Conformity Analysis and Determination Report for the Metrolina Area:

Cabarrus-Rowan MPO
Charlotte Regional Transportation Planning Organization
Gaston-Cleveland-Lincoln MPO

2026-2035 Transportation Improvement Program

2050 Metropolitan Transportation Plan

Projects from the 2026-2035 State Transportation Improvement Program for the Donut Area in Union County

(2008 8-hour Ozone)

(1997 8-hour Ozone)

July 2025

Prepared by:

NC Department of Transportation in coordination with:

The Cabarrus-Rowan Metropolitan Planning Organization,
The Gaston-Cleveland-Lincoln Metropolitan Planning Organization,
The Charlotte Regional Transportation Planning Organization,
The Rocky River Rural Planning Organization

The North Carolina Department of Environmental Quality
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Additional copies of this report can be obtained from the following websites:
www.crmpo.org, gclmpo.org and www.crtpo.org.

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1.0 Introduction

The concept of transportation conformity was introduced in the Clean Air Act (CAA) of 1977, which included a provision to ensure that transportation investments conform to a State implementation plan (SIP) for meeting the Federal air quality standards. Conformity requirements were made substantially more rigorous in the CAA Amendments of 1990. The transportation conformity regulations that detail implementation of the CAA requirements were first issued in November 1993, and have been amended several times. The regulations establish the criteria and procedures for transportation agencies to demonstrate that air pollutant emissions from metropolitan transportation plans, transportation improvement programs and projects are consistent with ("conform to") the state's air quality goals in the SIP. This document has been prepared for state and local officials who are involved in decision making on transportation investments.

Transportation conformity is required under CAA Section 176(c) to ensure that Federally supported transportation activities are consistent with ("conform to") the purpose of a state's SIP. Transportation conformity establishes the framework for improving air quality to protect public health and the environment. Conformity to the purpose of the SIP means Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) funding and approvals are given to highway and transit activities that will not cause new air quality violations, worsen existing air quality violations, or delay timely attainment of the relevant air quality standard, or any interim milestone.

In 1997, the national ambient air quality standard (NAAQS) for ozone was reviewed and revised to reflect improved scientific understanding of the health impacts of this pollutant. When the standard was revised in 1997, an 8-hour ozone standard was established that was designed to replace the 1-hour standard. The US Environmental Protection Agency (USEPA) designated the Metrolina Area as moderate non-attainment for ozone under the 8-hour standard with an effective date of June 15, 2004. The designation covered the following geographic areas:

- Cabarrus County
- Gaston County
- Lincoln County
- Mecklenburg County
- Rowan County
- Union County
- Coddle Creek and Davidson Townships in Iredell County

On March 28, 2013, the North Carolina Division of Air Quality (NCDAQ) submitted the final *"Supplement for Redesignation Demonstration and Maintenance Plan for the Charlotte-Gastonia-Rock Hill, NC-SC 1997 8-hour Ozone Nonattainment Area"* to the USEPA. The supplement documents the Metrolina Area attaining the 1997 8-hour ozone NAAQS and fulfilling the requirements of Section 175A(b) of the Federal Clean Air Act as amended. The USEPA took final

action on December 2, 2013 to redesignate the Metrolina Area to attainment for the 1997 8-hour ozone NAAQS with an effective date of January 2, 2014.

On May 27, 2008, the USEPA once again revised the ozone NAAQS to provide increased protection of public health and welfare especially for children and "at risk" populations. As a result of the new ozone NAAQS, the Metrolina Area was designated by the USEPA as marginal nonattainment for the 2008 8-hour ozone NAAQS on May 21, 2012. The designated area for the 2008 8-hour ozone NAAQS include,

- Central Cabarrus, Concord, Georgeville, Harrisburg, Kannapolis, Midland, Mount Pleasant, Odell, Poplar Tent, New Gilead and Rimertown Townships in Cabarrus County
- Dallas, Crowders Mountain, Gastonia, Riverbend and South Point Townships in Gaston County
- Coddle Creek and Davidson Townships in Iredell County
- Catawba Springs, Lincolnton and Ironton Townships in Lincoln County
- Mecklenburg County
- Atwell, China Grove, Franklin, Gold Hill, Litaker, Locke, Providence, Salisbury, Steele and Unity Townships in Rowan County
- Goose Creek, Marshville, Monroe, Sandy Ridge and Vance Townships in Union County.

The NCDAQ submitted the *"Redesignation Demonstration and Maintenance Plan for the Charlotte-Gastonia-Salisbury, North Carolina 2008 8-Hour Ozone Marginal Nonattainment Area"* to the USEPA on April 16, 2015. In the redesignation demonstration and maintenance plan, the maintenance demonstration was estimated using a Reid vapor pressure (RVP) of 7.8 psi. On May 21, 2015, the USEPA proposed to determine the Metrolina Area was attaining the 2008 8-hour ozone standard, approve the 2014 and 2026 motor vehicle emissions budgets (MVEBs) and redesignate the Metrolina Area to attainment for the 2008 8-hour ozone standard. The USEPA approval and final rule redesignating the Metrolina Area from nonattainment to attainment was signed on July 17, 2015.

On April 16, 2015, the NCDAQ also submitted to the USEPA the *"Clean Air Act Section 110(l) Non-Interference Demonstration to Support the Gasoline Reid Vapor Pressure (RVP) Standard Relaxation in Gaston and Mecklenburg Counties"* (RVP-related SIP). The RVP-related SIP requested the USEPA to change the Federal requirement Reid vapor pressure (RVP) in Gaston and Mecklenburg Counties from 7.8 psi to 9.0 psi. The RVP-related SIP also included updated motor vehicle emissions budgets that incorporated the RVP changes to Gaston and Mecklenburg Counties. In a final rule on July 28, 2015, the USEPA took action in support of the RVP-related SIP revision noninterference demonstration by determining that the changes to the RVP in Mecklenburg and Gaston Counties will not interfere with attainment or maintenance of any NAAQS or with any other applicable provisions of the Clean Air Act.

On May 4, 2017, the North Carolina legislative act signed by Gov. Cooper changed the state's inspection and maintenance (I/M) requirements for the 22 counties subject to the state's expanded I/M program. As a result, the NCDAQ submitted a SIP revision via a letter dated July 25, 2018 to the USEPA to support the state's request to change the vehicle model year coverage for the 22 counties subject to the expanded I/M program. The NCDAQ's SIP revision also included updates

to the Metrolina maintenance plan and associated MVEBs used for transportation conformity. On May 20, 2019, the USEPA proposed to find that the change in the vehicle model year coverage for the 22 counties subject to the expanded I/M program meets the requirements of the CAA section 110(l) and will not interfere with attainment or maintenance of any NAAQS in North Carolina. The USEPA took final action on September 11, 2019 to approve that North Carolina's SIP revision to the vehicle model year coverage for the 22 counties will not interfere with continued attainment or maintenance of any applicable NAAQS and approve the updated emissions for the 2008 8-hour ozone maintenance plan, including the updated MVEBs for the Charlotte 2008 Ozone Maintenance Area. This rule became effective on October 11, 2019. On August 25, 2021, the USEPA took final action to approve a SIP revision allocating a portion of the available safety margin to revised the 2026 MVEB's used for transportation conformity. On February 13, 2023, EPA approved a second 10-yr Limited Maintenance Plan for the North Carolina portion of the Charlotte Area to provide for the maintenance of the 1997 8-hour ozone NAAQS through 2034, the end of the second 10-year portion of the maintenance period. All of the USEPA's federal register notices are in Appendix A.

South Coast Air Quality Mgmt. District v. EPA ("*South Coast II*")

On February 16, 2018, the United States Court of Appeals for the District of Columbia Circuit in *South Coast Air Quality Mgmt. District v. EPA* ("*South Coast II*," 882 F.3d 1138) held that transportation conformity determinations must be made in areas that were either nonattainment or maintenance for the 1997 ozone NAAQS and attainment for the 2008 ozone NAAQS when the 1997 ozone NAAQS was revoked. These conformity determinations are required in these areas after February 16, 2019. As previously stated, a portion of the Metrolina Area was designated attainment with a maintenance plan for the 2008 ozone NAAQS with an effective date of July 28, 2015. Therefore, per the *South Coast II* decision, this conformity determination is being made for that partial portion of the 1997 8-hour ozone NAAQS.

For the 1997 8-hour ozone NAAQS areas, transportation conformity for metropolitan transportation plans (MTPs) and state transportation improvement program (TIP) for the 1997 8-hour ozone NAAQS can be demonstrated without a regional emissions analysis, per 40 CFR 93.109(c). This provision states that the regional emissions analysis requirement applies one year after the effective date of the USEPA's nonattainment designation for a NAAQS and until the effective date of revocation of such NAAQS for an area. The 1997 8-hour ozone NAAQS revocation was effective on April 6, 2015, and the *South Coast II* court upheld the revocation. As no regional emission analysis is required for this conformity determination, there is no requirement to use the latest emissions model, except to address transportation control measures (TCMs), or budget or interim emissions tests for the 1997 8-hour ozone NAAQS. There are no TCMs in the Metrolina SIP.

Therefore, transportation conformity for the 1997 8-hour ozone NAAQS for the Metrolina Area [Cabarrus-Rowan Metropolitan Planning Organization (CRMPO), Gaston-Cleveland-Lincoln Metropolitan Planning Organization (GCLMPO), and Charlotte Regional Transportation Planning Organization (CRTPO)] and NC Department of Transportation (NCDOT) FY 2020 – 2029 Transportation Improvement Program can be demonstrated by showing the remaining

requirements in Table 1 in 40 CFR 93.109 have been met.

These requirements, which are laid out in Section 2.4 of the USEPA's November 2018 Guidance and are addressed in the remainder of the document and includes:

- Latest planning assumptions (93.110)
- Consultation (93.112)
- Transportation Control Measures (93.113)
- Fiscal constraint (93.108)

The purpose of this report is to document compliance with the provisions of the Clean Air Act Amendments of 1990 (CAAA), the Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Bipartisan Infrastructure Bill (BIL). The conformity determination for the FY 2026-2035 Transportation Improvement Program is based primarily on a regional emissions analysis that utilized the transportation networks in adopted and conforming 2050 Metropolitan Transportation Plans and the resulting emissions modeled by the North Carolina Division of Air Quality. The Conformity Determination Report (CDR) for the 2026-2035 TIP updates is available on the following websites:

- Cabarrus-Rowan MPO:
  http://crmpo.org/Plans/Transportation-Conformity

- Gaston-Cleveland-Lincoln MPO:
  https://gclmpo.org/plans-programs-and-studies/long-range-planning/

- Charlotte Regional TPO:
  https://www.crtpo.org/metropolitan-transportation-plan-1

The FY 2026-2035 TIPs for the Metrolina Area contain a number of project changes which should be included in the 2050 MTP and Transportation Conformity Determination for the Metrolina Area. This conformity determination for the Metrolina area includes a new regional emissions analysis that ensures that the FY 2026-2035 TIPs are direct subsets of the 2050 MTPs.

The MPOs and the NCDOT are required by 23 CFR Parts 450 and 500 and 40 CFR Parts 51 and 93 to make a conformity determination on any newly adopted or fiscally-constrained MTPs and TIPs. The intent of this report is to document the transportation conformity determination for the FY 2026-2035 TIPs for the Metrolina Area and projects from the FY 2026-2035 State TIP for the donut area in Union County. In addition, the United States Department of Transportation (USDOT), specifically, the Federal Highway Administration (FHWA) must make a conformity determination on the MTPs and TIPs in all non-attainment and maintenance areas. The Metrolina Area is maintenance for the 2008 8-hour ozone.

Transportation Conformity Determinations for the 2050 MTP and 2026-2035 STIP for the Metrolina Area were approved as follows:

- Cabarrus-Rowan MPO: TBD
- Gaston-Cleveland-Lincoln MPO: TBD
- Charlotte Regional Transportation Planning Organization: TBD
- The North Carolina Department of Transportation (NCDOT) (for the donut portion in Union County in the Metrolina Ozone Maintenance Area): TBD

By these actions, the MPOs and NCDOT demonstrated that the 2050 MTPs are consistent with Section 176(c) of the Clean Air Act, the State Implementation Plan, MAP-21, and 40 CFR Parts 51 and 93. These conformity demonstrations were documented by the MPOs and NCDOT in this report. This report includes the regional emissions analysis comparison prepared for the 2050 MTPs demonstrating that emissions in each of the analysis years of the MTP (2025, 2035, 2045, and 2050) are less than the motor vehicle emissions budgets established by the attainment demonstration and maintenance plan SIP in accordance with 40 CFR Part 93 and approved by the USEPA. (See Appendix A for details on MVEBs in the SIP.)

Metropolitan Transportation Plans

As noted above, the 2050 MTPs include the timing of regionally significant projects included in the FY 2026-2035 TIP for the Metrolina Area. A new regional emissions analysis was conducted for this transportation conformity determination to reflect the appropriate horizon year for these regionally significant projects. As agreed upon by the interagency consultation partners, the regional emissions analysis work for this process began on June 3, 2025 and was completed on July 8, 2025. Details related to the interagency consultation associated with this conformity determination can be found in Appendix C.

Non-exempt projects in the 2050 MTPs are required to be part of travel demand model assumptions for the appropriate analysis year. All projects are included in the travel model assumptions for the appropriate horizon year. The 2050 MTPs provide an opportunity to incorporate the most current cost estimates as required in the fiscal constraint requirements. This conformity analysis will focus on the regionally significant 2050 MTP projects presented in Appendix D as reviewed by the Interagency partners on May 29, 2025. There were no regional significant projects in the Donut area.

FISCAL CONSTRAINT DETERMINATION

As part of the federal transportation planning requirements 23 CFR Parts 450 and 500 for MTPs, the costs of implementing transportation programs and projects included in MTPs are compared with the funding expected to be available. These MTPs' financial analyses were developed in response to the requirements for "financially-constrained plans".

These MTPs consider capital costs and operation and maintenance (O&M) costs associated with the preservation and continued operation of the existing transportation system, as well as the costs associated with the recommended expansion of the transportation networks included in the MTPs. The MTPs also describe revenues from all sources that will be available to pay for capital and

O&M costs. Each MTP describes in detail its own financing plan.

2.0 Relationship of the MTP and TIP

In accordance with 40 CFR Parts 51 and 93, the TIP is a direct subset of the MTP if the following conditions are met:

- The TIP is consistent with the conforming MTP such that the regional emissions analysis performed on the MTP applies to the TIP;
- The TIP contains all projects which must be started in the TIP's timeframe to implement the highway and transit system envisioned by the MTP in each of its horizon years;
- All federally funded TIP projects which are regionally significant are part of the specific highway or transit system envisioned in the MTP horizon years; and
- The design concept and scope of each regionally significant project identified in the TIP is not significantly different from that described in the MTP.
- The number of travel lanes of each regionally significant project identified in the TIP is not significantly different from that described in the MTP.

This report documents that the TIPs for FY 2026-2035 are a direct subset of the 2050 MTPs for the Cabarrus-Rowan MPO, the Gaston-Cleveland-Lincoln MPO, the Charlotte Regional Transportation Planning Organization and the projects from the donut area in Union County is the responsibility of the North Carolina Department of Transportation. The 2050 MTPs for these areas are fiscally-constrained and are consistent with 23 CFR Part 450 Subpart C. This conformity determination is based on the most recent estimates of the emissions and the most recent planning assumptions (including population, employment, travel and congestion estimates available) as determined by the appropriate MPOs and NCDOT. It has been demonstrated in the Conformity Determination Report that the 2050 MTPs conform to the provisions of the CAAA of 1990, MAP-2, and BIL. Also, the 2050 MTPs conform to the purpose of the TIP in accordance with 40 CFR Part 93.

3.0 Latest Planning Assumptions

The planning assumptions used to develop the Conformity Determination Report for the 2008 8-hour ozone NAAQS are the latest planning assumptions in the 2050 MTP that were approved by the respective MPOs and NCDOT. Estimates of future population and employment are less than five years old. The vehicle age distribution and fleet mix distributions used as input to the emission model were based on the current data from North Carolina Division of Motor Vehicles. This data is also less than five years old. The planning assumptions are outlined in the pre-consensus plan in Appendix C.

4.0 Transportation Control Measures

As mentioned before, there are no TCMs in the Metrolina SIP.

5.0 Interagency Consultation

The FY 2026-2035 TIP conformity has undergone interagency consultation as required in the North Carolina Administrative Code Title 15A Subpart 02D .0201-.0203 inclusive. An Interagency consultation meeting involving the MPOs, NCDOT, NCDAQ, FHWA and USEPA-Region 4 was held on March 28, 2025. A summary of issues raised and responses, along with any written agency comments, are provided in Appendix I.

6.0 Public Involvement

The FY 2026-2035 TIP and 2050 MTP were reviewed by the public in accordance with the Public Involvement Policies of the Cabarrus-Rowan MPO, the Gaston-Cleveland-Lincoln MPO, the Charlotte Regional Transportation Planning Organization and the NCDOT. This report was also made available for public review by the Rocky River Rural Planning Organization (RRRPO). Copies of citizen comments and agency responses to them are attached to this report in Appendix I. The newspaper advertisements for public review and comment period are attached to this report in Appendix J.

7.0 Regional Emissions Analysis Approach

The regional emissions analysis (REA) was conducted using the 2008 8-hour ozone Maintenance Plan (9.0 psi RVP based) MVEBs published on August 25, 2021. The horizon years for this conformity determination are 2026, 2035, 2045, and 2050. The 2026 MVEB will be used for years 2026, 2035, 2045, and 2050.

Approved 2008 8-hour Ozone Maintenance SIP (kilograms/day) – *(9.0 psi RVP)*

Cabarrus-Rowan MPO		
	2014	**2026**
NOx	11,814	4,903
VOC	7,173	4,888

Gaston Cleveland Lincoln MPO		
	2014	**2026**
NOx	10,079	3,768
VOC	5,916	3,472

Charlotte Regional TPO- Rocky River RPO		
	2014	**2026**
NOx	32,679	12,241
VOC	18,038	11,943

8.0 Emission Comparison Summary Tests by Location and Pollutants

Ozone

Cabarrus-Rowan MPO Emissions 2008 8-hour ozone Maintenance Plan MVEB Comparison Summary (9.0 psi RVP)

CRMPO Emissions Comparison Summary (kilograms/day)				
Year	NOx		VOC	
	MTP Emissions	SIP Budget	MTP Emissions	SIP Budget
2026	4,320	6,543	3,127	4,753
2035	1,678	6,543	2,184	4,753
2045	1,286	6,543	1,968	4,753
2050	1,298	6,543	1,901	4,753

Gaston-Cleveland-Lincoln MPO Emissions 2008 8-hour ozone Maintenance Plan MVEB Comparison Summary (9.0 psi RVP)

GCLMPO Emissions Comparison Summary (kilograms/day)				
Year	NOx		VOC	
	MTP Emissions	SIP Budget	MTP Emissions	SIP Budget
2026	3,932	5,117	2,629	3,583
2035	1,360	5,117	1,678	3,583
2045	948	5,117	1,407	3,583
2050	925	5,117	1,318	3,583

CRTPO and RRRPO 2008 8-hour ozone Maintenance Plan MVEB Comparison Summary (9.0 psi RVP)

CRTPO and RRPO Emissions Comparison Summary (kilograms/day)				
Year	NOx		VOC	
	MTP Emissions	SIP Budget	MTP Emissions	SIP Budget
2026	15,165	22,417	9,679	13,818
2035	7,168	22,417	7,933	13,818
2045	5,307	22,417	7,168	13,818
2050	5,280	22,417	6,807	13,818

The MOVES and Regional Emission Analysis files are provided in Appendix G.

9.0 Findings of Conformity

Cabarrus-Rowan MPO Ozone Conformity Finding for the 2050 Metropolitan Transportation Plan and 2026-2035 Transportation Improvement Program

Based on the analysis and consultation and involvement process described in this report, the Cabarrus-Rowan MPO 2050 Metropolitan Transportation Plan and **2026-2035** Transportation Improvement Program are found to conform to the purpose of the North Carolina SIP. The emissions expected from the implementation of the Cabarrus-Rowan MPO 2050 Metropolitan Transportation Plan and **2026-2035** Transportation Improvement Program are in conformity with the 2008 8-hour ozone standard.

Gaston-Cleveland-Lincoln MPO Ozone Conformity Finding for the 2050 Metropolitan Transportation Plan and 2026-2035 Transportation Improvement Program

Based on the analysis and consultation and involvement process described in this report, the Gaston-Cleveland-Lincoln MPO 2050 Metropolitan Transportation Plan and **2026-2035** Transportation Improvement Program are found to conform to the purpose of the North Carolina SIP. The emissions expected from the implementation of the Gaston-Cleveland-Lincoln MPO 2050 Metropolitan Transportation Plan and **2026-2035** Transportation Improvement Program are in conformity with the 2008 8-hour ozone standard.

Charlotte Regional Transportation Planning Organization Ozone Conformity Finding for the 2050 Metropolitan Transportation Plan and 2026-2035 Transportation Improvement Program

Based on the analysis and consultation and involvement process described in this report, the Charlotte Regional Transportation Planning Organization 2050 Metropolitan Transportation Plan and **2026-2035** Transportation Improvement Program are found to conform to the purpose of the North Carolina SIP. The emissions expected from the implementation of the Charlotte Regional Transportation Planning Organization 2050 Metropolitan Transportation Plan and **2026-2035** Transportation Improvement Program are in conformity with the 2008 8-hour ozone standard.

NCDOT Donut Area Conformity Finding for Projects from the 2026-2035 State Transportation Improvement Program

Based on the analysis and consultation and involvement process described in this report, the projects from the **2026-2035** State Transportation Improvement Program for the donut area in Union County that is outside of the MPO boundary is found to conform to the purpose of the North Carolina State Implementation Plan. The emissions expected from the implementation of the projects from the **2026-2035** State Transportation Improvement Program are in conformity with the 2008 8-hour ozone standard.

The MPO/NCDOT conformity determinations and TIP/MTP adoptions are provided in Appendix J**.** The USDOT Conformity Determination Letter is provided in Appendix K.

Appendix A: Metrolina Area Ozone SIP Federal Register Notices

Dated: June 7, 2024.

J.A. Stockwell,

Captain, U.S. Coast Guard, Captain of the Port, Sector Virginia.

[FR Doc. 2024–12845 Filed 6–12–24; 8:45 am]

BILLING CODE 9110–04–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R04–OAR–2023–0057; FRL–11847–02–R4]

Air Plan Approval; North Carolina; Revision to Approved Motor Vehicle Emissions Budgets

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving a revision to the North Carolina State Implementation Plan (SIP), submitted by the North Carolina Department of Environmental Quality (NCDEQ), Division of Air Quality, on December 19, 2022. The revision updates the 2026 on-road and nonroad emissions inventories and safety margins and allocates a portion of the newly available 2026 safety margins in the 2008 8-hour Ozone Maintenance Plan to the 2026 nitrogen oxides (NO_X) and volatile organic compounds (VOC) motor vehicle emissions budgets (''budgets'') for the North Carolina portion of the Charlotte-Rock Hill, NC–SC bi-state Area (hereinafter referred to as the ''North Carolina portion of the Charlotte Maintenance Area'') to accommodate updates from the EPA Motor Vehicle Emissions Simulator (MOVES3) model. The SIP revision also revises the current 2026 budgets based on the MOVES3 updates and recalculates new available safety margins. NCDEQ's December 19, 2022, submission supplements the revised 2008 8-hour Ozone Maintenance Plan submitted by NCDEQ on July 16, 2020, and approved by EPA on August 25, 2021. EPA is approving North Carolina's December 19, 2022, SIP revision pursuant to section 110(a)(1) of the Clean Air Act (CAA) and deeming the budgets adequate for transportation conformity purposes because they meet the applicable statutory and regulatory requirements.

DATES: This rule is effective July 15, 2024.

ADDRESSES: EPA has established a docket for this action under Docket Identification No. EPA–R04–OAR–2023–0057. All documents in the docket are listed on the *www.regulations.gov* website. Although listed in the index, some information may not be publicly available, *i.e.*, Confidential Business Information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *www.regulations.gov* or in hard copy at the Air Regulatory Management Section, Air Planning and Implementation Branch, Air and Radiation Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street SW, Atlanta, Georgia 30303–8960. EPA requests that if at all possible, you contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section to schedule your inspection. The Regional Office's official hours of business are Monday through Friday 8:30 a.m. to 4:30 p.m., excluding Federal holidays.

FOR FURTHER INFORMATION CONTACT: Dianna Myers, Air Regulatory Management Section, Air Planning and Implementation Branch, Air and Radiation Division, Region 4, U.S. Environmental Protection Agency, 61 Forsyth Street SW, Atlanta, Georgia 30303–8960. The telephone number is (404) 562–9207. Ms. Dianna Myers can also be reached via electronic mail at *Myers.Dianna@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. This Action

EPA is approving NCDEQ's December 19, 2022, SIP revision which updates the 2026 on-road and nonroad emissions inventories with the latest (at the time of NCDEQ's submission) approved EPA mobile emissions model, MOVES3, allocates a portion of the newly available safety margin, revises the 2026 NO_X and VOC budgets, and recalculates the available safety margins for the North Carolina portion of Charlotte 2008 8-hour Ozone Maintenance Area [1] for transportation conformity purposes.

The revised 2026 NO_X and VOC budgets from NCDEQ's December 19, 2022, SIP revision will replace the existing budgets in the State's 2008 8-hour Ozone Maintenance Plan approved on August 25, 2021. *See* 86 FR 47387. When today's action is effective, the newly revised 2026 budgets must be used in future transportation conformity analyses for the Area according to the Transportation Conformity Rule. *See* 40 CFR 93.118. Therefore, the August 25, 2021, approved budgets will no longer be applicable for transportation conformity purposes.

This action revises the 2026 on-road and nonroad emissions inventories and the NO_X and VOC safety margins using MOVES3. The revision also allocates a portion of the revised available safety margins to the 2026 NO_X and VOC budgets and recalculates new available safety margins. The emissions inventories for point and area sources from NCDEQ's July 16, 2020, SIP revision remain the same. EPA is approving North Carolina's December 19, 2022, SIP revision because it continues to demonstrate maintenance for the Charlotte Maintenance Area.

II. Background

Effective July 20, 2012, EPA designated the Charlotte-Rock Hill, NC–SC Area as Marginal nonattainment for the 2008 8-hour ozone national ambient air quality standard (hereinafter referred to as NAAQS or standard). The North Carolina portion of the Charlotte 2008 Maintenance Area includes Mecklenburg in its entirety and portions of Cabarrus, Gaston, Iredell, Lincoln, Rowan, and Union Counties. The Charlotte Maintenance Area also includes a portion of York County located in Rock Hill, South Carolina. *See* 77 FR 30088 (May 21, 2012). The North Carolina portion of the Charlotte Maintenance Area is comprised of three metropolitan planning organizations (MPOs): the Charlotte Regional Transportation Planning Organization (CRTPO) which covers Iredell, Mecklenburg, and Union Counties; the Cabarrus-Rowan Metropolitan Planning Organization (CRMPO) which covers Cabarrus and Rowan Counties; and the Gaston-Cleveland-Lincoln Metropolitan Planning Organization (GCLMPO) which covers Gaston, Cleveland, and Lincoln Counties. Although Cleveland County is included in the GCLMPO planning boundary, it was not included in the North Carolina portion of the Charlotte Maintenance Area. Each MPO has its own budget referred to as a ''sub-area budget.'' The York County, South Carolina, portion of this maintenance area has a separate MPO and budgets. The South Carolina portion of the maintenance area implements transportation conformity independent of the North Carolina portion.

[1] The North Carolina portion of the Charlotte Maintenance Area for the 2008 8-hour ozone national ambient air quality standards (NAAQS or standards) is comprised of the following counties: Mecklenburg County in its entirety and portions of Cabarrus, Gaston, Iredell, Lincoln, Rowan, and Union Counties.

EPA originally approved NCDEQ's 2008 8-hour ozone redesignation request and maintenance SIP for the North Carolina portion of the Charlotte Maintenance Area on July 28, 2015 (80 FR 44873), with base year NO_X and VOC actual emissions inventories for 2014; projected, future, and interim year inventories for 2015, 2018, and 2022; and projected final year emission inventory for 2026. On August 17, 2015 (80 FR 49164), EPA approved North Carolina's section 110(l) noninterference demonstration requesting relaxation of the Federal Reid Vapor Pressure requirement from 7.8 pounds per square inch (psi) to 9.0 psi and a revision to the 2026 NO_X and VOC sub-area budgets for Mecklenburg and Gaston Counties only. *See* 80 FR 44868 (July 28, 2015).

On September 11, 2019 (84 FR 47889), EPA approved NCDEQ's July 25, 2018, SIP revision related to North Carolina's I/M Program. The September 11, 2019, SIP approval updated the on-road mobile source inventory and revised the 2026 sub-area VOC and NO_X budgets; these remain the current SIP-approved budgets and inventories. The revised 2026 budgets became effective on October 11, 2019.

On August 25, 2021, EPA approved NCDEQ's July 16, 2020, SIP revision which allocated a portion of the available safety margin to the 2026 sub-area NO_X and VOC budgets to accommodate updates to the travel demand model used to calculate vehicle miles traveled in the Area. *See* 86 FR 47387. The revision to the 2026 sub-area budgets became effective on September 24, 2021.

EPA's analysis of North Carolina's December 19, 2022, SIP submittal indicates that maintenance will continue to be demonstrated for the Charlotte Maintenance Area with the revised MOVES3 on-road and nonroad emissions inventories, revised safety margins and new allocations of the available safety margins to the 2026 budgets because the total level of emissions from all source categories remains equal to or less than the attainment level of emissions.

In a notice of proposed rulemaking (NPRM) published on April 12, 2024 (89 FR 25849), EPA proposed to approve the December 19, 2022, SIP revision. The details of North Carolina's submittal and the rationale for EPA's action are explained further in the April 12, 2024, NPRM. Comments on the NPRM were due on or before May 13, 2024. EPA did not receive any comments on the April 12, 2024, NPRM.

Tables 1 through 3, below, provide the Revised NO_X and VOC Total Man-Made Emissions and Safety Margins.[2]

TABLE 1—REVISED TOTAL MAN-MADE NO_X EMISSIONS FOR NORTH CAROLINA PORTION OF THE CHARLOTTE MAINTENANCE AREA

[Tons/day]

County	2014	2015	2018	2022	2026
Cabarrus *	11.49	10.73	6.78	5.44	4.61
Gaston *	27.89	27.62	12.03	6.41	7.87
Iredell *	6.86	6.49	5.41	4.68	4.42
Lincoln *	4.36	4.71	6.41	4.29	2.48
Mecklenburg	56.71	52.97	39.16	33.52	34.95
Rowan *	11.74	11.31	8.28	7.01	6.02
Union *	11.13	10.36	6.63	5.09	4.40
Total	130.18	124.19	84.69	66.44	64.75

* Emissions for the portion of the county included in the maintenance area.

TABLE 2—REVISED TOTAL MAN-MADE VOC EMISSIONS FOR NORTH CAROLINA PORTION OF THE CHARLOTTE MAINTENANCE AREA

[Tons/day]

County	2014	2015	2018	2022	2026
Cabarrus *	11.50	11.27	9.51	9.23	8.57
Gaston *	12.96	12.74	11.53	10.94	10.42
Iredell *	6.33	6.22	5.29	5.11	4.88
Lincoln *	6.55	6.47	4.81	4.66	4.63
Mecklenburg	50.10	49.16	45.31	44.47	43.72
Rowan *	12.59	12.38	12.47	12.19	11.96
Union *	13.09	12.85	10.91	10.68	10.39
Total	113.12	111.09	99.82	97.28	94.57

* Emissions for the portion of the county included in the maintenance area.

TABLE 3—REVISED SAFETY MARGINS FOR THE NORTH CAROLINA PORTION OF THE CHARLOTTE MAINTENANCE AREA

Year	NO_X (tons/day)	VOC (tons/day)
2014	N/A	N/A
2015	−5.99	−2.03
2018	−45.49	−13.30

[2] A safety margin is the difference between the attainment level of emissions from all source categories (*i.e.,* point, area, on-road, and nonroad) and the projected level of emissions in the maintenance year from all source categories.

TABLE 3—REVISED SAFETY MARGINS FOR THE NORTH CAROLINA PORTION OF THE CHARLOTTE MAINTENANCE AREA—Continued

Year	NO_X (tons/day)	VOC (tons/day)
2022	−63.74	−15.84
2026	−65.43	−18.55

Table 4 provides the Revised On-road NO_X and VOC Emissions Inventories and Table 5 provides the NO_X and VOC Percentage of the On-Road Emissions Allocated to the Motor Vehicle Emissions Budget.

TABLE 4—REVISED ON-ROAD MOBILE SOURCE NO_X AND VOC SUMMER DAY EMISSIONS IN 2014 AND 2026 FOR THE NORTH CAROLINA PORTION OF THE CHARLOTTE MAINTENANCE AREA

County	2014 NO_X		2014 VOC		2026 NO_X		2026 VOC	
	tons/day	kg/day	tons/day	kg/day	tons/day	kg/day	tons/day	kg/day
Cabarrus *	6.60	5,989	4.15	3,765	2.43	2,208	1.76	1,600
Gaston *	8.11	7,357	4.61	4,179	2.45	2,224	1.68	1,524
Iredell *	3.36	3,045	1.95	1,768	1.29	1,171	0.86	782
Lincoln *	3.00	2,723	1.91	1,737	1.06	963	0.76	688
Mecklenburg *	26.99	24,488	14.40	13,060	12.08	10,957	7.14	6,476
Rowan *	6.42	5,825	3.76	3,408	1.94	1,757	1.37	1,246
Union *	5.67	5,146	3.54	3,210	2.29	2,074	1.62	1,471
Total	60.15	54,572	34.32	31,127	23.54	21,354	15.19	13,787

* Emissions for the portion of the county included in the maintenance area.

TABLE 5—PERCENTAGE OF ON-ROAD EMISSIONS ALLOCATED TO THE 2026 MOTOR VEHICLE EMISSIONS BUDGET

County	NO_X (%)	VOC (%)
Cabarrus	65	67
Gaston	60	62
Iredell	62	62
Lincoln	62	62
Mecklenburg	57	57
Rowan	65	67
Union	60	62

Based on the on-road emissions inventory revisions in Table 4, the following tables provide the NO_X and VOC sub-area budgets with the proposed safety margin allocations in kg/day for transportation conformity purposes for 2026 (2014 is only shown for illustration because no changes are being made to the budgets for that year).

TABLE 6—CABARRUS-ROWAN METROPOLITAN PLANNING ORGANIZATION (CRMPO) BUDGETS IN 2014 AND 2026

[kg/day] *

	2014 NO_X	2014 VOC	2026 NO_X	2026 VOC
Base On-road Emissions	11,814	7,173	3,965	2,846
Safety margin allocated to budget			2,578	1,907
Conformity budget	11,814	7,173	6,543	4,753

* Includes the portions of Cabarrus and Rowan Counties in the maintenance area.

TABLE 7—GASTON-CLEVELAND-LINCOLN METROPOLITAN PLANNING ORGANIZATION (GCLMPO) BUDGETS IN 2014 AND 2026

[kg/day] *

	2014 NO_X	2014 VOC	2026 NO_X	2026 VOC
Base On-road Emissions	10,079	5,916	3,187	2,212
Safety margin allocated to budget			1,930	1,371
Conformity budget	10,079	5,916	5,117	3,583

* Includes the portions of Gaston and Lincoln Counties in the maintenance area. Although Cleveland County is included in the MPO, it is not included in the Charlotte ozone maintenance area.

TABLE 8—PROPOSED CHARLOTTE REGIONAL TRANSPORTATION PLANNING ORGANIZATION (CRTPO) ROCKY RIVER RURAL PLANNING ORGANIZATION (RRRPO) BUDGETS IN 2014 AND 2026

[kg/day] *

	2014 NO_X	2014 VOC	2026 NO_X	2026 VOC
Base On-road Emissions	32,679	18,038	14,202	8,729
Safety margin allocated to budget	.....	.....	8,215	5,089
Conformity budget	32,679	18,038	22,417	13,818

* Includes all of Mecklenburg County and a portion of Iredell and Union Counties in the maintenance area.

The remaining new safety margins after the allocation to the 2026 budgets are 51.41 tons/day and 9.33 tons/day for NO_X and VOC, respectively, as shown below in Table 9.

TABLE 9—NEW SAFETY MARGINS FOR THE NORTH CAROLINA PORTION OF THE CHARLOTTE MAINTENANCE AREA

Year	NO_X (tons/day)	VOC (tons/day)
2014	N/A	N/A
2015	−5.99	−2.03
2018	−45.49	−13.30
2022	−63.74	−15.84
2026	−51.41	−9.33

III. Final Action

EPA has evaluated North Carolina's submittal and has determined that it meets the applicable requirements of the CAA and EPA regulations and is consistent with EPA policy. Therefore, EPA is approving NCDEQ's December 19, 2022, SIP revision to revise the Charlotte 2008 8-hour Ozone Maintenance Plan that updates the 2026 on-road and nonroad emissions inventories and safety margins with MOVES3 and allocates a portion of the newly available 2026 safety margins to the budgets. The SIP revision also updates the current 2026 budgets with MOVES3 and recalculates new available safety margins. The revised budgets ensure continued attainment of the 2008 8-hour ozone NAAQS through the maintenance year 2026. In addition, EPA is deeming the budgets adequate for transportation conformity purposes because the budgets meet the adequacy criteria in the conformity rule at 40 CFR 93.118(e)(4). Once this action is effective, the newly revised MOVES3 2026 budgets for NO_X and VOC identified in Tables 6 through 8 will be used by the MPOs in future transportation conformity determinations.

Within 24 months from the effective date of this approval, the transportation partners are required to demonstrate conformity to the revised NO_X and VOC budgets pursuant to 40 CFR 93.104(e).

IV. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. *See* 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 14094 (88 FR 21879, April 11, 2023);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because it approves a State program;
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001); and
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA.

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian Tribe has demonstrated that a Tribe has jurisdiction. In those areas of Indian country, the rule does not have Tribal implications and will not impose substantial direct costs on Tribal governments or preempt Tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 FR 7629, February 16, 1994) directs Federal agencies to identify and address ''disproportionately high and adverse human health or environmental effects'' of their actions on minority populations and low-income populations to the greatest extent practicable and permitted by law. EPA defines environmental justice (EJ) as ''the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws,

regulations, and policies.'' EPA further defines the term fair treatment to mean that ''no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental, and commercial operations or programs and policies.''

NCDEQ did not evaluate EJ considerations as part of its SIP submittal; the CAA and applicable implementing regulations neither prohibit nor require such an evaluation. EPA did not perform an EJ analysis and did not consider EJ in this action. Due to the nature of the action being taken here, this action is expected to have a neutral to positive impact on the air quality of the affected area. Consideration of EJ is not required as part of this action, and there is no information in the record inconsistent with the stated goal of E.O. 12898 of achieving EJ for people of color, low-income populations, and Indigenous peoples.

This action is subject to the Congressional Review Act, and EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by August 12, 2024. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. *See* section 307(b)(2).

List of Subjects in 40 CFR Part 52

Environmental Protection, Air Pollution Control, Incorporation by reference, Intergovernmental relations, Nitrogen oxides, Particulate matter, Ozone, Reporting and Recordkeeping Requirements, Sulfur oxides, Volatile organic compounds.

Dated: June 4, 2024.

Jeaneanne Gettle,

Acting Regional Administrator, Region 4.

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42.U.S.C. 7401 *et seq.*

Subpart II—North Carolina

■ 2. In § 52.1770 (e), amend the table by adding a new entry for ''MVEB Revision to the 2008 8-hour Ozone Maintenance Plan for the North Carolina portion of the bi-state Charlotte Area'' at the end of the table.

The addition reads as follows:

§ 52.1770 Identification of plan.

* * * * *

(e) * * *

EPA-APPROVED NORTH CAROLINA NON-REGULATORY PROVISIONS

Provision	State effective date	EPA approval date	**Federal Register** citation	Explanation
* * *	*	*	*	*
MVEB Revision to the 2008 8-hour Ozone Maintenance Plan for the North Carolina portion of the bi-state Charlotte Area.	12/19/2022	6/13/2024	[Insert first page of **Federal Register** citation].	

[FR Doc. 2024–12805 Filed 6–12–24; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R03–OAR–2023–0381; EPA–R03–OAR–2023–0380; FRL–9822–02–R3]

Air Plan Approval; West Virginia; 2006 24-Hour Fine Particulate Matter Limited Maintenance Plans for the Charleston Area and the West Virginia Portion of the Steubenville-Weirton Area

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving state implementation plan (SIP) revisions submitted by the State of West Virginia through the West Virginia Department of Environmental Protection (WVDEP). The revisions pertain to second 10-year limited maintenance plans (LMPs) for the 2006 24-hour fine particulate matter ($PM_{2.5}$) national ambient air quality standard (NAAQS). The LMPs address the Charleston, West Virginia area (Charleston Area) and the West Virginia portion of the Steubenville-Weirton, Ohio-West Virginia area (West Virginia portion of the Steubenville-Weirton Area). EPA is approving the Charleston Area LMP and the West Virginia portion of the Steubenville-Weirton Area LMP because they provide for the maintenance of the 2006 24-hour $PM_{2.5}$ NAAQS through the end of their respective second 10-year maintenance periods. In addition, EPA is finalizing the process to find the LMPs adequate for transportation conformity purposes. EPA is approving these revisions to the West Virginia SIP in accordance with the requirements of the Clean Air Act (CAA).

DATES: This final rule is effective on July 15, 2024.

ADDRESSES: EPA has established dockets for these actions under Docket ID No. EPA–R03–OAR–2023–0381 (Charleston Area) and EPA–R03–OAR–2023–0380 (West Virginia portion of the Steubenville-Weirton Area). All documents in the dockets are listed on the *www.regulations.gov* website. Although listed in the index, some information is not publicly available, *e.g.,* confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy form. Publicly available docket materials are available through *www.regulations.gov, o*r please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section for additional availability information.

FOR FURTHER INFORMATION CONTACT: Ellen Schmitt, Planning & Implementation Branch (3AD30), Air & Radiation Division, U.S. Environmental Protection Agency, Region III, 1600 John F. Kennedy Boulevard, Philadelphia,

Appendix B: North Carolina's Non-Interference Demonstration for the Federal Low RVP Submittal

STATE OF OREGON AIR QUALITY CONTROL PROGRAM—Continued

SIP citation	Title/subject	State effective date	EPA approval date	Explanation
*	* * * *	*	*	*
	Grants Pass Second 10-Year Carbon Monoxide Limited Maintenance Plan.	4/16/2015	7/28/2015, [Insert **Federal Register** citation].	
*	* * * *	*	*	*

* * * * *

[FR Doc. 2015–18220 Filed 7–27–15; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R04–OAR–2015–0260; FRL–9931–27–Region 4]

Approval and Promulgation of Implementation Plans; North Carolina: Non-Interference Demonstration for Federal Low-Reid Vapor Pressure Requirement for Gaston and Mecklenburg Counties

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving the State of North Carolina's April 16, 2015, revision to its State Implementation Plan (SIP), submitted through the North Carolina Department of Environment and Natural Resources, Division of Air Quality (DAQ), in support of the State's request that EPA change the Federal Reid Vapor Pressure (RVP) requirements for Gaston and Mecklenburg Counties. This RVP-related SIP revision evaluates whether changing the Federal RVP requirements in these counties would interfere with the requirements of the Clean Air Act (CAA or Act). North Carolina's April 16, 2015, RVP-related SIP revision also updates the State's maintenance plan and the associated motor vehicle emissions budgets (MVEBs) related to its redesignation request for the North Carolina portion of the Charlotte-Rock Hill 2008 8-hour ozone nonattainment area (Charlotte Area) to reflect the requested change in the Federal RVP requirements. EPA has determined that North Carolina's April 16, 2015, RVP-related SIP revision is consistent with the applicable provisions of the CAA.

DATES: This rule is effective July 28, 2015.

ADDRESSES: EPA has established a docket for this action under Docket Identification No. EPA–R04–OAR–2015–0260. All documents in the docket are listed on the *www.regulations.gov* Web site. Although listed in the index, some information may not be publicly available, *i.e.,* Confidential Business Information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *www.regulations.gov* or in hard copy at the Air Regulatory Management Section (formerly the Regulatory Development Section), Air Planning and Implementation Branch (formerly the Air Planning Branch), Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street SW., Atlanta, Georgia 30303–8960. EPA requests that if at all possible, you contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section to schedule your inspection. The Regional Office's official hours of business are Monday through Friday, 8:30 a.m. to 4:30 p.m., excluding Federal holidays.

FOR FURTHER INFORMATION CONTACT: Richard Wong of the Air Regulatory Management Section, in the Air Planning and Implementation Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street SW., Atlanta, Georgia 30303–8960. Mr. Wong may be reached by phone at (404) 562–8726 or via electronic mail at *wong.richard@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. What is the background for this final action?

On May 21, 2012, EPA designated and classified areas for the 2008 8-hour ozone NAAQS that was promulgated on March 27, 2008, as unclassifiable/attainment or nonattainment for the new 8-hour ozone NAAQS. *See* 77 FR 30088. The Charlotte Area was designated as nonattainment for the 2008 8-hour ozone NAAQS with a design value of 0.079 ppm. On April 16, 2015, DAQ submitted a redesignation request and maintenance plan for the North Carolina portion of the Charlotte Area for EPA's approval. In that submittal, the State included a maintenance demonstration that estimates emissions using a 7.8 psi RVP requirement for Gaston and Mecklenburg Counties for the 2008 8-hour ozone redesignation request and maintenance plan. EPA proposed action on the aforementioned redesignation request and maintenance plan in a **Federal Register** document published on May 21, 2015. *See* 80 FR 29250. The final rule approving the State's redesignation request and maintenance plan was signed on July 17, 2015. The State, in conjunction with its request to redesignate the North Carolina portion of the Charlotte Area to attainment, is also requesting a change of the Federal RVP requirement from 7.8 psi to 9.0 psi.

On April 16, 2015, to support its request for EPA to change the Federal RVP requirement for Gaston and Mecklenburg Counties, DAQ submitted a SIP revision that contains a noninterference demonstration that included modeling assuming 9.0 psi for RVP for Gaston and Mecklenburg Counties and that updates the maintenance plan submission and associated MVEBs for the North Carolina portion of the Charlotte Area. In a notice of proposed rulemaking (NPR) published on May 21, 2015, EPA proposed to approve the State's noninterference demonstration and the updates to its maintenance plan and the associated MVEBs related to the State's redesignation request for the North Carolina portion of the Charlotte Area, contingent upon EPA approval of North Carolina's redesignation request and maintenance plan for the North Carolina portion of the Charlotte Area. *See* 80 FR 29230. The details of North Carolina's submittal and the rationale for EPA's actions are explained in the NPR. EPA did not receive any comments on the proposed action.

II. Final Action

EPA is taking final action to approve the State of North Carolina's noninterference demonstration, submitted on April 16, 2015, in support of the State's request that EPA change

the Federal RVP requirements for Gaston and Mecklenburg Counties from 7.8 psi to 9.0 psi. Specifically, EPA has determined that the change in the RVP requirements for Gaston and Mecklenburg Counties will not interfere with attainment or maintenance of any NAAQS or with any other applicable requirement of the CAA. North Carolina's April 16, 2015, SIP revision also updates its maintenance plan and the associated MVEBs related to the State's redesignation request for the North Carolina portion of the Charlotte Area to reflect emissions changes for the requested change to the Federal RVP requirements. EPA is approving those changes to update the maintenance plan and the MVEBs.

EPA has determined that North Carolina's April 16, 2015, RVP-related SIP revision is consistent with the applicable provisions of the CAA for the reasons provided in the NPR. EPA is not taking action today to remove the Federal 7.8 psi RVP requirement for Gaston and Mecklenburg Counties. Any such action would occur in a separate and subsequent rulemaking.

In accordance with 5 U.S.C. 553(d), EPA finds that there is good cause for this action to become effective immediately upon publication. This is because a delayed effective date is unnecessary because this action approves a noninterference demonstration that will serve as the basis of a subsequent action to relieve the Area from certain CAA requirements that would otherwise apply to it. The immediate effective date for this action is authorized under both 5 U.S.C. 553(d)(1), which provides that rulemaking actions may become effective less than 30 days after publication if the rule grants or recognizes an exemption or relieves a restriction, and section 553(d)(3), which allows an effective date less than 30 days after publication as otherwise provided by the agency for good cause found and published with the rule. The purpose of the 30-day waiting period prescribed in section 553(d) is to give affected parties a reasonable time to adjust their behavior and prepare before the final rule takes effect. This rule, however, does not create any new regulatory requirements such that affected parties would need time to prepare before the rule takes effect. Rather, this rule will serve as a basis for a subsequent action to relieve the Area from certain CAA requirements. For these reasons, EPA finds good cause under 5 U.S.C. 553(d)(3) for this action to become effective on the date of publication of this action.

III. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submittal that complies with the provisions of the Act and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, October 7, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000) nor will it impose substantial direct costs on tribal governments or preempt tribal law.

The Congressional Review Act, 5 U.S.C. 801 *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register.** A major rule cannot take effect until 60 days after it is published in the **Federal Register.** This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by September 28, 2015. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. *See* section 307(b)(2).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: July 17, 2015.

Heather McTeer Toney,

Regional Administrator, Region 4.

40 CFR part 52 is amended as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart II—North Carolina

■ 2. In § 52.1770, the table in paragraph (e) is amended by adding a new entry ''Supplement Maintenance Plan for the Charlotte Area, NC 2008 8-hour Ozone Maintenance Area and RVP Standard'' at the end of the table to read as follows:

§ 52.1770 Identification of plan.

(e) * * *

* * * * *

EPA-APPROVED NORTH CAROLINA NON-REGULATORY PROVISIONS

Provision	State effective date	EPA Approval date	**Federal Register** citation	Explanation
* *	*	*	*	* *
Supplement Maintenance Plan for the Charlotte Area, NC 2008 8-hour Ozone Maintenance Area and RVP Standard.	4/16/2015	7/28/2015	[insert **Federal Register** citation].	Provides the non-interference demonstration for revising the Federal Low-Reid Vapor Pressure requirement for the Charlotte Area, NC.

[FR Doc. 2015–18343 Filed 7–27–15; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R07–OAR–2015–0357; FRL–9931–33-Region 7]

Approval and Promulgation of Air Quality Implementation Plans; State of Iowa; Revisions to Linn County Air Quality Ordinance

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving revisions to the State Implementation Plan (SIP) for the State of Iowa. The purpose of these revisions is to update the Linn County Air Quality Ordinance, Chapter 10. These revisions reflect updates to the Iowa statewide rules previously approved by EPA and will ensure consistency between the applicable local agency rules and Federally-approved rules.

DATES: This direct final rule will be effective September 28, 2015, without further notice, unless EPA receives adverse comment by August 27, 2015. If EPA receives adverse comment, we will publish a timely withdrawal of the direct final rule in the **Federal Register** informing the public that the rule will not take effect.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R07–OAR–2015–0357, by one of the following methods:

1. *www.regulations.gov.* Follow the on-line instructions for submitting comments.

2. *Email: Hamilton.heather@epa.gov.*

3. *Mail or Hand Delivery:* Heather Hamilton, Environmental Protection Agency, Air Planning and Development Branch, 11201 Renner Boulevard, Lenexa, Kansas 66219.

Instructions: Direct your comments to Docket ID No. EPA–R07–OAR–2015–0357. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit through *www.regulations.gov* or email information that you consider to be CBI or otherwise protected. The *www.regulations.gov* Web site is an ''anonymous access'' system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to EPA without going through *www.regulations.gov,* your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket: All documents in the docket are listed in the *www.regulations.gov* index. Although listed in the index, some information is not publicly available, *i.e.,* CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in *www.regulations.gov* or in hard copy at the Environmental Protection Agency, Air Planning and Development Branch, 11201 Renner Boulevard, Lenexa, Kansas 66219. The Regional Office's official hours of business are Monday through Friday, 8:00 a.m. to 4:30 p.m. excluding legal holidays. The interested persons wanting to examine these documents should make an appointment with the office at least 24 hours in advance.

FOR FURTHER INFORMATION CONTACT: Heather Hamilton, Environmental Protection Agency, Air Planning and Development Branch, 11201 Renner Boulevard, Lenexa, Kansas 66219, at 913–551–7039, or by email at *Hamilton.heather@epa.gov.*

SUPPLEMENTARY INFORMATION: Throughout this document ''we,'' ''us,'' or ''our'' refer to EPA. This section provides additional information by addressing the following:

I. What is being addressed in this document?
II. Have the requirements for approval of a SIP Revision been met?
III. What action is EPA taking?
IV. Statutory and Executive Order Reviews

I. What is being addressed in this document?

The State of Iowa has requested EPA approval of revisions to the local agency's rules and regulations, Linn County Air Quality Ordinance, Chapter 10, as a revision to the SIP. In order for the local program's ''Air Quality Ordinance'' to be incorporated into the Federally-enforceable SIP, on behalf of the local agency, the state must submit the formally adopted regulations and control strategies, which are consistent with the state and Federal requirements, to EPA for inclusion in the SIP. The regulation adoption process generally includes public notice, a public comment period and a public hearing, and formal adoption of the rule by the state authorized rulemaking body. In this case, that rulemaking body is the local agency. After the local agency formally adopts the rule, the local agency submits the rulemaking to the

Clean Air Act Section 110(l) Non-Interference Demonstration to Support the Gasoline Reid Vapor Pressure (RVP) Standard Relaxation in Gaston and Mecklenburg Counties

for

The Charlotte-Gastonia-Salisbury, NC 2008 8-Hour Ozone Maintenance Area

Prepared by

North Carolina Department of Environment and Natural Resources

Division of Air Quality

April 16, 2015

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1.0 OVERVIEW

In addition to requesting the Charlotte marginal nonattainment area be redesignated as attaining the 2008 8-hour ozone National Ambient Air Quality Standard (NAAQS), the North Carolina Division of Air Quality (DAQ) is requesting a relaxation of the federal summertime Reid vapor pressure (RVP) gasoline standard for Mecklenburg and Gaston Counties from 7.8 to 9.0 pounds per square inch (psi). The lower RVP requirement is effective in these two counties from June 1 through September 15 each year. This request is a stand-alone analysis separate from the "Redesignation Demonstration and Maintenance Plan for the Charlotte-Gastonia-Salisbury, North Carolina 2008 8-Hour Ozone Marginal Nonattainment Area" State Implementation Plan (SIP).

The DAQ has examined both the man-made and natural sources of volatile organic compound (VOC) emissions and their contribution to ozone formation in North Carolina. Because of the generally warm and moist climate of North Carolina, vegetation abounds in many forms, and forested lands naturally cover much of the state. As a result, the biogenic sector is the most abundant source of VOCs in North Carolina and accounts for approximately 90% of the total VOC emissions statewide. The overwhelming abundance of biogenic VOCs makes the majority of North Carolina a nitrogen oxide (NOx) limited environment for the formation of ozone. Since reductions in man-made VOC emissions do not reduce ozone levels, having a lower RVP standard during the summer months is not an effective control measure for ozone. In addition, it results in higher fuel costs, which places additional costs on businesses and consumers.

Our analysis conducted to support the non-interference demonstration under Section 110(l) of the Clean Air Act (CAA) indicates that increasing the RVP from 7.8 to 9.0 psi in Gaston and Mecklenburg Counties would not negatively impact the redesignation demonstration and maintenance plan for the Charlotte area. The emissions inventory comparison between the 7.8 and 9.0 psi RVP standards indicates that the estimated future year emissions are slightly higher for NOx and VOC. By 2026, relaxing the RVP standard is estimated to increase emissions by only 0.01 ton/day of NOx and 0.32 ton/day of VOC from all man-made emissions sources. This is equivalent to a 0.01% and 0.32% increase in total man-made emissions of NOx and VOC, respectively. When biogenic VOC emissions from natural sources (average of 183.90 tons/day from April through October using the EPA's 2011 National Emissions Inventory) are added to the man-made emissions (100.46 tons/day), the actual VOC emissions increase is only 0.11% (0.32/284.36 tons/day x 100).

Despite this small increase, the safety margin for the Charlotte maintenance area remains relatively unchanged. From 2014 through 2026, under the current RVP standard of 7.8 psi, summer day NOx emissions decrease by 62.64 tons/day and VOC emissions decrease by 12.66 tons/day which demonstrates that relaxing the RVP standard in Gaston and Mecklenburg Counties will not interfere with maintaining the overall downward trend in the emissions for the Charlotte area. The DAQ believes these small increases are within the uncertainty of the emissions inventory modeling analyses.

The DAQ concludes that relaxation of the federal RVP standard would not interfere with the attainment and maintenance of the NAAQS. The DAQ has developed a contingency plan based on a number of triggers and tracking mechanisms that will ensure that the Charlotte nonattainment area continues to maintain compliance with the 2008 8-hour ozone NAAQS. In addition, based on the DAQ's review of emissions and ambient monitoring data, it is very unlikely that relaxing the RVP standard in Gaston and Mecklenburg Counties will result in a violation of the NAAQS for carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), and particulate matter with an aerodynamic diameter less than 2.5 micrometers ($PM_{2.5}$). Therefore, with this submission, the DAQ believes the requirements of the CAA Section 110(1) have been met.

2.0 REQUEST FOR A UNIFORM REID VAPOR PRESSURE STANDARD IN THE CHARLOTTE OZONE MAINTENANCE/MARGINAL NONATTAINMENT AREA

The RVP is a federal control measure intended to lower air emissions of VOCs, a precursor to ozone formation. In the mid-to-late 1990s, the discovery that a significant amount of VOC emissions comes from natural sources began to change the understanding of the atmospheric chemistry, particularly in the Southeastern United States. Statewide, natural sources account for 90% of total VOC emissions. Today, we know that controlling ozone throughout North Carolina and much of the Southeast is more effectively done through emissions reductions of NOx. With this scientific understanding in mind, the DAQ is requesting the relaxation of the 7.8 psi RVP requirement in Gaston and Mecklenburg Counties.

This analysis shows that North Carolina can implement the 9.0 psi gasoline standard without interfering with the attainment of the NAAQS. The DAQ's analysis indicates that increasing the RVP from 7.8 to 9.0 psi would not negatively impact the redesignation request and maintenance plan. Therefore, the DAQ requests that the U.S. Environmental Protection Agency (EPA) relax the 7.8 psi RVP requirement and specify 9.0 psi as the applicable gasoline volatility standard for the entire maintenance area year round. This action would provide significant economic relief to

North Carolina consumers and businesses because it will (1) provide for a uniform gasoline standard throughout North Carolina, (2) lower summertime (June 1 – Sept. 15) gasoline prices at the pump for consumers and (3) simplify the gasoline distribution process for fuel distributors while not impacting the state's ability to maintain the 2008 ozone standard or any of the other NAAQs.

2.1 CURRENT EPA-APPROVED MAINTENANCE PLAN

Section 110(a)(1) of the CAA requires that each state adopt and submit to the EPA a plan which provides for implementation, maintenance and enforcement of primary and secondary standards for all areas within the state. The EPA stated that a 110(a)(1) maintenance plan is required for those areas that are designated as attainment/unclassifiable for the 2008 8-hour ozone standard and are designated as attainment for the 1997 8-hour and 1979 1-hour ozone standards with an approved maintenance plan. The three fundamental building blocks to this plan are:

- A foundation control program that contains all of the necessary federal and state control measures to maintain the 2008 8-hour ozone standard.

- A maintenance demonstration which shows the projected decreases in ozone-precursor emissions from all sectors (e.g., point, area, on-road and nonroad) from the effective start through the last year of the plan (i.e., 2014 through 2026). The demonstration shows that NOx and VOC emissions are expected to decrease substantially during this time: NOx emissions are expected to decrease by 62.64 tons/day and VOC emissions are expected to decrease by 12.66 tons/day from 2014 through 2026.

- A contingency plan which details actions that will be taken should the design value of any monitor within the maintenance area violate the 2008 8-hour standard.

The EPA-approved maintenance plan for the Charlotte marginal nonattainment area will be the document to which the proposed relaxation of the gasoline RVP standard will be made. The proposed and related revisions to the maintenance plan are described herein.

3.0 NON-INTERFERENCE DEMONSTRATION

3.1 EMISSIONS INVENTORIES

The 110(a)(1) maintenance plan requires the development of an attainment inventory and a future year inventory for VOC and NOx emissions for those areas that must maintain the 2008 8-hour ozone NAAQS. The Charlotte 8-hour ozone maintenance area; consisting all of Mecklenburg County and a part of Gaston, Cabarrus, Lincoln, Rowan, Union and Iredell Counties; meets the 110(a)(1) maintenance plan conditions as follows:

- The attainment inventory year must be one of the three years on which the 8-hour ozone attainment designation was based. The base year of 2014 was chosen since it is a year that falls within the attaining design value period of 2012-2014.

- The future inventory year is at least 10 years after the date that the EPA approves the redesignation request and maintenance plan. For this reason, 2026 was selected as the last year of the future inventory year is 2026.

- Finally, to be consistent with the EPA guidance, emissions inventories were prepared for the interim years of 2015, 2018 and 2022 that demonstrate a consistent, downward trend in emissions.

The emissions inventories are comprised of four major types of sources: point, area, on-road and nonroad. The projected emissions inventories have been estimated using projected rates of growth in population, traffic, economic activity, and other parameters. Naturally occurring, or biogenic, emissions are not included in the emissions inventory comparison, as these emissions are outside the state's span of control.

Relaxation of the RVP standard for Gaston and Mecklenburg Counties results in a slight increase in NOx and VOC emissions for on-road sources, and a slight increase in VOC emissions for nonroad and area sources. The remainder of this section provides a summary of the results. Appendix B to the redesignation request and maintenance plan SIP provides a detailed discussion on how the base and future year emission inventories were developed for each source category. For the applicable source categories, Appendix B presents emissions for Gaston and Mecklenburg Counties for the current summertime RVP standard of 7.8 psi and emissions for a 9.0 psi standard.

For point sources, Table 3.1 and Table 3.2 provide a summary of NOx and VOC emissions with the current 7.8 psi and proposed 9.0 psi gasoline standard, respectively. The table also shows a comparison of emissions associated with the two standards in terms of net absolute difference and percent change. No changes to point source emissions occur due to the relaxation of the RVP standard because the gasoline standard would not affect the air pollution sources reported in the point source inventory.

For area sources, relaxation of the RVP standard only affects VOC emissions associated with the gasoline service station unloading - stage I controls source category. A summary of the area source NOx and VOC emissions is presented in Table 3.3 and Table 3.4, respectively. Total area source VOC emissions are estimated to increase by 0.04 to 0.05 ton/day depending on the year.

A summary of the on-road mobile source NOx and VOC emissions is presented in Table 3.5 and Table 3.6, respectively. The MOVES2014 model estimates a NOx increase of 0.11 ton/day and VOC increase of 0.18 ton/day in year 2015 due to RVP relaxation. For 2026, MOVES2014 model estimates a NOx increase of 0.01 ton/day and VOC increase of 0.04 ton/day due to RVP relaxation. The net change in emissions associated with the RVP relaxation decline from 2015 through 2026 because of the benefits of the RVP standard on cleaner vehicle fleets is less than those for older fleets. Note that the DAQ is uncertain of the technical reason behind the model-predicted NOx emissions increases associated with relaxing the RVP standard for a given year. A discussion of the dependency between NOx emissions changes and gasoline RVP was not found in the model documentation, and a specific correlation equation could not be identified. For detailed discussion on how the on-road mobile emission inventory was developed, see Appendix B.3.

A summary of the nonroad mobile source NOx and VOC emissions is presented in Table 3.7 and Table 3.8, respectively. The relaxation of the RVP standard only affects VOC emissions from nonroad mobile sources as shown in the Table 3.8. The EPA's nonroad model estimates a VOC increase of 0.20 ton/day in 2015 and 0.24 ton/day in 2026 due to RVP relaxation. The nonroad model estimates no increase in NOx emissions from 2015 through 2026.

The sum totals of the man-made emissions for the North Carolina portion of the Charlotte nonattainment area are tabulated in Table 3.9 and Table 3.10. Overall, total NOx emissions are estimated to increase by 0.11 ton/day in 2015 and 0.01 ton/day in 2026. For VOC, total emissions are estimated to increase by 0.42 ton/day in 2015 and 0.32 ton/day in 2026 due to RVP relaxation. As explained later in Sections 3.2 through 3.4 of this analysis, these increases are not expected to impact ozone levels in the Charlotte area.

Table 3.1 Point Source NOx Emissions (tons/day)

County	Current 7.8 psi RVP				
	2014	**2015**	**2018**	**2022**	**2026**
Cabarrus[1]	1.72	1.80	1.94	2.07	2.20
Gaston[1, 2]	16.50	17.25	10.72	16.16	5.29
Iredell[1]	2.02	2.03	2.04	2.04	2.05
Lincoln[1]	0.18	0.84	0.95	1.20	0.73
Mecklenburg[2]	8.56	8.77	9.46	10.45	12.00
Rowan[1]	2.80	3.16	3.51	3.71	3.76
Union[1]	0.59	0.62	0.66	0.70	0.72
Total	**32.38**	**34.47**	**29.28**	**36.33**	**26.75**
	Proposed 9.0 psi RVP				
		2015	**2018**	**2022**	**2026**
Cabarrus[1]		1.80	1.94	2.07	2.20
Gaston[1, 2]		17.25	10.72	16.16	5.29
Iredell[1]		2.03	2.04	2.04	2.05
Lincoln[1]		0.84	0.95	1.20	0.73
Mecklenburg[2]		8.77	9.46	10.45	12.00
Rowan[1]		3.16	3.51	3.71	3.76
Union[1]		0.62	0.66	0.70	0.72
Total		**34.47**	**29.28**	**36.33**	**26.75**
Net Change in ton/day emissions		**0.00**	**0.00**	**0.00**	**0.00**
% Change in ton/day emissions		**0.00%**	**0.00%**	**0.00%**	**0.00%**

[1] Emissions for portion of county included in nonattainment area.
[2] 7.8 psi RVP requirement applies to Mecklenburg and Gaston Counties only. Proposed RVP relaxation only affects these two counties. The reaming counties already allow 9.0 psi gasoline.

Table 3.2 Point Source VOC Emissions (tons/day)

County	Current 7.8 psi RVP				
	2014	**2015**	**2018**	**2022**	**2026**
Cabarrus[1]	0.99	1.03	1.15	1.17	1.24
Gaston[1, 2]	1.82	1.90	2.06	2.16	2.22
Iredell[1]	0.68	0.68	0.69	0.69	0.69
Lincoln[1]	1.50	1.54	1.72	1.83	1.94
Mecklenburg[2]	3.36	3.45	3.73	4.02	4.36
Rowan[1]	2.30	2.40	2.70	2.85	3.14
Union[1]	1.38	1.42	1.57	1.64	1.74
Total	**12.03**	**12.42**	**13.62**	**14.36**	**15.33**
	Proposed 9.0 psi RVP				
		2015	**2018**	**2022**	**2026**
Cabarrus[1]		1.03	1.15	1.17	1.24
Gaston[1, 2]		1.90	2.06	2.16	2.22
Iredell[1]		0.68	0.69	0.69	0.69
Lincoln[1]		1.54	1.72	1.83	1.94
Mecklenburg[2]		3.45	3.73	4.02	4.36
Rowan[1]		2.40	2.70	2.85	3.14
Union[1]		1.42	1.57	1.64	1.74
Total		**12.42**	**13.62**	**14.36**	**15.33**
Net Change in ton/day emissions		**0.00**	**0.00**	**0.00**	**0.00**
% Change in ton/day emissions		**0.00%**	**0.00%**	**0.00%**	**0.00%**

[1] Emissions for portion of county included in nonattainment area.
[2] 7.8 psi RVP requirement applies to Mecklenburg and Gaston Counties only. Proposed RVP relaxation only affects these two counties. The reaming counties already allow 9.0 psi gasoline.

Table 3.3 Area Source NOx Emissions (tons/day)

County	Current 7.8 psi RVP				
	2014	**2015**	**2018**	**2022**	**2026**
Cabarrus[1]	0.97	0.96	0.96	0.96	0.96
Gaston[1, 2]	1.30	1.28	1.28	1.29	1.29
Iredell[1]	0.54	0.53	0.54	0.56	0.55
Lincoln[1]	0.40	0.40	0.40	0.40	0.40
Mecklenburg[2]	6.07	6.01	6.01	6.01	6.00
Rowan[1]	0.87	0.86	0.85	0.85	0.85
Union[1]	1.25	1.24	1.24	1.24	1.23
Total	**11.40**	**11.28**	**11.28**	**11.31**	**11.28**
	Proposed 9.0 psi RVP				
		2015	**2018**	**2022**	**2026**
Cabarrus[1]		0.96	0.96	0.96	0.96
Gaston[1, 2]		1.28	1.28	1.29	1.29
Iredell[1]		0.53	0.54	0.56	0.55
Lincoln[1]		0.40	0.40	0.40	0.40
Mecklenburg[2]		6.01	6.01	6.01	6.00
Rowan[1]		0.86	0.85	0.85	0.85
Union[1]		1.24	1.24	1.24	1.23
Total		**11.28**	**11.28**	**11.31**	**11.28**
Net Change in ton/day emissions		**0.00**	**0.00**	**0.00**	**0.00**
% Change in ton/day emissions		**0.00%**	**0.00%**	**0.00%**	**0.00%**

[1] Emissions for portion of county included in nonattainment area.
[2] 7.8 psi RVP requirement applies to Mecklenburg and Gaston Counties only. Proposed RVP relaxation only affects these two counties. The reaming counties already allow 9.0 psi gasoline.

Table 3.4 Area Source VOC Emissions (tons/day)

County	Current 7.8 psi RVP				
	2014	**2015**	**2018**	**2022**	**2026**
Cabarrus[1]	5.09	5.13	5.26	5.42	5.59
Gaston[1, 2]	5.24	5.30	5.42	5.59	5.75
Iredell[1]	3.08	3.13	3.26	3.43	3.58
Lincoln[1]	2.56	2.57	2.64	2.74	2.82
Mecklenburg[2]	20.59	20.73	21.15	21.70	22.22
Rowan[1]	5.23	5.28	5.40	5.56	5.72
Union[1]	6.09	6.12	6.26	6.43	6.60
Total	**47.88**	**48.26**	**49.39**	**50.87**	**52.28**
	Proposed 9.0 psi RVP				
		2015	**2018**	**2022**	**2026**
Cabarrus[1]		5.13	5.26	5.42	5.59
Gaston[1, 2]		5.30	5.43	5.60	5.75
Iredell[1]		3.13	3.26	3.43	3.58
Lincoln[1]		2.57	2.64	2.74	2.82
Mecklenburg[2]		20.77	21.19	21.73	22.26
Rowan[1]		5.28	5.40	5.56	5.72
Union[1]		6.12	6.26	6.43	6.60
Total		**48.30**	**49.44**	**50.91**	**52.32**
Net Change in ton/day emissions		**0.04**	**0.05**	**0.04**	**0.04**
% Change in ton/day emissions		**0.08%**	**0.10%**	**0.08%**	**0.08%**

[1] Emissions for portion of county included in nonattainment area.
[2] 7.8 psi RVP requirement applies to Mecklenburg and Gaston Counties only. Proposed RVP relaxation only affects these two counties. The reaming counties already allow 9.0 psi gasoline.

Table 3.5 On-road Mobile Source NOx Emissions (tons/day)

County	Current 7.8 psi RVP				
	2014	**2015**	**2018**	**2022**	**2026**
Cabarrus[1]	6.60	5.93	3.94	2.79	1.86
Gaston[1, 2]	8.11	7.23	4.60	3.04	1.97
Iredell[1]	3.36	3.05	2.05	1.41	0.93
Lincoln[1]	3.00	2.75	1.84	1.23	0.76
Mecklenburg[2]	26.99	24.12	14.35	9.63	6.85
Rowan[1]	6.42	5.75	3.73	2.56	1.59
Union[1]	5.67	5.14	3.41	2.28	1.51
Total	**60.15**	**53.97**	**33.92**	**22.94**	**15.47**
	Proposed 9.0 psi RVP				
		2015	**2018**	**2022**	**2026**
Cabarrus[1]		5.93	3.94	2.79	1.86
Gaston[1, 2]		7.26	4.62	3.04	1.98
Iredell[1]		3.05	2.05	1.41	0.93
Lincoln[1]		2.75	1.84	1.23	0.76
Mecklenburg[2]		24.20	14.39	9.65	6.85
Rowan[1]		5.75	3.73	2.56	1.59
Union[1]		5.14	3.41	2.28	1.51
Total		**54.08**	**33.98**	**22.96**	**15.48**
Net Change in ton/day emissions		**0.11**	**0.06**	**0.02**	**0.01**
% Change in ton/day emissions		**0.20%**	**0.18%**	**0.09%**	**0.06%**

[1] Emissions for portion of county included in nonattainment area.
[2] 7.8 psi RVP requirement applies to Mecklenburg and Gaston Counties only. Proposed RVP relaxation only affects these two counties. The reaming counties already allow 9.0 psi gasoline.

Table 3.6 On-road Mobile Source VOC Emissions (tons/day)

County	Current 7.8 psi RVP				
	2014	**2015**	**2018**	**2022**	**2026**
Cabarrus[1]	4.15	3.89	3.01	2.53	2.04
Gaston[1, 2]	4.61	4.24	3.05	2.31	1.72
Iredell[1]	1.95	1.82	1.40	1.10	0.82
Lincoln[1]	1.91	1.81	1.37	1.07	0.79
Mecklenburg[2]	14.40	13.28	10.00	8.18	6.64
Rowan[1]	3.76	3.48	2.57	1.93	1.41
Union[1]	3.54	3.30	2.54	2.04	1.56
Total	**34.32**	**31.82**	**23.94**	**19.16**	**14.98**
	Proposed 9.0 psi RVP				
		2015	**2018**	**2022**	**2026**
Cabarrus[1]		3.89	3.01	2.53	2.04
Gaston[1, 2]		4.29	3.08	2.32	1.73
Iredell[1]		1.82	1.40	1.10	0.82
Lincoln[1]		1.81	1.37	1.07	0.79
Mecklenburg[2]		13.41	10.09	8.22	6.67
Rowan[1]		3.48	2.57	1.93	1.41
Union[1]		3.30	2.54	2.04	1.56
Total		**32.00**	**24.06**	**19.21**	**15.02**
Net Change in ton/day emissions		**0.18**	**0.12**	**0.05**	**0.04**
% Change in ton/day emissions		**0.57%**	**0.50%**	**0.26%**	**0.27%**

[1] Emissions for portion of county included in nonattainment area.

[2] 7.8 psi RVP requirement applies to Mecklenburg and Gaston Counties only. Proposed RVP relaxation only affects these two counties. The reaming counties already allow 9.0 psi gasoline.

Table 3.7 Nonroad Mobile Source NOx Emissions (tons/day)

	Current 7.8 psi RVP				
	2014	**2015**	**2018**	**2022**	**2026**
Cabarrus[1]	2.20	2.04	1.65	1.34	1.16
Gaston[1, 2]	1.98	1.83	1.49	1.23	1.08
Iredell[1]	0.94	0.88	0.72	0.58	0.51
Lincoln[1]	0.78	0.72	0.59	0.49	0.42
Mecklenburg[2]	15.09	13.99	11.36	9.20	8.11
Rowan[1]	1.65	1.53	1.26	1.04	0.89
Union[1]	3.62	3.36	2.72	2.19	1.86
Total	**26.26**	**24.35**	**19.79**	**16.07**	**14.03**
	Proposed 9.0 psi RVP				
		2015	**2018**	**2022**	**2026**
Cabarrus[1]		2.04	1.65	1.34	1.16
Gaston[1, 2]		1.83	1.49	1.23	1.08
Iredell[1]		0.88	0.72	0.58	0.51
Lincoln[1]		0.72	0.59	0.49	0.42
Mecklenburg[2]		13.99	11.36	9.20	8.11
Rowan[1]		1.53	1.26	1.04	0.89
Union[1]		3.36	2.72	2.19	1.86
Total		**24.35**	**19.79**	**16.07**	**14.03**
Net Change in ton/day emissions		**0.00**	**0.00**	**0.00**	**0.00**
% Change in ton/day emissions		**0.00%**	**0.00%**	**0.00%**	**0.00%**

[1] Emissions for portion of county included in nonattainment area.

[2] 7.8 psi RVP requirement applies to Mecklenburg and Gaston Counties only. Proposed RVP relaxation only affects these two counties. The reaming counties already allow 9.0 psi gasoline.

Table 3.8 Nonroad Mobile Source VOC Emissions (tons/day)

	Current 7.8 psi RVP				
	2014	**2015**	**2018**	**2022**	**2026**
Cabarrus[1]	1.27	1.22	1.17	1.19	1.24
Gaston[1, 2]	1.29	1.23	1.12	1.10	1.12
Iredell[1]	0.62	0.59	0.52	0.49	0.49
Lincoln[1]	0.58	0.55	0.48	0.46	0.46
Mecklenburg[2]	11.75	11.35	10.82	10.91	11.30
Rowan[1]	1.30	1.22	1.05	0.96	0.94
Union[1]	2.08	2.01	1.92	1.93	2.00
Total	**18.89**	**18.17**	**17.08**	**17.04**	**17.55**
	Proposed 9.0 psi RVP				
		2015	**2018**	**2022**	**2026**
Cabarrus[1]		1.22	1.17	1.19	1.24
Gaston[1, 2]		1.25	1.14	1.12	1.15
Iredell[1]		0.59	0.52	0.49	0.49
Lincoln[1]		0.55	0.48	0.46	0.46
Mecklenburg[2]		11.53	11.01	11.11	11.51
Rowan[1]		1.22	1.05	0.96	0.94
Union[1]		2.01	1.92	1.93	2.00
Total		**18.37**	**17.29**	**17.26**	**17.79**
Net Change in ton/day emissions		**0.20**	**0.21**	**0.22**	**0.24**
% Change in ton/day emissions		**1.10%**	**1.23%**	**1.29%**	**1.37%**

[1] Emissions for portion of county included in nonattainment area.

[2] 7.8 psi RVP requirement applies to Mecklenburg and Gaston Counties only. Proposed RVP relaxation only affects these two counties. The reaming counties already allow 9.0 psi gasoline.

Table 3.9 Total Anthropogenic NOx Emissions (tons/day)

County	Current 7.8 psi RVP				
	2014	**2015**	**2018**	**2022**	**2026**
Cabarrus[1]	11.49	10.73	8.49	7.16	6.18
Gaston[1, 2]	27.89	27.59	18.09	21.72	9.63
Iredell[1]	6.86	6.49	5.35	4.59	4.04
Lincoln[1]	4.37	4.71	3.78	3.32	2.32
Mecklenburg[2]	56.71	52.89	41.18	35.29	32.96
Rowan[1]	11.74	11.30	9.35	8.16	7.09
Union[1]	11.13	10.36	8.03	6.41	5.32
Total	**130.19**	**124.07**	**94.27**	**86.65**	**67.54**
	Proposed 9.0 psi RVP				
		2015	**2018**	**2022**	**2026**
Cabarrus[1]		10.73	8.49	7.16	6.18
Gaston[1, 2]		27.62	18.11	21.72	9.64
Iredell[1]		6.49	5.35	4.59	4.04
Lincoln[1]		4.71	3.78	3.32	2.31
Mecklenburg[2]		52.97	41.22	35.31	32.96
Rowan[1]		11.30	9.35	8.16	7.09
Union[1]		10.36	8.03	6.41	5.32
Total		**124.18**	**94.33**	**86.67**	**67.54**
Net Change in ton/day emissions		**0.11**	**0.06**	**0.02**	**0.01**
% Change in ton/day emissions		**0.09%**	**0.06%**	**0.02%**	**0.01%**

[1] Emissions for portion of county included in nonattainment area.

[2] 7.8 psi RVP requirement applies to Mecklenburg and Gaston Counties only. Proposed RVP relaxation only affects these two counties. The reaming counties already allow 9.0 psi gasoline.

Table 3.10 Total Anthropogenic VOC Emissions (tons/day)

County	Current 7.8 psi RVP				
	2014	**2015**	**2018**	**2022**	**2026**
Cabarrus[1]	11.50	11.27	10.59	10.31	10.11
Gaston[1, 2]	12.96	12.67	11.65	11.16	10.81
Iredell[1]	6.33	6.22	5.87	5.71	5.58
Lincoln[1]	6.55	6.47	6.21	6.10	6.01
Mecklenburg[2]	50.10	48.81	45.70	44.81	44.52
Rowan[1]	12.59	12.38	11.72	11.30	11.21
Union[1]	13.09	12.85	12.29	12.04	11.90
Total	**113.12**	**110.67**	**104.03**	**101.43**	**100.14**
	Proposed 9.0 psi RVP				
		2015	**2018**	**2022**	**2026**
Cabarrus[1]		11.27	10.59	10.31	10.11
Gaston[1, 2]		12.74	11.71	11.20	10.85
Iredell[1]		6.22	5.87	5.71	5.58
Lincoln[1]		6.47	6.21	6.10	6.01
Mecklenburg[2]		49.16	46.02	45.08	44.80
Rowan[1]		12.38	11.72	11.30	11.21
Union[1]		12.85	12.29	12.04	11.90
Total		**111.09**	**104.41**	**101.74**	**100.46**
Net Change in ton/day emissions		**0.42**	**0.38**	**0.31**	**0.32**
% Change in ton/day emissions		**0.38%**	**0.37%**	**0.31%**	**0.32%**

[1] Emissions for portion of county included in nonattainment area.

[2] 7.8 psi RVP requirement applies to Mecklenburg and Gaston Counties only. Proposed RVP relaxation only affects these two counties. The reaming counties already allow 9.0 psi gasoline.

3.2 OZONE SENSITIVITY IN NORTH CAROLINA

A study published in the Journal of Environmental Management concluded that the sensitivity of ozone to anthropogenic VOC emissions in the Southeastern United States is 2-3 orders of magnitude smaller than the sensitivity of ozone to NOx emissions, primarily due to the abundance of biogenic VOC emissions in this region.[1] As a result, controlling anthropogenic VOC emissions in the Southeast is far less effective than controlling NOx emissions for purposes of reducing ozone levels. In fact, the study evaluates the change in ozone concentrations resulting from decreases in anthropogenic VOC emissions and indicates that the change in ozone concentrations resulting from a 30% decrease in anthropogenic VOC emissions is virtually zero in most cases. The virtual non-impact to ozone concentrations due to a change in anthropogenic VOC emissions in the Southeast supports the DAQ's conclusion that VOC emissions changes occurring in Gaston and Mecklenburg Counties due to RVP relaxation will not interfere with the Charlotte maintenance area's ability to maintain compliance with the 2008 8-hour ozone NAAQS.

The RVP relaxation results in the highest increase in VOC emissions in year 2026 (0.32 ton/day or 0.32% of total man-made emissions). When biogenic VOC emissions from natural sources (average of 183.9 tons/day from April through October using the EPA's 2011 National Emissions Inventory) are added to the man-made emissions (100.46 tons/day), the actual VOC emissions increase is only 0.11% (0.32/284.36 tons/day x 100). For the reasons cited above, the DAQ does not believe that the very small changes to VOC emissions will translate into measurable ground-level ozone concentrations changes in the Charlotte area. Consequently, maintenance of the 2008 8-hour ozone NAAQS is expected to be preserved.

3.3 NON-INTERFERENCE WITH OZONE NAAQS

There are currently six ozone monitors located throughout the Charlotte marginal nonattainment area and one monitor located in York County, South Carolina, just outside of the nonattainment area. The latest design value for the nonattainment area is 0.073 parts per million (ppm) based on the data from 2012-2014, and, therefore, is in attainment of the 2008 8-hour ozone NAAQS and the nonattainment area is eligible to be considered for redesignation to attainment.

[1] Odman, M Talat et al., *Quantifying the sources of ozone, fine particulate matter, and regional haze in the Southeastern United States,* 90 Journal of Environmental Management 3155-3168 (2009).

In addition, the emissions inventory comparison between the 7.8 and 9.0 psi RVP standards indicates that the estimated future year emissions are slightly higher for NOx and VOC emissions. The highest NOx increase occurs in the first year the standard is relaxed at 0.11 ton/day which is equivalent to a 0.09% increase in total man-made emissions. By 2026, relaxing the RVP results in an emissions increase of only 0.01 ton/day of NOx or 0.01% increase in total man-made NOx emissions. Despite this small increase in NOx emissions, which is the primary ozone precursor, the Charlotte area continues to demonstrate a downward trend in NOx and VOC emissions through all future years. A large safety margin remains between 2014 and 2026 to ensure that the area continues to attain the 2008 8-hour ozone NAAQS. Table 3.11 shows the difference between the base year emissions and the final year emissions with the proposed RVP relaxation request. Table 3.12 shows the corresponding safety margins with the proposed RVP standard.

Table 3.11 Maintenance Demonstration for North Carolina Portion of the Charlotte Nonattainment Area

Year	NOx (tons/day)	VOC (tons/day)
2014	130.18	113.12
2015	124.18	111.09
2018	94.33	104.41
2022	86.67	101.74
2026	67.54	100.46
Difference from 2014 to 2026	**-62.64**	**-12.66**

Table 3.12 Safety Margin for North Carolina Portion of the Charlotte Nonattainment Area

Year	NOx (tons/day)	VOC (tons/day)
2014	N/A	N/A
2015	-6.00	-2.03
2018	-35.85	-8.71
2022	-43.51	-11.38
2026	-62.64	-12.66

The data show that future years' total man-made emissions continue to follow a declining trend with the proposed RVP standard. The 2014 to 2015 safety margin for NOx contains the largest impact before and after the RFP relaxation: -6.11 tons/day of NOx with 7.8 psi compared to -6.00 tons/day of NOx with 9.0 psi. Based on emissions and air quality modeling studies conducted on previous RVP relaxation requests, the DAQ does not believe that the resulting difference of 0.11 tons/day of NOx (0.09% of total man-made emissions) will have a measureable impact on ground-level ozone formation. Subsequently, maintenance of the 2008 8-hour ozone NAAQS is expected to continue with the proposed 9.0 psi RVP standard. The conclusion is further supported by reviewing the safety margin in the final maintenance year. By 2026, the safety margin with the 7.8 psi RVP is 62.65 tons/day of NOx and 62.64 tons/day of NOx with 9.0 psi RVP. The 0.01 ton/day change in the safety margin in year 2026 is expected to have no impact on ground-level ozone concentrations. In summary, there is no expectation or concern that the small change in emissions due to the relaxation of the RVP standard will affect the attainment and maintenance stats of the Charlotte area for the ozone NAAQS.

3.4 NON-INTERFERENCE WITH THE NAAQS FOR CARBON MONOXIDE, PARTICULATE MATTER, SULFUR DIOXIDE, AND NITROGEN DIOXIDE

The current ambient air quality levels for CO are less than 20% of the CO standards. One of the two current NAAQS established by EPA for CO is an 8-hour standard of 9 ppm, measured using the annual second-highest maximum 8-hour concentration for two consecutive years as the design value. The other standard is a 1-hour average of 35 ppm, using the second-highest 1-hour average within a given year. Ambient monitoring data for the Charlotte area in the years 2012 and 2013 show an 8-hour design value of 1.2 ppm, or about 13% of the CO NAAQS. Additionally, years 2012 and 2013 ambient monitoring data show maximum 1-hour values of 2.3 and 1.7 ppm, respectively, within the Charlotte region. Both of these values are well below the 35 ppm standard set forth in the CO NAAQS. On-road mobile emissions are known to be a large component of overall CO emissions. However, for the Charlotte maintenance area, relaxation of the RVP standard is estimated to increase CO emissions by approximately 2.78 tons/day or 0.71% of total on-road mobile source CO emissions in 2015. For 2026, CO emissions are estimated to increase by approximately 1.44 tons/day or 0.60% of total on-road mobile source CO emissions due to relaxation of the RVP standard. This projected increase in CO emissions is comparatively minimal and it is expected that the effect on ambient concentrations of CO will be correspondingly minimal as well. Therefore, there is no expectation or concern that this change in CO emissions due to the relaxation of the RVP standard will affect the attainment status of the Charlotte area CO NAAQS. Nonroad and area sources are not large contributors to CO emissions.

The EPA revised the NO_2 standard on February 9, 2010 to establish a new 1-hour standard at a level of 100 parts per billion (ppb), based on the 3-year average of the 98th percentile of the yearly distribution of 1-hour daily maximum concentrations, to supplement the existing annual standard of 53 ppb based on the annual mean concentration. The annual mean NO_2 concentration in the Charlotte area was 8 ppb in 2013 or 15% of the annual NO_2 NAAQS. For the 1-hour standard, the monitoring requirements are focused on near-road monitoring; therefore, one focus of this standard is on-road mobile sources. To date, two near-road NO_2 monitors have been established in North Carolina, one in the Triangle area in January 2014 and the other in the Charlotte area in June 2014. The maximum 1-hour NO_2 concentration measured at the Triangle area near road site in 2014 was 41.2 ppb in March 2014. The maximum 1-hour NO_2 concentration measured in the Charlotte area was 43.6 ppb recorded on November 12, 2014. Since sufficient data has not yet been collected to determine if North Carolina is violating or close to exceeding this 1-hour standard, it is difficult to unequivocally determine whether relaxing the RVP standard will result in a violation of the NO_2 standard. However, on-road mobile sources are a large contributor of NOx emissions and NO_2 is a component of NOx. MOVES mobile emissions modeling results show that relaxing the RVP standard results in only slight increases in NOx emissions for the region (0.20% in 2015 and 0.05% in 2026). Based upon these estimates, it can be assumed that the RVP relaxation would likewise only slightly increase NO_2 emissions and therefore would not greatly affect attainment of the 1-hour NO_2 standard.

On-road, nonroad and area sources are not believed to be large contributors to directly emitted $PM_{2.5}$ or indirectly formed $PM_{2.5}$ concentrations. In North Carolina, directly emitted $PM_{2.5}$ is a very small component of the overall $PM_{2.5}$ ambient concentrations. The primary species impacting $PM_{2.5}$ concentrations are the secondarily formed sulfates and organic carbons. In 2013 the Charlotte area $PM_{2.5}$ design values were 9.8 micrograms per cubic meter for the annual standard or 82% of the annual $PM_{2.5}$ NAAQS and 22 microgram per cubic meter for the 24-hour standard or 63% of the daily $PM_{2.5}$ NAAQS. MOVES modeling results indicate that the RVP relaxation would lead to slight reductions of direct $PM_{2.5}$ emissions (0.23% in 2015 and 0.61% in 2026) and would have no effect on SO_2 and ammonia emissions. Based on this, it is concluded that the RVP relaxation will not affect the attainment of the $PM_{2.5}$ standard.

Sulfates are formed through the chemical reaction of SO_2 and ammonia and the majority of the organic carbons come from natural sources like trees. A 2009 analysis of SO_2 emissions, which is a primary contributor to the formation of $PM_{2.5}$ within North Carolina, found about 3.3% of total SO_2 emissions came from on-road, nonroad and area sources combined, while the remaining 96.7% came from point sources (see “Redesignation Demonstration and Maintenance

Plan for the Hickory (Catawba County) and Greensboro/Winston-Salem/High Point (Davidson and Guilford Counties) Fine Particulate Matter Nonattainment Areas", submitted to the EPA on December 18, 2009, Figure 4-2, p. 4-4). The SO_2 design value in 2013 for the Charlotte area was 10 ppb or 13% of the hourly SO_2 NAAQS.

For the reasons outlined above, it is unlikely that relaxing the RVP standard in Gaston and Mecklenburg Counties will result in a violation of the CO, SO_2, NO_2, and $PM_{2.5}$ NAAQS.

4.0 CONCLUSIONS

The most recent three years of ozone monitoring data for the Charlotte maintenance area demonstrate compliance with the 2008 8-hour ozone NAAQS. None of the six ozone monitors in the area show any violations of the 2008 8-hour ozone NAAQS. Since the 1990's, there have been many major programs enacted in North Carolina that have led to significant actual, enforceable emissions reductions which have led to air quality improvements in the Charlotte area. The closing (Riverbend) or conversion (Buck) of coal-fired power plants in the Charlotte nonattainment area from 2011 through 2013 has also helped to improve air quality in the Charlotte maintenance area. In addition, the decline in utilization of the Allen power plant in Gaston County has also contributed to air quality improvements in the Charlotte maintenance area. The capacity factor for the Allen plant dropped from 30% to 14% from 2011 to 2013, and is expected to continue to decline during the forecast period for the maintenance plan.

The maintenance plan demonstrates that the projected emissions inventory for 2026 is less than the base year emissions inventory when the RVP requirement of 7.8 psi is relaxed to 9.0 psi. The lower RVP requirement was implemented as a control measure to reduce VOC emissions. Since VOC emissions from biogenic sources dominate in the Southeast, controlling ozone in North Carolina is most effectively done through reduction in NOx emissions. The non-interference demonstration shows that the slight increase in NOx emissions from 2014 through 2026 would not affect the declining trends in emissions, and is not expected to result in measurable ozone impacts. The safety margin for NOx remains relatively unchanged with the 9.0 psi RVP standard, and, therefore, will not interfere with maintenance of the ozone NAAQS. The relaxation of the RVP standard is also not expected to interfere with the maintenance of the other NAAQS.

5.0 REVISED SECTIONS OF REDESIGNATION REQUEST AND MAINTENANCE PLAN

Following is the complete Pre-hearing Draft of the Redesignation Request and Maintenance Plan for the Charlotte-Gastonia-Salisbury, NC 8-hour Ozone Maintenance Area that has been revised to reflect changes to NOx and VOC emissions should the EPA approve both the redesignation request and maintenance plan as well as the DAQ's request to relax the RVP standard from 7.8 psi to 9.0 psi in Gaston and Mecklenburg Counties. The following identifies the sections of the redesignation request and maintenance plan that have been revised. For the area, onroad, and nonroad source categories for which emissions change due to relaxation of the RVP standard from 7.8 to 9.0 psi, Appendix B.2, Appendix B.3 and Appendix B.4 present emissions for both the current and proposed RVP standards, respectively.

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    - Table 4.5 Charlotte Regional Transportation Planning Organization (CRTPO) - Rocky River Rural Planning Organization (RRRPO) MVEB in 2014 and 2026 (kg/day), page 47
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Redesignation Demonstration
And Maintenance Plan
and
Clean Air Act Section 110(l) Non-Interference Demonstration to Support the Gasoline Reid Vapor Pressure (RVP) Standard Relaxation in Gaston and Mecklenburg Counties

for

The Charlotte-Gastonia-Salisbury, North Carolina 2008 8-Hour Ozone Marginal Nonattainment Area



Prepared by

North Carolina Department of Environment and Natural Resources

Division of Air Quality

April 16, 2015

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Preface: This document contains the technical support for North Carolina's Division of Air Quality to request the Charlotte-Gastonia-Salisbury 2008 8-hour ozone nonattainment area be redesignated as attainment for the 2008 8-hour ozone national ambient air quality standard pursuant to §§107(d)(3)(D) and (E) of the Clean Air Act, as amended.

EXECUTIVE SUMMARY

Introduction

Ozone is formed by a complex set of chemical reactions involving volatile organic compounds (VOCs), nitrogen oxides (NOx) and to a lesser extent carbon monoxide (CO). These gases are generated by utilities, combustion processes, certain industrial processes and even by natural sources such as trees. Tailpipe emissions from mobile sources (vehicles) are also significant sources of these pollutants. Emissions from smaller sources such as boat engines, lawn mowers and construction equipment also contribute to the formation of ozone. Ozone formation is promoted by strong sunlight, warm temperatures and light winds and is hence a problem predominantly during the hot summer months.

The 2008 8-hour ozone National Ambient Air Quality Standard (NAAQS) is 0.075 parts per million (ppm). An exceedance of the 2008 8-hour ozone NAAQS occurs when a monitor measures ozone above 0.075 ppm on average for an 8-hour period. A violation of this NAAQS occurs when the average of the annual fourth highest daily maximum 8-hour ozone values over three consecutive years is greater than or equal to 0.076 ppm. This three-year average is termed the "design value" for the monitor. The design value for a nonattainment area is the highest monitor design value in the area.

Charlotte-Gastonia-Salisbury Nonattainment Designation

The area surrounding Charlotte-Gastonia-Salisbury, North Carolina, called the Charlotte nonattainment area, was designated as marginal nonattainment for the 2008 8-hour ozone NAAQS on May 21, 2012 (77 Federal Register (FR) 30088). The nonattainment designation was an action taken by the U. S. Environmental Protection Agency (EPA) under Section 107(d) of the Clean Air Act (CAA). The CAA requires that some area be designated as nonattainment if a monitor is found to be in violation of a NAAQS. For the 2008 8-hour ozone NAAQS, the EPA took designation action in 2012 based on 2009-2011 design values. At that time, the design value for the Charlotte area was 0.079 ppm.

The Charlotte nonattainment area includes the entire county of Mecklenburg and parts of Cabarrus, Gaston, Iredell, Lincoln, Rowan and Union Counties (see Figure 1). The partial counties include the townships listed in Table 1. Note that the EPA also designated the portion of York County, South Carolina that is adjacent to the Charlotte nonattainment area for the 2008 8-hour ozone NAAQS. The South Carolina Department of Health & Environmental Control (SCDHEC) has developed a redesignation request and maintenance plan for the South Carolina portion of the Charlotte nonattainment area which is available upon request.

Charlotte Nonattainment Area Boundary

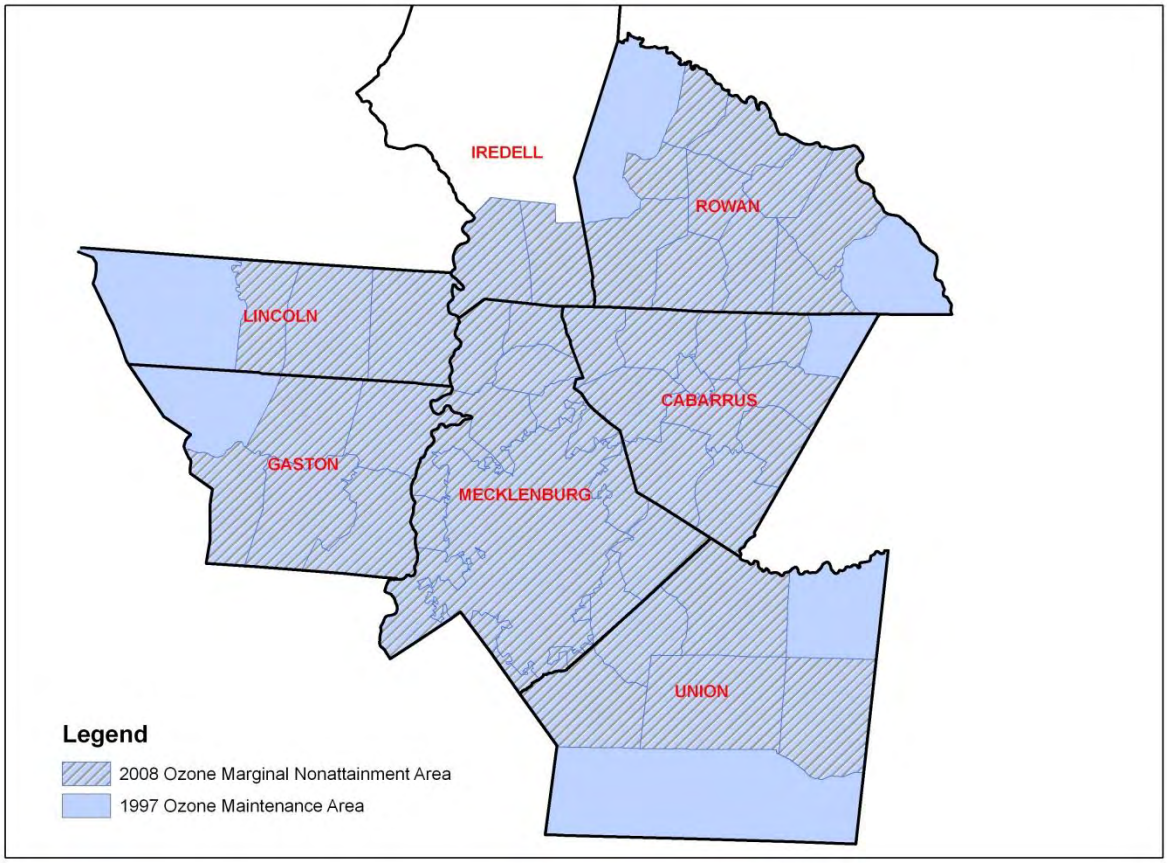


Table 1 Counties and Townships within the Charlotte Nonattainment Area

Cabarrus County Townships					
Central Cabarrus	Concord*	Georgeville	Harrisburg	Kannapolis	Midland
Mount Pleasant	Odell	Poplar Tent	New Gilead	Rimertown	
Gaston County Townships					
Dallas	Crowders Mountain	Gastonia	Riverbend	South Point	
Iredell County Townships					
Coddle Creek	Davidson				
Lincoln County Townships					
Catawba Springs	Lincolnton	Ironton			
Mecklenburg County – All Townships					
Rowan County Townships					
Atwell	China Grove	Franklin	Gold Hill*	Litaker	Locke
Providence	Salisbury	Steele	Unity		
Union County Townships					
Goose Creek	Marshville	Monroe	Sandy Ridge	Vance	

*Note: Concord Township in Cabarrus County and Gold Hill Township in Rowan County were inadvertently left out of North Carolina's recommendation and EPA's final designations. In a letter dated January 28, 2014, the DAQ requested the EPA to add the missing townships in the state's 2008 marginal ozone nonattainment area definition.

Current Air Quality

There are currently six ozone monitors located throughout the Charlotte nonattainment area and one monitor located in York County, South Carolina, just outside of the nonattainment area. The latest design value for the nonattainment area is 0.073 ppm based on the data from 2012-2014. The 2014 8-hour ozone monitoring data for the Charlotte nonattainment area was fully quality assured and officially submitted to the EPA for certification approval on December 12, 2014. The EPA concurred with the North Carolina Division of Air Quality (DAQ) and Mecklenburg County Air Quality (MCAQ) certification on December 15, 2014. A detailed discussion of air quality levels in the region is provided in Section 2.0.

Maintenance Plan Requirements

The state of North Carolina has implemented permanent and enforceable state and federal actions to reduce ozone precursor emissions in the North Carolina portion of the Charlotte nonattainment area. In addition, MCAQ has implemented actions to reduce ozone precursor emissions. This combination of state, federal, and local actions has resulted in cleaner air in the Charlotte nonattainment area, and the anticipated future benefits from these programs are expected to result in continued maintenance of the 2008 8-hour ozone NAAQS in this region. State actions include the Clean Smokestacks Act; the on-board diagnostic (OBDII) vehicle inspection and maintenance (I/M) program that began on July 1, 2002; and voluntary programs to reduce emissions from diesel engines. Local actions implemented by MCAQ include a prohibition on open burning and a very effective voluntary program called Grants to Replace Aging Diesel Engines (GRADE).[1] The GRADE program is designed to reduce NOx emissions by providing businesses and organizations funding incentives to replace or repower heavy-duty non-road equipment with newer, cleaner, less polluting engines.

Several federal actions have resulted in lower emissions throughout the eastern portion of the country. For on-road and nonroad vehicles, federal actions include the Tier 2 engine standards for light- and medium-duty vehicles, heavy-duty engine standards, the low-sulfur gasoline and diesel requirements, and off-road engine standards. For stationary sources, federal actions include the Mercury and Air Toxics (MATS) rule for electricity generating units (EGUs) and the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for industrial, commercial and institutional boilers and reciprocating internal combustion engines (RICE). In addition, there are several federal actions that will be implemented starting in 2015. These actions will provide for additional NOx emissions reductions in and near the Charlotte nonattainment area. For EGUs, the future federal actions include compliance with the Cross State Air Pollution Rule (CSAPR)

[1] http://charmeck.org/mecklenburg/county/LUESA/AirQuality/MobileSources/Pages/GRADE.aspx.

and the Tennessee Valley Authority (TVA) consent decree. For on-road vehicles, the future federal actions include compliance with the Tier 3 vehicle emissions and fuel standards and corporate average fuel economy standards for on-road vehicles.

Emissions

A base year inventory for NOx and VOC emissions was developed for 2014 since the design value for the 2012-2014 period shows attainment of the 2008 8-hour ozone NAAQS. Future year emissions inventories were also developed for the interim years 2015, 2018, 2022, and a final year emission inventory was developed for 2026. For each future year, the total NOx and VOC emissions is lower than the 2014 base year emissions. Furthermore, emissions modeling and air quality modeling for 2018 and 2030 performed by the EPA for the new Tier 3 engine and fuel standards and modeling performed by the Southeastern states for 2018 indicate that the area will be in attainment of the 2008 ozone NAAQS.[2, 3] The emission inventory comparison demonstrates that the Charlotte area is expected to maintain the 2008 8-hour ozone NAAQS through 2026 since in no future year are the emissions expected to be greater than they were in the base year. The area is also in compliance with Section 110 and Part D requirements of the CAA.

Conclusion and Request for Redesignation

Based on the information provided in this State Implementation Plan (SIP) and criteria established in Section 107(d)(3)(E) of the CAA, North Carolina is requesting that the EPA redesignate the Charlotte-Gastonia-Salisbury nonattainment area to attainment. North Carolina is also requesting that the EPA relax the 7.8 pounds per square inch (psi) Reid vapor pressure (RVP) requirement for Gaston and Mecklenburg Counties and specify 9.0 psi as the applicable gasoline volatility standard for the entire maintenance area year round. The monitoring data clearly show that the region has attained the 2008 8-hour ozone standard, and the maintenance demonstration shows that the future emission inventories are expected to be lower than the attainment year inventory through the implementation of the various federal and state control measures. The CAA Section 110(l) non-interference demonstration analysis indicates that increasing the RVP from 7.8 to 9.0 psi in Gaston and Mecklenburg Counties would not negatively impact the redesignation demonstration and maintenance plan for the Charlotte area.

[2] US EPA, http://www.epa.gov/otaq/documents/tier3/454r14002.pdf.
[3] Southeastern States Air Resource Managers (SESARM); Southeastern Modeling, Analysis and Planning (SEMAP) study, http://semap.ce.gatech.edu/sites/default/files/files/projections/base2018b-O3-DVFs-DDVFs-for-4configs.xls.

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LIST OF ACRONYMS

Acronym	Definition
AADVMT	Average annual daily vehicle miles traveled
AEO	Annual Energy Outlook
AERR	Air Emission Reporting Rule
AMPD	Air Markets Program Data
APU	Auxiliary Power Units
ARRA	American Recovery and Reinvestment Act
AvGas	Aviation gasoline
BTU	British Thermal Unit
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CAMD	Clean Air Markets Division
CDOT	Charlotte Department of Transportation
CFR	Code of Federal Regulations
CMAQ	Congestion Mitigation and Air Quality Improvement
CNG	Compressed Natural Gas
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CRMPO	Cabarrus Rowan Metropolitan Planning Organization
CRTPO	Charlotte Regional Transportation Planning Organization
CSAPR	Cross State Air Pollution Rule
DAQ	North Carolina Division of Air Quality
DERA	Diesel Emissions Reduction Act
DOC	Diesel Oxidation Catalyst
DPF	Diesel Particulate Filter
EDMS	Emissions and Dispersion Modeling System
EF	Emission factor
EGU	Electricity Generating Units
EIA	Energy Information Administration
EIIP	Emissions Inventory Improvement Program
EIS	Emissions Information System
EMP	Emissions Modeling Platform
EPA	United States Environmental Protection Agency
ERTAC	Eastern Regional Technical Advisory Committee
ºF	Degrees Fahrenheit
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
FIP	Federal Implementation Plan
FR	Federal Register

Acronym	Definition
FTR	Federal Transport Rule
GACT	Generally Available Control Technology
GCLMPO	Gaston-Cleveland-Lincoln Metropolitan Planning Organization
GHG	Greenhouse Gas
GIS	Geographic Information System
GRADE	Grants to Replace Aging Diesel Engines
GSE	Ground Support Equipment
HAP	Hazardous Air Pollutant
HC	Hydrocarbons
HDDV	Heavy duty diesel vehicles
HDGV	Heavy duty gas vehicles
HPMS	High performance monitoring system
I/M	Inspection and Maintenance
ICI	Industrial and commercial/institutional
KCLT	Charlotte Douglas International Airport
kg/day	Kilograms/Day
lbs	Pounds
LDDT1	Light duty diesel trucks 1
LDDT1	Light duty diesel trucks 2
LDDV	Light duty diesel vehicles
LDGT1	Light duty gas trucks 1
LDGT2	Light duty gas trucks 2
LDGV	Light duty gas vehicles
LPG	Liquid petroleum gas
LTO	Landing and takeoff
MACT	Maximum Achievable Control Technology
MATS	Mercury Air Toxics rule
MC	Motorcycles
MCAQ	Mecklenburg County Air Quality
MOA	Memorandum of Agreement
MOVES	Motor Vehicle Emissions Simulator
mpg	miles per gallon
MPO	Metropolitan Planning Organization
MRM	Metrolina Regional Model
MTP	Metropolitan Transportation Plan
MVEB	Motor Vehicle Emission Budget
NAAQS	National Ambient Air Quality Standard
NAICS	North American Industrial Classification System
NCAA	North Carolina Air Awareness
NCAC	North Carolina Administrative Code

Acronym	Definition
NCDAQ	North Carolina Division of Air Quality
NCDOT	North Carolina Department of Transportation
NCFS	North Carolina Forest Service
NCPCM	North Carolina Petroleum and Convenience Marketers
NEI	National Emissions Inventory
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NG	Natural Gas
NHTSA	National Highway Traffic Safety Administration
NMOG	Non-methane Organic Gases
NO_2	Nitrogen Dioxide
NOx	Nitrogen Oxides
NSPS	New Source Performance Standard
OBD	Onboard Diagnostic
PAD	Petroleum Administration for Defense
PFC	Portable fuel container
PM	Particulate Matter
PM_{10}	Particulate matter with an aerodynamic diameter less than or equal to 10 micrometers
$PM_{2.5}$	Particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers
ppb	Parts per billion
ppm	Parts per million
psi	pounds per square inch
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
RICE	Reciprocating Internal Combustion Engines
RPO	Rural Planning Organization
RRRPO	Rock River Rural Planning Organization
RT	Road type
RVP	Reid Vapor Pressure
SCDHEC	South Carolina Department of Health and Environmental Control
SEMAP	Southeastern Modeling, Analysis and Planning
SESARM	Southeastern States Air Resource Managers
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SUV	Sport Utility Vehicle
TAF	Terminal Area Forecast
TDM	Transportation Demand Model
TIP	Transportation Improvement Program
TVA	Tennessee Valley Authority
UI	Urban interstate

Acronym	Definition
UF	Urban freeway
USCBP	United Sates Census Bureau, County Business Patterns
USDA	United States Department of Agriculture
UST	Underground storage tank
VHT	Vehicle Hours Traveled
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds

1.0 INTRODUCTION

1.1 WHAT IS TROPOSPHERIC OZONE?

Ozone, a strong chemical oxidant, adversely impacts human health through effects on respiratory function and can also damage forests and crops. Ozone is not emitted directly by the electric utilities, industrial sources or motor vehicles but instead, is formed in the lower atmosphere, the troposphere, by a complex series of chemical reactions involving nitrogen oxides (NOx), resulting from the utilities, combustion processes and motor vehicles, and reactive volatile organic compounds (VOCs). VOCs include many industrial solvents, toluene, xylene and hexane as well as the various hydrocarbons (HC) that are evaporated from the gasoline used by motor vehicles or emitted through the tailpipe following combustion.

Ozone formation is promoted by strong sunlight, warm temperatures, and light winds. High concentrations tend to be a problem in the eastern United States only during the hot summer months when these conditions frequently occur. Therefore, the U. S. Environmental Protection Agency (EPA) mandates seasonal monitoring of ambient ozone concentrations in North Carolina from April 1 through October 31 (40 CFR 58 App. D, 2.5).[4] The DAQ has examined both the man-made and natural sources of VOC emissions and their contribution to ozone formation in North Carolina. Because of the generally warm and moist climate of North Carolina, vegetation abounds in many forms, and forested lands naturally cover much of the state. As a result, the biogenic sector is the most abundant source of VOCs in North Carolina and accounts for approximately 90% of the total VOC emissions statewide. The overwhelming abundance of biogenic VOCs makes the majority of North Carolina a NOx limited environment for the formation of ozone. This is supported by a study published in the Journal of Environmental Management that concludes that the sensitivity of ozone to anthropogenic VOC emissions in the Southeastern United States is 2-3 orders of magnitude smaller than the sensitivity of ozone to NOx emissions, primarily due to the abundance of biogenic VOC emissions in this region.[5] As a result, controlling anthropogenic VOC emissions in the Southeast is far less effective than controlling NOx emissions for purposes of reducing ozone levels.

On March 12, 2008, the EPA revised the primary (health) and secondary (welfare) National Ambient Air Quality Standards (NAAQS) for ozone to a level of 0.075 parts per million (ppm). An exceedance of the 2008 8-hour ozone NAAQS occurs when a monitor measures ozone above 0.075 ppm on average for an 8-hour period. A violation of this NAAQS occurs when the average of the annual fourth highest daily maximum 8-hour ozone values over three consecutive

[4] 40 CFR 58 App. D, 2.5.
[5] Odman, M Talat et al., *Quantifying the sources of ozone, fine particulate matter, and regional haze in the Southeastern United States,* 90 Journal of Environmental Management 3155-3168 (2009).

years is greater than or equal to 0.076 ppm. This three-year average is termed the "design value" for the monitor. The design value for a nonattainment area is the highest monitor's design value in the area.

1.2 CLEAN AIR ACT OF 1990

Since the 1977 amendments to the Clean Air Act (CAA), areas of the country that had not attained the ambient standard for a particular pollutant were formally designated as nonattainment for that pollutant. This formal designation concept was retained in the 1990 CAA Amendments.

1.3 AIR QUALITY HISTORY

The area surrounding Charlotte-Gastonia-Rock Hill, North Carolina-South Carolina, called the Metrolina area (see Figure 1.1), was designated nonattainment for the 1997 8-hour ozone NAAQS on April 30, 2004.[6] The 1997 8-hour ozone NAAQS was set at 0.085 ppm. The Metrolina nonattainment area includes the North Carolina counties of Cabarrus, Gaston, Lincoln, Mecklenburg, Rowan and Union; Coddle Creek and Davidson Townships in Iredell County, North Carolina; and the Rock Hill Metropolitan Planning Organization boundary in York County, South Carolina. On December 2, 2013, the EPA approved North Carolina's redesignation demonstration and maintenance plan for the 1997 8-hour ozone NAAQS for the Charlotte-Gastonia-Rock Hill, North Carolina area.[7]

On July 20, 2012, the EPA designated the Charlotte-Gastonia-Salisbury, North Carolina nonattainment area (referred to as the Charlotte nonattainment area) as "marginal" nonattainment for the 2008 8-hour ozone standard (Figure 1.1) based on the ambient data from 2009-2011. The nonattainment area includes all of Mecklenburg County and portions of Cabarrus, Gaston, Iredell, Lincoln, Rowan, and Union Counties. Table 1.1 identifies the townships in each county that are included in the Charlotte nonattainment area. At that time, the design value for the Charlotte area was 0.079 ppm. The official designation and classification was published in the Federal Register (FR) on May 21, 2012.[8] The designation became effective on July 20, 2012.

[6] 69 FR 23858.
[7] 78 FR 72036.
[8] 77 FR 30088.

