

10-B. Title VI and Environmental Justice

Environmental Justice

Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

Environmental Justice helps to ensure that programs, policies and activities that have adverse effects on communities do not have disproportionately high and adverse effects on minority populations and low-income populations. Environmental Justice also helps ensure that minority and low-income populations share in the benefits provided by programs, policies and activities.

Environmental Justice Fundamental Principles

- To ensure minority and low-income populations have the same degree of protection from environmental, health, social, and economic hazards.
- To ensure equal access to the transportation decision-making process allowing for a healthy environment in which to live, learn, and work.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

Adverse Effects

Adverse effects as described in Executive Order 12898 is the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to:

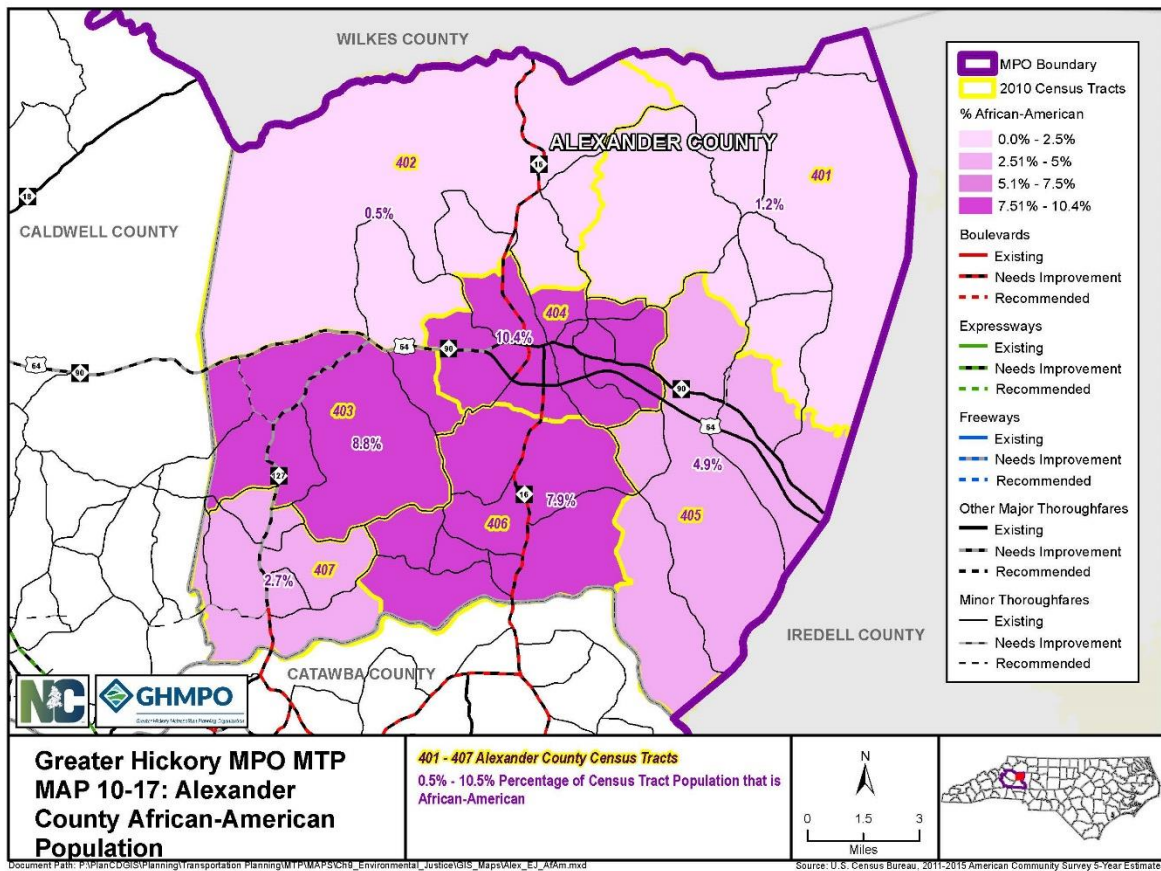
- Bodily impairment, infirmity, illness or death
- Air, noise and water pollution and soil contamination
- Destruction or disruption of:
 - Man-made or natural resources
 - Aesthetic values
 - Community cohesion or a community's economic vitality
 - Availability of public and private facilities and services
- Adverse employment effects
- Displacement of persons, businesses, farms or nonprofit organizations
- Increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community
- Denial of, reduction in or significant delay in the receipt of benefits of the GHMPO programs, policies or activities

Environmental Justice Indicators

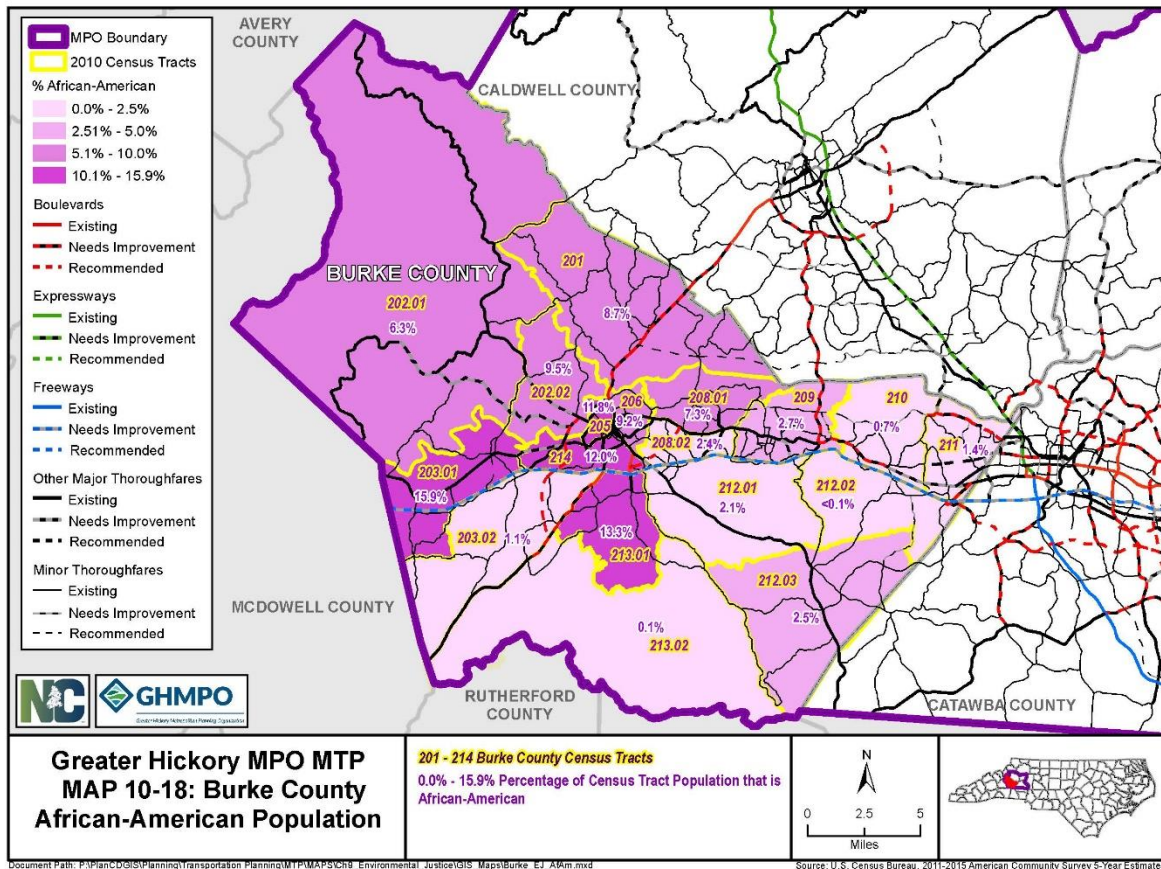
To determine potential impacts, the GHMPO used 2016 Census data to identify Environmental Justice communities across the four county region. Maps 10-17 through 10-32 were used to identify individuals or households that may experience disproportionately high levels of adverse effects in the transportation planning process.

For maps 10-17 through 10-28, minority populations include persons of African American, Asian, and Hispanic or Latino descent.

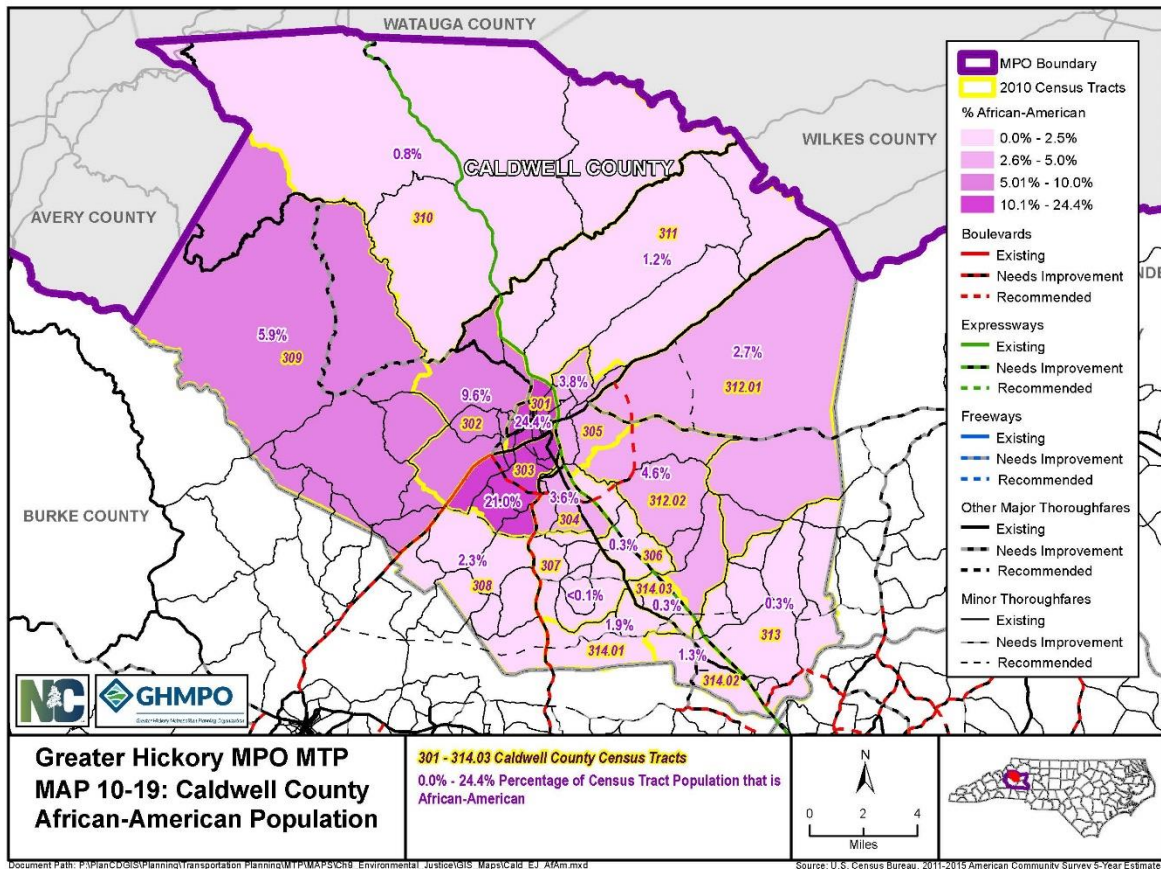
For maps 10-29 through 10-32, low income includes individuals or households whose median income is at or below the poverty level in the previous 12 months.



