5. How We Developed Our Plan

This section describes the organizations and technical tools used to develop the Plan, how the public was involved in the Plan's development and review, and other recent and on-going studies and plans that relate to the Plan.

5.1 Who is Responsible for the Plan?

Metropolitan Planning Organizations (MPOs) are the regional organizations responsible for transportation planning for urban areas, and therefore are charged with developing and their individual Plans. The Research Triangle Region has two MPOs: The Durham-Chapel Hill-Carrboro (DCHC) MPO and the Capital Area MPO (CAMPO).

The CAMPO planning area covers all of Wake County and portions of Franklin, Granville, Harnett and Johnston Counties, along with 18 municipalities in these five counties. The DCHC planning area covers all of Durham County, a portion of Orange County including the towns of Chapel Hill, Carrboro and Hillsborough, and northeast Chatham County. *Figure 2.2.3* in Chapter 2 shows a map of the MPO boundaries. The DCHC MPO and CAMPO are also two of the eleven urbanized areas in North Carolina designated as Transportation Management Areas (TMAs) by the principal federal transportation legislation called *Fixing America's Surface Transportation (FAST) Act*. TMAs are urbanized areas with a population over 200,000, and have additional responsibilities such as the development of a congestion management process and direct allocation of certain federal revenues. Much of the MPO organizational structure and processes are designed to address state and federal legislation related to transportation. Each MPO is comprised of two committees:

Policy Board (PB) – The Policy Board coordinates and makes decisions on transportation planning issues. The Board is comprised of elected and appointed officials from each county, municipality and major transit provider within the MPO, and from the NCDOT.

For the Capital Area MPO, these officials are from the counties of Franklin, Granville, Harnett, Johnson and Wake, the municipalities of Angier, Apex, Archer Lodge, Bunn, Cary, Clayton, Creedmoor, Franklinton, Fuquay-Varina, Garner, Holly Springs, Knightdale, Morrisville, Raleigh, Roseville, Wake Forest, Wendell, Youngsville and Zebulon, GoTriangle and the North Carolina Department of Transportation. The Board also has advisory (non-voting) members from the NC Turnpike Authority and the Federal Highway Administration.

For the DCHC MPO, these officials are from the City of Durham, the Town of Chapel Hill, the Town of Carrboro, the Town of Hillsborough, Durham County, Orange County, Chatham County, GoTriangle and the North Carolina Department of Transportation. The Board also has advisory (non-voting) members from the Federal Highway Administration.

Technical Committee (TC) – The TC is composed of staff members from our local governments, Triangle Transit, Research Triangle Park, Triangle J Council of Governments, Raleigh-Durham Airport Authority, Carolina Trailways, the NC Turnpike Authority and the largest universities in the applicable MPO: North Carolina Central University, University of North Carolina and Duke University in the DCHC MPO, and North Carolina State University in CAMPO. The TC staff, who provide technical recommendations to the Policy Board, are commonly transportation, land use, community, and facility planners and engineers. The final key organizational element of the MPO is the Lead Planning Agency (LPA). The LPA is responsible for the administration and oversight of the planning, project implementation, grant funding, and other MPO related activities. In the DCHC MPO, the LPA staff work for the City of Durham's Transportation Department. In CAMPO, the staff are employees of the City of Raleigh, but only work on MPO tasks.

5.2 Stakeholder & Public Involvement Process

Extensive input and coordination activities were used to develop the 2045 MTP. These activities included both regional coordination efforts between the two MPOs and involvement of the public and local elected officials by each MPO.

Regional Coordination

Several regional coordination activities were undertaken to ensure that the two MPO plans would be integrated and mutually supportive. The key coordination activities are described throughout the various sections of this report in detail. The following list provides a summary of key coordinated activities used to develop the Plan:

- County Transit Plans -- The DCHC MPO and their respective counties updated the Durham County Transit Plan and the Orange County Transit Plan in 2017. The Capital Area MPO and Wake County approved the Wake County Transit Plan in 2016. These plans designate the general design for improved bus, light rail, commuter rail and bus rapid transit in their respective counties, and the funding sources to finance these improvements.

- Connect 2045 CommunityViz -- The MPOs fund, guide and use the same Socioeconomic Data forecast process and model. This process convened local planners, developers and other professionals who impact the development process to create the Community Visualization land use model (version 2) and produce population and employment projections.
- Alternatives – The MPOs jointly defined and evaluated the various land use and highway, bus transit and light rail transit alternatives, and selected the same land use alternative for development into the final Plan.

