

# 4. Highways and Roadways

## Introduction

Under Federal law (23 USC 134), Metropolitan Planning Organizations (MPOs) are required to prepare a Long Range Transportation Plan (LRTP) also known as a Metropolitan Transportation Plan (MTP). The MTP is required to address the federal planning requirements in 23 USC 134, which include being fiscally constrained, having a minimum 20 year horizon, and being updated every 4 years in air quality non-attainment or maintenance areas (every 5 years in attainment areas).

Under State law (NCGS 136-66.2), MPOs and municipalities shall develop a Comprehensive Transportation Plan (CTP) in cooperation with the North Carolina Department of Transportation (NCDOT). For municipalities and counties, or portions thereof, located within an MPO planning area, the development of a comprehensive transportation plan shall be by the MPO in cooperation with the NCDOT. By comparison, the state law requires that the transportation plan be developed so that it will serve present and anticipated travel demand (it is not required to be fiscally constrained and no minimum horizon year or update timeframes are specified). The Greater Hickory MPO MTP is the fiscally constrained subset of the Greater Hickory MPO's MTP and Comprehensive Transportation Plan (CTP). The MTP consists of three interim horizon years, 2025, 2035, and 2045.

It is important to note that the MTP/CTP does not include every road on the highway system. As such, in accordance with NCGS 136-66.2, to complement the roadway element of the MTP/CTP, municipalities and MPOs may develop a collector street plan to assist in developing the roadway network. The Department of Transportation may review and provide comments but is not required to provide approval of the collector street plan. The MTP/CTP and the locally approved collector street plan(s) work together to identify the future transportation system. The street and highway elements of the plans developed pursuant to G.S. 136-66.2 shall serve as the plan referenced in G.S. 136-66.10(a), which addresses the dedication of right-of-way under local ordinances.

## Complete Streets

NCDOT adopted a "Complete Streets<sup>1</sup>" policy in July 2009. The policy directs the Department to consider and incorporate several modes of transportation when building

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<sup>1</sup> For more information on Complete Streets, go to: <http://www.completestreetsnc.org/>

new projects or making improvements to existing infrastructure. Under this policy, the Department will collaborate with cities, towns and communities during the planning and design phases of projects. Together, they will decide how to provide the transportation options needed to serve the community and complement the context of the area. The benefits of this approach include:

- Making it easier for travelers to get where they need to go;
- Encouraging the use of alternative forms of transportation;
- Building more sustainable communities;
- Increasing connectivity between neighborhoods, streets, and transit systems;
- Improving safety for pedestrians, cyclists, and motorists.

Complete streets are streets designed to be safe and comfortable for all users, including pedestrians, bicyclists, transit riders, motorists and individuals of all ages and capabilities. These streets generally include sidewalks, appropriate bicycle facilities, transit stops, right-sized street widths, context-based traffic speeds, and are well-integrated with surrounding land uses. The complete street policy and concepts were utilized in the development of the MTP/CTP.

## **Implementation**

The MTP/CTP is based on the projected growth for the planning area. It is possible that actual growth patterns will differ from those logically anticipated. As a result, it may be necessary to accelerate or delay the implementation of some recommendations found within this plan. Some portions of the plan may require revisions in order to accommodate unexpected changes in development. Therefore, any changes made to one element of the MTP/CTP should be consistent with the other elements.

Initiative for implementing the MTP/CTP rests predominately with the Greater Hickory MPO. As transportation needs throughout the state exceed available funding, it is imperative that the local planning area aggressively pursue funding for priority projects. Projects should be prioritized locally and submitted by the Greater Hickory MPO for submittal and prioritization to NCDOT. Local governments may use the MTP/CTP to guide development and protect corridors for the recommended projects. It is critical that NCDOT and local government coordinate on relevant land development reviews and all transportation projects to ensure proper implementation of the MTP/CTP. Local governments and the North Carolina Department of Transportation share the responsibility for access management and the planning, design and construction of the recommended projects.

Recommended improvements shown on the MTP/CTP map represents an agreement of identified transportation deficiencies and potential solutions to address the deficiencies.