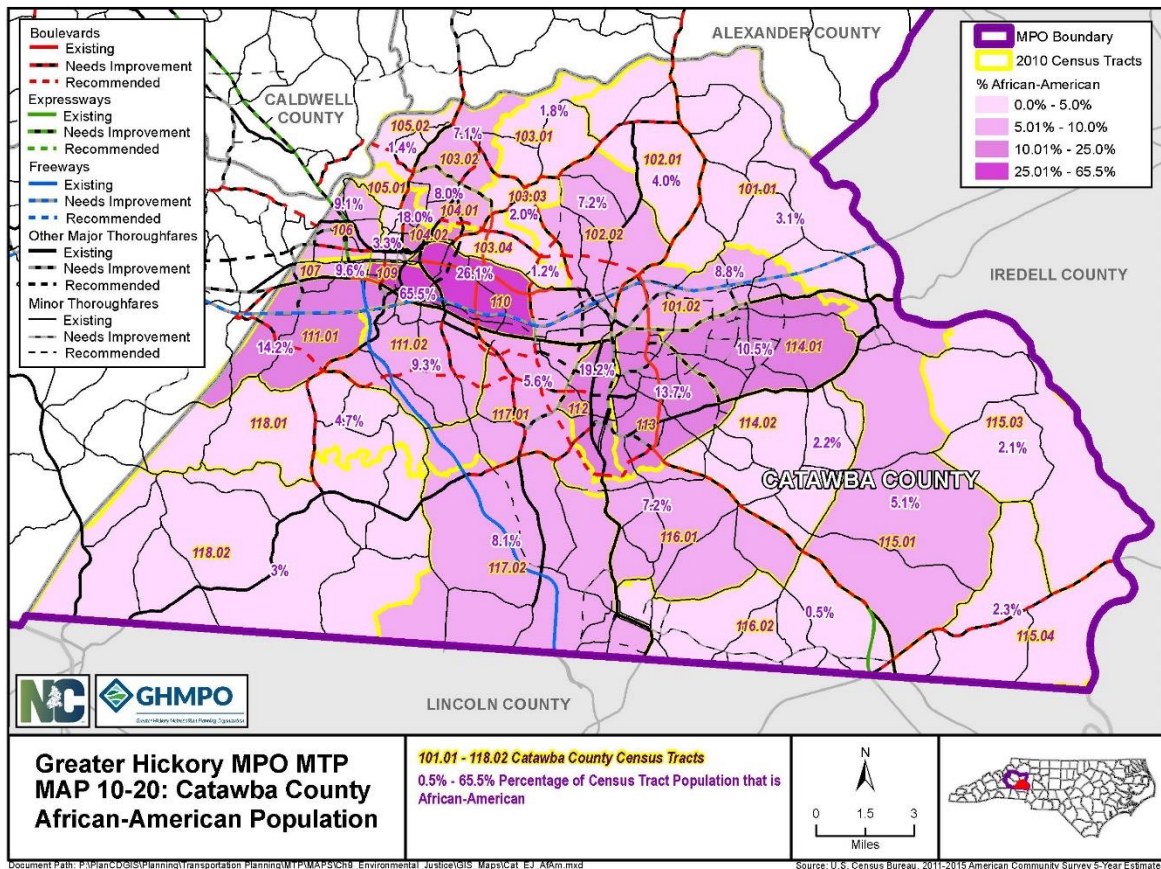
Data from the U.S. Census Bureau show the most concentrated African American populations in Alexander County were in Census Tracts 403, 404, and 406 and ranged from 7.51% to 10.4% of the overall Tract population. Tract 402 had the lowest African American population at 0.5%.



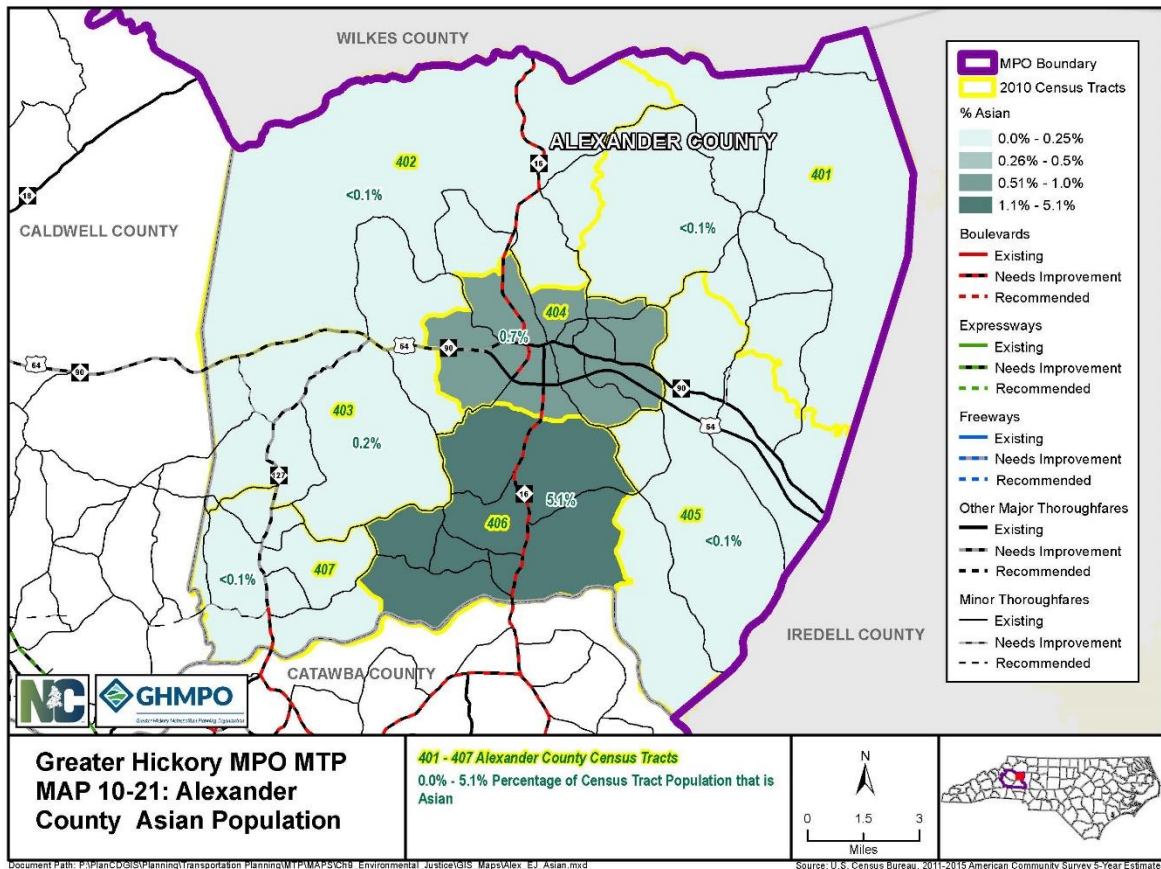
Data from the U.S. Census Bureau show the most concentrated African American populations in Burke County were in Census Tracts 203.01, 205, 213.01, and 214 and ranged from 10.1% to 15.9% of the overall Tract population. Tract 212.02 had the lowest African American population at <0.1%.



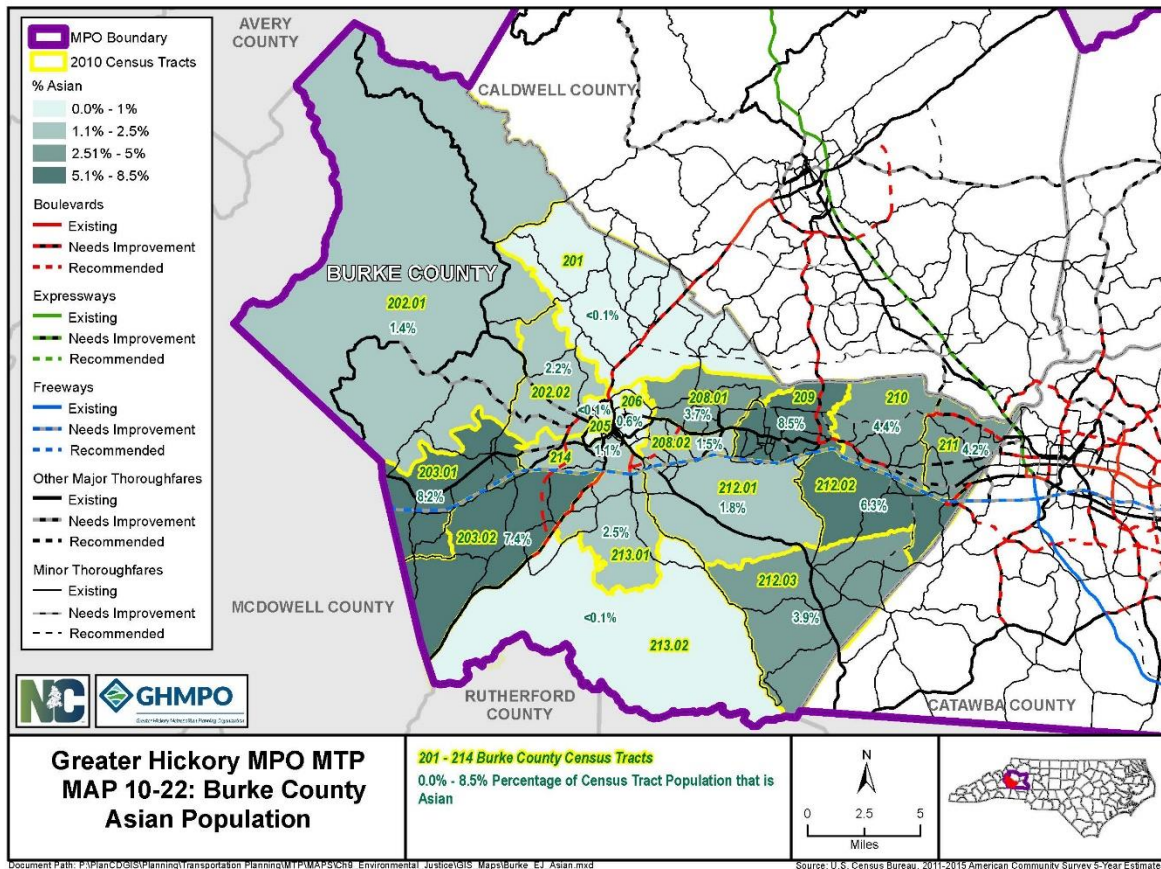
Data from the U.S. Census Bureau show the most concentrated African American populations in Caldwell County were in Census Tracts 301 and 303 and ranged from 10.1% to 24.4% of the overall Tract population. Tract 307 had the lowest African American population at <0.1%.



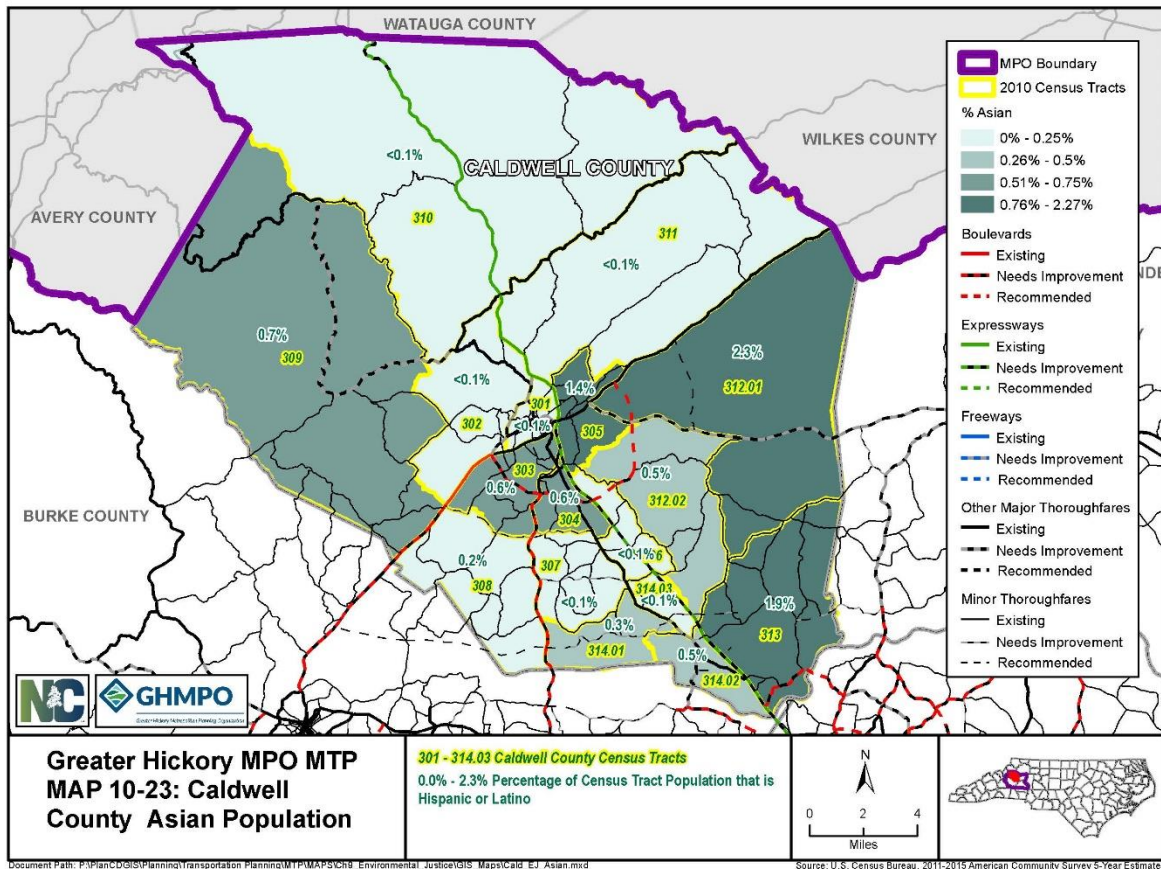
Data from the U.S. Census Bureau show the most concentrated African American populations in Catawba County were in Census Tracts 109 and 110 and ranged from 25.01% to 65.5% of the overall Tract population. Tract 116.02 had the lowest African American population at 0.5%.