- Joint Policy Board Meeting –The MPOs' conducted joint MPO Policy Board meetings on November 30, 2016 and November 30, 2017 to advance 2045 MTP coordination at the policy board level.

- Financial Plan – The MPOs used the same financial methodologies and cost and revenue basis for highways, bus transit, rail transit, and all aspects of the plan.

- Triangle Regional Model (TRM) – The MPOs used the same principal planning tool for the 2045 MTP, the Triangle Regional Model (TRM – the region's travel demand model), version 6.

- Goals, Objectives and Performance Measures – The two MPOs developed and used the same set of Goals, Objectives and Performance Measures to guide the selection of a land use scenario and of projects in the 2045 MTP process.

MPO Public Involvement Policy

Both MPOs have a formal public involvement policy that governs the public input process for not only the MTP process but for all major activities such as the Transportation Improvement Program (TIP). The policies prescribe: the methods for notifying the public; the type of input activities such as workshops and hearings; the minimum comment period; the use of visual techniques; and outreach to special groups such as low-income, minority and limited-English proficiency households, and people with disabilities. The public involvement policy for each MPO is available at:

CAMPO -- www.campo-nc.us
DCHC MPO -- www.dchcmpo.org

MTP Public Involvement Process

Decisions cannot be based solely on numbers and the interpretation of Goals and Objectives by staff and the MPOs Policy Boards. The 2045 MTP included a comprehensive public involvement process to use citizen and stakeholder input for providing a critical evaluation of the products for each stage of developing the plan. Citizens, public officials and board and commission members took advantage of a variety of planning and public input activities to voice their opinions and concerns.

Figure 5.2.1, Summary of Public Involvement Activities, demonstrates the breadth and depth of this public involvement effort by summarizing the many activities that occurred in each stage of the MTP's development for both CAMPO and DCHC MPO.

There are some notable details to the Figure 5.2.1 table. For example, the media effort was especially intensive and usually included:

- Draft documents and detailed supporting data available on the MPOs' Web sites;
- Notices in newspapers for workshops, hearings and other public involvement activities;
- Email lists to notify members of the community who have participated or indicated an interest in related planning activities. This included information about public workshops and input events as well as public hearings.
- Information was shared using social media platforms such as LinkedIn, Facebook, and Twitter, including a Facebook targeted ad campaign that reached more than 11,500 people across the region.
- Various formats for citizens to provide public comments included email, paper feedback forms, public workshops, information tables at community events, hearings and presentations at local elected officials' meetings.
- The DCHC MPO Goals and Objectives and CAMPO Alternatives Analysis were supported by online surveys that attracted over 800 respondents in one particular survey.

In addition, there were many workshops in the various member jurisdictions or multi-jurisdictional areas, and over a dozen presentations to local elected officials, boards and commissions. As a result of this extensive outreach effort, many of the elected bodies and locally-appointed boards and commissions provided considerable input through formal resolutions to the MPO Policy Boards.
One of the commitments in a consultative process is to circle back with public participants and inform them of any final decisions or outcomes, and how their input influenced those outcomes. Upon adoption of the 2045 MTP document in early 2018, it is the intention of both MPOs to send a media release, email update, website update, and social media posts advertising the adoption as well as post on the websites a spreadsheet of comments received including a staff response regarding the disposition.

This public involvement process met and exceeded the MPOs' public involvement policies for developing a transportation plan.

The extent of the public involvement process to identify and choose projects for the 2045 MTP go beyond the MTP development process. Many 2045 MTP projects have been incorporated from local and MPO plans identified in section "*5.4 -- Related Plans and Studies*" of this report. These plans and studies have commonly employed their own extensive public involvement process.

