

BARREN RIVER AREA DEVELOPMENT DISTRICT

Kentucky/Adams Street Improvements Study Warren County

Socioeconomic Study

January 2020

Prepared for
Kentucky Transportation Cabinet (KYTC) – Division of Planning



Prepared by
Barren River Area Development District

BARREN RIVER



AREA DEVELOPMENT DISTRICT

This document was prepared in cooperation with the Kentucky Transportation Cabinet.

Introduction

This report presents an overview of the findings for selected socioeconomic characteristics in the Kentucky/Adams Street Improvement Study. The purpose of this study is to evaluate safety and traffic operational improvements, with a focus on compatibility with urban land use, on Kentucky and Adams Streets in central Bowling Green in Warren County. Currently, Kentucky and Adams Street (US-68X) operate as a one-way couplet between Old Morgantown Road and West 6th Avenue.

The information in this report outlines 2014-2018 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, region, county, 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 project study area is located in Warren County in downtown Bowling Green, the eponymous city in the Bowling Green – Warren County Metropolitan Planning Organization. Warren County is located in south-central Kentucky and covers a land area of 548 square miles, of which 542 square miles is land and 6.0 square miles is water. According to the 2018 ACS 5-Year Estimates, Warren County has a population of 126,427 persons, and the City of Bowling Green has a population of 65,731 persons. The county seat is Bowling Green, which serves as the major economic, cultural, and population center for the county.

Warren County contains 24 Census tracts. The planning study area is comprised of the following Census Tracts and Block Groups:

- Census Tract 101, Block Group 1
- Census Tract 101, Block Group 2
- Census Tract 102, Block Group 1
- Census Tract 102, Block Group 2
- Census Tract 102, Block Group 2
- Census Tract 102, Block Group 3
- Census Tract 103, Block Group 1
- Census Tract 103, Block Group 2
- Census Tract 103, Block Group 3
- Census Tract 104, Block Group 1
- Census Tract 104, Block Group 2

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 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 (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 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 US Census Bureau American Community Survey including tables:

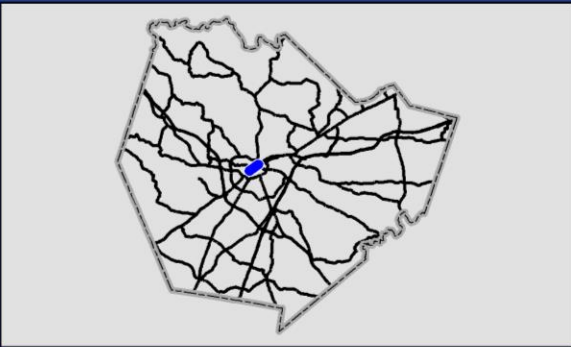
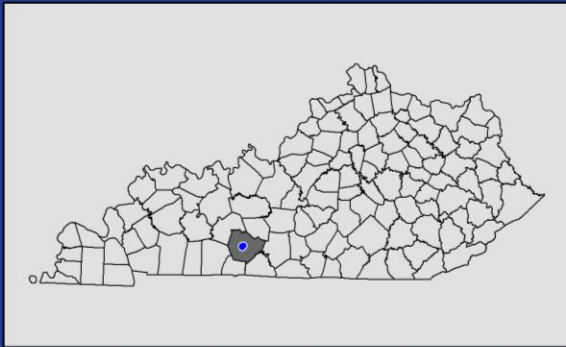
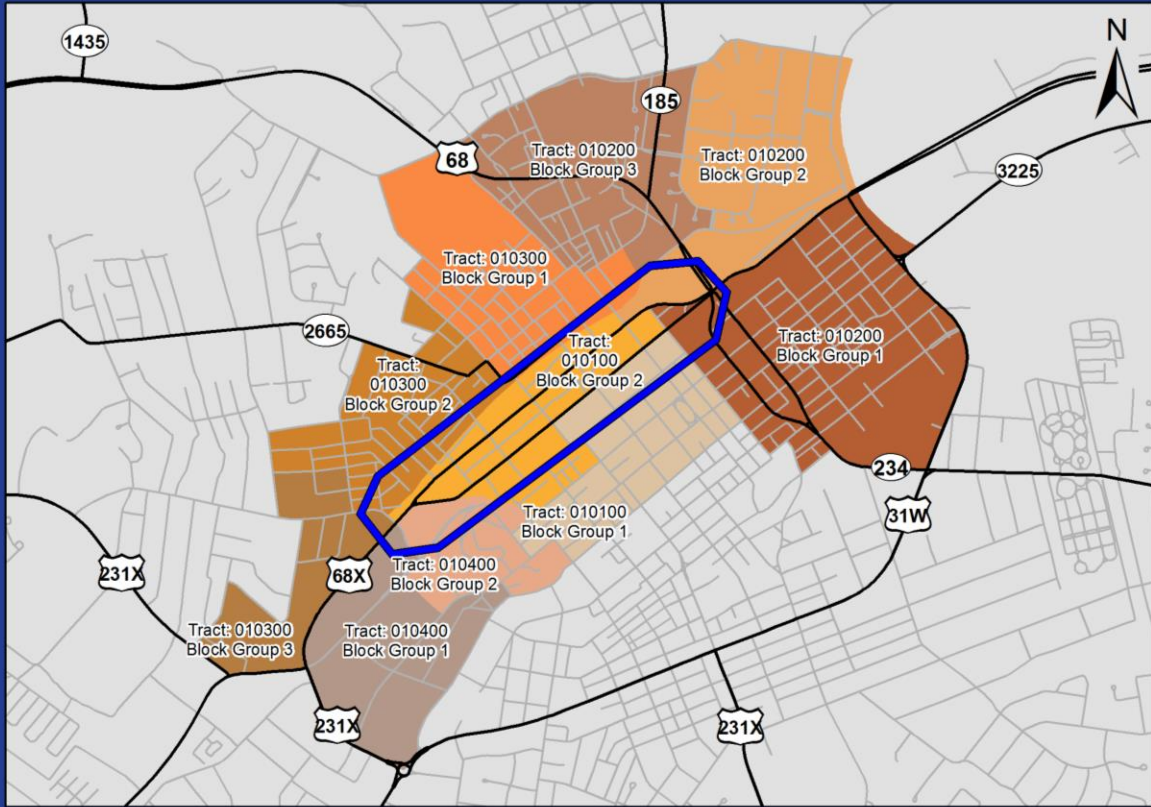
- B02001 – Race
- B01001 – Sex by Age
- B17021 – Poverty Status of Individuals in the Past 12 Months by Living Arrangement
- C21007 – Age by Veteran Status by Poverty Status in the Past 12 Months by Disability Status for the Civilian Population 18 Years and Over
- B16004 – Age by Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over

