



# ENVIRONMENTAL JUSTICE REPORT

FOR THE DURHAM-CHAPEL HILL-CARRBORO  
METROPOLITAN PLANNING ORGANIZATION

## 2014

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# 1. BACKGROUND & OVERVIEW

## CHAPTER CONTENTS

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## INTRODUCTION

Environmental justice (EJ) refers to the **fair treatment and meaningful involvement of people from all races, cultures, abilities, and incomes** during the development of projects, laws, regulations, and policies.<sup>1</sup> EJ is a federal requirement of all federal, state, and local agencies and has legal basis in Title VI of the Civil Rights Act of 1964, Executive Order 12898 of 1994, and the National Environmental Policy Act (NEPA). These regulations require that all agencies receiving federal assistance demonstrate compliance with related laws so that all the populations in the agency's study area enjoy the same benefits of the federal investments, bare the same burdens resulted from the federal projects, and have equal participation in the local and state issues.

In response to these federal statutes, the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) incorporates EJ into all relevant aspects of the transportation planning process. The DCHC MPO's policy is based on the **three core principles of EJ** set forth by the Federal Highway Administration and Federal Transit Administration:

- 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.

- Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations.

After taking into consideration the federal definition of environmental justice, the DCHC MPO determined that there may be other variables that should be reviewed. This is because the United States Department of Transportation's (US DOT) planning regulations require MPOs to "seek out and consider the needs of those traditionally underserved by existing transportation systems, including, but not limited to, low-income and minority households." It is for that reason that the discussion has been broadened in this EJ report to consider the Limited English Proficiency (LEP) population, low access to vehicle populations, and senior populations.

This document details the DCHC MPO's approach to EJ in the DCHC MPO planning area.

## DCHC MPO

The DCHC MPO is the regional organization responsible for transportation planning and project selection for the western part of the Research Triangle area in North Carolina.

The DCHC MPO urbanized area, first designated by the 1980 Census, covers all of Durham County, a portion of Orange County including the towns of Chapel Hill, Carrboro, and Hillsborough, and the northeastern section of Chatham County. The DCHC MPO area is one of the ten urban areas in North Carolina designated as a Transportation Management Area (TMA). TMA's are urban areas with a population of over 200,000 people. The map on page 1-3 presents the DCHC MPO planning area boundary.<sup>2</sup>

The DCHC MPO is an umbrella organization led by the MPO Board and the Technical Committee (TC), local governments, transit agencies, and the State of North Carolina. The MPO Board is a policy body that coordinates and makes decisions on transportation planning issues. The TC is composed of staff members from the units of local governments, Triangle Transit Authority, Research Triangle Park, Triangle J Council of Governments, Raleigh-Durham Airport Authority, North Carolina Central University, the University of North Carolina at Chapel Hill, Duke University, and Carolina Trailways. The TC reviews data, information, reports, and other transportation-related materials and provides technical recommendations to the MPO Board.

## **DCHC MPO DUTIES AND RESPONSIBILITIES**

The primary responsibility of the DCHC MPO is to fulfill the requirements of the Federal Highway Act of 1962. These regulations require those urban areas with a population of 50,000 or more to conduct a Continuing, Comprehensive, and Cooperative (3-C) transportation planning process. An integral element of this 3-C process is the development of long-range transportation-related plans and programs.

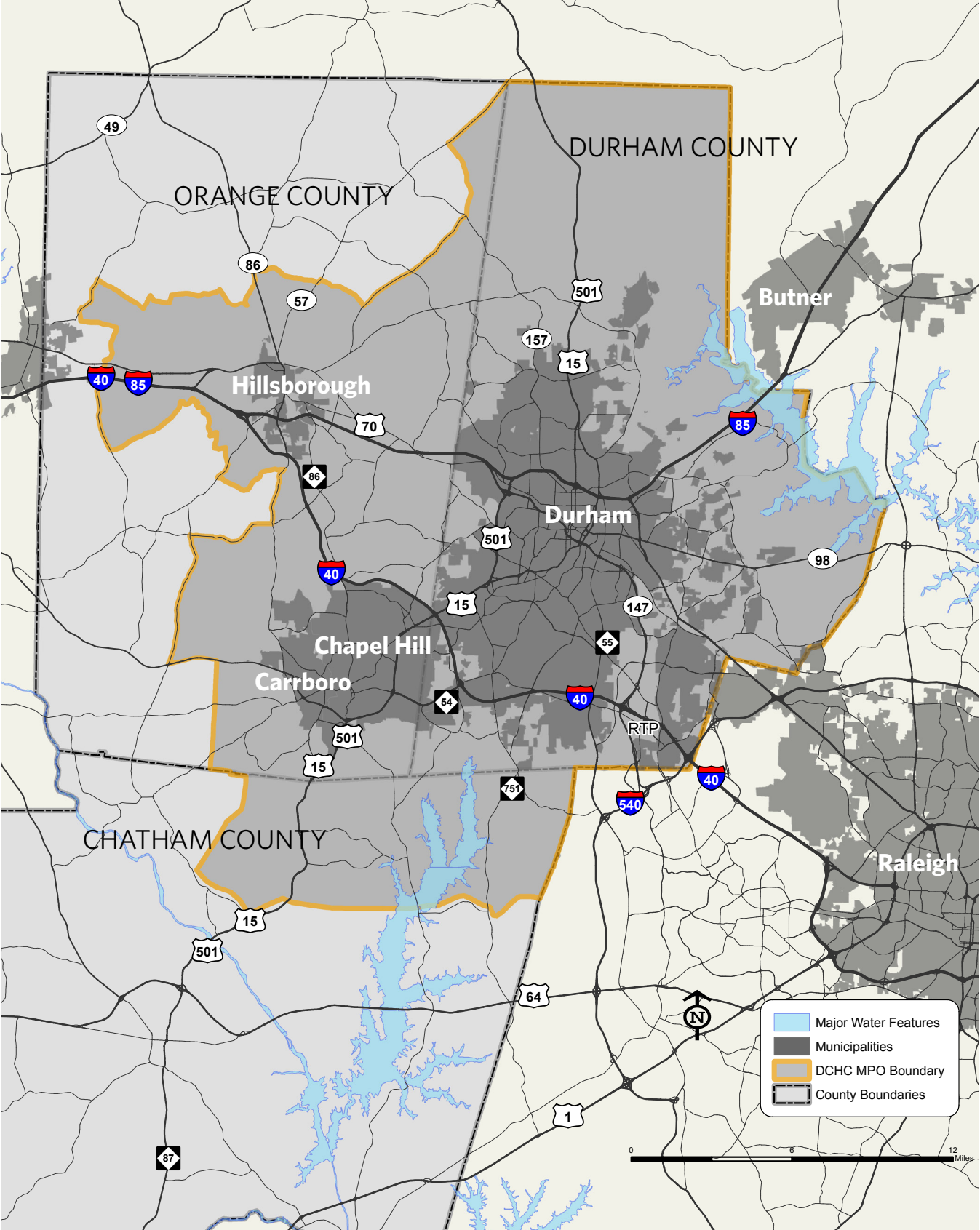
The DCHC MPO develops and maintains the area's long-range Metropolitan Transportation Plan (MTP), which addresses the region's projects, programs and policies for at least a 25-year period. The DCHC MPO also produces and maintains the metropolitan Transportation Improvement Program (TIP), which is a short-range document listing transportation projects to be initiated within the MPO area using federal funds, or deemed "regionally significant."

Annually, the DCHC MPO is required by federal regulations to prepare a Unified Planning Work Program (UPWP) that describes and guides the urban area transportation planning activities and programs for the year.

In addition to the MTP, TIP, and UPWP, the DCHC MPO prepares special planning documents such as the Comprehensive Transportation Plan (CTP), transit plans, safety plans, bicycle, pedestrian, and trails plans, and congestion management plans.<sup>3</sup>

Chapter 2 of this EJ report presents a summary of the federal laws, regulations, statutes, and orders that establish the requirements for non-discrimination during all DCHC MPO transportation-related planning and programming initiatives. An analysis of EJ populations is included in Chapter 3, followed by an assessment of the DCHC MPO's major planning activities in Chapter 4.

## Map 1. DCHC MPO Urbanized Area



## Endnotes

1. "Environmental Justice Key Terms," last modified November 17, 2014, <http://www.epa.gov/region7/ej/definitions.htm>.
2. "DCHC MPO Overview," last modified January 21, 2015, <http://www.dchcmpo.org>.

## 2. LAWS & REGULATIONS PERTAINING TO ENVIRONMENTAL JUSTICE

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### TITLE VI OF THE CIVIL RIGHTS ACT AND ENVIRONMENTAL JUSTICE

Two key federal actions provide the basis for the civil protections addressed in this EJ report:

1. The 1964 Civil Rights Act and Title VI of the Act (nondiscrimination)
2. Executive Order No. 12898 signed by President Clinton in 1994 (environmental justice)

The Civil Rights Act, and specifically Title VI of the Act, establishes the prohibition of discrimination “on the basis of race, color or national origin” in any “program or activity receiving federal financial assistance.” Subsequent legislation has extended the protection to include gender, disability, age and income, and has broadened the application of the protection to all activities of federal aid recipients, sub-recipients and contractors regardless of whether a particular activity is receiving federal funding.

The 1994 Executive Order 12898 focused attention on Title VI of the Civil Rights Act by providing that “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

programs, policies and activities on minority populations and low-income populations.”

The three fundamental principals of environmental justice set forth by Title VI and Executive Order 12898 are:

1. To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority 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 of these protections for minority and low-income populations.

Environmental justice must be considered in all phases of planning. Areas of focus and particular concern are public participation – to ensure that protected populations have real and equitable opportunity to influence decisions – and an analysis – to assess the distribution of benefits and impacts on protected populations.



## ***Federal Statutes and Regulations***

This section contains the regulations, statutes and orders that establish the requirements for non-discrimination for the DCHC MPO. United State Code (USC) and Code of Federal Regulations (CFR) citations are provided.<sup>1</sup>

Title VI of the Civil Rights Act of 1964 mandates, “No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” (23 CFR 2009 and 49 CFR Part 21)

As the designated Metropolitan Planning Organization for the urbanized areas of Durham, Orange, and Chatham Counties, the DCHC MPO is responsible for planning and implementing transportation projects, and is thus required to comply with this law. The following notations expand on the authority, requirements and standards of the 1964 Act:

- The Federal Aid Highway Act of 1973 (23 USC 324) established the prohibition of discrimination based on gender.
- The Civil Rights Act of 1987 broadened the scope of Title VI coverage by expanding the definitions of “programs or activities” to include all programs or activities of Federal Aid recipients, sub-recipients and contractors, regardless of whether the programs and activities are federally assisted (Public Law 100259 {S. 557}, March 22, 1988).
- The Americans with Disabilities Act of 1990 (42 USC 12101 et seq. and 49 CFR Parts 27, 37 and 38) and The Rehabilitation Act of 1973, Section 504, (29 USC 794) extended the protections under Title VI of the Civil Rights Act of 1964 to prohibit discrimination

of persons with disabilities; and in Title II requires that public transit be accessible to persons with disabilities. The Act states that all new transit vehicles must be made accessible to persons with disabilities, and that paratransit can be used to complement existing fixed-route service.

- The Age Discrimination Act of 1975 prohibits discrimination based on age (42 USC 6101).
- Executive Order 12250 (28 CFR Part 41) requires consistent and effective implementation of various laws prohibiting discriminatory practices in programs receiving federal funding assistance, including Title VI of the Civil Rights Act of 1964.
- Executive Order 12898 (28 CFR 50) from 1994 directs federal agencies to evaluate impacts on low-income and minority populations and ensure that there are not disproportionate adverse environmental, social, and economic impacts on communities, specifically low-income and minority populations. This order also directs federal agencies to provide enhanced public participation where programs may affect such populations.
- USDOT Order on Environmental Justice (DOT Order 5610.2) from 1997 describes how the principles in the Executive Order are to be incorporated into programs and activities. The Order states that the USDOT will not carry out any program, policy or activity that will have a disproportionately high and adverse effect on minority or low-income populations unless mitigation measures or alternatives that would avoid the adverse impacts are not practicable.
- FHWA Order 6640.23 from 1998 contains policies and procedures for the FHWA to use in complying with Executive Order 12898.

- Executive Order 13166 intends to improve access to federally conducted and assisted programs and activities for those who because of national origin have limited English language proficiency (LEP). The Order requires federal agencies to review services, identify any needed services and develop and implement a program so that LEP populations have meaningful access. LEP guidance from the US Department of Justice sets compliance standards that federal fund recipients must follow to ensure that programs and services provided in English are accessible to LEP individuals, and thereby do not discriminate on the basis of national origin (protection afforded under the 1964 Civil Rights Act, Title VI). US Department of Transportation Policy Guidance: Federal Register, Vol. 70, No. 239, pages 74087-74100, Dec. 14, 2005.

FHWA and FTA Memorandum on Title VI Requirements (October 7, 1999) clarifies Title VI requirements in metropolitan and statewide planning. The memorandum provides division FHWA and FTA staff a list of proposed review questions to assess Title VI capability and provides guidance in assessing Title VI capability. Failure to comply can lead to a corrective action being issued by FTA and/or FHWA, and failure to address the corrective action can affect continued federal funding.

Administrative Regulations, 23 CFR 200 and 49 CFR 21 from Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) set requirements for state transportation departments to implement Title VI policies and procedures at the state and local levels.

USDOT Planning Assistance and Standards for Metropolitan Planning require MPOs to seek out and consider “the needs of those traditionally underserved by existing transportation systems,

such as low income and minority households, who may face challenges accessing employment and other services” (23 CFR 450.316). Additional staff guidance from FHWA and FTA provides direction for assessing an MPO’s level of compliance with Title VI, and establishes a corrective process that can affect federal funding.

## ***DCHC MPO’s Commitment to Environmental Justice***

The DCHC MPO carries out a comprehensive and thorough set of activities to ensure that disadvantaged persons, as characterized in the federal and state regulations listed in this chapter, do not suffer discrimination in the transportation planning and implementation processes. These activities have been in the areas of public participation and outreach, equitable distribution of programming and project funding, and plan analysis. Each long range planning initiative and special study prepared by the DCHC MPO includes a presentation of EJ analyses and activities performed during the planning process.<sup>2</sup>

## Endnotes

1. Rogue Valley Metropolitan Planning Organization. *Title VI & Environmental Justice Plan*. Adopted August 2014, [http://www.rvmmpo.org/images/EJ\\_Plan\\_FINAL\\_Oct\\_2014.pdf](http://www.rvmmpo.org/images/EJ_Plan_FINAL_Oct_2014.pdf).

The inclusion of an overview of Federal statutes, regulations, statutes, and orders in this EJ Report was influenced by Chapter 1, Section 3 of the Rogue Valley MPO's Title VI & Environmental Justice Plan.

2. Durham-Chapel Hill-Carrboro Metropolitan Planning Organization. *Public Involvement Policy*. Adopted November 14, 2012.

# 3. DEMOGRAPHIC PROFILES

## CHAPTER CONTENTS

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ANALYSIS OF ENVIRONMENTAL JUSTICE COMMUNITIES OF CONCERN (3-3)

## OVERVIEW

The DCHC MPO considers the impact its programs may have on populations protected by Title VI/environmental justice, also referred to as environmental justice (EJ) populations. Federal statutes and regulations require that all EJ analyses consider the needs of minority and low-income populations, however, neither Title VI of the Civil Rights Act nor Executive Order 12898 provide specific instructions for a preferred methodology or approach to EJ analyses. Therefore, MPOs are granted the latitude to devise their own methods for ensuring that EJ and non-EJ population groups and their needs are appropriately represented in transportation decision making processes.

The ability to effectively communicate and share ideas with all populations within the DCHC MPO area strengthens community and local planning efforts. Innovative ideas exist within EJ populations, as they exist in other non-EJ populations. Too often, however, avenues for communicating and sharing local acumen are poorly established. For immigrants, language can be a barrier. Other social and cultural barriers limiting knowledge or comfort levels in the ability to engage local leaders may exist, resulting in a consistent lack of participation and engagement.