Figure 5.2.1 – Summary of Public Involvement Activities

	Activity				
Decision	**MPO Approval** (2)	**Public Hearing**	**Public Engagement**	**Draft for Public Review**	**Media Notification**
Goals and Objectives					
CAMPO	10/19/16	--	Public notice	11/21/15 08/17/16	--
DCHC	01/10/17	03/09/16	Online survey & workshop	02/12/16	Yes
2045 Growth Guide Totals					
CAMPO	10/19/16 02/21/18	--	Public notice	08/17/16	--
DCHC	--	--	--	09/14/16	--
Transportation Model (2)	(TransCAD version 6)				
CAMPO	10/19/16 02/21/18	--	Public Notice	08/07/16 01/11/18	Yes
DCHC	01/10/18	--	Public Notice	12/13/17	Yes
Deficiency Analysis					
CAMPO	--	--	Public Notice	03/15/17	Yes
DCHC	--	--	--	06/14/17	Yes
Alternatives Evaluation					
CAMPO	08/16/17	--	Public notice	04/17/17	Yes
DCHC	--	09/13/17	4 workshops	08/09/17	Yes
Approve 2045 MTP (1)					
CAMPO	12/13/17	12/13/17	20 workshops (10 Transit, 10 multimodal)	10/31/17	Yes
DCHC	12/13/17	11/08/17	Public Notice	11/01/17	Yes
Adopt 2045 MTP & Report (2)					
CAMPO	02/21/18	02/21/18	Public notice	01/11/18	Yes
DCHC	01/10/18	--	Public notice	12/13/17	Yes

Dashed lines, "-- ", indicate that the activity was not carried out because it is not a formal part of the metropolitan transportation plan or the MPO's public involvement policy.

(1) Includes the principal parts of the 2045 MTP that are presented in the Preferred Option report, including the Goals and Objectives, socioeconomic data, project lists and maps, and the financial plan.

(2) Includes the principal parts of the 2045 MTP that were approved in December 2017, and the full report, Performance Measures and Targets that are already aligned with the Goals and Objectives, and the Triangle Regional Model (TRM) version 6.

Visualization Techniques

The use of visuals in reviewing a plan not only makes good sense but is a federal transportation policy requirement. The goal is to help the public and decision makers visualize and interact with transportation plans and projects, alternatives, large data sets and land-use information more effectively. The MPOs used extensive visual techniques throughout the 2045 MTP planning process to present data to the public, elected officials and staff. Visual highlights are summarized directly below. *Figure 5.2.2 Examples of Visualization Techniques* provides some samples; however, the MPOs' MTP Web sites demonstrate the extensive use of interactive maps, tables and graphics used throughout the 2045 MTP planning process.

Socioeconomic Data

There are "dot-density" maps of population and employment growth to the year 2045. Examples: see section 6.2 of this report, and the Land Use or SE Data Web pages on the MPOs' 2045 MTP Web sites.

Projects

All the highway, bus transit, rail transit and bicycle projects have been depicted on maps and listed in tables that included the project attribute data. Examples: see section 7 and appendices 1 through 4 of this report; and the 2045 MTP Web pages on the MPOs' Web sites, which include links to interactive online maps.

Deficiency Analysis

The deficiency analysis provided interactive and static maps of roadway congestion levels, travel time between key points and travel time isochrones. Examples: see section 6.3 of this report; and the deficiency analysis Web pages on the MPOs' Web sites, which include links to interactive online maps.

Financial Plan

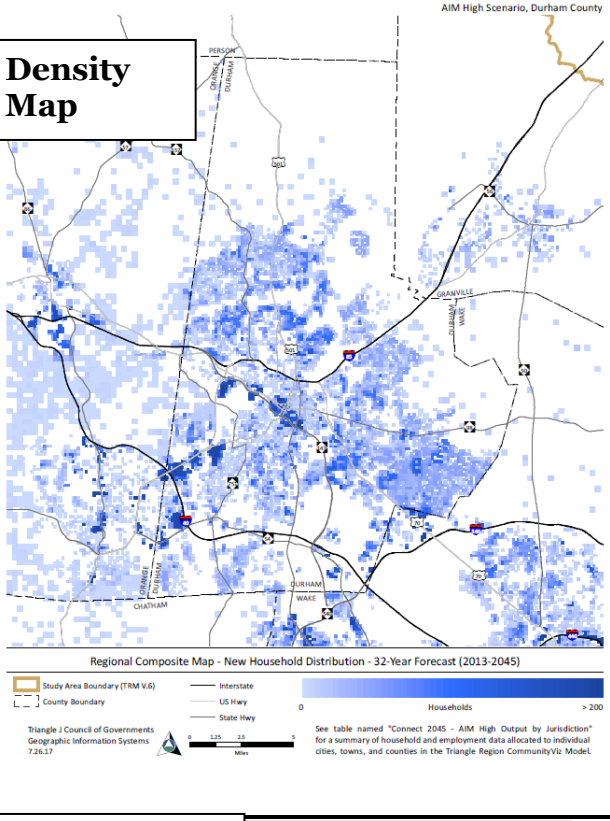
The financial plan used pie and bar charts to present data. Examples: see MPOs' Web sites for draft reports and presentations throughout the planning process.