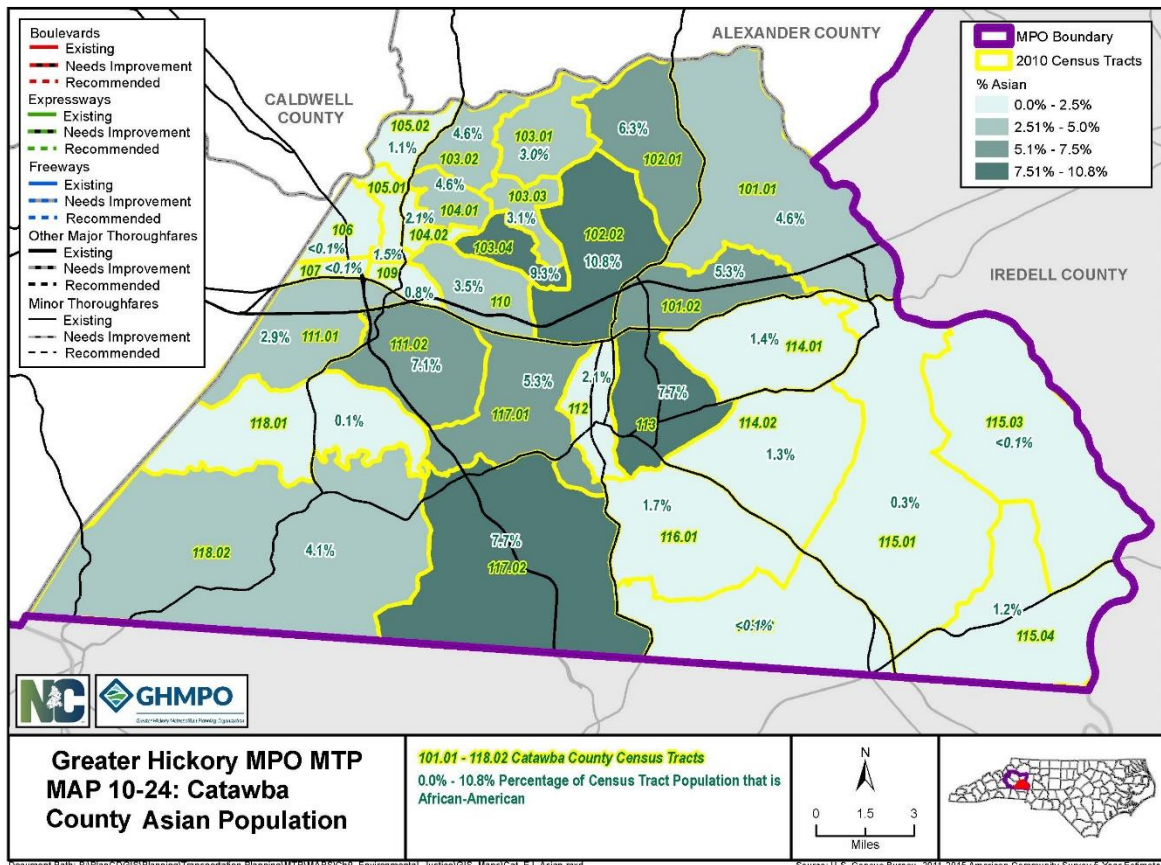
Data from the U.S. Census Bureau show the most concentrated Asian populations in Alexander County were in Census Tract 406 and encompassed 5.1% of the overall Tract population. Tracts 401, 402, 405, and 407 had the lowest Asian populations at <0.1%.



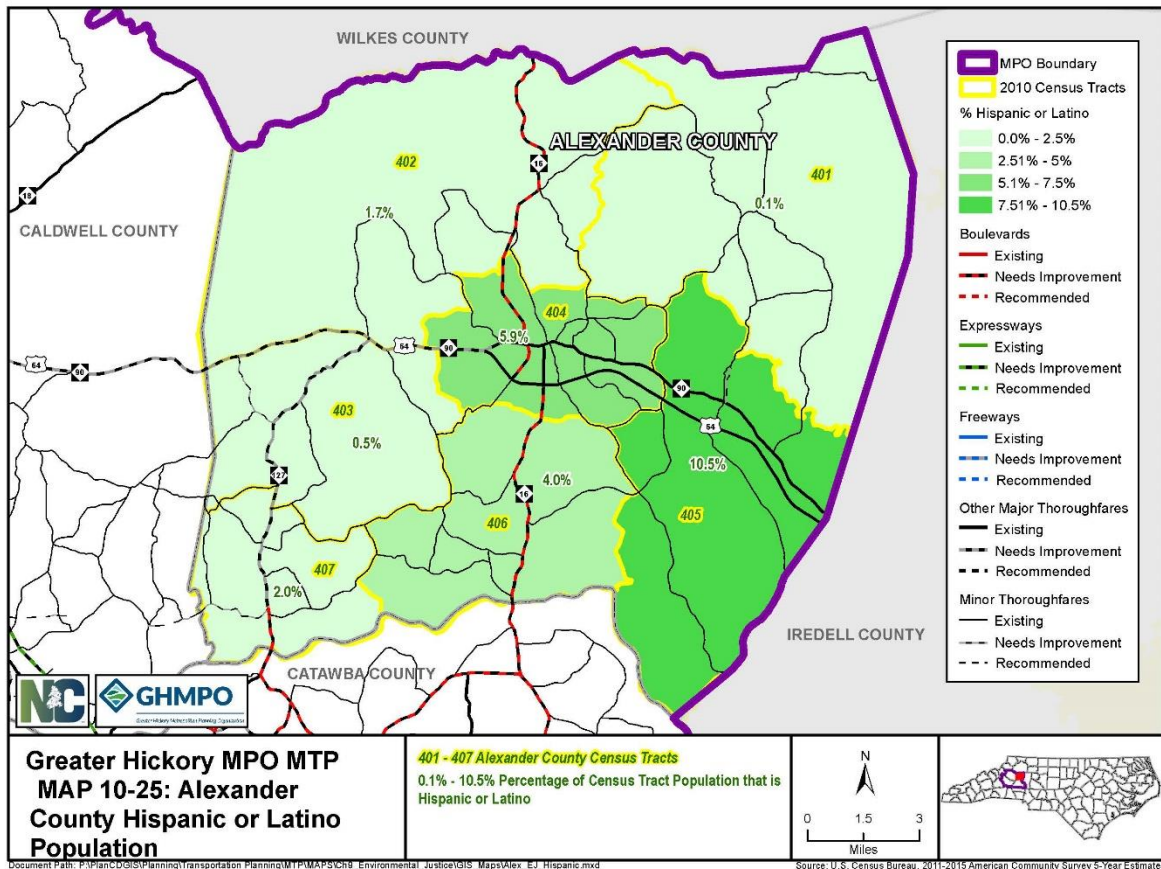
Data from the U.S. Census Bureau show the most concentrated Asian populations in Burke County were in Census Tracts 203.01, 203.02, 209, and 212.02 and ranged from 5.1% to 8.5% of the overall Tract population. Tracts 201, 205, and 213.02 had the lowest Asian populations at <0.1%.



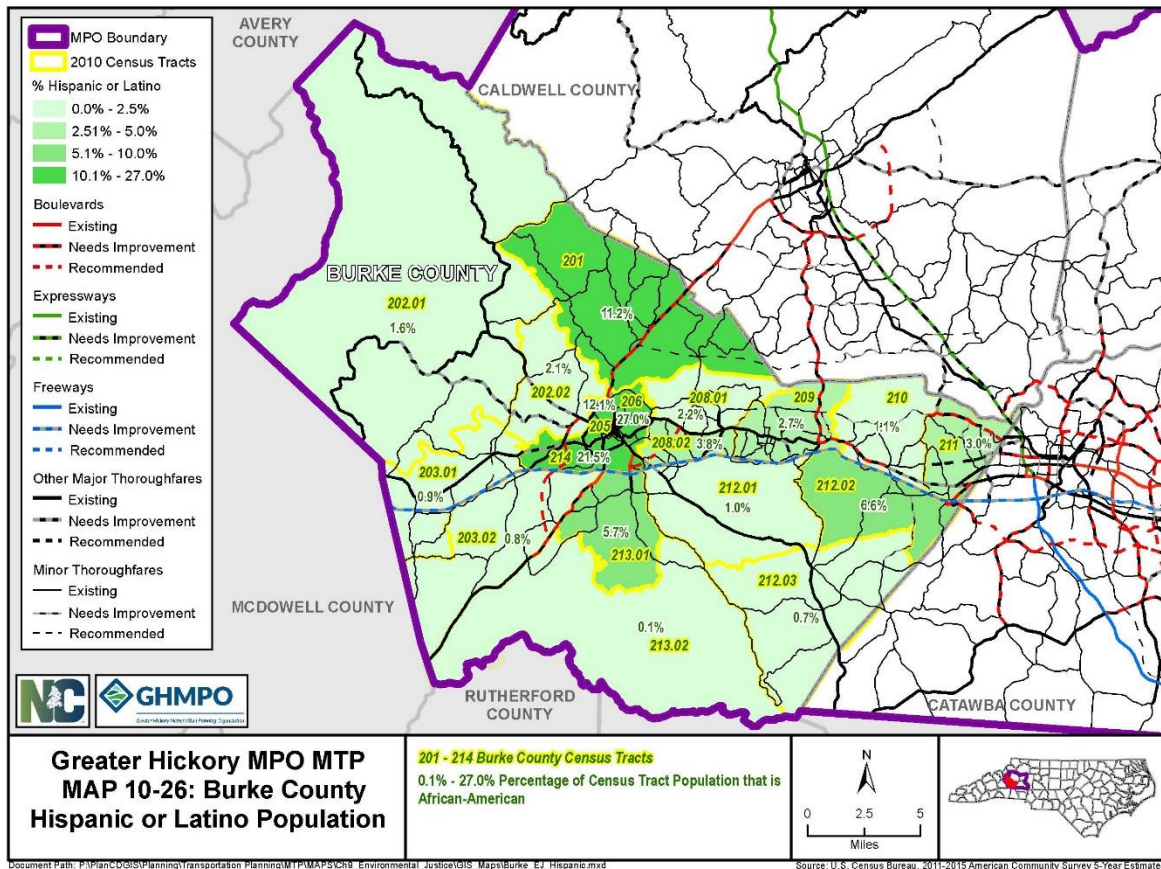
Data from the U.S. Census Bureau show the most concentrated Asian populations in Caldwell County were in Census Tracts 305, 312.01, and 313 and ranged from 0.76% to 2.27% of the overall Tract population. Tracts 301, 302, 306, 307, 310, 311, and 314.03 had the lowest Asian populations at <0.1%.



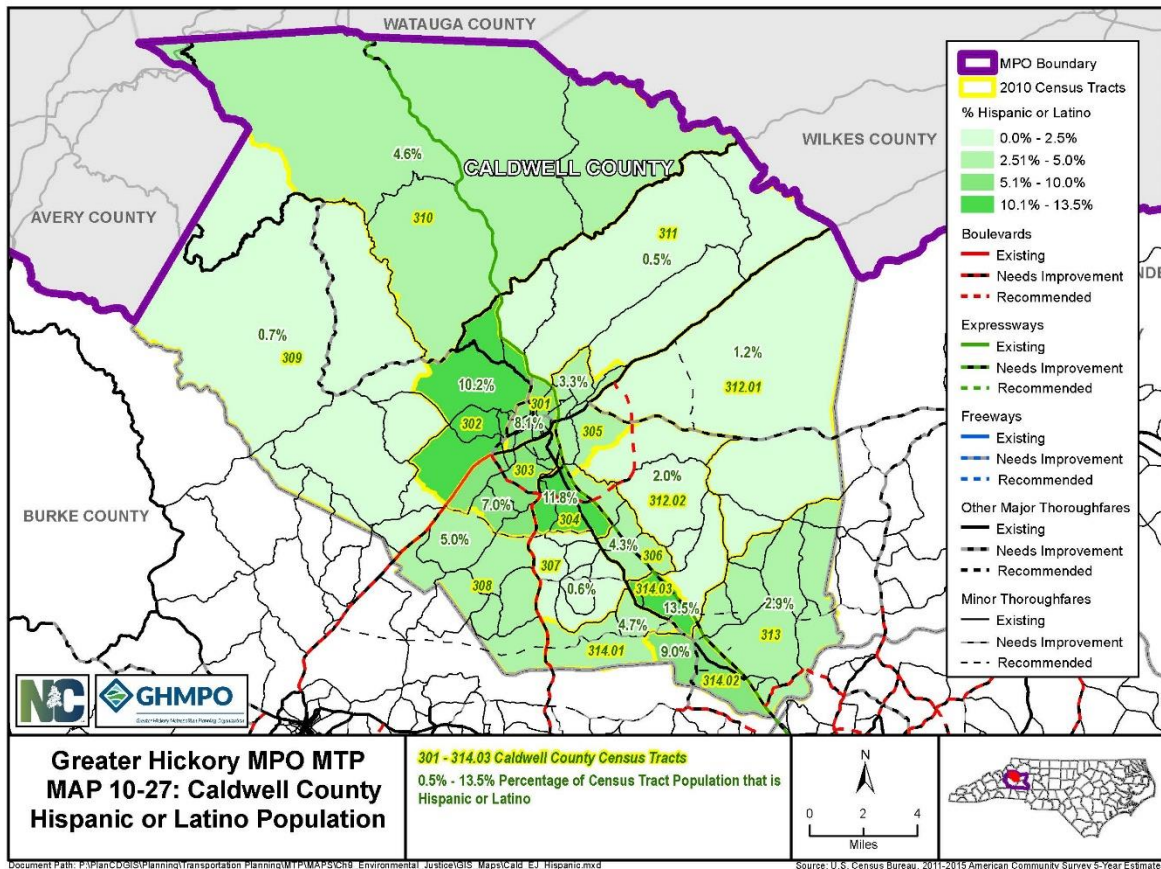
Data from the U.S. Census Bureau show the most concentrated Asian populations in Catawba County were in Census Tracts 102.02, 103.04, 113, and 117.02 and ranged from 7.51% to 10.8% of the overall Tract population. Tracts 106, 107, 115.03, and 116.02 had the lowest Asian populations at <0.1%.



