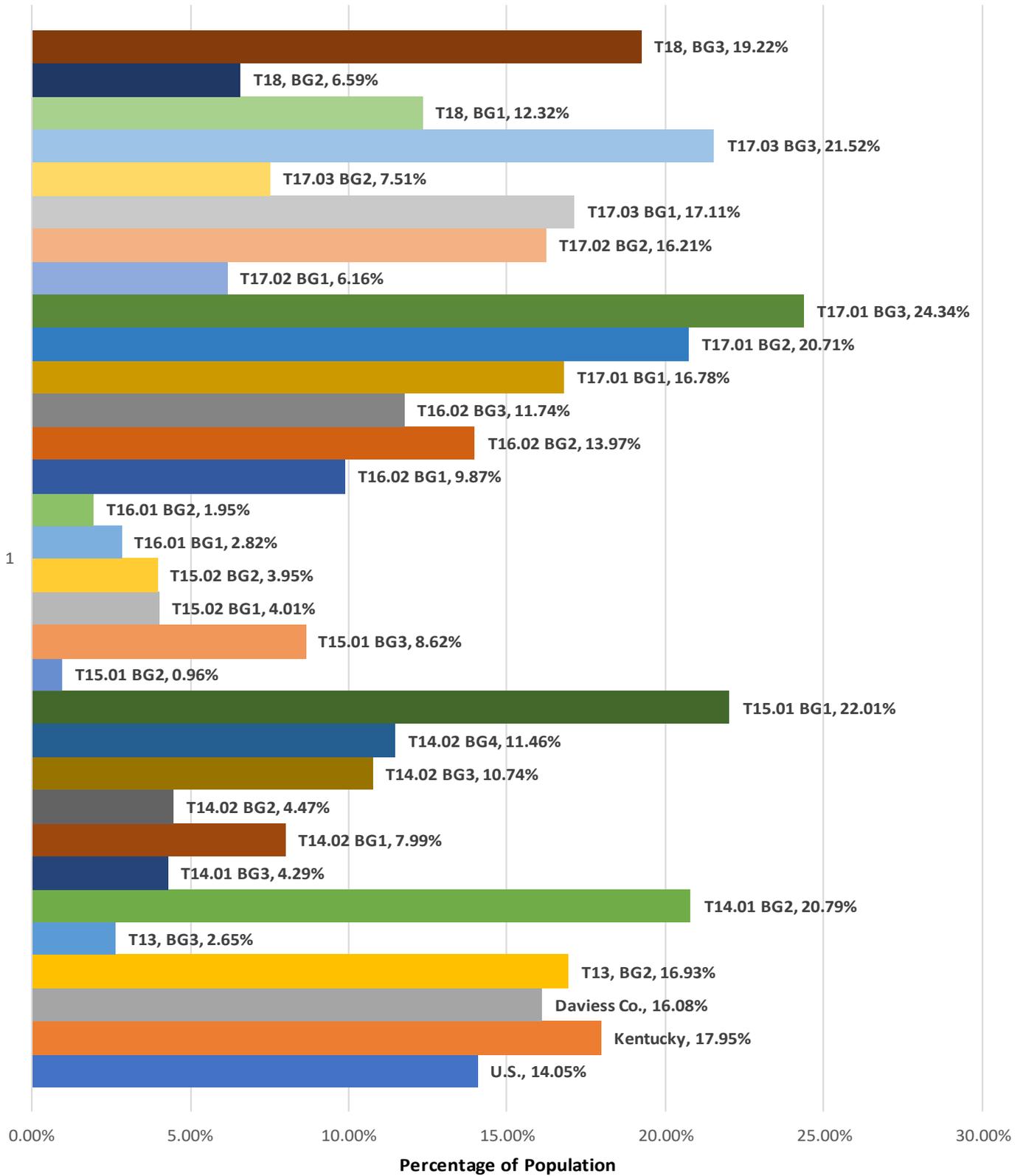
D. Population by Persons Living in Poverty

The percentage of Daviess County residents living in poverty (16.1 percent) exceeds the national average of 14.1 percent but is well below Kentucky’s statewide average of 17.9 percent. Ten Block Groups out of the 29 studied exceeded the 16.1 percent threshold:

- Tract 17.01, Block Group 3 at 24.34 percent population living in poverty.
- Tract 15.01, Block Group 1 at 22.01 percent.
- Tract 17.03, Block Group 3 at 21.52 percent.
- Tract 14.01, Block Group 2 at 20.79 percent.
- Tract 17.01, Block Group 2 at 20.71 percent.
- Tract 18, Block Group 3 at 19.22 percent.
- Tract 17.03, Block Group 1 at 17.11 percent.
- Tract 13, Block Group 2 at 16.93 percent.
- Tract 17.01, Block Group 1 at 16.78 percent.
- Tract 17.02, Block Group 2 at 16.21 percent.



