

2040 Metropolitan Transportation Plans

Review Draft [version5]

4/1/13

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Appendices

- Appendix 1: Road Projects List
- Appendix 2: Rail Technology and Service Briefs
- Appendix 3: Transit Service List
- Appendix 4: Bicycle and Pedestrian Facilities Lists
- Appendix 5: Road Cross-Sections and Access Management and Safety Design Elements
- Appendix 6: Air Quality Conformity Report [To be included in Final Report]
- Appendix 7: Public Comments [To be included in Final Report]
- Appendix 8: Acronyms
- Appendix 9: Greenhouse Gas Emissions (Durham County)
- Appendix 10: Detailed Transportation and Growth Maps
- Appendix 11: Year-of-Expenditure Financial Plan
- Appendix 12: Environmental Justice Maps and Critical Environmental Resource Maps

A Note to Readers:

The heart of any transportation plan is the investments that will be made to serve the travel needs of our growing region's citizens, businesses and visitors. These investments take the form of road, transit and other transportation facilities and services. Maps are created to help visualize the nature of both the facilities in which we plan to invest and the existing and future population and jobs that the facilities are designed to serve. But the maps in this document are for illustrative purposes only and are subject to change and interpretation. The details of the investments are in the project lists that are included with this report.

This version of the plan is a final review draft. It is designed to include the key content of the plan, and to show the type and format of information that will be in the final adopted document. Some parts of the document, such as some of the appendices, will not be created until the final version. In addition, some of the graphics in this version of the document are early drafts or lower-resolution images that will be upgraded in the final version.

Comments may be submitted to either of the MPOs through their websites:

NC Capital Area MPO: www.campo-nc.us/

attention: Chris Lukasina

Durham-Chapel Hill-Carrboro MPO: www.dchcmpo.org/

attention: Andy Henry

Because this document addresses the official plans of both MPOs, the document is color-coded. Text and tables with a white background apply to both MPOs.

Text and tables highlighted in this green color apply only to the Durham-Chapel Hill-Carrboro MPO.

Text and tables highlighted in this yellow color apply only to the Capital Area MPO

1. Executive Summary

Transportation investments link people to the places where they work, learn, shop and play, and provide critical connections between businesses and their labor markets, suppliers and customers.

This document contains the 2040 Metropolitan Transportation Plans (MTPs) for the two organizations charged with transportation decision-making in the Research Triangle Region: the Capital Area Metropolitan Planning Organization (CAMPO) and the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO). These organizations, and the areas for which they are responsible, are commonly called “MPOs.”

The Metropolitan Transportation Plans are the guiding documents for future investments in roads, transit services, bicycle and pedestrian facilities and related transportation activities and services to match the growth expected in the Research Triangle Region.

The areas covered by this plan are part of a larger economic region. Transportation investments should consider the mobility needs of this larger region and links to the other large metro regions of North Carolina and throughout the Southeast. The Triangle Region is expected to accommodate a phenomenal amount of future growth; we need to plan for the region we will become, not just the region we are today.

<i>Estimated 2010 and Forecast 2040 Population and Jobs</i>	2010		2040		2010 to 2040 Growth	
	Population	Jobs	Population	Jobs	Population	Jobs
Capital Area MPO	1,060,000	530,000	1,990,000	840,000	930,000	310,000
Durham-Chapel Hill-Carrboro MPO	400,000	260,000	630,000	430,000	230,000	170,000
Areas outside MPO boundaries	160,000	60,000	310,000	100,000	150,000	40,000
Total for area covered by the region's transportation model	1,620,000	850,000	2,930,000	1,370,000	1,310,000	520,000

The Triangle has historically been one of the nation's most sprawling regions and current forecasts project both continued outward growth and infill development in selected locations, most notably in the central parts of Raleigh, Durham and Chapel Hill and at community-defined activity centers like the planned mixed use center within the Research Triangle Park. A key challenge for our transportation plans is to match our vision for how our communities should grow with the transportation investments to support this growth.

No region has been able to “build its way” out of congestion; an important challenge for our transportation plans is to provide travel choices that allow people to avoid congestion where we can not prevent it.

Our population is changing. The population is aging, more households will be composed of single-person and two-person households without children, the number of households without cars is increasing, and more people are interested in living in more compact neighborhoods with a mix of activities. Our plans must provide mobility choices for our changing needs.

Our MPOs are tied together by very strong travel patterns between them; our largest commute pattern and heaviest travel volumes occur at the intersection of the MPO boundaries. Our MPO plans should recognize the mobility needs of residents and businesses that transcend our MPO borders.

The region has a common vision of what it wants its transportation system to be:

a seamless integration of transportation services that offer a range of travel choices to support economic development and are compatible with the character and development of our communities, sensitive to the environment, improve quality of life and are safe and accessible for all.



Each MPO has adopted goals and objectives to accomplish this vision that reflect the unique characteristics and aspirations of the communities within the MPOs. The *2040 Transportation Plan* commits our region to transportation services and patterns of development that contribute to a more sustainable place where people can successfully pursue their daily activities.