Others

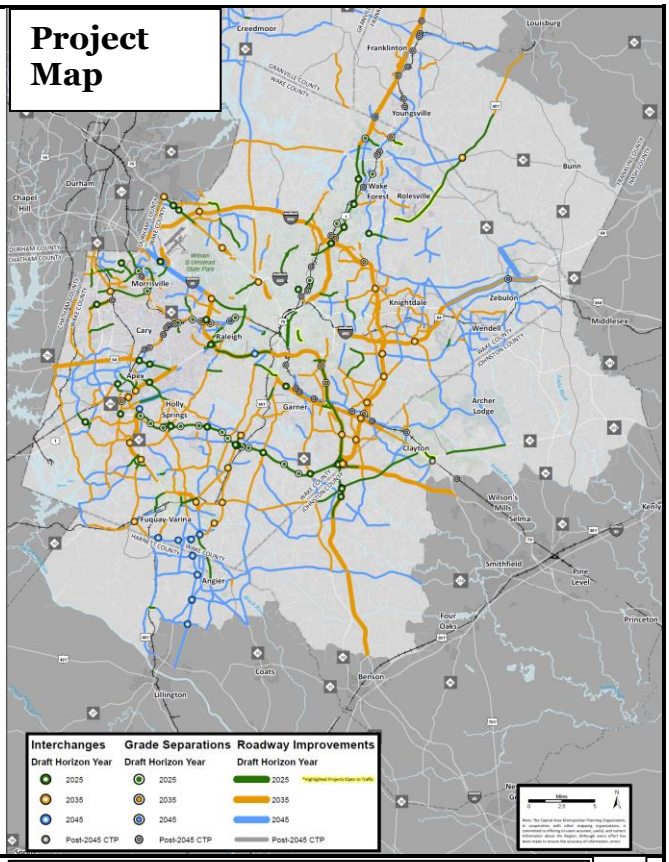
The presentations throughout the 2040 MTP planning process and this final report have dozens of maps and graphics to depict everything from the status of the planning process to the relationship of the MTP, CTP and TIP.