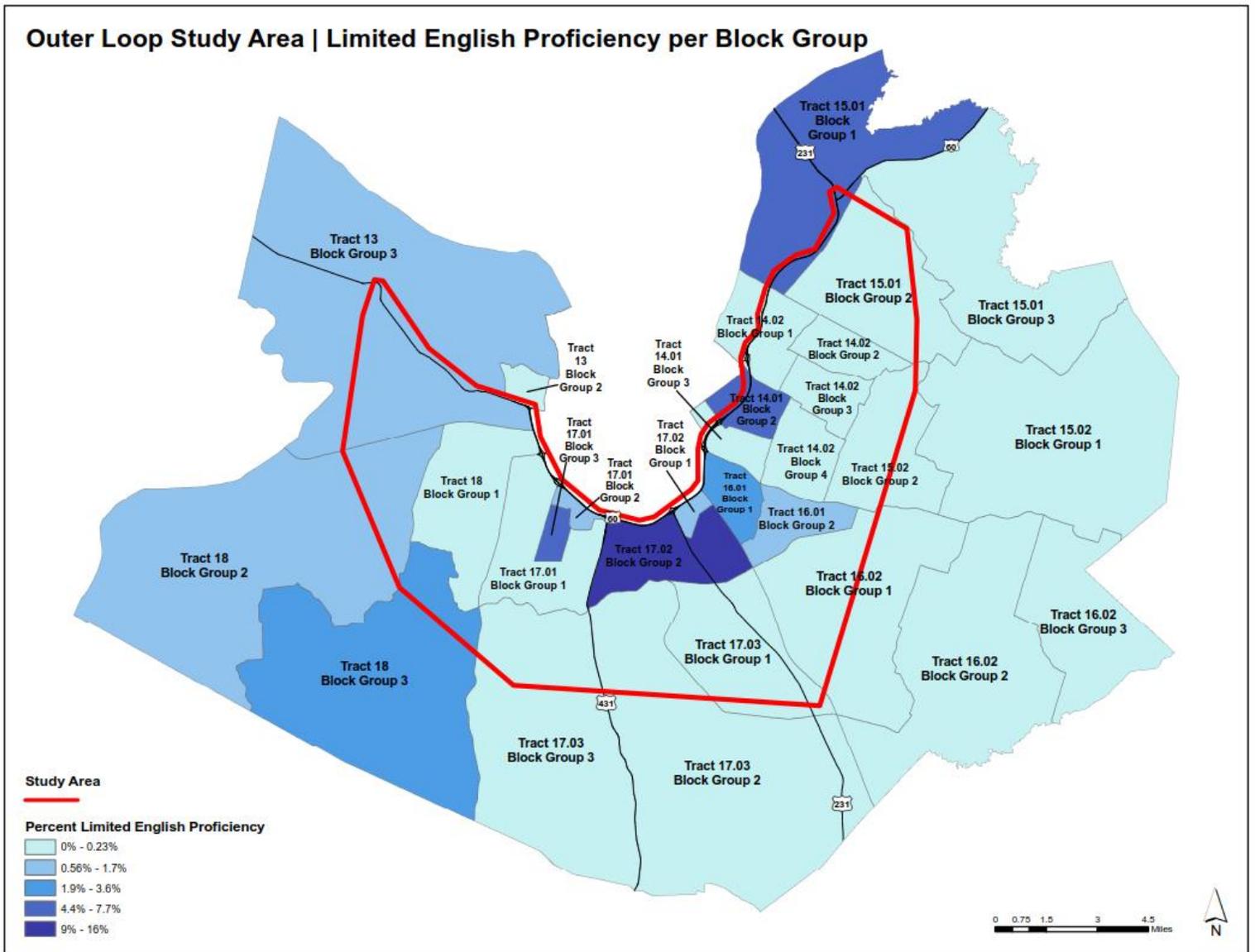
Percentage of Population living in Poverty