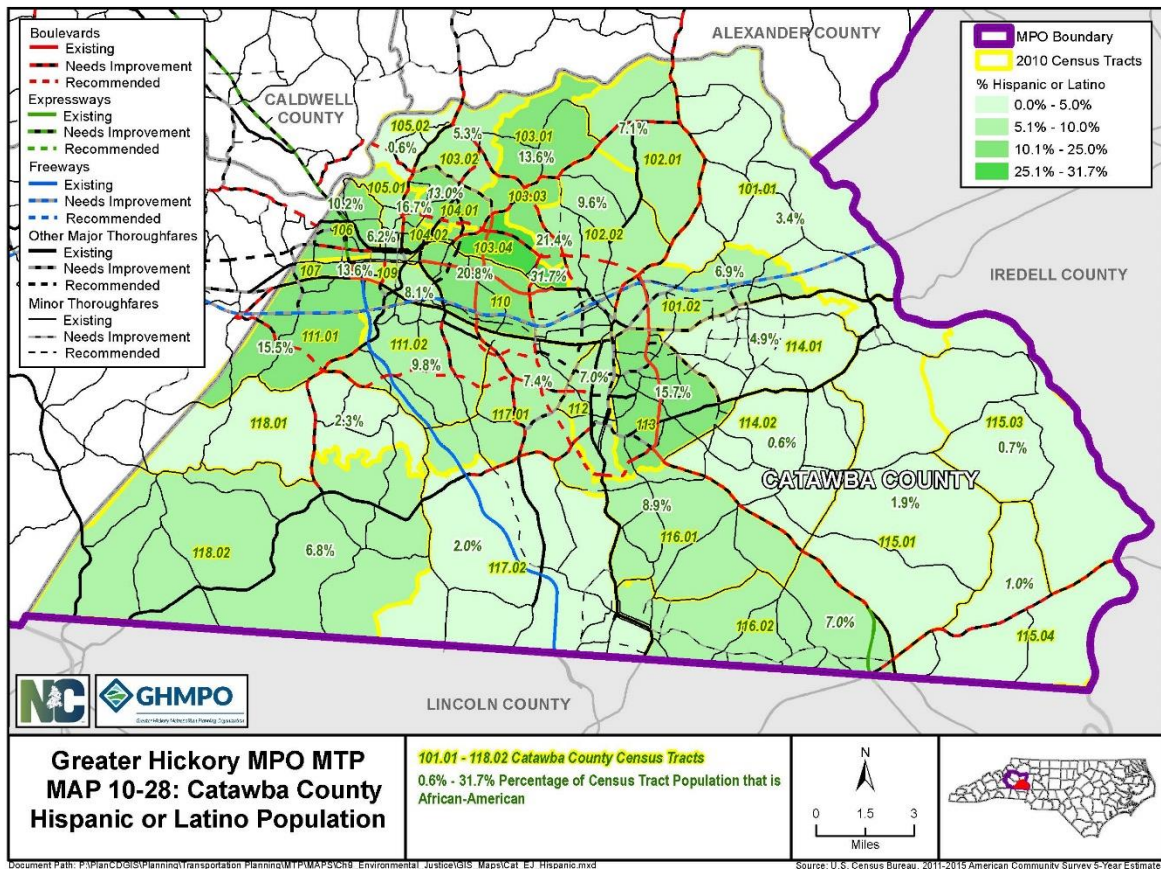
Data from the U.S. Census Bureau show the most concentrated Hispanic or Latino populations in Alexander County were in Census Tract 405 and encompassed 10.5% of the overall Tract population. Tract 401 had the lowest Hispanic or Latino populations at 0.1%.



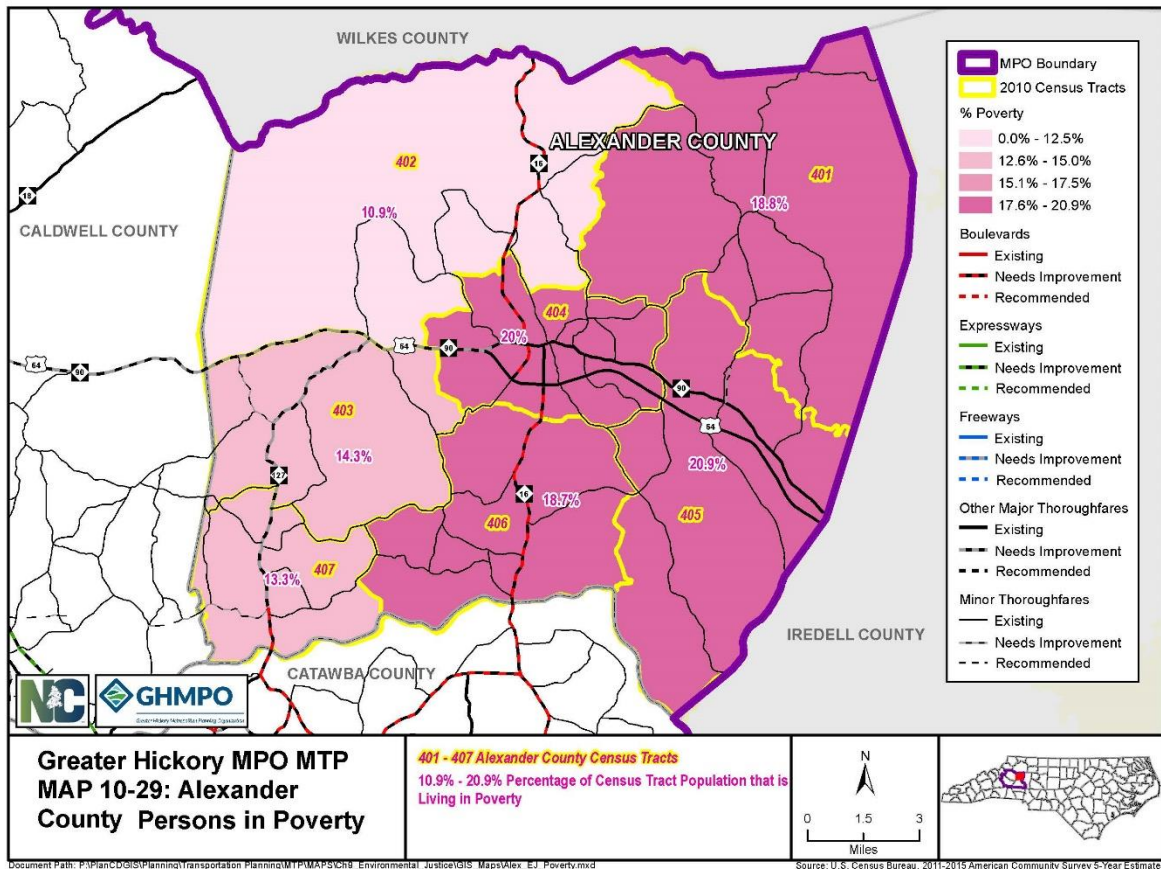
Data from the U.S. Census Bureau show the most concentrated Hispanic or Latino populations in Burke County were in Census Tracts 201, 205, 206, and 214 and ranged from 10.1% to 27% of the overall Tract population. Tract 213.02 had the lowest Hispanic or Latino populations at 0.1%.



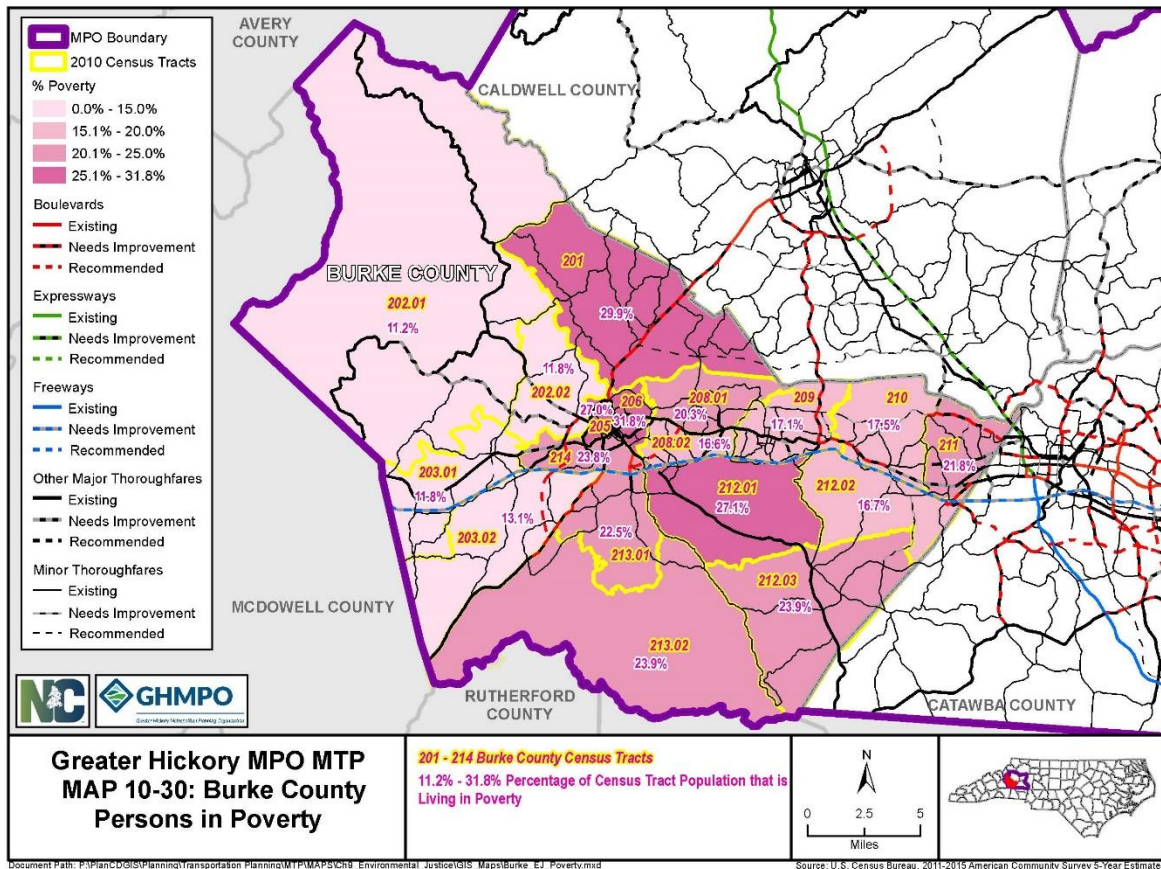
Data from the U.S. Census Bureau show the most concentrated Hispanic or Latino populations in Caldwell County were in Census Tracts 302, 304, and 314.03 and ranged from 10.1% to 13.5% of the overall Tract population. Tract 311 had the lowest Hispanic or Latino populations at 0.5%.