While the MTP/CTP does propose recommended solutions, it may not represent the final location or cross section associated with the improvement. All MTP/CTP recommendations are based on high level systems analyses that seek to minimize impacts to the natural and human environment. Prior to implementing projects from the MTP/CTP, additional analysis will be necessary to meet the National Environmental Policy Act (NEPA) or the North Carolina (or State) Environmental Policy Act<sup>2</sup> (SEPA). During the NEPA/SEPA process, the specific project location and cross section will be determined based on environmental analysis and public input. This MTP/CTP may be used to support transportation decision making and provide transportation planning data in the NEPA/SEPA process.

## **Problem Statements**

Problem statements describe the transportation system deficiencies identified during the planning process and recommend improvements to alleviate the deficiencies. Problem statements for the below MTP recommendations are located in the MTP *Appendix - Project Background*.

### **MTP Horizon-Year 2025**

#### Multi-County

US 321 (Burke, Caldwell, & Catawba Counties)

NC 127 North (Alexander & Catawba Counties)

#### Burke County

NC 181

#### Catawba County

NC 127 South

### **MTP Horizon-Year 2035**

#### Multi-County

US 64 / NC 18 (Burke & Caldwell Counties)

#### Burke County

Connelly Springs Road (SR 1001)

#### Catawba County

McDonald Parkway / 24<sup>th</sup> Street NE / 29<sup>th</sup> Avenue Drive NE (SR 1402 / SR 1404)

### **MTP Horizon-Year 2045**

#### Multi-County

Malcolm Boulevard (SR 1001) (Burke & Caldwell Counties)

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<sup>2</sup>For more information on SEPA, go to: <http://www.doa.nc.gov/clearing/faq.aspx>.

## Project Need

Level of Service (LOS) is a classification system used to describe the relationship between roadway capacity and travel demand. Six LOS categories (from A to F) are used to describe the range of possible operating conditions on a roadway, with A being the best and F being the worst. Moving from LOS A to LOS F, traffic density increases and drivers become less comfortable. The North Carolina Department of Transportation states that “LOS D indicates “practical capacity” of a roadway, or the capacity at which the public begins to express dissatisfaction. Recommended improvements... based upon achieving a minimum LOS D on existing facilities and a LOS C on new facilities.”

Several highway projects in this chapter refer to LOS, focusing on traffic congestion and plans to accommodate projected traffic volumes in order to maintain a specific LOS. Table 4.1 below summarizes the 6 LOS categories, from Free Flow (LOS A) to Breakdown Flow (LOS F).

Table 4.1 Level of Service.

| Service Level | Driver Comfort | Traffic Flow Condition   | Impacts                                    | Max. Passenger Car Density<br>(per mile per lane) |
|---------------|----------------|--------------------------|--|---|
| A             | High           | Free Flow                | Minor incidents are easily absorbed        | 12  |
| B             | High           | Reasonably Free Flow     | Traffic only slightly restricted           | 20  |
| C             | Some Tension   | Stable Operations        | Maneuverability is noticeably restricted   | 30  |
| D             | Poor           | Borders on Unstable Flow | Minor incidents create substantial queuing | 42  |
| E             | Extremely Poor | Operation at Capacity    | Virtually no usable gaps in traffic stream | 67  |
| F             | The Lowest     | Breakdown Flow           | Extensive queuing                          | 67+   |

Source: North Carolina Department of Transportation.

## Program Funding

The projects described in this chapter represent a snapshot of how funds are currently programmed in the 2018-2027 State Transportation Improvement Plan (STIP). The STIP is a statewide plan, developed by NCDOT with input from all MPOs, RPOs and NCDOT Divisions. The Greater Hickory MPO develops the Metropolitan Transportation Improvement Plan (MTIP), which lists funded projects in the GHMPO region and must be in agreement with the STIP. The GHMPO’s MTIP is a “living document”, subject to frequent modifications due to the complexity of each project. For example, project funding may be shifted from one fiscal year to another due to the challenges associated with right-of-way acquisition, the installation of utilities, or unforeseen construction delays.

## Recommended Highway Projects

### *MTP Horizon Year 2025 Projects*

The following projects represent the short-term vision for the GHMPO through year 2025. These projects are fiscally constrained within the MTP. Fiscally constrained projects are those that “can be implemented using committed, available, or reasonably available revenue sources” (23 CFR 450.104).