Figure 5.2.2 -- Examples of Visualization Techniques

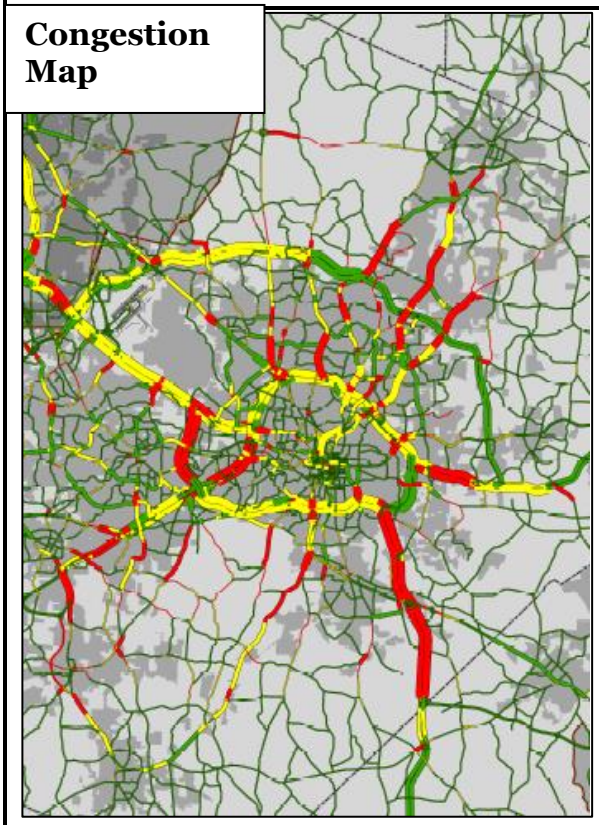
Density Map



Project Map



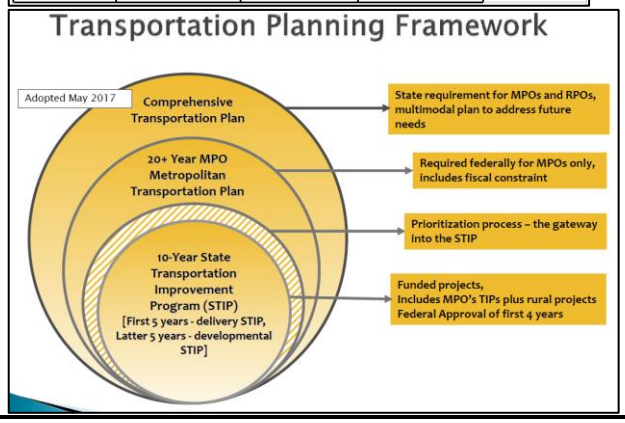
Congestion Map



Tables & Graphics

Population				
County	**2013**	**2045**	**2013-45**	% change
Chatham*	41,543	72,110	30,567	74%
Durham	286,210	475,091	188,881	66%
Orange	139,289	194,867	55,578	40%
Total	*467,042*	*742,068*	*275,026*	59%

Employment				
County	**2013**	**2045**	**2013-45**	% change
Chatham*	9,339	17,718	8,379	90%
Durham	192,877	342,910	150,033	78%
Orange	64,212	107,791	43,579	68%
Total	*266,428*	*468,419*	*201,991*	76%



5.3 Triangle Region Transportation Model

The Triangle Regional Model (TRM) is a tool that was developed for understanding how future growth in the region impacts transportation facilities and services. The TRM can help identify the location and scale of future transportation problems, and proposed solutions to those problems can be tested using the TRM. The TRM is developed and maintained by the TRM Service Bureau housed at the Institute for Transportation Research and Education on behalf of the DCHC MPO, CAMPO, North Carolina Department of Transportation, and GoTriangle, the four organizations that fund the modeling effort and guide its development and use.

The modeled area covers approximately 3,400 square miles, and includes all of Wake, Orange and Durham counties and part of Chatham, Franklin, Granville, Harnett, Nash, Person, and Johnston counties. This area is divided into over 2,800 geographic areas (traffic analysis zones) for which detailed population and employment information is maintained. The highway system is represented by about 20,000 roadway links in 2013 (the calibrated base year) and about 22,000 roadway links in 2045. The roadway links are described by detailed characteristics including: length, number of lanes by direction, speed, and traffic carrying capacity. Transit services operated by GoRaleigh, GoDurham, Chapel Hill Transit, GoTriangle, GoCary, Wolfline, and Duke Transit are represented in the model as well. Transit services are described by detailed characteristics including: length, stop locations, speed, frequency of service, and average rider-perceived fare.

The model produces summary statistics including: vehicle miles of travel, vehicle hours traveled, degree of traffic congestion, number of trips taken by travel mode, and transit riders. The model also computes trip statistics for each of the approximately 2,800 traffic analysis zones, categorized by mode, general trip purposes, and origin or destination zone. These statistics are shown elsewhere in the report in tables and maps. Statistics on speed and vehicle miles of travel by type of roadway are used to calculate air quality impacts for the plan.

The model is an advanced four step travel demand forecasting model. Models like the TRM forecast travel using the following sub-models, or steps:

- Trip Generation – based on population and employment data for each traffic analysis zone, calculate the number of trips people will make for various trip purposes, and the number of trips likely to go to destinations throughout the region.
- Trip Distribution – based on the number of trips generated for each purpose, the cost to travel from zone to zone, and the characteristics of the zones, calculate the trips from each zone to other zones.
- Mode Choice – based on the trips calculated in trip distribution, characteristics of the traveler, transit service characteristics, highway congestion, and other service characteristics, calculate for each trip purpose the number of trips made by automobile, carpooling, and transit.
- Trip Assignment – based on highway speeds and transit speed, find a route that takes the shortest time to get from one zone to another zone and sum the trips on that roadway or transit route. The model includes feedback to allow the travel times to include the effects of traffic congestion on the calculation of the shortest time on roadway links or transit services.

Model relationships were developed using 2006 household survey data, 2010 census data, transit survey data, traffic counts taken throughout the Triangle, and a survey of travelers entering or leaving the modeled area. The model was validated to 2010 traffic count and transit rider data. The model inputs were also updated to 2013 and validated to traffic counts and transit passenger counts. The model version used for this analysis was adopted for use in December, 2016 by the Durham-Chapel Hill-Carrboro MPO, Capital Area MPO, North Carolina Department of Transportation and GoTriangle and is referred to as TRM Version 6.