To analyze our transportation investment choices we have, the MPOs followed a painstaking process involving significant public engagement. It began with an understanding of how our communities' plans envision guiding future growth. Community plans anticipate that five regional activity centers in Raleigh, Durham, Cary, Chapel Hill and the Research Triangle Park are expected to contain large concentrations of employment and/or intense mixes of homes, workplaces, shops, medical centers, higher education institutions, visitor destinations and entertainment venues. Linking these activity centers to one another, and connecting them with communities throughout the region by a variety of travel modes can afford expanded opportunities for people to have choices about where they live, work, learn and play.



Next, planners used sophisticated software to forecast the types, locations and amounts of future population and job growth based on market conditions and trends, factors that influence development and local plans.



Based on the forecasts, we looked at mobility trends and needs, and where our transportation system may become deficient in meeting these needs.

Working with a variety of partners and based on public input, we developed different transportation system alternatives and analyzed their performance, comparing the performance of system alternatives against one another and to performance targets derived from our goals and objectives.

The result of this analysis and extensive public engagement was a set of planned investments, along with recommended land use development to match the investments and additional studies to ensure that the investments are carefully designed and effectively implemented. The core of the plan is the set of transportation investments described in Section 7, including:

- New and expanded roads;
- Local and regional transit facilities and services, including bus and rail;
- Aviation and long-distance rail services;
- Bicycle and pedestrian facilities, both independent projects and in concert with road projects;
- Transportation Demand Management: marketing and outreach efforts that increase the use of alternatives to driving alone;
- Intelligent Transportation Services: the use of advanced technology to make transit and road investments more effective; and
- Transportation Systems Management: road projects that improve safety and traffic flow without adding new capacity.

In addition to these investments, the plan includes a focus on three issues where the ties between development and our transportation investments are most critical: transit station area development, major roadway access management and “complete streets” whose designs are sensitive to the neighborhoods of which they are a part. The two MPOs will work with their member communities, the state and regional organizations on these three issues to match land use decisions with transportation investments.

The maps on the following pages show roadway and transit investments that are planned; Section 7 of the Plan provides greater detail. The plan anticipates that the region will match its historic focus on roads with a sustained commitment to high-quality transit service as well, emphasizing three critical components:

- Greatly expanded local and regional bus service to provide service in and between communities throughout the region;
- Rail transit service to link our regional centers to one another and to walkable, mixed-use neighborhoods along heavily-travelled corridors; and
- Frequent, high quality transit circulator service to extend the reach of regional bus and rail services within key centers.

Although the plan includes a new emphasis on transit investment, it envisions significant additional roadway investment as well; major road projects are shown below and all projects are listed in Appendix 1.

Durham Chapel Hill-Carrboro MPO		
2011-20	2021-30	2031-40
Triangle Expressway extension of the Durham Freeway (I-40 to NC 540)	Managed lanes added to I-40 from Wade Avenue (Wake County) to NC 147 (Durham Freeway)	Managed lanes added to I-40 from NC 147 (Durham Freeway) to US 15-501 (Durham County)
East End Connector completed linking US 70 to NC 147 (Durham Freeway)	I-85 widening (I-40 to Lawrence Rd)	I-85 widening (Lawrence Rd to Durham County)
I-40 widening (US 15-501 to I-85)	I-85 widening (US 70 to Red Mill Road)	US 15-501 freeway conversion (I-40 to US 15-501 bypass)
	US 70 freeway conversion (Lynn Road to Wake County line)	Northern Durham Parkway (Aviation Pkwy to US 501)
Capital Area MPO		
2011-20	2021-30	2031-40
I-40 widened from Wade Ave. to Lake Wheeler Road	I-40 widened from I-440 to NC 42 in Johnston County	NC 50 widened from I-540 to Dove Road
I-40 widening through Cary	US 1 upgrade to freeway from I-540 to NC 98	Managed lanes added to I-540 (Northern Wake Expressway) from I-40 to US 64 bypass
US 401 widened from I-540 to Louisburg with a Rolesville bypass	NC 540 completed as a toll road from Holly Springs to US 64 bypass	US 401 widened from Garner to Fuquay-Varina
NC 540 completed as a toll road from Apex to Holly Springs	I-440 widened from Wade Avenue to Crossroads	Managed lanes added to I-40 from MPO boundary in Johnston County to Cornwallis Road
Brier Creek & TW Alexander Drive Interchanges on US 70	NC 54 widened through Cary and Morrisville	US 1 widening south from US 64 to NC 540
NC 42 widening from US 70 to Rocky Branch Road	I-40 Managed lanes added from Durham County line to Cornwallis Rd.	

