9. Critical Factors in the Planning Process

Our transportation investments influence more than just our ability to get from one place to another. How and where we develop roads, transit lines and other transportation services impact other things we value. The health and well-being of the natural environment, our neighborhoods, and those who live in them are vital to maintaining the quality of life our region is known for. Federal law recognizes these important considerations by requiring that Metropolitan Transportation Plans specifically address eight planning factors:

1. Support economic vitality of the metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the safety of the transportation system for motorized and non-motorized users;
3. Increase the security of the transportation system for motorized and non-motorized users;
4. Increase accessibility and mobility of people and freight;
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
7. Promote efficient system management and operation; and
8. Emphasize the preservation of the existing transportation system.

Each of these factors is addressed throughout this report. This section highlights the following critical factors:

- *Air quality*: demonstrating that transportation plans will further clean air goals and meet air pollutant standards;
- *Environmental Justice*: showing how transportation plans relate to communities that have been historically underserved or disproportionately impacted by transportation investments; and
- *Safety and Security*: addressing how the transportation plans and the organizations that implement them promote safer and more secure travel choices.

9.1 Transportation - Air Quality Conformity

Transportation-air quality conformity ("conformity") is a way to ensure that Federal funding and approval goes to transportation activities that are consistent with air quality goals. Conformity applies to metropolitan transportation plans—such as this one, to transportation improvement programs (TIPs), and to projects funded or approved by the Federal Highway Administration (FHWA) or the Federal Transit Administration (FTA) in areas that do not meet or previously have not met air quality standards for ozone, carbon monoxide, particulate matter, or nitrogen dioxide. These areas are known as "non-attainment areas" or "maintenance areas," respectively.

A conformity determination demonstrates that the total emissions projected for a plan or program are within the emissions limits ("budgets") established by the State Implementation Plan (SIP) for air quality, and that transportation control measures (TCMs) – specific projects or programs enumerated in the SIP that are designed to improve air quality – are implemented in a timely fashion. All of the area within the Triangle covered by the two MPOs, except for Harnett County, is currently designated as a "maintenance area" for the 8-hour ozone standard; the effective date of this designation was December 26, 2007. In addition, Durham and Wake Counties are maintenance areas for carbon monoxide.

Determining Conformity

Regional emissions are estimated based on highway and transit usage according to transportation plans and TIPs. The projected emissions for the plan and TIP must not exceed the emissions limits (or "budgets") established by the SIP. Where TCMs are included, responsible MPOs and the North Carolina Department of Transportation (NCDOT) are required to demonstrate that TCMs are implemented in a timely fashion. In North Carolina there are currently no TCMs included in SIPs.

The Decision Process

A formal interagency consultation process involving the Environmental Protection Agency (EPA), FHWA, FTA and state and local transportation and air quality agencies is required in developing SIPs, TIPs, and transportation plans, and in making conformity determinations. Metropolitan Planning Organization (MPO) policy boards make initial conformity determinations in metropolitan areas, while the NCDOT does so in areas outside of MPOs, in consultation with affected Rural Planning Organizations (RPOs).

Four organizations are responsible for making the conformity determinations in four distinct parts of the Triangle Ozone Maintenance Area:

a. the Capital Area MPO within the CAMPO metropolitan area boundary – all of Wake County, and parts of Franklin, Granville, and Johnston counties.
b. the DCHC MPO within its metropolitan area boundary – all of Durham County and parts of Orange and Chatham counties.
c. the Burlington-Graham MPO within its portion of the metropolitan area boundary in western Orange County.
d. the NCDOT in a rural area that is comprised of those portions of Chatham, Orange, Person, Franklin, Granville and Johnston Counties that remain outside of any MPO metropolitan area boundary.

Each of these responsible organizations must make a conformity determination for its respective area in order for all of the areas to be designated in conformity.

The final conformity determination is made at the Federal level by FHWA/FTA. These determinations must be made at least every four years, or when transportation plans or TIPs are amended or updated, or within one year of the effective date of a non-attainment designation. Conformity determinations must also be made within two years after the approval of a State Implementation Plan (SIP) containing motor vehicle emission budgets or determination of adequacy of those budgets.

Appendix 6 includes the *Conformity Analysis and Determination Report* for the CAMPO and DCHC MPO 2040 Metropolitan Transportation Plans, along with the 2012-18 TIP.

9.2 Environmental Justice

The intent of environmental justice is to avoid, minimize, or mitigate disproportionately high and adverse effects on minority and low-income populations; and ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.

Environmental justice addresses fairness toward the disadvantaged and often addresses the possible exclusion of racial and ethnic minorities, low-income people, the elderly, and persons with disabilities from decision-making. The federal government has identified environmental justice as an important goal in transportation, and local and regional governments must incorporate environmental justice into transportation planning. Capital Area MPO and DCHC MPO goals that relate to the public transportation system, the protection of the natural environment and social systems, and the public involvement process each have objectives that support environmental justice. This support must be evident throughout the transportation planning process, including those processes for the long-range transportation plan, transportation improvement program, and specific project planning.

Even though the term "environmental justice" is not in federal legislation, the concept and its application have been developed through a succession of court cases, transportation regulations, agency memoranda, and Executive Orders. Much of the legal application is based on Title VI of the Civil Rights Act of 1964 that provides protection from discriminatory actions or results from federal, or federally assisted or approved, actions. In terms of transportation planning, environmental justice seeks to ensure that the disadvantaged:

1. Have access to the decision-making process;
2. Realize benefits from investments that are commensurate with the population as a whole;
3. Do not shoulder a disproportionate share of the negative effects and burden resulting from the implementation of transportation projects; and,
4. Do not incur a disproportionate share of the financial cost.