Figure 1.1 Charlotte Nonattainment Area Boundary

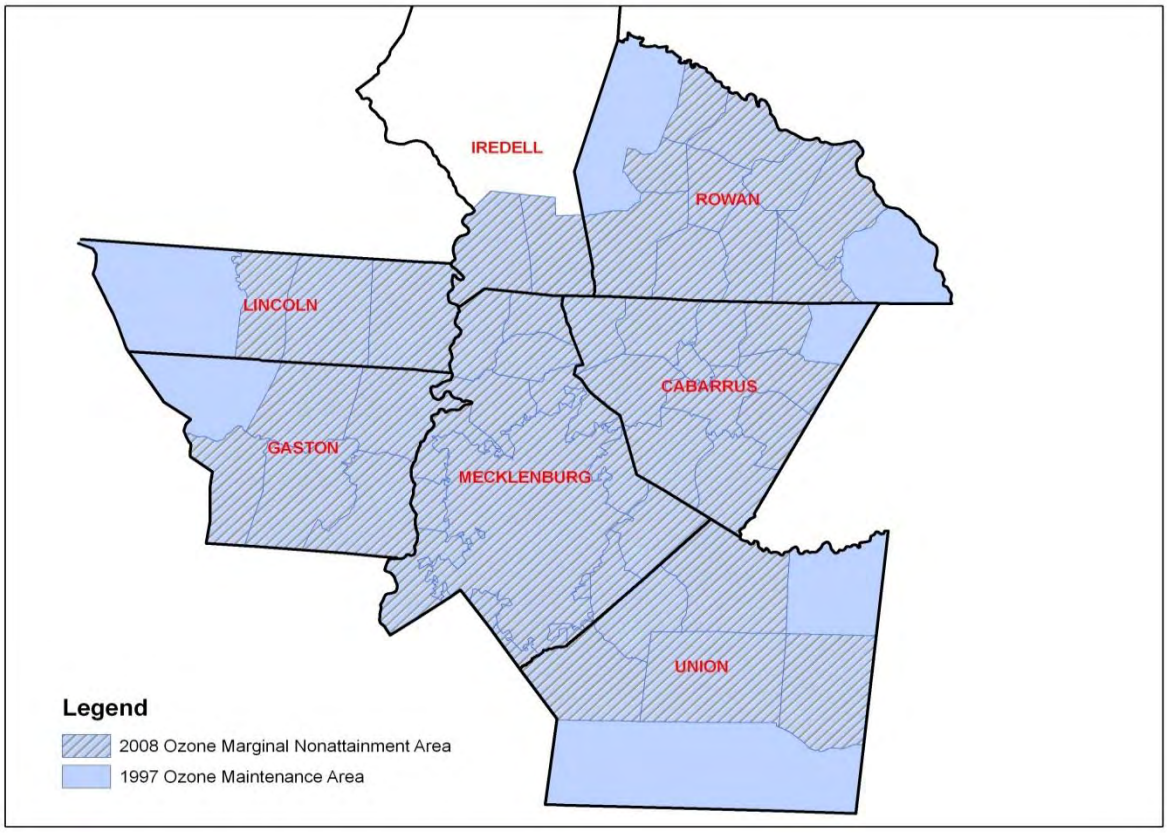


Table 1.1 Counties and Townships within the Charlotte Nonattainment Area

Cabarrus County Townships					
Central Cabarrus	Concord*	Georgeville	Harrisburg	Kannapolis	Midland
Mount Pleasant	Odell	Poplar Tent	New Gilead	Rimertown	
Gaston County Townships					
Dallas	Crowders Mountain	Gastonia	Riverbend	South Point	
Iredell County Townships					
Coddle Creek	Davidson				
Lincoln County Townships					
Catawba Springs	Lincolnton	Ironton			
Mecklenburg County – All Townships					
Rowan County Townships					
Atwell	China Grove	Franklin	Gold Hill*	Litaker	Locke
Providence	Salisbury	Steele	Unity		
Union County Townships					
Goose Creek	Marshville	Monroe	Sandy Ridge	Vance	

*Note: Concord Township in Cabarrus County and Gold Hill Township in Rowan County were inadvertently left out of North Carolina's recommendation and EPA's final designations. In a letter dated January 28, 2014, the North Carolina Division of Air Quality (DAQ) requested EPA to add the missing townships in the state's 2008 marginal ozone nonattainment area definition.

There are currently six ozone monitors located throughout the Charlotte nonattainment area and one monitor located in York County, South Carolina. The North Carolina Division of Air Quality (DAQ) operates three of the monitors in the Charlotte area, the Mecklenburg County Air Quality (MCAQ) operates three of the monitors in the Mecklenburg County, and South Carolina Department of Health and Environmental Control (SCDHEC) operates the York County monitor.

In 2013, all but two monitors, Garinger and County Line located in Mecklenburg County, came into attainment of the 2008 8-hour ozone NAAQS. With the completion of the 2014 ozone season, the Garinger and County Line monitors attained the standard as well. The 2012-2014 design value for Charlotte nonattainment area is 0.073 ppm.

1.4 CLEAN AIR ACT REDESIGNATION CRITERIA

Section 107(d)(3)(E) of the CAA, as amended, states an area can be redesignated to attainment if the following conditions are met:

1. The EPA has determined that the NAAQS have been attained. For ozone, the areas must show that the average of the fourth highest 8-hour ozone values from three (3) complete, consecutive calendar years of quality-assured air quality monitoring data must be below 0.076 ppm.

2. The applicable implementation plan has been fully approved by the EPA under Section 110(k).

3. The EPA has determined that the improvement in air quality is due to permanent and enforceable reductions in emissions. To demonstrate this, the state should estimate the percent reduction (from the year used to determine the design value for designation and classification) achieved from federal, state, and local measures.

4. The state has met all applicable requirements for the area under Section 110 and Part D.

5. The EPA has fully approved a maintenance plan, including a contingency plan, for the areas under Section 175A.

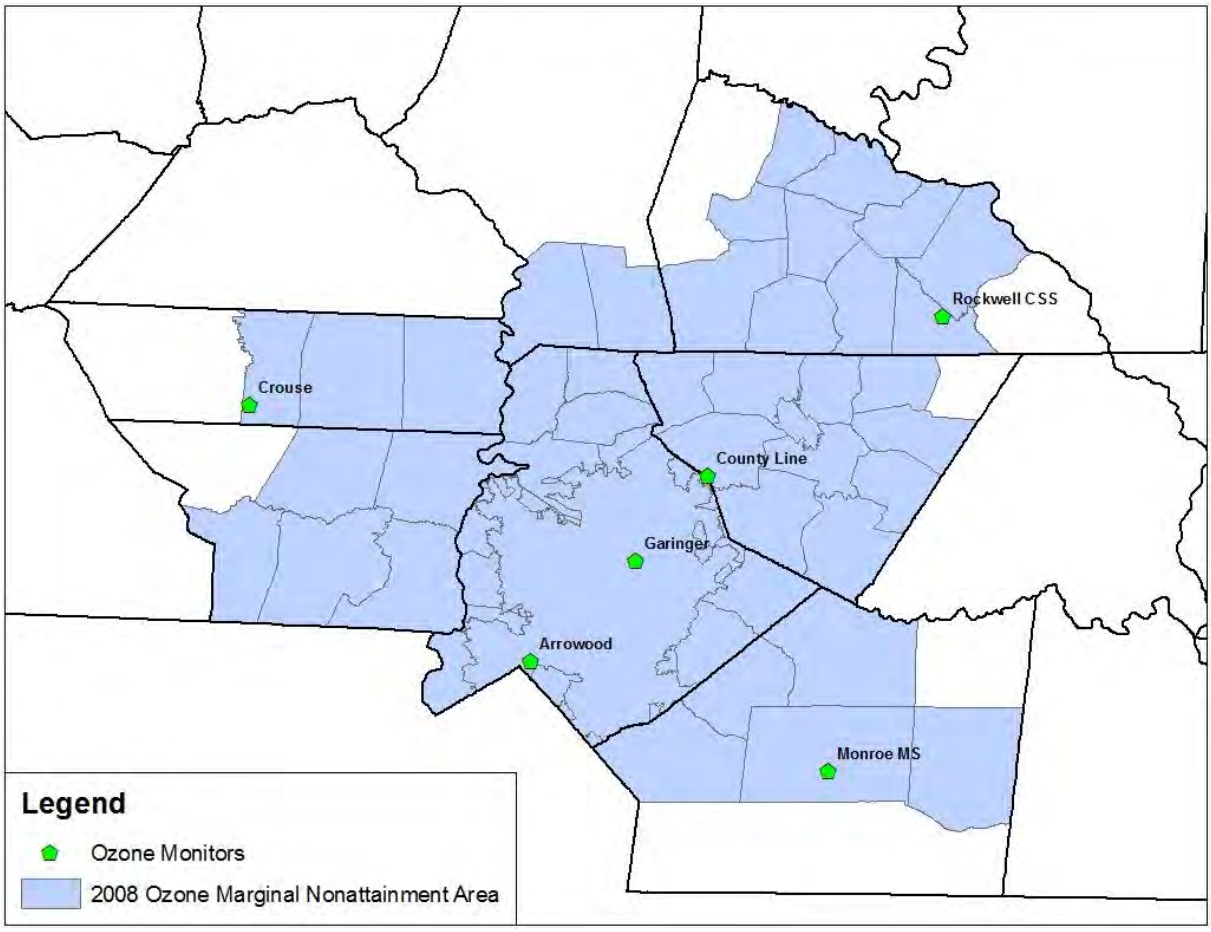
In the following sections, the DAQ provides the technical data necessary to show that the Charlotte-Gastonia-Salisbury nonattainment area has attained and is expected to maintain the 2008 8-hour ozone standard, and has met the requirements for redesignation set forth above.

2.0 AIR QUALITY

2.1 HISTORIC AIR QUALITY (2003 – 2011)

The DAQ and MCAQ have collected ambient monitoring data for the Charlotte area since the late seventies. Figure 2.1 shows the location of the six ozone monitors throughout the Charlotte nonattainment area. In addition, one additional ozone monitor is located in York County, South Carolina (not shown in Figure 2.1). These monitors were installed in accordance with the Code of Federal Regulations (CFR) 40 CFR 58.

Figure 2.1 Ozone Monitor Locations in the Charlotte Nonattainment Area



Tables 2.1 and 2.2 show the air quality data and corresponding design values for the monitors in the Charlotte region, respectively, from 2003 to 2014. As shown in Table 2.2, the design values for most of the monitors near and downwind of Charlotte have been declining rapidly in the past several years.

Table 2.1 Charlotte Area's Historic 4th Highest 8-hour Ozone Values (2003-2014)

Monitor	4th Highest 8-hour Ozone Values (ppm)											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Crouse AIRS ID #37-109-0004 Lincoln County	0.089	0.074	0.082	0.082	0.085	0.079	0.065	0.072	0.077	0.076	0.064	0.064
Garinger AIRS ID #37-119-0041 Mecklenburg County	0.086	0.085	0.088	0.091	0.093	0.085	0.069	0.082	0.088	0.080	0.067	0.065
Arrowood AIRS ID #37-119-1005 Mecklenburg County	0.073	0.077	0.085	0.078	0.087	0.073	0.068	0.078	0.082	0.073	0.062	0.063
County Line AIRS ID #37-119-1009 Mecklenburg County	0.088	0.083	0.090	0.093	0.096	0.093	0.071	0.082	0.083	0.085	0.066	0.068
Rockwell AIRS ID #37-159-0021 Rowan County	0.098	0.080	0.086	0.085	0.096	0.084	0.071	0.077	0.077	0.080	0.062	0.064
Enochville[1] AIRS ID #37-159-0022 Rowan County	0.087	0.080	0.088	0.089	0.095	0.082	0.073	0.078	0.078	0.077	0.063	-----
Monroe AIRS ID #37-179-0003 Union County	0.083	0.074	0.082	0.080	0.082	0.080	0.067	0.071	0.073	0.075	0.062	0.067
York AIRS ID #45-091-0006 York County	0.076	0.071	0.079	0.078	0.080	0.075	0.062	0.065	0.065	0.065	0.061	0.056

[1] Monitoring data for 2014 are not available for this monitor because it was shut down in 2014.

Table 2.2 Charlotte Area's Historic Design Values (2003 - 2014)

Monitor	Design Value (ppm)									
	03-05	04-06	05-07	06-08	07-09	08-10	09-11	10-12	11-13	12-14
Crouse AIRS ID #37-109-0004 Lincoln County	0.081	0.079	0.083	0.082	0.076	0.072	0.071	0.075	0.072	0.068
Garinger AIRS ID #37-119-0041 Mecklenburg County	0.086	0.088	0.090	0.089	0.082	0.078	**0.079**	**0.083**	**0.078**	0.070
Arrowood AIRS ID #37-119-1005 Mecklenburg County	0.078	0.080	0.083	0.079	0.076	0.073	**0.076**	**0.077**	0.072	0.066
County Line AIRS ID #37-119-1009 Mecklenburg County	0.087	0.088	0.093	0.094	0.086	0.082	**0.078**	**0.083**	**0.078**	0.073
Rockwell AIRS ID #37-159-0021 Rowan County	0.088	0.083	0.089	0.088	0.083	0.077	0.075	**0.078**	0.073	0.068
Enochville[1] AIRS ID #37-159-0022 Rowan County	0.085	0.085	0.090	0.088	0.083	0.077	**0.076**	**0.077**	0.072	----
Monroe AIRS ID #37-179-0003 Union County	0.079	0.078	0.081	0.080	0.076	0.072	0.070	0.073	0.070	0.068
York AIRS ID #45-091-0006 York County	0.075	0.076	0.079	0.077	0.072	0.067	0.064	0.065	0.063	0.060

Note: Bolded values represent violations of the 2008 8-hour ozone standard.
[1] 2012-2014 design value for this monitor is not available because it was shut down in 2014.

2.2 RECENT AIR QUALITY VALUES (2012 –2014)

Under the CAA, a marginal classification for the 2008 8-hour ozone NAAQS requires North Carolina to attain the standard within three years of designation, or July 20, 2015. However, in the 2008 Ozone Implementation Rule, the EPA extended the compliance date to December 31,

2015.[9] In a recent ruling by the U.S. Court of Appeals for the District of Columbia Circuit, the extension deadline was vacated, among other decisions.[10]

The most recent three years of ozone monitoring data (2012-2014) for the Charlotte nonattainment area demonstrate compliance with the 2008 8-hour ozone NAAQS. Table 2.3 is a summary of the fourth highest 8-hour average ozone concentration and the design value at each of the monitors in the Charlotte region for 2012-2014.

Table 2.3 Charlotte Area's Current Air Quality Data (2012 -2014)

Monitor	Year	4th Highest 8-hour ozone values (ppm)	Design Value (ppm) 2012-2014
Crouse AIRS ID #37-109-0004 Lincoln County	2012	0.076	0.068
	2013	0.064	
	2014	0.064	
Garinger AIRS ID #37-119-0041 Mecklenburg County	2012	0.080	0.070
	2013	0.067	
	2014	0.065	
Arrowood AIRS ID #37-119-1005 Mecklenburg County	2012	0.073	0.066
	2013	0.062	
	2014	0.063	
County Line AIRS ID #37-119-1009 Mecklenburg County	2012	0.085	0.073
	2013	0.066	
	2014	0.068	
Rockwell AIRS ID #37-159-0021 Rowan County	2012	0.080	0.068
	2013	0.062	
	2014	0.064	
Monroe AIRS ID #37-179-0003 Union County	2012	0.075	0.068
	2013	0.062	
	2014	0.067	
York AIRS ID #45-091-0006 York County	2012	0.065	0.060
	2013	0.061	
	2014	0.055	

The 2014 8-hour ozone monitoring data for the Charlotte nonattainment area was fully quality assured and officially submitted to the EPA for certification approval on December 12, 2014.

[9] 78 FR 34178.
[10] http://www.cadc.uscourts.gov/internet/opinions.nsf/E97A64FFBFE4DC1D85257DB70054D5EE/$file/12-1321-1528834.pdf.

The EPA concurred with the DAQ and MCAQ certification on December 15, 2014. The Enochville site in Rowan County was shut down in 2014, but the most recent design value for that site was 0.072 ppm in 2011-2013 and it was not the highest value in Rowan County or the greater Charlotte area at the time of its shutdown.

The monitoring data shown above demonstrates that the Charlotte area is attaining the 2008 8-hour ozone standard, and is on schedule with the compliance date mandated in the CAA and upheld by the D.C. Circuit Court.

2.3 PERMANENT AND ENFORCEABLE EMISSIONS REDUCTIONS

There are several state and federal measures that have been enacted in recent years that have ensured permanent and enforceable emissions reductions. A list of those measures that contributed to the permanent and enforceable emission reductions are summarized here and are more fully described in Section 3.2.

The federal measures that have been implemented include:

- Tier 2 vehicle and fuel standards: Implementation began in 2004 and requires all passenger vehicles in each manufacture's fleet to meet an average standard of 0.07 grams of NOx per mile. Additionally, in January 2006 the sulfur content of gasoline was required to be on average 30 ppm which assists in lowering NOx emissions. Most gasoline sold in North Carolina prior to January 2006 had a sulfur content of about 300 ppm. These emission reductions are federally enforceable.

- Tier 3 vehicle and fuel standards: Implementation begins in 2017 with full compliance required by 2025. Tier 3 requires all passenger vehicles to meet an average standard of 0.03 gram/mile of NOx. Compared to Tier 2, the Tier 3 tailpipe standards for light-duty vehicles are expected to reduce NOx and VOC emissions by approximately 80%. Tier 3 vehicle standards also include evaporative standards using onboard diagnostics (OBD) that will result in a 50% reduction in VOC emissions over Tier 2. The rule reduces the sulfur content of gasoline to 10 ppm starting in January 2017. These emission reductions will be federally enforceable.

- National program for greenhouse gas (GHG) emissions and fuel economy standards: The federal GHG and fuel economy standards apply to light-duty cars and trucks in model years 2012-2016 (phase 1) and 2017-2025 (phase 2). The final standards are projected to result in an average industry fleet-wide level of 163 grams/mile of carbon

dioxide (CO_2) which is equivalent to 54.5 miles per gallon (mpg) if achieved exclusively through fuel economy improvements. The fuel economy standards will result in less fuel being consumed, and therefore less NOx emissions released. These emission reductions will be federally enforceable.

- Heavy-duty gasoline and diesel highway vehicle standards: Implementation of the program began in 2004 with full implementation in 2010. The program was estimated to reduce NOx emissions by 95% and required that the sulfur content of fuel be reduced to 15 ppm. These emission reductions are federally enforceable.

- Medium- and heavy-duty vehicle fuel consumption and GHG standards: Began implementation in 2014 and requires on-road vehicles to achieve from a 7% to 20% reduction in CO_2 emissions and fuel consumption by 2018. The decrease in fuel consumption will result in a 7% to 20% decrease in NOx emissions. These emission reductions will be federally enforceable.

- Large nonroad diesel engine standards: Phased in between 2008 through 2014, the combined engine and fuel requirements are expected to reduce NOx emissions by 90% and reduce the sulfur content in the nonroad diesel fuel to 15 ppm. These emission reductions are federally enforceable.

- Nonroad spark-ignition engine and recreational engine standards: Tier 1 of these standards was implemented in 2004 and Tier 2 started in 2007. These standards reduce NOx emissions by 80%. These emission reductions are federally enforceable.

- Clean Air Interstate Rule (CAIR) and Cross State Air Pollution Rule (CSAPR): In May 2005, the EPA promulgated CAIR to reduce NOx and SO_2 emissions from electricity generating units (EGUs). After court challenges to CAIR, the EPA issued CSAPR in July 2011. CSAPR will take effect starting January 1, 2015 for SO_2 and annual NOx, and May 1, 2015 for ozone season NOx. Combined with other final state and EPA actions, the CSAPR will reduce power plant SO_2 emissions by 73% and NOx emissions by 54% from 2005 levels. The emission reductions will be federally enforceable.

- Tennessee Valley Authority (TVA) Consent Decree: In January 2009, a federal court required TVA coal-fired EGUs to install modern pollution controls for SO_2 and NOx. After an appeals court reversed the decision, North Carolina, TVA, and several other parties agreed to a settlement. The settlement caps NOx and SO_2 emissions at all of

TVA's coal-fired facilities to permanent levels of 52,000 tons of NOx in 2018 and 110,000 tons of SO_2 in 2019. These emission reductions are federally enforceable.

- Boiler and Reciprocating Internal Combustion Engine (RICE) National Emissions Standards for Hazardous Air Pollutants (NESHAP): The NESHAPs for industrial, commercial and institutional boilers and RICE are expected to result in a small decrease in VOC emissions. Boilers must comply with the NESHAP by January 31, 2016 for all states except North Carolina which has a compliance date in May 2019 (see following discussion under state measures). RICE owners and operators had to comply with the NESHAP by May 3, 2013. These emission reductions are federally enforceable.

- Utility Mercury Air Toxics Standards (MATS) and New Source Performance Standards (NSPS): On February 16, 2012, the EPA published final rules for both the (1) MATS for new and existing coal- and oil-fired EGUs and (2) NSPS for fossil-fuel fired electric utility, industrial-commercial-institutional and small industrial-commercial-institutional steam generating units.[11] The MATS reduce emissions of toxic air pollutants from EGUs larger than 25 megawatts that burn coal or oil for the purpose of generating electricity for sale and distribution through the national electric grid to the public. For the NSPS, the EPA revised the standards that new coal- and oil-fired power plants must meet for NOx, SO_2, and particulate matter (PM). While MATS is still under court review, and portions of it may be overturned, the rule can be expected to result in the reduction of both NOx and SO_2 emissions in addition to the reduction in mercury and other air toxic emissions. The emission reductions associated with the MATS and revised NSPS are federally enforceable.

The state measures that have been implemented include:

- Vehicle Emissions Inspection and Maintenance (I/M) Program: In 1999, the North Carolina State Legislation passed the Clean Air Bill that expanded the on-road vehicle I/M program from 9 to 48 counties. It was phased-in in the Charlotte nonattainment area from July 1, 2002 through January 1, 2004. This program reduces NOx, VOC and CO emissions. The rule for the I/M program was submitted to the EPA for adoption into the State Implementation Plan (SIP) in August 2002 and was federally approved in October 2002. Therefore, these emission reductions are both state and federally enforceable.

[11] 77 FR 9304.

On February 5, 2015, the EPA approved a change to North Carolina's I/M rules triggered by a state law which exempted plug-in vehicles and the three newest model year vehicles with less than 70,000 miles on their odometers from emission inspection in all areas in North Carolina where I/M is required.[12] In North Carolina's Section 110(l) demonstration, the state showed that the change in the compliance rate from 95% to 96% more than compensates for the NOx and VOC emissions increase. The EPA-approved change to the I/M rules was effective March 9, 2015, and are state and federally enforceable. See Section 3.2.2 of this SIP for a more detailed discussion of this change.

- Clean Smokestacks Act: This state law requires coal-fired power plants to reduce annual NOx emissions by 77% by 2009, and to reduce annual SO_2 emissions by 49% by 2009 and 73% by 2013. This law set a NOx emissions cap of 56,000 tons/year for 2009 and SO_2 emissions caps of 250,000 tons/year and 130,000 tons/year for 2009 and 2013, respectively. The public utilities cannot meet these emission caps by purchasing emission credits. The EPA approved the statewide emissions caps as part of the Charlotte SIP on September 26, 2011. In 2013, the power plants subject to this law had combined NOx emissions of 38,857 tons/year, well below the 56,000 tons/year cap. The emissions cap has been met in all subsequent years as well. These emissions limits are enforceable at both the federal and state level.

- Boiler NESHAP: Because of delays associated with the EPA's promulgation of the boiler NESHAP, North Carolina adopted and implemented equivalent emission limitations by permit under Section 112(j) of the CAA.[13] These limitations apply to owners and operators of industrial, commercial and institutional boilers and process heaters burning natural gas, coal, oil or biomass beginning in 2013. These emissions limits are enforceable at both the federal and state level.

- Transportation Conformity Memorandum of Agreements (MOAs): The Conformity MOAs are signed by federal and state transportation agencies and local air quality organizations and the MPOs subject to transportation conformity requirements for applicable transportation-related NAAQs and satisfies the requirement in the CAA Section 176(c). The DAQ chose through rulemaking to develop Conformity MOAs to ensure that interagency consultation procedures for transportation conformity are followed in each of the nonattainment or maintenance areas in the state.

[12] Approval and Promulgation of Implementation Plans; North Carolina; Inspection and Maintenance Program Updates, 80 FR, 6455.
[13] 15A NCAC 02D .1109 - 112(j) Case-by-Case Maximum Achievable Control Technology.

2.4 ADDITIONAL PROGRAMS SUPPORTING MAINTENANCE

This section provides a brief summary of state and local programs that have been implemented in the Charlotte area to maintain compliance with the NAAQS. Although these are important programs that help to ensure compliance with the NAAQS, they have not been relied upon as federally enforceable measures. These state and local programs are more fully described in Section 3.3.

State programs that have been implemented include:

- Air awareness program: The North Carolina Air Awareness Program is a public outreach and education program of the DAQ. The goal of the program is to reduce air pollution though voluntary actions by individuals and organizations. The program seeks to educate individuals about (1) the sources of air pollution; (2) the health effects of air pollution and how these effects can be mitigated by modification of outdoor activities on ozone action days; and (3) simple "action tips", such as carpooling, vehicle maintenance and energy conservation that reduce individual contributions to air pollution. One of the major program components is the daily air quality forecast. The DAQ produces the 8-hour ozone forecasts and corresponding air quality index for the Charlotte forecast area from April 1 through October 31 of each year.[14] Additionally, the DAQ produces daily PM forecasts for the Charlotte area.

- Grant Program: The DAQ has offered multiple forms of grant funding from state and federal funds to help cover the costs associated with emission reduction projects across the state. These projects include diesel engine replacements, diesel oxidation catalyst retrofits, marine diesel repowers, replacing gasoline vehicles with electric vehicles, vehicle replacement and many more. Grant projects that have been awarded have helped to reduce PM, NO_x, CO and VOC emissions from mobile sources.

- Open burning rule: This rule prohibits open burning of man-made materials throughout the state. Additionally, the rule prohibits open burning of yard waste in areas that the DAQ forecasts air quality action days. The open burning regulation reduces NOx, VOC, and CO emissions as well as PM with an aerodynamic diameter less than or equal to 10 micrometers (PM_{10}) and 2.5 micrometers ($PM_{2.5}$).

[14] See N.C. DAQ http://www.ncair.org/airaware/.

- Idle Reduction Regulation: The North Carolina Environmental Management Commission adopted the Heavy-Duty Vehicle Idling Restrictions rule to reduce unnecessary idling of heavy-duty trucks on July 9, 2009 and the rule became effective on July 10, 2010. This rule generally prevents any person who operates a heavy-duty vehicle to cause, let, permit, suffer or allow idling for a period of time in excess of 5 consecutive minutes in any 60 minute period. This rule is state enforceable.

Local program that have been implemented include:

- Open Burning Prohibition: Mecklenburg County prohibits open burning of any kind year round, except under extenuating circumstances with an approved burn permit. This prohibition is more stringent than the state's open burning rule and therefore enhances this control measure's overall benefit to the region. The open burning rule reduces NOx, VOC, CO, PM_{10} and $PM_{2.5}$. These emission reductions are enforceable at the local level.

- GRADE Program: In 2007, MCAQ initiated an air pollution control program called GRADE designed to reduce NOx emissions in the Charlotte nonattainment area. Funded by federal, state and local county grant money, GRADE provides businesses and organizations financial incentives to replace or repower heavy-duty non-road equipment with newer, cleaner, less polluting engines. GRADE has funded cost effective emission reduction projects operating in multiple segments of the economy including construction, landfills, timber logging operations, open pit mining, freight transportation, and commercial aviation. As of July 31, 2014, GRADE projects have reduced over 350 tons of NOx region-wide.

- Mobile Source Emissions Reduction Grants: This program reduces NOx, PM, and VOC emissions. MCAQ has also received DERA funding as well as American Recovery and Reinvestment Act (ARRA) and Congestion Mitigation and Air Quality Improvement (CMAQ) program funding. These funds have been used to repower or replace existing diesel engines from on-road vehicles and nonroad equipment. Even though these emission reductions are voluntary and not enforceable, they are still considered permanent reductions.

2.5 EFFECT NOX CONTROL PROGRAMS ON OZONE LEVELS

The foundation control program for stationary and mobile sources for the Charlotte area has significantly reduced NOx emissions enabling the area to demonstrate attainment with the 2008

ozone NAAQS. As an example, historically EGUs have been a significant source of NOx emissions contributing to ozone formation during the summer months in the Charlotte area as well as statewide. A recent review of the NOx emissions in the EPA's Air Markets Program Data database shows a reduction in over 96,641 tons of NOx from the reporting sources in North Carolina between 2002 and 2013. The trend in decreasing NOx emissions from these facilities are attributable to a combination of state (Clean Smoke Stacks Act) and federal (CAIR / CSAPR) measures and market forces (switching from coal to natural gas due to favorable natural gas prices). Table 2.4 presents the annual emissions for the North Carolina sources obtained from the EPA's Air Markets Program Data database.

Table 2.5 shows trends in NOx emissions from 2002 through 2013 from North Carolina power plants in the Charlotte nonattainment area, as well as the power plants located directly north and west of the Charlotte region that may impact the nonattainment area. There are four facilities located within Gaston, Lincoln and Rowan Counties. The facility west of the Charlotte nonattainment area is Cliffside, located in Cleveland County and the facility north of the

Table 2.4 NOx Emissions from NC Sources in EPA's Air Markets Program Database

Year	Annual NOx Emissions from NC Sources (tons)
2002	145,706
2003	135,879
2004	124,079
2005	114,300
2006	108,584
2007	64,770
2008	61,669
2009	44,506
2010	57,305
2011	48,889
2012	51,057
2013	49,065

Charlotte nonattainment area is Marshall located in Catawba County. These data are taken from the EPA Clean Air Markets Division's (CAMD) Air Markets Program Data and represent the second and third quarters of the year (April through September), the period during which ozone levels are the highest. The emissions from these facilities have significantly decreased during the ozone season since 2002, with over 12,000 tons of NOx reduction in the 2013 ozone season compared to 2002. In addition, two coal-fired power plants (Buck and Riverbend) were retired in April 2013, which resulted in additional emissions reductions.

Table 2.5 April 1 through September 30 NOx Emissions for Electric Utilities Near Charlotte Area (tons/period)

Facility	County	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Allen*	Gaston	5,011	3,643	4,002	3,589	3,001	3,053	3,082	2,188	2,925	2,738	1,676	1,906
Riverbend*	Gaston	2,556	2,703	1,844	1,379	1,417	1,296	1,256	304	1,063	884	109	0
Lincoln*	Lincoln	44	20	50	20	52	81	33	6	40	46	10	22
Buck*	Rowan	1,084	1,468	1,089	1,286	1,262	870	832	197	783	477	196	61
Marshall	Catawba	9,283	9,101	8,243	7,558	6,370	7,253	7,151	4,481	4,861	5,443	5,128	4,777
Cliffside	Cleveland	1,944	2,149	1,738	1,782	1,540	1,311	1,173	561	357	469	267	673
Total	**-----**	**19,922**	**19,084**	**16,966**	**15,614**	**13,642**	**13,864**	**13,527**	**7,737**	**10,029**	**10,057**	**7,386**	**7,439**

*Facility is located within the Charlotte nonattainment area boundary.

Temperature is a key meteorological factor that determines the ozone production potential of a given day. In North Carolina, many exceedances occur when the maximum daily temperature is 90 degrees Fahrenheit (ºF) or greater. In recent years, however, foundation control program measures have reduced NOx emissions in the Charlotte area to the extent that recent trends are showing that ozone levels are lower than the NAAQS even when the daily temperature is 90 ºF or greater. Figure 2.2 shows the relationship of exceedance days to high temperature days from 2000 through 2014 for the Charlotte region monitors. The relationship between the maximum 4th highest ozone value to high temperature days from 2000 through 2014 is displayed in Figure 2.3.

It is important to see how the ozone levels have changed over the last decade in response to lower NOx emissions in the state. The worst summer in terms of the number of exceedance days and observed 4th highest ozone concentrations was 2002, with 61 exceedance days in the Charlotte region and a maximum 4th highest daily average 8-hour concentration of 0.108 ppm. That summer there were 49 days when the temperature was 90 ºF or greater in the Charlotte region. The next highest number of exceedance days occurred in 2007 with 56 days and 74 days with temperatures at or above 90 °F, yet the maximum 4th highest daily average 8-hour concentration was significantly lower than 2002 at 0.096 ppm. More recently, in the year 2010, the Charlotte area experienced the hottest summer of the 21st century with 86 days at or above 90 °F. However, the Charlotte area only observed 17 exceedance days and the maximum 4th highest daily average concentration was only 0.082 ppm. In subsequent years, the 4th-highest values have generally decreased as the number of very hot days over 90 degrees has moderated. In 2014, there were a total of 37 days with a high temperature over 90 degrees, but no exceedances of the 2008 8-hour ozone standard and a peak 4th highest daily average value of 0.068 ppm. The steady decrease of ozone values over the last 15 years regardless of summertime temperature regime illustrates the progress that North Carolina has made and the positive effects of the control strategies put in place by North Carolina, Mecklenburg County and the EPA to regulate NOx emissions.

Figure 2.2 Relationship between high temperature days and number of exceedance days in the Charlotte area

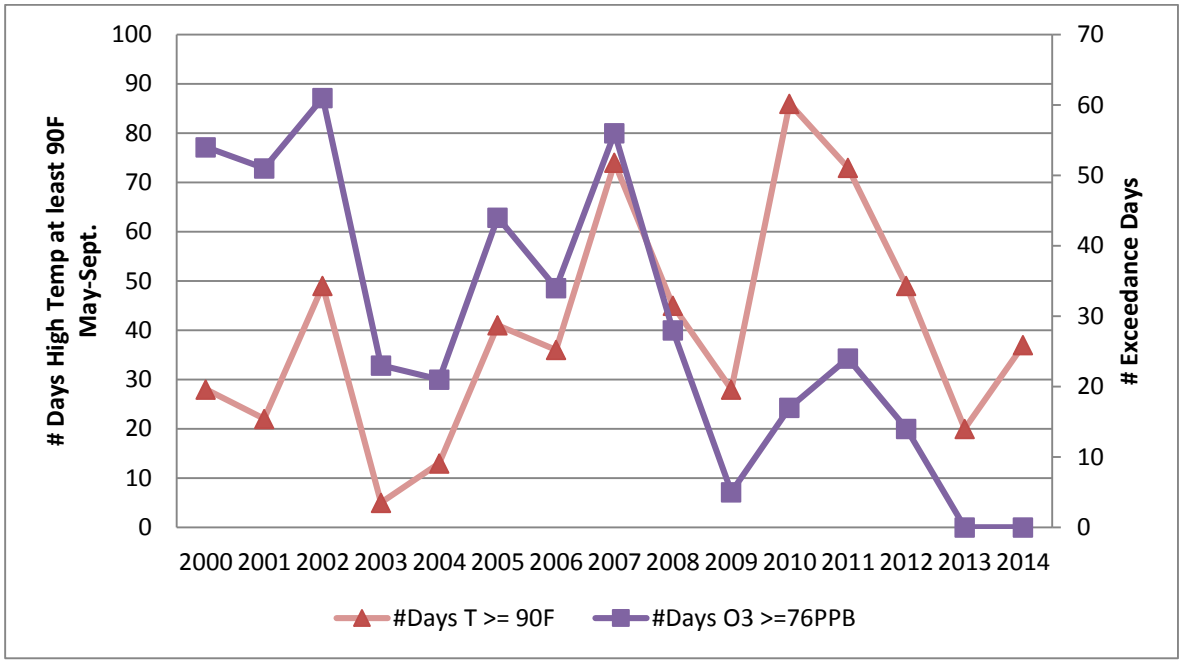
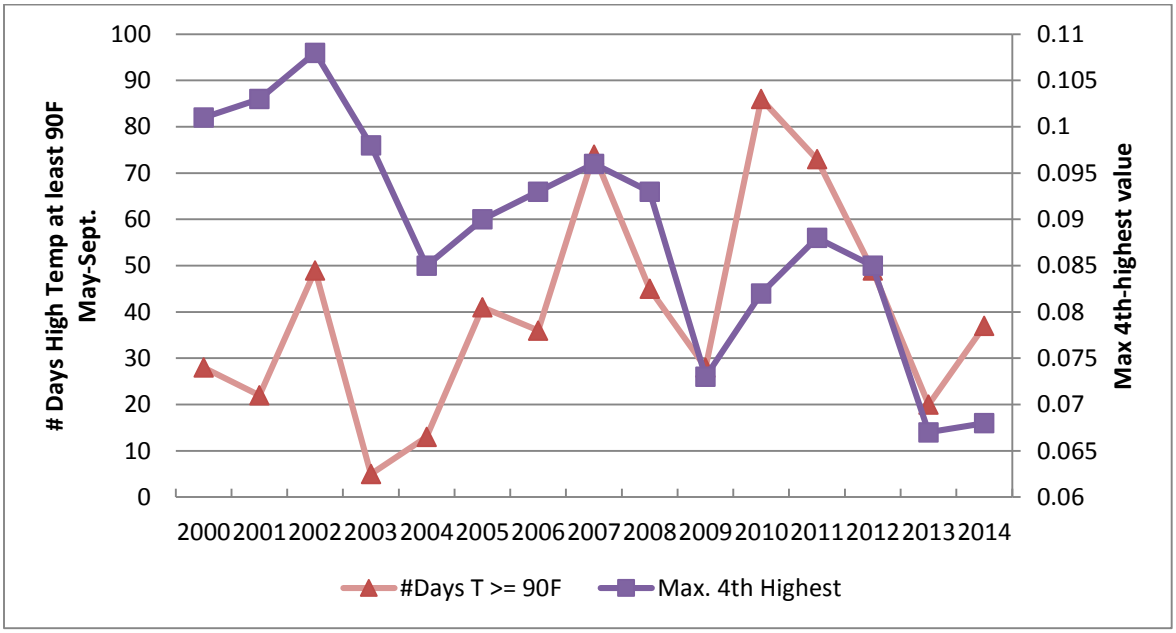


Figure 2.3 Relationship between high temperature days and maximum 4th highest ozone value in the Charlotte Area



3.0 MAINTENANCE PLAN

3.1 CONCEPT OF NORTH CAROLINA'S MAINTENANCE PLAN

The state's plan for maintaining compliance with the ambient air quality standard for the 2008 8-hour ozone in the Charlotte-Gastonia-Salisbury nonattainment area consists of three major parts: a foundation control program, a maintenance demonstration, and a contingency plan. The foundation control program consists of the current federal and state control measures already in effect, as well as the future benefits of the federal actions. For EGUs, the future federal actions include implementation of the MATS, CSAPR, and carbon rules and the TVA consent decree. Additionally, North Carolina will continue to implement and enforce the Clean Smokestacks Act. For on-road vehicles, the future federal actions include compliance with the Tier 3 vehicle emissions and fuel standards and corporate average fuel economy standards for on-road vehicles. Although North Carolina did not rely on the emission reductions from CSAPR or the TVA consent decree for maintenance of the 2008 8-hour ozone standard, these actions will result in additional reductions in NOx emissions regionally.

The foundation control program includes federally and state enforceable control programs that have been adopted and implemented by the DAQ. These programs will remain enforceable and ensure that maintenance of the 2008 8-hour ozone standard will continue. Sources are prohibited from reducing or removing emission controls (anti-backsliding) following the redesignation of the area unless such a change is first approved by the EPA as a revision to the North Carolina SIP that is consistent with Section 110(l) of the CAA.

For the maintenance demonstration, the base year of 2014 was chosen since it is a year that falls within the attaining design value period of 2012-2014. The interim years 2015, 2018 and 2022 were chosen based on consultation with the EPA. The final year of the maintenance demonstration is 2026, since the CAA requires maintenance for at least 10 years after the EPA approves the redesignation demonstration and maintenance plan. The maintenance demonstration consists of a comparison between the 2014 baseline emissions inventory and the projected emissions inventories (for 2015, 2018, 2022, and 2026), which consider economic and population growth. The comparison shows that the total emissions in each of the interim years and the final year is estimated to be lower than in the base year, which demonstrates maintenance of the 2008 8-hour ozone standard. The reductions in emissions are due to the foundation control programs outlined below.

The North Carolina contingency plan involves tracking and triggering mechanisms to determine when contingency measures are needed and a process of implementing appropriate control measures. The primary trigger of the contingency plan will be a violation of the ambient air

quality standard for 2008 8-hour ozone standard. The secondary trigger will be a monitored air quality pattern that suggests an actual 2008 8-hour ozone NAAQS violation may be imminent.

The SCDHEC has developed a redesignation demonstration and maintenance plan for the South Carolina portion of the nonattainment area. Contact the SCDHEC for a copy of the South Carolina redesignation demonstration and maintenance plan.

3.2 FOUNDATION CONTROL PROGRAM

The main element of the maintenance plan is the foundation control program. The foundation control program consists of a combination of federal and state control measures necessary to maintain the ambient air quality standards. The purpose of the foundation control program is to prevent the ambient air quality standards from being violated and thereby eliminate the need for more costly controls being imposed on industry and the general public. Each component of the foundation control program is essential in demonstrating maintenance of the air quality standards. The following provides a summary of each federal and state control measure included in the foundation control program for the Charlotte nonattainment area. All of these programs have already been implemented or are in the process of being implemented.

3.2.1 Federal Control Measures

Tier 2 Vehicle and Fuel Standards

Federal Tier 2 vehicle standards require all passenger vehicles in a manufacturer's fleet, including light-duty trucks and sport utility vehicles (SUVs), to meet an average standard of 0.07 gram/per mile of NOx. Implementation began in 2004, with full compliance required by 2007. The Tier 2 standards also cover passenger vehicles over 8,500 pounds gross vehicle weight rating (the larger pickup trucks and SUVs), which are not covered by the Tier 1 regulations. For these vehicles, the standards were phased in beginning in 2008, with full compliance required by 2009. The Tier 2 standards require vehicles to be 77% to 95% cleaner. The Tier 2 rule also reduced the sulfur content of gasoline to 30 ppm starting in January of 2006. Most gasoline sold in North Carolina prior to January 2006 had a sulfur content of about 300 ppm. Sulfur occurs naturally in gasoline and interferes with the operation of catalytic converters on vehicles, which results in higher NOx emissions. Lower-sulfur gasoline is necessary to achieve the Tier 2 vehicle emission standards.[15] These emission reductions are federally enforceable.

[15] Fact Sheet, Office of Mobile Sources, EPA-420-F-99-051, December 1999.

Tier 3 Vehicle and Fuel Standards

Federal Tier 3 vehicle standards require all passenger vehicles in a manufacturer's fleet, including light-duty trucks and SUVs, to meet an average standard of 0.03 gram/per mile of NOx. Heavy-duty passenger vehicles must meet average standards of 0.178 to 0.247 gram/per mile of NOx depending on vehicle classification. Implementation begins in 2017, with full compliance required by 2025. Compared to current standards in 2014, the Tier 3 tailpipe standards for light-duty vehicles are expected to reduce non-methane organic gases (NMOG) and NOx by approximately 80%. The Tier 3 program is expected to reduce per-vehicle PM standards by approximately 70%. The heavy-duty tailpipe standards represent about a 60% reduction in both fleet average NMOG+NOx and per vehicle PM standards. Tier 3 vehicle standards also require evaporative standards including OBD that will result in a 50% reduction in VOC emissions from Tier 2 for all 2017 and later light-duty and on-road gasoline-powered heavy-duty vehicles. The Tier 3 rule also reduced the sulfur content of gasoline to 10 ppm starting in January 2017. Tier 2 standards had limited the sulfur content to 30 ppm. Sulfur occurs naturally in gasoline and interferes with the operation of catalytic converters on vehicles, which results in higher NOx emissions.[16] These emission reductions are federally enforceable.[17]

National Program for GHG Emissions and Fuel Economy Standards

The EPA and the National Highway Traffic Safety Administration (NHTSA) jointly developed the federal GHG and fuel economy standards for light-duty cars and trucks in model years 2012-2016 (phase 1) and 2017-2025 (phase 2). The EPA also aligned implementation of the Tier 3 program with the second phase of the EPA and NHTSA federal GHG and fuel economy standards program. Together, phases 1 and 2 of the final standards are projected to result in an average industry fleet-wide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 mpg if achieved exclusively through fuel economy improvements.[18] The fuel economy standards will result in less fuel being consumed, and therefore less NOx emissions released. These emission reductions will be federally enforceable.

Heavy-Duty Gasoline and Diesel Highway Vehicles Standards

The EPA standards designed to reduce NOx and VOC emissions from heavy-duty gasoline and diesel highway vehicles began to take effect in 2004. A second phase of standards and testing procedures that began in 2007 reduced PM from heavy-duty highway engines and also reduced highway diesel fuel sulfur content to 15 ppm since the sulfur damages emission control devices. The total program is expected to achieve a 90% reduction in PM emissions and a 95% reduction

[16] Fact Sheets, Office of Transportation and Air Quality, EPA-420-F-14-008 and EPA-420-F-14-009, March 2014.
[17] See U.S. EPA, http://www.epa.gov/otaq/tier3.htm.
[18] See U.S. EPA, http://www.epa.gov/otaq/climate/regs-light-duty.htm.

in NOx emissions for these new engines using low-sulfur diesel, compared to engines using higher-content sulfur diesel. These emission reductions are federally enforceable.

Large Nonroad Diesel Engines Rule

In May 2004, the EPA promulgated new rules for large nonroad diesel engines, such as those used in construction, agricultural and industrial equipment, to be phased in between 2008 and 2014. The nonroad diesel rules also reduced the allowable sulfur in nonroad diesel fuel to 15 ppm. Prior to the fuel standard change, nonroad diesel fuel averaged about 3,400 ppm sulfur. The combined engine and fuel rules are expected to reduce NOx and PM emissions from large nonroad diesel engines by over 90%.[19] These emission reductions are federally enforceable.

Medium- and Heavy-Duty Vehicle Fuel Consumption and GHG Standards

In September 2011, the EPA and the NHTSA promulgated joint rules to reduce GHG emissions and improve fuel efficiency of combination tractor trucks, heavy-duty pickups and vans, and vocational trucks beginning with model year 2014 and applying to all model years by 2018. Depending on truck type, the on-road vehicles must achieve from a 7% to 20% reduction in CO_2 emissions and fuel consumption from the 2010 base year. The decrease in fuel consumption will result in a 7% to 20% decrease in NOx emissions.[20] These emission reductions are federally enforceable.

Nonroad Spark-Ignition Engines and Recreational Engines Standard

The nonroad spark-ignition and recreational engine standards, effective in July 2003, regulates NOx, hydrocarbons and CO for groups of previously unregulated nonroad engines. These engine standards apply to all new engines sold in the United States and imported after these standards began and applies to large spark-ignition engines (forklifts and airport ground service equipment), recreational vehicles (off-highway motorcycles and all-terrain-vehicles), and recreational marine diesel engines. The regulation varies based upon the type of engine or vehicle.

The large spark-ignition engines contribute to ozone formation and ambient CO and PM levels in urban areas. Tier 1 of this standard was implemented in 2004 and Tier 2 started in 2007. Like the large spark-ignition, recreational vehicles contribute to ozone formation and ambient CO and PM levels. For the off-highway motorcycles and all-terrain-vehicles, the exhaust emissions standard was phased-in. Fifty percent of model year 2006 engines had to meet the standard and for model years 2007 and later, all engines must meet the standard. Recreational marine diesel

[19] See U.S. EPA http://transportpolicy.net/index.php?title=US:_Heavy-duty:_Fuel_Consumption_and_GHG
[20] Fact Sheet, Office of Transport and Air Quality, EOA-420-F-11-031, August 2011.

engines over 37 kilowatts are used in yachts, cruisers, and other types of pleasure craft. Recreational marine engines contribute to ozone formation and PM levels, especially in marinas. Depending on the size of the engine, the standard began phasing-in in 2006.

When the nonroad spark-ignition and recreational engine standards are fully implemented in 2020, an overall 72% reduction in hydrocarbons, 80% reduction in NOx, and 56% reduction in CO emissions are expected. These controls will help reduce ambient concentrations of ozone, CO, and fine PM.[21] These emission reductions are federally enforceable.

CAIR and CSAPR

On May 12, 2005, the EPA promulgated the CAIR which required reductions in emissions of NOx and SO_2 from large fossil fuel fired EGUs. CAIR also allowed non-EGU industrial boilers to participate in the program to meet their NOx SIP Call requirements.[22] The U.S. Court of Appeals for the D.C. Circuit ruled on petitions for review of CAIR and CAIR Federal Implementation Plans (FIPs), including their provisions establishing the CAIR NOx annual and ozone season and SO_2 trading programs. On July 11, 2008, the Court issued an opinion vacating and remanding these rules. However, parties to the litigation requested rehearing of aspects of the Court's decision, including the vacatur of the rules. On December 23, 2008, the Court remanded the rules to the EPA without vacating them. The December 23, 2008 ruling left CAIR in place until the EPA issued a new rule to replace CAIR in accordance with the July 11, 2008 decision.

The EPA issued CSAPR in July 2011 to address CAA requirements concerning interstate transport of air pollution and to replace the previous CAIR which the D.C. Circuit remanded to the EPA for replacement. Following the original rulemaking, CSAPR was amended by three further rules known as the Supplemental Rule, the First Revisions Rule, and the Second Revisions Rule. As amended, CSAPR requires 28 states to limit their state-wide emissions of SO_2 and/or NOx in order to reduce or eliminate the states' contributions to fine PM and/or ground-level ozone pollution in other states. The emissions limitations are defined in terms of maximum state-wide "budgets" for emissions of annual SO_2, annual NOx, and/or ozone-season NOx by each state's large EGUs.

As the mechanism for achieving compliance with the emissions limitations, CSAPR establishes FIPs that require large EGUs in each affected state to participate in one or more new emissions trading programs that supersede the existing CAIR emissions trading programs. Non-EGU

[21] Final Rule: Control of Emissions from Nonroad Large Spark-Ignition Engines, and Recreational Engines (Marine and Land-Based), 67 FR 68242.
[22] In 2009, the NOx SIP Call program was replaced by CAIR.

boilers are not able to participate in CSAPR, resulting in a group of "orphaned" industrial units that are still subject to the NOx SIP Call. Interstate trading of CSAPR's emission allowances is permitted, but the rule includes "assurance provisions" designed to ensure that individual states' emissions do not exceed the states' respective emissions budgets. CSAPR allows states to elect to revise their SIPs to modify or replace the FIPs while continuing to rely on the rule's trading programs for compliance with the emissions limitations, and establishes certain requirements and deadlines related to those optional SIP revisions. The rule also contains provisions that sunset CAIR compliance requirements on a schedule coordinated with the implementation of CSAPR compliance requirements.

Certain industry and state and local government petitioners challenged CSAPR in the D.C. Circuit and filed motions seeking a stay of the rule pending judicial review. On December 30, 2011, the Court granted a stay of the rule, ordering the EPA to continue administering CAIR on an interim basis. In a subsequent decision on the merits, the Court vacated CSAPR based on a subset of petitioners' claims, but on April 29, 2014, the U.S. Supreme Court reversed that decision and remanded the case to the D.C. Circuit for further proceedings. Throughout the initial round of D.C. Circuit proceedings and the ensuing Supreme Court proceedings, the stay remained in place and the EPA has continued to implement CAIR. Following the Supreme Court decision, in order to allow CSAPR to replace CAIR in an equitable and orderly manner while further D.C. Circuit proceedings are held to resolve petitioners' remaining claims, the EPA filed a motion asking the D.C. Circuit to lift the stay and to toll by three years all CSAPR compliance deadlines that had not passed as of the date of the stay order. On October 23, 2014, the Court granted the EPA's motion.

CSAPR will take effect starting January 1, 2015 for SO_2 and annual NOx, and May 1, 2015 for ozone season NOx. Combined with other final state and EPA actions, the CSAPR will reduce power plant SO_2 emissions by 73% and NOx emissions by 54% from 2005 levels in the CSAPR region.[23] The emission reductions will be federally enforceable.

TVA Consent Decree

In January 2009 a federal court found that four TVA coal-fired generating stations were creating a public nuisance in North Carolina. The judge ordered that each unit of each facility install modern pollution controls for SO_2 and NOx and meet emission limits that are consistent with the continuous operation of such controls. The court ordered that TVA meet these limits on a staggered schedule ending in 2013. In July 2010 an appeals court reversed the decision.

[23] Interim Final Rule: Rulemaking To Amend Dates in Federal Implementation Plans Addressing Interstate Transport of Ozone and Fine Particulate Matter, 79 FR 71663.

In April 2011 North Carolina, TVA, and several other parties agreed to a comprehensive settlement of a variety of air pollution allegations. The detailed settlement would (1) subject SO_2 and NOx emissions at all of TVA's coal-fired facilities to system-wide caps that decline on an annual basis to permanent levels of 110,000 tons of SO_2 in 2019 and 52,000 tons of NOx in 2018; (2) require TVA to install modern pollution controls on or shutdown the majority of its coal-fired units; and (3) require TVA to pay North Carolina $11.2 million to fund mitigation projects in North Carolina. The settlement is being successfully implemented, including the provision of funds directly to North Carolina for approved projects.[24] These emission reductions are federally enforceable.

Boiler NESHAP

The NESHAP for the industrial, commercial and institutional boiler source category is applicable to boilers and process heaters burning natural gas, coal, oil or biomass. Boilers must comply with the NESHAP by January 31, 2016 for all states except North Carolina (see state control measure Section 3.2.2 below for further discussion) and by May 2019 for boilers in North Carolina. The NESHAP contains work practice standards such as annual boiler tune ups for most boilers. There are also emissions standards for the largest emitting boilers (<1% of all boilers) including a CO standard that is a surrogate for gas-phase hazardous air pollutants (HAPs) and VOC. There is estimated to be a small reduction in VOC emissions due to the NESHAP.[25] These new emission reductions are federally enforceable.

RICE NESHAP

The RICE NESHAP applies to stationary engines burning natural gas and diesel fuels that generate electricity and power equipment at industrial, agricultural, oil and gas production, power generation and other facilities. RICE owners and operators had to comply with the NESHAP by May 3, 2013. The NESHAP contains work practice standards such as engine maintenance, requires ultralow-sulfur diesel fuel for some engines, and requires the use of catalytic converters on larger engines. There is estimated to be a slight reduction in VOC emissions due to the NESHAP.[26] These emission reductions are federally enforceable.

Utility MATS and NSPS Rules

On February 16, 2012, the EPA published final rules for both the (1) MATS for new and existing coal- and oil-fired EGUs and (2) NSPS for fossil-fuel fired electric utility, industrial-

[24] http://www.ncdoj.gov/getdoc/bdf66401-8137-4be2-bd20-57e89b570c1a/TVA-signed-consent-decree.aspx.
[25] See U.S. EPA http://www.epa.gov/ttn/atw/boiler/boilerpg.html.
[26] See U.S. EPA http://www.epa.gov/ttn/atw/icengines/.

commercial-institutional and small industrial-commercial-institutional steam generating units.[27] The MATS reduce emissions of toxic air pollutants from EGUs larger than 25 megawatts that burn coal or oil for the purpose of generating electricity for sale and distribution through the national electric grid to the public. For the NSPS, the EPA revised the standards that new coal- and oil-fired power plants must meet for NOx, SO_2, and PM.

Following promulgation of the final rules, the EPA received petitions for reconsideration of various provisions of both rules, including requests to reconsider the work practice standards applicable during startup periods and shutdown periods that were included in the final rule. The EPA granted reconsideration of the startup and shutdown provisions because the public was not provided an opportunity to comment on the work practice requirements contained in the final rule. On November 30, 2012, the EPA published a proposed rule reconsidering certain new source standards issued in MATS and the startup and shutdown provisions in MATS and the Utility NSPS.[28] The EPA proposed certain minor changes to the startup and shutdown provisions contained in the 2012 final rule based on information obtained in the petitions for reconsideration. On April 24, 2013, the EPA took final action on the new source standards that were reconsidered and also the technical corrections contained in the November 30, 2012, proposed action. [29] The EPA did not take final action on the startup and shutdown provisions, and, on June 25, 2013, the EPA added new information and analysis to the docket and reopened the public comment period for the proposed revisions to the startup and shutdown provisions in MATS and the startup and shutdown provisions related to the PM standard in the Utility NSPS. [30] The EPA took final action on the remaining topics of the reconsideration on November 19, 2014.[31] The compliance date for existing sources is April 16, 2015, while the compliance date for new sources is April 16, 2012.

On November 25, 2014, The U.S. Supreme Court accepted several challenges to the rules brought by the utility industry and a coalition of nearly two dozen states. The court will hear arguments in the case in the spring and is likely to rule in June 2015.[32] While MATS is still under court review, and portions of it may be overturned, the rule can be expected to result in the reduction of both NOx and SO_2 emissions in addition to the reduction in mercury and other air toxic emissions. The emission reductions are federally enforceable.

[27] 77 FR 9304.
[28] 77 FR 71323.
[29] 78 FR 24073.
[30] 78 FR 38001.
[31] 79 FR 68777.
[32] Wall Street Journal, Nov. 25, 2014, Supreme Court to Review EPA Rule on Power Plant Emissions, http://www.wsj.com/articles/supreme-court-to-review-epa-rule-on-power-plant-emissions-1416942022?mod=WSJ_newsreel_6.

3.2.2 State Control Measures

North Carolina has adopted a number of regulations, legislation and voluntary programs to address pollution issues across the state. These are summarized below.

Vehicle Emissions Inspection and Maintenance (I/M) Program

The 1999 Clean Air Bill expanded the vehicle emissions I/M program in North Carolina from 9 counties to 48 counties from July 1, 2002 through January 1, 2006. Vehicles are tested using the OBDII, an improved method of testing, which ensures proper emission system operation for vehicles and light trucks during their lifetime by monitoring emission-related components and systems for malfunction and/or deterioration. An important aspect of OBDII is its ability to notify the driver of malfunction and/or deterioration by illuminating the "check engine light". If the vehicle is taken to a repair shop in a timely fashion, it can be properly repaired before any significant and prolonged emission increase occurs. The previously used tailpipe test (i.e., idle test) did not measure NOx emissions; it only tested for VOC and CO emissions. By utilizing the OBDII test method, the NOx emissions as well as other pollutants from motor vehicles are reduced. The effective dates for the counties in the North Carolina portion of the Charlotte nonattainment area are July 1, 2002 for Cabarrus, Gaston, Mecklenburg and Union Counties; July 1, 2003 for Iredell and Rowan Counties; and January 1, 2004 for Lincoln County.

The I/M program rule was submitted to the EPA for adoption into the SIP in August 2002 and was federally approved in October 2002. Therefore, these emission reductions are both state and federally enforceable.

On February 5, 2015, the EPA approved a change to North Carolina's I/M rules triggered by a state law which exempted plug-in vehicles and the three newest model year vehicles with less than 70,000 miles on their odometers from emission inspection in all areas in North Carolina where I/M is required.[33] In North Carolina's Section 110(l) demonstration, the state showed that the change in the compliance rate from 95% to 96% more than compensates for the NOx and VOC emissions increase from exempting the newest model year vehicles with less than 70,000 miles. Based on recent modeling the DAQ completed using the EPA's MOVES2014 model, North Carolina's current I/M program with the the three newest model year vehicle exemption is expected to yield annual I/M emission reduction benefits ranging from 5% to 8% for NOx and 6% to 8.5% for VOC. The EPA-approved change to the I/M rules was effective March 9, 2015. The emissions reductions are state and federally enforceable.

[33] Approval and Promulgation of Implementation Plans; North Carolina; Inspection and Maintenance Program Updates, 80 FR, 6455.

Clean Smokestacks Act

In June 2002, the North Carolina General Assembly enacted the North Carolina Clean Smokestacks Act, which required coal-fired power plants in North Carolina to reduce annual NOx emissions by 77% by 2009.[34] These power plants were also required to reduce annual SO_2 emissions by 49% by 2009 and 74% by 2013. The utilities have reduced NOx emissions by 83% and SO_2 emissions by 89% relative to 1998 emissions levels.

With the requirement to meet annual emissions caps and disallowing the purchase of NOx credits to meet the caps, the Clean Smokestacks Act reduces NOx emissions beyond the requirements of the NOx SIP Call Rule. The CSA emissions caps were submitted to the EPA for adoption into the SIP in August 2009 and were approved in September 2011. These regulations are both state and federally enforceable.

Boiler NESHAP

Because of delays associated with the EPA's promulgation of the boiler NESHAP, North Carolina adopted and implemented equivalent emission limitations by permit under Section 112(j) of the CAA.[35] These limitations apply to owners and operators of industrial, commercial and institutional boiler boilers and process heaters burning natural gas, coal, oil or biomass beginning in 2013. This rule reduced uncertainty for owners and operators of affected emission units while the EPA resolved legal challenges to the federal rule, reduced emissions from affected units three years earlier than the federal rule, and provided the time needed for owners and operators to transition to the federal rule requirements beginning in May 2019.[36] Although the rule establishes limits for reducing HAPs form boilers and process heaters, VOC emissions will also be controlled. In the Charlotte area, natural gas fired boilers are the only types of emission units affected by this rule. For natural gas fired boilers, VOC emissions are estimated to be reduced by 4%. The emission limits associated with this rule are state and federally enforceable.

Transportation Conformity MOAs

Transportation conformity MOAs establish criteria and procedures related to interagency consultation, conflict resolution, public participation and enforceability of certain transportation related control measures and mitigation measures in the State of North Carolina and its SIP.

[34] Air Quality/Electric Utilities Bill (SB 1078), http://daq.state.nc.us/news/leg/.
[35] 15A NCAC 02D .1109 - 112(j) Case-by-Case Maximum Achievable Control Technology.
[36] See U.S. EPA http://www.epa.gov/ttn/atw/boiler/boilerpg.html.

Transportation conformity is required under section 176(c) of the CAA for nonattainment and maintenance areas to ensure that federally supported highway projects, transit projects, and other activities are consistent with (conform to) the purpose of the SIP, which is to eliminate or reduce the severity and number of violations of the NAAQS and to achieve expeditiously the attainment of such standards. In compliance with Section 176(c) of the CAA, North Carolina Department of Environment and Natural Resources, Division of Air Quality chose, through rulemaking as referenced in 15A North Carolina Administrative Code (NCAC) 02D.2005, to develop Conformity MOAs to ensure that interagency consultation procedures for transportation conformity are followed.[37] The Conformity MOAs were submitted to the EPA on July 12, 2013. The USEPA, through direct final rule action, approved a revision to the North Carolina SIP with the effective date of February 24, 2014.[38]

3.3 ADDITIONAL PROGRAMS SUPPORTING MAINTENANCE

This section provides a summary of state and local programs that have been implemented in the Charlotte area to maintain compliance with the NAAQS. Although these are important programs that help to ensure compliance with the NAAQS, they have not been relied upon as federally enforceable measures.

3.3.1 State Programs Supporting Maintenance

Air Awareness Program

The DAQ has found that the most effective outreach programs are performed by locally-based personnel who can work closely with members of the local community. The DAQ has contracted with MCAQ to manage the Charlotte area North Carolina Air Awareness (NCAA) program since its inception in 1997. Charlotte area NCAA has conducted educational outreach with the general public, built strong working relationships with regional interest groups, and developed communication resources for business coalition members. Coalition activities are designed to communicate air quality information, including the forecast, and promote voluntary emissions reduction programs. The business coalition includes partnerships with private businesses and civic organizations. These efforts are important for maintaining compliance with the NAAQS. Under MCAQ's management, Charlotte area NCAA has established itself as a leader in advocating for voluntary pollution reduction efforts throughout the state's only ozone nonattainment region.

[37] http://www.ncair.org/rules/rules/D2005.pdf.
[38] 78 FR 73266-78272.

Grant Program

Since 1995, the DAQ has offered multiple forms of grant funding to help cover the costs associated with emission reduction projects. These projects include diesel engine replacements, diesel oxidation catalyst retrofits, marine diesel repowers, replacing gasoline vehicles with electric vehicles and many more. One source of funding is the North Carolina Mobile Source Emissions Reduction Grants funded by gasoline tax receipts. The Mobile Source Emissions Reduction Grant program has awarded grants to a number of businesses, cities, counties and school districts that have ranged from the installation of Diesel Oxidation Catalysts (DOCs) or Diesel Particulate Filters (DPFs) on their diesel equipment to non-diesel emission reduction projects like purchase of electric vehicles. The DAQ has also received federal funds from the Diesel Emissions Reduction Act (DERA) and the American Recovery and Reinvestment Act (ARRA) to fund diesel emission reducing projects. The DERA and ARRA funds that the DAQ has received have been used to retrofit, repower or replace existing diesel engines from on-road and nonroad mobile source vehicles/equipment. Even though these emission reductions are voluntary and not enforceable, they are still considered permanent reductions.

Open Burning Rule

The North Carolina open burning rule prohibits the burning of man-made materials statewide. The rule also prohibits open burning of yard waste and land clearing debris on forecasted code orange or higher "air quality action days" for those counties for which the DAQ or local air programs forecast ozone or fine PM.[39] The open burning rule reduces PM, SO_2, CO, NOx, and VOC emissions. This rule is state enforceable.

Idle Reduction Regulation

The North Carolina Environmental Management Commission adopted the Heavy-Duty Vehicle Idling Restrictions rule to reduce unnecessary idling of heavy-duty trucks on July 9, 2009 and the rule became effective on July 10, 2010. This rule generally prevents any person who operates a heavy-duty vehicle to cause, let, permit, suffer or allow idling for a period of time in excess of 5 consecutive minutes in any 60 minute period. This rule is state enforceable.

3.3.2 Local Programs Supporting Maintenance

Mobile Source Emissions Reduction Grants

In the Charlotte area, between 2011 and 2013, with funding from a settlement, a nonroad equipment repower was funded. This project resulted in significant fuel savings and reductions in NOx and $PM_{2.5}$ emissions.

[39] 15A NCAC 02Q.1900 – Open Burning.

GRADE Program

In 2007, MCAQ initiated an air pollution control program called GRADE designed to reduce NOx emissions in the Charlotte nonattainment area. Funded by federal, state and local county grant money, GRADE provides businesses and organizations financial incentives to replace or repower heavy-duty non-road equipment with newer, cleaner, less polluting engines.
GRADE has funded cost effective emission reduction projects operating in multiple segments of the economy including construction, landfills, timber logging operations, open pit mining, freight transportation, and commercial aviation. As of July 31, 2014, GRADE projects have reduced over 350 tons of NOx region-wide.

Open Burning Prohibitions

Mecklenburg County prohibits open burning of any kind year round except under extenuating circumstances with an approved burn permit. This prohibition is more stringent than the state's open burning rule and therefore enhances this control measure's overall benefit to the region. The open burning rule reduces emissions of NOx, VOC, CO, PM_{10} and $PM_{2.5}$. These emission reductions are enforced at the local level.

3.4 EMISSIONS INVENTORIES AND MAINTENANCE DEMONSTRATION

3.4.1 Theory of Approach

There are two basic approaches used to demonstrate continued maintenance. The first is the comparison of a projected emissions inventory with a baseline emissions inventory. The second approach involves complex analysis using gridded photochemical modeling. The approach used by the DAQ is the comparison of emissions inventories for the years 2014 and 2026.

For the maintenance demonstration, the base year of 2014 was chosen since it is a year that falls within the attaining design value period of 2012-2014. The maintenance demonstration is made by comparing the 2014 baseline summer day emissions inventory to the 2026 projected summer day emissions inventory. The baseline summer day emissions inventory represents an emission level for a period when the ambient air quality standard was not violated, 2012-2014. If the projected emissions remain at or below the baseline emissions, continued maintenance is demonstrated and it then follows, if the projected emissions remain at or below the baseline emissions, then the ambient air quality standard should not be violated in the future. In addition to comparing the final year of the plan, all of the interim years are compared to the 2014 baseline to demonstrate that these years are also expected to show continued maintenance of the 2008 8-hour ozone standard.

The emissions inventories are comprised of four major types of sources: point, area, on-road mobile and nonroad mobile. The projected summer day emission inventories have been estimated using projected rates of growth in population, traffic, economic activity and other parameters. Naturally occurring, or biogenic, emissions are not included in the emissions inventory comparison, as these emissions are outside the state's span of control.

The SCDHEC has developed a redesignation demonstration and maintenance plan for the South Carolina portion of the nonattainment area. Contact the SCDHEC for a copy of the South Carolina redesignation demonstration and maintenance plan.

3.4.2 Emission Inventories

The base year and future year emissions inventory for this SIP includes the emissions associated with all emission sources in Mecklenburg County and the portion of the other six counties that is included in the nonattainment area. For point sources, the location coordinates for each facility were mapped using Geographic Information System (GIS) software to identify the facilities located within the nonattainment portion of each county. For the on-road mobile, nonroad mobile, and area source sectors, total county emissions were multiplied by the population percentages for the townships within the nonattainment area to calculate the emissions for the nonattainment portion for each county. Table 3.1 shows the population percentages that were used to determine emissions contributions for the nonattainment portion of each partial county (except for Mecklenburg County). The population percentages were obtained from transportation demand modeling (TDM) that the Charlotte Department of Transportation completed to develop vehicle miles traveled (VMT) and vehicle speed data used as inputs to the on-road model for the base year and each of the future years.

The following provides a brief discussion on the four different man-made emission inventory source classifications: (1) stationary point, (2) area, (3) on-road mobile and (4) nonroad mobile.

Table 3.1 Population Percentages Used to Allocate Partial County Emissions

		Population Percentage			
County	**2014**	**2015**	**2018**	**2022**	**2026**
Cabarrus	99.4	99.4	99.5	99.5	99.5
Gaston	92.2	92.4	92.5	92.7	92.9
Iredell	44.2	44.5	45.3	46.1	46.6
Lincoln	83.3	83.3	83.6	83.8	84.1
Rowan	93.9	93.9	93.9	94.0	94.0
Union	87.6	87.5	87.5	87.6	87.6

Point sources are those stationary sources that require an air permit to operate. In general, these sources have a potential-to-emit more than five tons per year of a criteria air pollutant or its precursors from a single facility. The source emissions are tabulated from data collected by direct on-site measurements of emissions or mass balance calculations utilizing emission factors from the EPA's AP-42 or stack test results. There are usually several emission sources for each facility. Emission data are collected for each point source at a facility and reported to the DAQ through its on-line system.

Airports and rail yards are not required to have air quality permits for construction and operation (although they could have equipment such as a boiler or generator that requires a permit). They do have fixed and known locations and their emissions quantities can be comparable to industrial sources so, for purposes of the EPA's National Emission Inventory (NEI), they are included in the point source inventory even though they are traditionally considered nonroad sources.

For EGUs, base year 2014 average July day emissions were obtained from the EPA's CAMD for the three Duke Energy Carolinas EGU facilities located in the Charlotte area (i.e., Allen in Gaston County, Lincoln in Lincoln County, and Buck in Rowan County). For the remaining Title V sources, the latest data available were the 2013 emissions data that the sources submitted to the DAQ, and, for these sources, 2013 emissions were used to represent 2014 base year emission. For sources that emit less than 25 tons per year of NOx or VOC and are subject to emissions statements requirements, the latest data available were the 2013 emissions data that the sources submitted to the DAQ, and, for these sources, 2013 emissions were used to represent 2014 base year emission. The Charlotte nonattainment area includes some small sources that report emissions to the DAQ once every five years and, for these sources, the most recently reported data was used and assumed to be equivalent to 2014 since the emissions from these small sources do not vary much from year to year.[40] The DAQ reviewed recent historical emissions data (i.e., 2010 - 2013) for non-EGU Title V and emissions sources subject to the emissions statements requirements. Based on this review, the DAQ decided that 2013 emissions should be used to represent 2014 emissions due to the uncertainty associated with applying regional growth factors to forecast emissions for one year.

For each of the three EGU facilities located in the Charlotte area, Duke Energy Carolinas provided the DAQ with the projected emissions for July for each facility for each future year. Projected emissions for July were divided by the number of operating days during July to estimate the average summer July day emissions. The forecast reflects compliance with the North Carolina Clean Smokestacks Act and the MATS rule; however, it does not reflect any

[40] North Carolina permit renewal intervals for small sources changed from every five years to every eight years, effective 2014.

additional controls to comply with CSAPR. Therefore, if additional controls are installed to comply with CSAPR the emissions forecast may be lower than reflected in the forecast for the three EGU facilities.

Non-EGU point sources future year emission were adjusted by growth factors based on North American Industry Classification System (NAICS) codes generated using growth patterns obtained from the Annual Energy Outlook 2014 reference case and state employment forecasts.[41] However, for EGUs, the estimated projected future year emissions were based on forecast data provided by the utility company.

The inventory includes 20 natural gas fired boilers that, beginning in 2014, are subject to equivalent emission limitations by permit that North Carolina established per Section 112(j) of the CAA. Because the base year inventory for these boilers did not include the effects of controls installed to comply with the NESHAP, a VOC control factor was applied to future year emissions to account for the effects of the controls. A NOx control factor was not applied to the future year emissions for the boilers because the NESHAP is not expected to significantly affect NOx emissions. No other control factors were applied to point source emissions for the future year inventories.

Aircraft future year emissions were generated by using growth factors produced by running the Federal Aviation Administration's (FAA) Terminal Area Forecast (TAF) model. For each aircraft category, the 2011 operations estimate was divided into the operations estimate of later years to calculate the growth factor.

Rail yard future year emissions were estimated by using growth factors calculated using national fuel use estimates for freight and for intercity passenger service found on Table 46 of the Energy Information Administration's (EIA) *Annual Energy Outlook,2014*. Rail yard future year emission were also adjusted by control factors calculated using recommended emission factors for NOx and hydrocarbons (virtually the same as VOC) from Emission Factors for Locomotives, EPA-420-F-09-025.

For detailed discussion on how the point sources emission inventory was developed, see Appendix B.1. A summary of the point source emissions is presented in Table 3.2 and Table 3.3. The emissions are presented in a ton per summer day basis.

[41] Annual Energy Outlook 2014, released May 7, 2014, http://www.eia.gov/forecasts/aeo/.

Table 3.2 Point Source NOx Emissions (tons/day)

County	2014	2015	2018	2022	2026
Cabarrus*	1.72	1.80	1.94	2.07	2.20
Gaston*¥	16.50	17.25	10.72	16.16	5.29
Iredell*	2.02	2.03	2.04	2.04	2.05
Lincoln*	0.18	0.84	0.95	1.20	0.73
Mecklenburg	8.56	8.77	9.46	10.45	12.00
Rowan*	2.80	3.16	3.51	3.71	3.76
Union*	0.59	0.62	0.66	0.70	0.72
Total	**32.38**	**34.47**	**29.28**	**36.33**	**26.75**

* Emissions for portion of county included in nonattainment area**.** Totals include emissions associated with stationary point sources, aircraft, and rail yards.

¥ For Gaston County, the fluctuation in NOx emissions from 2014 through 2026 are primarily associated with the emissions forecast that Duke Energy Carolinas provided for the G.G. Allen power plant.

Table 3.3 Point Source VOC Emissions (tons/day)

County	2014	2015	2018	2022	2026
Cabarrus*	0.99	1.03	1.15	1.17	1.24
Gaston*	1.82	1.90	2.06	2.16	2.22
Iredell*	0.68	0.68	0.69	0.69	0.69
Lincoln*	1.50	1.54	1.72	1.83	1.94
Mecklenburg	3.36	3.45	3.73	4.02	4.36
Rowan*	2.30	2.40	2.70	2.85	3.14
Union*	1.38	1.42	1.57	1.64	1.74
Total	**12.03**	**12.42**	**13.62**	**14.36**	**15.33**

* Emissions for portion of county included in nonattainment area. Totals include emissions associated with stationary point sources, aircraft, and rail yards.

Area sources are those stationary sources whose emissions are relatively small but due to the large number of these sources, the collective emissions could be significant (i.e., dry cleaners, service stations, etc.). For area sources, emissions are estimated by multiplying an emission factor by some known indicator of collective activity such as production, number of employees, or population. These types of emissions are estimated on the county level. For the future year inventory, base year area source emissions are changed by projected population or employment growth. For detailed discussion on how the area source emission inventory was developed, see Appendix B.2. A summary of the area source emissions is presented in Table 3.4 and Table 3.5. The emissions are presented in a ton per summer day basis.

Table 3.4 Area Source NOx Emissions (tons/day)

County	2014	2015	2018	2022	2026
Cabarrus*	0.97	0.96	0.96	0.96	0.96
Gaston*	1.30	1.28	1.28	1.29	1.29
Iredell*	0.54	0.53	0.54	0.56	0.55
Lincoln*	0.40	0.40	0.40	0.40	0.40
Mecklenburg	6.07	6.01	6.01	6.01	6.00
Rowan*	0.87	0.86	0.85	0.85	0.85
Union*	1.25	1.24	1.24	1.24	1.23
Total	**11.40**	**11.28**	**11.28**	**11.31**	**11.28**

* Emissions for portion of county included in nonattainment area.

Table 3.5 Area Source VOC Emissions (tons/day)

County	2014	2015	2018	2022	2026
Cabarrus*	5.09	5.13	5.26	5.42	5.59
Gaston*	5.24	5.30	5.43	5.60	5.75
Iredell*	3.08	3.13	3.26	3.43	3.58
Lincoln*	2.56	2.57	2.64	2.74	2.82
Mecklenburg	20.59	20.77	21.19	21.73	22.26
Rowan*	5.23	5.28	5.40	5.56	5.72
Union*	6.09	6.12	6.26	6.43	6.60
Total	**47.88**	**48.30**	**49.44**	**50.91**	**52.32**

* Emissions for portion of county included in nonattainment area.

For highway mobile sources, the EPA's Motor Vehicle Emission Simulator (MOVES2014) mobile model was run to generate emissions. The MOVES2014 model includes the road class VMT as an input file and can directly output the estimated emissions. For the projected years' inventories, the highway mobile sources emissions are calculated by running the MOVES mobile model for the future year with the projected VMT to generate emissions that take into consideration expected federal tailpipe standards, fleet turnover and new fuels. For detailed discussion on how the on-road mobile emission inventory was developed, see Appendix B.3. A summary of the on-road mobile source emissions is presented in Table 3.6 and Table 3.7. The emissions are presented in a ton per summer day basis.

Nonroad mobile sources, also referred to as off-road mobile sources, are equipment that can move but do not use the roadways (i.e., lawn mowers, construction equipment, railroad locomotives, etc.). The emissions from this category are calculated using the EPA's NONROAD2008a model, with the exception of the railroad locomotives. The railroad locomotive emissions are estimated by taking activity and multiply by an emission factor. These emissions are also estimated at the county level. For the projected years' inventories, the

emissions are estimated using the EPA's NONROAD2008a model. For detailed discussion on how the nonroad mobile emission inventory was developed, see Appendix B.4. A summary of the nonroad mobile source emissions is presented in Table 3.8 and Table 3.9. The emissions are presented in a ton per summer day basis.

Table 3.6 On-road Mobile Source NOx Emissions (tons/day)

County	2014	2015	2018	2022	2026
Cabarrus*	6.60	5.93	3.94	2.79	1.86
Gaston*	8.11	7.26	4.62	3.04	1.98
Iredell*	3.36	3.05	2.05	1.41	0.93
Lincoln*	3.00	2.75	1.84	1.23	0.76
Mecklenburg	26.99	24.20	14.39	9.65	6.85
Rowan*	6.42	5.75	3.73	2.56	1.59
Union*	5.67	5.14	3.41	2.28	1.51
Total	**60.15**	**54.08**	**33.98**	**22.96**	**15.48**

* Emissions for portion of county included in nonattainment area.

Table 3.7 On-road Mobile Source VOC Emissions (tons/day)

County	2014	2015	2018	2022	2026
Cabarrus*	4.15	3.89	3.01	2.53	2.04
Gaston*	4.61	4.29	3.08	2.32	1.73
Iredell*	1.95	1.82	1.40	1.10	0.82
Lincoln*	1.91	1.81	1.37	1.07	0.79
Mecklenburg	14.40	13.41	10.09	8.22	6.67
Rowan*	3.76	3.48	2.57	1.93	1.41
Union*	3.54	3.30	2.54	2.04	1.56
Total	**34.32**	**32.00**	**24.06**	**19.21**	**15.02**

* Emissions for portion of county included in nonattainment area.

Table 3.8 Nonroad Mobile Source NOx Emissions (tons/day)

County	2014	2015	2018	2022	2026
Cabarrus*	2.20	2.04	1.65	1.34	1.16
Gaston*	1.98	1.83	1.49	1.23	1.08
Iredell*	0.94	0.88	0.72	0.58	0.51
Lincoln*	0.78	0.72	0.59	0.49	0.42
Mecklenburg	15.09	13.99	11.36	9.20	8.11
Rowan*	1.65	1.53	1.26	1.04	0.89
Union*	3.62	3.36	2.72	2.19	1.86
Total	**26.26**	**24.35**	**19.79**	**16.07**	**14.03**

* Emissions for portion of county included in nonattainment area.

Table 3.9 Nonroad Mobile Source VOC Emissions (tons/day)

County	2014	2015	2018	2022	2026
Cabarrus*	1.27	1.22	1.17	1.19	1.24
Gaston*	1.29	1.25	1.14	1.12	1.15
Iredell*	0.62	0.59	0.52	0.49	0.49
Lincoln*	0.58	0.55	0.48	0.46	0.46
Mecklenburg	11.75	11.53	11.01	11.11	11.51
Rowan*	1.30	1.22	1.05	0.96	0.94
Union*	2.08	2.01	1.92	1.93	2.00
Total	**18.89**	**18.37**	**17.29**	**17.26**	**17.79**

* Emissions for portion of county included in nonattainment area.

3.4.3 Summary of Emissions

The sum totals of the man-made emissions for the North Carolina portion of the Charlotte nonattainment area are tabulated in Table 3.10 and Table 3.11.

Table 3.10 Total Man-Made NOx Emissions for the North Carolina Portion of the Charlotte Nonattainment Area (tons/day)

County	2014	2015	2018	2022	2026
Cabarrus*	11.49	10.73	8.49	7.16	6.18
Gaston*	27.89	27.62	18.11	21.72	9.64
Iredell*	6.86	6.49	5.35	4.59	4.04
Lincoln*	4.36	4.71	3.78	3.32	2.31
Mecklenburg	56.71	52.97	41.22	35.31	32.96
Rowan*	11.74	11.30	9.35	8.16	7.09
Union*	11.13	10.36	8.03	6.41	5.32
Total	**130.18**	**124.18**	**94.33**	**86.67**	**67.54**

* Emissions for portion of county included in nonattainment area.

Table 3.11 Total Man-Made VOC Emissions for the North Carolina Portion of the Charlotte Nonattainment Area (tons/day)

County	2014	2015	2018	2022	2026
Cabarrus*	11.50	11.27	10.59	10.31	10.11
Gaston*	12.96	12.74	11.71	11.20	10.85
Iredell*	6.33	6.22	5.87	5.71	5.58
Lincoln*	6.55	6.47	6.21	6.10	6.01
Mecklenburg	50.10	49.16	46.02	45.08	44.80
Rowan*	12.59	12.38	11.72	11.30	11.21
Union*	13.09	12.85	12.29	12.04	11.90
Total	**113.12**	**111.09**	**104.41**	**101.74**	**100.46**

* Emissions for portion of county included in nonattainment area.

3.4.4 Maintenance Demonstration

As discussed above, maintenance is demonstrated when the future year's total man-made emissions are less than the 2014 baseline emissions. Table 3.12 summarizes the NOx and VOC emissions for the North Carolina portion of the Charlotte nonattainment area. The difference between the base year and the final year illustrates that the continued maintenance of the 2008 8-hour ozone NAAQS is expected. This is further supported by two modeling studies summarized in the following section.

Table 3.12 Maintenance Demonstration for North Carolina Portion of the Charlotte Nonattainment Area

Year	NOx (tons/day)	VOC (tons/day)
2014	130.18	113.12
2015	124.18	111.09
2018	94.33	104.41
2022	86.67	101.74
2026	67.54	100.46
Difference from 2014 to 2026	**-62.64**	**-12.66**

The difference between the attainment level of emissions (2014) from all man-made sources and the projected level of emissions (2026) from all man-made sources in the nonattainment area is considered the "safety margin". The safety margin for the North Carolina portion of the nonattainment area is summarized in Table 3.13.

Table 3.13 Safety Margin for North Carolina Portion of the Charlotte Nonattainment Area

Year	NOx (tons/day)	VOC (tons/day)
2014	N/A	N/A
2015	-6.00	-2.03
2018	-35.85	-8.71
2022	-43.51	-11.38
2026	-62.64	-12.66

3.4.5 National and Regional Air Quality Assessments in Future Years

The Southeastern States Air Resource Managers (SESARM) conducted a Southeastern Modeling, Analysis and Planning (SEMAP) project to produce technical analyses to assist member states in developing SIPs for ozone and $PM_{2.5}$, and in the demonstration of reasonable progress for the regional haze rule. Photochemical modeling predicts that ozone in the Charlotte nonattainment area will be well below 0.075 ppm in 2018. Base and future design values are shown in Table 3.14. It should be noted that the benefits of Tier 3 engine and fuel standards were not included in these results.

Table 3.14 Eight-hour Design Values from SEMAP Photochemical Modeling

Monitor	County	2007 Base Design Value, ppm	2018 Future Design Value, ppm	Relative Reduction Factor[1]
371090004	Lincoln	0.080	0.064	0.7977
371190041	Mecklenburg	0.087	0.070	0.8149
371191005	Mecklenburg	0.079	0.065	0.8224
371191009	Mecklenburg	0.091	0.072	0.7927
371590021	Rowan	0.086	0.067	0.781
371590022	Rowan	0.087	0.068	0.7888
371790003	Union	0.079	0.062	0.7869

Source: Southeastern States Air Resource Managers (SESARM); Southeastern Modeling, Analysis and Planning (SEMAP) study, http://semap.ce.gatech.edu/sites/default/files/files/projections/base2018b-O3-DVFs-DDVFs-for-4configs.xls.

[1] The Relative Reduction Factor is the ratio of the future modeled ozone concentration divided by the base modeled ozone concentration. The future design value is computed by multiplying the Relative Reduction Factor and the base design value.

The EPA used photochemical modeling to assess the impacts of the federal Tier 3 rule. Ozone design values in 2018 within the Charlotte nonattainment area are predicted to be below 0.075 ppm in the reference case, and even lower when Tier 3 controls are included. The downward trend in ozone continues out to 2030. The EPA Tier 3 ozone modeling results are shown in Table 3.15.

Table 3.15 Eight-hour Design Values Scenarios from EPA Tier 3 Photochemical Modeling

County	2007 Baseline Design Value, ppm	2018 Reference Design Value, ppm	2018 Tier 3 Control Design Value, ppm	2030 Reference Design Value, ppm	2030 Tier 3 Control Design Value, ppm
Lincoln	0.080	0.064	0.063	0.060	0.058
Mecklenburg	0.091	0.073	0.072	0.069	0.067
Rowan	0.087	0.069	0.068	0.065	0.063
Union	0.079	0.062	0.061	0.058	0.056

Source: US EPA http://www.epa.gov/otaq/documents/tier3/454r14002.pdf.

3.5 CONTINGENCY PLAN

3.5.1 Overview

The two main elements of the North Carolina contingency plan are tracking and triggering mechanisms to determine when contingency control measures are needed and a process of developing and adopting appropriate control measures. There will be three potential triggers for the contingency plan. The primary trigger of the contingency plan will be a violation of the 2008 8-hour ozone NAAQS at any of the Charlotte area monitors. The secondary trigger will be a monitored air quality pattern that suggests an actual 2008 8-hour ozone NAAQS violation may be imminent. The tertiary trigger will be a monitored fourth highest exceedance of the NAAQS. Upon either the primary or secondary triggers being activated, the DAQ, working in consultation with the SCDHEC and the MCAQ local program, will commence analyses to determine what additional measures, if any, will be necessary to attain or maintain the 2008 8-hour ozone standard. If activation of either the primary or secondary triggers occurs, this plan provides a regulatory adoption process for revising emission control strategies. Activation of the tertiary trigger will result in an analysis to understand the cause of the exceedance and to identify voluntary measures if needed.

In addition, there will be a tracking mechanism that requires a comparison of the actual emissions inventory submitted under the Air Emission Reporting Rule (AERR) to the projected inventory, and to the attainment year inventory contained in this maintenance plan. The AERR reporting years coincide with the base year (2014) and final year (2026) for this maintenance demonstration. In addition, the AERR reporting years will occur at 3-year intervals, thus enabling the comparison of actual emissions developed for the AERR to the projected emissions for the interim years presented in this maintenance demonstration.

3.5.2 Contingency Plan Triggers

The primary trigger of the contingency plan will be a violation of the 2008 8-hour ozone standard, or when the three-year average of the 4th highest values is equal to or greater than 0.076 ppm at a monitor in the Charlotte nonattainment area. The trigger date will be 60 days from the date that the state observes a 4th highest value that, when averaged with the two previous ozone seasons' fourth highest values, would result in a three-year average equal to or greater than 0.076 ppm.

The secondary trigger will apply where no actual violation of the 2008 8-hour ozone standard has occurred, but where the state finds monitored ozone levels indicating that an actual ozone NAAQS violation may be imminent. A pattern will be deemed to exist when there are two consecutive ozone seasons in which the 4th highest values are 0.076 ppm or greater at a single

monitor within the Charlotte nonattainment area. The trigger date will be 60 days from the date that the state observes a 4th highest value of 0.076 ppm or greater at a monitor for which the previous season had a 4th highest value of 0.076 ppm or greater.

Similarly, the tertiary trigger will not be an actual violation of the 2008 8-hour ozone standard. This trigger will be a first alert as to a potential air quality problem on the horizon. The trigger will be activated when a monitor in the Charlotte nonattainment area has a 4th highest value of 0.076 ppm or greater, starting the first year after the maintenance plan has been approved. The trigger date will be 60 days from the date that the state observes a 4th highest value of 0.076 ppm or greater at any monitor.

3.5.3 Action Resulting From Trigger Activation

Once the primary or secondary trigger is activated, the Planning Section of the DAQ, in consultation with the SCDHEC and MCAQ, shall commence analyses including trajectory analyses of high ozone days, and emissions inventory assessment to determine those emission control measures that will be required for attaining or maintaining the 2008 8-hour ozone standard. By May 1 of the year following the ozone season in which the primary or secondary trigger has been activated, North Carolina will complete sufficient analyses to begin adoption of necessary rules for ensuring attainment and maintenance of the 2008 8-hour ozone NAAQS. The rules would become state effective by the following January 1, unless legislative review is required.

The measures that will be considered for adoption upon a trigger of the contingency plan include: NOx Reasonably Available Control Technology on stationary sources with a potential to emit less than 100 tons per year in the North Carolina portion of the Charlotte nonattainment area, diesel I/M program, implementation of diesel retrofit programs, including incentives for performing retrofits, and additional controls in upwind areas.

The DAQ commits to implement within 24 months of a primary or secondary trigger, or as expeditiously as practicable, at least one of the control measures listed above or other contingency measures that may be determined to be more appropriate based on the analyses performed.

Once the tertiary trigger is activated, the Planning Section of the DAQ, in consultation with the SCDHEC and MCAQ, shall commence analyses including meteorological evaluation, trajectory analyses of high ozone days, and emissions inventory assessment to understand why a 4th highest exceedance of the standard has occurred. Once the analyses are completed, the DAQ will work with SCDHEC, MCAQ and the local air awareness program to develop an outreach plan

identifying any additional voluntary measures that can be implemented. If the 4th highest exceedance occurs early in the season, the DAQ will work with entities identified in the outreach plan to determine if the measures can be implemented during the current season, otherwise, DAQ will work with SCDHEC, MCAQ and the local air awareness coordinator to implement the plan for the following ozone season.

3.5.4 Tracking Program for Ongoing Maintenance

In addition to the measures listed above, emissions inventory comparisons will be carried out. The large stationary sources are required to submit an emissions inventory annually to the DAQ or MCAQ. The DAQ will commit to review these emissions inventories to determine if an unexpected growth in NOx emissions in the Charlotte area may endanger the maintenance of the 2008 8-hour ozone standard. Additionally, as new VMT data are provided by the NCDOT, the DAQ commits to review these data and determine if any unexpected growth in VMT may endanger the maintenance of the 2008 8-hour ozone standard.

Additionally, under the AERR the DAQ is required to develop a comprehensive, annual, statewide emissions inventory every three years and is due 12 to 18 months after the completion of the inventory year. The AERR inventory years match the base year and final year of the inventory for the maintenance plan, and are within one or two years of the interim inventory years of the maintenance plan. Therefore, the DAQ commits to compare the AERR inventories as they are developed with the maintenance plan to determine if additional steps are necessary for continued maintenance of the 2008 8-hour ozone standard in this area.

4.0 MOTOR VEHICLE EMISSIONS BUDGET FOR CONFORMITY

4.1 TRANSPORTATION CONFORMITY

The purpose of transportation conformity is to ensure that federal transportation actions occurring in nonattainment and maintenance areas do not hinder the area from attaining and maintaining the 2008 8-hour ozone standard. This means that the level of emissions estimated by the NCDOT or the metropolitan planning organizations for the TIP and Metropolitan Transportation Plan (MTP) must not exceed the motor vehicle emissions budgets (MVEBs) as defined in this maintenance plan.

The DAQ held three conference calls with the Charlotte Regional Transportation Planning Organization (CRTPO) - Rocky River Rural Planning Organization (RRRPO), Gaston-Cleveland-Lincoln Metropolitan Planning Organization (GCLMPO), and Cabarrus Rowan Metropolitan Planning Organization (CRMPO) to determine what years to set MVEBs for the Charlotte maintenance plan. According to Section 93.118 of the transportation conformity rule, a maintenance plan must establish MVEBs for the last year of the maintenance plan (in this case, 2026). The consensus formed during the interagency consultation process was that another MVEB should be set for the Charlotte maintenance plan base year of 2014.

4.2 SAFETY MARGIN

As stated in Section 3.3.4, a safety margin is the difference between the attainment level of emissions from all source categories (i.e., point, area, on-road and nonroad) and the projected level of emissions from all source categories. The safety margins for the North Carolina portion of the Charlotte nonattainment area are listed in Table 3.12. The state may choose to allocate some of the safety margin to the MVEB, for transportation conformity purposes, so long as the total level of emissions from all source categories remains below the attainment level of emissions.

The DAQ has decided to allocate a portion of the safety margin to the MVEB to allow for unanticipated growth in VMT, changes and uncertainty in vehicle mix assumptions, and uncertainty associated with mobile modeling that will influence the future year emission estimations. The DAQ has developed and implemented a five-step approach for determining a factor to use to calculate the amount of safety margin to apply to the MVEB for 2026 (see the following Section 4.3 and Appendix B.3). The percent increase to the MVEBs for the North Carolina counties in the Charlotte nonattainment area are listed in the Table 4.1. Note that because the initial MVEB year of 2014 is also the base year for the maintenance plan inventory, there is no safety margin and, therefore, no adjustments were made to the MVEB for 2014.

Table 4.1 Percent Increase to Mobile Vehicle Emissions Budget

County	2026
Cabarrus	20%
Gaston	20%
Iredell	22%
Lincoln	22%
Mecklenburg	17%
Rowan	20%
Union	20%

4.3 MOTOR VEHICLE EMISSION BUDGETS

Although the emissions up to this point have been expressed in terms of tons/day, for conformity purposes the MVEBs are expressed in kilograms/day (kg/day). Note that, for this reason, kg/day was selected as the specified units for all MOVES2014 model outputs. Emissions values in kg/day were divided by 907.1847 to convert them to units of tons/day.

Table 4.2 shows the counties with their highway mobile NOx and VOC emissions, respectively, expressed in tons/day and the corresponding kg/day values for 2014 and 2026.

Table 4.2 Highway Mobile Source NOx and VOC Emissions in 2014 and 2026 for North Carolina Portion of the Charlotte Nonattainment Area

County	2014 NOx		2014 VOC		2026 NOx		2026 VOC	
	tons/day	kg/day	tons/day	kg/day	tons/day	kg/day	tons/day	kg/day
Cabarrus*	6.60	5,989	4.15	3,765	1.86	1,685	2.04	1,854
Gaston*	8.14	7,389	4.66	4,228	1.98	1,793	1.73	1,571
Iredell*	3.36	3,045	1.95	1,768	0.93	841	0.82	742
Lincoln*	3.00	2,723	1.91	1,737	0.76	692	0.79	713
Mecklenburg	27.09	24,574	14.55	13,201	6.85	6,219	6.67	6,052
Rowan*	6.42	5,825	3.76	3,408	1.59	1,439	1.41	1,281
Union*	5.67	5,146	3.54	3,210	1.51	1,370	1.56	1,420
Total	**60.28**	**54,691**	**34.52**	**31,317**	**15.48**	**14,039**	**15.02**	**13,633**

* Emissions for portion of county included in nonattainment area.

As part of the consultation process on developing MVEBs, the DAQ coordinated three interagency conference calls with local and state transportation partners and the EPA's Region IV staff to establish the framework and process for developing MVEBs. Based on these

conference calls, the participants in the consultation process unanimously agreed to the following:

Emissions Inventory and Forecast

- Use 2014 as the base year for the emissions inventory and include emissions estimates for 2018, 2022, and 2026 (4-year increments) from the base year.
- The Charlotte DOT runs the local transportation demand model based on inputs from the local transportation planning organizations to generate inputs (VMT, and speeds for daily travel periods, and human population to forecast VMT) needed to run MOVES2014 to estimate emissions for each year

Geographic Extent of MVEBs

- Prepare separate MVEBs based on the latest MPO jurisdictional boundaries such that MVEBs are established for the CRMPO (Cabarrus and Rowan Counties), for the CRTPO-RRRPO (Iredell, Mecklenburg and Union Counties), and for the GCLMPO (Gaston and Lincoln Counties). Although Cleveland County is included in the GCLMPO, it is not included in the Charlotte ozone nonattainment area.

MVEB Years

- In addition to developing a MVEB for 2026 (required by EPA guidance), the group agreed to develop a MVEB for the base year 2014.

Adjustment to MVEBs

- Allocate a portion of the safety margin to increase the MVEB for each county grouping following the process used to develop the MVEBs for the previous "Redesignation Demonstration and Maintenance Plan for the Charlotte-Gastonia-Rock Hill, NC-SC 1997 8-Hour Ozone Nonattainment Area." This process, which includes the following five steps, was used to adjust the MVEB for 2026. Because 2014 is the base year for the emissions inventory there is no safety margin; consequently, the MVEB for 2014 was not adjusted.

  Step 1 - Percentage below the standard

  - All counties get 2% of their emissions allocated to MVEB in 2026

  Step 2 - Account for unanticipated model input data changes

  - All counties get an additional 5% of their emissions allocated to MVEB in 2026

Step 3 - Provide flexibility and account for rapid growth for counties that are determined to be medium to small contributors to the on-road mobile NOx emissions inventory

- Counties with <8% of total on-road mobile source NOx emissions received an additional 5% of their emissions allocated to MVEB in 2026 (Iredell and Lincoln)
- Counties with 8% to 25% of total on-road mobile source NOx emissions received an additional 3% of their emissions allocated to MVEB in 2026 (Cabarrus, Gaston, Rowan and Union)

Step 4 - Account for input uncertainty in final year of the maintenance plan:

- All counties get 10% additional of their emissions allocated to MVEB in 2026 to account for potential changes in VMT, vehicle mix and vehicle age distribution
- Additional percentage is added to the current percentages outlined in the steps above

Step 5 - Ensure the sum of the safety margins applied to the MVEB does not exceed 50% of the total safety margin available. For 2026, Steps 1-4 accounted for:

- 5% of the total NOx safety margin
- 22% of the total VOC safety margin

Tables 4.3 through 4.5 provide the NOx and VOC MVEBs in kg/day, for transportation conformity purposes, for 2014 and 2026. Upon the EPA's affirmative adequacy finding for these sub-area MVEBs, they will become the applicable MVEBs for transportation conformity.

Table 4.3 Cabarrus Rowan Metropolitan Planning Organization (CRMPO) MVEB in 2014 and 2026 (kg/day)*

	2014		2026	
	NOx	**VOC**	**NOx**	**VOC**
Base Emissions	11,814	7,173	3,124	3,135
Safety Margin Allocated to MVEB	-	-	625	627
Conformity MVEB	**11,814**	**7,173**	**3,749**	**3,762**

* Includes the portion of Cabarrus and Rowan Counties in the nonattainment area.

Table 4.4 Gaston-Cleveland-Lincoln Metropolitan Planning Organization (GCLMPO) MVEB in 2014 and 2026 (kg/day)*

	2014		2026	
	NOx	**VOC**	**NOx**	**VOC**
Base Emissions	10,079	5,916	2,485	2,284
Safety Margin Allocated to MVEB	-	-	511	471
Conformity MVEB	**10,079**	**5,916**	**2,996**	**2,755**

* Includes the portion of Gaston and Lincoln Counties in the nonattainment area. Although Cleveland County is included in the MPO it is not included in the Charlotte ozone nonattainment area.

Table 4.5 Charlotte Regional Transportation Planning Organization (CRTPO) - Rocky River Rural Planning Organization (RRRPO) MVEB in 2014 and 2026 (kg/day)*

	2014		2026	
	NOx	**VOC**	**NOx**	**VOC**
Base Emissions	32,679	18,038	8,430	8,214
Safety Margin Allocated to MVEB	-	-	1,516	1,476
Conformity MVEB	**32,679**	**18,038**	**9,946**	**9,690**

* Includes all of Mecklenburg County and the portion of Iredell and Union Counties in the nonattainment area.

New Safety Margins

A total of 2,650 kg/day (2.92 tons/day) of 2026 NOx safety margin were added to the MVEB for the Charlotte area. A total of 2,569 kg/day (2.83 tons/day) of 2026 VOC safety margin were added to the MVEB for the Charlotte area. The revised safety margins, which take into consideration the portion of the safety margin applied to the MVEB, for each projected year is listed below in Table 4.6.

Table 4.6 New Safety Margins for the North Carolina Portion of the Charlotte Nonattainment Area (tons/day)

Year	NOx	VOC
2014	N/A*	N/A
2015	-6.00	-2.03
2018	-35.85	-8.71
2022	-43.51	-11.38
2026	-59.72	-9.82

* N/A = not applicable.

5.0 STATE IMPLEMENTATION PLAN APPROVAL

5.1 INTRODUCTION

For an area to be redesignated and have an approved maintenance plan, the SIP must include evidence of compliance with the rules relied on to show maintenance of the standard. This section provides the evidence of compliance with such rules for the Charlotte-Gastonia-Salisbury 2008 8-hour ozone nonattainment area.

5.2 EVIDENCE OF COMPLIANCE

Two counties in the Charlotte area (Gaston and Mecklenburg Counties) were designated as moderate nonattainment for 1-hour ozone effective January 1992. Since a redesignation demonstration and maintenance plan was submitted for this area prior to November 15, 1992, the CAA requirements for moderate areas were not required with the exception of the I/M program. An I/M program was established in the Charlotte area as prescribed by the 1990 CAA. Therefore, North Carolina has a fully approved SIP for this area.

For the 1997 8-hour ozone standard, the DAQ submitted to the EPA for approval the Metrolina Attainment Demonstration SIP on June 15, 2007, and a Supplement to the Attainment Demonstration SIP on April 5, 2010. The North Carolina portion of the Metrolina nonattainment area includes the counties of Cabarrus, Gaston, Lincoln, Mecklenburg, Rowan and Union and Coddle Creek and Davidson Townships in Iredell County. The Reasonable Further Progress SIP was submitted to the EPA for approval on June 15, 2007 and a Revised Reasonable Further Progress SIP was submitted on November 30, 2009. The EPA approved the Revised Reasonable Further Progress SIP on October 12, 2012.[42] On November 2, 2011 the DAQ submitted to the EPA a Redesignation Demonstration and Maintenance Plan for 1997 8-hour Ozone standard; and submitted a supplement to this SIP on March 28, 2013. The EPA approved the redesignation request and maintenance plan on December 2, 2013.[43]

For the 2008 8-hour ozone standard for the Charlotte nonattainment area, the DAQ submitted to the EPA for approval the Base Year (2011) Emissions Inventory and Emissions Statements SIP on July 7, 2014, to fulfill the requirements of Sections 182(a)(1) and 182(a)(3)(B) of the CAA.[44]

[42] 77 FR 62159-62166.
[43] 78 FR 72036-72040.
[44] http://ncair.org/planning/metrolina/metrolina_area_sip_plans.shtml.

Additionally, the following rules regulating emissions of VOCs and/or NOx in the Charlotte nonattainment area counties have been approved, or have been submitted with a request to be approved, as part of the SIP:

15A NCAC 2D .0958, Work Practices For Sources of Volatile Organic Compounds,
15A NCAC 2D .0530, Prevention of Significant Deterioration,
15A NCAC 2D .0925, Petroleum Liquid Storage in Fixed Roof Tanks,
15A NCAC 2D .0926, Bulk Gasoline Plants,
15A NCAC 2D .0927, Bulk Gasoline Terminals,
15A NCAC 2D .0928, Gasoline Service Stations Stage I,
15A NCAC 2D .0932, Gasoline Truck Tanks and Vapor Collection Systems,
15A NCAC 2D .0933 Petroleum Liquid Storage in External Floating Roof Tanks
15A NCAC 2D .1000, Motor Vehicle Emission Control Standards.
15A NCAC 2D .1200, Control and Emissions from Incinerators
15A NCAC 2D .1409(b), Stationary Internal Combustion Engines
15A NCAC 2D .1416 - .1423, NOx SIP rules
15A NCAC 2D .1600, General Conformity
15A NCAC 2D .1700, Municipal Solid Waste Landfills, and
15A NCAC 2D .1900, Open Burning
15A NCAC 2D .2000, Transportation Conformity
15A NCAC 2D .2400 Clean Air Interstate Rules

Rules 15A NCAC 2D .0925, .0926, .0927, .0928, .0932, .0933, .0948, .0949, and .0958 have been approved as part of the SIP and are applicable across the state regardless of the size of the source.

Section 15A NCAC 2D .1000 also regulates emissions from motor vehicles in the North Carolina counties in and around the Charlotte nonattainment area and requires the use of the OBDII system, which provides an indication of NOx emissions as well as other pollutants.

Section 15A NCAC 2D .1200 regulates the controls and emissions from incinerators. Part of this rule has been submitted as part of the SIP, while .1205, .1206 and .1210 are part of the CAA Section 111(d) plans.

Two rules are conformity related, 15A NCAC 2D .1600 and .2000. General conformity related projects are covered under Section .1600, while transportation conformity related projects are covered under Section .2000. Although neither of these rules requires reduction in emissions, they do ensure that federal actions do not hinder attainment or maintenance of the NAAQS.

North Carolina has adopted an open burning rule, 15A NCAC 2D .1900 that prohibits open burning of vegetative material during Air Quality Action Days of Code Orange or higher in

forecasted areas of the state. Ozone forecasts are issued for the Charlotte area from May 1st through September 30th, therefore this area is covered by this rule.

Section 15A NCAC 2D .2400 regulates nitrogen oxide emissions from electric generating units with a nameplate capacity of 25 megawatts or more producing electricity for sale. Section 15A NCAC 2D .2400 also covers industrial boilers that are covered under the NOx SIP rules. This Section replaces the NOx SIP rules beginning January 1, 2009. Although North Carolina did not rely on the emission reductions from CAIR for maintenance of the 2008 8-hour ozone standard, these regulations will result in additional reductions in NOx emissions regionally.

Another important set of rules that control volatile organic compound emissions in these counties is Section 15A NCAC 2D .1100, Control of Toxic Air Pollutants. These rules, however, have not been submitted to the EPA to be approved as part of the SIP.

There are two other rules that control emissions of volatile organic compounds in these areas. They are 15A NCAC 2D .0524, New Source Performance Standards, and 2D.1110, National Emission Standards for Hazardous Air Pollutants. Also, rule 2D.1111, Maximum Achievable Control Technology applies to control of emissions of volatile organic compounds. They are not part of the SIP, but the EPA has delegated the state enforcement authority for standards that have been adopted by the state. (The standards adopted by the state are state-enforceable regardless of the EPA delegation.)

6.0 STATE COMPLIANCE WITH CLEAN AIR ACT REQUIREMENTS

Section 107(d)(3)(E)(v) of the CAA requires that the provisions of Section 110 (State Implementation Plans for the Primary and Secondary NAAQS) and Part D (Plan Requirements for Nonattainment Areas) of the CAA be met within the area to be redesignated. This means that North Carolina must meet all requirements, if any, that had come due as of the date of the redesignation request.

The EPA, in its latest guidance on redesignation requirements (as contained in a memorandum from John Calcagni, Director, Air Quality Management Division, Office of Air Quality Planning and Standards to the EPA Regional Offices dated September 4, 1992, see Appendix A), states that "For the purposes of redesignation, a state must meet all requirements of Section 110 and Part D that were applicable prior to submittal of the complete redesignation request. When evaluating a redesignation request, Regions should not consider whether the state has met requirements that come due under the Act after submittal of a complete redesignation request."

Monitoring is one of the requirements of Section 110. The DAQ commits to continue operating the current ozone monitors in the North Carolina portion of the Charlotte 2008 8-hour ozone nonattainment area, providing sufficient funding is available for continued operation. Any monitor shutdowns or relocations will only be made with the approval of EPA. No plans are underway to discontinue operation, relocation or otherwise affect the integrity of the ambient monitoring network in place. The current monitors are operated consistent with 40 CFR Part 58 and any changes will only be made if they are consistent with 40 CFR Part 58.

For the 2008 8-hour ozone standard for the Charlotte marginal nonattainment area, the DAQ submitted to the EPA for approval the Base Year (2011) Emissions Inventory and Emissions Statements SIP on July 7, 2014, to fulfill the requirements of Part D, Sections 182(a)(1) and 182(a)(3)(B) of the CAA.[45] The DAQ believes that North Carolina has met all of the requirements of Section 110 and Part D.

[45] http://ncair.org/planning/metrolina/metrolina_area_sip_plans.shtml.

7.0 CONCLUSION

The most recent three years of ozone monitoring data (2012-2014) for the Charlotte-Gastonia-Salisbury nonattainment area demonstrate compliance with the NAAQS for 2008 8-hour ozone. Since the 1990's, there have been many major programs enacted in North Carolina that have led to significant actual, enforceable emissions reductions, which have led to improvements in the air quality in the Charlotte area. Additionally, the maintenance plan demonstrates that the projected emissions inventories for 2026, the final year of the maintenance plan and 10 years beyond the expected redesignation year, as well as the interim years, are all less than the base year emissions inventory. In addition, the CAA Section 110(l) non-interference demonstration analysis indicates that increasing the RVP from 7.8 to 9.0 psi in Gaston and Mecklenburg Counties would not negatively impact the redesignation demonstration and maintenance plan for the Charlotte area. Therefore, maintenance of the 2008 8-hour ozone NAAQS has also been demonstrated.

This redesignation demonstration and maintenance plan has been prepared to meet the requirements of the 1990 CAA Amendments.

Final

Supplement to the Revised Maintenance Plan for The Charlotte-Gastonia-Salisbury, North Carolina 2008 8-Hour Ozone Marginal Nonattainment Area



Prepared by

North Carolina Department of Environmental Quality

Division of Air Quality

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Proposed Supplement: July 16, 2020

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Preface: In this supplement, North Carolina is proposing to revise the 2026 motor vehicle emission budgets (MVEBs) for oxides of nitrogen (NO_x) and volatile organic compound (VOC) emssions in the Charlotte-Gastonia-Salisbury area by increasing the allocations of safety margin emissions. The MVEB revisions are proposed to accommodate recent updates to the travel demand model used to calculate vehicle miles traveled in the affected area. The proposed revisions to the MVEBs for 2026 do not change the overall maintenance plan emissions upon which the safety margins are based. In addition, the revisions do not exceed 50 percent of the total available safety margin.

EXECUTIVE SUMMARY

Introduction

Ozone is formed by a complex set of chemical reactions involving volatile organic compounds (VOCs), nitrogen oxides (NOx) and to a lesser extent carbon monoxide (CO). These gases are generated by utilities, combustion processes, certain industrial processes and even by natural sources such as trees. Tailpipe emissions from mobile sources (vehicles) are also significant sources of these pollutants. Emissions from smaller sources such as boat engines, lawn mowers and construction equipment also contribute to the formation of ozone. Ozone formation is promoted by strong sunlight, warm temperatures and light winds and is hence a problem predominantly during the hot summer months.

The 2008 8-hour ozone National Ambient Air Quality Standard (NAAQS) is 0.075 parts per million (ppm). An exceedance of the 2008 8-hour ozone NAAQS occurs when a monitor measures ozone above 0.075 ppm on average for an 8-hour period. A violation of this NAAQS occurs when the average of the annual fourth highest daily maximum 8-hour ozone values over three consecutive years is greater than or equal to 0.076 ppm. This three-year average is termed the "design value" for the monitor. The design value for a nonattainment area is the highest monitor design value in the area.

On July 28, 2015, the U. S. Environmental Protection Agency (EPA) published its final rule (80 FR 44873) in which it (1) determined that the Charlotte-Gastonia-Salisbury, North Carolina 2008 8-Hour Ozone Marginal Nonattainment Area (hereinafter referred to as the "Charlotte area" or "maintenance area") was attaining the 2008 8-hour ozone NAAQS, (2) redesignated the North Carolina portion of the Charlotte area to attainment for the 2008 8-hour ozone NAAQS, (3) approved and incorporated North Carolina's maintenance plan for maintaining attainment of the 2008 8-hour ozone standard for the North Carolina portion of the Charlotte area into the State Implementation Plan (SIP), and (4) determined that the 2014 and 2026 sub-area NOx and VOC motor vehicle emissions budgets (MVEBs) for 2026 for the North Carolina portion of the Charlotte area were adequate for the purposes of transportation conformity. The final rule became effective August 27, 2015.

On the same day, EPA also published its final rule (80 FR 44868) approving of North Carolina's Clean Air Act (CAA) Section 110(l) noninterference demonstration for relaxing the Federal Reid vapor pressure (RVP) requirement from 7.8 pound per square inch (psi) to 9.0 psi applicable to gasoline introduced into commerce from June 1 to September 15 of each year in Mecklenburg and Gaston Counties. The EPA subsequently issued a direct final rule (80 FR 49164) on August 17,

2015, approving revisions to the rule (effective on October 16, 2015) to relax the summertime RVP requirement in the two counties.

In 2017, the North Carolina General Assembly enacted Session Law 2017-10, Senate Bill 131 (An Act to Provide Further Regulatory Relief to the Citizens of North Carolina) which revised the state's emissions inspection and maintenance (I/M) program. Section 3.5.(b) of the Act amended *North Carolina General Statue (NCGS) §143-215.107A(c) §20-183.2(b)* by changing the vehicle model year coverage from 1996 and newer vehicles to the most recent 20 model years (excluding the three most recent model year vehicles with less than 70,000 miles on the odometer).

On July 25, 2018, the DAQ submitted a revision to the maintenance plan for the Charlotte area to update the emissions forecast and MVEBs for 2026 to account for the small increase in NOx and VOC emissions associated with the change in vehicle model year coverage as proposed by Section 3.5.(b) of the Act. The DAQ also submitted an accompanying I/M SIP revision, CAA Section 110(l) noninterference demonstration, and revisions to North Carolina's air quality rule 15A North Carolina Administrative Code (NCAC) 02D .1002 (Applicability). On September 11, 2019, EPA published a final rule (84 FR 47889) approving the revisions (effective on October 11, 2019).

In accordance with Section 3.5.(d) of the Act, on September 17, 2019, the Secretary of the Department of Environmental Quality submitted official certification to North Carolina's Revisor of Statutes that EPA published its final approval of the SIP revisions. The Section also required the changes to become effective on the first day of a month that is 60 days after the Secretary's official certification was submitted. As a result, the effective date for implementing the changes to the vehicle model year coverage was on December 1, 2019.

The DAQ prepared this supplement to revise the motor vehicle emission budgets (MVEBs) for the Charlotte-Gastonia-Salisbury area by increasing the safety margin emissions allocated to the MVEBs of each of the three budget regions in the area. Transportation conformity in the Charlotte-Gastonia-Salisbury, North Carolina 2008 8-Hour Marginal Nonattainment Area ensures that federal transportation actions do not interfere with maintaining compliance with the 2008 8-hour ozone National Ambient Air Quality Standards (NAAQS). As such, the level of emissions estimated for Transportation Improvement Programs and Metropolitan Transportation Plans must not exceed the MVEBs as defined in the area's maintenance plan. Historically, the North Carolina Division of Air Quality (DAQ) has limited the allocation of nitrogen oxides (NOx) and volatile organic compounds (VOC) safety margin emissions to MVEBs so that less than 50% of the safety margin of each pollutant is allocated. In this submittal, North Carolina is proposing to increase the amount of the total safety margin allocated to the 2026 MVEBs from 4.7% to 9.4%

for NOx and from 18.7% to 37.4% for VOC. The MVEB revisions are proposed to accommodate recent updates to the travel demand model used to calculate vehicle miles traveled for the Charlotte area.