Why does this matter to long range planning? The best community and long range planning efforts are able to fully tap into their most important resource: people. People know the

strengths and weaknesses of their community and the improvements that can catalyze resilient prosperity. Not unlike the scientific method, human daily routines are the product of much trial and error; developing presumptions, exploring options, and uncovering successful strategies in daily routines serves to inform longer-term planning efforts. This is how people find their community niche (or create one for themselves and others). By more thoroughly and effectively connecting to all groups – hence including a more diverse pool of entrepreneurs and ideas – innovative community solutions can be revealed and encouraged to flourish.<sup>1</sup> This makes planning outputs more valuable, more meaningful, and ultimately more successful.

As previously mentioned, federal requirements for EJ mandate that an MPO identify and analyze the needs of minority and low-income populations. The DCHC MPO broadened the scope of the traditional EJ approach to include a review and consideration of additional EJ populations that exist in the DCHC MPO area. The six EJ populations considered in this EJ report were:

1. Minority race populations
2. Hispanic/Latino ethnicity origins
3. Elderly populations
4. Low-income households
5. Limited English Proficiency (LEP)
6. Zero-car households

This chapter describes the DCHC MPO's methodology for evaluating EJ populations and serves as a resource for local and regional transportation planning by providing recent and statistically reliable information about areas of identified populations and population demographics using US Census Bureau American Community Survey (ACS) data sets.

The demographic analyses presented in the remainder of this chapter assist in assessing the needs of, and analyzing the potential impacts on and benefits to, the six identified EJ populations.

## EJ POPULATION DATA AND DEFINITIONS

The approach to environmental justice developed by DCHC MPO in this EJ report strives to be a people- and place-based approach that locates selected EJ population groups in the region and determines how the regional transportation system and DCHC MPO's programs, policies, and investments impact these groups.

ACS five-year estimates data from the US Census were used to conduct the demographic analyses. The ACS is conducted every year to provide current information about the social and economic needs of the country. ACS data is organized in one-year, three-year, and five-year estimates. The five-year data estimates were chosen because they include data for all areas and provide information at the block group level. The six EJ populations evaluated in the development of this EJ report are defined in this section.

**Racial Minority Populations:** Racial minority population includes any non-white individual, inclusive of the populations designated in the *Department of Transportation's Order on Environmental Justice in Minority Populations and Low-Income Households*, as described on this page.

- *Black:* A person having origins in any of the black racial groups of Africa.
- *Asian:* A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent.
- *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.
- *Native Hawaiian or Other Pacific Islander:* A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

### **Hispanic/Latino Ethnicity Origin Populations:**

Any person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

**Elderly Populations:** Elderly population includes any individual age 65 and over. This metric was determined based on a reading of *An Aging Nation: The Older Population in the United States*, published by the US Census Bureau.<sup>2</sup>

**Limited-English Proficiency (LEP) Populations:** Persons with Limited-English Proficiency were those with a primary or home language other than English and reported to the US Census that "no one 14 and over speaks English only or speaks English 'very well,'" in the household.

**Low-Income Households:** A household whose annual median household income was less than 60 percent of the average median household income level for the three-county (Durham, Orange, and Chatham counties) area. The average median household income for the three-county area reported by the US Census is \$55,342. Applying the 60 percent income limit factor to \$55,342 results in a low-income limit of **\$33,205** for households in the DCHC MPO area.



A review of local policies related to low-income limits for affordable housing resulted in the findings below and served as the basis for determining the low-income limit and definition of low-income household used in this EJ report.

- The Town of Chapel Hill uses 80 percent of Median Income as the low-income limit, as defined by the US Department of Housing and Urban Development (HUD), for the Town's inclusionary zoning/affordable housing policy.
- The Town of Carrboro uses 80 percent of Median Income as the low-income limit, as defined by HUD, for the Town's affordable housing density bonus program.
- The County and City of Durham each passed a resolution in 2014 that set their low-income limit as 60 percent of Median Income, as defined by HUD.

Based on the review of each local jurisdiction's policy for setting low-income limits, **60 percent of Median Household Income was used as the low-income limit for households.**

Additional analysis of lower income populations was also performed to consider the location and concentrations of extremely low-income populations. The extremely low-income limit was determined by applying on HUD's standard of 30 percent of Median Household Income.<sup>3</sup>

**Table 3.1: Regional Thresholds for EJ Populations**

Demographic Data for Three-County Region Surrounding DCHC MPO Area	% of Total Population
Total Population: 452, 349	--
Total Number of Households: 242, 470	--
Racial Minority Population: 171,540	37.9%
Hispanic/Latino Population: 64,235	14.2%
Elderly Population: 67,151	14.8%
Limited English Proficiency Population: 33,990	7.5%
Low-Income Limit for Households	\$33,205
Zero-Car Households: 15, 411	6.4%

**Zero-Car Households:** The data on vehicles available were obtained from the Housing Questions in the ACS. These data show the number of passenger cars, vans, and pickup or panel trucks of one-ton capacity or less kept at home and available for the use of household members. Vehicles rented or leased for one month or more, company vehicles, and police and government vehicles are included if kept at home and used for non-business purposes. Dismantled or immobile vehicles are excluded. Vehicles kept at home but used only for business purposes are also excluded.

## ANALYSIS OF EJ COMMUNITIES OF CONCERN

EJ "communities of concern" are defined as any area where the percentage of any EJ population (defined on pages 3-2 and 3-3) is greater than the regional threshold for that particular EJ population. US Census Block Group level data were used as the geographic area of comparison for each EJ population.

### Determining Regional Thresholds

Regional thresholds for each EJ population group were developed and used as benchmarks for comparison. Total population numbers for each EJ population in Orange, Durham, and Chatham counties were found and then compared to the total population of the three-county area to determine the percent of total population for each EJ population. Each regional threshold was then used during the analysis and identification of EJ communities of concern. Regional thresholds are presented in Table 3.1.

## Comparing US Census Block Groups to Regional Thresholds

Each EJ population in the DCHC MPO area was mapped by US Census Block Group (Block Group). **Any Block Group with a concentration of an EJ population that exceeded the regional threshold for that population was identified as a community of concern.** This comparative analysis was performed for each EJ population group to determine the locations of concentrated EJ communities of concern.

For example, Table 3.1 on page 3-3 indicates that the racial minority population is 37.9 percent of the total population of the three-county area, thus 37.9 percent is used as the regional threshold. Any Block Group with a racial minority populations representing greater than 37.9 percent of the population in that Block Group is considered an EJ community of concern for racial minority population.

The determination of what is “disproportionately high and adverse human health or environmental effect” as discussed by E.O. 12898 is context dependent. The approach used in the development of this EJ report to identify communities of concern is only based on available Block Group data and the proportion of protected populations that they contain. All future project development processes should include additional efforts to utilize local knowledge of individual neighborhoods to identify potential populations that might have been missed during this Census-based analysis.

## Population Density (Map 3.1)

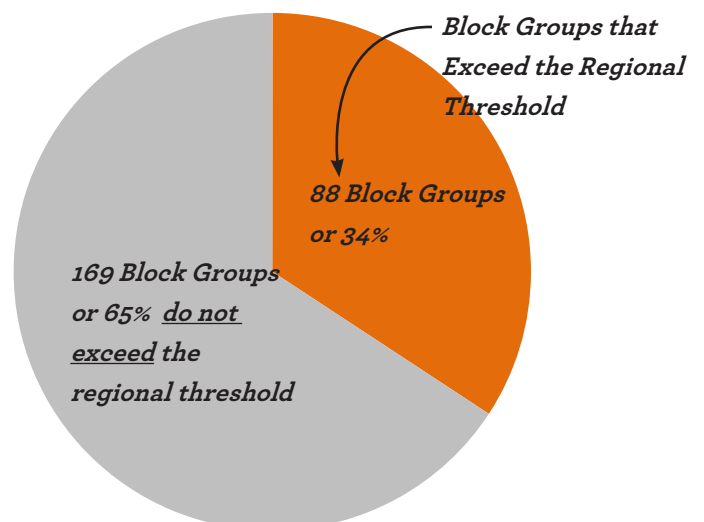
Map 3.1 on page 3-5 shows population density by Block Group in the DCHC MPO area. The most densely populated areas with densities ranging from 53 to 425 persons per acre are located in the downtown cores of Durham and Chapel Hill. There are additional densely populated areas in the eastern side of Durham near Alston Avenue

and the southwestern edge of Chapel Hill near Jones Ferry Road. Providing safe access between highly populated areas and destinations such as commercial centers and downtown areas should be considered a high priority for the DCHC MPO.

## Racial Minority Populations (Map 3.2)

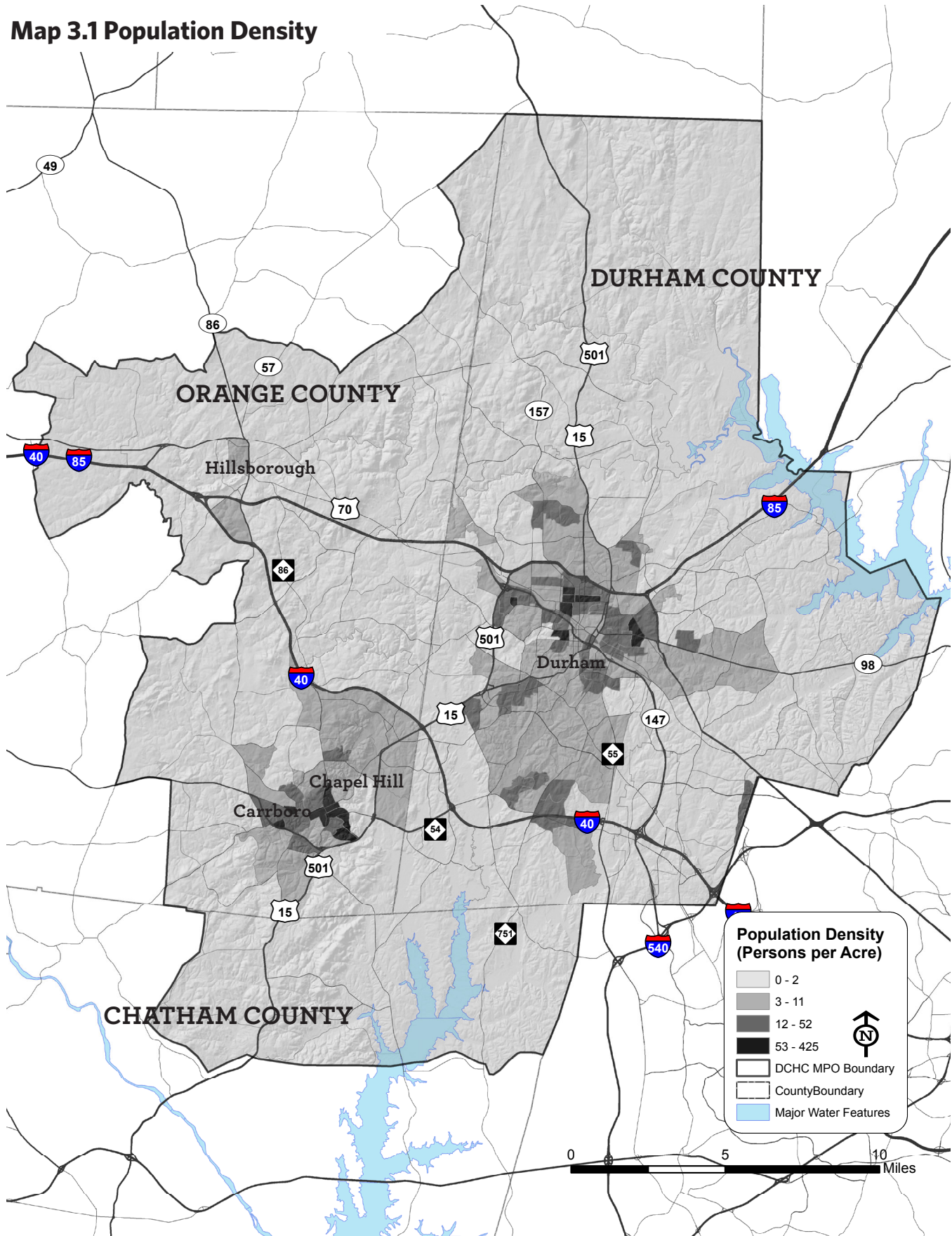
**The regional threshold for racial minority populations is 37.9 percent.** Detailed analysis of Block Groups in the DCHC MPO area identified 88 of the total 257 Block Groups with racial minority populations representing greater than 37.9 percent of the total population, thus these Block Groups were considered communities of concern. The most concentrated areas of racial minority communities of concern were located in the City of Durham. Of the 88 Block Groups that exceed the regional threshold, the vast majority are located within the City of Durham and Durham County. There were three racial minority communities of concern Block Groups located within or northwest of Hillsborough, and two additional racial minority communities of concern Block Groups were located in northern Chapel Hill along I-40.

**Chart 1: Block Groups that Exceed the Regional Threshold for Racial Minority Populations**



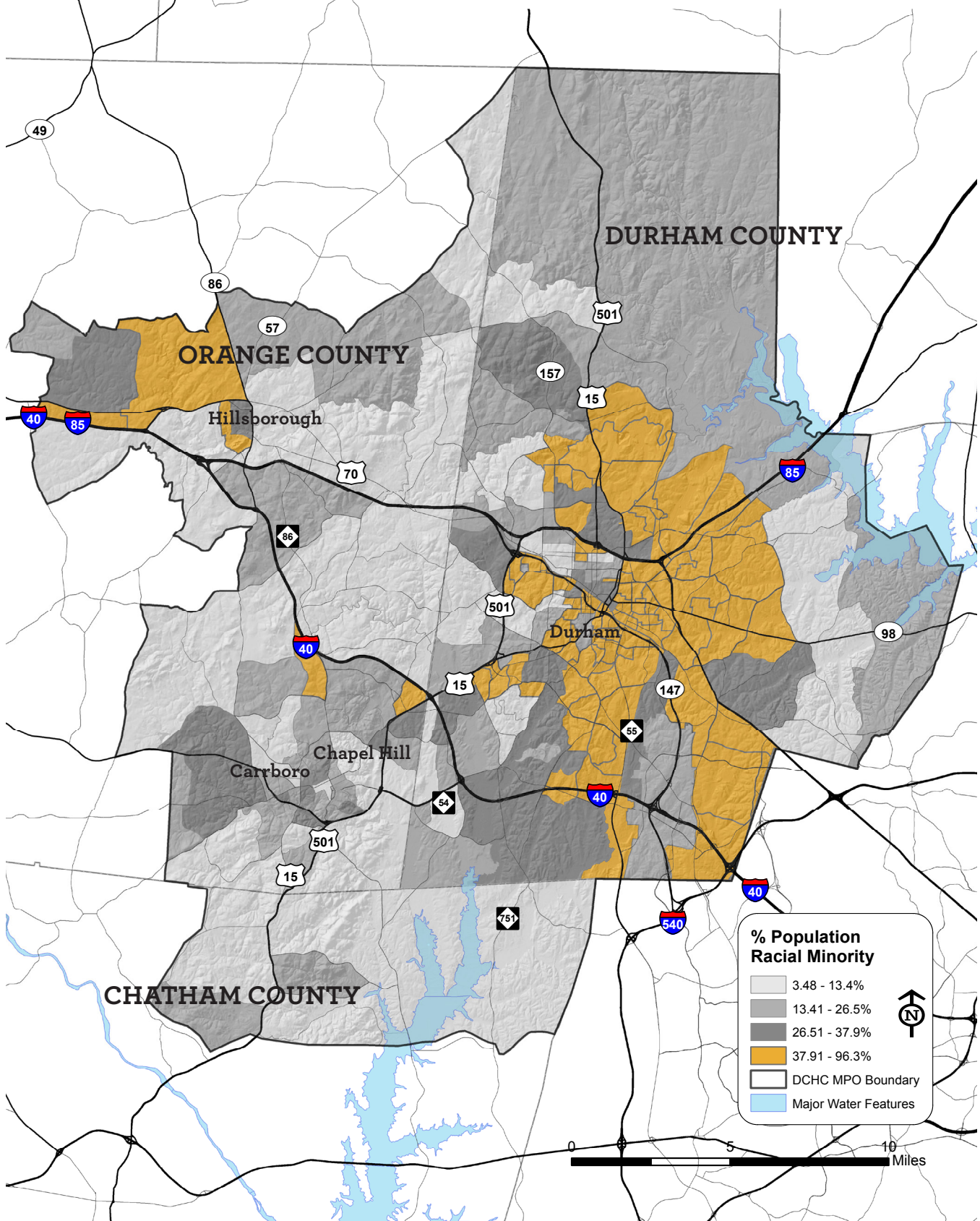
*There are 257 total Block Groups in the DCHC MPO area.*

**Map 3.1 Population Density**





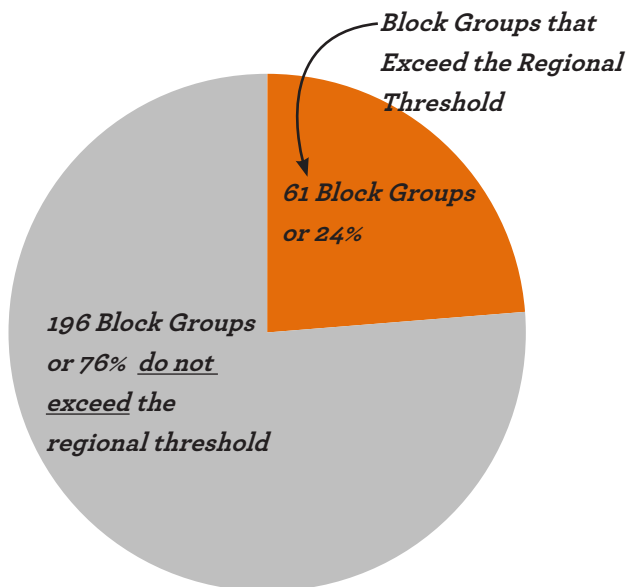
**Map 3.2 Percent of Population: Racial Minority**



### Hispanic/Latino Ethnicity Origin Populations (Map 3.3)

The regional threshold for Hispanic/Latino ethnicity origin populations is 14.2 percent. 61 of the total 257 Block Groups in the DCHC MPO area have Hispanic/Latino Ethnicity Origin populations that represent greater than 14.2 percent of the total population and were considered communities of concern. Of the 61 Block Groups, 11 have Hispanic/Latino Ethnicity Origin populations **that exceed 40 percent** of the total population. The City of Durham has the greatest number of Hispanic/Latino Ethnicity Origin communities of concern. There were 49 Block Groups located in the City of Durham that exceed the regional threshold for Hispanic/Latino Ethnicity Origin populations. The remaining Block Groups that exceed the regional threshold were located in Orange County. There is a cluster of Block Groups within, or adjacent to, Carrboro and another cluster adjacent to US 70.

