

APPENDIX B

Two variables from the 2000 U.S. Census were used to calculate the potential impacts of roadway projects on disadvantaged populations by census block group:

- P7, Hispanic or Latino by Race, whose universe is the total population; and,
- P88, Ratio of Income in 1999 to Poverty Level, whose universe is the population for whom poverty status is determined.

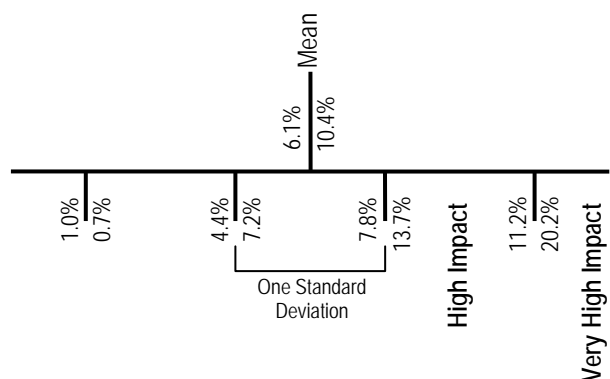
The scope of interest within the variables included non-white population and population whose ratio of income to poverty level was less than 1.00 (represents “at poverty”).

The first step to determine areas of potential impact involved creating thresholds equal to the percentages of each variable for the whole of the planning area. (This process is exactly the same as for transit propensity.) The planning area is equal to the sum of the populations of the 15 communities residing within the planning area. (Even though only half of the Town of Hamilton is within the planning area, it is considered in its entirety.) The **thresholds** then would equal the total number exhibiting the characteristic of concern divided by the total:

- Population within the planning area who are a race other than “white alone” (6,598) divided by the total population of the planning area (107,887) equals **6.1 percent**.
- Population within the planning area living below poverty (10,702) divided by the total population within the planning area for whom poverty status is determined (102,612) equals **10.4 percent**.

The next and final steps involved creating categories for very high impact (minority and low-income), very high minority impact, very high poverty impact, high impact (minority and low-income), high minority impact, high poverty impact, and very-low-to-moderate impact. This process included:

1. Calculating the standard deviation for each variable to create a “moderate” category equal to one standard deviation around the mean (one-half standard deviation below and one-half standard deviation above).



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2. Querying for census block groups that experienced percentages less than or equal to the upper bound of the “moderate” range (7.8% for minority and 13.7% for low-income) and categorized them as “very low to moderate impact.”
3. Querying for census block groups that experienced minority percentages greater than 7.8 and less than or equal to 11.2 AND poverty percentages less than 13.7 and categorized them as “High Minority Impact.”
4. Querying for census block groups that experienced low-income percentages greater than 13.7 and less than or equal to 20.2 AND minority percentages less than 7.8 and categorized them as “High Poverty Impact.”
5. Querying for census block groups that experienced minority percentages greater than 7.8 and less than or equal to 11.2 AND low-income percentages greater than 13.7 and less than or equal to 20.2 and categorized them as “High Impact.”
6. Repeating steps 3 through 5 for “Very High Minority Impact,” “Very High Poverty Impact,” and “Very High Impact” using the ranges and bounds illustrated in the matrix below.

The following matrix helps illustrate the aforementioned process. To save space “P” equals “Poverty” and “M” equals “Minority.”

Environmental Justice Impacts

Variable	Very Low to Moderate	High			Very High		
		Minority	Poverty	Both	Minority	Poverty	Both
Minority	Minority populations make up less than or equal to 7.8% AND Low-income populations make up less than or equal to 13.7%		P>13.7	P>13.7 & P≤20.2			
Poverty		M>7.8 & M≤11.2; P≤13.7	& P≤20.2	& M>7.8 & M≤11.2	M>11.2 & P≤13.7	P>20.2 & M≤7.8	M>11.2 & P>20.2