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 block groups, county, region, state, and nation. This report uses the population percentages for Warren County as the reference threshold for identifying target populations. The county numbers were selected as the reference threshold because the project is completely within the county limits. 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 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 poverty status, and minority populations.

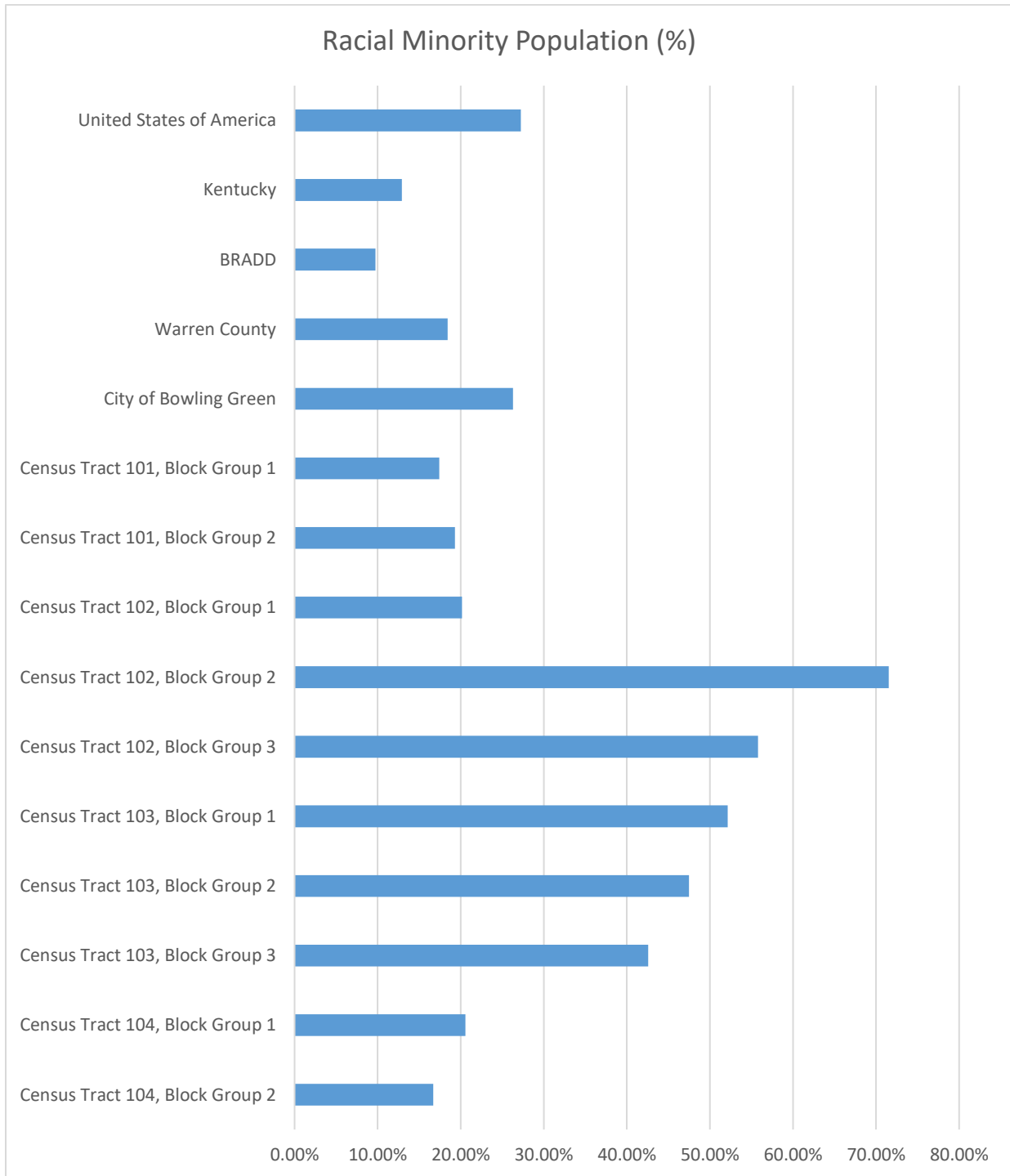
Census Block Group Boundaries Kentucky/Adams Street