The Capital Area MPO and DCHC MPO have carried out a comprehensive and thorough set of activities to ensure that disadvantaged persons, as characterized in federal regulations, do not suffer discrimination in the transportation planning and implementation process. These activities have been in the area of both public participation and plan analysis. The following sections describe the environmental justice activities that occurred as part of the 2040 MTP. Detailed maps are contained in Appendix 12.

Access to the Decision-making Process

The Capital Area MPO and DCHC MPO ensured that all individuals, regardless of race, ethnicity, income, age, or disability, had access to the planning process. Throughout the plan's development, documents were available for public review several times.

In the DCHC MPO, documents were available online and at all local public libraries and planning departments. Notice of the public review periods was published in local newspapers and sent by email and post office mail. Environmental justice community organizations and neighborhoods are included on the DCHC MPO's email and mail lists.

In addition, the DCHC MPO held public workshops for review of the Goals and Objectives, socioeconomic data and alternatives analysis. The DCHC MPO held three to four public workshops for each review period. These workshops were held throughout the MPO: one in Hillsborough, one in Chapel Hill/Carrboro, one in Pittsboro and one in Durham. The Hillsborough, Chapel Hill and Durham workshops were held at locations along public transportation routes. The Pittsboro workshop was not because Pittsboro does not have bus service. Accommodations were made at public meeting and hearings for the disabled.

Plan Benefits

The investments in transportation infrastructure included in the 2040 MTP will benefit the MPO's population in many ways including increased mobility, safety, time savings, economic development, and recreational opportunities. The investment in transit in particular will benefit low income populations that do not have access to personal vehicles and the disabled who may not be able to operate personal vehicles. Currently, tens of thousands of households in the Triangle do not have personal vehicles. The travel forecasts for the 2040 MTP estimate that a majority of transit trips will be made by people from households that do not have cars or low-income households with cars.

For the plan analysis, the DCHC MPO included performance targets that measured some of the plan's benefits to environmental justice communities including the percentage of the environmental justice population that lives within a ¼ mile of transit. The 2040 MTP results in the percentage of poverty households that lives within a ¼ mile of transit rising from 62% in the "no build" scenario to 65% with implementation of the 2040 Plan.

The bicycle and pedestrian network in the 2040 MTP is a composite of local government bicycle and pedestrian plans. Most of these local planning efforts included environmental justice criteria for project selection. Furthermore, the map of the bicycle network shows that the bicycle facilities are well distributed across the MPO – nearly all non-subdivision streets include on-road bicycle facilities in the plan. Therefore, the connectivity, safety, and recreational benefits that bicycle facilities provide are fairly distributed among the MPO's population.

Negative Project Impacts

The investments in transportation infrastructure included in the 2040 MTP will also have some negative impacts to some of the MPOs' population. While road widening projects may increase overall mobility, the residents near the project may be impacted negatively. Some of the negative impacts to nearby residents include increased traffic through their neighborhoods, increased vehicle speeds, land acquisition for necessary right-of-way, relocations of homes and businesses, a change in neighborhood character and land uses, etc. A project's net impact is not always clear and may be perceived differently by different residents. A project that increases property values, mobility, and economic development may also increase traffic, relocate homes and businesses, and change neighborhood character. Although it is difficult at this stage of project development to conclusively assess the overall impact of the highway projects included in the 2040 MTP, the two MPOs did complete several analyses of the potential negative impacts the projects may have on environmental justice communities.

During the development of the 2040 MTP, MPO staff often qualitatively evaluated individual projects for potential negative impacts and often eliminated projects that had significant potential negative impacts. Staff eliminated some projects based on factors such as limited right-of-way, neighborhood and community characteristics, and the historical impact of urban renewal.

The two MPOs analyzed the potential impact of the 2040 MTP highway projects to ensure that the potential negative project impacts were not disproportionately impacting environmental justice communities. This analysis was completed for the plan as a whole. Individual projects in the 2040 MTP may have significant negative impacts that will be studied more in depth during project development and design. These negative impacts are often able to be mitigated by context sensitive design.

For this analysis, the two MPOs used United States Census Bureau data to classify the MPOs' block groups by percent of minority population and the percent of households below poverty. The minority data was taken from the 2010 Census. The low-income data was taken from the five-year summary 2006-2010 American

Community Survey. The percent of minority population was determined by calculating the percent of the population that was not 'white and non-Hispanic'. It included both racial and ethnic minorities. Since the assessment of disproportionate impact must be relative to a baseline, the block groups were classified into five categories depending upon the population characteristics as compared to the county average of percent minority population and the county average of the percent of households below poverty. The county averages were selected as the baselines because the two MPOs are in eight counties with varying population demographics.

The county averages are displayed in the table below.

	Percent of Minority Population	Percent of Households Below Poverty
Chatham County	29%	12%
Durham County	58%	14%
Franklin County	37%	14%
Granville County	42%	12%
Harnett County	36%	17%
Johnston County	30%	14%
Orange County	29%	16%
Wake County	38%	9%

In the two MPOs, each roadway project was analyzed based on the population characteristics of the block groups that the project was located in. Figure 9.2.1 displays the location of roadway projects and minority population Census block groups, and Figure 9.2.2 displays the roadways with the low-income block groups. The methodology used to generate Figure 9.2.1 sums all minority populations together. Figures 9.2.3, 9.2.4, 9.2.5, and 9.2.6 display the location of roadway projects and single minority populations, including Black or African-American Alone, Hispanic or Latino, and Asian Alone. All other minority populations represented less than two percent of the population in each county and thus were not mapped. However, all racial and ethnic minorities are included in the total minority population maps.

The county averages for these individual minority groups are displayed in the table below:

	Percent of Black or African American Alone Population	Percent of Hispanic or Latino Population	Percent of Asian Alone Population
Chatham County	13%	13%	1%
Durham County	38%	13%	5%
Franklin County	27%	8%	0%
Granville County	33%	7%	1%
Harnett County	21%	11%	1%
Johnston County	15%	13%	1%
Orange County	12%	8%	7%
Wake County	21%	10%	5%

Note: all figures are rounded to the nearest percent.