5.4 Related Plans and Studies

Although the Metropolitan Transportation Plan (MTP) serves as the main guiding document for regional transportation investments, many related transportation plans and studies feed into the development of the MTP and provide a more detailed look at projects, priorities, and selection issues.

This section highlights past and current plans and studies that have been used to inform the development of the 2045 MTP. Section 7.11, later in this document, identifies future plans and studies that are recommended to clarify issues and provide details for project selection for the next MTP.

Examples of studies undertaken in the region to better inform the development of the 2045 MTP, include: Corridor plans that address roadway design and operations on specific roadways; Small area plans that identify multimodal transportation investments and related development issues in a particular part of the region; and, Transit plans that range from broad regional vision to short-range investment plans for specific transit providers. Those that apply specifically to one MPO or the other are color-coded. CAMPO projects have this yellow background and DCHC MPO projects have this green background. Projects with no background color apply to both MPOs:

	Plan or Study	**Type**
1	*North Carolina Railroad Commuter Rail Capacity Study.* Identifies the capital costs needed for track improvements, stations and vehicles to provide peak-period, peak-direction commuter rail services between Goldsboro and Greensboro. www.ncrr.com/capacity-study.html	Transit Plan
2	*North Carolina Railroad Commuter Rail Ridership and Market Study.* Estimates ridership and revenues, and recommends service levels for commuter rail services. www.ncrr.com/capital-investment/commuter-rail-ridership-study/	Transit Plan
3	*CORE Bicycle & Pedestrian Plan.* A linked network of pedestrian, bicycle and greenspace facilities within the jurisdiction of 7 local governments and several regional agencies in the Center of the Region. www.tjcog.org/core-reports-downloads.aspx	Functional Plan
4	*Triangle Region Long Range Transportation Demand Management Plan.* Recommended 7-year investment strategy to provide regional TDM services, local TDM services in specified "hot spots" and an administrative structure to fund, manage, monitor and evaluate TDM services across both MPOs. http://tjcog.org/triangle-transportation-demand-management-program.aspx	Functional Plan
5	*Congestion Management Plan (CMP*). Collects travel and safety data for vehicles, pedestrian, bicycles and transit services to identify current and short-term trend congestion levels. Also, it defines congestion, identifies specific mitigation measures for congestion and provides a state of the system report to meet federal requirements. The DCHC MPO has a System Status Report and Mobility Report Card. http://www.dchcmpo.org/programs/cmp/default.asp The Capital Area MPO has a Congestion Management Process (CMP) and System Status Report. http://www.campo-nc.us/programs-studies/cmptdm	Functional Plan

	Plan or Study	Type
6	*Triangle Freight Study*. Evaluated current freight system needs and identified policy and project recommendations for future improvements to the freight network. The study included truck, rail, and air components and initiated the creation of the Regional Freight Stakeholder Advisory Committee. The study included a comprehensive regional analysis of freight, goods movement, and services mobility needs and developed recommendations for the 2045 joint MTP.	Functional Plan
7	*ITS Strategic Deployment Plan Update*. Plan includes a snapshot of best practices, list of projects, regional ITS architecture, and guidelines for maintaining the Plan. http://www.campo-nc.us/programs-studies/its	Functional Plan
8	*Wake Transit Plan* – Operating plan and capital program for transit services in the Wake County portion of the Capital Area MPO. This plan was developed to guide the public transportation improvements derived from a potential local option sales tax. https://www.waketransit.com	Transit Plan
9	*US 1 Phases I & II Corridor Studies.* Recommended a comprehensive multimodal transportation and growth plan that will preserve the functional characteristic of this corridor, manage the overall growth within the area, enhance the quality of life of its surrounding communities, and provide for the local and regional transportation needs along US-1 between I-540 and the northern MPO boundary http://us-1corridornorth.com/	Corridor Study
10	*NC 50 Corridor Study.* A comprehensive corridor study that recommended implementation actions designed to; Improve transportation mobility and traffic safety along the corridor, Preserve the residential and rural nature of the corridor while supporting regional economic development, and support activities to protect recreation, water quality, and the environment in the Falls Lake watershed http://www.kimley-horn.com/projects/nc50study/index.html	Corridor Study
11	*NC 54 and More Study.* A feasibility study that investigated the costs and impacts of proposed facility upgrades to the NC 54 Corridor from NC 540 to Northwest Maynard Road, within the Municipalities of Morrisville and Cary and recommended roadway widening, intersection improvements, improvements for pedestrians, bicyclists, and public transit services, potential railroad grade separations, crossing consolidation, proposed rail transit, and proposed railroad expansion plans for freight, intercity passenger rail and commuter. http://www.townofcary.org/Departments/Engineering/Streets_and_Sidewalks/Streets_Projects/NC54_MoreFeasibilityStudy.htm	Corridor Study

