

# 1. Executive Summary

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

This document contains the 2035 Long-Range Transportation Plans 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 Long-Range 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 2005 and Forecast 2035 Population and Jobs</i>	2005		2035	
	Population	Jobs	Population	Jobs
Capital Area MPO	880,000	440,000	1,950,000	910,000
Durham-Chapel Hill-Carrboro MPO	380,000	230,000	550,000	390,000
Areas outside MPO boundaries	60,000	20,000	150,000	40,000
Total for area covered by the region’s transportation model	1,320,000	690,000	2,650,000	1,340,000

The Triangle is 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. 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.

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 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 *2035 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.

In order to analyze the transportation investment choices we have, the MPOs followed a painstaking process involving significant public engagement. It began with an understanding of how our communities' comprehensive plans envision guiding future growth. The land use plans revealed that five regional activity centers centered on 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, local planners estimated the types, locations and amounts of future population and job growth based on market conditions and trends and community plans.



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

Working with a variety of partners and based on public input, we then 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;
- Transit facilities and services, including bus and rail;
- 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 of North Carolina and regional organizations on these three issues to match land use decisions with transportation investments.

The maps on the following pages show the roadway and transit investments that are planned; Section 7 of the Plan provides greater detail.

The plan anticipates that the region will begin to 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;
- Seamless electric light rail transit service to link our regional centers to one another and commuter rail service to connect Raleigh with towns to the east and north; and
- Frequent, high quality transit circulator service to extend the reach of regional bus and rail services within regional centers.

Although the plan includes a new emphasis on transit investment, it envisions significant additional roadway spending; major roadway projects included in the plan are shown below.

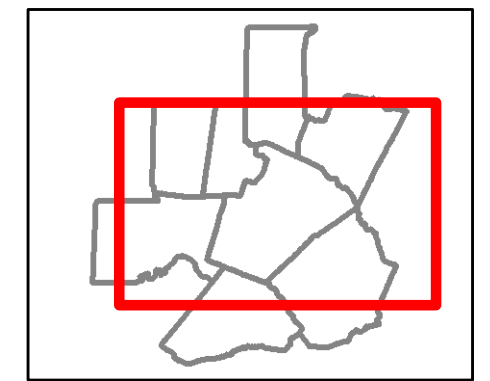
<b>Durham Chapel Hill-Carrboro MPO</b>		
<b>2009-15</b>	<b>2016-25</b>	<b>2026-35</b>
NC 147 extended and NC 540 completed as a toll road from Durham to Holly Springs	East End Connector completed linking US 70 to NC 147 (Durham Freeway)	HOV/HOT lanes added to I-40 from Wade Avenue (Wake County) to US 15-501 (Durham County)
	I-85 widening (I-40 to Durham County line)	I-40 widening (US 15-501 to I-85)
	I-85 widening (US 70 to Red Mill Road)	NC 147 widening (I-40 to East End Connector)
	US 70 freeway conversion (Lynn Road to Wake Co.)	Roxboro Road widening (Duke St. to Goodwin Rd.)
	Northern Durham Parkway	
<b>Capital Area MPO</b>		
<b>2009-15</b>	<b>2016-25</b>	<b>2026-35</b>
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 NC 98
US 401 widened from I-540 to Louisburg with a Rolesville bypass	US 401 widened south of Fuquay-Varina including eastern and western bypasses	I-540 (Northern Wake Expressway) widened from I-40 to US 64 bypass and converted to toll road
NC 147 extended and NC 540 completed as a toll road from Durham to Holly Springs	NC 540 completed as a toll Holly Springs to US 64 bypass	NC 42 (Johnston & Wake Co.)
	I-440 widened from Wade Avenue to Crossroads	US 401 widened from Garner to Fuquay-Varina
	NC 54 widened through Cary and Morrisville	HOV/HOT lanes added to I-40 from Wade Avenue (Wake County) to US 15-501 (Durham County)
	US 64/264 widened from the US 64 bypass to Zebulon	

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# 2035 Long Range Transportation Plan