Copyright 2020, Barren River Area Development District (BRADD). This map is created for general planning purposes ONLY. This map is not legally recorded, surveyed, or intended to be used for purposes other than generalized planning. Nor does it show all aspects or features of this particular area which may have changed over the years.

Study Findings

Population of Persons by Racial Minority Status



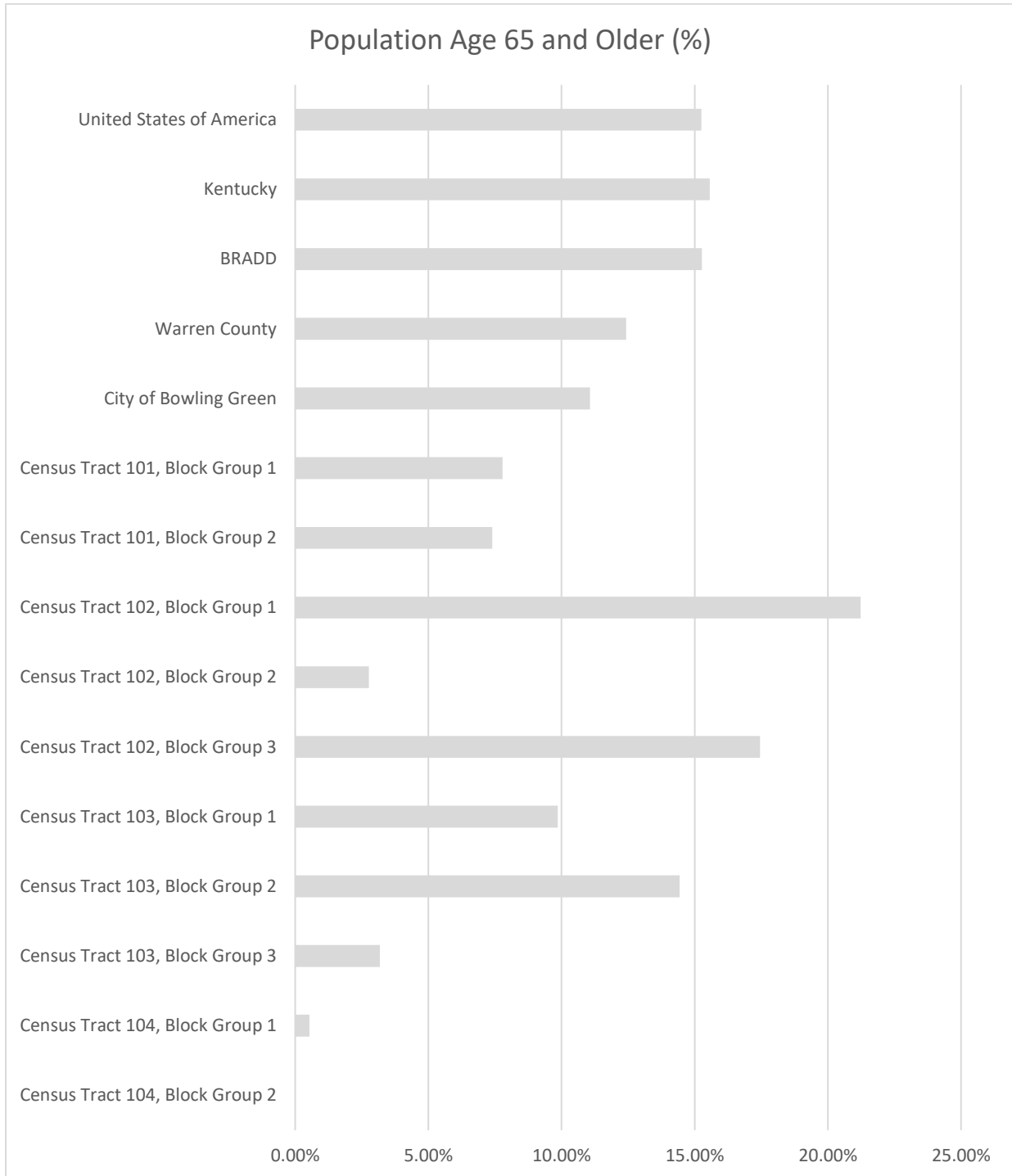
BRADD Socioeconomic Study, Kentucky/Adams Street Improvement Study