The proposed revisions to the MVEBs were agreed upon at the March 27, 2020, interagency consultation meeting and do not change the overall maintenance plan emissions upon which the safety margins are based. In addition, the Charlotte-Gastonia-Salisbury area is currently attaining the 2008 and 2015 8-hour ozone NAAQS based on certified ambient monitoring data. Therefore, the DAQ concludes that the proposed revisions to the 2026 MVEBs will not interfere with any applicable requirement concerning the attainment and maintenance of the NAAQS.

Charlotte-Gastonia-Salisbury Nonattainment Designation

The area surrounding Charlotte-Gastonia-Salisbury, North Carolina, called the Charlotte area, was designated as marginal nonattainment for the 2008 8-hour ozone NAAQS on May 21, 2012 (77 Federal Register (FR) 30088). The nonattainment designation was an action taken by EPA under Section 107(d) of the CAA. The CAA requires that some area be designated as nonattainment if a monitor is found to be in violation of a NAAQS. For the 2008 8-hour ozone NAAQS, the EPA took designation action in 2012 based on 2009-2011 design values. At that time, the design value for the Charlotte area was 0.079 ppm.

The Charlotte area includes the entire county of Mecklenburg and parts of Cabarrus, Gaston, Iredell, Lincoln, Rowan and Union Counties (see Figure 1). The partial counties include the townships listed in Table 1. Note that the EPA also designated the portion of York County, South Carolina that is adjacent to the Charlotte area nonattainment for the 2008 8-hour ozone NAAQS. On April 17, 2015, the South Carolina Department of Health & Environmental Control (SCDHEC) submitted to EPA a SIP package request to redesignate the York County portion of the Charlotte nonattainment area to attainment. On December 11, 2015, EPA approved the SCDHEC's request and the redesignation to attainment became effective on January 11, 2016 (80 FR 76865).

Charlotte Nonattainment Area Boundary

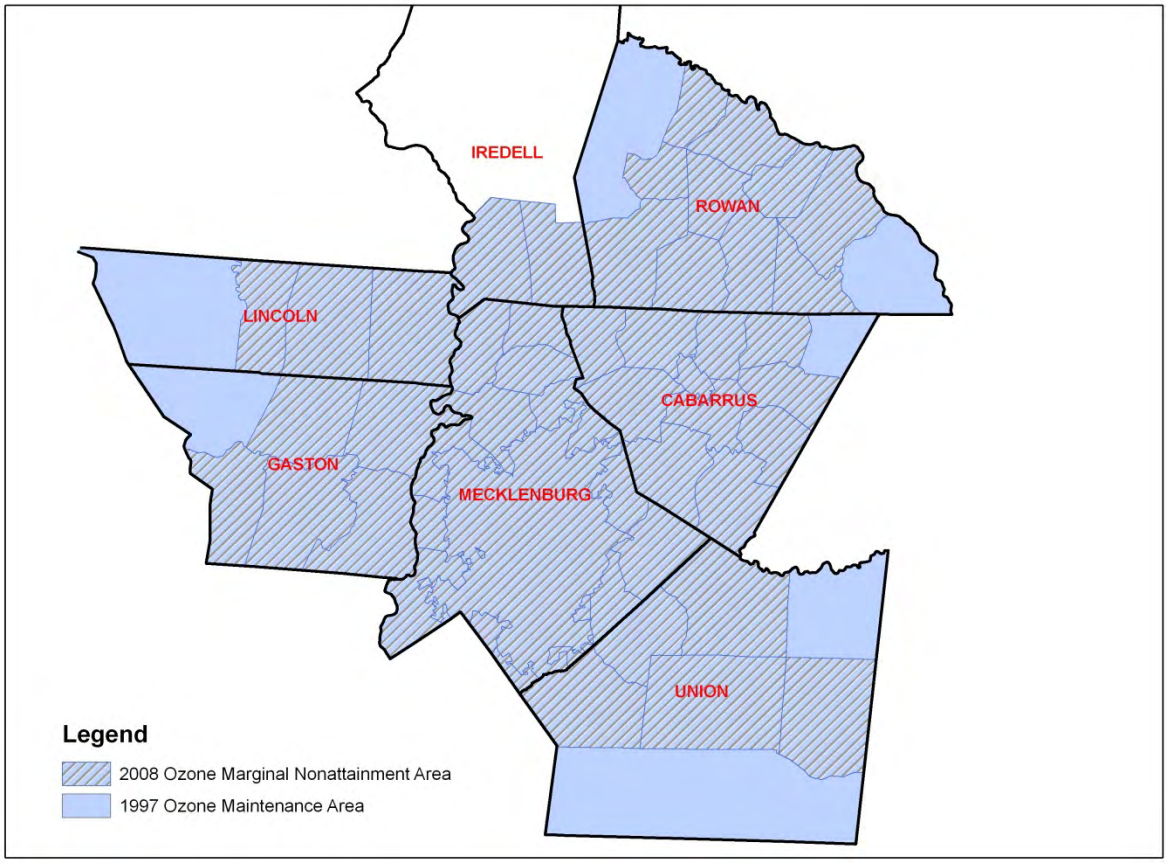


Table 1 Counties and Townships within the Charlotte Nonattainment Area

Cabarrus County Townships					
Central Cabarrus	Concord*	Georgeville	Harrisburg	Kannapolis	Midland
Mount Pleasant	Odell	Poplar Tent	New Gilead	Rimertown	
Gaston County Townships					
Dallas	Crowders Mountain	Gastonia	Riverbend	South Point	
Iredell County Townships					
Coddle Creek	Davidson				
Lincoln County Townships					
Catawba Springs	Lincolnton	Ironton			
Mecklenburg County – All Townships					
Rowan County Townships					
Atwell	China Grove	Franklin	Gold Hill*	Litaker	Locke
Providence	Salisbury	Steele	Unity		
Union County Townships					
Goose Creek	Marshville	Monroe	Sandy Ridge	Vance	

*Note: Concord Township in Cabarrus County and Gold Hill Township in Rowan County were inadvertently left out of North Carolina's recommendation and EPA's final designations. In a letter dated January 28, 2014, the DAQ requested the EPA to add the missing townships in the state's 2008 marginal ozone nonattainment area definition.

Current Air Quality

There are currently six ozone monitors located throughout the Charlotte area and one monitor located in York County, South Carolina, just outside of the area. The design value for the nonattainment area is 0.073 ppm based on the data from 2012-2014. The 2014 8-hour ozone monitoring data for the Charlotte area was fully quality assured and officially submitted to the EPA for certification approval on December 12, 2014. The EPA concurred with the North Carolina Division of Air Quality (DAQ) and Mecklenburg County Air Quality (MCAQ) certification on December 15, 2014. A detailed discussion of air quality levels in the region is provided in Section 2.0.

Maintenance Plan Requirements

The state of North Carolina has implemented permanent and enforceable state and federal actions to reduce ozone precursor emissions in the North Carolina portion of the Charlotte area. In addition, MCAQ has implemented actions to reduce ozone precursor emissions. This combination of state, federal, and local actions has resulted in cleaner air in the Charlotte area, and the anticipated future benefits from these programs are expected to result in continued maintenance of the 2008 8-hour ozone NAAQS in this region. State actions include the Clean Smokestacks Act; the on-board diagnostic (OBDII) vehicle I/M program that began on July 1, 2002; and voluntary programs to reduce emissions from diesel engines. Local actions implemented by MCAQ include a prohibition on open burning and a very effective voluntary program called Grants to Replace Aging Diesel Engines (GRADE).[1] The GRADE program is designed to reduce NOx emissions by providing businesses and organizations funding incentives to replace or repower heavy-duty non-road equipment with newer, cleaner, less polluting engines.

Several federal actions have resulted in lower emissions throughout the eastern portion of the country. For on-road and nonroad vehicles, federal actions include the Tier 2 engine standards for light- and medium-duty vehicles, heavy-duty engine standards, the low-sulfur gasoline and diesel requirements, and off-road engine standards. For stationary sources, federal actions include the Mercury and Air Toxics (MATS) rule for electricity generating units (EGUs) and the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for industrial, commercial and institutional boilers and reciprocating internal combustion engines (RICE). In addition, there are several federal actions that will be implemented starting in 2015. These actions will provide for additional NOx emissions reductions in and near the Charlotte area. For EGUs, the future federal actions include compliance with the Cross State Air Pollution Rule (CSAPR) and the Tennessee Valley Authority (TVA) consent decree. For on-road vehicles, the future federal actions include

[1] http://charmeck.org/mecklenburg/county/LUESA/AirQuality/MobileSources/Pages/GRADE.aspx.

compliance with the Tier 3 vehicle emissions and fuel standards and corporate average fuel economy standards for on-road vehicles.

Emissions

A base year inventory for NOx and VOC emissions was developed for 2014 since the design value for the 2012-2014 period shows attainment of the 2008 8-hour ozone NAAQS. Future year emissions inventories were also developed for the interim years 2015, 2018, 2022, and a final year emission inventory was developed for 2026. For each future year, the total NOx and VOC emissions is lower than the 2014 base year emissions. Furthermore, emissions modeling and air quality modeling for 2018 and 2030 performed by the EPA for the new Tier 3 engine and fuel standards and modeling performed by the Southeastern states for 2018 indicate that the area will be in attainment of the 2008 ozone NAAQS.[2, 3] The emission inventory comparison demonstrates that the Charlotte area is expected to maintain the 2008 8-hour ozone NAAQS through 2026 since in no future year are the emissions expected to be greater than they were in the base year. The area is also in compliance with Section 110 and Part D requirements of the CAA.

Conclusion and Request for Approval of Revised Maintenance Plan

Based on the information provided in this supplement to the revised SIP and criteria established in Section 107(d)(3)(E) of the CAA, North Carolina is requesting that EPA approve this supplement to the revised maintenance plan for the Charlotte-Gastonia-Salisbury maintenance area. The proposed revisions entail only increases to MVEBs, and do not affect the projected emissions inventories for 2026. The current approved maintenance plan demonstrates that the projected emissions inventories for 2026, the final year of the maintenance plan and 10 years beyond the redesignation year, as well as the interim years, are all less than the base year emissions inventory. Therefore, continued maintenance of the 2008 8-hour ozone NAAQS will not be affected by the proposed revisions.

[2] US EPA, http://www.epa.gov/otaq/documents/tier3/454r14002.pdf.
[3] Southeastern States Air Resource Managers (SESARM); Southeastern Modeling, Analysis and Planning (SEMAP) study, http://semap.ce.gatech.edu/sites/default/files/files/projections/base2018b-O3-DVFs-DDVFs-for-4configs.xls.

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LIST OF ACRONYMS

Acronym	Definition
AADVMT	Average annual daily vehicle miles traveled
AERR	Air Emission Reporting Rule
ARRA	American Recovery and Reinvestment Act
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CAMD	Clean Air Markets Division
CDOT	Charlotte Department of Transportation
CFR	Code of Federal Regulations
CMAQ	Congestion Mitigation and Air Quality Improvement
CNG	Compressed Natural Gas
CO	Carbon Monoxide
CRMPO	Cabarrus Rowan Metropolitan Planning Organization
CRTPO	Charlotte Regional Transportation Planning Organization
CSAPR	Cross State Air Pollution Rule
DAQ	North Carolina Division of Air Quality
DERA	Diesel Emissions Reduction Act
DOC	Diesel Oxidation Catalyst
DPF	Diesel Particulate Filter
EF	Emission factor
EGU	Electricity Generating Units
EPA	United States Environmental Protection Agency
^{o}F	Degrees Fahrenheit
FHWA	Federal Highway Administration
FIP	Federal Implementation Plan
FR	Federal Register
GCLMPO	Gaston-Cleveland-Lincoln Metropolitan Planning Organization
GHG	Greenhouse Gas
GIS	Geographic Information System
GRADE	Grants to Replace Aging Diesel Engines
HAP	Hazardous Air Pollutant
HC	Hydrocarbons
HDDV	Heavy duty diesel vehicles
HDGV	Heavy duty gas vehicles
HPMS	Highway performance monitoring system
I/M	Inspection and Maintenance
ICI	Industrial and commercial/institutional

Acronym	Definition
KCLT	Charlotte Douglas International Airport
kg/day	Kilograms/Day
lbs	Pounds
LDDT1	Light duty diesel trucks 1
LDDT2	Light duty diesel trucks 2
LDDV	Light duty diesel vehicles
LDGT1	Light duty gas trucks 1
LDGT2	Light duty gas trucks 2
LDGV	Light duty gas vehicles
MATS	Mercury Air Toxics Standards
MC	Motorcycles
MCAQ	Mecklenburg County Air Quality
MOA	Memorandum of Agreement
MOVES	Motor Vehicle Emissions Simulator
mpg	miles per gallon
MPO	Metropolitan Planning Organization
MRM	Metrolina Regional Model
MTP	Metropolitan Transportation Plan
MVEB	Motor Vehicle Emission Budget
NAAQS	National Ambient Air Quality Standard
NCAA	North Carolina Air Awareness
NCAC	North Carolina Administrative Code
NCDOT	North Carolina Department of Transportation
NEI	National Emissions Inventory
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NHTSA	National Highway Traffic Safety Administration
NMOG	Non-methane Organic Gases
NOx	Nitrogen Oxides
NSPS	New Source Performance Standard
OBD	Onboard Diagnostic
PM	Particulate Matter
PM_{10}	Particulate matter with an aerodynamic diameter less than or equal to 10 micrometers
$PM_{2.5}$	Particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers
ppb	Parts per billion
ppm	Parts per million
psi	pounds per square inch
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
RICE	Reciprocating Internal Combustion Engines

Acronym	Definition
RPO	Rural Planning Organization
RRRPO	Rock River Rural Planning Organization
RT	Road type
RVP	Reid Vapor Pressure
SCDHEC	South Carolina Department of Health and Environmental Control
SEMAP	Southeastern Modeling, Analysis and Planning
SESARM	Southeastern States Air Resource Managers
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SUV	Sport Utility Vehicle
TDM	Transportation Demand Model
TIP	Transportation Improvement Program
TVA	Tennessee Valley Authority
UI	Urban interstate
UF	Urban freeway
VHT	Vehicle Hours Traveled
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds

1.0 INTRODUCTION

1.1 WHAT IS TROPOSPHERIC OZONE?

Ozone, a strong chemical oxidant, adversely impacts human health through effects on respiratory function and can also damage forests and crops. Ozone is not emitted directly by the electric utilities, industrial sources or motor vehicles but instead, is formed in the lower atmosphere, the troposphere, by a complex series of chemical reactions involving nitrogen oxides (NOx), resulting from the utilities, combustion processes and motor vehicles, and reactive volatile organic compounds (VOCs). VOCs include many industrial solvents, toluene, xylene and hexane as well as the various hydrocarbons (HC) that are evaporated from the gasoline used by motor vehicles or emitted through the tailpipe following combustion.

Ozone formation is promoted by strong sunlight, warm temperatures, and light winds. High concentrations tend to be a problem in the eastern United States only during the hot summer months when these conditions frequently occur. Therefore, the U. S. Environmental Protection Agency (EPA) mandates seasonal monitoring of ambient ozone concentrations in North Carolina from April 1 through October 31 (40 CFR 58 App. D, 2.5).[4] The DAQ has examined both the man-made and natural sources of VOC emissions and their contribution to ozone formation in North Carolina. Because of the generally warm and moist climate of North Carolina, vegetation abounds in many forms, and forested lands naturally cover much of the state. As a result, the biogenic sector is the most abundant source of VOCs in North Carolina and accounts for approximately 90% of the total VOC emissions statewide. The overwhelming abundance of biogenic VOCs makes the majority of North Carolina a NOx limited environment for the formation of ozone. This is supported by a study published in the Journal of Environmental Management that concludes that the sensitivity of ozone to anthropogenic VOC emissions in the Southeastern United States is 2-3 orders of magnitude smaller than the sensitivity of ozone to NOx emissions, primarily due to the abundance of biogenic VOC emissions in this region.[5] As a result, controlling anthropogenic VOC emissions in the Southeast is far less effective than controlling NOx emissions for purposes of reducing ozone levels.

On March 12, 2008, the EPA revised the primary (health) and secondary (welfare) National Ambient Air Quality Standards (NAAQS) for ozone to a level of 0.075 parts per million (ppm). An exceedance of the 2008 8-hour ozone NAAQS occurs when a monitor measures ozone above 0.075 ppm on average for an 8-hour period. A violation of this NAAQS occurs when the average of the annual fourth highest daily maximum 8-hour ozone values over three consecutive

[4] 40 CFR 58 App. D, 2.5.
[5] Odman, M Talat et al., *Quantifying the sources of ozone, fine particulate matter, and regional haze in the Southeastern United States,* 90 Journal of Environmental Management 3155-3168 (2009).

years is greater than or equal to 0.076 ppm. This three-year average is termed the "design value" for the monitor. The design value for a nonattainment area is the highest monitor's design value in the area.

1.2 CLEAN AIR ACT OF 1990

Since the 1977 amendments to the Clean Air Act (CAA), areas of the country that had not attained the ambient standard for a particular pollutant were formally designated as nonattainment for that pollutant. This formal designation concept was retained in the 1990 CAA Amendments.

1.3 AIR QUALITY HISTORY

The area surrounding Charlotte-Gastonia-Rock Hill, North Carolina-South Carolina, called the Metrolina area (see Figure 1.1), was designated nonattainment for the 1997 8-hour ozone NAAQS on April 30, 2004.[6] The 1997 8-hour ozone NAAQS was set at 0.085 ppm. The Metrolina nonattainment area includes the North Carolina counties of Cabarrus, Gaston, Lincoln, Mecklenburg, Rowan and Union; Coddle Creek and Davidson Townships in Iredell County, North Carolina; and the Rock Hill Metropolitan Planning Organization boundary in York County, South Carolina. On December 2, 2013, the EPA approved North Carolina's redesignation demonstration and maintenance plan for the 1997 8-hour ozone NAAQS for the Charlotte-Gastonia-Rock Hill, North Carolina area.[7]

On July 20, 2012, the EPA designated the Charlotte-Gastonia-Salisbury, North Carolina nonattainment area (referred to as the Charlotte area) as "marginal" nonattainment for the 2008 8-hour ozone standard (Figure 1.1) based on the ambient data from 2009-2011. The nonattainment area includes all of Mecklenburg County and portions of Cabarrus, Gaston, Iredell, Lincoln, Rowan, and Union Counties. Table 1.1 identifies the townships in each county that are included in the Charlotte nonattainment area. At that time, the design value for the Charlotte area was 0.079 ppm. The official designation and classification was published in the Federal Register (FR) on May 21, 2012.[8] The designation became effective on July 20, 2012.

[6] 69 FR 23858.
[7] 78 FR 72036.
[8] 77 FR 30088.

Figure 1.1 Charlotte Nonattainment Area Boundary

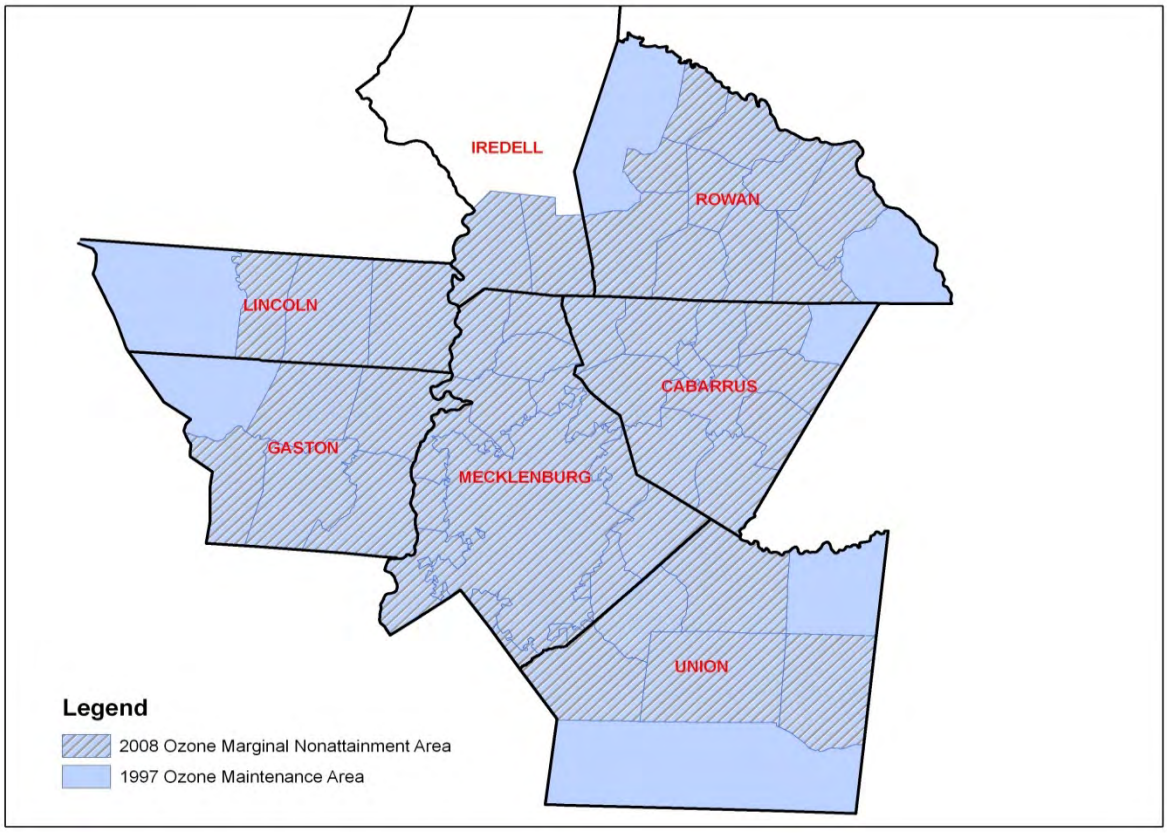


Table 1.1 Counties and Townships within the Charlotte Nonattainment Area

Cabarrus County Townships					
Central Cabarrus	Concord*	Georgeville	Harrisburg	Kannapolis	Midland
Mount Pleasant	Odell	Poplar Tent	New Gilead	Rimertown	
Gaston County Townships					
Dallas	Crowders Mountain	Gastonia	Riverbend	South Point	
Iredell County Townships					
Coddle Creek	Davidson				
Lincoln County Townships					
Catawba Springs	Lincolnton	Ironton			
Mecklenburg County – All Townships					
Rowan County Townships					
Atwell	China Grove	Franklin	Gold Hill*	Litaker	Locke
Providence	Salisbury	Steele	Unity		
Union County Townships					
Goose Creek	Marshville	Monroe	Sandy Ridge	Vance	

*Note: Concord Township in Cabarrus County and Gold Hill Township in Rowan County were inadvertently left out of North Carolina's recommendation and EPA's final designations. In a letter dated January 28, 2014, the North Carolina Division of Air Quality (DAQ) requested EPA to add the missing townships in the state's 2008 marginal ozone nonattainment area definition.

There are currently six ozone monitors located throughout the Charlotte area and one monitor located in York County, South Carolina. The North Carolina Division of Air Quality (DAQ) operates three of the monitors in the Charlotte area, the Mecklenburg County Air Quality (MCAQ) operates three of the monitors in the Mecklenburg County, and South Carolina Department of Health and Environmental Control (SCDHEC) operates the York County monitor.

In 2013, all but two monitors, Garinger and County Line located in Mecklenburg County, came into attainment of the 2008 8-hour ozone NAAQS. With the completion of the 2014 ozone season, the Garinger and County Line monitors attained the standard as well. The 2012-2014 design value for Charlotte area is 0.073 ppm.

1.4 CLEAN AIR ACT REDESIGNATION CRITERIA

Section 107(d)(3)(E) of the CAA, as amended, states an area can be redesignated to attainment if the following conditions are met:

1. The EPA has determined that the NAAQS have been attained. For ozone, the areas must show that the average of the fourth highest 8-hour ozone values from three (3) complete, consecutive calendar years of quality-assured air quality monitoring data must be below 0.076 ppm.

2. The applicable implementation plan has been fully approved by the EPA under Section 110(k).

3. The EPA has determined that the improvement in air quality is due to permanent and enforceable reductions in emissions. To demonstrate this, the state should estimate the percent reduction (from the year used to determine the design value for designation and classification) achieved from federal, state, and local measures.

4. The state has met all applicable requirements for the area under Section 110 and Part D.

5. The EPA has fully approved a maintenance plan, including a contingency plan, for the areas under Section 175A.

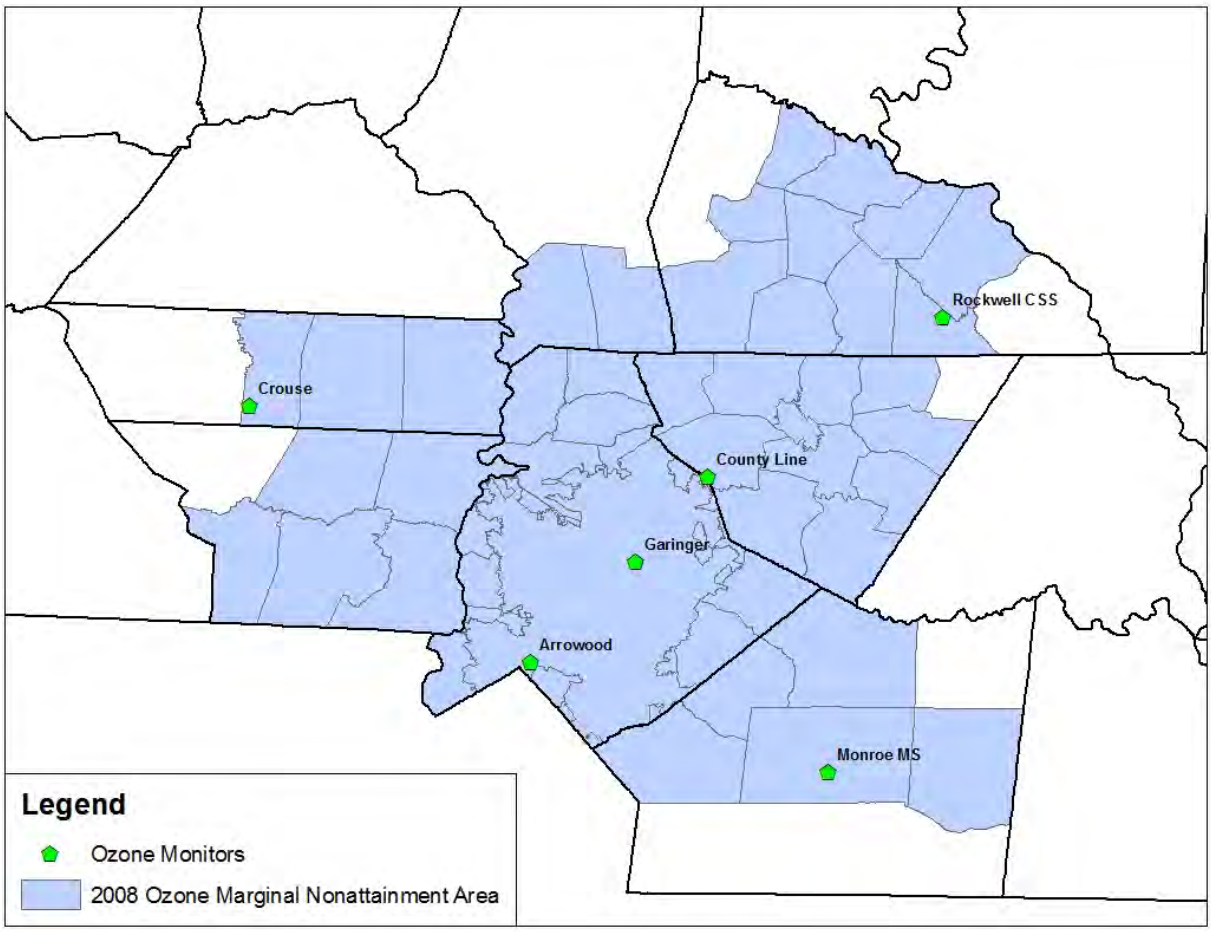
In the following sections, the DAQ provides the technical data necessary to show that the Charlotte-Gastonia-Salisbury nonattainment area has attained and is expected to maintain the 2008 8-hour ozone standard, and has met the requirements for redesignation set forth above.

2.0 AIR QUALITY

2.1 HISTORIC AIR QUALITY (2003 – 2011)

The DAQ and MCAQ have collected ambient monitoring data for the Charlotte area since the late seventies. Figure 2.1 shows the location of the six ozone monitors throughout the Charlotte nonattainment area. In addition, one additional ozone monitor is located in York County, South Carolina (not shown in Figure 2.1). These monitors were installed in accordance with the Code of Federal Regulations (CFR) 40 CFR 58.

Figure 2.1 Ozone Monitor Locations in the Charlotte Nonattainment Area



Tables 2.1 and 2.2 show the air quality data and corresponding design values for the monitors in the Charlotte region, respectively, from 2003 to 2014. As shown in Table 2.2, the design values for most of the monitors near and downwind of Charlotte have been declining rapidly in the past several years.

Table 2.1 Charlotte Area's Historic 4th Highest 8-hour Ozone Values (2003-2014)

Monitor	4th Highest 8-hour Ozone Values (ppm)											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Crouse AIRS ID #37-109-0004 Lincoln County	0.089	0.074	0.082	0.082	0.085	0.079	0.065	0.072	0.077	0.076	0.064	0.064
Garinger AIRS ID #37-119-0041 Mecklenburg County	0.086	0.085	0.088	0.091	0.093	0.085	0.069	0.082	0.088	0.080	0.067	0.065
Arrowood AIRS ID #37-119-1005 Mecklenburg County	0.073	0.077	0.085	0.078	0.087	0.073	0.068	0.078	0.082	0.073	0.062	0.063
County Line AIRS ID #37-119-1009 Mecklenburg County	0.088	0.083	0.090	0.093	0.096	0.093	0.071	0.082	0.083	0.085	0.066	0.068
Rockwell AIRS ID #37-159-0021 Rowan County	0.098	0.080	0.086	0.085	0.096	0.084	0.071	0.077	0.077	0.080	0.062	0.064
Enochville[1] AIRS ID #37-159-0022 Rowan County	0.087	0.080	0.088	0.089	0.095	0.082	0.073	0.078	0.078	0.077	0.063	-----
Monroe AIRS ID #37-179-0003 Union County	0.083	0.074	0.082	0.080	0.082	0.080	0.067	0.071	0.073	0.075	0.062	0.067
York AIRS ID #45-091-0006 York County	0.076	0.071	0.079	0.078	0.080	0.075	0.062	0.065	0.065	0.065	0.061	0.056

[1] Monitoring data for 2014 are not available for this monitor because it was shut down in 2014.

Table 2.2 Charlotte Area's Historic Design Values (2003 - 2014)

Monitor	Design Value (ppm)									
	03-05	04-06	05-07	06-08	07-09	08-10	09-11	10-12	11-13	12-14
Crouse AIRS ID #37-109-0004 Lincoln County	0.081	0.079	0.083	0.082	0.076	0.072	0.071	0.075	0.072	0.068
Garinger AIRS ID #37-119-0041 Mecklenburg County	0.086	0.088	0.090	0.089	0.082	0.078	**0.079**	**0.083**	**0.078**	0.070
Arrowood AIRS ID #37-119-1005 Mecklenburg County	0.078	0.080	0.083	0.079	0.076	0.073	**0.076**	**0.077**	0.072	0.066
County Line AIRS ID #37-119-1009 Mecklenburg County	0.087	0.088	0.093	0.094	0.086	0.082	**0.078**	**0.083**	**0.078**	0.073
Rockwell AIRS ID #37-159-0021 Rowan County	0.088	0.083	0.089	0.088	0.083	0.077	0.075	**0.078**	0.073	0.068
Enochville[1] AIRS ID #37-159-0022 Rowan County	0.085	0.085	0.090	0.088	0.083	0.077	**0.076**	**0.077**	0.072	----
Monroe AIRS ID #37-179-0003 Union County	0.079	0.078	0.081	0.080	0.076	0.072	0.070	0.073	0.070	0.068
York AIRS ID #45-091-0006 York County	0.075	0.076	0.079	0.077	0.072	0.067	0.064	0.065	0.063	0.060

Note: Bolded values represent violations of the 2008 8-hour ozone standard.
[1] 2012-2014 design value for this monitor is not available because it was shut down in 2014.

2.2 RECENT AIR QUALITY VALUES (2012 –2014)

Under the CAA, a marginal classification for the 2008 8-hour ozone NAAQS requires North Carolina to attain the standard within three years of designation, or July 20, 2015. However, in the 2008 Ozone Implementation Rule, the EPA extended the compliance date to December 31,

2015.[9] In a ruling by the U.S. Court of Appeals for the District of Columbia Circuit, the extension deadline was vacated, among other decisions.[10]

The most recent three years of ozone monitoring data (2012-2014) for the Charlotte nonattainment area demonstrate compliance with the 2008 8-hour ozone NAAQS. Table 2.3 is a summary of the fourth highest 8-hour average ozone concentration and the design value at each of the monitors in the Charlotte region for 2012-2014.

Table 2.3 Charlotte Area's Current Air Quality Data (2012 -2014)

Monitor	Year	4th Highest 8-hour ozone values (ppm)	Design Value (ppm) 2012-2014
Crouse AIRS ID #37-109-0004 Lincoln County	2012	0.076	0.068
	2013	0.064	
	2014	0.064	
Garinger AIRS ID #37-119-0041 Mecklenburg County	2012	0.080	0.070
	2013	0.067	
	2014	0.065	
Arrowood AIRS ID #37-119-1005 Mecklenburg County	2012	0.073	0.066
	2013	0.062	
	2014	0.063	
County Line AIRS ID #37-119-1009 Mecklenburg County	2012	0.085	0.073
	2013	0.066	
	2014	0.068	
Rockwell AIRS ID #37-159-0021 Rowan County	2012	0.080	0.068
	2013	0.062	
	2014	0.064	
Monroe AIRS ID #37-179-0003 Union County	2012	0.075	0.068
	2013	0.062	
	2014	0.067	
York AIRS ID #45-091-0006 York County	2012	0.065	0.060
	2013	0.061	
	2014	0.055	

[9] 78 FR 34178.
[10] http://www.cadc.uscourts.gov/internet/opinions.nsf/E97A64FFBFE4DC1D85257DB70054D5EE/$file/12-1321-1528834.pdf.

The 2014 8-hour ozone monitoring data for the Charlotte nonattainment area was fully quality assured and officially submitted to the EPA for certification approval on December 12, 2014. The EPA concurred with the DAQ and MCAQ certification on December 15, 2014. The Enochville site in Rowan County was shut down in 2014, but the most recent design value for that site was 0.072 ppm in 2011-2013 and it was not the highest value in Rowan County or the greater Charlotte area at the time of its shutdown.

The monitoring data shown above demonstrates that the Charlotte area is attaining the 2008 8-hour ozone standard, and is on schedule with the compliance date mandated in the CAA and upheld by the D.C. Circuit Court.

2.3 PERMANENT AND ENFORCEABLE EMISSIONS REDUCTIONS

There are several state and federal measures that have been enacted in recent years that have ensured permanent and enforceable emissions reductions. A list of those measures that contributed to the permanent and enforceable emission reductions are summarized here and are more fully described in Section 3.2.

The federal measures that have been implemented include:

- Tier 2 vehicle and fuel standards: Implementation began in 2004 and requires all passenger vehicles in each manufacture's fleet to meet an average standard of 0.07 grams of NOx per mile. Additionally, in January 2006 the sulfur content of gasoline was required to be on average 30 ppm which assists in lowering NOx emissions. Most gasoline sold in North Carolina prior to January 2006 had a sulfur content of about 300 ppm. These emission reductions are federally enforceable.

- Tier 3 vehicle and fuel standards: Implementation begins in 2017 with full compliance required by 2025. Tier 3 requires all passenger vehicles to meet an average standard of 0.03 gram/mile of NOx. Compared to Tier 2, the Tier 3 tailpipe standards for light-duty vehicles are expected to reduce NOx and VOC emissions by approximately 80%. Tier 3 vehicle standards also include evaporative standards using onboard diagnostics (OBD) that will result in a 50% reduction in VOC emissions over Tier 2. The rule reduces the sulfur content of gasoline to 10 ppm starting in January 2017. These emission reductions will be federally enforceable.

- National program for greenhouse gas (GHG) emissions and fuel economy standards: The federal GHG and fuel economy standards apply to light-duty cars and trucks in

model years 2012-2016 (phase 1) and 2017-2025 (phase 2). The final standards are projected to result in an average industry fleet-wide level of 163 grams/mile of carbon dioxide (CO_2) which is equivalent to 54.5 miles per gallon (mpg) if achieved exclusively through fuel economy improvements. The fuel economy standards will result in less fuel being consumed, and therefore less NOx emissions released. These emission reductions will be federally enforceable.

- Heavy-duty gasoline and diesel highway vehicle standards: Implementation of the program began in 2004 with full implementation in 2010. The program was estimated to reduce NOx emissions by 95% and required that the sulfur content of fuel be reduced to 15 ppm. These emission reductions are federally enforceable.

- Medium- and heavy-duty vehicle fuel consumption and GHG standards: Began implementation in 2014 and requires on-road vehicles to achieve from a 7% to 20% reduction in CO_2 emissions and fuel consumption by 2018. The decrease in fuel consumption will result in a 7% to 20% decrease in NOx emissions. These emission reductions will be federally enforceable.

- Large nonroad diesel engine standards: Phased in between 2008 through 2014, the combined engine and fuel requirements are expected to reduce NOx emissions by 90% and reduce the sulfur content in the nonroad diesel fuel to 15 ppm. These emission reductions are federally enforceable.

- Nonroad spark-ignition engine and recreational engine standards: Tier 1 of these standards was implemented in 2004 and Tier 2 started in 2007. These standards reduce NOx emissions by 80%. These emission reductions are federally enforceable.

- Clean Air Interstate Rule (CAIR) and Cross State Air Pollution Rule (CSAPR): In May 2005, the EPA promulgated CAIR to reduce NOx and sulfur dioxide (SO_2) emissions from electricity generating units (EGUs). After court challenges to CAIR, the EPA issued CSAPR in July 2011. CSAPR will take effect starting January 1, 2015 for SO_2 and annual NOx, and May 1, 2015 for ozone season NOx. Combined with other final state and EPA actions, the CSAPR will reduce power plant SO_2 emissions by 73% and NOx emissions by 54% from 2005 levels. The emission reductions will be federally enforceable.

- Tennessee Valley Authority (TVA) Consent Decree: In January 2009, a federal court required TVA coal-fired EGUs to install modern pollution controls for SO_2 and NOx

After an appeals court reversed the decision, North Carolina, TVA, and several other parties agreed to a settlement. The settlement caps NOx and SO_2 emissions at all of TVA's coal-fired facilities to permanent levels of 52,000 tons of NOx in 2018 and 110,000 tons of SO_2 in 2019. These emission reductions are federally enforceable.

- Boiler and Reciprocating Internal Combustion Engine (RICE) National Emissions Standards for Hazardous Air Pollutants (NESHAP): The NESHAPs for industrial, commercial and institutional boilers and RICE are expected to result in a small decrease in VOC emissions. Boilers must comply with the NESHAP by January 31, 2016 for all states except North Carolina which has a compliance date in May 2019 (see following discussion under state measures). RICE owners and operators had to comply with the NESHAP by May 3, 2013. These emission reductions are federally enforceable.

- Utility Mercury Air Toxics Standards (MATS) and New Source Performance Standards (NSPS): On February 16, 2012, the EPA published final rules for both the (1) MATS for new and existing coal- and oil-fired EGUs and (2) NSPS for fossil-fuel fired electric utility, industrial-commercial-institutional and small industrial-commercial-institutional steam generating units.[11] The MATS reduce emissions of toxic air pollutants from EGUs larger than 25 megawatts that burn coal or oil for the purpose of generating electricity for sale and distribution through the national electric grid to the public. For the NSPS, the EPA revised the standards that new coal- and oil-fired power plants must meet for NOx, SO_2, and particulate matter (PM). While MATS is still under court review, and portions of it may be overturned, the rule can be expected to result in the reduction of both NOx and SO_2 emissions in addition to the reduction in mercury and other air toxic emissions. The emission reductions associated with the MATS and revised NSPS are federally enforceable.

The state measures that have been implemented include:

- Vehicle Emissions Inspection and Maintenance (I/M) Program: In 1999, the North Carolina State Legislation passed the Clean Air Bill that expanded the on-road vehicle I/M program from 9 to 48 counties. It was phased-in in the Charlotte area from July 1, 2002 through January 1, 2004. This program reduces NOx, VOC and CO emissions. The rule for the I/M program was submitted to the EPA for adoption into the State Implementation Plan (SIP) in August 2002 and was federally approved

[11] 77 FR 9304.

in October 2002. Therefore, these emission reductions are both state and federally enforceable.

On February 5, 2015, the EPA approved a change to North Carolina's I/M rules triggered by a state law which exempted plug-in vehicles and the three newest model year vehicles with less than 70,000 miles on their odometers from emission inspection in all areas in North Carolina where I/M is required.[12] In North Carolina's Section 110(l) demonstration, the state showed that the change in the compliance rate from 95% to 96% more than compensates for the NOx and VOC emissions increase. The EPA-approved change to the I/M rules was effective March 9, 2015, and are state and federally enforceable. See Section 3.2.2 of this SIP for a more detailed discussion of this change.

- Clean Smokestacks Act: This state law requires coal-fired power plants to reduce annual NOx emissions by 77% by 2009, and to reduce annual SO_2 emissions by 49% by 2009 and 73% by 2013. This law set a NOx emissions cap of 56,000 tons/year for 2009 and SO_2 emissions caps of 250,000 tons/year and 130,000 tons/year for 2009 and 2013, respectively. The public utilities cannot meet these emission caps by purchasing emission credits. The EPA approved the statewide emissions caps as part of the Charlotte SIP on September 26, 2011. In 2013, the power plants subject to this law had combined NOx emissions of 38,857 tons/year, well below the 56,000 tons/year cap. The emissions cap has been met in all subsequent years as well. These emissions limits are enforceable at both the federal and state level.

- Boiler NESHAP: Because of delays associated with the EPA's promulgation of the boiler NESHAP, North Carolina adopted and implemented equivalent emission limitations by permit under Section 112(j) of the CAA.[13] These limitations apply to owners and operators of industrial, commercial and institutional boilers and process heaters burning natural gas, coal, oil or biomass beginning in 2013. These emissions limits are enforceable at both the federal and state level.

- Transportation Conformity Memorandum of Agreements (MOAs): The Conformity MOAs are signed by federal and state transportation agencies and local air quality organizations and the Metropolitan Planning Organization (MPOs) subject to transportation conformity requirements for applicable transportation-related NAAQs and satisfies the requirement in the CAA Section 176(c). The DAQ chose through

[12] Approval and Promulgation of Implementation Plans; North Carolina; Inspection and Maintenance Program Updates, 80 FR, 6455.
[13] 15A NCAC 02D .1109 - 112(j) Case-by-Case Maximum Achievable Control Technology.

rulemaking to develop Conformity MOAs to ensure that interagency consultation procedures for transportation conformity are followed in each of the nonattainment or maintenance areas in the state.

2.4 ADDITIONAL PROGRAMS SUPPORTING MAINTENANCE

This section provides a brief summary of state and local programs that have been implemented in the Charlotte area to maintain compliance with the NAAQS. Although these are important programs that help to ensure compliance with the NAAQS, they have not been relied upon as federally enforceable measures. These state and local programs are more fully described in Section 3.3.

State programs that have been implemented include:

- Air awareness program: The North Carolina Air Awareness Program is a public outreach and education program of the DAQ. The goal of the program is to reduce air pollution though voluntary actions by individuals and organizations. The program seeks to educate individuals about (1) the sources of air pollution; (2) the health effects of air pollution and how these effects can be mitigated by modification of outdoor activities on ozone action days; and (3) simple "action tips", such as carpooling, vehicle maintenance and energy conservation that reduce individual contributions to air pollution. One of the major program components is the daily air quality forecast. The DAQ produces the 8-hour ozone forecasts and corresponding air quality index for the Charlotte forecast area from April 1 through October 31 of each year.[14] Additionally, the DAQ produces daily PM forecasts for the Charlotte area.

- Grant Program: The DAQ has offered multiple forms of grant funding from state and federal funds to help cover the costs associated with emission reduction projects across the state. These projects include diesel engine replacements, diesel oxidation catalyst (DOC) retrofits, marine diesel repowers, replacing gasoline vehicles with electric vehicles, vehicle replacement and many more. Grant projects that have been awarded have helped to reduce PM, NO_x, CO and VOC emissions from mobile sources.

- Open burning rule: This rule prohibits open burning of man-made materials throughout the state. Additionally, the rule prohibits open burning of yard waste in areas that the DAQ forecasts air quality action days. The open burning regulation

[14] See N.C. DAQ http://www.ncair.org/airaware/.

reduces NOx, VOC, and CO emissions as well as PM with an aerodynamic diameter less than or equal to 10 micrometers (PM_{10}) and 2.5 micrometers ($PM_{2.5}$).

- Idle Reduction Regulation: The North Carolina Environmental Management Commission adopted the Heavy-Duty Vehicle Idling Restrictions rule to reduce unnecessary idling of heavy-duty trucks on July 9, 2009 and the rule became effective on July 10, 2010. This rule generally prevents any person who operates a heavy-duty vehicle to cause, let, permit, suffer or allow idling for a period of time in excess of 5 consecutive minutes in any 60 minute period. This rule is state enforceable.

Local program that have been implemented include:

- Open Burning Prohibition: Mecklenburg County prohibits open burning of any kind year round, except under extenuating circumstances with an approved burn permit. This prohibition is more stringent than the state's open burning rule and therefore enhances this control measure's overall benefit to the region. The open burning rule reduces NOx, VOC, CO, PM_{10} and $PM_{2.5}$. These emission reductions are enforceable at the local level.

- Grants to Replace Aging Diesel Engines (GRADE) Program: In 2007, MCAQ initiated an air pollution control program called GRADE designed to reduce NOx emissions in the Charlotte area. Funded by federal, state and local county grant money, GRADE provides businesses and organizations financial incentives to replace or repower heavy-duty non-road equipment with newer, cleaner, less polluting engines. GRADE has funded cost effective emission reduction projects operating in multiple segments of the economy including construction, landfills, timber logging operations, open pit mining, freight transportation, and commercial aviation. As of July 31, 2014, GRADE projects have reduced over 350 tons of NOx region-wide.

- Mobile Source Emissions Reduction Grants: This program reduces NOx, PM, and VOC emissions. MCAQ has also received Diesel Emissions Reduction Act (DERA) funding as well as American Recovery and Reinvestment Act (ARRA) and Congestion Mitigation and Air Quality Improvement (CMAQ) program funding. These funds have been used to repower or replace existing diesel engines from on-road vehicles and nonroad equipment. Even though these emission reductions are voluntary and not enforceable, they are still considered permanent reductions.

2.5 EFFECT OF NOX CONTROL PROGRAMS ON OZONE LEVELS

The foundation control program for stationary and mobile sources for the Charlotte area has significantly reduced NOx emissions enabling the area to demonstrate attainment with the 2008 ozone NAAQS. As an example, historically EGUs have been a significant source of NOx emissions contributing to ozone formation during the summer months in the Charlotte area as well as statewide. A recent review of the NOx emissions in the EPA's Air Markets Program Data database shows a reduction in over 96,641 tons of NOx from the reporting sources in North Carolina between 2002 and 2013. The trend in decreasing NOx emissions from these facilities are attributable to a combination of state (Clean Smoke Stacks Act) and federal (CAIR / CSAPR) measures and market forces (switching from coal to natural gas due to favorable natural gas prices). Table 2.4 presents the annual emissions for the North Carolina sources obtained from the EPA's Air Markets Program Data database.

Table 2.5 shows trends in NOx emissions from 2002 through 2013 from North Carolina power plants in the Charlotte area, as well as the power plants located directly north and west of the Charlotte region that may impact the area. There are four facilities located within Gaston, Lincoln and Rowan Counties. The facility west of the Charlotte area is Cliffside, located in Cleveland County and the facility north of the

Table 2.4 NOx Emissions from NC Sources in EPA's Air Markets Program Database

Year	Annual NOx Emissions from NC Sources (tons)
2002	145,706
2003	135,879
2004	124,079
2005	114,300
2006	108,584
2007	64,770
2008	61,669
2009	44,506
2010	57,305
2011	48,889
2012	51,057
2013	49,065

Charlotte area is Marshall located in Catawba County. These data are taken from the EPA Clean Air Markets Division's (CAMD) Air Markets Program Data and represent the second and third quarters of the year (April through September), the period during which ozone levels are the highest. The emissions from these facilities have significantly decreased during the ozone season since 2002, with over 12,000 tons of NOx reduction in the 2013 ozone season compared

to 2002. In addition, two coal-fired power plants (Buck and Riverbend) were retired in April 2013, which resulted in additional emissions reductions.

Table 2.5 April 1 through September 30 NOx Emissions for Electric Utilities Near Charlotte Area (tons/period)

Facility	County	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Allen*	Gaston	5,011	3,643	4,002	3,589	3,001	3,053	3,082	2,188	2,925	2,738	1,676	1,906
Riverbend*	Gaston	2,556	2,703	1,844	1,379	1,417	1,296	1,256	304	1,063	884	109	0
Lincoln*	Lincoln	44	20	50	20	52	81	33	6	40	46	10	22
Buck*	Rowan	1,084	1,468	1,089	1,286	1,262	870	832	197	783	477	196	61
Marshall	Catawba	9,283	9,101	8,243	7,558	6,370	7,253	7,151	4,481	4,861	5,443	5,128	4,777
Cliffside	Cleveland	1,944	2,149	1,738	1,782	1,540	1,311	1,173	561	357	469	267	673
Total	**-----**	**19,922**	**19,084**	**16,966**	**15,614**	**13,642**	**13,864**	**13,527**	**7,737**	**10,029**	**10,057**	**7,386**	**7,439**

*Facility is located within the Charlotte nonattainment area boundary.

Temperature is a key meteorological factor that determines the ozone production potential of a given day. In North Carolina, many exceedances occur when the maximum daily temperature is 90 degrees Fahrenheit (ºF) or greater. In recent years, however, foundation control program measures have reduced NOx emissions in the Charlotte area to the extent that recent trends are showing that ozone levels are lower than the NAAQS even when the daily temperature is 90 ºF or greater. Figure 2.2 shows the relationship of exceedance days to high temperature days from 2000 through 2014 for the Charlotte region monitors. The relationship between the maximum 4th highest ozone value to high temperature days from 2000 through 2014 is displayed in Figure 2.3.

It is important to see how the ozone levels have changed over the last decade in response to lower NOx emissions in the state. The worst summer in terms of the number of exceedance days and observed 4th highest ozone concentrations was 2002, with 61 exceedance days in the Charlotte region and a maximum 4th highest daily average 8-hour concentration of 0.108 ppm. That summer there were 49 days when the temperature was 90 ºF or greater in the Charlotte region. The next highest number of exceedance days occurred in 2007 with 56 days and 74 days with temperatures at or above 90 °F, yet the maximum 4th highest daily average 8-hour concentration was significantly lower than 2002 at 0.096 ppm. More recently, in the year 2010, the Charlotte area experienced the hottest summer of the 21st century with 86 days at or above 90 °F. However, the Charlotte area only observed 17 exceedance days and the maximum 4th highest daily average concentration was only 0.082 ppm. In subsequent years, the 4th-highest values have generally decreased as the number of very hot days over 90 degrees has moderated. In 2014, there were a total of 37 days with a high temperature over 90 degrees, but no exceedances of the 2008 8-hour ozone standard and a peak 4th highest daily average value of 0.068 ppm. The steady decrease of ozone values over the last 15 years regardless of summertime temperature regime illustrates the progress that North Carolina has made and the positive effects of the

control strategies put in place by North Carolina, Mecklenburg County and the EPA to regulate NOx emissions.

Figure 2.2 Relationship between high temperature days and number of exceedance days in the Charlotte area

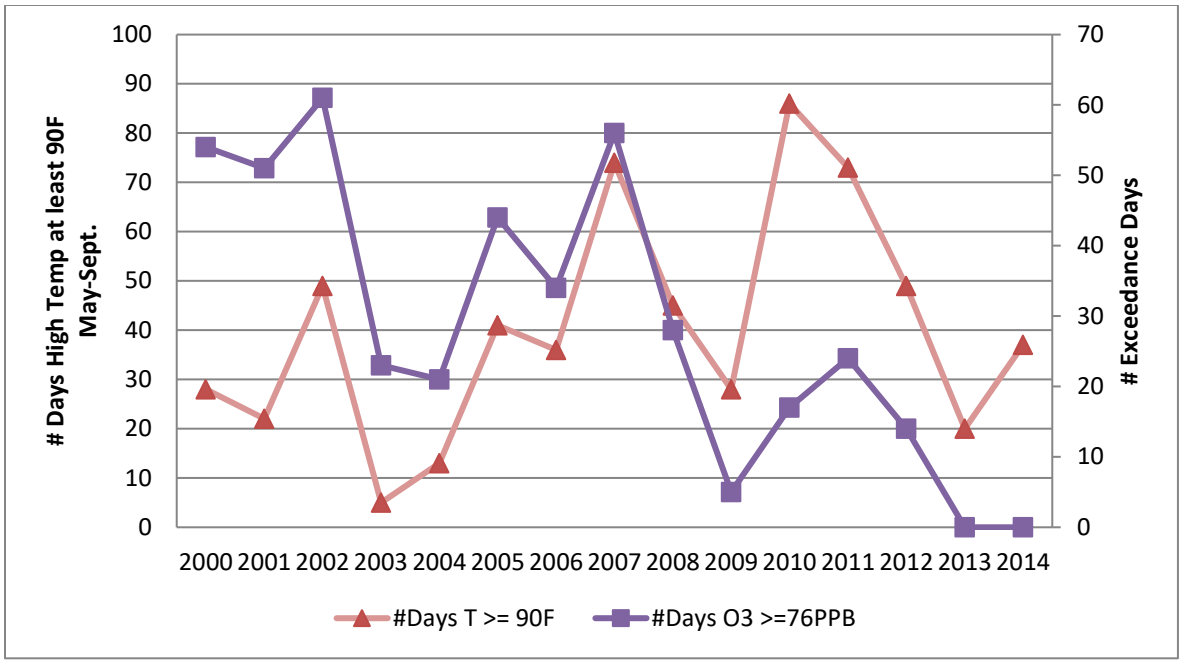
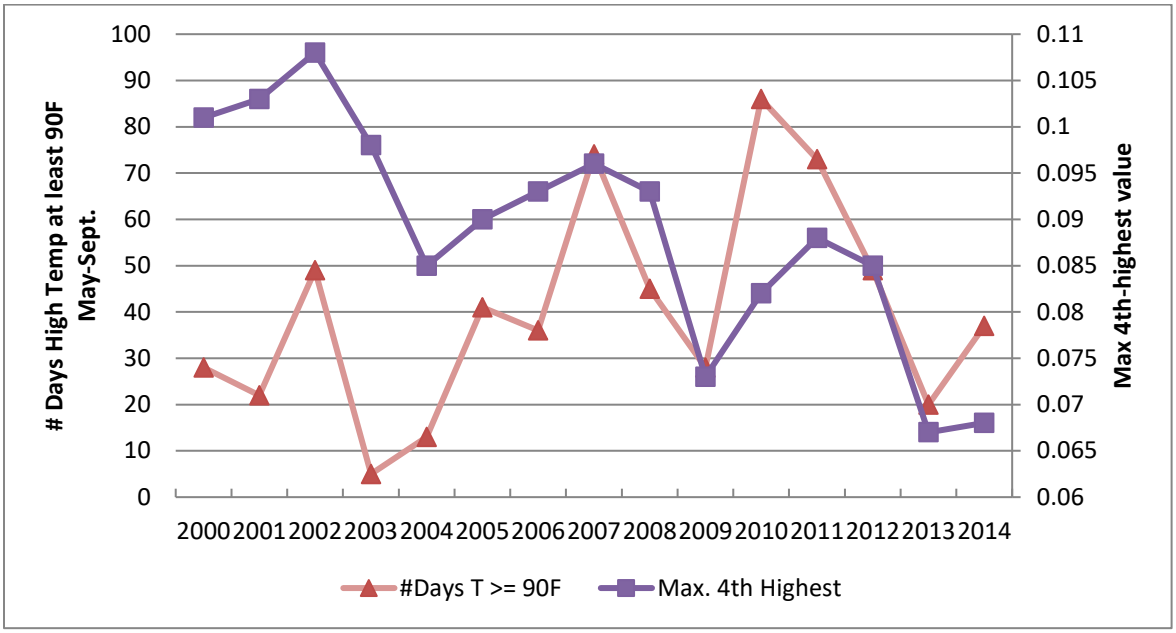


Figure 2.3 Relationship between high temperature days and maximum 4th highest ozone value in the Charlotte Area



3.0 MAINTENANCE PLAN

3.1 CONCEPT OF NORTH CAROLINA'S MAINTENANCE PLAN

The state's plan for maintaining compliance with the ambient air quality standard for the 2008 8-hour ozone in the Charlotte-Gastonia-Salisbury nonattainment area consists of three major parts: a foundation control program, a maintenance demonstration, and a contingency plan. The foundation control program consists of the current federal and state control measures already in effect, as well as the future benefits of the federal actions. For EGUs, the future federal actions include implementation of the MATS, CSAPR, and carbon rules and the TVA consent decree. Additionally, North Carolina will continue to implement and enforce the Clean Smokestacks Act. For on-road vehicles, the future federal actions include compliance with the Tier 3 vehicle emissions and fuel standards and corporate average fuel economy standards for on-road vehicles. Although North Carolina did not rely on the emission reductions from CSAPR or the TVA consent decree for maintenance of the 2008 8-hour ozone standard, these actions will result in additional reductions in NOx emissions regionally.

The foundation control program includes federally and state enforceable control programs that have been adopted and implemented by the DAQ. These programs will remain enforceable and ensure that maintenance of the 2008 8-hour ozone standard will continue. Sources are prohibited from reducing or removing emission controls (anti-backsliding) following the redesignation of the area unless such a change is first approved by the EPA as a revision to the North Carolina SIP that is consistent with Section 110(l) of the CAA.

For the maintenance demonstration, the base year of 2014 was chosen since it is a year that falls within the attaining design value period of 2012-2014. The interim years 2015, 2018 and 2022 were chosen based on consultation with the EPA. The final year of the maintenance demonstration is 2026, since the CAA requires maintenance for at least 10 years after the EPA approves the redesignation demonstration and maintenance plan. The maintenance demonstration consists of a comparison between the 2014 baseline emissions inventory and the projected emissions inventories (for 2015, 2018, 2022, and 2026), which consider economic and population growth. The comparison shows that the total emissions in each of the interim years and the final year is estimated to be lower than in the base year, which demonstrates maintenance of the 2008 8-hour ozone standard. The reductions in emissions are due to the foundation control programs outlined below.

The North Carolina contingency plan involves tracking and triggering mechanisms to determine when contingency measures are needed and a process of implementing appropriate control measures. The primary trigger of the contingency plan will be a violation of the ambient air

quality standard for 2008 8-hour ozone standard. The secondary trigger will be a monitored air quality pattern that suggests an actual 2008 8-hour ozone NAAQS violation may be imminent.

On April 17, 2015, the SCDHEC submitted to EPA a SIP package request to redesignate the York County portion of the Charlotte nonattainment area to attainment. On December 11, 2015, EPA approved the SCDHEC's request and the redesignation to attainment became effective on January 11, 2016 (80 FR 76865).

3.2 FOUNDATION CONTROL PROGRAM

The main element of the maintenance plan is the foundation control program. The foundation control program consists of a combination of federal and state control measures necessary to maintain the ambient air quality standards. The purpose of the foundation control program is to prevent the ambient air quality standards from being violated and thereby eliminate the need for more costly controls being imposed on industry and the general public. Each component of the foundation control program is essential in demonstrating maintenance of the air quality standards. The following provides a summary of each federal and state control measure included in the foundation control program for the Charlotte nonattainment area. All of these programs have already been implemented or are in the process of being implemented.

3.2.1 Federal Control Measures

Tier 2 Vehicle and Fuel Standards

Federal Tier 2 vehicle standards require all passenger vehicles in a manufacturer's fleet, including light-duty trucks and sport utility vehicles (SUVs), to meet an average standard of 0.07 gram/per mile of NOx. Implementation began in 2004, with full compliance required by 2007. The Tier 2 standards also cover passenger vehicles over 8,500 pounds gross vehicle weight rating (the larger pickup trucks and SUVs), which are not covered by the Tier 1 regulations. For these vehicles, the standards were phased in beginning in 2008, with full compliance required by 2009. The Tier 2 standards require vehicles to be 77% to 95% cleaner. The Tier 2 rule also reduced the sulfur content of gasoline to 30 ppm starting in January of 2006. Most gasoline sold in North Carolina prior to January 2006 had a sulfur content of about 300 ppm. Sulfur occurs naturally in gasoline and interferes with the operation of catalytic converters on vehicles, which results in higher NOx emissions. Lower-sulfur gasoline is necessary to achieve the Tier 2 vehicle emission standards.[15] These emission reductions are federally enforceable.

[15] Fact Sheet, Office of Mobile Sources, EPA-420-F-99-051, December 1999.

Tier 3 Vehicle and Fuel Standards

Federal Tier 3 vehicle standards require all passenger vehicles in a manufacturer's fleet, including light-duty trucks and SUVs, to meet an average standard of 0.03 gram/per mile of NOx. Heavy-duty passenger vehicles must meet average standards of 0.178 to 0.247 gram/per mile of NOx depending on vehicle classification. Implementation begins in 2017, with full compliance required by 2025. Compared to current standards in 2014, the Tier 3 tailpipe standards for light-duty vehicles are expected to reduce non-methane organic gases (NMOG) and NOx by approximately 80%. The Tier 3 program is expected to reduce per-vehicle PM standards by approximately 70%. The heavy-duty tailpipe standards represent about a 60% reduction in both fleet average NMOG+NOx and per vehicle PM standards. Tier 3 vehicle standards also require evaporative standards including OBD that will result in a 50% reduction in VOC emissions from Tier 2 for all 2017 and later light-duty and on-road gasoline-powered heavy-duty vehicles. The Tier 3 rule also reduced the sulfur content of gasoline to 10 ppm starting in January 2017. Tier 2 standards had limited the sulfur content to 30 ppm. Sulfur occurs naturally in gasoline and interferes with the operation of catalytic converters on vehicles, which results in higher NOx emissions.[16] These emission reductions are federally enforceable.[17]

National Program for GHG Emissions and Fuel Economy Standards

The EPA and the National Highway Traffic Safety Administration (NHTSA) jointly developed the federal GHG and fuel economy standards for light-duty cars and trucks in model years 2012-2016 (phase 1) and 2017-2025 (phase 2). The EPA also aligned implementation of the Tier 3 program with the second phase of the EPA and NHTSA federal GHG and fuel economy standards program. Together, phases 1 and 2 of the final standards are projected to result in an average industry fleet-wide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 mpg if achieved exclusively through fuel economy improvements.[18] The fuel economy standards will result in less fuel being consumed, and therefore less NOx emissions released. These emission reductions will be federally enforceable.

Heavy-Duty Gasoline and Diesel Highway Vehicles Standards

The EPA standards designed to reduce NOx and VOC emissions from heavy-duty gasoline and diesel highway vehicles began to take effect in 2004. A second phase of standards and testing procedures that began in 2007 reduced PM from heavy-duty highway engines and also reduced highway diesel fuel sulfur content to 15 ppm since the sulfur damages emission control devices. The total program is expected to achieve a 90% reduction in PM emissions and a 95% reduction

[16] Fact Sheets, Office of Transportation and Air Quality, EPA-420-F-14-008 and EPA-420-F-14-009, March 2014.
[17] See U.S. EPA, http://www.epa.gov/otaq/tier3.htm.
[18] See U.S. EPA, http://www.epa.gov/otaq/climate/regs-light-duty.htm.

in NOx emissions for these new engines using low-sulfur diesel, compared to engines using higher-content sulfur diesel. These emission reductions are federally enforceable.

Large Nonroad Diesel Engines Rule

In May 2004, the EPA promulgated new rules for large nonroad diesel engines, such as those used in construction, agricultural and industrial equipment, to be phased in between 2008 and 2014. The nonroad diesel rules also reduced the allowable sulfur in nonroad diesel fuel to 15 ppm. Prior to the fuel standard change, nonroad diesel fuel averaged about 3,400 ppm sulfur. The combined engine and fuel rules are expected to reduce NOx and PM emissions from large nonroad diesel engines by over 90%.[19] These emission reductions are federally enforceable.

Medium- and Heavy-Duty Vehicle Fuel Consumption and GHG Standards

In September 2011, the EPA and the NHTSA promulgated joint rules to reduce GHG emissions and improve fuel efficiency of combination tractor trucks, heavy-duty pickups and vans, and vocational trucks beginning with model year 2014 and applying to all model years by 2018. Depending on truck type, the on-road vehicles must achieve from a 7% to 20% reduction in CO_2 emissions and fuel consumption from the 2010 base year. The decrease in fuel consumption will result in a 7% to 20% decrease in NOx emissions.[20] These emission reductions are federally enforceable.

Nonroad Spark-Ignition Engines and Recreational Engines Standard

The nonroad spark-ignition and recreational engine standards, effective in July 2003, regulates NOx, hydrocarbons and CO for groups of previously unregulated nonroad engines. These engine standards apply to all new engines sold in the United States and imported after these standards began and applies to large spark-ignition engines (forklifts and airport ground service equipment), recreational vehicles (off-highway motorcycles and all-terrain-vehicles), and recreational marine diesel engines. The regulation varies based upon the type of engine or vehicle.

The large spark-ignition engines contribute to ozone formation and ambient CO and PM levels in urban areas. Tier 1 of this standard was implemented in 2004 and Tier 2 started in 2007. Like the large spark-ignition, recreational vehicles contribute to ozone formation and ambient CO and PM levels. For the off-highway motorcycles and all-terrain-vehicles, the exhaust emissions standard was phased-in. Fifty percent of model year 2006 engines had to meet the standard and for model years 2007 and later, all engines must meet the standard. Recreational marine diesel

[19] See U.S. EPA http://transportpolicy.net/index.php?title=US:_Heavy-duty:_Fuel_Consumption_and_GHG
[20] Fact Sheet, Office of Transport and Air Quality, EOA-420-F-11-031, August 2011.

engines over 37 kilowatts are used in yachts, cruisers, and other types of pleasure craft. Recreational marine engines contribute to ozone formation and PM levels, especially in marinas. Depending on the size of the engine, the standard began phasing-in in 2006.

When the nonroad spark-ignition and recreational engine standards are fully implemented in 2020, an overall 72% reduction in hydrocarbons, 80% reduction in NOx, and 56% reduction in CO emissions are expected. These controls will help reduce ambient concentrations of ozone, CO, and fine PM.[21] These emission reductions are federally enforceable.

CAIR and CSAPR

On May 12, 2005, the EPA promulgated the CAIR which required reductions in emissions of NOx and SO_2 from large fossil fuel fired EGUs. CAIR also allowed non-EGU industrial boilers to participate in the program to meet their NOx SIP Call requirements.[22] The U.S. Court of Appeals for the D.C. Circuit ruled on petitions for review of CAIR and CAIR Federal Implementation Plans (FIPs), including their provisions establishing the CAIR NOx annual and ozone season and SO_2 trading programs. On July 11, 2008, the Court issued an opinion vacating and remanding these rules. However, parties to the litigation requested rehearing of aspects of the Court's decision, including the vacatur of the rules. On December 23, 2008, the Court remanded the rules to the EPA without vacating them. The December 23, 2008 ruling left CAIR in place until the EPA issued a new rule to replace CAIR in accordance with the July 11, 2008 decision.

The EPA issued CSAPR in July 2011 to address CAA requirements concerning interstate transport of air pollution and to replace the previous CAIR which the D.C. Circuit remanded to the EPA for replacement. Following the original rulemaking, CSAPR was amended by three further rules known as the Supplemental Rule, the First Revisions Rule, and the Second Revisions Rule. As amended, CSAPR requires 28 states to limit their state-wide emissions of SO_2 and/or NOx in order to reduce or eliminate the states' contributions to fine PM and/or ground-level ozone pollution in other states. The emissions limitations are defined in terms of maximum state-wide "budgets" for emissions of annual SO_2, annual NOx, and/or ozone-season NOx by each state's large EGUs.

As the mechanism for achieving compliance with the emissions limitations, CSAPR establishes FIPs that require large EGUs in each affected state to participate in one or more new emissions trading programs that supersede the existing CAIR emissions trading programs. Non-EGU

[21] Final Rule: Control of Emissions from Nonroad Large Spark-Ignition Engines, and Recreational Engines (Marine and Land-Based), 67 FR 68242.
[22] In 2009, the NOx SIP Call program was replaced by CAIR.

boilers are not able to participate in CSAPR, resulting in a group of "orphaned" industrial units that are still subject to the NOx SIP Call. Interstate trading of CSAPR's emission allowances is permitted, but the rule includes "assurance provisions" designed to ensure that individual states' emissions do not exceed the states' respective emissions budgets. CSAPR allows states to elect to revise their SIPs to modify or replace the FIPs while continuing to rely on the rule's trading programs for compliance with the emissions limitations, and establishes certain requirements and deadlines related to those optional SIP revisions. The rule also contains provisions that sunset CAIR compliance requirements on a schedule coordinated with the implementation of CSAPR compliance requirements.

Certain industry and state and local government petitioners challenged CSAPR in the D.C. Circuit and filed motions seeking a stay of the rule pending judicial review. On December 30, 2011, the Court granted a stay of the rule, ordering the EPA to continue administering CAIR on an interim basis. In a subsequent decision on the merits, the Court vacated CSAPR based on a subset of petitioners' claims, but on April 29, 2014, the U.S. Supreme Court reversed that decision and remanded the case to the D.C. Circuit for further proceedings. Throughout the initial round of D.C. Circuit proceedings and the ensuing Supreme Court proceedings, the stay remained in place and the EPA has continued to implement CAIR. Following the Supreme Court decision, in order to allow CSAPR to replace CAIR in an equitable and orderly manner while further D.C. Circuit proceedings are held to resolve petitioners' remaining claims, the EPA filed a motion asking the D.C. Circuit to lift the stay and to toll by three years all CSAPR compliance deadlines that had not passed as of the date of the stay order. On October 23, 2014, the Court granted the EPA's motion.

CSAPR will take effect starting January 1, 2015 for SO_2 and annual NOx, and May 1, 2015 for ozone season NOx. Combined with other final state and EPA actions, the CSAPR will reduce power plant SO_2 emissions by 73% and NOx emissions by 54% from 2005 levels in the CSAPR region.[23] The emission reductions will be federally enforceable.

TVA Consent Decree

In January 2009 a federal court found that four TVA coal-fired generating stations were creating a public nuisance in North Carolina. The judge ordered that each unit of each facility install modern pollution controls for SO_2 and NOx and meet emission limits that are consistent with the continuous operation of such controls. The court ordered that TVA meet these limits on a staggered schedule ending in 2013. In July 2010 an appeals court reversed the decision.

[23] Interim Final Rule: Rulemaking to Amend Dates in Federal Implementation Plans Addressing Interstate Transport of Ozone and Fine Particulate Matter, 79 FR 71663.

In April 2011 North Carolina, TVA, and several other parties agreed to a comprehensive settlement of a variety of air pollution allegations. The detailed settlement would (1) subject SO_2 and NOx emissions at all of TVA's coal-fired facilities to system-wide caps that decline on an annual basis to permanent levels of 110,000 tons of SO_2 in 2019 and 52,000 tons of NOx in 2018; (2) require TVA to install modern pollution controls on or shutdown the majority of its coal-fired units; and (3) require TVA to pay North Carolina $11.2 million to fund mitigation projects in North Carolina. The settlement is being successfully implemented, including the provision of funds directly to North Carolina for approved projects.[24] These emission reductions are federally enforceable.

Boiler NESHAP

The NESHAP for the industrial, commercial and institutional boiler source category is applicable to boilers and process heaters burning natural gas, coal, oil or biomass. Boilers must comply with the NESHAP by January 31, 2016 for all states except North Carolina (see state control measure Section 3.2.2 below for further discussion) and by May 2019 for boilers in North Carolina. The NESHAP contains work practice standards such as annual boiler tune ups for most boilers. There are also emissions standards for the largest emitting boilers (<1% of all boilers) including a CO standard that is a surrogate for gas-phase hazardous air pollutants (HAPs) and VOC. There is estimated to be a small reduction in VOC emissions due to the NESHAP.[25] These new emission reductions are federally enforceable.

RICE NESHAP

The RICE NESHAP applies to stationary engines burning natural gas and diesel fuels that generate electricity and power equipment at industrial, agricultural, oil and gas production, power generation and other facilities. RICE owners and operators had to comply with the NESHAP by May 3, 2013. The NESHAP contains work practice standards such as engine maintenance, requires ultralow-sulfur diesel fuel for some engines, and requires the use of catalytic converters on larger engines. There is estimated to be a slight reduction in VOC emissions due to the NESHAP.[26] These emission reductions are federally enforceable.

Utility MATS and NSPS Rules

On February 16, 2012, the EPA published final rules for both the (1) MATS for new and existing coal- and oil-fired EGUs and (2) NSPS for fossil-fuel fired electric utility, industrial-

[24] http://www.ncdoj.gov/getdoc/bdf66401-8137-4be2-bd20-57e89b570c1a/TVA-signed-consent-decree.aspx.
[25] See U.S. EPA http://www.epa.gov/ttn/atw/boiler/boilerpg.html.
[26] See U.S. EPA http://www.epa.gov/ttn/atw/icengines/.

commercial-institutional and small industrial-commercial-institutional steam generating units.[27] The MATS reduce emissions of toxic air pollutants from EGUs larger than 25 megawatts that burn coal or oil for the purpose of generating electricity for sale and distribution through the national electric grid to the public. For the NSPS, the EPA revised the standards that new coal- and oil-fired power plants must meet for NOx, SO_2, and PM.

Following promulgation of the final rules, the EPA received petitions for reconsideration of various provisions of both rules, including requests to reconsider the work practice standards applicable during startup periods and shutdown periods that were included in the final rule. The EPA granted reconsideration of the startup and shutdown provisions because the public was not provided an opportunity to comment on the work practice requirements contained in the final rule. On November 30, 2012, the EPA published a proposed rule reconsidering certain new source standards issued in MATS and the startup and shutdown provisions in MATS and the Utility NSPS.[28] The EPA proposed certain minor changes to the startup and shutdown provisions contained in the 2012 final rule based on information obtained in the petitions for reconsideration. On April 24, 2013, the EPA took final action on the new source standards that were reconsidered and also the technical corrections contained in the November 30, 2012, proposed action.[29] The EPA did not take final action on the startup and shutdown provisions, and, on June 25, 2013, the EPA added new information and analysis to the docket and reopened the public comment period for the proposed revisions to the startup and shutdown provisions in MATS and the startup and shutdown provisions related to the PM standard in the Utility NSPS.[30] The EPA took final action on the remaining topics of the reconsideration on November 19, 2014.[31] The compliance date for existing sources is April 16, 2015, while the compliance date for new sources is April 16, 2012.

On November 25, 2014, The U.S. Supreme Court accepted several challenges to the rules brought by the utility industry and a coalition of nearly two dozen states. The court will hear arguments in the case in the spring and is likely to rule in June 2015.[32] While MATS is still under court review, and portions of it may be overturned, the rule can be expected to result in the reduction of both NOx and SO_2 emissions in addition to the reduction in mercury and other air toxic emissions. The emission reductions are federally enforceable.

[27] 77 FR 9304.
[28] 77 FR 71323.
[29] 78 FR 24073.
[30] 78 FR 38001.
[31] 79 FR 68777.
[32] Wall Street Journal, Nov. 25, 2014, Supreme Court to Review EPA Rule on Power Plant Emissions, http://www.wsj.com/articles/supreme-court-to-review-epa-rule-on-power-plant-emissions-1416942022?mod=WSJ_newsreel_6.

3.2.2 State Control Measures

North Carolina has adopted a number of regulations, legislation and voluntary programs to address pollution issues across the state. These are summarized below.

Vehicle Emissions Inspection and Maintenance (I/M) Program

The 1999 Clean Air Bill expanded the vehicle emissions I/M program in North Carolina from 9 counties to 48 counties from July 1, 2002 through January 1, 2006. Vehicles are tested using the OBDII, an improved method of testing, which ensures proper emission system operation for vehicles and light trucks during their lifetime by monitoring emission-related components and systems for malfunction and/or deterioration. An important aspect of OBDII is its ability to notify the driver of malfunction and/or deterioration by illuminating the "check engine light". If the vehicle is taken to a repair shop in a timely fashion, it can be properly repaired before any significant and prolonged emission increase occurs. The previously used tailpipe test (i.e., idle test) did not measure NOx emissions; it only tested for VOC and CO emissions. By utilizing the OBDII test method, the NOx emissions as well as other pollutants from motor vehicles are reduced. The effective dates for the counties in the North Carolina portion of the Charlotte nonattainment area are July 1, 2002 for Cabarrus, Gaston, Mecklenburg and Union Counties; July 1, 2003 for Iredell and Rowan Counties; and January 1, 2004 for Lincoln County.

The I/M program rule was submitted to the EPA for adoption into the SIP in August 2002 and was federally approved in October 2002. Therefore, these emission reductions are both state and federally enforceable.

On February 5, 2015, the EPA approved a change to North Carolina's I/M rules triggered by a state law which exempted plug-in vehicles and the three newest model year vehicles with less than 70,000 miles on their odometers from emission inspection in all areas in North Carolina where I/M is required.[33] In North Carolina's Section 110(l) demonstration, the state showed that the change in the compliance rate from 95% to 96% more than compensates for the NOx and VOC emissions increase from exempting the newest model year vehicles with less than 70,000 miles. Based on recent modeling the DAQ completed using the EPA's Motor Vehicle Emission Simulator (MOVES2014) model, North Carolina's current I/M program with the three newest model year vehicle exemption is expected to yield annual I/M emission reduction benefits ranging from 5% to 8% for NOx and 6% to 8.5% for VOC. The EPA-approved change to the

[33] Approval and Promulgation of Implementation Plans; North Carolina; Inspection and Maintenance Program Updates, 80 FR, 6455.

I/M rules was effective March 9, 2015. The emissions reductions are state and federally enforceable.

The 2017 session of the North Carolina General Assembly enacted Session Law 2017-10, Senate Bill 131 (An Act to Provide Further Regulatory Relief to the Citizens of North Carolina). Section 3.5.(a) of the Act amended *North Carolina General Statue (NCGS) §143-215.107A(c)* to remove 26 of 48 counties from North Carolina's emissions inspection and maintenance (I/M) program. For the 22 counties remaining in the I/M program, Section 3.5.(b) of the Act also amended *NCGS §20-183.2(b)* by changing the vehicle model year coverage. Specifically, the Act requires the following changes to North Carolina's I/M program:

- Eliminate the following 26 counties from vehicle I/M requirements: Brunswick, Burke, Caldwell, Carteret, Catawba, Chatham, Cleveland, Craven, Edgecombe, Granville, Harnett, Haywood, Henderson, Lenoir, Moore, Nash, Orange, Pitt, Robeson, Rutherford, Stanly, Stokes, Surry, Wayne, Wilkes, and Wilson.

  Retain the vehicle I/M program in the following 22 counties: Alamance, Buncombe, Cabarrus, Cumberland, Davidson, Durham, Forsyth, Franklin, Gaston, Guilford, Iredell, Johnston, Lee, Lincoln, Mecklenburg, New Hanover, Onslow, Randolph, Rockingham, Rowan, Union, and Wake. All seven counties in the Charlotte maintenance area will continue to operate the I/M program.

- For the 22 counties remaining in the program, change the model year vehicle coverage to: (i) a vehicle with a model year within 20 years of the current year and older than the three most recent model years, or (ii) a vehicle with a model year within 20 years of the current year and has 70,000 miles or more on its odometer. Previously, the program applied to (i) a 1996 or later model year vehicle and older than the three most recent model years, or (ii) a 1996 or later model year vehicle and has 70,000 miles or more on its odometer.

Implementation of these changes to North Carolina's I/M program are contingent upon EPA's approval of the changes. In addition, for the counties covered by this maintenance plan for the Charlotte area, EPA must also approve the revisions to the emissions inventory forecast, safety margins, and motor vehicle emissions budgets (MVEBs) for the three local planning organizations before implementing the changes to the vehicle model year coverage of the I/M program for the area.

Clean Smokestacks Act

In June 2002, the North Carolina General Assembly enacted the North Carolina Clean Smokestacks Act, which required coal-fired power plants in North Carolina to reduce annual

NOx emissions by 77% by 2009.[34] These power plants were also required to reduce annual SO_2 emissions by 49% by 2009 and 74% by 2013. The utilities have reduced NOx emissions by 83% and SO_2 emissions by 89% relative to 1998 emissions levels.

With the requirement to meet annual emissions caps and disallowing the purchase of NOx credits to meet the caps, the Clean Smokestacks Act reduces NOx emissions beyond the requirements of the NOx SIP Call Rule. The CSA emissions caps were submitted to the EPA for adoption into the SIP in August 2009 and were approved in September 2011. These regulations are both state and federally enforceable.

Boiler NESHAP

Because of delays associated with the EPA's promulgation of the boiler NESHAP, North Carolina adopted and implemented equivalent emission limitations by permit under Section 112(j) of the CAA.[35] These limitations apply to owners and operators of industrial, commercial and institutional boiler boilers and process heaters burning natural gas, coal, oil or biomass beginning in 2013. This rule reduced uncertainty for owners and operators of affected emission units while the EPA resolved legal challenges to the federal rule, reduced emissions from affected units three years earlier than the federal rule, and provided the time needed for owners and operators to transition to the federal rule requirements beginning in May 2019.[36] Although the rule establishes limits for reducing HAPs form boilers and process heaters, VOC emissions will also be controlled. In the Charlotte area, natural gas fired boilers are the only types of emission units affected by this rule. For natural gas fired boilers, VOC emissions are estimated to be reduced by 4%. The emission limits associated with this rule are state and federally enforceable.

Transportation Conformity MOAs

Transportation conformity MOAs establish criteria and procedures related to interagency consultation, conflict resolution, public participation and enforceability of certain transportation related control measures and mitigation measures in the State of North Carolina and its SIP.

Transportation conformity is required under section 176(c) of the CAA for nonattainment and maintenance areas to ensure that federally supported highway projects, transit projects, and other activities are consistent with (conform to) the purpose of the SIP, which is to eliminate or reduce the severity and number of violations of the NAAQS and to achieve expeditiously the attainment

[34] Air Quality/Electric Utilities Bill (SB 1078), http://daq.state.nc.us/news/leg/.
[35] 15A NCAC 02D .1109 - 112(j) Case-by-Case Maximum Achievable Control Technology.
[36] See U.S. EPA http://www.epa.gov/ttn/atw/boiler/boilerpg.html.

of such standards. In compliance with Section 176(c) of the CAA, the DAQ chose, through rulemaking as referenced in 15A North Carolina Administrative Code (NCAC) 02D.2005, to develop Conformity MOAs to ensure that interagency consultation procedures for transportation conformity are followed.[37] The Conformity MOAs were submitted to the EPA on July 12, 2013. The USEPA, through direct final rule action, approved a revision to the North Carolina SIP with the effective date of February 24, 2014.[38]

3.3 ADDITIONAL PROGRAMS SUPPORTING MAINTENANCE

This section provides a summary of state and local programs that have been implemented in the Charlotte area to maintain compliance with the NAAQS. Although these are important programs that help to ensure compliance with the NAAQS, they have not been relied upon as federally enforceable measures.

3.3.1 State Programs Supporting Maintenance

Air Awareness Program

The DAQ has found that the most effective outreach programs are performed by locally-based personnel who can work closely with members of the local community. The DAQ has contracted with MCAQ to manage the Charlotte area North Carolina Air Awareness (NCAA) program since its inception in 1997. Charlotte area NCAA has conducted educational outreach with the general public, built strong working relationships with regional interest groups, and developed communication resources for business coalition members. Coalition activities are designed to communicate air quality information, including the forecast, and promote voluntary emissions reduction programs. The business coalition includes partnerships with private businesses and civic organizations. These efforts are important for maintaining compliance with the NAAQS. Under MCAQ's management, Charlotte area NCAA has established itself as a leader in advocating for voluntary pollution reduction efforts throughout the state's only ozone nonattainment region.

Grant Program

Since 1995, the DAQ has offered multiple forms of grant funding to help cover the costs associated with emission reduction projects. These projects include diesel engine replacements, DOC retrofits, marine diesel repowers, replacing gasoline vehicles with electric vehicles and many more. One source of funding is the North Carolina Mobile Source Emissions Reduction Grants funded by gasoline tax receipts. The Mobile Source Emissions Reduction Grant program

[37] http://www.ncair.org/rules/rules/D2005.pdf.
[38] 78 FR 73266-78272.

has awarded grants to a number of businesses, cities, counties and school districts that have ranged from the installation of DOCs or Diesel Particulate Filters (DPFs) on their diesel equipment to non-diesel emission reduction projects like purchase of electric vehicles. The DAQ has also received federal funds from the DERA and the American Recovery and Reinvestment Act (ARRA) to fund diesel emission reducing projects. The DERA and ARRA funds that the DAQ has received have been used to retrofit, repower or replace existing diesel engines from on-road and nonroad mobile source vehicles/equipment. Even though these emission reductions are voluntary and not enforceable, they are still considered permanent reductions.

Open Burning Rule

The North Carolina open burning rule prohibits the burning of man-made materials statewide. The rule also prohibits open burning of yard waste and land clearing debris on forecasted code orange or higher "air quality action days" for those counties for which the DAQ or local air programs forecast ozone or fine PM.[39] The open burning rule reduces PM, SO_2, CO, NOx, and VOC emissions. This rule is state enforceable.

Idle Reduction Regulation

The North Carolina Environmental Management Commission adopted the Heavy-Duty Vehicle Idling Restrictions rule to reduce unnecessary idling of heavy-duty trucks on July 9, 2009 and the rule became effective on July 10, 2010. This rule generally prevents any person who operates a heavy-duty vehicle to cause, let, permit, suffer or allow idling for a period of time in excess of 5 consecutive minutes in any 60 minute period. This rule is state enforceable.

3.3.2 Local Programs Supporting Maintenance

Mobile Source Emissions Reduction Grants

In the Charlotte area, between 2011 and 2013, with funding from a settlement, a nonroad equipment repower was funded. This project resulted in significant fuel savings and reductions in NOx and $PM_{2.5}$ emissions.

GRADE Program

In 2007, MCAQ initiated an air pollution control program called GRADE designed to reduce NOx emissions in the Charlotte nonattainment area. Funded by federal, state and local county grant money, GRADE provides businesses and organizations financial incentives to replace or repower heavy-duty non-road equipment with newer, cleaner, less polluting engines.
GRADE has funded cost effective emission reduction projects operating in multiple segments of

[39] 15A NCAC 02Q.1900 – Open Burning.

the economy including construction, landfills, timber logging operations, open pit mining, freight transportation, and commercial aviation. As of July 31, 2014, GRADE projects have reduced over 350 tons of NOx region-wide.

Open Burning Prohibitions

Mecklenburg County prohibits open burning of any kind year round except under extenuating circumstances with an approved burn permit. This prohibition is more stringent than the state's open burning rule and therefore enhances this control measure's overall benefit to the region. The open burning rule reduces emissions of NOx, VOC, CO, PM_{10} and $PM_{2.5}$. These emission reductions are enforced at the local level.

3.4 EMISSIONS INVENTORIES AND MAINTENANCE DEMONSTRATION

3.4.1 Theory of Approach

There are two basic approaches used to demonstrate continued maintenance. The first is the comparison of a projected emissions inventory with a baseline emissions inventory. The second approach involves complex analysis using gridded photochemical modeling. The approach used by the DAQ is the comparison of emissions inventories for the years 2014 and 2026.

For the maintenance demonstration, the base year of 2014 was chosen since it is a year that falls within the attaining design value period of 2012-2014. The maintenance demonstration is made by comparing the 2014 baseline summer day emissions inventory to the 2026 projected summer day emissions inventory. The baseline summer day emissions inventory represents an emission level for a period when the ambient air quality standard was not violated, 2012-2014. If the projected emissions remain at or below the baseline emissions, continued maintenance is demonstrated and it then follows, if the projected emissions remain at or below the baseline emissions, then the ambient air quality standard should not be violated in the future. In addition to comparing the final year of the plan, all of the interim years are compared to the 2014 baseline to demonstrate that these years are also expected to show continued maintenance of the 2008 8-hour ozone standard.

The emissions inventories are comprised of four major types of sources: point, area, on-road mobile and nonroad mobile. The projected summer day emission inventories have been estimated using projected rates of growth in population, traffic, economic activity and other parameters. Naturally occurring, or biogenic, emissions are not included in the emissions inventory comparison, as these emissions are outside the state's span of control.

On April 17, 2015, the SCDHEC submitted to EPA a SIP package request to redesignate the York County portion of the Charlotte nonattainment area to attainment. On December 11, 2015, EPA approved the SCDHEC's request and the redesignation to attainment became effective on January 11, 2016 (80 FR 76865).

3.4.2 Emission Inventories

The base year and future year emissions include the emissions associated with all emission sources in Mecklenburg County and the portion of the other six counties that is included in the maintenance area. For point sources, the location coordinates for each facility were mapped using Geographic Information System (GIS) software to identify the facilities located within the maintenance area of each county. For the on-road mobile sector, emissions were modeled based on vehicle activity within the maintenance area of each county. For the nonroad mobile and area source sectors, total county emissions were multiplied by the population percentages for the townships within the maintenance area to calculate the emissions for the maintenance area for each county. Table 3.1 shows the population percentages that were used to determine emissions contributions for the maintenance area of each partial county (except for Mecklenburg County). The population percentages were obtained from transportation demand modeling (TDM) that the Charlotte Department of Transportation completed to develop vehicle miles traveled (VMT) and vehicle speed data used as inputs to the on-road model for the base year and each of the future year inventories.

Table 3.1 Population Percentages Used to Allocate Partial County Emissions

County	Population Percentage				
	2014	2015	2018	2022	2026
Cabarrus	99.4	99.4	99.5	99.5	99.5
Gaston	92.2	92.4	92.5	92.7	92.9
Iredell	44.2	44.5	45.3	46.1	46.6
Lincoln	83.3	83.3	83.6	83.8	84.1
Rowan	93.9	93.9	93.9	94.0	94.0
Union	87.6	87.5	87.5	87.6	87.6

In this SIP revision, the 2014 base year and 2015 emissions presented in the original April 16, 2015, maintenance plan for the Charlotte area were not changed.[40] However, the 2018, 2022, and 2026 emissions forecast for all sectors was revised to (1) account for anticipated future increases in on-road mobile source NOx and VOC emissions associated with changing the

[40] Redesignation Demonstration And Maintenance Plan and Clean Air Act Section 110(l) Non-Interference Demonstration to Support the Gasoline Reid Vapor Pressure (RVP) Standard Relaxation in Gaston and Mecklenburg Counties for The Charlotte-Gastonia-Salisbury, North Carolina 2008 8-Hour Ozone Marginal Nonattainment Area, Appendix B Emission Inventory Documentation, Prepared by North Carolina DEQ/DAQ, April 16, 2015.

vehicle model year coverage of North Carolina's I/M program in accordance with Section 3.5.(b) of Session Law 2017-10; and (2) incorporate the most recent emissions forecast data available for the nonroad, point, and area source sectors.

The DAQ prepared a 2018-year inventory for all sectors for the CAA Section 110(l) noninterference demonstration based on more recent data than were available when the original maintenance SIP was prepared for the Charlotte area.[41] Therefore, the DAQ revised 2018-year emissions in this revised maintenance SIP to be consistent with the emissions presented in the CAA Section 110(l) noninterference demonstration. The DAQ also revised the emissions for 2022 and 2026 in this maintenance SIP. Table 3.2 identifies the references/data sources for the 2014 base year emissions inventory and revised 2015, 2018, 2022, and 2026 emissions forecast prepared for each sector.

Table 3.2 References/Data Sources for the Base Year Emissions Inventory and Revised Emissions Forecast

Sector	Inventory Year	References / Data Sources
All Sectors	2014, 2015	Original Maintenance Plan.[40]
On-road	2018, 2022, 2026	MOVES2014 modeling – See Appendix A of this Revised Maintenance Plan.
Point EGU	2018, 2022, 2026	Emissions forecast provided by Duke Energy dated April 2017
Point non-EGU (including aircraft and rail yards), EGU NOx, nonroad, and area	2018	CAA Section 110(l) Noninterference Demonstration for Changing Vehicle Model Year Coverage of I/M program.[41]
Point non-EGU (including aircraft and rail yards), EGU VOC, nonroad, and area	2022, 2026	Applied 2022/2018 and 2026/2018 county-level ratio of emissions in the Original Maintenance Plan to the revised 2018 emissions in the CAA Section 110(l) Noninterference Demonstration to update the 2022 and 2026 emissions in this Revised Maintenance Plan. $2022\ revised = 2018\ revised\ x \frac{2022\ original}{2018\ original}$ $2026\ revised = 2018\ revised\ x \frac{2026\ original}{2018\ original}$

[41] CAA Section 110(l) Noninterference Demonstration for Changing the Vehicle Model Year Coverage for 22 Counties Subject to North Carolina's Motor Vehicle Emissions Inspection and Maintenance (I&M) Program, prepared by North Carolina DEQ/DAQ, Appendix B (Nonroad Sources), Appendix C (Point Sources), and Appendix D (Area Sources), Fall 2017.

The following provides a brief discussion on the four different man-made emission inventory source classifications: (1) stationary point, (2) stationary area, (3) on-road mobile and (4) nonroad mobile.

Point Sources

Point sources are those stationary sources that require an air permit to operate. In general, these sources have a potential-to-emit more than five tons per year of a criteria air pollutant or its precursors from a single facility. The source emissions are tabulated from data collected by direct on-site measurements of emissions or mass balance calculations utilizing emission factors from the EPA's AP-42 or stack test results. There are usually several emission sources for each facility. Emission data are collected for each point source at a facility and reported to the DAQ through its on-line system.

Airports and rail yards are not required to have air quality permits for construction and operation (although they could have equipment such as a boiler or generator that requires a permit). They do have fixed and known locations and their emissions quantities can be comparable to industrial sources so, for purposes of the EPA's National Emissions Inventory (NEI), they are included in the point source inventory even though they are traditionally considered nonroad sources.

Point EGU Sources

For EGUs, 2014 base year NOx emissions for July were obtained from the EPA's CAMD database for the G.G. Allen Steam Station in Gaston County, Lincoln County Combustion Turbine Station in Lincoln County, and Buck Steam Station in Rowan County. Total emissions for the month of July for each unit were divided by the number of days the unit operated in July to calculate average July day emissions. Base year 2014 July day VOC emissions were calculated for each unit using emissions for the month of July that Duke Energy Carolinas reported to the DAQ. A forecast that Duke Energy Carolinas provided to the DAQ was used to estimate NOx emissions for 2015.[42] For each unit, the 2014 to 2015 projection factor for NOx emissions was applied to VOC emissions for 2014 to estimate VOC emissions for 2015.

In April 2017, Duke Energy Carolinas provided the DAQ with a revised unit-level NOx emissions forecast for the month of July for 2018, 2022, and 2026.[43] The forecast did not include an estimate of the number of days each unit would operate in July; therefore, for each emission unit, July emissions for each year were divided by the number of days the unit operated

[42] Duke Energy Carolinas, NOx emissions forecast provided to NC DAQ, December 2, 2014.
[43] Duke Energy Carolinas, NOx emissions forecast provided to NC DAQ, April 17, 2017.

in July 2014 to estimate the average summer July day emissions for each year. The forecast reflects compliance with the North Carolina Clean Smokestacks Act, the MATS rule, and Phase I of CSAPR. Energy companies are not required to report VOC emissions to CAMD; therefore, the DAQ used 2018 emissions from the noninterference demonstration and then applied the growth rate for NOx emissions to estimate VOC emissions for 2022 and 2026.[44]

Point Non-EGU Sources

For non-EGU point sources, the latest data available were the 2013 emissions data that permitted sources submitted to the DAQ, and, for these sources, 2013 emissions were used to represent 2014 base year emission. The Charlotte maintenance area includes some small sources that report emissions to the DAQ once every five years and, for these sources, the most recently reported data were used and assumed to be equivalent to 2014 since the emissions from these small sources do not vary much from year to year.[45] The DAQ reviewed recent historical emissions data (i.e., 2010 - 2013) for non-EGU Title V sources and emissions sources subject to the emissions statements requirements. Based on this review, the DAQ decided that 2013 emissions should be used to represent 2014 emissions due to the uncertainty associated with applying regional growth factors to forecast emissions for one year.

For non-EGU point sources, aircraft, and rail yards, the 2018 inventory is based on the Mid-Atlantic Regional Air Management Association (MARAMA) Beta 2 air quality modeling platform for the year 2017.[46] The 2017 MARAMA Beta 2 air quality modeling platform was projected from EPA's 2011 base year air quality modeling platform (referred to as version 6.2eh, or 2011v6.2eh).[47] The EPA's 2011v6.2eh modeling platform was developed from the 2011 NEI v2.[48] The two modeling platforms and the 2011 NEI v2 all have undergone extensive stakeholder reviews and, for this reason, are considered to be the most comprehensive and accurate inventories available at the time that the 2018 inventory was prepared.

[44] At the time the EGU inventory was prepared for the noninterference demonstration, the DAQ used 2015 actual NOx and VOC emissions data to represent 2018 emissions. Note that although NOx emissions for 2016 were available from EPA at the time, 2016 VOC emissions that Duke Energy reported to the DAQ would not available until November 2017. Therefore, 2015 was selected to be representative of 2018 emissions because this is the most recent year for which both actual NOx and VOC emissions were available.

[45] North Carolina permit renewal intervals for small sources changed from every five years to every eight years, effective 2014.

[46] The previous version of the 2017 modeling platform was actually prepared for the year 2018. For most sources, 2018 emissions were assumed to represent 2017 emissions in the 2017 modeling platform.

[47] *Technical Support Document (TSD), Preparation of Emissions Inventories for the Version 6.2, 2011 Emissions Modeling Platform*, August, 2015, https://www.epa.gov/air-emissions-modeling/2011-version-62-technical-support-document.

[48] *2011 National Emissions Inventory, version 2, Technical Support Document* which can be downloaded from https://www.epa.gov/air-emissions-inventories/2011-national-emissions-inventory-nei-documentation.

The inventory includes 20 natural gas fired boilers that, beginning in 2014, are subject to equivalent emission limitations by permit that North Carolina established per Section 112(j) of the CAA. Although the Section 112(j) standards only apply to hazardous air pollutants, compliance with the standards also reduces VOC and NOx emissions. Therefore, VOC and NOx control factors were applied to the natural gas boilers to estimate emissions for 2018.

Non-EGU point, aircraft, and rail yard emissions for 2022 and 2026 were estimated by applying the 2022/2018 and 2026/2018 county-level ratio of emissions in the original maintenance plan to the revised 2018-year emissions. This approach provides consistency with the projection methods previously applied to estimate emissions for 2022 and 2026. Table 3.3 and Table 3.4 present a summary of the point source NOx and VOC emissions, respectively, on a ton per summer day basis.

Table 3.3 Point Source NOx Emissions (tons/summer day)

County	2014	2015	2018	2022	2026
Cabarrus*	1.72	1.80	0.85	0.91	0.96
Gaston*¥	16.50	17.25	5.27	1.44	4.09
Iredell*	2.02	2.03	2.46	2.46	2.46
Lincoln*	0.18	0.84	3.85	2.41	0.98
Mecklenburg	8.56	8.77	9.25	10.18	11.75
Rowan*	2.80	3.16	2.86	2.95	3.11
Union*	0.59	0.62	0.30	0.32	0.33
Total	**32.37**	**34.47**	**24.83**	**20.67**	**23.67**

* Emissions for portion of county included in maintenance area**.** Totals include emissions associated with stationary point sources, aircraft, and rail yards.

¥ For Gaston County, the fluctuation in NOx emissions from 2014 through 2026 are primarily associated with the emissions forecast that Duke Energy Carolinas provided for the G.G. Allen power plant.

Table 3.4 Point Source VOC Emissions (tons/summer day)

County	2014	2015	2018	2022	2026
Cabarrus*	0.99	1.03	0.74	0.75	0.80
Gaston*	1.82	1.90	1.35	1.33	1.49
Iredell*	0.68	0.68	0.80	0.80	0.80
Lincoln*	1.50	1.54	1.02	1.08	1.15
Mecklenburg	3.36	3.45	1.83	1.98	2.14
Rowan*	2.30	2.40	5.15	5.45	5.97
Union*	1.38	1.42	0.90	0.94	1.00
Total	**12.03**	**12.42**	**11.78**	**12.33**	**13.34**

* Emissions for portion of county included in maintenance area. Totals include emissions associated with stationary point sources, aircraft, and rail yards.

Area Sources

Area sources are those stationary sources whose emissions are relatively small but due to the large number of these sources, the collective emissions could be significant (i.e., dry cleaners, service stations, etc.). In general, area source emissions are estimated by multiplying an emission factor by some known indicator of collective activity such as production, number of employees, or population. These types of emissions are estimated on the county level. For 2014 and 2015, the emissions estimation methodology varied depending on the latest available data for each source category. The reader is referred to the area source documentation for the original maintenance plan for details.

For 2018, the area source emissions inventory is based on the MARAMA Beta 2 air quality modeling platform for the year 2017 as previously described for non-EGU point sources. Emissions for 2022 and 2026 were estimated by applying the 2022/2018 and 2026/2018 county-level ratio of emissions in the original maintenance plan to the revised 2018-year emissions. Table 3.5 and Table 3.6 present a summary of the area source NOx and VOC emissions, respectively, on a ton per summer day basis.

Table 3.5 Area Source NOx Emissions (tons/summer day)

County	2014	2015	2018	2022	2026
Cabarrus*	0.97	0.96	0.45	0.45	0.45
Gaston*	1.30	1.28	0.58	0.59	0.59
Iredell*	0.54	0.53	0.26	0.27	0.27
Lincoln*	0.40	0.40	0.15	0.15	0.15
Mecklenburg	6.07	6.01	5.37	5.37	5.37
Rowan*	0.87	0.86	0.40	0.40	0.40
Union*	1.25	1.24	0.50	0.50	0.50
Total	**11.40**	**11.28**	**7.71**	**7.73**	**7.73**

***** Emissions for portion of county included in maintenance area.

Table 3.6 Area Source VOC Emissions (tons/summer day)

County	2014	2015	2018	2022	2026
Cabarrus*	5.09	5.13	4.56	4.70	4.83
Gaston*	5.24	5.30	5.86	6.04	6.21
Iredell*	3.08	3.13	2.56	2.69	2.82
Lincoln*	2.56	2.57	1.91	1.99	2.04
Mecklenburg	20.59	20.77	22.69	23.37	23.82
Rowan*	5.23	5.28	3.67	3.78	3.89
Union*	6.09	6.12	5.56	5.73	5.84
Total	**47.88**	**48.30**	**46.81**	**48.30**	**49.45**

* Emissions for portion of county included in maintenance area.

On-road Mobile Sources

For on-road mobile sources, EPA's MOVES2014 model was run to generate emissions for each year. The MOVES2014 model includes the road class VMT as an input file and can directly output the estimated emissions. For the projected years' inventories, the highway mobile source emissions are calculated by running the MOVES2014 model for the future year with the projected VMT to generate emissions that take into consideration expected federal tailpipe standards, fleet turnover and new fuels. Emissions for 2018, 2022, and 2026 were revised to account for increases in NOx and VOC emissions associated with changing the vehicle model year coverage of North Carolina's I/M program in accordance with Section 3.5.(b) of Session Law 2017-10. This was accomplished by modeling on-road mobile source emissions for 2018, 2022, and 2026 using new I/M model input parameters which characterize the revised I/M program. All other model inputs were unchanged from the original SIP. The emissions for 2014 and 2015 were not revised because they would not be affected by the I/M program change. For a detailed discussion on how the on-road mobile source emission inventory was developed, see Appendix A. Table 3.7 and Table 3.8 present a summary of the on-road mobile source NOx and VOC emissions, respectively, on a ton per summer day basis.

Table 3.7 On-road Mobile Source NOx Emissions (tons/summer day)

County	2014	2015	2018	2022	2026
Cabarrus*	6.60	5.93	4.01	2.89	2.00
Gaston*	8.11	7.26	4.70	3.15	2.12
Iredell*	3.36	3.05	2.08	1.46	1.00
Lincoln*	3.00	2.75	1.87	1.28	0.83
Mecklenburg	26.99	24.20	14.62	9.93	7.17
Rowan*	6.42	5.76	3.81	2.66	1.73
Union*	5.67	5.14	3.47	2.36	1.62
Total	**60.15**	**54.09**	**34.56**	**23.73**	**16.47**

***** Emissions for portion of county included in maintenance area.

Table 3.8 On-road Mobile Source VOC Emissions (tons/summer day)

County	2014	2015	2018	2022	2026
Cabarrus*	4.15	3.89	3.08	2.63	2.19
Gaston*	4.61	4.29	3.15	2.42	1.86
Iredell*	1.95	1.82	1.43	1.15	0.88
Lincoln*	1.91	1.81	1.40	1.13	0.86
Mecklenburg	14.40	13.41	10.27	8.49	6.98
Rowan*	3.76	3.48	2.62	2.02	1.53
Union*	3.54	3.30	2.59	2.13	1.68
Total	**34.32**	**32.00**	**24.54**	**19.97**	**15.98**

* Emissions for portion of county included in maintenance area.

Nonroad Mobile Sources

Nonroad mobile sources, also referred to as off-road mobile sources, are equipment that can move but do not use the roadways (i.e., lawn mowers, construction equipment, railroad locomotives, etc.). The 2014 and 2015 emissions from this category were calculated using EPA's NONROAD2008a model, with the exception of the railroad locomotives. Emissions for 2018 were calculated using EPA's MOVES2014a model.[49] Railroad locomotive emissions for 2014 and 2015 were estimated by applying growth and control factors to the 2008 NEI. Emissions for 2018 are based on the MARAMA Beta 2 air quality modeling platform for the year 2017 as previously described for non-EGU point and area sources. Nonroad model and railroad locomotive emissions for 2022 and 2026 were estimated by applying the 2022/2018 and 2026/2018 county-level ratio of emissions in the original maintenance plan to the revised 2018-year emissions.

Table 3.9 and Table 3.10 present summary of the nonroad mobile source NOx and VOC emissions, respectively, on a ton per summer day basis. The significant decrease in NOx (and to a lesser extent VOC) emissions from 2015 to 2018 is most likely associated with differences between the NONROAD2008a and MOVES2014a models.

Table 3.9 Nonroad Mobile Source NOx Emissions (tons/summer day)

County	2014	2015	2018	2022	2026
Cabarrus*	2.20	2.04	1.47	1.19	1.03
Gaston*	1.98	1.83	1.48	1.23	1.07
Iredell*	0.94	0.88	0.61	0.49	0.43
Lincoln*	0.78	0.72	0.54	0.45	0.38
Mecklenburg	15.09	13.99	9.92	8.04	7.04
Rowan*	1.65	1.53	1.21	1.00	0.86
Union*	3.62	3.36	2.36	1.91	1.60
Total	**26.26**	**24.35**	**17.59**	**14.31**	**12.41**

***** Emissions for portion of county included in maintenance area.

[49] After the on-road inventory was prepared and prior to preparing the nonroad inventory, EPA released MOVES2014a which included revisions to the nonroad sector of the model. Therefore, MOVES2014a was used to prepare the nonroad inventory rather than MOVES2014.

Table 3.10 Nonroad Mobile Source VOC Emissions (tons/summer day)

County	2014	2015	2018	2022	2026
Cabarrus*	1.27	1.22	1.13	1.15	1.20
Gaston*	1.29	1.25	1.17	1.15	1.18
Iredell*	0.62	0.59	0.50	0.47	0.47
Lincoln*	0.58	0.55	0.48	0.46	0.46
Mecklenburg	11.75	11.53	10.52	10.63	11.05
Rowan*	1.30	1.22	1.03	0.94	0.93
Union*	2.08	2.01	1.86	1.88	1.93
Total	**18.89**	**18.37**	**16.69**	**16.68**	**17.22**

* Emissions for portion of county included in maintenance area.

3.4.3 Summary of Emissions

The sum totals of the man-made emissions for the North Carolina portion of the Charlotte maintenance area are tabulated in Table 3.11 and Table 3.12.

Table 3.11 Total Man-Made NOx Emissions for the North Carolina Portion of the Charlotte Maintenance Area (tons/summer day)

County	2014	2015	2018	2022	2026
Cabarrus*	11.49	10.73	6.78	5.44	4.44
Gaston*	27.89	27.62	12.03	6.41	7.87
Iredell*	6.86	6.49	5.41	4.68	4.16
Lincoln*	4.36	4.71	6.41	4.29	2.34
Mecklenburg	56.71	52.97	39.16	33.52	31.33
Rowan*	11.74	11.31	8.28	7.01	6.10
Union*	11.13	10.36	6.63	5.09	4.05
Total	**130.18**	**124.19**	**84.69**	**66.44**	**60.28**

* Emissions for portion of county included in maintenance area.

Table 3.12 Total Man-Made VOC Emissions for the North Carolina Portion of the Charlotte Maintenance Area (tons/summer day)

County	2014	2015	2018	2022	2026
Cabarrus*	11.50	11.27	9.51	9.23	9.02
Gaston*	12.96	12.74	11.53	10.94	10.74
Iredell*	6.33	6.22	5.29	5.11	4.97
Lincoln*	6.55	6.47	4.81	4.66	4.51
Mecklenburg	50.10	49.16	45.31	44.47	43.99
Rowan*	12.59	12.38	12.47	12.19	12.32
Union*	13.09	12.85	10.91	10.68	10.45
Total	**113.12**	**111.09**	**99.82**	**97.28**	**95.99**

***** Emissions for portion of county included in maintenance area.

3.4.4 Maintenance Demonstration

As discussed above, maintenance is demonstrated when the future year's total man-made emissions are less than the 2014 baseline emissions. Table 3.13 summarizes the NOx and VOC emissions for the North Carolina portion of the Charlotte maintenance area. The difference between the base year and the final year illustrates that the continued maintenance of the 2008 8-hour ozone NAAQS is expected. This is further supported by two modeling studies summarized in the following section.

Table 3.13 Maintenance Demonstration for North Carolina Portion of the Charlotte Maintenance Area

Year	**NOx (tons/**summer **day)**	**VOC (tons/**summer **day)**
2014	130.18	113.12
2015	124.19	111.09
2018	84.69	99.82
2022	66.44	97.28
2026	60.28	95.99
Difference from 2014 to 2026	**69.90**	**17.13**

The difference between the attainment level of emissions (2014) from all man-made sources and the projected level of emissions (2015, 2018, 2022, and 2026) from all man-made sources in the maintenance area is considered the "safety margin". The safety margin for the North Carolina portion of the maintenance area for each period is summarized in Table 3.14.

Table 3.14 Safety Margins for North Carolina Portion of the Charlotte Maintenance Area

Year	**NOx (tons/**summer **day)**	**VOC (tons/**summer **day)**
2014	N/A	N/A
2015	-5.99	-2.03
2018	-45.49	-13.30
2022	-63.74	-15.84
2026	-69.90	-17.13

3.4.5 National and Regional Air Quality Assessments in Future Years

The Southeastern States Air Resource Managers (SESARM) conducted a Southeastern Modeling, Analysis and Planning (SEMAP) project to produce technical analyses to assist member states in developing SIPs for ozone and $PM_{2.5}$, and in the demonstration of reasonable progress for the regional haze rule. Photochemical modeling predicts that ozone in the Charlotte maintenance area will be well below 0.075 ppm in 2018. Base and future design values are shown in Table 3.15. It should be noted that the benefits of Tier 3 engine and fuel standards were not included in these results.

Table 3.15 Eight-hour Design Values from SEMAP Photochemical Modeling

Monitor	County	2007 Base Design Value, ppm	2018 Future Design Value, ppm	Relative Reduction Factor[1]
371090004	Lincoln	0.080	0.064	0.7977
371190041	Mecklenburg	0.087	0.070	0.8149
371191005	Mecklenburg	0.079	0.065	0.8224
371191009	Mecklenburg	0.091	0.072	0.7927
371590021	Rowan	0.086	0.067	0.781
371590022	Rowan	0.087	0.068	0.7888
371790003	Union	0.079	0.062	0.7869

Source: Southeastern States Air Resource Managers (SESARM); Southeastern Modeling, Analysis and Planning (SEMAP) study, http://semap.ce.gatech.edu/sites/default/files/files/projections/base2018b-O3-DVFs-DDVFs-for-4configs.xls.

[1] The Relative Reduction Factor is the ratio of the future modeled ozone concentration divided by the base modeled ozone concentration. The future design value is computed by multiplying the Relative Reduction Factor and the base design value.

The EPA used photochemical modeling to assess the impacts of the federal Tier 3 rule. Ozone design values in 2018 within the Charlotte maintenance area are predicted to be below 0.075 ppm in the reference case, and even lower when Tier 3 controls are included. The downward trend in ozone continues out to 2030. Table 3.16 shows EPA's Tier 3 ozone modeling results.

Table 3.16 Eight-hour Design Values Scenarios from EPA Tier 3 Photochemical Modeling

County	2007 Baseline Design Value, ppm	2018 Reference Design Value, ppm	2018 Tier 3 Control Design Value, ppm	2030 Reference Design Value, ppm	2030 Tier 3 Control Design Value, ppm
Lincoln	0.080	0.064	0.063	0.060	0.058
Mecklenburg	0.091	0.073	0.072	0.069	0.067
Rowan	0.087	0.069	0.068	0.065	0.063
Union	0.079	0.062	0.061	0.058	0.056

Source: US EPA http://www.epa.gov/otaq/documents/tier3/454r14002.pdf.

3.5 CONTINGENCY PLAN

3.5.1 Overview

The two main elements of the North Carolina contingency plan are tracking and triggering mechanisms to determine when contingency control measures are needed and a process of developing and adopting appropriate control measures. There will be three potential triggers for the contingency plan. The primary trigger of the contingency plan will be a violation of the 2008 8-hour ozone NAAQS at any of the Charlotte area monitors. The secondary trigger will be a monitored air quality pattern that suggests an actual 2008 8-hour ozone NAAQS violation may be imminent. The tertiary trigger will be a monitored fourth highest exceedance of the NAAQS. Upon either the primary or secondary triggers being activated, the DAQ, working in consultation with the SCDHEC and the MCAQ local program, will commence analyses to determine what additional measures, if any, will be necessary to attain or maintain the 2008 8-hour ozone standard. If activation of either the primary or secondary triggers occurs, this plan provides a regulatory adoption process for revising emission control strategies. Activation of the tertiary trigger will result in an analysis to understand the cause of the exceedance and to identify voluntary measures if needed.

In addition, there will be a tracking mechanism that requires a comparison of the actual emissions inventory submitted under the Air Emission Reporting Rule (AERR) to the projected inventory, and to the attainment year inventory contained in this maintenance plan. The AERR reporting years coincide with the base year (2014) and final year (2026) for this maintenance demonstration. In addition, the AERR reporting years will occur at 3-year intervals, thus enabling the comparison of actual emissions developed for the AERR to the projected emissions for the interim years presented in this maintenance demonstration.

