

Executive Summary

In January of 2014, the Transportation Planning Branch of the North Carolina Department of Transportation (NCDOT) and Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) initiated a study to cooperatively develop the DCHC MPO Comprehensive Transportation Plan (CTP), which includes the towns of Carrboro, Chapel Hill, Hillsborough; the city of Durham; and Chatham, Durham and Orange Counties. This is a long range multimodal transportation plan that covers transportation needs through 2040. Modes of transportation evaluated as part of this plan include: highway, public transportation and rail, bicycle, and pedestrian. This plan does not cover routine maintenance or minor operations issues. Refer to Appendix A for contact information on these types of issues.

Findings of this CTP study were based on an analysis of the transportation system, environmental screening and public input, which are detailed in Chapter 1. Figure 1, starting on page vii, shows the CTP maps, which were mutually adopted by DCHC MPO and NCDOT in 2017. Descriptive information and definitions for designations depicted on the CTP maps can be found in Appendix B. Implementation of the plan is the responsibility of the counties and their municipalities, and NCDOT. Refer to Chapter 2 for information on the implementation process.

This report documents the recommendations for improvements that are included in the DCHC MPO CTP. The major highway recommendations for improvements are listed in the table below. Other major non-highway projects are listed on page vi. More detailed information about these and other recommendations can be found in Chapter 2 and Appendix C.

Major Highway Recommendations:

Table 1

Facility	Project Location	Status	Recommendation
<i>Chatham County</i>			
US 15-501	Smith Level Road (SR 1919) to south of Andrews Store Road (SR 1528)	Needs Improvement	Improve access management along US 15-501 in accordance with the 2014 Corridor Study recommendations.
NC 751	Durham County to Martha's Chapel Road (SR 1752)	Needs Improvement	Improve to a boulevard facility. Further study is needed for cross section.

Facility	Project Location	Status	Recommendation
<i>Durham County</i>			
I-40	Wake County to NC 147	Needs Improvement	Widen freeway to 12 lanes. With 8 general purpose and 4 managed lanes.
I-40	NC 147 to NC 54	Needs Improvement	Widen freeway to 10 lanes. With 6 to 8 general purpose and 2 to 4 managed lanes.
I-40	NC 54 to US 15-501	Needs Improvement	Widen freeway to 8 lanes. With 6 general purpose and 2 managed lanes.
I-85	US 70 to Granville County	Needs Improvement	Widen to a 6-lane freeway and upgrade interchanges and ramps.
US 15-501	I-40 to US 15-501 Bypass	Needs Improvement	Convert to freeway with interchanges.
US 15-501	US 15-501 Business to I-85	Needs Improvement	Widen freeway to 6 lanes with interchange improvements.
US 15-501 Business	US 15-501 to University Drive (SR 1183)	Needs Improvement	Improve to boulevard facility to accommodate multimodal traffic.
US 501 (North Roxboro Road)	North Duke Street (US 501) to Sandeewood Drive (SR 1698)	Needs Improvement	Improve to a 4-lane divided synchronized street (also known as superstreet).
US 501 (North Duke Street)	I-85 to US 501 Business (North Roxboro Street)	Needs Improvement	Improve to a 4-lane divided synchronized street (also known as superstreet).
US 501 Business (North Roxboro Street)	Old Oxford Road (SR 1004) to East Club Boulevard (SR 1669)	Needs Improvement	Improve to a 4-lane divided boulevard with a narrow median.
US 70	Pleasant Drive (SR 1815) to Wake County	Needs Improvement	Widen to a 6-lane freeway with grade separations and interchanges.