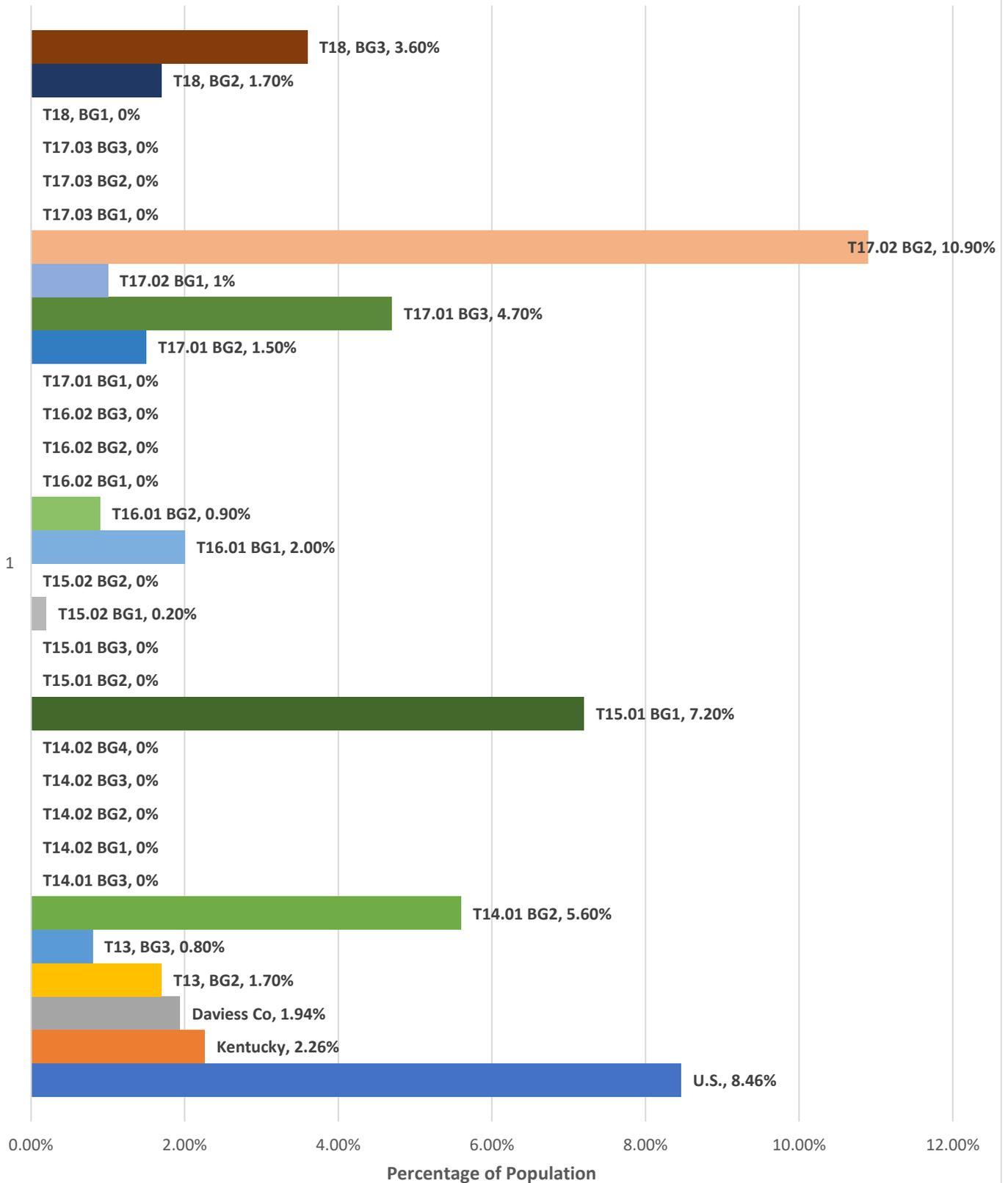
E. Population by Persons with Limited English Proficiency