	Total Population	Racial Minority Population	Racial Minority Population (%)
United States of America	322,903,060	87,998,242	27.25%
Kentucky	4,440,204	573,528	12.92%
BRADD	299,945	29,248	9.75%
Warren County	126,427	23,291	18.42%
City of Bowling Green	65,731	17,284	26.30%
Census Tract 101, Block Group 1	1,453	253	17.41%
Census Tract 101, Block Group 2	1,000	193	19.30%
Census Tract 102, Block Group 1	1,206	243	20.15%
Census Tract 102, Block Group 2	759	543	71.54%
Census Tract 102, Block Group 3	957	534	55.80%
Census Tract 103, Block Group 1	882	460	52.15%
Census Tract 103, Block Group 2	1,234	586	47.49%
Census Tract 103, Block Group 3	1,038	442	42.58%
Census Tract 104, Block Group 1	3,948	812	20.57%
Census Tract 104, Block Group 2	1,833	306	16.69%

Source: U.S. Census Bureau, 2018 ACS 5-Year Estimates Data Profiles (Table ID: B02001)

While Kentucky, the BRADD region, Warren County, and the City of Bowling Green all have a minority population that is smaller percentage-wise than the national figure of 27.25%, five of the ten block groups affected by this project have a minority population that is significantly larger percentage-wise than the national figure. The block group in the study area with the highest percentage of individuals who are part of a racial minority is Census Tract 102, Block Group 2, at 71.54%. All of the block groups in this project's study area have a higher percentage than the State (12.92%) and the BRADD region (9.75%)