### Multi-County

#### **US 321** (Caldwell & Watauga Counties)

STIP project **R-2237** widens US 321 to a multi-lane facility from Blackberry Road in Caldwell County to US 221 in Blowing Rock. This project is currently under construction and nearing completion. Over half of the project is located outside the GHMPO region or within Watauga County.

#### **US 321** (Burke, Caldwell, & Catawba Counties)

STIP project **U-4700A** widens US 321 to a six-lane, divided facility with superstreet treatments at signalized intersections. The existing four-lane facility is projected to be near or over capacity in 2045 from US 70 in Hickory to US 64 in Lenoir. The project is planned to accommodate projected traffic volumes in order to maintain a Level of Service (LOS) of D or higher. Right-of-way is programmed for 2018 and construction for 2024. *Also see US 321 in the Appendix – Project Background.*

#### **NC 150** (Catawba & Iredell Counties)

STIP project **R-2307B** widens NC 150 to a four-lane divided facility from US 21 in Iredell County to east of Greenwood Road (SR 1840) in Catawba County. The project also includes a new bridge over Lake Norman between the two counties. The vast majority of this project is located outside the GHMPO region or in Iredell County. Less than a mile of the project is located inside Catawba County. Right-of-way is programmed in 2017 and construction in 2019. *Also see NC 150 in the Appendix – Project Background.*

#### **NC 127** (Alexander & Catawba Counties)

STIP project **R-3603A** upgrades existing facility to four-lanes divided between Clonginger Mill Road (SR 1400) in Catawba County and Richey Road (SR 1156) in Alexander County. The project also adds a new bridge over the Catawba River between the two counties. The current two-lane facility is projected to be near or overcapacity in 2045. The project is

planned to accommodate projected traffic volumes in order to maintain a Level of Service (LOS) of D or higher. Right-of-way is programmed in 2021 and construction in 2023. Also see *NC 127 North in the Appendix - Project Background*.

## **Alexander County**

**US 64 / Church Road (SR 1124)** – STIP project **U-6041** adds left turn lanes to US 64. Right-of-way is programmed for 2021 and construction for 2023.

**NC 16 / County Home Road (SR 1609)** – STIP project **R-5762** adds turn lanes to NC 16. Right-of-way is programmed in 2018 and construction in 2019.

**NC 127 / Bethlehem School Road (SR 1146)** – STIP project **U-6040** adds a turn lane to NC 127. Right-of-way is currently programmed in 2021 and construction in 2023.

**Sulphur Springs Road (SR 1001)** – Upgrade road from NC 90 to Lackey Road (SR 1503).

## **Burke County**

**I-40 / Jamestown Road (SR 1142), Exit 100** – STIP project **I-5874** upgrades the interchange. Two-way traffic on the interstate ramp from Old Hushpuppy Avenue on the southeast ramp and two-way traffic from Reep Drive on the northwest ramp need to be redirected in order to meet Federal design standards. Right-of-way is programmed in 2018 and construction in 2020.

**I-40 / US 64 (Burkemont Road), Exit 103** – STIP project **I-5009** upgrades the interchange. The existing bridge poorly accommodates current traffic. Traffic sometimes backs up onto I-40 creating dangerous conditions. A feasibility study on Burkemont Avenue and I-40 has been completed and includes this interchange. Right-of-way is programmed for 2019 and construction in 2020.

**I-40 / Drexel Road (SR 1712), Exit 107** – STIP Project **I-5875** upgrades the interchange to meet State and Federal design standards. Right-of-way is programmed in 2020 and construction in 2022.

**I-40 / Carolina Street SE / Millstone Avenue (SR 1734), Exit 111** – STIP project **I-5008** revises interchange. Exit 111 needs to be redesigned for safety reasons with ramps that meet State and Federal design standards. The recommended design is to revise the

interchange to a diamond configuration. Right-of-way is programmed in 2019 and construction in 2020.

**I-40 / Mineral Springs Mountain Road (SR 1744) / Eldred Street (SR 1744), Exit 112** – STIP project I-5975 upgrades the interchange. Two-way traffic from the southeast on-ramp to the flea market off Paradise Avenue needs to be relocated to meet Federal design standards. Right-of-way is programmed in 2020 and construction in 2022.