3.5.2 Contingency Plan Triggers

The primary trigger of the contingency plan will be a violation of the 2008 8-hour ozone standard, or when the three-year average of the 4th highest values is equal to or greater than 0.076 ppm at a monitor in the Charlotte nonattainment area. The trigger date will be 60 days from the date that the state observes a 4th highest value that, when averaged with the two previous ozone seasons' fourth highest values, would result in a three-year average equal to or greater than 0.076 ppm.

The secondary trigger will apply where no actual violation of the 2008 8-hour ozone standard has occurred, but where the state finds monitored ozone levels indicating that an actual ozone NAAQS violation may be imminent. A pattern will be deemed to exist when there are two consecutive ozone seasons in which the 4th highest values are 0.076 ppm or greater at a single

monitor within the Charlotte nonattainment area. The trigger date will be 60 days from the date that the state observes a 4th highest value of 0.076 ppm or greater at a monitor for which the previous season had a 4th highest value of 0.076 ppm or greater.

Similarly, the tertiary trigger will not be an actual violation of the 2008 8-hour ozone standard. This trigger will be a first alert as to a potential air quality problem on the horizon. The trigger will be activated when a monitor in the Charlotte nonattainment area has a 4th highest value of 0.076 ppm or greater, starting the first year after the maintenance plan has been approved. The trigger date will be 60 days from the date that the state observes a 4th highest value of 0.076 ppm or greater at any monitor.

3.5.3 Action Resulting From Trigger Activation

Once the primary or secondary trigger is activated, the Planning Section of the DAQ, in consultation with the SCDHEC and MCAQ, shall commence analyses including trajectory analyses of high ozone days, and emissions inventory assessment to determine those emission control measures that will be required for attaining or maintaining the 2008 8-hour ozone standard. By May 1 of the year following the ozone season in which the primary or secondary trigger has been activated, North Carolina will complete sufficient analyses to begin adoption of necessary rules for ensuring attainment and maintenance of the 2008 8-hour ozone NAAQS. The rules would become state effective by the following January 1, unless legislative review is required.

The measures that will be considered for adoption upon a trigger of the contingency plan include: NOx Reasonably Available Control Technology on stationary sources with a potential to emit less than 100 tons per year in the North Carolina portion of the Charlotte nonattainment area, diesel I/M program, implementation of diesel retrofit programs, including incentives for performing retrofits, and additional controls in upwind areas.

The DAQ commits to implement within 24 months of a primary or secondary trigger, or as expeditiously as practicable, at least one of the control measures listed above or other contingency measures that may be determined to be more appropriate based on the analyses performed.

Once the tertiary trigger is activated, the Planning Section of the DAQ, in consultation with the SCDHEC and MCAQ, shall commence analyses including meteorological evaluation, trajectory analyses of high ozone days, and emissions inventory assessment to understand why a 4th highest exceedance of the standard has occurred. Once the analyses are completed, the DAQ will work with SCDHEC, MCAQ and the local air awareness program to develop an outreach plan

identifying any additional voluntary measures that can be implemented. If the 4th highest exceedance occurs early in the season, the DAQ will work with entities identified in the outreach plan to determine if the measures can be implemented during the current season, otherwise, DAQ will work with SCDHEC, MCAQ and the local air awareness coordinator to implement the plan for the following ozone season.

3.5.4 Tracking Program for Ongoing Maintenance

In addition to the measures listed above, emissions inventory comparisons will be carried out. The large stationary sources are required to submit an emissions inventory annually to the DAQ or MCAQ. The DAQ will commit to review these emissions inventories to determine if an unexpected growth in NOx emissions in the Charlotte area may endanger the maintenance of the 2008 8-hour ozone standard. Additionally, as new VMT data are provided by the North Carolina Department of Transportation (NCDOT), the DAQ commits to review these data and determine if any unexpected growth in VMT may endanger the maintenance of the 2008 8-hour ozone standard.

Additionally, under the AERR the DAQ is required to develop a comprehensive, annual, statewide emissions inventory every three years and is due 12 to 18 months after the completion of the inventory year. The AERR inventory years match the base year and final year of the inventory for the maintenance plan, and are within one or two years of the interim inventory years of the maintenance plan. Therefore, the DAQ commits to compare the AERR inventories as they are developed with the maintenance plan to determine if additional steps are necessary for continued maintenance of the 2008 8-hour ozone standard in this area.

4.0 MOTOR VEHICLE EMISSIONS BUDGET FOR CONFORMITY

4.1 TRANSPORTATION CONFORMITY

For the Charlotte-Gastonia-Salisbury, North Carolina 2008 8-Hour Ozone Marginal Nonattainment Area, the purpose of transportation conformity is to ensure that federal transportation actions occurring in the area do not interfere with the area maintaining compliance with the 2008 8-hour ozone standard. This means that the level of emissions estimated by the NCDOT or the MPOs for the Transportation Improvement Program (TIP) and Metropolitan Transportation Plan (MTP) must not exceed the MVEBs as defined in this maintenance plan.

The DAQ held three conference calls with the Charlotte Regional Transportation Planning Organization (CRTPO) - Rocky River Rural Planning Organization (RRRPO), Gaston-Cleveland-Lincoln Metropolitan Planning Organization (GCLMPO), and Cabarrus-Rowan Metropolitan Planning Organization (CRMPO) to determine what years to set MVEBs for the Charlotte maintenance plan. According to Section 93.118 of the transportation conformity rule, a maintenance plan must establish MVEBs for the last year of the maintenance plan (in this case, 2026). The consensus formed during the interagency consultation process was that another MVEB should be set for the Charlotte maintenance plan base year of 2014.

4.2 SAFETY MARGIN

As stated in Section 3.3.4, a safety margin is the difference between the attainment level of emissions from all source categories (i.e., point, area, on-road and nonroad) and the projected level of emissions from all source categories. The safety margins for the North Carolina portion of the Charlotte area are listed in Table 3.14. The state may choose to allocate some of the safety margin to the MVEB, for transportation conformity purposes, so long as the total level of emissions from all source categories remains below the attainment level of emissions.

The DAQ has decided to allocate a portion of the safety margin for 2026 to the MVEB to allow for unanticipated growth in VMT, changes and uncertainty in vehicle mix assumptions, and uncertainty associated with mobile modeling that will influence the future year emission estimations. The DAQ has developed and implemented a five-step approach for determining a factor to use to calculate the amount of safety margin to apply to the MVEB for 2026 (see the following Section 4.3 and Appendix A). The resulting percent increase to the MVEBs for the North Carolina counties in the Charlotte area are listed in the Table 4.1. Note that because the initial MVEB year of 2014 is also the base year for the maintenance plan inventory, there is no safety margin and, therefore, no adjustments were made to the MVEB for 2014.

Table 4.1 Percent Increase to Mobile Vehicle Emissions Budget

County	2026
Cabarrus	45%
Gaston	40%
Iredell	42%
Lincoln	42%
Mecklenburg	37%
Rowan	45%
Union	40%

4.3 MOTOR VEHICLE EMISSION BUDGETS

Although the emissions up to this point have been expressed in terms of tons/summer day, for conformity purposes the MVEBs are expressed in kilograms/day (kg/summer day). Note that, for this reason, kg/summer day was selected as the specified unit for all MOVES2014 model outputs. MOVES2014 output emissions values were rounded to the nearest kg/summer day, and were divided by 907.1847 to convert them to units of tons/summer day. The resulting values in tons/summer day were rounded to two decimal places.

Table 4.2 shows the counties with their highway mobile NOx and VOC emissions, respectively, expressed in tons/summer day and the corresponding kg/summer day values for 2014 and 2026.

Table 4.2 Highway Mobile Source NOx and VOC Summer Day Emissions in 2014 and 2026 for North Carolina Portion of the Charlotte Maintenance Area

County	2014 NOx		2014 VOC		2026 NOx		2026 VOC	
	tons/day	kg/day	tons/day	kg/day	tons/day	kg/day	tons/day	kg/day
Cabarrus*	6.60	5,989	4.15	3,765	2.00	1,810	2.19	1,982
Gaston*†	8.11	7,357	4.61	4,179	2.12	1,924	1.86	1,689
Iredell*	3.36	3,045	1.95	1,768	1.00	903	0.88	801
Lincoln*	3.00	2,723	1.91	1,737	0.83	757	0.86	779
Mecklenburg†	26.99	24,488	14.40	13,060	7.17	6,501	6.98	6,334
Rowan*	6.42	5,825	3.76	3,408	1.73	1,571	1.53	1,389
Union*	5.67	5,146	3.54	3,210	1.62	1,466	1.68	1,520
Total	**60.15**	**54,572**	**34.32**	**31,127**	**16.47**	**14,932**	**15.98**	**14,494**

* Emissions for portion of county included in maintenance area.

† The 2014 base year NOx and VOC emissions for Gaston and Mecklenburg counties have been revised slightly to correct a transcription error in recording the values in this table in the original maintenance plan.

As part of the consultation process on developing MVEBs, the DAQ coordinated three interagency conference calls with local and state transportation partners and the EPA's Region

IV staff to establish the framework and process for developing MVEBs. Based on these conference calls, the participants in the consultation process unanimously agreed to the following:

Emissions Inventory and Forecast

- Use 2014 as the base year for the emissions inventory and include emissions estimates for 2018, 2022, and 2026 (4-year increments) from the base year.
- The Charlotte DOT runs the local transportation demand model based on inputs from the local transportation planning organizations to generate inputs (VMT, and speeds for daily travel periods, and human population to forecast VMT) needed to run MOVES2014 to estimate emissions for each year.

Geographic Extent of MVEBs

- Prepare separate MVEBs based on the latest MPO jurisdictional boundaries such that MVEBs are established for the CRMPO (Cabarrus and Rowan Counties), for the CRTPO-RRRPO (Iredell, Mecklenburg and Union Counties), and for the GCLMPO (Gaston and Lincoln Counties). Although Cleveland County is included in the GCLMPO, it is not included in the Charlotte ozone maintenance area.

MVEB Years

- In addition to developing a MVEB for 2026 (required by EPA guidance), the group agreed to develop a MVEB for the base year 2014.

Adjustment to MVEBs

- Allocate a portion of the safety margin to increase the MVEBs for each county grouping following the process used to develop the MVEBs for the previous "Redesignation Demonstration and Maintenance Plan for the Charlotte-Gastonia-Rock Hill, NC-SC 1997 8-Hour Ozone Nonattainment Area." This process, which includes the following five steps, was used to adjust the MVEBs for 2026. Because 2014 is the base year for the emissions inventory there is no safety margin; consequently, the MVEB for 2014 was not adjusted.

  Step 1 - Percentage below the standard

  - All counties get 2% of their emissions allocated to the NOx and VOC MVEBs in 2026

  Step 2 - Account for unanticipated model input data changes

- The amount of safety margin allocated to the MVEBs in 2026 was increased from 5% to 25% in 2026 for each county

Step 3 - Provide flexibility and account for rapid growth for counties that are determined to be medium to small contributors to the on-road mobile NOx emissions inventory

- Counties with <8% of total on-road mobile source NOx emissions received an additional 5% of their emissions allocated to the MVEBs in 2026 (Iredell and Lincoln)
- Counties with 8% to 25% of total on-road mobile source NOx emissions received an additional 3% of their emissions allocated to the MVEBs in 2026 (Cabarrus, Gaston, Rowan and Union)

Step 4 - Account for input uncertainty in final year of the maintenance plan:

- All counties get 10% additional of their emissions allocated to the MVEBs in 2026 to account for potential changes in VMT, vehicle mix and vehicle age distribution
- Cabarrus and Rowan Counties each get an additional safety margin allocation equal to 5% of their emissions to account for projected high growth rates in the CRMPO jurisdiction.

Step 5 - Ensure the sum of the safety margins applied to the MVEBs does not exceed 50% of the total safety margin available. For 2026, Steps 1-4 accounted for:

- 9.4% of the total NOx safety margin
- 37.4% of the total VOC safety margin

Tables 4.3 through 4.5 provide the NOx and VOC MVEBs in kg/summer day, for transportation conformity purposes, for 2014 and 2026. Upon the EPA's final approval for these sub-area MVEBs, they will become the applicable MVEBs for transportation conformity.

Table 4.3 Cabarrus-Rowan Metropolitan Planning Organization (CRMPO) MVEB in 2014 and 2026 (kg/summer day)*

	2014		2026	
	NOx	**VOC**	**NOx**	**VOC**
Base Emissions	11,814	7,173	3,381	3,371
Safety Margin Allocated to MVEB	-	-	1,522	1,517
Conformity MVEB	**11,814**	**7,173**	**4,903**	**4,888**

* Includes the portion of Cabarrus and Rowan Counties in the maintenance area.

Table 4.4 Gaston-Cleveland-Lincoln Metropolitan Planning Organization (GCLMPO) MVEB in 2014 and 2026 (kg/summer day)*

	2014		2026	
	NOx	**VOC**	**NOx**	**VOC**
Base Emissions	10,079	5,916	2,681	2,468
Safety Margin Allocated to MVEB	-	-	1,087	1,004
Conformity MVEB	**10,079**	**5,916**	**3,768**	**3,472**

* Includes the portion of Gaston and Lincoln Counties in the maintenance area. Although Cleveland County is included in the MPO it is not included in the Charlotte ozone maintenance area.

Table 4.5 Charlotte Regional Transportation Planning Organization (CRTPO) - Rocky River Rural Planning Organization (RRRPO) MVEB in 2014 and 2026 (kg/summer day)*

	2014		2026	
	NOx	**VOC**	**NOx**	**VOC**
Base Emissions	32,679	18,038	8,870	8,655
Safety Margin Allocated to MVEB	-	-	3,371	3,288
Conformity MVEB	**32,679**	**18,038**	**12,241**	**11,943**

* Includes all of Mecklenburg County and the portion of Iredell and Union Counties in the maintenance area.

New Safety Margins

With this revision, an additional 2,987 kg/summer day (3.29 tons/summer day) of NOx emissions and 2,899 kg/summer day (3.19 tons/summer day) of VOC emissions was allocated from available safety margin emissions to the Charlotte area 2026 MVEBs. This results in total safety margin emissions allocations to the 2026 MVEBs of 5,980 kg/summer day (6.59 tons/summer day) of NOx and 5,809 kg/summer day (6.40 tons/summer day) of VOC. The updated safety margins for each projected year are listed in Table 4.6.

Table 4.6 New Safety Margins for the North Carolina Portion of the Charlotte Maintenance Area (tons/summer day)

Year	NOx	VOC
2014	N/A*	N/A
2015	-5.99	-2.03
2018	-45.49	-13.30
2022	-63.74	-15.84
2026	-63.31	-10.73

* N/A = not applicable.

5.0 STATE IMPLEMENTATION PLAN APPROVAL

5.1 INTRODUCTION

For an area to be redesignated and have an approved maintenance plan, the SIP must include evidence of compliance with the rules relied on to show maintenance of the standard. This section provides the evidence of compliance with such rules for the Charlotte-Gastonia-Salisbury 2008 8-hour ozone nonattainment area.

5.2 EVIDENCE OF COMPLIANCE

Two counties in the Charlotte area (Gaston and Mecklenburg Counties) were designated as moderate nonattainment for 1-hour ozone effective January 1992. Since a redesignation demonstration and maintenance plan was submitted for this area prior to November 15, 1992, the CAA requirements for moderate areas were not required with the exception of the I/M program. An I/M program was established in the Charlotte area as prescribed by the 1990 CAA. Therefore, North Carolina has a fully approved SIP for this area.

For the 1997 8-hour ozone standard, the DAQ submitted to the EPA for approval the Metrolina Attainment Demonstration SIP on June 15, 2007, and a Supplement to the Attainment Demonstration SIP on April 5, 2010. The North Carolina portion of the Metrolina nonattainment area includes the counties of Cabarrus, Gaston, Lincoln, Mecklenburg, Rowan and Union and Coddle Creek and Davidson Townships in Iredell County. The Reasonable Further Progress SIP was submitted to the EPA for approval on June 15, 2007 and a Revised Reasonable Further Progress SIP was submitted on November 30, 2009. The EPA approved the Revised Reasonable Further Progress SIP on October 12, 2012.[50] On November 2, 2011 the DAQ submitted to the EPA a Redesignation Demonstration and Maintenance Plan for 1997 8-hour Ozone standard; and submitted a supplement to this SIP on March 28, 2013. The EPA approved the redesignation request and maintenance plan on December 2, 2013.[51]

For the 2008 8-hour ozone standard for the Charlotte nonattainment area, the DAQ submitted to the EPA for approval the Base Year (2011) Emissions Inventory and Emissions Statements SIP on July 7, 2014, to fulfill the requirements of Sections 182(a)(1) and 182(a)(3)(B) of the CAA.[52]

[50] 77 FR 62159-62166.
[51] 78 FR 72036-72040.
[52] http://ncair.org/planning/metrolina/metrolina_area_sip_plans.shtml.

Additionally, the following rules regulating emissions of VOCs and/or NOx in the Charlotte nonattainment area counties have been approved, or have been submitted with a request to be approved, as part of the SIP:

15A NCAC 2D .0958, Work Practices For Sources of Volatile Organic Compounds,
15A NCAC 2D .0530, Prevention of Significant Deterioration,
15A NCAC 2D .0925, Petroleum Liquid Storage in Fixed Roof Tanks,
15A NCAC 2D .0926, Bulk Gasoline Plants,
15A NCAC 2D .0927, Bulk Gasoline Terminals,
15A NCAC 2D .0928, Gasoline Service Stations Stage I,
15A NCAC 2D .0932, Gasoline Truck Tanks and Vapor Collection Systems,
15A NCAC 2D .0933 Petroleum Liquid Storage in External Floating Roof Tanks
15A NCAC 2D .1000, Motor Vehicle Emission Control Standards.
15A NCAC 2D .1200, Control and Emissions from Incinerators
15A NCAC 2D .1409(b), Stationary Internal Combustion Engines
15A NCAC 2D .1416 - .1423, NOx SIP rules
15A NCAC 2D .1600, General Conformity
15A NCAC 2D .1700, Municipal Solid Waste Landfills, and
15A NCAC 2D .1900, Open Burning
15A NCAC 2D .2000, Transportation Conformity
15A NCAC 2D .2400 Clean Air Interstate Rules

Rules 15A NCAC 2D .0925, .0926, .0927, .0928, .0932, .0933, .0948, .0949, and .0958 have been approved as part of the SIP and are applicable across the state regardless of the size of the source.

Section 15A NCAC 2D .1000 also regulates emissions from motor vehicles in the North Carolina counties in and around the Charlotte nonattainment area and requires the use of the OBDII system, which provides an indication of NOx emissions as well as other pollutants.

Section 15A NCAC 2D .1200 regulates the controls and emissions from incinerators. Part of this rule has been submitted as part of the SIP, while .1205, .1206 and .1210 are part of the CAA Section 111(d) plans.

Two rules are conformity related, 15A NCAC 2D .1600 and .2000. General conformity related projects are covered under Section .1600, while transportation conformity related projects are covered under Section .2000. Although neither of these rules requires reduction in emissions, they do ensure that federal actions do not hinder attainment or maintenance of the NAAQS.

North Carolina has adopted an open burning rule, 15A NCAC 2D .1900 that prohibits open burning of vegetative material during Air Quality Action Days of Code Orange or higher in

forecasted areas of the state. Ozone forecasts are issued for the Charlotte area from May 1st through September 30th, therefore this area is covered by this rule.

Section 15A NCAC 2D .2400 regulates nitrogen oxide emissions from electric generating units with a nameplate capacity of 25 megawatts or more producing electricity for sale. Section 15A NCAC 2D .2400 also covers industrial boilers that are covered under the NOx SIP rules. This Section replaces the NOx SIP rules beginning January 1, 2009. Although North Carolina did not rely on the emission reductions from CAIR for maintenance of the 2008 8-hour ozone standard, these regulations will result in additional reductions in NOx emissions regionally.

Another important set of rules that control volatile organic compound emissions in these counties is Section 15A NCAC 2D .1100, Control of Toxic Air Pollutants. These rules, however, have not been submitted to the EPA to be approved as part of the SIP.

There are two other rules that control emissions of volatile organic compounds in these areas. They are 15A NCAC 2D .0524, New Source Performance Standards, and 2D.1110, National Emission Standards for Hazardous Air Pollutants. Also, rule 2D.1111, Maximum Achievable Control Technology applies to control of emissions of volatile organic compounds. They are not part of the SIP, but the EPA has delegated the state enforcement authority for standards that have been adopted by the state. (The standards adopted by the state are state-enforceable regardless of the EPA delegation.)

6.0 STATE COMPLIANCE WITH CLEAN AIR ACT REQUIREMENTS

Section 107(d)(3)(E)(v) of the CAA requires that the provisions of Section 110 (State Implementation Plans for the Primary and Secondary NAAQS) and Part D (Plan Requirements for Nonattainment Areas) of the CAA be met within the area to be redesignated. This means that North Carolina must meet all requirements, if any, that had come due as of the date of the redesignation request.

The EPA, in its latest guidance on redesignation requirements (as contained in a memorandum from John Calcagni, Director, Air Quality Management Division, Office of Air Quality Planning and Standards to the EPA Regional Offices dated September 4, 1992), states that "For the purposes of redesignation, a state must meet all requirements of Section 110 and Part D that were applicable prior to submittal of the complete redesignation request. When evaluating a redesignation request, Regions should not consider whether the state has met requirements that come due under the Act after submittal of a complete redesignation request."

Monitoring is one of the requirements of Section 110. The DAQ commits to continue operating the current ozone monitors in the North Carolina portion of the Charlotte 2008 8-hour ozone nonattainment area, providing sufficient funding is available for continued operation. Any monitor shutdowns or relocations will only be made with the approval of EPA. No plans are underway to discontinue operation, relocation or otherwise affect the integrity of the ambient monitoring network in place. The current monitors are operated consistent with 40 CFR Part 58 and any changes will only be made if they are consistent with 40 CFR Part 58.

For the 2008 8-hour ozone standard for the Charlotte marginal nonattainment area, the DAQ submitted to the EPA for approval the Base Year (2011) Emissions Inventory and Emissions Statements SIP on July 7, 2014, to fulfill the requirements of Part D, Sections 182(a)(1) and 182(a)(3)(B) of the CAA.[53] The DAQ believes that North Carolina has met all of the requirements of Section 110 and Part D.

[53] http://ncair.org/planning/metrolina/metrolina_area_sip_plans.shtml.

7.0 SUMMARY AND CONCLUSION RELATED TO THIS REVISION TO THE MAINTENANCE PLAN

This revised maintenance plan demonstrates that the projected emissions inventories for 2026, the final year of the maintenance plan and 10 years beyond the redesignation year, as well as the interim years, are all less than the base year emissions inventory. In addition, the CAA Section 110(l) non-interference demonstration analysis indicates that changing the vehicle model year coverage would not negatively impact air quality in the Charlotte maintenance area. Therefore, maintenance of the 2008 8-hour ozone NAAQS has been demonstrated.

This maintenance plan has been prepared to meet the requirements of the 1990 CAA Amendments.

Appendix C: Interagency Consultation and Pre-Consensus Plan

CRMPO		Comments/Response
HL-0001	Not in Plan.	This project is an intersection project and exempt, so no TDM needed.
HL-0063	Not in Plan.	This project is the extension of a road for 3k feet using State Trust Funds. It does not connect, so no TDM needed.
U-3415	Not in Plan.	U-3415A is in the MTP in horizon year 2035. U-3415B is in horizon year 2045.
R-5706A	Not in Plan.	This project is in Mecklenburg and already in the TDM.
U-5761	STIP construction in 2027	This project is an intersection project and exempt, so no TDM needed.
U-4920	Under Construction. Will this be in the 2026 model year?	This project is complete.
I-3802B	Under Construciton. Will this be in the 2026 model year?	This project is complete.
I-2304	Not in STIP. Is this open?	This project is complete.

CRTPO TIP ID	Comment	Action Requested	CRTPO Comment
U-5008	Not in MTP. No Construction year though	Delete	
R-3833	Not in MTP. No Construction year though	Delete	Project is Complete. R-3833A & R-3833B
R-2632	Fund Swap	Delete	R-2632AC is Complete. No other sibiling projects remain.
R-2555	Not in MTP. No Construction year though	Delete	R-2555A is Complete and R-2555B is in 2050 MTP (2050-E306)
R-0211	Under construction. Not in MTP	In 2050 MTP 2050-E354	R-0211EC is in the 2050 MTP 2050-E354
I-4750	Funding	Delete	Project is Complete
HL-0118	Fund Swap	We will add this project to the 2050 MTP Amendment List	Unclear on next step.
HL-0115	Project not in MTP	We will add this project to the 2050 MTP Amendment List	added to 2050 MTP amendment list. Project Locally Selected
U-6039	States currently under construction; will it be open by the end of 2025?	We will be amending this projects as part of the 2055 MTP update and this will be part of the 2035 Horizon Year	Confirm with Martin Horizon Year Modeled.
U-6029	Not in the STIP	Horizon Year is 2045. We will work to prioritize this project in a future prioritization cycle.	Horizon year is 2045 in 2050 MTP
U-5908	STIP also shows A&B sections. States currently under construction; will it be open by the end of 2025?	We will be amending this projects as part of the 2055 MTP update and this will be part of the 2035 Horizon Year	Project was amended during the adoption of the 2024-2033 TIP. I will ask NCDOT for completion date.
U-5905	STIP Shows A&B. B Part Shows Exempt. Will A portion be completed by 2025	We will be amending this projects as part of the 2055 MTP update and this will be part of the 2035 Horizon Year	Confirm with Martin Horizon Year Modeled.

U-5874	States currently under construction; will it be open by the end of 2025?	We will be amending this projects as part of the 2055 MTP update and this will be part of the 2035 Horizon Year	Confirm with Martin Horizon Year Modeled.
I-5507	States currently under construction; will it be open by the end of 2025?	This project should be complete by the end of the year.	Confirm with Martin Horizon Year Modeled.
I-3819B	States currently under construction; will it be open by the end of 2025?	We will be amending this projects as part of the 2055 MTP update and this will be part of the 2035 Horizon Year	Confirm with Martin Horizon Year Modeled.
2050-3063	NIT with 2035 Horizon. Big widening project	We will work to prioritize this project in a future prioritization cycle.	Not in the Draft TIP
2050-3069	NIT with 2035 Horizon. Big widening project	We will work to prioritize this project in a future prioritization cycle.	Not in the Draft TIP
2050-3081	NIT with 2035 Horizon. Big widening project	We will work to prioritize this project in a future prioritization cycle.	Not in the Draft TIP
2050-3103	NIT with 2035 Horizon. Big widening project	We will work to prioritize this project in a future prioritization cycle.	Not in the Draft TIP
I-6056	Not in STIP	We will work to prioritize this project in a future prioritization cycle.	Not in the Draft TIP
I-6017	Not in STIP	We will work to prioritize this project in a future prioritization cycle.	Not in the Draft TIP
I-5963	Not in STIP	We will work to prioritize this project in a future prioritization cycle.	Not in the Draft TIP
I-6014	Not in STIP	We will work to prioritize this project in a future prioritization cycle.	Not in the Draft TIP
U-5007	Not in STIP	We will work to prioritize this project in a future prioritization cycle.	Not in the Draft TIP
U-5960	Not in STIP	We will work to prioritize this project in a future prioritization cycle.	Not in the Draft TIP

U-5779	Not in STIP	We will work to prioritize this project in a future prioritization cycle.	Not in the Draft TIP
R-2522	Not in STIP	We will work to prioritize this project in a future prioritization cycle.	Not in the Draft TIP
U-2509C	Not in STIP	We will work to prioritize this project in a future prioritization cycle.	Not in the Draft TIP

From: Dellinger, Tori
To: Hildebrandt, Heather J
Subject: [External] RE: DOT Project Comparison List
Date: Thursday, May 29, 2025 10:22:18 AM
Attachments: image003.png
image001.png
Importance: High

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Hi Heather,

Thank you so much for following up, and I apologize for overlooking your original email. I've started reviewing the spreadsheet and had a few initial questions/comments. I've added questions/ comments in red below. I apologize in advance for any confusion on my end — some of the questions may be silly, but I just want to make sure I'm understanding everything correctly.

I'll continue working on this and will follow up with any additional information as I gather it.

Question: For the projects that are listed in the Excel as "Not in TIP", are you just wanting us to confirm whether these projects should remain in the MTP?

GCLMPO

I-5985A Not in TIP (Question above)
I-5985B Not in TIP
U-2567 Not in TIP
U-5929 Not in TIP
R-5712 2025 HY with CON in 2025. Will this be open and part of the 2026 model run? This may be a question, but are you asking if the project will be complete and open by 2026? If so, I don't think it will be. Based on the May 2025 Progress Report for Division 12 Projects in GCLMPO, the status of R – 5712 is Working with Duke Energy to resolve additional Permanent Utility Easement needs. Let is currently scheduled for Spring of 2025. I will reach out to Anil Panicker to see if he can provide any additional schedule updates. Please let me know if I've misunderstood what you're asking here.
R-5713 Not in TIP
U-5775 Not in TIP
U-5959 Not in TIP
U-5961 TIP description does not include number of lanes. Four lane divided
B-6051 TIP description does not include widening of bridge. Is this under a different STIP number? I believe this project is being built along with U-6143. Please see screenshot below. I am not sure if this helps.

BR-0020/ U-6143/ B-6051	Gaston	US 29/ US 74	Replace Bridge 350091 on US 74/ 29 over Catawba River and improvements to the Intersection of US 74/ 29 and NC 7 on the Gaston County side. Right of Way acquisition has begun and Construction Let scheduled for July 2025.	To be built along with U-6143. Design plans are nearing completion. The cost of the betterments have been finalized for the Catawba River Bridge. Local funding needed for the bridge aesthetics is $685,000 and will be split between Gaston and Mecklenburg Counties. The City of Belmont will be paying to extend pedestrian facilities to Kevin Loftis Park. Coordination efforts are also ongoing with the Charlotte Area Transit System for extending light rail into Gaston County. The Environmental Document for the project is complete. Advance Right of way acquisitions and utility relocations are ongoing. Some delays in obtaining the required Federal Energy Regulatory Commission (FERC) permits has caused the let date to be delayed. Project is expected to be let in July of 2025.	NA

U-6143 TIP shows construction in 2025. MTP HY is 2035. What year will this project be modeled? 2026 or 2035? Project is expected to be let in July of 2025. I believe this will take around three years complete. I believe 2035.
U-6146 TIP shows construction in 2025. MTP HY is 2035. What year will this project be modeled? 2026 or 2035? Right of way acquisition is complete. FERC permit expected soon. Duke is preparing to relocate utilities. I am not sure how long construction will take, but I believe 2035…
R-2307A Not in TIP

U-5965 TIP shows construction in 2025. MTP HY is 2035. What year will this project be modeled? 2026 or 2035? Based on the May 2025 Progress Report , the status of this project : Finalizing roadway plans. Coordination with the railroad is ongoing. Right of Way acquisition underway. The projected schedule for construction is in FY 2026. I would say 2035.

R-2707D Not in TIP

R-2707E Not in TIP

R-4045 Not in TIP

U-5970 Not in TIP

U-6140 Not in TIP

U-6141 Not in TIP

R-0617C Not in TIP

U-6142 Not in TIP

U-2221C Not in TIP

U-6144 Not in TIP

U-6139 Not in TIP

R-0617BB Not in TIP

U-2221A Not in TIP

U-6043 TIP shows construction in 2025. MTP HY is 2035. What year will this project be modeled? 2026 or 2035? Based on the May 2025 Progress Report , the status of this project : Final design in progress. Right of Way acquisition is underway. The projected schedule for construction is FY 2025. I am not sure how long the project will take to complete construction, but I would assume 2035.

U-3608 Not in TIP

U-3633 Not in Plan. Is it open? I am not familiar with this project. Would you mind clarifying?

R-5721 MTP does not contain the full project Would you mind clarifying which part of the project appears to be missing from our MTP documentation? Sorry for the confusion on my end.

Tori S. Dellinger
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It is the policy of GCLMPO, as a federal-aid recipient, to ensure that no person shall, on the ground of race, color, national origin, Limited English Proficiency, sex, age, or disability, (and low-income, where applicable), be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any of our programs and activities, as provided by Title VI of the Civil Rights Act of 1964, Executive Orders 12898 and 13166, the Civil Rights Restoration Act of 1987, and other pertinent nondiscrimination authorities.

From: Hildebrandt, Heather J <hjhildebrandt@ncdot.gov>
Sent: Thursday, May 29, 2025 9:09 AM
To: Dellinger, Tori <Tori.Dellinger@gastonianc.gov>
Subject: FW: DOT Project Comparison List

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Tori,

Just making sure that this is on your radar to provide responses by COB today. Please let me know if you have any questions or if we need to meet to discuss.

Heather J. Hildebrandt

Statewide Initiatives Supervisor

919 707 0964 office

From: Hildebrandt, Heather J
Sent: Thursday, May 22, 2025 1:26 PM
To: Kinnamon, Martin <martin.kinnamon@charlottenc.gov>; Cook, Robert <robert.w.cook@charlottenc.gov>; Neil.Burke <neil.burke@charlottenc.gov>; pconrad <pconrad@rlcassoc.com>; Dellinger, Tori S
Cc: Bailey, John A <jabailey@ncdot.gov>; Eatman, Mark R <mreatman@ncdot.gov>; Castillo Santamaria, Roger I <ricastillo@ncdot.gov>; Stupka, Emily L <elstupka@ncdot.gov>
Subject: DOT Project Comparison List

Please see attached projects with questions during the STIP/MTP project comparisons. I did not receive any comments from the other agency partners.

Based on the horizon years selected, I expect that all MPO responses will not require changes to the TDM. Please respond to the attached project list on the tab for your area. I would appreciate a response no later than May 29th so that Martin can begin modeling.

Heather J. Hildebrandt
Statewide Initiatives Supervisor
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Metrolina Area Transportation Conformity: Pre-Analysis Consensus Plan (8-Hour Ozone)

March 18, 2025

Prepared Cooperatively Between the
Charlotte Regional Transportation Planning Organization, Cabarrus Rowan Metropolitan Planning Organization, the Gaston Cleveland Lincoln Metropolitan Planning Organization and the Rocky River Rural Planning Organization
North Carolina Department of Transportation
and the
Federal Highway Administration

Metrolina Area Transportation Conformity:
Pre-Analysis Consensus Plan
August 16, 2022

The Metrolina Regional Metropolitan Planning Organizations and the North Carolina Department of Transportation (NCDOT-representing rural portions of the Metrolina maintenance area are proposing the following plan and procedures to conduct a transportation conformity analysis. This plan is being submitted to the interagency consultation partners for soliciting consensus before commencement of a full-scale transportation conformity analysis. The plans and procedures may be revised as the MPO's and NCDOT proceed with the analysis. After consensus is reached; notification of changes will be made to the interagency consultation partners.

Metrolina Area MPOs (*for this conformity process*):

- Charlotte Regional Transportation Planning Organization (CRTPO)
- Cabarrus Rowan Metropolitan Planning Organization (CRMPO)
- Gaston Cleveland Lincoln Metropolitan Planning Organization (GCLMPO)

Donut Areas:

- Rocky River RPO - Rural portion of Union County outside of the MPO area

The following pollutants will be included in this conformity determination:

- 1997 8-Hour Ozone - No regional emissions analysis per 40 CFR 93.109(c)
- 2008 8-Hour Ozone

Metropolitan Transportation Plan (MTP) and Metropolitan Transportation Improvement Program (MTIP)

1. **Existing Land Use and Demographics: For CRTPO, CRMPO, GCLMPO and rural (donut) Union County**

Staff collected data as outlined in Attachment A. An economist was contracted to produce population, household, and employment estimates in five-year increments from 2025 to 2055using

a top down approach. The Regional partners then applied local knowledge to finalize the county totals in their areas and produce the Traffic Analysis Zone (TAZ) level base year data. CRMPO also applied local knowledge to produce their TAZ level projections. CRTPO and GCLMPO used the Metrolina CommunityViz Model 3.0 as a base year data management tool and applied the model to develop TAZ level projections. The Metrolina CommunityViz Model was developed under contract to the Centralina Council of Governments and City Explained, Inc.

Data sources include the following:

- 2022 Census Estimates
- 201**4**-201**8** American Community **Survey, North Carolina Office of State Budget and Management 2022 data and projections;**
- **NCSTM Gen 4 SE data for P6.0;**
- 2022 InfoUSA employment data;
- **Institute of Transportation Engineers Trip Generation Manual, Ninth Edition;**
- 2020 Public Use Microdata Sample (PUMS) data;
- Bureau of Economic Analysis (BEA) data;
- area school system data;
- building permit data;
- tax data;
- zoning; and
- land use plans

2. MTP Model Validation (Base) Year:
2022

TIP Years: 2026-2035

4. MTP Horizon Year: 2050

5. MTP Travel Demand Intermediate Years: 2026, 2035, 2045 and 2050

6. Transportation Conformity Analysis Years (2008 8-Hour Ozone)

The Tables below summarize transportation conformity analysis methods and years for the different parts of the Metrolina non-attainment/maintenance areas. Specific conformity year information is listed in the following tables:

2008 O3 Maintenance SIP

County	Area model status	Area emissions budget status	Emissions analysis source	Emission comparison years				
				2026[2] *(modeled)*	**2035** *(modeled)*	**2045 Horizon** *(modeled)*	**2050 Horizon** *(Modeled)*	
Charlotte Region TPO-Rocky River RPO MVEB (all of Mecklenburg and *portions of Union and Iredell County in the maintenance area*)	Modeled all	2008 8-Hour Ozone Maintenance Plan	MRM[1]	O3	O3	O3	03	
Cabarrus Rowan MPO (*portions of Cabarrus and Rowan County in the maintenance area*)	Modeled all	2008 8-Hour Ozone Maintenance Plan	MRM[1]	O3	O3	O3	03	
Gaston Cleveland Lincoln MPO (*portions of Gaston and Lincoln County in the maintenance area*)	Modeled all	2008 8-Hour Ozone Maintenance Plan	MRM[1]	O3	O3	O3	03	

1. The base year of the MRM is 2022
2. 2026 is a SIP MVEB for NOx and VOC

Additional table notes and explanations:

County:

- 2008 Ozone: The Metrolina area is maintenance for the 2008 Ozone Standard which consists of 1 whole county and 6 partial counties (Mecklenburg (CRTPO), Union (CRTPO-partial), Union (RRRPO-donut), Gaston (GCLMPO-partial), Cabarrus (CRMPO-partial) Rowan (CRMPO-partial), Lincoln (GCLMPO partial) and Iredell (CRTPO-partial).

***Note:** a donut area is an area outside the MPO boundary but within the non-attainment/maintenance area.*

Model Status: Mecklenburg, Union, Cabarrus, Rowan, Gaston, and Lincoln, plus one partial county (Iredell) are completely within the Metrolina Regional Model (MRM) boundary.

Emissions analysis years:

- 2008 8-hour Ozone Standard Maintenance SIP: 2 2026 (modeled) 2035 (modeled), 2045 (modeled) and 2050 (modeled)

Emission analysis source: The VMT and speeds for the regional emissions analysis (REA) will be derived from the MRM.

Emission Comparison Years:

- Motor Vehicle Emissions Budget Test
  - **2008 8-Hour Ozone Maintenance SIP**: *(Gaston-partial, Mecklenburg, Cabarrus-partial, Rowan-partial, Union-partial, Lincoln-partial, and Iredell-partial,* 2026 (modeled-compare to 2026 MVEB), 2035 (modeled- compare to 2026 MVEB), 2045 (modeled-compare to 2026 MVEB) and 2050 (modeled-compared to 2026 MVEB)

List of Specific Conformity Years

2008 8-Hour Ozone Maintenance SIP

Horizon: 2050

a. 2008 8-Hour Ozone Maintenance SIP MVEB Years: 2026
b. Emission comparison years (NOx and VOC): 2026 (modeled), 2035, 2045 & 2050

7. Non-attainment / Maintenance Counties:

- 2008 8 Hour Ozone Maintenance Area: Gaston Co. (partial)., Mecklenburg Co., Cabarrus Co. (partial), Rowan Co.(partial), Union Co.(partial), Lincoln (partial), and Iredell Co. (partial)

8. Land-Use Demographics Projections/Forecast:

Land-use demographic projections for the region were developed using both a top-down and bottom-up approach.

An economist was contracted to develop regional and county level population, household, and employment projections for 5-year increments from 2025 to 2055 through a top-down forecasting approach. The economist's forecasting model is based on national growth patterns and calibrated to trends and capture rates in the Metrolina region. Refer to the *Metrolina Population and Employment Projections Report V5.1, December 27, 2023, by Fourth Economy* for more detailed

information. MPO and RPO staff also reviewed county level projections from the sources referenced in this section and then applied local knowledge reflecting current local policies and plans to finalize county-level control totals for 2025, 2035, 2045, and 2055.

TAZ level 2025, 2035, 2045 and 2055 population, household, and employment data was projected for CRTPO and GCLMPO through a top-down /bottom-up forecasting approach using the Metrolina CommunityViz Model v3.0. CRMPO applied local knowledge through a manual process to allocate projected data to the TAZ level. For both approaches, data inventoried for the base year was used as quantitative inputs to the process of deriving projections. Qualitative inputs to the projections to both processes include future land use plans, building permits data, transportation plans and other capital improvements plans (such as water and sewer extensions and schools construction), and other factors limiting development (such as soils, floodplains, and water supply watershed regulations).

9. Travel Demand Model: Metrolina Regional Model (MRM)

The regional travel demand model is a simplified tour-based model developed for a 2-state, 13-county (10 whole, 3 partial) region (refer to Attachment B). The modeling area encompasses 4 MPOs and 1 RPOs.

As described previously, a multitude of land use and demographic data was collected as input into the model. Additional data collected includes transit and highway network data as well as multiple travel surveys. Transit data collected includes routes, headways, and travel times. Refer to Attachment C for the highway network data dictionary. Following is a list of the travel surveys completed:

2022 Passive Origin Destination Data;
2023 Household Travel Survey;
2022 On-board CATS Origin-Destination Study and Counts;
2022 INRIX Speed Data; and
2022-2024 Vehicle Classification Counts

10. Mode Split / Mode Choice:

The nested logit mode-choice model is structured similar to the Houston-Galveston Area Council's regional travel model. Nesting and mode constants were developed using CATS's on-board ridership survey conducted in 2013.

Transit paths include in-vehicle travel time, out-of-vehicle time (walking / driving and waiting), transfers, and direct cost (fare, parking). Four trip purposes are modeled. For the Home-Based Work, Home-Based-Other, and Home-Based University trip purposes, the potential transit Council's regional travel model. Nesting and mode constraints were developed using CATS's on-board ridership survey conducted in 2013.

Walk, drive, and drop-off approaches are handled in the nesting structure. Parking is provided at selected suburban stations.

The mode choice model was developed under contract with AECOM Consult

11. Local Street Count & VMT Estimate:

Vehicle miles of travel (VMT) – the sum of the distance that each vehicle travels during a

specified period (day, year, etc.) – is the most typical measure of the level of travel in an area. Like most statistics, it is still impossible to actually measure. To do so, *all* vehicles would have to be monitored all day. The most common method of estimating VMT uses traffic counts. We have a large count database from CDOT, NCDOT, and SCDOT including counts from 2000 – 2024. Each count will be factored to the base year 2022. Average Daily Traffic volumes will be factored to Average Weekday volumes. The adjusted base-year weekday counts are then aggregated by County and functional class. The average (mean) volume for each county / functional class will be multiplied by the number of road miles to obtain VMT. For future year estimates, the travel demand model, calibrated to the base year counts and VMT, will provide VMT for thoroughfares (VMT = assigned volume * length).

Local streets make up 60%-70% of the roadway miles, but a much smaller fraction of VMT. Most serve to accumulate traffic from neighborhoods. The bulk of the trip is then made on thoroughfares (that are modeled). Few local streets are included in the model. Counts are sporadic and usually concentrated on local streets experiencing traffic problems. Many of the local streets are represented by zonal centroid connectors in the model. We will use the centroid connectors times 2 to better approximate actual local VMT. VMT derived with this method compares favorably with local VMT estimated using street miles and assumed volumes. The centroid method provides a better method of relating VMT to high growth TAZs.

12. Rural (Donut) Area Projects

The rural areas do not develop long range transportation plans like the MPOs. The rural area projects that are included in the conformity regional emissions analysis (REA) come from the State TIP. It is NCDOT's position that projects that are in the State TIP and have right of way or construction phases scheduled in the first seven years should be included in the REA. In addition, for rural areas adjacent to an MPO the MPO may extend projects outside their boundary to a logical terminus. The MPO may include the portion outside of their MPO boundary in the financial element of their MTP.

13. VMT Adjustments:

No VMT adjustments are used.

14. Motor Vehicle Emissions Budgets

Three ozone maintenance areas are included within the seven-county Metrolina area:

a. 2008 8-Hour Ozone NAAQS Maintenance Area.
The Charlotte-Gastonia-Salisbury, North Carolina Marginal Nonattainment Area for the 2008 8-hour ozone NAAQS was redesignated as attainment on July 28, 2015 with an effective date of August 27, 2015. The latest approved maintenance plan revision established new NOx and VOC MVEBs, with an effective date of July 15, 2024. The maintenance area consists of one whole county and six partial counties (Mecklenburg (CRTPO), Union (CRTPO-partial), Union (RRRPO-donut), Gaston (GCLMPO-partial), Cabarrus (CRMPO-partial) Rowan (CRMPO- partial), Lincoln (GCLMPO partial) and Iredell (CRMPO-partial). Motor vehicle emissions budgets (MVEBs) were established for three sub-areas within the Metrolina area which are generally defined by MPO jurisdictional boundaries. The current approved MVEBs are show in the table below.

NOx Budgets: 2008 8-hour Ozone NAAQS					
Budget Area	**MVEB Year**	**Comparison Years & MVEB (kg/day)**			
		2026	**2035**	**2045**	**2050**
Cabarrus Rowan MPO	2026	6,543	6,543	6,543	6,543
Gaston Cleveland Lincoln MPO	2026	5,117	5,117	5,117	5,117
Mecklenburg Union MPO/ Rocky River RPO	2026	22,417	22,417	22,417	22,417

VOC Budgets: 2008 8-hour Ozone NAAQS					
Budget Area	**MVEB Year**	**Comparison Years & MVEB (kg/day)**			
		2026	**2035**	**2045**	**2050**
Cabarrus Rowan MPO	2026	4,753	4,753	47,53	4,753
Gaston Cleveland Lincoln MPO	2026	3,583	3,583	3,583	3,583
Mecklenburg Union MPO/ Rocky River RPO	2026	13,818	13,818	13,818	13,818

15. Control Strategies: Emission reduction credits will be taken for the following on-road mobile SIP commitments or Federal programs. Currently there are no TCMs in the Metrolina Area SIPs.

Strategy	**Methodology/Approach**
I/M Program	*Accounted for in the MOVES model*
Tier 2/Tier 3 vehicle's Emission Standards	*Accounted for in the MOVES model*
Low Sulfur Gasoline and Diesel fuels	*Accounted for in the MOVES model*
Heavy Duty Vehicle Rules 2004 and 2007	*Accounted for in the MOVES model*
Low RVP Gasoline	*Accounted for in the MOVES model*
On board vapor recovery	*Accounted for in the MOVES model*

16. MOVES Model Settings: The following model-input parameters will be used in the conformity analysis.

- **2008 Eight Hour Ozone Standard Maintenance Area*:** Cabarrus (partial), Gaston (partial), Lincoln (partial), Mecklenburg, Rowan (partial), Union (partial) and Iredell (partial)

MOVES Model (MOVES4.0.2)

MOVES Model Settings: The following MOVES model-input parameters will be used in the conformity analysis performed by DAQ.

Parameter	**Details**	**Data Source**
a. ***Emissions Model Version(s):***	MOVES4.0.2	
b. ***Emission Model Runs:***	Typical Summer Weekday (NOx and VOC)	
c. ***Evaluation month:***	July (NOx and VOC)	
d. ***Time Periods:***	VMT and speeds modeled for 4 daily travel periods (see item #23 below) will be processed according to USEPA guidance to generate hourly speed and VMT distribution data in the required MOVES input formats.	
e. ***Pollutants Reported:***	NOx, VOC	
f. ***Emissions Budget Years:***	2008 NAAQS: 2026 (NOx and VOC)	
g. ***Emissions Analysis Years:***	2008 NAAQS: 2026, 2035, 2045, and 2050	
h. ***Temperature and Relative Humidity:***	**2008 NAAQS**: July 2014 monthly average 24-hour temperature and relative humidity profiles from the Charlotte-Douglas International Airport (KCLT).	
i. ***Vehicle Classes:***	13	
j. ***VMT mix:***	Statewide mix based on 2023 or 2024 data using the method in the August 2004 USEPA Guidance.	

k. ***Speed Distribution:*** Regional Model MRM22v1.1

l. **Source type (vehicle type) *age distribution:*** The latest available 2023 or 2024) vehicle registration data provided by NCDOT, which also includes a breakdown of the number of vehicles by model year, will be used to create the required source type age distribution input file for each county. As per EPA guidance, the source type age distribution will not be projected for future years.

m. ***I/M Program:*** The following I/M program parameters will apply: compliance rate = 96%, waiver rate = 5% with an exemption for vehicles from the 3-year latest model years.

n. ***RVP:*** July 9.0 psi for all counties

o. ***Source Type (vehicle type) Population:*** Vehicle population estimates will be developed for each future modeling year based on the latest available 2023 or 2024 vehicle registration data provided by NCDOT. This data includes the total number of registered vehicles by county, divided into nine source type categories. The data will first be reorganized into thirteen source type categories (i.e. passenger cars, light commercial trucks, combination long-haul trucks, etc.) as required for MOVES4.0.2. These source type population estimates will then be projected for each required modeling year, using the same base and future year-county human population data that were used in the TDM model, according to the following formula:

Total Vehicle Population $_{\textbf{future year}}$ = Total Vehicle Population $_{\text{base year}}$ * (Human Population $_{\text{future year}}$ / Human Population $_{\text{base year}}$)

p. ***Strategies:*** None

17. Emissions analysis units, conversion factors, significant figures, rounding and truncating conventions:
Units= Kilograms or Grams
Grams to tons conversion factor= Divide x grams by 907184.7 to get tons
Round to 2 decimal places

18. CMAQ Projects: Not Applicable

19. Regionally Significant Projects (Federal and Non-Federal): Not Applicable

20. List of Exempt Projects and Non-Regionally Significant Projects (Federally Funded): Not Applicable

21. **Conformity Schedule:** *(A draft conformity schedule has been developed and is provided as an attachment to this document)*

22. Conformity Determinations: Four organizations will be responsible for making conformity determinations in two distinctive parts of the Metrolina non-attainment/maintenance areas:

i. The CRTPO within its metropolitan area boundary (MAB) -all of Mecklenburg County and parts of Union and Iredell County
ii. The CRMPO within its metropolitan area boundary (MAB) – parts of Cabarrus and Rowan County
iii. The GCLMPO within its metropolitan area boundary (MAB) – parts of Gaston and Lincoln County
iv. The NCDOT for the rural areas are comprised of the parts of Union County that are outside of any MPO MAB

Each of these responsible organizations must make a conformity determination for its respective area to ensure all areas will be designated in conformity.

The following resolutions will be needed for this conformity process:

- CRTPO/CRMPO/GCLMPO
  - 2050 MTP amendment adoption
  - 2024-2033 TIP adoption
  - Conformity Determination for the 2050 MTP amendments
  - Conformity Determination for the 2024-2033 TIP
- NCDOT Conformity Determination for the donut area of Union County

23. Other

- Any reference to York County in this document has been removed since EPA has made the 8-hour ozone designations. Although a portion of York County, South Carolina was designated as part of the bi-state Charlotte 8-hour ozone nonattainment area, they are allowed to demonstrate transportation conformity independent of the North Carolina portion of this nonattainment area. Therefore, the planning assumptions and methodologies used for the York County, South Carolina portion of this nonattainment area is reflected in a separate transportation conformity determination that is generated by the Rock Hill-Fort Mill Area Transit Study Metropolitan Planning Organization.

- The techniques used for this conformity process are the following:
  - VMT and speed will be done for 4 times of day (the 4 times of days are summed for the regional emissions analysis)
    - 6:30 am - 9:30 am
    - 9:30 am - 3:30 pm
    - 3:30 pm - 6:30 pm
    - 6:30 pm - 6:30 am
  - For the MOVES modeling component, the times of day will consist of whole hours and are as follows:
    - 6:00 am – 9:00 am
    - 9:00 am - 3:00 pm
    - 3:00 pm - 6:00 pm
    - 6:00 pm - 6:00 am

Metrolina Conformity Process Schedule:

Metrolina Transportation Conformity Process Kickoff Meeting	March 2025
Submit project list for modelling in TDM Model.	April 2025
Conduct TDM Modelling Process.	May 2025
TDM complete and outputs submitted to NCDAQ.	May 2025
MOVES Modelling process complete by NCDAQ.	June 2025*
Conformity Determination Report (CDR) development completed.	June. of 2025
MPO Boards action to release CDR for public/agency review & comment.	June of 2025
Release CDR/TIP for comment.	June. of 2025
NCDOT Board approval of STIP.	July of 2025
MPO Board Adoption of CDR/TIP.	Aug. of 2025
Agency/EPA final 30-day Review.	Sept of 2025
USDOT final action.	Oct. of 2025
FHWA STIP approval.	Sept. of 2025

*Note: The MOA allows 15-days to complete the MOVES modelling process.

Appendix D: List of Roadway Projects within the Maintenance Areas

2026-2035 STATE TRANSPORTATION IMPROVEMENT PROGRAM

Final STIP (BOT adoption anticipated July 2025)

NOTES: LAST UPDATED 6/4/2025. ANY AMOUNTS PROGRAMMED FOR ACTIVITIES OTHER THAN RIGHT-OF-WAY, UTILITIES, OR CONSTRUCTION ARE INCLUDED UNDER "OTHER ACTIVITIES".

BASIC PROJECT INFORMATION													FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Locations in Division 12	Upgrade intersections to comply with the Americans with Disabilities Act (ADA) using Transportation Alternatives (TA) funds.		Bike & Ped	Other	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	BO-2412	Division 12	TA, TALT5	2024	$250,000	2024	$250,000	2024	$5,000,000	2024	$600,000	$6,100,000	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Locations in Division 12	Upgrade intersections to comply with the Americans with Disabilities Act (ADA) using Transportation Alternatives (TA) funds.		Bike & Ped	Other	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	R-5792	Division 12	HF, TA					2020	$3,600,000			$3,600,000	UNDER CONSTRUCTION. "HF" FUNDS ARE STATE HIGHWAY FUNDS
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Various locations in Division 12.	Upgrade intersections to comply with the Americans with Disabilities Act (ADA) using Transportation Alternatives (TA) funds.		Bike & Ped	Other	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	BO-2612	Division 12										$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Routes in Division 12.	Construct safety improvements.		Highway	Safety	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	HS-2012											$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Routes in Division 12.	Construct safety improvements.		Highway	Safety	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	HS-2412											$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Routes in Division 12.	Construct safety improvements.		Highway	Safety	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	W-5712											$0	IN PROGRESS
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Routes in Division 12.	Construct safety improvements.		Highway	Safety	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	W-5712DIV	Division 12	HSIP	2020	$120,000			2020	$720,000			$840,000	IN PROGRESS.
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Routes in Division 12.	Construct safety improvements.		Highway	Safety	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	W-5712REG	Region F	HSIP	2020	$120,000			2020	$720,000			$840,000	IN PROGRESS.
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Routes in Division 12.	Construct safety improvements.		Highway	Safety	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	W-5712SW	Statewide Mobility	HSIP	2020	$160,000			2020	$960,000			$1,120,000	IN PROGRESS.
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Routes in Division 12.	Construct safety improvements.		Highway	Safety	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	W-5812											$0	PROGRAMMED FOR PRELIMINARY ENGINEERING ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE REQUESTED IN THE FUTURE AS NEEDED.
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Routes in Division 12.	Implement Vulnerable Road User Bicycle and Pedestrian Improvement Program.		Highway	Safety	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	HS-2027											$0	
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Routes in Division 12.	Implement Vulnerable Road User Bicycle and Pedestrian Improvement Program.		Highway	Safety	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	HS-2027DIV	Division 12	VRU					2023	$300,000			$300,000	
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Routes in Division 12.	Implement Vulnerable Road User Bicycle and Pedestrian Improvement Program.		Highway	Safety	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	HS-2027REG	Region F	VRU					2023	$300,000			$300,000	
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Routes in Division 12.	Implement Vulnerable Road User Bicycle and Pedestrian Improvement Program.		Highway	Safety	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	HS-2027SW	Statewide Mobility	VRU					2023	$400,000			$400,000	
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Routes in Division 12.	Install rumble stripes, guardrail, safety and lighting improvements.		Highway	Safety	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	W-5212											$0	DIVISION PURCHASE ORDER CONTRACT (DPOC) - IN PROGRESS; SEGMENT J: ADDITIONAL FUNDING FOR PRELIMINARY ENGINEERING AND RIGHT-OF-WAY TO COVER ANTICIPATED EXPENDITURES. HF(M) IS SPOT SAFETY FUNDS.
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Various locations in Division 12.	Safety Improvements.		Highway	Safety	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	HS-2612											$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Locations in Division 12.	Traffic separation study implementation and closures.		Rail	Rail-Highway Grade Crossing Closure	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	RC-2012	Division 12										$0	PROGRAMMED FOR PRELIMINARY ENGINEERING ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE REQUESTED IN THE FUTURE AS NEEDED.
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Locations in Division 12.	Construct highway-rail grade crossing safety improvements in Division 12.		Rail	Rail-Highway Grade Crossing Improvement	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	RX-2012	Division 12										$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Locations in Division 12.	Construct highway-rail grade crossing safety improvements in Division 12.		Rail	Rail-Highway Grade Crossing Improvement	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	RX-2412											$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Alexander, Catawba, Cleveland, Gaston, Iredell, Lincoln	Various	NCDOT	Locations in Division 12.	Construct highway-rail grade crossing safety improvements in Division 12.		Rail	Rail-Highway Grade Crossing Improvement	12	Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Charlotte Regional TPO	RX-2612											$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Alexander, Catawba, Iredell	Various	NCDOT	Secondary routes in Division 12.	Install long life pavement markings.		Highway	Safety	12	Cabarrus-Rowan MPO, Charlotte Regional TPO	HS-2012D	Division 12	HSIP					2023	$3,615,000			$3,615,000	UNDER CONSTRUCTION.

BASIC PROJECT INFORMATION												FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Locations in Division 10	Construct intersection improvements to comply with the Americans with Disabilities Act (ADA) using Transportation Alternatives (TA) funds.		Bike & Ped	Other	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	BO-2410	Division 10	TA, TALT5	2024	$250,000	2024	$250,000	2024	$5,000,000	2024	$625,000	$6,125,000	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Locations in Division 10	Upgrade intersections to comply with the Americans with Disabilities Act (ADA) using Transportation Alternatives (TA) funds.		Bike & Ped	Other	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	R-5790	Division 10	HF, TA					2020	$3,600,000			$3,600,000	UNDER CONSTRUCTION. "HF" FUNDS ARE STATE HIGHWAY FUNDS
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Various locations in Division 10.	Upgrade intersections to comply with the Americans with Disabilities Act (ADA) using Transportation Alternatives (TA) funds.		Bike & Ped	Other	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	BO-2610	Division 10										$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Routes in Division 10.	Construct safety improvements.		Highway	Safety	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	HS-2010											$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Routes in Division 10.	Construct safety improvements.		Highway	Safety	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	HS-2410											$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Routes in Division 10.	Construct safety improvements.		Highway	Safety	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	W-5710											$0	HF(M) FOR SEGMENTS Y & Z ARE SPOT SAFETY FUNDS. ADDITIONAL FUNDING FOR PRELIMINARY ENGINEERING AND RIGHT-OF-WAY TO COVER ANTICIPATED EXPENDITURES.
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Routes in Division 10.	Construct safety improvements.		Highway	Safety	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	W-5710DIV	Division 10	HSIP	2020	$410,000			2020	$2,025,000			$2,435,000	IN PROGRESS.
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Routes in Division 10.	Construct safety improvements.		Highway	Safety	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	W-5710REG	Region E	HSIP	2020	$540,000			2020	$720,000			$1,260,000	IN PROGRESS.
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Routes in Division 10.	Construct safety improvements.		Highway	Safety	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	W-5710SW	Statewide Mobility	HSIP	2020	$160,000			2020	$960,000			$1,120,000	IN PROGRESS.
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Routes in Division 10.	Construct safety improvements.		Highway	Safety	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	W-5810											$0	PROGRAMMED FOR PRELIMINARY ENGINEERING ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE REQUESTED IN THE FUTURE AS NEEDED.
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Routes in Division 10.	Implement Vulnerable Road User Bicycle and Pedestrian Improvement Program.		Highway	Safety	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	HS-2025											$0	
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Routes in Division 10.	Implement Vulnerable Road User Bicycle and Pedestrian Improvement Program.		Highway	Safety	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	HS-2025DIV	Division 10	VRU					2023	$300,000			$300,000	
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Routes in Division 10.	Implement Vulnerable Road User Bicycle and Pedestrian Improvement Program.		Highway	Safety	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	HS-2025REG	Region E	VRU					2023	$300,000			$300,000	
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Routes in Division 10.	Implement Vulnerable Road User Bicycle and Pedestrian Improvement Program.		Highway	Safety	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	HS-2025SW	Statewide Mobility	VRU					2023	$400,000			$400,000	
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Various locations in Division 10	Safety Improvements.		Highway	Safety	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	HS-2610											$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Locations in Division 10.	Traffic separation study implementation and closures.		Rail	Rail-Highway Grade Crossing Closure	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	RC-2010	Division 10										$0	PROGRAMMED FOR PRELIMINARY ENGINEERING ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE REQUESTED IN THE FUTURE AS NEEDED.
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Locations in Division 10.	Construct highway-rail grade crossing safety improvements in Division 10.		Rail	Rail-Highway Grade Crossing Improvement	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	RX-2010	Division 10										$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Locations in Division 10.	Construct highway-rail grade crossing safety improvements in Division 10.		Rail	Rail-Highway Grade Crossing Improvement	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	RX-2410											$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Anson, Cabarrus, Mecklenburg, Stanly, Union	Various	NCDOT	Locations in Division 10.	Construct highway-rail grade crossing safety improvements in Division 10.		Rail	Rail-Highway Grade Crossing Improvement	10	Rocky River RPO, Charlotte Regional TPO, Cabarrus-Rowan MPO	RX-2610											$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Anson, Robeson, Richmond, Scotland, Union	US 74	NCDOT	Eastern end of Monroe Bypass to I-95 in Lumberton.	Install broadband and ITS.	86.48	Highway	Other	6, 8, 10	Lumber River RPO, Rocky River RPO, Charlotte Regional TPO	HO-0002B	Statewide Mobility	HSIP					2021	$14,216,000			$14,216,000	UNDER CONSTRUCTION. LETTING TO BE COMBINED WITH R-5777D, I-5986C, HO-0002A, AND HO-0002C. UNDER CONSTRUCTION.
Cabarrus	JQF	CONCORD REGIONAL AIRPORT (JQF)	Concord-Padgett Regional Airport	Expand north airport apron.		Aviation	STI (Prioritization)	10	Cabarrus-Rowan MPO	AV-5892	Region E	O, T					2024	$2,170,000			$2,170,000	COMPLETE. OTHER FUNDING PROVIDED BY CONCORD REGIONAL AIRPORT
Cabarrus	JQF	CONCORD REGIONAL AIRPORT (JQF)	Concord-Padgett Regional Airport	Expand south development area apron.		Aviation	STI (Prioritization)	10	Cabarrus-Rowan MPO	AV-5731	Region E	O, T					2025	$8,517,000			$8,517,000	
Cabarrus	JQF	CONCORD REGIONAL AIRPORT (JQF)	Concord-Padgett Regional Airport	Rehabilitate pavement on airport apron and taxiway.		Aviation	STI (Prioritization)	10	Cabarrus-Rowan MPO	AV-5890	Region E	T					2020	$300,000			$300,000	COMPLETE.
Cabarrus	Clarke Creek Greenway	CONCORD	Beginning at JE 'Jim' Ramseur Park near Cox Mill Elementary School, crossing Clarke Creek to the Highland Creek neighborhood and crossing back to a terminus at the Allen Mills neighborhood along Cox Mill Road	Construct greenway.	3.6	Bike & Ped	Locally Selected	10	Cabarrus-Rowan MPO	BL-0060	Exempt	CMAQ, L					2025	$4,600,000	2023	$13,000	$4,613,000	
Cabarrus	SR 1138 (Hickory Ridge Road); SR 1161 (Stallings Road)	HARRISBURG	SR 1161 (Stallings Road) to Hickory Ridge Middle School; SR 1138 (Hickory Ridge Road) to SR 1304 (Harrisburg Veterans Road) in Charlotte.	Construct sidewalks.		Bike & Ped	Locally Selected	10	Cabarrus-Rowan MPO	BL-0086	Division 10	L(M), TADA	2026	$172,000	2026	$56,000	2027	$1,563,000	2024	$287,000	$2,078,000	

BASIC PROJECT INFORMATION												FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Cabarrus	Union Street	CONCORD	Tulip Ave Southwest to NC 3	Construct sidewalk extension.		Bike & Ped	Locally Selected	10	Cabarrus-Rowan MPO	EB-5903	Division 10	CMAQ, L, TADA					2020	$866,000			$866,000	COMPLETE.
Cabarrus	Various	CONCORD	Elm Street Avenue Northwest from Glenn Street Northwest to Alexander Street Northwest in Concord; Glenn Street Northwest from Elm Avenue Northwest to Academy Avenue Northwest in Concord; Crowell Drive Northwest from Clearwater Arts Center driveway to Ceda	Construct sidewalks.		Bike & Ped	Locally Selected	10	Cabarrus-Rowan MPO	BL-0087	Division 10	L(M), TADA					2026	$1,615,000	2024	$10,000	$1,625,000	
Cabarrus	SR 2154 (Little Texas Road)	KANNAPOLIS	SR 2180 (Lane Street) to SR 2126 (Dale Earnhardt Boulevard) in Kannapolis	Construct sidewalk and curb and gutter.	2.02	Bike & Ped	STI (Prioritization)	10	Cabarrus-Rowan MPO	EB-5844	Division 10	CMAQ, HF(M), L, TAANY	2024	$400,000			2025	$5,500,000	2025	$98,000	$5,998,000	RIGHT-OF-WAY IN PROGRESS.
Cabarrus	SR 2894 (Bruton Smith Boulevard / Concord Mills Boulevard); Portion of Weddington Road	NCDOT	US 29 to Weddington Road in Concord	Construct sidewalk on both sides of road, including portion of Weddington Road.	1.71	Bike & Ped	STI (Prioritization)	10	Cabarrus-Rowan MPO	EB-5732	Division 10	L, TAANY	2029	$3,400,000	2029	$400,000	2031	$10,500,000			$14,300,000	
Cabarrus	SR 1132 (Miami Church Road)	NCDOT	Bridge 120137 over Dutch Buffalo Creek.	Replace bridge.	0.25	Highway	Bridges	10	Cabarrus-Rowan MPO	B-5375	Division 10	BGOFF					2022	$1,573,000			$1,573,000	UNDER CONSTRUCTION.
Cabarrus	US 29	NCDOT	Bridges 120014 and 120019 over Rocky River and Access Road.	Replace bridges.	0.322	Highway	Bridges	10	Cabarrus-Rowan MPO	B-5123	Region E										$0	COMPLETE
Cabarrus	US 29 / US 601	NCDOT	Bridges 120057 and 120059 over Irish Buffalo Creek.	Replace bridges.	0.25	Highway	Bridges	10	Cabarrus-Rowan MPO	B-5808	Region E	BFP, NHPB	2021	$255,000	2021	$1,156,000	2023	$10,100,000			$11,511,000	UNDER CONSTRUCTION.
Cabarrus	NC 49	NCDOT	Prince Circle to West of General Services Drive Southwest.	Upgrade existing full access crossover to reduced conflict intersection with leftovers and signalized U-turn leftovers.		Highway	Economic Development	10	Cabarrus-Rowan MPO	HE-0015	Division 10	O, T					2023	$4,091,000			$4,091,000	THIS IS AN ECONOMIC DEVELOPMENT PROJECT FOR KROGER. "O" FUNDS REPRESENT DEVELOPER CONTRIBUTION OF $2,090,841.
Cabarrus	Various	KANNAPOLIS	NC 73 at SR 1430 and Access Road intersections; SR 1620 at SR 1621 (Barr Road) intersection; I-85 ramps at NC 73 interchange	EXTEND LEFT TURN LANE AT NC 73 AND SR 1430, CONSTRUCT RIGHT AND LEFT TURN AT ACCESS ROAD ON NC 73; CONSTRUCT ROUNDABOUT AT SR 1620 AND SR 1621 (BARR ROAD); CONSTRUCT 200 FEET SB ON-RAMP RIGHT TURN LANE AT I-85 AND EXTEND STORAGE TO NB OFF RAMP		Highway	Economic Development	10	Cabarrus-Rowan MPO	U-6098	Division 10	T					2019	$1,450,000			$1,450,000	ECONOMIC DEVELOPMENT PROJECT FOR AMAZON - UNDER CONSTRUCTION.
Cabarrus	I-85	NCDOT	SR 1430 (George Liles Parkway) Interchange in Concord.	Install lighting at interchange.	0.1	Highway	Locally Selected	10	Cabarrus-Rowan MPO	HL-0157	Exempt	BGDA, HF(M), L(M)					2025	$1,000,000			$1,000,000	
Cabarrus	NC 49	HARRISBURG	SR 1300 (Morehead Road) to Cedar Drive.	Construct access management improvements.	0.54	Highway	Locally Selected	10	Cabarrus-Rowan MPO	HL-0062	Exempt	BGANY, BGDA, L	2025	$955,000	2025	$382,000	2026	$6,445,000	2023	$1,396,000	$9,178,000	STBG-DA FUNDS ARE EXEMPT AS THE PROJECT IS ELIGIBLE FOR REGIONAL IMPACT FUNDS. $3.863M IN BGDA FUNDS SWITCHED WITH $3.8631M IN BGANY FUNDS AS PART OF FUND SWAP 8-16-24.
Cabarrus	SR 1173 (Caldwell Road)	HARRISBURG	NC 49 to US 29.	Extend roadway approximately 3000 feet and construct intersection improvements at SR 1173 (Caldwell Road) and NC 49.	0.6	Highway	Locally Selected	10	Cabarrus-Rowan MPO	HL-0063	Division 10	L, T(DA)	2026	$1,108,000	2026	$10,000	2026	$4,156,000	2023	$833,000	$6,107,000	$4.885M IN BGDA FUNDS SWITCHED WITH $4.885M IN T(DA) FUNDS AS PART OF FUND SWAP 10-8-24.
Cabarrus	SR 1394 (Poplar Tent Road)	CONCORD	SR 1449 (Harris Road) intersection in Concord; SR 2880 (Moss Drive) to Fullerton Place Drive.	Construct intersection improvements; Widen to four lanes.	0.5	Highway	Locally Selected	10	Cabarrus-Rowan MPO	HL-0001	Division 10	BGANY, BGDA, L	2026	$5,520,000			2029	$7,850,000	2022	$1,710,000	$15,080,000	$5M IN STBG-DA FUNDS SWITCHED WITH $5M IN STBG ANYAREA FUNDS AS PART OF FUND SWAP ON 5/31/2022.
Cabarrus	SR 1445 (Derita Road)	NCDOT	SR 2894 (Concord Mills Boulevard) to Aviation Boulevard	Widen to 4-lanes divided.	1	Highway	Locally Selected	10	Cabarrus-Rowan MPO	U-4910A	Division 10										$0	UNDER CONSTRUCTION
Cabarrus	Various		Locations in Concord.	Upgrade software for Concord citywide signal system.		Highway	Locally Selected	10	Cabarrus-Rowan MPO	HL-0123	Exempt	CRPDA, L					2026	$500,000	2025	$1,000,000	$1,500,000	
Cabarrus	Roberta Road	HARRISBURG	Main Street Intersection.	Construct roundabout.		Highway	NCDOT Selected (Other Selection Process)	10	Cabarrus-Rowan MPO	HN-0036	Division 10	CMAQ, L	2027	$250,000			2028	$1,741,000	2025	$715,000	$2,706,000	Total fund of 2,706,125 is split in to 80/20 percent. The local match is 541,225.
Cabarrus	SR 1643 (Bethpage Road)	KANNAPOLIS	SR 1008 (South Main Street) to Leonard Avenue, and Westgreen Drive to Klondale Avenue in Kannapolis.	Construct sidewalk.		Highway	Other	10	Cabarrus-Rowan MPO	C-5603F	Exempt	CMAQ, L(M)	2025	$117,000			2026	$2,365,000			$2,482,000	
Cabarrus	US 601	CONCORD	SR 1132 (Flowes Store Road) to SR 1153 (Zion Church Road), and SR 1132 (Flowes Store Road) intersection in Concord.	Construct sidewalks and intersection improvements.		Highway	Other	10	Cabarrus-Rowan MPO	C-5603I	Exempt	CMAQ, L(M)	2025	$250,000			2026	$4,881,000			$5,131,000	RIGHT-OF-WAY IN PROGRESS.
Cabarrus	George Liles Parkway	NCDOT	SR 1304 (Roberta Road) to SR 1431 (Weddington Road).	Widen to four lanes divided, some on new location.	2.98	Highway	Pre-STI (Historic)	10	Cabarrus-Rowan MPO	R-2246B											$0	COMPLETE
Cabarrus	George Liles Parkway	NCDOT	SR 1431 (Weddington Road) to south of I-85.	Widen to four lanes divided, some on new location.	1.236	Highway	Pre-STI (Historic)	10	Cabarrus-Rowan MPO	R-2246C											$0	COMPLETE
Cabarrus	I-85	NCDOT	NC 73 (Exit 55) to SR 2180 (Lane Street).	Install ITS.	7.35	Highway	Pre-STI (Historic)	10	Cabarrus-Rowan MPO	I-3802AA	Pre-STI (Transition)	CMAQ, CRPDA, T(M)					2023	$2,523,000			$2,523,000	COMPLETE
Cabarrus	SR 1445 (Derita Road)	NCDOT	Aviation Boulevard to SR 1394 (Poplar Tent Road)	Widen to three lanes divided.	1.54	Highway	Pre-STI (Historic)	10	Cabarrus-Rowan MPO	U-4910B	Pre-STI (Transition)	BGDA, T(M)					2024	$1,135,000			$1,135,000	UNDER CONSTRUCTION
Cabarrus	NC 24 / NC 27	NCDOT	SR 1100 (Pine Bluff Road / Reed Mine Road) intersection near Locust.	Construct a reduced conflict intersection.	0.5	Highway	Safety	10	Cabarrus-Rowan MPO	HS-2010F	Region E	HSIP	2023	$5,000			2024	$1,160,000			$1,165,000	
Cabarrus	NC 24 / NC 27	NCDOT	SR 1120 (Bethel School Road) intersection in Midland.	Construct reduced conflict intersection with signalized bulb-outs.	0.5	Highway	Safety	10	Cabarrus-Rowan MPO	HS-2010D	Region E	HSIP	2023	$301,000			2024	$790,000			$1,091,000	RIGHT-OF-WAY IN PROGRESS.
Cabarrus	NC 49	NCDOT	SR 1155 (Zion Church Road) intersection near Concord.	Construct reduced conflict intersection with signalized bulb-outs.	0.5	Highway	Safety	10	Cabarrus-Rowan MPO	HS-2010H	Statewide Mobility	HSIP	2024	$210,000	2024	$70,000	2026	$1,949,000			$2,229,000	
Cabarrus	NC 49	NCDOT	SR 2635 (Old Airport Road) intersection in Concord.	Install directional crossover with U-turn bulb-out.	0.5	Highway	Safety	10	Cabarrus-Rowan MPO	HS-2010Q	Statewide Mobility	HSIP	2025	$10,000	2025	$10,000	2027	$750,000			$770,000	
Cabarrus	NC 49; US 601; NC 3	NCDOT	Mile marker 13.8 to mile marker 15.8; Mile marker 5.4 to mile marker 12.3; Mile marker 13.8 to mile marker 20.3.	Install rumble stripes and long life pavement markings.		Highway	Safety	10	Cabarrus-Rowan MPO	HS-2010P	Region E	HSIP					2024	$885,000			$885,000	
Cabarrus	SR 1002 (Old Salisbury Concord Road)	NCDOT	SR 2400 (Irish Potato Road) near Kannapolis.	Construct safety improvements.	0.5	Highway	Safety	10	Cabarrus-Rowan MPO	W-5710AO	Division 10	HSIP					2024	$1,296,000			$1,296,000	
Cabarrus	SR 1168 (Robinson Church Road)	NCDOT	SR 1169 (Peach Orchard Road) intersection near Harrisburg.	Widen shoulders and improve superelevation.	0.5	Highway	Safety	10	Cabarrus-Rowan MPO	HS-2010R	Division 10	HSIP	2026	$50,000	2027	$25,000	2027	$730,000			$805,000	
Cabarrus	SR 1790 (Winecoff School Road)	NCDOT	Winecoff Elementary School in Concord	Install pedestrian accommodations.	0.5	Highway	Safety	10	Cabarrus-Rowan MPO	HS-2410A	Division 10	HSIP	2026	$10,000			2028	$97,000			$107,000	
Cabarrus	US 29 (Concord Parkway)	NCDOT	SR 2894 (Bruton Smith Boulevard) intersection in Concord	Install pedestrian signal upgrades.		Highway	Safety	10	Cabarrus-Rowan MPO	HS-2410D	Region E	HSIP					2025	$29,000			$29,000	
Cabarrus	George Liles Parkway	NCDOT	NC 49 to south of I-85 in Concord.	Widen to four lanes divided, part on new location.	6.5	Highway	STI (Prioritization)	10	Cabarrus-Rowan MPO	R-2246											$0	
Cabarrus	George Liles Parkway	NCDOT	NC 49 to SR 1304 (Roberta Road) in Concord.	Widen to four lanes divided, part on new location.	1.59	Highway	STI (Prioritization)	10	Cabarrus-Rowan MPO	R-2246A	Division 10	T	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$6,400,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$8,800,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$42,100,000			$57,300,000	
Cabarrus	NC 3 (Dale Earnhardt Boulevard)	NCDOT	US 29 / US 601 (Cannon Boulevard) intersection.	Construct intersection improvements.	0.5	Highway	STI (Prioritization)	10	Cabarrus-Rowan MPO	U-5761	Region E	T			2026	$1,800,000	2027	$8,100,000			$9,900,000	RIGHT-OF-WAY IN PROGRESS.
Cabarrus	NC 73 (Davidson Highway)	NCDOT	I-85 to US 29 in Cabarrus County.	Widen to multi-lanes.	2.79	Highway	STI (Prioritization)	10	Cabarrus-Rowan MPO	R-5706BB	Not Funded	NHP	NOT FUNDED	$16,500,000	NOT FUNDED	$8,000,000	NOT FUNDED	$50,700,000	NOT FUNDED		$75,200,000	
Cabarrus	NC 73 (Davidson Highway)	NCDOT	SR 1394 (Popular Tent Road) to I-85 in Cabarrus County.	Widen to multi-lanes.	6.07	Highway	STI (Prioritization)	10	Cabarrus-Rowan MPO	R-5706BA	Not Funded	NHP	NOT FUNDED	$26,000,000	NOT FUNDED	$6,500,000	NOT FUNDED	$139,000,000	NOT FUNDED		$171,500,000	
Cabarrus	SR 1394 (Poplar Tent Road)	NCDOT	East of I-85 to George Liles Parkway.	Widen to multi-lanes.	2.96	Highway	STI (Prioritization)	10	Cabarrus-Rowan MPO	U-3415A	Division 10	BGANY	2029	$12,900,000	2029	$900,000	2033	$49,400,000			$63,200,000	

2026-2035 STATE TRANSPORTATION IMPROVEMENT PROGRAM (BOT adoption anticipated July 2025)

June 2025

BASIC PROJECT INFORMATION												FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Cabarrus	SR 1394 (Poplar Tent Road)	NCDOT	George Liles Parkway to US 29 / US 601 Bypass.	Widen to multi-lanes.		Highway	STI (Prioritization)	10	Cabarrus-Rowan MPO	U-3415B	Not Funded	T	NOT FUNDED	$9,900,000	NOT FUNDED	$13,200,000	NOT FUNDED	$32,900,000	NOT FUNDED		$56,000,000	
Cabarrus	SR 1394 (Poplar Tent Road)	NCDOT	SR 1445 (Derita Road) to US 29 / US 601 Bypass.	Widen to multi-lanes.	6.1	Highway	STI (Prioritization)	10	Cabarrus-Rowan MPO	U-3415											$0	
Cabarrus	SR 2894 (Concord Mills Boulevard)	NCDOT	Kings Grant Pavilion (Entrance #1) intersection in Concord.	Construct two lane grade separated directional left flyover.	1	Highway	STI (Prioritization)	10	Cabarrus-Rowan MPO	U-5806	Division 10	T					2021	$10,380,000	2021	$1,755,000	$12,135,000	COMPLETE. $1.5M PROVIDED BY CITY OF CONCORD; BUILD NC BOND FUNDING: $1.363 M FOR PE, PAYBACK FY 2021-2035 (FY 2021 / YR 2&3 SALE); $8.068 M FOR CONSTRUCTION, PAYBACK FY 2021-2035 (FY 2021 / YR 2&3 SALE)
Cabarrus	US 29	NCDOT	Union Cemetery Road intersection in Concord; West of SR 1414 (Rock Hill Church Road) to east of SR 1414 (Rock Hill Church Road) in Concord.	Realign Union Cemetery Road to intersect with US 29 and SR 1414 (Rock Hill Church Road) intersection; Upgrade roadway.		Highway	STI (Prioritization)	10	Cabarrus-Rowan MPO	U-5956	Region E	T	2022	$3,400,000	2025	$2,050,000	2026	$24,905,000			$30,355,000	RIGHT-OF-WAY IN PROGRESS. NC BUILD BOND $10M FOR CON, PAYBACK FY 2026-2040 (FY 2026 / YR 6 SALE);
Cabarrus	NC 3	NCDOT	West Side Bypass (U-2009) to SR 1691 (Loop Road) in Kannapolis.	Widen to four lanes divided.	2.58	Highway	Transition	10	Cabarrus-Rowan MPO	U-3440	Pre-STI (Transition)	T	2025	$561,000			2025	$3,100,000			$3,661,000	UNDER CONSTRUCTION
Cabarrus	SR 1445 (Derita Road)	NCDOT	SR 2894 (Concord Mills Boulevard) to SR 1394 (Poplar Tent Road) in Concord.	Widen to three lanes divided.	2.6	Highway	Transition	10	Cabarrus-Rowan MPO	U-4910											$0	SEGMENTS A AND B LET TOGETHER
Cabarrus	US 29 / US 601	NCDOT	Bridges 120066 and 120069 over Southern Railroad.	Replace bridges.	0.25	Highway	Transition	10	Cabarrus-Rowan MPO	B-5136	Region E	T					2021	$2,790,000			$2,790,000	COMPLETE; BUILD NC BOND FUNDING: $2.167 M FOR CONSTRUCTION, PAYBACK FY 2021-2035 (FY 2021 / YR 2&3 SALE).
Cabarrus	Cabarrus County Transit	RIDER TRANSIT / CONCORD	Systemwide	Funding for 5310 program projects - Operating		Public Transportation (Transit)	Capital (Non-STI)	10	Cabarrus-Rowan MPO	TA-5128B	Public Transit	5310, L							2020	$1,350,000	$1,350,000	FUNDS AUTHORIZED IN PROGRESS
Cabarrus	Concord Kannapolis Area Transit	RIDER TRANSIT / CONCORD	Systemwide	Funding for 5310 program projects - Capital		Public Transportation (Transit)	Capital (Non-STI)	10	Cabarrus-Rowan MPO	TA-5128A	Public Transit	5310, L							2020	$2,500,000	$2,500,000	FUNDS AUTHORIZED IN PROGRESS
Cabarrus	Concord Kannapolis Area Transit	RIDER TRANSIT / CONCORD	Systemwide	Funding for 5339 Program bus and bus facilities expansion vehicles.		Public Transportation (Transit)	Capital (Non-STI)	10	Cabarrus-Rowan MPO	TA-5130B	Public Transit	5339, L							2020	$2,000,000	$2,000,000	FUNDS AUTHORIZED IN PROGRESS
Cabarrus	Concord Kannapolis Area Transit	RIDER TRANSIT / CONCORD	Systemwide	Funding for agency administration for 5310 Program.		Public Transportation (Transit)	Capital (Non-STI)	10	Cabarrus-Rowan MPO	TA-5128C	Public Transit	5310							2020	$200,000	$200,000	FUNDS AUTHORIZED IN PROGRESS
Cabarrus	Concord Kannapolis Area Transit	RIDER TRANSIT / CONCORD	Systemwide	Funding for planning assistance.		Public Transportation (Transit)	Capital (Non-STI)	10	Cabarrus-Rowan MPO	TP-5118	Public Transit	5303, L, S							2020	$304,000	$304,000	FUNDS AUTHORIZED IN PROGRESS
Cabarrus	Concord Kannapolis Area Transit	RIDER TRANSIT / CONCORD	Systemwide	Safety and security minimum 1 % set aside		Public Transportation (Transit)	Capital (Non-STI)	10	Cabarrus-Rowan MPO	TS-5116	Public Transit	5307							2020	$100,000	$100,000	FUNDS AUTHORIZED IN PROGRESS
Cabarrus	Concord Kannapolis Area Transit	RIDER TRANSIT / CONCORD	Systemwide	Funding for operating assistance.		Public Transportation (Transit)	Miscellaneous/Other	10	Cabarrus-Rowan MPO	TO-5138	Public Transit	5307, L, SMAP							2020	$10,852,000	$10,852,000	FUNDS AUTHORIZED IN PROGRESS
Cabarrus	Cabarrus County Transit	CABARRUS COUNTY	Various locations	Funding for capital for Cabarrus County through the City of Concord.		Public Transportation (Transit)	Routine Capital and Preventive Maintenance	10	Cabarrus-Rowan MPO	TG-6789	Public Transit	5307, L							2020	$2,256,000	$2,256,000	
Cabarrus	Norfolk Southern Mainline	NCDOT	Rogers Lake Road Crossing (724408Y) in Kannapolis.	Construct grade separation.		Rail	STI (Prioritization)	10	Cabarrus-Rowan MPO	Y-4810K	Statewide Mobility	O, T					2023	$19,170,000			$19,170,000	UNDER CONSTRUCTION. OTHER FUNDING PROVIDED BY NORFOLK SOUTHERN
Cabarrus	Various	NCDOT	Locations in Kannapolis.	Construct track improvements, second platform, pedestrian underpass, sitework, retaining wall, and signaling equipment.		Rail	STI (Prioritization)	10	Cabarrus-Rowan MPO	P-5725	Region E	T					2026	$13,500,000			$13,500,000	RIGHT-OF-WAY IN PROGRESS
Cabarrus, Mecklenburg	NC 73 (Davidson Highway)	NCDOT	East of SR 2693 (Davidson-Concord Road) to US 29.	Widen to multi-lanes.	10.9	Highway	STI (Prioritization)	10	Cabarrus-Rowan MPO, Charlotte Regional TPO	R-5706											$0	COORDINATE WITH R-2632AB.
Cabarrus, Mecklenburg	Piedmont Corridor	NCDOT	Haydock to Junker	Restore double track		Rail	Pre-STI (Historic)	10	Cabarrus-Rowan MPO, Charlotte Regional TPO	P-5208	Pre-STI (Transition)										$0	UNDER CONSTRUCTION
Cabarrus, Rowan	Various	NCDOT	Cabarrus Rowan Metropolitan Planning Organization	Unallocated Transportation Alternatives Program Funds.		Bike & Ped	Locally Selected	9, 10	Cabarrus-Rowan MPO	U-5545	Division 9, 10	L, TADA					2024	$7,516,000			$7,516,000	
Cabarrus, Rowan	Various	NCDOT	Cabarrus-Rowan Metropolitan Planning Organization	Unallocated Surface Transportation Block Grant Program Funds.		Highway	Locally Selected	9, 10	Cabarrus-Rowan MPO	U-5614	Division 9, 10	BGANY, BGDA, L					2024	$76,499,000			$76,499,000	$6M STBG-ANY AREA PROVIDED AS PART OF FUND SWAP
Cabarrus, Rowan	Various	NCDOT	Cabarrus-Rowan Planning Organization (CRMPO) area.	Unallocated Carbon Reduction Program funds.		Highway	Locally Selected	9, 10	Cabarrus-Rowan MPO	HL-0093	Exempt	CRPDA, L					2024	$0			$0	
Cabarrus, Rowan	Various	CONCORD	Locations in the Cabarrus-Rowan MPO.	Improve congestion and air quality.		Highway	Other	9, 10	Cabarrus-Rowan MPO	C-5603	Exempt	CMAQ, L(M)	2020	$309,000			2020	$1,848,000	2020	$927,000	$3,084,000	IN PROGRESS
Cabarrus, Rowan	I-85	NCDOT	NC 73 (Exit 55) in Cabarrus County to US 29 / US 601 Connector (Exit 68) in Rowan County.	Widen to eight lanes.	13.6	Highway	STI (Prioritization)	9, 10	Cabarrus-Rowan MPO	I-3802											$0	PROJECT COMPLETED. SEGMENT B INCLUDES B-5365 AND I-3610
Cabarrus, Rowan	I-85	NCDOT	NC 73 intersection in Cabarrus County (Exit 55) to SR 2180 (Lane Street) in Cabarrus County.	Widen to eight lanes.	7.35	Highway	Transition	9, 10	Cabarrus-Rowan MPO	I-3802A	Pre-STI (Transition)										$0	COMPLETE
Cabarrus, Rowan	Concord Kannapolis Area Transit	CONCORD KANNAPOLIS AREA TRANSIT	Various locations	Funding for routine capital including bus stop shelters, benches, shop equipment, spare parts, engines, farebox, vehicles, etc.		Public Transportation (Transit)	Capital (Non-STI)	9, 10	Cabarrus-Rowan MPO	TA-5130A	Public Transit	5339, L							2020	$1,000,000	$1,000,000	
Cabarrus, Rowan	Concord Kannapolis Area Transit	RIDER TRANSIT / CONCORD	Systemwide	Funding for ADA services.		Public Transportation (Transit)	Operations and Maintenance	9, 10	Cabarrus-Rowan MPO	TG-5103B	Public Transit	5307, L							2020	$1,563,000	$1,563,000	FUNDS AUTHORIZED IN PROGRESS
Cabarrus, Rowan	Concord Kannapolis Area Transit	RIDER TRANSIT / CONCORD	Systemwide	Funding for preventative maintenance.		Public Transportation (Transit)	Operations and Maintenance	9, 10	Cabarrus-Rowan MPO	TG-5103C	Public Transit	5307, L							2020	$6,750,000	$6,750,000	FUNDS AUTHORIZED IN PROGRESS
Cabarrus, Rowan	Concord Kannapolis Area Transit	RIDER TRANSIT / CONCORD	Systemwide	Funding for bus stop shelters, benches, shop equipment, spare parts, engines, farebox, service vehicles, etc.		Public Transportation (Transit)	Routine Capital and Preventive Maintenance	9, 10	Cabarrus-Rowan MPO	TG-5103A	Public Transit	5307, L							2020	$2,500,000	$2,500,000	FUNDS AUTHORIZED IN PROGRESS
Cabarrus, Stanly	NC 73	NCDOT	Mile marker 0 to mile marker 4.3, mile marker 13.1 to mile marker 18.9, mile marker 20.9 to mile marker 24.0 in Cabarrus County; Mile marker 0 to mile marker 8.1 in Stanly County.	Install rumble stripes and long life pavement markings.		Highway	Safety	10	Cabarrus-Rowan MPO, Rocky River RPO	HS-2010O	Region E	HSIP					2024	$1,400,000			$1,400,000	
Catawba, Iredell, Lincoln	NC 150	NCDOT	NC 16 interchange to US 21.	Widen to multi-lanes.	14.8	Highway	STI (Prioritization)	12	Greater Hickory MPO, Charlotte Regional TPO, Gaston-Cleveland-Lincoln MPO	R-2307											$0	SEGMENT B INCORPORATES WORK PREVIOUSLY UNDER I-5717.
Catawba, Lincoln	NC 10	NCDOT	Mile marker 0.0 to mile marker 2.2 in Lincoln County and mile marker 0.0 to mile marker 11.0 in Catawba County.	Install centerline and shoulder rumble stripes.		Highway	Safety	12	Greater Hickory MPO, Gaston-Cleveland-Lincoln MPO	HS-2012M	Region F	HSIP					2024	$525,000			$525,000	
Catawba, Lincoln	NC 150	NCDOT	Relocated NC 16 (STIP Project R-2206) to east of SR 1840 (Greenwood Road).	Widen to four lanes with a bypass of the Terrell Historic District.	7.94	Highway	STI (Prioritization)	12	Greater Hickory MPO, Gaston-Cleveland-Lincoln MPO	R-2307A	Region F	BGLT5, T	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$155,000,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$9,500,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$207,200,000			$371,700,000	

BASIC PROJECT INFORMATION													FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Chatham, Cumberland, Edgecombe, Gaston, Harnett, Henderson, Lee, Lincoln, Martin, Transylvania, Bertie, Hertford, Nash, Randolph, Wake	Various	NCDOT	Locations in Divisions 1, 4, 5, 6, 8, 12, and 14.	install EV chargers at multiple community colleges.		Highway	Other	1, 4, 5, 6, 8, 12, 14	Capital Area MPO, Central Pines RPO, Fayetteville Area MPO, French Broad River MPO, Gaston-Cleveland-Lincoln MPO, Land-of-Sky RPO, Mid-Carolina RPO, Peanut Belt RPO, Piedmont Triad RPO, Rocky Mount Urban Area MPO, Upper Coastal Plain RPO	HO-0019	Exempt	DP, HF(M)					2025	$1,259,000			$1,259,000	DP REPRESENTS FEDERAL 2024 CHARGING AND FUELING INFRASTRUCTURE (CFI) GRANT. HF REPRESENT CONTINGENCY FUNDS.
Cleveland, Gaston	Kings Mountain	NCDOT	Various locations	Install 20 EV chargers across five locations.		Highway	Other	12	Gaston-Cleveland-Lincoln MPO	HO-0018	Exempt	DP, L					2025	$1,029,000			$1,029,000	DP REPRESENTS FEDERAL 2024 CHARGING AND FUELING INFRASTRUCTURE (CFI) GRANT.
Cleveland, Gaston	NC 150	NCDOT	Mile marker 19.3 to Gaston County line and from the Cleveland County line to mile marker 1.2.	Construct safety improvements.	5.88	Highway	Safety	12	Gaston-Cleveland-Lincoln MPO	W-5712U	Region F	HSIP					2025	$625,000			$625,000	
Cleveland, Gaston	I-85	NCDOT	South Carolina state line to US 74.	Install broadband.	9.5	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	I-5719FC	Statewide Mobility	DP, T(M)					2025	$7,050,000			$7,050,000	DP REPRESENTS 2022 INFRA GRANT.
Cleveland, Gaston	Kings Mountain		Five locations	Funding to install 20 new EV chargers		Public Transportation (Transit)	Locally Selected	12	Gaston-Cleveland-Lincoln MPO	TO-6813	Exempt	DP, L					2024	$1,029,000			$1,029,000	DP REPRESENTS CHARGING AND FUELING INFRASTRUCTURE (CFI) GRANT
Cleveland, Polk, Gaston, Henderson, Rutherford, Mecklenburg, Buncombe	U 74	NCDOT	I-40 in Asheville to I-77 at I-485 (south) in Charlotte.	Install broadband.	123.09	Highway	Other	10, 12, 13, 14	Gaston-Cleveland-Lincoln MPO, Foothills RPO, French Broad River MPO, Charlotte Regional TPO	HO-0002A	Statewide Mobility	HSIP					2021	$18,435,000			$18,435,000	UNDER CONSTRUCTION. LETTING TO BE COMBINED WITH R-5777D, I-5986C, HO-0002B, AND HO-0002C.
Columbus, Robeson, Anson, Scotland, Richmond, Brunswick, Union	US 74	NCDOT	Eastern end of Monroe Bypass to I-140 in Wilmington.	Install flood gates and flood monitoring.	156.15	Highway	Other	3, 6, 8, 10	Lumber River RPO, Cape Fear RPO, Rocky River RPO, Charlotte Regional TPO, Wilmington Urban Area MPO	HO-0002D	Statewide Mobility	DP, T							2022	$2,200,000	$2,200,000	
Columbus, Robeson, Cleveland, Anson, Gaston, Polk, Scotland, Henderson, Richmond, Rutherford, Mecklenburg, Brunswick, Buncombe, Union	US 74	NCDOT	I-40 in Asheville to I-140 in Wilmington.	Implement broadband, ITS, and resiliency improvements.	279.24	Highway	Other	3, 6, 8, 10, 12, 13, 14	Lumber River RPO, Cape Fear RPO, Gaston-Cleveland-Lincoln MPO, Foothills RPO, French Broad River MPO, Rocky River RPO, Charlotte Regional TPO, Wilmington Urban Area MPO	HO-0002											$0	DP REPRESENTS FEDERAL INFRA GRANT FUNDS.
Davidson, Alamance, Cabarrus, Durham, Guilford, Mecklenburg, Orange, Rowan, Wake	Piedmont Corridor	NCDOT	Regionwide	Purchase new trains and upgrade maintenance facility.		Rail	STI (Prioritization)	5, 7, 9, 10	Capital Area MPO, High Point Urban Area MPO, Burlington-Graham MPO, Cabarrus-Rowan MPO, Charlotte Regional TPO, Greensboro Urban Area MPO, Triangle West TPO	P-5719C	Region C, D, E	DP, T					2026	$212,529,000			$212,529,000	
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Locations in Division 9	Construct intersection improvements to comply with the Americans with Disabilities Act (ADA) using Transportation Alternatives (TA) funds.		Bike & Ped	Other	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	BO-2409	Division 9	TA, TALT5	2024	$250,000	2024	$250,000	2024	$5,000,000	2024	$500,000	$6,000,000	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Locations in Division 9	Upgrade intersections to comply with the Americans with Disabilities Act (ADA) using Transportation Alternatives (TA) funds.		Bike & Ped	Other	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	R-5789	Division 9	HF, TA					2020	$3,600,000			$3,600,000	IN PROGRESS; "HF" FUNDS REFLECT STATE HIGHWAY FUNDS
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Various locations in Division 9.	Upgrade intersections to comply with the Americans with Disabilities Act (ADA) using Transportation Alternatives (TA) funds.		Bike & Ped	Other	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	BO-2609	Division 9										$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Routes in Division 9	Construct safety improvements.		Highway	Safety	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	W-5709DIV	Division 9	HSIP	2020	$90,000			2020	$555,000			$645,000	
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Routes in Division 9	Construct safety improvements.		Highway	Safety	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	W-5709REG	Region D	HSIP	2020	$90,000			2020	$555,000			$645,000	
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Routes in Division 9	Construct safety improvements.		Highway	Safety	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	W-5709SW	Statewide Mobility	HSIP	2020	$120,000			2020	$740,000			$860,000	
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Routes in Division 9.	Construct safety improvements.		Highway	Safety	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	HS-2009											$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Routes in Division 9.	Construct safety improvements.		Highway	Safety	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	HS-2409											$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Routes in Division 9.	Construct safety improvements.		Highway	Safety	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	W-5709											$0	IN PROGRESS; $2.5M NHP FUNDING APPLIED TO W-5709E.
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Routes in Division 9.	Construct safety improvements.		Highway	Safety	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	W-5809											$0	
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Routes in Division 9.	Implement Vulnerable Road User Bicycle and Pedestrian Improvement Program.		Highway	Safety	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	HS-2024											$0	
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Routes in Division 9.	Implement Vulnerable Road User Bicycle and Pedestrian Improvement Program.		Highway	Safety	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	HS-2024DIV	Division 9	VRU					2023	$300,000			$300,000	
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Routes in Division 9.	Implement Vulnerable Road User Bicycle and Pedestrian Improvement Program.		Highway	Safety	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	HS-2024REG	Region D	VRU					2023	$300,000			$300,000	

2026-2035 STATE TRANSPORTATION IMPROVEMENT PROGRAM (BOT adoption anticipated July 2025)

BASIC PROJECT INFORMATION												FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Routes in Division 9.	Implement Vulnerable Road User Bicycle and Pedestrian Improvement Program.		Highway	Safety	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	HS-2024SW	Statewide Mobility	VRU					2023	$400,000			$400,000	
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Secondary routes in Division 9.	Install long-life pavement markings.		Highway	Safety	9	Cabarrus-Rowan MPO, High Point Urban Area MPO, Northwest Piedmont RPO, Winston-Salem Area TPO	HS-2009A	Division 9	HSIP					2021	$1,900,000			$1,900,000	
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Various locations in Division 9	Safety Improvements.		Highway	Safety	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	HS-2609											$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Locations in Division 9.	Implementation of traffic separation study and closures in Division 9.		Rail	Rail-Highway Grade Crossing Closure	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	RC-2009	Division 9										$0	PROGRAMMED FOR PRELIMINARY ENGINEERING ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE REQUESTED IN THE FUTURE AS NEEDED.
Davidson, Davie, Forsyth, Rowan, Stokes	SR 1002 (Bringle Ferry Road)		Winston Salem Southbound Railway Crossing 849833X.	Improve highway-rail grade crossing safety.		Rail	Rail-Highway Grade Crossing Improvement	9	High Point Urban Area MPO	RX-2409E	Division 9	RR					2031	$400,000	2031	$40,000	$440,000	
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Locations in Division 9.	Construct highway-rail grade crossing safety improvements in Division 9.		Rail	Rail-Highway Grade Crossing Improvement	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	RX-2009	Division 9										$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Locations in Division 9.	Construct highway-rail grade crossing safety improvements in Division 9.		Rail	Rail-Highway Grade Crossing Improvement	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	RX-2409											$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Davidson, Davie, Forsyth, Rowan, Stokes	Various	NCDOT	Locations in Division 9.	Construct highway-rail grade crossing safety improvements in Division 9.		Rail	Rail-Highway Grade Crossing Improvement	9	Northwest Piedmont RPO, Winston-Salem Area TPO, High Point Urban Area MPO, Cabarrus-Rowan MPO	RX-2609											$0	PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY. INDIVIDUAL PROJECTS AND FUNDING TO BE PROGRAMMED IN THE FUTURE AS NEEDED.
Davidson, Rowan	I-85	NCDOT	North of SR 2120 (Long Ferry Road) in Rowan County to North of NC 150 in Davidson County, including Yadkin River Bridge.	Reconstruct bridge.		Highway	Pre-STI (Historic)	9	Cabarrus-Rowan MPO, High Point Urban Area MPO	I-2304AC	Exempt	NHP	2009	$1,066,000			2010	$8,220,000			$9,286,000	UNDER CONSTRUCTION; GARVEE BOND FUNDING: $14.3 MILLION FOR RIGHT-OF-WAY, SECTIONS AC & AD, PAYBACK FY 2009-2021; AND $111.7 MILLION FOR CONSTRUCTION, SECTION AC
Davidson, Rowan	I-85	NCDOT	North of SR 2120 (Long Ferry Road) in Rowan County to US 29 / US 52 / US 70 / I-85 Business in Davidson County.	Construct additional lanes, and reconstruct Bridges 790137 and 790465 (Yadkin River Bridge).	6.8	Highway	Pre-STI (Historic)	9	High Point Urban Area MPO, Cabarrus-Rowan MPO	I-2304	Pre-STI (Transition)										$0	INCLUDES B-3833; TIGER AWARD / INTERSTATE MAINTENANCE DISCRETIONARY FUNDING $11.7 MILLION; GARVEE BONDS: SEE INDIVIDUAL SEGMENTS FOR BOND AMOUNTS AND PAYBACK YEARS
Davidson, Rowan	I-85	NCDOT	In Division 9.	Implement intelligent transportation system (ITS).		Highway	Transition	9	Cabarrus-Rowan MPO, High Point Urban Area MPO	I-2304AF	Pre-STI (Transition)										$0	COMPLETE
Gaston	Cramerton-McAdenville Greenway Connector	CRAMERTON	Paved trail at South Fork Village in Cramerton to Riverside Drive in McAdenville, following South Fork of Catawba River.	Construct greenway.	0.37	Bike & Ped	Locally Selected	12	Gaston-Cleveland-Lincoln MPO	C-5704	Exempt	CMAQ, L	2025	$51,000			2025	$1,363,000	2022	$317,000	$1,731,000	CMAQ AWARD AMOUNT IS $1,183,200
Gaston	Highland Branch Greenway	GASTON COUNTY	Sims Legion Park to Bulb Avenue in Gastonia.	Construct greenway.	0.62	Bike & Ped	Locally Selected	12	Gaston-Cleveland-Lincoln MPO	C-5622	Exempt	CMAQ, L					2022	$810,000			$810,000	UNDER CONSTRUCTION. CMAQ AWARD AMOUNT IS $1,068,204. As per MA of 07/25/24, total contribution of NCDOT is Zero amount.
Gaston	Leisure Lane		NC 275 to trailhead for C-5606E near Sportsman Drive in Dallas	Construct greenway.		Bike & Ped	Locally Selected	12	Gaston-Cleveland-Lincoln MPO	BL-0105	Exempt	CMAQ, L					2026	$424,000	2024	$155,000	$579,000	
Gaston	NC 161	BESSEMER CITY	South 13th Street to South 14th Street in Bessemer City.	Construct sidewalks with crosswalks.	0.47	Bike & Ped	Locally Selected	12	Gaston-Cleveland-Lincoln MPO	C-5606B	Exempt	CMAQ, L(M)	2026	$5,000			2026	$529,000	2018	$214,000	$748,000	INCORPORATES WORK FORMERLY UNDER C-5606L. CMAQ AWARD AMOUNT IS $527,847.
Gaston	NC 274 (Tryon Courthouse Road)	GASTON COUNTY	SR 1534 (Pine Springs Drive) to Tryon Elementary School in Tryon	Construct sidewalk on west side of roadway from Pine Springs to Court Terrace. Install mid-block crosswalk and construct sidewalk on east side of roadway to Tryon Elementary School.	0.31	Bike & Ped	Locally Selected	12	Gaston-Cleveland-Lincoln MPO	BL-0033	Exempt	CMAQ, L	2026	$50,000			2028	$1,449,000	2023	$188,000	$1,687,000	
Gaston	New Route	GASTON COUNTY	Rankin Lake to Tech Park Greenway near Gastonia.	Construct greenway.	0.8	Bike & Ped	Locally Selected	12	Gaston-Cleveland-Lincoln MPO	C-5606K	Exempt	CMAQ, L(M)	2026	$15,000			2026	$656,000	2023	$275,000	$946,000	CMAQ AWARD AMOUNT IS $757,478.
Gaston	New Route	GASTON COUNTY	Technology Park to Gaston College near Gastonia.	Construct greenway.	0.63	Bike & Ped	Locally Selected	12	Gaston-Cleveland-Lincoln MPO	C-5606E	Exempt	CMAQ, L(M)					2025	$588,000			$588,000	UNDER CONSTRUCTION. CMAQ AWARD AMOUNT IS $513,300.
Gaston	SR 2201 (Lowell Spencer Mountain Road)	GASTON COUNTY	George Poston Parkway to end of park limits near Gastonia.	Construct sidewalk.	0.26	Bike & Ped	Locally Selected	12	Gaston-Cleveland-Lincoln MPO	C-5606J	Exempt	CMAQ, L(M)					2026	$186,000			$186,000	CMAQ AWARD AMOUNT IS $334,379.
Gaston	SR 2400 (Neal Hawkins Road)	GASTON COUNTY	Existing sidewalk at Marth Rivers Park to existing sidewalk at Village of Parkside; South of SR 2420 (Forbes Road) intersection; South of SR 2420 (Forbes Road) intersection to Hawk Ridge Drive near Gastonia.	Construct sidewalk on south side of Neal Hawkins Road; Construct mid-block crossing; Construct sidewalk on north side of Neal Hawkins Road.	1.82	Bike & Ped	Locally Selected	12	Gaston-Cleveland-Lincoln MPO	C-5606M	Exempt	CMAQ, L(M)	2026	$19,000			2027	$1,364,000	2023	$477,000	$1,860,000	CMAQ AWARD AMOUNT IS $1,488,462.
Gaston	Various	DALLAS	Locations along US 321 Business and NC 275 / NC 279 near Gaston College	Construct sidewalks. Install crosswalk across NC 275 / NC 279.		Bike & Ped	Locally Selected	12	Gaston-Cleveland-Lincoln MPO	C-5606D	Exempt	CMAQ, L(M)					2025	$393,000			$393,000	CMAQ AWARD AMOUNT IS $383,779.
Gaston	NC 7 (Riverside Drive)	NCDOT	SR 2000 (Hickory Grove Road) to future Riverlink Trail Extension in Cramerton.	Construct sidewalk.	0.2	Bike & Ped	NCDOT Selected (Other Selection Process)	12	Gaston-Cleveland-Lincoln MPO	BN-0029	Exempt	CMAQ, L(M)	2026	$40,000			2026	$2,413,000	2025	$47,000	$2,500,000	MCADENVILLE RIVER LINK SIDEWALK CONNECTOR.
Gaston	NC 279 (New Hope Road)	GASTONIA	US 29 / US 74 (Franklin Boulevard) to Hunt Avenue in Gastonia	Construct sidewalk on east side of NC 279 (New Hope Road) from US 29 / US 74 (Franklin Boulevard) to Court Drive and west side of NC 279 (New Hope Road) from Court Drive to Hunt Avenue.	1.03	Bike & Ped	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	EB-5975	Division 12	L, TA50200					2027	$2,065,000	2023	$516,000	$2,581,000	
Gaston	NC 279 (South New Hope Road)	GASTONIA	SR 2200 (Armstrong Park Road) to SR 1255 (Hudson Boulevard) in Cramerton	Construct missing sidewalk on south side of NC 279.	1.12	Bike & Ped	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	EB-5743	Division 12	L, TA50200					2027	$1,285,000	2023	$321,000	$1,606,000	
Gaston	South Marietta Street / SR 1877 (Hilltop Drive)	GASTONIA	SR 1255 (Hudson Boulevard) to Clyde Street in Gastonia	Construct sidewalk.	0.48	Bike & Ped	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	EB-5768	Division 12	L, TA50200	2026	$1,200,000	2026	$800,000	2026	$1,000,000	2023	$350,000	$3,350,000	
Gaston	SR 1255 (Hudson Boulevard); SR 2466 (Redbud Drive)	GASTONIA	SR 2200 (Gaston Day School Road) to SR 2466 (Redbud Drive); SR 1255 (Hudson Boulevard) to NC 279 (South New Hope Road) in Cramerton	Construct sidewalk on one side.	1.11	Bike & Ped	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	EB-5745	Division 12	L, TA50200	2025	$900,000	2025	$600,000	2027	$2,500,000	2023	$308,000	$4,308,000	
Gaston	SR 2014 (Lakewood Road)	CRAMERTON	SR 2565 (Eagle Road) to Lake Drive in Cramerton	Construct sidewalk and pedestrian bridge over South Fork River Inlet.	0.14	Bike & Ped	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	EB-5913	Division 12	L, TA50200					2026	$354,000	2023	$164,000	$518,000	

2026-2035 STATE TRANSPORTATION IMPROVEMENT PROGRAM (BOT adoption anticipated July 2025)