The DCHC MPO's Web site – www.dchcmpo.org – has larger versions of the maps presented here.

Figure 9.2.1 Low Income Population and 2040 MTP Roadway Projects – DCHC MPO and Capital Area MPO

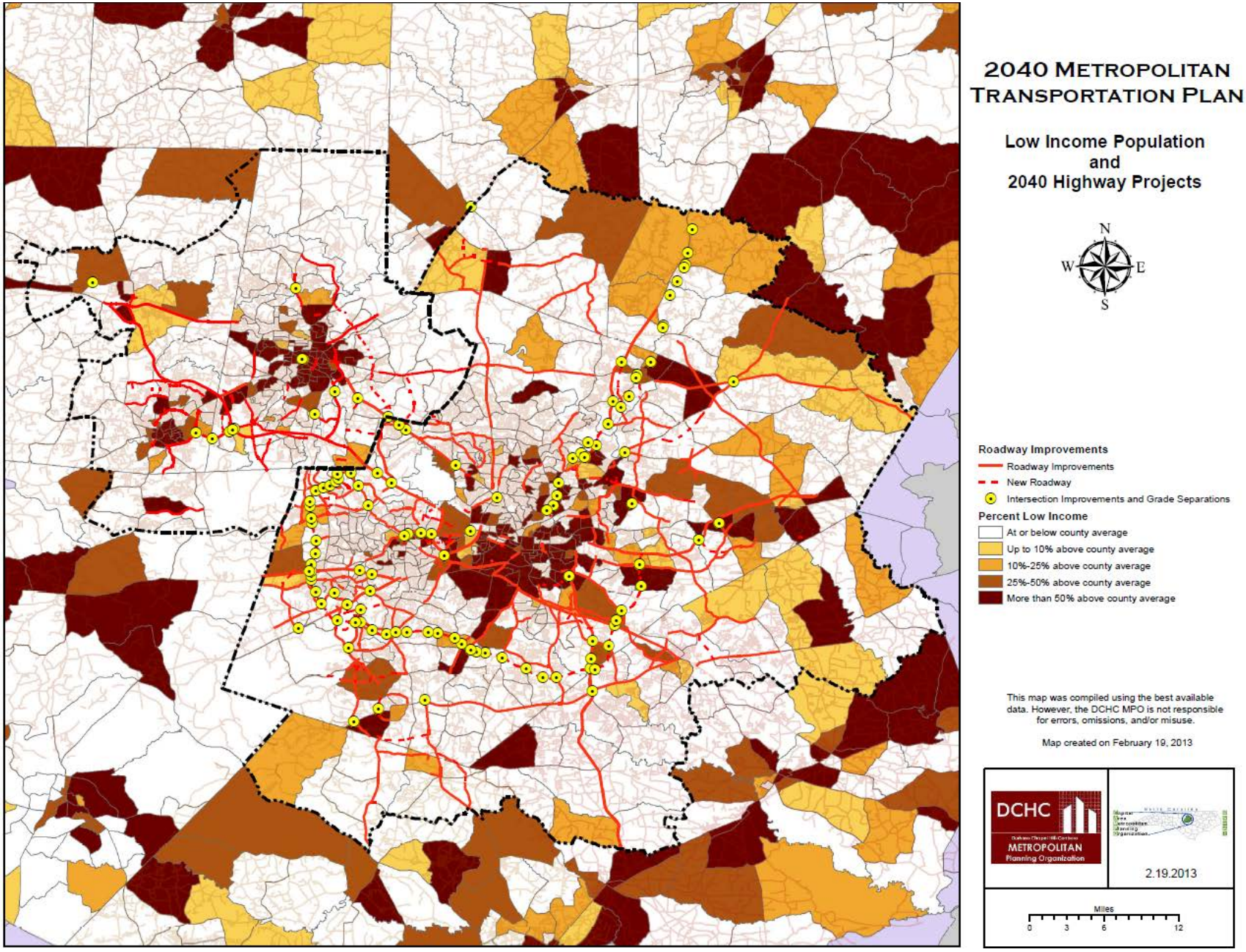


Figure 9.2.2 Total Minority Population and 2040 MTP Roadway Projects – DCHC MPO and Capital Area MPO

