

## **2040 MTP and CTP Alternatives -- Introduction**

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### **What is the 2040 MTP?**

The 2040 Metropolitan Transportation Plan (MTP) is the guide for major transportation investments in the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC-MPO) area. The DCHC-MPO area covers the entire Durham County and the urbanized portions of Orange and Chatham Counties. The 2040 MTP recommends major transportation projects, policies and strategies designed to maintain existing transportation systems and serve the region's future travel needs. The 2040 MTP is also designed to support land use and air quality goals for the urban area, and must be prepared in accordance with Federal transportation and environmental requirements. Projects must be in the 2040 MTP to receive state and federal transportation funding in the North Carolina Transportation Improvement Program (TIP).

### **What is the CTP?**

North Carolina General Statute 136-66.2 requires each municipality or Metropolitan Planning Organization (MPO), with the cooperation of the NCDOT, to develop a Comprehensive Transportation Plan (CTP) serving present and anticipated travel demand in and around the MPO. The principal differences between the MTP and CTP include:

- MTP lists only proposed highway improvements and transit services, whereas the CTP maps out both the current and proposed projects;
- MTP must be fiscally-constrained, i.e., the anticipated revenues must cover the anticipated costs, but the CTP has no fiscal element.

The development process for these two documents is very similar – each includes the use of a travel demand model and extensive public involvement. As a result, the DCHC MPO will complete the development process for both documents at the same time.

### **What are Alternatives?**

The DCHC MPO plans to develop and evaluate several Alternatives in the process to create the 2040 Metropolitan Transportation Plan. Each Alternative will be a combination of a Transportation network, which includes a set of highway, transit and other transportation improvements, and a Land Use scenario that depicts the distribution of population and employment for the year 2040. These Alternatives will be run in the Triangle Regional Model (TRM) to produce a set of transportation performance measures that describe how the transportation system will meet the travel demand generated by a particular population and employment distribution in the year 2040. These performance

measures, such as the level of roadway congestion, average travel time, and transit ridership, will be used to evaluate and compare the various Alternatives.

It should be noted that it is very unlikely that one of the Alternatives in its entirety would be advanced as the Preferred Option. These Alternatives have been designed to emphasize a particular mode in meeting the future travel demands so that the public and technical staff can understand how the designated mode meets travel demand. In fact, it is unlikely that the Alternatives using the Highway Intensive and Transit Intensive networks are financially feasible.

## **How can Citizens Participate?**

There are many opportunities for citizens to review and comment on the Alternatives and Preferred Option at a series of public workshops and public hearings that will take place from August through December 2012. The complete public involvement calendar for the Alternatives is displayed in the table on the next page. The DCHC MPO Web site will continue to post a detailed list of these public involvement opportunities in the Alternatives Analysis section of the Website – [www.dchcmo.org](http://www.dchcmo.org). For more information, citizens can also contact Andy Henry, (919) 560-4366, extension 36419, or [andrew.henry@durhamnc.gov](mailto:andrew.henry@durhamnc.gov).

Public Hearing -- The MPO policy board, the Transportation Advisory Committee (TAC), will conduct a public hearing on September 12, 2012, 9AM, in the Committee Room on the 2<sup>nd</sup> Floor of Durham City Hall. The public can sign up to speak directly to the TAC on the Alternatives.

Where to Send Comments – Comments can be sent to the following email and postal address”

- [andrew.henry@durhamnc.gov](mailto:andrew.henry@durhamnc.gov).
- Andrew Henry  
City of Durham/Transportation Dept.  
101 City Hall Plaza  
Durham, NC 27701

Comment Period – The public comment period for the Alternatives will run from August 17, 2012 through October 10, 2012.

## Alternatives Analysis – Public Involvement Calendar

Jurisdiction	Elected Board	Planning Board	Transportation Board	Bicycle/Pedestrian Board	Transit Board	Public Workshops
<b>City of Durham</b>	9/20/2012	9/11/2012	n/a	8/21/2012	n/a	9/18 Durham Station Transportation Center*
<b>Durham County</b>	9/24/2012	9/11/2012	n/a	8/21/2012	n/a	
<b>Chapel Hill</b>	9/24 or 10/8	TBD	TBD	TBD (Active Living)	n/a	9/20 (tentative) Chapel Hill Town Hall, 4-7pm
<b>Carrboro</b>	9/11 & 10/2	9/20/12	9/20/12			
<b>Hillsborough</b>	9/24/12	9/20/12	n/a	n/a	n/a	9/13 “The Barn”, 4-7 pm
<b>Orange County</b>	10/2/2012	Invited to OUTBoard Mtg	9/19/2012	n/a	n/a	
<b>Chatham County</b>	9/17/2012	9/11/2012	8/28/2012	8/23/2012	n/a	n/a

\*One workshop will be focused for environmental justice organizations.

Notes: Check DCHC MPO Web site for any meeting date and time updates – [www.dchcmo.org](http://www.dchcmo.org).  
Check local government information to make sure the Alternatives is on the agenda.

### What is the Next Step in the 2040 MTP Process?

In the next major step in the 2040 MTP development process, the public, elected officials and technical staff will use the evaluation and comparison of the Alternatives to create a single Alternative that best meets the MPO’s Goals and Objectives and the fiscal constraint requirements. The fiscal restraint requirements demand that the project costs do not exceed the expected funding revenues. This final Alternative is called the Preferred Option, and it will also go through a public review process similar to that of the Alternatives.

### Development of Alternatives

The table below shows the combinations of transportation networks and land use scenarios that will be modeled for the 2040 MTP development process to produce each Alternative.