	Plan or Study	Type
12	*Southwest Area Study.* Evaluated the dependence of local commuters on regional routes such as NC 55, US 401, NC 42, NC 540 and NC 210, coupled with potential demand for increased development in the southwest area of the MPO jurisdiction. Recommended initiatives addressed strategic improvements to regionally significant corridors, provision of increased transit/fixed guideway services, and sustainable development patterns. http://www.southwestareastudy.com/	Special Area Study
13	*Northeast Area Study.* Initiated by CAMPO to identify a sustainable transportation strategy for the growing communities of Wake Forest, Knightdale, Raleigh, Wendell, Zebulon, Rolesville, Bunn, Franklinton, and Youngsville. This region encompasses 374 square miles of a unique mix of a large metropolitan area, small towns, suburbs and farming communities painted across a broad expanse of rural tapestry in both eastern Wake and southern Franklin counties. The study evaluated the dependence of local commuters on regional routes such as I-87/Future I-87, US 401, NC 98, NC 97, NC 540, , I-95, US 70, NC 42, NC 540, and NC 50, coupled with increasing development pressures in southeast Wake and northwest Johnston Counties. Recommended initiatives addressed strategic improvements to regionally significant corridors, provision of increased transit/fixed guideway services, and more sustainable development patterns. http://www.campo-nc.us/programs-studies/area-studies/northeast-area-study	Special Area Study
14	*Southeast Area Study.* Evaluated the dependence of local commuters on regional routes such as I-40, I-95, US 70, NC 42, NC 540, and NC 50, coupled with increasing development pressures in southeast Wake and northwest Johnston Counties. Recommended initiatives addressed strategic improvements to regionally significant corridors, provision of increased transit/fixed guideway services, and more sustainable development patterns. http://www.southeastareastudy.com/	Special Area Study
15	*Raleigh-Cary Rail Crossing Study.* The study evaluated potential improvements to the at-grade roadway/rail crossings from NE Maynard Road in Cary to Gorman Street in Raleigh, with a focus on how changes at the crossings will affect future land uses and connectivity within the community. In addition to looking at existing crossings, this study also considered possible new roadway extensions across the railroad within the corridor. http://www.rcrxstudy.com/	Corridor Study
16	*NC 56 Corridor Study.* A joint effort among the Town of Butner, City of Creedmoor, Granville County, CAMPO, Kerr-Tarr RPO, and North Carolina Department of Transportation (NCDOT) to evaluate improvements for a 4.5-mile segment of NC 56 from 33rd Street in Butner to Darden Drive in Creedmoor. The goal of the study was to clarify the long-term vision for the corridor, while also identifying opportunities to address existing needs over a shorter timeframe.	Corridor Study
17	*DCHC MPO Comprehensive Transportation Plan (CTP)*. Deficiency analysis and maps of highway, public transportation, bicycle, pedestrian and multiuse path facilities and improvements needed in the long-range. http://www.dchcmpo.org/programs/ctp/default.asp	Long-range Plan
18	*Durham-Orange Light Rail Transit Project Final Environmental Impact Statement* and *Record of Decision (FEIS/ROD). The FEIS evaluates the environmental,*	Transit Plan