June 2025

BASIC PROJECT INFORMATION												FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Gaston	SR 2044 (Tuckaseegee Road)	MOUNT HOLLY	NC 273 to Marina Village Drive; Marina Village Drive North to Broome Street in Mount Holly	Construct sidewalk on south side; Construct sidewalk on west side.	0.48	Bike & Ped	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	EB-5912	Division 12	L, TA50200, TAANY	2027	$2,500,000	2027	$430,000	2028	$4,500,000	2023	$436,000	$7,866,000	
Gaston	SR 2200 (Cox Road)	GASTONIA	I-85 to Court Drive in Gastonia	Construct sidewalk on both sides.	0.6	Bike & Ped	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	EB-5976	Division 12	L, TA50200					2027	$1,400,000	2023	$350,000	$1,750,000	
Gaston	SR 2439 (Beaty Road)	MOUNT HOLLY	Ferstl Avenue to Smith Street in Belmont	Construct sidewalk on one side.	0.36	Bike & Ped	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	EB-5748	Division 12	L, TA50200	2026	$140,000			2027	$800,000	2022	$101,000	$1,041,000	
Gaston	US 29 / US 74 (East Franklin Boulevard)	GASTONIA	SR 2200 (Cox Road) to east of Duhart's Creek in Gastonia	Construct sidewalk in gaps on south side of roadway, pedestrian improvements.	0.52	Bike & Ped	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	EB-5701	Division 12	L, TA50200	2025	$800,000	2025	$75,000	2026	$1,533,000			$2,408,000	
Gaston	12th Street; Yellow Jacket Lane / SR 1446 (Bess Town Road)	BESSEMER CITY	Chadwick Court to Kaiser Road; 12th Street to 14th Street (NC 274) in Bessemer City	Construct sidewalks.	0.4	Bike & Ped	Transition	12	Gaston-Cleveland-Lincoln MPO	EB-5531	Pre-STI (Transition)	BGANY					2026	$300,000			$300,000	
Gaston	Gastonia	GASTONIA	Poston Park to South Fork River Greenway in Gastonia.	Construct trail.		Bike & Ped	Transition	12	Gaston-Cleveland-Lincoln MPO	EB-5533	Pre-STI (Transition)										$0	UNDER CONSTRUCTION
Gaston	Rail Trail	BELMONT	SR 1923 (Woodlawn Avenue) to Belmont Abbey College and Downtown.	Upgrade abandoned railroad to pedestrian trail.		Bike & Ped	Transition	12	Gaston-Cleveland-Lincoln MPO	C-5505	Exempt										$0	IN PROGRESS
Gaston	SR 1421 (Marys Grove Road)	NCDOT	Bridge 350097 over Unnamed Tributary of Muddy Fork Creek.	Replace bridge.	0.25	Highway	Bridges	12	Gaston-Cleveland-Lincoln MPO	B-5961	Division 12	BGOFF	2021	$67,000			2022	$705,000			$772,000	UNDER CONSTRUCTION.
Gaston	US 29 / US 74	NCDOT	BRIDGE 350091 OVER CATAWBA RIVER	REPLACE BRIDGE.	0.25	Highway	Bridges	12	Gaston-Cleveland-Lincoln MPO	B-6051	Region F	HFB, HIB	2023	$4,000,000			2026	$76,000,000			$80,000,000	RIGHT-OF-WAY IN PROGRESS. PRELIMINARY ENGINEERING TO USE FEDERAL-AID FUNDING. PROJECT ALSO REFERRED TO AS BR-0020. HIB FUNDS ARE 2021 HIGHWAY INFRASTRUCTURE BRIDGE REPLACEMENT FUNDS (Z922). PROJECT TO BE LET WITH U-6143.
Gaston	I-85	NCDOT	Cleveland County line to mile marker 14.0.	Rehabilitate pavement.	5.91	Highway	Interstate Maintenance	12	Gaston-Cleveland-Lincoln MPO	I-5921	Statewide Mobility	NHPIM					2027	$16,830,000			$16,830,000	
Gaston	NC 275 / NC 279		US 321 to US 321 Business.	Extend right turn lane. Add right turn lane on southbound off ramp from US 321.	0.5	Highway	NCDOT Selected (Other Selection Process)	12	Gaston-Cleveland-Lincoln MPO	HN-0027	Region F	CRPANY, HF(M)						2025	$1,040,000	2024	$205,000	$1,245,000	HF(M) REPRESENTS SPOT MOBILITY HIGHWAY FUNDS
Gaston	Gastonia	NCDOT	Citywide.	Upgrade citywide signal system.		Highway	Other	12	Gaston-Cleveland-Lincoln MPO	C-5703	Region F	CMAQ, L(M), T(M)	2022	$750,000			2022	$11,363,000			$12,113,000	UNDER CONSTRUCTION. LOCAL FUNDS PROVIDED BY CITY OF GASTONIA (1.5% OF PROJECT COST). STATE MATCH TO USE REGIONAL IMPACT FUNDS (REGION F). CONSTRUCTION FUNDS INCLUDE FUNDS FOR C-5606C (LET UNDER A SINGLE WBS 48320.3.1).
Gaston		NCDOT				Highway	Pre-STI (Historic)	12	Gaston-Cleveland-Lincoln MPO	U-2523A											$0	COMPLETE
Gaston	NC 279 (New Hope Road)	NCDOT	Burtonwood Drive to SR 2466 (Garrison Boulevard) in Gastonia.	Construct turn lanes.	0.53	Highway	Pre-STI (Historic)	12	Gaston-Cleveland-Lincoln MPO	C-4934	Exempt										$0	UNDER CONSTRUCTION
Gaston	NC 274	NCDOT	SR 1443 (Dameron Road) to SR 1405 (Ramseur Road).	Install rumble stripes.	0.5	Highway	Safety	12	Gaston-Cleveland-Lincoln MPO	W-5601R	Region F	HSIP					2023	$90,000			$90,000	
Gaston	NC 275	NCDOT	Mile marker 5.1 to mile marker 9.7.	Install centerline and shoulder rumble stripes.		Highway	Safety	12	Gaston-Cleveland-Lincoln MPO	HS-2012J	Region F	HSIP					2024	$152,000			$152,000	
Gaston	NC 279 (Dallas Cherryville Highway)	NCDOT	South of SR 1438 (St. Mark's Church Road) to north of NC 275.	Construct safety improvements including passing zones.	8.02	Highway	Safety	12	Gaston-Cleveland-Lincoln MPO	W-5212N	Region F	T					2021	$12,750,000			$12,750,000	COMPLETE; BUILD NC BOND FUNDING: $9.912 M FOR CONSTRUCTION, PAYBACK FY 2021-2035 (FY 2021 / YR 2&3 SALE).
Gaston	I-85	NCDOT	NC 7 (McAdenville Road / Main Street) to NC 273	Widen to eight lanes.	3.4	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	I-5719B	Statewide Mobility	DP, NHP, T(M)	2025	$38,400,000	2025	$47,900,000	2025	$481,505,000			$567,805,000	DP REPRESENTS 2022 INFRA GRANT. GARVEE BOND FUNDING: $150M FOR CONSTRUCTION, PAYBACK FY 2027-2041; $70M FOR CONSTRUCTION, PAYBACK FY 2029-2043.
Gaston	I-85	NCDOT	NC 7 (McAdenville Road / Main Street) to NC 273.	Install and implement Intelligent Transportation System (ITS) components including Active Traffic Management and Incident Management.	3.4	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	I-5719FB	Statewide Mobility	DP, T(M)					2025	$7,150,000			$7,150,000	DP REPRESENTS 2022 INFRA GRANT.
Gaston	I-85	NCDOT	South Carolina state line to NC 273	Piedmont Northern Railroad bridge, two Norfolk Southern Railroad bridges, and Bridge 350142 over SR 2213 (Grove Street) within the limits of I-5719A		Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	I-5719C	Statewide Mobility	NHP, T	2026	$5,000,000	2026	$2,600,000	2026	$232,400,000			$240,000,000	
Gaston	I-85	NCDOT	US 321 interchange.	Construct geometric safety improvements to interchange.	0.17	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	I-5000	Statewide Mobility										$0	UNDER CONSTRUCTION
Gaston	I-85	NCDOT	US 321 to NC 273.	Widen to eight lanes.	9.8	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	I-5719	Statewide Mobility										$0	DESIGN-BUILD PROJECT - TO BE LET WITH U-5800. INCLUDES IMPROVEMENTS PREVIOUSLY FUNDED UNDER I-5713 (COX ROAD INTERCHANGE IMPROVEMENTS). DP FUNDING REPRESENTS FEDERAL 2022 INFRA GRANT.
Gaston	I-85	NCDOT	US 321 to NC 7 (McAdenville Road / Main Street)	Widen to eight lanes.	6.6	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	I-5719A	Statewide Mobility	NHP, T	2029	$47,200,000	2029	$12,300,000	2029	$528,205,000			$587,705,000	GARVEE BOND FUNDING: $100M FOR CONSTRUCTION, PAYBACK FY 2029-2043.
Gaston	I-85	NCDOT	US 321 to NC 7 (McAdenville Road / Main Street).	Install and implement Intelligent Transportation System (ITS) components including Active Traffic Management and Incident Management.	6.6	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	I-5719FA	Statewide Mobility	NHP, T(M)					2028	$4,100,000			$4,100,000	
Gaston	NC 27 (West Charlotte Avenue)	NCDOT	SR 2534 (Hawthorne Street) intersection in Mount Holly.	Construct intersection improvements.	0.5	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	U-5819	Division 12	T	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$1,800,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$600,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$5,200,000			$7,600,000	
Gaston	NC 273 (South Main Street)	NCDOT	Tuckaseegee Road to A & E Drive in Mount Holly.	Widen to four lanes divided.	1.1	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	U-3633	Region F	T					2021	$6,315,000			$6,315,000	COMPLETE; BUILD NC BOND FUNDING: $4.910 M FOR CONSTRUCTION, PAYBACK FY 2021-2035 (FY 2021 / YR 2&3 SALE).PROJECT INCORPORATES WORK PREVIOUSLY UNDER EB-5746
Gaston	NC 274 (Union Road)	NCDOT	Osceola Street to Niblick Drive in Gastonia.	Upgrade roadway.	1.02	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	U-5961	Region F	BG50200, O	2028	$25,500,000	2028	$4,100,000	2031	$24,000,000			$53,600,000	$5M IN OTHER FUNDING PROVIDED BY CITY OF GASTONIA
Gaston	NC 275; SR 1327 (Fairview Road)	NCDOT	NC 274 and SR 1327 (Fairview Road) intersections in Gastonia; SR 1456 (White Jenkins Road) intersection in Gastonia.	Construct intersection improvements and close intersection of NC 275 and SR 1456 (White Jenkins Road).	1.5	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	U-6078	Division 12	BGANY	2025	$1,400,000	2025	$780,000	2027	$7,900,000			$10,080,000	
Gaston	NC 279	NCDOT	NC 7 to west of NC 275 in Dallas.	Widen to multi-lanes.	3.6	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	U-2523	Region F										$0	
Gaston	NC 279	NCDOT	North of SR 2275 (Robinson-Clemmer Road) to west of NC 275 in Dallas.	Widen to multi-lanes.	1.94	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	U-2523B	Region F	BGANY	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$17,500,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$4,300,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$39,100,000			$60,900,000	INCLUDES IMPROVEMENTS AT NC 279 (LOWER DALLAS HIGHWAY) AND NC 275 (DALLAS STANLEY HIGHWAY) INTERSECTION (FORMERLY U-5778).
Gaston	NC 279 (New Hope Road)	NCDOT	SR 2478 (Titman Road) to SR 2435 (Union-New Hope Road) in Gastonia.	Widen to four lanes.	0	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	U-5821	Division 12	T	2024	$51,200,000	2026	$17,000,000	2028	$109,800,000			$178,000,000	RIGHT-OF-WAY IN PROGRESS.
Gaston	NC 279 (North New Hope Road)	NCDOT	US 29 / US 74 (Franklin Boulevard) intersection in Gastonia.	Construct right turn lane from NC 279 (North New Hope Road) to US 29 / US 74 (Franklin Boulevard).	0.5	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	U-6138	Region F	BG50200	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$880,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$70,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$2,000,000			$2,950,000	

BASIC PROJECT INFORMATION													FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Gaston	NC 7	NCDOT	US 74 and US 29 intersections in Belmont.	Construct northbound through lane and intersection improvements.	0.5	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	U-5800	Region F	BG50200	2025	$18,600,000	2025	$3,700,000	2025	$19,600,000			$41,900,000	UNDER CONSTRUCTION. DESIGN-BUILD PROJECT. TO BE LET WITH I-5719B.
Gaston	NC 7 (East Catawba Street)	NCDOT	US 74 (Wilkinson Boulevard) intersection in Belmont.	Construct northbound right-turn lane on NC 7 (East Catawba Street) and extend existing westbound left-turn lane on US 74 (Wilkinson Boulevard).	0.5	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	U-6143	Region F	L, NHP	2023	$630,000	2023	$280,000	2026	$7,200,000			$8,110,000	PROJECT TO BE LET WITH B-6051. LOCAL FUNDS PROVIDED BY CITY OF BELMONT. RIGHT-OF-WAY IN PROGRESS.
Gaston	SR 2200 (Cox Road)	NCDOT	I-85 to US 29 / US 74.	Widen road and construct operational improvements.	0.27	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	U-6044	Division 12	BG50200	2029	$49,500,000	2029	$1,500,000	2029	$14,300,000			$65,300,000	TO BE LET WITH I-5719.
Gaston	US 29 (Franklin Boulevard)	NCDOT	US 29 (Franklin Boulevard) and NC 274.	Construct intersection improvements.	0.5	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	U-5965	Region F	BG50200, T	2023	$6,900,000	2023	$300,000	2026	$7,200,000			$14,400,000	RIGHT-OF-WAY IN PROGRESS.
Gaston	US 29 / US 74 (Franklin Boulevard)	NCDOT	SR 2200 (Cox Road) to 400 feet east of Lineberger Road.	Construct additional lane in the eastbound direction.	1.06	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	U-6043	Division 12	BG50200, T	2023	$1,300,000	2023	$900,000	2026	$7,900,000			$10,100,000	RIGHT-OF-WAY IN PROGRESS.
Gaston	US 29 / US 74 (Wilkinson Boulevard)	NCDOT	Market Street to SR 2015 (Alberta Avenue).	Widen to six lanes. Replace bridge 350082 over South Fork of Catawba River.	1.19	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	U-6146	Region F	HFB, T	2022	$8,380,000	2021	$5,500,000	2026	$43,500,000			$57,380,000	RIGHT-OF-WAY IN PROGRESS. HFB IS FOR BRIDGE REPLACEMENT OVER SOUTH FORK OF CATAWBA RIVER. RIGHT-OF-WAY IN PROGRESS. BUILD NC BOND FUNDING: $2M FOR RIGHT-OF-WAY, PAYBACK FY 2022-2036 (FY 2022 / YR 4 SALE);
Gaston	US 74 (Wilkinson Boulevard)	NCDOT	NC 7 (Catawba Street) to SR 2209 (Wesleyan Drive).	Implement adaptive signal system.	3.87	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	U-6038	Division 12	T					2019	$600,000			$600,000	COMPLETE - BUILD NC BOND FUNDING: $456,129 FOR CONSTRUCTION, PAYBACK FY 2020-2034 (FY 2019 / YR 1 SALE)
Gaston	Gastonia Transit Authority		Various locations	Funding for capital rolling stock.		Public Transportation (Transit)	Capital (Non-STI)	12	Gaston-Cleveland-Lincoln MPO	TM-0047	Public Transit	5307, L							2025	$375,000	$375,000	
Gaston	Gastonia Transit Authority	GASTONIA TRANSIT	Systemwide	Funding for operating assistance.		Public Transportation (Transit)	Miscellaneous/Other	12	Gaston-Cleveland-Lincoln MPO	TO-5142	Public Transit	5307, L, SMAP							2020	$1,068,000	$1,068,000	FUNDS AUTHORIZED IN PROGRESS
Gaston	Gastonia Transit Authority	GASTONIA TRANSIT	Systemwide	Funding for operating expenses.		Public Transportation (Transit)	Miscellaneous/Other	12	Gaston-Cleveland-Lincoln MPO	TO-6061	Public Transit	5307, L							2025	$4,594,000	$4,594,000	FUNDING ADDED TO FY 20 AT THE REQUEST OF GASTONIA MPO.
Gaston	Gastonia Transit Authority	GASTONIA TRANSIT	Gastonia.	Purchase an electric ADA van.		Public Transportation (Transit)	Operations and Maintenance	12	Gaston-Cleveland-Lincoln MPO	TM-0058	Public Transit	5307, L					2025	$266,000			$266,000	
Gaston	Gastonia Transit Authority	GASTONIA TRANSIT	Systemwide	Funding for ADA paratransit service.		Public Transportation (Transit)	Operations and Maintenance	12	Gaston-Cleveland-Lincoln MPO	TG-6183A	Public Transit	5307, L							2025	$1,250,000	$1,250,000	FUNDING ADDED TO FY 20 AT THE REQUEST OF GASTONIA MPO.
Gaston	Gastonia Transit Authority	GASTONIA TRANSIT	Systemwide	Funding for Gastonia Transit payment kiosk.		Public Transportation (Transit)	Operations and Maintenance	12	Gaston-Cleveland-Lincoln MPO	TM-0045	Public Transit	5307, L							2023	$219,000	$219,000	
Gaston	Gastonia Transit Authority	GASTONIA TRANSIT	Systemwide	Funding for preventative maintenance.		Public Transportation (Transit)	Operations and Maintenance	12	Gaston-Cleveland-Lincoln MPO	TG-6184B	Public Transit	5307, L							2025	$427,000	$427,000	FUNDING ADDED TO FY 20 AT THE REQUEST OF GASTONIA MPO.
Gaston	Gastonia Transit Authority	GASTONIA TRANSIT	Systemwide	Funding for transit app.		Public Transportation (Transit)	Operations and Maintenance	12	Gaston-Cleveland-Lincoln MPO	TG-6804	Public Transit	5307, L							2020	$63,000	$63,000	FUNDING ADDED TO FY 20 AT THE REQUEST OF GASTONIA MPO.
Gaston	Gastonia Transit Authority	GASTON TRANSIT	Various locations	Improve pedestrian walkways.		Public Transportation (Transit)	Routine Capital and Preventive Maintenance	12	Gaston-Cleveland-Lincoln MPO	TG-6792	Public Transit	5307, L					2024	$458,000			$458,000	FUNDING ADDED TO FY 20 AT THE REQUEST OF GASTONIA MPO.
Gaston	Piedmont and Northern Railroad	NCDOT	Various locations	Construct crossing signal.		Rail	Other	12	Gaston-Cleveland-Lincoln MPO	P-5200A											$0	COMPLETE
Gaston	Piedmont and Northern Railroad	NCDOT	Various locations	Install crossing sign/pavement marking.		Rail	Other	12	Gaston-Cleveland-Lincoln MPO	P-5200B											$0	COMPLETE
Gaston	Piedmont and Northern Railroad	NCDOT	Various locations	Rail track construction engineering oversight.		Rail	Other	12	Gaston-Cleveland-Lincoln MPO	P-5200C											$0	COMPLETE
Gaston	Piedmont and Northern Railroad	NCDOT	Belmont Spur.	Reactivate rail corridor.		Rail	Pre-STI (Historic)	12	Gaston-Cleveland-Lincoln MPO	P-5200D	Pre-STI (Transition)	BGANY	2025	$50,000			2025	$850,000			$900,000	
Gaston	SR 2412 (Little Mountain Road)	NCDOT	Norfolk Southern Crossing 729966J in Gastonia.	Construct safety improvements.		Rail	Rail-Highway Grade Crossing Improvement	12	Gaston-Cleveland-Lincoln MPO	RX-2012H	Division 12	RR					2027	$556,000			$556,000	
Gaston, Cleveland	I-85	NCDOT	South Carolina state line to NC 273.	Implement Intelligent Transportation System (ITS) Statewide Resilience, connected vehicle technology, and traveler information.	26.8	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	I-5719FD	Statewide Mobility	DP, T(M)					2025	$6,970,000			$6,970,000	DP REPRESENTS 2022 INFRA GRANT.
Gaston, Cleveland	I-85	NCDOT	Various locations.	Implement flood risk, vulnerability assessment, and flood warning system along the I-85 corridor.		Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	I-5719D	Statewide Mobility	DP, T(M)							2025	$200,000	$200,000	DP REPRESENTS 2022 INFRA GRANT.
Gaston, Cleveland	I-85	NCDOT	Various locations.	Install electric vehicle charging ports along the I-85 corridor.		Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	I-5719E	Statewide Mobility	DP, T(M)					2025	$560,000	2025	$140,000	$700,000	DP REPRESENTS 2022 INFRA GRANT.
Gaston, Cleveland, Lincoln	Various	NCDOT	Gaston Cleveland Lincoln Planning Organization (GCLMPO) area.	Unallocated Carbon Reduction Program funds.		Highway	Locally Selected	12	Gaston-Cleveland-Lincoln MPO	HL-0096	Exempt	CRPDA, L					2024	$1,540,000			$1,540,000	
Gaston, Cleveland, Lincoln	Various	NCDOT	Locations in Gaston-Cleveland-Lincoln MPO.	Improve congestion and air quality.		Highway	Other	12	Gaston-Cleveland-Lincoln MPO	C-5606	Exempt										$0	"HF" FUNDS ON SEGMENT I REPRESENT CONTIGENCY FUNDS
Gaston, Iredell, Catawba	Various	NCDOT	Routes in Division 12.	Install rumble stripes, guardrail, safety and lighting improvements.		Highway	Safety	12	Gaston-Cleveland-Lincoln MPO, Charlotte Regional TPO, Greater Hickory MPO	W-5212REG	Region F										$0	
Gaston, Mecklenburg	Piedmont and Northern Railroad	NCDOT	Gastonia and Mount Holly, including the Belmont Spur.	Reactivate rail corridor.		Rail	Other	10, 12	Gaston-Cleveland-Lincoln MPO, Charlotte Regional TPO	P-5200											$0	
Guilford, Davidson, Rowan, Alamance, Cabarrus, Orange, Wake, Durham, Mecklenburg, Randolph	Piedmont Corridor	NCDOT	-	Equip 9 stations and platforms with ADA/FRA Passenger Information Display Systems.		Rail	Other	5, 7, 8, 9, 10	Cabarrus-Rowan MPO, High Point Urban Area MPO, Triangle West TPO, Burlington-Graham MPO, Greensboro Urban Area MPO, Capital Area MPO, Charlotte Regional TPO	P-2918I											$0	IN PROGRESS
Guilford, Davidson, Rowan, Alamance, Cabarrus, Orange, Wake, Durham, Mecklenburg, Randolph	Piedmont Corridor	NCDOT	-	Passenger train security system, CCTV data network and generators.		Rail	Other	5, 7, 8, 9, 10	Cabarrus-Rowan MPO, High Point Urban Area MPO, Triangle West TPO, Burlington-Graham MPO, Greensboro Urban Area MPO, Capital Area MPO, Charlotte Regional TPO	P-2918E											$0	IN PROGRESS
Guilford, Davidson, Rowan, Alamance, Cabarrus, Orange, Wake, Durham, Mecklenburg, Randolph	Piedmont Corridor	NCDOT	-	Purchase 2 used locomotives.		Rail	Other	5, 7, 8, 9, 10	Cabarrus-Rowan MPO, High Point Urban Area MPO, Triangle West TPO, Burlington-Graham MPO, Greensboro Urban Area MPO, Capital Area MPO, Charlotte Regional TPO	P-2918B											$0	COMPLETE
Guilford, Davidson, Rowan, Alamance, Cabarrus, Orange, Wake, Durham, Mecklenburg, Randolph	Piedmont Corridor	NCDOT	-	Purchase 4 used passenger cars and rehabilitate 7 passenger cars.		Rail	Other	5, 7, 8, 9, 10	Cabarrus-Rowan MPO, High Point Urban Area MPO, Triangle West TPO, Burlington-Graham MPO, Greensboro Urban Area MPO, Capital Area MPO, Charlotte Regional TPO	P-2918G											$0	IN PROGRESS

BASIC PROJECT INFORMATION												FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Guilford, Davidson, Rowan, Alamance, Cabarrus, Orange, Wake, Durham, Mecklenburg, Randolph	Piedmont Corridor	NCDOT	-	Rebuild 2 F59PHI locomotives.		Rail	Other	5, 7, 8, 9, 10	Cabarrus-Rowan MPO, High Point Urban Area MPO, Triangle West TPO, Burlington-Graham MPO, Greensboro Urban Area MPO, Capital Area MPO, Charlotte Regional TPO	P-2918A											$0	IN PROGRESS
Guilford, Davidson, Rowan, Alamance, Cabarrus, Orange, Wake, Durham, Mecklenburg, Randolph	Piedmont Corridor	NCDOT	-	Rehabilitate equipment - 3 locomotives.		Rail	Other	5, 7, 8, 9, 10	Cabarrus-Rowan MPO, High Point Urban Area MPO, Triangle West TPO, Burlington-Graham MPO, Greensboro Urban Area MPO, Capital Area MPO, Charlotte Regional TPO	P-2918C											$0	IN PROGRESS
Guilford, Davidson, Rowan, Alamance, Cabarrus, Orange, Wake, Durham, Mecklenburg, Randolph	Piedmont Corridor	NCDOT	-	Rehabilitate equipment - 3 passenger cars.		Rail	Other	5, 7, 8, 9, 10	Cabarrus-Rowan MPO, High Point Urban Area MPO, Triangle West TPO, Burlington-Graham MPO, Greensboro Urban Area MPO, Capital Area MPO, Charlotte Regional TPO	P-2918D											$0	COMPLETE
Guilford, Davidson, Rowan, Alamance, Cabarrus, Orange, Wake, Durham, Mecklenburg, Randolph	Piedmont Corridor	NCDOT	Regionwide	Train 74 / 75 operations between Charlotte and Raleigh, equipment and capital yard maintenance facility.		Rail	Other	5, 7, 8, 9, 10	Cabarrus-Rowan MPO, High Point Urban Area MPO, Triangle West TPO, Burlington-Graham MPO, Greensboro Urban Area MPO, Capital Area MPO, Charlotte Regional TPO	P-2918	Exempt	CMAQ, HF(M)							2021	$61,393,000	$61,393,000	"HF" FUNDING REFLECTS STATE RAIL FUNDS
Guilford, Davidson, Rowan, Alamance, Cabarrus, Orange, Wake, Durham, Mecklenburg, Randolph	Piedmont Corridor	NCDOT	Regionwide	Purchase and refurbish rail cars for Piedmont Service expansion.		Rail	STI (Prioritization)	5, 7, 8, 9, 10	Cabarrus-Rowan MPO, High Point Urban Area MPO, Triangle West TPO, Burlington-Graham MPO, Greensboro Urban Area MPO, Capital Area MPO, Charlotte Regional TPO	P-5719											$0	"DP" FUNDING REFLECTS FEDERAL-STATE PARTNERSHIP FOR STATE OF GOOD REPAIR GRANT
Guilford, Wake, Mecklenburg	Piedmont Corridor	NCDOT	-	Acquire and rebuild two additional locomotives.		Rail	STI (Prioritization)	5, 7, 10	Greensboro Urban Area MPO, Capital Area MPO, Charlotte Regional TPO	P-5719A	Exempt										$0	COMPLETE
Guilford, Wake, Mecklenburg	Piedmont Corridor	NCDOT	-	Acquire and rebuild two coach and one lounge/baggage rail cars.		Rail	STI (Prioritization)	5, 7, 10	Greensboro Urban Area MPO, Capital Area MPO, Charlotte Regional TPO	P-5719B	Exempt										$0	IN PROGRESS
Iredell	SVH	STATESVILLE REGIONAL AIRPORT (SVH)	Statesville Regional Airport	Relocate East Aviation Drive to allow for future runway extension.		Aviation	STI (Prioritization)	12	Charlotte Regional TPO	AV-5896	Division 12	T	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$7,000,000			FUNDED FOR PRELIMINARY ENGINEERING ONLY	$4,700,000			$11,700,000	
Iredell	Bellingham Park Greenway	MOORESVILLE	Bellingham Park to SR 1142 (Johnson Dairy Road) in Mooresville	Extend greenway.		Bike & Ped	Locally Selected	12	Charlotte Regional TPO	EB-5787	Division 12	L, TADA					2023	$4,444,000			$4,444,000	UNDER CONSTRUCTION.
Iredell	Moore Avenue	MOORESVILLE	South Church Street to North Academy Street in Mooresville	Construct pedestrian improvements.	0.22	Bike & Ped	Locally Selected	12	Charlotte Regional TPO	BL-0013	Division 12	L, TAANY					2026	$1,990,000	2024	$10,000	$2,000,000	$1.2M IN STBG-DA FUNDS SWAPPED FOR $1.2M IN TAP-ANYAREA FUNDS ON 5-17-23.
Iredell	NC 115	MOORESVILLE	SR 1246 (Fairview Road) to SR 1135 (Waterlynn Road) in Mooresville	Construct multi-use path.	0.55	Bike & Ped	Locally Selected	12	Charlotte Regional TPO	BL-0082	Division 12	L, TAANY, TADA	2027	$700,000			2029	$3,829,000	2025	$344,000	$4,873,000	$2.078M IN TADA FUNDS SWITCHED WITH $2.078M IN TAANY FUNDS AS PART OF FUND SWAP 12-12-24.
Iredell	NC 152 (North Main Street)	MOORESVILLE	Glastonbury Drive to East Mooresville Intermediate School (EIMS) in Mooresville	Construct sidewalk and crossing.	0.1	Bike & Ped	Locally Selected	12	Charlotte Regional TPO	BL-0160	Division 12	BGDA, L(M)	2027	$666,000	2027	$10,000	2029	$599,000	2026	$290,000	$1,565,000	
Iredell	NC 152 (North Main Street)	MOORESVILLE	Pine Street to North Main Park in Hendersonville	Construct pedestrian improvements.	1.68	Bike & Ped	Locally Selected	12	Charlotte Regional TPO	BL-0009	Division 12	BGDA, L	2026	$617,000			2027	$729,000	2025	$138,000	$1,484,000	
Iredell	New Route	MOORESVILLE	South Elementary School to Mooresville Middle School in Mooresville	Construct greenway connectors.		Bike & Ped	Locally Selected	12	Charlotte Regional TPO	BL-0055	Division 12	L, TAANY					2026	$2,081,000	2025	$363,000	$2,444,000	$1.833M IN STBG-DA FUNDS SWAPPED FOR $1.833M IN TAP-ANYAREA FUNDS ON 5-17-23
Iredell	Patterson Heights	MOORESVILLE	West Moore Avenue to West Iredell Avenue in Mooresville	Construct greenway.		Bike & Ped	Locally Selected	12	Charlotte Regional TPO	BL-0122	Division 12	BGDA, L					2028	$3,148,000	2025	$10,000	$3,158,000	
Iredell	Richardson Greenway South, US 21 / NC 115 (South Main Street)	TROUTMAN	Troutman Elementary School to Jacobs Woods subdivision in Troutman	Construct greenway.		Bike & Ped	Locally Selected	12	Charlotte Regional TPO	EB-5932	Division 12	L, TADA	2026	$217,000			2027	$1,250,000	2021	$122,000	$1,589,000	
Iredell	Rumple Street; Wagner Street	TROUTMAN	US 21 / NC 115 to Thomas Street; US 21 / NC 115 to West Avenue in Troutman	Improve sidewalks.		Bike & Ped	Locally Selected	12	Charlotte Regional TPO	EB-5930	Division 12	L, TADA	2026	$199,000			2026	$1,623,000	2021	$312,000	$2,134,000	
Iredell	Shelton Avenue Multi-Use Path	STATESVILLE	Garner Bagnal Boulevard to SR 2342 (Amity Hill Road) in Statesville	Construct greenway.		Bike & Ped	Locally Selected	12	Charlotte Regional TPO	EB-5788	Division 12	BGDA, L	2023	$251,000							$251,000	RIGHT-OF-WAY IN PROGRESS
Iredell	SR 1306 (Rinehardt Road)	MOORESVILLE	Selma Burke Middle School (SMBS) to East Plaza Drive in Mooresville.	Construct sidewalk.	0.1	Bike & Ped	Locally Selected	12	Charlotte Regional TPO	BL-0159	Division 12	BGDA, L(M)	2027	$1,105,000	2027	$10,000	2029	$1,493,000	2026	$580,000	$3,188,000	
Iredell	SR 2162 (White Oak Road); Maple Avenue; McNeely Avenue; Rocky River School Road	MOORESVILLE	Various locations in Mooresville	Construct sidewalks.	0.69	Bike & Ped	Locally Selected	12	Charlotte Regional TPO	BL-0056	Division 12	BGDA, L	2027	$104,000			2029	$1,972,000	2024	$563,000	$2,639,000	
Iredell	US 21 (Turnersburg Highway)	STATESVILLE	Statesville Greenway - Gregory Creek Segment to Statesville Greenway - Fourth Creek Greenway Segment near Statesville.	Construct greenway connector under US 21.		Bike & Ped	Locally Selected	12	Charlotte Regional TPO	EB-5818	Division 12	BGDA, L, TAANY					2025	$3,060,000			$3,060,000	UNDER CONSTRUCTION. $1.2M IN STBG-DA FUNDS SWAPPED FOR $1.2M IN TAP-ANYAREA FUNDS ON 5-17-23
Iredell	Various	MOORESVILLE	SR 1148 (Kistler Farm Road); Briarcliff Road; Bellingham Drive; White Oak Road in Mooresville	Construct sidewalks.		Bike & Ped	Locally Selected	12	Charlotte Regional TPO	C-5531	Exempt	BGDA, L					2020	$801,000			$801,000	COMPLETE; ADDITIONAL FUNDING FOR CONSTRUCTION TO COVER ANTICIPATED EXPENDITURES.
Iredell	I-40	NCDOT	Bridges 480006 and 480007 over Catawba River.	Replace bridges.	0.25	Highway	Bridges	12	Charlotte Regional TPO	HB-0018	Statewide Mobility	BFP	2026	$710,000	2026	$660,000	2030	$59,900,000			$61,270,000	
Iredell	I-77	NCDOT	Bridges 480133 and 480128 over Third Creek.	Replace bridges.	0.25	Highway	Bridges	12	Charlotte Regional TPO	HB-0041	Statewide Mobility	BFP	2026	$370,000	2026	$320,000	2030	$23,900,000			$24,590,000	
Iredell	SR 1004 (Hudson Chapel Road)	NCDOT	Bridge 480081 over Catawba River.	Replace bridge.	0.25	Highway	Bridges	12	Charlotte Regional TPO	HB-0032	Division 12	BGOFF	2025	$1,000,000	2025	$10,000	2028	$20,400,000			$21,410,000	
Iredell	SR 1577 (Pisgah Ridge Circle)	NCDOT	Bridge 480131 over Unnamed Tributary to Snow Creek.	Replace bridge.	0.25	Highway	Bridges	12	Charlotte Regional TPO	BR-0107	Highway Fund	HFB					2022	$800,000			$800,000	COMPLETE. LEVERAGE PROJECT FOR GREATTER BUILD GRANT.
Iredell	SR 1595 (Coolbrook Road)	NCDOT	Bridge 480166 on SR 1595 over Rocky Creek.	Replace bridge.	0.25	Highway	Bridges	12	Charlotte Regional TPO	BR-0115	Division 12	DP, HFB	2020	$170,000			2021	$1,600,000			$1,770,000	COMPLETE. DP REPRESENT FEDERAL BUILD GRANT FUNDING
Iredell	SR 1601 (Branton Road)	NCDOT	Bridge 480165 on SR 1601 over Rocky Creek.	Replace bridge.	0.25	Highway	Bridges	12	Charlotte Regional TPO	BR-0114	Division 12	DP, HFB	2020	$150,000			2021	$1,150,000			$1,300,000	COMPLETE. DP REPRESENT FEDERAL BUILD GRANT FUNDING
Iredell	SR 1639 (Meacham Road)	NCDOT	Bridge 480118 over I-40.	Replace bridge.	0.25	Highway	Bridges	12	Charlotte Regional TPO	BR-0025	Division 12	BFP	2029	$80,000	2029	$10,000	2031	$4,200,000			$4,290,000	
Iredell	SR 1892 (Jennings Road)	NCDOT	Bridge 480189 over South Yadkin River.	Replace bridge.	0.25	Highway	Bridges	12	Charlotte Regional TPO	B-5846	Division 12	BGOFF	2022	$85,000	2022	$325,000	2023	$5,495,000			$5,905,000	UNDER CONSTRUCTION.
Iredell	SR 1892 (Jennings Road)	NCDOT	Bridge 480212 over Patterson Creek.	Replace bridge.	0.25	Highway	Bridges	12	Charlotte Regional TPO	BR-0202	Highway Fund	HFB					2021	$1,250,000			$1,250,000	THIS PROJECT REPRESENTS HFB PROJECT NUMBER 17BP.12.R.49
Iredell	SR 1892 (Jennings Road)	NCDOT	Bridge 480219 over Olin Creek.	Replace bridge.	0.25	Highway	Bridges	12	Charlotte Regional TPO	BR-0204	Highway Fund	HFB					2021	$900,000			$900,000	THIS PROJECT REPRESENTS HFB PROJECT NUMBER 17BP.12.R.51
Iredell	SR 1896 (Friendship Road)	NCDOT	Bridge 480214 over Patterson Creek	Replace bridge.	0.25	Highway	Bridges	12	Charlotte Regional TPO	BR-0203	Highway Fund	HFB					2021	$1,000,000			$1,000,000	THIS PROJECT REPRESENTS HFB PROJECT NUMBER 17BP.12.R.50

BASIC PROJECT INFORMATION												FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Iredell	SR 2402 (Hoover Road)	NCDOT	Bridge 480020 over I-L Creek.	Replace bridge.	0.25	Highway	Bridges	12	Charlotte Regional TPO	B-5843	Division 12	BGOFF	2028	$67,000			2030	$1,500,000			$1,567,000	
Iredell	I-40	NCDOT	SR 2158 (Old Mocksville Road) to Davie County line.	Rehabilitate pavement.	8.26	Highway	Interstate Maintenance	12	Charlotte Regional TPO	I-5805	Statewide Mobility	NHFP, NHPIM					2030	$70,500,000			$70,500,000	
Iredell	I-77	NCDOT	Mile marker 36.5 to mile marker 50.0.	Rehabilitate pavement.	13.55	Highway	Interstate Maintenance	12	Charlotte Regional TPO	I-5918	Statewide Mobility	NHFP, NHPIM, PROTCT					2024	$30,201,000			$30,201,000	
Iredell	I-77	NCDOT	Mile marker 52.6 to mile marker 56.8.	Rehabilitate pavement.	3.1	Highway	Interstate Maintenance	12	Charlotte Regional TPO	I-5919	Statewide Mobility	NHFP, NHPIM					2025	$8,773,000			$8,773,000	
Iredell	I-77	NCDOT	Mile marker 58.4 to Yadkin County line.	Rehabilitate pavement.	10.41	Highway	Interstate Maintenance	12	Charlotte Regional TPO	I-5920	Statewide Mobility	NHFP, NHPIM					2028	$19,276,000			$19,276,000	
Iredell	Langtree Road	MOORESVILLE	Pin Oak Lane to Mount Mourne Loop.	Widen roadway.	1.21	Highway	Locally Selected	12	Charlotte Regional TPO	HL-0114	Division 12	L, T(DA)							2024	$1,091,000	$1,091,000	$873K IN STBG-DA FUNDS SWAPPED FOR $873K IN STATE FUNDS ON 5-17-23
Iredell	NC 115	MOORESVILLE	Faith Road / Campus Lane intersection in Mooresville.	Realign Faith Road to tie into existing NC 115 / Campus Lane intersection. Construct dedicated turn lanes on Faith Road and Campus Lane at intersection.	0.5	Highway	Locally Selected	12	Charlotte Regional TPO	C-5529	Exempt	BGDA, L					2023	$1,128,000	2023	$259,000	$1,387,000	UNDER CONSTRUCTION
Iredell	NC 115	MOORESVILLE	NC 150 intersection in Mooresville.	Construct southbound right turn lane on NC 115 and westbound shared through-right lane on NC 150.		Highway	Locally Selected	12	Charlotte Regional TPO	C-5200	Exempt	BGDA, L					2020	$1,514,000			$1,514,000	COMPLETE. STBG-DA FUNDS ARE EXEMPT SINCE THEY ARE BEING USED ON AN ELIGIBLE REGIONAL IMPACT PROJECT. ADDITIONAL FUNDING FOR CONSTRUCTION TO COVER ANTICIPATED EXPENDITURES.
Iredell	NC 115	MOORESVILLE	SR 1102 (Langtree Road) intersection near Mooresville.	Construct intersection improvements.	0.5	Highway	Locally Selected	12	Charlotte Regional TPO	U-6249	Exempt	BGDA, L, L(M), T(DA)	2026	$500,000			2028	$4,006,000	2021	$560,000	$5,066,000	STBG-DA FUNDS ARE EXEMPT SINCE THEY ARE BEING USED ON AN ELIGIBLE REGIONAL IMPACT PROJECT. $3.605M IN STBG-DA FUNDS SWAPPED FOR $3.605M IN STATE FUNDS ON 5-17-23
Iredell	NC 801	MOORESVILLE	NC 150 intersection in Mooresville.	Construct intersection improvements.	0.5	Highway	Locally Selected	12	Charlotte Regional TPO	C-5701	Region F	BA, BGDA, CMAQ, L	2020	$324,000			2020	$3,236,000			$3,560,000	COMPLETE. STBG-DA FUNDS ARE EXEMPT SINCE THEY ARE BEING USED ON AN ELIGIBLE REGIONAL IMPACT PROJECT. ADDITIONAL FUNDING FOR RIGHT-OF-WAY TO COVER ANTICIPATED EXPENDITURES. $2.168M IN STBG-DA SWITCHED FOR CMAQ AS PART OF I-77 PPSL FUND SWAP.
Iredell	New Route	MOORESVILLE	Langtree Road to NC 115 (Mecklenburg Highway)	Construct roadway.	0.84	Highway	Locally Selected	12	Charlotte Regional TPO	U-6239	Division 12	BGDA, DP, L	2022	$6,149,000			2023	$28,492,000	2021	$525,000	$35,166,000	UNDER CONSTRUCTION. DP REPRESENTS FEDERAL 2019 BUILD GRANT FUNDS AWARDED TO THE TOWN OF MOORRSVILLE.
Iredell	New Route	STATESVILLE	Brookdale Drive to US 21.	Construct roadway.	0.09	Highway	Locally Selected	12	Charlotte Regional TPO	U-6054	Division 12	BGANY, BGDA, L	2025	$1,540,000			2026	$2,218,000	2020	$326,000	$4,084,000	ADDITIONAL FUNDING FOR PRELIMINARY ENGINEERING TO COVER ANTICIPATED EXPENDITURES; $1.975M IN BGANY USED AS PART OF FUND SWAP. RIGHT-OF-WAY IN PROGRESS.
Iredell	SR 1363 (Bethlehem Road)	STATESVILLE	Aviation Drive to Bethlehem Road.	Relocate roadway adjacent to Statesville Regional Airport.	0.76	Highway	Locally Selected	12	Charlotte Regional TPO	U-6153	Division 12	BA, O, T					2029	$4,648,000			$4,648,000	OTHER FUNDS PROVIDED BY THE CITY OF STATESVILLE. STATE TRUST FUNDS ALLOCATED DUE TO FUNDING SWAP WITH U-5816 FOR BA FUNDS. $2.098M IS MAXIMUM STATE TRUST FUNDS ALLOCATED TO THE PROJECT.
Iredell	US 21 / NC 115 (Main Street)	TROUTMAN	Murdock Road / Old Mountain Road intersection in Troutman.	Construct intersection improvements.	0.5	Highway	Locally Selected	12	Charlotte Regional TPO	HL-0134	Region F	BGANY, L	2027	$1,582,000			2029	$3,295,000	2025	$580,000	$5,457,000	$3.547M IN BGDA FUNDS SWITCHED WITH $3.547M IN BGANY FUNDS AS PART OF FUND SWAP 12-12-24.
Iredell	Various	NCDOT	Routes in Division 12.	Perform various maintenance activities including resurfacing and pavement restriping.		Highway	Locally Selected	12	Charlotte Regional TPO	HL-0037	Division 12	BGDACV					2023	$975,000			$975,000	
Iredell	I-40	NCDOT	I-77 interchange in Statesville.	Construct interchange improvements.	1	Highway	Pre-STI (Historic)	12	Charlotte Regional TPO	I-3819A	Pre-STI (Transition)	NHP					2012	$4,388,000			$4,388,000	COMPLETE. SEE PARENT PROJECT FOR GARVEE DETAILS.
Iredell	I-77	NCDOT	Mile marker 57.83 to mile marker 61.74.	Rehabilitate pavement.	3.9	Highway	Pre-STI (Historic)	12	Charlotte Regional TPO	I-5106	Pre-STI (Transition)	NHP					2009	$439,000			$439,000	COMPLETE - GARVEE BOND FUNDING: $4M FOR CONSTRUCTION, PAYBACK FY 2009-2020
Iredell	SR 1100 (Brawley School Road)	NCDOT	SR 1109 (Centre Church Road) to I-77	Widen to multi-lanes.	1.1	Highway	Pre-STI (Historic)	12	Charlotte Regional TPO	R-3833B											$0	COMPLETE
Iredell	SR 1100 (Brawley School Road)	NCDOT	SR 1177 (Chuckwood Road) to SR 1109 (Centre Church Road).	Widen to multi-lanes.	3.9	Highway	Pre-STI (Historic)	12	Charlotte Regional TPO	R-3833A											$0	COMPLETE
Iredell	NC 150	NCDOT	Mile marker 11.4 to mile marker 11.9.	Install centerline and shoulder rumble stripes.		Highway	Safety	12	Charlotte Regional TPO	HS-2012K	Region F	HSIP					2024	$25,000			$25,000	
Iredell	NC 150	NCDOT	NC 152 (western intersection) in Mooresville.	Install rumble stripes, guardrail, safety and lighting improvements.	0.5	Highway	Safety	12	Charlotte Regional TPO	W-5601U	Region F	HF, HSIP	2022	$472,000			2025	$1,965,000			$2,437,000	RIGHT-OF-WAY IN PROGRESS.
Iredell	SR 1125 (Shearers Road)	NCDOT	SR 1147 (Rocky River Road) intersection near Mooresville.	Install traffic signal.	0.5	Highway	Safety	12	Charlotte Regional TPO	HS-2012C	Division 12	HSIP					2023	$205,000	2022	$20,000	$225,000	UNDER CONSTRUCTION.
Iredell	SR 1303 (Perth Road)	NCDOT	SR 1302 (Cornelius Road) intersection near Mooresville.	Install signal and turn lanes.	0.5	Highway	Safety	12	Charlotte Regional TPO	W-5212JB	Division 12	BGANY, HF(M)	2022	$125,000			2023	$1,091,000			$1,216,000	UNDER CONSTRUCTION. $460K IN BGANY USED AS PART OF FUND SWAP.
Iredell	SR 1303 (Perth Road)	NCDOT	SR 1378 (Judas Road) intersection near Mooresville.	Install signal.	0.5	Highway	Safety	12	Charlotte Regional TPO	W-5212JA	Division 12	BGANY, BGDA, HF(M)	2020	$25,000			2022	$125,000			$150,000	$62K IN BGANY USED AS PART OF FUND SWAP. UNDER CONSTRUCTION.
Iredell	I-40	NCDOT	I-77 interchange in Statesville.	Construct interchange improvements.	1	Highway	STI (Prioritization)	12	Charlotte Regional TPO	I-3819											$0	GARVEE BOND FUNDING - SEGMENT A: $10M FOR CONSTRUCTION, PAYBACK FY 2012-2023
Iredell	I-40	NCDOT	I-77 interchange in Statesville.	Construct interchange improvements.	1	Highway	STI (Prioritization)	12	Charlotte Regional TPO	I-3819B	Statewide Mobility	T					2019	$360,365,000			$360,365,000	UNDER CONSTRUCTION; BUILD NC BOND FUNDING: $110.79M FOR CONSTRUCTION, PAYBACK FY 2021-2035 (FY 2021 / YR 2&3 SALE)
Iredell	I-77	NCDOT	SR 1302 (Cornelius Road).	Upgrade grade separation to an interchange.	1	Highway	STI (Prioritization)	12	Charlotte Regional TPO	I-5962	Statewide Mobility	NHP, O	2028	$7,000,000	2028	$630,000	2031	$61,200,000			$68,830,000	OTHER FUNDS PROVIDED BY TOWN OF MOORESVILLE
Iredell	NC 150	NCDOT	Good Luck Lane to Morrison Plantation Parkway in Mooresville.	Extend eastbound right and through lane.	0.28	Highway	STI (Prioritization)	12	Charlotte Regional TPO	R-2307BA	Region F	T					2023	$1,600,000			$1,600,000	UNDER CONSTRUCTION.
Iredell	NC 150	NCDOT	SR 2399 (Wiggins Road) intersection in Mooresville.	Realign intersection.	0.5	Highway	STI (Prioritization)	12	Charlotte Regional TPO	U-5780	Region F	T	2019	$605,000	2025	$865,000	2025	$4,520,000			$5,990,000	RIGHT-OF-WAY IN PROGRESS. PROJECT TO BE LET WITH W-5601U.
Iredell	SR 1100 (Brawley School Road)	NCDOT	I-77 to US 21 in Mooresville	Widen to multi-lanes.	1	Highway	STI (Prioritization)	12	Charlotte Regional TPO	R-3833C	Division 12	L, T	2019	$5,610,000	2019	$1,950,000	2024	$43,837,000			$51,397,000	RIGHT-OF-WAY IN PROGRESS. BUILD NC BOND FUNDING $15,000,000 FOR CON, PAYBACK FY 2025-2039 (FY 2025 / YR 5 SALE); $890,000 CONTRIBUTION FROM TOWN OF MOORESVILLE.
Iredell	SR 1100 (Brawley School Road)	NCDOT	SR 1177 (Chuckwood Road) to US 21 in Mooresville.	Widen to multi-lanes with interchange at I-77.	5.9	Highway	STI (Prioritization)	12	Charlotte Regional TPO	R-3833											$0	$890,000 CONTRIBUTION FROM TOWN OF MOORESVILLE.
Iredell	SR 1109 (Williamson Road)	NCDOT	I-77 to NC 150 in Mooresville.	Widen to four lanes.	3.2	Highway	STI (Prioritization)	12	Charlotte Regional TPO	R-5100											$0	COORDINATE WITH U-5817.

2026-2035 STATE TRANSPORTATION IMPROVEMENT PROGRAM (BOT adoption anticipated July 2025)

June 2025

BASIC PROJECT INFORMATION													FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Iredell	SR 1109 (Williamson Road)	NCDOT	I-77 to SR 1100 (Brawley School Road) in Mooresville.	Widen to four lanes.	2.35	Highway	STI (Prioritization)	12	Charlotte Regional TPO	R-5100A	Division 12	T	2020	$11,700,000	2022	$5,300,000	2027	$69,405,000	2020	$600,000	$87,005,000	RIGHT-OF-WAY IN PROGRESS; BUILD NC BOND FUNDING: $466,370 PE, PAYBACK FY 20-34 (FY 19/YR 1 SALE); $142,461 ROW, PAYBACK FY 20-34 (FY 19/YR 1 SALE); $3M ROW, PAYBACK FY 22-36 (FY 22/YR 4 SALE); $10M CON PAYBACK FY 28-42 (FY 28/YR 8 SALE).
Iredell	SR 1109 (Williamson Road)	NCDOT	SR 1100 (Brawley School Road) to NC 150 in Mooresville.	Widen to four lanes.	0.87	Highway	STI (Prioritization)	12	Charlotte Regional TPO	R-5100B	Division 12	BGANY, T	2019	$9,515,000	2022	$1,300,000	2026	$9,600,000			$20,415,000	RIGHT-OF-WAY IN PROGRESS; BUILD NC BOND FUNDING: $347,148 FOR ROW, PAYBACK FY 2020-2034 (FY 2019/YR 1 SALE); $2M FOR ROW, PAYBACK FY 2022-2036 (FY 2022/YR 4 SALE).
Iredell	SR 1246 (Fairview Road)	NCDOT	Existing SR 1246 (Fairview Road) to SR 1206 (Alcove Road).	Extend roadway over I-77 and construct parallel north-south connector roads to SR 1109 (Williamson Road).	0.11	Highway	STI (Prioritization)	12	Charlotte Regional TPO	U-5817	Division 12	BA, BGANY, BGDA	2019	$5,800,000	2019	$1,900,000	2027	$25,200,000			$32,900,000	RIGHT-OF-WAY IN PROGRESS. COORDINATE WITH R-5100.
Iredell	SR 1305 (Oates Road / Midnight Lane)	NCDOT	US 21 (Charlotte Highway) to SR 1474 (Bluefield Road) in Mooresville.	Widen to three lanes with overpass over I-77.	1.56	Highway	STI (Prioritization)	12	Charlotte Regional TPO	U-5816	Division 12	T	2026	$22,800,000	2026	$3,200,000	2029	$52,805,000			$78,805,000	NC BUILD BONDS: $16M ON CONSTRUCTION PAYBACK 2030-2044 (SALE 10 / FY 2030).
Iredell	SR 2321 (East Broad Street)	NCDOT	Vine Street to SR 2422 (Signal Hill Drive).	Upgrade roadway and implement access management solutions.	0.68	Highway	STI (Prioritization)	12	Charlotte Regional TPO	U-6039	Division 12	T					2019	$5,350,000			$5,350,000	UNDER CONSTRUCTION. DESIGN-BUILD PROJECT - TO BE LET WITH I-3819 B
Iredell	US 21	NCDOT	SR 1933 (Pump Station Road) to SR 1930 (Fort Dobbs Road) in Statesville.	Widen to four lanes. Realign offset intersections of SR 1922 (Shumaker Drive) and SR 2171 (Jane Sowers Road).	0.81	Highway	STI (Prioritization)	12	Charlotte Regional TPO	U-5799	Region F	T	2020	$22,360,000	2023	$4,000,000	2031	$29,400,000	2020	$2,265,000	$58,025,000	RIGHT-OF-WAY IN PROGRESS. BUILD NC BOND FUNDING: $1.757M FOR PE, PAYBACK 2020-2034 (FY 2019 / YR 1 SALE); $42,703 FOR ROW, PAYBACK FY 2020-2034 (FY 2019 / YR 1 SALE)
Iredell	US 21	NCDOT	SR 2375 (Houston Road) / SR 1312 (Flower House Road) intersection in Troutman.	Realign and signalize intersection.	0.5	Highway	STI (Prioritization)	12	Charlotte Regional TPO	R-5711	Region F	T	2024	$100,000			2026	$2,950,000			$3,050,000	RIGHT-OF-WAY IN PROGRESS
Iredell	US 21 (Charlotte Highway)	NCDOT	NC 150 (Plaza Drive) to SR 1245 (Medical Park Road).	Widen to four lanes divided.	2.64	Highway	STI (Prioritization)	12	Charlotte Regional TPO	U-6037	Division 12	T	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$39,900,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$2,500,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$77,000,000			$119,400,000	
Iredell	US 64 (Davie Avenue)	NCDOT	US 21 (Sullivan Road) intersection in Statesville.	Upgrade 5-approach intersection to a single lane roundabout.	0.5	Highway	STI (Prioritization)	12	Charlotte Regional TPO	U-5964	Region F	T	2024	$3,800,000	2024	$700,000	2026	$3,299,000			$7,799,000	
Iredell	SR 1302 (Perth Road)	NCDOT	SR 1378 (Judas Road) and SR 1302 (Cornelius Road) intersections near Mooresville.	Construct intersection improvements.	0.5	Highway	Transition	12	Charlotte Regional TPO	W-5212J	Division 12	BGANY, HF(M)							2020	$356,000	$356,000	$178K IN BGANY USED AS PART OF FUND SWAP.
Iredell	Iredell County Area Transportation System (ICATS)	IREDELL COUNTY	Systemwide	Funding for operating assistance.		Public Transportation (Transit)	Miscellaneous/Other	12	Charlotte Regional TPO	TO-5149	Public Transit	5307, L							2020	$687,000	$687,000	FUNDS AUTHORIZED IN PROGRESS
Iredell	Iredell County Area Transportation System (ICATS)	IREDELL COUNTY	Systemwide	Funding for operations for FY 20-21.		Public Transportation (Transit)	Miscellaneous/Other	12	Charlotte Regional TPO	TO-6158	Public Transit	5307, 5316, L, L(M)					2026	$500,000	2020	$5,572,000	$6,072,000	ADDING FUNDS FOR FFY2020
Iredell	Iredell County Area Transportation System (ICATS)	IREDELL COUNTY	Systemwide	Funding for agency administration.		Public Transportation (Transit)	Operations and Maintenance	12	Charlotte Regional TPO	TK-6179	Public Transit	5311							2020	$1,040,000	$1,040,000	FUNDS AUTHORIZED IN PROGRESS
Iredell	SR 2395 (Mazeppa Road)	NCDOT	NC 115 intersection in Mooresville.	Construct grade separation over Norfolk Southern railroad and NC 115.	0.3	Rail	Locally Selected	12	Charlotte Regional TPO	RL-0001	Region F	BGDA, DP, L	2025	$320,000			2026	$12,633,000			$12,953,000	DP REPRESENTS FEDERAL CRISI GRANT FUNDS. STBG-DA FUNDS ARE EXEMPT SINCE THE PROJECT IS AN ELIGIBLE STATEWIDE MOBILITY PROJECT.
Iredell	Opal Street	NCDOT	Norfolk Southern Crossing 729684T in Statesville.	Construct safety improvements.		Rail	Rail-Highway Grade Crossing Improvement	12	Charlotte Regional TPO	RX-2012D	Division 12	RR					2025	$474,000			$474,000	
Iredell	SR 1639 (Meacham Road)	NCDOT	ARC Crossing 865740U in Statesville.	Construct highway-rail grade crossing safety improvements.	0.5	Rail	Rail-Highway Grade Crossing Improvement	12	Greater Hickory MPO	RX-2412A	Division 12	RR					2026	$400,000			$400,000	
Iredell	Wall Street	NCDOT	Norfolk Southern Crossing 729686G in Statesville.	Construct safety improvements.		Rail	Rail-Highway Grade Crossing Improvement	12	Charlotte Regional TPO	RX-2012B	Division 12	RR					2025	$474,000			$474,000	
Iredell, Catawba	I-40	NCDOT	Mile marker 130.7 to mile marker 150.2.	Rehabilitate bridge.		Highway	Interstate Maintenance	12	Charlotte Regional TPO, Greater Hickory MPO	I-5915B	Statewide Mobility	BGDA, NHPIM, T(M)					2023	$11,840,000			$11,840,000	$7.319M IN NHPIM FUNDS SWITCHED WITH $7.319M IN BGDA AS PART OF FUND SWAP. UNDER CONSTRUCTION.
Iredell, Catawba	I-40	NCDOT	Mile marker 130.7 to mile marker 150.2.	Rehabilitate pavement and bridge.	19.5	Highway	Interstate Maintenance	12	Charlotte Regional TPO, Greater Hickory MPO	I-5915											$0	
Iredell, Catawba	I-40	NCDOT	Mile marker 130.7 to mile marker 150.2.	Rehabilitate pavement.	32.62	Highway	Interstate Maintenance	12	Charlotte Regional TPO, Greater Hickory MPO	I-5915A	Statewide Mobility										$0	COMPLETE
Iredell, Catawba	Various	NCDOT	Routes in Division 12.	Install rumble stripes, guardrail, safety and lighting improvements.		Highway	Safety	12	Charlotte Regional TPO, Greater Hickory MPO	W-5212DIV	Division 12	HSIP	2020	$50,000			2020	$2,500,000			$2,550,000	IN PROGRESS.
Iredell, Catawba	NC 150	NCDOT	SR 1840 (Greenwood Road) in Catawba County to west of SR 1303 / SR 1180 (Perth Road / Doolie Road) in Iredell County; SR 1383 / SR 1180 to US 21 in Iredell County	Widen to four lanes; Widen to six lanes.	6.9	Highway	STI (Prioritization)	12	Charlotte Regional TPO, Greater Hickory MPO	R-2307B	Region F	T					2025	$311,017,000			$311,017,000	RIGHT-OF-WAY IN PROGRESS. CONSTRUCTION FUNDED WITH TOLL CREDITS. BUILD NC BONDS: $50M FOR CONSTRUCTION, PAYBACK FY 2027-2041 (FY 2027 / YR 7 SALE); $22.5M FOR CONSTRUCTION, PAYBACK FY 2029-2043 (FY 2029 / YR 9 SALE)
Iredell, Mecklenburg	I-77	NCDOT	SR 5544 (West Catawba Avenue) Exit 28 to NC 150.	Construct one additional lane in each direction.		Highway	STI (Prioritization)	10, 12	Charlotte Regional TPO	I-4750AB	Not Funded	NHP	NOT FUNDED	$10,500,000	NOT FUNDED	$675,000	NOT FUNDED	$133,000,000	NOT FUNDED		$144,175,000	
Iredell, Mecklenburg	I-77	NCDOT	SR 5544 (West Catawba Avenue) Exit 28 to NC 150.	Widen and reconstruct roadway.	23	Highway	STI (Prioritization)	10, 12	Charlotte Regional TPO	I-4750											$0	FUNDING FOR I-4750 AA INCLUDED IN I-5405
Iredell, Mecklenburg	I-77	NCDOT	SR 5544 (West Catawba Avenue) to NC 150.	Construct high occupancy/toll (hot) lanes.	7.79	Highway	Transition	10, 12	Charlotte Regional TPO	I-4750AA											$0	COMPLETE - UNDER CONSTRUCTION WITH PROJECT I-5405
Lenoir, Wilson, Rowan, Davidson, Richmond, Robeson, Granville, Halifax, Johnston, Vance, Beaufort, Chatham	Various		Locations in 15 municipalities in Divisions 2, 4, 5, 6, 8, and 9	Construct pedestrian countdown signal heads, crosswalks and accessible routes at signalized intersections.		Bike & Ped	Other	2, 4, 5, 6, 8, 9	Lumber River RPO, Upper Coastal Plain RPO, Kerr-Tar RPO, Peanut Belt RPO, Cabarrus-Rowan MPO, Central Pines RPO, Eastern Carolina RPO, High Point Urban Area MPO, Mid-East RPO	BO-2419	Division 2, 4, 5, 6, 8, 9	DP, HF, HSIP	2025	$122,000	2025	$122,000	2025	$10,647,000	2024	$1,409,000	$12,300,000	WALK NC - CREATING SAFER CROSSINGS. DP FUNDS REPRESENT FEDERAL RAISE GRANT FUNDS. "HF" FUNDS REPRESENT SPOT SAFETY PROGRAM FUNDS.
Lincoln	IPJ	LINCOLNTON-LINCOLN COUNTY AIRPORT (IPJ)	Lincolnton-Lincoln County Airport	Acquire land for Runway 5 approach.		Aviation	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	AV-5755	Division 12	T	2024	$176,000							$176,000	
Lincoln	IPJ	LINCOLNTON-LINCOLN COUNTY AIRPORT (IPJ)	Lincolnton-Lincoln County Airport	Remove obstructions on Runway 5 approach.		Aviation	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	AV-5753	Division 12	T	2024	$295,000							$295,000	
Lincoln	NC 27	LINCOLNTON	Locations along NC 27 in Lincolnton	Construct sidewalks in gaps.	0.09	Bike & Ped	Locally Selected	12	Gaston-Cleveland-Lincoln MPO	C-5606I	Exempt	CMAQ, HF, L(M)					2024	$700,000			$700,000	UNDER CONSTRUCTION. CMAQ AWARD AMOUNT IS $158,000.
Lincoln	SR 1003 (Buffalo Shoals Road)	NCDOT	SR 1343 (Ivey Church Road).	Construct safety improvements.	0.5	Highway	Safety	12	Gaston-Cleveland-Lincoln MPO	W-5712R	Division 12	HSIP	2024	$42,000	2024	$5,000	2025	$610,000			$657,000	
Lincoln	SR 1360 (Beth Haven Church Road)	NCDOT	SR 1373 (Wingate Hill Road / Forney Hill Road) intersection near Denver.	Install all-way stop, upgrade signs and pavement markings, and improve shoulders.	0.5	Highway	Safety	12	Gaston-Cleveland-Lincoln MPO	HS-2012F	Division 12	HSIP					2023	$25,000			$25,000	UNDER CONSTRUCTION.

BASIC PROJECT INFORMATION													FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Lincoln	NC 16 Business	NCDOT	SR 1373 (Campground Road) and SR 1386 (Will Proctor Road) intersections.	Realign intersections.	0.5	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	U-5962	Region F	O, T	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$16,000,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$2,700,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$16,799,000			$35,499,000	OTHER FUNDING PROVIDED BY LINCOLN COUNTY
Lincoln	NC 16 Business	NCDOT	SR 1439 (Unity Church Road) / SR 1387 (Triangle Circle) intersection near Denver.	Construct turn lanes.	0.5	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	R-5712	Region F	T			2025	$1,200,000	2025	$4,500,000			$5,700,000	UNDER CONSTRUCTION.
Lincoln	NC 16 Bypass	NCDOT	SR 1380 (Optimist Club Road) intersection near Denver.	Upgrade at-grade intersection to interchange.	1	Highway	STI (Prioritization)	12	Gaston-Cleveland-Lincoln MPO	U-6134	Region F	BGLT5	2024	$500,000	2024	$100,000	2031	$46,800,000			$47,400,000	
Lincoln	Lincoln County Transit	LINCOLN COUNTY	Systemwide	Funding for agency administration.		Public Transportation (Transit)	Operations and Maintenance	12	Eastern Carolina RPO	TK-6141	Public Transit	5311, L, S							2020	$876,000	$876,000	FUNDS AUTHORIZED IN PROGRESS
Lincoln, Cleveland, Gaston	Various	NCDOT	Secondary routes in Division 12.	Install long life pavement markings.		Highway	Safety	12	Gaston-Cleveland-Lincoln MPO	HS-2012E	Division 12	HSIP					2023	$2,675,000			$2,675,000	UNDER CONSTRUCTION.
Lincoln, Mecklenburg	NC 73	NCDOT	NC 16 to Vance Road Extension / Beatties Ford Road in Huntersville.	Widen to multi-lanes.	5.57	Highway	STI (Prioritization)	10, 12	Gaston-Cleveland-Lincoln MPO, Charlotte Regional TPO	R-5721A	Region E, F	T	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$69,900,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$9,300,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$189,600,000			$268,800,000	
Mecklenburg	CLT	CHARLOTTE DOUGLAS INTERNATIONAL AIRPORT	Charlotte Douglas International Airport	Construct end around taxiway on west side of proposed fourth parallel runway.		Aviation	STI (Prioritization)	10	Charlotte Regional TPO	AP-0001	Statewide Mobility	T					2029	$2,000,000			$2,000,000	
Mecklenburg	CLT	CHARLOTTE DOUGLAS INTERNATIONAL AIRPORT (CLT)	Charlotte Douglas International Airport	Construct fourth parallel runway.		Aviation	STI (Prioritization)	10	Charlotte Regional TPO	AV-5879	Statewide Mobility	O, T					2025	$609,000,000			$609,000,000	OTHER FUNDING PROVIDED BY CHARLOTTE DOUGLAS INTERNATIONAL AIRPORT
Mecklenburg	CLT	CHARLOTTE DOUGLAS INTERNATIONAL AIRPORT (CLT)	Charlotte Douglas International Airport	Expand west ramp near Concourse A.		Aviation	STI (Prioritization)	10	Charlotte Regional TPO	AV-5881	Statewide Mobility	O, T					2021	$40,100,000			$40,100,000	COMPLETE. OTHER FUNDING PROVIDED BY CHARLOTTE DOUGLAS INTERNATIONAL AIRPORT
Mecklenburg	Albemarle Road; Wilora Lake Road	CHARLOTTE	Redman Road to Nevin Road in Charlotte; Albemarle Road to 100 feet north of Barr Drive in Charlotte	Construct sidewalk; Construct sidewalk and pedestrian improvements at various intersections.	0.93	Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0084	Division 10	L, TADA					2027	$3,182,000	2025	$10,000	$3,192,000	
Mecklenburg	Beaty Street	DAVIDSON	NC 115 (North Main Street) to SR 2158 (Griffith Street) in Davidson	Construct shared use path.		Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0096	Division 10	L, TADA	2026	$601,000			2028	$2,561,000	2024	$330,000	$3,492,000	
Mecklenburg	Davidson-Concord Road	DAVIDSON	South Prong Rocky River Greenway to Davidson Place Drive in Davidson.	Construct side path.	0.1	Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0161	Division 10	BGDA, L(M)	2028	$473,000	2028	$10,000	2030	$1,880,000	2027	$440,000	$2,803,000	
Mecklenburg	Four Mile Creek Greenway	MATTHEWS	SR 3448 (South Trade Street) in Matthews	Construct greenway crossing under roadway.		Bike & Ped	Locally Selected	10	Charlotte Regional TPO	EB-5829	Division 10	L, TADA					2022	$2,899,000			$2,899,000	UNDER CONSTRUCTION.
Mecklenburg	Hornets Nest Park	CHARLOTTE	SR 2025 (Oakdale Road / Miranda Road) to Kiev Drive in Charlotte.	Construct sidewalks on the north side.	2.83	Bike & Ped	Locally Selected	10	Charlotte Regional TPO	EB-6036	Division 10	BGDA, L					2025	$3,158,000			$3,158,000	
Mecklenburg	Huntersville	HUNTERSVILLE	US 21 in Huntersville.	Construct greenway culvert under roadway.	0.21	Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0080	Division 10	L, TADA					2025	$3,240,000	2024	$10,000	$3,250,000	
Mecklenburg	Irwin Creek Greenway	MECKLENBURG COUNTY	Clanton Road to Lester Street in Charlotte	Construct greenway.	1.3	Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0057	Division 10	BGDA, CMAQ, L					2030	$6,081,000	2024	$10,000	$6,091,000	$483K IN STBG-DA SWITCHED WITH $483K IN CMAQ FUNDS FOR CON AS PART OF FUND SWAP 8-9-22.
Mecklenburg	Kincaid Multi-Use Path	DAVIDSON	Eugenia Street and Spring Street to South Prong Rocky River Greenway near Davidson Elementary in Davidson	Construct multi-use path.		Bike & Ped	Locally Selected	10	Charlotte Regional TPO	EB-5933	Division 10	L, TAANY					2025	$878,000	2024	$219,000	$1,097,000	$702K IN STBG-DA FUNDS SWAPPED FOR $702K IN TAP-ANYAREA FUNDS ON 5-17-23
Mecklenburg	McDowell Creek Greenway	CORNELIUS	Magnolia Plaza to SR 2147 (Westmoreland Road) in Cornelius	Construct greenway.		Bike & Ped	Locally Selected	10	Charlotte Regional TPO	EB-5817	Division 10	BGDA, L, TADA					2020	$3,882,000			$3,882,000	COMPLETE.
Mecklenburg	McDowell Creek Greenway	NCDOT	NC 73 near Lindholm Drive in Huntersville	Construct pedestrian bridge.		Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0119	Division 10	BGDA, L(M)					2027	$5,159,000			$5,159,000	
Mecklenburg	McDowell Creek Tributary Greenway	CORNELIUS	Smithville Park at Catawba Avenue to SR 2147 (Westmoreland Road); SR 2147 (Westmoreland Road) from east of Amberwood Glen Drive to SR 2600 (Washam Potts Road) in Cornelius	Construct shared-use path.		Bike & Ped	Locally Selected	10	Charlotte Regional TPO	EB-5777	Division 10	CMAQ, L	2021	$960,000			2026	$2,040,000			$3,000,000	RIGHT-OF-WAY IN PROGRESS. $2.4M IN STBG-DA SWITCHED FOR CMAQ AS PART OF I-77 PPSL FUND SWAP.
Mecklenburg	NC 24 (W.T. Harris Boulevard)	CHARLOTTE	SR 2940 (North Tryon Street) to JW Clay Boulevard in Charlotte	Construct multi-use path.	0.32	Bike & Ped	Locally Selected	10	Charlotte Regional TPO	EB-6052	Division 10	L, TADA	2025	$400,000			2026	$1,252,000	2023	$10,000	$1,662,000	
Mecklenburg	NC 51	PINEVILLE	Johnston Drive intersection in Pineville	Relocate Johnston Drive to align with existing Church Street intersection.	0.06	Bike & Ped	Locally Selected	10	Charlotte Regional TPO	EB-5949	Division 10	BGDA, L, O					2022	$4,404,000			$4,404,000	UNDER CONSTRUCTION. OTHER FUNDS PROVIDED BY THE TOWN OF PINEVILLE; OTHER FUNDS ARE $1,435,000 AN EARMARK THE TOWN OF PINEVILLE RECEIVED WITH $358,750 IN LOCAL MATCH
Mecklenburg	Rail Trail Pedestrian Bridge	CHARLOTTE	SR 3815 (East Morehead Street) to Brooklyn Village Light Rail Station over I-277 (Belk Freeway) in Charlotte	Construct rail trail pedestrian bridge.	0.11	Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0058	Division 10	L, TAANY					2025	$6,343,000			$6,343,000	$1.903M IN STBG-DA FUNDS SWAPPED FOR $1.903M IN TAP-ANYAREA FUNDS ON 5-17-23
Mecklenburg	South McDowell Street	CHARLOTTE	Baxter Street to SR 1798 (East Stonewall Street) in Charlotte	Construct bike lanes and upgrade pedestrian accommodations.		Bike & Ped	Locally Selected	10	Charlotte Regional TPO	EB-5929	Division 10	BGANY, BGDA, L, TADA	2021	$517,000			2026	$1,669,000	2019	$265,000	$2,451,000	$1.159M IN STBG-DA SWITCHED FOR BGANY AS PART OF I-77 PPSL FUND SWAP. RIGHT-OF-WAY IN PROGRESS. BELK GREENWAY CONNECTOR PHASE ONE.
Mecklenburg	SR 1004 (Bain School Road)	MINT HILL	Gait Drive to SR 1004 (Philadelphia Church Road) in Mint Hill	Construct sidewalk.		Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0120	Division 10	BGDA, L	2028	$220,000			2030	$1,100,000	2026	$469,000	$1,789,000	
Mecklenburg	SR 2840 (Rocky River Road)	CHARLOTTE	Rockland Drive to SR 2939 (Old Concord Road) in Charlotte	Construct shared-use path.		Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0123	Division 10	BGDA, L					2027	$3,952,000	2025	$10,000	$3,962,000	
Mecklenburg	SR 3128 (Lawyers Road)	MINT HILL	Piaffe Avenue to SR 3125 (Thompson Road) in Mint Hill	Construct sidewalk.		Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0121	Division 10	BGDA, L	2028	$236,000			2030	$774,000	2026	$319,000	$1,329,000	
Mecklenburg	SR 3135 (Lebanon Road); SR 3156 (Margaret Wallace Road)	MINT HILL	SR 3156 (Margaret Wallace Road) to Gristmill Lane; SR 3143 (Idlewild Road) to SR 3135 (Lebanon Road) in Mint Hill	Construct sidewalks.	0.99	Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0081	Division 10	L, TADA	2026	$133,000			2027	$1,081,000	2025	$434,000	$1,648,000	
Mecklenburg	SR 3168 (Sam Newell Road)	MATTHEWS	Northeast Parkway to Crown Point Elementary School in Matthews	Construct greenway.		Bike & Ped	Locally Selected	10	Charlotte Regional TPO	EB-5783	Division 10	BGANY, BGDA, L, L(M)	2022	$335,000			2025	$2,023,000	2018	$381,000	$2,739,000	RIGHT-OF-WAY IN PROGRESS. ADDITIONAL FUNDING FOR PRELIMINARY ENGINEERING TO COVER ANTICIPATED EXPENDITURES; $30K IN BGANY USED AS PART OF FUND SWAP.
Mecklenburg	SR 3178 (Moore Road)	MATTHEWS	Chambers Drive to Royal Commons Lane in Matthews.	Construct sidewalk.	0.1	Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0158	Division 10	BGDA, L(M)	2028	$152,000	2028	$10,000	2030	$323,000	2026	$92,000	$577,000	
Mecklenburg	Sugar Creek Road	CHARLOTTE	SR 2502 (Rumple Road) to Nevin Road, Roman Road to Graham Street in Charlotte. Merlane Drive to North Tryon Street in Charlotte	Construct sidewalk. Construct multi-use path. Install pedestrian improvements at Sofley Road. Improve transit stops at Sugar Creek Road, Merlane Drive, and Mallard Creek Road.	1.07	Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0083	Division 10	DP, L, TADA	2025	$686,000			2027	$20,262,000	2025	$10,000	$20,958,000	DP REPRESENTS FY 23 RAISE GRANT FUNDS.
Mecklenburg	The Park - Huntersville Greenway	HUNTERSVILLE	Torrence Creek Greenway to SR 2004 (Mount Holly-Huntersville Road) in Huntersville	Construct greenway.	1.55	Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0010	Division 10	BGDA, L, TAANY, TADA	2025	$516,000			2026	$2,600,000	2023	$376,000	$3,492,000	$181K IN STBG-DA FUNDS SWAPPED FOR $181K IN TAP-ANYAREA FUNDS ON 5-17-23

BASIC PROJECT INFORMATION													FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Mecklenburg	Truelight Church Road	MINT HILL	SR 5223 (Wilgrove-Mint Road) to Heather Nicole Lane in Mint Hill	Construct sidewalk.		Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0124	Division 10	BGDA, L	2028	$124,000			2030	$1,216,000	2026	$500,000	$1,840,000	
Mecklenburg	Upper McDowell Creek Greenway	HUNTERSVILLE	Chilgrove Lane to NC 73 in Huntersville	Construct greenway.		Bike & Ped	Locally Selected	10	Charlotte Regional TPO	EB-5785	Division 10	CMAQ, L					2025	$5,339,000			$5,339,000	$4.271 M IN STBG-DA SWITCHED WITH $4.271M IN CMAQ FUNDS FOR CON AS PART OF FUND SWAP 8-9-22.
Mecklenburg	Various	CHARLOTTE	Locations in Charlotte	Expand bicycle routes.		Bike & Ped	Locally Selected	10	Charlotte Regional TPO	EB-5820	Division 10										$0	UNDER CONSTRUCTION
Mecklenburg	Various	MINT HILL	Lawyers Road from Lebanon Road / Wilson Grove Road to Apple Creek Drive in Mint Hill; Wilgrove-Mint Hill Road from Jim Harper Lane to Wilson Grove Road in Mint Hill; Wilson Grove Road from Wilgrove-Mint Hill Road to Central Drive in Mint Hill	Extend sidewalks.	3.37	Bike & Ped	Locally Selected	10	Charlotte Regional TPO	EB-6051	Division 10	L, TADA	2025	$60,000			2027	$2,574,000	2022	$376,000	$3,010,000	
Mecklenburg	West Branch Nature Preserve	DAVIDSON	Summers Walk Boulevard to end point near West Branch Rocky River in Davidson	Construct greenway.	0.77	Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0003	Division 10	BGDA, L, L(M), TADA	2028	$10,000	2028	$10,000	2028	$1,558,000	2023	$537,000	$2,115,000	WEST BRANCH NATURE PRESERVE - RIVER RUN NEIGHBORHOOD
Mecklenburg	North Davidson Street	NCDOT	East 37th Street to Bearwood Avenue in Charlotte	Construct sidewalk.	0.59	Bike & Ped	Other	10	Charlotte Regional TPO	U-5008A	Pre-STI (Transition)	DP	2022	$1,000,000	2022	$25,000	2023	$1,200,000			$2,225,000	UNDER CONSTRUCTION.
Mecklenburg	Irwin Creek Greenway	MECKLENBURG COUNTY	Existing Irwin Creek Greenway to Hamilton Street in Charlotte	Construct greenway.	0.55	Bike & Ped	STI (Prioritization)	10	Charlotte Regional TPO	EB-5970	Division 10	L, TAANY					2028	$4,636,000			$4,636,000	
Mecklenburg	McAlpine Creek Greenway	MECKLENBURG COUNTY	NC 51 to Four Mile Creek Greenway in Charlotte	Construct greenway.	1.65	Bike & Ped	STI (Prioritization)	10	Charlotte Regional TPO	EB-5782	Division 10	L, TAANY, TADA					2023	$7,218,000			$7,218,000	
Mecklenburg	NC 51	NCDOT	Trade Street to Independence Point Parkway in Matthews	Construct multi-use path on south side.	0.53	Bike & Ped	STI (Prioritization)	10	Charlotte Regional TPO	EB-5969	Division 10	L, TAANY, TADA	2025	$960,000			2027	$1,300,000	2023	$464,000	$2,724,000	
Mecklenburg	SR 2151 (Jetton Street)	DAVIDSON	Griffith Street to SR 6037 (Potts Street) in Davidson	Construct sidewalk on south side of Jetton Street.	0.66	Bike & Ped	STI (Prioritization)	10	Charlotte Regional TPO	EB-5971	Division 10	L, TAANY					2026	$280,000	2025	$10,000	$290,000	
Mecklenburg	SR 2833 (Mallard Creek Church Road)	CHARLOTTE	SR 2472 (Mallard Creek Road) to SR 2746 (Claude Freeman Drive) in Charlotte	Construct multi-use trail on south side of road.	0.62	Bike & Ped	STI (Prioritization)	10	Charlotte Regional TPO	EB-5832	Division 10	BGDA, L, TAANY					2022	$1,678,000			$1,678,000	UNDER CONSTRUCTION.
Mecklenburg	Stewart Creek Greenway	CHARLOTTE	State Street to Rozzelles Ferry Road in Charlotte	Construct greenway.		Bike & Ped	STI (Prioritization)	10	Charlotte Regional TPO	EB-5781	Division 10	BGDA, CMAQ, L					2021	$3,159,000			$3,159,000	UNDER CONSTRUCTION. $1.09M IN STBG-DA SWITCHED FOR CMAQ AS PART OF I-77 PPSL FUND SWAP.
Mecklenburg	NC 16 (Brookshire Boulevard)	NCDOT	SR 2004 (Mount Holly Huntersville Road) intersection.	Construct intersection improvements.	0.5	Highway	Economic Development	10	Charlotte Regional TPO	U-6084	Region E	T					2018	$1,963,000			$1,963,000	THIS IS AN ECONOMIC DEVELOPMENT PROJECT FOR CORNING OPTICAL COMMUNICATIONS - COMPLETE.
Mecklenburg	I-277	NCDOT	I-77 to East 10th Street.	Resurface roadway and rehabilitate bridges.	3.5	Highway	Interstate Maintenance	10	Charlotte Regional TPO	I-5746											$0	
Mecklenburg	I-277 (Belk Freeway)	NCDOT	East Stonewall Street to East 10th Street.	Rehabilitate bridges 590047, 590309, 590315, 590316, 590448, 590449, 590450, 590451, 590452, 590478, 590479, 590487, 590488, and 590522.		Highway	Interstate Maintenance	10	Charlotte Regional TPO	I-5746B	Statewide Mobility										$0	COMPLETE
Mecklenburg	I-277 (Belk Freeway)	NCDOT	I-77 to East Stonewall Street.	Rehabilitate bridges 590078, 590118, 590505, 590506, 590507, 590508, 590509, and 590510.		Highway	Interstate Maintenance	10	Charlotte Regional TPO	I-5746A	Statewide Mobility										$0	COMPLETE
Mecklenburg	I-277 (Brookshire Freeway)	NCDOT	I-77 to East 10th Street.	Resurface roadway and rehabilitate bridges 590044, 590048, 590138, 590320, 590322, 590326, 590327, 590328, 590330, and 590332.	1.75	Highway	Interstate Maintenance	10	Charlotte Regional TPO	I-5746C	Statewide Mobility	NHPIM					2022	$37,517,000			$37,517,000	UNDER CONSTRUCTION.
Mecklenburg	I-277 (Brookshire Freeway)	NCDOT	West of I-77 to east of I-77.	Rehabilitate bridges 590339, 590337, 590338, 590341, 590342, 590281, 590282, and 590283 .	0.32	Highway	Interstate Maintenance	10	Charlotte Regional TPO	I-6052	Statewide Mobility	BGDA, NHPIM, T, T(M)					2023	$17,800,000			$17,800,000	$11,840,000 IN NHPIM FUNDS SWITCHED WITH $11,840,000 IN BGDA AS PART OF FUND SWAPS IN 2022 AND 2023. UNDER CONSTRUCTION.
Mecklenburg	I-485	NCDOT	Blair Road to Idlewild Road.	Rehabilitate pavement.	6.19	Highway	Interstate Maintenance	10	Charlotte Regional TPO	I-5904	Statewide Mobility	NHPIM, T(M)					2020	$9,801,000			$9,801,000	COMPLETE - GARVEE BOND FUNDING - $6,049,190 FOR CONSTRUCTION, PAYBACK FY 2020-2034
Mecklenburg	I-485	NCDOT	I-77 to NC 49; Bridges 590661, 590662, 590663, 590664, and 590643	Rehabilitate pavement; Rehabilitate bridges.	56.03	Highway	Interstate Maintenance	10	Charlotte Regional TPO	I-5828	Statewide Mobility	HFB, NHPIM					2029	$11,950,000			$11,950,000	$2.9M IS FROM HIGH VALUE BRIDGE FUNDS
Mecklenburg	I-485	NCDOT	Oakdale Road Interchange at mile marker 17.2.	Rehabilitate pavement and bridges 590955 and 590956.	1	Highway	Interstate Maintenance	10	Charlotte Regional TPO	I-5861	Statewide Mobility	NHPIM					2023	$1,256,000			$1,256,000	UNDER CONSTRUCTION.
Mecklenburg	I-485	NCDOT	SR 1786 (Old Gum Branch Road) to NC 27.	Rehabilitate bridges 590945, 590946, and 590947.	0.65	Highway	Interstate Maintenance	10	Charlotte Regional TPO	I-5902	Statewide Mobility	NHPIM					2028	$1,600,000			$1,600,000	
Mecklenburg	I-77	NCDOT	North of SR 5901 (Billy Graham Parkway) to south of NC 16 at mile marker 35.93.	Rehabilitate pavement.	1.11	Highway	Interstate Maintenance	10	Charlotte Regional TPO	I-5769	Statewide Mobility	NHPIM, T(M)					2020	$17,532,000			$17,532,000	COMPLETE - GARVEE BOND FUNDING: $3,038,925 FOR CONSTRUCTION, PAYBACK FY 2020-2034
Mecklenburg	I-85	NCDOT	Bridges 590203 (I-85 NB) and 590204 (I-85 SB) over Seaboard Coastline Railroad.	Rehabilitate bridges.	0.5	Highway	Interstate Maintenance	10	Charlotte Regional TPO	I-5838	Statewide Mobility	NHPIM					2023	$1,031,000			$1,031,000	UNDER CONSTRUCTION.
Mecklenburg	I-85	NCDOT	Concrete pavement joint at US 29 / NC 49 connector to concrete pavement joint north of NC 73.	Preserve pavement and bridge 590296.	13.93	Highway	Interstate Maintenance	10	Charlotte Regional TPO	I-5826	Statewide Mobility	NHPIM, T(M)					2020	$8,940,000			$8,940,000	UNDER CONSTRUCTION - I-5860 REMOVED AND COMBINED WITH I-5826. GARVEE BOND FUNDING - $2M FOR CONSTRUCTION, PAYBACK FY 2020-2034
Mecklenburg	I-85	NCDOT	North of SR 5901 (Billy Graham Parkway) to south of NC 16 at mile marker 35.93.	Rehabilitate pavement.	2.92	Highway	Interstate Maintenance	10	Charlotte Regional TPO	I-5796	Statewide Mobility										$0	TO BE LET WITH I-5770 - UNDER CONSTRUCTION
Mecklenburg	I-85	NCDOT	West of NC 16 (Brookshire Boulevard) to concrete pavement joint at US 29 / NC 49 Connector.	Rehabilitate pavement.	2	Highway	Interstate Maintenance	10	Charlotte Regional TPO	I-5905	Statewide Mobility	BGDA, NHPIM, T(M)					2021	$19,588,000			$19,588,000	COMBINED WITH I-5906. UNDER CONSTRUCTION.
Mecklenburg	Beaty Street	DAVIDSON	Main Street intersection in Davidson.	Construct intersection improvements.	0.5	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0111	Exempt	CMAQ, L(M)	2027	$339,000			2029	$2,742,000	2025	$358,000	$3,439,000	
Mecklenburg	Brown-Grier Road; Sandy Porter Road	CHARLOTTE	NC 160 to I-485; William Glen to Brown-Grier Road	Improve corridors.		Highway	Locally Selected	10	Charlotte Regional TPO	HL-0138	Division 10	BGANY, L					2027	$31,751,000	2025	$10,000	$31,761,000	$11.117M IN BGDA FUNDS SWITCHED WITH $11.117M IN BGANY FUNDS AS PART OF FUND SWAP 12-12-24.
Mecklenburg	Davidson-Concord Road	NCDOT	Robert Walker Drive intersection in Davidson.	Construct roundabout.		Highway	Locally Selected	10	Charlotte Regional TPO	U-6092	Exempt	BGDA, CMAQ, L	2022	$795,000			2025	$2,472,000	2020	$150,000	$3,417,000	RIGHT-OF-WAY IN PROGRESS. ADDITIONAL FUNDING FOR PRELIMINARY ENGINEERING TO COVER ANTICIPATED EXPENDITURES. $1.206M IN STBG-DA SWITCHED FOR CMAQ AS PART OF I-77 PPSL FUND SWAP.
Mecklenburg	Greylock Ridge Road	NCDOT	East John Street to Tank Town Road.	Construct roadway on new location.	0.25	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0025	Division 10	BA, L(M), T(DA)	2023	$701,000	2024	$500,000	2026	$7,322,000	2022	$1,040,000	$9,563,000	RIGHT-OF-WAY IN PROGRESS. $5.892M IN BA FUNDS SWITCHED WITH $5.892M IN T(DA) FUNDS AS PART OF FUND SWAP 8-29-23. $1.563M IN BGDA FUNDS SWITCHED WITH $1.563M IN T(DA) FUNDS AS PART OF FUND SWAP 5-25.
Mecklenburg	I-485	NCDOT	Various locations along interstate.	Replace overhead signs.		Highway	Locally Selected	10	Charlotte Regional TPO	HL-0038D	Exempt	BGDACV					2022	$705,000			$705,000	UNDER CONSTRUCTION.
Mecklenburg	Lancaster Highway	CHARLOTTE	Providence Road West intersection in Charlotte.	Construct intersection improvements.	0.5	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0113	Exempt	CMAQ, L(M)					2027	$1,683,000	2025	$10,000	$1,693,000	

BASIC PROJECT INFORMATION													FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Mecklenburg	Main Street	HUNTERSVILLE	NC 115 (Old Statesville Road) / SR 2004 (Mount Holly-Huntersville Road) to south of SR 2439 (Ramah Church Road).	Widen and realign roadway.	1	Highway	Locally Selected	10	Charlotte Regional TPO	U-5908											$0	UNDER CONSTRUCTION; SEGMENTS A & B TO BE LET TOGETHER. STBG-DA FUNDS ON SEGMENT B ARE EXEMPT AS THEY ARE BEING USED ON AN ELIGIBLE REGIONAL IMPACT PROJECT. ADD'L FUNDING FOR ROW TO COVER ANTICIPATED EXPENDITURES. BGANY USED AS PART OF FUND SWAP.
Mecklenburg	Main Street	HUNTERSVILLE	NC 115 (Old Statesville Road) / SR 2004 (Mount Holly-Huntersville Road) to south of SR 2439 (Ramah Church Road).	Widen and realign roadway.	1.02	Highway	Locally Selected	10	Charlotte Regional TPO	U-5908A	Division 10	BGANY, BGDA, L	2020	$825,000			2021	$4,075,000	2021	$12,000	$4,912,000	UNDER CONSTRUCTION.
Mecklenburg	NC 115	HUNTERSVILLE	Harvest Point Drive to Sam Furr Road.	Improve corridor.	0.43	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0056	Exempt	L, T(DA)	2027	$2,852,000			2029	$4,938,000	2024	$751,000	$8,541,000	$526K IN STBG-DA FUNDS SWITCHED WITH $526K IN T(DA) FOR PE, $1.996M IN STBG-DA FUNDS SWITCHED WITH $1.996M IN T(DA) FOR ROW, AND $3.457M IN STBG-DA FUNDS SWITCHED WITH $3.457M IN T(DA) FOR CON AS PART OF FUND SWAP.
Mecklenburg	NC 115	HUNTERSVILLE	Realigned Main Street south of SR 2439 (Ramah Church Road) and SR 2004 (Mount Holly-Huntersville Road) intersections.	Construct roundabouts.	0.5	Highway	Locally Selected	10	Charlotte Regional TPO	U-5908B	Exempt	BGANY, BGDA, L	2020	$2,895,000			2021	$12,249,000			$15,144,000	UNDER CONSTRUCTION.
Mecklenburg	NC 115	NCDOT	Hickory Street intersection in Cornelius.	Construct intersection improvements.	0.5	Highway	Locally Selected	10	Charlotte Regional TPO	C-5613J	Exempt	BGDA, CMAQ, L(M)	2022	$75,000			2025	$3,469,000			$3,544,000	RIGHT-OF-WAY IN PROGRESS. CMAQ AWARD AMOUNT IS $1,003,265
Mecklenburg	NC 115	NCDOT	SR 6037 (Potts Street) intersection in Cornelius.	Construct intersection improvements.		Highway	Locally Selected	10	Charlotte Regional TPO	U-5873	Exempt	BA, CMAQ, CRPDA, L, L(M), T(DA), T(M)	2018	$4,254,000			2024	$16,992,000	2020	$504,000	$21,750,000	RIGHT-OF-WAY IN PROGRESS. STBG-DA FUNDS ARE EXEMPT SINCE THEY ARE BEING USED ON AN ELIGIBLE REGIONAL IMPACT PROJECT. ADDITIONAL FUNDING FOR PRELIMINARY ENGINEERING AND RIGHT-OF-WAY TO COVER ANTICIPATED EXPENDITURES. PROJECT PART OF I-77 PPSL FUND SWAP.
Mecklenburg	NC 16	CHARLOTTE	SR 2373 (Rozzelles Ferry Road) Intersection in Charlotte.	Improve intersection.	0.1	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0161	Region E	BGDA, L(M)	2028	$38,000	2028	$10,000	2029	$3,166,000	2026	$596,000	$3,810,000	
Mecklenburg	NC 24 (W.T. Harris Boulevard)	CHARLOTTE	SR 2004 (Mount Holly-Huntersville Road) to I-85 North ramp.	Install overhead street lights.	7.92	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0057	Division 10	BA, L, T(DA)					2026	$1,515,000	2024	$10,000	$1,525,000	$981,000 IN I-5507 BONUS ALLOCATION (BA) FUNDS SWITCHED TO T(DA) FUNDS FROM U-5907 TO ENSURE BA FUNDS ARE AUTHORIZED BY JUNE 30, 2024.
Mecklenburg	NC 27 (Freedom Drive); Eastway Drive	MECKLENBURG COUNTY	Valerie C. Woodard Center and Ella B. Scarborough Community Resource Center.	Install electric vehicle fast charging stations.	0.1	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0163	Exempt	CMAQ, CRPDA, L(M)					2027	$784,000	2027	$50,000	$834,000	
Mecklenburg	NC 51	NCDOT	Park Road to Carmel Road.	Construct access management improvements.	1.46	Highway	Locally Selected	10	Charlotte Regional TPO	U-6086	Exempt	BGANY, L(M)					2026	$7,553,000			$7,553,000	PE AND ROW FUNDED UNDER W-5710R; $5.643M IN BGANY USED AS PART OF FUND SWAP
Mecklenburg	New Route	NCDOT	SR 6037 (Potts Street), Sloan Street, and Beaty Street connector.	Construct roadway.	1.73	Highway	Locally Selected	10	Charlotte Regional TPO	U-5907	Division 10	BA, L, T(DA)	2020	$1,048,000			2024	$10,504,000	2021	$766,000	$12,318,000	RIGHT-OF-WAY IN PROGRESS. FUNDING IS SUBJECT TO ROADS BEING ADDED TO STATE MAINTAINED SYSTEM. ADDITIONAL FUNDS FOR PE AND ROW TO COVER ANTICIPATED EXPENDITURES. $981K OF T(DA) FUNDS SWITCHED FOR $981K IN BA FUNDS ON U-5907.
Mecklenburg	North University Research Park I-85 Overpass	CHARLOTTE	SR 2722 (Louis Rose Place) to Doug Mayes Place.	Construct roadway.	0.3	Highway	Locally Selected	10	Charlotte Regional TPO	U-5874	Division 10	BGANY, BGDA, L	2020	$3,500,000			2022	$19,883,000			$23,383,000	UNDER CONSTRUCTION; OTHER FUNDS PROVIDED BY THE CITY OF CHARLOTTE; $1.750M IN CMAQ FUNDS PREVIOUSLY AUTHORIZED REPLACED WITH STBG-DA FUNDS, AS PROJECT IS NOT ELIGIBLE FOR CMAQ FUNDS. ADDITIONAL FUNDING FOR ROW TO COVER ANTICIPATED EXPENDITURES.
Mecklenburg	Rea Road	CHARLOTTE	I-485 Outer Loop to Williams Pond Lane.	Widen to six lanes.	0.73	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0023	Division 10	BA, HF, O, T(DA)	2023	$820,000			2025	$6,181,000	2024	$24,000	$7,025,000	RIGHT-OF-WAY IN PROGRESS. OTHER FUNDS PROVIDED BY CITY OF CHARLOTTE. RIGHT-OF-WAY IN PROGRESS. $5.885M IN BA FUNDS SWITCHED WITH $5.885M IN T(DA) FUNDS AS PART OF FUND SWAP 8-29-23.
Mecklenburg	SR 1138 (Arrowood Road)	CHARLOTTE	NC 49 (South Tryon) to South Boulevard.	Install ITS upgrades.		Highway	Locally Selected	10	Charlotte Regional TPO	C-5613BD	Exempt	CMAQ, L(M)					2022	$614,000			$614,000	UNDER CONSTRUCTION.
Mecklenburg	SR 1662 (Tuckaseegee Road)	CHARLOTTE	Berryhill Road / Thrift Road intersection in Charlotte.	Construct a roundabout.	0.5	Highway	Locally Selected	10	Charlotte Regional TPO	C-5538	Division 10	CMAQ, L					2021	$3,676,000			$3,676,000	COMPLETE; $1.053M IN STBG-DA SWITCHED FOR CMAQ AS PART OF I-77 PPSL FUND SWAP.
Mecklenburg	SR 2112 (Lakeview Road)	CHARLOTTE	NC 24 (Harris Boulevard) and US 21 (Statesville Road) intersections in Charlotte.	Construct intersection improvements.	1	Highway	Locally Selected	10	Charlotte Regional TPO	U-5905B	Exempt	BA, BGDA					2021	$3,162,000			$3,162,000	
Mecklenburg	SR 2112 (Lakeview Road)	CHARLOTTE	Reames Road to NC 115.	Upgrade roadway.	1.72	Highway	Locally Selected	10	Charlotte Regional TPO	U-5905A	Division 10	BA, BGDA					2021	$8,661,000			$8,661,000	RIGHT-OF-WAY IN PROGRESS
Mecklenburg	SR 2112 (Lakeview Road)	CHARLOTTE	Reames Road to NC 115.	Upgrade roadway.	2.1	Highway	Locally Selected	10	Charlotte Regional TPO	U-5905											$0	SEGMENTS A AND B TO BE LET TOGETHER. STBG-DA FUNDS ON SEGMENT B ARE EXEMPT SINCE THEY ARE BEING USED ON AN ELIGIBLE REGIONAL IMPACT PROJECT.
Mecklenburg	SR 2136 (Gilead Road)	HUNTERSVILLE	SR 2120 (McCoy Road) to Wynfield Creek Parkway.	Widen to 4-lanes divided.	0.47	Highway	Locally Selected	10	Charlotte Regional TPO	U-6106	Division 10	BGANY, BGDA, L	2022	$3,134,000			2025	$10,684,000			$13,818,000	RIGHT-OF-WAY IN PROGRESS. $8.750M IN BGANY USED AS PART OF FUND SWAP 12/20. 4-25-2022: $1.343M IN STBG-DA FUNDS SWITCHED WITH $1.343M IN BG-ANY AS PART OF FUND SWAP.
Mecklenburg	SR 2142 (Oliver Hager Road)	CHARLOTTE	SR 2137 (Ervin Cook Road) and South Birkdale Commons Parkway.	Extend roadway. Construct roundabout at SR 2142 (Oliver Hager Road) and Ervin Cook Road.	0.4	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0162	Division 10	L(M), T(DA)							2026	$812,000	$812,000	$406K IN BGDA FUNDS SWITCHED WITH $406K IN T(DA) FUNDS AS PART OF FUND SWAP.
Mecklenburg	SR 2195 (Torrence Chapel Road)	NCDOT	SR 5544 (West Catawba Avenue) intersection in Cornelius.	Construct intersection improvements.	0.5	Highway	Locally Selected	10	Charlotte Regional TPO	U-5906	Division 10	BA, BGDA, L, T, T(DA)	2020	$11,153,000			2025	$19,193,000	2017	$2,041,000	$32,387,000	ADDITIONAL FUNDING FOR PRELIMINARY ENGINEERING AND RIGHT-OF-WAY TO COVER ANTICIPATED EXPENDITURES. $8.644M IN STBG-DA AND $829K IN BA SWITCHED FOR CMAQ AS PART OF I-77 PPSL FUND SWAP. UNDER CONSTRUCTION.
Mecklenburg	SR 2415 (Bailey Road)	NCDOT	Poole Place Drive to US 21 (Statesville Road).	Construct roadway.	0.35	Highway	Locally Selected	10	Charlotte Regional TPO	U-6105	Division 10	BGANY, BGDA, L	2023	$2,064,000			2025	$4,632,000			$6,696,000	UNDER CONSTRUCTION. $3M IN BGANY USED AS PART OF FUND SWAP
Mecklenburg	SR 2467 (Mallard Creek Road)	CHARLOTTE	NC 24 (Harris Boulevard) to Governor Hunt Road.	Install ITS and traffic management upgrades.		Highway	Locally Selected	10	Charlotte Regional TPO	C-5613BE	Exempt	CMAQ, L(M)					2023	$200,000			$200,000	UNDER CONSTRUCTION.

BASIC PROJECT INFORMATION													FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Mecklenburg	SR 2479 (Dearmon Road)	CHARLOTTE	SR 2475 (Benfield Road) to SR 2480 (Browne Road).	Construct complete street improvements.	0.78	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0112	Division 10	L, T(DA)					2028	$15,665,000	2024	$10,000	$15,675,000	$5.486M IN STBG-DA FUNDS SWAPPED FOR $5.486M IN STATE FUNDS ON 5-17-23 $5.486M IN STBG-DA FUNDS SWAPPED FOR $5.486M IN STATE FUNDS ON 5-17-23
Mecklenburg	SR 2822 (Robinson Church Road)	CHARLOTTE	NC 24 to Plott Road.	Widen to three lanes.	0.58	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0053	Division 10	L, T(DA)					2028	$12,444,000	2026	$10,000	$12,454,000	$6.227M IN STBG-DA FUNDS SWITCHED WITH $6.227M IN STATE TRUST FUNDS "T(DA)" AS PART OF FUND SWAP.
Mecklenburg	SR 3156 (Margaret Wallace Road)	NCDOT	Arequipa Drive intersection in Charlotte.	Construct intersection improvements.	0.5	Highway	Locally Selected	10	Charlotte Regional TPO	U-2509EA	Division 10	L, T(DA)	2026	$8,568,000	2025	$910,000	2028	$4,887,000			$14,365,000	PROJECT PREVIOUSLY HL-0054.$5.568M IN STBG-DA FUNDS SWITCHED WITH $5.568M IN STATE TRUST FUNDS "T(DA)" FOR ROW, AND $3.767M IN STBG-DA FUNDS SWITCHED WITH $3.767M IN STATE TRUST FUNDS "T(DA)" FOR CON AS PART OF FUND SWAP.
Mecklenburg	SR 3468 (Weddington Road)	NCDOT	SR 3440 (McKee Road) intersection in Matthews.	Construct intersection improvements.	0.5	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0024	Division 10	BA, T(DA)	2024	$2,300,000	2024	$1,200,000	2029	$4,723,000	2021	$1,211,000	$9,434,000	RIGHT-OF-WAY IN PROGRESS. $5.923M IN BA FUNDS SWITCHED WITH $5.923M IN HTF AS PART OF FUND SWAP 8-9-22.
Mecklenburg	Stumptown Road	HUNTERSVILLE	Aberfeld Road to NC 115.	Widen roadway.	0.154	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0118	Region E	L, L(M), T(DA)	2027	$4,042,000	2027	$603,000	2029	$16,873,000	2026	$185,000	$21,703,000	$5.156M IN STBG-DA FUNDS SWAPPED FOR $5.156M IN STATE FUNDS ON 5-17-23; $6.103M IN STBG-DA FUNDS SWAPPED FOR $6.103M IN STATE FUNDS ON 2-17-25.
Mecklenburg	US 21	NCDOT	SR 5544 (Catawba Avenue) in Cornelius.	Construct roundabouts.		Highway	Locally Selected	10	Charlotte Regional TPO	C-5621	Region E	BA, BGDA, CMAQ, L, T(M)	2020	$6,183,000			2024	$23,823,000	2020	$1,916,000	$31,922,000	RIGHT-OF-WAY IN PROGRESS. STBG-DA FUNDS ARE EXEMPT SINCE THEY ARE BEING USED ON AN ELIGIBLE REGIONAL IMPACT PROJECT. BA FUNDS IN EXCESS OF 20% MATCH ON PE AND ROW USED TO MATCH PREVIOUSLY AUTHORIZED FEDERAL FUNDS. PROJECT PART OF I-77 PPSL FUND SWAP.
Mecklenburg	US 29 / US 74 (Wilkinson Boulevard); US 29 (North Tryon Street)	NCDOT	Gaston County line to Field Ridge Road; West Sugar Creek Road to Old Concord Road.	Resurface roadways.	3.46	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0038A	Exempt	BGDACV					2022	$2,596,000			$2,596,000	COMPLETE.
Mecklenburg	Various	NCDOT	Routes in Division 10.	Perform various maintenance activities including resurfacing, traffic signal loop replacement, pavement restriping and markers, and sign replacement.		Highway	Locally Selected	10	Charlotte Regional TPO	HL-0038		BGDACV							2022	$5,000	$5,000	
Mecklenburg	Various	NCDOT	Routes in Division 10.	Replace pavement markings and snow plowable markers.		Highway	Locally Selected	10	Charlotte Regional TPO	HL-0038B	Exempt	BGDACV					2022	$2,318,000			$2,318,000	UNDER CONSTRUCTION.
Mecklenburg	Various	NCDOT	Routes in Division 10.	Replace traffic signal loops.		Highway	Locally Selected	10	Charlotte Regional TPO	HL-0038C	Exempt	BGDACV					2022	$90,000			$90,000	COMPLETE.
Mecklenburg	Wilkinson Boulevard	CHARLOTTE	Various locations	Install ITS infrastructure, improve traffic flow, and upgrade signals.		Highway	Locally Selected	10	Charlotte Regional TPO	HL-0152	Exempt	BGDA, CRPANY, CRPDA, L					2027	$4,040,000	2025	$857,000	$4,897,000	$834K IN CRPDA FUNDS SWITCHED WITH $834K IN CRPANY FUNDS AS PART OF FUND SWAP 12-12-24.
Mecklenburg	WT Harris Boulevard	CHARLOTTE	Sugar Creek intersection in Charlotte	Construct intersection improvements.	0.5	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0137	Exempt	BGANY, L					2028	$1,901,000	2025	$10,000	$1,911,000	STBG-DA FUNDS ARE EXEMPT. $1.338M IN BGDA FUNDS SWITCHED WITH $1.338M IN BGANY FUNDS AS PART OF FUND SWAP 12-12-24.
Mecklenburg	Morris Field Drive	CHARLOTTE	Bridge 590443 over Southern Railroad.	Replace Bridge.	0.25	Highway	Municipal Bridge	10	Charlotte Regional TPO	B-5931	Division 10	BGANY, BGDA, BGOFF, L, L(M)					2025	$6,204,000	2024	$20,000	$6,224,000	PLANNING/DESIGN BY CITY OF CHARLOTTE. UNDER CONSTRUCTION.
Mecklenburg	Sardis Lane	CHARLOTTE	Bridge 590433 over McAlpine Creek.	Replace Bridge.	0.25	Highway	Municipal Bridge	10	Charlotte Regional TPO	B-5930	Division 10	BGOFF, L					2021	$2,000,000			$2,000,000	PROJECT ADMINISTERED BY CITY OF CHARLOTTE
Mecklenburg	Charlotte	NCDOT	Northlake Mall.	Install 4 DC fast charging ports.		Highway	National Electric Vehicle Infrastructure	10	Charlotte Regional TPO	HV-0001F	Division 10	NEVI, O(M), S(M)					2025	$1,473,000			$1,473,000	O AND O(M) FUNDS REPRESENT PRIVATE FUNDS FROM SCHNEIDER ELECTRIC BUILDINGS AMERICAS INC
Mecklenburg	I-85	NCDOT	I-485 interchange west of Charlotte	Improve interchange. Clearing work only.	1	Highway	Other	10	Charlotte Regional TPO	I-6016A	Highway Fund	HF					2024	$200,000			$200,000	
Mecklenburg		NCDOT				Highway	Pre-STI (Historic)	10	Charlotte Regional TPO	R-2632AC	Pre-STI (Transition)										$0	COMPLETE
Mecklenburg		NCDOT				Highway	Pre-STI (Historic)	10	Charlotte Regional TPO	U-0209B	Pre-STI (Transition)	NHP	2010	$10,968,000			2013	$1,025,000			$11,993,000	COMPLETE. SEE PARENT PROJECT FOR GARVEE DETAILS.
Mecklenburg		NCDOT				Highway	Pre-STI (Historic)	10	Charlotte Regional TPO	U-0209BA	Pre-STI (Transition)										$0	WORK TO BE CONSTRUCTED BY PROJECT U-6103
Mecklenburg	US 74 (Independence Boulevard)	NCDOT	Brookshire Freeway to Idlewild Road in Charlotte.	Construct additional lanes and interchanges with Sharon Amity Road and Idlewild Road and safety improvements.	1.4	Highway	Pre-STI (Historic)	10	Charlotte Regional TPO	U-0209											$0	COMPLETE - GARVEE BOND FUNDING: $50M FOR RIGHT-OF-WAY, PAYBACK FY 2010-2021; $2M FOR CONSTRUCTION, PAYBACK FY 2013-2024
Mecklenburg	I-277	NCDOT	Multiple exits	Install smart cushions.		Highway	Safety	10	Charlotte Regional TPO	HS-2010B	Statewide Mobility	HSIP					2021	$144,000			$144,000	
Mecklenburg	NC 24 / NC 27	NCDOT	SR 3110 (Arlington Church Road) intersection near Charlotte.	Construct intersection improvements.	0.5	Highway	Safety	10	Charlotte Regional TPO	HS-2010A	Region E	HSIP	2022	$4,000			2023	$1,900,000			$1,904,000	UNDER CONSTRUCTION.
Mecklenburg	NC 49 (South Tryon Street)	NCDOT	General Drive; SR 1347 (Nevada Boulevard) intersections in Charlotte.	Install traffic signal at NC 49 and General Drive, and convert NC 49 at SR 1347 (Nevada Boulevard) to a directional crossover.	0.42	Highway	Safety	10	Charlotte Regional TPO	HS-2010E	Region E	HSIP			2025	$25,000	2025	$870,000			$895,000	
Mecklenburg	NC 51	NCDOT	Palomino Drive / Hoods Village Drive intersection in Mint Hill	Construct directional crossover.		Highway	Safety	10	Charlotte Regional TPO	HS-2410H	Region E	HSIP	2026	$260,000	2026	$15,000	2028	$848,000			$1,123,000	
Mecklenburg	NC 51	NCDOT	SR 4982 (Polk Street) intersection in Charlotte.	Install pedestrian signals and accommodations.	0.5	Highway	Safety	10	Charlotte Regional TPO	HS-2010G	Region E	HSIP	2025	$70,000			2025	$410,000			$480,000	
Mecklenburg	NC 51 (Matthews Township Parkway)	NCDOT	Fullwood Lane intersection in Matthews	Construct pedestrian improvements.		Highway	Safety	10	Charlotte Regional TPO	HS-2410J	Region E	HSIP	2026	$15,000	2026	$5,000	2027	$277,000			$297,000	
Mecklenburg	NC 73 (Sam Furr Road)	NCDOT	SR 5544 (Catawba Avenue) and Glenfurness Drive intersections in Huntersville.	Install pedestrian accommodations.	0.5	Highway	Safety	10	Charlotte Regional TPO	HS-2010J	Region E	HSIP					2024	$865,000			$865,000	UNDER CONSTRUCTION.
Mecklenburg	SR 2025 (Oakdale Road)	NCDOT	SR 2108 (Sunset Boulevard) / SR 2025 (Miranda Road) / SR 2040 (Lawing Road) intersection near Charlotte.	Construct safety improvements.	0.5	Highway	Safety	10	Charlotte Regional TPO	W-5710X	Division 10	BGANY, BGDA, CMAQ, HSIP, L, L(M), T(M)	2021	$2,288,000			2026	$9,746,000	2021	$788,000	$12,822,000	RIGHT-OF-WAY IN PROGRESS. $3.482M IN STBG-DA FUNDS SWITCHED WITH $3.482M IN BGANY AS PART OF FUND SWAP.
Mecklenburg	SR 2935 (The Plaza)	NCDOT	Cove Creek Drive intersection in Charlotte	Construct directional crossover.		Highway	Safety	10	Charlotte Regional TPO	HS-2410G	Division 10	HSIP					2025	$482,000			$482,000	
Mecklenburg	SR 3300 (7th Street)	NCDOT	Bascom Street / Cameron Avenue in Charlotte	Install traffic signal with pedestrian accommodations.		Highway	Safety	10	Charlotte Regional TPO	HS-2410B	Division 10	HSIP	2026	$25,000			2028	$233,000			$258,000	
Mecklenburg	SR 3448 (Pleasant Plains Road)	NCDOT	Squirrel Lake Park entrance intersection in Matthews.	Construct sidewalks and install pedestrian improvements.		Highway	Safety	10	Charlotte Regional TPO	HS-2410K	Division 10	HSIP			2025	$10,000	2026	$101,000			$111,000	
Mecklenburg	SR 3468 (Weddington Road)	NCDOT	Vinicity of Socrates Academy	Construct pedestrian improvements.	0.1	Highway	Safety	10	Charlotte Regional TPO	HS-2410N	Division 10	HSIP	2025	$10,000	2025	$5,000	2027	$115,000			$130,000	
Mecklenburg	SR 3624 (Rea Road)	NCDOT	Piper Glen Drive and Bevington Place intersections in Charlotte	Upgrade the traffic signals and install pedestrian accommodations.		Highway	Safety	10	Charlotte Regional TPO	HS-2410C	Division 10	HSIP	2026	$1,000			2028	$317,000			$318,000	
Mecklenburg	SR 3687 (Park Road)	NCDOT	Jim Hynes Circle intersection in Charlotte.	Install pedestrian signal.		Highway	Safety	10	Charlotte Regional TPO	HS-2410E	Division 10	HSIP					2025	$36,000			$36,000	
Mecklenburg	SR 5901 (Billy Graham Parkway)	NCDOT	NC 49 (Tryon Road) to I-85.	Install guardrail.	5.1	Highway	Safety	10	Charlotte Regional TPO	HS-2010L	Statewide Mobility	HSIP					2023	$960,000			$960,000	