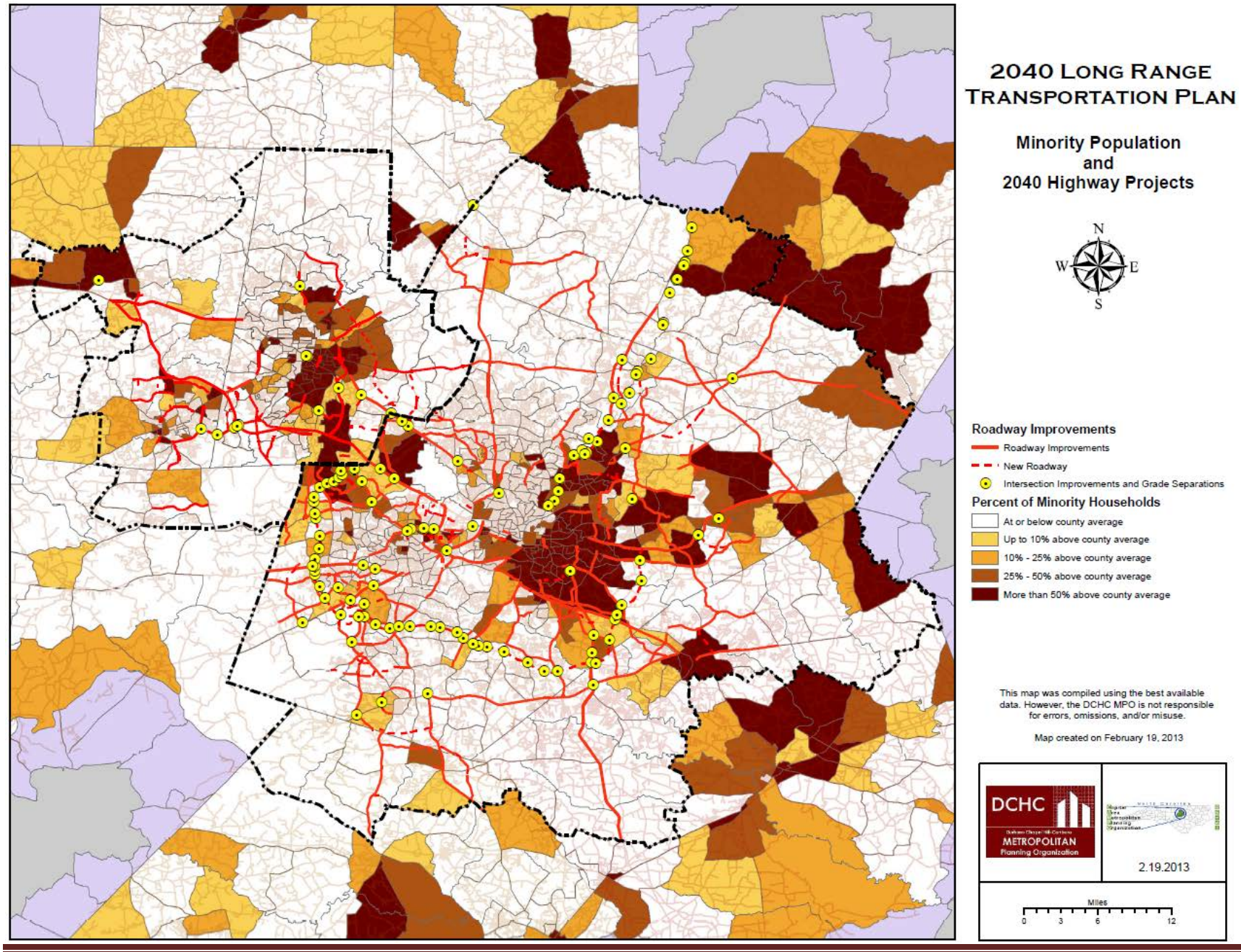


Figure 9.2.3 Hispanic or Latino Population and 2040 MTP Roadway Projects – DCHC MPO and Capital Area MPO

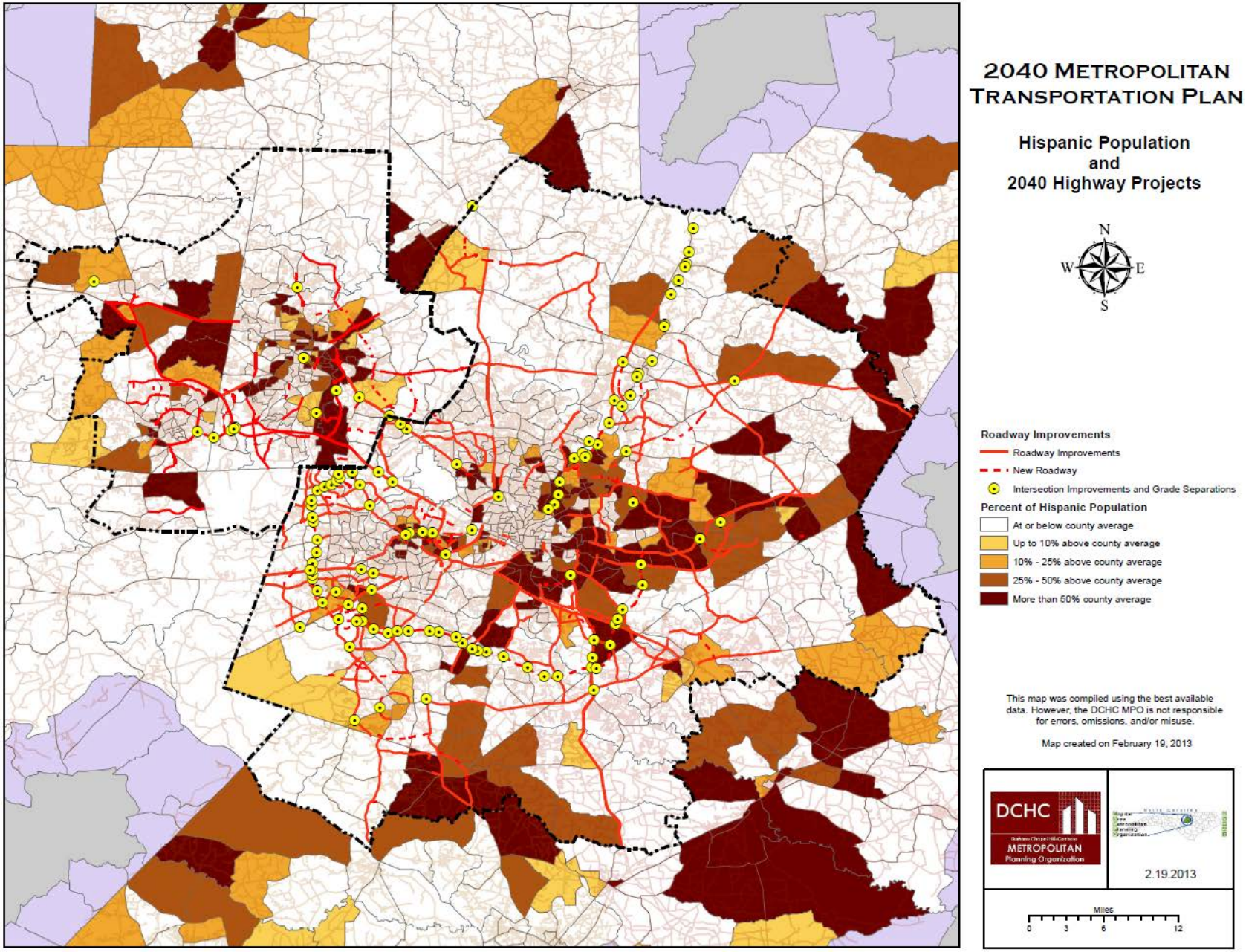


Figure 9.2.4 Asian Alone Population and 2040 MTP Roadway Projects – DCHC MPO and Capital Area MPO