Facility	Project Location	Status	Recommendation
<i>Durham County</i>			
NC 147 (Durham Freeway)	I-40 to I-85	Needs Improvement	<ul style="list-style-type: none"> - I-40 to EEC: Widen freeway to 8 lanes with managed lanes and interchange improvements. - EEC to NC 55 (Alston Avenue): Widen freeway to 6 lanes with interchange improvements. - NC 55 (Alston Avenue) to I-85: Upgrade freeway with interchange improvements.
NC 55	NC 147 to Holloway Street (US 70 Business /NC 98)	Needs Improvement	Widen to a 4-lane divided boulevard facility.
NC 54	US 15-501 to NC 55	Needs Improvement	<ul style="list-style-type: none"> - US 15-501 to I-40: Improve to synchronized street (also known as superstreet) with interchanges. - Barbee Chapel Road (SR 1110) to NC 55 (Durham County): Add two travel lanes. - Throughout corridor: Improved bicycle, pedestrian and light rail transit accommodation.
NC 55 (Avondale Drive)	I-85 to East Geer Street (SR 1670)	Needs Improvement	Widen to 4-lane boulevard (with a narrow median), and bicycle lanes and sidewalks; Consider multi-use path per city of Durham option.
NC 98	Junction Road (SR 1838) to Wake County	Needs Improvement	<ul style="list-style-type: none"> - Junction Road (SR 1838) to Nichols Farm Drive: Add narrow median, bicycle lanes and sidewalks to improve current 4-lane undivided section. - Nichols Farms Drive to Wake County: Widen to a 4-lane divided boulevard.
NC 751	NC 54 to Chatham County	Needs Improvement	Improve to a boulevard facility. Further study is needed for cross section.
North Alston Avenue Extension	US 501 Business (North Roxboro Street)/ Old Oxford Road (SR 1004) to NC 55 (North Alston Avenue)	Recommended New Facility	Construct new boulevard facility. Further study is needed for cross section and alignment.

Facility	Project Location	Status	Recommendation
<i>Durham County</i>			
Northern Durham Parkway (NDP)	US 70 to I-85 to Old Oxford Road (SR 1004)	Recommended New Facility	Construct a new 4-lane divided boulevard facility with separate bicycle lanes and sidewalks.
South Roxboro Street Extension	Martin Luther King Jr Parkway to Cornwallis Road (SR 1158)	Recommended New Facility	Construct new boulevard facility with sidewalks and bicycle lanes.
SW Durham Drive (SR 1110)/ Farrington Road (SR 1110)/ George King Road (SR 1112)/ Mount Moriah Road Extension/ George King Road Extension	Mount Moriah Road (SR 2294) to NC 54	Needs Improvement and Recommended New Facility	<p>- Mount Moriah Road (SR 2294) to I-40: 4-lane divided with sidewalks and bicycle accommodations. Extend Mount Moriah Road (SR 2294) to US 15-501 at SW Durham Drive (SR 1110).</p> <p>- I-40 to NC 54: 2-lane divided with sidewalks and bicycle lanes. Extend Farrington Road (SR 1110) at I-40 to George King Road (SR 1112) at Ephesus Church Road (SR 1113). Extend George King Road (SR 1112) to NC 54.</p>
<i>Orange County</i>			
I-40	I-85 to NC 86	Needs Improvement	Widen freeway to 6 general purpose lanes.
I-40	NC 86 to 15-501	Needs Improvement	Widen freeway to 6 lanes. With 4 general purpose and 2 managed lanes.
I-85	I-40 to Durham County	Needs Improvement	Widen freeway to 6 general purpose lanes with a raised median and interchange improvements.
US 15-501	NC 86 (South Columbia Street) to I-40	Needs Improvement	<p>- NC 86 (S Columbia St) – Ephesus Church Rd: In the draft STIP FY 2017-2027, U-5304 indicates capacity improvements and intersection/ interchange improvements with sidewalks, wide outside lanes and transit accommodations.</p> <p>- Ephesus Church Rd – I-40: In the draft STIP FY 2017-2027, U-5304 indicates corridor capacity improvements.</p>