BASIC PROJECT INFORMATION													FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Mecklenburg	Various	NCDOT	Various locations.	Install signal at various location on secondary routes.		Highway	Safety	10	Charlotte Regional TPO	HS-2410L	Division 10	HSIP					2025	$1,153,000			$1,153,000	
Mecklenburg	I-485		I-77 to I-85 in southwest Charlotte.	Construct one express lane in each direction. This is a toll project (express lanes only).		Highway	STI (Prioritization)	10	Charlotte Regional TPO	HP-0002	Statewide Mobility	BOND R, NHP	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$1,600,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$23,700,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$246,200,000			$271,500,000	
Mecklenburg	I-485	NCDOT	I-77 south of Charlotte to US 74 (Independence Boulevard).	Construct one express lane in each direction. This is a toll project (express lanes only).	16.62	Highway	STI (Prioritization)	10	Charlotte Regional TPO	I-5507	Statewide Mobility	T					2019	$458,656,000			$458,656,000	UNDER CONSTRUCTION. DESIGN-BUILD PROJECT
Mecklenburg	I-485	NCDOT	NC 16 (Brookshire Boulevard) interchange.	Construct interchange improvements.	1	Highway	STI (Prioritization)	10	Charlotte Regional TPO	I-5973	Region E	T			2022	$195,000	2023	$6,460,000			$6,655,000	UNDER CONSTRUCTION. BUILD NC BOND FUNDING: $1,580,327 FOR CONSTRUCTION, PAYBACK FY 2023-2036 (FY 2022 / YR 4 SALE)
Mecklenburg	I-485	NCDOT	NC 49 (South Tryon Street) interchange.	Construct interchange improvements.	1	Highway	STI (Prioritization)	10	Charlotte Regional TPO	I-6019	Statewide Mobility	NHP	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$14,900,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$4,700,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$20,700,000			$40,300,000	
Mecklenburg	I-485	NCDOT	NC 51 (Pineville-Matthews Road) interchange.	Construct interchange improvements.	1	Highway	STI (Prioritization)	10	Charlotte Regional TPO	I-6015	Statewide Mobility	T	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$840,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$720,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$14,000,000			$15,560,000	
Mecklenburg	I-77	NCDOT	NC 73 interchange.	Upgrade interchange to split diamond configuration.	1	Highway	STI (Prioritization)	10	Charlotte Regional TPO	I-5715	Statewide Mobility	NHP	2023	$19,000,000	2023	$3,000,000	2027	$79,900,000			$101,900,000	RIGHT-OF-WAY IN PROGRESS.
Mecklenburg	I-77	NCDOT	South Carolina state line to I-277 / NC 16 (Brookshire Freeway).	Widen freeway to ten lanes by constructing managed lanes and reconstruct I-277 interchanges. This is a toll project (managed lanes only).	11.2	Highway	STI (Prioritization)	10	Charlotte Regional TPO	I-5718	Statewide Mobility	BOND R, NHP	2029	$1,508,000,000	2029	$42,000,000	2029	$2,763,315,000			$4,313,315,000	GARVEE BOND FUNDING: $100M FOR CONSTRUCTION, PAYBACK FY 2031-2045; $100M FOR CONSTRUCTION, PAYBACK FY 2033-2047; $100M FOR CONSTRUCTION, PAYBACK FY 2035-2049.
Mecklenburg	I-77	NCDOT	SR 2136 (Gilead Road) interchange.	Upgrade interchange.	1	Highway	STI (Prioritization)	10	Charlotte Regional TPO	I-5714	Statewide Mobility										$0	UNDER CONSTRUCTION
Mecklenburg	I-85		SR 1291 (Billy Graham Parkway) interchange in Charlotte.	Construct interchange improvements.		Highway	STI (Prioritization)	10	Charlotte Regional TPO	HP-0004	Statewide Mobility	NHP	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$8,400,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$700,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$38,700,000			$47,800,000	
Mecklenburg	I-85	NCDOT	I-485 interchange Northeast of Charlotte.	Construct interchange improvements.	1	Highway	STI (Prioritization)	10	Charlotte Regional TPO	I-6012	Statewide Mobility	NHP	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$4,200,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$900,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$47,000,000			$52,100,000	
Mecklenburg	I-85	NCDOT	I-485 interchange west of Charlotte.	Construct interchange improvements.	1	Highway	STI (Prioritization)	10	Charlotte Regional TPO	I-6016	Statewide Mobility	HF, T	2024	$2,000,000	2024	$970,000	2026	$41,400,000			$44,370,000	HF FUNDS ARE CONTINGENCY FUNDS.
Mecklenburg	I-85	NCDOT	NC 16 (Brookshire Boulevard) interchange.	Construct interchange improvements.	1	Highway	STI (Prioritization)	10	Charlotte Regional TPO	I-6020	Statewide Mobility	NHP	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$56,900,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$2,300,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$72,900,000			$132,100,000	
Mecklenburg	I-85	NCDOT	NC 24 (W.T. Harris Boulevard) interchange.	Construct interchange improvements.	1	Highway	STI (Prioritization)	10	Charlotte Regional TPO	I-6013	Statewide Mobility	NHP	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$590,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$390,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$23,000,000			$23,980,000	
Mecklenburg	I-85	NCDOT	SR 2480 (Sugar Creed Road) interchange.	Construct interchange improvements.	1	Highway	STI (Prioritization)	10	Charlotte Regional TPO	I-6053	Statewide Mobility	NHP	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$26,973,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$655,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$24,300,000			$51,928,000	
Mecklenburg	Independence Pointe Parkway	NCDOT	Sardis Road to SR 3474 (Sam Newell Road).	Construct roadway on new location.	0.63	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-2509EB	Division 10	T	2028	$1,200,000	2028	$190,000	2031	$12,000,000			$13,390,000	SEGMENT C9
Mecklenburg	Independence Pointe Parkway	NCDOT	Windsor Square Drive to NC 51.	Construct roadway on new location.	0.7	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-2509AC	Statewide Mobility	NHP	2030	$5,799,000	2030	$3,500,000	2033	$20,400,000			$29,699,000	0
Mecklenburg	NC 115 (Old Statesville Road)	NCDOT	NC 24 (Harris Boulevard) to I-485 in Charlotte.	Widen to multi-lanes.	2.16	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5772	Region E	T	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$30,600,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$3,200,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$85,900,000			$119,700,000	
Mecklenburg	NC 16 (Brookshire Boulevard)	NCDOT	I-85 northbound ramp to eastbound NC 16 in Charlotte.	Improve I-85 northbound ramp to eastbound NC 16.		Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5955A	Region E	T					2023	$3,000,000			$3,000,000	UNDER CONSTRUCTION.
Mecklenburg	NC 16 (Brookshire Boulevard)	NCDOT	I-85 to Idaho Drive in Charlotte.	Construct additional westbound through lane west of Idaho Drive and I-85. Improve I-85 northbound ramp to eastbound NC 16.	0.38	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5955	Region E										$0	
Mecklenburg	NC 16 (Brookshire Boulevard)	NCDOT	Idaho Drive intersection in Charlotte.	Upgrade intersection to an interchange.	0.38	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5955B	Region E	NHP	2030	$4,300,000	2030	$345,000	2033	$12,700,000			$17,345,000	
Mecklenburg	NC 160	NCDOT	NC 49 (South Tryon Road) to I-485.	Widen to multi-lanes.	4.31	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5766B	Region E	O, T	2026	$61,890,000	2026	$42,200,000	2029	$137,400,000			$241,490,000	BUILD NC BOND FUNDING: $12.3M FOR ROW, PAYBACK FY 2026-2040 (FY 2026 / YR 6 SALE).
Mecklenburg	NC 160	NCDOT	South Carolina line to I-485.	Widen to multi-lanes.	6.8	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5766											$0	"O" FUNDS REPRESENT CITY OF CHARLOTTE
Mecklenburg	NC 160	NCDOT	South Carolina line to NC 49 (South Tryon Road).	Widen to multi-lanes.	2.04	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5766A	Region E	T	2025	$26,600,000	2026	$10,700,000	2030	$35,600,000			$72,900,000	
Mecklenburg	NC 27 (Freedom Drive)	NCDOT	SR 1644 (Toddville Road) to SR 1600 (Moores Chapel Road) in Charlotte.	Widen to four lanes.	1.25	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5957	Region E	T	2030	$15,900,000	2030	$2,200,000	2034	$28,800,000			$46,900,000	
Mecklenburg	NC 49; SR 2827 (Back Creek Church Road)	NCDOT	John Kirk Drive to I-485; Existing SR 2827 (Back Creek Church Road) and NC 49 and SR 5394 (Mallard Creek Church Road)intersection in Harrisburg.	Widen to six lanes; Realign roadway on new location. Close existing grade rail crossing at NC 49 and SR 2827 (Back Creek Church Road).	2.13	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5768	Region E	L, T	2030	$37,900,000	2030	$7,500,000	2034	$80,400,000			$125,800,000	LOCAL FUNDING PROVIDED BY THE CITY OF CHARLOTTE
Mecklenburg	NC 51 (Matthews Township Parkway)	NCDOT	SR 3356 (Sardis Road) to SR 1010 (East John Street / Monroe Road).	Widen to six lanes.	0.75	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5763	Region E	T	2030	$40,100,000	2030	$5,800,000	2034	$43,000,000			$88,900,000	
Mecklenburg	NC 73	NCDOT	NC 115 to SR 2693 (Davidson-Concord Road) in Huntersville.	Widen to four lanes.	2.67	Highway	STI (Prioritization)	10	Charlotte Regional TPO	R-2632AB	Region E	BGDA, NHP, T(M)	2023	$8,300,000	2023	$5,100,000	2028	$68,100,000			$81,500,000	RIGHT-OF-WAY IN PROGRESS.
Mecklenburg	NC 73	NCDOT	US 21 to NC 115.	Widen to multi-lanes.		Highway	STI (Prioritization)	10	Charlotte Regional TPO	R-2632AA											$0	COMPLETE
Mecklenburg	NC 73	NCDOT	US 21 to SR 2693 (Davidson-Concord Road) in Huntersville.	Widen to four lanes.	4.3	Highway	STI (Prioritization)	10	Charlotte Regional TPO	R-2632											$0	COORDINATE WITH R-5706A & B. $7.273M IN NHP FUNDS SWITCHED WITH $7.237M IN BGDA AS PART OF FUND SWAP 8-9-22.
Mecklenburg	NC 73	NCDOT	Vance Road Extension / Beatties Ford Road to SR 5544 (West Catawba Avenue) in Huntersville.	Widen to multi-lanes.	1.88	Highway	STI (Prioritization)	10	Charlotte Regional TPO	R-5721B	Region E	BA, T	2024	$15,401,000	2024	$3,000,000	2028	$59,300,000			$77,701,000	RIGHT-OF-WAY IN PROGRESS. $5.923M IN T FUNDS SWITCHED WITH $5.923M IN BA FOR ROW AS PART OF FUND SWAP 8-9-22.
Mecklenburg	NC 73 (Sam Furr Road)	NCDOT	SR 5544 (West Catawba Avenue) to SR 2316 (Northcross Drive).	Widen to six lanes.	1.12	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5765	Region E	T	2023	$58,430,000	2023	$7,500,000	2027	$49,700,000			$115,630,000	COORDINATE WITH R-5721. RIGHT-OF-WAY IN PROGRESS. NC BUILD BOND $18M FOR CON, PAYBACK FY 2027-2041 (FY 2027 / YR 7 SALE);

BASIC PROJECT INFORMATION													FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Mecklenburg	New route	NCDOT	SR 3457 (Campus Ridge Road) to SR 3448 (Pleasant Plains Road) in Matthews.	Construct two lane roadway on new location.	1.1	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-4713											$0	
Mecklenburg	SR 1009 (John Street / Old Monroe Road)	NCDOT	I-485 interchange in Matthews	Construct interchange improvements.	1	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-4714AB	Division 10										$0	UNDER CONSTRUCTION. LET WITH I-5507.
Mecklenburg	SR 1009 (John Street / Old Monroe Road)	NCDOT	SR 3348 / SR 3474 (Trade Street) to west of I-485.	Widen to multi-lanes.	1.01	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-4714AA	Not Funded	BGANY, T	NOT FUNDED	$19,700,000	NOT FUNDED	$1,600,000	NOT FUNDED	$30,600,000	NOT FUNDED		$51,900,000	
Mecklenburg	SR 1009 (Monroe Road)	NCDOT	Rama Road / Idlewild Road intersection in Charlotte.	Construct intersection improvements.	0.5	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5805	Division 10	BGANY, L(M), T, T(M)	2020	$1,386,000			2026	$7,440,000			$8,826,000	RIGHT-OF-WAY IN PROGRESS. $4.24M IN BGANY USED AS PART OF FUND SWAP.
Mecklenburg	SR 2467 (Mallard Creek Road)	NCDOT	SR 2472 (Mallard Creek Church Road) to Breezewood Drive.	Widen to four lanes.	1.48	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-6028	Division 10	T	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$12,300,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$14,700,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$30,000,000			$57,000,000	
Mecklenburg	SR 2940 (Eastway Drive)	NCDOT	Shamrock Drive intersection in Charlotte.	Construct intersection improvements.	0.5	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5803	Division 10	BGANY, L(M), O	2026	$6,000,000			2027	$59,519,000			$65,519,000	LOCAL CONTRIBUTION OF $5M BY CITY OF CHARLOTTE FOR RIGHT-OF-WAY AND CONSTRUCTION - CITY PAYING 100% OF PRELIMINARY ENGINEERING AND UTILITIES. $7.82M IN STBG-DA FUNDS SWITCHED WITH $7.82M IN STBG-ANYAREA FUNDS AS PART OF FUND SWAP.
Mecklenburg	SR 3174 (Idlewild Road)	NCDOT	SR 1375 (Stallings Road) to I-485.	Widen to four lanes.	0.53	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-4913A	Division 10	T	2025	$750,000	2025	$250,000	2028	$10,600,000			$11,600,000	RIGHT-OF-WAY IN PROGRESS.
Mecklenburg	SR 3440 (McKee Road) Extension	NCDOT	SR 3448 (Pleasant Plains Road) to SR 1010 (East John Street).	Construct two lane roadway on new location.	0.75	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-4713A	Division 10	L, T	2020	$2,680,000	2021	$1,100,000	2025	$15,616,000	2020	$1,155,000	$20,551,000	UNDER CONSTRUCTION. BUILD NC BONDS: $888,488 FOR PE, PAYBACK FY 20-34 (FY 19 / YR 1 SALE); $280,117 FOR ROW, PAYBACK FY 20-34 (FY 19 / YR 1 SALE); $4M FOR CON, PAYBACK FY 26-40 (FY 26 / YR 6 SALE). LOCAL FUNDS PROVIDED BY TOWN OF MATTHEWS
Mecklenburg	SR 3448 (South Trade Street)	NCDOT	Four Mile Creek to Weddington Road in Matthews.	Widen to four lanes.	0.13	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5804B	Division 10	T					2019	$1,470,000			$1,470,000	COMPLETE. BUILD NC BOND FUNDING: $1.134 M FOR CONSTRUCTION, PAYBACK FY 2019-2033 (FY 2019 / YR 1 SALE).
Mecklenburg	SR 3448 (South Trade Street)	NCDOT	Fullwood Lane to Four Mile Creek in Matthews.	Widen to four lanes.	0.43	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5804A											$0	COMPLETE - BY TOWN OF MATTHEWS USING TOWN FUNDS.
Mecklenburg	SR 3448 (South Trade Street)	NCDOT	Fullwood Lane to Weddington Road in Matthews.	Widen to four lanes.	0.5	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5804											$0	
Mecklenburg	SR 5544 (West Catawba Avenue)	NCDOT	NC 73 (Sam Furr Road) to east of SR 2151 (Jetton Road) in Cornelius.	Widen to four lanes divided.	2.35	Highway	STI (Prioritization)	10	Charlotte Regional TPO	R-2555B	Division 10	L, T	2018	$5,000,000	2026	$4,000,000	2028	$37,605,000			$46,605,000	RIGHT-OF-WAY IN PROGRESS. NC BUILD BONDS: $10M FOR CONSTRUCTION, PAYBACK FY 2028-2042 (FY 2028 / YR 8 SALE).
Mecklenburg	SR 5544 (West Catawba Avenue)	NCDOT	NC 73 (Sam Furr Road) to east of SR 2195 (Torrence Chapel Road) in Cornelius.	Widen to four lanes divided.	3.4	Highway	STI (Prioritization)	10	Charlotte Regional TPO	R-2555											$0	
Mecklenburg	SR 5544 (West Catawba Avenue)	NCDOT	SR 2151 (Jetton Road) to SR 2195 (Torrence Chapel Road).	Widen to four lanes divided.	0.9	Highway	STI (Prioritization)	10	Charlotte Regional TPO	R-2555A											$0	COMPLETE
Mecklenburg	US 21	NCDOT	SR 2136 (Gilead Road) to Holly Point Drive in Huntersville.	Widen to four lanes.	2.21	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5771	Region E	BA, L, T, T(DA)	2022	$53,050,000	2022	$1,600,000	2027	$39,809,000			$94,459,000	RIGHT-OF-WAY IN PROGRESS. BL-0080 INCORPORATED INTO U-5771. FUND SWAP OF $2.56M OF TAP-DA FOR $2.56M OF T(DA). NC BUILD BOND $15M FOR CON, PAYBACK FY 2027-2041 (FY 2027 / YR 7 SALE);
Mecklenburg	US 21 (Statesville Road)	NCDOT	Northcross Center Court to SR 2147 (Westmoreland Road).	Widen to multi-lanes.	1.22	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5767	Region E	T	2030	$88,500,000	2030	$2,700,000	2034	$44,300,000			$135,500,000	
Mecklenburg	US 521 (Lancaster Highway / Johnston Road)	NCDOT	South Carolina State Line to SR 4979 (Ballantyne Commons Parkway).	Widen to multi-lanes.	2.95	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-6109	Region E	NHP	2030	$11,900,000	2030	$2,100,000	2034	$52,900,000			$66,900,000	
Mecklenburg	US 74 (Independence Boulevard)	NCDOT	I-277 to west of Idlewild Road.	Widen roadway to allow for two-way express lane. This is a toll project (express lanes only).	4.85	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-6103	Statewide Mobility	NHP	2030	$12,000,000	2030	$8,100,000	2033	$248,500,000			$268,600,000	
Mecklenburg	US 74 (Independence Boulevard)	NCDOT	Matthews-Mint Hill Road intersection in Charlotte.	Construct interchange at Matthews-Mint Hill Road. Extend Northeast Parkway from Overcash Drive to Waiting Street.	0.23	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-2509AD	Statewide Mobility	NHP	2026	$46,800,000	2026	$2,600,000	2029	$35,700,000			$85,100,000	SEGMENT C10, C13
Mecklenburg	US 74 (Independence Boulevard)	NCDOT	Sardis Road and SR 3473 (Sam Newell Road) intersections in Charlotte.	Construct interchanges at Sardis Road North and Sam Newell Road. Construct extension of Sardis Road North from US 74 to Arequipa Drive Extension and construct extension of Arequipa Drive from Sardis Road North Extension to Sam Newell Road.	0.59	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-2509AB	Statewide Mobility	NHP	2026	$40,700,000	2026	$5,700,000	2030	$76,000,000			$122,400,000	SEGMENTS C6, C7A, C8
Mecklenburg	US 74 (Independence Boulevard)	NCDOT	Sharon Forest Drive and Harris Boulevard / Village Lake Drive intersections in Charlotte.	Construct grade separation at Sharon Forest Drive and construct interchange at Village Lake Drive.	1	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-2509AA	Statewide Mobility	NHP	2026	$85,100,000	2026	$6,500,000	2031	$78,500,000			$170,100,000	SEGMENTS C1, C2
Mecklenburg	US 74 (Independence Boulevard)	NCDOT	SR 3356 (Sardis Road) to I-485.	Construct additional general purpose and express lanes. Construct express lane interchanges at I-485 and east side of Conference Drive, and reconstruct interchange at NC 51 (Matthews Township Parkway). This is a toll project (express lanes only).	3.23	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-2509D	Not Funded	NHP	NOT FUNDED	$92,299,000	NOT FUNDED	$10,300,000	NOT FUNDED	$202,205,000	NOT FUNDED		$304,804,000	SEGMENTS C14, M3
Mecklenburg	US 74 (Independence Boulevard)	NCDOT	Wallace Lane to SR 3356 (Sardis Road).	Construct additional general purpose and express lanes. Construct express lane interchange at Sardis Road. This is a toll project (express lanes only).	2.45	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-2509C	Not Funded	NHP	NOT FUNDED	$39,199,000	NOT FUNDED	$5,600,000	NOT FUNDED	$70,349,000	NOT FUNDED		$115,148,000	SEGMENT M2
Mecklenburg	US 74 (Independence Boulevard)	NCDOT	West of Idlewild Road to I-485.	Upgrade roadway to expressway with express lanes and construct improvements on parallel routes.	6.62	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-2509											$0	
Mecklenburg	US 74 (Independence Boulevard)	NCDOT	West of SR 3143 (Idlewild Road) to Wallace Lane.	Construct additional general purpose and express lanes. Construct express lane interchange on west side of Conference Drive. This is a toll project (express lanes only).	0.95	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-2509B	Statewide Mobility	NHP	2030	$8,499,000	2030	$2,100,000	2033	$75,100,000			$85,699,000	SEGMENT M1
Mecklenburg	Various	NCDOT	Krefeld Drive, Arequipa Drive, and Independence Pointe Parkway.	Construct roadway improvements, part on new location.	3.39	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-2509E	Not Funded	T	NOT FUNDED	$43,200,000	NOT FUNDED	$3,500,000	NOT FUNDED	$69,400,000	NOT FUNDED		$116,100,000	SEGMENTS C3, C4, C5, C7B, C12
Mecklenburg		NCDOT			1.1	Highway	Transition	10	Charlotte Regional TPO	U-4713B	Pre-STI (Transition)										$0	COMPLETE
Mecklenburg	I-77	NCDOT	Griffth Street (Exit 30) interchange.	Construct roundabouts at northbound and southbound ramp termini.	1	Highway	Transition	10	Charlotte Regional TPO	I-4750AC	Exempt										$0	COMPLETE
Mecklenburg	Northcross Drive Extension	NCDOT	NC 73 in Huntersville to Westmoreland Road in Cornelius.	Construct road on new location.	0.97	Highway	Transition	10	Charlotte Regional TPO	U-5108	Pre-STI (Transition)	BA, BGANY, BGDA, L, T(M)	2020	$3,500,000			2024	$17,642,000	2020	$960,000	$22,102,000	ADDITIONAL FUNDING FOR PRELIMINARY ENGINEERING AND RIGHT-OF-WAY TO COVER ANTICIPATED EXPENDITURES. $6.150M IN BGANY USED AS PART OF FUND SWAP.

2026-2035 STATE TRANSPORTATION IMPROVEMENT PROGRAM (BOT adoption anticipated July 2025)

June 2025

BASIC PROJECT INFORMATION													FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Mecklenburg	SR 2975 (Sugar Creek Road)	NCDOT	North Carolina Railroad / Norfolk Southern Railway Crossing 715 352H in Charlotte.	Construct grade separation. Close Craighead Road Crossing 715 352H.		Highway	Transition	10	Charlotte Regional TPO	U-5008											$0	DP ARE FEDERAL RAILROAD ADMINISTRATION (FRA) PRIIA GRANT, NCRR, NSR AND CITY OF CHARLOTTE FUNDS
Mecklenburg	SR 4979 (Ballantyne Commons Parkway-McKee Road)	CHARLOTTE	NC 16 (Providence Road) intersection in Charlotte.	Construct additional left turn lane on SR 4979 (Ballantyne Commons Parkway-McKee Road) and a second left turn lane on southbound NC 16.		Highway	Transition	10	Charlotte Regional TPO	C-5534	Exempt	BGDA					2020	$640,000			$640,000	COMPLETE. ADDITIONAL STBG-DA FUNDS TO COVER ANTICIPDATED EXPENDITURES.
Mecklenburg	US 21	NCDOT	SR 2136 (Gilead Road) intersection in Huntersville.	Construct intersection improvements, including bicycle and pedestrian accommodations.	0.5	Highway	Transition	10	Charlotte Regional TPO	U-5114	Pre-STI (Transition)										$0	UNDER CONSTRUCTION
Mecklenburg	Various	CHARLOTTE	Mecklenburg County Air Quality - Grants to Replace Aging Diesel Engines (GRADE).	Replace, repower, or retrofit aging diesel vehicles and equipment.		Highway	Transition	10	Charlotte Regional TPO	C-5536	Exempt	CMAQ					2021	$139,000			$139,000	COMPLETE.
Mecklenburg	Charlotte Area Transit System (CATS)		Systemwide	Acquire battery-electric buses, hybrid buses, bus charges, management systems, training, and equipment.		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TC-0035	Public Transit	5339(b), L							2025	$12,442,000	$12,442,000	
Mecklenburg	Charlotte Area Transit System (CATS)		Systemwide.	Improve bus stops for enhanced mobility of seniors and individuals living with disabilities.		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TM-0064	Public Transit	5310, L							2025	$490,000	$490,000	
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Lynx Blue Line near Iverson Way in South Charlotte	Add a light rail station.		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TP-5156	Public Transit	L							2021	$7,582,000	$7,582,000	"L" REFLECTS CATS CAPITAL FUND, CITY OF CHARLOTTE CAPITAL FUNDS, PRIVATE DEVELOPER PARTICIPATION.
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	South Tryon Street Garage	Funding to service debt.		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TD-4701	Public Transit	5307, L, S					2025	$12,658,000			$12,658,000	FUNDS AUTHORIZED IN PROGRESS
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Systemwide	Funding for city lynx gold line - American rescue plan small starts.		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TC-0024	Public Transit	5309							2022	$11,122,000	$11,122,000	
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Systemwide	Funding for operating projects for enhanced mobility to seniors and individuals with disabilities.		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TQ-9033	Public Transit	5310, L, S							2025	$2,476,000	$2,476,000	CORRECTED FUNDING LEVEL FOR FY 20-25 FOR OPERATING PROJECTS AS REQUESTED BY THE CRTPO
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Systemwide	Funding to purchase electric buses.		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TM-0042	Public Transit	CMAQ, L, S							2023	$2,739,000	$2,739,000	
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Systemwide	Purchase expansion vanpool.		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TC-0014	Public Transit	5307, L, S							2021	$174,000	$174,000	"L" REFLECTS CATS CAPITAL FUND
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Systemwide	Purchase replacement bus.		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TA-4710	Public Transit	5307, 5339, L, S							2026	$80,212,000	$80,212,000	"L" REFLECTS CATS CAPITAL PROGRAM
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Systemwide	Purchase replacement paratransit vehicle.		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TA-4711	Public Transit	5307, L, S							2025	$12,427,000	$12,427,000	FUNDS AUTHORIZED IN PROGRESS
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Systemwide	Purchase replacement van for vanpool.		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TA-4960	Public Transit	5307, L, S							2020	$3,279,000	$3,279,000	FUNDS AUTHORIZED IN PROGRESS
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Systemwide	Safety and security minimum 1 % set aside		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TS-5107	Public Transit	5307, L							2025	$6,165,000	$6,165,000	FUNDS AUTHORIZED IN PROGRESS
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Transit Center	Upgrade facility.		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TD-4702	Public Transit	5307, L, S					2020	$720,000			$720,000	FUNDS AUTHORIZED IN PROGRESS
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Various locations	Construct fixed guideway.		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TE-4901	Public Transit	5309, L, S					2020	$66,328,000			$66,328,000	FUNDS AUTHORIZED IN PROGRESS
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Various locations	Perform rapid transit corridor studies.		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TE-4902	Public Transit	5307, FED, L, S					2021	$200,000			$200,000	FUNDS AUTHORIZED IN PROGRESS
Mecklenburg	Charlotte Area Transit System (CATS)	NCDOT	Fixed guideway	Funding for bridge inspections and emergency repairs.		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TW-5102B	Public Transit	FMOD, L					2020	$1,160,000			$1,160,000	FUNDS AUTHORIZED IN PROGRESS
Mecklenburg	Charlotte Area Transit System (CATS)	NCDOT	Systemwide	Funding for bridge inspections and repairs.		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TW-5102A	Public Transit	5307, L, S					2025	$2,030,000			$2,030,000	FUNDS AUTHORIZED IN PROGRESS
Mecklenburg	Charlotte Area Transit System (CATS)	NCDOT	Systemwide	Major investment study/alternative analysis for bus rapid transit extension to Research Triangle Park (RTP) and Clayton.		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TW-4901	Public Transit	5337, FMOD, L, S							2020	$7,854,000	$7,854,000	FUNDS AUTHORIZED IN PROGRESS
Mecklenburg	Charlotte Area Transit System (CATS)	NCDOT	Systemwide	STATE OF GOOD REPAIR - BUS		Public Transportation (Transit)	Capital (Non-STI)	10	Charlotte Regional TPO	TW-5104B	Public Transit	5307, 5337, L, S							2020	$13,890,000	$13,890,000	FUNDS AUTHORIZED IN PROGRESS
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE	Systemwide	Purchase two electric buses for Ballantyne - I-485 service.		Public Transportation (Transit)	Locally Selected	10	Charlotte Regional TPO	TL-0056	Exempt	CRPDA, L					2026	$2,188,000			$2,188,000	
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	North Davidson and South Tryon bus garages	Install electric bus chargers.		Public Transportation (Transit)	Locally Selected	10	Charlotte Regional TPO	TL-0032	Exempt	CRPDA, L					2025	$200,000			$200,000	
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Systemwide	Funding for operating assistance.		Public Transportation (Transit)	Miscellaneous/Other	10	Charlotte Regional TPO	TO-5137	Public Transit	SMAP							2020	$75,312,000	$75,312,000	FUNDS AUTHORIZED IN PROGRESS
Mecklenburg	Charlotte Area Transit System (CATS)	CATS	Systemwide.	Acquire new light rail vehicles.		Public Transportation (Transit)	Operations and Maintenance	10	Charlotte Regional TPO	TM-0065	Public Transit	5307, DP, L							2027	$50,950,000	$50,950,000	
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Charlotte Transportation Center in Uptown Charlotte	Rebuild CATS main transit hub.		Public Transportation (Transit)	Operations and Maintenance	10	Charlotte Regional TPO	TM-0041	Public Transit	CMAQ, DP, L					2024	$85,718,000	2023	$2,708,000	$88,426,000	DP REPRESENTS FEDERAL RAISE GRANT AWARD. AWARD AMOUNT IS $15,000,000.
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Systemwide	Funding for agency administration for 5310 Program.		Public Transportation (Transit)	Operations and Maintenance	10	Charlotte Regional TPO	TQ-7009	Public Transit	5310							2026	$279,000	$279,000	CORRECTED FUNDING LEVEL TO FY 20-25 FOR THE ADMINISTRATIVE OVERSIGHT OF THE 5310 PROGRAM AS REQUESTED BY THE CRTPO
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Systemwide	Funding for operating projects for enhanced mobility to seniors and individuals with disabilities.		Public Transportation (Transit)	Operations and Maintenance	10	Charlotte Regional TPO	TQ-6957	Public Transit	5310, L							2026	$978,000	$978,000	CORRECTED FUNDING LEVEL FOR FY 20-25 FOR OPERATING PROJECTS AS REQUESTED BY THE CRTPO
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Systemwide	Plan new and replacement circulator routes with new on-demand strategy of micro-transit zones to reduce travel times and improve connectivity to high-frequency routes at mobility hubs.		Public Transportation (Transit)	Operations and Maintenance	10	Charlotte Regional TPO	TM-0040	Public Transit	ARP							2023	$750,000	$750,000	

2026-2035 STATE TRANSPORTATION IMPROVEMENT PROGRAM (BOT adoption anticipated July 2025)

June 2025

BASIC PROJECT INFORMATION													FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE REGIONAL	Various locations	Funding for operating projects for enhanced mobility to seniors and individuals with disabilities.		Public Transportation (Transit)	Operations and Maintenance	10	Charlotte Regional TPO	TQ-6597	Public Transit	5310, L							2020	$2,790,000	$2,790,000	CORRECTED FUNDING LEVELS FOR FY 20-25 FOR OPERATING PROJECTS AS REQUESTED BY THE CRTPO
Mecklenburg	Mecklenburg Transit System		Systemwide	Funding for demand response vendor trips, preventative maintenance expenses and security related software.		Public Transportation (Transit)	Operations and Maintenance	10	Charlotte Regional TPO	TM-0056	Public Transit	5307, L							2024	$1,243,000	$1,243,000	
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Lynx Silver Line light rail	Funding for planning.	28.84	Public Transportation (Transit)	Planning	10	Charlotte Regional TPO	TU-0001	Public Transit	5307, L							2025	$5,000,000	$5,000,000	
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Systemwide	Funding for Lynx Silver Line TOD planning in cooperation with CATS, CRTPO, and GCLMPO.		Public Transportation (Transit)	Planning	10	Charlotte Regional TPO	TP-5159	Public Transit	5303, L							2023	$507,000	$507,000	
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Systemwide	Funding for planning assistance.		Public Transportation (Transit)	Planning	10	Charlotte Regional TPO	TP-5114	Public Transit	5303, L, S							2020	$2,598,000	$2,598,000	FUNDS AUTHORIZED IN PROGRESS
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Systemwide	Funding for bus stop shelters, benches, shop equipment, spare parts, engineers, farebox, etc.		Public Transportation (Transit)	Routine Capital and Preventive Maintenance	10	Charlotte Regional TPO	TG-4726	Public Transit	5307, 5337, FMOD, L							2025	$6,128,000	$6,128,000	FUNDS AUTHORIZED IN PROGRESS
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Systemwide	Funding to service vehicles.		Public Transportation (Transit)	Routine Capital and Preventive Maintenance	10	Charlotte Regional TPO	TG-4827	Public Transit	5307, L							2025	$5,765,000	$5,765,000	FUNDS AUTHORIZED IN PROGRESS
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Various locations	Funding for light rail vehicle overhaul.		Public Transportation (Transit)	Routine Capital and Preventive Maintenance	10	Charlotte Regional TPO	TG-5118B	Public Transit	5307, 5337, L							2025	$58,995,000	$58,995,000	FUNDS AUTHORIZED IN PROGRESS
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Various locations	Funding for preventative maintenance for rail, bus, and facilities.		Public Transportation (Transit)	Routine Capital and Preventive Maintenance	10	Charlotte Regional TPO	TG-5119	Public Transit	5307, L							2025	$10,211,000	$10,211,000	FUNDS AUTHORIZED IN PROGRESS
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Various locations	Funding for state of good repair - rail.		Public Transportation (Transit)	Routine Capital and Preventive Maintenance	10	Charlotte Regional TPO	TG-5118A	Public Transit	5337, L, S							2025	$24,519,000	$24,519,000	FUNDS AUTHORIZED IN PROGRESS
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Various locations	Purchase battery electric buses and charging stations. Funding for onsite training and startup support and testing.		Public Transportation (Transit)	Routine Capital and Preventive Maintenance	10	Charlotte Regional TPO	TG-0010	Public Transit	5339, L							2021	$7,448,000	$7,448,000	
Mecklenburg	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	I-77 and Hambright Road Park	Construct park and ride lot and transfer facility.		Public Transportation (Transit)	STI (Prioritization)	10	Charlotte Regional TPO	TA-6724	Division 10	BGDA, CMAQ, L(M), T(M)	2025	$1,262,000			2025	$9,906,000	2025	$1,513,000	$12,681,000	LOCAL FUNDS PROVIDED BY CATS AND FTA 5307; T(M) IS HIGHWAY TRUST FUNDS
Mecklenburg	Mecklenburg Transportation	MECKLENBURG COUNTY	Systemwide	Expand paratransit fleet by purchasing additional buses.		Public Transportation (Transit)	STI (Prioritization)	10	Charlotte Regional TPO	TA-6673	Division 10	O, T							2021	$2,500,000	$2,500,000	OTHER FUNDING PROVIDED BY CHARLOTTE AREA TRANSIT (CATS) FUNDS
Mecklenburg	Various	NCDOT	Charlotte Railyard; Pineville Railyard.	Implement Grants to Replace Aging Diesel Engines (GRADE).		Rail	Locally Selected	10	Charlotte Regional TPO	RL-0002	Exempt	CMAQ, L					2025	$5,450,000			$5,450,000	
Mecklenburg	Piedmont and Northern Railroad	NCDOT	Various locations	Relocate thrift depot.		Rail	Other	10	Charlotte Regional TPO	P-5200EA	Pre-STI (Transition)										$0	UNDER CONSTRUCTION
Mecklenburg	Piedmont and Northern Railroad	NCDOT	Various locations	Stabilize thrift depot.		Rail	Other	10	Charlotte Regional TPO	P-5200EB	Pre-STI (Transition)										$0	UNDER CONSTRUCTION
Mecklenburg	Piedmont Corridor	NCDOT	CRISP Charlotte Maintenance Facility.	Track extension and shop building.		Rail	Other	10	Charlotte Regional TPO	P-2918F											$0	IN PROGRESS
Mecklenburg	SR 2623 (Trailer Drive)	NCDOT	Norfolk Southern (Crossing Number 910 618A, MP O4.11)	Construct at grade crossing improvements.		Rail	Other	10	Charlotte Regional TPO	P-5754	Exempt	O					2022	$1,200,000	2020	$50,000	$1,250,000	UNDER CONSTRUCTION. OTHER FUNDING PROVIDED BY QUIK TRIP; CONSTRUCTION TO BE PERFORMED BY NORFOLK SOUTHERN
Mecklenburg	Pecan Avenue	NCDOT	CSX Crossing 631391N in Charlotte.	Construct safety improvements.		Rail	Rail-Highway Grade Crossing Improvement	10	Charlotte Regional TPO	RX-2010D	Division 10	RR					2026	$388,000			$388,000	
Mecklenburg	Pecan Avenue	NCDOT	Norfolk Southern Crossing 716055T in Pineville.	Construct safety improvements.		Rail	Rail-Highway Grade Crossing Improvement	10	Charlotte Regional TPO	RX-2010E	Division 10	RR					2027	$451,000			$451,000	
Mecklenburg	SR 2805 (Harrisburg Highway)	NCDOT	ACWR Crossing 726808Y in Charlotte.	Construct highway-rail grade crossing safety improvements.	0.5	Rail	Rail-Highway Grade Crossing Improvement	10	Charlotte Regional TPO	RX-2410C	Division 10	RR					2026	$400,000			$400,000	
Mecklenburg	SR 2940 (Eastway Drive)	NCDOT	ACWR Crossing 726797N in Charlotte.	Construct highway-rail grade crossing safety improvements.	0.5	Rail	Rail-Highway Grade Crossing Improvement	10	Charlotte Regional TPO	RX-2410B	Division 10	RR					2026	$400,000			$400,000	
Mecklenburg	Tipperary Place	NCDOT	ACWR Crossing 726798V in Charlotte.	Construct highway-rail grade crossing safety improvements.	0.5	Rail	Rail-Highway Grade Crossing Improvement	10	Charlotte Regional TPO	RX-2410D	Division 10	RR					2026	$400,000			$400,000	
Mecklenburg	Charlotte Gateway Station	NCDOT	Charlotte	Update and maintain Charlotte Gateway Station.		Rail	STI (Prioritization)	10	Charlotte Regional TPO	P-5705											$0	DP REPRESENTS FEDERAL PRIIA GRANT AWARD = $2,578,000
Mecklenburg	Charlotte Gateway Station	NCDOT	Charlotte Junction.	Construct WYE connection track.		Rail	STI (Prioritization)	10	Charlotte Regional TPO	P-5705A	Statewide Mobility	DP, T	2021	$500,000			2023	$13,000,000			$13,500,000	UNDER CONSTRUCTION.
Mecklenburg	Charlotte Gateway Station	NCDOT	Various locations	Acquire right-of-way.		Rail	STI (Prioritization)	10	Charlotte Regional TPO	P-5705B	Region E										$0	UNDER CONSTRUCTION.
Mecklenburg	Charlotte Gateway Station	NCDOT	Various locations	Install platform and canopy.		Rail	STI (Prioritization)	10	Charlotte Regional TPO	P-5705BB	Region E										$0	UNDER CONSTRUCTION.
Mecklenburg	Charlotte Gateway Station	NCDOT	Various locations	Install track, structure, and signals.		Rail	STI (Prioritization)	10	Charlotte Regional TPO	P-5705BA	Region E										$0	UNDER CONSTRUCTION.
Mecklenburg	Clanton Road	NCDOT	End point of Clanton Road to US 29 / US 74 (Wilkinson Boulevard).	Extend roadway. Construct grade separation of Norfolk Southern Railroad and close the Donald Ross Road crossing.		Rail	STI (Prioritization)	10	Charlotte Regional TPO	P-5730	Region E	O, T	2030	$13,600,000	2030	$1,200,000	2034	$62,801,000			$77,601,000	"O" FUNDS REPRESENT FUNDS FROM NORFOLK SOUTHERN.
Mecklenburg, Cabarrus	I-85; I-77; I-277; I-485; and US 74	NCDOT	Various locations.	Install wrong way pavement markings and signs.		Highway	Safety	10	Charlotte Regional TPO, Cabarrus-Rowan MPO	HS-2010M	Statewide Mobility	HSIP					2024	$783,000			$783,000	
Mecklenburg, Cabarrus	NC 73 (Davidson Highway)	NCDOT	East of SR 2693 (Davidson-Concord Road) to east of SR 1394 (Popular Tent Road) in Mecklenburg County.	Widen to multi-lanes.	2.35	Highway	STI (Prioritization)	10	Charlotte Regional TPO, Cabarrus-Rowan MPO	R-5706A	Region E	NHP	2025	$12,000,000	2025	$6,200,000	2029	$53,100,000			$71,300,000	
Mecklenburg, Cabarrus	SR 2467 (Mallard Creek Road) / SR 1445 (Derita Road)	NCDOT	I-485 to SR 2894 (Concord Mills Boulevard)	Widen to six lanes.	0.87	Highway	STI (Prioritization)	10	Charlotte Regional TPO, Cabarrus-Rowan MPO	U-6032	Division 10	T	2022	$11,500,000	2025	$2,514,000	2029	$45,595,000			$59,609,000	RIGHT-OF-WAY IN PROGRESS. NC BUILD BONDS: $14M ON CONSTRUCTION PAYBACK 2030-2044 (SALE 10 / FY 2030).
Mecklenburg, Cabarrus	Charlotte Area Transit System (CATS)	CHARLOTTE AREA TRANSIT SYSTEM	Systemwide	Purchase six buses.		Public Transportation (Transit)	STI (Prioritization)	10	Charlotte Regional TPO, Cabarrus-Rowan MPO	TA-6672	Region E	O, T							2020	$3,000,000	$3,000,000	OTHER FUNDING PROVIDED BY CHARLOTTE AREA TRANSIT (CATS) FUNDS
Mecklenburg, Iredell	I-77	NCDOT	Mile marker 11.0 to mile marker 20.0 and mile marker 24.5 to mile marker 37.	Rehabilitate pavement.	21.27	Highway	Interstate Maintenance	10, 12	Charlotte Regional TPO	I-5992	Statewide Mobility										$0	UNDER CONSTRUCTION
Mecklenburg, Iredell	I-77	NCDOT	I-485 to NC 150.	Construct peak period shoulder use lanes.	16.38	Highway	Locally Selected	10, 12	Charlotte Regional TPO	I-6065	Exempt	BA, BGDA, T(DA), T(M)	2027	$100,000			2029	$45,080,000	2020	$1,820,000	$47,000,000	PROJECT FUNDED AS PART OF STBG-DA AND BA FUND SWAP FOR CMAQ FUNDS. PROJECT IS EXEMPT AS DA FUNDS ARE BEING USED ON AN ELIGIBLE STATEWIDE MOBILITY PROJECT. $36.762M IN STBG-DA FUNDS SWITCHED WITH $36.762M IN STATE TRUST FUNDS "T(DA)" AS PART OF FUND SWAP.
Mecklenburg, Iredell, Union	Various	NCDOT	Charlotte Regional Transportation Planning Organization (CRTPO) Area.	Improve congestion and air quality.		Highway	Locally Selected	10, 12	Charlotte Regional TPO	C-5613	Exempt	CMAQ, L(M)	2020	$518,000			2020	$3,108,000	2020	$1,554,000	$5,180,000	IN PROGRESS.
Mecklenburg, Lincoln	NC 73	NCDOT	NC 16 in Lincoln County to SR 5544 (West Catawba Avenue) in Huntersville.	Widen to multi-lanes.	9.7	Highway	STI (Prioritization)	10, 12	Charlotte Regional TPO, Gaston-Cleveland-Lincoln MPO	R-5721											$0	COORDINATE WITH U-5765.
Mecklenburg, Union, Iredell	Various	NCDOT	Locations in the Charlotte Regional Transportation Planning Organization	Unallocated Transportation Alternatives Program Funds.		Bike & Ped	Locally Selected	10, 12	Charlotte Regional TPO	U-5544	Division 10, 12	L, TADA					2024	$24,694,000			$24,694,000	

BASIC PROJECT INFORMATION													FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Mecklenburg, Union, Iredell	Various	NCDOT	Charlotte Regional Transportation Planning Organization (CRTPO)	Unallocated Surface Transportation Block Grant Program Funds.		Highway	Locally Selected	10, 12	Charlotte Regional TPO	U-4744	Division 10, 12	BGDA, L					2024	$194,877,000			$194,877,000	
Mecklenburg, Union, Iredell	Various	NCDOT	Charlotte Regional Transportation Planning Organization (CRTPO) area.	Unallocated Carbon Reduction Program funds.		Highway	Locally Selected	10, 12	Charlotte Regional TPO	HL-0092	Exempt	CRPDA, L					2024	$1,433,000			$1,433,000	
Mecklenburg, Union, Iredell	Various	NCDOT	Charlotte Regional Transportation Planning Organization.	Planning (PL) Supplement.		Highway	Locally Selected	10, 12	Charlotte Regional TPO	U-4950	Division 10, 12	BGDA, L							2024	$18,298,000	$18,298,000	FORMERLY U-9999C - IN PROGRESS
Mecklenburg, Wake, Guilford, Forsyth, Durham, Cabarrus, Gaston, Johnston, Union, Catawba, Davidson, Iredell, Orange, Rowan, Lincoln, Nash, Chatham, Davie, Edgecombe, Franklin, Granville, Haywood, Person, Swain	North Carolina Department of Environment and Natural Resources	NCDOT	Statewide	North Carolina air awareness outreach program to provide education and produce daily air quality forecasts.		Highway	Other	4, 5, 7, 8, 9, 10, 12, 14	Charlotte Regional TPO, Capital Area MPO, Triangle West TPO, Cabarrus-Rowan MPO, Winston-Salem Area TPO, Gaston-Cleveland-Lincoln MPO, Greensboro Urban Area MPO, High Point Urban Area MPO, Greater Hickory MPO, Kerr-Tar RPO, Rocky Mount Urban Area MPO, Roc	HO-0009	Exempt	CMAQ, L(M), O							2022	$1,604,000	$1,604,000	"O" FUNDING REFLECTS PARTICIPATION BY DAQ - IN PROGRESS
Mecklenburg, Wake, Guilford, Forsyth, Durham, Cabarrus, Gaston, Johnston, Union, Catawba, Davidson, Iredell, Orange, Rowan, Nash, Davie, Edgecombe, Granville, Haywood	Various	NCDOT	Locations in Divisions 4, 5, 7, 9, and 10.	Install statewide ITS devices.		Highway	Other	4, 5, 7, 9, 10, 12, 14	Charlotte Regional TPO, Capital Area MPO, Triangle West TPO, Winston-Salem Area TPO, Greensboro Urban Area MPO, Cabarrus-Rowan MPO, High Point Urban Area MPO, Gaston-Cleveland-Lincoln MPO, Greater Hickory MPO, Rocky Mount Urban Area MPO, Kerr-Tar RPO, Lan	HO-0005	Exempt	CMAQ, T(M)					2022	$21,605,000			$21,605,000	UNDER CONSTRUCTION.
Rowan	Arlington Avenue	SALISBURY	Salisbury.	Construct sidewalks.		Bike & Ped	Locally Selected	9	Cabarrus-Rowan MPO	C-4908D	Exempt										$0	COMPLETE
Rowan	Grants Creek Greenway	SALISBURY	Catawba College and Meadowbrook Neighborhood to south of Statesville Boulevard in Salisbury	Construct multi-use path.	0.61	Bike & Ped	Locally Selected	9	Cabarrus-Rowan MPO	EB-5619B	Division 9	BGDA, L(M)	2020	$825,000	2025	$10,000	2025	$1,725,000			$2,560,000	RIGHT-OF-WAY IN PROGRESS
Rowan	Grants Creek Greenway	SALISBURY	South of Statesville Boulevard to Kelsey Scott Park along Wiltshire Place, East Colonial Drive, and South McCoy Road in Salisbury	Construct multi-use path.	0.31	Bike & Ped	Locally Selected	9	Cabarrus-Rowan MPO	EB-5619C	Division 9	BGDA, L(M), TADA	2025	$65,000	2025	$45,000	2026	$2,044,000	2024	$675,000	$2,829,000	
Rowan	Grants Creek Greenway	SALISBURY	Vicinity of Forestdale Drive to Catawba College in Salisbury.	Construct low-water bridge greenway connection.		Bike & Ped	Locally Selected	9	Cabarrus-Rowan MPO	EB-5619A	Division 9										$0	COMPLETE
Rowan	Kerns Street; North Oak Street; Crook Street	GRANITE QUARRY	SR 2300 (North Main Street) to US 52; Crook Street to Granite Civic Park; SR 2300 (North Main Street) to North Oak Street in Granite Quarry.	Construct sidewalks.		Bike & Ped	Locally Selected	9	Cabarrus-Rowan MPO	BL-0088	Division 9	L, TADA	2025	$90,000	2025	$10,000	2026	$380,000	2024	$70,000	$550,000	
Rowan	Main Street	SALISBURY	D Avenue to Sunset Drive in Salisbury	Construct sidewalk.	0.43	Bike & Ped	Locally Selected	9	Cabarrus-Rowan MPO	C-4908H	Exempt										$0	UNDER CONSTRUCTION
Rowan	Newsome Road	SALISBURY	SR 1002 (Bringle Ferry Road) to SR 1004 (Stokes Ferry Road) in Salisbury.	Construct sidewalks.		Bike & Ped	Locally Selected	9	Cabarrus-Rowan MPO	C-4908F	Exempt										$0	PROJECT DELETED AT MPO REQUEST
Rowan	Various	SALISBURY	Locations in Salisbury	Construct sidewalks.		Bike & Ped	Locally Selected	9	Cabarrus-Rowan MPO	C-4908	Exempt										$0	
Rowan	Grants Creek Greenway	SALISBURY	Kelsey Scott Park to Catawba College in Salisbury	Construct multi-use path.		Bike & Ped	Other	9	Cabarrus-Rowan MPO	EB-5619	Division 9										$0	PLANNING / DESIGN / RIGHT-OF-WAY / CONSTRUCTION BY CITY OF SALISBURY
Rowan	Various	SALISBURY	Ryan Street to Celebration Drive and South Boundary Street from Hillsboro Street to Hills Street in Salisbury.	Construct sidewalks.		Bike & Ped	Pre-STI (Historic)	9	Cabarrus-Rowan MPO	C-4908B	Exempt										$0	COMPLETE
Rowan	Various	SALISBURY	Various streets around Salisbury High School in Salisbury.	Construct sidewalk.		Bike & Ped	Pre-STI (Historic)	9	Cabarrus-Rowan MPO	C-4908C	Exempt										$0	COMPLETE
Rowan	SR 2739 (North Main Street)	KANNAPOLIS	12th Street to 22nd Street in Kannapolis	Construct sidewalk.	0.92	Bike & Ped	STI (Prioritization)	9	Cabarrus-Rowan MPO	EB-5921	Division 9	L, TAANY	2030	$700,000	2030	$1,100,000	2033	$2,600,000	2026	$450,000	$4,850,000	COORDINATE WITH U-6062
Rowan	Third Street Greenway	SPENCER	West of Old Mocksville Road near Grants Creek at existing Salisbury Greenway to Fieldcrest Cannon Lane in Spencer	Construct greenway and sidewalk.	5.77	Bike & Ped	STI (Prioritization)	9	Cabarrus-Rowan MPO	EB-5861	Division 9	L(M), TAANY	2026	$10,000	2026	$10,000	2026	$4,286,000	2024	$185,000	$4,491,000	
Rowan	SR 1724 (Hurley School Road)	NCDOT	Bridge 790066 over Norfolk Southern Railroad.	Replace bridge.	0.25	Highway	Bridges	9	Cabarrus-Rowan MPO	B-5772	Division 9	BGOFF	2021	$77,000	2021	$31,000	2022	$3,009,000			$3,117,000	UNDER CONSTRUCTION
Rowan	NC 152	NCDOT	Intersection with Access Road east of I-85 / US 601 in China Grove.	Widen pavement and construct roundabout.		Highway	Economic Development	9	Cabarrus-Rowan MPO	HE-0009	Division 9	T					2025	$5,411,000	2022	$1,489,000	$6,900,000	THIS IS AN ECONOMIC DEVELOPMENT PROJECT FOR MACYS.
Rowan	NC 152	NCDOT	NC 152, intersection with proposed access road east of I-85 / US 601 in China Grove	Construct intersection improvements. Widen pavement and construct turn lanes for Phase I of roadway improvements.	0.4	Highway	Economic Development	9	Cabarrus-Rowan MPO	HE-0009A	Division 9	T					2023	$1,000,000			$1,000,000	UNDER CONSTRUCTION. CONSTRUCTION BY STATE FORCES. THIS IS AN ECONOMIC DEVELOPMENT PROJECT FOR MACYS.
Rowan	SR 2120 (Long Ferry Road)	NCDOT	SR 2182 (I-85 Service Road) near Spencer.	Construct Right-turn lane on SR 2120, and remove residual pavement and strengthen remaining pavement on SR 2182 (I-85 Service Road).	0.6	Highway	Economic Development	9	Cabarrus-Rowan MPO	U-6237	Division 9	T			2021	$50,000	2021	$365,000			$415,000	UNDER CONSTRUCTION; THIS IS AN ECONOMIC DEVELOPMENT PROJECT FOR CHEWY.COM
Rowan	I-85	NCDOT	US 29 / US 601 in China Grove to US 601 (Jake Alexander Boulevard) in Salisbury and from south of US 52 in Salisbury to north of SR 2120 (Long Ferry Road) in Spencer.	Rehabilitate pavement.	1.08	Highway	Interstate Maintenance	9	Cabarrus-Rowan MPO	I-5858	Statewide Mobility	NHPIM					2019	$12,012,000			$12,012,000	UNDER CONSTRUCTION; GARVEE BOND FUNDING: $10 MILLION FOR CONSTRUCTION - PAYBACK 2019-2033
Rowan	Brenner Avenue	SALISBURY	US 70 / US 601 (Jake Alexander Boulevard) to Milford Hills Road in Salisbury.	Construct median and construct roundabout at Milford Hills Road.	0.21	Highway	Locally Selected	9	Cabarrus-Rowan MPO	HL-0049	Division 9	BGDA, L(M)	2025	$14,000	2025	$200,000	2026	$591,000	2023	$220,000	$1,025,000	
Rowan	New Route	NCDOT	SR 1211 (Kimball Road) extension, SR 1242 (North Chapel Street) to SR 1221 (Bostian Road) in Landis.	Construct two-lane connector on new location.	0.27	Highway	Locally Selected	9	Cabarrus-Rowan MPO	U-5608	Division 9										$0	PROJECT COMPLETED
Rowan	US 29 (Main Street)	SALISBURY	Kerr Street to Horah Street in Salisbury.	Construct safety improvements.	0.52	Highway	Locally Selected	9	Cabarrus-Rowan MPO	HL-0064	Division 9	BGDA, L			2024	$3,261,000	2025	$6,011,000	2024	$10,000	$9,282,000	
Rowan	Various	SALISBURY	Locations in Salisbury.	Upgrade signal System.		Highway	Locally Selected	9	Cabarrus-Rowan MPO	HL-0005	Division 9	BGDA, L					2022	$429,000			$429,000	
Rowan	Brenner Avenue	SALISBURY	SR 2094 (Statesville Boulevard) to West Horah Street, and at Link Avenue in Salisbury.	Construct sidewalks and add turn lanes at Link Avenue.		Highway	Other	9	Cabarrus-Rowan MPO	C-5603H	Exempt	CMAQ, CRPANY, L, L(M)			2025	$275,000	2025	$1,594,000			$1,869,000	$676,032 IN CMAQ TRANSFERRED FROM BL-0034
Rowan	Horah Street	SALISBURY	Brenner Avenue to Partee Street in Salisbury.	Construct sidewalk.		Highway	Other	9	Cabarrus-Rowan MPO	C-4908A	Exempt										$0	PROJECT DELETED AT MPO REQUEST
Rowan	SR 1002 (Old Concord Road)	SALISBURY	Ryan Street to SR 1007 (Jake Alexander Boulevard)	Construct sidewalk.		Highway	Other	9	Cabarrus-Rowan MPO	C-5603D	Exempt	CMAQ, L(M)	2024	$15,000			2025	$1,950,000			$1,965,000	
Rowan	NC 152	NCDOT	NC 153 intersection near China Grove.	Construct intersection improvements.	0.5	Highway	Safety	9	Cabarrus-Rowan MPO	HS-2009I	Region D	HSIP	2024	$20,000			2025	$380,000			$400,000	
Rowan	NC 153 (Rice Street)	NCDOT	SR 1197 (Cannon Farm Road / Mt Moriah Church Road) in China Grove.	Construct roundabout.	0.5	Highway	Safety	9	Cabarrus-Rowan MPO	W-5709E	Region D	BGANY					2024	$2,500,000			$2,500,000	RIGHT-OF-WAY IN PROGRESS
Rowan	SR 1002 (Old Concord Road)	NCDOT	Jake Alexander Boulevard in Salisbury to the Cabarrus County line.	Install pavement markings.	10.94	Highway	Safety	9	Cabarrus-Rowan MPO	HS-2009E	Division 9	HSIP					2023	$396,000			$396,000	

2026-2035 STATE TRANSPORTATION IMPROVEMENT PROGRAM (BOT adoption anticipated July 2025)

June 2025

BASIC PROJECT INFORMATION													FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Rowan	SR 1002 (Old Concord Road)	NCDOT	Martin Luther King Jr. Avenue South intersection	Upgrade traffic signal and install/upgrade pedestrian signals and other pedestrian accommodations.	0.5	Highway	Safety	9	Cabarrus-Rowan MPO	HS-2409B	Division 9	HSIP			2025	$30,000	2026	$160,000			$190,000	
Rowan	SR 1007 (Jake Alexander Boulevard)	NCDOT	Morlan Park Road intersection.	Install concrete channelization and leftover with U-turn bulb.	0.5	Highway	Safety	9	Cabarrus-Rowan MPO	HS-2009D	Division 9	HSIP	2022	$50,000	2022	$20,000	2023	$520,000			$590,000	UNDER CONSTRUCTION
Rowan	I-85	NCDOT	SR 1221 (Old Beatty Ford Road) intersection near Landis.	Upgrade grade separation to interchange.	1	Highway	STI (Prioritization)	9	Cabarrus-Rowan MPO	I-3804	Division 9										$0	INCLUDED IN I-3802B - DESIGN-BUILD PROJECT
Rowan	I-85	NCDOT	SR 2180 (Lane Street) in Cabarrus County to US 29 / US 601 connector in Rowan County.	Widen to eight lanes.	6.49	Highway	STI (Prioritization)	9	Cabarrus-Rowan MPO	I-3802B	Statewide Mobility										$0	COMPLETE - DESIGN-BUILD PROJECT
Rowan	NC 150	NCDOT	SR 1526 (Rowan Mill Road) and SR 1526 (Sherrills Ford Road) intersections in Sherrills Ford and Salisbury	Add storage and turn lanes.		Highway	STI (Prioritization)	9	Cabarrus-Rowan MPO	HP-0029	Region D	BGANY	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$3,600,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$2,300,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$14,000,000			$19,900,000	
Rowan	NC 152	NCDOT	SR 1509 (Miller Road) intersection in China Grove	Construct roundabout.		Highway	STI (Prioritization)	9	Cabarrus-Rowan MPO	HP-0028	Region D	BGANY	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$1,400,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$500,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$4,200,000			$6,100,000	
Rowan	New Route	NCDOT	Airport Parkway, SR 1710 (Harrison Road) near US 70 / US 601 (Jake Alexander Boulevard) to SR 2539 (Peach Orchard Road) at US 29 in Salisbury.	Construct 2-lane roadway.	3.63	Highway	STI (Prioritization)	9	Cabarrus-Rowan MPO	U-5901	Division 9	BGANY	2030	$19,600,000	2030	$7,900,000	2034	$52,090,000			$79,590,000	
Rowan	New Route	NCDOT	SR 1006 (Faith Road) to US 52 (East Innes Street)	Construct multi-lane roadway on new location.	0.1	Highway	STI (Prioritization)	9	Cabarrus-Rowan MPO	U-5820B	Division 9	T					2020	$1,100,000			$1,100,000	
Rowan	New Route	NCDOT	SR 2576 (Bendix Drive) to SR 1006 (Faith Road)	Construct multi-lane roadway on new location.	0.42	Highway	STI (Prioritization)	9	Cabarrus-Rowan MPO	U-5820A	Division 9	T					2019	$2,609,000			$2,609,000	UNDER CONSTRUCTION; BUILD NC BONDS: $2.023 MILLION FOR CONSTRUCTION - PAYBACK 2020-2033 (FY 2019 / YR 1 SALE)
Rowan	New Route	NCDOT	SR 2576 (Bendix Drive) to US 52 (East Innes Street) at Newsome Road in Salisbury.	Construct a new multi-lane roadway.	0.6	Highway	STI (Prioritization)	9	Cabarrus-Rowan MPO	U-5820											$0	FUNDING FOR PART B REFLECTS REIMBURSEMENT TO CITY OF SALISBURY
Rowan	SR 2528 (Julian Road)	NCDOT	US 601 (Jake Alexander Boulevard) to SR 2667 (Summit Park Drive) in Salisbury.	Widen to four lane divided facility with bike-ped accommodations.	1.28	Highway	STI (Prioritization)	9	Cabarrus-Rowan MPO	U-5738	Division 9	T					2022	$14,995,000			$14,995,000	UNDER CONSTRUCTION
Rowan	SR 2739 (North Main Street / South Main Street)	NCDOT	SR 2000 (Jackson Park Road) / North Loop Road in Kannapolis to SR 1211 (Kimball Road) in China Grove	Upgrade roadway incorporating bicycle lanes and sidewalks.	4.26	Highway	STI (Prioritization)	9	Cabarrus-Rowan MPO	U-6062	Division 9	T	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$33,800,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$10,800,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$35,800,000			$80,400,000	COORDINATE WITH EB-5921
Rowan	US 52	NCDOT	Proposed Granite Quarry bypass	Construct 3-lane facility on new location.	4.63	Highway	STI (Prioritization)	9	Cabarrus-Rowan MPO	R-5860C	Not Funded	NHP	NOT FUNDED	$5,500,000	NOT FUNDED	$900,000	NOT FUNDED	$36,500,000	NOT FUNDED		$42,900,000	
Rowan	US 52	NCDOT	Proposed Rockwell bypass	Construct 3-lane facility on new location.	3.63	Highway	STI (Prioritization)	9	Cabarrus-Rowan MPO	R-5860B	Not Funded	NHP	NOT FUNDED	$8,200,000	NOT FUNDED	$500,000	NOT FUNDED	$22,300,000	NOT FUNDED		$31,000,000	
Rowan	SR 1002 (Bringley Ferry Road)	SALISBURY	Long Street to Newsome Road in Salisbury	Construct sidewalk.		Highway	Transition	9	Cabarrus-Rowan MPO	C-4908E	Exempt										$0	COMPLETE
Rowan	US 70 (Statesville Boulevard)	SALISBURY	US 601 (Jake Alexander Boulevard)	Construct sidewalk.		Highway	Transition	9	Cabarrus-Rowan MPO	C-4908G	Exempt										$0	UNDER CONSTRUCTION
Rowan	City Of Salisbury	CITY OF SALISBURY	Systemwide	Funding for preventive maintenance for bus and bus facility, facility improvements and repairs, automatic bus washer, shop equipment, fueling system, security gate upgrade.		Public Transportation (Transit)	Capital (Non-STI)	9	Cabarrus-Rowan MPO	TD-5302	Public Transit	5339, L							2020	$2,025,000	$2,025,000	
Rowan	City Of Salisbury	CITY OF SALISBURY	Systemwide	Funding for safety and security, minimum set 1 % aside		Public Transportation (Transit)	Capital (Non-STI)	9	Cabarrus-Rowan MPO	TS-5133	Public Transit	5307							2020	$28,000	$28,000	FUNDS AUTHORIZED IN PROGRESS
Rowan	City of Salisbury	CITY OF SALISBURY	Systemwide	Purchase expansion vehicle (ADA paratransit, administration).		Public Transportation (Transit)	Capital (Non-STI)	9	Cabarrus-Rowan MPO	TA-5182	Public Transit	5339, L							2020	$2,000,000	$2,000,000	FUNDS AUTHORIZED IN PROGRESS
Rowan	City Of Salisbury	CITY OF SALISBURY	Systemwide	Purchase replacement bus.		Public Transportation (Transit)	Capital (Non-STI)	9	Cabarrus-Rowan MPO	TA-5181	Public Transit	5307, L, S							2020	$8,235,000	$8,235,000	FUNDS AUTHORIZED IN PROGRESS
Rowan	City Of Salisbury	SALISBURY TRANSIT (CITY OF SALISBURY)	Systemwide	Replace four transit buses that have exceeded their useful life, and replace vehicle related equipment such as fare boxes, destination signs, camera systems and automated voice annunciation system.		Public Transportation (Transit)	Capital (Non-STI)	9	Cabarrus-Rowan MPO	TC-0023	Public Transit	5339(b), L							2021	$4,560,000	$4,560,000	
Rowan	City Of Salisbury	CITY OF SALISBURY	Systemwide	Funding for operating assistance.		Public Transportation (Transit)	Miscellaneous/Other	9	Cabarrus-Rowan MPO	TO-5135	Public Transit	5307, L, SMAP							2020	$3,560,000	$3,560,000	FUNDS AUTHORIZED IN PROGRESS
Rowan	City Of Salisbury	CITY OF SALISBURY	Systemwide	Funding for operating assistance.		Public Transportation (Transit)	Miscellaneous/Other	9	Cabarrus-Rowan MPO	TO-5201	Public Transit	CMAQ, SMAP							2020	$904,000	$904,000	FUNDS AUTHORIZED IN PROGRESS
Rowan	City Of Salisbury	CITY OF SALISBURY	Systemwide	Funding for operating free fare.		Public Transportation (Transit)	Miscellaneous/Other	9	Cabarrus-Rowan MPO	TO-5139	Public Transit	CMAQ, L							2020	$336,000	$336,000	FUNDS AUTHORIZED IN PROGRESS
Rowan	City of Salisbury	CITY OF SALISBURY	Systemwide	Funding for planning assistance -5303		Public Transportation (Transit)	Planning	9	Cabarrus-Rowan MPO	TP-5150	Public Transit	5303, L, S							2020	$170,000	$170,000	FUNDS AUTHORIZED IN PROGRESS
Rowan	City of Salisbury	CITY OF SALISBURY	Systemwide	Funding for AVL system.		Public Transportation (Transit)	Routine Capital and Preventive Maintenance	9	Cabarrus-Rowan MPO	TG-6179	Public Transit	5339, L							2020	$1,400,000	$1,400,000	FUNDS AUTHORIZED IN PROGRESS
Rowan	City Of Salisbury	CITY OF SALISBURY	Systemwide	Funding for bus stop shelters, benches, shop equipment, spare parts, engines, farebox, service vehicles, etc.		Public Transportation (Transit)	Routine Capital and Preventive Maintenance	9	Cabarrus-Rowan MPO	TG-5233	Public Transit	5307, L							2020	$1,120,000	$1,120,000	FUNDS AUTHORIZED IN PROGRESS
Rowan	City of Salisbury	CITY OF SALISBURY	Various locations	Funding for ADA services.		Public Transportation (Transit)	Routine Capital and Preventive Maintenance	9	Cabarrus-Rowan MPO	TG-5260	Public Transit	5307, L							2020	$704,000	$704,000	FUNDS AUTHORIZED IN PROGRESS
Rowan	City of Salisbury	CITY OF SALISBURY	Various locations	Funding for preventive maintenance on buses and facilities.		Public Transportation (Transit)	Routine Capital and Preventive Maintenance	9	Cabarrus-Rowan MPO	TG-5232	Public Transit	5307, L							2020	$3,336,000	$3,336,000	FUNDS AUTHORIZED IN PROGRESS
Rowan	SR 1526 (Henderson Grove Church Road)	NCDOT	Railroad crossing 724 362M	Close railway-highway crossing and construct roadway on new location to Julian Road.		Rail	Rail-Highway Grade Crossing Closure	9	Cabarrus-Rowan MPO	Y-5500IA	Division 9	RR					2024	$4,900,000			$4,900,000	
Rowan	Norfolk Southern	NCDOT	City of Salisbury.	Upgrade station building, expand waiting space and surface parking.		Rail	STI (Prioritization)	9	Cabarrus-Rowan MPO	P-5733	Division 9	CMAQ, T	2026	$5,300,000			2026	$5,699,000	2024	$720,000	$11,719,000	2024 CMAQ AWARD AMOUNT IS $8,520,440, T FUNDS ARE USED AS LOCAL MATCH FOR CMAQ AWARD. PROJECT WAS SELECTED IN P5.0.
Rowan	Norfolk Southern	NCDOT	Norfolk Southern mainline in Rowan County.	Construct track improvements, second platform, pedestrian underpass, sitework, retaining wall and signal equipment.		Rail	STI (Prioritization)	9	Cabarrus-Rowan MPO	P-5726	Region D	T	2019	$1,638,000			2028	$13,600,000			$15,238,000	
Rowan	Norfolk Southern Mainline	NCDOT	Salisbury Train Station	Construct second platform and pedestrian underpass.		Rail	STI (Prioritization)	9	Cabarrus-Rowan MPO	P-5726A	Region D	T					2027	$2,500,000			$2,500,000	

BASIC PROJECT INFORMATION													FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Rowan	Norfolk Southern Mainline	SALISBURY	Salisbury Norfolk Southern Crossover.	Relocation.		Rail	STI (Prioritization)	9	Cabarrus-Rowan MPO	P-5726B	Region D	T					2026	$4,000,000			$4,000,000	
Rowan	North Carolina Railroad / Norfolk Southern Main Line	NCDOT	SR 2120 (Long Ferry Rd).	Construct grade separation and close crossing #715307Nr.		Rail	STI (Prioritization)	9	Cabarrus-Rowan MPO	RP-0006	Region D	T	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$4,500,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$700,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$15,000,000			$20,200,000	
Rowan, Cabarrus	US 52	NCDOT	Proposed Misenheimer Bypass to Granite Quarry Bypass.	Widen to three lane roadway.	4.54	Highway	STI (Prioritization)	9, 10	Cabarrus-Rowan MPO	R-5860	Division 9, 10										$0	
Rowan, Cabarrus	US 52	NCDOT	Proposed Misenheimer Bypass to proposed Rockwell Bypass.	Widen to three lane roadway.	4.54	Highway	STI (Prioritization)	9, 10	Cabarrus-Rowan MPO	R-5860A	Division 9, 10	NHP	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$24,400,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$4,900,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$50,500,000			$79,800,000	
Union	Marvin Loop Trail	MARVIN	SR 3635 (Marvin Road) at Saddle Avenue to SR 1316 (Marvin School Road) at Yellow Jasmine Lane in Weddington	Construct pedestrian improvements.	1.16	Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0012	Division 10	BGDA, L, TADA	2025	$157,000			2026	$1,309,000	2023	$244,000	$1,710,000	
Union	NC 205 (North Elm Street); East Union Street	MARSHVILLE	SR 1740 (Main Street) and SR 1735 (East Union Street) intersections in Marshville; N Cross Street intersection in Marshville	Construct pedestrian improvements and install pavement markings.	0.55	Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0011	Division 10	BGDA, L					2026	$335,000	2023	$63,000	$398,000	
Union	NC 75	NCDOT	Potter Road Intersection in Mineral Springs.	Construct sidewalk and pedestrian improvements.	0.1	Bike & Ped	Locally Selected	10	Charlotte Regional TPO	BL-0157	Division 10	BGDA, L(M)	2028	$412,000	2028	$10,000	2030	$642,000	2026	$173,000	$1,237,000	
Union	North Indian Trail Road	INDIAN TRAIL	SR 1371 (Southfork Road) to Liberty Lane in Indian Trail	Construct complete street. Construct intersection improvements at SR 1008 (Indian Trail Road) and SR 1367 (Unionville-Indian Trail Road).		Bike & Ped	Locally Selected	10	Charlotte Regional TPO	EB-5931	Division 10	BGDA, CMAQ, L, L(M), TADA	2023	$1,509,000			2025	$7,391,000	2020	$25,000	$8,925,000	RIGHT-OF-WAY IN PROGRESS. $723,000 IN ADDITIONAL LOCAL FUNDS ARE NON-PARTICIPATORY FROM THE TOWN OF INDIAN TRAIL; $4.719M IN BGANY USED AS PART OF FUND SWAP. $4.719 M IN STBG-DANY SWITCHED WITH $4.719M IN CMAQ FUNDS FOR CON AS PART OF FUND SWAP 8-9-22.
Union	Various	WAXHAW	Locations in downtown Waxhaw	Install pedestrian and bicycle facility enhancements.		Bike & Ped	Locally Selected	10	Charlotte Regional TPO	EB-5819	Division 10	BGDA, L, TADA					2022	$1,738,000	2016	$258,000	$1,996,000	UNDER CONSTRUCTION.
Union	US 74	INDIAN TRAIL	SR 1520 (Indian Trail Fairview Road) to SR 1367 (Unionville Indian Trail Road); SR 1367 (Unionville Indian Trail Road) to Oakwood Lane in Indian Trail	Construct multi-use path.	0.6	Bike & Ped	STI (Prioritization)	10	Charlotte Regional TPO	EB-5723	Division 10	CMAQ, L(M), TAANY, TADA	2025	$125,000			2026	$3,931,000			$4,056,000	$2.042M IN STBG-DA SWITCHED FOR CMAQ AS PART OF I-77 PPSL FUND SWAP.
Union	NC 200	NCDOT	Bridge 890053 over Stewarts Creek.	Replace bridge.	0.25	Highway	Bridges	10	Charlotte Regional TPO	B-5949	Region E	BFP	2026	$120,000			2028	$5,400,000			$5,520,000	
Union	SR 1681 (Old Camden Road)	NCDOT	Bridge 890021 over Stewarts Creek.	Replace bridge.	0.25	Highway	Bridges	10	Charlotte Regional TPO	B-5376	Division 10	BGOFF	2024	$210,000			2028	$3,000,000			$3,210,000	
Union	Indian Trail	INDIAN TRAIL	Crooked Creek Park, Chestnut Square Park, and Crossing Paths Park in Indian Trail.	Install Level 2 electric vehicle chargers.		Highway	Locally Selected	10	Charlotte Regional TPO	HL-0139	Exempt	BGDA, L					2026	$784,000	2025	$5,000	$789,000	
Union	Indian Trail-Fairview Road	INDIAN TRIAL	SR 1519 (Younts Road) and SR 1522 (Stinson Hartis Road) intersections in Indian Trail.	Improve intersections.	0.2	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0160	Division 10	BGDA, L(M)	2029	$566,000	2029	$152,000	2031	$7,498,000	2027	$2,248,000	$10,464,000	
Union	NC 16 (North Broome Street)	WAXHAW	North Church Street to NC 75.	Widen to three lanes, construct intersection improvements, construct sidewalks, and upgrade existing pedestrian facilities.	0.38	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0115	Region E	BGANY, BGDA, L	2027	$517,000			2028	$3,099,000	2025	$461,000	$4,077,000	$1.836M IN BGDA FUNDS SWITCHED WITH $1.836M IN BGANY FUNDS AS PART OF FUND SWAP 12-12-24.
Union	NC 218	UNION COUNTY	SR 1001 (Love Mill Road) intersection near Fairview.	Construct roundabout.	0.5	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0117	Exempt	CMAQ, HF(M)	2025	$308,000			2027	$2,349,000			$2,657,000	HF(M) IS SPOT SAFETY FUND AND HIGH IMPACT-LOW COST FUNDS (CONSTRUCTION ONLY)
Union	NC 75	NCDOT	SR 1111 (Old Providence Road) intersection in Waxhaw.	Construct intersection improvements.	0.5	Highway	Locally Selected	10	Charlotte Regional TPO	U-6248	Exempt	L, T(DA)	2025	$1,598,000			2027	$3,544,000			$5,142,000	STBG-DA FUNDS ARE EXEMPT AS THEY ARE BEING USED ON AN ELIGIBLE REGIONAL IMPACT PROJECT.
Union	NC 84	NCDOT	SR 1007 (Rocky River Road) intersection near Monroe.	Construct intersection improvements.	0.5	Highway	Locally Selected	10	Charlotte Regional TPO	U-6246	Exempt	BGDA, HF(M), L, T(DA)	2026	$350,000			2027	$2,080,000	2022	$200,000	$2,630,000	STBG-DA FUNDS ARE EXEMPT SINCE THEY ARE BEING USED ON AN ELIGIBLE REGIONAL IMPACT PROJECT. LOCAL MATCH IS $50K FROM THE CITY OF MONROE AND $50K FROM UNION COUNTY. HF(M) IS SPOT MOBILITY FUNDS.
Union	NC 84	NCDOT	SR 1162 (Potter Road) intersection in Wesley Chapel.	Construct intersection improvements.	0.5	Highway	Locally Selected	10	Charlotte Regional TPO	U-6247	Exempt	BGDA, HF(M), L, L(M), T(DA)	2027	$270,000			2028	$6,985,000	2021	$363,000	$7,618,000	"HF(M)" FUNDS REPRESENT SPOT MOBILITY FUNDS, STBG-DA FUNDS ARE EXEMPT AS THEY ARE BEING USED ON AN ELIGIBLE REGIONAL IMPACT PROJECT.
Union	North Charlotte Avenue; New Town Road	NCDOT	Walnut Street to NC 200; Cuthbertson Road to Ennis Road.	Resurface roadways.	3.23	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0039A	Division 10	BGDACV					2022	$938,000			$938,000	UNDER CONSTRUCTION.
Union	SR 1305 (Kensington Drive)	WAXHAW	NC 16 to Sunset Hill Road in Waxhaw.	Improve corridor.	0.24	Highway	Locally Selected	10	Charlotte Regional TPO	EB-5950	Division 10	BGANY, BGDA, L	2022	$591,000			2025	$3,818,000			$4,409,000	RIGHT-OF-WAY IN PROGRESS. $2.749M IN STBG-DA FUNDS SWAPPED FOR $2.749M IN STBG-ANYAREA FUNDS ON 5-17-23
Union	SR 1307 (Bonds Grove Church Road)	UNION COUNTY	SR 1301 (Waxhaw Marvin Road) intersection in Waxhaw.	Construct roundabout.	0.5	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0116	Exempt	CMAQ, L(M)	2026	$595,000			2028	$4,426,000	2024	$438,000	$5,459,000	
Union	SR 1315 (New Town Road)	NCDOT	Cuthbertson Road intersection in Wesley Chapel	Construct roundabout.	0.5	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0135	Division 10	BGANY, HF(M), L	2025	$447,000			2027	$3,646,000	2024	$407,000	$4,500,000	HF(M) REPRESENTS SPOT SAFETY MOBILITY FUNDS. $3.15M IN BGDA FUNDS SWITCHED WITH $3.15M IN BGANY FUNDS AS PART OF FUND SWAP 12-12-24.
Union	SR 1315 (New Town Road)	NCDOT	SR 1312 (Marvin Road) intersection in Marvin.	Construct roundabout.		Highway	Locally Selected	10	Charlotte Regional TPO	U-6088	Division 10	BGDA, CMAQ, HF(M), L(M)					2023	$1,872,000			$1,872,000	UNDER CONSTRUCTION. HF(M) FOR CONSTRUCTION IS A COMBINATION OF SPOT SAFETY FUNDS ($121,000), SMALL CONSTRUCTION ($66,610), AND CONTINGENCY FUNDS ($105,000). PROJECT PART OF I-77 PPSL FUND SWAP.
Union	SR 1344 (Weddington-Matthews Road)	NCDOT	SR 1345 (Tilley Morris Road) intersection in Weddington.	Construct roundabout.		Highway	Locally Selected	10	Charlotte Regional TPO	U-6090	Division 10	CMAQ, HF(M), L(M)	2020	$261,000			2022	$2,443,000	2020	$391,000	$3,095,000	UNDER CONSTRUCTION. HF(M) IS SPOT SAFETY FUNDS FROM THE HIGHWAY FUND. ADDITIONAL FUNDING FOR PRELIMINARY ENGINEERING AND RIGHT-OF-WAY TO COVER ANTICIPATED EXPENDITURES. $1.988M IN STBG-DA SWITCHED FOR CMAQ AS PART OF I-77 PPSL FUND SWAP.
Union	SR 1346 (Potter Road)	NCDOT	SR 1377 (Wesley Chapel Road) intersection in Wesley Chapel.	Construct roundabout.		Highway	Locally Selected	10	Charlotte Regional TPO	U-6087	Division 10	BGDA, CMAQ, CRPDA, HF, HF(M), L, L(M)					2025	$2,246,000			$2,246,000	UNDER CONSTRUCTION. HF IS SPOT MOBILITY AND RESURFACING FUNDS FROM THE HIGHWAY FUND. ADDITIONAL FUNDING FOR PE AND RIGHT-OF-WAY TO COVER ANTICIPATED EXPENDITURES. CURRENT MATCH FOR PE EXCEEDS FEDERAL AGREEMENT. PROJECT PART OF I-77 FUND SWAP.

2026-2035 STATE TRANSPORTATION IMPROVEMENT PROGRAM (BOT adoption anticipated July 2025)

June 2025

BASIC PROJECT INFORMATION												FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Union	SR 1357 (Potter Road)	NCDOT	SR 1358 (Forest Lawn Drive) intersection in Weddington.	Construct intersection improvements.	0.5	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0055	Division 10	BGANY, HF, L, L(M), O, T(DA)	2024	$643,000			2027	$1,773,000	2023	$475,000	$2,891,000	$380K IN STBG-DA FUNDS SWITCHED WITH $380K IN T(DA) FOR PE, $466K IN STBG-DA FUNDS SWITCHED WITH $466K IN T(DA) FOR ROW, AND $1.098M IN STBG-DA FUNDS SWITCHED WITH $1.098M IN T(DA) FOR CON AS PART OF FUND SWAP. "HF" REPRESENTS SPOT SAFETY FUNDS.
Union	US 74	MARSHVILLE	Marshville Lake Park Intersection in Marshville.	Construct right turn lanes.	0.1	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0159	Statewide Mobility	BGDA, L(M)	2026	$136,000	2026	$10,000	2028	$1,667,000	2025	$203,000	$2,016,000	
Union	Various	NCDOT	Routes in Division 10.	Perform various maintenance activities including resurfacing, traffic signal loop replacement, and pavement restriping.		Highway	Locally Selected	10	Charlotte Regional TPO	HL-0039											$0	
Union	Various	NCDOT	Routes in Division 10.	Replace pavement markings.		Highway	Locally Selected	10	Charlotte Regional TPO	HL-0039B	Exempt	BGDACV					2022	$126,000			$126,000	COMPLETE.
Union	Various	NCDOT	Routes in Division 10.	Replace traffic signal loops.		Highway	Locally Selected	10	Charlotte Regional TPO	HL-0039C	Exempt	BGDACV					2023	$189,000			$189,000	UNDER CONSTRUCTION.
Union	Waxhaw Parkway West	WAXHAW	SR 1307 (Waxhaw-Marvin Road) to NC 16 in Waxhaw.	Extend roadway.	1	Highway	Locally Selected	10	Charlotte Regional TPO	HL-0158	Division 10	L(M), T(DA)	2027	$1,696,000	2027	$10,000	2029	$8,130,000	2026	$10,000	$9,846,000	HELMS ROAD EXTENSION PROJECT. $4.923M IN BGDA FUNDS SWITCHED WITH $4.923M IN T(DA) FUNDS AS PART OF FUND SWAP.
Union	Various	NCDOT	Locations in Rocky River RPO.	Improve congestion and air quality.		Highway	Other	10	Rocky River RPO	C-5617	Exempt	CMAQ, L	2020	$6,000			2020	$38,000	2020	$18,000	$62,000	
Union	NC 200 (Lancaster Highway)	NCDOT	NC 522 / SR 1007 (South Rocky River Road) / SR 1146 (Parkwood School Road) intersection near Mineral Springs.	Construct 5-approach roundabout.	0.5	Highway	Safety	10	Charlotte Regional TPO	W-5710Z	Region E	BGANY, BGDA, HF(M), HSIP, L(M)	2020	$35,000			2022	$2,571,000	2020	$195,000	$2,801,000	UNDER CONSTRUCTION. $1.486M IN BGANY USED AS PART OF FUND SWAP.
Union	NC 200 (Lancaster Highway)	NCDOT	SR 1137 (Potter Road) intersection near Waxhaw.	Construct safety improvements.	0.5	Highway	Safety	10	Charlotte Regional TPO	W-5710AH	Region E	HF(M), HSIP	2022	$650,000			2024	$2,914,000			$3,564,000	
Union	NC 218	NCDOT	SR 1606 (Sikes Mills Road) intersection near Fairview.	Construct roundabout.	0.5	Highway	Safety	10	Charlotte Regional TPO	W-5710AI	Region E	HSIP					2024	$1,217,000			$1,217,000	
Union	SR 1005 (Landsford Road)	NCDOT	SR 1937 (Old Pageland Marshville Road).	Install an all way stop.		Highway	Safety	10	Charlotte Regional TPO	W-5710AD	Division 10	HSIP					2024	$30,000			$30,000	
Union	SR 1009 (Old Charlotte Highway)	NCDOT	Williams Road in Monroe.	Construct safety improvements.		Highway	Safety	10	Charlotte Regional TPO	W-5710AN	Division 10	HSIP					2024	$952,000			$952,000	
Union	SR 1313 (Joe Kerr Road)	NCDOT	SR 3486 (Wheatfield Drive) intersection in Marvin.	Install pedestrian signs and crosswalk.		Highway	Safety	10	Charlotte Regional TPO	HS-2410M	Division 10	HSIP			2025	$10,000	2026	$90,000	2025	$30,000	$130,000	
Union	SR 1315 (New Town Road)	NCDOT	SR 1008 (Waxhaw-Indian Trail Road) intersection in Wesley Chapel.	Construct safety improvements.	0.5	Highway	Safety	10	Charlotte Regional TPO	W-5710Y	Division 10	BGANY, HF(M), HSIP					2021	$2,581,000			$2,581,000	COMPLETE. $1.385M IN BGANY USED AS PART OF FUND SWAP.
Union	NC 16 (Providence Road South)	NCDOT	SR 1307 (Bonds Grove Church Road) intersection in Waxhaw.	Construct interim safety improvements.	0.5	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5769AA	Region E	HSIP, T	2024	$4,000,000	2024	$1,000,000	2026	$1,225,000			$6,225,000	
Union	NC 16 (Providence Road South)	NCDOT	SR 1307 (Bonds Grove Church Road) to SR 3530 (Waxhaw Parkway) in Waxhaw.	Widen to multi-lanes.	1.73	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5769B	Region E	T	2025	$18,200,000	2025	$10,000	2029	$80,900,000			$99,110,000	
Union	NC 16 (Providence Road South)	NCDOT	SR 1316 (Rea Road extension) to SR 1307 (Bonds Grove Church Road) in Waxhaw.	Widen to multi-lanes.	4.05	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5769A	Region E	T	2025	$29,800,000	2025	$10,000	2029	$71,000,000			$100,810,000	
Union	NC 16 (Providence Road South)	NCDOT	SR 1316 (Rea Road extension) to SR 3530 (Waxhaw Parkway) in Waxhaw.	Widen to multi-lanes.	5.7	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5769											$0	
Union	NC 84	NCDOT	NC 16 to SR 1008 (Waxhaw-Indian Trail Road) in Wesley Chapel.	Construct four lane roadway, part on new location.	4.02	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-3467	Region E	BGANY, T	2024	$41,000,000	2025	$5,700,000	2028	$115,595,000			$162,295,000	NC BUILD BOND $41M FOR CON, PAYBACK FY 2029-2043 (FY 2029 / YR 9 SALE);
Union	SR 1004 (Lawyers Road)	NCDOT	I-485 to SR 1524 (Stevens Mill Road).	Widen to four lanes.	0.25	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-6170	Division 10	T	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$5,000,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$900,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$18,700,000			$24,600,000	
Union	SR 1009 (Charlotte Avenue)	NCDOT	Seymour Street to NC 200 (Dickerson Boulevard).	Widen to four lanes divided.	0.37	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-6031	Division 10	T	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$3,900,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$3,100,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$18,100,000			$25,100,000	
Union	SR 1009 (John Street / Old Monroe Road)	NCDOT	West of Morningside Meadow Lane to east of SR 1377 (Wesley Chapel-Stouts Road).	Widen to multi-lanes.	3.16	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-4714B	Division 10	BGANY, BGDA, O, T, T(M)	2021	$46,000,000	2021	$4,500,000	2028	$77,765,000			$128,265,000	RIGHT-OF-WAY IN PROGRESS. TO BE LET WITH U-4714AC. NC BUILD BONDS: $35.2M ON CONSTRUCTION PAYBACK 2029-2043 (SALE 9 / FY 2029). OTHER FUNDS PROVIDED BY TOWN OF INDIAN TRAIL.
Union	SR 1362 (Chestnut Lane Connector)	NCDOT	SR 1367 (Matthews Indian Trail Road) to SR 1368 (Gribble Road) in Indian Trail.	Construct road on new location.	0.39	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5808	Division 10	T	2019	$1,615,000	2019	$1,200,000	2024	$20,041,000			$22,856,000	RIGHT-OF-WAY IN PROGRESS. NC BUILD BOND $6M FOR CON, PAYBACK FY 2025-2039 (YR 5 SALE / FY 2025);
Union	SR 1514 (Rocky River Road)	NCDOT	James Hamilton Road intersection in Monroe.	Realign James Hamilton Road to intersect with SR 1514 (Rocky River Road) and Myers Road.	0.14	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5703B	Statewide Mobility	O, T	2023	$3,457,000	2023	$325,000	2026	$2,295,000			$6,077,000	RIGHT-OF-WAY IN PROGRESS. OTHER FUNDS PROVIDED BY THE CITY OF MONROE.
Union	US 601	NCDOT	Existing US 74 to the Monroe Bypass.	Widen to multi-lanes.	0.89	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-4024	Region E	T	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$1,200,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$770,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$27,700,000			$29,670,000	COORDINATE WITH U-5723
Union	US 74	NCDOT	Indian Trail / Fairview Road to North Rocky River Road in Monroe.	Widen roadway to six lanes.		Highway	STI (Prioritization)	10	Charlotte Regional TPO	HP-0001	Statewide Mobility	NHP	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$5,900,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$2,800,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$107,300,000			$116,000,000	
Union	US 74	NCDOT	NC 200 (Dickerson Boulevard) to SR 1007 (Rocky River Road).	Widen to six lanes.	2.8	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5764	Region E	BGANY	2026	$59,248,000	2026	$7,400,000	2030	$74,700,000			$141,348,000	RIGHT-OF-WAY IN PROGRESS. COORDINATE WITH U-5931
Union	US 74	NCDOT	Secrest Shortcut Road intersection in Monroe.	Construct intersection improvements.	0.5	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5931	Statewide Mobility	T	2027	$4,531,000	2027	$520,000	2030	$8,800,000			$13,851,000	RIGHT-OF-WAY IN PROGRESS. COORDINATE WITH U-5764.
Union	US 74	NCDOT	US 601 interchange in Monroe.	Construct interchange improvements.	1	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5723	Statewide Mobility	T			2025	$500,000	2030	$23,100,000			$23,600,000	RIGHT-OF-WAY IN PROGRESS. COORDINATE WITH U-4024
Union	US 74 (Roosevelt Boulevard)	NCDOT	SR 1514 (Rocky River Road) intersection in Monroe.	Construct reduced conflict intersection.	0.5	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5703											$0	
Union	US 74 (Roosevelt Boulevard)	NCDOT	SR 1514 (Rocky River Road) intersection in Monroe.	Construct reduced conflict intersection.	0.5	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-5703A	Statewide Mobility										$0	COMPLETE
Union	SR 1364 (Pleasant Plains Road)	NCDOT	SR 1357 (Potters Road) intersection in Stallings.	Construct intersection improvements including left turn lanes and modification of traffic signal.	0.5	Highway	Transition	10	Charlotte Regional TPO	U-5112	Pre-STI (Transition)	BGANY, BGDA, CMAQ, HSIP, L, L(M), T(M)	2021	$676,000			2024	$10,203,000			$10,879,000	RIGHT-OF-WAY IN PROGRESS - PROJECT TO BE ADMINISTERED BY THE TOWN OF STALLINGS. $1.6M IN STBG-DA SWITCHED FOR CMAQ AS PART OF I-77 PPSL FUND SWAP.
Union	Union County Transportation	UNION COUNTY TRANSPORTATION	Union County Transportation motor pool facility	Implement low emission alternative fuel conversion.		Public Transportation (Transit)	Locally Selected	10	Charlotte Regional TPO	TL-0031	Exempt	CRPDA, L					2024	$200,000			$200,000	
Union	Union County Transportation		Various locations	Funding for operational expenses and routine capital.		Public Transportation (Transit)	Operations and Maintenance	10	Charlotte Regional TPO	TM-0052	Public Transit	5307, L(M)							2024	$1,942,000	$1,942,000	
Union	Union County Transportation	UNION COUNTY TRANSPORTATION	Systemwide	Operational expenses, routine capital, and planning.		Public Transportation (Transit)	Operations and Maintenance	10	Charlotte Regional TPO	TM-0059	Public Transit	5307, L							2024	$1,938,000	$1,938,000	

2026-2035 STATE TRANSPORTATION IMPROVEMENT PROGRAM (BOT adoption anticipated July 2025)

June 2025

BASIC PROJECT INFORMATION													FISCAL YEAR PROJECT PHASE SCHEDULED TO START									
COUNTY(S)	ROUTE/CITY	RESPONSIBLE AGENCY	LOCATION DESCRIPTION	DESCRIPTION OF WORK	LENGTH (MILES)	MODE	FUNDING PROGRAM	DIVISION(S)	MPOs/RPOs	PROJECT ID	STI CATEGORY FUNDED	FUNDING SOURCE (SEE FUNDING SOURCES TAB FOR MORE INFO)	RIGHT-OF-WAY PROJECTED SCHEDULE	FUNDS NEEDED FOR RIGHT-OF-WAY	UTILITIES PROJECTED SCHEDULE	FUNDS NEEDED FOR UTILITIES	CONSTRUCTION PROJECTED SCHEDULE	FUNDS NEEDED FOR CONSTRUCTION	PROJECTED SCHEDULE FOR OTHER ACTIVITIES	FUNDS FOR OTHER ACTIVITIES	TOTAL FUNDS NEEDED	COMMENT
Union	CSX Railroad	NCDOT	SR 1758 (North Main Street) crossing; Stewart Street crossing; SR 1762 (Bivens Street) crossing.	Improve crossings at SR 1758 (North Main Street) and SR 1762 (Bivens Street). Close crossing at Stewart Street.		Rail	Rail-Highway Grade Crossing Closure	10	Charlotte Regional TPO	RC-2010A	Division 10	RR	2025	$500,000			2027	$3,000,000			$3,500,000	
Union	SR 1008 (Indian Trail Road)	NCDOT	CSX Crossing 631928Y in Indian Trail.	Construct safety improvements.		Rail	Rail-Highway Grade Crossing Improvement	10	Charlotte Regional TPO	RX-2010C	Division 10	RR					2026	$388,000			$388,000	
Union	SR 3522 (Weddington Road)	NCDOT	CSX Crossing 631587H near Monroe.	Construct safety improvements.		Rail	Rail-Highway Grade Crossing Improvement	10	Charlotte Regional TPO	RX-2010A	Division 10	RR					2023	$800,000			$800,000	UNDER CONSTRUCTION.
Union	CSX SF Line	NCDOT	SR 1007 (Rockey River Road) and SR 1009 (Old Charlotte Highway) at-grade crossings in Monroe	Construct two rail-highway grade separations.		Rail	STI (Prioritization)	10	Charlotte Regional TPO	RP-0001	Statewide Mobility	BGANY	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$7,800,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$210,000	FUNDED FOR PRELIMINARY ENGINEERING ONLY	$34,000,000			$42,010,000	
Union	CSX SF LINE	NCDOT	SR 1377 (Wesley Chapel Stouts Road).	Construct grade separation.		Rail	STI (Prioritization)	10	Charlotte Regional TPO	P-5744	Statewide Mobility	DP, O, T	2026	$5,848,000	2026	$826,000	2028	$23,100,000			$29,774,000	DP REPRESENTS FEDERAL CRISI GRANT. OTHER FUNDING PROVIDED BY CSX.
Union	CSX SG Line	CSXT RR	SR 1300 (Helms Road) in Waxhaw.	Construct rail siding.		Rail	STI (Prioritization)	10	Charlotte Regional TPO	P-5748A	Region E	T					2022	$5,894,000			$5,894,000	UNDER CONSTRUCTION.
Union	CSX SG Line	NCDOT	SR 1300 (Helms Road) in Waxhaw; SR 1432 (Tory Path) in Waxhaw.	Construct grade separation at SR 1300 (Helms Road). Close at-grade crossings at SR 1300 (Helms Road) and SR 1432 (Troy Path).		Rail	STI (Prioritization)	10	Charlotte Regional TPO	P-5748B	Region E	DP, O, T	2023	$5,000,000	2023	$378,000	2026	$24,202,000			$29,580,000	RIGHT-OF-WAY IN PROGRESS.
Union	CSX SG Line	NCDOT	SR 1300 (Helms Road) in Waxhaw; SR 1432 (Tory Path) in Waxhaw.	Construct rail siding and grade separation in vicinity of SR 1300 (Helms Road). Close at-grade crossings at SR 1300 (Helms Road) and SR 1432 (Troy Path).		Rail	STI (Prioritization)	10	Charlotte Regional TPO	P-5748											$0	DP REPRESENTS FEDERAL CRISI GRANT FUNDS; OTHER FUNDING PROVIDED BY CSX.
Union, Anson, Mecklenburg	NC 218	NCDOT	US 74 in Anson County to US 601 in Union County, and from Mill Grove Road in Union County to I-485 in Mecklenburg County.	Install milled rumble stripes.	27.51	Highway	Safety	10	Charlotte Regional TPO	HS-2010C	Region E	HSIP					2022	$616,000			$616,000	UNDER CONSTRUCTION.
Union, Mecklenburg	SR 1009 (John Street / Old Monroe Road)	NCDOT	East of I-485 to west of Morningside Meadow Lane	Widen to multi-lanes.	2.02	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-4714AC	Division 10	BGANY, BGDA, T, T(DA), T(M)	2019	$11,780,000	2019	$2,200,000	2027	$67,755,000			$81,735,000	$7.7M IN STBG-DA FUNDS SWITCHED WITH $7.7M IN STATE TRUST FUNDS "T(DA)" AS PART OF FUND SWAP. RIGHT-OF-WAY IN PROGRESS. NC BUILD BONDS: $23.5M ON CONSTRUCTION PAYBACK 2028-2042 (SALE 8 / FY 2028).
Union, Mecklenburg	SR 1009 (John Street / Old Monroe Road)	NCDOT	SR 3348 / SR 3474 (Trade Street) to SR 1377 (Wesley Chapel-Stouts Road).	Widen to multi-lanes.	6.5	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-4714											$0	
Union, Mecklenburg	SR 3174 / SR 1501 (Idlewild Road)	NCDOT	I-485 to SR 1524 (Stevens Mill Road).	Widen to six lanes.	0.77	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-4913B	Not Funded	T	NOT FUNDED	$14,947,000	NOT FUNDED	$646,000	NOT FUNDED	$21,500,000	NOT FUNDED		$37,093,000	
Union, Mecklenburg	SR 3174 / SR 1501 (Idlewild Road)	NCDOT	SR 3175 (Stallings Road) to SR 1524 (Stevens Mill Road).	Widen roadway.	0.77	Highway	STI (Prioritization)	10	Charlotte Regional TPO	U-4913											$0	PROJECT BEING ACCELERATED BY A LOAN PROVIDED BY THE TOWN OF MATTHEWS. LOAN TO BE PAID BACK TO THE TOWN WITH ROW/UTIL IN 2025 AND CON IN 2026. NCDOT TO BEGIN ROW IN 2024 AND CON IN 2026.
Wake, Iredell, Mecklenburg, Rowan, Cleveland, Union, Cabarrus, Gaston, Johnston, Durham, Lincoln, Franklin, Orange, Chatham, Granville, Harnett	Statewide Traffic Operations	NCDOT	Statewide	Implement statewide traffic operations activities such as traffic management centers, traveler information, intelligent transportation systems (ITS), and traffic incident and event management in the Triangle and Metrolina Areas.		Highway	Other	4, 5, 6, 7, 8, 9, 10, 12	Capital Area MPO, Charlotte Regional TPO, Gaston-Cleveland-Lincoln MPO, Cabarrus-Rowan MPO, Triangle West TPO	HO-0010A	Statewide Mobility	CRPANY, HF(M)							2023	$4,000,000	$4,000,000	
Wilson, Lee, Rowan, Brunswick, New Hanover, Pender, Johnston, Alamance, Rockingham, McDowell, Montgomery, Edgecombe, Franklin, Granville, Nash, Randolph, Vance, Warren	Integrated Mobility Division		Systemwide	Funding for turnkey project.		Public Transportation (Transit)	Capital (Non-STI)	3, 4, 5, 7, 8, 9, 13	Wilmington Urban Area MPO, Upper Coastal Plain RPO, Piedmont Triad RPO, Greensboro Urban Area MPO, Winston-Salem Area TPO, Kerr-Tar RPO, Foothills RPO	TC-0031	Public Transit	L, RTAP, S							2024	$25,400,000	$25,400,000	

INDEX	YEAR	TIP_NO	PROJECT	LIMITS	TYPE	COUNTY
1101	2021	I-3802B	Interstate; I-85	Cabarrus County to US 29-601 Connector (Exit 68)	Widen to 8-lanes	Rowan
1120	2021	I-3804	Interstate; I-85	SR 1221 (Old Beatty Ford Rd)	Interchange	Rowan
904	2025	U-4910B	Urban; Derita Rd	Popular Tent Rd to Aviation Blvd	Widen to 4-lanes	Cabarrus
923	2025	U-3440	Urban; NC 3	Kannapolis Pkwy to Loop Rd	Widen to 4-lanes	Cabarrus
963	2025	U-4910A	Urban; Derita Rd	Concord Mills Blvd to Aviation Blvd	Widen to 4-lanes	Cabarrus
3660	2025	U-5806	Concord Mills Mall Flyover	Intersection of Concord Mills Blvd and Entrance 1	2-lane grade separated flyover	Cabarrus
1121	2025	U-5738	Urban; Julian-Heilig Rd	Jake Alexander to Summit Park Drive	Widen to 4-ln median divided	Rowan
1144	2025	U-5608	Kimball Rd Ext	Main St. to US 29	2-lanes new location	Rowan
3908	2025	U-5820	Newsome Rd	Bendix Dr to US 52	New roadway (2-lane)	Rowan
914	2035	U-3415 A	Urban; Poplar Tent Rd	Derita Rd to George Liles Pkwy	Median divided Widen to 4 lanes with sidewalks and bike lanes	Cabarrus
975	2035	U-5956	Union Cemetery Rd Relocation	Realign to intersect US 29 at Rock Hill Church Rd	New Location	Cabarrus
1102	2035	U-6062	Urban; Main St (SR 1008)	Jackson Park Rd to Kimball Rd	Widen to 3-lanes & improve roadway incorporating sidewalks and bike la	Rowan
1119	2035	U-5901	Urban; Airport Blvd Extension	Jake Alexander Blvd to Peach Orchard Road	2-lanes on multi-lane right of way	Rowan
3904	2035	R-5860	US 52 Widening	Rockwell Bypass to Misenheimer Bypass	Widen to 4 lanes with median	Rowan
5029	2035		NC 152 Intersection Improvements			Rowan
922	2045	R-5706B	Urban; NC 73	US 29 to Kannapolis Parkway	median divided widened to 4 lanes with sidewalks and bikelanes	Cabarrus
924	2045	U-5773A	NC 3	Dale Earnhardt Blvd to NC73	Median-divided widened with sidewalks and bike lanes	Cabarrus
934	2045	U-5773B	Urban; Union St	NC73 to US 601	Median-divided widened with sidewalks and bike lanes	Cabarrus
935	**2050**		**Urban; US 29**	**Church St to I-85**	**Widen to 7-lanes**	**Cabarrus**
942	**2050**		**Urban; US 601**	**South Union St to Flowes Store Rd**	**Widen;4-lanes divided facility**	**Cabarrus**
977	2045	R-5706B	NC 73	Kannapolis Pkwy to Poplar Tent Rd	median divided widened to 4 lanes with sidewalks and bikelanes	Cabarrus
3902	2045	U-3415 B	Urban; Poplar Tent Rd	Georg Liles to US 29	Widen to 4 lanes with median, sidewalks, and bike lanes	Cabarrus
1118	2045	U-5900	Urban; NC 150	Airport Rd to West of Grants Creek	Widen to 4-lanes	Rowan
1154	2045		US 52 Bypass	South of Rockwell to North of Rockwell	Widen to 4 lanes with median-divied	Rowan
3903	2045	U-6075	US 52 Bypass	South of Granite Quarry to North of Granite Quarry	Widen with median	Rowan
5028	2045		Interstate; I-85	McCanless Road	Interchange	Rowan
989	2050	R-2246	Rural; George Liles Parkway	Roberta Rd to NC 49	widen;4-lane divided, some new	Cabarrus
1141	2050		China Grove; NC 152 Bypass	NC 152 West to NC 152 East	3-lane	Rowan
3218	2035	U-6032	Mallard Creek Rd Widening	I-485 to Concord Mills Blvd	Widening (6-lanes), median	Mecklenburg-Cabarrus

ADOPTED

2050 MTP Roadway Projects

2050 MTP ID	TIP No	Project Name	Route No	Jurisdiction	County	STI Category	Start of Project	End of Project	Project Length (miles)	Improvement Type	Existing Lanes	Proposed Lanes	Project Description	Project Cost	Horizon Year
2050-E106	U-6153	Bethlehem Rd	--	Statesville	Iredell	Div-12	Aviation Dr	Bethlehem Rd / Lowes Aviation DR	0.8	New Roadway	2	2	Relocate roadway adjacent to Statesville Regional Airport	$ 2,550,000	HY 2025
2050-E102	U-6054	Brookdale Dr / US 21 Connector	--	Statesville	Iredell	Div-12	Brookdale Dr	Sullivan Rd (US 21)	0.1	New Roadway	0	2	New 2 lane roadway	$ 2,932,000	HY 2025
2050-E105	U-6039	East Broad St	--	Statesville	Iredell	Div-12	Vine St	Signal Hill Dr	0.7	Widening	4	4	Improve roadway and implement access management solutions	$ 5,350,000	HY 2025
2050-E101	I-3819B	I-40 at I-77	I-40 / I-77	Iredell County & Statesville	Iredell	SW	--	--	--	Improve Existing Interchange	--	--	Construct new interchange	$ 197,713,000	HY 2025
2050-E120	U-6249	Mecklenburg Hwy (NC 115) at Langtree Rd	NC 115	Iredell County	Iredell	Exempt	--	--	--	Improve Existing Intersection	--	--	Construct intersection improvements	$ 4,053,000	HY 2025
2050-E119	C-5529	Mecklenburg Hwy at Faith Rd / Campus Ln	NC 115	Iredell County & Mooresville	Iredell	Exempt	--	--	--	Improve Existing Intersection	--	--	Realign roadway and construct intersection improvements	$ 0	HY 2025
2050-E110	C-5701	NC 801 at Oakridge Farm Hwy	NC 801 / NC 150	Mooresville	Iredell	Exempt	--	--	--	Improve Existing Intersection	--	--	Construct intersection improvements	$ 2,975,000	HY 2025
2050-E112	U-5780	Oakridge Farm Hwy at Wiggins Rd	NC 150	Mooresville	Iredell	Reg-F	--	--	--	Improve Existing Intersection	--	--	Realign intersection	$ 1,300,000	HY 2025
2050-E108	R-5711	S Main St at Houston Rd / Flower House Loop	US 21 / NC 115	Troutman	Iredell	Reg-F	--	--	--	Improve Existing Intersection	--	--	Realign and signalize intersection	$ 2,950,000	HY 2025
2050-E121	U-6239	Silicon Shores East-West Connector Rd	--	Iredell County & Mooresville	Iredell	Exempt	Langtree Rd	Mecklenburg Hwy (NC 115)	0.8	New Roadway	0	4	New 4 lane roadway, with median, bike lanes and sidewalks	$ 13,603,000	HY 2025
2050-E100	U-5799	Turnersburg Hwy	US 21	Statesville	Iredell	Reg-F	Pump Station Rd	Fort Dobbs Rd	0.8	Widening	2	2+	Widen roadway to multi-lanes and realign intersection	$ 23,049,000	HY 2025
2050-E308	U-6105	Bailey Rd Ext	--	Cornelius & Mecklenburg County	Mecklenburg	Div-10	Poole Place Dr	US 21 (Statesville Rd)	0.4	New Roadway	0	2	Construct roadway on new location	$ 3,276,000	HY 2025
2050-E326	U-6084	Brookshire Blvd at Mount Holly-Huntersville Rd	NC 16	Charlotte	Mecklenburg	Reg-E	--	--	--	Improve Existing Intersection	--	--	Convert intersection to continuous flow intersection, with bicycle and pedestrian accommodations	$ 1,963,000	HY 2025
2050-E305	U-6092	Davidson-Concord Rd at Robert Walker Dr	--	Davidson	Mecklenburg	Div-10	--	--	--	Improve Existing Intersection	--	--	Convert intersection to roundabout	$ 1,206,000	HY 2025
2050-E320	U-6106	Gilead Rd	--	Huntersville	Mecklenburg	Div-10	McCoy Rd	Wynfield Creek Pkwy	0.5	Widening	2	4	Widen roadway from 2 to 4 lanes, with a median	$ 8,770,000	HY 2025
2050-E357	I-5507	I-485	I-485	Charlotte, Matthews & Pineville	Mecklenburg	SW	I-77 (Exit 67)	Independence Blvd (US 74) (Exit 51)	10.7	Widening	4/6	6/8	Widen from 4/6 lanes to 6/8 lanes including express lanes	$ 306,756,000	HY 2025
2050-E327	I-5973	I-485 at Brookshire Blvd	I-485 / NC 16	Charlotte	Mecklenburg	Reg-E	--	--	--	Improve Existing Interchange	--	--	Construct interchange improvements, with bicycle and pedestrian accommodations	$ 12,000,000	HY 2025
2050-E354	R-0211EC	I-485 at Weddington Rd	I-485	Charlotte & Matthews	Mecklenburg	Div-10	--	--	--	New Interchange	--	--	Construct new interchange, with bicycle and pedestrian accommodations	$ 9,000,000	HY 2025
2050-E319	I-5714	I-77 at Gilead Rd	I-77	Huntersville	Mecklenburg	SW	--	--	--	Improve Existing Interchange	--	--	Convert existing interchange to diverging diamond interchange, with bicycle and pedestrian accommodations	$ 0	HY 2025
2050-E325	U-5905	Lakeview Rd	--	Charlotte	Mecklenburg	Div-10	Reames Rd	Old Statesville Rd (NC 115)	1.7	Widening	2	2	Construct roadway improvements, with bike lanes and sidewalks	$ 11,823,000	HY 2025
2050-E355	EB-5949	Main St	NC 51	Pineville	Mecklenburg	Div-10	Johnson Dr	Church St	0.1	New Roadway	2	2	Realign existing roadway and construct access management measures	$ 1,175,000	HY 2025
2050-E316	U-5908	Main St	--	Huntersville	Mecklenburg	Div-10	Old Statesville Rd (NC 115) at Mt Holly-Huntersville Rd	Ramah Church Rd	1.2	Widening	2	2+	Widen and realign roadway, with bike lanes and sidewalks	$ 9,634,000	HY 2025
2050-E329	U-2507	Mallard Creek Rd Connector	--	Charlotte	Mecklenburg	TRN	Sugar Creek Rd	Mallard Creek Church Rd	4.1	New Roadway	2	4	Widen from 2 lanes to 4 lanes and construct new 4 lane roadway, with median, bike lanes and sidewalks	$ 0	HY 2025
2050-E339	U-5805	Monroe Rd at Rama Rd / Idlewild Rd	--	Charlotte	Mecklenburg	Div-10	--	--	--	Improve Existing Intersection	--	--	Construct intersection improvements, with bicycle and pedestrian accommodations	$ 7,130,000	HY 2025
2050-E301	U-5873	N Main St at Potts St	NC 115	Cornelius	Mecklenburg	Exempt	--	--	--	Improve Existing Intersection	--	--	Construct intersection improvements, with bicycle and pedestrian accommodations	$ 5,216,000	HY 2025
2050-E328	U-5874	North University Research Park Bridge	--	Charlotte	Mecklenburg	Div-10	Louis Rose Pl	Doug Mayes Pl	0.3	New Roadway	0	2	New 2 lane roadway, with bike lanes and sidewalks	$ 12,904,000	HY 2025
2050-E309	U-5108	Northcross Dr Ext	--	Cornelius	Mecklenburg	Div-10	Sam Furr Rd (NC 73)	Westmoreland Rd	1.5	New Roadway	0	3	Improve existing roadway and construct new 3 lane roadway, with bike lanes and sidewalks	$ 12,206,000	HY 2025
2050-E352	U-6086	Pineville-Matthews Rd	NC 51	Charlotte & Pineville	Mecklenburg	Exempt	Park Rd	Carmel Rd	1.5	Widening	--	--	Construct access management solutions	$ 5,643,000	HY 2025
2050-E300	U-5907	Potts-Sloan-Beatty Connector	--	Davidson	Mecklenburg	Exempt	Main St (NC 115)	Griffith St	0.8	New Roadway	0	2	New 2 lane roadway, with bike lanes and sidewalks	$ 4,500,000	HY 2025
2050-E356	C-5534	Providence Rd at Ballantyne Commons Pkwy / McKee Rd	NC 16	Charlotte	Mecklenburg	Exempt	--	--	--	Improve Existing Intersection	--	--	Construct intersection improvements, with bicycle and pedestrian accommodations	$ 640,000	HY 2025
2050-E302	C-5621	Statesville Rd at Catawba Ave	US 21	Cornelius	Mecklenburg	Exempt	--	--	--	Improve Existing Intersection	--	--	Convert intersection to roundabout, with bicycle and pedestrian accommodations	$ 12,438,000	HY 2025
2050-E318	U-5114	Statesville Rd at Gilead Rd	US 21	Huntersville	Mecklenburg	TRN	--	--	--	Improve Existing Intersection	--	--	Construct intersection improvements, with bicycle and pedestrian accommodations	$ 0	HY 2025
2050-E351	U-5762	Steele Creek Rd at Hamilton Rd	NC 160	Charlotte	Mecklenburg	Reg-E	--	--	--	Improve Existing Intersection	--	--	Construct intersection improvements, with bicycle and pedestrian accommodations	$ 1,305,000	HY 2025
2050-E303	U-5906	Torrence Chapel Rd at W Catawba Ave	--	Cornelius	Mecklenburg	Div-10	--	--	--	Improve Existing Intersection	--	--	Construct intersection improvements, with bicycle and pedestrian accommodations	$ 13,843,000	HY 2025
2050-E336	C-5538	Tuckaseegee Rd at Thrift Rd and Berry Hill Rd	--	Charlotte	Mecklenburg	Div-10	--	--	--	Improve Existing Intersection	--	--	Convert intersection to roundabout, with bicycle and pedestrian accommodations	$ 2,850,000	HY 2025
2050-E304	I-6065	I-77 Shoulder Use Lanes	I-77	Mooresville, Cornelius, & Huntersville	Mecklenburg & Iredell	Exempt	I-485	NC 150	16.4	Widening	--	--	Construct peak period shoulder lanes	$ 47,000,000	HY 2025
2050-E202	U-5808	Chestnut Ln Connector	--	Indian Trail	Union	Div-10	Matthews-Indian Trail Rd	Gribble Rd	0.4	New Roadway	0	2	New 2 lane roadway, with bike lanes and sidewalks	$ 15,115,000	HY 2025
2050-E203	U-6250	Indian Trail Rd N at Matthews-Indian Trail Rd	--	Indian Trail	Union	Div-10	--	--	--	Improve Existing Intersection	--	--	Construct intersection improvements, with bicycle and pedestrian accommodations	$ 2,730,000	HY 2025
2050-E220	EB-5950	Kensington Dr	--	Waxhaw	Union	Div-10	Providence Rd (NC 16)	Sunset Hills Rd	0.2	Widening	2	2	Construct roadway improvements	$ 3,170,000	HY 2025
2050-E221	U-6248	NC 75 at Old Providence Rd	NC 75	Waxhaw	Union	Exempt	--	--	--	Improve Existing Intersection	--	--	Construct intersection improvements	$ 2,720,000	HY 2025
2050-E217	U-6088	New Town Rd at Marvin Rd	--	Marvin	Union	Div-10	--	--	--	Improve Existing Intersection	--	--	Convert intersection to roundabout	$ 1,646,000	HY 2025
2050-E201	U-5112	Pleasant Plains Rd at Potter Rd	--	Stallings	Union	TRN	--	--	--	Improve Existing Intersection	--	--	Construct intersection improvements	$ 2,100,000	HY 2025
2050-E211	U-6087	Potter Rd at Wesley Chapel Rd	--	Wesley Chapel	Union	Div-10	--	--	--	Improve Existing Intersection	--	--	Convert intersection to roundabout	$ 1,431,000	HY 2025
2050-E208	U-5703	Roosevelt Blvd at Rocky River Rd	US 74	Monroe	Union	SW	--	--	--	Improve Existing Intersection	--	--	Implement Super Street	$ 1,150,000	HY 2025
2050-E205	U-5987	Unionville-Indian Trail Rd at Sardis Church Rd	--	Indian Trail	Union	Div-10	--	--	--	Improve Existing Intersection	--	--	Construct intersection improvements	$ 2,866,000	HY 2025
2050-E212	U-6247	Weddington Rd at Potter Rd	NC 84	Wesley Chapel	Union	Exempt	--	--	--	Improve Existing Intersection	--	--	Construct intersection improvements	$ 2,230,000	HY 2025
2050-E218	U-6246	Weddington Rd at Rocky River Rd	NC 84	Monroe & Union County	Union	Exempt	--	--	--	Improve Existing Intersection	--	--	Construct intersection improvements	$ 1,676,000	HY 2025
2050-E206	U-6091	Weddington-Matthews Rd at Chestnut Ln	--	Stallings & Union County	Union	Div-10	--	--	--	Improve Existing Intersection	--	--	Convert intersection to roundabout	$ 2,371,000	HY 2025
2050-E207	U-6090	Weddington-Matthews Rd at Tilley Morris Rd	--	Weddington	Union	Div-10	--	--	--	Improve Existing Intersection	--	--	Convert intersection to roundabout	$ 2,455,000	HY 2025
2050-E115	R-3833C	Brawley School Rd	--	Mooresville	Iredell	Div-12	Talbert Rd	Charlotte Hwy (US 21)	0.8	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, bike lanes and sidewalks	$ 25,840,000	HY 2035
2050-E117	U-6037	Charlotte Hwy	US 21	Iredell County & Mooresville	Iredell	Div-12	W Plaza Dr (NC 150)	Medical Park Rd	2.5	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, and construct intersection improvements	$ 35,100,000	HY 2035
2050-E118	U-5817	Fairview Rd / I-77 Overpass	--	Mooresville	Iredell	Div-12	Fairview Rd	Alcove Rd	0.1	New Roadway	0	2	New grade separated overpass	$ 23,478,000	HY 2035