**Chart 2: Block Groups that Exceed the Regional Threshold for Hispanic/Latino Ethnicity Origin Populations**

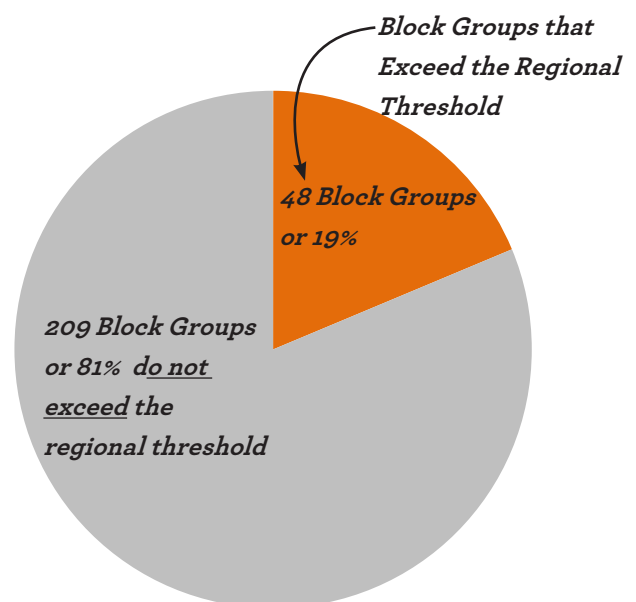


There are 257 total Block Groups in the DCHC MPO area.

### Elderly Populations (Map 3.4)

The regional threshold for elderly populations is 14.8 percent. 48 of the total 257 Block Groups in the DCHC MPO area have elderly populations that represent greater than 14.8 percent of the total population and were considered communities of concern. Elderly population communities of concern are dispersed throughout the DCHC MPO area. There were three Block Groups in northern Chatham County, east of US 15/501 and surrounding the Jordan Lake area that are elderly communities of concern. Ten Block Groups located east of Martin Luther King Jr. Boulevard in Chapel Hill were elderly communities of concern. There were two Block Groups located north of I-40 and I-85 in or near Hillsborough and one in the Efland area that are elderly communities of concern. Durham County and the City of Durham have 32 Block Groups with elderly population densities that exceed the regional threshold.

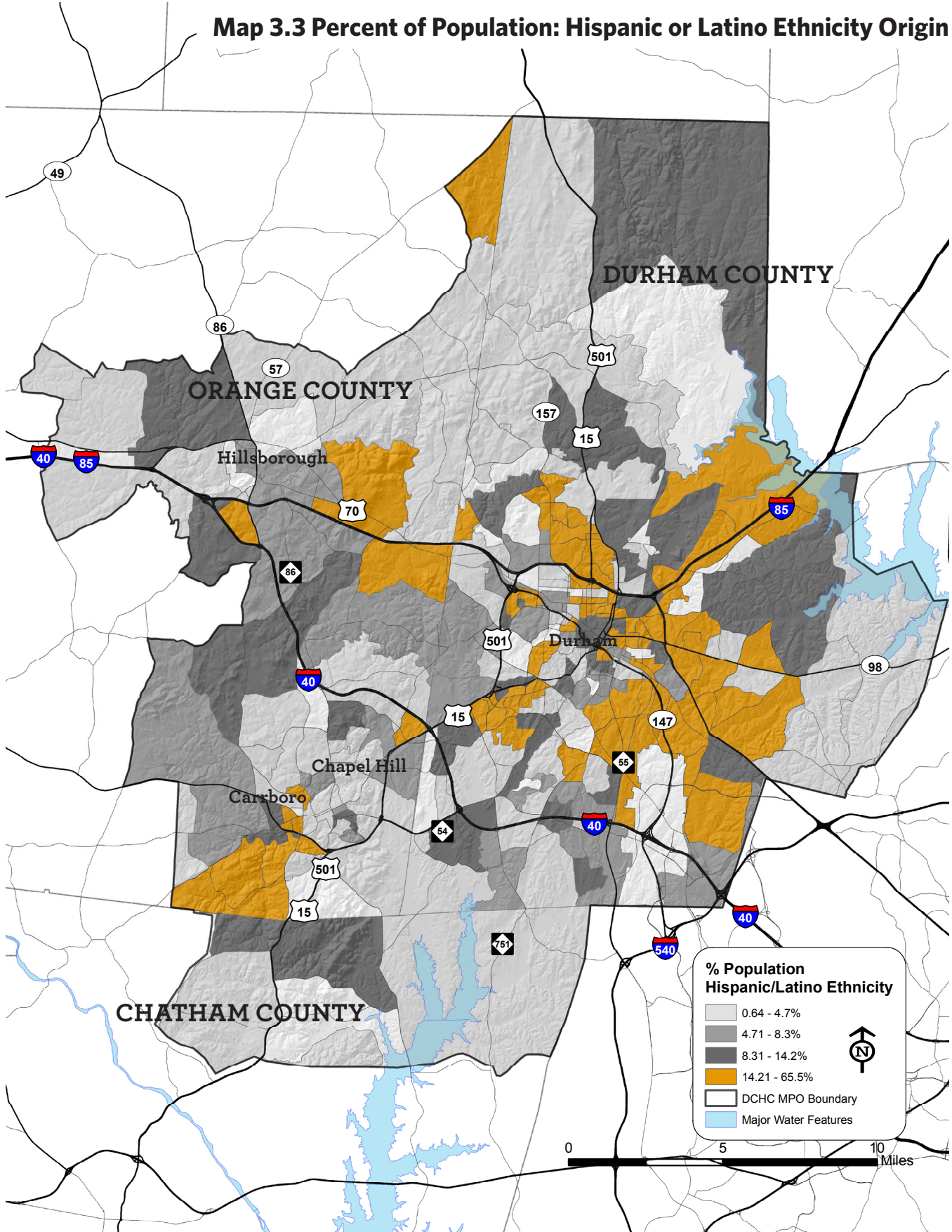
**Chart 3: Block Groups that Exceed the Regional Threshold for Elderly Populations**



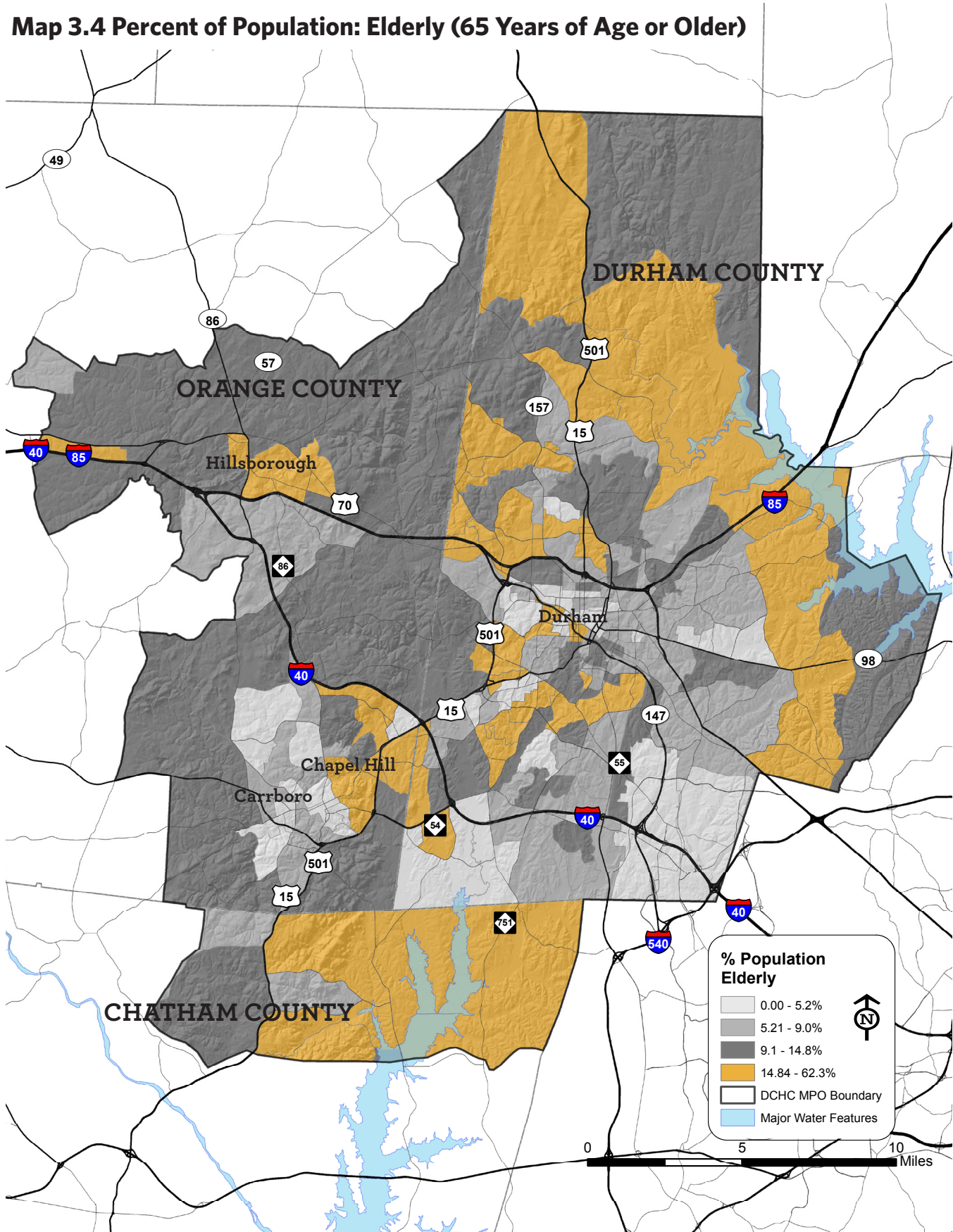
There are 257 total Block Groups in the DCHC MPO area.



**Map 3.3 Percent of Population: Hispanic or Latino Ethnicity Origin**



**Map 3.4 Percent of Population: Elderly (65 Years of Age or Older)**



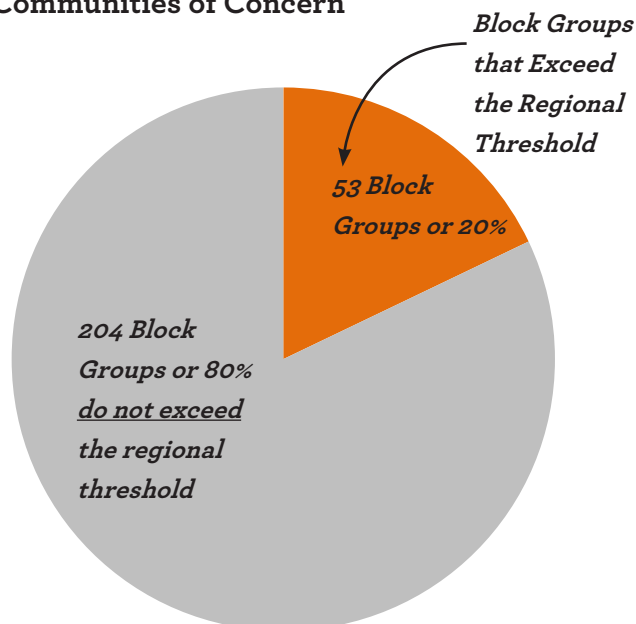


## Low-Income Households (Map 3.5)

A household whose annual median income is less than the low-income limit is considered a low-income household community of concern. As defined earlier in this chapter, the low-income limit for the three-county area is **\$33,205 and is established as the regional threshold**. Median household income is presented by Block Group, thus any Block Group with a median household income less than \$33,205 was considered a low-income community of concern.

53 of the total 257 Block Groups in the DCHC MPO area were considered low-income communities of concern. Low-income household communities of concern are shown in orange in Map 3.5. There were clusters of low-income communities of concern in the City of Durham, near or within Chapel Hill and Carrboro, and adjacent to US 70 near or within Hillsborough.

**Chart 6: Block Groups that are Low-Income Communities of Concern**



*There are 257 total Block Groups in the DCHC MPO area.*

## Extremely Low-Income Households (also Map 3.5)

To fully consider the needs of lower-income populations and recognizing that HUD uses more than one low-income limit to review lower-income populations, the DCHC MPO reviewed a second low-income limit called *extremely low-income*. The term extremely low-income refers to households whose incomes do not exceed 30 percent of the median household income for the area.<sup>3</sup> **30 percent of the median household income (\$55,342) is \$16,620.**

Any Block Group with a median household income less than \$16,620 is illustrated on Map 3.5 by orange with a black striping overlay. 12 of the total 257 Block Groups in the DCHC MPO area were considered extremely low-income.