Daviess County is below both the state and national percentages for residents five and older with a limited English proficiency. Nationwide, 8.46 percent of the population do not speak English well. In Kentucky, that percentage is 2.26 percent. In Daviess County 1.94 percent of residents have limited English proficiency. Six Block Groups out of the 29 studied exceeded the 1.94 percent threshold:

- Tract 17.02, Block Group 2 at 10.9 percent residents with limited English capability.
- Tract 15.01, Block Group 1 at 7.2 percent.
- Tract 14.01, Block Group 2 at 5.6 percent.
- Tract 17.01, Block Group 3 at 4.7 percent.
- Tract 18, Block Group 3 at 3.6 percent.
- Tract 16.01, Block Group 1 at 2.2 percent.



Percentage of Population with Limited English Proficiency



VI. Conclusion

In each of the five categories examined, at least one block group exceeded the county threshold.

Four of the 29 Block Groups exceeded the threshold for minority residence. Thirteen Block Groups exceeded the threshold in population of 65 or older. Fourteen exceeded the threshold in population living with a disability. Ten Block Groups exceeded the threshold in population living in poverty. Six exceeded the threshold in limited English proficiency. (See Appendix A)

While no Block Group exceeded the county threshold in all five areas examined, several showed up in multiple categories. Six Block Groups didn't exceed the threshold in any category.

Four categories

Two block groups exceeded the county thresholds in four categories:

- 17.01 BG 3 – minority residents, residents in poverty, residents with a disability and residents with limited English proficiency
- 17.02 BG2 – minority residents, residents in poverty, residents 65 or older and residents with limited English proficiency

Three categories

Five block groups exceeded the county thresholds in three categories:

- T14.01 BG2 – residents in poverty, residents 65 or older and residents with limited English proficiency
- T15.01 BG1 – minority residents, residents in poverty and residents with limited English proficiency
- 17.01 BG 2 – minority residents, residents in poverty and residents with a disability
- 17.03 BG 3 – residents in poverty, residents 65 or older and residents with a disability
- T 18 BG 3 – residents in poverty, residents with a disability and residents with limited English proficiency

Two Categories

Eight block groups exceeded the county thresholds in two categories:

- T14.02 BG 1 – residents 65 or older and residents with a disability
- T15.01 BG2 – residents 65 or older and residents with a disability
- T15.01 BG3 – residents 65 or older and residents with a disability
- T16.02 BG 3 – residents 65 or older and residents with a disability
- T17.01, BG 1 – residents in poverty and residents 65 or older
- T17.03 BG 1 – residents in poverty and residents with a disability
- T18 BG 1 – residents 65 or older and residents with a disability
- T18 BG 2 – residents 65 or older and residents with a disability

VI. Appendices

Appendix A: Affected Census Tract and Block Group Table

County		Total Population	Minority	Over 65	Disability	Poverty	LEP
Daviess		99,937	11.6%	16.3%	15.7%	16.08%	1.94%
Census Tract	Block Group						
13	2	1,939	0%	4.74%	13.58%	16.93%	1.7%
13	3	2,692	3%	13.96%	16.61%	2.65%	0.8%
14.01	2	1,294	8.9%	20.01%	12.75%	20.79%	5.6%
14.01	3	2,321	8.1%	17.28%	11.56%	4.29%	0.0%
14.02	1	801	7.9%	17.85%	23.13%	7.99%	0.0%
14.02	2	1,028	6.1%	13.13%	15.57%	4.47%	0.0%
14.02	3	1,834	2.8%	10.74%	19.22%	10.74%	0.0%
14.02	4	1,579	5%	11.84%	7.86%	11.46%	0.0%
15.01	1	1,163	12.1%	5.67%	11.02%	22.01%	7.2%
15.01	2	1,458	3.5%	23.25%	20.89%	0.96%	0.0%
15.01	3	824	2.4%	20.75%	18.32%	8.62%	0.0%
15.02	1	1,846	5%	17.17%	15.49%	4.01%	0.2%
15.02	2	1,393	2.1%	13.35%	10.87%	3.95%	0.0%
16.01	1	3,396	8.5%	16.25%	7.77%	2.82%	2.2%
16.01	2	1,077	4.7%	9.38%	15.75%	1.95%	0.9%
16.02	1	1,506	0.4%	13.74%	10.53%	9.87%	0.0%
16.02	2	1,518	0.9%	11.59%	14.58%	13.97%	0.0%
16.02	3	1,414	3.6%	18.88%	17.53%	11.74%	0.0%
17.01	1	876	3.8%	17.12%	14.7%	16.78%	0.0%
17.01	2	3,018	29.8%	7.98%	15.95%	20.71%	1.5%
17.01	3	2,186	14.4%	11.8%	17.24%	24.34%	4.7%
17.02	1	1,591	6.7%	20.36%	15.19%	6.16%	1.0%
17.02	2	1,585	17.7%	20.75%	14.82%	16.21%	10.9%
17.03	1	1,268	6.7%	13.72%	16.48%	17.11%	0.0%
17.03	2	2,438	7%	9.39%	7.93%	7.51%	0.0%
17.03	3	1,055	0.9%	22.74%	19.48%	21.52%	0.0%
18	1	2,224	4.4%	21.22%	16.63%	12.32%	0.0%
18	2	3,174	4.9%	22.87%	18.89%	6.59%	1.7%
18	3	1,509	3.6%	5.67%	23.59%	19.22%	3.6%