2050 MTP Roadway Projects

2050 MTP ID	TIP No	Project Name	Route No	Jurisdiction	County	STI Category	Start of Project	End of Project	Project Length (miles)	Improvement Type	Existing Lanes	Proposed Lanes	Project Description	Project Cost	Horizon Year
2050-E109	I-5962	I-77 at Cornelius Rd	I-77	Iredell County & Mooresville	Iredell	SW	--	--	--	New Interchange	--	--	Convert grade separation to interchange	$ 25,060,000	HY 2035
2050-E107	R-2522	Main St / Shelton Ave	US 21 / NC 115	Troutman	Iredell	Reg-F	Cedar Ln	Moose Club Rd	2.2	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, bike lanes and sidewalks	$ 32,150,000	HY 2035
2050-E111	U-5960	Oakridge Farm Hwy	NC 150	Iredell County & Mooresville	Iredell	Reg-F	Statesville Hwy (NC 115)	Park Ave / Mt Ulla Hwy (NC 801)	1.3	Widening	2/4	4/6	Widen from 2/4 lanes to 4/6 lanes, with median, wide outside lanes and sidewalks	$ 28,700,000	HY 2035
2050-E114	U-5816	Oates Rd / Midnight Ln	--	Mooresville	Iredell	Div-12	Charlotte Hwy (US 21)	Bluefield Rd	1.5	New Roadway	0	3	New 3 lane roadway, including grade separation over I-77, with bike lanes and sidewalks	$ 41,300,000	HY 2035
2050-E113	R-2307	River Hwy / W Plaza Dr	NC 150	Iredell County & Mooresville	Iredell	Reg-F	Catawba River	I-77	6.2	Widening	2/4	6	Widen from 2/4 lanes to 6 lanes, with median, wide outside lanes and sidewalks	$ 290,010,000	HY 2035
2050-E104	U-5964	Sullivan Rd at Davie Ave	US 21 / US 64	Statesville	Iredell	Reg-F	--	--	--	Improve Existing Intersection	--	--	Convert intersection to roundabout	$ 1,100,000	HY 2035
2050-E103	U-5779	Wilkesboro Hwy	NC 115	Iredell County & Statesville	Iredell	Reg-F	Old Wilkesboro Rd	Hartness Rd	0.9	Widening	2/3	2+	Widen to multi-lanes	$ 13,700,000	HY 2035
2050-E116	R-5100	Williamson Rd	--	Mooresville	Iredell	Div-12	I-77	River Hwy / W Plaza Dr (NC 150)	3.2	Widening	2	2+	Widen to multi-lanes	$ 58,277,000	HY 2035
2050-3081	--	Billy Graham Pkwy	--	Charlotte	Mecklenburg	SW	Josh Birmingham Pkwy	I-85	1.2	Widening	4	6	Widen from 4 lanes to 6 lanes, with median, curb and gutter, and multi-use path	$ 12,700,000	HY 2035
2050-E334	U-5955	Brookshire Blvd	NC 16	Charlotte	Mecklenburg	Reg-E	Idaho Dr	I-85	0.4	Widening	4	6	Widen from 4 lanes to 6 lanes, with bicycle and pedestrian accommodations	$ 9,500,000	HY 2035
2050-E337	U-5803	Eastway Dr at Shamrock Dr	--	Charlotte	Mecklenburg	Div-10	--	--	--	Improve Existing Intersection	--	--	Construct intersection improvements, with bicycle and pedestrian accommodations	$ 8,000,000	HY 2035
2050-E333	U-5957	Freedom Dr	NC 27	Charlotte	Mecklenburg	Reg-E	Moores Chapel Rd	Toddville Rd	1.2	Widening	2	4	Widen from 2 lanes to 4 lanes, with bike lanes and sidewalks	$ 17,100,000	HY 2035
2050-E317	U-5807	Gilead Rd	--	Huntersville	Mecklenburg	Div-10	Statesville Rd (US 21)	Old Statesville Rd (NC 115)	0.7	Widening	3	4	Widen from 3 lanes to 4 lanes, with bike lanes and sidewalks	$ 12,800,000	HY 2035
2050-3083	--	I-277 (John Belk Fwy)	I-277	Charlotte	Mecklenburg	SW	South Blvd	Kenilworth Ave	0.6	Widening	6	6	Improve interchanges along corridor to improve operations	$ 24,080,000	HY 2035
2050-3108	I-6019	I-485 at NC 49	I-485 / NC 49	Charlotte	Mecklenburg	SW	--	--	--	Improve Existing Interchange	--	--	Interchange improvements, with multi-use path	$ 49,510,000	HY 2035
2050-3123	I-6015	I-485 at NC 51	I-485 / NC 51	Pineville	Mecklenburg	SW	--	--	--	Improve Existing Interchange	--	--	Interchange improvements, with bike lanes and sidewalks	$ 15,810,000	HY 2035
2050-E358	I-5963	I-485 at Providence Rd	I-485 / NC 16	Charlotte	Mecklenburg	SW	--	--	--	Improve Existing Interchange	--	--	Construct interchange improvements, with bicycle and pedestrian accommodations	$ 41,300,000	HY 2035
2050-E332	I-6014	I-77 at I-85	I-77 / I-85	Charlotte	Mecklenburg	SW	--	--	--	Improve Existing Interchange	--	--	Construct interchange improvements	$ 82,100,000	HY 2035
2050-E313	I-5715	I-77 at Sam Furr Rd	I-77 / NC 73	Huntersville	Mecklenburg	SW	--	--	--	Improve Existing Interchange	--	--	Convert existing interchange to split diamond interchange, with bicycle and pedestrian accommodations	$ 43,450,000	HY 2035
2050-3061	I-6056	I-77 at Sunset Rd	I-77 / US 21	Charlotte	Mecklenburg	SW	--	--	--	Improve Existing Interchange	--	--	Convert to diverging diamond interchange, with multi-use path	$ 41,000,000	HY 2035
2050-3012	--	I-77 at Westmoreland Rd	I-77	Cornelius	Mecklenburg	SW	--	--	--	New Interchange	--	--	Interchange improvements to convert 2 lane Westmoreland Road flyover into 4 lane single point interchange, with bike lanes and multi-use path	$ 36,340,000	HY 2035
2050-3075	--	I-85 at Billy Graham Pkwy	I-85	Charlotte	Mecklenburg	SW	--	--	--	Improve Existing Interchange	--	--	Convert to diverging diamond interchange, with multi-use path	$ 14,130,000	HY 2035
2050-3072	I-6020	I-85 at Brookshire Blvd	I-85 / NC 16	Charlotte	Mecklenburg	SW	--	--	--	Improve Existing Interchange	--	--	Convert to diverging diamond interchange, with multi-use path	$ 30,580,000	HY 2035
2050-E324	I-6012	I-85 at I-485 (NE of Charlotte)	I-85 / I-485	Charlotte	Mecklenburg	SW	--	--	--	Improve Existing Interchange	--	--	Construct interchange improvements	$ 13,500,000	HY 2035
2050-E335	I-6016	I-85 at I-485 (W of Charlotte)	I-85 / I-485	Charlotte	Mecklenburg	SW	--	--	--	Improve Existing Interchange	--	--	Construct interchange improvements	$ 4,300,000	HY 2035
2050-3057	I-6017	I-85 at Mallard Creek Church Rd	I-85	Charlotte	Mecklenburg	SW	--	--	--	Improve Existing Interchange	--	--	Interchange improvements, with multi-use path	$ 14,130,000	HY 2035
2050-E330	I-6013	I-85 at NC 24 (WT Harris Blvd)	I-85 / NC 24	Charlotte	Mecklenburg	SW	--	--	--	Improve Existing Interchange	--	--	Construct interchange improvements	$ 16,400,000	HY 2035
2050-3068	I-6053	I-85 at Sugar Creek Rd	I-85	Charlotte	Mecklenburg	SW	--	--	--	Improve Existing Interchange	--	--	Convert to diverging diamond interchange, with multi-use path	$ 15,070,000	HY 2035
2050-3130	--	Johnston Rd	US 521	Charlotte	Mecklenburg	Reg-E	I-485	Ballantyne Commons Pkwy	0.8	Widening	6	7	Upgrade roadway to improve operations	$ 6,280,000	HY 2035
2050-E359	U-6109	Lancaster Hwy / Johnston Rd	US 521	Charlotte	Mecklenburg	Reg-E	SC State Line	Ballantyne Commons Pkwy	3	Widening	4	4+	Widen to multi-lanes	$ 43,700,000	HY 2035
2050-E323	U-6028	Mallard Creek Rd	--	Charlotte	Mecklenburg	Div-10	Mallard Creek Church Rd	Breezewood Dr	1.5	Widening	2/3	4	Widen from 2/3 lanes to 4 lanes, with bike lanes and sidewalks	$ 22,390,000	HY 2035
2050-E350	U-5763	Matthews Township Pkwy	NC 51	Matthews	Mecklenburg	Reg-E	Sardis Rd	Monroe Rd / W John St	0.7	Widening	4	6	Widen from 4 lanes to 6 lanes, with median and multi-use path	$ 47,900,000	HY 2035
2050-E341	U-5007	Matthews-Mint Hill Rd	NC 51	Mint Hill	Mecklenburg	Reg-E	Matthews Township Pkwy (NC 51)	Lawyers Rd	4	Widening	2	4	Widen from 2 lanes to 4 lanes, with median and multi-use path	$ 43,250,000	HY 2035
2050-E353	U-4713A	McKee Rd Ext	--	Matthews	Mecklenburg	Div-10	Pleasant Plains Rd	E John St	0.8	New Roadway	0	2	New 2 lane roadway	$ 9,435,000	HY 2035
2050-E314	R-5721	NC 73	NC 73	Huntersville	Mecklenburg	Reg-E	Vance Rd Ext	W Catawba Ave	7.8	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, wide outside lanes and sidewalks	$ 197,280,000	HY 2035
2050-E321	U-6032	Odell School Rd	--	Charlotte	Mecklenburg	Div-10	I-485	Concord Mills Blvd	1.4	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, bicycle and pedestrian accommodations	$ 28,400,000	HY 2035
2050-E322	U-5772	Old Statesville Rd	NC 115	Charlotte	Mecklenburg	Reg-E	WT Harris Blvd (NC 24)	I-485	2.2	Widening	2	4	Widen from 2 lanes to 4 lanes, with bike lanes and sidewalks	$ 70,700,000	HY 2035
2050-3122	--	Pineville-Matthews Rd	NC 51	Pineville	Mecklenburg	Reg-E	I-485	Park Rd	0.2	Widening	6	7	Widen from 6 lanes to 7 lanes, with bike lanes, sidewalks, and/or multi-use path	$ 2,730,000	HY 2035
2050-3131	--	Providence Rd (NC 16)	NC 16	Charlotte	Mecklenburg	Reg-E	Providence Country Club Dr	Ballantyne Commons Pkwy / McKee Rd	1.2	Widening	6	6	Implement super street, with multi-use path	$ 24,530,000	HY 2035
2050-3103	--	S Tryon St	NC 49	Charlotte	Mecklenburg	Reg-E	Arrowood Rd	Shopton Rd	1.3	Widening	4	6	Widen from 4 lanes to 6 lanes, with median and multi-use path	$ 17,260,000	HY 2035
2050-3107	--	S Tryon St	NC 49	Charlotte	Mecklenburg	Reg-E	I-485	Arrowood Rd	0.5	Widening	4	6	Widen from 4 lanes to 6 lanes, with median and multi-use path	$ 8,180,000	HY 2035
2050-E312	U-5765	Sam Furr Rd	NC 73	Huntersville	Mecklenburg	Reg-E	W Catawba Ave	Northcross Dr	1.1	Widening	3/4	6	Widen from 3/4 lanes to 6 lanes, with median, wide outside lanes and sidewalks	$ 56,380,000	HY 2035
2050-E310	R-2632AB	Sam Furr Rd	NC 73	Huntersville	Mecklenburg	Reg-E	Old Statesville Rd (NC 115)	Davidson-Concord Rd	2.7	Widening	2	2+	Widen to multi-lanes	$ 40,335,000	HY 2035
2050-E307	U-5767	Statesville Rd	US 21	Cornelius & Huntersville	Mecklenburg	Reg-E	Northcross Center Ct	Westmoreland Rd	1.2	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, wide outside lanes and sidewalks	$ 23,200,000	HY 2035
2050-E315	U-5771	Statesville Rd	US 21	Huntersville	Mecklenburg	Reg-E	Gilead Rd	Holly Point Dr	2.2	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, wide outside lanes and sidewalks	$ 19,500,000	HY 2035
2050-E349	U-5766	Steele Creek Rd	NC 160	Charlotte	Mecklenburg	Reg-E	I-485	South Carolina State Line	6.9	Widening	2	4	Widen from 2 lanes to 4 lanes, with bike lanes and sidewalks	$ 161,805,000	HY 2035
2050-E331	U-5768	University City Blvd and Back Creek Church Rd	NC 49	Charlotte	Mecklenburg	Reg-E	John Kirk Dr	I-485	2.1	Widening	4	6	Widen from 4 lanes to 6 lanes, with bike lanes and sidewalks	$ 90,880,000	HY 2035
2050-E306	R-2555B	W Catawba Ave	--	Cornelius	Mecklenburg	Div-10	Jetton Rd	Sam Furr Rd (NC 73)	2.4	Widening	2	4	Widen from 2 lanes to 4 lanes, with 10 ft. multi-use path	$ 22,370,000	HY 2035
2050-3114	--	Westinghouse Blvd	--	Charlotte	Mecklenburg	Div-10	S Tryon St (NC 49)	Nations Ford Rd	2.1	Widening	4	6	Widen from 4 lanes to 6 lanes, with median, multi-use path	$ 26,780,000	HY 2035
2050-3063	--	WT Harris Blvd	NC 24	Charlotte	Mecklenburg	Reg-E	N Tryon St (US 29)	University City Blvd (NC 49)	0.8	Widening	5	6	Widen from 5 lanes to 6 lanes, with median and multi-use path	$ 12,260,000	HY 2035
2050-3069	--	WT Harris Blvd	NC 24	Charlotte	Mecklenburg	Reg-E	University City Blvd (NC 49)	The Plaza	3.3	Widening	4	6	Widen from 4 lanes to 6 lanes, with median and multi-use path	$ 33,620,000	HY 2035
2050-E204	U-4714	E John St / Old Monroe Rd	--	Matthews & Stallings	Mecklenburg & Union	Div-10	S Trade St	Wesley Chapel-Stouts Rd	6.5	Widening	2/3	4	Widen from 2/3 lanes to 4 lanes, with median, bike lanes and sidewalks	$ 89,680,000	HY 2035
2050-E200	U-4913	Idlewild Rd	--	Matthews & Stallings	Mecklenburg & Union	Div-10	Stallings Rd	Stevens Mill Rd	1	Widening	2/3	4	Widen from 2/3 lanes to 4 lanes, with median, bike lanes and sidewalks	$ 8,005,000	HY 2035
2050-E215	U-6031	Charlotte Ave	--	Monroe	Union	Div-10	Seymour St	Dickerson Blvd / N MLK Jr Blvd (NC 200)	0.4	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, bike lanes and sidewalks	$ 26,800,000	HY 2035
2050-E219	U-5769	Providence Rd S	NC 16	Marvin, Waxhaw & Weddington	Union	Reg-E	Rea Rd Ext	Waxhaw Pkwy	5.8	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, wide outside lanes and sidewalks	$ 81,600,000	HY 2035
2050-E214	U-3467	Rea Rd / Marvin School Rd / Weddington Rd	NC 84	Weddington	Union	Reg-E	Providence Rd S (NC 16)	Waxhaw-Indian Trail Rd	4	New Roadway	0	4	Improve existing roadway and construct new 4 lane roadway, with median, wide outside lanes and sidewalks	$ 47,500,000	HY 2035
2050-E210	U-5764	Roosevelt Blvd	US 74	Monroe	Union	Reg-E	Dickerson Blvd (NC 200)	Rocky River Rd	3.2	Widening	4	6	Widen from 4 lanes to 6 lanes, with median, bike lanes and sidewalks	$ 78,700,000	HY 2035
2050-E213	U-5931	Roosevelt Blvd at Secrest Shortcut Rd	US 74	Monroe	Union	SW	--	--	--	Improve Existing Intersection	--	--	Construct intersection improvements	$ 10,500,000	HY 2035
2050-E216	U-5723	Roosevelt Blvd at US 601	US 74 / US 601	Monroe	Union	SW	--	--	--	Improve Existing Intersection	--	--	Construct intersection improvements	$ 8,000,000	HY 2035
2050-E209	U-4024	Skyway Dr (US 601)	US 601	Union County & Monroe	Union	Reg-E	Roosevelt Blvd (US 74)	Monroe Expressway	2.1	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, bike lanes and sidewalks	$ 28,500,000	HY 2035
2050-1032	--	Connector Rd	--	Iredell County	Iredell	Div-12	Statesville Hwy (NC 115)	Charlotte Hwy (US 21)	0.9	Widening	2	4	Widen from 2 lanes to 4 lanes, with median and multi-use path	$ 11,220,000	HY 2045
2050-1037	--	Plaza Dr	NC 150	Mooresville	Iredell	Reg-F	Charlotte Hwy (US 21)	Statesville Hwy (NC 115)	1.8	Widening	5	6	Widen from 5 lanes to 6 lanes, with bike lanes and sidewalks	$ 55,250,000	HY 2045
2050-1012	--	Salisbury Rd	--	Statesville	Iredell	Div-12	Opal St	Salisbury Hwy (US 70)	1.2	Widening	4	3	Road diet from 4 lanes to 3 lanes, paved shoulder, with wide outside lanes and sidewalks	$ 7,110,000	HY 2045
2050-3086	--	Albemarle Rd	NC 24 / NC 27	Charlotte	Mecklenburg	Reg-E	WT Harris Blvd (NC 24)	Eastern Circumferential Rd	2.1	Widening	4	6	Widen from 4 lanes to 6 lanes, with median and multi-use path	$ 31,320,000	HY 2045
2050-3133	U-6167	Ardrey Kell Rd	--	Mecklenburg County & Charlotte	Mecklenburg	Div-10	Lancaster Hwy (US 521)	Rea Rd	2.7	Widening	2	4	Widen from 2 lanes to 4 lanes, with median and multi-use path	$ 41,370,000	HY 2045

2050 MTP Roadway Projects

2050 MTP ID	TIP No	Project Name	Route No	Jurisdiction	County	STI Category	Start of Project	End of Project	Project Length (miles)	Improvement Type	Existing Lanes	Proposed Lanes	Project Description	Project Cost	Horizon Year
2050-E344	Covered under TIP No U-2509	Arequipa Dr / Northeast Pkwy	--	Charlotte	Mecklenburg	SW	Margaret Wallace Rd	Sam Newell Rd	1.3	New Roadway	0	2	New 2 lane roadway, with bike lanes and sidewalks	N/A	HY 2045
2050-3059	--	Brookshire Blvd	NC 16	Mecklenburg County & Charlotte	Mecklenburg	Reg-E	Gaston County Line	Bellhaven Blvd	4.8	Widening	4	6	Widen from 4 lanes to 6 lanes, with median and multi-use path	$ 75,380,000	HY 2045
2050-3067	--	Brookshire Blvd	NC 16	Charlotte	Mecklenburg	Reg-E	I-85	Bellhaven Blvd	3.5	Widening	4	6	Widen from 4 lanes to 6 lanes, with median and multi-use path	$ 55,540,000	HY 2045
2050-3074	--	Brookshire Fwy	NC 16	Charlotte	Mecklenburg	Reg-E	I-77	Idaho Drive	1.8	Widening	4	6	Widen from 4 lanes to 6 lanes, with median and paved shoulders	$ 37,390,000	HY 2045
2050-E311	R-5706A	Davidson-Concord Rd	NC 73	Davidson & Huntersville	Mecklenburg	Reg-E	Davidson-Concord Rd	Poplar Tent Rd	2.4	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, wide outside lanes and sidewalks	$ 251,200,000	HY 2045
2050-3064	--	Eastern Circumferential Rd	--	Mecklenburg County & Charlotte	Mecklenburg	Div-10	Rosemallow Rd	Rocky River Rd	1.8	Widening	2	4	Widen from 2 lanes to 4 lanes, with multi-use path	$ 37,940,000	HY 2045
2050-3079	--	Eastway Dr	--	Charlotte	Mecklenburg	Div-10	Kilborne Dr	Sugar Creek Rd	1.1	Widening	4	6	Widen from 4 lanes to 6 lanes, with median and multi-use path	$ 14,650,000	HY 2045
2050-3066	--	I-485 at Rocky River Rd	I-485	Mecklenburg County & Charlotte	Mecklenburg	SW	--	--	--	Improve Existing Interchange	--	--	Convert to diverging diamond interchange	$ 13,010,000	HY 2045
2050-E340	I-5718A	I-77	I-77	Charlotte	Mecklenburg	SW	South Carolina State Line	I-277 (John Belk Fwy) (Exit 9)	9.4	Widening	6	10	Widen from 6 lanes to 10 lanes, including express lanes and median improvements	$ 790,500,000	HY 2045
2050-3052	--	I-85 at I-485	I-85 / I-485	Mecklenburg County & Charlotte	Mecklenburg	SW	--	--	--	Improve Existing Interchange	--	--	Interchange improvements	$ 16,030,000	HY 2045
2050-E342	U-2509	Independence Blvd	US 74	Charlotte	Mecklenburg	SW	Idlewild Rd	I-485	6.4	Widening	4/6	6/8	Widen from 4/6 to 6/8 lanes, with express lanes	$ 1,203,200,000	HY 2045
2050-E338	U-6103	Independence Blvd Express Lanes	US 74	Charlotte	Mecklenburg	SW	I-277	West of Idlewild Rd	4.9	Widening	--	--	Widen roadway to allow for two-way express lanes	$ 0	HY 2045
2050-E347	Covered under TIP No U-2509	Independence Pointe Pkwy	--	Matthews	Mecklenburg	SW	Sam Newell Rd	Matthews Township Pkwy (NC 51)	0.9	New Roadway	0	2	New 2 lane roadway, with bike lanes and sidewalks	N/A	HY 2045
2050-E348	Covered under TIP No U-2509	Independence Pointe Pkwy	--	Matthews	Mecklenburg	SW	Matthews Township Pkwy (NC 51)	Campus Ridge Rd	1.9	New Roadway	0	2	New 2 lane roadway, with median, bike lanes and sidewalks	N/A	HY 2045
2050-E345	Covered under TIP No U-2509	Krefeld Dr / Independence Pointe Pkwy	--	Charlotte	Mecklenburg	SW	Crownpoint Executive Dr	Sam Newell Rd	0.9	New Roadway	0	2	New 2 lane roadway, with bike lanes and sidewalks	N/A	HY 2045
2050-E343	Covered under TIP No U-2509	Krefeld Dr Ext	--	Charlotte	Mecklenburg	SW	Krefeld Dr	Sardis Rd N	0.8	New Roadway	0	2	New 2 lane roadway, with bike lanes and sidewalks	N/A	HY 2045
2050-3062	--	Mt Holly Rd	NC 27	Mecklenburg County & Charlotte	Mecklenburg	Reg-E	Rhyne Rd	Belmeade Dr	1.6	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, multi-use path	$ 24,820,000	HY 2045
2050-E346	Covered under TIP No U-2509	Northeast Pkwy	--	Matthews	Mecklenburg	SW	Overcash Dr	Matthews-Mint Hill Rd	0.4	New Roadway	0	2	New 2 lane roadway, with bike lanes and sidewalks	N/A	HY 2045
2050-3121	U-6165	Park Rd	--	Pineville	Mecklenburg	Div-10	Johnston Rd	Pineville-Matthews Rd (NC 51)	0.9	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, multi-use path	$ 20,720,000	HY 2045
2050-3022	U-6029	Poplar Tent Rd	--	Mecklenburg County & Cabarrus County	Mecklenburg	Div-10	Davidson-Concord Rd / Davidson Hwy (NC 73)	Huntersville-Concord Rd	1.4	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, bike lanes and sidewalks	$ 17,880,000	HY 2045[1]
2050-3113	--	S Tryon St	NC 49	Charlotte	Mecklenburg	Reg-E	I-485	Steele Creek Rd (NC 160)	4.4	Widening	4	6	Widen from 4 lanes to 6 lanes, with median and multi-use path	$ 75,270,000	HY 2045
2050-3037	--	Statesville Rd	US 21	Huntersville	Mecklenburg	Reg-E	Hambright Rd	Gilead Rd	2.4	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, multi-use path	$ 36,810,000	HY 2045
2050-3095	--	Steele Creek Rd	NC 160	Mecklenburg County & Charlotte	Mecklenburg	Reg-E	I-485	Western Pkwy	1.3	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, multi-use path	$ 17,680,000	HY 2045
2050-3053	--	WT Harris Blvd	NC 24	Charlotte	Mecklenburg	Reg-E	I-77	Sugar Creek Rd	3.1	Widening	4	6	Widen from 4 lanes to 6 lanes, with median and multi-use path	$ 30,380,000	HY 2045
2050-3060	--	WT Harris Blvd	NC 24	Charlotte	Mecklenburg	Reg-E	Sugar Creek Rd	Research Dr / IBM Dr	2.7	Widening	4	6	Widen from 4 lanes to 6 lanes, with median and multi-use path	$ 21,600,000	HY 2045
2050-2001	U-6170	Lawyers Rd	--	Mecklenburg County, Union County & Stallings	Mecklenburg & Union	Div-10	I-485	Stevens Mill Rd	0.4	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, bike lanes and sidewalks	$ 5,070,000	HY 2045
2050-1029	--	Cornelius Rd	--	Iredell County & Mooresville	Iredell	Div-12	Bluefield Rd	US 21	1.9	Widening	2	4	Widen from 2 lanes to 4 lanes, with median and multi-use path	$ 31,630,000	HY 2050
2050-1013	--	Garner Bagnal Blvd	US 70	Statesville	Iredell	Reg-F	Buffalo Shoals Rd	I-77	2.5	Widening	2	4	Widen from 2 to 4 lanes, with median, bike lanes, sidewalks, and/or multi-use path	$ 46,480,000	HY 2050
2050-3085	--	Albemarle Rd	NC 24 / NC 27	Mecklenburg County, Charlotte & Mint Hill	Mecklenburg	Reg-E	Circumferential Rd	I-485	2.7	Widening	4	6	Widen from 4 lanes to 6 lanes, with median and multi-use path	$ 31,360,000	HY 2050
2050-3132	--	Ardrey Kell Rd	--	Charlotte	Mecklenburg	Div-10	Rea Rd	Providence Rd (NC 16)	2.6	Widening	2	4	Widen from 2 lanes to 6 lanes, with median and multi-use path	$ 45,280,000	HY 2050
2050-3071	--	Eastern Circumferential Rd	--	Mecklenburg County & Charlotte	Mecklenburg	Div-10	Rocky River Rd	Plaza Rd Ext	1.3	New Roadway	0	4	New 4 lane roadway, with multi-use path	$ 21,020,000	HY 2050
2050-3082	I-6022A	I-277	I-277	Charlotte	Mecklenburg	SW	Kenilworth Ave	N Davidson St	2	Widening	6	6	Upgrade interchanges along corridor to improve operations	$ 205,390,000	HY 2050
2050-3078	I-5718B	I-77	I-77	Charlotte	Mecklenburg	SW	I-277 (John Belk Fwy)	I-277 (Brookshire Fwy)	1.8	Widening	8	10	Widen from 8 lanes to 10 lanes, interchange improvements, and installation of a collector-distributor road	$ 246,320,000	HY 2050
2050-3023	--	Old Statesville Rd	NC 115	Huntersville	Mecklenburg	Reg-E	Main St	Sam Furr Rd (NC 73)	1.5	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, bike lanes and sidewalks	$ 29,060,000	HY 2050
2050-3040	--	Old Statesville Rd	NC 115	Mecklenburg County & Huntersville	Mecklenburg	Reg-E	Hambright Rd	Mt Holly-Huntersville Rd	2	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, bike lanes and sidewalks	$ 28,620,000	HY 2050
2050-3049	--	Statesville Rd	US 21	Mecklenburg County, Charlotte & Huntersville	Mecklenburg	Reg-E	WT Harris Blvd (NC 24)	Hambright Rd	2.1	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, multi-use path	$ 32,060,000	HY 2050
2050-3091	--	Western Pkwy	--	Mecklenburg County & Charlotte	Mecklenburg	Reg-E	Billy Graham Pkwy	Steele Creek Rd (NC 160)	3	New Roadway	0	4	New 4 lane roadway; with median and multi-use path	$ 61,640,000	HY 2050
2050-3076	--	Wilkinson Blvd	US 74 / US 29	Charlotte	Mecklenburg	Reg-E	Little Rock Rd	I-485	1.5	Widening	4	6	Widen from 4 lanes to 6 lanes, with median, multi-use path	$ 20,370,000	HY 2050
2050-3097	--	Fairview Rd	NC 218	Mecklenburg County, Union County & Mint Hill	Mecklenburg & Union	Reg-E	Brief Rd	Rock Hill Church Rd	1.8	Widening	2	4	Widen from 2 lanes to 4 lanes, with median, bike lanes and sidewalks	$ 25,010,000	HY 2050

[1] MTP ID 2050-3022, Poplar Tent Rd, is included in HY 2045 to maintain regional consistency with Cabarrus-Rowan MPO. Funding for this project is accounted for in the CRMPO MTP.

Table 5-1: Fiscally-Constrained List of Highway Projects - Statewide Tier

ID NUMBER	MODE	COUNTY	MILE-AGE	ROUTE	PROJECT NAME	FROM	TO	PROJECT DESCRIPTION	FUNDING TIER	STIP COST	REGIONALLY SIGNIFICANT	EXEMPT	FUNCTIONAL CLASSIFICATION	2020 COST	2025 COST	2035 COST	2045 COST	2050 COST	2050 MTP HORIZON YEAR
2035 HORIZON YEAR PROJECTS																			
I-5719 H129671	Highway	Gaston	9.8	I-85	I-85 Widening	US 321	NC 273	Widen to 8 Lanes. Construct interchange improvements at SR 2200 (Cox Rd).	Statewide	$388,909,000	Yes	No	Interstate	$388,909,000	$388,909,000	$388,909,000			2035
I-5719A	Highway	Gaston	9.8	I-85	I-85 Flood Risk	SC State Line	NC 273	Implement flood risk, vulnerability assessment, and flood warning system along the I-85 Corridor	Statewide	$200,000			Interstate			$200,000			2035
I-5719B	Highway	Gaston	9.8	I-85	I-85 Vehicle Charging Ports	SC State Line	NC 273	Install electric vehicle charging ports along the I-85 corridor.	Statewide	$700,000			Interstate			$700,000			2035
I-5719C	Highway	Gaston	9.8	I-85	I-85 ITS	SC State Line	NC 273	Install and implement intelligient transportation system components including active traffic management, incident management, statewide resiliance, broadband (South Carolina state line to US 74), connected vehicle technology, and traveler information.	Statewide	$21,170,000			Interstate			$21,170,000			2035
I-5985A	Highway	Cleveland	10.5	I-85	I-85 Widening	SC State Line	US 74	Widen to six lanes.	Statewide	$143,400,000	Yes	No	Interstate	$143,400,000	$143,400,000	$143,400,000			2035
I-5985B	Highway	Gaston	6.6	I-85	I-85 Widening	US 74	US 321	Widen to eight lanes	Statewide	$141,300,000	Yes	No	Interstate	$141,300,000	$141,300,000	$141,300,000			2035
U-2567	Highway	Cleveland	0.5	US 74	Dixon Blvd Interchange	NC 150 (Dekalb St)	NA	US 74-NC 150 (Dekalb Street). Construct interchange.	Statewide	$23,300,000	Yes	No	Principal Arterial	$23,300,000	$23,300,000	$23,300,000			2035
U-5929	Highway	Cleveland	0.5	US 74	US 74/NC 226 Intersection Improvements	US 74 (Dixon Blvd)	NC 226 (Earl Rd)	Construct interchange.	Statewide	$17,500,000	Yes	No	Principal Arterial	$17,500,000	$17,500,000	$17,500,000			2035

Table 5-2: Fiscally-Constrained List of Highway Projects - Regional Tier (Continued)

ID NUMBER	IMPROVEMENT TYPE	MODE	COUNTY	JURISDICTION	MILEAGE	ROUTE	PROJECT NAME	FROM	TO	PROJECT DESCRIPTION	FUNDING TIER	REGIONALLY SIGNIFICANT	EXEMPT	REGULATION	FUNCTIONAL CLASSIFICATION	STIP PROGRAMMED COST (MINUS LOCAL FUNDING)	TOTAL POINTS (105 MAX)	2025 COST	2035 COST	2045 COST	2050 COST	2050 MTP HORIZON YEAR
2025 HORIZON YEAR PROJECTS																						
R-5712	Intersection	Highway	Lincoln	Lincoln County	0.5	NC 16 BUS	NC 16 BUS Intersection	SR 1439 Unity Church/SR 1387 (Triangle Cir)		Add turn lanes.	Regional	No	Yes	§ 93.127	Local / Minor Arterial	$4,552,000	NA	$4,552,000				2025
R-5713	Access Management	Highway	Cleveland	Shelby/ Cleveland County	6.0	US 74	Dixon Blvd Access Management	US 74 Bus	NC 226	Placement of Directional Crossovers and Management of Access Roads to increase Safety and Efficiency. Construct access management improvements.	Regional	No	Yes	§ 93.127	Principal Arterial	$3,830,000	NA	$3,830,000				2025
U-5775	Intersection	Highway	Cleveland	Shelby	0.5	US 74 Business	Marion Street Intersection	NC 150 (Cherryville Road)		Realign intersection.	Regional	No	Yes	§ 93.127	Minor Arterial	$3,153,000	NA	$3,153,000				2025
2035 HORIZON YEAR PROJECTS																						
U-5959 H150398	Intersection	Highway	Gaston	Belmont	0.5	US 74	US 74/NC 273 Intersection Improvements	US 74 (Wilkinson Blvd)	NC 273 (Park St)	Construct intersection improvements.	Regional	No	Yes	§ 93.127	Principal Arterial	$853,000	NA	$853,000	$853,000			2035
U-5961 H150202	Capacity	Highway	Gaston	Gastonia	1.0	NC 274	Union Rd Widening	Osceola St	Niblick Dr	Upgrade roadway to 5 lanes.	Regional	Yes	No		Principal Arterial	$7,900,000	NA	$7,900,000	$7,900,000			2035
B-6051	Capacity	Highway	Gaston	Belmont	0.4	US 29/US 74	US 29/74 (Wilkinson Blvd) Catawba River Bridge Replacement	NC 7 (Catawba St)	East Bank of Catawba River	Widen existing 4-lane bridge and cross section to 6-lanes. The road on both sizes of the bridge will be widened to 6-lanes	Regional	Yes	No		Other Principal Arterial	$44,000,000	NA	$44,000,000				2035
U-6143 H172124	Intersection	Highway	Gaston	Belmont	0.1	US 74	US 74 Wilkinson Blvd)/NC 7 (E Catawba St) Intersection Improvements	NC 7		Construct northbound right-turn lane on NC 7 (E Catawba St) and extend existing westbound left-turn lane on US 74 (Wilkinson Blvd).	Regional	No	Yes	§ 93.127	Principal Arterial/ Minor Arterial	$2,210,000	NA	$2,210,000				2035

Table 5-2: Fiscally-Constrained List of Highway Projects - Regional Tier (continued)

ID NUMBER	IMPROVEMENT TYPE	MODE	COUNTY	JURISDICTION	MILEAGE	ROUTE	PROJECT NAME	FROM	TO	PROJECT DESCRIPTION	FUNDING TIER	REGIONALLY SIGNIFICANT	EXEMPT	REGULATION	FUNCTIONAL CLASSIFICATION	STIP PROGRAMMED COST (MINUS LOCAL FUNDING)	TOTAL POINTS (105 MAX)	2025 COST	2035 COST	2045 COST	2050 COST	2050 MTP HORIZON YEAR
U-6146 H170685	Capacity	Highway	Gaston	Cramerton	1.2	US 29/US 74	US 74 (Wilkinson Blvd) Widening	Market St	SR 2015 (Alberta Ave)	Widen existing four-lane bridge and cross section to six-lanes. Widen road on both sides of bridge to six-lanes.	Regional	Yes	No		Other Principal Arterial	$31,305,000	NA	$31,305,000				2035
R-2307A	Capacity	Highway	Lincoln	Lincoln County	0.2	NC 150	NC 150 Widening	Relocated NC 16	East of SR 1840 (Greenwood Rd)	Widen to multi-lanes with a bypass of the Terrell Historic District.	Regional	No	No		Other Principal Arterial	$1,414,000	NA	$1,414,000	$1,414,000			2035
U-2523B H090331-B	Capacity	Highway	Gaston	Dallas	1.9	NC 279	Lower Dallas Hwy Widening	North of SR 2275 (Robinson-Clemmer Rd)	West of NC 275 in Dallas	Widen to Multi-Lanes	Regional	Yes	No		Principal Arterial	$27,450,000	NA	$27,450,000	$27,450,000			2035
U-5962 H150551	Intersection	Highway	Lincoln	Lincoln County	0.5	NC 16 BUS	NC 16 BUS Intersection Realignment	SR 1373 (Campground Rd)/SR 1386 (Will Proctor)		Realign offset intersections.	Regional	No	Yes	§ 93.127	Minor Arterial	$17,002,000	NA	$17,002,000	$17,002,000			2035
U-5965 H141272	Intersection	Highway	Gaston	Gastonia	0.5	US 29/US 74	Franklin Blvd Intersection Improvements	US 29/74 (Franklin Blvd)	NC 274 (Broad St)	Construct intersection improvements.	Regional	No	Yes	§ 93.127	Other Principal Arterial	$3,450,000	NA	$3,450,000	$3,450,000			2035
R-2707D H090186-D	Capacity	Highway	Cleveland	Cleveland County	4.1	Shelby Bypass	Shelby Bypass / US 74	East of NC 150	Existing US 74 west of SR 2238 (Long Branch Rd)	Construct Freeway on New Location.	Regional	Yes	No		New Route	$84,460,000	NA	$84,460,000	$84,460,000			2035
R-2707E H090186-E	Capacity	Highway	Cleveland	Cleveland County	2.6	Shelby Bypass	Shelby Bypass / US 74	Existing US 74 West of SR 2238 (Long Branch Road)	West of SR 1001 (Stony Point Rd)	Construct Freeway on New Location.	Regional	Yes	No		Principal Arterial	$42,950,000	NA	$42,950,000	$42,950,000			2035

Table 5-2: Fiscally-Constrained List of Highway Projects - Regional Tier (continued)

ID NUMBER	IMPROVEMENT TYPE	MODE	COUNTY	JURISDICTION	MILEAGE	ROUTE	PROJECT NAME	FROM	TO	PROJECT DESCRIPTION	FUNDING TIER	REGIONALLY SIGNIFICANT	EXEMPT	REGULATION	FUNCTIONAL CLASSIFICATION	STIP PROGRAMMED COST (MINUS LOCAL FUNDING)	TOTAL POINTS (105 MAX)	2025 COST	2035 COST	2045 COST	2050 COST	2050 MTP HORIZON YEAR
2035 HORIZON YEAR PROJECTS																						
R-4045	Capacity	Highway	Cleveland	Cleveland County	0.5	US 74	US 74 Upgrade	West of US 74 BUS (Ellenboro Rd)	East of Bridges 48 and 49 over Sandy Run.	Upgrade at-grade intersection to interchange and upgrade US 74 to full control of access.	Regional	Yes	No		Principal Arterial	$29,900,000	NA	$29,900,000	$29,900,000			2035
R-5721A H090185-A	Capacity	Highway	Lincoln	Lincoln County	2.7	NC 73	NC 73 Widening	NC 16 Business	Beatties Ford Rd	Widen to Multi-Lanes.	Regional	Yes	No		Other Principal Arterial	$165,130,000	NA	$165,130,000	$165,130,000			2035
U-5800	Capacity	Highway	Gaston	Belmont	0.5	NC 7	NC 7 Intersection Improvements and Widening	NC 7/US 74	NC 7/US 29	Construct northbound through lane and intersection improvements.	Regional	No	Yes	§ 93.127	Minor Arterial/ Other Principal Arterial	$7,040,000	NA	$7,040,000	$7,040,000			2035
U-5970 H090601	Access Management	Highway	Gaston	Gastonia	0.2	US 321	US 321 Access Management	19th Ave	Clyde St	Construct access management improvements.	Regional	No	Yes	§ 93.127	Principal Arterial	$5,300,000	NA	$5,300,000	$5,300,000			2035
U-6134 H170830	Intersection	Highway	Lincoln	Lincoln County	0.5	NC 16	NC 16 Interchange Improvements	NC 16	Optimist Club Rd	Upgrade at-grade intersection to interchange.	Regional	No	No		Local	$25,976,000	NA	$25,976,000	$25,976,000			2035
U-6138 H172121	Intersection	Highway	Gaston	Gastonia	0.5	NC 279	US 74/N New Hope Rd Intersection Improvements	N New Hope Rd	US 29/74	Add right turn lane on south bound New Hope Rd onto west bound Franklin Blvd	Regional	No	Yes	§ 93.127	Principal Arterial	$2,875,000	NA	$2,875,000	$2,875,000			2035
U-6140 H170989	Intersection	Highway	Lincoln	Lincolnton	2.3	NC 27	NC 27 (E Main St) Improvements	US 321 BUS	NC 150 (East)	Construct access management and intersection improvements. Includes construction of northbound turn lane from SR 1294 (Lithina Inn Rd) to NC 27 (E Main St) and widening of bridge # 540042 over Seaboard RR on NC 150.	Regional	No	Yes	§ 93.127	Minor Arterial	$32,110,000	NA	$32,110,000	$32,110,000			2035
2045 HORIZON YEAR PROJECTS																						
U-6141 H171306	Intersection	Highway	Gaston	Gastonia	0.5	US 29/74	US 74 (Franklin Blvd)/ Redbud Dr Intersection Improvements	Redbud Dr		Replace existing full-movement intersection with quadrant intersection.	Regional	No	Yes	§ 93.127	Minor Arterial	$28,510,000	80	$4,888,870	$5,959,505	$7,264,603	$8,020,709	2045
H184216	Intersection	Highway	Gaston	Gastonia	0.5	NC 279 (S New Hope Rd)	NC 279/ Redbud Dr Intersection Improvements	SR 2329 (Redbud Dr)		Construct median U-turn intersection to improve capacity.	Regional	No	Yes	§ 93.127	Other Principal Arterial		80	$1,578,836	$1,924,592	$2,346,067	$2,590,247	2045

Table 5-2: Fiscally-Constrained List of Highway Projects - Regional Tier (continued)

ID NUMBER	IMPROVEMENT TYPE	MODE	COUNTY	JURISDICTION	MILEAGE	ROUTE	PROJECT NAME	FROM	TO	PROJECT DESCRIPTION	FUNDING TIER	REGIONALLY SIGNIFICANT	EXEMPT	REGULATION	FUNCTIONAL CLASSIFICATION	STIP PROGRAMMED COST (MINUS LOCAL FUNDING)	TOTAL POINTS (105 MAX)	2025 COST	2035 COST	2045 COST	2050 COST	2050 MTP HORIZON YEAR
2045 HORIZON YEAR PROJECTS																						
H184214	Intersection	Highway	Lincoln	Lincolnton	0.5	NC 27 (W Main St)	NC 27/Grove St Intersection Improvements	SR 1008 (Grove St)		Construct mini-roundabout.	Regional	No	Yes	§ 93.127	Minor Arterial		80	$2,444,435	$2,979,753	$3,632,302	$4,010,355	2045
H184215	Intersection	Highway	Cleveland	Kings Mountain	0.5	US 74 BUS (King St)	US 74 BUS/ NC 161 Intersection Improvements	NC 161 (York Rd/Cleveland Ave)		Construct right turn lanes on each approach.	Regional	No	Yes	§ 93.127	Other Principal Arterial		80	$3,157,671	$3,849,183	$4,692,133	$5,180,494	2045
H184875	Capacity	Highway	Lincoln	Lincolnton	1.3	US 321 BUS (N Generals Boulevard/ Maiden Highway)	US 321 BUS Widening	NC 27 (E Main Street)	US 321 (N Aspen Street)	Widen to 4-lane divided.	Regional	Yes	No		Arterial		80	$19,398,700	$23,646,907	$28,825,447	$31,825,623	2045
H184218	Intersection	Highway	Gaston	Belmont	2.0	US 74 (Wilkinson Blvd)	US 74/NC 273 Interchange	NC 273 (Park St)		Construct interchange.	Regional	Yes	No		Minor Arterial / Other Principal Arterial		80	$44,052,824	$53,700,147	$65,460,179	$72,273,327	2045
H184221	Intersection	Highway	Gaston	Lowell / Ranlo	0.5	NC 7 (E Ozark Ave/ Lowell Rd)	NC 7/Cox Rd Intersection Improvements	SR 2200 (Spencer Mountain Rd/ Cox Rd)		Construct additional through lane on SB SR 2200 (Spencer Mountain Rd).	Regional	No	Yes	§ 93.127	Other Principal Arterial		75	$789,418	$962,296	$1,173,033	$1,295,124	2045
H184603	Capacity	Highway	Lincoln	Lincoln County	2.3	NC 16 Business	NC 16 BUS Widening	NC 73	SR 1439 (Unity Church Road)/ SR 1387 (Triangle Circle)	Widen roadway to 4-lane boulevard with sidewalks and bicycle lanes.	Regional	Yes	No		Minor Arterial		75	$45,368,888	$55,304,422	$67,415,782	$74,432,470	2045
H184607	Capacity	Highway	Lincoln	Lincoln County	1.4	NC 16 Business	NC 16 BUS Widening	SR 1439 (Unity Church Road)/SR 1387 (Triangle Road)	SR 1389 (Fairfield Forest Road)	Widen roadway from 2 lanes to 4 lanes with median, sidewalks and bicycle lanes.	Regional	Yes	No		Minor Arterial		75	$26,497,939	$32,300,840	$39,374,544	$43,472,678	2045
H184210	Intersection	Highway	Gaston	Belmont	0.5	NC 273 (Park St/ Keener Blvd)	NC 273/NC 7 Intersection Improvements	NC 7 (Catawba St)		Improve intersection with the addition of left turn lanes in all directions as well as a right turn lane on NC 273 (Keener Blvd) to NC 7 (Catawba St).	Regional	No	Yes	§ 93.127	Minor Arterial		70	$3,947,089	$4,811,479	$5,865,166	$6,475,618	2045
H190678	Intersection	Highway	Gaston	Gastonia	0.5	NC 274 (Bessemer City Road)	NC 274/ Jenkins Rd/ Brown St/ Milton Ave Intersection Improvements	Jenkins Road/Brown Street/Milton Avenue		Realign intersection to make Jenkins Road the through movement.	Regional	No	Yes	§ 93.127	Other Principal Arterial		70	$1,578,836	$1,924,592	$2,346,067	$2,590,247	2045

Table 5-2: Fiscally-Constrained List of Highway Projects - Regional Tier (continued)

ID NUMBER	IMPROVEMENT TYPE	MODE	COUNTY	JURISDICTION	MILEAGE	ROUTE	PROJECT NAME	FROM	TO	PROJECT DESCRIPTION	FUNDING TIER	REGIONALLY SIGNIFICANT	EXEMPT	REGULATION	FUNCTIONAL CLASSIFICATION	STIP PROGRAMMED COST (MINUS LOCAL FUNDING)	TOTAL POINTS (105 MAX)	2025 COST	2035 COST	2045 COST	2050 COST	2050 MTP HORIZON YEAR
2045 HORIZON YEAR PROJECTS																						
R-0617C H090049-C	Capacity	Highway	Lincoln	Lincolnton/ Lincoln County	2.0	NC 150	NC 150	US 321 at Lincolnton	US 321 Bypass	Widen to Multi-Lanes, Part on New Location from US 321 at Lincolnton to US 321 Bypass.	Regional	Yes	No		Minor Arterial	$49,100,000	70	$54,210,367	$66,082,135	$80,553,754	$88,937,854	2045
H191616	Modernization	Highway	Cleveland	Boiling Springs	6.1	NC 150 (College Avenue)	NC 150 (College Ave) Modernization	NC 150/SR 1161 (Main Street)	NC 18 (S Lafayette Street)	Modernize roadway and construct roundabouts at various intersections.	Regional	No	Yes	§ 93.126	Minor Arterial		65	$16,685,973	$20,340,108	$24,794,478	$27,375,108	2045
U-6150 H170691	Intersection	Highway	Gaston	Belmont	0.5	NC 273	NC 273/South Point Rd Intersection Improvements	South Point Rd	Armstrong Rd	Construct roundabout.	Regional	No	Yes	§ 93.127	Minor Arterial	$4,010,000	45	$4,427,364	$5,396,932	$6,578,830	$7,263,560	2045
2050 HORIZON YEAR PROJECTS																						
U-6142 H170271	Capacity	Highway	Lincoln	Lincoln County	3.9	New Route	NC 73 Extension	US 321	SR 1356 (Camp Creek Rd)	Construct new four-lane divided boulevard on new location.	Regional	Yes	No		Other Principal Arterial	$100,210,000	70	$110,639,937	$134,869,466	$164,405,127	$181,516,544	2050
H184885	Intersection	Highway	Lincoln	Lincolnton	0.5	SR 1267 (Sigmon Road/ Wilma Sigmon Road)	Wilma Sigmon Rd/ US 321 BUS Intersection Improvements	US 321 BUS (N Generals Boulevard)		Construct left turn lanes.	Regional	No	Yes	§ 93.127	Minor Arterial		65	$1,578,836	$1,924,592	$2,346,067	$2,590,247	2050
H184901	Capacity	Highway	Lincoln	Lincoln County	0.4	US 321 BUS (Maiden Hwy)	US 321 BUS Widening	US 321	SR 1276 (Finger Mill Rd)	Widen to 4-lane roadway.	Regional	Yes	No		Minor Arterial		60	$7,270,372	$8,862,543	$10,803,390	$11,927,816	2050
UNMET NEEDS																						
H190215	Modernization	Highway	Cleveland	Cleveland County	7.1	NC 150	Cherryville Rd Modernization	Shelby Bypass	SR 1427 (Grove Rd)	Modernize roadway to current design standards by increasing lane widths and shoulder widths. Improve horizontal and vertical geometry where needed, and provide turn lanes where appropriate.	Regional	No	Yes	§ 93.126	Other Principal Arterial		65	$11,915,240	$14,524,611	$17,705,420	$19,548,214	
H191852	Modernization	Highway	Gaston	Gaston County	5.0	NC 275 (Dallas-Stanley Highway)	NC 275 Modernization	NC 279 (East Trade St)	SR 2000 (Hickory Grove Rd)	Modernize roadway and improve various intersections.	Regional	No	Yes	§ 93.126	Minor Arterial		65	$20,443,160	$24,920,098	$30,377,461	$33,539,171	

Table 5-2: Fiscally-Constrained List of Highway Projects - Regional Tier (continued)

ID NUMBER	IMPROVEMENT TYPE	MODE	COUNTY	JURISDICTION	MILEAGE	ROUTE	PROJECT NAME	FROM	TO	PROJECT DESCRIPTION	FUNDING TIER	REGIONALLY SIGNIFICANT	EXEMPT	REGULATION	FUNCTIONAL CLASSIFICATION	STIP PROGRAMMED COST (MINUS LOCAL FUNDING)	TOTAL POINTS (105 MAX)	2025 COST	2035 COST	2045 COST	2050 COST	2050 MTP HORIZON YEAR
UNMET NEEDS																						
U-2221C H090323-C	Capacity	Highway	Cleveland	Shelby	1.6	NC 180	N Post Rd	SR 2052 (Elizabeth Ave)	NC 150 (Cherryville Rd)	NC 226 to NC 150. Widen to Multi-Lanes. Section C: SR 2052 to NC 150.	Regional	Yes	No		Minor Arterial	$18,100,000	65	$19,983,863	$24,360,217	$29,694,968	$32,785,645	
H190681	Capacity	Highway	Gaston	Gastonia	2.7	NC 274 (Union Road)	NC 274 (Union Rd) Widening	SR 2439 (Beaty Road)	SR 2416 (Robinson Rd)	Widen to five lanes.	Regional	Yes	No		Other Principal Arterial		65	$43,727,120	$53,303,116	$64,976,200	$71,738,976	
H190754	Capacity	Highway	Gaston	Belmont / Mt. Holly / Gaston County	11.9	New Route	Belmont-Mt. Holly Loop	NC 273 (South Point Road)	NC 273 (North Main Street)	Construct 4-lane roadway on new location.	Regional	Yes	No		Minor Arterial		65	$604,305,379	$736,644,885	$897,966,004	$991,427,027	
U-6144 H170832	Capacity	Highway	Lincoln	Lincoln County	1.5	NC 16 BUS	NC 16 BUS Widening	SR 1389 (Fairfield Forest Rd)	SR 1379 (Webbs Rd)	Widen to a four-lane divided facility.	Regional	Yes	No		Minor Arterial	$32,510,000	60	$35,893,667	$43,754,180	$53,336,101	$58,887,365	
H191865	Modernization	Highway	Cleveland	Cleveland County	5.3	NC 18 (Fallston Rd)	NC 18 Modernization	SR 1337 (E Zion Church Rd)	SR 1800 (Jim Cline Rd)	Modernize roadway.	Regional	No	Yes	§ 93.126	Minor Arterial		60	$8,922,077	$10,875,962	$13,257,737	$14,637,613	
H170270	Capacity	Highway	Cleveland	Kings Mountain	0.9	NC 161	York Rd	US 74 Business (King St)	I-85	Widen from three-lanes to four-lanes.	Regional	Yes	No		Minor Arterial		60	$17,808,823	$21,708,856	$26,462,975	$29,217,262	
H171296	Capacity	Highway	Lincoln	Lincoln County	2.8	NC 27 (Riverside Dr)	NC 27 (Riverside Dr) Widening	SR 1184 (Rock Dam Rd)	SR 1008 (Grove St)	Widen existing two-lane road to three-lane.	Regional	Yes	No		Major Collector		60	$48,958,255	$59,679,840	$72,749,392	$80,321,207	
H190179	Intersection	Highway	Lincoln	Lincoln County	2.0	NC 16	NC 16 Interchange Improvements	NC 16	SR 1386 (St. James Church Rd)	Convert at-grade intersection to interchange.	Regional	Yes	No		Other Principal Arterial		60	$18,995,710	$23,155,665	$28,226,626	$31,164,476	
H184701	Capacity	Highway	Lincoln	Lincoln County	4.5	NC 73	NC 73 Widening	SR 1383 (Ingleside Farm Road)	SR 1362 (Amity Church Road)	Widen to 4-lane boulevard.	Regional	Yes	No		Other Principal Arterial		55	$60,987,215	$74,343,075	$90,623,794	$100,055,991	
U-6139 H170661	Capacity	Highway	Lincoln	Lincoln County	1.8	NC 73	NC 73 Widening	SR 1383 (Ingleside Farm Rd)	NC 16	Widen from two to four lanes from Anderson Creek, west of SR 1383 (Ingleside Fram Rd) to NC 16, including widening of railroad bridge and interchange improvements at NC 16	Regional	Yes	No		Principal Arterial	$49,110,000	55	$54,221,408	$66,095,594	$80,570,160	$88,955,967	
H171310	Capacity	Highway	Gaston	Gastonia	1.2	I-85/New	I-85/New	Davidson Ave/Tulip Drive	Fairview Dr/ NA	New interchange at I-85/Davidson Ave. New 2-lane alignment connecting Tulip Dr to Fairview Dr. Include sidewalks and bike facilities.	Regional	Yes	No		Interstate/ Local		55	$21,878,888	$26,670,242	$32,510,877	$35,894,635	

Table 5-2: Fiscally-Constrained List of Highway Projects - Regional Tier (continued)

ID NUMBER	IMPROVEMENT TYPE	MODE	COUNTY	JURISDICTION	MILEAGE	ROUTE	PROJECT NAME	FROM	TO	PROJECT DESCRIPTION	FUNDING TIER	REGIONALLY SIGNIFICANT	EXEMPT	REGULATION	FUNCTIONAL CLASSIFICATION	STIP PROGRAMMED COST (MINUS LOCAL FUNDING)	TOTAL POINTS (105 MAX)	2025 COST	2035 COST	2045 COST	2050 COST	2050 MTP HORIZON YEAR
UNMET NEEDS																						
	Capacity	Highway	Gaston/ Mecklenburg	Gastonia/ Gaston County/ Belmont/ Cramerton	6.7	New	Catawba Crossings	NC 279 (S New Hope Rd)	NC 160 (Steele Creek Rd)	Construct new Boulevard on new location.	Regional	Yes	No		New Route		55	$323,274,859	$394,070,249	$480,369,435	$530,366,672	
H171317	Capacity	Highway	Gaston	Mount Holly	1.8	NC 273	Highland St/N Main St Widening	A&E Dr	SR 1939 (Lanier Ave)	Widen two-lane facility to four-lane divided facility with sidewalks and bike lanes on both sides.	Regional	No	No		Minor Arterial		55	$42,445,282	$51,740,562	$63,071,457	$69,635,985	
H184813	Capacity	Highway	Gaston	Belmont	1.5	NC 273 (South Point Road)	NC 273 (South Point Rd) Widening	SR 2529 (Henry Chapel Road)	NC 273 (R. L. Stowe Road)	Widen to 4-lane boulevard.	Regional	Yes	No		Minor Arterial		55	$31,875,917	$38,856,565	$47,365,936	$52,295,820	
H171283	Intersection	Highway	Gaston	Bessemer City	0.5	NC 161 (13th Street)	NC 161/ NC 274 Intersection Improvements	13th St, W Pennsylvania	13th St, W Virginia Ave	Improve intersections on each side of RR with dual mini roundabouts and crosswalks.	Regional	No	Yes	§ 93.127	Other Principal Arterial		50	$3,157,671	$3,849,183	$4,692,133	$5,180,494	
H184952	Capacity	Highway	Gaston	Gaston County	5.5	NC 279 (Dallas-Cherryville Highway)	NC 279 Widening	SR 1608 (Long Shoals Road)	US 321	Widen to 4-lane boulevard.	Regional	Yes	No		Minor Arterial		50	$78,823,641	$96,085,578	$117,127,784	$129,318,538	
H170792	Intersection	Highway	Gaston	Mount Holly	0.5	NC 273 (Mountain Island Highway)	NC 273/Lucia Riverbend Hwy Intersection Improvements	SR 1992 (Lucia Riverbend Hwy)		Improve intersection by installing a roundabout.	Regional	No	Yes	§ 93.127	Major Collector		50	$1,838,295	$2,240,871	$2,731,609	$3,015,917	
	Capacity	Highway	Gaston	Stanley	1.7	New	Stanley Southern Connector	NC 275 (Dallas-Stanley Hwy)	NC 27 (Charles Raper Jonas Hwy)	Construct New, Four-Lane Divided Facility from NC 275 to NC 27 (Charles Raper Jonas Hwy)	Regional	No	No		New Route		50	$24,218,307	$29,521,981	$35,987,131	$39,732,700	
H184703	Capacity	Highway	Lincoln	Lincoln County	4.6	NC 73	NC 73 Widening	SR 1362 (Amity Church Road)	NC 27	Widen to 4-lane boulevard.	Regional	Yes	No		Other Principal Arterial		40	$64,855,915	$79,058,998	$96,372,477	$106,403,002	
H193391	Capacity	Highway	Gaston	Belmont	1.9	NC 273 (South Point Rd)	South Point Rd Widening	NC 273 (Lower Armstrong Rd)	SR 2529 (Henry Chapel Rd)	Widen to four lane roadway.	Regional	Yes	No		Minor Arterial		40	$52,292,579	$63,744,362	$77,704,022	$85,791,519	
	Intersection	Highway	Cleveland	Kings Mountain	0.5	NC 216	S Battleground Ave	Mountain St/ Gold St	NA	Mountain St and Gold St Railroad Intersection Crossing Changes. Crosswalks, pedheads, turn lanes on every approach, and signalization if justified. Safety improvements	Regional	No	Yes	§ 93.127	Minor Arterial		40	$233,737	$284,924	$347,321	$383,471	

Table 5-2: Fiscally-Constrained List of Highway Projects - Regional Tier (continued)

ID NUMBER	IMPROVEMENT TYPE	MODE	COUNTY	JURISDICTION	MILEAGE	ROUTE	PROJECT NAME	FROM	TO	PROJECT DESCRIPTION	FUNDING TIER	REGIONALLY SIGNIFICANT	EXEMPT	REGULATION	FUNCTIONAL CLASSIFICATION	STIP PROGRAMMED COST (MINUS LOCAL FUNDING)	TOTAL POINTS (105 MAX)	2025 COST	2035 COST	2045 COST	2050 COST	2050 MTP HORIZON YEAR
UNMET NEEDS																						
H171291	Capacity	Highway	Gaston	Mount Holly	0.8	New Route	Lanier Ave/ Sella Ridge Dr/New Alignment/ Woodcliff Ln/New Alignment	NC 273 (N Main St)	SR 1923 (Woodlawn Ave)	Upgrade and connect existing two-lane ROW setions of Lanier Ave and Woodcliff Ln to cross Dutchman's Creek and connect to Woodlawn Ave at Hawthorne St.	Regional	No	No		Minor Arterial		40	$19,844,748	$24,190,638	$29,488,252	$32,557,413	
H150203	Intersection	Highway	Gaston	Mt. Holly Gaston County	0.5	NC 273 (Mountain Island Highway)	NC 273/ Sandy Ford Rd Intersection Improvements	SR 1918 (Sandy Ford Road)		Construct turn lanes on all three approaches to the intersection.	Regional	No	Yes	§ 93.127	Major Collector		40	$2,368,253	$2,886,888	$3,519,100	$3,885,371	
R-0617BB H090049-BB	Capacity	Highway	Lincoln	Cherryville/ Lincolnton	3.2	NC 150	NC 150	West of Indian Creek	US 321 at Lincolnton	Widen to Multi-Lanes, Part on New Location from West of indian Creek to US 321 at Lincolnton.	Regional	Yes	No		Other Principal Arterial		35	$79,240,983	$96,594,317	$117,747,933	$130,003,232	
H190792	Capacity	Highway	Cleveland	Cleveland County	7.5	NC 150 (Cherryville Rd)	NC 150 (Cherryville Rd) Widening	NC 180	SR 1651 (Delview Rd)	Widen from a two lane road to a four lane roadway.	Regional	Yes	No		Other Principal Arterial		35	$159,225,013	$194,094,402	$236,599,993	$261,225,511	
U-2221A	Capacity	Highway	Cleveland	Cleveland County	0.9	NC 180	NC 180 Widening	NC 226 (Earl Rd)	SR 2200 (Taylor Rd)	Widen to multi-lanes.	Regional	Yes	No		Minor Arterial		35	$8,385,405	$10,221,762	$12,460,271	$13,757,146	
	Capacity	Highway	Gaston	Gastonia / Gaston County	3.5	NC 274	Union Rd/ Union-New Hope Rd Widening	Beaty Rd	South Carolina State Line	Widen to a 4-lane facility from Beaty Rd to South Carolina State Line. Include sidewalks and bike facilities along both sides.	Regional	Yes	No		Minor Arterial		35	$22,512,978	$27,443,195	$33,453,101	$36,934,927	
	Capacity	Highway	Cleveland	Kings Mountain	3.6	New Route	Kings Mountain Blvd Extension	Shelby Rd (US 74 Business)	NC 216	Extend Kings Mountain Blvd from Shelby Road to NC 216.	Regional	Yes	No		New Route		35	$54,609,059	$66,568,138	$81,146,189	$89,591,949	
H184892	Capacity	Highway	Gaston	Gaston County	4.4	NC 279 (South New Hope Road)	NC 279 (S New Hope Rd) Widening	South Carolina State Line	SR 2435 (Union New Hope Road)	Widen to 4-lane boulevard.	Regional	Yes	No		Minor Arterial		30	$66,982,374	$81,651,140	$99,532,284	$109,891,685	
H190923	Capacity	Highway	Gaston	Mount Holly	0.5	NC 273	NC 273 Extension	NC 273 (Lucia Riverbend Hwy)	NC 16	Construct new portion of NC 273 from Lucia Riverbend Highway to NC 16 and construct a new interchange.	Regional	Yes	No		Major Collector		25	$28,795,531	$35,101,592	$42,788,645	$47,242,121	

Table 5-3: Fiscally-Constrained List of Highway Projects - Division Tier

ID NUMBER	IMPROVEMENT TYPE	MODE	COUNTY	JURISDICTION	MILEAGE	ROUTE	PROJECT NAME	FROM	TO	PROJECT DESCRIPTION	FUNDING TIER	REGIONALLY SIGNIFICANT	EXEMPT	REGULATION	FUNCTIONAL CLASSIFICATION	STIP PROGRAMMED COST (MINUS LOCAL FUNDING)	TOTAL POINTS (105 MAX)	2020 COST	2025 COST	2035 COST	2045 COST	2050 COST	2050 MTP HORIZON YEAR
2025 HORIZON YEAR PROJECTS																							
H191177	Intersection	Highway	Gaston	Gastonia	0.5	SR 2200 (Cox Rd)	Cox Rd/ Aberdeen Blvd Intersection Improvements	SR 2200 (Cox Road)	SR 2381 (Aberdeen Boulevard)	Construct quadrant intersection improvements.	Division				Other Principal Arterial		75	$4,428,000	$4,888,870	$5,959,505	$7,264,603	$8,020,709	2025
H184878	Modernization	Highway	Gaston	Gastonia	1.5	SR 2439 (Beaty Road)	Beaty Rd Modernization	SR 2445 (Kendrick Road)	NC 279 (New Hope Road)	Modernize roadway and construct roundabout at Kendrick Road.	Division	No	No		Minor Arterial		70	$6,045,000	$6,674,168	$8,135,774	$9,917,463	$10,949,681	2025
H184868	Modernization	Highway	Gaston	Gastonia	2.5	SR 2439 (Lowell Bethesda Road)	Lowell Bethesda Rd Modernization	NC 279 (New Hope Road)	US 29/74 (Wilkinson Boulevard)	Modernize roadway and construct roundabouts at the intersections of Titman Road Cramerton Road and Gaston Road.	Division	No	No		Minor Arterial		65	$13,898,000	$15,344,515	$18,704,878	$22,801,142	$25,174,303	2025
	Capacity	Highway	Gaston	Gastonia	0.4	Gaston Mall Drive	Gaston Mall Drive Extension	Cox	Franklin Blvd	Extend Gaston Mall Drive from Cox Rd to Franklin Blvd.	Division	No	No		Local		60	$2,073,569	$2,289,388	$2,790,751	$3,401,910	$3,755,983	2025
H184825	Capacity	Highway	Gaston	Gastonia	1.5	SR 2329 (Redbud Drive)	Redbud Dr Widening	NC 279 (New Hope Road)	US 29/74 (Wilkinson Boulevard)	Widen to a 4-lane boulevard.	Division	Yes	No		Minor Arterial		60	$29,784,000	$32,883,943	$40,085,343	$48,863,809	$53,949,593	2025
	Capacity	Highway	Gaston	Lowell	0.4	New Route	Lineberger Connector Extension	Lineberger Rd	S Main St	Extend the Lineberger Connector from Lineberger Rd to S Main St in Lowell.	Division	No	No		Local		60	$3,100,000	$3,422,650	$4,172,192	$5,085,879	$5,615,221	2025
H170856	Capacity	Highway	Gaston	Belmont	1.2	SR 2083 (Hazeline Ave)	Hazeline Ave Extension	US 29/74 (Wilkinson Blvd)	Hawley Avenue	Construct two-lane road from US 29/74 to Hawley Avenue. This road will be an extension of Hazeline Ave, and consist of connecting short sections of existing road with new segments.	Division	No	No		New Route (Local)		55	$15,453,000	$17,061,361	$20,797,703	$25,352,284	$27,990,971	2025

Table 5-3: Fiscally-Constrained List of Highway Projects - Division Tier (continued)

ID NUMBER	IMPROVEMENT TYPE	MODE	COUNTY	JURISDICTION	MILEAGE	ROUTE	PROJECT NAME	FROM	TO	PROJECT DESCRIPTION	FUNDING TIER	REGIONALLY SIGNIFICANT	EXEMPT	REGULATION	FUNCTIONAL CLASSIFICATION	STIP PROGRAMMED COST (MINUS LOCAL FUNDING)	TOTAL POINTS (105 MAX)	2020 COST	2025 COST	2035 COST	2045 COST	2050 COST	2050 MTP HORIZON YEAR
2025 HORIZON YEAR PROJECTS																							
H150211		Highway	Gaston	Cramerton	0.5	SR 2014 (Lakewood Rd)	Lakewood Rd Intersection Improvements	Eagle Rd		Construct roundabout with pedestrian and bicycle facilities.	Division	No	Yes	§ 93.127	Minor Arterial		50	$1,144,440	$1,263,554	$1,540,266	$1,877,575	$2,072,995	2025
2035 HORIZON YEAR PROJECTS																							
U-6043 H090439	Capacity	Highway	Gaston	Gastonia	1.1	US 29/US 74	Franklin Blvd	SR 2200 (Cox Rd)	400 feet east of Lineberger Rd	Add lane in the eastbound direction, widening from five to six lanes.	Division	Yes	No		Principal Arterial	$10,500,000	NA	$10,500,000	$10,500,000				2035
U-6078 H150542	Intersection	Highway	Gaston	Gastonia	0.5	NC 275	NC 275 Intersection Improvements	NC 274, SR 1456 (White Jenkins Rd), SR 1327 (Fairview Rd)		Improve intersections and close intersection of NC 275 and SR 1456 (White Jenkins Rd).	Division	No	Yes	§ 93.127	Major Collector	$8,600,000	NA	$8,600,000	$8,600,000				2035
U-3608	Capacity	Highway	Gaston	Belmont	0.3	NC 7	N Main St Widening	I-85	US 29/74 (Wilkinson Blvd)	Widen to four lanes throughout, and construct operational improvements.	Division	No	No		Minor Arterial	$5,615,000	NA	$5,615,000	$5,615,000	$5,615,000			2035
U-6044 H150539	Capacity	Highway	Gaston	Gastonia	0.3	SR 2200 (Cox Rd)	Cox Rd Improvements	I-85	US 29/74	Selective widening and operational movements.	Division	Yes	No		Principal Arterial	$33,500,000	NA	$33,500,000	$33,500,000	$33,500,000			2035
U-5821 H090612	Capacity	Highway	Gaston	Gastonia Cramerton	3.8	NC 279	S. New Hope Rd Widening	SR 2478 (Titman Rd)	SR 2435 (Union-New Hope Rd)	Widen existing facility to four-lanes divided.	Division	Yes	No		Principal Arterial	$100,565,000	NA	$100,565,000	$100,565,000	$100,565,000			2035
U-5819 H141299	Intersection	Highway	Gaston	Mount Holly	0.5	NC 27	W Charlotte Ave Intersection	NC 27 (W Charlotte Ave)	SR 2534 (Hawthorne St)	Construct interection improvements.	Division	No	Yes	§ 93.127	Minor Arterial	$2,550,000	NA	$2,550,000	$2,550,000	$2,550,000			2035
H172044	Modernization	Highway	Gaston	Dallas	1.6	SR 1001 (Philadelphia Church Rd/ Oakland St)	Oakland St Modernization	SR 1803 (Carr Rd)	NC 275-279 (West Trade St)	Widen substandard two-lane road to 12 ft. lanes and include wide shoulders.	Division	No	Yes	§ 93.126	Minor Arterial		55	$2,719,000	$3,001,996	$3,659,416	$4,460,808	$4,925,092	2035
	Capacity	Highway	Gaston	Lowell	0.5	3rd St	3rd Street Extension	N Main St (NC 7)	First St (NC 7)	Extend 3rd St as a 2-lane facility from NC 7 (Main St) to NC 7 (First St). Includes a traffic circle at NC 7 (First St) connecting to Potts St and improvements to Ash St.	Division	No	No		New Route (local)		55	$3,214,836	$3,549,439	$4,326,746	$5,274,279	$5,823,230	2035

Table 5-3: Fiscally-Constrained List of Highway Projects - Division Tier (continued)

ID NUMBER	IMPROVEMENT TYPE	MODE	COUNTY	JURISDICTION	MILEAGE	ROUTE	PROJECT NAME	FROM	TO	PROJECT DESCRIPTION	FUNDING TIER	REGIONALLY SIGNIFICANT	EXEMPT	REGULATION	FUNCTIONAL CLASSIFICATION	STIP PROGRAMMED COST (MINUS LOCAL FUNDING)	TOTAL POINTS (105 MAX)	2020 COST	2025 COST	2035 COST	2045 COST	2050 COST	2050 MTP HORIZON YEAR
2035 HORIZON YEAR PROJECTS																							
	Intersection	Highway	Gaston	Bessemer City	0.5	SR 1307	Alabama Ave	8th St	NA	Install traffic circle	Division	No	Yes	§ 93.126	Local/ Minor Arterial		50	$861,514	$951,181	$1,159,484	$1,413,405	$1,560,513	2035
H170845	Intersection	Highway	Gaston	Bessemer City	0.5	SR 1484 (E Maine Ave)	SR 1484 (E Maine Ave)	SR 1448 (12th St)	NA	Intersection improvements. Crosswalks, pedheads, turn lanes on every approach, and signalization if justified.	Division	No	Yes	§ 93.127	Minor Arterial		50	$2,860,000	$3,157,671	$3,849,183	$4,692,133	$5,180,494	2035
H190676	Modernization	Highway	Gaston	Gastonia	1.9	SR 1131 (Linwood Rd)	Linwood Rd	SR 1136 (S Myrtle School Rd)	US 29/74 (Franklin Blvd)	Modernize roadway.	Division	No	No		Minor Arterial		50	$5,345,000	$5,901,312	$7,193,666	$8,769,039	$9,681,728	2035
	Capacity	Highway	Gaston	Gastonia Lowell	2.3	Aberdeen Blvd	Lineberger Connector	Aberdeen Blvd	Lineberger Rd	Relocate and extend Lineberger Road as a three-lane facility, including improvements to the intersection of Lineberger/ Hwy 7 and the rail crossing. Extend Aberdeen Blvd as a three-lane facility from existing Aberdeen Blvd to the relocated Lineberger Rd. Extend Scalybark Rd.	Division	Yes	No		Local		50	$19,235,358	$21,237,390	$25,888,259	$31,557,644	$34,842,189	2035
H184911	Modernization	Highway	Lincoln	Lincoln County	1.7	SR 1379 (Webbs Rd)	SR 1379 (Webbs Rd) Modernization	NC 16 Business	SR 1376 (Burton Ln)	Widen existing lanes to include wide shoulders and roundabouts at Eastwind Cove Rd/Legacy Dr and SR 1376 (Burton Ln).	Division	No	Yes	§ 93.126	Local		50	$6,690,000	$7,386,301	$9,003,859	$10,975,654	$12,118,009	2035
H150212	Intersection	Highway	Gaston	Mount Holly	0.5	SR 2040 (West Catawba)	West Catawba Intersection Improvements	West Catawba (SR 2040)	South Hawthorne St	Install traffic circle at West Catawba and South Hawthorne Street, including pedestrian upgrades.	Division	No	Yes	§ 93.126	Minor Arterial		50	$2,214,000	$2,444,435	$2,979,753	$3,632,302	$4,010,355	2035

Table 5-3: Fiscally-Constrained List of Highway Projects - Division Tier (continued)

ID NUMBER	IMPROVEMENT TYPE	MODE	COUNTY	JURISDICTION	MILEAGE	ROUTE	PROJECT NAME	FROM	TO	PROJECT DESCRIPTION	FUNDING TIER	REGIONALLY SIGNIFICANT	EXEMPT	REGULATION	FUNCTIONAL CLASSIFICATION	STIP PROGRAMMED COST (MINUS LOCAL FUNDING)	TOTAL POINTS (105 MAX)	2020 COST	2025 COST	2035 COST	2045 COST	2050 COST	2050 MTP HORIZON YEAR
2035 HORIZON YEAR PROJECTS																							
H191842	Capacity	Highway	Lincoln	Lincoln County	0.2	SR 1380 (Optimist Club Rd)	Optimist Club Road Extension	SR 1387 (Triangle Circle)	NC 16 Business	Construct an extension of Optimist Club Road.	Division	No	No		Major Collector		50	$2,643,000	$2,918,086	$3,557,130	$4,336,122	$4,787,429	2035
	Intersection	Highway	Gaston	Cramerton	1.1	Armstrong Ford Rd	Armstrong Ford Rd Realignment	NC 279 (South New Hope Rd)	Armstrong Ford Rd	Realign Armstrong Ford Rd - new 2LDIV facility	Division	No	No		Minor Arterial/ Major Collector		45	$7,019,594	$7,750,199	$9,447,449	$11,516,388	$12,715,023	2035
	Capacity	Highway	Gaston	Gastonia	0.5	SR 2445	Kendrick Rd	SR 2437 (Robinwood Rd)	SR 2439 (Beaty Rd)	Widen Kendrick Road at intersections. Include pedestrian and bicycle upgrades.	Division	No	No		Minor Collector		35	$3,135,102	$3,461,406	$4,219,435	$5,143,467	$5,678,803	2035
2045 HORIZON YEAR PROJECTS																							
H193410	Modernization	Highway	Lincoln	Lincoln County	2.4	SR 1439 (Unity Church Rd)	Unity Church Rd Modernization	NC 16 Business	End of Facility	Widen existing lanes to include wide shoulders. No additional lanes will be added.	Division	No	No		Local		45	$4,813,000	$5,313,941	$6,477,664	$7,896,237	$8,718,083	2045
H193411	Modernization	Highway	Lincoln	Lincoln County	10.5	SR 1008 (Reepsville Rd)	Reepsville Rd Modernization	Clarks Creek	SR 1002 (Cat Square Rd)	Widen existing lanes to include wide shoulders. No additional lanes will be added.	Division	No	No		Minor Collector		45	$14,874,000	$16,422,098	$20,018,446	$24,402,374	$26,942,192	2045
H170836	Capacity	Highway	Gaston	Mount Holly	1.3	New Route	W Catawba Ave Extension	SR 2040 (W Catawba Ave)	NC 27 (W Charlotte Ave)	Construct new 2-lane alignment with sidewalks.	Division	No	No		Minor Arterial		45	$16,120,000	$17,797,783	$21,695,398	$26,446,569	$29,199,149	2045
H184897	Capacity	Highway	Gaston	Ranlo	1.2	SR 2200 (Spencer Mountain Rd)	Spencer Mountain Rd Widening	NC 7 (East Ozark Ave/ Lowell Rd)	SR 2332 (Mitchem Rd)	Widen to 4-lane roadway.	Division	No	No		Minor Arterial		45	$19,213,000	$21,212,704	$25,858,168	$31,520,963	$34,801,690	2045
	Capacity	Highway	Lincoln	Lincoln County	5.8	St. James Church Rd/N Little Egypt Rd	St. James Church Rd/N Little Egypt Rd Widening	NC 73	NC 16 Business	Widen from two-lane to three-lane.	Division	No	No		Local		45	$23,960,173	$26,453,967	$32,247,238	$39,309,203	$43,400,537	2045
	Capacity	Highway	Gaston	Dallas	3.2	SR 1804 (Ratchford Rd)	Ratchford Rd	US 321	NC 279 (Lower Dallas Rd)	Widen existing two-lane road to three-lanes; One-half mile of road on new location.	Division	No	No		Local		40	$24,431,395	$26,974,234	$32,881,441	$40,082,293	$44,254,090	2045
	Capacity	Highway	Gaston	Gastonia	2.8	New	Gaston Day School Rd Extension	Kinmere Dr	NC 274 (Union Rd)	Construct new 3-lane facility with sidewalks and bike facilities.	Division	No	No		New Route (Minor Arterial)		40	$26,893,318	$29,692,396	$36,194,865	$44,121,339	$48,713,523	2045

Table 5-3: Fiscally-Constrained List of Highway Projects - Division Tier (continued)

ID NUMBER	IMPROVEMENT TYPE	MODE	COUNTY	JURISDICTION	MILEAGE	ROUTE	PROJECT NAME	FROM	TO	PROJECT DESCRIPTION	FUNDING TIER	REGIONALLY SIGNIFICANT	EXEMPT	REGULATION	FUNCTIONAL CLASSIFICATION	STIP PROGRAMMED COST (MINUS LOCAL FUNDING)	TOTAL POINTS (105 MAX)	2020 COST	2025 COST	2035 COST	2045 COST	2050 COST	2050 MTP HORIZON YEAR
2045 HORIZON YEAR PROJECTS																							
H191670	Capacity	Highway	Lincoln	Lincoln County	1.1	New Route	Webbs Rd Extension	SR 1386 (St. James Church Road)	NC 16 Business	Construct an extension of Webbs Road.	Division	No	No		Major Collector		35	$10,610,000	$11,714,297	$14,279,663	$17,406,830	$19,218,546	2045
	Capacity	Highway	Gaston	Bessemer City	1.7	New	Southridge Parkway West Extension	SR 1302 (Crowders Mountain Rd)	SR 1307 (Edgewood Rd)	Construct new three lane facility from Crowders Mountain Rd to Edgewood Rd.	Division	No	No		New Route (Minor Arterial/ Major Collector)		35	$15,677,500	$17,309,227	$21,099,851	$25,720,600	$28,397,621	2045
2050 HORIZON YEAR PROJECTS																							
H171301	Capacity	Highway	Gaston	Bessemer City	0.6	SR 1307 (Edgewood Rd)	Edgewood Rd Widening	SR 1395 (Southridge Pkwy)	I-85	Widen existing two-lane road to a three-lane facility.	Division	No	No		Minor Arterial		35	$10,932,000	$12,069,811	$14,713,033	$17,935,105	$19,801,805	2050
H184699	Capacity	Highway	Lincoln	Lincoln County	1.5	SR 1380 (Optimist Club Rd)	SR 1380 (Optimist Club Rd) Widening	SR 1386 (N. Little Egypt Rd)	SR 1388 (Triangle Cir)	Widen to four-lane divided.	Division	No	No		Local		35	$17,797,000	$19,649,326	$23,952,419	$29,197,865	$32,236,802	2050
	Capacity	Highway	Gaston	Bessemer City	0.9	SR 1448	Puetts Chapel Rd	SR 1484 (Maine Ave)	Proposed NC 274 Bypass	Widen existing two-lane road to a three-lane facility.	Division	No	No		Minor Arterial		35	$8,533,683	$9,421,876	$11,485,214	$14,000,411	$15,457,586	2050
H171281	Capacity	Highway	Lincoln	Lincolnton	1.5	New Route	Motz Ave Extension	NC 27 (W Main St)	SR 1262 (S Laurel St)	Widen Motz Ave to 11-foot lanes and extend on new location west to NC 27 (W Main St) and east to SR 1262 (S Laurel St) at Flint Street.	Division	No	No		Major Collector		35	$39,828,000	$43,973,330	$53,603,244	$65,342,056	$72,142,909	2050
UNMET NEEDS																							
H170852	Capacity	Highway	Gaston	Gastonia	1.2	SR 1255 (Hudson Blvd)	Hudson Blvd Extension	SR 1136 (Davis Park Rd)	SR 1128 (Chapel Grove Rd)	Construct new 3-lane facility with sidewalks and bike facilities.	Division	No	No		New Route (Minor Arterial)		35	$21,110,000	$23,307,146	$28,411,281	$34,633,193	$38,237,843	Unfunded

GCLMPO 2050 Metropolitan Transportation Plan

Appendix E: VMT and Speeds

Based on 2008 8-hour Non-attainment Boundary
2022: NC STIP 26-35

		24 Hour		AM Peak		Midday		PM Peak		Night	
Cabarrus (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	10.2	141,671	52.9	35,891	50.2	39,593	55.0	35,594	51.6	30,593	55.1
Rural Minor Art.	20.1	244,698	56.7	65,682	57.2	57,859	57.3	72,440	55.3	48,716	57.5
Rural Major Collect.	49.1	393,185	47.7	103,021	44.9	101,349	50.9	110,024	45.0	78,791	52.1
Rural Minor Collect.	50.2	238,837	44.7	62,353	43.1	58,975	46.7	68,833	42.7	48,675	47.9
Rural Local		408,385	28.0	98,345	28.2	117,319	27.8	106,445	28.2	86,277	27.9
Urban Interstate	28.2	1,642,923	66.4	424,692	64.4	436,181	68.2	449,124	65.2	332,926	68.2
Urban Frwy/Exprwy	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Principal Art.	37.2	785,511	38.9	186,809	36.7	224,440	41.8	200,497	35.0	173,765	43.0
Urban Minor Art.	70.2	835,264	36.3	199,700	34.8	234,333	38.0	220,000	33.8	181,230	39.4
Urban Collector	105.5	505,916	29.6	121,287	28.6	138,902	32.5	143,066	25.7	102,661	34.3
Urban Local		832,709	26.1	185,301	26.2	250,500	26.1	223,784	25.6	173,125	26.6
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	129.6	1,426,776	40.6	365,293	40.2	375,095	40.8	393,337	40.0	293,052	41.7
Urban	241.1	4,602,322	39.3	1,117,788	38.9	1,284,356	40.4	1,236,471	37.0	963,707	41.8
County	370.7	6,029,099	39.6	1,483,081	39.2	1,659,452	40.5	1,629,808	37.7	1,256,758	41.8

				AM Peak		Midday		PM Peak		Night	
Gaston (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	4.6	128,056	68.0	31,634	67.8	40,607	68.2	31,474	67.8	24,342	68.2
Rural Principal Art.	6.8	164,547	47.0	40,254	42.2	46,500	58.7	43,598	37.1	34,194	58.7
Rural Minor Art.	12.1	83,828	52.5	20,484	51.0	23,186	53.4	22,736	52.3	17,423	53.5
Rural Major Collect.	36.0	244,446	46.1	61,954	44.0	63,894	48.4	66,930	44.1	51,667	48.9
Rural Minor Collect.	51.5	102,738	38.7	27,898	36.6	24,120	39.6	33,203	39.3	17,517	39.6
Rural Local		197,513	27.0	46,575	27.1	58,019	26.7	52,138	27.6	40,782	26.6
Urban Interstate	34.2	2,031,442	52.4	488,955	47.2	604,365	63.3	505,912	41.8	432,211	64.2
Urban Frwy/Exprwy	18.1	419,692	61.2	107,229	58.5	123,944	62.3	102,945	61.0	85,574	63.5
Urban Principal Art.	82.5	1,152,153	33.4	293,194	32.4	315,647	35.7	315,703	30.4	227,609	36.2
Urban Minor Art.	122.3	841,067	35.1	213,751	33.0	227,860	37.0	226,589	33.7	172,867	37.8
Urban Collector	69.3	240,387	26.4	55,322	25.7	70,799	27.4	61,941	23.6	52,325	29.8
Urban Local		830,957	24.8	185,194	25.0	260,111	24.7	208,148	24.6	177,503	25.1
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	111.0	921,128	41.4	228,799	40.0	256,325	43.3	250,079	39.5	185,925	43.3
Urban	326.3	5,515,698	37.6	1,343,645	36.1	1,602,727	40.4	1,421,238	33.8	1,148,087	41.4
County	437.3	6,436,826	38.1	1,572,444	36.6	1,859,051	40.8	1,671,318	34.6	1,334,013	41.6

				AM Peak		Midday		PM Peak		Night	
Iredell (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	6.2	294,673	54.4	68,670	44.3	97,316	62.8	67,102	47.7	61,586	68.2
Rural Principal Art.	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Minor Art.	5.5	118,385	16.5	24,300	14.1	37,910	15.1	24,646	14.1	31,528	26.2
Rural Major Collect.	12.4	134,688	43.1	35,204	40.5	37,315	46.2	35,691	40.4	26,479	46.9
Rural Minor Collect.	22.7	207,321	38.4	50,845	36.5	60,595	40.2	52,276	36.0	43,605	41.7
Rural Local		416,108	27.8	97,546	27.4	123,839	27.8	103,495	27.5	91,228	28.4
Urban Interstate	16.4	775,404	58.5	174,102	52.0	257,576	62.4	171,614	53.1	172,113	67.9
Urban Frwy/Exprwy	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Principal Art.	6.6	123,779	32.2	28,326	29.9	36,323	34.6	29,822	29.2	29,309	35.7
Urban Minor Art.	17.4	155,865	33.4	37,400	31.4	44,959	35.0	38,609	31.7	34,897	36.1
Urban Collector	21.8	217,197	31.6	51,969	28.2	62,161	35.1	53,306	28.5	49,761	36.0
Urban Local		348,995	25.7	78,674	25.2	107,628	25.8	85,119	25.3	77,574	26.3
Urban HOV	5.7	116,716	64.4	39,933	62.5	33,727	69.6	39,043	61.9	4,013	69.8
Rural	46.8	1,171,175	32.4	276,564	30.4	356,975	33.0	283,209	30.6	254,427	36.7
Urban	68.0	1,737,957	39.5	410,403	37.0	542,374	42.1	417,513	36.8	367,668	42.2
County	114.8	2,909,132	36.3	686,967	34.0	899,348	37.9	700,722	34.0	622,094	39.8

				AM Peak		Midday		PM Peak		Night	
Lincoln (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	7.4	92,799	60.9	23,777	59.3	30,959	61.8	21,411	60.6	16,652	62.0
Rural Minor Art.	26.8	395,854	40.4	90,826	37.0	121,779	41.9	92,584	35.8	90,666	49.0
Rural Major Collect.	10.8	69,211	54.3	17,670	53.9	21,222	54.5	16,612	54.3	13,706	54.3
Rural Minor Collect.	32.3	132,131	40.0	35,493	36.7	36,404	41.7	37,113	40.6	23,120	42.4
Rural Local		519,162	27.0	126,103	24.5	158,112	27.9	126,624	27.9	108,322	28.2
Urban Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Frwy/Exprwy	29.6	504,944	65.7	134,890	65.3	154,950	65.8	123,707	65.8	91,397	66.1
Urban Principal Art.	6.4	109,716	36.6	26,257	34.5	33,108	38.4	26,215	34.5	24,136	39.5
Urban Minor Art.	31.3	314,955	35.8	74,434	33.4	95,948	36.9	73,907	33.7	70,666	39.7
Urban Collector	18.5	74,296	34.7	18,280	34.0	22,178	35.8	18,625	33.2	15,212	35.9
Urban Local		162,851	27.1	37,095	27.1	50,777	26.9	38,794	27.0	36,185	27.3
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	77.2	1,209,156	34.5	293,870	31.6	368,476	35.6	294,344	33.8	252,467	37.4
Urban	85.7	1,166,762	42.2	290,957	41.8	356,961	42.9	281,247	41.2	237,597	43.0
County	162.9	2,375,918	37.9	584,826	36.0	725,437	38.9	575,591	37.1	490,064	39.9

				AM Peak		Midday		PM Peak		Night	
Mecklenburg	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	7.2	216,788	39.8	51,257	27.1	62,544	51.5	55,710	38.8	47,277	52.1
Rural Minor Art.	4.3	87,063	33.1	20,959	25.8	22,883	37.3	23,928	33.2	19,293	40.1
Rural Major Collect.	6.8	71,017	44.6	18,036	42.1	19,245	46.8	19,578	43.1	14,158	47.4
Rural Minor Collect.	16.6	164,503	33.0	44,716	30.3	41,039	36.6	47,733	30.2	31,015	38.5
Rural Local		324,268	27.8	78,659	28.3	91,496	27.7	88,968	27.7	65,146	27.7
Urban Interstate	147.9	8,700,334	54.9	2,074,722	49.7	2,462,278	59.9	2,155,178	49.5	2,008,157	62.5
Urban Frwy/Exprwy	139.4	7,172,232	57.5	1,809,094	52.4	1,922,301	65.1	1,892,627	50.7	1,548,209	66.3
Urban Principal Art.	201.1	5,246,140	27.4	1,233,321	24.5	1,519,984	31.8	1,349,933	22.1	1,142,902	35.2
Urban Minor Art.	232.0	4,416,401	27.2	1,066,826	24.2	1,268,386	31.3	1,196,552	23.2	884,637	33.6
Urban Collector	371.5	4,173,939	25.8	989,436	22.3	1,196,941	29.7	1,095,517	21.9	892,045	33.1
Urban Local		6,260,834	23.4	1,416,849	23.0	1,888,555	24.0	1,691,105	22.2	1,264,325	25.0
Urban HOV	20.2	496,143	64.6	169,174	61.8	117,095	68.2	170,073	65.1	39,800	64.8
Rural	35.0	863,639	32.8	213,628	28.9	237,206	35.6	235,916	31.9	176,889	36.5
Urban	1,112.1	36,466,022	34.0	8,759,422	31.4	10,375,540	37.1	9,550,985	29.6	7,780,075	40.4
County	1,147.1	37,329,661	33.9	8,973,049	31.3	10,612,746	37.1	9,786,901	29.7	7,956,965	40.3

				AM Peak		Midday		PM Peak		Night	
Rowan (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	9.7	125,558	59.1	35,843	59.0	31,472	59.2	37,546	59.0	20,697	59.3

Rural Minor Art.	10.2	107,655	61.6	26,307	61.1	31,242	61.7	26,188	61.2	23,919	62.3
Rural Major Collect.	58.7	392,810	56.8	101,147	56.0	108,902	57.3	103,556	56.3	79,204	58.0
Rural Minor Collect.	61.4	257,350	50.7	73,357	50.0	61,861	50.9	78,652	50.6	43,481	51.8
Rural Local		345,796	29.3	82,504	29.7	104,212	28.8	85,475	29.6	73,605	29.0
Urban Interstate	38.8	1,545,692	73.3	379,374	73.3	487,035	73.4	371,577	73.3	307,707	73.4
Urban Frwy/Exprwy	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Principal Art.	38.7	351,391	38.7	83,833	38.2	105,854	38.7	87,894	37.6	73,811	40.4
Urban Minor Art.	61.7	487,772	40.3	123,293	39.3	138,068	41.0	128,398	38.8	98,013	42.9
Urban Collector	125.7	443,511	38.3	110,365	38.0	125,929	38.3	117,042	38.2	90,175	39.1
Urban Local		474,501	26.5	107,904	26.7	148,850	26.4	116,044	26.4	101,702	26.7
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	140.0	1,229,170	44.4	319,159	45.0	337,688	43.5	331,417	45.1	240,906	44.0
Urban	264.8	3,302,868	46.1	804,769	46.1	1,005,735	46.4	820,955	45.2	671,409	46.6
County	404.8	4,532,038	45.6	1,123,927	45.8	1,343,423	45.6	1,152,372	45.2	912,315	45.9

				AM Peak		Midday		PM Peak		Night	
Union (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	28.4	376,445	58.7	113,095	60.0	103,138	58.5	89,753	57.7	70,459	58.5
Rural Minor Art.	13.3	64,525	44.5	18,710	43.3	14,363	46.7	19,438	42.7	12,014	47.4
Rural Major Collect.	108.4	740,305	44.3	188,327	40.7	205,620	46.9	196,130	43.0	150,228	47.9
Rural Minor Collect.	79.2	269,847	42.0	71,081	39.7	72,320	45.0	70,098	39.1	56,348	45.6
Rural Local		874,308	30.6	218,675	29.7	245,375	31.2	227,567	30.2	182,690	31.7
Urban Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Frwy/Exprwy	25.0	433,291	54.6	103,033	52.0	109,165	57.2	135,938	52.4	85,155	58.8
Urban Principal Art.	19.4	521,985	45.5	129,071	44.6	147,663	46.4	138,125	44.5	107,126	47.0
Urban Minor Art.	48.1	483,014	31.6	119,089	27.7	137,955	36.4	123,409	27.2	102,561	38.3
Urban Collector	73.4	669,695	31.8	165,880	28.8	185,275	35.7	175,645	27.5	142,895	38.1
Urban Local		1,043,947	27.0	245,942	26.0	306,521	27.6	268,444	26.5	223,039	28.3
Urban HOV	0.3	3,405	25.0	952	16.4	1,042	35.7	833	24.1	578	38.8
Rural	229.3	2,325,430	39.1	609,889	37.9	640,816	40.2	602,987	37.9	471,738	40.7
Urban	166.1	3,155,337	33.4	763,967	31.2	887,622	35.2	842,395	31.4	661,353	36.7
County	395.5	5,480,767	35.6	1,373,856	33.9	1,528,437	37.2	1,445,382	33.8	1,133,092	38.2

				AM Peak		Midday		PM Peak		Night	
York (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	24.6	1,099,021	60.9	276,807	55.0	329,223	66.2	272,546	58.3	220,445	65.7
Rural Principal Art.	6.1	133,234	48.7	33,513	42.2	41,771	58.8	34,521	40.8	23,430	61.1
Rural Minor Art.	19.2	319,897	35.0	79,900	31.7	90,600	39.5	81,336	30.3	68,062	41.1
Rural Major Collect.	46.3	276,658	37.8	67,968	33.6	80,479	42.6	71,044	33.8	57,168	44.0
Rural Minor Collect.	8.3	32,890	14.5	8,009	10.5	9,886	20.5	8,232	11.2	6,762	23.6
Rural Local		456,639	26.0	108,302	25.7	136,364	26.2	116,966	25.7	95,007	26.4
Urban Interstate	18.3	948,142	60.3	236,039	55.1	280,075	63.0	234,697	61.1	197,331	63.0
Urban Frwy/Exprwy	3.1	60,912	39.8	15,325	39.9	17,806	39.6	14,800	40.0	12,981	39.7
Urban Principal Art.	52.5	1,028,469	32.8	250,998	29.8	296,741	36.7	259,202	28.9	221,528	38.0
Urban Minor Art.	82.0	715,346	31.7	172,575	28.8	207,723	35.5	184,956	28.0	150,091	36.6
Urban Collector	71.5	292,860	22.5	71,458	21.8	84,864	27.0	75,468	16.7	61,069	29.2
Urban Local		673,449	24.8	148,191	24.6	212,772	25.0	165,844	24.6	146,643	25.2
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	104.5	2,318,339	40.6	574,499	37.4	688,323	44.3	584,645	37.5	470,873	44.5
Urban	227.5	3,719,178	33.4	894,586	31.5	1,099,982	36.0	934,967	30.1	789,643	37.0
County	332.0	6,037,517	35.9	1,469,085	33.6	1,788,304	38.8	1,519,612	32.6	1,260,516	39.5

		24 Hour		AM Peak		Midday		PM Peak		Night	
NC/SC NA	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	10.9	422,729	57.9	100,304	49.7	137,923	64.3	98,575	52.6	85,927	68.2
Rural Principal Art.	69.6	1,117,808	51.5	300,117	46.5	314,207	56.9	283,612	48.5	219,872	56.9
Rural Minor Art.	92.3	1,102,007	38.4	267,268	36.1	309,222	37.3	281,960	36.7	243,558	45.6
Rural Major Collect.	282.2	2,045,662	47.4	525,361	44.7	557,545	49.7	548,521	45.7	414,235	50.6
Rural Minor Collect.	314.0	1,372,728	41.4	365,744	39.3	355,313	43.4	387,908	39.8	263,762	44.5
Rural Local		3,085,540	28.5	748,407	27.9	898,371	28.7	790,712	28.6	648,050	29.0
Urban Interstate	265.5	14,695,795	57.3	3,541,844	52.7	4,247,434	62.6	3,653,405	51.6	3,253,113	64.4
Urban Frwy/Exprwy	212.0	8,530,158	58.0	2,154,247	53.3	2,310,360	64.6	2,255,216	51.9	1,810,336	65.7

Urban Principal Art.	391.9	8,290,675	30.3	1,980,810	27.8	2,383,019	34.2	2,148,189	25.4	1,778,657	36.8
Urban Minor Art.	582.9	7,534,338	30.1	1,834,492	27.4	2,147,509	33.6	2,007,465	26.4	1,544,871	35.7
Urban Collector	785.7	6,324,941	27.6	1,512,539	24.5	1,802,185	31.0	1,665,143	23.8	1,345,074	34.0
Urban Local		9,954,794	24.4	2,256,960	24.0	3,012,943	24.8	2,631,438	23.4	2,053,453	25.6
Urban HOV	26.1	616,264	64.0	210,059	61.1	151,864	68.1	209,949	64.1	44,392	64.7
Rural	769.0	9,146,475	37.8	2,307,201	36.2	2,572,581	38.6	2,391,290	36.9	1,875,404	40.0
Urban	2264.1	55,946,965	35.5	13,490,951	33.3	16,055,314	38.3	14,570,804	31.6	11,829,896	40.8
County	3033.1	65,093,440	35.8	15,798,151	33.7	18,627,895	38.3	16,962,094	32.3	13,705,300	40.7

Based on 2008 8-hour Non-attainment Boundary

2025: NC STIP 26-35

		24 Hour		AM Peak		Midday		PM Peak		Night	
Cabarrus (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	10.2	113,984	48.3	28,657	45.8	31,356	50.2	28,515	47.1	25,456	50.3
Rural Minor Art.	20.1	268,944	56.4	72,729	56.4	64,676	57.2	77,822	54.9	53,717	57.6
Rural Major Collect.	49.1	417,792	46.0	108,556	43.1	107,903	48.9	114,909	43.3	86,424	50.4
Rural Minor Collect.	50.2	254,432	42.9	66,189	41.3	64,617	44.5	73,476	41.0	50,149	46.2
Rural Local		453,267	28.0	109,689	28.2	127,979	27.9	119,868	28.1	95,731	27.9
Urban Interstate	28.2	1,786,247	65.1	457,601	62.2	482,851	68.2	483,215	62.9	362,580	68.2
Urban Frwy/Exprwy	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Principal Art.	37.2	759,527	36.3	181,594	34.3	215,024	39.2	195,975	32.7	166,934	40.3
Urban Minor Art.	70.2	866,824	34.7	210,404	33.2	239,580	36.5	231,044	32.1	185,796	37.9
Urban Collector	105.5	561,606	28.8	131,992	27.7	158,406	31.8	155,009	24.6	116,199	33.9
Urban Local		909,011	25.8	203,684	25.9	271,135	25.9	243,600	25.3	190,592	26.4
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	129.6	1,508,419	39.4	385,820	38.9	396,532	39.6	414,591	38.7	311,476	40.6
Urban	241.1	4,883,214	38.1	1,185,275	37.5	1,366,995	39.5	1,308,843	35.6	1,022,101	40.8
County	370.7	6,391,633	38.4	1,571,095	37.8	1,763,527	39.5	1,723,433	36.3	1,333,577	40.8

				AM Peak		Midday		PM Peak		Night	
Gaston (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	4.6	142,930	67.7	34,835	67.1	46,003	68.2	34,260	67.3	27,832	68.2
Rural Principal Art.	6.8	170,018	43.8	41,442	38.2	48,991	58.6	44,188	32.6	35,397	58.8
Rural Minor Art.	12.1	86,757	51.6	21,394	49.3	24,659	52.4	23,326	51.7	17,378	53.4
Rural Major Collect.	36.0	283,716	44.8	74,374	41.4	72,567	47.7	78,623	43.3	58,153	48.2
Rural Minor Collect.	51.5	113,365	39.2	32,908	37.9	25,984	40.0	35,230	39.5	19,242	39.9
Rural Local		212,650	27.2	51,280	27.4	60,564	26.7	57,376	27.9	43,429	26.6
Urban Interstate	34.2	2,186,337	50.3	508,332	43.8	678,046	61.4	519,654	39.0	480,305	64.1
Urban Frwy/Exprwy	18.1	460,790	60.7	113,989	57.4	140,602	61.9	109,975	60.7	96,224	63.3
Urban Principal Art.	82.9	1,198,298	31.7	309,495	30.3	328,534	34.6	325,117	28.6	235,151	35.3
Urban Minor Art.	123.1	925,368	34.2	234,848	31.4	252,110	36.5	248,097	32.9	190,314	37.3
Urban Collector	69.8	257,955	25.2	59,310	25.1	75,129	25.8	66,584	22.6	56,932	28.6
Urban Local		909,075	24.8	201,458	24.8	283,678	24.8	228,911	24.5	195,029	25.2

Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	111.0	1,009,437	40.8	256,233	39.0	278,769	43.4	273,005	38.6	201,431	43.3
Urban	328.0	5,937,824	36.5	1,427,432	34.2	1,758,099	39.9	1,498,338	32.3	1,253,954	41.1
County	439.0	6,947,261	37.1	1,683,665	34.8	2,036,868	40.3	1,771,342	33.2	1,455,385	41.4

			AM Peak		Midday		PM Peak		Night	
Iredell (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	6.2	316,025	48.8	70,891	37.3	107,311	55.6	69,197	42.2	68,627	68.0
Rural Principal Art.	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Minor Art.	5.5	118,646	15.8	24,429	13.6	37,692	14.6	24,603	13.6	31,921	24.3
Rural Major Collect.	12.4	138,816	39.5	35,825	35.9	40,314	42.7	35,571	36.9	27,105	44.4
Rural Minor Collect.	22.7	225,978	37.2	55,814	34.6	65,994	39.6	56,232	34.3	47,937	41.3
Rural Local		452,602	27.4	106,054	27.0	136,085	27.5	111,443	27.0	99,020	28.1
Urban Interstate	16.4	818,221	55.2	179,439	46.8	275,399	58.8	175,103	49.8	188,279	67.6
Urban Frwy/Exprwy	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Principal Art.	6.6	126,716	31.6	29,160	28.8	36,326	34.2	31,073	28.6	30,157	35.5
Urban Minor Art.	17.4	164,088	32.5	39,639	30.0	47,109	34.3	40,608	30.7	36,731	35.5
Urban Collector	21.8	224,695	30.7	54,052	27.2	65,375	34.5	54,993	27.2	50,275	35.4
Urban Local		366,565	25.6	83,399	25.1	112,344	25.7	89,214	25.2	81,608	26.3
Urban HOV	5.7	139,518	59.6	42,763	55.7	47,130	68.9	42,813	54.0	6,811	69.8
Rural	46.8	1,252,067	31.2	293,012	28.6	387,396	32.1	297,047	29.2	274,611	36.1
Urban	68.0	1,839,802	38.4	428,453	35.0	583,684	41.5	433,804	35.3	393,861	42.4
County	114.8	3,091,869	35.1	721,465	32.1	971,080	37.2	730,851	32.6	668,473	39.6

			AM Peak		Midday		PM Peak		Night	
Lincoln (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	7.4	114,758	61.1	28,843	59.2	38,769	62.2	26,467	60.5	20,680	62.7
Rural Minor Art.	26.8	403,266	38.5	89,915	34.2	127,186	40.1	92,146	34.1	94,019	47.4
Rural Major Collect.	10.8	72,212	52.9	18,401	52.3	21,844	53.3	17,469	52.9	14,499	53.0
Rural Minor Collect.	32.3	164,659	39.8	44,853	36.8	46,794	41.8	45,914	39.6	27,099	42.7
Rural Local		561,997	26.7	135,685	24.1	170,490	27.5	140,455	27.3	115,368	28.0
Urban Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Frwy/Exprwy	29.6	574,980	65.8	148,948	65.4	181,690	65.9	136,770	66.0	107,571	66.1
Urban Principal Art.	6.4	115,488	35.8	27,258	33.3	35,503	37.5	27,224	33.4	25,502	39.6
Urban Minor Art.	31.3	331,011	34.3	78,123	31.1	100,979	35.8	77,595	32.1	74,314	39.0
Urban Collector	18.5	78,405	34.2	19,788	33.3	22,918	35.4	19,756	32.9	15,943	35.4
Urban Local		169,190	27.1	39,179	27.0	52,915	26.9	40,238	27.1	36,858	27.3
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Rural	77.2	1,316,893	33.8	317,697	30.8	405,082	35.2	322,450	33.0	271,664	37.0
Urban	85.7	1,269,073	42.1	313,296	41.0	394,006	43.1	301,582	40.8	260,189	43.5
County	162.9	2,585,966	37.4	630,993	35.1	799,088	38.7	624,032	36.4	531,853	40.0

			AM Peak		Midday		PM Peak		Night	
Mecklenburg	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	7.2	208,368	36.7	49,335	23.7	60,454	50.3	54,932	36.0	43,647	50.8
Rural Minor Art.	4.3	90,652	31.8	21,656	23.5	24,263	36.6	24,946	32.6	19,788	39.8
Rural Major Collect.	6.8	72,589	44.3	18,485	41.4	20,255	46.7	19,966	42.9	13,882	47.5
Rural Minor Collect.	16.6	174,705	32.8	48,292	30.3	43,911	36.6	49,994	29.8	32,508	38.2
Rural Local		336,801	28.0	81,957	28.5	94,810	27.8	92,265	27.6	67,769	27.9
Urban Interstate	147.9	9,233,405	52.4	2,142,756	45.9	2,690,657	58.4	2,224,991	46.0	2,175,002	61.8
Urban Frwy/Exprwy	139.8	7,556,984	56.5	1,860,440	50.5	2,092,707	64.6	1,935,284	49.3	1,668,553	66.2
Urban Principal Art.	201.7	5,422,856	26.2	1,274,986	22.7	1,583,077	30.9	1,377,703	21.2	1,187,091	34.6
Urban Minor Art.	231.5	4,540,424	25.7	1,104,779	22.3	1,305,686	30.3	1,224,195	21.8	905,764	32.9
Urban Collector	372.6	4,397,022	24.6	1,040,594	20.6	1,271,841	28.9	1,135,927	20.5	948,659	32.7
Urban Local		6,571,619	23.0	1,502,635	22.2	1,975,687	23.7	1,769,533	21.6	1,323,764	24.8
Urban HOV	40.4	780,334	60.6	268,521	60.5	177,958	67.4	279,911	56.1	53,945	66.2
Rural	35.0	883,116	32.1	219,725	27.7	243,693	35.3	242,103	31.1	177,595	36.1
Urban	1,133.8	38,502,645	32.9	9,194,710	29.5	11,097,612	36.7	9,947,545	28.3	8,262,778	40.2
County	1,168.8	39,385,760	32.9	9,414,435	29.4	11,341,305	36.6	10,189,647	28.4	8,440,373	40.1

			AM Peak		Midday		PM Peak		Night	
Rowan (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	9.7	138,623	59.1	38,737	58.9	39,627	59.1	36,458	59.1	23,801	59.2
Rural Minor Art.	10.2	104,156	61.6	24,991	61.4	29,655	61.5	25,541	61.4	23,969	62.2
Rural Major Collect.	58.7	407,033	55.4	105,791	54.3	110,455	56.0	105,658	55.1	85,129	56.6
Rural Minor Collect.	61.4	290,262	50.6	83,917	49.8	71,265	51.4	86,214	50.2	48,867	51.6
Rural Local		388,048	29.4	93,451	30.0	116,182	29.0	96,050	29.7	82,365	29.1
Urban Interstate	38.8	1,679,068	73.3	416,319	73.3	522,694	73.4	410,426	73.3	329,629	73.4
Urban Frwy/Exprwy	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Principal Art.	38.7	330,159	36.5	78,466	36.0	100,093	36.8	81,105	35.4	70,495	38.1

Urban Minor Art.	61.7	504,108	38.5	126,020	37.5	145,851	39.3	129,531	37.1	102,706	41.0
Urban Collector	125.7	493,105	37.1	123,268	36.7	138,984	37.3	128,729	36.7	102,123	38.1
Urban Local		534,522	26.7	122,008	26.9	166,545	26.6	130,782	26.6	115,186	26.8
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	140.0	1,328,123	43.8	346,888	44.4	367,184	43.1	349,922	44.3	264,130	43.5
Urban	264.8	3,540,962	45.2	866,082	45.3	1,074,168	45.6	880,573	44.5	720,139	45.5
County	404.8	4,869,085	44.8	1,212,969	45.0	1,441,352	44.9	1,230,494	44.4	984,269	44.9

				AM Peak		Midday		PM Peak		Night	
Union (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	28.4	406,496	58.4	121,169	59.7	113,405	58.3	95,884	57.3	76,038	58.3
Rural Minor Art.	13.3	71,303	43.0	21,502	42.2	14,910	44.6	22,715	41.5	12,175	45.4
Rural Major Collect.	108.4	790,970	42.9	200,150	38.7	224,276	45.9	205,216	41.6	161,328	46.8
Rural Minor Collect.	79.2	283,044	41.4	73,023	39.2	76,564	44.3	73,483	38.4	59,975	44.9
Rural Local		920,405	29.7	228,488	28.4	259,519	30.4	239,569	29.3	192,829	31.0
Urban Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Frwy/Exprwy	25.0	469,869	54.0	110,009	51.0	119,917	56.9	147,278	51.5	92,665	58.6
Urban Principal Art.	19.4	558,050	45.3	138,303	44.2	158,798	46.4	146,101	44.0	114,848	47.0
Urban Minor Art.	48.1	473,867	30.7	115,913	27.0	136,091	35.3	119,750	26.3	102,113	37.5
Urban Collector	73.4	680,507	31.3	167,985	28.3	189,358	34.9	178,368	27.3	144,796	37.6
Urban Local		1,070,873	27.0	254,343	25.9	314,821	27.7	274,838	26.4	226,872	28.2
Urban HOV	0.3	3,464	26.1	929	18.0	1,154	33.0	808	25.8	573	38.8
Rural	229.3	2,472,219	38.1	644,332	36.6	688,674	39.5	636,867	36.9	502,346	39.9
Urban	166.1	3,256,631	33.2	787,484	31.0	920,139	35.1	867,141	31.3	681,866	36.5
County	395.5	5,728,849	35.2	1,431,816	33.3	1,608,813	36.8	1,504,009	33.5	1,184,212	37.9

				AM Peak		Midday		PM Peak		Night	
York (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	24.6	1,149,373	59.7	285,673	52.4	350,002	66.1	277,746	56.4	235,952	65.6
Rural Principal Art.	6.1	122,071	47.0	30,121	39.4	38,839	55.4	31,417	41.4	21,693	57.9
Rural Minor Art.	19.2	321,909	33.0	83,450	29.6	88,335	38.0	82,938	28.5	67,186	39.7
Rural Major Collect.	46.3	320,976	39.8	80,976	36.2	92,697	43.5	82,294	36.8	65,009	44.5
Rural Minor Collect.	8.3	35,412	15.3	8,688	11.3	10,721	19.3	8,472	13.0	7,531	22.5

Rural Local		490,328	26.1	117,048	25.8	145,440	26.4	124,014	25.9	103,826	26.5
Urban Interstate	18.3	996,449	59.3	246,091	53.0	297,578	62.9	240,463	59.3	212,318	63.0
Urban Frwy/Exprwy	3.1	63,373	40.0	15,811	40.2	17,675	39.8	16,787	40.3	13,100	39.7
Urban Principal Art.	52.5	1,032,552	32.1	250,872	28.7	298,645	35.8	259,704	28.7	223,331	37.1
Urban Minor Art.	82.0	753,027	31.3	181,887	28.2	218,757	34.9	190,711	27.8	161,672	36.3
Urban Collector	74.6	318,007	23.1	79,344	22.9	89,639	27.1	83,283	17.8	65,741	28.4
Urban Local		701,720	24.7	156,564	24.4	219,122	24.9	172,641	24.5	153,393	25.2
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	104.5	2,440,069	40.2	605,955	36.6	726,035	43.9	606,881	37.3	501,197	44.1
Urban	230.6	3,865,129	33.1	930,570	30.9	1,141,416	35.8	963,588	30.0	829,555	36.7
County	335.1	6,305,198	35.5	1,536,525	32.9	1,867,451	38.6	1,570,470	32.4	1,330,752	39.2

		24 Hour		AM Peak		Midday		PM Peak		Night	
NC/SC NA	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	10.9	458,955	53.4	105,726	43.7	153,314	58.9	103,457	48.2	96,458	68.1
Rural Principal Art.	69.6	1,152,248	49.9	308,183	44.2	332,602	56.3	286,445	46.1	225,018	56.2
Rural Minor Art.	92.3	1,143,723	37.3	276,616	34.6	323,040	36.6	291,099	35.9	252,968	44.4
Rural Major Collect.	282.2	2,183,129	45.7	561,582	42.5	597,614	48.3	577,413	44.2	446,520	49.4
Rural Minor Collect.	314.0	1,506,445	40.8	404,996	38.8	395,129	42.9	420,543	39.0	285,776	44.0
Rural Local		3,325,771	28.2	806,603	27.5	965,629	28.4	857,026	28.3	696,512	28.8
Urban Interstate	265.5	15,703,278	55.1	3,704,447	49.3	4,649,648	61.2	3,813,388	48.6	3,535,795	64.0
Urban Frwy/Exprwy	212.4	9,062,623	57.1	2,233,386	51.7	2,534,917	64.1	2,329,307	50.7	1,965,013	65.7
Urban Principal Art.	392.8	8,511,094	28.9	2,039,263	25.8	2,457,356	33.0	2,184,297	24.3	1,830,179	35.9
Urban Minor Art.	583.2	7,805,690	28.7	1,909,726	25.5	2,227,405	32.6	2,070,820	25.0	1,597,738	34.9
Urban Collector	787.3	6,693,294	26.4	1,596,991	23.0	1,922,010	30.2	1,739,365	22.5	1,434,927	33.5
Urban Local		10,530,855	24.0	2,406,705	23.4	3,177,125	24.6	2,777,116	22.9	2,169,909	25.5
Urban HOV	46.4	923,316	60.1	312,214	59.4	226,242	67.4	323,532	55.7	61,329	66.1
Rural	769.0	9,770,273	36.9	2,463,707	35.0	2,767,329	38.0	2,535,984	35.9	2,003,253	39.4
Urban	2287.5	59,230,150	34.5	14,202,732	31.6	17,194,703	37.8	15,237,826	30.4	12,594,889	40.5
County	3056.5	69,000,423	34.8	16,666,439	32.0	19,962,032	37.9	17,773,810	31.1	14,598,142	40.4