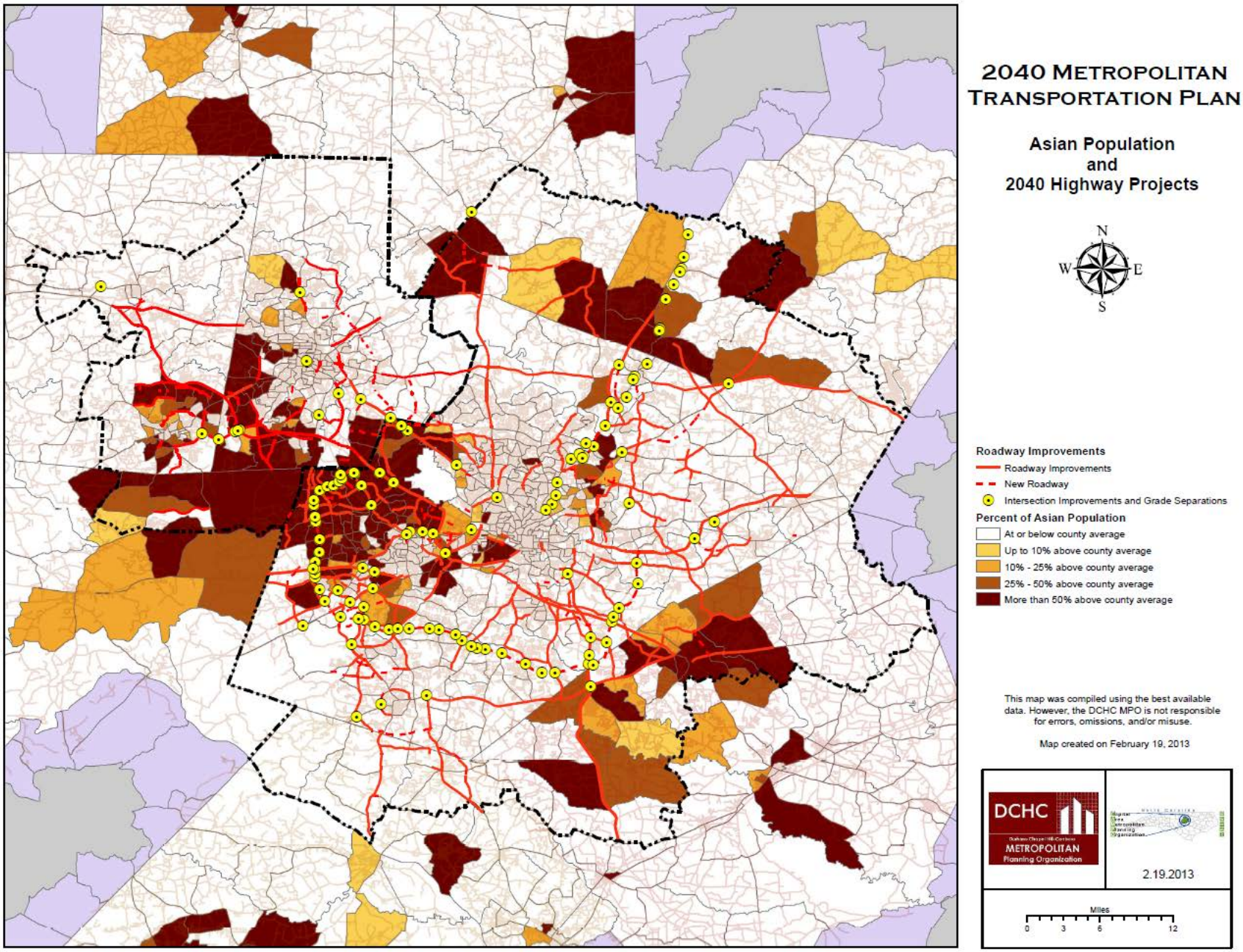
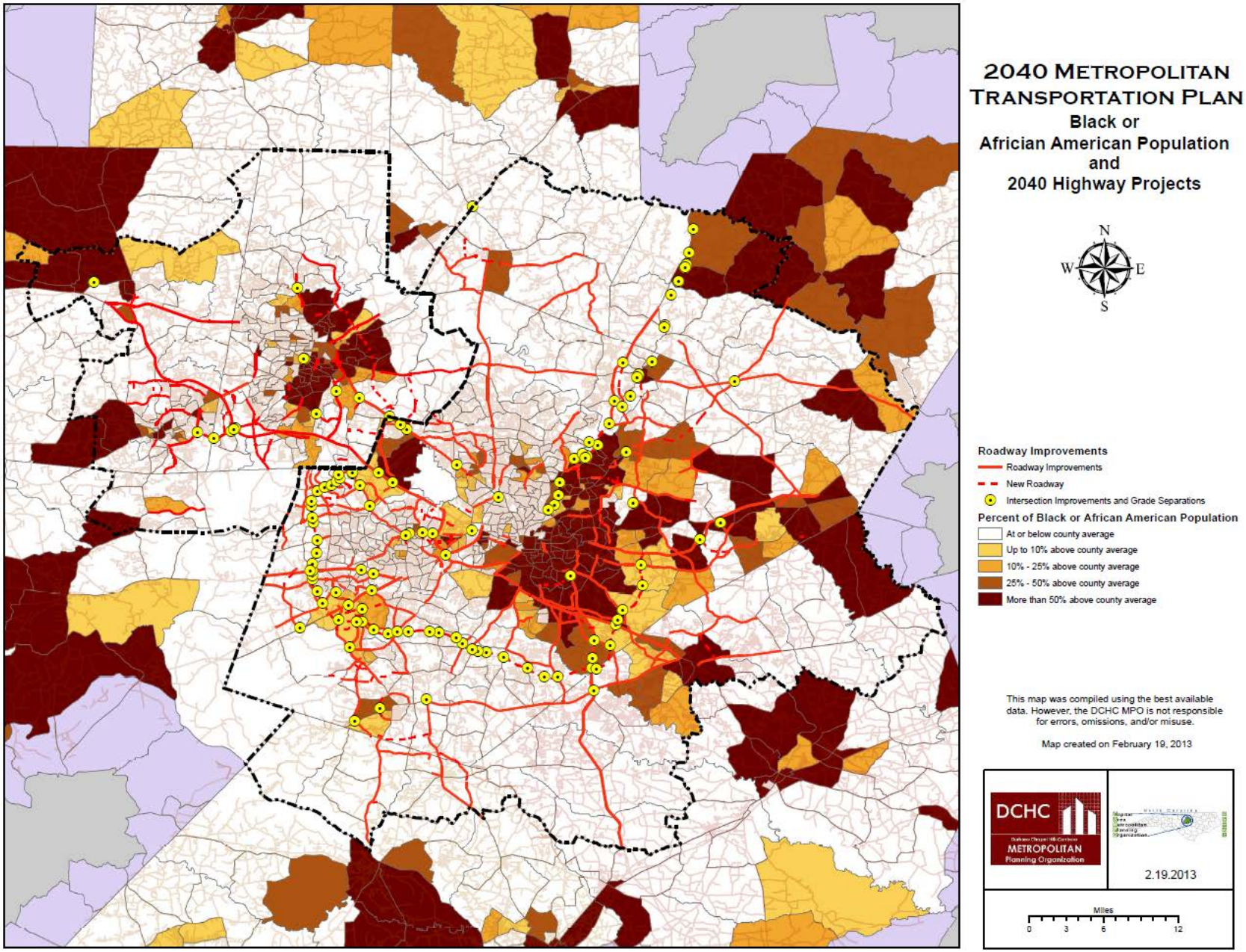