May 29, 2009







## Interchanges and Grade Separations


-  Interchange
-  Grade Separation

\*Color coded the same as roadways

## AQ Year of Completion for Highway Projects

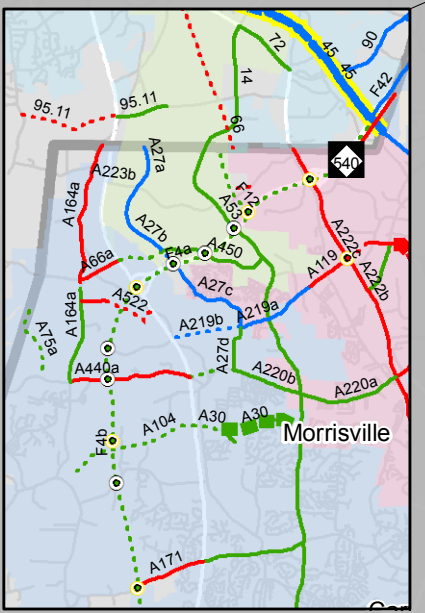
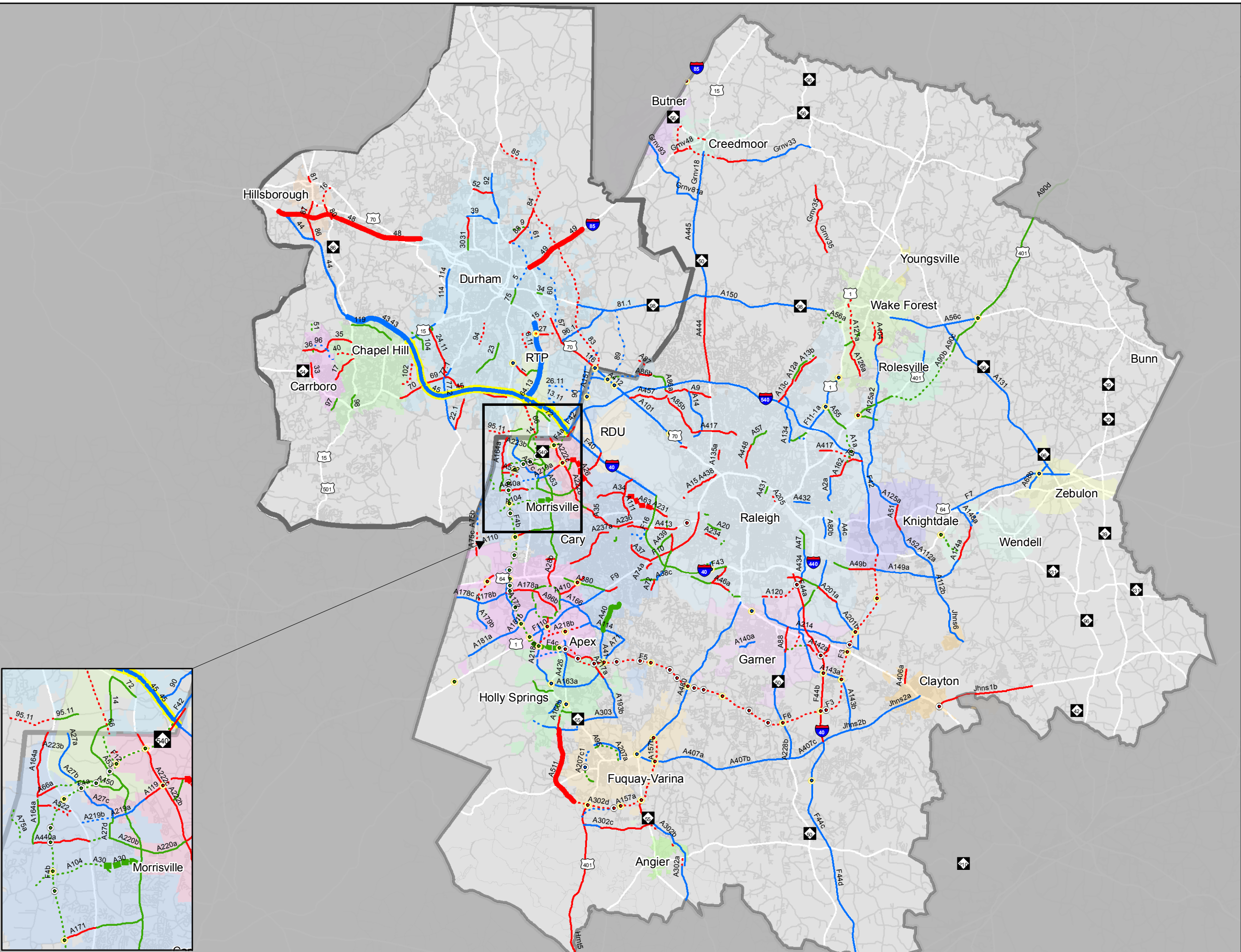
-  2015
-  2025
-  2035
-  HOT/HOV Lanes

N



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

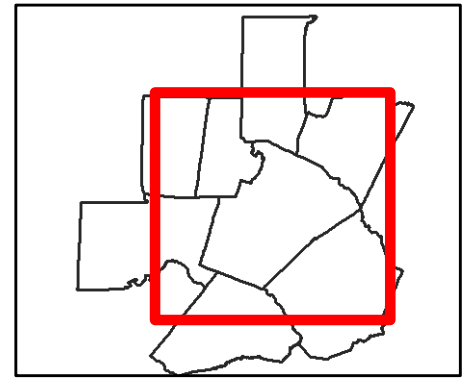
Map created on May 29, 2009 by the Capital Area MPO.