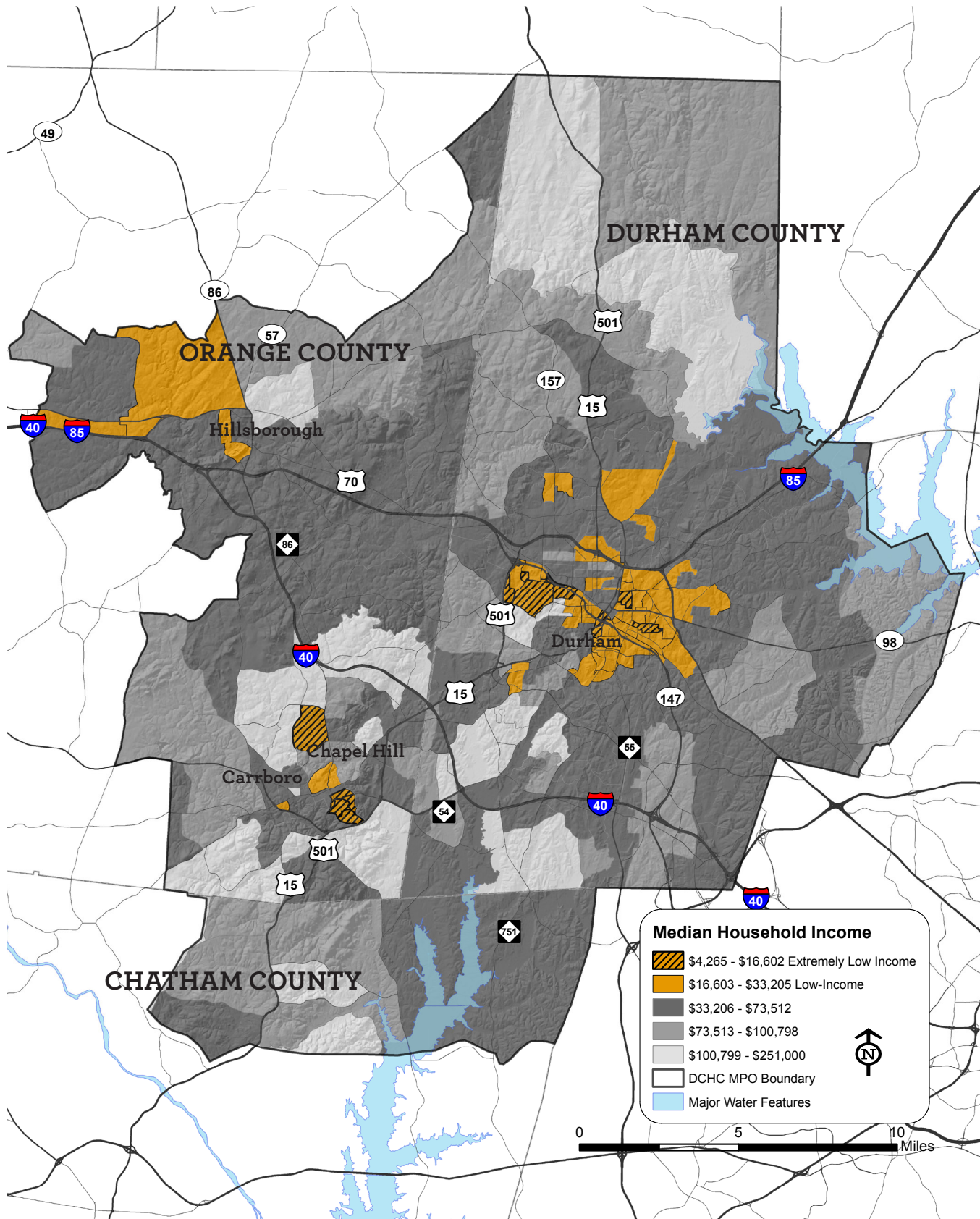
Four of the 12 extremely low-income Block Groups with median household incomes of \$4,265, \$4,688, \$5,956, and \$14,205 were located north of US 501/Fordham Blvd in Chapel Hill. This area is the University of North Carolina at Chapel Hill.

Four of the 12 extremely low-income Block Groups with median household incomes of ranging from \$8,482 to \$13,684 were located south of US 15/501, surrounding or adjacent to Erwin Road, LaSalle Street, and Towerview Road in Durham. This area is Duke University, the Duke University Hospital, and the area located between Duke University and US 15/501.

Three of the 12 extremely low-income Block Groups with median household incomes of ranging from \$15,161 to \$16,146 were located in downtown Durham and east of downtown Durham near US 70.

One Block Group with a median household income of \$13,942 was located north of Chapel Hill in Orange County near the University of North Carolina at Chapel Hill's North Campus, adjacent to NC 86.

**Map 3.5 Low-Income and Extremely Low-Income Households**

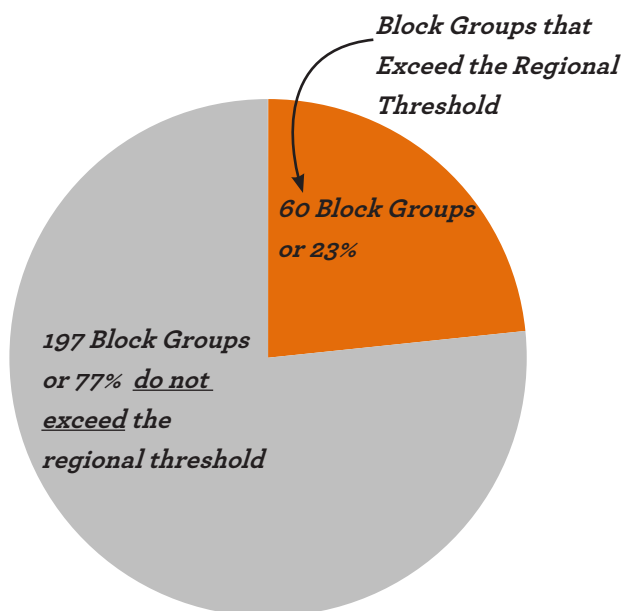


### Limited English Proficiency Populations by Household (Map 3.6)

Limited English Proficiency (LEP) populations were mapped by households and **the regional threshold for LEP populations by household is 7.5 percent**. 60 of the total 257 Block Groups in the DCHC MPO area exceed the regional threshold for LEP populations and were considered LEP communities of concern. As depicted on Map 3.6 on page 3-12 the LEP communities of concern were dispersed throughout the DCHC MPO area. There were 16 LEP communities of concern Block Groups located in Orange County and 44 located in Durham County, primarily in the eastern areas of the City of Durham and the eastern areas of Durham County.

In many instances the Block Groups that were LEP communities of concern were the same Block Groups that are Racial Minority and Hispanic/Latino Ethnicity Origin communities of concern.

**Chart 4: Block Groups that Exceed the Regional Threshold for LEP Populations**



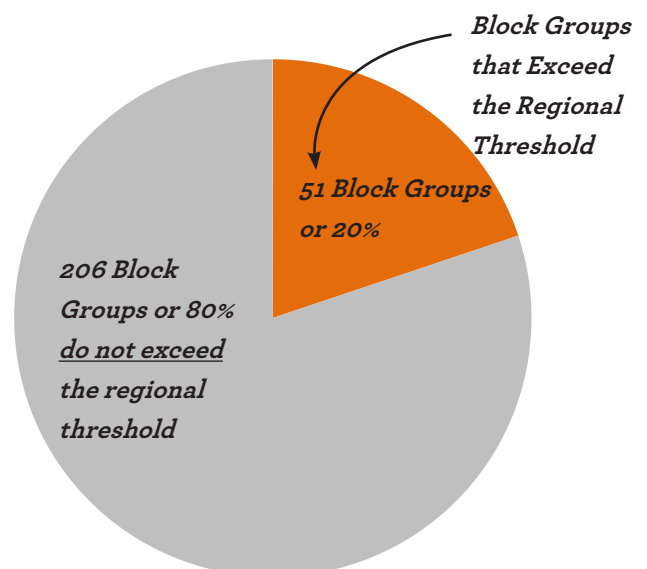
*There are 257 total Block Groups in the DCHC MPO area.*

### Zero-Car Households (Map 3.7)

Households that do not have access to a vehicle, are often referred to as “zero-car households.” These residents primarily rely on walking or another form of non-motorized transportation, or public transit service. **The regional threshold for zero-car households is 6.4 percent**. 51 of the total 257 Block Groups in the DCHC MPO area have zero-car household populations that represent greater than 7.5 percent of the total number of households and are considered zero-car household communities of concern. These 51 Block Groups were primarily located throughout downtown Durham, downtown Chapel Hill, and northwest of Hillsborough.

There were three Block Groups located in the City of Durham with zero-car household population densities representing **greater than 25 percent of the total number of households**. These Block Groups were located adjacent to US 15/501 north of Cameron Boulevard, in downtown straddling NC 147 near S. Duke Street and Morehead Avenue, and just east of NC 55.

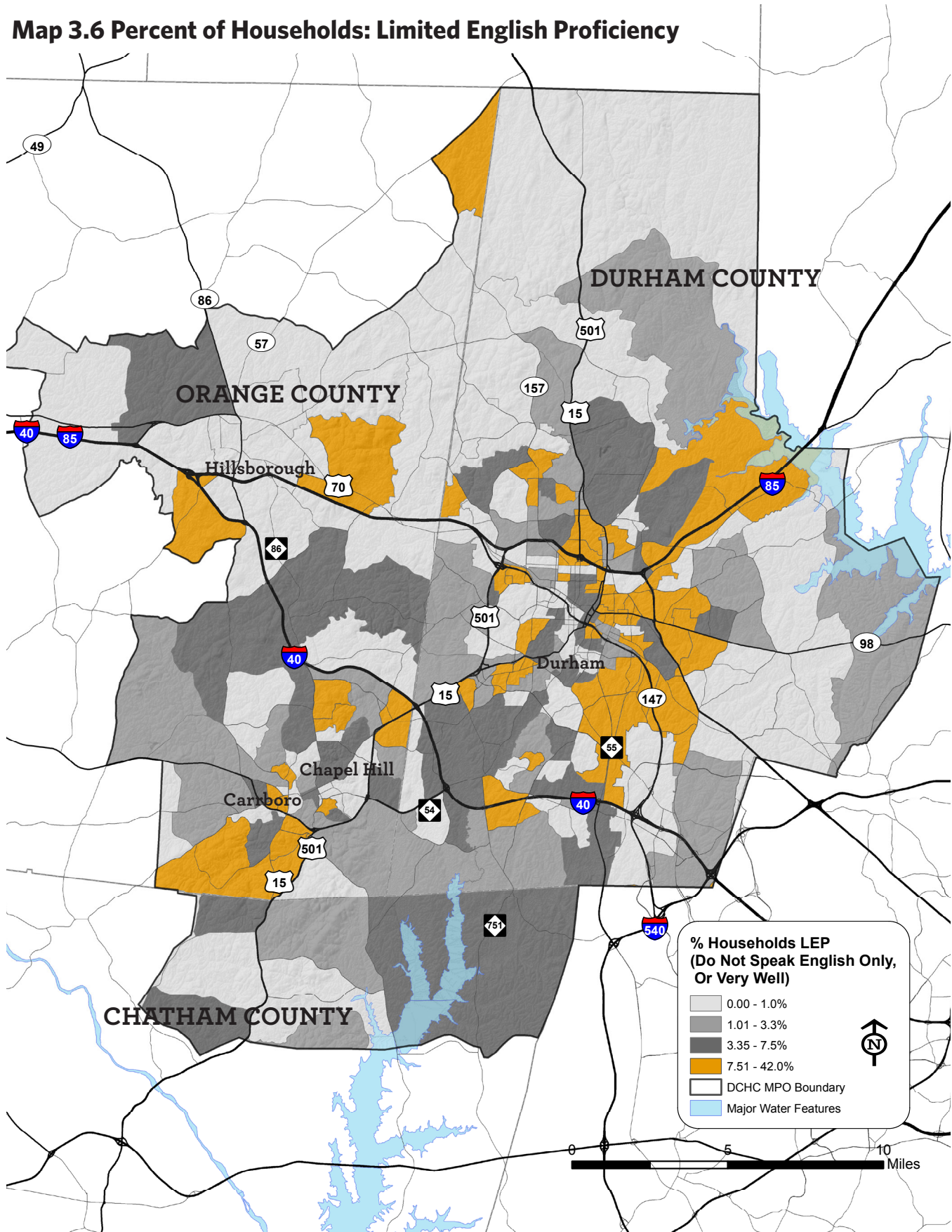
**Chart 7: Block Groups that Exceed Regional Threshold for Zero-Car Households**



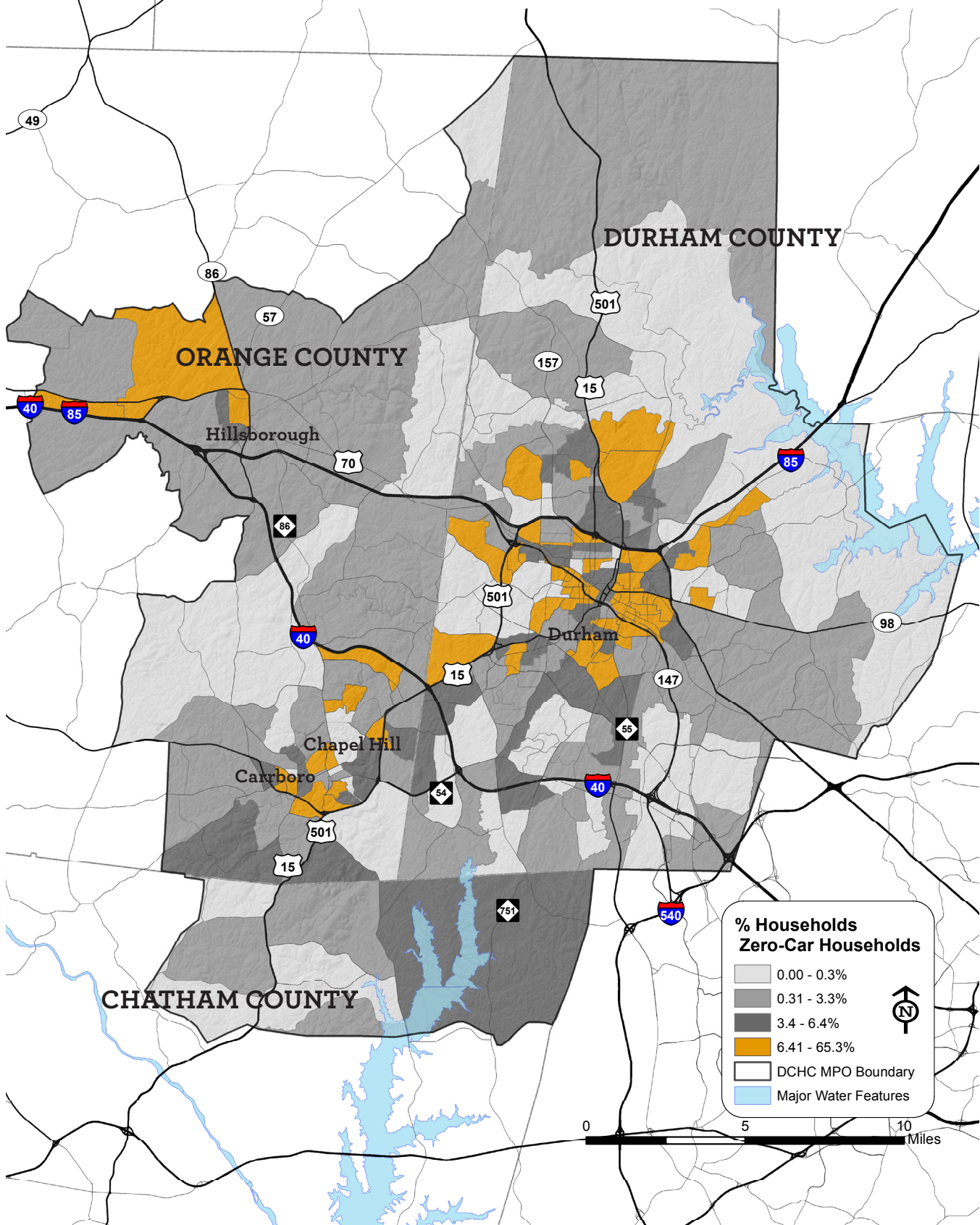
*There are 257 total Block Groups in the DCHC MPO area.*



**Map 3.6 Percent of Households: Limited English Proficiency**



**Map 3.7 Percent of Households: Zero-Car Households**





## Summary of All Communities of Concern Block Groups (Table 3.2)

The next step in evaluating EJ in the DCHC MPO area was to compile the percent of total Block Groups for each of the six EJ populations previously presented as the pie charts in this chapter. The six percentages are shown in column D of Table 3.2 below. The six percentages were then averaged to determine the overall average percent of total Block Groups (see bottom row). The overall averaged percent of total Block Groups was 25 percent. This means that **25 percent of all Block Groups in the DCHC MPO area are considered an EJ community of concern.** 25 percent was used as a threshold for the evaluation of long-range transportation projects included in Chapter 4.

**Table 3.2: Summary of Communities of Concern Block Groups**

Column A	Column B	Column C	Column D
EJ Populations	Total # of Communities of Concern Block Groups	Total # of Block Groups in DCHC MPO Area	Percent of Total Block Groups
Racial Minority Populations	88	257	34%
Hispanic/Latino Ethnicity Origin Populations	61	257	24%
Elderly Population	48	257	19%
Limited English Proficiency Populations	60	257	23%
Low-Income Households	53	257	21%
Zero-Car Households	51	257	20%
<i>TOTAL</i>	455		
<b>Averaged Percent of Total Block Groups (sum of Column D ÷ 6)</b>			<b>25%</b>

## Overlapping Communities of Concern Block Groups (Table 3.2, Map 3.8)

The final step in the evaluation of communities of concern was to identify which Block Groups had **two or more** overlapping communities of concern. This evaluation, often referred to as density mapping or heat mapping, makes it possible to quickly and easily identify **where higher concentrations of EJ communities of concern exist.** The existence of higher concentrations of EJ communities of concern within the same Block Groups, indicates that additional attention should be given to this area during the DCHC MPO's planning processes.