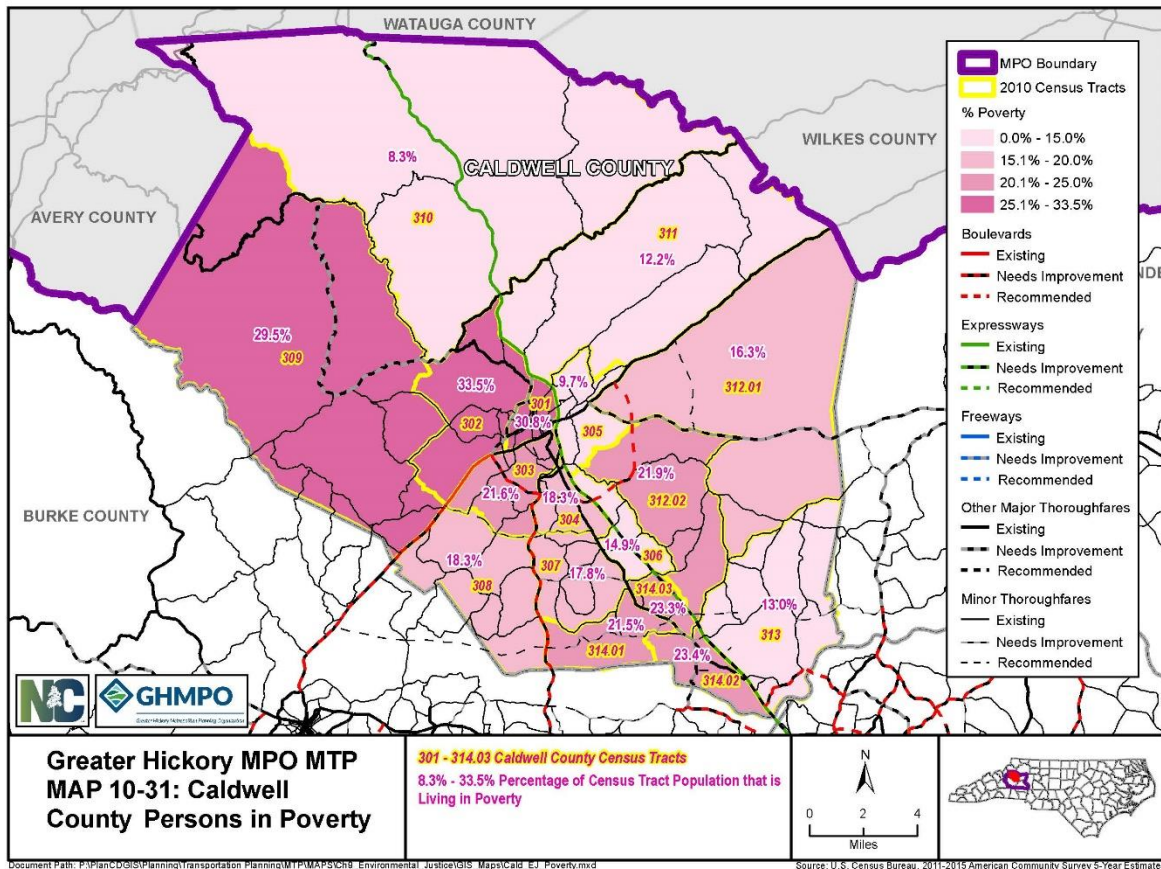
Data from the U.S. Census Bureau show the most concentrated Hispanic or Latino populations in Catawba County were in Census Tract 103.04 and encompassed 31.7% of the overall Tract population. Tract 105.02 had the lowest Hispanic or Latino populations at 0.6%.



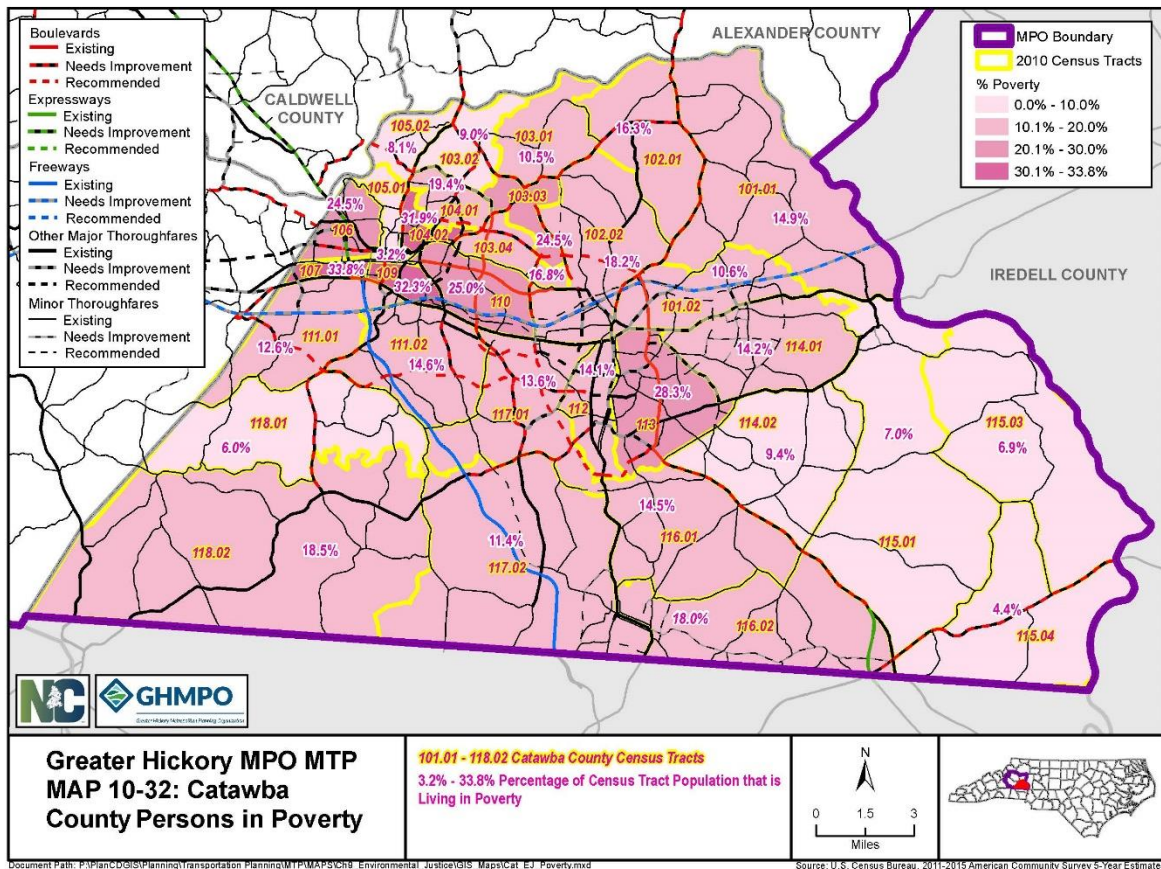
Data from the U.S. Census Bureau show the most concentrated poverty areas in Alexander County were in Census Tracts 401, 404, 405, and 406 and ranged from 17.6% to 20.9% of the overall Tract population. Tract 402 had the lowest number of persons in poverty at 10.9%.



Data from the U.S. Census Bureau show the most concentrated poverty areas in Burke County were in Census Tracts 201, 205, 206, and 212.01 and ranged from 25.1% to 31.8% of the overall Tract population. Tract 202.01 had the lowest number of persons in poverty at 11.2%.



Data from the U.S. Census Bureau show the most concentrated poverty areas in Caldwell County were in Census Tracts 301, 302, and 309 and ranged from 25.1% to 33.5% of the overall Tract population. Tract 310 had the lowest number of persons in poverty at 8.3%.



Data from the U.S. Census Bureau show the most concentrated poverty areas in Catawba County were in Census Tracts 104.02, 107, and 109 and ranged from 30.1% to 33.8% of the overall Tract population. Tract 105.01 had the lowest number of persons in poverty at 3.2%.

Environmental Justice Analysis

The Environmental Justice (EJ) analysis results illustrated in Maps 10-33 through 10-36 show how low-income and minority populations are distributed throughout the Greater Hickory MPO planning area. This analysis examined low-income and minority populations using 2010 Census Tracts, which are small, relatively permanent statistical subdivisions of a county. The purpose of this analysis was to determine EJ group concentrations and evaluate those groups' accessibility to existing and proposed transportation options. The following methodology was used to determine Census Tract EJ group concentrations:

1. United States Census and 2011-2015 American Community Survey (ACS) 5-Year Estimates data was used to calculate regional African-American, Asian, Hispanic or Latino, and Low-Income population percentages by dividing the total EJ group regional population by the total regional population.

2. The same Census and ACS data was used to calculate Census Tract population percentages for the same four groups by dividing the EJ group Tract population by the total Tract population.
3. Census Tract population percentages exceeding regional population percentages were scored and placed into a 4-level categorized “EJ Groups Concentration” scale based on total number of EJ Groups:
 - *No Concentration* – Census Tract with zero groups exceeding regional averages
 - *Low Concentration* – Census Tract with 1 group exceeding regional averages
 - *Moderate Concentration* – Census Tract with 2 groups exceeding regional averages
 - *High Concentration* – Census Tract with 3 or 4 groups exceeding regional averages
4. The 2045 MTP road network, regional sidewalk network, and public transit network were then mapped and overlaid onto the concentration categories. Finally, percentages were calculated to show how much of each network exists within each concentration category.

Results

Analysis Study Area

The Greater Hickory MPO planning area includes all jurisdictions within Alexander, Burke, Caldwell, and Catawba Counties. The region’s population is approximately 363,000 and consists of 1,666 square miles. The region is further divided into 73 Census Tracts. The region’s Census Tract populations range from 2,093 to 8,753 and their sizes range from 1.4 to 160.3 square miles.

Regional Averages

Each Census Tract was compared to regional population percentages for African-American, Asian, Hispanic or Latino, and low-income Environmental Justice (EJ) communities. The regional averages provide a threshold for analyzing EJ population concentrations in each Census Tract and helps focus outreach efforts and services accordingly. Table 10-1 shows the regional population percentages for the 4 EJ groups. At 18.1%, the Low-Income population represents the largest EJ group. African-Americans comprise 6.8% of the region’s population; Hispanic or Latino, 6.7%; and Asian, 2.8%. The region’s percentage of African-American and Hispanic or Latino population is nearly identical. There are less than 10,000 North Carolinians of Asian origin living in the region. Though the overall regional average of this group is low, it is important to examine it to determine potential impacts of transportation projects on all Environmental Justice communities within the GHMPO region.

Table 10-1.

Greater Hickory MPO Regional Environmental Justice Population Percentages		
Group	Population	Percent
African-American	24,703	6.8%
Asian	9,986	2.8%
Hispanic or Latino	24,324	6.7%
Low-Income	----	18.1%

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Census Tract Averages vs. Regional Averages

The number of Census Tract Environmental Justice categories that exceed regional percentages are shown in Table 10-2. Nearly 40% of the African-American Tract percentages were higher than the regional average. These Tracts comprise all of Taylorsville, west Morganton, west Lenoir, south Hickory, and most of Newton-Conover. Approximately 33% of the Asian Tract percentages were higher than the regional average. These Tracts consist of all of Connelly Springs, Drexel, Rutherford College, Valdese, and the Mountain View area of southwest Catawba County (but none of Taylorsville or Lenoir). Thirty Tracts had higher Hispanic or Latino percentages than the regional average. These tracts included southeast Alexander County, west Lenoir, north Gamewell, and along NC 16 in Catawba County. Nearly half the Tracts in the region had Low-Income percentages that were higher than the regional average. These Tracts include the South Mountains State Park area, some of the southern Pisgah National Forest Area of Caldwell County, and eastern Alexander County.

Table 10-2.

Greater Hickory MPO Census Tract Environmental Justice Population Percentages Vs. Regional Environmental Justice Population Percentages				
Group	Number of Tract Percentages Over Regional Percentages	Over Percentages	Number of Tract Percentages Under Regional Percentages	Under Percentage
African-American	29	39.7%	44	60.3%
Asian	24	32.9%	49	67.1%
Hispanic or Latino	30	41.1%	43	58.9%
Low-Income	34	46.6%	39	53.4%

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Concentration Scale

The total area and number of Census Tracts for the categorized concentration levels are shown in Table 10-3. The *No Concentration Level* had zero Tract averages that exceed the regional average, and consists of almost 40% of the MPO's planning area. The *No Concentration Level* is primarily located between northwest and southwest Alexander County, the Jonas Ridge (northeast) area of Burke County, northern Caldwell County, and the Lake Norman (southeast) area of Catawba County. The *Low Concentration Level* is the region's second largest in term of square mileage (nearly 493 square miles), of which 337 square miles are located in Burke and Caldwell Counties. West Newton Taylorsville, Hildebran, and Maiden are all located within the *Moderate Concentration* levels. Twenty Tracts make up the *High Concentration Level*.

Table 10-3.