Facility	Project Location	Status	Recommendation
<i>Orange County</i>			
US 70	I-85/US 70 Connector to US 70 Alternate	Needs Improvement	Widen to a 4-lane divided cross section with 5-foot bike lanes and 5-foot sidewalks separate from travel lanes.
NC 54	US 15-501 to NC 55 (in Durham County)	Needs Improvement	<p>- US 15-501 (Fordham Blvd) – I-40: In the draft STIP FY 2017-2027, U-5774 indicates the upgrade of the roadway corridor with upgrade of US 15-501 interchange, interchange improvements at I-40, conversion of at-grade intersections to interchanges (or construct intersection improvements per CTP option from Chapel Hill) with Barbee Chapel Rd and Falconbridge Rd, and conversion of at-grade intersection with Farrington Rd to grade separation. Projects are to improve bicycle and pedestrian travel the complete length of the corridor, and accommodate the D-O LRT.</p> <p>- I-40 – NC 55: In the draft STIP FY 2017-2027, U-5774 indicates the upgrade of the roadway corridor.</p>
NC 54	Old Fayetteville Road (SR 1107) to Bethel Hickory Grove Church Road (SR 1104)	Needs Improvement	Provide operational improvements; further study is needed to determine specific long-term improvements.
NC 86	US 70 Business to Old NC 10 (SR 1710)	Needs Improvement	Widen to a 4-lane divided cross section with a raised median with bike lanes and sidewalks.
NC 86	US 70 Bypass (Cornelius Street) to north of the NC 86/ NC 57 split	Needs Improvement	Improvements are needed to accommodate projected traffic and to improve pedestrian safety. Further study is needed for specific improvements.
I-85/ US 70 Connector	I-85 to US 70	Needs Improvement	Improve existing I-85/US 70 Connector interchange with US 70 to a full-movement interchange.
S Churton Street (US 70/ NC 86/ SR 1009)	Eno River Bridge to I-40	Needs Improvement	Widen to a 4-lane divided cross section with a raised median with bike lanes and sidewalks.

Facility	Project Location	Status	Recommendation
<i>Orange County</i>			
Eubanks Road (SR 1727)	NC 86 to Millhouse Road (SR 1725)	Needs Improvement	Widen to a 4-lane divided boulevard.
Eno Mountain Road realignment	Eno Mountain Road (SR 1148) to intersection of Mayo Street (SR 1192) and Orange Grove Road (SR 1006)	Recommended New Facility	Realignment of Eno Mountain Road (SR 1148) at the intersection of Mayo Street (SR 1192) and Orange Grove Road (SR 1006) with on-road bicycle, pedestrian and bus accommodations.
Orange Grove Road Extension	South Churton Street (SR 1009) to US 70 Business	Recommended New Facility	Construct a new 4-lane divided boulevard facility with bicycle, pedestrian and bus accommodations.

There are many recommended improvements associated with the public transportation and rail mode, such as light rail transit, commuter rail, bus rapid transit, express bus, improved regular bus service, park and ride facilities, transit centers, multimodal centers and rail stations. Major public transportation and rail recommendations include:

- Durham-Orange Light Rail Transit (D-O LRT): Light rail system running from UNC Hospitals in Chapel Hill to NCCU in Durham.
- North-South Corridor Bus Rapid Transit (N-S BRT): Bus Rapid Transit route along NC 86 (Martin Luther King Jr Boulevard/ South Columbia Street) and US 15-501 from the Eubanks Park and Ride to Southern Village.

There are many recommended improvements associated with the bicycle and pedestrian modes, such as bicycle lanes, wide paved shoulders, wide outside lanes and off-road bicycle trails, off-road pedestrian paths, and multi-use paths. One major multi-use recommendation is:

- Durham-Orange Light Rail Transit Multi-use Path: A multi-use path, or a combination of separate bicycle and pedestrian accommodations when appropriate, constructed generally parallel to the Durham-Orange Light Rail corridor from Chapel Hill to Durham.

Optimal viewing of the CTP maps for all the modes is online at the following links and QR code shown here:

- Online interactive maps: <http://bit.ly/DCHCMPO--Adopted-CTP> (see Adopted tab), and
- Poster-sized PDF maps: <http://tinyurl.com/DCHC-CTP> (or QR code).