**I-40 / Old Hwy NC 10 (SR 1761), Exit 116** – STIP project I-5971 upgrades the interchange. The eastbound deceleration lane needs to be extended and the bridge replaced. Two-way traffic needs to be removed. Right-of-way is programmed in 2020 and construction in 2022.

**I-40 / Old Hwy NC 10 (SR 1761), Exit 118** – STIP project I-5990 upgrades the interchange. The eastbound deceleration lane needs to be extended and the bridge replaced. Two-way traffic needs to be removed. Right-of-way is programmed in 2021 and construction in 2023.

**US 70 (West Fleming Drive) / US 64 (Burkemont Avenue)** – Construct turn lanes on US 70 (West Fleming Drive) to US 64 (Burkemont Avenue). This will address safety and congestion deficiencies at the intersection.

**NC 18 (South Sterling Street)** – STIP project U-2550 widened to five-lane facility and upgraded the interchange (Exit 105) on I-40. Construction was completed in 2016.

**NC 181** – STIP project U-5978 widens NC 181 from Spainhour Road (SR 1440) to Bost Road (SR 1419). The current two-lane facility is projected to be near capacity in 2045. The project is planned to accommodate projected traffic volumes in order to maintain a Level of Service (LOS) of D or higher. *Also see NC 181 in the Appendix – Project Background.*

**Enola Road (SR 1922 / SR 1924)** – STIP project U-2551 widened to a multi-lane facility and upgrade the interchange (Exit 104) on I-40. Construction was completed in 2017.

**Malcolm Boulevard (SR 1001)** – Prepare Feasibility Study of widening to a multi-lane facility between US 70 and the Catawba River. Study should be coordinated with STIP project R-3430, which this MTP recommends for Horizon-Year 2035. *Also see Connelly Springs Road (SR 1001) under Horizon Year 2035 Catawba County.*

## Caldwell County

**US 321 / Mount Herman Road (SR 1160)** – STIP project **U-4700CA** converts intersection to superstreet design to address corridor congestion. Right-of-way is programmed 2018 and construction in 2019.

**US 321 / Pine Mountain Road (SR 1809/1952)** – S TIP project **U-4700CB** converts intersection to superstreet design to address corridor congestion. Right-of-way is programmed 2018 and construction in 2019.

**US 321 / Mission Road (SR 1108)** – STIP project **U-4700CC** converts intersection to superstreet design to address corridor congestion. Right-of-way is programmed 2018 and construction in 2019.

**US 321 / Dudley Shoals Road (SR 1002)** – Add southbound ramp onto US 321 to address intersection congestion at US 321 and Pinewood Road (SR 1109).

**US 321-A / Duke Street (SR 1106)** – STIP project **U-5776** realigns intersection in Granite Falls. Construction is programmed in 2018.

**US 321-A** – STIP project **U-6034** upgrades roadway from Pinewood Road (SR 1109) to Duke Street (SR 1106). Right-of-way is programmed for 2022 and construction for 2024.

**US 64 / Calico Road (SR 1142)** – STIP project **U-6033** realigns and improves intersection. Right-of-way is programmed for 2019 and construction for 2020.

**US 64 / NC 90 / NC 18 (Wilkesboro Boulevard)** – STIP project **R-5745** improves intersection. Construction is programmed for 2018.

**Dudley Shoals Road (SR 1002)** – STIP project **U-6035** constructs roundabout at five points intersection (Grace Chapel Road, Peach Orchard Road, and Campground Road). Right-of-way is programmed for 2018 and construction in 2019.

**Pinewood Road (SR 1109)** – STIP project **U-6036** modernizes roadway from US 321 to Bert Huffman Road (SR 1931). Right-of-way is programmed for 2020 and construction for 2022.

## Catawba County

**I-40 / Lenoir Rhyne Blvd (SR 1007), Exit 125** – STIP project **I-5716** adds a cloverleaf ramp to the northeast quadrant of the interchange. Construction is programmed in 2020.



**US 321 Business** – Realign North Main Avenue at West Main Street to connect with South Main Avenue (SR 2003). This project will address the congestion at the existing offset intersection in downtown Maiden.

**NC 16** – STIP project **R-3100** widens highway to a four-lane divided facility from Tower Road (SR 1895) to Claremont Road (SR 1801). The existing two-lane facility is projected to be over or near capacity by 2045. Project is currently under construction.