Population of Persons Age 65 Years and Older

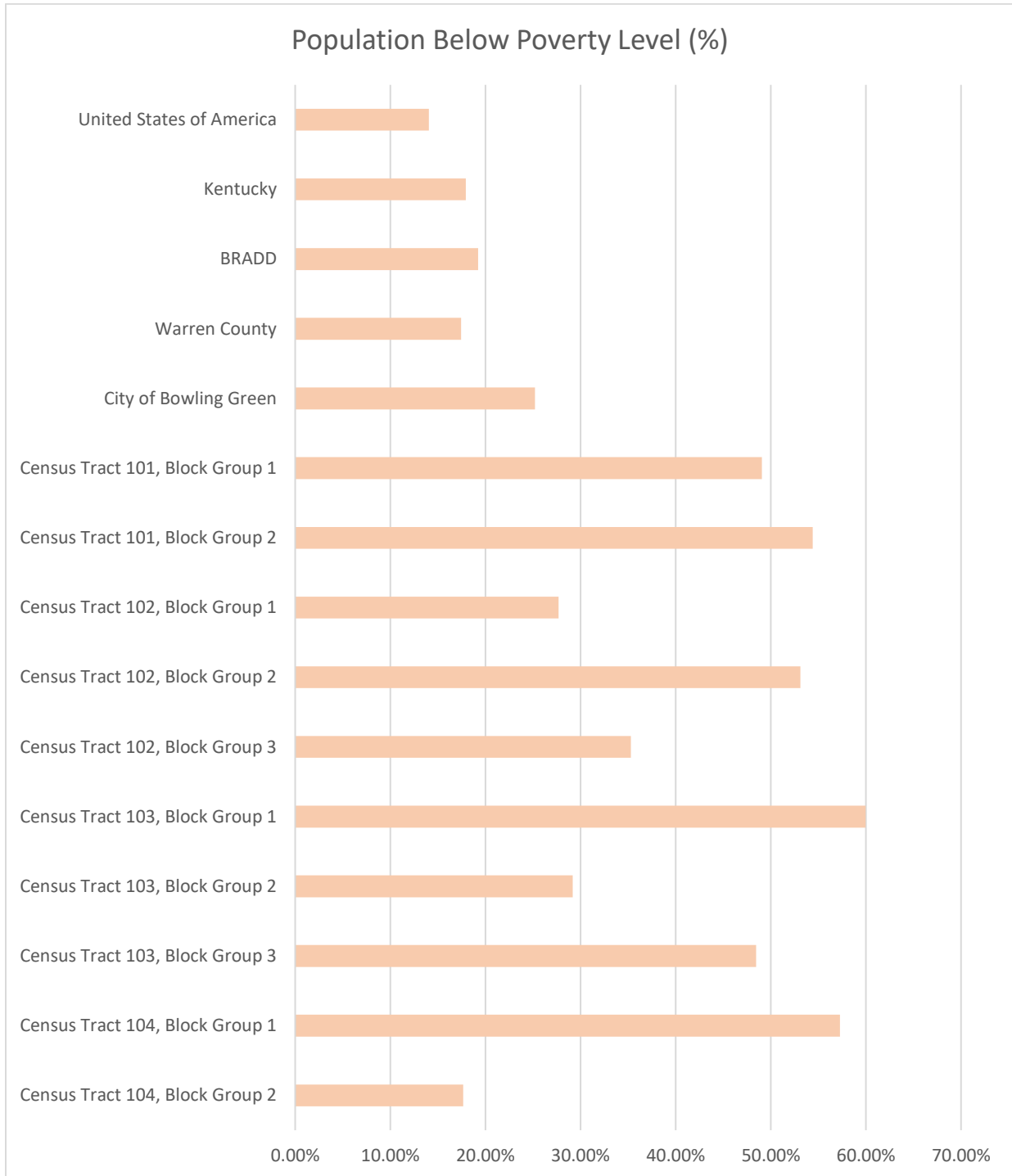


	Total Population	Population Age 65+	Population Age 65+ (%)
United States of America	322,903,060	49,238,581	15.25%
Kentucky	4,440,204	691,509	15.57%
BRADD	299,945	45,814	15.27%
Warren County	126,427	15,710	12.43%
City of Bowling Green	65,731	7,275	11.07%
Census Tract 101, Block Group 1	1,453	113	7.78%
Census Tract 101, Block Group 2	1,000	74	7.40%
Census Tract 102, Block Group 1	1,206	256	21.23%
Census Tract 102, Block Group 2	759	21	2.77%
Census Tract 102, Block Group 3	957	167	17.45%
Census Tract 103, Block Group 1	882	87	9.86%
Census Tract 103, Block Group 2	1,234	178	14.43%
Census Tract 103, Block Group 3	1,038	33	3.18%
Census Tract 104, Block Group 1	3,948	21	0.53%
Census Tract 104, Block Group 2	1,833	0	0.00%

Source: U.S. Census Bureau, 2018 ACS 5-Year Estimates Data Profiles (Table ID: B01001)

Warren County and the City of Bowling Green have a slightly lower percentage of persons ages 65 and older than the country, state, and BRADD region, with 12.43% and 11.07%, respectively. With the exception of Census Tract 102, Block Group 1; Census Tract 102, Block Group 3; and Census Tract 103, Block Group 2, the study area has a considerably lower percentage of persons ages 65 and older than the larger areas shown in the analysis. Some of the significantly lower percentages, such as Census Tract 104 having only 0.36% of its residents being ages 65 and older, are in part due to the immediate proximity and influence of Western Kentucky University's campus.