2040 Metropolitan Transportation Plan

February 28, 2013

Roadway Improvements

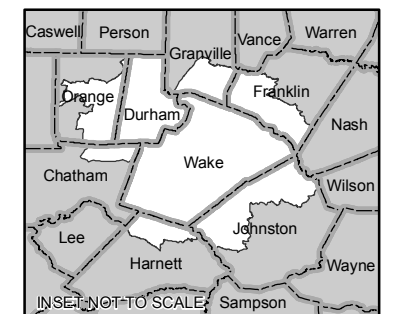
- Completed 2020 Projects
- 2020
- 2030
- 2040
- CTP

Interchanges

- 2020
- 2030
- 2040

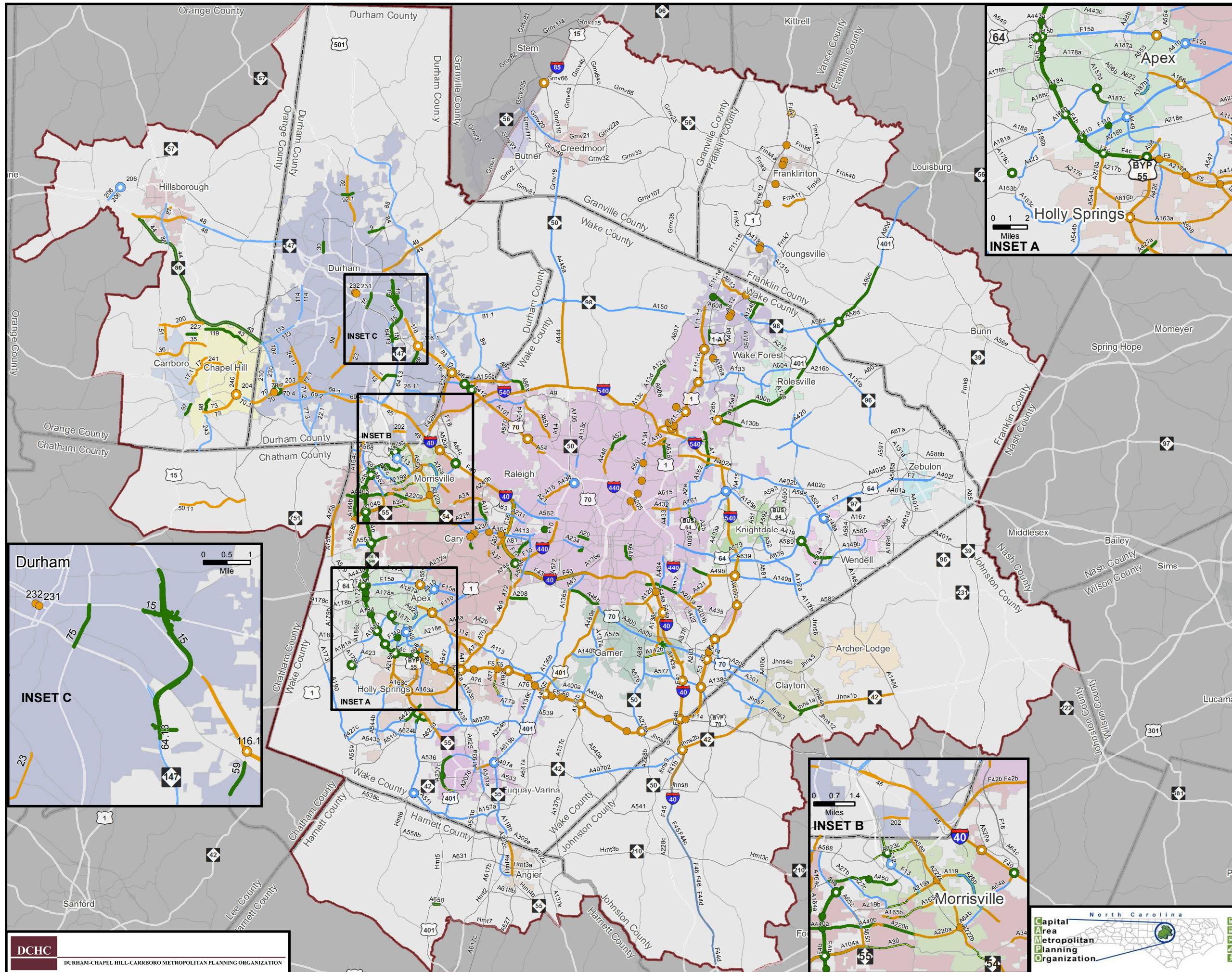
Grade Separations

- 2020
- 2030
- 2040



This map was compiled using the best available data, however, the Capital Area MPO is not responsible for errors, omissions, and/or misuse. Subject to change.

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Miles



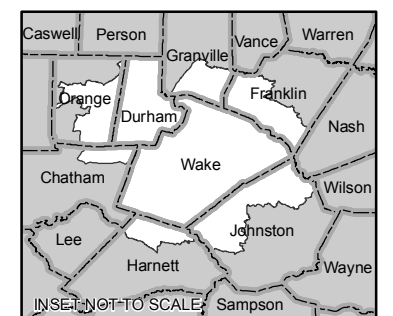
2040 Metropolitan Transportation Plan

February 20, 2013

Preliminary Preferred Alternative

- Light Rail
- Commuter Rail
- Premium Transit Study Corridors
- NC RailRoads
- Triangle Region Bus Routes

*Routes are subject to change based on further study for service optimization.



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