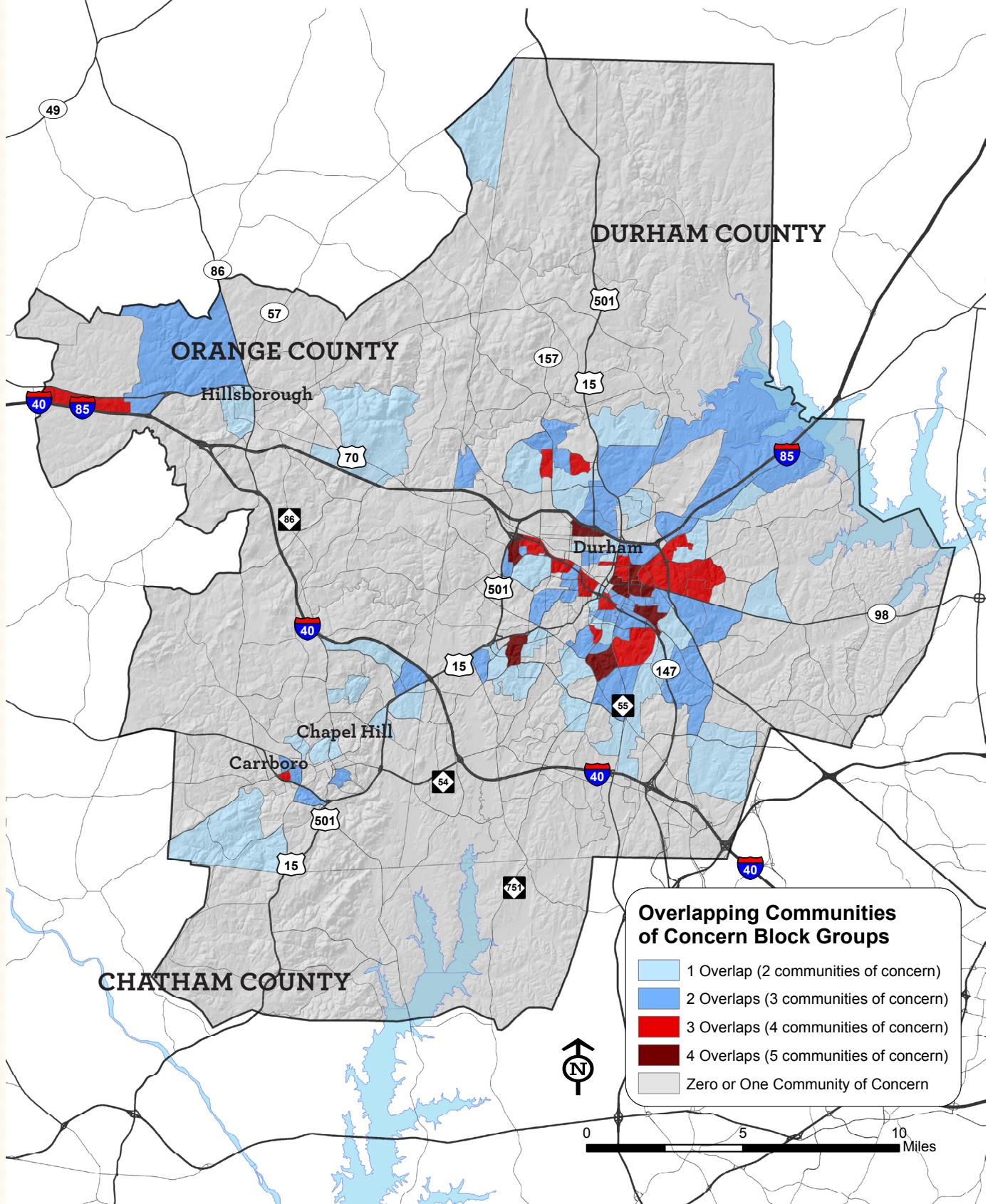
Table 3.3 presents a summary of the overlapping communities of concern and Map 3.8 on page 3-16 depicts **the locations where two or more EJ communities of concern overlap.** All six EJ communities of concern did not exist together in any single Block Group. The greatest number of EJ communities of concern in single a Block Group was five, also described as four overlaps, as shown in the table below and illustrated by the darkest color red in Map 3.8.

**Table 3.3: Summary of Overlapping Communities of Concern Block Groups**

Column A	Column B	Total Block Groups
# of Overlapping Communities of Concern*	# of Block Groups that contain the # of overlaps in Column A	(Column A x Column B)
1 Overlap	35	35
2 Overlaps	34	68
3 Overlaps	17	51
4 Overlaps	9	36
<i>TOTAL</i>	95	190

- \*1 Overlap = 2 communities of concern
- 2 Overlaps = 3 communities of concern
- 3 Overlaps = 4 communities of concern
- 4 Overlaps = 5 communities of concern

**Map 3.8 Overlapping Communities of Concern in the DCHC MPO Area**





## Endnotes & Data Resources

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## 4. ENVIRONMENTAL JUSTICE IN DCHC MPO'S MAJOR PLANNING ACTIVITIES

### CHAPTER CONTENTS

INTRODUCTION (4-1) | PUBLIC INVOLVEMENT POLICY (4-1) | METROPOLITAN TRANSPORTATION PLAN ( 4-7) | TRANSPORTATION IMPROVEMENT PROGRAM ( 4-12)

UNIFIED PLANNING WORK PROGRAM (4-16) | FINDINGS FOR DCHC MPO'S LONG RANGE PLANNING ACTIVITIES (4-18) | CONCLUSIONS AND NEXT STEPS (4-19)

### INTRODUCTION

The DCHC MPO is responsible for all major transportation planning projects, plans, and services for the DCHC MPO area. This chapter provides a review of environmental justice considerations and activities undertaken during each of the DCHC MPO's major planning activities.

### DCHC MPO PUBLIC INVOLVEMENT POLICY (PIP)

Recognizing the importance of involving the public in planning for the future of this region, the DCHC MPO developed a Public Involvement Policy (PIP) that includes a Limited English Proficiency Plan. The PIP provides guidance and direction for the incorporation of public outreach, involvement, and engagement for all plans, programs, and initiatives related to the transportation planning process. This provides an opportunity for the community to play an integral part in the transportation planning process.

The PIP includes guidance on the public involvement process for all of the DCHC MPO's planning activities, including the Metropolitan Transportation Plan (MTP), the metropolitan Transportation Improvement Program (TIP), the

Air Quality Conformity Determination, major investment studies, the Unified Planning Work Program (UPWP), the MPO's provisions for the American with Disabilities Act (ADA), and on-going transportation planning (3-C) process. An overview and summary of key objectives of the PIP are included in this chapter and the adopted PIP is available for review on the DCHC MPO's website ([www.dchcmpo.org](http://www.dchcmpo.org)).

### PIP Objectives

1. Bring a broad cross-section of the public into the public policy and transportation planning decision-making process.
2. Maintain public involvement from the early stages of the planning process through detailed project development.
3. Use different combinations of public involvement techniques to meet the diverse needs of the general public.
4. Determine the public's knowledge of the metropolitan transportation system and the public's values and attitudes concerning transportation.
5. Educate citizens and elected officials in order to increase general understanding of transportation issues.

6. Make technical and other information available to the public using the MPO web site and other electronically accessible formats and means as practicable.
7. Employ visualization techniques to MPO metropolitan transportation plans, TIPs, and other project planning activities.
8. Consult with federal and state agencies responsible for land management, natural resources, environmental protection, conservation, historic preservation and economic development in the development of metropolitan transportation plans, TIPs, and project planning.
9. Establish a channel for an effective feedback process.
10. Evaluate the public involvement process and procedures to assess their success at meeting requirements specified in MAP-21, NEPA, and the Interim FTA/FHWA Guidance on Public Participation.

## ***Outreach Methods and Techniques***

In accordance with the MPO's adopted PIP, the MPO uses the following methods to connect with and inform the public about upcoming opportunities for public input on planning activities:

- Legal notices in local newspapers
- MPO website
- Mailing lists
- Targeted mailings to neighborhood and advocacy groups
- Press releases
- Periodic MPO newsletters

## ***Meeting Notices***

Notices for upcoming MPO meetings are filed with every town clerk's office. Notices for MPO public involvement meetings or workshops for planning activities are advertised in local newspapers. The notice for public meetings/workshop includes a statement in Spanish that translator services may be requested in advance. The notice also include a statement that sign language services may be requested in advance.

All notices for planning activities of the DCHC MPO include an announcement that states that persons with disabilities will be accommodated. Special provisions can be made if notified 48 hours in advance (i.e. having available large print documents, audio material, someone proficient in sign language, a translator or other provisions requested).

Notices for the public comment period and the public hearing are advertised in the area's major daily newspaper, and other local, minority, or alternative language newspapers, as appropriate, as well as on the public service announcement on Time Warner Cable. Local member jurisdictions are advised to publicize the public comment period/hearing in their local media as well. Public meetings are held in locations accessible to persons with disabilities and are located near or on a transit route.

The MPO allows time for public review and comment on transportation planning activities at key decision points. Minimum notification periods are as follows:

- Amendments to DCHC-MPO's Public Involvement Policy – 45 days
- Adoption of the TIP & major TIP amendments – 21 days
- Adoption of the TIP Regional Priority List & major amendments – 21 days



- Adoption of the MTP/CTP & major amendments – 42 days
- Adoption of the Air Quality Conformity Determination – 30 days
- Adoption of the UPWP & major amendments – 21 days
- Policy Board & Technical Committee (TC) meetings – 7 days

## ***Public Involvement for Major Planning Activities***

### **Metropolitan Transportation Plan**

The Public Involvement Process for the Metropolitan Transportation Plan (MTP) consists of a series of innovative public participation techniques, including: transportation-related committees from MPO jurisdictions, public service announcements, a newsletter, public meetings, surveys, and the mass media. These techniques are employed at various stages of the development of a plan update, and as appropriate for major or minor revisions.

#### **PUBLIC INVOLVEMENT PROCESS FOR THE MTP**

1. The DCHC MPO provides opportunity for early and meaningful public involvement in the development and update of the MTP. The MPO produces a public involvement plan for the development and update of metropolitan transportation plans.
2. Proactive participation techniques are employed to involve citizens and provide full access to information and technical data. The techniques generally include, but not be limited to: public meetings/hearings; surveys; focus groups; newsletters; public service announcements; charrette; transportation related committees, and mass media.

3. Information dissemination, notification of meeting, publication of proposed plans are integral elements of the public involvement process.
4. The DCHC MPO initiates the MTP update process as required by the Moving Ahead for Progress in the 21st Century Act (MAP-21), the Clean Air Act Amendments (CAAA) and subsequent federal regulations. Elements of the MTP, and/or amendments meet all current Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Environmental Protection Agency (EPA), and the North Carolina Department of Transportation (NCDOT) requirements.
5. A draft MTP and schedule for the MTP update process are developed by the Technical Committee (TC) and made available for public review. The MTP details the strategy for the update process including work elements and a tentative schedule.
6. Copies of the draft MTP and schedule are distributed to the member jurisdictions, citizen groups and agencies, and are placed in the local libraries. Notification of the draft MTP is provided in a major daily newspaper, and other local, minority, or alternative language newspapers, as appropriate.
7. The notification informs the public of the availability of the draft MTP for review and comment, where to send written comments, and the addresses and phone numbers of contact persons. The notices also include an announcement that states that persons with disabilities will be accommodated. Special provisions will be made if notified 48 hours in advance (i.e. having available large print documents, audio material, someone proficient in sign language, a translator, or other provisions, as requested). Additionally, the notice informs the public

that copies of the draft MTP are available for review at local libraries and offices of member agencies.

8. The public comment period is a minimum six-week (42-day) public comment period, effective from the date of the public notice publication. Written comments are received during the comment period and are directed to the Lead Planning Agency (LPA). The Lead Planning Agency's contact person, phone number and e-mail address are included in the public notice.
9. Public meeting(s)/workshops are held to: formulate a vision for the MTP development; provide the public background information on the metropolitan transportation system and other issues as well as the proposed framework of the MTP update process; and receive citizen input.
11. Public meetings (forums) designed to solicit public comment are held at various locations around the DCHC MPO area to encourage the greatest public participation. Public meetings are held at a location which is accessible to persons with disabilities and is located on a transit route.
12. The TC assembles all comments and forwards comments to the MPO Board. The MPO Board may choose to hold a public hearing before adopting the strategy and work program for the MTP. Comments regarding the draft strategy are considered and addressed in adopting the final plan.

## **Transportation Improvement Program**

The DCHC MPO prepares a Transportation Improvement Program (TIP), which is consistent with the requirements of the MAP-21, and any implementing federal regulations. The TIP will be developed based on: 1) revenue estimates provided by the North Carolina Department of Transportation (NCDOT); and, 2) the DCHC MPO Regional Priority List. The public input element of the Transportation Improvement Program is presented below.

### **PUBLIC INVOLVEMENT PROCESS**

1. The DCHC MPO TC develops a draft Regional Priority List from the Local Project Priorities of the MPO jurisdictions.
2. The Regional Priority List is published for a minimum three-week (21-day) public comment period and the notice is published by the Lead Planning Agency (LPA) in a major daily newspaper, and other local, minority, or alternative language newspapers, as appropriate. The notices for the public comment period and the public hearing include an announcement that states that persons with disabilities will be accommodated. Special provisions can be made if notified 48 hours in advance (i.e. having available large print documents, audio material, someone proficient in sign language, a translator or other provisions as requested). The Regional Priority List is on file in the City of Durham Department of Transportation, Town of Chapel Hill Planning Department, Town of Carrboro Planning Department, Town of Hillsborough Planning Department, Counties of Durham, Orange, Chatham Planning Departments, the Triangle Transit Authority, and the county public libraries for public review and comment.

3. The MPO Board holds a public hearing on the draft Regional Priority List. The public hearing is held at a location which is accessible to persons with disabilities and located on a transit route. The MPO Board approves a final Regional Priority List after considering the public comments received.
4. The DCHC MPO TC develops a draft TIP from the approved Regional Priority List and from revenue estimates provided by the North Carolina Department of Transportation. The TC forwards the draft TIP to the MPO Board. The MPO Board publishes the draft TIP for public review and comment.
5. Copies of a draft TIP are distributed to MPO Board members and the transportation related committees of MPO member jurisdictions. Each jurisdiction also provides hard copies for public review. The draft TIP will follow the same notification procedures as outlined above for the Regional Priority List.
6. The public comments are assembled and presented to the DCHC MPO Board. The MPO Board holds a public hearing on the draft TIP. The public hearing is held at a location which is accessible to persons with disabilities and located on a transit route. Public comments are addressed and considered in the adoption of the TIP.
7. The DCHC MPO, being a maintenance area for air quality, provides additional opportunity for public comment on the revision of the draft TIP (if the final TIP is significantly different and/or raises new material issues).
8. The process for updating and approving the Transportation Improvement Program follows the sequence and procedure as described in the aforementioned PIP framework.
9. Amendments to TIP are available for public review and comment if they make a substantial change to the TIP. A substantial change is classified as the addition or deletion of a project with an implementation cost exceeding \$1 million. Public comment on project additions deletions of less than \$1 million may be sought at the discretion of the MPO Board by majority vote. As long as a project's description, scope or expected environmental impact have not materially changed, the MPO Board may approve changes to project funding without a separate public meeting.
10. Written public comments and their responses are published as an appendix to the final TIP.