**NC 127 / 1st Avenue SE / 2nd Avenue SE** – STIP project **U-5777** adds turn lanes at both intersection to add capacity for high-volume turns. Right-of-way is programmed for 2019 and construction for 2020.

**NC 127** – STIP project **U-2530A** widens NC 127 to a multi-lane facility between Huffman Farm Road (SR 1132) to Zion Church Road (SR 1008). The existing two-lane facility is projected to be near or over capacity in 2045. The project is planned to accommodate projected traffic volumes in order to maintain a Level of Service (LOS) of D or higher. Right-of-way is programmed for 2021 and construction for 2023. *Also see NC 127 South in the Appendix – Project Background.*

**17<sup>th</sup> Street NW Connector** – Construct a two-lane connector from 9<sup>th</sup> Avenue NW to Clement Boulevard NW on new location. 17<sup>th</sup> Street NW is a collector that runs parallel to US 321 and serves both residential and industrial development. Extending this connection to Clement Boulevard NW provides local residents an alternative route to US 321 between Clement Boulevard and US 70.

**33<sup>rd</sup> St SW (SR 1124) and 34<sup>th</sup> St NW** – STIP project **U-6042** realigns existing offset intersection for enhanced safety and reduced congestion. Right-of-way is programmed for 2022 and construction for 2024.

**Springs Road (SR 1453) / 12<sup>th</sup> Avenue NE (SR 1453) / 16<sup>th</sup> Street NE (SR 1401)** – From 9<sup>th</sup> Avenue NE to Charlotte Street (SR 1504), this corridor primarily serves commercial development with some residential development. The number of turns has led to safety concerns. Planned project would convert this facility from five-lanes to four-lane divided with a grass median, turn lanes, and driveway consolidation.

**Sweetwater Road (SR 1468) Extension** – STIP project **U-5510** creates new three-lane connection between US 70 and Startown Road (SR 1005) aligned with Robinwood Road (SR 1148). Currently, north-south traffic must use Startown Road (SR 1005) to McDonald Parkway to travel to downtown Hickory via 21st Street SE (SR 1468). Right-of-way is already completed, and project is currently under construction.

## ***MTP Horizon Year 2035 Projects***

The following projects represent the medium-term vision for the GHMPO through year 2035. These projects are fiscally constrained within the MTP. Fiscally constrained projects are those that “can be implemented using committed, available, or reasonably available revenue sources” (23 CFR 450.104).

### **Multi-County**

#### **US 64 / NC 90** (Alexander & Caldwell Counties)

STIP project **R-2550** upgrades roadway from NC 18 in Lenoir to west of Three Forks Road (SR 1313) in Taylorsville. Recommendations include upgrading the existing two lanes, adding paved shoulders, left turn lanes at some locations, and rumble strips.

#### **US 64 / NC 18** (Burke & Caldwell Counties)

STIP project **R-2549** widens corridor to a four-lane divided facility from Rocky Road (SR 1143) in Gamewell to US 64 in Morganton. The current two-lane facility is projected to be near or overcapacity in 2045. The project is planned to accommodate projected traffic volumes in order to maintain a Level of Service (LOS) of D or higher. *Also see NC 181 in the Appendix – Project Background.*

### **Alexander County**

**NC 16** – STIP project **R-2403A** modernizes two-lane facility from the Catawba River to US 64. From 2007 through 2011, nineteen intersections along this corridor were identified as having 4 to 29 crashes. Recommendations include upgrading the existing two lanes, adding paved shoulders, left turn lanes at some locations, and rumble strips.

**NC 127** – STIP project **R-3603B** modernizes existing two-lane facility between Richey Road (SR 1156) and US 64 / NC 90. *Also see NC 127 under Horizon Year 2025 Multi-County projects.*

## Burke County

**I-40 / Causby Road (SR 1147), Exit 98** – Upgrade interchange and remove two-way traffic on northwest on-ramp.

**NC 126** – Modernize two-lane facility from Independence Blvd (SR 1304) to Watermill Road (SR 1250). Recommendations include wide outside shoulders.

**NC 126** – Modernize two-lane facility from Watermill Road (SR 1250) to Fish Hatchery Road (SR 1254). Recommendations include widened curves and paved shoulders.