Environmental Justice Concentration Scale by Area and Number of Census Tracts				
Concentration Level	Area (Square Miles)	Area (%)	Number of Census Tracts	Census Tracts (%)
No	657.7	39.5%	18	24.7%
Low	492.8	29.6%	17	23.3%
Moderate	260.1	15.6%	18	24.7%
High	255.6	15.3%	20	27.4%
Total	1666.2	100%	73	100%

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

2045 MTP Highway Network

Table 10-4 shows how much of the MTP Highway Network is contained within each Concentration Level. Maps 10-33 through 10-36 display how the network roads intersect these Levels. Almost 79% (or 1,346-miles of the network) is located within *Low to High Concentration* areas. The highest percentage of the MTP's Highway Network (22.5%) is located within the *High Concentration Level*.

Table 10-4.

Highway Network Length and Percentages by Concentration Level		
Concentration Level	Road Miles	Road Miles (%)
No	52.9	20.7%
Low	41.1	16.1%
Moderate	28.1	11.1%
High	51.9	20.3%
Shared Boundary	81	31.8%
Total	255	100%

Source: Greater Hickory Metropolitan Planning Organization, U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

In Alexander County, NC 16 crosses Tract 406 (the county's *High* EJ Group Concentration Tract). US 64 and NC 90 traverse Tracts 404 and 405, both of which are *Moderate* EJ Group Concentration Tracts as shown in Map 10-33.

Tracts 201, 205, 208.01 and 214 in Burke County are *High* EJ Group Concentration Tracts. Multiple thoroughfares cross these Tracts. Ongoing improvements to I-40 interchanges in Morganton have improved access to the Interstate for residents in Tracts 205 and 214. US 70 and NC 18 serve the *Moderate* EJ Concentration Tracts (Tracts 203.01, 206, 211, 212.03 and 213.01) as shown in Map 10-34.

In Caldwell County, several major thoroughfares traverse the *High* EJ Group Concentration Tracts (Tracts 302 and 303): US 321, US 321 A, US 64 and NC 90. Future plans call for improvements to US 321 and 321A, a loop on Lenoir's east side, and a new road beginning at US 321 connecting to NC 18 near Cedar Rock. These improvements will make moving around the Lenoir area easier for residents, workers and visitors. US 321 and 321-A also serve the *Moderate* EJ Group Concentration Tracts of 301, 304, 314.02 and 314.03 as shown in Map 10-35.

Major plans for thoroughfare improvements in Catawba County include increased connectivity in Hickory, Newton and Conover and substantial improvements to NC 16, NC 10 and NC 127 South as shown in Map 10-36. These projects will provide better links for the *High* and *Moderate* EJ Group Concentration Tracts in the area, resulting in increased connectivity in and around each city and into the wider GHMPO region.

Regional Sidewalk Network

Maps 7-7 through 7-10 from the Bicycle and Pedestrian Chapter (Chapter 7) show the locations of existing and proposed sidewalks within the MPO's planning area. Tables 10-5 and 10-6 describe how much linear feet of existing and proposed sidewalk are contained in each concentration level. Approximately 45% of the region's existing sidewalk network

is located within a *High Concentration* Census Tract: of 671,100 total linear feet, 632,400 linear feet are located within Conover, Hickory, and west Morganton. Slightly more than 31% of the region's existing sidewalk network is located in the *Moderately Concentrated* areas of Lenoir, east Morganton, west Newton, and Taylorsville. Almost 3/4 of all proposed sidewalks are located within a *Moderate* or *High Concentration* area. Nearly 57% of proposed sidewalks are planned for *Highly Concentrated* areas primarily in Hickory, Conover, and Newton.

Table 10-5.

Existing Sidewalk Network Length and Percentages by Concentration Level		
Concentration Level	Linear Feet	Linear Feet (%)
No	211,000	14.0%
Low	153,600	10.2%
Moderate	473,800	31.4%
High	671,100	44.5%
Total	1,509,500	100%

Source: Greater Hickory Metropolitan Planning Organization, U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Table 10-6.

Proposed Sidewalk Network Length and Percentages by Concentration Level		
Concentration Level	Linear Feet	Linear Feet (%)
No	156,100	11.5%
Low	185,000	13.7%
Moderate	242,800	18.0%
High	767,900	56.8%
Total	1,351,800	100%

Source: Greater Hickory Metropolitan Planning Organization, U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Public Transit Network

Map 6-2 and Figure 6-1 from the Public Transportation Chapter (Chapter 6) show the current public transportation routes that serve the cities of Conover, Hickory, and Newton. Greenway Public Transportation also has a flex route in the downtown Taylorsville area.

Transit access is generally good for urban residents of Catawba County's largest cities (Hickory, Newton, and Conover); residents of Morganton (Burke County) and Lenoir (Caldwell County), however, are currently without fixed transit routes. Rural residents in the GHMPO with low-moderate household incomes are not served by Greenway Public Transportation's fixed transit service. Greenway Public Transportation does serve all four

counties with demand response van service, which is often used by low-moderate income and older populations.

Table 10-7 lists the percentage of public transit service by Concentration Level. More than 90% of the region's public transit network is located within *Moderate to High Concentration* areas in Alexander and Catawba Counties. Of that 90%, 67% is located in the *High Concentration* areas of Catawba County. Approximately 6% of the public transit network is located in areas of *No Concentration* and zero percent is located in *Low Concentration* areas.

Table 10-7.

Public Transit Service by Concentration Level	
Concentration Level	Route (%)
No	6.1%
Low	0%
Moderate	16.7%
High	66.6%
Shared Boundary	10.6%
Total	100%

Source: Greenway Public Transportation, U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Table 10-8 provides a summary of the range of public transit services provided in the GHMPO, and the extent to which public transit is available in High Concentration EJ areas. The table also provides information on the location of air quality monitoring stations in relation to EJ areas.

Table 10-8.

Public Transit Service and Air Quality Monitoring Stations					
	Fixed/Flex Route Transit	Fixed Route Transit Service to High Concentration EJ Tracts	Rural Fixed Route Transit	Rural Demand Response Transit	Air Quality Monitor in EJ Tracts
Alexander	Yes - Flex, Taylorsville	Yes	None	Yes	Yes - Tract 404, High EJ Concentration
Burke	None	N/A	None	Yes	No Monitors
Caldwell	None	N/A	None	Yes	Yes - Tract 305, Moderate EJ Concentration
Catawba	Yes - Hickory, Newton, Conover	Yes	None	Yes	Yes - Tract 109, High EJ Concentration

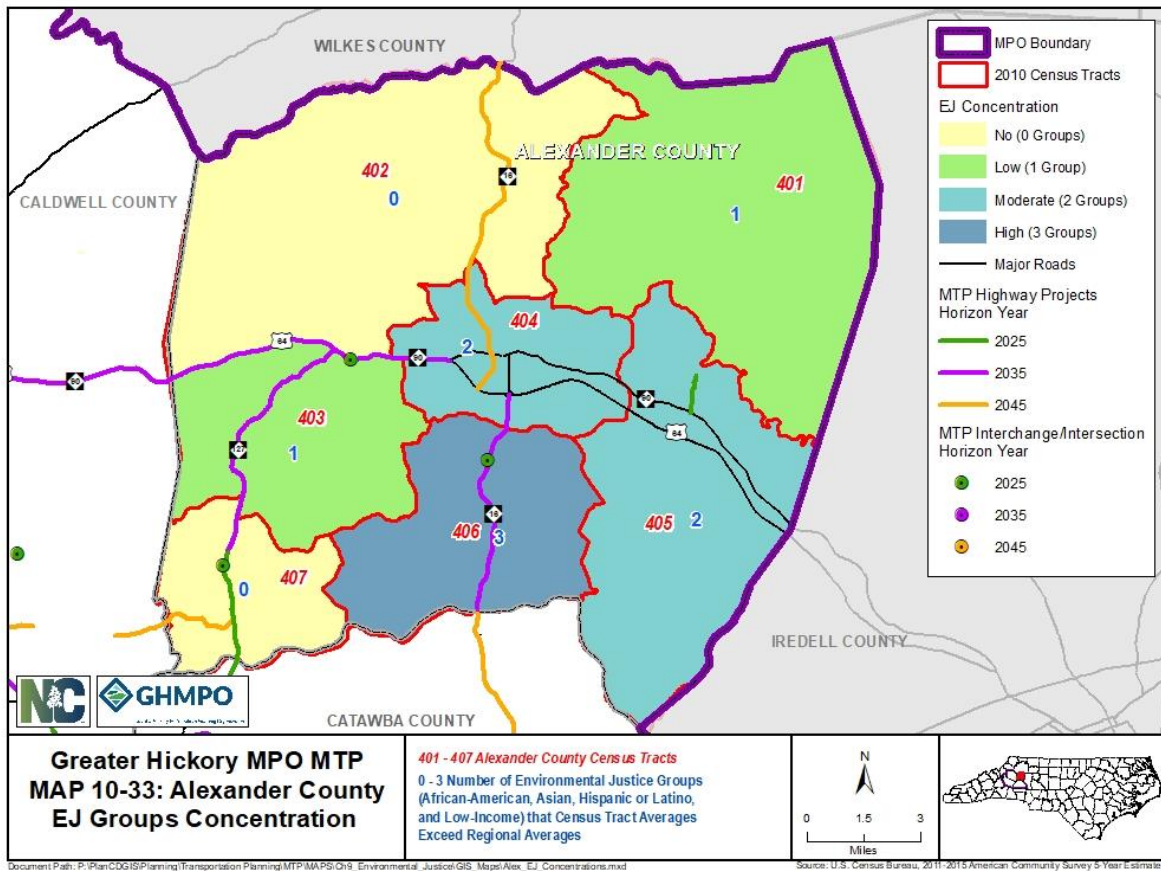
Source: GHMPO, NCDEQ.

Highway Projects Intersecting Concentrated Environmental Justice Census Tracts

Highway, roadway, intersection and interchange projects scheduled to occur in Environmental Justice (EJ) Census Tracts are listed by their respective MTP project ID numbers below. For additional project details, refer to Chapter 4, Highways and Roadways.

Alexander County (Map 10-33):

One Census Tract in Alexander County has a high concentration of EJ groups. Census Tract 406 has two projects identified, one each for horizon years 2025 and 2035.



Alexander County - Horizon Year 2025

Census Tract 406:

ALEX-HR-2. Intersection improvements on NC 16 at County Home Road (R-5762). These improvements will consist of the construction of additional turn lanes. The total estimated cost of this project is \$235,000.

Alexander County - Horizon Year 2035

Census Tract 406:

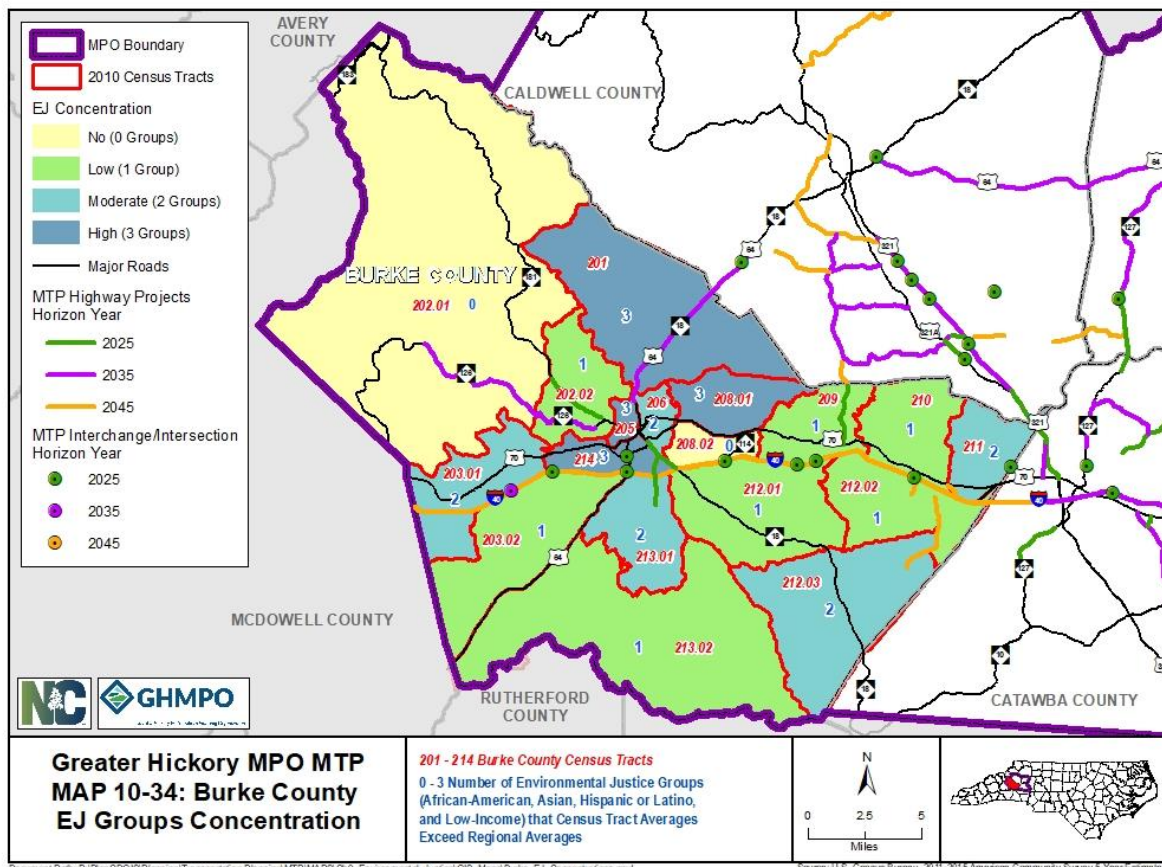
ALEX-HR-4. NC 16 (R-2403A) from the Catawba County line to just north of the Census Tract boundary at US 64. This project consists of upgrades including 4-foot wide paved shoulders throughout Tract 406. The total estimated cost of this project is \$6.8 million.