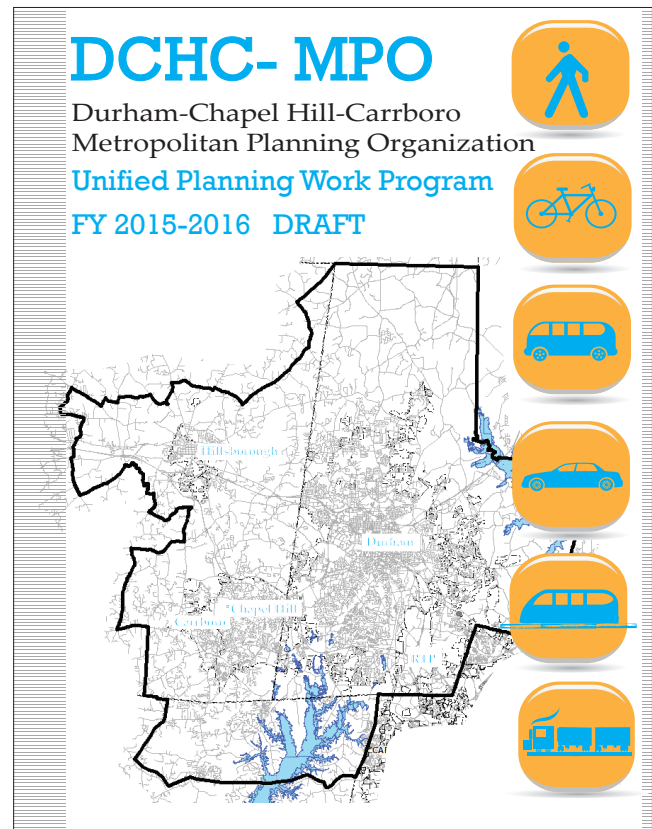
<b>DCHC</b>	
DURHAM • CHAPEL HILL • CARRBORO METROPOLITAN PLANNING ORGANIZATION	
<b>Member Governments</b> Town of Carrboro Town of Chapel Hill County of Chatham City of Durham County of Durham Town of Hillsborough NC Department of Transportation County of Orange	<p><b>FY 2012 – 2018</b>  <b>Metropolitan Transportation Improvement Program</b>          September 14, 2011</p> <p>City of Durham          Transportation Division          101 City Hall Plaza          Durham, NC 27701</p> <p>(919) 560-4366</p>
<small>City of Durham • Department of Transportation • 101 City Hall Plaza • Durham, North Carolina 27701 • (919) 560-4366 • Facsimile (919) 560-4561</small>	

## Unified Planning Work Program

Each year the DCHC MPO prepares an annual work program known as the Unified Planning Work Program (UPWP). The UPWP must identify the MPO planning tasks to be undertaken with the use of federal transportation funds, including highway and transit.

### PUBLIC INVOLVEMENT PROCESS

1. The Distribution Formula for FTA Section 5307 funds for the appropriate federal fiscal year is submitted to the MPO Board for approval. The MPO Board meetings are open to the public and comments on the Distribution Formula may be received at this time.
2. The Lead Planning Agency distributes FHWA Section 104(f) planning funds based on the MPO Board-approved formula.
3. The local jurisdictions prepare a list of tasks and funding for the federal fiscal year according to the approved Distribution Formula. These lists are submitted to the Lead Planning Agency for compilation into a draft Unified Planning Work Program.
4. The draft Unified Planning Work Program is reviewed by the MPO TC. The TC meetings are open to the public. The TC endorses a draft UPWP and forwards the document to the MPO Board for release for a minimum 21-day comment period.
5. The draft UPWP is reviewed by the MPO Board. The MPO Board releases a draft UPWP for a 21-day comment period. The draft is sent to the NCDOT Public Transportation Division for comments.
6. The final UPWP comes back to the MPO Board for approval. Upon MPO Board approval, the UPWP is forwarded on to the State and FHWA/FTA.
7. The process for updating and approving the annual UPWP shall generally follow the principles as described in the PIP Framework.





## 2040 METROPOLITAN TRANSPORTATION PLAN

The Metropolitan Transportation Plan (MTP) serves as the official long-range transportation plan for the DCHC MPO region and guides the transportation decision-making for at least a projected 20-year planning horizon. It is updated periodically and was recently updated to plan for the years through 2040. The primary goals of the updated MTP are identified as:

- A safe, sustainable, efficient, attractive, multi-modal transportation system that: supports local land use; accommodates trip-making choices; maintains mobility and access; protects the environment and neighborhoods; and improves the quality of life for urban area residents.
- An attractive multi-modal street and highway system that allows people and goods to be moved safely, conveniently, and efficiently.
- Improve transportation safety.
- A convenient, accessible, and affordable public transportation system, provided by both public and private operators, that enhances mobility and economic development.
- A pedestrian and bicycle system that: provides a safe alternative means of transportation; allows greater access to public transit; supports recreational opportunities; and includes off-road trails.
- A Transportation Plan that is integrated with local land use plans and development policies.
- A multi-modal transportation system which provides access and mobility to all residents, while protecting the public health, natural environment, cultural resources, and social systems.

- An ongoing program to inform and involve citizens throughout all stages of the development, update, and implementation of the Transportation Plan.
- Continue to improve transportation safety and ensure the security of the transportation system.
- Improve mobility and accessibility of freight and urban goods movement.

The 2040 MTP contains an overview of environmental justice issues and identifies the location of particular communities of concern (low-income, minority, and LEP populations).

Public involvement was an essential component in developing the 2040 MTP. The MTP's public involvement process, as directed by the DCHC MPO's PIP, was instituted to ensure early and timely input from a wide range of participants, particularly at critical milestones in the plan development process. For future updates and MTP development, the DCHC MPO will refer to this EJ report for information on the locations and potential impacts EJ populations. It is important to ensure that all groups in the DCHC MPO region understand and have access to the MTP process, including representatives from low-income, LEP, elderly, and minority communities.

### 2040 MTP Project Evaluation

By analyzing the geographic and funding distribution of projects included in the 2040 MTP, it can be determined if the MTP complies with Title VI, Executive Orders 12898 and 13166, and USDOT Orders related to EJ. Project cost estimates included in the 2040 MTP are estimates of perceived costs for future transportation projects. Updated cost estimates for projects will be developed when the project has been programmed in the TIP and design/preliminarily engineering for the project has been completed.

## 2040 MTP Projects Measured Against Communities of Concern Block Groups

### DETERMINING THE THRESHOLD

There are 257 total Block Groups in the DCHC MPO region. The evaluation of EJ communities of concern in chapter 3 identified a total of 455 instances in which a Block Group exceeded at least one of the regional thresholds for EJ populations. In many cases, two or more communities of concern exist in the same Block Group and are considered overlapping communities of concern. These overlaps represent more highly concentrated areas of EJ communities of concern. There are **95 instances** where two or more communities of concern overlap and exist in the same Block Group.

The evaluation of communities of concern in chapter 3 determined that **25 percent** of all Block Groups in the DCHC MPO area are considered an EJ community of concern. **25 percent was set as the threshold for measuring the distribution of MTP projects.** It is reasonable to assume that 25 percent of all MTP projects and MTP project funding will fall within, adjacent to, or impact an EJ community of concern Block Group.

### MEASURING 2040 MTP PROJECTS AGAINST THE THRESHOLD

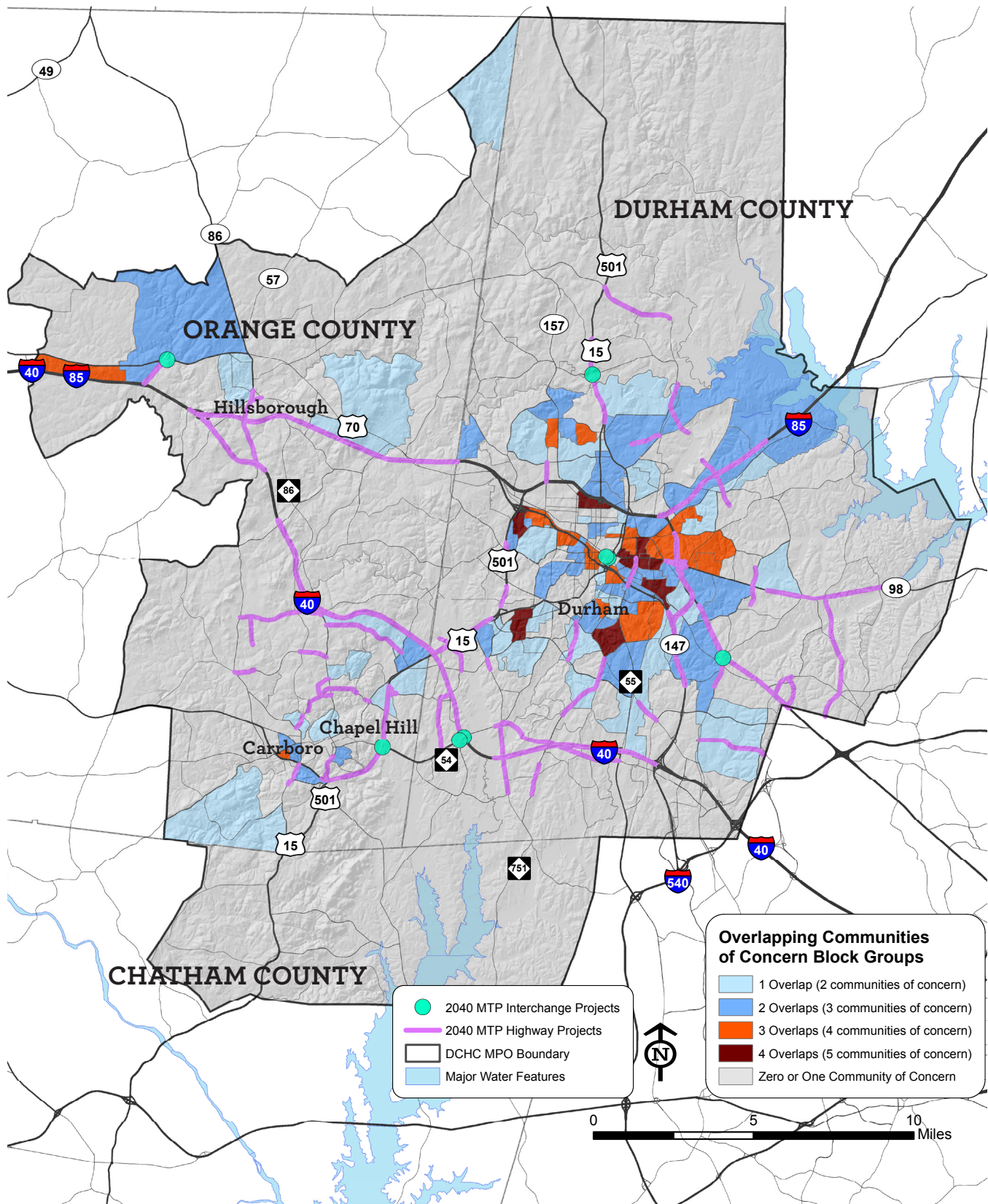
Maps 4.1 and 4.2 on pages 4-9 and 4-10 respectively display the relationship between locations of MTP projects and overlapping community of concern Block Groups. There are a total of 81 projects in the adopted 2040 MTP. The 81 projects were mapped by segments to more concisely determine the portion or portions of a project that impact an overlapping community of concern Block Group. If a project segment was located partially or completely within a community of concern Block Group, it was assumed to impact those populations living there.

The MTP includes **eight interchange projects totaling \$115 million in project funding.** Of the eight projects, four projects (50 percent) were located within, partially within, or connected directly to an overlapping community of concern Block Group. Of the \$115 million in total funding, \$88 million, or **76 percent** was within, partially within, or connected directly to an overlapping community of concern Block Group.

The MTP includes **740 highway project segments totaling \$2.2 billion in project funding.** Of the 740 project segments, 297 project segments (40 percent) were located within, partially within, or connected directly to, an area of overlapping communities of concern Block Groups. Of the \$2.2 billion in total funding, \$24 million, or **one percent** was within, partially within, or connected directly to an overlapping community of concern Block Group.

The MTP includes **194 transit route projects segments. Of the 194 project segments, 165 segments or 85 percent** were located within, partially within, or connected directly to an area of overlapping communities of concern Block Groups. Projected costs for transit route projects and service in 2040 were calculated as part of the 2040 MTP, however, a methodology for geographic distribution of transit route project costs was not included as part of the 2040 MTP. Thus, the geographic distribution of funding for transit route service projects could not be compared to locations of EJ communities of concern as part of this EJ report.

**Map 4.1 Location of 2040 MTP Highway Projects Relative to Overlapping Community of Concern Block Groups**





**Map 4.2 Location of 2040 MTP Transit Route Projects Relative to Overlapping Community of Concern Block Groups**

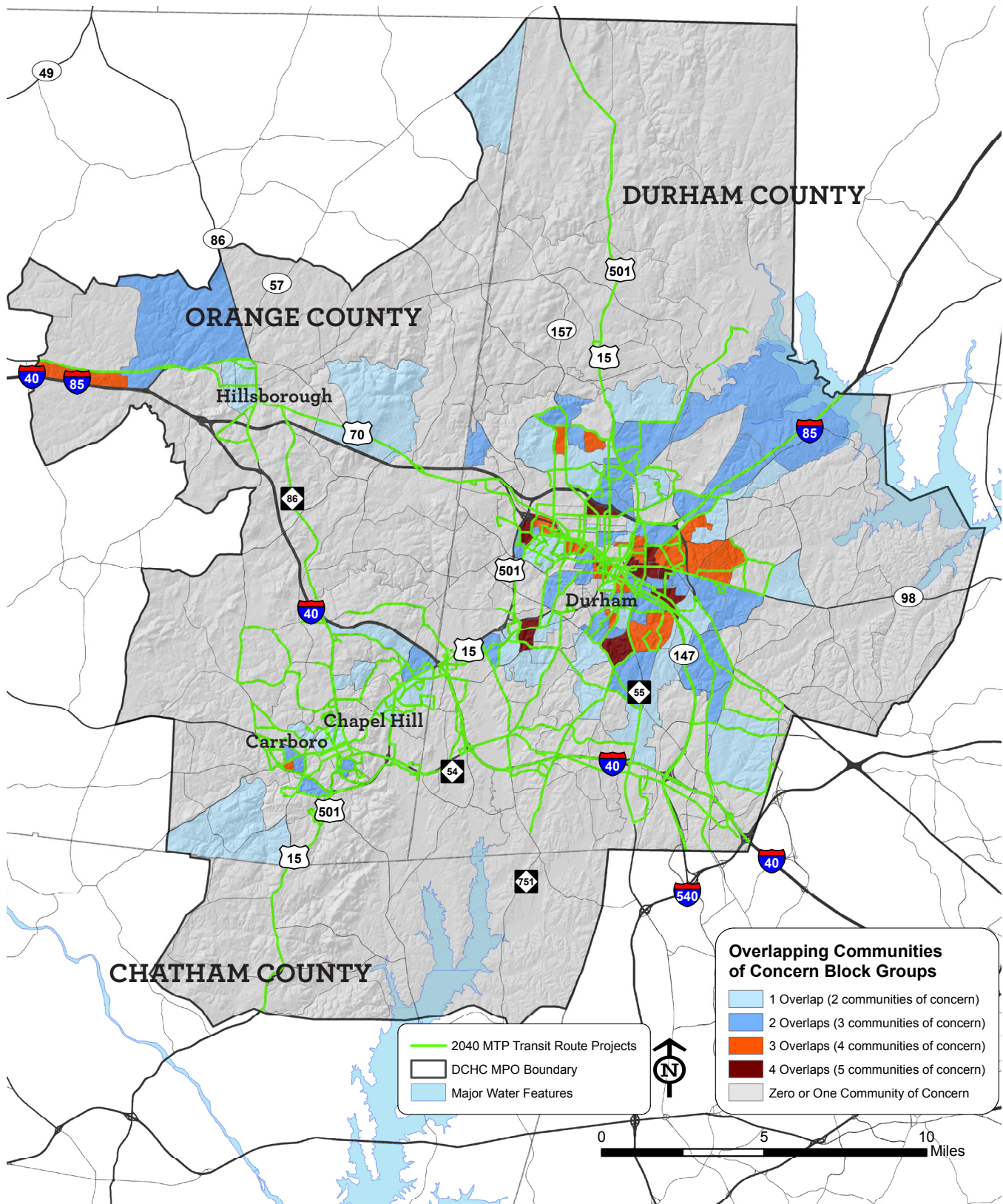




Table 4.1 below presents the percentage of MTP project segments and MTP project funding relative to overlapping EJ communities of concern Block Groups. The percentages of MTP projects and MTP project funding for interchange projects and transit route projects were **well above the 25 percent threshold**. However, the percentage of highway project segments located within or near overlapping EJ communities of concern Block Groups segments was 40 percent, which is closer to the 25 percent threshold, and funding for the same highway project segments accounted for only **one percent** of total funding for highway projects.