Figure 9.2.5 Black or African American Alone Population and 2040 MTP Roadway Projects – DCHC MPO and Capital Area MPO



The two MPOs determined the percent of total 2040 MTP highway project length and the percent of total 2040 MTP cost that were in each environmental justice category. The results of this analysis are shown in the Figures 9.2.6, 9.2.7, 9.2.8, and 9.2.9 below. The percent of 2012 population that live in the block groups in each environmental justice category is also shown for comparison.

Figure 9.2.6 – DCHC MPO Roadway Investments in Minority Block Groups

Percent of Minority Population	Percent of Project Length in Block Groups	Percent of Project Cost in Block Groups	Percent of 2012 Population in Block Groups
At or below county average	45%	47%	52%
Up to 10% above county average	16%	15%	7%
10% - 25% above county average	11%	11%	9%
25% - 50% above county average	8%	10%	14%
More than 50% above county average	19%	17%	17%

Figure 9.2.7– Capital Area MPO Roadway Investments in Minority Block Groups

Percent of Minority Population	Percent of Project Length in Block Groups	Percent of Project Cost in Block Groups	Percent of 2012 Population in Block Groups
At or below county average	64%	64%	63%
Up to 10% above county average	7%	6%	6%
10% - 25% above county average	8%	7%	5%
25% - 50% above county average	11%	10%	8%
More than 50% above county average	10%	11%	18%

Figure 9.2.8– DCHC Roadway Investments in Low-Income Block Groups

Percent of Households Below Poverty	Percent of Project Length in Block Groups	Percent of Project Cost in Block Groups	Percent of 2000 Population in Block Groups
At or below county average	62%	59%	61%
Up to 10% above county average	10%	9%	3%
10% - 25% above county average	5%	6%	4%
25% - 50% above county average	7%	7%	6%
More than 50% above county average	17%	18%	26%

Figure 9.2.9 – Capital Area MPO Roadway Investments in Low-Income Block Groups

Percent of Households Below Poverty	Percent of Project Length in Block Groups	Percent of Project Cost in Block Groups	Percent of 2000 Population in Block Groups
At or below county average	64%	64%	68%
Up to 10% above county average	7%	6%	4%
10% - 25% above county average	8%	7%	5%
25% - 50% above county average	11%	10%	6%
More than 50% above county average	10%	11%	16%

The distribution of the DCHC MPO's roadway projects, both in terms of total project length and project costs, mirrors the distribution of the minority and low-income population. Therefore, the DCHC MPO concludes that the roadway projects in the 2040 LRTP do not disproportionately impact minority and low income populations and that the project benefits are also fairly distributed across populations. Again, this analysis does not substitute for the individual project level analyses that will be completed for each project during design and development.

The majority of the Capital Area MPO roadway projects, both in terms of total project length and project costs, are in block groups that are at or below the county average for percent of minority population and percent of households below poverty. This mirrors the distribution of the population - the majority of the MPO's population lives in block groups at or below the county average in terms of minority population and households below poverty. In general, the distribution of projects by length and cost is fairly close to distribution by population for all block groups. Therefore, the Capital Area MPO concludes that the roadway projects in the 2040 LRTP do not disproportionately impact minority and low income populations and that the project benefits are also fairly distributed across populations. Again, this analysis does not substitute for the individual project level analyses that will be completed for each project during design and development.