Both projects in Census Tract 406 will result in safety and mobility improvements along a principal arterial (NC 16) that links residents to key employment opportunities, local schools, recreational sites and retail centers.

The MTP has no recommended projects within this one Census Tract of Alexander County for Horizon Year 2045.

Burke County (Map 10-34):

Four Census Tracts in Burke County have high concentrations of EJ groups. Three of these Tracts (201, 205 and 214) have highway and/or interchange/intersection improvements projects identified. Census Tract 208.01 is adjacent to one project that will result in improved mobility to and from that Tract.



Burke County – Horizon Year 2025

Census Tract 208.01:

BURK-HS-3. Interchange upgrades to I-40/SR 1712 (Drexel Road), Exit 107. This project will improve vehicle safety and accessibility to I-40, the County, and the wider region. The total estimated cost for the project is \$18.4 million.

Census Tract 214:

BURK-HS-2. Interchange improvements at I-40/US 64 (Burkemont Road), Exit 103. This project will improve vehicle safety and accessibility to I-40, the County, and the wider region. The total estimated cost for this project is \$1.41 million.

BURK-HS-1. Interchange upgrades at I-40/SR 1142 (Jamestown Road), Exit 100, due to the fact that the existing ramps do not meet State or Federal design standards (2-way traffic on the southeast and northeast ramps). Importantly, the project will significantly improve accessibility to one of the County's largest employers (Teves) and I-40. The total estimated cost of the project is \$2.4 million.

BURK- HR-1. The construction of turn lanes on US 70 (West Fleming Drive) to US 64 (Burkemont Avenue) at a total cost of \$558,000. This project will result in improved access to several major employers and Western Piedmont Community College.

Census Tract 214:

BURK-HD-1. The widening of SR 1922/SR 1924 to multi-lane facility from SR 2026 to NC 18 and the upgrade of the I-40 Interchange at Exit 104. This 2 mile project will improve access to area schools, employers, retail locations and to I-40. The project's total estimated cost is \$32.3 million.

Census Tract 214:

BURK-HR-2. Widening NC 18 to 5 lanes with curb and gutter from Fleming Drive to I-40 and upgrades to Exit 105. This 2.1 mile project will improve access to area schools, shopping locations and the interstate. The project's total estimated cost is \$41.5 million.

Burke County – Horizon Year 2035

Census Tracts 201, 205:

MULT-HR-4. Widening US 64 / NC 18 to 4 lane divided facility from Gamewell to Morganton. As part of a larger project linking Morganton and Lenoir, this project will result in improved access between key employment centers in the two cities. The total estimated cost of this project is \$51.5 million.

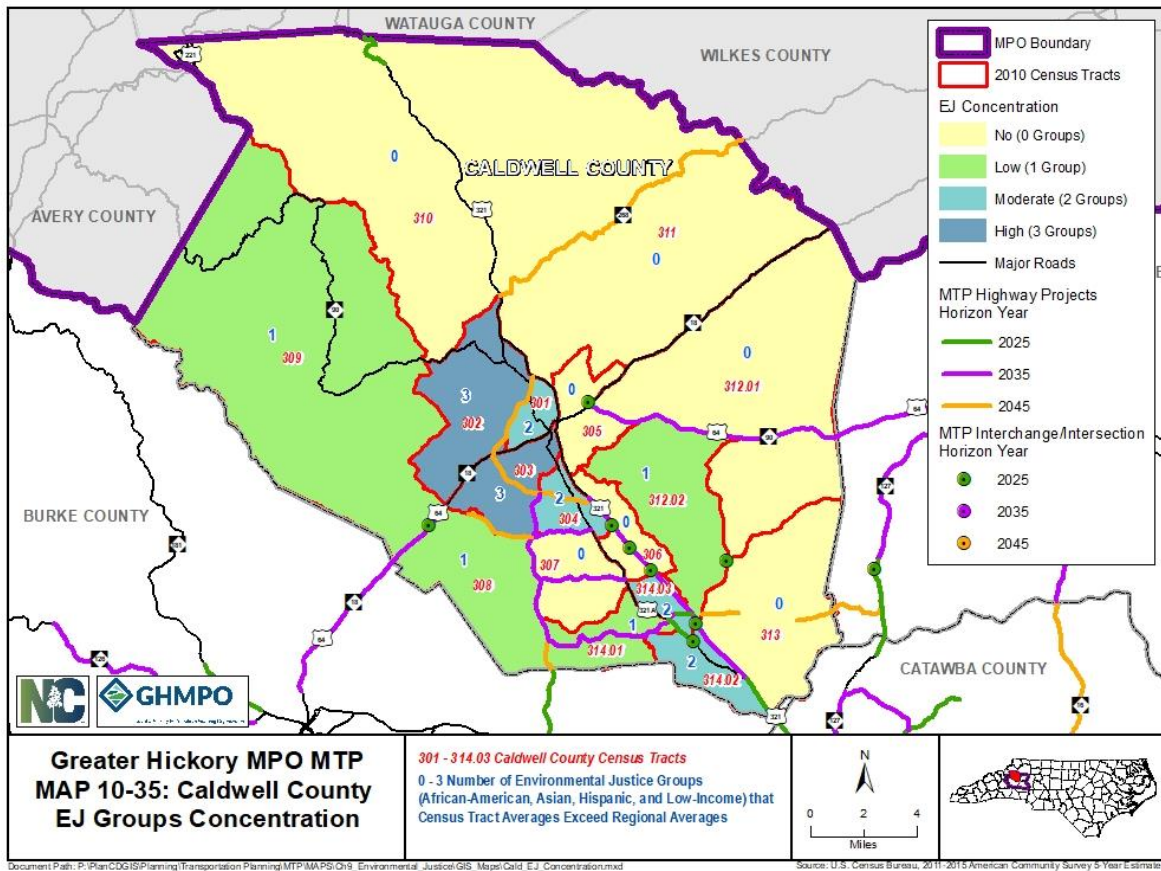
Burke County – Horizon Year 2045

Census Tract 214:

BURK-HS-9. The widening of I-40 from Exit 100 to NC 10 (within the Census Tract 214) from 4 lanes to 6 lanes. This is part of a larger project that will widen I-40 in Burke County from the McDowell County line to the Catawba County line, substantially improving accessibility both within Tract 214 and throughout the County. The project's total estimated cost is \$367.6 million.

Caldwell County (Map 10-35):

<p>Two Census Tracts in Caldwell County have high concentrations of EJ Groups: Tract 302 and Tract 303.</p>
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Caldwell County - Horizon Year 2035

Census Tract 303:

CALD-HD-6. The widening of Connelly Springs Road from a 2 lane facility to a 4 lane divided facility (in the southeast portion of Tract 303) to Southwest Blvd. (SR 1933). This 6 mile project is estimated to cost \$79.3 million, and will improve mobility for Tract residents traveling to work in Lenoir and Burke County.

Caldwell County - Horizon Year 2045

Census Tract 302:

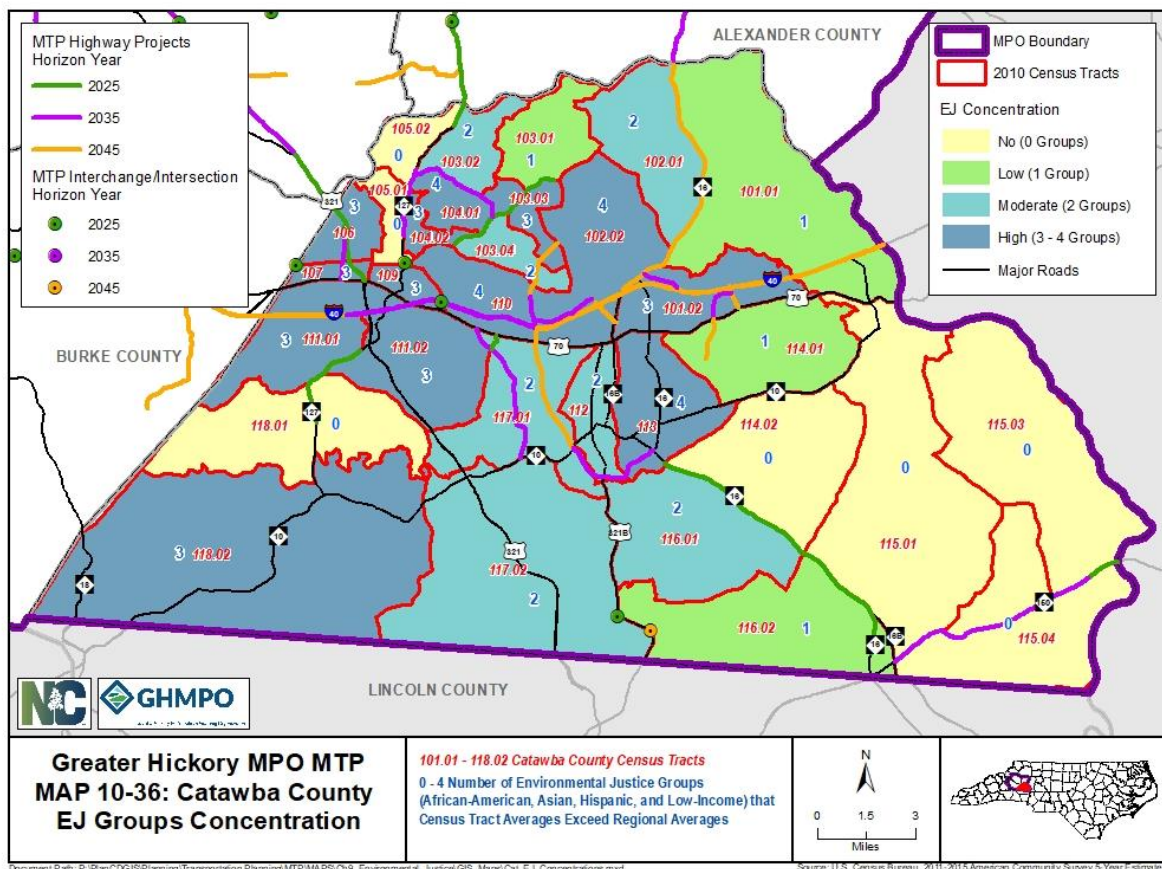
CALD-HD-12. The development of a feasibility study for the continuation of Southwest Blvd/Creekway Drive north to US 321. This 7.98 mile project would improve mobility around the City of Lenoir and improve access to US 64/NC18. The project's total estimated cost is \$58.4 million.

CALD-HD-10. Improvements to Orchard Drive (SR 1146) including the widening and alignment of the intersection of Orchard Drive with Crump Road (SR 1929) at Clark's Chapel Road. This 1.37

mile project would improve access to major employers along US 64/NC 18 and also improve mobility within Tract 303. The project's total estimated cost is \$1.7 million.

Catawba County (Map 10-36):

Thirteen Census Tracts in Catawba County have high concentrations of EJ Groups: 101.02, 102.02, 103.03, 104.01, 104.02, 106, 107, 109, 110, 111.01, 111.02, 113, and 118.02.



Catawba County – Horizon Year 2025

Census Tracts 109, 110:

CATA-HS-1. I-40 at Exit 125 (Lenoir Rhyne Blvd/SR 1007). The addition of a clover ramp in the northeast quadrant. This project will improve mobility and reduce congestion in an area with numerous retail establishments. The total estimated cost for this project is \$1.4 million.

Census Tracts 111.01, 111.02:

CATA-HR-4. The widening of NC 127 to a multi-lane facility from SR 1132 (Huffman Farm Rd) to SR 1008 (Zion Church Rd). The project will result in improved mobility for Tract residents and improved access to Mountain View Elementary School. This project's total estimated cost is \$34.1 million.