## Caldwell County

**US 321** – STIP project U-4700B is from US 321A to SR 1108 (Mission Road). STIP project U-4700C is from Mission Road to Southwest Boulevard (SR 1933). These two projects widen US 321 to a six-lane, divided facility with superstreet treatments at signalized intersections. *Also see US 321 under Horizon Year 2025 Multi-County (Caldwell and Catawba) projects for STIP project U-4700A.*

**Cajah's Mountain Road (SR 1130)** – Modernize two-lane facility from Connelly Springs Road (SR 1001) to US 321A. Recommendations include widened 12-foot lanes and straightened curves.

**Dry Ponds Road (SR 1115)** – Modernize two-lane facility from Connelly Springs Road (SR 1001) to Pinewood Road (SR 1109) and construct a two-lane facility on new location from Pinewood Road (SR 1109) to US 321A. The enhanced connectivity would provide for more direct travel between US 321-A and US 321. Existing AADT of 3,200 is projected to grow to 6,500 by 2045.

**Pleasant Hill Road (SR 1159)** – Modernize two-lane facility from US 321-A to Connelly Springs Road (SR 1001). Recommendations include widened 12-foot lanes and straightened curves.

## Catawba County

**I-40** – STIP project **I-5991A** widens I-40 to a six-lane expressway from Fairgrove Church Road (SR 1476) to US 321. The corridor is expected to be over capacity by 2045. 2015 volumes ranged from 66,000 to 70,100 with a capacity of 89,000. Projected volume of 81,800 is expected to be near capacity in 2045.

**NC 127** – Convert existing five-lane facility into four-lane divided facility between 8<sup>th</sup> Avenue NE and 30<sup>th</sup> Ave NW. The corridor is heavily impacted by the high number of retail driveways. 2015 volumes range from 23,000 to 43,000, and the capacity is 25,400. 2045 volumes are projected to range from 24,600 to 45,700. There are eight intersections with a significant number of crashes, 17 to 61, between years 2007 and 2011. The intersection with 25<sup>th</sup> Avenue NW had 39 crashes during this time period while the intersection with 29<sup>th</sup> Avenue NE had 61 crashes. Recommendations also include left turn median openings and sidewalks.

**NC 150** – STIP project **R-2307A** widens NC 150 to a four-lane divided facility from relocated NC 16 to east of Greenwood Road (SR 1840). *Also see NC 150 under Horizon Year 2025 Multi-County projects.*

**17<sup>th</sup> Street NW (SR 1739)** – Widen for turn lanes and bicycle lanes from 2<sup>nd</sup> Avenue NW to 9<sup>th</sup> Avenue NW. *Also see 17<sup>th</sup> Street NW Connector under Horizon Year 2025 Catawba County projects.*

**17<sup>th</sup> Street SW (SR 1739)** – Widen to three-lane facility and add bicycle lanes from US 70 to 2<sup>nd</sup> Avenue NW (SR 1306). *Also see 17<sup>th</sup> Street NW Connector under Horizon Year 2025 Catawba County projects.*

**Fairgrove Church Road (SR 1476)** – Widen to a four-lane divided facility from I-40 to Tate Boulevard. This major north-south facility currently connects US 70 and Highland Avenue NE and is currently near to overcapacity. 2015 volumes range from 13,000 to 19,000, and the current capacity is 13,800. 2045 volumes are projected to range from 18,900 to 26,500. There are large numbers of commercial driveways along this facility, impacting corridor mobility.

**Lap Road (SR 1760)** – Improve and extend Lap Road from Rock Barn Road to NC 16. The existing roadway provides access to industrial property near I-40. The extension will create a parallel access road to I-40, serving additional commercial properties and creating alternate local-traffic connections parallel to I-40.

**McDonald Parkway NE / 29<sup>th</sup> Avenue Drive NE** – STIP project **U-2307** widens corridor to a four-lane divided facility from Springs Road (SR 1453) to NC 127. The existing two-lane facility is already overcapacity. The continuation of McDonald Parkway to NC 127 provides a loop connection to the northeast of downtown Hickory and Lenoir-Rhyne University.