# 2035 Long Range Transportation Plan

April 21, 2009



## Transit Service Plan

- \* Light Rail Transit: 2025
- Light Rail Transit: 2035
- Commuter Rail: 2025

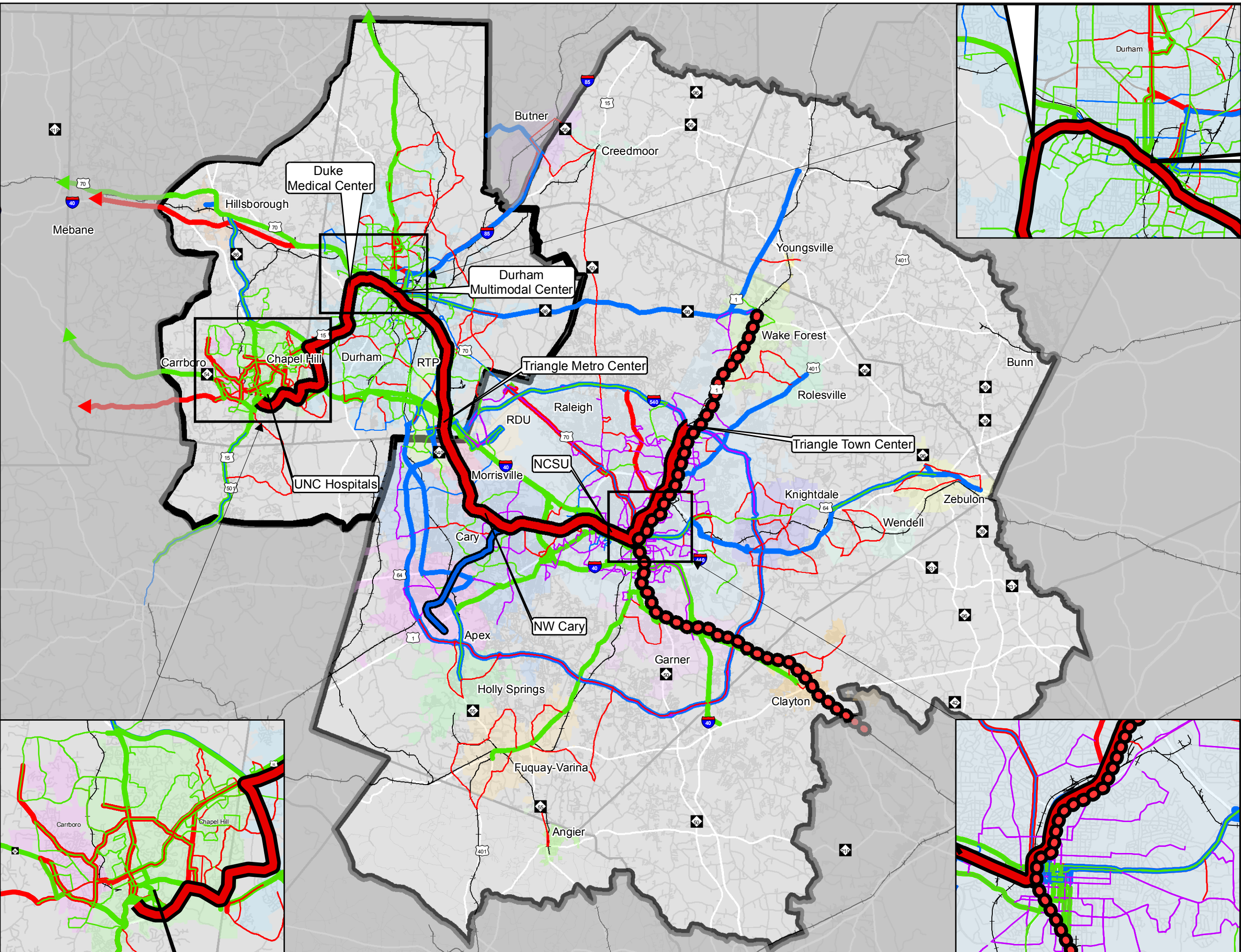
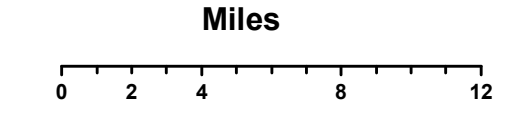
## Local Bus Service

- Existing
- 2015
- 2025
- 2035
- Regular Bus
- Express Bus

\* Light rail alignment subject to further study

N

This map was compiled using the best available data, however, the Capital Area MPO is not responsible for errors, omissions, and/or misuse.  
Map created on April 21, 2009 by the Capital Area MPO.