Census Tracts 109, 110:

CATA-HR-3. The addition of turn lanes on NC 127 from 1st Ave SE to 2nd Ave SE. This project will result in improved mobility for Tract residents traveling to and from key downtown employers and retail establishments. Total estimated project cost: \$830,000.

Census Tract 106:

CATA-HD-1. 17th Street NW Connector. The construction of a two lane connector from 9th Avenue NW to Clement Boulevard NW. 17th Street NW runs parallel to US 321 and serves both residential and industrial development. Providing a connection to Clement Boulevard NW would provide Tract residents with an alternative route to US 321 between Clement Boulevard and US 70. The project's total estimated cost is \$1.5 million.

Census Tract 107:

CATA-HD-2. Intersection realignment at 33rd St SW (SR 1124) and 34th St NW. Total estimated project cost: \$2.5 million.

Census Tracts 106, 107, 109, 111.01:

MULT-HS-2. US 321 and bridge. The widening of US 321 to six-lanes/Superstreet from US 70 in Hickory to US 321-A in Granite Falls. Though this project spans multiple counties, the four tracts along the project with high concentration of EJ groups are located in Catawba County. This project will improve Tract residents' ability to access major employers in the area and the wider region, while improving traffic flow in a congested area. The project's total estimated cost is \$70.5 million.

Census Tracts 103.03, 104.01, 104.02:

CATA-HD-3. Springs Rd NE / 12th Ave NE (SR 1453). From 9th Ave NE to Charlotte St (SR 1504). Converting a 5 lane facility to 4 a lane divided facility with medians, turn lanes and driveway consolidations. Springs Road primarily serves commercial development with some residential development. The high number of turns on Springs Rd. has led to safety concerns on the part of Tract residents. The project's total estimated cost is \$35.5 million.

Census Tracts 110, 111.02:

CATA-HD-4. New three-lane facility (from US 70 to Startown Road). This project will enhance connectivity for Tract residents in the Catawba Valley area by providing direct route to 21st

Street SE (SR 1468), creating improved links to Catawba Valley Community College and other key employers on US 70. The project's total estimated cost is \$2.66 million.

Catawba County – Horizon Year 2035

Census Tracts 111.01, 111.02, 109, 110:

CATA-HS-2. The widening of I-40 from Fairgrove Church Road (SR 1476) to US 321 from four-lane facility to six-lane facility. I-40 serves through traffic and also serves Tract residents traveling to important nearby destinations e.g. the Catawba Valley Medical Center, shopping centers, and Catawba Valley Community College. This project's total estimated cost is \$222.2 million.

Census Tracts 104.01, 104.02, 110, 103.02:

CATA-HR-6. NC 127- convert 8th Ave NE to 30th Ave NW to a 4 lane divided facility with sidewalks and left turn median openings. This project will enhance safety and mobility for Tract residents, while also providing improved pedestrian connections to a high number of retail establishments. This project's total estimated cost is \$28.9 million.

Census Tracts 106, 107, 109, 111.01:

CATA-HD-6. 17th Street SW (SR 1739); Modernization (from US 70 to 2nd Avenue NW). 17th Street SW (Long View) modernize from US 70 to 2nd Avenue. This project's total estimated cost is \$3.5 million.

Census Tracts 106, 107, 109, 111.01:

CATA-HD-5. Improvements to 17th St NW from 2nd Ave NW to 9th Ave NW. This project will improve mobility and connectivity to nearby employers and retail establishments. The project's total estimated cost is \$1.5 million.

Census Tracts 104.01, 103.03, 104.02, 102.02:

CATA-HD-9. McDonald Parkway (East Side Thoroughfare) - upgrade 29th Ave. NE to a multi-lane roadway from Springs Rd (SR 1453) to NC 127 North. The project will improve mobility and connectivity both within the Tract and the wider region. This project's total estimated cost is \$93.0 million.

Census Tracts 110, 109, 101.02:

CATA-HD-7. The widening of Fairgrove Church Rd from I-40 to Tate Boulevard to a 4-lane divided roadway. The section between I-40 and Tate Boulevard is primarily commercial development (including Catawba Valley Medical Center, the region's largest community hospital). Tract residents are experiencing heavy traffic, and mobility is impacted by numerous driveways. The project's total estimated cost is \$13.7 million.

Census Tracts 101.02, 102.02:

CATA-HD-6. The modernization of 17th Street SW (SR 1739) from US 70 to 2nd Avenue NW. This area has a mixture of commercial and residential land uses. The project will result in Tract residents' improved access to and from US 70. This project's total estimated cost is \$3.5 million.

Census Tracts 113, 101.02:

CATA-HD-10. Newton and Conover Loop (Southern Portion) – construction of a multi-lane facility from NC 10 southwest of Newton to NC 16 via “P” St. A portion of the project will be built on a new location. The primary route through Newton is NC 10. NC 10 from Jarrett Farm Road (SR 2015) to NC 16 is projected to be over or near capacity by 2045. Improvements are needed to help address this deficiency and improve Tract residents’ mobility. The total estimated cost of the project is \$67.7 million.

Census Tracts 110, 101.02, 111.02, 102.02:

CATA-HD-11. Punch Loop Road (SR 1483) and Extension West (Conover) – construction of a two-lane facility on new location from 1st Street West to Fairgrove Church Road. This project will improve accessibility for Tract residents in an area with several major employers and retail establishments. The project’s total estimated cost is \$13.1 million.

Census Tracts 111.02, 110:

CATA-HD-12. Improving Startown Road (SR 1005) from US 70 to Hwy 10 into 4 lane divided facility. This project will improve safety and mobility for Tract residents while improving access to employers and Catawba Valley Community College. The project’s total estimated cost is \$36.5 million.

Census Tracts 101.02, 113, 110, 102.02:

CATA-HD-13. Western Claremont Loop/Heart Drive – construction of a two lane facility on new location (from N. Oxford St. to US 70. This project will result in improved connectivity for Tract residents, in an area where current facilities steer all trips onto US 70. This project’s total estimated cost is \$15.6 million.

Catawba County – Horizon Year 2045**Census Tracts 111.01, 111.02:**

MULT-HS-3. The widening of I-40 from a four-lane facility to a six-lane facility (from US 321 - Exit 123 to Old NC 10 (SR 1761) in Burke County). Though this project spans multiple counties, the two tracts along the project with high concentration of EJ groups are located in Catawba County. The project will alleviate capacity constraints, enhance regional mobility and improve safety for Tract residents. This project’s total estimated cost is \$97.1 million.

Census Tracts 101.02, 102.02, 110:

MULT-HS-4. The widening of I-40 from a four-lane facility to a six-lane facility from I-77 in Iredell County line to NC 16. Though this project spans multiple counties, the three tracts along the project with high concentration of EJ groups are located in Catawba County. This project will alleviate capacity constraints, improve regional mobility and enhance safety for Tract residents. The project’s total estimated cost is \$222.2 million.

Census Tracts 110, 102.02, 101.02:

CATA-HS-3. Widen I-40 from Fairgrove Church Road (Exit 128) to NC 16 (Exit 132). This segment is expected to be over capacity by 2045. This project will result in the widening of I-40 from four lanes to six lanes, improving mobility, safety and accessibility to major employers for Tract residents. The project's total estimated cost is \$46.3 million.

Census Tracts 110, 101.02:

CATA-HD-14. The widening of 1st Street W (SR 1007) to multi-lanes (from I-40 to NC 16 Business). It is also recommended that the five-point intersection in downtown Conover be modified by connecting Second Avenue NE to NC 16 at a location north of the intersection. This major thoroughfare serves crosstown travel and connects the industrial area off US 70-A to downtown Conover. This project will improve mobility for Tract residents and is estimated to cost \$12.6 million.

Census Tracts 110, 103.03, 102.02:

CATA-HD-15. Newton and Conover Loop (Western Portion) - widen Fairgrove Church Rd. (SR 1476) and extend new roadway to NC 10 West in Newton and build new a roadway to the north. This project will enhance connectivity for Tract residents, its total estimated cost is \$100 million.

Census Tracts 101.02, 102.02:

CATA-HR-8. The widening of NC 16 North to a four-lane divided facility (from I-40 to the Alexander & Catawba County line). This project will improve Tract residents' regional connectivity and provide enhanced linkages to major employers. The project's total estimated cost is \$75 million.

Census Tract 101.02:

CATA-HD-16. The widening of N. Oxford Street (SR 1715) in Claremont from I-40 to US 70 - widen to a five lane facility. This project will provide Tract residents with improved access to a key retail and employment corridor. The project's total estimated cost is \$14.4 million.

Discussion:

As these proposed projects move from the conceptual phases through to construction and completion, Environmental Justice and National Environmental Policy Act (NEPA) regulations require the evaluation (and mitigation of disproportionate impacts where necessary) of each project. Some of the potential negative impacts resulting from projects include, but are not limited to:

- Overall community accessibility and mobility (both within the EJ Tract and the wider region)
- Community cohesion
- Access to schools, senior centers, hospitals and social service providers
- Access to parks and the impacts of projects on parks
- The environment (auditory, visual, air/water pollution, vibration)
- Employment in the project vicinity (permanent or temporary business closures)
- Construction effects (dust, noise, emissions, vibration)
- The ability of residents and visitors to locate parking

- Indirect and cumulative effects (loss or gain in property values)

Conclusions

Nearly every High Concentration Tract in the GHMPO has major roads that are classified as needing improvement, indicating that environmental justice issues should be anticipated in those Tracts. The Environmental Justice Groups Concentration Analysis shows that Catawba County has the most *High Concentration* Tracts (13) and the most *Moderate Concentration* Tracts (7). Burke County is second with 4 and 5, respectively. Caldwell County has 2 *High Concentration* Tracts and 4 *Moderate Concentration* Tracts, while Alexander County has 1 *High Concentration* Tract and 2 *Moderate Concentration* Tracts. Similarly, Catawba County has the highest number of *Moderate Concentration* Tracts (7), while Burke County has the second highest (5). Caldwell County has 4 *Moderate Concentration* Tracts, and Alexander County has 2.

Burke County has the most *Low Concentration* Tracts (7). Catawba County has 4 *Low Concentration* Tracts, as does Caldwell County. Alexander County has the fewest (2). While the EJ Analysis shows that there is only 1 EJ Group in a *Low Concentration* Tract, this does not mean that environmental justice concerns are less important in these Tracts. In fact, the environmental justice concerns of all EJ Groups are critical, and are not evaluated based solely on the concentration of each group in a particular tract.

An extensive EJ Community involvement process must be undertaken in order to encourage full EJ Community participation in both the project planning and decision-making processes. To ensure that no disproportionately high and adverse property impacts accrue to low-income or minority populations, planners must avoid, minimize, and mitigate impacts to EJ Communities.

Outreach to EJ communities through neighborhood and small group meetings must take place early in the planning process. The potential impacts of a project on EJ Community cohesion is a critical factor that must be considered during the outreach phases.

Implementation of any of the alternatives considered for a project may have both beneficial and adverse impacts to communities within a project area, making public dialog and involvement that much more important. Only a transparent and comprehensive evaluation of potential alternatives, conducted in concert with all impacted EJ Community Groups, will result the selection of the best project alternatives.

Suggestions for Moving Forward

- The GHMPO shall continue to practice the following three basic Environmental Justice principles to benefit minority, low income and older populations:

- avoid or minimize high and adverse human health, environmental, social and/or economic effects on minority and low-income populations;
- ensure full and fair participation of all potentially affected communities in the transportation decision-making process; and
- prevent denial of, reduction in or significant delay in the receipt of benefits by minority and low-income populations
- Investigate organizations offering Environmental Justice Grants that support solutions to local environmental and public health issues.
- Evaluate enhanced transit options to low income residents in the GHMPO, where feasible and as funding allows, to low income residents in rural areas of the counties.
- Targeted public outreach is recommended for future planning efforts, as well as during the National Environmental Policy Act (NEPA) process.
- Work to establish fixed transit routes in minority, low income and older population areas of Morganton and Lenoir where they are currently non-existent.
- Work to expand fixed transit routes in the Morganton area and from Morganton east to Valdese and Rutherford College where many seniors currently reside.
- Continue to conduct meetings in locations that are convenient and easily accessible to Title VI and Environmental Justice populations.
- Develop a practice of connecting with key community leaders, organizations, and institutions within minority and low income communities to ensure effective public outreach in those communities.
- Increase bicycle and pedestrian infrastructure for a more interconnected network in low income and minority communities.
- Continue to map past transportation projects in identified environmental justice areas (minority and poverty concentration) to determine project effects over time.
- Ensure that public meetings are accessible via transit and bicycle and pedestrian facilities where applicable.