Financial Cost

Lastly, environmental justice also requires that the disadvantaged population not bear a disproportionate share of the financial cost of the plan. The 2040 MTP is financed by traditional revenue sources and new revenue sources. The 2040 MTP does not propose a change to the traditional funding sources so this was not analyzed for environmental justice impacts.

The new sources of revenue are:

1. Sales tax increase for public transit
2. Car registration fee increase
3. Toll roads and managed lanes

Typically, sales taxes are regressive, meaning that lower income households pay a higher percentage of their income in sales taxes than do higher income households (higher income households pay more in *actual* dollars in sales tax than lower income households, but these payments represent a smaller *proportion* of the total income of higher income households). Approved legislation in NC seeks to mitigate the "who pays" side of the equation by excluding many necessities from the sales tax, including food, medicine, utilities and shelter. By excluding these items, a typical household in the lowest 20% income group would pay about $3 per month for the transit tax, based on analysis by the North Carolina Budget & Tax Center. Households in the top 1% income bracket would average $57 per month and those rounding out the top 5% income bracket would average $17 per month. Also, one financial analysis showed that the impact of a one dollar increase in the price of a gallon of gasoline is about ten times worse for low-income households than the impact of a ½ cent sales tax.

Moreover, looking at who pays is only half of the equation. Analysis should also consider who benefits. Transit service is disproportionately used by people with lower incomes and households that do not have access to cars. Currently, tens of thousands of households in the Research Triangle Region report having no vehicle available. Our region's travel forecasts estimate that the majority of transit trips after we invest in rail service and greatly expanded bus service will be made by people from households without cars and low-income households with cars. So looking at the whole equation, a sales tax that is spent entirely on transit would provide a net benefit to households most dependent on transit service to reach jobs and educational opportunities, different from if a sales tax were spent on services that were used equally by lower income and higher income households.

Toll roads and managed lanes projects will require a detailed environmental review during project development. At that point, the project-level environmental justice impacts will be studied. The I-40 managed lanes project would require the payment of tolls to use the new lanes. Low income populations will still have the option to use the facility by using the existing general purpose lanes free of charge. In addition, public transit vehicles will be able to use the facility free of charge. High-occupancy vehicles may also be able to use the new managed lanes free of charge. A decision has not yet been made on if there will be an exception for high-occupancy vehicles on some facilities.

9.3 Safety and Security

Metropolitan Planning Organizations are being encouraged to effectively address safety and security issues in accordance with policies outlined with the Moving Ahead for Progress in the 21st Century (MAP-21).

MAP-21 maintains the existing core program called the "Highway Safety Improvement Program" (HISP). This program is structured and funded to make significant progress in reducing fatalities on highways as well as other modes that use highway, railroads, and other conduits within the transportation network. The HSIP increases the funds for infrastructure safety and requires strategic highway safety planning focused on measurable results. Other programs target specific areas of concern such as work zones and older drivers. Pedestrians, including children walking to school, are also a focus area for the program.

Both the Capital Area MPO and Durham-Chapel Hill-Carrboro MPO have been proactive in addressing safety and security as a component of our overall transportation processes by pursuing the following actions:

- Video surveillance. The transit agencies in both MPOs (i.e. Capital Area Transit, Durham Area Transit Authority, Chapel Hill Transit, Cary Transit, Triangle Transit, and area human service providers) have or are in the process of providing on-board video surveillance cameras and transit station camera detection as a deterrent to crime; as well as providing Mobile Data Computers/Automatic Vehicle Locators on their vehicles. Cary Transit System's paratransit vehicles have automated vehicle locator systems as well as video surveillance via DriveCam.

- Safe Routes to Schools. Agencies within the Capital Area MPO are in the process of funding a "Safe Routes to Schools" Prioritization Study that will benefit elementary schools and their adjacent neighborhoods in communities.

- Safety Metrics. Both MPOs include "Accident/Safety" metrics when determining the technical scoring and prioritization of roadway projects for their Transportation Improvement Programs.

- "Four E's" for Biking and Walking. Both MPOs have adopted bicycle and pedestrian plans that include four significant pillars to strengthen the role of bicycle and pedestrian facilities in overall transportation planning. The "Four-Es" (i.e. education, engineering, enforcement, and encouragement) bring attention to the importance of safety through various public service announcements in the local media focused attention to these key areas of transportation network development. Furthermore, both MPOs continue to remain active in promoting bicycle and pedestrian activities through events such as Bike to Work Week and the SmartCommute Challenge. These programs impact the region's overall transportation culture by promoting bicycle and pedestrian traffic and travel as a valuable mode of movement through the region.

- Watch 4 Me NC Campaign. Both MPOs have incorporated within those adopted bicycle and pedestrian plans expansion of bicycle accommodations and walkway infrastructure through both on-road and off-road facilities. The presence of walkway infrastructure will have a significant impact in the reduction of pedestrian crashes (particularly an 88 percent reduction in "walking along road"

pedestrian crashes). The concern about pedestrian safety in the state of North Carolina (currently recognized by FHWA as a "Pedestrian Emphasis" state) has encouraged NCDOT to host pedestrian safety classes. These classes have been taken by staff from both MPOs. Both MPOs, in cooperation with the North Carolina Highway Safety Research Center (HSRC) and NCDOT are participating in the initial "Watch 4 Me, NC" campaign. This campaign is intended to improve pedestrian safety through educational messages directed at pedestrians and drivers as well as encouraging police enforcement of current pedestrian laws. The MPOs, along with NCDOT and HSRC, are conducting the initial campaign in Raleigh, Durham, Chapel Hill, and Carrboro and will be extending the campaign to the region's other communities in future years. A bicycle safety campaign will also be conducted in future years as well.

