

**Beaver to South Eisenhower Drive Project
(Beckley Z-Way)
Environmental Justice Analysis
Raleigh County, West Virginia**

**State Project Number: X341-ZWAY-6.22
Federal Project: STP-0019(420)D**

**U.S. Department of Transportation
Federal Highway Administration**



**West Virginia Department of Transportation
Division of Highways**



July 2018

The Beaver to South Eisenhower Drive Project is being proposed by the West Virginia Division of Highways (WVDOH) to construct new roadway from US 19 and WV 307 (Airport Road) to Interstate 64 at the South Eisenhower Boulevard interchange. The new road would be three lanes, allowing for a through-lane in each direction and a continuous center turning lane. The purpose of this project is to reduce congestion on nearby roadways and support transportation system continuity to the City of Beckley and surrounding commercial areas.

The potential project encompasses a mostly forested slope with a small residential area near the center of the project area. The eastern extend of the area is near the Beaver Plaza (Beaver) along WV 307 (Airport Road) and the western extent is at the Interstate 64 South Eisenhower Boulevard interchange (South Eisenhower). The project study area is shown on Figure 1. The project area is a mixture of forested, residential areas, commercial, and transportation corridors in a rural setting.

Environmental Justice

Executive Order 12898 of February 11, 1994, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, requires that the proposed project be assessed to determine whether or not it will have a disproportionately high impact on minority or low-income populations within the area (OPUSA 1994). An analysis of potential environmental justice impacts was conducted to assess if there were environmental justice populations in the project area, and if so, to determine if there would be such a disproportionate effect on them from the proposed project. There are three fundamental principles at the core of environmental justice:

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

Environmental justice addresses potentially disproportionate high effects of proposed decisions on low-income populations and minority populations. The Federal Highway Administration defines “disproportionate impacts as adverse effects that are predominately borne by a minority

population and/or a low-income population. Disproportionate effects are appreciably more severe or greater in magnitude on environmental justice populations than on nonminority or non-low-income populations (FHWA 2015).

Demographic Overview

Information from the *American Community Survey* was accessed from the U.S. Census Bureau (USCB 2016) and the U.S. Environmental Protection Agency environmental justice web sites (USEPA 2016a) to determine the presence of any minority or low-income populations within the project area. Population estimates from 2015 were also reviewed.

The population of West Virginia during the 2000 U.S. Census was 1,808,344 (USCB 2000). By 2010, the statewide population had grown to 1,852,994 (USCB 2010). Population in Raleigh County peaked in 1950 when it reached 96,273. It has been relatively stable over the past 20 years, with the most recent population estimate of 77,827 in 2014 (USCB 2014).

Population projections for the area indicate the county’s population will decline slightly over the next 15 years (WVU 2014). As a comparison, the population of West Virginia is expected to grow by 1.4 percent to by the year 2035. Table 1 provides a demographic overview of Raleigh County, Census Tract (CT) 3 and CT 8.04 as they relate to the entire state.

**Table 1
Demographic Overview**

Area	Population Characteristics					Individuals Below Poverty Level		Housing	
	Total Population	White	African Amer.	Other Minority	Age 65 & Over	Total	Percent	Units	Households
Raleigh County	77,510	68,619	7,642	1,249	14,687	14,750	19.7	36,019	31,315
Census Tract 3	4,081	2,955	895	231	725	817	18.9	2,163	1,881
Census Tract 8.04	6,053	5,762	180	111	1,074	357	6.6	2,633	2,347
West Virginia	1,844,128	1,727,948	66,389	49,791	328,255	337,475	18.3	884,605	742,359

Methodology

The analytical methodology employs a comparative screening analysis that measures potentially impacted populations to determine if an environmental justice population would see a disproportionate impact when compared to the non-environmental justice populations. This methodology identifies a threshold for the study area and compares block (B) or block group (BG) data to that threshold. If block group data exceed the threshold, the potential for disproportionate effects to occur on that block group is judged to be present. It does not address potential impacts to individual members of environmental justice populations, instead evaluating impacts to neighborhoods as a whole.

The use of thresholds to identify minority and low-income populations is an established method for conducting environmental justice analyses (USEPA 2016b). Although researchers have cautioned using this method in all cases. It has been shown to be an effective instrument in other West Virginia transportation projects. It is especially appropriate for Beckley Z-Way projects because of the tight project footprint, the suburban settlement pattern in the project area (exhibiting medium densities), and the availability of block group and block data within a relatively close-knit community.

The analysis utilized currently available information from the following U.S. Census units: Raleigh County; CT 3; CT 8.04; CT 3 BG 2 B 2108, 2110, 2112, 2113, and 2122; and CT 8.04 BG 1 B 1000. Although, CT 8.04 BG 3, B 3001 is located within the project study area, there are no private dwellings within the project area. Population, race, and household data were retrieved directly from the U.S. Census Interactive Population Map.

Data on poverty were retrieved from the American Community Survey and the USEPA environmental justice screening tool. Poverty statistics are not available for blocks but were calculated based on the estimated number of persons within the block groups with incomes below the poverty level, then compared against data found in the EPA screening tool. The factors used for the environmental justice screening are found in Table 2.

**Table 2
Environmental Justice Screening Factors**

Area	Total Population	White Population	Minority Population	Percent Minority	Persons with Incomes Below Poverty Level	Percent Below Poverty Level
Raleigh County	78,241	69,400	8,841	11.3	13,849	17.7
CT 3 BG 2 B 2108	13	13	0	0	1	11.4
CT 3 BG 2 B 2110	44	41	3	6.8	5	11.4
CT 3 BG 2 B 2112	104	104	0	0	12	11.4
CT 3 BG 2 B 2113	25	25	0	0	3	11.4
CT 3 BG 2 B 2122	82	80	2	2.5	9	11.4
CT 8.04 BG 1 B 1000	43	43	0	0	1	0.7
Total Study Area (All of the Blocks Combined)	311	306	5	1.6	31	10.0

Findings

With a minority population of 1.6 percent, the project’s study area (CT 3 BG 2 B 2108, 2110, 2112, 2113, 2122, CT 8.04 BG 1 B 1000 and other census blocks with populations of 0) does not exceed the screening threshold of Raleigh County (11.3 percent). With a low-income population of 10.0 percent, the project’s study area does not exceed the screening threshold of Raleigh County (17.7 percent). Not only does the entire study area fall below the county thresholds for each environmental justice category, all of the individual block groups do as well. Consequently, the project is unlikely to have a disproportionate effect on environmental justice populations.

References

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