To ensure that our plans will be realized, they need to be fiscally-constrained. This means that the cost of the various roadway, transit and other transportation facilities and services must be paid for by state, federal, local, private and other transportation revenues that can be reasonably expected to be available. The Financial Plan, summarized in the cost and revenue tables on this page and described in Section 8 of the Plan, provides a comparison of projected revenues and costs from 2009 through 2035 – a 27-year period – to demonstrate the balance between costs and revenues.

### **2035 LRTP Costs (in millions \$)**

<b>-- Cost Category</b>		<b>DCHC</b>	<b>CAMPO</b>
<b>Roadways - Total</b>		<b>\$ 3,687</b>	<b>\$ 9,171</b>
	<i>Roadways</i>	\$ 2,020	\$ 5,222
	<i>Tolled roads (excluding I-40 HOT)</i>	\$ 157	\$ 1,936
	<i>Non-tolled trust fund urban loops</i>	\$ 684	\$ -
	<i>Maintenance</i>	\$ 827	\$ 2,013
<b>Light Rail and Commuter Rail - Total</b>		<b>\$ 1,913</b>	<b>\$ 2,628</b>
<b>Bus - Total</b>		<b>\$ 1,935</b>	<b>\$ 1,459</b>
<b>Other - Total</b>		<b>\$ 561</b>	<b>\$ 326</b>
	<i>Pedestrian/Bicycle</i>	\$ 368	\$ 128
	<i>Transportation Demand Management</i>	\$ 33	\$ 73
	<i>Intelligent Transportation Systems</i>	\$ 50	\$ 96
	<i>Transportation System Management</i>	\$ 111	\$ 29
<b>Total</b>		<b>\$ 8,096</b>	<b>\$ 13,584</b>

**Note:** Total may differ slightly from sum of subtotals because subtotals are rounded to nearest million.

### **2035 LRTP Revenues (in millions \$)**

<b>-- Revenue Category</b>		<b>DCHC</b>	<b>CAMPO</b>
<b>Roadways - Total</b>		<b>\$ 3,334</b>	<b>\$ 6,343</b>
	<i>Traditional Funding</i>	\$ 1,700	\$ 2,623
	<i>Tolled roads (excluding I-40 HOT)</i>	\$ 157	\$ 1,936
	<i>Non-tolled trust fund urban loops</i>	\$ 650	\$ -
	<i>Maintenance</i>	\$ 827	\$ 1,784
<b>Transit (Bus and Rail)</b>		<b>\$ 2,951</b>	<b>\$ 1,825</b>
<b>Total</b>		<b>\$ 6,284</b>	<b>\$ 8,168</b>

**Note:** Total may differ slightly from sum of subtotals because subtotals are rounded to nearest million.

The current transportation funding programs will not produce enough revenue to finance the highway, bus transit, light rail transit and other transportation needs in the Triangle. Therefore, the MPOs have assumed new revenue sources to close this funding gap. The Financial Plan in Section 8 provides details on the expectations of generating and investing these new revenues.

### **2035 LRTP New Revenue Sources (in millions \$)**

<b>New Revenue Source</b>	<b>CAMPO Assumptions</b>	<b>CAMPO Amount</b>	<b>DCHC Assumptions</b>	<b>DCHC Amount</b>
Sales Tax #1 (or equivalent)	Level of effort equivalent to a 1/2 cent sales tax increase in 2011 for transit.	\$ 1,576	1/2 cent sales tax increase in Durham and Orange counties, and 1/4 cent increase in Chatham County; starting 2011	\$ 755
Sales Tax #2 (or equivalent)	Level of effort equivalent to a 1/2 cent sales tax increase in in 2016 for roads.	\$ 1,140	Not applicable for DCHC MPO	\$ -
Regional, Local, and Private support	Some municipalities have agreed to contribute to certain road projects.	\$ 1,258	(Included in local highway revenue for DCHC MPO)	\$ -
New State and/or Federal Infrastructure Programs	New state/federal funding for NC Strategic Highway Corridors .	\$ 1,060	New state/federal funding program or change in allocation methodology.	\$ 380
Financing Package for I-40 High Occupancy Vehicle/Toll Lanes	(Included in program above -- New State and/or Federal Infrastructure Programs)	\$ -	Includes toll revenue, bonding based on future toll revenue, and State gap funding	\$ 579
Car Registration Fee	\$10 car registration fee increase in 2011.	\$ 185	\$10 car registration fee increase in 2011.	\$ 107
Rail Bonds	Debt Financing to pay for initial rail construction.	\$ 585	(Included in light rail transit revenues)	\$ -
<b>Total</b>		<b>\$ 5,804</b>		<b>\$ 1,820</b>

**Note:** Total may differ slightly from sum of subtotals because subtotals are rounded to nearest million