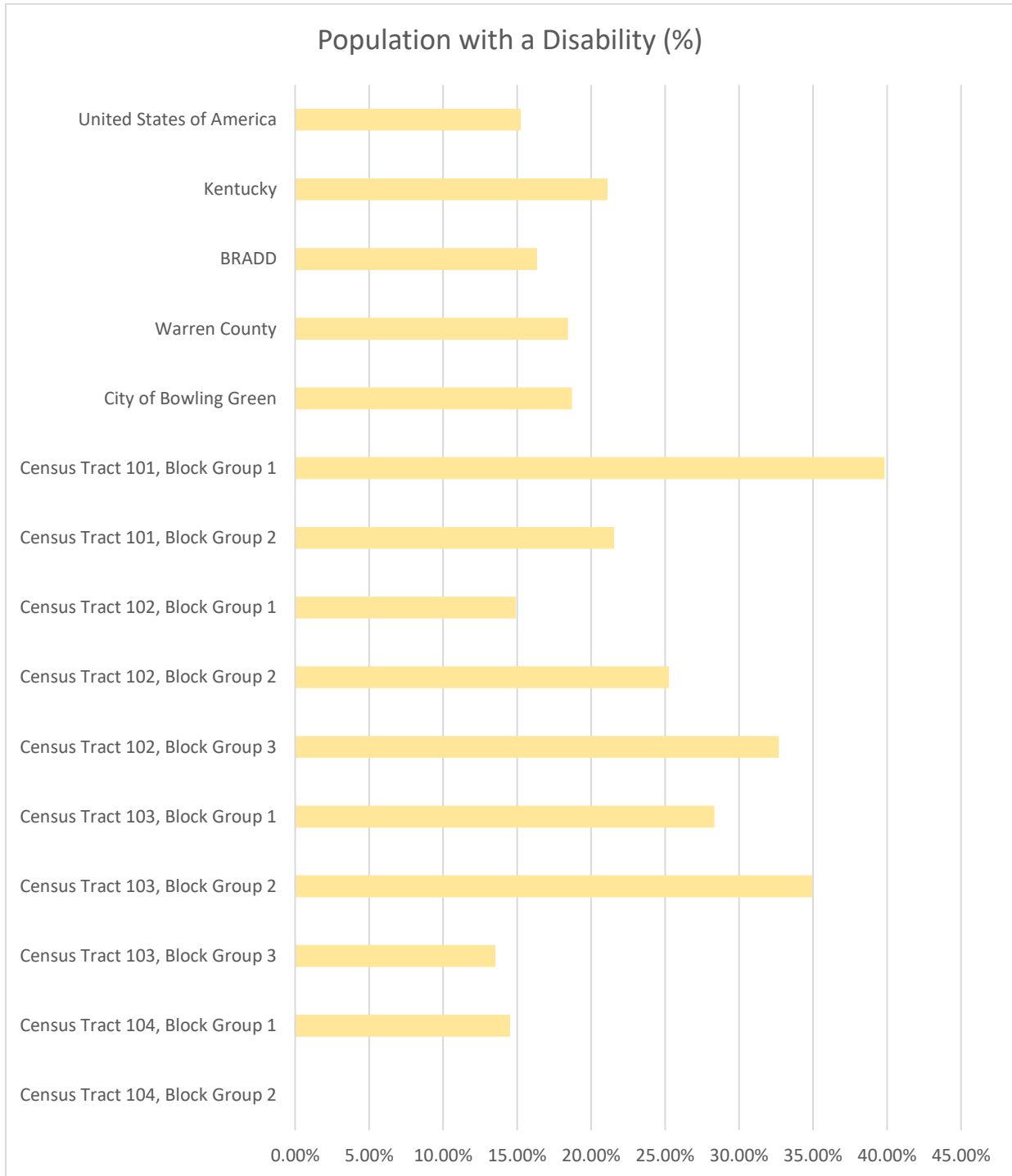
Population of Persons below Poverty Level



	Population for whom poverty status is determined*	Below Poverty Level	Below Poverty Level (%)
United States of America	314,943,184	44,257,979	14.05%
Kentucky	4,302,315	772,080	17.95%
BRADD	289,114	55,606	19.23%
Warren County	118,750	20,703	17.43%
City of Bowling Green	58,408	14,732	25.22%
Census Tract 101, Block Group 1	852	418	49.06%
Census Tract 101, Block Group 2	849	462	54.42%
Census Tract 102, Block Group 1	1,026	284	27.68%
Census Tract 102, Block Group 2	759	403	53.10%
Census Tract 102, Block Group 3	955	337	35.29%
Census Tract 103, Block Group 1	882	529	59.98%
Census Tract 103, Block Group 2	1,234	360	29.17%
Census Tract 103, Block Group 3	1,038	503	48.46%
Census Tract 104, Block Group 1	117	67	57.27%
Census Tract 104, Block Group 2	34	6	17.65%
<i>Source: U.S. Census Bureau, 2018 ACS 5-Year Estimates Subject Tables (Table ID: B17021)</i>			
<i>*The U.S. Census Bureau determines poverty status for all persons except those who are institutionalized, those in military group quarters, those in college dormitories, and unrelated individuals under 15 years old.</i>			

The Commonwealth of Kentucky, the BRADD region, Warren County, the City of Bowling Green, and all of the Census tracts within the study area each have a percentage of individuals living below the poverty level that is higher than the national percentage of 14.05%. The City of Bowling Green's percentage of individuals living below the poverty level is 7.79% higher than Warren County as a whole. Nine of the study area's ten block groups all have a percentage of individuals living below the poverty level that is significantly higher than the other areas in the analysis, with Census Tract 103, Block Group 1 having the overall highest percentage at 59.98%. It is worth noting that while some of the Census tracts' high percentages are undoubtedly impacted by Western Kentucky University's student population (except for those who live in dormitories, who were excluded from the Census Bureau's tabulation), this is but one of a myriad of factors in the high poverty rates amongst the widely socioeconomically diverse groups of people who live within these tracts.