**Table 4.1: 2040 MTP Project Distribution**

Type of MTP Project	Located Within Overlapping Communities of Concern Block Groups	Total # of Project Segments or Total Project Funding in DCHC MPO Area	Percent of Total
MTP Interchange Projects	4	8	50%
MTP Interchange Project Funding	\$87,546,000	\$115,446,000	76%
MTP Highway Project Segments	297 (segments)	740 (segments)	40%
MTP Highway Project Funding	\$24,269,037	\$2,222,439,325	1%
MTP Transit Route Projects	165	194	85%

## TRANSPORTATION IMPROVEMENT PROGRAM

The Transportation Improvement Program (TIP) reflects the transportation capital improvement priorities of the DCHC MPO region and serves as the link between the transportation planning process and project implementation. It includes a list of transportation projects and programs, scheduled for implementation over a ten-year period, which must be consistent with the goals and the policies in the MTP. While inclusion in the TIP does not guarantee funding, it is an essential step in the authorization of funding for a project, and it is critical to the successful implementation of the project. It is important to ensure that all groups in the DCHC MPO region understand and have access to the TIP process, including representatives from low-income, LEP, elderly, and minority communities.

### ***FY2012-2018 TIP Project Evaluation***

By analyzing the geographic and funding distribution of projects included in the TIP, it can be determined if the TIP complies with Title VI, Executive Orders 12898 and 13166, and USDOT Orders related to EJ. Project cost estimates included in the TIP were estimates of perceived costs for future transportation projects. Updated cost estimates for projects will be developed when the design/preliminary engineering for the project has been completed.

### **TIP Projects Measured Against Communities of Concern Block Groups in the DCHC MPO Area**

#### **DETERMINING THE THRESHOLD**

There are 257 total Block Groups in the DCHC MPO region. The evaluation of EJ communities of concern in chapter 3 identified a total of 455 instances in which a Block Group exceeded at least one of the regional thresholds for

EJ populations. In many cases, two or more communities of concern exist in the same Block Group and are considered overlapping communities of concern. These overlaps represent more highly concentrated areas of EJ communities of concern. There are **95 instances** where two or more communities of concern overlap and exist in the same Block Group.

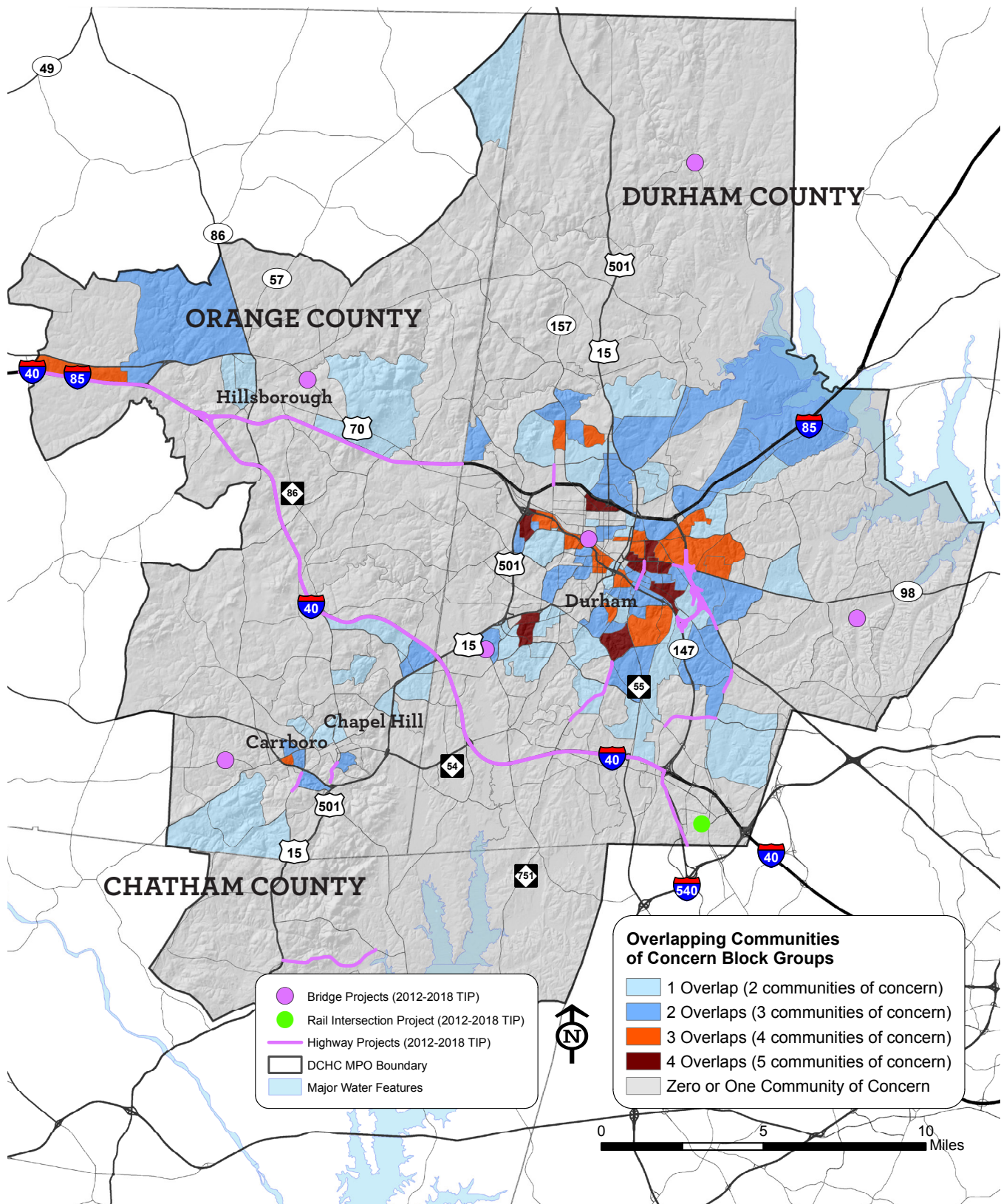
The evaluation of communities of concern in chapter 3 determined that **25 percent** of all Block Groups in the DCHC MPO area are considered an EJ community of concern. **25 percent was set as the threshold for measuring the distribution of TIP projects.** It is reasonable to assume that 25 percent of all TIP projects and TIP project funding will fall within, adjacent to, or impact an EJ community of concern Block Groups.

#### **MEASURING TIP PROJECTS AGAINST THE THRESHOLD**

The FY2012-2018 TIP was reviewed for projects that were considered to improve local safety, preserve the existing roadways, or enhance the local transportation system, and the projects that could be mapped, were mapped. Projects were categorized as either a highway project, a bridge project, or a rail project. Maps 4.3 and 4.4 on pages 4-13 and 4-14 respectively, display the relationship between locations of TIP projects and overlapping community of concern Block Groups.

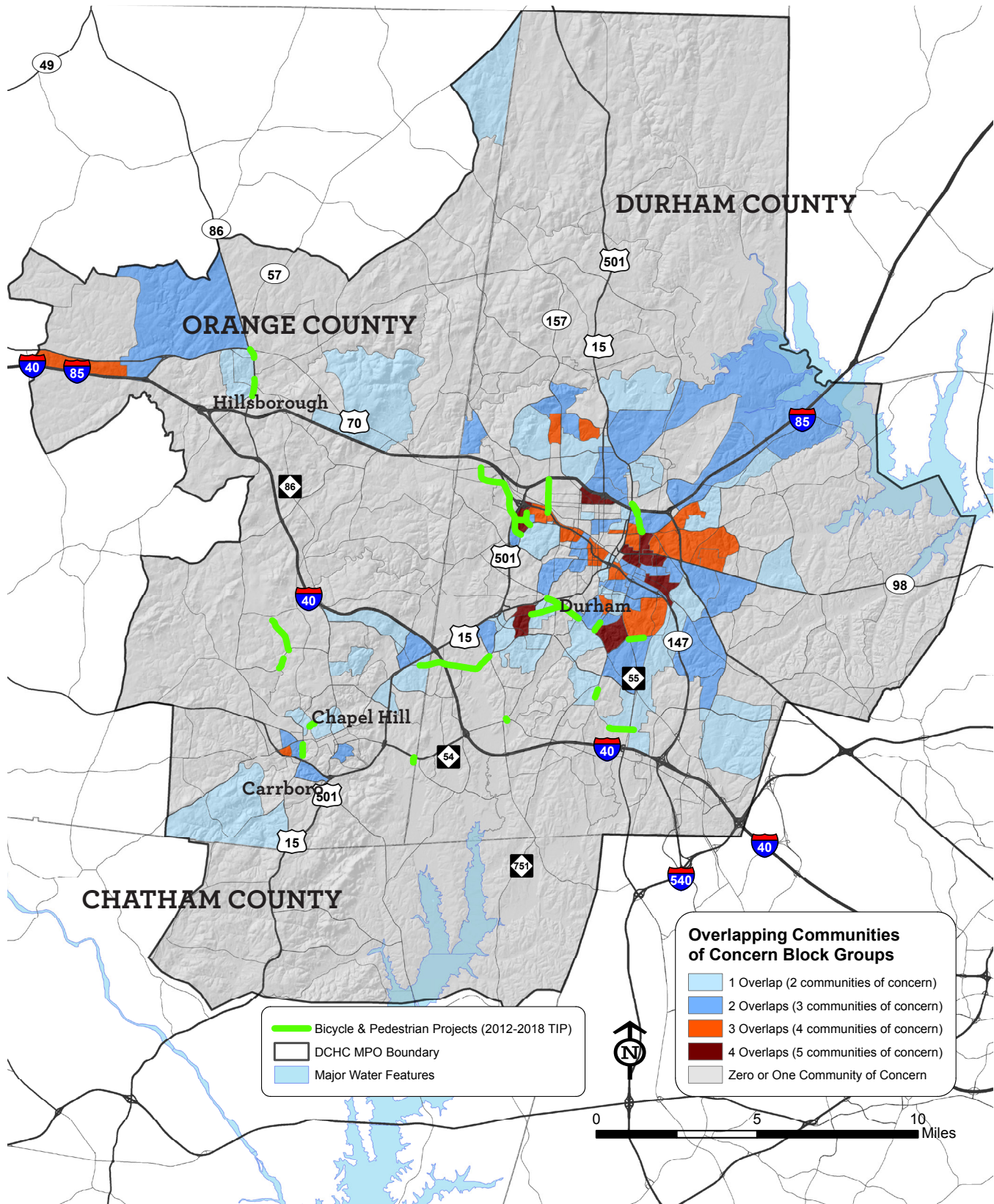
Highway projects in the TIP were mapped by segments to more concisely determine the portion or portions of a project that impact an overlapping community of concern Block Group. If a project segment was located partially or completely within a community of concern Block Group, it was assumed to impact those populations living there. Bicycle and pedestrian projects in the TIP were not mapped by segment, as these projects were often shorter in length.

**Map 4.3 Location of TIP Highway, Bridge, and Rail Projects Relative to Overlapping Communities of Concern Block Groups**





**Map 4.4 Locations of TIP Bicycle and Pedestrian Projects Relative to Overlapping Community of Concern Block Groups**





**The FY2012-2018 TIP includes 29 bicycle and pedestrian project totaling \$55 million in project funding.** Of the 29 projects, 21 project (72 percent) were located within, partially within, or connected directly to an area of overlapping EJ communities of concern Block Groups. Of the \$55 million in total project funding, \$40 million, or **73 percent** was within, partially within, or connected directly to an overlapping EJ community of concern Block Group.

**The FY2012-2018 TIP includes 385 highway project segments totaling over one billion dollars in project funding.** Of the 385 projects segments, 153 project segments were located within, partially within, or connected directly to an area of overlapping EJ communities of concern Block Groups. Of the one billion dollars in total project funding, \$525 million, or **45 percent** was within, partially within, or connected directly to an overlapping EJ community of concern Block Group.

**The FY2012-2018 TIP includes six bridge projects totaling \$16 million in project funding.** Of the six projects, two were located

within, partially within, or connected directly to an area of overlapping EJ communities of concern Block Groups. Of the \$16 million in total project funding, \$7, million, or **50 percent** was within, partially within, or connected directly to an overlapping EJ community of concern Block Group.

**The FY2012-2018 TIP includes one rail intersection improvement project totaling \$30 million in project funding.** This project was not located within, partially within, or directly connected to an area of overlapping communities of concern Block Groups. Of the \$30 million in total project funding, zero funding was within, partially within, or directly connected to a community of concern Block Group.

Table 4.2 below presents the percentage of TIP projects and project segments segments and TIP project funding relative to overlapping EJ communities of concern Block Groups. The percentages of TIP project segments and the percentages of TIP project funding are well **above the 25 percent threshold for each project type except for the rail improvement project.**

**Table 4.2: FY2012-2018 TIP Project Distribution**

Type of TIP Project	Located Within Overlapping Communities of Concern Block Groups	Total # of Projects or Project Segments or Total Project Funding in DCHC MPO Area	Percent of Total
Bicycle and Pedestrian Projects	21	29	72%
Bicycle and Pedestrian Project Funding	\$39,709,656	\$54,501,858	73%
Highway Projects	153	385	40%
Highway Project Funding	\$524,858,140	\$1,159,944,000	45%
Bridge Projects	2	6	33%
Bridge Project Funding	\$6,666,000	\$15,938,000	42%
Intersection (Rail Improvement) Project	0	1	0%
Intersection (Rail Improvement) Project Funding	\$0	\$30,037,000.00	0%

## UNIFIED PLANNING WORK PROGRAM

Each year, the DCHC MPO, in cooperation with member agencies, prepares a Unified Planning Work Program (UPWP). The UPWP includes documentation of planning activities to be performed with funds provided to the DCHC MPO by the FHWA and FTA. All transportation-planning activities of member agencies and consultants, as well as the work done directly by the DCHC MPO staff and funded in federal sources are included in the UPWP.

### ***Public Involvement***

Public involvement is important to the development of the UPWP. From the outset, citizens are given an opportunity to suggest projects and other activities for consideration. Moreover, the DCHC MPO staff solicits comments from the public, stakeholders, members of the MPO TC and members of the MPO Board.

The draft UPWP is made available for a 45-day public review and comment period. Once comments have been received and addressed, the final UPWP document is presented to the MPO TC and the MPO Board. The MPO Board holds a public hearing prior to voting on adoption of the final UPWP document. Once adopted, the UPWP is made available on the DCHC MPO website with hard copies available by request.

### ***FY2015 UPWP Program of Funding***

Over **\$4.5 million** in federal, state, and local funding was programmed for use in the FY 2015 UPWP. Of these funds, over **\$1.6 million** was programmed to support activities of the DCHC MPO lead planning agency staff. Over **\$1.4 million** was programmed for other municipal and county transportation planning activities and over **\$1 million** was programmed for regional

transit planning activities. While a majority of this funding is needed for mandatory regional planning activities (such as the MTP and this EJ report), and staff support to carry them out, a notable amount of money is available to conduct studies and fund planning projects. Table 4.3 on page 4-17 presents a summary of the FY2015 UPWP funding program.

### ***UPWP Funding Relative to EJ Populations***

As there continues to be funding available through the UPWP to fund local studies and projects, it is critical for the DCHC MPO to carefully review this EJ report to ensure EJ populations in the DCHC MPO area enjoy the same benefits of the federal investments, bear the same burdens resulting from the federal projects, and have equal participation in the local and state issues. Public outreach efforts must be strategic and diverse, as the different populations that live within the DCHC MPO area have diverse interests, needs, and abilities. Each receiving agency must ensure public access to, and public engagement during, the development of federally funded programs and planning activities. Receiving agencies work strategically to connect with, and engage traditionally underrepresented populations in the DCHC MPO area.