**Newton and Conover Loop (Southern Portion)** – STIP project **U-3450** creates a new loop to the south of Newton. Existing NC 10 is a primary route through Newton. NC 10 from Jarrett Farm Road (SR 2015) to NC 16 is projected to be over or near capacity by 2045. Recommendations are to construct a four-lane divided facility on new location connecting with existing East P Street (SR 2105). *Also see Newton and Conover Loop (Western Portion) under Horizon Year 2045 Catawba County projects.*

**Punch Loop Road (SR 1483) and Extension West** – Construct two-lane facility on new location from 1<sup>st</sup> Street West to Fairgrove Church Road. 5700 vehicles per day (vpd) are projected to use this extension in 2045.

**Startown Road (SR 1005)** – STIP project **U-5113** widens existing two-lane facility to a four-lane divided facility from US 70 to NC 10. 2015 volumes range from 8,700 to 12,000, with a capacity of 11,900. 2045 volumes are projected to range from 10,000 to 16,300. From 2007 through 2011, four intersections along this corridor were identified as having over 20 crashes. The northern terminus with US 70 experienced over 50. There are also intermittent sections along this corridor that experienced 4 to 19 crashes during this time. Recommendations are to widen the full corridor, but priority should be placed on the segment between Catawba Valley Community College (CVCC) and US 70.

**Western Claremont Loop** – The area west of Claremont suffers from a lack of connectivity. Area roadways currently load most trips onto US 70. Recommendations are to create a new two-lane loop around Claremont to divert through traffic. Centennial Boulevard (SR 2438) currently provides this loop function in northeast Claremont. The new facility would complete a western loop from NC 16 at Centennial Boulevard to US 70. Approximately 2,700 daily vehicles are projected to use this facility in 2045. *Also see Western Claremont Loop / Heart Drive under Horizon Year 2035 Catawba County projects.*

## *MTP Horizon Year 2045 Projects*

The following projects represent the long-term vision for the GHMPO through year 2045. These projects are fiscally constrained within the MTP. Fiscally constrained projects are those that “can be implemented using committed, available, or reasonably available revenue sources” (23 CFR 450.104).

### **Multi-County**

#### **I-40** (Burke & Catawba Counties)

From Old NC 10 (SR 1761, Exit 116) in Burke County to US 321 (Exit 123) in Catawba County, I-40 is expected to be over capacity by 2045. 2015 traffic volumes ranged from 45,000 to 48,000, and 2045 volumes are projected to be between 51,500 and 58,400. Current capacity is 59,300. A six-lane expressway is recommended.

#### **I-40** (Catawba & Iredell Counties)

I-40 from I-77 in Iredell County to NC 16 is projected to be approaching its capacity of 59,200 vpd by 2045. 2015 AADTs ranged from 37,000 vpd to 43,000 vpd. Volumes are expected to reach 54,000 vpd by 2045. A six-lane expressway is recommended.

#### **Hubbard Road (SR 1143) / Shiloh Church Road (SR 1208)** (Alexander & Caldwell Counties)

STIP project **R-2918** modernizes these state roads with some new location from NC 127 to Grace Chapel Road (SR 1751).

#### **Malcolm Blvd (SR 1001)** (Burke & Caldwell Counties)

Add capacity to roadway from US 70 in Burke County to just across Catawba River in Caldwell County. Malcolm Boulevard (SR 1001) is projected to be near or over capacity in 2045. The Feasibility Study recommended in this MTP by 2025 will develop project concepts for the Burke County portion of the longer, multi-county corridor, plus the bridge across the Catawba River between the two counties. The Caldwell County portion of the corridor, also known as Connelly Springs Road (SR 1001), is planned in this MTP by 2035 for widening between just north of the Catawba River to Southwest Boulevard in Lenoir.

## Alexander County

**NC 16-** STIP project **R-2403B** modernizes NC 16 from US 64 in Taylorsville to the Wilkes County line by adding 4-foot paved shoulders and left-turn lanes at select locations. Also see NC 16 under Horizon Year 2035 Alexander County.

## Burke County

**I-40** – From McDowell County to Old NC 10 (SR 1761), I-40 has a daily capacity of 59,300 vehicles per day. 2015 volumes ranged from 28,000 to 45,000, and 2045 volumes are projected to be between 35,000 and 53,700. A six-lane expressway is recommended.

**Miller Bridge Road (SR 1786)** – Improve and modernize existing two-lane facility from Shoupes Grove Church Road (SR 1785) to I-40.