Land Use/Network	Highway Intensive	Transit Intensive	Moderate
<b>CommPlan</b>	Yes	Yes	Yes
<b>All-in-Transit</b>	No	Yes	Yes

The land use scenarios are based on the following assumptions:

Community Plan

- Based on local comprehensive plans
- Used in Deficiency Analysis (June 2012)

All-in-Transit

- Based on local comprehensive plans, plus...
- Additional and enhanced transit oriented developments
- Additional development attraction to rail and premium transit

The table on the next page summarizes the highway and transit projects included in each of the three transportation networks. Section 7 provides a map and project list for each transportation network.

The remainder of this report is dedicated to presenting tables and maps that show the level to which each of the Alternatives meets the forecasted travel demand. Two additional Alternatives from the Deficiency Analysis are used for purposes of comparison. The MPO completed the Deficiency Analysis in June 2012 and the detailed results are available on the MPO Web page.

- 2010 – This is the current condition. It uses the current transportation network and current population and employment distribution.
- E+C (Existing plus Committed) – This is the no build alternatives. It uses the current transportation network (including any committed projects) and the forecasted population and employment.

# Transportation Networks

	Highway Intensive	Transit Intensive	Moderate
Highway	<ul style="list-style-type: none"> <li>• 2035 LRTP</li> <li>• CTP highway projects</li> <li>➤ <b>410</b> new lanes miles</li> <li>➤ <b>\$3.9</b> billion highway costs</li> <li>➤ <u>2,979</u> total lane miles in network</li> </ul>	<ul style="list-style-type: none"> <li>➤ Basically, 2015 and 2025 tier</li> <li>➤ No 2035 tier or CTP highway projects</li> <li>➤ <b>120</b> new lanes miles</li> <li>➤ <b>\$1.2</b> billion highway costs</li> <li>➤ <u>2,842</u> total lanes miles in network</li> </ul>	<ul style="list-style-type: none"> <li>➤ Basically, 2035 LRTP (minus some minor highway projects)</li> <li>➤ <b>261</b> new lanes miles</li> <li>➤ <b>\$2.5</b> billion highway costs</li> <li>➤ <u>2,737</u> total lanes miles in network</li> </ul>
Transit	<ul style="list-style-type: none"> <li>• Current bus transit</li> <li>• No rail transit</li> <li>➤ <u>2,028</u> bus transit line miles (Triangle)</li> </ul>	<ul style="list-style-type: none"> <li>• Current bus transit</li> <li>• County plans (based on ½ cent sales tax)</li> <li>• LRT between Durham and Wake (instead of CRT)</li> <li>• LRT and CRT extensions in Orange County</li> <li>• CRT addition between Cary and western RTP</li> <li>• All Bus Rapid Transit (BRT) in Chapel Hill</li> <li>➤ <u>2,646</u> bus transit line miles (Triangle)</li> <li>➤ <b>69,354</b> transit service miles (Triangle)</li> <li>➤ <b>260</b> miles of rail transit alignment (Triangle)</li> </ul>	<ul style="list-style-type: none"> <li>• Current bus transit</li> <li>• County plans (based on ½ cent sales tax)</li> <li>• LRT and CRT (based on Locally Preferred Alternative)</li> <li>• MLK Blvd Bus Rapid Transit (BRT) in Chapel Hill</li> <li>➤ <u>2,882</u> bus transit line miles (Triangle)</li> <li>➤ <b>66,211</b> transit service miles (Triangle)</li> <li>➤ <b>75</b> miles of rail transit line (Triangle)</li> </ul>

Notes: New lane miles only includes proposed widenings and new roadways in the Alternative.

Total lane miles includes all interstates, arterials and major collector streets in the Alternative network; most local streets are not included.

Transit line miles, service miles and miles of rail transit line are daily values and are for the entire Triangle region.

## Summary of Alternatives

The Alternatives presented in this report can be summarized as follows:

2010 – This benchmark shows the current state of the transportation system. It assumes the 2010 highway and transit network and 2010 population and employment.

E+C (Existing plus Committed) – This is the no build benchmark – it shows the state of the transportation system in the year 2040 if no highway or transit improvements are made.

Highway Intensive – This transportation network assumes an emphasis on highway improvements and less investment in transit (e.g., does not include rail transit)

Transit Intensive – This transportation network assumes an emphasis on bus and rail investment, including the extension of light rail transit beyond the UNC-Chapel Hill area and the extension of commuter rail transit into Orange County. There are two Alternatives using this network:

- one assumes a year 2040 land use scenario with Transit Oriented Development (TOD) around proposed rail stations to take advantage of the synergy between the rail mode and concentrated station development – this land scenario is called All-in-Transit for this study.
- one assumes a 2040 land use scenario based on the local comprehensive plans – this scenarios is called Community Plan (CommPlan).

Moderate – This transportation network assumes a mix of highway projects, bus transit and rail transit that is very similar to that of the 2035 Long Range Transportation Plan (2035 LRTP). Like the Transit Intensive network, there are two Alternatives for this network – one for each of the All-in-Transit and Community Plan land use scenarios.

See the Alternatives Description and Socioeconomic Data sections of this report for detailed information on the transportation networks and land use scenarios used to create these Alternatives.

## How is Report Organized?

This report presents the TRM model output first and then provides details on the land use scenarios and the Alternatives. The model output begins with the broad, system-wide Performance Measures and progressively moves toward more project based information such as the congestion maps (e.g., volume/capacity ration).

## Who Can I Contact?

For more information, citizens can contact Andy Henry, (919) 560-4366, extension 36419, or send an email to [andrew.henry@durhamnc.gov](mailto:andrew.henry@durhamnc.gov).