**Table 4.3: UPWP Funding Program**

Receiving Agency	STP-DA Sec. 133(b)(3)(7)		Section 104(f) PL		Section 5303 Highway/Transit		
	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%
LPA	\$235,599	\$942,397	\$101,773	\$407,090	\$0	\$0	\$0
Carrboro	\$6,802	\$27,205	\$0	\$0	\$0	\$0	\$0
Chapel Hill/CHT	\$31,006	\$124,024	\$0	\$0	\$17,011	\$17,011	\$136,088
Chatham County	\$8,749	\$34,994	\$0	\$0	\$0	\$0	\$0
Durham/DATA	\$42,720	\$170,880	\$0	\$0	\$17,708	\$17,706	\$141,656
Durham County	\$10,389	\$41,556	\$0	\$0	\$0	\$0	\$0
Hillsborough	\$20,000	\$80,000	\$0	\$0	\$0	\$0	\$0
Orange County	\$6,006	\$24,025	\$0	\$0	\$0	\$0	\$0
TJCOG	\$13,750	\$55,000	\$0	\$0	\$0	\$0	\$0
TTA	\$0	\$0	\$0	\$0	\$0	\$0	\$0
NCDOT	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Totals</b>	<b>\$375,021</b>	<b>\$1,500,081</b>	<b>\$101,773</b>	<b>\$407,090</b>	<b>\$34,719</b>	<b>\$34,717</b>	<b>\$277,744</b>

Receiving Agency	Section 5307 Transit			Funding Summary			
	Local 10%	NCDOT 10%	FTA 80%	Local	NCDOT	Federal	Total
LPA	\$25,986	\$25,986	\$207,886	\$363,358	\$25,986	\$1,557,373	\$1,946,716
Carrboro	\$0	\$0	\$0	\$6,802	\$0	\$27,205	\$34,007
Chapel Hill/CHT	\$20,250	\$20,250	\$162,000	\$68,267	\$37,261	\$422,112	\$527,640
Chatham County	\$0	\$0	\$0	\$8,749	\$0	\$34,994	\$43,743
Durham/DATA	\$29,500	\$29,500	\$236,000	\$89,928	\$47,206	\$548,536	\$685,670
Durham County	\$0	\$0	\$0	\$10,389	\$0	\$41,556	\$51,945
Hillsborough	\$0	\$0	\$0	\$20,000	\$0	\$80,000	\$100,000
Orange County	\$0	\$0	\$0	\$6,006	\$0	\$24,025	\$30,031
TJCOG	\$0	\$0	\$0	\$13,750	\$0	\$55,000	\$68,750
TTA	\$85,500	\$85,500	\$684,000	\$315,500	\$85,500	\$684,000	\$1,085,000
NCDOT	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Totals</b>	<b>\$161,236</b>	<b>\$161,236</b>	<b>\$1,289,886</b>	<b>\$902,749</b>	<b>\$195,953</b>	<b>\$3,474,801</b>	<b>\$4,573,502</b>

## FINDINGS FOR DCHC MPO'S LONG RANGE PLANNING ACTIVITIES

A comparison of the ratio of total 2040 MTP and FY2012-2018 TIP projects with those projects located in communities of concern Block Groups, indicates that the **DCHC MPO has unevenly distributed projects and funding across the region.**

### **2040 MTP Findings**

The evaluation of 2040 MTP project segments indicates that 50 percent of interchange projects, 76 percent of highway projects, and 85 percent of transit route projects are located within or adjacent to communities of concern Block Groups. These percentages **exceed the regional threshold of 25 percent** for measuring the distribution of MTP projects.

The evaluation of 2040 MTP project funding indicates that 76 percent of funding for interchange projects, and 40 percent of funding for highway projects, are located within or adjacent to communities of concern Block Groups. The percentages of project funding **exceed the regional threshold of 25 percent** for measuring the distribution of MTP project funding.

### **FY2012-2018 TIP Findings**

The evaluation of FY2012-2018 TIP projects indicates that 72 percent of bicycle and pedestrian projects, 40 percent of highway projects, 33 percent of bridge projects, and zero percent of the rail improvement project are located within or adjacent to communities of concern Block Groups. With the exception of the rail improvement project, these percentages **exceed the regional threshold of 25 percent** for measuring the distribution of TIP projects.

The evaluation of FY2012-2018 TIP project funding indicates that 73 percent of funding for bicycle and pedestrian projects, 45 percent of funding for highway projects, 42 percent of funding for bridge projects, and zero percent of funding for the rail improvement project, are located within or adjacent to communities of concern Block Groups. The percentages of project funding **exceed the regional threshold of 25 percent** for measuring the distribution of TIP project funding.

### **Summary**

Project funding and the number of projects in the 2040 MTP and FY2012-2018 TIP that are located within or adjacent to EJ communities of concern Block Groups exceed regional thresholds identified in this EJ report. The DCHC MPO should refer to the findings of this EJ report to more fully incorporate the consideration of EJ communities of concern into major planning activities. Impacts related to transportation projects can be beneficial to or burdensome to nearby communities. An equitable distribution of funding and projects will allow all populations to equally enjoy the benefits and bare the burdens related to transportation projects. The DCHC MPO should carefully assess potential benefits and burdens related to projects that are proposed for inclusion in long range planning effort such as the MTP and TIP. **Particularly, early and careful consideration of project-related burdens, relative to the populations that exist in close proximity to the project is important. Consideration of the timing or schedule of projects, will also significantly limit unnecessary or continual burdens felt by those populations.**

Benefits and burdens related to transportation projects are discussed in more detail beginning on page 4-20 of this EJ report.



## CONCLUSION AND NEXT STEPS

### *Considering the Planning Process and Impacts*

EJ analysis is a type of equity analysis that is performed as part of the MPO's long-range planning process and also as a component of the planning phase for a specific project. For specific projects, the emphasis is not just to consider potential impacts of project alternatives on the affected community, but also whether the community participated in project inputs and project meetings.<sup>1</sup> An appropriate public outreach and engagement strategy must be developed early in the planning process or in the project development phase and must include opportunities for community input and feedback at all key milestones or decision-making points.

### *Public Involvement Strategies*

The DCHC MPO Public Involvement Policy (PIP) provides effective guidance on public outreach and engagement methods, techniques, strategies, and time lines. However, as the demographic population profiles of the DCHC MPO area evolve over time, so should the PIP. Each time the *Environmental Justice Report for the DCHC MPO* is updated based on more recent US Census Bureau American Community Survey data sets, the DCHC MPO should revisit the PIP to verify that the methods, techniques, strategies, and timelines for public involvement are still relevant and successful. If recent public outreach and engagement efforts have not been successful, the DCHC MPO should re-evaluate the PIP and update it as appropriate.

### *Updating the Public Involvement Policy*

During the next update to the PIP, a specific EJ-related outreach policy statement should be incorporated. It is also important to identify and

consider the unique communities that live in the DCHC MPO area. The DCHC MPO should refer to this EJ report or any future updates to this EJ report to identify any highly concentrated areas of EJ populations. **It is critical that updates to the PIP do not exclude the consideration of non-EJ populations** that live in the DCHC MPO area. The DCHC MPO should learn and understand the values, traditions, and histories of **all** communities and populations that exist in the DCHC MPO area and tailor outreach strategies appropriately. A few key questions that the MPO should ask during an update to the PIP are:

- Historically, what populations or communities have been underrepresented during transportation planning activities?
- Is there a local community leader that would be willing to serve as a liaison?
- Where do members of these communities work?
- Where do members of these communities recreate or congregate?
- Where do members of these communities access basic needs, in particular, food and retail goods?
- What languages do members of these communities speak at home?
- How do members of these communities seek out and share information within their communities?
- What obstacles such as physical ability, transportation, employment, or family responsibilities would prevent members of these communities from participating in public meetings or workshops?

For public outreach in the DCHC MPO area to be successful, an update to the PIP should reflect answers or solutions to the questions listed above.

## Benefits and Burdens

Not every project can be considered supremely beneficial to the communities that it directly impacts. There are benefits and burdens related to every transportation-related project and both must be comprehensively assessed for each specific project during the project identification and prioritization phases of long range planning activities such as the MTP and the TIP.

### POTENTIAL BURDENS

When considering potential burdens of transportation-related projects, all reasonably foreseeable adverse social, economic, and environmental effects on minority, LEP, elderly, and low-income populations must be identified and addressed. For the purposes of this EJ report, burdens are impacts related to the transportation process that have an adverse impact or effect on the surrounding communities.

The USDOT update to the Final Environmental Justice Order 56102 states that **adverse effects** 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;
- Destruction or diminution of aesthetic values;
- Destruction or disruption of community cohesion or a community's economic vitality;
- Destruction or disruption of the availability of public and private facilities and services;
- Vibration;
- 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; and
- The denial of, reduction in, or significant delay in the receipt of benefits of USDOT programs, policies, or activities.<sup>2</sup>

As stated on page 4-18, the DCHC MPO should carefully assess potential burdens related to projects that are proposed for inclusion in long-range planning efforts such as the MTP and TIP.

### POTENTIAL BENEFITS

Benefits of a transportation investment are the direct, positive effects of that project; that is to say, the desirable things we obtain by directly investing in the project.<sup>3</sup> Example benefits include but are not limited to:

- Reduction of travel time;
- Reduced vehicle-related costs (costs of owning and operating a vehicle);
- Reduction in the number or severity of crashes;
- Reduction in circuitry of travel (provide a shorter route); and
- Reduction of costs related to emission reductions.

The DCHC MPO should carefully assess anticipated benefits related to projects that are proposed for inclusion in long-range planning efforts such as the MTP and TIP. Not all proposed projects will be beneficial to all populations that exist in close proximity to the projects and **full consideration of EJ measures such as accessibility, mobility, safety, displacement, equity, environmental, social, and aesthetics should be made during all long range planning activities.**

## Benefits and Burdens Comparison Table

The Coastal Region Metropolitan Planning Organization (CORE MPO), located in the Savannah, Georgia Urbanized Area, adopted an *Environmental Justice Report of the Coastal Region Metropolitan Planning Organization* in 2012. Chapter 2 of the CORE MPO report presents a summary table of benefits and burdens related to transportation projects and includes potential

mitigation strategies that were identified by the CORE MPO.<sup>4</sup>

The summary table (below) has been included in this EJ report because it provides a wealth of excellent information in an easy to read and condensed format. The DCHC MPO will refer to Table 4.4 during future planning process and will also update the table as needed to reflect EJ goals of the DCHC MPO area.

**Table 4.4: Example Table of Potential Benefits and Burdens of Transportation Projects**

Proposed Project Type	Possible Benefits	Possible Burdens	Possible Mitigation Strategies
<b>HIGHWAY SYSTEM</b>			
New Road	Enhance accessibility and mobility; Promote economic development; Improve safety; Improve operational efficiency.	Benefits limited to populations with motor vehicles; Increase in noise and air pollution; Might impact existing neighborhoods.	Signal synchronization, pedestrian crosswalks, bike lanes, bus route addition, etc; Select ROW for minimum impacts; Try to incorporate context-sensitive design to maintain the neighborhoods.
Resurface/Upgrade of existing roadways	Promote system preservation; Improve safety; Improve operational efficiency.	Expansion of shoulder width impinges on residential property; Diverted traffic during project construction causes heavy traffic and dangerous conditions on city streets; Noise and air pollution during construction.	Build curbing and sidewalks rather than shoulders; Close large section of roadways on weekends to increase resurfacing productivity; Reroute traffic to major streets if possible.
<b>PUBLIC TRANSIT</b>			
Fixed Route Bus Service	Enhance accessibility by transit to EJ populations; Reduce reliance on motor vehicles and improve air quality; Increase mobility to EJ populations.	Buses are sometimes smelly and noisy; Bus headways in certain routes might be too long; Possible capacity problems with ferry boat; Some bus shelters are not wheelchair accessible.	Try to create a comfortable environment for the bus and ferry boat riders; Improve transit frequency if possible; Bus routes should be within walking distance of EJ populations; Install bus shelters accessible by wheelchairs.
<b>PEDESTRIAN AND BICYCLE FEATURES</b>			
Addition of Pedestrian Amenities and / or Safety Provisions	Improve quality of life, health and environment by encouraging people to use the bike/pedestrian facilities.	"Bump-outs" and traffic calming measures make commercial deliveries difficult.	Need to come up with some original improvement plans to accommodate both motor vehicle traffic and bike/pedestrian usage.
<b>PEDESTRIAN AND BICYCLE FEATURES ~ CONTINUED</b>			
Addition of Bike Routes/Lanes to Existing Roads	Improve safety to pedestrians and bike riders; Provide an alternative to motor vehicles.	Bike routes takes space for passing turning cars at intersections and reduce on-street parking.	Develop standardized design guidelines that accommodate both motor vehicle traffic and bike/pedestrian usage.
<b>OTHER TRANSPORTATION PROJECTS</b>			
Multi-modal connections	Enhance mobility and accessibility.	Some ITS projects might be expensive to implement.	Multi-modal incorporates transit stations and other modes.
ITS improvements	Improve safety.		Have a comprehensive design before any ITS projects are implemented.
CMP strategies	Enhance system preservation and operational efficiency.		

## ***Next Steps: Using & Updating this EJ Report***

This EJ report can help local, regional, and state agencies or organizations identify the locations and concentrations of EJ populations. Additionally, it can be of assistance during long-range planning processes to avoid disproportionately high and adverse impacts of plans and policies on EJ populations. This report should be used in conjunction with a more detailed, project-specific EJ analysis conducted during long-range planning activities such as the MTP and TIP, and again during individual project planning phases, such as the NEPA phase. As the DCHC MPO region continues to grow and change demographically, the methodology developed for this EJ report to evaluate EJ communities of concern should be reassessed for consistency with new or current EJ population evaluation methodologies.

As was done in this document with the inclusion of the LEP, elderly, and zero-car household analyses, future analyses may consider evaluation of additional EJ populations. This may also include the creation of a project-specific EJ Advisory Committee, coordination with other MPOs involved in similar processes, receipt of input from stakeholders, individual citizens or community groups, and research and updating of data sources that may prove useful to the analysis. The DCHC MPO should also **consider including a review and evaluation of past projects or recently completed projects in a future update to this EJ plan. The inclusion of such an evaluation would ensure there are no systematic or cumulative impacts to any one community in the DCHC MPO area.**

Additionally, the DCHC MPO will continue to implement EJ activities as part of its annual UPWP, fulfillment of federal certification requirements, and completion of regional goals related to EJ. The EJ program at DCHC MPO

is constantly evolving, becoming more effective and inclusive over time. To ensure EJ compliance and considerations are implemented in all major planning activities of the DCHC MPO, the MPO will:

- Remain informed of legal developments related to Title VI and other non-discrimination statutes;
- Continue to update the Table 4.4 of potential benefits and burdens related to transportation projects in the DCHC MPO area and include evaluation of **additional EJ measures such as accessibility, mobility, safety, displacement, equity, environmental, social, and aesthetics**;
- Evaluate the potential impacts of DCHC MPO transportation projects on EJ communities of concern and strive to mitigate or reduce the level of burden associated with a project;
- Assess DCHC MPO studies and programs to identify the regional benefits and challenges of different populations groups;
- Determine strategic outreach efforts to LEP populations and strengthen efforts to include all population groups in the DCHC MPO area in the regional planning process;
- Provide EJ education and training for DCHC MPO staff to heighten the awareness of EJ in the planning process;
- Maintain and update the Title VI Compliance, Public Involvement Plan, LEP Plan, and Environmental Justice Report as necessary;
- Refer to this EJ report often during planning processes for guidance on the locations and concentrations of EJ communities of concern in the DCHC MPO area; and
- Update this EJ report following, or in conjunction with the adoption of the future 2045 MTP.



## Endnotes

1. Federal Highway Administration. *FHWA Guidebook for State, Regional, and Local Governments on Addressing Potential Equity Impacts of Road Pricing*. <http://www.ops.fhwa.dot.gov/publications/fhwahop13033/ch4.htm#s42>.
2. US Department of Transportation. *Update to the Final Environmental Justice Order 56102*. [http://www.fhwa.dot.gov/environment/environmental\\_justice/ej\\_at\\_dot/orders/order\\_56102a/](http://www.fhwa.dot.gov/environment/environmental_justice/ej_at_dot/orders/order_56102a/).
3. Minnesota Department of Transportation, Planning & Programming. *Benefit-Cost Analysis for Transportation Projects*. <http://www.dot.state.mn.us/planning/program/benefitcost.html>.
4. Coastal Region Metropolitan Planning Organization. *2012 Environmental Justice Report of the Coastal Region Metropolitan Planning Organization*. <http://www.thempc.org/documents/Transportation/TitleVI/environmental%20justice%20documentation%20updated.pdf>.

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