**Johnson Bridge Road (SR 1803)** – Improve and modernize existing two-lane facility from Old NC 10 to George Hidebran School Road (SR 1800).

**Tex's Fish Camp Road (SR 1627)** – This roadway and Curleys Fish Camp Road form a dog-legged intersection at US 70, creating problems for left turns. A proposed extension on new location from US 70 to Old NC 10 (SR 1761) is recommended to eliminate the offset intersection, plus provide access to I-40 via Old NC 10.

## Caldwell County

**NC 268** – Upgrade and modernize roadway from US 321 to Wilkes County Line to improve safety.

**Crump Road Extension (SR 1629)** – The Rocky Road Connector is one of a series of recommendations to improve connectivity between US 64 / NC 18 and US 321, as well as the communities of Granite Falls, Cahah's Mountain, and Hudson. The connector would link Rocky Road at Miller Hill Road to Crump Road (SR 1929) on new location and is proposed as a two-lane facility.

**Orchard Drive (SR 1146)**- Improve Orchard Drive by widening and aligning intersection of Orchard Drive (SR 1146) with Crump Road (SR 1929) at Clark's Chapel Road (SR 1153).

**Pinewood Road Extension** – Construct new two-lane facility from Dudley Shoals Road (SR 1002) to Wike Road (SR 1753). This project provides a northern connector for Granite Falls and access for local traffic away from US 321.

**Southwest Boulevard / Harper Avenue/ Creekway Drive/ Main Street** – Complete a Feasibility Study on improving these facilities to a four-lane divided facility. There are currently funded improvements to US 321 from US 70 in Catawba County northward ending at Southwest Boulevard. There remain local concerns for potential impacts of a superstreet design along US 321 through Lenoir and at the US 64 / NC 18 intersection. This Feasibility Study would assess alternatives to divert through traffic and create parallel capacity for local traffic.

## **Catawba**

**I-40** – STIP project **I-5991B** widens I-40 to a six-lane expressway from Fairgrove Church Road (Exit 128) to NC 16 (Exit 132). Current capacity is 58,500 vehicles per day with 2015 AADT of 53,000. Traffic volumes are projected to be approaching 67,000 by 2045. *Also see I-40 under Horizon Year 2035 Catawba County projects.*

### **NC 16**

Widen to four lane divided boulevard from I-40 to Alexander and Catawba County line.

**1st Street W (SR 1007)** – The existing cross-section varies from two to three lanes on the section north of NC 16 to four lanes in the downtown area. Traffic congestion currently occurs during peak hours. Recommended improvements such as the Newton-Conover Loop and Conover-Startown Extension will provide some relief for First Street in the future; however, traffic on this facility will remain high. Recommendation is to widen to multi-lanes from I-40 to NC 16 Business.

**Newton and Conover Loop (Western Portion)** – STIP project **U-2529** seeks to enhance connectivity, construct a loop facility by widening Fairgrove Church Road (SR 1476), extending new roadway south to NC 10 West in Newton, and creating new roadway north to Section House Rd. (SR 1491). Recommendations are for a four-lane divided facility on new location and some five-lane for portions of existing Fairgrove Church Road (SR 1476).

**N. Oxford Street (SR 1715) in Claremont** – Widen to five-lane facility from I-40 to US 70.

**Providence Mill Road (SR 1810)** – Intersection improvements at Providence Mill Road (SR 1810), East Maiden Road and US 321-B.



**Rosenwald School Street** – Widen Rosenwald School Street from NC 10 to Hudson Chapel Road (SR 1826) and redesign intersection of Lowrance Road (SR 1822) and Hudson Chapel Road (SR 1826).

**Western Claremont Loop / Heart Drive** – A loop facility is recommended to increase connectivity and provide alternatives to US 70 for local traffic. This project is the completion of the Western Claremont Loop from US 70 using Heart Drive to Keisler Road (SR 1731) utilizing Heart Drive. *Also see Western Claremont Loop under Horizon Year 2035 Catawba County projects.*

## **Projects Beyond 2045**

A large number of transportation needs for the Greater Hickory Region fall outside the fiscal constraints of this 2045 MTP. Project descriptions and classification maps for these future needs are located in *Appendix – Comprehensive Transportation Plan (CTP)*.