Appendix B: Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies

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.

A map or shapefile of the alternatives will be provided by the consultant or KYTC to the applicable Area Development District (ADD). KYTC, in conjunction with the consultant, will review the ADD data for quality and completeness. The consultant will summarize the information provided by the ADD in the final report. The full Socioeconomic analysis should be placed in an Appendix for reference as necessary.

Maps should be included with the analysis that depict the project area in relation to the Census tracts and block groups included in the analysis. Maps should be symbolized utilizing an appropriate range dependent on the relevant data being studied.

Additional Information

The below information may be beneficial to note for future reference:

- Changes due to new residential developments in the area;
- Increases in Asian and/or Hispanic populations;
- Concentrations or communities that share a common religious, cultural, ethnic or other background, e.g., Amish communities;
- Communities or neighborhoods that exhibit a high degree of community cohesion or interaction and the ability to mobilize community actions at the start of community involvement; and/or
- Concentrations of common employment, religious centers and/or educational institutions.

Tips:

- Only include data that is being analyzed. For instance, there is no need to define Block Groups if they are not used. Similarly, Census Tracts should only be referenced as they relate to location of Block Groups discussed.
- Choropleth maps (shaded, color gradation) should be developed based on population percentage.
- 1-page summary facing the adjacent related map is a functional, readily relatable format.
- At this stage, there is no proposed alignment; therefore, we can make no assumptions regarding adverse impacts or mitigation efforts to any populations. We can only identify potential locations of Affected Communities.

Applicable Laws, Acts and Executive Orders

Civil Rights Act of 1964, Title VI (42 USC 2000d et seq.) -This title declares it to be the policy of the United States that discrimination on the grounds of race, color, or national origin shall not occur in connection with programs and activities receiving federal financial assistance, and authorizes and directs the appropriate federal departments and agencies to take action to carry out this policy. The Presidential Memorandum accompanying Executive Order 12898 states that in accordance with this title, each federal agency should ensure that all programs or activities receiving federal financial assistance that affect human health or the environment do not directly, or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin.

Age Discrimination Act of 1975 - 42 U.S.C. 6101, provides: No person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

Rehabilitation Act of 1973, Section 504 - 42 U.S.C. 794, et seq., provides: No qualified handicapped person shall, solely by reason of his handicap, be excluded from participation in, be denied the benefits of, be subjected to discrimination under any program or activity that receives or benefits from Federal financial assistance.

Americans With Disabilities Act of 1990 - 42 U.S.C. 12131, et seq., provides: No qualified individual with a disability shall, by reason of such disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination by a department, agency, special purpose district, or other instrumentality of a State or local government.

Executive Order #12898 - (Environmental Justice) directs federal agencies to develop strategies to address disproportionately high and adverse human health or environmental effects of their programs on minority and low-income populations.

Executive Order #13166 - (Limited-English-Proficiency) directs federal agencies to evaluate services provided and implement a system that ensures that Limited English Proficiency persons are able to meaningfully access the services provided consistent with and without unduly burdening the fundamental mission of each federal agency.