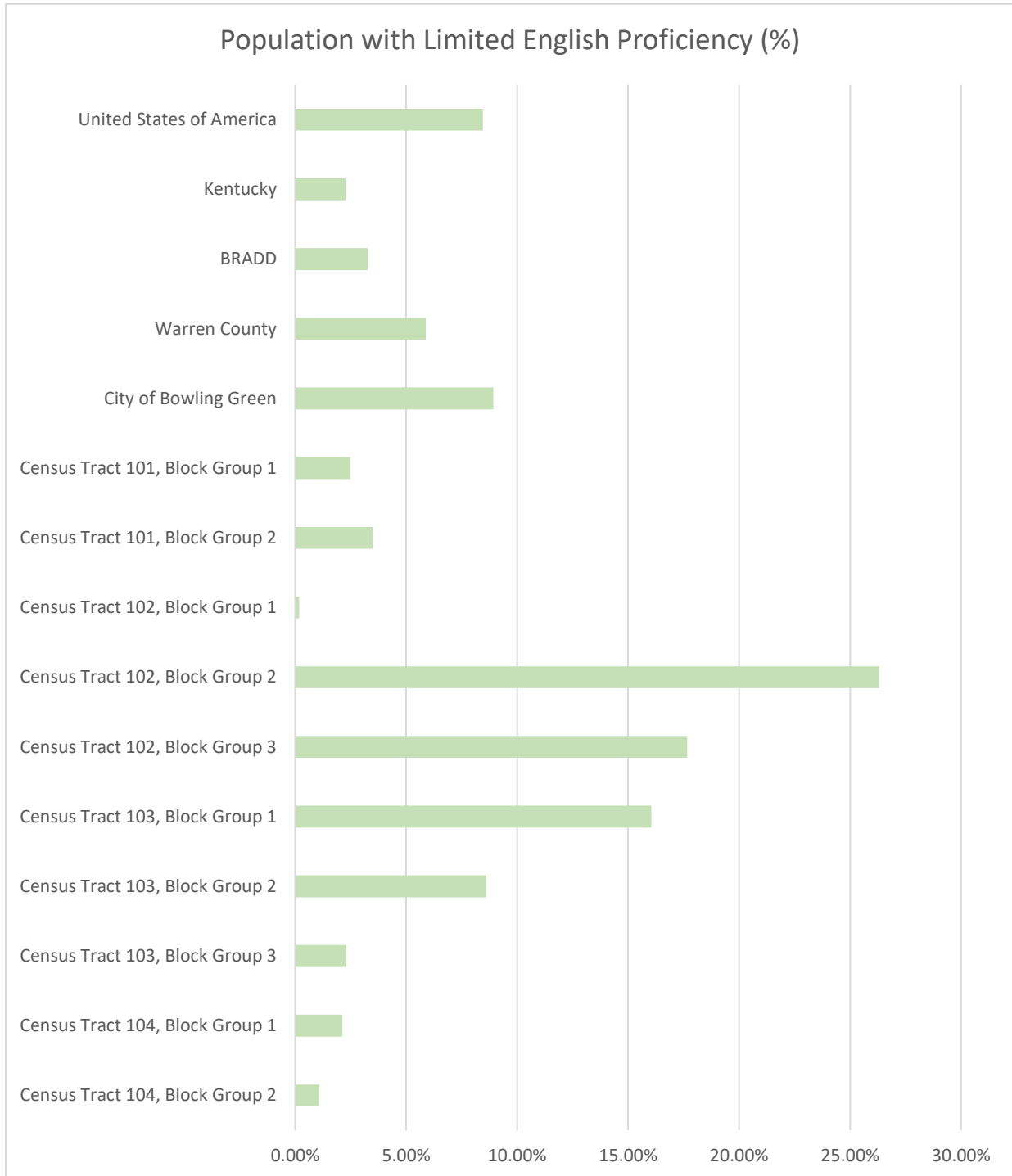
Population of Persons by Disability Status