- Incident Management. Both MPOs will be funding an Incident Management Plan, which includes strategies for improving:

    - Responder safety
    - Safe, quick clearance activities
    - Prompt, reliable, interoperable communications

    The proposed program will directly address eight of the twelve strategies aimed at improving responder safety and safe, quick clearance of incidents; particularly along I-40, and other Interstate/freeway candidate facilities in the region.

- Safety Audits. Both MPOs receive Traffic Engineering Accident Analysis (TEAAS) data from NCDOT's Transportation Mobility & Safety Division. The aforementioned division uses the data for Road Safety Audits for state maintained roads. Both MPOs will continue to work with NCDOT's Transportation Mobility & Safety Division to utilize data from future road safety audits to prioritize and fund future road projects.

- Safety Countermeasures. Additional safety countermeasures that are utilized by both state and local agencies within both MPOs include:

    - buffers or planting strips,
    - marked crosswalks,
    - "road diets (narrowing or eliminating travel lanes on roadways)
    - traffic calming/traffic control devices.

    Both MPOs will support safety countermeasures on roads, and at signalized and unsignalized intersections where needed to ensure safety for the travelling public.

- ITS safety. Both MPOs were a part of the Triangle Regional ITS Strategic Deployment Plan Update that was finalized in May 2010. One of the goals of the ITS Strategic Deployment Plan is to "*Advance safe and efficient movement of people and goods throughout the region".* The three objectives associated with the goal include:

    - *Clear 90% of incidents in 60 minutes or less on the principle arterial network,*
    - *Reduce the number of crashes per 100 million vehicle miles by 10% over a three-year floating average on the principle arterial network, and*
    - *Decrease secondary incidents by 10% on the principle arterial network*

9.4 Critical Environmental Resources

The Capital Area MPO and DCHC MPO evaluated the 2040 MTP's impact on critical environmental factors. Developing a transportation system that provides mobility and access while protecting health, the environment, cultural resources, and social systems is important to both MPOs. Compliance with local, state, and federal laws and regulations is critical to the development of all transportation projects. The MPOs recognize that the MTP is one of the first steps in developing viable transportation projects that meet these laws and regulations. In addition, the MPOs recognize the tremendous impact that transportation projects have on land development patterns. The transportation network and land use regulations must be complimentary and work together to protect critical environmental resources.

The MPOs' environmental analysis was a voluntary effort coordinated with representatives from environmenttal and cultural resource agencies. At this stage in project development, it is impossible to conclusively and comprehensively analyze the impact each project may have on the environment. This analysis does not substitute for the more thorough project-level analysis that is required as part of the National Environmental Protection Act. The analysis below was intended to identify and flag early in the process projects that might have significant impacts on the environment and that might require costly mitigation measures.

For this analysis, the MPOs looked at all of the projects in the Comprehensive Transportation Plan project lists to ensure that a comprehensive record of all of the potential future projects was being evaluated. Many of the CTP projects are not in the final adopted 2040 MTP, and are considered to be beyond the 2040 time horizon of the plan. The MPOs created maps of the CTP projects overlaid on several environmental and cultural GIS files. The maps are grouped in the following themes with the following datasets:

- Biodiversity and Wildlife Habitat
    - NC Conservation Planning Tool – Biodiversity and Wildlife Habitat Assessment – this dataset classifies areas from 1 to 10 based on several metrics
    - Managed Areas
    - Conservation Tax Credit Properties
- Development
    - Hospitals
    - Schools (Public and Private)
    - Colleges or Universities
    - Airports
    - Water and Sewer Service Boundaries
- Farmland
    - NC Conservation Planning Tool – Farmland Assessment – this dataset classifies areas from 1 to 10 based on several metrics
    - Voluntary Agricultural Districts
- Forest
    - NC Conservation Planning Tool – Forestry Lands Assessment – this dataset classifies areas from 1 to 10 based on several metrics
- Gamelands, Hunting Buffers, and Smoke
    - Gamelands
    - Gameland Hunting Buffers
    - Smoke Awareness Areas
- Hazards
    - Hazardous Waste Sites
    - Animal Operation Facilities
    - Active Permitted Landfills
    - Hazardous Substance Disposal Site

- Historic Sites
    - Local Landmarks
    - Local Historic Districts
    - National Register Historic Sites
    - National Register Historic Districts
- Jurisdictions
    - Jurisdictional Boundaries – This map is designed to identify the local jurisdiction that has planning and zoning authority in the vicinity of a project. Since each jurisdiction has different zoning classifications and methodologies, a comprehensive zoning map could not be developed for the entire region.
- Parks and Recreation
    - Open Space and Conservation Lands
    - Boat Access Ramps
    - Trails
    - Greenways
    - Local and State Parks
- Water Resources
    - Impaired Streams
    - Outstanding Resource Management Zones
    - Ecosystem Enhancement Program Target Local Watersheds
- Water Supply
    - Public Water Supply Sources
    - National Pollutant Discharge Elimination System (NPDES) Permitted Sites
    - Surface Water Intake
    - Water Supply Watersheds
    - Nutrient Sensitive Waters
- Wetlands and Floodplains
    - Floodplain Mapping Information Systems (FMIS) Floodplains
    - Wetlands

In addition, as a courtesy, the DCHC MPO also sent GIS shape files to resource agencies during the public review process. The agencies contacted were:

- United States Army Corps of Engineers
- NC Department of Natural Resources
- NC Wildlife Resources Commission
- United States Environmental Protection Agency
- United States Fish and Wildlife Service
- NC Department of Cultural Resources
- NC Department of Commerce
- NC Department of Environment and Natural Resources

Several agencies provided comments, which were used in developing the final plan, including eliminating one project in response to the comments received.

The maps are shown in Appendix 12. Larger versions of the maps are posted on the MPOs' websites.