	transportation, social, and economic impacts of the transportation improvements, and the ROD is a concise public record of the Federal Transit Administration (FTA) decisions. http://ourtransitfuture.com/library/lrt/	
19	*Durham County Transit Plan* and *Orange County Transit Plan.* Identifies the transit projects, services, facilities and vehicles to be funded by four Tax District Revenue streams. http://ourtransitfuture.com/plans/	Transit Plan
20	*North-South Corridor Study.* A 30-month study that evaluated a series of transit investments for implementation in the main north-south commuter corridor in Chapel Hills, and culminated in the adoption of a preferred-option that was accepted into the FTA Small Starts program. http://nscstudy.org/	Transit Plan
21	*US 15-501 Corridor Study.* Traffic forecast and analysis used to identify policies and facilities to meet future travel demand and safety objectives. http://www.dchcmpo.org/programs/local/corridor.asp	Corridor Study
22	*NC 54/I-40 Corridor Study. S*tudy and recommendations to guide land use and transportation decisions and investments in the NC 54 corridor, from US 15-501 in Chapel Hill to I-40 in Durham. https://gis.dchcmpo.org/website/CorridorStudy/index.html	Corridor Study
23	*Southwest Durham/Southeast Chapel Hill Collector Street Plan.* Small area plan recommending location of future collector streets and street designs to ensure future connectivity and multimodal street functioning. http://www.dchcmpo.org/programs/collector/swdurham/default.asp	Functional Plan
24	Local Bicycle Plans: *-Carrboro Comprehensive Bicycle Transportation Plan,* http://bit.ly/2z7c9JL *-Chapel Hill Bike Plan,* http://bit.ly/1uGbDZ5 *-Chatham County Bicycle Plan,* http://bit.ly/1TSdlUv *-Durham Trails and Greenways Master Plan,* http://bit.ly/2Cmfiax *-Durham Bike+Walk Implementation Plan,* http://bit.ly/2p2yHJS *-Hillsborough Community Connectivity Plan,* http://bit.ly/1UDAFHY *-Orange County Comprehensive Plan: Transportation Element,* http://bit.ly/1S5qjw1	Functional Plan
25	Local Pedestrian Plans: *-Chapel Hill Mobility and Connectivity Plan*, http://bit.ly/2zVt45w *-Durham Trails and Greenways Master Plan*, http://bit.ly/2Cmfiax *-Durham Bike+Walk Implementation Plan*, http://bit.ly/2p2yHJS *-Hillsborough Community Connectivity Plan*, http://bit.ly/1UDAFHY	Functional Plan
26	Local Multiuse Path Plans: *-Chapel Hill Greenways Master Plan*, http://bit.ly/1Pg2y4p *-Durham Trails and Greenways Master Plan*, http://bit.ly/25KdgK3	Functional Plan

In addition, many plans that informed the development of earlier Metropolitan Transportation Plans continue to be used to support the development of the 2045 MTP, including:

- US 15-501 Major Investment Study, Phase II Report (December 2001).
- I-40 Express Lanes Feasibility Study (from I-85 to Wade Avenue, Orange, Durham and Wake Counties (FS-1205A), (2015).
- NC 147 Feasibility Study (from I-40 to NC 55) (FS-1205C), (2016).
- NC 54 widening, I-40 (exit 273) to NC 55 (FS 1005C), (2011)
- NC 751 widening, NC 54 to US 64 (FS-1008B), (2012)
- Northern Durham Parkway, I-540 to US 501, (Roxboro Rd.), (2014)

Key points from this section:

- Metropolitan Planning Organizations, or MPOs, are the organizations charged with creating and adopting Metropolitan Transportation Plans. MPOs are made up of all the local governments in the area, the NC Department of Transportation, plus other organizations with transportation responsibilities. This document includes the plans for the two MPOs in the Research Triangle Region: the Capital Area MPO and the Durham-Chapel Hill-Carrboro MPO.
- MPOs have 3 main organizational components: (i) the Policy Board, which is made up of local elected officials and a NC Department of Transportation board member; (ii) the Technical Committee, or TC, made up of technical staff from local, state and regional organizations that provide technical input; and (iii) the Lead Planning Agency, or LPA, which provides the staff support to carry out the MPO's responsibilities.
- Each MPO has an explicit, written Public Involvement Policy, which was used to garner public input into the plan and provide opportunities for public review and comment. Using maps, graphs, charts and other visual tools is an important part of conveying transportation-related information to a variety of stakeholders.
- One of the key tools used to understand the region's transportation challenges and the impacts of investments to address these challenges is the Triangle Regional Travel Demand Model (TRM), which covers both MPOs. A new and improved version of the model was used for the first time in the development of the 2045 Metropolitan Transportation Plan.
- Many related transportation plans and studies are undertaken both to feed into the development of Metropolitan Transportation Plans and to provide a more detailed look at issues identified in or related to MTPs.