	Civilian population 18 years and over for whom poverty status is determined*	Total population with a disability	Population with a disability (%)
United States of America	241,861,644	36,880,263	15.25%
Kentucky	3,305,206	698,106	21.12%
BRADD	296,226	48,439	16.35%
Warren County	90,568	16,687	18.43%
City of Bowling Green	44,674	8,355	18.70%
Census Tract 101, Block Group 1	826	329	39.83%
Census Tract 101, Block Group 2	784	169	21.56%
Census Tract 102, Block Group 1	831	124	14.92%
Census Tract 102, Block Group 2	495	125	25.25%
Census Tract 102, Block Group 3	771	252	32.69%
Census Tract 103, Block Group 1	628	178	28.34%
Census Tract 103, Block Group 2	1,007	352	34.96%
Census Tract 103, Block Group 3	886	120	13.54%
Census Tract 104, Block Group 1	117	17	14.53%
Census Tract 104, Block Group 2	34	0	0.00%
<i>Source: U.S. Census Bureau, 2018 ACS 5-Year Estimates Subject Tables (Table ID: C21007)</i>			
<i>*The statistics herein include individuals above and below the poverty level. The U.S. Census Bureau determines poverty status for all persons except those who are institutionalized, those in military group quarters, those in college dormitories, and unrelated individuals under 15 years old.</i>			

Six of the study area's ten block groups have a percentage of the population with a disability which exceeds the national percentage of 15.25%. Census Tract 102, Block Group 3 has the highest percentage in the study area, with 39.83% of the population having a disability. These six tracts' percentages also exceed the City of Bowling Green (18.70%), Warren County (18.43%), the BRADD region (16.35%), and Kentucky as a whole (21.12%).

Population of Persons with Limited English Proficiency



	Total population 5 years and older	Speak English less than "very well"	Speak English less than "very well" (%)
United States of America	303,066,180	25,647,781	8.46%
Kentucky	4,165,764	94,542	2.27%
BRADD	280,929	9,194	3.27%
Warren County	118,345	6,960	5.88%
City of Bowling Green	61,908	5,527	8.93%
Census Tract 101, Block Group 1	1,453	36	2.48%
Census Tract 101, Block Group 2	978	34	3.48%
Census Tract 102, Block Group 1	1,135	2	0.18%
Census Tract 102, Block Group 2	661	174	26.32%
Census Tract 102, Block Group 3	889	157	17.66%
Census Tract 103, Block Group 1	798	128	16.04%
Census Tract 103, Block Group 2	1,198	103	8.60%
Census Tract 103, Block Group 3	1,001	23	2.30%
Census Tract 104, Block Group 1	3,948	84	2.13%
Census Tract 104, Block Group 2	1,833	20	1.09%
<i>Source: U.S. Census Bureau, 2018 ACS 5-Year Estimates Subject Tables (Table ID: B16004)</i>			

Kentucky's percentage of individuals age 5 and over who speak English less than "very well" is significantly lower than that of the United States as a whole – 3.27%, compared to 8.46%, respectively. Warren County (5.88%) has a higher percentage of individuals with limited English proficiency than the BRADD region (3.27%) and the State. Within Warren County, however, the City of Bowling Green (8.93%) as a whole and four of the ten block groups within the study area have higher percentages than the country as a whole. Census Tract 102, Block Group 2, with more than double the percentage as the country and the city (and nearly six times the percentage as the BRADD region as a whole), includes the northeastern limit of the study area.

Conclusion

The percentage of racial minority populations in all Census tracts spanned by the study area is greater than Kentucky's (12.92%) and BRADD's (9.75%). Specifically, Census Tract 102 and Census Tract 103's percentages were significantly higher than other tracts within the study area.

Only two block groups in the study area, Census Tract 102, Block Group 1, and Census Tract 102, Block Group 3, have a percentage of persons over the age of 65 that is greater than the national percentage of 15.25% or the state percentage of 15.57%.

All but one of the block groups included in the study area have a higher percentage of individuals living beneath the poverty level than the country (14.05%), State (17.95%), BRADD region (19.23%), Warren County (17.43%), and the City of Bowling Green (25.22%). The nine block groups' percentages range from 27.68% in Census Tract 102, Block Group 1 to 59.98% in Census Tract 103, Block Group 1.

Six of the ten block groups in the study area have a higher percentage of individuals living with a disability than the country (15.25%), State (21.12%), BRADD region (16.35%), Warren County (18.43%), and the City of Bowling Green (18.70%). The Census tract with the highest percentage of individuals living with a disability is Census Tract 101, Block Group 1, at 39.83%.

While the City of Bowling Green's percentage of individuals who speak English less than "very well" is only slightly higher than the country's (8.93% and 8.46%, respectively), Census Tract 102, Block Group 2's percentage is more than double the city's and the country's, at 26.32%. Census Tract 102, Block Group 3; Census Tract 103, Block Group 1; and Census Tract 103, Block Group 2 also exceed the national percentage, to varying degrees.

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.