Based on 2008 8-hour Non-attainment Boundary

2026: NC STIP 26-35

		24 Hour		AM Peak		Midday		PM Peak		Night	
Cabarrus (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	10.2	117,227	48.2	29,123	45.6	32,486	50.1	28,975	46.9	26,643	50.3
Rural Minor Art.	20.1	278,600	56.3	74,624	56.4	67,382	57.2	80,458	54.7	56,136	57.6
Rural Major Collect.	49.1	419,625	45.1	108,319	42.4	108,285	47.8	115,868	42.7	87,152	49.4
Rural Minor Collect.	50.2	253,666	42.8	67,149	41.5	63,123	44.5	72,778	40.8	50,616	46.0
Rural Local		467,909	28.0	113,697	28.2	132,252	27.8	122,800	28.1	99,160	27.9
Urban Interstate	28.2	1,797,439	65.2	461,180	62.1	486,761	68.2	483,150	63.0	366,348	68.3
Urban Frwy/Exprwy	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Principal Art.	37.2	773,461	36.1	184,104	34.0	218,842	39.1	197,410	32.5	173,105	40.3
Urban Minor Art.	70.2	880,433	34.5	213,188	32.9	243,439	36.4	234,328	31.9	189,478	37.7
Urban Collector	106.1	572,666	28.7	134,839	27.5	161,497	31.7	157,870	24.6	118,459	33.8
Urban Local		933,218	25.8	208,876	25.8	278,598	25.8	249,588	25.3	196,157	26.4
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	129.6	1,537,026	39.1	392,912	38.6	403,529	39.3	420,877	38.4	319,707	40.4
Urban	241.7	4,957,216	37.9	1,202,186	37.2	1,389,136	39.4	1,322,348	35.4	1,043,546	40.7
County	371.3	6,494,242	38.2	1,595,098	37.5	1,792,665	39.3	1,743,225	36.1	1,363,254	40.6

				AM Peak		Midday		PM Peak		Night	
Gaston (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	4.6	143,786	67.8	34,898	67.2	46,469	68.2	34,217	67.4	28,201	68.2
Rural Principal Art.	6.8	171,783	43.4	41,610	36.7	49,462	58.5	44,324	32.7	36,387	58.8
Rural Minor Art.	12.1	88,264	51.4	21,450	48.7	25,283	52.4	23,699	51.6	17,831	53.3
Rural Major Collect.	36.0	282,377	44.8	73,389	41.2	72,549	47.7	77,825	43.3	58,614	48.3
Rural Minor Collect.	51.5	114,011	39.2	31,911	37.6	26,575	39.9	35,968	39.6	19,557	40.0
Rural Local		214,412	27.2	51,235	27.3	61,167	26.7	58,041	28.0	43,969	26.6
Urban Interstate	34.2	2,201,402	50.3	507,051	43.7	688,024	61.1	519,278	39.1	487,049	64.1
Urban Frwy/Exprwy	18.1	465,456	60.6	114,775	57.3	142,019	61.9	110,148	60.5	98,513	63.3
Urban Principal Art.	82.9	1,210,016	31.7	310,473	30.1	333,850	34.6	326,863	28.5	238,830	35.3
Urban Minor Art.	123.1	935,629	34.1	237,206	31.2	255,336	36.4	250,124	32.7	192,962	37.3
Urban Collector	69.8	260,635	25.1	60,118	25.0	75,953	25.7	67,210	22.5	57,354	28.2
Urban Local		920,211	24.8	204,925	24.8	287,064	24.8	231,514	24.5	196,709	25.2

Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	111.0	1,014,634	40.7	254,494	38.6	281,506	43.4	274,074	38.6	204,559	43.3
Urban	328.0	5,993,348	36.4	1,434,547	34.0	1,782,246	39.8	1,505,137	32.3	1,271,417	41.1
County	439.0	7,007,982	37.0	1,689,042	34.6	2,063,753	40.3	1,779,211	33.1	1,475,976	41.4

			AM Peak		Midday		PM Peak		Night	
Iredell (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	6.2	320,094	47.7	71,259	35.9	109,257	53.7	69,437	41.7	70,142	67.9
Rural Principal Art.	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Minor Art.	5.5	119,527	15.7	24,454	13.6	38,085	14.5	24,748	13.4	32,240	23.5
Rural Major Collect.	12.4	134,589	39.0	34,644	35.0	38,881	42.2	34,589	36.9	26,476	44.1
Rural Minor Collect.	22.7	229,340	36.7	56,885	34.1	67,606	39.2	56,348	33.5	48,500	41.3
Rural Local		446,483	27.4	104,818	27.1	132,880	27.5	110,972	27.0	97,813	28.1
Urban Interstate	16.4	828,710	54.7	180,472	46.3	280,840	57.6	175,955	49.6	191,441	67.5
Urban Frwy/Exprwy	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Principal Art.	6.6	132,084	31.6	30,153	28.7	38,957	34.2	31,905	28.5	31,068	35.5
Urban Minor Art.	17.4	169,223	32.3	40,730	29.8	49,231	34.1	41,343	30.4	37,919	35.5
Urban Collector	21.8	224,527	30.8	54,140	27.7	64,982	34.3	54,900	27.4	50,506	35.4
Urban Local		371,359	25.5	84,644	25.1	114,663	25.6	90,157	25.1	81,894	26.3
Urban HOV	5.7	152,781	53.9	45,259	47.1	54,792	68.0	45,796	47.3	6,934	69.8
Rural	46.8	1,250,033	31.0	292,060	28.3	386,708	31.8	296,094	28.9	275,171	35.9
Urban	68.0	1,878,683	38.2	435,398	34.6	603,467	41.2	440,057	35.0	399,762	42.5
County	114.8	3,128,716	34.9	727,458	31.8	990,175	37.0	736,150	32.3	674,933	39.5

			AM Peak		Midday		PM Peak		Night	
Lincoln (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	7.4	116,137	61.1	29,433	59.2	38,931	62.2	26,588	60.4	21,185	62.5
Rural Minor Art.	26.8	407,738	38.1	89,927	33.9	128,958	39.5	92,752	34.0	96,101	47.2
Rural Major Collect.	10.8	72,451	53.0	18,256	52.5	22,452	53.3	16,887	53.0	14,856	53.0
Rural Minor Collect.	32.3	164,963	39.6	44,982	36.0	47,473	41.7	45,265	39.6	27,243	42.8
Rural Local		571,952	26.7	139,327	24.2	172,399	27.5	141,922	27.4	118,303	27.9
Urban Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Frwy/Exprwy	29.6	584,350	65.8	152,732	65.3	183,901	65.9	137,798	66.0	109,919	66.1
Urban Principal Art.	6.4	116,713	35.8	27,436	33.3	36,054	37.3	27,376	33.5	25,847	39.6
Urban Minor Art.	31.3	331,933	34.4	77,947	31.2	101,945	35.7	77,012	32.4	75,029	39.0
Urban Collector	18.5	79,304	34.2	20,205	33.1	23,107	35.4	19,656	33.0	16,336	35.6
Urban Local		168,759	27.1	38,858	27.1	52,920	27.0	39,859	27.0	37,122	27.3
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Rural	77.2	1,333,242	33.7	321,925	30.6	410,214	35.0	323,415	33.0	277,689	36.9
Urban	85.7	1,281,058	42.2	317,177	41.2	397,927	43.1	301,701	41.0	264,253	43.6
County	162.9	2,614,300	37.4	639,102	35.1	808,141	38.6	625,116	36.4	541,941	39.9

			AM Peak		Midday		PM Peak		Night	
Mecklenburg	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	7.2	212,791	36.5	50,255	23.3	61,942	50.0	55,714	35.9	44,881	50.7
Rural Minor Art.	4.3	92,390	31.7	21,814	23.3	25,027	36.4	25,311	32.3	20,239	39.7
Rural Major Collect.	6.8	74,183	44.3	18,726	41.5	20,903	46.6	20,153	42.7	14,401	47.4
Rural Minor Collect.	16.6	177,692	32.6	49,043	30.0	45,043	36.6	50,458	29.4	33,149	38.3
Rural Local		351,267	28.0	85,056	28.4	99,480	27.9	95,151	27.6	71,580	28.0
Urban Interstate	147.9	9,337,434	52.0	2,155,485	45.6	2,729,059	58.1	2,241,360	45.4	2,211,530	61.8
Urban Frwy/Exprwy	139.8	7,636,415	56.2	1,872,027	50.1	2,127,804	64.5	1,946,586	48.7	1,689,999	66.2
Urban Principal Art.	201.7	5,482,011	26.0	1,284,272	22.4	1,605,288	30.6	1,388,786	20.9	1,203,665	34.4
Urban Minor Art.	231.5	4,593,891	25.5	1,113,890	22.0	1,326,182	30.1	1,238,502	21.5	915,317	32.8
Urban Collector	372.6	4,452,459	24.3	1,050,587	20.4	1,291,155	28.6	1,148,557	20.2	962,160	32.6
Urban Local		6,703,243	22.9	1,529,398	22.2	2,016,438	23.7	1,805,858	21.5	1,351,549	24.8
Urban HOV	40.4	811,902	60.5	277,504	59.6	195,556	67.8	279,397	56.4	59,445	65.0
Rural	35.0	908,324	32.0	224,893	27.5	252,395	35.2	246,786	31.0	184,249	36.0
Urban	1,133.8	39,017,354	32.6	9,283,164	29.2	11,291,480	36.5	10,049,045	28.0	8,393,665	40.2
County	1,168.8	39,925,677	32.6	9,508,057	29.2	11,543,875	36.4	10,295,831	28.0	8,577,914	40.1

			AM Peak		Midday		PM Peak		Night	
Rowan (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	9.7	141,042	59.1	39,423	58.9	39,876	59.1	37,919	59.0	23,824	59.2
Rural Minor Art.	10.2	104,253	61.6	25,028	61.3	29,552	61.5	25,154	61.5	24,518	62.2
Rural Major Collect.	58.7	411,767	55.4	107,057	54.3	111,768	56.0	108,949	55.0	83,992	56.6
Rural Minor Collect.	61.4	298,681	50.5	86,578	49.8	73,941	51.3	88,439	50.1	49,722	51.6
Rural Local		395,652	29.4	95,237	29.9	118,377	29.0	98,088	29.7	83,951	29.1
Urban Interstate	38.8	1,704,571	73.3	419,929	73.3	533,694	73.4	413,205	73.3	337,743	73.4
Urban Frwy/Exprwy	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Principal Art.	38.7	334,999	36.5	79,704	36.1	101,987	36.8	82,577	35.5	70,731	38.0

Urban Minor Art.	61.7	510,667	38.6	126,345	37.4	147,796	39.2	131,407	37.1	105,119	41.2
Urban Collector	125.7	503,705	37.2	125,068	36.7	142,649	37.4	132,284	36.7	103,703	38.0
Urban Local		544,950	26.7	124,116	26.9	169,946	26.6	133,645	26.7	117,244	26.8
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	140.0	1,351,394	43.8	353,324	44.3	373,514	43.1	358,549	44.3	266,007	43.4
Urban	264.8	3,598,893	45.2	875,162	45.2	1,096,073	45.6	893,117	44.4	734,540	45.6
County	404.8	4,950,287	44.8	1,228,486	45.0	1,469,587	45.0	1,251,667	44.3	1,000,547	45.0

				AM Peak		Midday		PM Peak		Night	
Union (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	28.4	412,986	58.5	122,931	59.7	114,621	58.2	97,774	57.5	77,662	58.4
Rural Minor Art.	13.3	79,245	44.2	23,552	42.8	16,836	46.7	25,570	42.7	13,287	46.8
Rural Major Collect.	108.4	797,896	42.8	200,779	38.6	225,644	45.8	208,237	41.3	163,237	46.7
Rural Minor Collect.	79.2	285,992	41.2	74,332	39.1	77,305	44.1	73,600	38.1	60,756	45.0
Rural Local		922,620	29.4	230,696	28.2	259,495	30.2	239,650	28.9	192,779	30.7
Urban Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Frwy/Exprwy	25.0	477,852	53.2	111,978	50.0	122,202	56.5	149,885	50.6	93,786	58.1
Urban Principal Art.	19.4	564,332	45.3	138,614	44.2	161,712	46.4	147,018	44.0	116,987	47.1
Urban Minor Art.	48.1	469,404	30.8	115,156	26.8	133,742	35.3	118,029	26.9	102,477	37.5
Urban Collector	73.4	685,267	31.5	169,330	28.5	189,315	35.0	179,930	27.6	146,691	37.5
Urban Local		1,106,315	27.1	261,742	26.0	322,425	27.8	287,271	26.3	234,877	28.3
Urban HOV	0.3	3,551	25.5	927	18.1	1,214	31.1	831	24.4	579	38.8
Rural	229.3	2,498,740	38.0	652,289	36.5	693,900	39.4	644,830	36.7	507,721	39.9
Urban	166.1	3,306,720	33.2	797,747	31.0	930,611	35.1	882,964	31.4	695,398	36.5
County	395.5	5,805,460	35.1	1,450,036	33.2	1,624,511	36.8	1,527,794	33.4	1,203,118	37.8

				AM Peak		Midday		PM Peak		Night	
York (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	24.6	1,157,585	59.8	286,135	52.7	355,614	66.1	278,425	56.5	237,411	65.6
Rural Principal Art.	6.1	124,968	46.3	30,898	38.2	39,432	55.1	31,935	40.9	22,703	57.8
Rural Minor Art.	19.2	326,515	32.9	84,188	29.5	89,369	37.8	85,168	28.4	67,790	39.6
Rural Major Collect.	46.3	326,107	39.9	82,211	36.4	94,149	43.3	83,531	37.1	66,217	44.6
Rural Minor Collect.	8.3	35,952	15.3	8,685	11.2	10,950	19.1	8,725	13.2	7,593	22.8

Rural Local		502,355	26.2	120,105	25.8	149,327	26.4	126,969	25.9	105,954	26.6
Urban Interstate	18.3	1,004,140	59.4	247,216	53.1	301,774	62.9	241,476	59.4	213,675	63.0
Urban Frwy/Exprwy	3.1	64,275	40.0	16,067	40.1	18,012	39.8	16,970	40.4	13,226	39.7
Urban Principal Art.	52.5	1,046,840	32.0	254,395	28.5	302,603	35.6	261,465	28.7	228,376	37.0
Urban Minor Art.	82.0	763,884	31.2	183,693	28.0	222,062	34.7	193,999	27.8	164,130	36.3
Urban Collector	74.6	321,674	23.0	80,207	22.8	91,090	26.9	84,316	17.8	66,061	28.3
Urban Local		713,259	24.8	157,730	24.4	223,324	24.9	175,925	24.5	156,280	25.2
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	104.5	2,473,482	40.1	612,221	36.5	738,840	43.8	614,752	37.2	507,668	44.1
Urban	230.6	3,914,073	33.0	939,308	30.8	1,158,865	35.7	974,151	30.0	841,749	36.7
County	335.1	6,387,555	35.4	1,551,529	32.8	1,897,705	38.4	1,588,904	32.4	1,349,417	39.1

		24 Hour		AM Peak		Midday		PM Peak		Night	
NC/SC NA	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	10.9	463,880	52.5	106,157	42.4	155,726	57.3	103,654	47.7	98,343	68.0
Rural Principal Art.	69.6	1,171,966	49.7	312,775	43.7	337,318	56.2	291,292	46.2	230,581	56.2
Rural Minor Art.	92.3	1,170,016	37.3	280,849	34.6	331,123	36.5	297,692	35.9	260,353	44.1
Rural Major Collect.	282.2	2,192,889	45.5	561,170	42.2	600,483	48.0	582,508	43.9	448,728	49.1
Rural Minor Collect.	314.0	1,524,346	40.6	410,879	38.5	401,066	42.8	422,857	38.7	289,544	44.0
Rural Local		3,370,295	28.2	820,067	27.4	976,051	28.4	866,623	28.2	707,555	28.7
Urban Interstate	265.5	15,869,555	54.9	3,724,118	49.0	4,718,378	60.9	3,832,948	48.2	3,594,111	64.0
Urban Frwy/Exprwy	212.4	9,164,072	56.8	2,251,512	51.3	2,575,926	64.0	2,344,417	50.0	1,992,217	65.6
Urban Principal Art.	392.8	8,613,615	28.7	2,054,755	25.6	2,496,691	32.8	2,201,935	24.0	1,860,234	35.9
Urban Minor Art.	583.2	7,891,178	28.6	1,924,462	25.3	2,257,671	32.5	2,090,745	24.8	1,618,301	34.9
Urban Collector	787.9	6,778,562	26.2	1,614,287	22.8	1,948,658	30.0	1,760,408	22.3	1,455,209	33.4
Urban Local		10,748,054	24.0	2,452,558	23.4	3,242,054	24.6	2,837,891	22.8	2,215,551	25.5
Urban HOV	46.4	968,234	59.1	323,690	57.1	251,562	67.5	326,024	54.7	66,958	65.1
Rural	769.0	9,893,392	36.7	2,491,897	34.8	2,801,767	37.8	2,564,625	35.8	2,035,104	39.3
Urban	2288.2	60,033,272	34.3	14,345,382	31.3	17,490,940	37.7	15,394,369	30.1	12,802,581	40.5
County	3057.2	69,926,664	34.6	16,837,279	31.8	20,292,706	37.7	17,958,994	30.8	14,837,685	40.3

Based on 2008 8-hour Non-attainment Boundary

2035: NC STIP 26-35

		24 Hour		AM Peak		Midday		PM Peak		Night	
Cabarrus (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	10.2	136,402	46.2	32,686	43.0	40,193	49.3	32,735	43.4	30,788	49.3
Rural Minor Art.	20.1	249,071	49.9	68,462	50.2	58,065	51.1	75,153	47.6	47,391	51.7
Rural Major Collect.	49.1	505,054	43.2	129,699	39.9	129,495	47.3	139,254	39.5	106,607	49.0
Rural Minor Collect.	50.2	317,222	41.7	83,814	40.2	75,475	44.3	94,971	38.8	62,961	46.1
Rural Local		607,707	28.2	148,904	28.3	168,278	28.0	162,785	28.2	127,740	28.2
Urban Interstate	28.2	2,006,399	62.9	503,038	58.9	553,848	68.2	528,484	58.1	421,030	68.3
Urban Frwy/Exprwy	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Principal Art.	37.2	880,913	33.5	204,063	30.8	256,721	37.6	220,077	28.2	200,053	39.6
Urban Minor Art.	70.2	1,019,402	32.0	241,477	30.0	287,036	35.1	270,924	28.0	219,965	37.3
Urban Collector	106.3	686,170	26.8	160,800	25.4	194,674	30.4	190,080	22.1	140,617	33.1
Urban Local		1,143,075	25.1	256,634	25.2	338,780	25.7	312,410	23.6	235,252	26.3
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	129.6	1,815,456	37.2	463,564	36.4	471,506	38.0	504,898	35.9	375,487	39.1
Urban	241.9	5,735,960	35.6	1,366,011	34.4	1,631,058	38.2	1,521,974	31.4	1,216,917	40.2
County	371.5	7,551,415	36.0	1,829,575	34.9	2,102,564	38.1	2,026,872	32.4	1,592,404	39.9

				AM Peak		Midday		PM Peak		Night	
Gaston (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	4.6	161,552	66.9	38,229	65.7	53,352	67.9	37,715	65.8	32,257	68.2
Rural Principal Art.	6.8	177,848	49.3	43,330	44.6	49,571	58.6	45,957	40.8	38,990	58.7
Rural Minor Art.	12.1	95,464	50.3	23,123	48.5	27,121	51.6	25,108	49.3	20,112	52.1
Rural Major Collect.	36.0	298,610	43.7	76,529	40.0	78,297	47.0	80,679	41.8	63,105	47.6
Rural Minor Collect.	51.5	126,093	38.4	35,321	35.7	29,151	39.8	39,574	39.3	22,046	39.9
Rural Local		235,438	27.2	58,774	27.6	66,555	26.7	62,256	27.7	47,854	26.6
Urban Interstate	34.2	2,506,519	56.6	585,492	50.6	776,943	63.2	597,246	50.2	546,837	64.2
Urban Frwy/Exprwy	18.1	481,527	59.6	117,785	56.4	146,425	60.4	113,480	59.3	103,837	62.8
Urban Principal Art.	85.4	1,293,126	32.3	326,989	30.6	358,024	34.1	354,905	30.4	253,208	35.0
Urban Minor Art.	123.6	1,027,290	33.6	255,739	30.4	283,842	36.1	273,074	31.9	214,635	37.0
Urban Collector	70.1	290,948	25.0	67,303	24.5	85,108	25.9	74,502	21.8	64,034	29.2
Urban Local		1,008,857	24.4	224,589	24.1	314,251	24.6	254,372	23.9	215,644	25.1

Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	111.0	1,095,006	41.0	275,306	39.0	304,047	43.1	291,289	39.4	224,365	43.2
Urban	331.4	6,608,267	37.5	1,577,897	35.2	1,964,593	40.0	1,667,581	34.7	1,398,196	41.1
County	442.4	7,703,273	38.0	1,853,203	35.7	2,268,640	40.4	1,958,869	35.3	1,622,561	41.4

			AM Peak		Midday		PM Peak		Night	
Iredell (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	6.2	331,661	44.4	70,924	33.8	113,936	47.1	69,922	38.6	76,879	67.3
Rural Principal Art.	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Minor Art.	5.5	192,189	27.4	45,403	18.1	61,261	34.0	44,878	25.2	40,646	43.6
Rural Major Collect.	12.4	137,315	37.5	34,908	32.9	40,946	41.0	35,920	35.2	25,540	44.0
Rural Minor Collect.	23.4	273,380	33.7	64,849	30.4	81,913	35.8	67,660	30.3	58,958	40.3
Rural Local		501,366	26.6	117,276	26.0	149,259	26.7	125,607	25.8	109,224	28.2
Urban Interstate	22.9	883,775	50.8	184,793	41.8	297,807	52.6	183,033	45.6	218,142	66.5
Urban Frwy/Exprwy	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Principal Art.	6.6	146,665	31.4	34,336	28.9	42,321	34.1	36,845	28.2	33,163	35.5
Urban Minor Art.	17.5	172,995	32.1	41,663	29.4	50,843	34.2	44,183	30.6	36,306	35.3
Urban Collector	21.8	242,531	31.9	60,583	29.0	67,133	34.7	61,649	29.5	53,167	35.4
Urban Local		397,072	25.3	91,811	25.1	121,642	25.4	96,156	24.4	87,463	26.3
Urban HOV	5.7	137,810	58.7	39,898	56.7	46,858	69.0	42,198	50.4	8,855	69.8
Rural	47.5	1,435,911	31.8	333,361	27.1	447,316	34.1	343,987	29.4	311,247	38.9
Urban	74.6	1,980,848	37.3	453,083	33.6	626,605	39.7	464,063	34.0	437,096	42.9
County	122.1	3,416,759	34.8	786,444	30.5	1,073,920	37.2	808,051	31.9	748,344	41.1

			AM Peak		Midday		PM Peak		Night	
Lincoln (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	7.4	128,177	58.6	32,205	55.7	43,433	60.8	28,860	56.4	23,679	62.0
Rural Minor Art.	26.8	438,520	36.6	96,909	31.7	136,920	39.1	97,949	31.4	106,743	46.2
Rural Major Collect.	10.8	77,005	52.7	19,346	51.9	23,610	53.1	18,250	52.7	15,800	53.0
Rural Minor Collect.	32.3	185,394	38.7	49,269	36.3	56,529	40.1	49,213	37.8	30,383	42.2
Rural Local		694,394	26.4	171,167	24.2	206,672	27.2	173,183	26.9	143,372	27.8
Urban Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Frwy/Exprwy	29.6	585,031	66.3	152,971	66.0	177,812	66.5	139,579	66.3	114,669	66.3
Urban Principal Art.	6.4	124,629	34.2	29,514	30.8	38,891	35.8	28,557	32.2	27,667	39.1
Urban Minor Art.	31.3	352,109	33.4	81,941	30.2	108,536	34.7	81,738	31.3	79,895	38.2
Urban Collector	19.4	83,609	33.9	21,508	32.7	24,256	34.8	20,205	33.2	17,641	35.3
Urban Local		177,912	27.1	40,802	26.8	56,370	27.2	41,833	27.0	38,906	27.4
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Rural	77.2	1,523,491	32.6	368,896	29.6	467,164	34.2	367,455	31.4	319,977	36.1
Urban	86.6	1,323,290	41.3	326,735	40.0	405,866	42.1	311,912	40.2	278,778	43.2
County	163.8	2,846,781	36.2	695,631	33.7	873,029	37.4	679,366	34.9	598,754	39.1

			AM Peak		Midday		PM Peak		Night	
Mecklenburg	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	7.2	249,996	41.0	60,917	29.7	68,982	50.3	67,291	40.9	52,806	50.7
Rural Minor Art.	4.3	91,950	31.3	22,387	24.7	24,810	34.9	24,848	30.8	19,905	38.5
Rural Major Collect.	6.8	90,497	40.8	21,957	38.5	25,074	44.8	24,079	36.2	19,387	45.8
Rural Minor Collect.	16.6	203,283	31.4	52,618	27.9	53,315	36.7	57,056	27.4	40,294	38.4
Rural Local		459,285	27.7	111,661	27.7	126,491	27.8	127,664	27.4	93,469	28.0
Urban Interstate	160.8	9,792,607	50.9	2,207,991	44.5	2,886,423	58.2	2,310,464	42.7	2,387,729	61.3
Urban Frwy/Exprwy	140.2	8,290,198	52.6	1,957,190	45.9	2,372,711	62.8	2,056,280	42.5	1,904,016	65.9
Urban Principal Art.	202.3	5,947,937	24.1	1,376,041	20.7	1,749,968	29.4	1,500,836	18.5	1,321,092	33.5
Urban Minor Art.	232.4	5,144,475	23.7	1,226,533	20.3	1,501,174	29.0	1,386,474	19.0	1,030,294	32.3
Urban Collector	379.2	5,035,128	22.4	1,169,220	18.9	1,464,384	26.9	1,304,834	17.7	1,096,690	31.9
Urban Local		7,734,179	21.8	1,754,449	21.2	2,311,871	22.7	2,121,285	19.8	1,546,573	24.5
Urban HOV	54.2	1,340,696	51.4	436,568	48.7	327,859	62.4	466,951	46.0	109,317	64.0
Rural	35.0	1,095,012	31.9	269,540	28.6	298,673	34.5	300,938	30.6	225,860	35.5
Urban	1,169.0	43,285,219	30.5	10,127,993	27.2	12,614,390	35.0	11,147,125	24.9	9,395,711	39.4
County	1,204.0	44,380,231	30.5	10,397,534	27.2	12,913,064	35.0	11,448,062	25.0	9,621,571	39.3

			AM Peak		Midday		PM Peak		Night	
Rowan (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	9.7	158,422	58.8	44,165	58.7	43,402	59.0	45,418	58.7	25,437	59.2
Rural Minor Art.	10.2	116,179	61.4	27,426	60.9	33,821	61.5	27,773	60.9	27,159	62.3
Rural Major Collect.	58.7	471,790	54.9	121,514	53.3	129,176	55.8	124,409	54.3	96,691	56.5
Rural Minor Collect.	61.4	356,524	49.8	104,935	49.0	86,326	51.0	106,760	48.8	58,503	51.4
Rural Local		457,132	29.3	110,517	29.8	137,755	29.0	112,724	29.6	96,136	29.0
Urban Interstate	38.8	1,922,798	73.2	463,246	73.1	609,458	73.4	465,427	73.1	384,667	73.4
Urban Frwy/Exprwy	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Principal Art.	38.7	372,747	36.0	89,731	35.6	110,290	36.5	94,056	34.5	78,670	37.9

Urban Minor Art.	61.7	563,696	37.3	139,551	35.9	163,348	38.3	147,015	35.6	113,781	40.5
Urban Collector	125.7	579,711	36.8	143,171	36.3	163,835	37.4	152,344	35.9	120,361	38.0
Urban Local		627,515	26.7	141,835	26.7	194,826	26.6	156,106	26.6	134,748	26.9
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	140.0	1,560,047	43.4	408,557	43.8	430,480	42.9	417,084	43.8	303,926	43.2
Urban	264.8	4,066,467	44.7	977,535	44.4	1,241,757	45.5	1,014,947	43.5	832,228	45.4
County	404.8	5,626,514	44.3	1,386,092	44.2	1,672,237	44.8	1,432,031	43.6	1,136,154	44.8

				AM Peak		Midday		PM Peak		Night	
Union (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	28.4	462,492	58.4	134,360	59.3	131,254	58.2	108,878	57.4	88,000	58.4
Rural Minor Art.	13.3	84,640	44.2	25,545	42.6	17,278	46.5	28,124	43.2	13,694	46.5
Rural Major Collect.	108.4	907,849	43.8	228,676	40.2	257,861	46.3	235,008	42.5	186,305	47.2
Rural Minor Collect.	79.2	325,905	41.5	83,842	39.6	88,449	44.5	85,662	38.2	67,953	45.2
Rural Local		1,096,797	29.5	273,265	28.7	307,924	30.0	288,355	28.8	227,253	30.6
Urban Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Frwy/Exprwy	25.0	522,833	53.9	123,461	51.3	137,899	57.2	155,109	50.4	106,364	58.7
Urban Principal Art.	19.4	606,440	44.2	149,701	42.5	173,178	45.7	158,763	42.8	124,798	46.4
Urban Minor Art.	48.1	544,895	31.4	135,954	28.0	154,245	35.8	141,250	27.4	113,446	37.5
Urban Collector	73.4	767,500	30.7	189,150	27.7	213,676	34.3	200,236	26.7	164,438	36.7
Urban Local		1,212,722	26.8	284,990	25.7	356,353	27.6	314,220	25.9	257,159	28.2
Urban HOV	0.3	2,653	36.8	788	29.6	842	41.0	559	40.2	463	41.9
Rural	229.3	2,877,683	38.0	745,688	36.9	802,765	39.2	746,026	36.7	583,205	39.7
Urban	166.1	3,657,043	32.9	884,045	30.8	1,036,193	34.9	970,137	30.7	766,668	36.3
County	395.5	6,534,727	35.0	1,629,733	33.3	1,838,959	36.7	1,716,163	33.0	1,349,872	37.7

				AM Peak		Midday		PM Peak		Night	
York (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	24.6	1,225,781	59.9	301,228	55.9	374,756	66.0	294,676	53.4	255,121	65.7
Rural Principal Art.	6.1	135,926	39.5	32,890	31.9	43,234	49.4	34,422	32.2	25,381	54.5
Rural Minor Art.	19.2	359,129	32.6	91,497	28.8	99,266	37.6	93,801	28.3	74,565	39.4
Rural Major Collect.	46.3	379,665	37.6	95,720	33.9	110,299	41.3	96,035	34.0	77,610	43.8
Rural Minor Collect.	8.3	41,844	17.2	9,928	14.8	12,871	19.2	10,330	14.5	8,715	23.1

Rural Local		611,501	26.1	146,697	25.6	181,739	26.5	156,084	25.5	126,982	26.6
Urban Interstate	18.3	1,070,438	59.1	265,189	52.2	319,946	62.9	253,075	59.6	232,228	63.0
Urban Frwy/Exprwy	3.1	68,281	40.0	17,288	40.1	18,706	39.9	17,926	40.2	14,362	39.7
Urban Principal Art.	52.5	1,190,365	31.0	284,507	27.8	344,457	35.1	299,315	26.7	262,086	36.9
Urban Minor Art.	82.0	885,945	31.0	213,691	27.3	259,449	34.9	228,360	27.6	184,446	36.5
Urban Collector	75.3	366,513	24.4	91,612	24.3	104,833	27.9	96,097	19.5	73,971	29.3
Urban Local		810,534	24.7	179,618	24.2	255,150	24.9	200,932	24.5	174,834	25.1
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	104.5	2,753,846	38.8	677,960	36.0	822,164	42.4	685,348	35.1	568,374	43.2
Urban	231.3	4,392,076	32.6	1,051,905	30.3	1,302,541	35.4	1,095,704	29.4	941,926	36.7
County	335.8	7,145,922	34.8	1,729,865	32.3	2,124,706	37.8	1,781,051	31.3	1,510,300	38.9

		24 Hour		AM Peak		Midday		PM Peak		Night	
NC/SC NA	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	10.9	493,214	49.9	109,152	40.7	167,289	52.2	107,637	45.2	109,136	67.6
Rural Principal Art.	69.6	1,313,338	51.6	347,664	47.1	376,835	55.9	329,139	49.1	259,700	55.9
Rural Minor Art.	92.3	1,268,013	38.8	309,255	33.0	359,276	41.8	323,832	36.4	275,649	47.6
Rural Major Collect.	282.2	2,488,121	45.1	632,629	41.8	684,459	47.9	657,597	42.9	513,435	49.1
Rural Minor Collect.	314.6	1,787,801	39.5	474,648	37.3	471,157	41.8	500,897	37.1	341,099	43.8
Rural Local		4,052,118	28.0	991,563	27.4	1,162,934	28.2	1,052,574	27.8	845,047	28.7
Urban Interstate	284.8	17,112,097	54.8	3,944,560	49.0	5,124,479	61.0	4,084,653	47.8	3,958,405	63.7
Urban Frwy/Exprwy	212.8	9,879,589	53.6	2,351,407	47.6	2,834,847	62.6	2,464,449	44.4	2,228,886	65.4
Urban Principal Art.	396.0	9,372,458	27.1	2,210,375	24.0	2,729,393	31.7	2,394,039	21.9	2,038,651	35.1
Urban Minor Art.	584.7	8,824,861	26.9	2,122,857	23.7	2,549,023	31.5	2,344,659	22.4	1,808,322	34.4
Urban Collector	795.9	7,685,598	24.6	1,811,735	21.4	2,213,066	28.6	2,003,849	20.0	1,656,948	32.8
Urban Local		12,301,332	23.1	2,795,111	22.6	3,694,094	23.9	3,296,383	21.3	2,515,745	25.3
Urban HOV	60.2	1,481,159	52.0	477,255	49.2	375,560	63.1	509,708	46.3	118,636	64.3
Rural	769.7	11,402,605	36.4	2,864,911	34.3	3,221,950	37.7	2,971,676	35.1	2,344,067	39.2
Urban	2334.5	66,657,094	32.6	15,713,299	29.7	19,520,462	36.5	17,097,739	27.6	14,325,594	39.9
County	3104.1	78,059,699	33.1	18,578,211	30.3	22,742,413	36.7	20,069,415	28.5	16,669,661	39.8

Based on 2008 8-hour Non-attainment Boundary

2045: NC STIP 26-35

		24 Hour		AM Peak		Midday		PM Peak		Night	
Cabarrus (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	10.2	143,613	41.7	36,906	39.4	37,056	44.7	37,307	38.9	32,345	45.1
Rural Minor Art.	20.1	292,413	45.1	75,881	45.0	74,671	48.8	82,393	40.1	59,467	49.3
Rural Major Collect.	49.1	585,497	41.6	150,863	38.5	153,300	45.6	158,330	37.8	123,004	47.1
Rural Minor Collect.	50.2	389,942	39.0	101,200	36.8	94,686	42.5	116,415	35.4	77,641	44.7
Rural Local		781,838	27.7	190,204	27.4	217,103	28.0	212,268	27.4	162,263	28.1
Urban Interstate	28.2	2,260,507	58.4	540,121	52.4	661,743	67.8	568,053	49.7	490,591	68.4
Urban Frwy/Exprwy	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Principal Art.	37.2	1,056,063	31.5	247,590	28.7	301,911	37.0	267,032	25.0	239,530	39.3
Urban Minor Art.	70.2	1,280,143	31.1	304,034	29.2	361,785	35.1	345,626	26.1	268,698	37.3
Urban Collector	106.3	795,137	25.5	182,989	23.9	226,385	28.9	217,917	20.7	167,846	32.2
Urban Local		1,366,704	24.3	307,469	24.4	403,813	25.5	375,223	22.0	280,199	26.3
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	129.6	2,193,303	35.2	555,055	34.2	576,815	36.7	606,712	33.2	454,721	37.8
Urban	241.9	6,758,553	33.7	1,582,203	31.9	1,955,636	37.7	1,773,851	28.2	1,446,863	39.8
County	371.5	8,951,856	34.0	2,137,258	32.5	2,532,452	37.5	2,380,562	29.3	1,901,584	39.3

				AM Peak		Midday		PM Peak		Night	
Gaston (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	4.6	173,345	66.0	40,551	63.6	57,947	67.5	39,304	64.3	35,543	68.2
Rural Principal Art.	6.8	186,963	43.5	45,572	37.2	51,248	57.7	48,539	33.0	41,604	57.9
Rural Minor Art.	12.9	102,839	47.5	25,425	45.6	29,266	48.8	27,342	46.0	20,805	50.3
Rural Major Collect.	36.0	302,051	42.8	77,846	37.9	80,829	46.5	80,350	41.4	63,027	47.5
Rural Minor Collect.	51.5	142,413	37.9	40,765	34.7	33,546	39.7	44,306	38.7	23,797	39.9
Rural Local		265,188	27.8	68,769	28.2	73,301	27.4	70,569	28.4	52,549	27.3
Urban Interstate	34.2	2,631,441	55.8	595,921	49.3	842,159	62.0	603,336	49.2	590,025	64.2
Urban Frwy/Exprwy	18.1	511,368	59.2	122,546	55.9	155,812	60.1	118,165	58.6	114,845	62.4
Urban Principal Art.	88.0	1,405,564	32.0	353,977	30.0	394,431	34.1	381,786	29.9	275,369	35.1
Urban Minor Art.	127.0	1,092,076	32.9	270,941	29.6	305,379	35.7	287,050	31.0	228,705	36.8
Urban Collector	70.5	320,624	24.5	73,805	24.2	92,980	25.1	81,766	21.7	72,073	28.2
Urban Local		1,074,323	24.1	239,152	23.6	335,390	24.5	270,202	23.4	229,579	25.1

Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	111.8	1,172,800	39.8	298,929	37.0	326,137	42.9	310,409	37.7	237,325	43.1
Urban	337.7	7,035,395	36.9	1,656,344	34.2	2,126,151	39.6	1,742,305	33.8	1,510,595	41.1
County	449.5	8,208,195	37.3	1,955,272	34.6	2,452,288	40.0	2,052,714	34.3	1,747,920	41.3

			AM Peak		Midday		PM Peak		Night	
Iredell (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	6.2	341,605	41.5	71,524	30.5	116,653	42.6	69,688	37.2	83,740	65.9
Rural Principal Art.	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Minor Art.	5.5	195,359	27.4	45,122	19.4	61,785	33.5	45,014	23.0	43,438	43.1
Rural Major Collect.	12.4	156,754	36.0	39,274	30.9	48,758	39.4	39,093	33.2	29,630	43.9
Rural Minor Collect.	23.4	292,129	32.1	71,000	28.4	86,579	34.9	73,826	28.4	60,724	39.8
Rural Local		537,571	26.6	128,210	26.0	160,761	27.0	133,955	25.5	114,645	28.3
Urban Interstate	22.9	908,188	48.5	184,700	39.3	305,381	49.2	181,981	43.5	236,127	64.8
Urban Frwy/Exprwy	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Principal Art.	6.6	163,995	31.8	39,019	30.1	45,904	34.5	42,825	28.4	36,247	35.5
Urban Minor Art.	17.5	194,885	32.3	48,224	29.2	57,558	34.5	48,711	30.9	40,391	35.7
Urban Collector	21.8	252,703	31.5	62,617	28.6	70,943	34.3	63,987	28.9	55,156	35.3
Urban Local		421,913	25.2	97,477	24.9	129,014	25.5	102,640	24.3	92,783	26.3
Urban HOV	5.7	172,937	49.1	46,856	40.8	64,320	65.3	47,022	40.0	14,739	69.8
Rural	47.5	1,523,418	31.1	355,131	26.6	474,535	33.3	361,575	28.1	332,176	38.9
Urban	74.6	2,114,621	36.3	478,893	32.1	673,120	38.9	487,166	32.7	475,442	42.8
County	122.1	3,638,039	33.9	834,023	29.5	1,147,655	36.3	848,742	30.6	807,619	41.1

			AM Peak		Midday		PM Peak		Night	
Lincoln (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	7.4	143,419	56.9	35,550	53.9	49,467	58.3	31,336	54.4	27,065	61.8
Rural Minor Art.	26.8	490,647	38.0	109,519	34.9	153,669	38.8	110,703	34.8	116,756	44.6
Rural Major Collect.	10.8	84,203	52.4	20,830	51.4	26,351	53.0	19,928	52.4	17,095	52.8
Rural Minor Collect.	32.3	225,154	37.8	56,828	34.6	70,220	39.2	59,359	37.2	38,748	42.1
Rural Local		850,355	25.7	207,846	23.4	256,657	26.6	210,652	25.7	175,199	27.6
Urban Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Frwy/Exprwy	29.6	645,600	66.3	167,924	65.8	193,493	66.6	152,130	66.3	132,053	66.4
Urban Principal Art.	8.0	144,712	33.1	33,321	29.5	45,522	34.6	32,811	30.5	33,059	39.0
Urban Minor Art.	31.3	378,119	35.2	89,917	32.5	116,571	36.9	87,423	32.8	84,208	39.3
Urban Collector	19.8	92,297	33.9	23,489	32.3	27,717	35.5	22,246	32.6	18,845	35.2
Urban Local		193,417	27.1	43,574	26.8	62,492	27.3	44,825	26.8	42,526	27.6
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Rural	77.2	1,793,779	32.0	430,573	29.3	556,364	33.2	431,979	31.0	374,863	35.2
Urban	88.6	1,454,145	41.9	358,226	40.7	445,795	42.7	339,435	40.4	310,690	44.1
County	165.7	3,247,924	35.8	788,799	33.5	1,002,159	36.9	771,414	34.6	685,553	38.7

				AM Peak		Midday		PM Peak		Night	
Mecklenburg	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	7.2	291,741	43.6	71,278	39.4	78,625	49.3	78,260	38.9	63,578	49.8
Rural Minor Art.	4.3	109,229	32.5	25,957	25.8	30,680	37.1	28,574	31.4	24,018	39.1
Rural Major Collect.	6.8	110,629	36.0	26,625	33.3	31,940	41.4	28,040	29.5	24,024	43.6
Rural Minor Collect.	16.6	265,241	30.4	64,588	25.8	74,794	37.0	71,944	25.4	53,915	39.2
Rural Local		603,041	25.5	145,855	24.6	166,524	26.8	170,944	23.8	119,718	27.5
Urban Interstate	160.4	10,301,844	48.0	2,256,259	41.5	3,117,867	56.4	2,367,678	38.0	2,560,040	60.1
Urban Frwy/Exprwy	140.5	8,890,535	48.9	2,008,212	42.9	2,657,511	59.7	2,117,797	36.6	2,107,015	64.9
Urban Principal Art.	203.4	6,827,847	22.8	1,574,521	19.8	2,007,945	28.1	1,737,432	16.8	1,507,949	33.3
Urban Minor Art.	232.4	5,690,042	21.8	1,333,299	18.6	1,684,324	27.5	1,535,228	16.6	1,137,192	31.9
Urban Collector	385.0	5,627,073	20.4	1,275,632	17.1	1,662,429	24.6	1,449,441	15.5	1,239,571	30.7
Urban Local		8,758,130	20.3	1,963,801	19.6	2,619,377	21.5	2,435,583	17.8	1,739,370	23.8
Urban HOV	68.8	1,827,442	46.9	552,514	44.2	484,762	58.7	601,215	39.7	188,951	62.4
Rural	35.0	1,379,881	30.3	334,303	27.7	382,563	33.5	377,762	27.2	285,253	34.9
Urban	1,190.5	47,922,914	28.1	10,964,237	24.9	14,234,215	33.1	12,244,374	21.8	10,480,088	38.5
County	1,225.5	49,302,795	28.2	11,298,540	25.0	14,616,778	33.1	12,622,136	21.9	10,765,341	38.4

				AM Peak		Midday		PM Peak		Night	
Rowan (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	9.7	183,782	58.5	50,915	58.0	53,035	59.0	49,447	58.2	30,385	59.2
Rural Minor Art.	10.2	126,757	61.2	28,971	60.3	37,396	61.5	29,454	60.3	30,936	62.4
Rural Major Collect.	58.7	510,102	52.7	133,811	51.1	139,611	53.8	137,870	51.8	98,810	55.1
Rural Minor Collect.	61.4	412,300	48.5	114,874	47.1	110,666	50.3	117,227	46.7	69,534	51.2
Rural Local		516,850	29.1	125,208	29.7	155,021	28.8	127,196	29.2	109,425	28.9
Urban Interstate	38.8	2,206,034	73.0	518,568	72.7	725,602	73.3	514,257	72.7	447,607	73.4
Urban Frwy/Exprwy	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Principal Art.	42.9	433,303	36.0	105,406	35.6	129,254	36.1	107,795	34.8	90,848	37.9

Urban Minor Art.	61.7	622,371	36.6	149,522	35.0	186,262	37.7	159,676	34.6	126,911	40.3
Urban Collector	126.5	672,097	36.1	164,661	35.3	192,422	36.8	176,423	35.0	138,591	37.7
Urban Local		712,209	26.4	160,354	26.4	221,022	26.4	178,226	26.3	152,607	26.7
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	140.0	1,749,792	42.5	453,778	42.7	495,730	42.4	461,194	42.5	339,090	42.6
Urban	269.8	4,646,015	44.3	1,098,511	43.8	1,454,562	45.4	1,136,377	42.7	956,564	45.4
County	409.9	6,395,806	43.8	1,552,289	43.4	1,950,292	44.6	1,597,571	42.6	1,295,654	44.7

				AM Peak		Midday		PM Peak		Night	
Union (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	28.4	545,084	58.3	155,053	58.9	155,980	58.2	127,836	57.4	106,215	58.5
Rural Minor Art.	13.3	94,818	42.5	29,654	41.1	16,870	44.4	35,363	42.1	12,931	44.4
Rural Major Collect.	108.4	987,572	42.4	248,405	38.3	285,238	45.3	249,940	40.8	203,989	46.5
Rural Minor Collect.	79.2	377,397	40.0	96,136	37.7	103,167	43.3	99,766	36.4	78,328	44.5
Rural Local		1,273,909	29.0	314,505	28.1	361,057	29.7	333,508	28.2	264,839	30.4
Urban Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Frwy/Exprwy	25.0	604,625	53.1	143,876	50.1	160,773	57.3	175,122	48.4	124,854	59.4
Urban Principal Art.	19.4	671,003	43.0	163,833	40.9	193,676	45.1	173,416	40.7	140,078	45.9
Urban Minor Art.	48.1	605,249	29.1	147,709	25.1	173,549	34.2	156,255	24.5	127,735	36.7
Urban Collector	73.4	855,402	29.1	208,616	25.8	239,884	33.3	221,351	24.5	185,551	36.3
Urban Local		1,372,286	26.1	319,065	24.7	404,177	27.2	357,805	24.9	291,239	28.0
Urban HOV	0.3	2,682	36.7	876	29.6	851	41.2	449	41.7	506	42.0
Rural	229.3	3,278,780	37.2	843,754	35.8	922,312	38.6	846,413	35.6	666,302	39.3
Urban	166.2	4,111,247	31.7	983,975	29.1	1,172,911	34.3	1,084,398	28.8	869,963	36.0
County	395.5	7,390,027	33.9	1,827,729	31.8	2,095,222	36.0	1,930,811	31.4	1,536,265	37.3

				AM Peak		Midday		PM Peak		Night	
York (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	24.6	1,347,351	58.2	323,936	52.8	428,081	64.8	312,154	51.2	283,181	65.8
Rural Principal Art.	6.1	154,963	32.4	36,717	24.7	49,406	44.5	38,287	23.7	30,552	53.8
Rural Minor Art.	19.2	396,444	31.6	97,653	27.8	115,290	36.7	99,617	26.6	83,884	39.1
Rural Major Collect.	46.3	436,431	35.7	109,350	31.8	128,096	39.8	108,353	31.4	90,632	43.1
Rural Minor Collect.	8.3	47,811	17.5	11,676	15.3	14,652	19.3	11,401	14.6	10,082	23.7

Rural Local		729,212	25.9	175,062	25.4	216,202	26.5	185,699	25.1	152,248	26.7
Urban Interstate	18.3	1,167,150	59.0	283,242	52.4	360,048	62.7	267,244	58.6	256,617	62.9
Urban Frwy/Exprwy	3.1	75,291	40.0	19,601	40.2	20,715	39.9	19,859	40.2	15,116	39.8
Urban Principal Art.	52.5	1,313,299	29.0	307,644	25.7	389,429	33.2	322,951	24.0	293,275	36.3
Urban Minor Art.	82.0	984,568	29.5	237,257	26.1	292,085	33.4	249,095	25.2	206,131	36.1
Urban Collector	75.3	417,830	23.6	103,733	23.0	121,239	27.0	109,045	18.8	83,814	29.0
Urban Local		918,172	24.6	204,220	24.1	287,388	24.8	229,154	24.3	197,410	25.2
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	104.5	3,112,213	37.2	754,394	33.9	951,727	41.4	755,512	32.7	650,581	42.6
Urban	231.3	4,876,309	31.4	1,155,697	28.9	1,470,903	34.4	1,197,347	27.5	1,052,363	36.3
County	335.8	7,988,523	33.4	1,910,090	30.7	2,422,630	36.8	1,952,859	29.3	1,702,943	38.5

		24 Hour		AM Peak		Midday		PM Peak		Night	
NC/SC NA	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	10.9	514,950	47.4	112,076	37.6	174,600	48.6	108,992	43.8	119,283	66.6
Rural Principal Art.	69.6	1,494,602	50.7	395,275	48.5	425,411	55.0	372,724	46.1	301,192	55.0
Rural Minor Art.	93.1	1,412,061	38.9	340,530	34.4	404,337	41.5	358,843	35.8	308,350	46.4
Rural Major Collect.	282.2	2,736,810	43.3	697,653	39.7	766,026	46.4	713,551	41.0	559,579	48.0
Rural Minor Collect.	314.6	2,104,577	37.9	545,391	35.0	573,657	41.1	582,841	34.9	402,688	43.4
Rural Local		4,828,753	27.4	1,180,597	26.5	1,390,425	27.9	1,259,092	26.8	998,639	28.6
Urban Interstate	284.5	18,308,014	52.4	4,095,568	46.2	5,652,751	59.7	4,235,305	43.5	4,324,389	62.9
Urban Frwy/Exprwy	213.1	10,652,127	50.4	2,442,558	44.9	3,167,590	60.0	2,563,213	38.9	2,478,767	64.6
Urban Principal Art.	405.5	10,702,488	25.8	2,517,668	23.0	3,118,643	30.7	2,743,097	20.0	2,323,080	34.9
Urban Minor Art.	588.1	9,862,885	25.3	2,343,646	22.1	2,885,429	30.3	2,619,971	20.1	2,013,839	34.1
Urban Collector	803.3	8,615,333	22.7	1,991,811	19.7	2,512,760	26.6	2,233,131	17.9	1,877,631	31.8
Urban Local		13,898,983	21.9	3,130,892	21.2	4,175,284	22.9	3,764,504	19.6	2,828,302	24.8
Urban HOV	74.8	2,003,061	47.1	600,246	43.8	549,933	59.4	648,686	39.7	204,196	62.8
Rural	770.5	13,091,753	35.2	3,271,522	33.1	3,734,456	36.9	3,396,044	33.4	2,689,731	38.5
Urban	2369.2	74,042,890	30.6	17,122,388	27.6	22,062,390	35.0	18,807,907	24.6	16,050,205	39.2
County	3139.7	87,134,643	31.2	20,393,911	28.4	25,796,846	35.3	22,203,951	25.7	18,739,936	39.1

Based on 2008 8-hour Non-attainment Boundary

2050: NC STIP 26-35

				AM Peak		Midday		PM Peak		Night	
Cabarrus (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	10.2	154,164	41.0	39,534	38.6	40,783	44.1	40,107	38.0	33,741	44.7
Rural Minor Art.	20.1	311,883	43.6	81,530	42.9	79,429	48.2	86,525	37.9	64,400	48.8
Rural Major Collect.	49.1	626,718	40.4	159,458	37.2	166,126	44.8	168,843	36.2	132,292	46.4
Rural Minor Collect.	50.2	431,167	37.8	110,705	35.6	106,510	41.9	128,756	33.6	85,196	44.4
Rural Local		874,405	27.3	210,725	26.7	245,153	27.9	234,338	26.7	184,189	28.2
Urban Interstate	28.2	2,361,973	56.3	558,956	49.3	701,195	67.3	582,456	46.2	519,366	68.3
Urban Frwy/Exprwy	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Principal Art.	37.2	1,134,198	30.1	264,004	27.5	327,816	36.2	286,411	23.0	255,966	39.0
Urban Minor Art.	70.2	1,382,632	29.6	322,759	27.5	396,436	34.3	371,385	24.0	292,053	37.0
Urban Collector	106.3	870,430	24.5	197,732	22.8	248,740	28.0	240,820	19.7	183,138	31.8
Urban Local		1,491,312	24.0	333,595	24.0	441,242	25.4	410,861	21.2	305,615	26.3
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	129.6	2,398,338	34.3	601,952	33.0	638,000	36.3	658,569	31.9	499,817	37.4
Urban	241.9	7,240,545	32.3	1,677,046	30.4	2,115,429	36.9	1,891,932	26.2	1,556,138	39.5
County	371.5	9,638,883	32.8	2,278,998	31.0	2,753,429	36.8	2,550,502	27.5	2,055,954	38.9

				AM Peak		Midday		PM Peak		Night	
Gaston (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	4.6	186,679	68.1	44,691	67.8	61,941	68.2	41,954	68.0	38,093	68.2
Rural Principal Art.	6.8	195,098	43.2	46,418	35.9	55,788	57.4	49,091	32.9	43,801	57.9
Rural Minor Art.	12.9	105,993	47.0	25,448	45.4	30,903	47.9	26,926	45.9	22,716	49.0
Rural Major Collect.	36.0	315,749	41.9	80,635	36.4	86,037	45.5	83,234	40.6	65,843	47.4
Rural Minor Collect.	51.5	137,168	37.3	37,455	33.2	34,372	39.7	42,152	38.4	23,189	39.8
Rural Local		274,416	27.9	70,641	28.3	78,015	27.7	72,148	28.4	53,612	27.2
Urban Interstate	34.2	2,773,653	56.2	628,047	49.6	899,805	61.1	622,341	50.7	623,460	64.2
Urban Frwy/Exprwy	18.1	520,447	59.3	123,221	56.5	159,477	60.2	120,054	58.0	117,695	62.4
Urban Principal Art.	88.0	1,471,940	31.7	368,861	29.5	420,019	33.9	394,557	29.6	288,504	34.9
Urban Minor Art.	127.0	1,126,757	32.5	276,730	28.9	320,584	35.4	293,361	30.5	236,082	36.8
Urban Collector	70.5	329,620	24.5	75,217	24.1	96,215	25.2	84,072	21.7	74,116	28.0
Urban Local		1,116,061	24.0	247,465	23.3	348,849	24.5	280,478	23.1	239,269	25.1

Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	111.8	1,215,102	39.8	305,288	36.6	347,056	42.8	315,504	37.6	247,253	43.2
Urban	337.7	7,338,478	36.8	1,719,541	34.0	2,244,949	39.5	1,794,862	33.7	1,579,126	41.0
County	449.5	8,553,580	37.2	2,024,830	34.3	2,592,005	39.9	2,110,367	34.2	1,826,379	41.3

			AM Peak		Midday		PM Peak		Night	
Iredell (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	6.2	349,451	39.4	72,862	28.3	119,174	39.1	69,338	36.8	88,077	64.5
Rural Principal Art.	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Minor Art.	5.5	206,602	24.9	47,030	17.2	67,021	29.7	45,840	20.6	46,711	42.9
Rural Major Collect.	12.4	161,626	34.9	39,873	29.7	51,220	37.9	39,544	32.1	30,989	43.7
Rural Minor Collect.	23.4	309,041	32.0	75,055	27.9	91,207	34.5	78,736	29.0	64,043	39.9
Rural Local		556,897	27.0	134,001	25.9	166,275	27.4	137,423	26.4	119,198	28.5
Urban Interstate	22.9	925,144	46.9	188,018	37.8	311,476	46.5	180,907	43.2	244,743	63.6
Urban Frwy/Exprwy	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Principal Art.	6.6	171,587	31.3	40,964	29.5	49,139	34.2	43,345	27.6	38,140	35.1
Urban Minor Art.	17.5	205,806	31.7	50,280	28.1	61,356	34.1	50,422	30.2	43,748	35.6
Urban Collector	21.8	259,241	31.6	64,145	28.3	74,302	34.2	64,285	29.7	56,508	35.2
Urban Local		446,131	25.2	102,808	24.6	137,544	25.5	107,790	24.4	97,990	26.4
Urban HOV	5.7	183,551	49.4	48,814	42.6	69,257	60.2	48,026	41.1	17,454	69.8
Rural	47.5	1,583,618	30.4	368,822	25.4	494,897	32.2	370,881	28.0	349,017	39.0
Urban	74.6	2,191,461	35.7	495,029	31.4	703,074	37.7	494,774	32.6	498,584	42.5
County	122.1	3,775,079	33.3	863,851	28.6	1,197,971	35.2	865,656	30.4	847,601	41.0

			AM Peak		Midday		PM Peak		Night	
Lincoln (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	7.4	153,084	59.4	37,803	58.4	53,206	60.6	32,977	56.6	29,097	61.8
Rural Minor Art.	26.8	514,148	37.1	116,435	33.5	160,519	38.2	114,942	34.0	122,251	43.5
Rural Major Collect.	13.6	166,407	52.5	43,765	51.2	49,979	53.5	42,162	52.0	30,499	53.7
Rural Minor Collect.	32.3	240,574	37.6	60,653	33.6	74,802	38.8	58,475	37.1	46,644	42.7
Rural Local		898,458	25.3	213,715	22.6	274,652	26.4	220,491	25.2	189,601	27.6
Urban Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Frwy/Exprwy	29.6	687,881	66.1	177,688	65.6	210,456	66.4	161,798	66.2	137,939	66.3
Urban Principal Art.	8.0	141,345	39.7	34,476	38.1	44,386	40.0	33,182	38.9	29,301	42.1
Urban Minor Art.	31.3	395,557	36.3	94,559	33.8	123,123	37.8	92,100	34.1	85,776	39.8
Urban Collector	20.6	120,790	36.1	30,461	34.4	36,480	37.4	29,044	35.3	24,805	37.5
Urban Local		200,386	27.7	44,482	27.4	64,524	27.7	46,498	27.4	44,881	28.4
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Rural	80.0	1,972,670	32.1	472,371	29.1	613,158	33.4	469,047	31.1	418,093	35.4
Urban	89.4	1,545,959	43.6	381,666	42.8	478,969	44.2	362,621	42.6	322,702	45.0
County	169.4	3,518,629	36.3	854,037	33.9	1,092,127	37.4	831,669	35.2	740,795	39.0

				AM Peak		Midday		PM Peak		Night	
Mecklenburg	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	7.2	309,152	41.7	73,726	37.3	84,960	49.0	82,658	35.3	67,808	49.5
Rural Minor Art.	4.3	115,854	31.9	27,286	24.9	32,607	37.1	30,305	30.2	25,657	39.3
Rural Major Collect.	6.8	119,629	35.1	28,669	34.0	34,843	40.1	29,832	27.5	26,285	42.7
Rural Minor Collect.	16.6	291,346	27.6	69,325	21.5	83,716	35.6	78,046	22.7	60,259	38.9
Rural Local		691,991	23.4	164,800	22.0	194,461	25.1	194,999	21.3	137,730	26.8
Urban Interstate	161.2	10,589,169	46.8	2,288,359	40.0	3,242,232	55.3	2,397,530	36.3	2,661,048	59.7
Urban Frwy/Exprwy	140.5	9,222,872	47.7	2,034,406	41.4	2,808,221	57.9	2,158,007	35.2	2,222,237	64.5
Urban Principal Art.	203.4	7,196,712	22.1	1,645,896	19.2	2,135,225	27.3	1,821,888	16.0	1,593,703	33.0
Urban Minor Art.	235.2	6,003,039	21.0	1,390,421	18.0	1,796,091	26.7	1,610,809	15.6	1,205,718	31.7
Urban Collector	385.9	5,846,744	19.6	1,312,102	16.5	1,737,234	23.5	1,500,171	14.7	1,297,237	30.0
Urban Local		9,262,339	19.7	2,068,077	19.1	2,775,279	21.0	2,579,583	17.1	1,839,401	23.6
Urban HOV	79.8	2,069,735	46.3	631,579	42.8	544,679	59.2	683,217	39.3	210,259	62.3
Rural	35.0	1,527,973	28.0	363,806	24.9	430,587	31.7	415,840	24.4	317,740	34.1
Urban	1,205.9	50,190,611	27.2	11,370,840	24.1	15,038,962	32.2	12,751,206	20.8	11,029,603	38.0
County	1,240.9	51,718,583	27.2	11,734,646	24.1	15,469,549	32.2	13,167,046	20.9	11,347,343	37.9

				AM Peak		Midday		PM Peak		Night	
Rowan (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	14.3	232,846	56.8	62,416	56.1	66,442	57.7	62,998	56.0	40,989	57.5
Rural Minor Art.	10.2	128,451	60.8	30,114	59.8	36,544	61.5	30,770	59.6	31,023	62.2
Rural Major Collect.	58.7	536,453	52.2	137,772	50.3	150,664	53.3	142,082	51.1	105,935	54.7
Rural Minor Collect.	61.4	443,659	47.7	120,923	45.9	122,253	50.0	122,365	45.6	78,119	51.1
Rural Local		549,368	29.4	132,797	29.9	163,879	29.1	138,300	29.8	114,391	29.0
Urban Interstate	38.8	2,322,207	72.9	547,543	72.3	765,895	73.3	536,794	72.4	471,976	73.4
Urban Frwy/Exprwy	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Principal Art.	43.5	442,399	35.2	107,889	35.0	130,090	35.3	113,027	33.8	91,393	37.3

Urban Minor Art.	69.3	637,259	35.8	155,568	34.5	189,133	36.5	165,760	34.0	126,797	38.9
Urban Collector	126.4	720,565	35.8	173,896	34.8	208,504	36.7	187,580	34.3	150,584	37.6
Urban Local		771,977	26.4	173,452	26.4	239,137	26.4	194,093	26.2	165,296	26.7
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	144.6	1,890,777	42.5	484,022	42.3	539,781	42.6	496,516	42.3	370,457	43.0
Urban	278.0	4,894,407	43.8	1,158,348	43.3	1,532,758	45.0	1,197,254	42.0	1,006,047	45.0
County	422.7	6,785,184	43.5	1,642,370	43.0	2,072,540	44.4	1,693,770	42.1	1,376,504	44.4

				AM Peak		Midday		PM Peak		Night	
Union (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural Principal Art.	28.4	588,236	58.1	166,489	58.4	171,176	58.3	135,169	57.1	115,402	58.6
Rural Minor Art.	13.3	105,461	41.7	32,471	39.8	19,945	44.5	38,233	41.0	14,813	44.4
Rural Major Collect.	108.4	1,041,542	41.7	257,702	37.4	301,381	44.6	263,420	39.9	219,038	46.1
Rural Minor Collect.	79.2	412,036	39.6	105,751	37.2	113,123	42.7	109,125	36.0	84,036	44.4
Rural Local		1,371,129	28.9	337,941	27.9	387,784	29.5	360,352	28.1	285,051	30.3
Urban Interstate	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Urban Frwy/Exprwy	25.0	645,153	52.0	150,328	48.3	175,512	57.0	183,301	46.6	136,013	59.6
Urban Principal Art.	19.4	721,100	43.4	179,347	41.3	205,660	44.7	188,542	42.6	147,551	45.6
Urban Minor Art.	48.1	632,476	28.3	153,470	24.1	183,332	33.3	161,738	23.6	133,937	36.4
Urban Collector	73.4	892,464	28.3	215,481	24.8	251,414	32.8	230,446	23.6	195,122	35.9
Urban Local		1,444,362	25.8	336,039	24.3	425,029	27.1	376,822	24.5	306,472	27.9
Urban HOV	0.3	2,843	34.7	924	26.0	921	40.7	446	41.7	552	42.0
Rural	229.3	3,518,404	36.8	900,355	35.3	993,409	38.3	906,300	35.2	718,340	39.1
Urban	166.2	4,338,398	31.2	1,035,589	28.5	1,241,867	34.0	1,141,294	28.3	919,648	35.9
County	395.5	7,856,802	33.5	1,935,944	31.3	2,235,276	35.8	2,047,594	31.0	1,637,988	37.2

				AM Peak		Midday		PM Peak		Night	
York (NA part)	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	24.6	1,434,041	55.8	338,334	48.5	462,266	63.5	327,431	48.1	306,010	65.9
Rural Principal Art.	6.1	162,834	30.1	37,865	22.9	52,397	41.4	39,327	21.1	33,246	53.3
Rural Minor Art.	19.2	399,102	30.3	99,765	26.6	113,013	35.6	102,569	25.2	83,755	38.8
Rural Major Collect.	46.3	469,220	34.8	117,340	30.5	137,063	39.4	117,018	30.2	97,798	42.9
Rural Minor Collect.	8.3	50,613	17.2	12,513	15.0	15,452	19.2	11,976	14.3	10,673	23.3

Rural Local		789,156	25.8	190,486	25.3	232,917	26.5	201,357	25.0	164,396	26.7
Urban Interstate	18.3	1,242,884	58.2	295,689	50.9	389,040	62.5	279,436	57.2	278,720	63.0
Urban Frwy/Exprwy	3.1	79,564	40.0	20,299	40.1	21,991	39.9	20,963	40.2	16,311	39.9
Urban Principal Art.	52.5	1,358,159	28.1	318,302	24.7	401,801	32.6	332,281	22.8	305,776	35.8
Urban Minor Art.	82.0	1,027,213	28.8	246,363	25.3	303,128	33.0	260,676	24.5	217,044	35.9
Urban Collector	75.3	443,588	23.5	109,138	22.4	128,096	26.9	117,473	19.0	88,882	28.9
Urban Local		968,474	24.5	215,700	23.9	301,482	24.8	242,188	24.3	209,104	25.2
Urban HOV	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rural	104.5	3,304,966	36.2	796,304	32.4	1,013,108	40.8	799,677	31.3	695,878	42.7
Urban	231.3	5,119,882	30.9	1,205,490	28.1	1,545,538	34.2	1,253,017	26.8	1,115,837	36.2
County	335.8	8,424,849	32.8	2,001,794	29.7	2,558,646	36.5	2,052,693	28.4	1,811,715	38.4

				AM Peak		Midday		PM Peak		Night	
NC 2008 8 hr AQ NA	**Miles**	**VMTassn**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**	**VMT**	**Spd**
Rural Interstate	10.9	536,130	46.2	117,553	36.4	181,115	45.8	111,292	44.5	126,170	65.6
Rural Principal Art.	74.2	1,632,580	50.2	426,386	47.9	472,355	55.0	403,001	45.0	330,838	54.8
Rural Minor Art.	93.1	1,488,393	37.4	360,315	32.5	426,967	40.0	373,541	34.2	327,571	45.7
Rural Major Collect.	285.1	2,968,125	42.7	747,874	39.0	840,250	45.8	769,119	40.0	610,882	47.7
Rural Minor Collect.	314.6	2,264,990	36.9	579,867	33.3	625,983	40.6	617,654	33.6	441,486	43.4
Rural Local (est)		5,216,663	26.9	1,264,621	25.8	1,510,219	27.7	1,358,051	26.2	1,083,771	28.5
Urban Interstate	285.2	18,972,147	51.4	4,210,924	44.9	5,920,603	58.7	4,320,027	42.2	4,520,594	62.7
Urban Frwy/Exprwy	213.1	11,076,353	49.2	2,485,643	43.5	3,353,666	58.4	2,623,160	37.6	2,613,884	64.2
Urban Principal Art.	406.1	11,279,281	25.2	2,641,437	22.5	3,312,335	30.0	2,880,951	19.3	2,444,558	34.6
Urban Minor Art.	598.6	10,383,527	24.5	2,443,786	21.4	3,070,055	29.7	2,745,574	19.0	2,124,112	33.9
Urban Collector	804.9	9,039,853	22.0	2,069,035	19.1	2,652,890	25.7	2,336,418	17.1	1,981,510	31.3
Urban Local		14,732,569	21.4	3,305,918	20.8	4,431,603	22.6	3,996,124	18.9	2,998,924	24.6
Urban HOV	85.8	2,256,130	46.5	681,317	42.7	614,857	59.3	731,690	39.5	228,266	62.8
Rural	777.9	14,106,882	34.5	3,496,616	32.1	4,056,889	36.4	3,632,659	32.5	2,920,718	38.3
Urban	2393.7	77,739,859	29.7	17,838,060	26.8	23,356,008	34.3	19,633,944	23.6	16,911,847	38.9
County	3171.6	91,846,741	30.4	21,334,675	27.6	27,412,897	34.6	23,266,603	24.6	19,832,565	38.8

Appendix F: MOVES Emissions Summary Spreadsheet

Charlotte Regional TPO / Rocky River RPO							
Year	Pollutant	Mecklenburg County (kg/day)	Union County Nonattainment Area (kg/day)	Iredell County Nonattainment Area (kg/day)	Charlotte Regional TPO/ Rocky River RPO Total (kg/day)	Emissions Budget (kg/day)	Comparison to Budget (negative indicates under budget) kg/day
2026	NOX	11,746	2,034	1,385	15,165	**22,417**	**-7,252**
2035	NOX	5,794	865	509	7,168	**22,417**	**-15,249**
2045	NOX	4,306	647	354	5,307	**22,417**	**-17,110**
2050	NOX	4,293	642	345	5,280	**22,417**	**-17,137**
2026	VOC	7,244	1,575	860	9,679	**13,818**	**-4,139**
2035	VOC	6,251	1,160	522	7,933	**13,818**	**-5,885**
2045	VOC	5,697	1,041	430	7,168	**13,818**	**-6,650**
2050	VOC	5,423	982	402	6,807	**13,818**	**-7,011**

Cabarrus-Rowan MPO						
Year	Pollutant	Cabarrus County Nonattainment Area (kg/day)	Rowan County Nonattainment Area (kg/day)	Cabarrus-Rowan MPO Total (kg/day)	Emissions Budget (kg/day)	Comparison to Budget (negative indicates under budget) kg/day
2026	NOX	2,323	1,997	4,320	**6,543**	**-2,223**
2035	NOX	968	710	1,678	**6,543**	**-4,865**
2045	NOX	770	516	1,286	**6,543**	**-5,257**
2050	NOX	788	510	1,298	**6,543**	**-5,245**
2026	VOC	1,684	1,443	3,127	**4,753**	**-1,626**
2035	VOC	1,287	897	2,184	**4,753**	**-2,569**
2045	VOC	1,189	779	1,968	**4,753**	**-2,785**
2050	VOC	1,158	743	1,901	**4,753**	**-2,852**

Gaston-Lincoln-Cleveland MPO						
Year	Pollutant	Gaston County Nonattainment Area (kg/day)	Lincoln County Nonattainment Area (kg/day)	Gaston-Lincoln-Cleveland MPO Total (kg/day)	Emissions Budget (kg/day)	Comparison to Budget (negative indicates under budget) kg/day
2026	NOX	2,826	1,106	3,932	**5,117**	**-1,185**
2035	NOX	973	387	1,360	**5,117**	**-3,757**
2045	NOX	669	279	948	**5,117**	**-4,169**
2050	NOX	647	278	925	**5,117**	**-4,192**
2026	VOC	1,831	798	2,629	**3,583**	**-954**
2035	VOC	1,169	509	1,678	**3,583**	**-1,905**
2045	VOC	952	455	1,407	**3,583**	**-2,176**
2050	VOC	887	431	1,318	**3,583**	**-2,265**

Appendix G: MOVES Emissions Analysis Results

To obtain copies of the MOVES Emissions Analysis Results, please contact Todd Pasley at todd.pasley@ncdenr.gov

Appendix H: Public Participation Policies

GASTON-CLEVELAND-LINCOLN MPO
Metropolitan Planning Organization

PUBLIC PARTICIPATION PLAN FOR THE GASTON-CLEVELAND-LINCOLN METROPOLITAN PLANNING ORGANIZATION

Approved
November 27, 2012

Amended and Approved
March 26, 2015
July 28, 2016
September 24, 2020

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PUBLIC PARTICIPATION PLAN FOR THE GASTON-CLEVELAND-LINCOLN MPO AREA

Study Area Profile and the Planning Process

Gaston, Cleveland, and Lincoln counties are within the Piedmont region of North Carolina and are part of the Charlotte-Gastonia-Concord Consolidated Metropolitan Statistical Area. The region is a mix of rural, suburban, and urban development and character with a sprawling urban core that includes over one-third of the persons living in the three counties. One of the unique features of this urban area is the number of incorporated municipalities. Including Gastonia, which is the largest city, there are 18 municipalities participating in the governance of the GCLMPO.

The U.S. Code of Federal Regulations, 23 CFR Section 450.316 guides the development of public participation plans for transportation planning process. The United States Department of Transportation, through the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) require:

> "...each urbanized area, as a condition to the receipt of Federal capital or operating assistance, have a continuing, cooperative and comprehensive transportation planning process that results in plans and programs consistent with the comprehensive planned development of the urbanized area"

These federal regulations require a single agency be responsible for the implementation of the urban transportation planning process in each urbanized area. This agency is designated as the Metropolitan Planning Organization (MPO) for the study area. In the Gastonia Urbanized Area, this function is fulfilled by the Gaston-Cleveland-Lincoln Metropolitan Planning Organization Board and is advised by the Technical Coordinating Committee (TCC). The Memorandum of Understanding (MOU) states voting members are elected officials appointed by their respective board or council to serve as each jurisdictions representative. The TCC are members of the individual member governments and NCDOT staff that review the technical aspects of all transportation planning including roads, greenways, transit and bicycle and pedestrian planning.

The Board ensures that a continuing, cooperative and comprehensive (3C) planning process exists in the study area. The Federal Register states that: "The urban transportation planning process shall include the development of a transportation plan consisting of a transportation systems element for each mode out to twenty (20) years. The transportation plan shall be reviewed every four (4) years or earlier if needed to confirm its validity and its consistency with current transportation and land use conditions."

For the Gaston-Cleveland-Lincoln MPO area, the North Carolina Department of Transportation has led the development of Thoroughfare Plans, now known as Comprehensive Transportation Plans (CTPs). However, MPO staff leads the development of Metropolitan Transportation Plans (MTPs), project prioritizations for Transportation Improvement Program (TIP) development, and a range of smaller transportation plans and programs. This work frequently involves travel demand model development, which can take months to calibrate. These models are used to evaluate the various alternatives proposed during the planning process. The local planners and MPO staff provide demographic information and alternatives needed for the modeling. Much of this work is performed in coordination with the City of Charlotte Department of Transportation (CDOT), who

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has been responsible for managing the Metrolina Regional Travel Demand Model (MRM) since its inception. The decision to have one (1) agency, CDOT, perform this work is to better provide the uniform and consistent data collection and output necessary for regional compliance for plan development and conformity determination reports for demonstrating progress in addressing Ozone non-attainment as established by US Environmental Protection Agency.

GCLMPO Contact List

The MPO will maintain a distribution list of all Technical Coordinating Committee (TCC) and Board members, their alternates and non-voting members stipulated in the MPO's MOU and bylaws, who shall be apprised of all upcoming meetings and opportunities for comment on MPO plans and related documents. These TCC and Board rosters will include representatives of local governments as well as the NCDOT, FHWA, FTA and other local transportation agencies, such as transit, airports and non-motorized modes.

The MPO will maintain an e-mail and mailing list of any interested person or organization who wishes to be made aware of all upcoming meetings, projects and opportunities for comment. The MPO will make specific attempts to include representatives of the following groups:

- Freight and Economic Development: Freight shippers, providers of freight transportation services, and economic development professionals;
- Environmental: Federal, state, and local environmental protection organizations and advocates;
- Land use: Land use planners;
- Aviation: Area airport representatives;
- Non-automotive Transportation: Bicycle and pedestrian advocates, planners, and users;
- Public Transportation: Public transportation, representatives of disabled persons, representatives of users of public transportation, governmental and non-profit providers of non-emergency medical transportation;
- Elderly, disabled, minority, limited English proficiency (LEP) populations; advocacy groups, etc.

Public Notice and Comment Periods

The MPO will provide adequate notice of upcoming meetings, as well as duration to public input and comment periods, in order to allow affected parties to review materials and submit comments. The public and interested parties will be notified by means listed under "Strategies to Solicit Public Input."

The MPO will provide a minimum of seven (7) days' notice for all upcoming public meetings, and all public comment periods will be 30 days, unless otherwise noted in this Public Participation Plan. Public comments will be accepted via in-person meetings, USPS mail, and/or by virtual means (email, Online GIS platforms, etc.).

All public comment provided to the MPO will be reviewed by the MPO staff and conveyed to the Technical Coordinating Committee (TCC) and MPO Board for consideration.

A written response to public comments, if warranted, will be made within 30 days after the TCC and MPO Board have reviewed the comments.

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MPO Public Input and Comment Activities

All TCC and Board meetings are open to the public and include a public comment period. Public input or other participation is encouraged and welcomed at both the TCC and MPO Board meetings and will be allowed up to three (3) minutes per person or five (5) minutes per group. The following processes include, but are not limited to projects, project lists, programs, plans and policy updates or development necessitating public comment or input:

1. **Transportation Improvement Program (TIP)**
   The MPO will solicit public input at the beginning of the Transportation Improvement Program (TIP) development cycle to update the MPO's candidate project list as well as the project ranking process for submittal to the NCDOT for consideration in developing the Statewide TIP (STIP). In addition, the MPO will solicit public input during the local input point assignment process for Regional Impact and Division Needs projects. The public comment periods for both Regional Impact and Division Needs Tiers will total no less than thirty (30) days. More information can be found in the GCLMPO's Local Input Point Methodology, located on the MPO's website.

2. **Metropolitan Transportation Improvement Program (MTIP)**
   The MPO will solicit public input when adopting modifications to the local Metropolitan TIP (MTIP) periodically *when a formal amendment is required*. Public input will not be solicited for administrative modifications to the MTIP.

   Formal/Major Amendments require documentation of a 30-day public review and public comment opportunity at the TCC and MPO Board meetings. Also, the amendment may require re-demonstration of fiscal constraint and local transportation conformity determination. Fiscal constraint may be shown by either the project cost impact being less than 5% of the expected annual budget or by showing other project cost reductions and/or revenue increases within the affected fiscal year(s).

   Examples of Formal Amendments:
   - Change in a unique project phase cost beyond a predetermined threshold; increases in highway projects that exceed both $2 million and 25% of the original cost and may affect fiscal constraint and changes (increases or decreases) in transit projects that exceed either $1 million or 25% of the original project cost;
   - Any addition or deletion of a federally funded project to the first four (4) years of the Program;
   - Addition or deletion of any regionally significant project into the first four (4) years of the Program;
   - Change in project design or scope that significantly changes the termini or project type, purpose, or number of through lanes on a non-exempt (for transportation purposes) project;
   - Any addition, deletion or significant modification of non-traditional funding source to a project (traditional sources of revenue include federal, state, or local government tax revenues. Non-traditional sources include state bonding and/or private participation);
   - Project schedule shifts that move ROW, major capital acquisitions, or construction authorization dates either into or out of the four (4) year STIP time window;

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- Project schedule shifts in years one (1) through four (4) that move project completion dates across Horizon Years as determined by the local Metropolitan Transportation plan;

Administrative Modifications do not require documentation of public review or comment, re-demonstration of fiscal constraint, or a transportation conformity determination.

Examples of Administrative Modifications:

- Any change to projects in years five (5) or later of the STIP;
- Minor change to project descriptions, scopes, sponsor funding;
- Minor cost increases in highway projects that do not exceed both $2 million and 25% of the original project cost;
- Minor cost change (increase or decrease) in transit projects that do not exceed either $1 million or 25% of the original project cost;
- Addition or deletion of a state funded project that is determined to not be regionally significant;
- An existing project or project segment (project break) is sub-divided into two (2) or more sub-segments without changing the overall project scope or description and both pieces remain in the first four (4) year period of an approved STIP;
- Schedule changes that move project authorization dates within the first four (4) year STIP time window and do not affect local air quality conformity findings;
- Funding source changes between traditional funding sources (i.e. substituting available Congestion Mitigation Air Quality (CMAQ) funds for FTA Section 5307 formula transit funds);
- Projects approved for Emergency Relief funds do not generally have to be included in the STIP, so any changes made for emergency projects may be considered minor modifications.

State funded projects are amended when the fiscal year changes or when there is a significant change in the project description. Unless the project is determined to be regionally significant for transportation conformity purposes these amendments are approved solely by the State Board of Transportation. Local approval of these changes is desired but not legally required. The GCLMPO may treat these as Administrative Modifications if the Board so chooses. If there is a change to a state funded project that is regionally significant this requires a new transportation conformity determination and this determination must be made before the amendment can be processed. The state public notification process will be the same for state funded projects as it is for federal-aid projects.

3. **Unified Planning Work Program (UPWP) Development:** The MPO will solicit input on the draft UPWP outlining the work tasks for the upcoming fiscal year following the posting of the TCC agenda, seven (7) days prior to the meeting, allowing a minimum of fourteen (14) days for public comment prior to the adoption by the Board. The same will apply for amendments to the UPWP.

4. **Comprehensive Transportation Plan (CTP) Development:** The MPO may choose to identify a steering committee comprised of members of the public as well as the TCC and MPO Board to oversee a significant update of a CTP. This update may involve periodic public input meetings to help guide the committee's work. For amendments to the CTP, please reference the CTP Amendment Policy. Two types of amendments may be requested: Administrative and

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Procedural. Administrative Amendments do not require public involvement. Procedural Amendments require a full public engagement process, including a thirty (30) day public comment period, and one (1) public meeting. The MPO will also accept public comments at the MPO TCC and Board meetings for Procedural Amendments.

5. **Metropolitan Transportation Plan (MTP):** MPO staff will release a draft MTP and supporting conformity documents for 30-day public comment periods. The two (2) documents will be presented to the public at a series of public meetings with one (1) meeting each in Gaston, Cleveland and Lincoln counties. Verbal, written and email comments will be received and presented to the TCC and MPO Board for consideration. The TCC and MPO Board will recommend and approve the MTP and corresponding conformity report at their first meeting following a 30-day comment period. Major amendments to the MTP, including conformity (if needed), will also be released for public comment for thirty (30) days and a public comment opportunity given at the TCC and MPO Board meetings.

6. **Public Participation Plan (PPP):** Formal amendments to the PPP require documentation of a 45-day public review, public comment opportunity and a public meeting. (23 CFR 450.316 (3))

7. **Performance Measures:** The MPO will seek public input via a 30-day public comment period when initially adopting performance measures. Subsequent amendments will be announced via the TCC and Board agenda packets seven (7) days prior to a meeting.

Title VI Policy Statement

It is the policy of GCLMPO, as a federal-aid recipient, to ensure that no person shall, on the ground of race, color, national origin, Limited English Proficiency, sex, age, or disability, (and low-income, where applicable), be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any of our programs and activities, as provided by Title VI of the Civil Rights Act of 1964, Executive Orders 12898 and 13166, the Civil Rights Restoration Act of 1987, and other pertinent nondiscrimination authorities.

If you feel you have been subjected to discrimination, you may file a complaint. Allegations of discrimination should be promptly reported to our Title VI Coordinator.

Randi Gates
150 S. York St. Gastonia, NC 28052
704-854-6604
randig@cityofgastonia.com

The GCLMPO Title VI Program Plan can be accessed at www.gclmpo.org/TitleVI. To respond to the ever-changing demographics of our population we must use a range of methods to reach all populations. The end goal is to involve minority, low-income and limited English proficiency populations in the transportation decision-making process. To accomplish this, we must solicit adequate, effective, and meaningful participation by understanding unique needs, cultural perspectives and financial limitations of different socioeconomic groups.

The MPO attempts to increase participation of these groups by translating public input documents into Spanish and by holding multiple meetings.

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Public Participation Processes and Strategies

The GCLMPO commits to the following strategies, as appropriate, for effective public participation in transportation planning in its study area.

- **Newspapers:** The GCLMPO will send news releases to major newspapers of record in each of the three counties. These news releases will be sent at least seven (7) days in advance of any public meeting pertaining to revised or new planning documents as required.
- **Legal Advertisements/Notice of Public Meetings:** Once per year the GCLMPO will advertise, in the major newspaper of record in each of the three (3) counties, all MPO Board and TCC meeting dates (for the calendar year) including the website address and physical location where the agendas will be available for review. If a meeting date changes, a new legal advertisement will be released.
- **Posting of Public Meetings for major planning documents:** The GCLMPO will distribute news releases, post on the GCLMPO website and email via the GCLMPO Contact List. In addition, the GCLMPO will post to traditional outlets such as municipal offices with populations greater than 3,000 persons as of the 2010 Census.
- **Social Media:** The GCLMPO will maintain a presence on various social media websites including Facebook and Twitter where upcoming meetings as well as news and updates will be posted regularly.
- **Internet:** The GCLMPO will maintain a Section 508/Americans with Disabilities Act (ADA) compliant website. All programs and projects developed by the MPO will be posted to the website (www.gclmpo.org). Hyperlinks to the NCDOT, local governments and other relevant transportation related programs or projects will be included on the website. The website will include announcements of upcoming meetings and opportunities for public input. This Public Participation Plan will be included on the website.
- **Public Participation Email List:** The MPO will maintain an e-mail list of any interested person or organization who wishes to be made aware of all upcoming meetings, projects and opportunities for public comment. You can sign up for this list on the MPO's website.
- **Meeting Locations:**
    a. The GCLMPO will attempt to hold public comment and input meetings and utilize bulletin boards in public and/or government buildings (City Halls, Public Libraries, etc.) and other media forms for information dissemination and will attempt to notify Title VI population groups of meetings. In some instances, it may be necessary to hold public meetings virtually due to extenuating circumstances such as a Governor-declared state of emergency, local emergencies or severe inclement weather.
    b. The GCLMPO will update its website and social media regarding meeting locations, method of meeting and possible meeting location changes when possible as soon as changes are determined by the Chairman.
    c. MPO meetings: At the Gastonia Police Department; 200 Long Avenue; Gastonia, NC unless otherwise advertised. In some instances, it may be necessary to hold meetings virtually due to extenuating circumstances such as a Governor-declared state of emergency, local emergencies or severe inclement weather. If changes need to be made to the location or method of meeting the public will be notified at least seven (7) days in advance.
    d. TCC meetings: Gaston County Administration Building; Room 3A; 128 West Main Avenue, Gastonia, NC unless otherwise advertised. In some instances, it may be

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necessary to hold meetings virtually, due to extenuating circumstances such as a Governor-declared state of emergency, local emergencies or severe inclement weather. If changes need to be made to the location or method of meeting the public will be notified at least seven (7) days in advance.

- **Program and Sub-Committee meetings:** To the extent possible, GCLMPO meetings will be held in ADA-accessible locations along scheduled public transportation routes.
- **Meeting Format:** the MPO will employ visualization techniques to describe metropolitan transportation plans, TIPs, and other related documents. This will typically mean displaying information as maps, graphs, tables and charts in addition to written documents. MPO staff will present information verbally as well as through printed materials.
- **Meeting Times for TCC and MPO Board Meetings**: Regular meetings for both GCLMPO boards will be held bi-monthly beginning in January and in each odd-numbered month of the year, unless otherwise determined by the Board. The MPO Board will typically meet at 6:30 pm on the fourth Thursday of the month, unless otherwise advertised. The TCC will meet regularly at 10:00 am on the second Wednesday of the odd-numbered months of the year, unless otherwise advertised.
- **Board Meeting Agenda Packets -** The agenda will be electronically transmitted and posted on the MPO webpage at least seven (7) days in advance of any Board meetings. If any person or organization wishes to receive a hard copy they can request this by contacting GCLMPO staff in advance of the meeting.
- **Meeting Times for Public Participation Meetings:** MPO staff will work to schedule meetings at times convenient to the general public, with both day and evening meetings scheduled when possible.
- **Coordination with the NCDOT and Other Agencies:** The GCLMPO will coordinate with the NCDOT and other related agencies whenever possible in order to maximize the effectiveness of concurrent public outreach and public comment events and processes.
- **Translation:** The GCLMPO will provide translation of any requested documents into another language within a reasonable period of time.
- **Environmental Justice (EJ):** The MPO will distribute announcements of upcoming meetings and opportunities for public input to persons or organizations identified in the Title VI Program Plan.

Monitoring, Evaluation and Updates

GCLMPO staff will evaluate the effectiveness of this Public Participation Plan (PPP) a minimum of every two (2) years, or if modifications are necessary. The results of this evaluation will be presented to the TCC and Board for their feedback, recommendation and adoption of a modified PPP if necessary.

While this PPP does not list specific performance criteria we will track the number of attendees at public comment meetings, tracking the frequency of and geographic location of public meetings, tracking visitor trends on the MPO website, the number of comments received from the public, or the public comment period and any personal information provided.

Any recommended updates to this plan shall be available to the public for forty-five (45) calendar days before the revised document is adopted by the MPO. Copies of the updated public participation plan shall be distributed based on this policy and a copy provided to the NCDOT, FHWA and FTA for their records as well as posted on the MPO's website.

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Social Media External Use Policy

Comments and Interactions

The GCLMPO reserves the right to repost, share, like, or retweet content from another social media account. A like, share, or retweet of content does not imply an endorsement of that account. Likewise, comments expressed on any MPO social media page do not necessarily reflect the opinions and position of the GCLMPO, its individual members, administrators or employees. In addition to information provided by the GCLMPO, the social media sites may contain comments and opinions from unrelated third parties which are being provided as a convenience to the public and for informational purposes only. These comments or opinions do not constitute an endorsement or an approval by the GCLMPO of any of the views or comments posted on the GCLMPO's social media pages. Furthermore, the GCLMPO bears no responsibility for the accuracy or legality of these materials. When in doubt, the GCLMPO will take a very conservative approach to what appears through social media.

Third party comments will be rejected or removed (if possible) when the content:

- Is off-subject or out of context;
- Contains obscenity or material that appeals to the prurient interest;
- Contains personal identifying information or sensitive personal information;
- Contains offensive terms that target protected classes;
- Is threatening, harassing, defamatory or discriminatory;
- Contains any copyrighted material owned by a third party;
- Circumvents Public Records and Open Meetings Laws;
- Incites or promotes violence or illegal activities;
- Contains information that reasonably could compromise individual or public safety;
- Advertises or promotes a commercial product or service, or any entity or individual.

Moderation of Third Party Content

The MPO's social media sites serve as a limited public forum and all content published is subject to monitoring. In the same manner as a public forum, user-generated posts should be suitable in terms of time, manner and place. The GCLMPO reserves the right to publish any posting, or to later remove it based on the aforementioned guidelines.

While endorsing the proper use of the limited public forum on the MPO's social media platforms the GCLMPO cannot guarantee that violations will not take place. If a comment violates these guidelines, the GCLMPO reserves the right to remove or hide a comment without prior notification.

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charlotte regional transportation planning organization

Public Involvement Plan













Adopted by: Charlotte Regional Transportation Planning Organization

November 15, 2017
November 17, 2021 Amendment Adopted

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List of Acronyms

- **23 CFR 450.316 – Code of Federal Regulations, Title 23 – Highways, Part 450 – Planning Assistance and Standards**
- **ADA – Americans with Disabilities Act**
- **CRTPO – Charlotte Regional Transportation Planning Organization**
- **CTP – Comprehensive Transportation Plan**
- **EJ – Environmental Justice**
- **FAST Act – Fixing America's Surface Transportation Act**
- **HOA – Homeowner's Association**
- **LEP – Limited English Proficiency**
- **MPO – Metropolitan Planning Organization**
- **MTP – Metropolitan Transportation Plan**
- **NAAQS – National Ambient Air Quality Standard**
- **NCDOT – North Carolina Department of Transportation**
- **NEPA – National Environmental Policy Act**
- **PIP – Public Involvement Plan**
- **RPO – Rural Planning Organization**
- **TCC - Technical Coordinating Committee**
- **TIP – Transportation Improvement Program**
- **TTY – Teletypewriter**
- **UPWP – Unified Planning Work Program**

The Charlotte Regional Transportation Planning Organization (CRTPO) adopted its initial Public Involvement Plan (PIP) in 2005. Since the last update in 2012, new federal regulations have been passed, the CRTPO's planning area boundary has expanded, and there have been advancements in public engagement techniques within the transportation planning field. In 2017, an analysis of the PIP evaluated the effectiveness of the CRTPO's public involvement program by surveying its current practices, assessing state and federal requirements, and developing recommendations based upon best practices.

This document incorporates revisions to strengthen the CRTPO's ability to solicit input, communicate, and engage with the public. A Steering Committee was organized to guide the evaluation process of the PIP. The evaluation process included peer Metropolitan Planning Organization (MPO) reviews and surveys of the CRTPO Technical Coordinating Committee (TCC), the MPO Board, and the public. This PIP was adopted on Month, XX, 2017 following a 45-day public comment period (August 17, 2017 – October 1, 2017).

I. Overview

The CRTPO is the MPO for the Charlotte Urbanized Area which includes Iredell, Mecklenburg, and the western portion of Union County. Federal legislation requires Urbanized Areas with populations larger than 50,000 to have an MPO, whose primary function is to carry out the transportation planning process by actively participating in the continuing, cooperative, and comprehensive (3-C) process upon which MPO activities were originally based. Given the Charlotte region's growth throughout the past several decades, and the recognition at the federal, state and local levels of the importance of an efficient transportation system to support continued economic vitality, transportation infrastructure improvements have taken on an exceedingly important and prominent role. As such, the CRTPO views public participation as essential in building public trust and ensuring that transportation planning efforts meet the needs and requests of the residents throughout the three county planning area.

The CRTPO defines its role in public participation as not only providing quality information about transportation planning to the public, but also ensuring that its awareness and education initiatives are all-inclusive to the diverse populations within its boundary. To accomplish successful public involvement, the CRTPO is dedicated to the following goals:

1. Education of residents to allow for meangingful input

2. Informing residents about the location to assist in making an informed decision

3. Providing opportunities to actively soliciting meaningful participation

4. Evaluating public input received

5. Communicating the method in which public input is incorporated into plan and process recommendations.

6. Improving the public involvement process to enhance participation opportunities and incorporate new methods and technologies as they are available

This PIP provides guidelines and techniques that CRTPO may incorporate as appropriate to fulfill its mission in a transparent, collaborative process. The strategies detailed in this document will enable CRTPO to conduct public involvement throughout the planning process.

A. CRTPO

The CRTPO is governed by a policy board that consists of elected officials representing the following jurisdictions:



- Iredell County: Iredell County, Mooresville, Statesville, and Troutman;
- Mecklenburg County: Charlotte, Cornelius, Davidson, Huntersville, Matthews, Mecklenburg County, Mint Hill, and Pineville; and,
- Union County: Fairview, Indian Trail, Marshville, Marvin, Mineral Springs, Monroe, Stallings, Union County, Waxhaw, Weddington, Wesley Chapel and Wingate.

The North Carolina Board of Transportation has two voting members on CRTPO board from representing NCDOT-Divisions 10 and 12. The Metropolitan Transit Commission also has a voting member on the policy board. Non-voting members of the CRTPO board include a member representing the Iredell, Mecklenburg, and Union County Planning Commissions, North Carolina Turnpike Authority, and the Federal Highway Administration. The Charlotte-Mecklenburg Planning Department is the MPO's lead planning agency, and additional staff support is received from the Charlotte Department of Transportation.

B. Federal Requirements

The Federal laws and processes covering public participation in transportation planning include:

- 23 CFR 450.316 (Updated Annually);
- Fixing America's Surface Transportation Act (FAST) (2015);
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency (2000);
- The Americans with Disabilities Act of 1990, the Rehabilitation Act of 1973 (Section 504), and the Rehabilitation Act Amendments of 1998 (Section 508);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (1994);

- The Clean Air Act Amendments of 1990;
- National Environmental Policy Act (NEPA) (1969); and,
- Title VI of the Civil Rights Act of 1964.

1. 23 CFR 450.316 (Updated Annually)

The Code of Federal Regulations (CFR) is updated annually and produced by the Federal Register through the federal government's departments and agencies. It is divided into 50 Titles representing topics subject to federal regulation. Title 23 of the CFR pertains to Highways. Part 450 (Planning Assistance and Standards) is broken into sections with Subpart C pertaining to Metropolitan Transportation Planning and Programming. Section 316 details public participation requirements including:

- Development and use of a documented participation plan providing for reasonable opportunities to be involved in the metropolitan planning process;
- Adequate public notice of public participation activities and time for public review and comment at key decision points;
- Timely public notice and reasonable access to information about transportation issues and processes;
- Visualization techniques to describe Metropolitan Transportation Plan (MTP) and the Transportation Improvement Program (TIP);
- Public information and meeting available in electronically accessible formats and means, such as World Wide Web;
- Public meetings at convenient and accessible locations and times;
- Explicit consideration and response to public input received;
- Seeking out and considering the needs of people traditionally underserved by existing transportation systems;
- Providing additional opportunities for public comment if the final MTP or TIP differs significantly from the version that was made available for public comment;
- Coordination with Statewide public involvement and consultation processes;
- Periodically reviewing the effectiveness of the procedures and strategies contained in the participation plan to ensure a full and open participation process;
- Provide a summary, analysis, and report on the disposition of significant written and oral comments received;
- A minimum public comment period of 45 days before adoption or revision of the public involvement process; and,
- Consult with agencies and officials responsible for other planning activities that are affected by transportation or coordinate the planning process with such planning activities.

2. FAST Act (2015)

The FAST Act was signed into law on December 4, 2015. The FAST Act expands upon the requirements of previous transportation legislation (Intermodal Surface Transportation Efficiency Act (ISTEA), Transportation Equity Act for the 21st Century

(TEA-21), Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), and Moving Ahead for Progress in the 21st Century Act, (MAP-21); thus public involvement remains a feature of the planning process. The following were added as part of the FAST Act:

- The criteria required a representative from the transit provider to be part of the MPO process. *The FAST Act* states transit provider may "also serve as the representative of a local municipality;"
- It continues to encourage MPOs to consult with officials responsible for other types of planning activities. It adds tourism and the reduction of risk of natural disasters to the list of such activities; and,
- The *FAST Act* explicitly adds public ports and certain private providers of transportation, including intercity bus operators and employer-based commuting programs, to the list of interested parties that a MPO must provide with reasonable opportunity to comment on a transportation plan.

3. Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency (2000)

The basis of *Executive Order 13166* lies in *Title VI of the Civil Rights Act of 1964*. It requires that Federal agencies work to ensure that recipients of Federal financial assistance provide "meaningful access" to their limited English proficiency applicants and beneficiaries.

4. The Americans with Disabilities Act of 1990, the Rehabilitation Act of 1973 (Section 504), and the Rehabilitation Act Amendments of 1998 (Section 508)

The Americans with Disabilities Act of 1990 mandates that public facilities be made accessible to people with disabilities and has been the basis for requiring that transit buses and street curbs be retrofitted or reconstructed with appropriate equipment and design details. *The Rehabilitation Act of 1973* (Section 504) states that "no qualified individual with a disability in the United States shall be excluded from, denied the benefits of, or be subjected to discrimination under" any program or activity that receives Federal financial assistance. The *Rehabilitation Act Amendments of 1998* (Section 508) states that Federal agencies must ensure that electronic and information technology is accessible to employees and members of the public with disabilities to the extent it does not pose an "undue burden."

5. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (1994)

The basis of *Executive Order 12898* lies in *Title VI of the Civil Rights Act of 1964*. It directs that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." *Executive Order 12898* defines minority populations as belonging to any of the following groups:

- Black – a person having origins in any of the black racial groups of Africa;
- Hispanic – a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race;
- Asian American – a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands; and,
- American Indian and Alaskan Native – a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition.

It defines low-income populations as those whose household incomes (or in the case of a community or group, whose median household income) is at or below the U.S. Department of Health and Human Services poverty guidelines. The three fundamental environmental justice principles include:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations;
- To ensure full and fair participation by all potentially affected communities in the transportation decision-making process; and,
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

6. The Clean Air Act Amendments of 1990

The Clean Air Act Amendments of 1990 require CRTPO to perform transportation conformity prior to adopting a MTP or TIP. A public review and comment period is required for transportation conformity in non-attainment (meaning an area that has work air quality than the National Ambient Air Quality Standard defined in the Clean Air Act) areas. This requirement is important in protecting air quality for both the public and the environment. Federal funding and approvals are given to projects that are consistent with the federal air quality goals.

7. Title VI of the Civil Rights Act of 1964

Title VI of the Civil Rights Act of 1964 states that “no person in the United States shall, on the grounds of race, color or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

PUBLIC INVOLVEMENT STRATEGY & TECHNIQUES



Public Involvement Toolkit

Informational Techniques

- Infographics/graphics
- Brochures/Fact Sheets
- Electronic Newsletters
- Website/Digital Materials
- Social Media
- Multi-language Hotline
- Radio Interviews
- Informational Videos
- TCC Ambassadors

Outreach Tools

- Media Notices
- E-blasts
- Direct Mail
- Social Media Advertisements
- Bus Notices
- Utility Bill Notices
- Online Targeted Newspaper Ads

Engagement Methods

- Informational Workshops/Open Houses
- Public Meetings
- Pop-up Events
- Small Group Meetings
- Participant Surveys
- Interactive Mapping
- Webinars
- Web-based Engagement Platforms
- Task Force Group
- Social Media

II. Public Involvement Strategy & Techniques

This section contains a comprehensive list of public engagement tools and practices that CRTPO may implement. The CRTPO covers a large planning area, with diverse communities that have varied needs. This section allows for flexibility to engage with a variety of communities effectively. The project scope, size, and range of affected stakeholders will determine which strategies and techniques are most appropriate. A chart describing appropriate implementation is provided in Section G at the end of this chapter.

The PIP is an evolving document; as innovative technologies and tools become available, new techniques may be incorporated.

A. Maintain a Stakeholder Database

The CRTPO maintains a stakeholder database that is compiled of identified stakeholders, organizations, and groups that may have an interest or may be impacted by transportation plans throughout the region

Recommendations:

- The stakeholder database to disseminate e-blasts about CRTPO activities, news, and upcoming public participation opportunities.
- Assistance can be pursued from stakeholders in distributing CRTPO communications within the stakeholders' organization.
- The stakeholder list should be updated on a periodic basis to include newly identified stakeholders.

B. Partner with Stakeholders

The CRTPO may partner with stakeholders with an interest in transportation. Coordinating outreach efforts with identified stakeholder agencies may help expand the CRTPO's reach and provide additional public outreach resources.



C. Outreach to Underserved Populations

The CRTPO must provide equal opportunity to all populations regardless of race, color, national origin, limited English proficiency (LEP), income status, sex, age, and disability, in CRTPO programs and activities per federal requirements.

Title VI of the Civil Rights Act of 1964 (Title VI) correlates to Environmental Justice (EJ) guidance as both prohibit discrimination, and ensure fair treatment and meaningful involvement of all populations respectively. Requirements and guidelines in regards to Title VI, LEP, and EJ populations are previously stated in *Chapter I, Section B: Federal Requirements, Number 3: Executive Order 13166, Number 4: The Americans with Disabilities Act of 1990, the Rehabilitation Act of 1973 (Section 504), and the Rehabilitation Act Amendments of 1998 (Section 508), Number 5: Executive Order 12898, and Number 8: Title VI of the Civil Rights Act of 1964*.

> Title VI prohibits discrimination based on race, color or national origin in programs or activities which receive federal funding.

> Environmental Justice ensures fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income.

The CRTPO's public involvement efforts include strategies to specifically engage residents who have not traditionally participated in the transportation planning process. The following groups have traditionally demonstrated lower than average participation rates in CRTPO's public involvement processes:

- Disabled residents
- Economically disadvantaged residents
- Elderly residents
- Illiterate residents, or residents with limited literacy comprehension
- LEP
- Minority groups

Recommendations: CRTPO should establish relationships with organizations that represent underserved populations to build relationships with these groups and leaders as well as identify strategies to engage traditional non-participants in the transportation planning process.

Additional strategies to engage with these groups may incorporate the following:

- Holding meetings in transit accessible locations or in the targeted community neighborhood for those who do not have personal transportation;
- Holding meetings at various times throughout the day to allow for participation from all members of the community;
- Hosting meetings on days of the week or weekend when it is convenient for the public to attend;
- Participating in existing events to reach additional residents;
- Conducting meetings and providing materials in a language that can be understood by the community;
- Reaching out to churches in a specific neighborhood;
- Hosting pop-up events in areas where people congregate such as malls or transit stops; and,
- Producing materials for public consumption in English, Spanish, and other languages as necessary.

1. Title VI and Limited English Proficiency Plan

The CRTPO has developed and implemented a plan to reach minority and low-income populations, who usually do not participate in the transportation planning process. This plan is referred to as the Title VI Plan. The CRTPO Title VI plan addresses Title VI and EJ populations. CRTPO has a separate plan entitled, Limited English Proficiency Plan, to describe methods to engage populations with the limited ability to read, write, speak or understand English.

D. Informational Techniques

1. Develop and Implement Methods to Explain Complex Concepts

The CRTPO should attempt to simplify and explain complex concepts by using the following methods:

- **Clearly state the intent of public involvement**: Prepared materials should explain **how** the resident will be affected and **why** residents should participate;
- **Understand the needs of the audience**: Materials created for public distribution should incorporate graphics, and limit the amount of text if possible. Limit the use of industry vocabulary and acronyms whenever possible;
- **Use Graphics instead of text**: Infographics, visualizations, and/or renderings should be used to illustrate information when applicable; and,

2. Develop and Distribute Informational Handouts

Brochures, fact sheets, and other informational handouts can be used to inform residents of relevant initiatives and current planning efforts.

Recommendations:

- Consideration should be given to the preparation of these materials in other relevant languages as well as in large-print.
- Periodic reviews of materials should be conducted to ensure that relevant material is displayed.
- Graphics can be used to explain complex concepts. Informational materials should be available online and distributed at public events attended by the CRTPO.

3. Newsletters

The CRTPO has distributed quarterly newsletters to provide subscribers with periodic updates of relevant activities and public involvement opportunities since 2009. The newsletter is available online and distributed to over 750 stakeholders. Residents may elect to receive the newsletter through the newsletter link on the website. The CRTPO has distributed special edition newsletters on an as-needed basis to provide information on specific topics outside of the regular newsletter distribution cycle. The following recommendations have been developed to guide the development and readability of the CRTPO's newsletter.

Recommendations:

- Graphics should be incorporated as appropriate to illustrate and describe content.
- Newsletter content should be concise, easy to understand, and use graphics whenever applicable.
- Newsletters should be prepared in other relevant languages and at the request of a subscriber be available in a large-print format.
- Resident and stakeholder email addresses collected during public events can be added to the newsletter database.
- The newsletter should contain approximately five articles per edition to ensure readability and reader comprehension. If there is a consistent need to include more than five articles per edition, then staff may consider implementing a new schedule to include six newsletters a year (every other month).

4. Website

The CRTPO's website provides information about CRTPO and its activities, as well as the transportation planning activities of its member jurisdictions. Given the reach of the internet, the CRTPO website has become the central repository for meeting agendas and minutes, plan information, project information, mapping and other resources. The website provides the public access to documents such as, but not limited to:

- MTP: Current document and previous archived versions, as well as documentation of the MTP development process;
- CTP mapping and background information;
- TIP: Current document and previous archived versions, as well as documentation of the TIP development process (NCDOT Prioritization);

- PIP;
- UPWP;
- TCC and MPO meeting agendas and minutes;
- Frequently Asked Questions;
- Glossary of important terms; and,
- Documents and links to provide background information regarding the MPOs federal and state requirements.

Visit www.crtpo.org to review materials and information, contact us, or connect with us.

The following recommendations have been compiled to ensure that CRTPO's website continues to be a valuable resource for residents of the planning area.

Recommendations:

- Website content should be concise, easy to understand, and use graphics whenever applicable.
- Staff should review the CRTPO website content on a regular basis to determine if content needs to be added or updated.
- The website will be maintained in compliance with Section 508 of the Rehabilitation Act Amendments of 1998.

5. Social Media

The CRTPO has utilized social media to enhance its public involvement program and provide real-time information to planning area residents since 2016. It is anticipated that mediums such as social media will continue to become an ideal method to reach residents and conduct public involvement, with reduced reliance on holding large public meetings. The following recommendations are intended to ensure that the CRTPO's social media accounts are being used effectively.

Recommendations:

- Staff should use a content calendar will help to ensure that regular posts are being made on CRTPO's social media accounts. Determining a routine schedule for posting information will help CRTPO's social media accounts maintain their relevancy without overwhelming its followers.
- The subject and type of CRTPO's social media postings should be varied. Examples of relevant social media posts include: videos, questions designed to engage followers, and informational postings regarding CRTPOs core processes.
- The CRTPO may "share" posts from other organizations (such as NCDOT) or municipalities that pertain to the CRTPO.
- Images and videos should be incorporated frequently within social media posts
- Consider implementing a community-based social networking website (such as NextDoor) in a future plan development process. Community-based social media websites are organized by HOAs allowing organizations to target communications to

specific audiences. This technology allows local governments to distribute information about plans and processes to a broad audience in lieu of residents' attendance at a public meeting.

6. Multi-language Hotline

A toll-free telephone line provides instructions in multiple languages to offer non-English speaking residents with a method to provide feedback. The toll-free hotline allows a caller to leave a message detailing their feedback. CRTPO may implement the multi-language hotline for its plans and programs as needed. A multi-language hotline was available to residents during the development of the 2040 and 2045 MTPs.

7. Radio Interviews

The CRTPO pursues radio interviews regarding as a method to reach additional residents during the development of plans and programs. Radio interviews provide another source for the public and stakeholders to receive information. Radio interviews should be publicized through social media whenever possible.



8. Informational Videos

The CRTPO periodically develops short informational videos to present complex information in a simplified and concise manner. The CRTPO has developed brief videos to clearly convey the CTP public involvement process, and MTP and TIP development processes to residents. The following recommendations are intended to ensure that informational videos are a valuable resource for residents:



Recommendations:

- Videos should be limited to approximately than three minutes in length to maintain the viewer's attention.
- Graphics may also be incorporated into informational videos to clarify a concept.

- Informational videos should be posted on the website, social media, and distributed as needed including to the news media.

9. Public Input at CRTPO Board Meetings

The CRTPO Board bylaws state that residents are provided with an opportunity to address the CRTPO on any issue related to the transportation planning process. Residents should sign up at the beginning of the meeting to speak or contact the CRTPO's secretary prior to the meeting.

Meeting agendas and minutes from MPO and TCC Meetings can be viewed on the website by clicking here.

10. Public Attendance at Technical Coordinating Committee (TCC) Meetings

The TCC is the staff arm to the MPO. It is composed of representatives of various departments and communities involved in the transportation planning process. The TCC's primary responsibility is to carry out the various planning tasks described in the UPWP. These include updates to the MTP, analysis of operational issues in the thoroughfare system, recommendations for various transportation investment programs and the public involvement process for the MPO. Virtually all technical recommendations to the MPO originate at the TCC level.

TCC meetings are generally scheduled on the first Thursday of each month at 10:00 AM in the Charlotte-Mecklenburg Government Center. The TCC Bylaws are available on the website. Residents may attend TCC meetings to gain insight on transportation planning efforts; however, public questions or comments should be addressed during the CRTPO Board meeting.

11. Technical Coordinating Committee (TCC) Member Outreach Assistance

TCC members may be asked to assist in public outreach coordination between the CRTPO and their respective jurisdiction. Staff may request TCC member assistance with the following tasks for public engagement within their respective jurisdictions.

- Promote the CRTPO's public meetings and opportunities for input to the TCC member's municipality;
- Facilitate coordination between the CRTPO and the municipality to disseminate information through local channels to the public; and,
- Present information at local events and meetings using the CRTPO's presentation materials.

1. **Technical Coordinating Committee (TCC)** meetings are held on the first Thursday of each month.
2. **CRTPO Metropolitan Planning Organization (MPO) Board** meetings are held on the third Wednesday of each month.

   Meetings are located at the Charlotte-Mecklenburg Government Center (600 East Fourth Street, Charlotte, NC 28202) Room 267.



E. Outreach Tools

1. Media Releases

The CRTPO issues media releases to announce upcoming activities in radio, television and newspaper outlets in Iredell, Mecklenburg and Union Counties. Media releases should focus on upcoming public participation opportunities, and public comment periods for the CRTPO's plans and programs. This medium can also be used to announce milestones in the transportation planning process such as the approval of project funding or the adoption of a significant plan. Media outlets within the planning area that target non-English speakers should be included. A list of media outlets has been established and will be updated as necessary. A media list will be available on the updated public involvement page of the CRTPO website.

2. E-blasts

E-blasts are informational e-mails sent to numerous recipients simultaneously. E-blasts should be sent using a web-based communications service to the CRTPO distribution lists. The analytics feature tracks "open" and "click" rates and preferences of recipients. Residents may subscribe for e-blasts by sending a message to CRTPO staff through the "Contact Us" page on the website.

3. Direct Mail

Distribution of a direct mailing to a targeted area may be necessary when local area impacts are possible because of a proposed plan or project. Direct mailings should provide information about project scope, potential impacts, and methods to obtain further information.

4. Social Media Advertisements

Social media advertisements utilize social networking sites as a marketing tool. The advertisements are a cost-effective method that may be incorporated during the outreach phase to promote public participation opportunities and reach specific audiences. Social media sites allow the advertiser to set a daily limit on cost. Target audiences can be selected by demographic, location, and profile information. The target audience does not have to be a current CRTPO subscriber to receive the advertisement. The advertisement appears in the target audience's newsfeed or side bar of the screen. The CRTPO may choose to implement social media advertisements to publicize comment periods, project-related meetings, and events where staff will be present to provide information on a planning process.

5. Bus Flyer

The CRTPO may choose coordinate with transit providers within the planning area to distribute bus flyers to reach residents utilizing transit. Bus flyers may also be utilized when an amendment or proposed decision may affect transit operations. A Quick Response (QR) code should be incorporated on the bus flyer to direct residents to additional information regarding the particular issue.

6. Utility Bill Notices

The CRTPO may coordinate with utility companies to include public event notices in mailings throughout the three counties. Notices should include information regarding public participation opportunities.

7. Online Targeted Newspaper Ads

The CRTPO may publicize public participation notifications in online news media. Following the advertisement's run period, CRTPO should use advertisement "views" and click rates provided by the newspaper to determine the cost benefit of running newspaper advertisements. This method may be incorporated solely to reach targeted communities.

F. Engagement Methods

1. Conduct Public Engagement Events

The CRTPO seeks to involve the public and throughout the transportation planning process through a variety of engagement methods including; in-person outreach efforts to reach diverse audiences. These public engagement events are conducted to educate and solicit public input regarding the region's transportation plans and programs.



Open houses, public meetings and public workshops are the traditional methods that the CRTPO has used to conduct public involvement in the past. While the CRTPO has shifted its focus to using interactive and internet-based methods for reaching residents, public meetings may need to be conducted periodically to ensure that residents have an opportunity to provide input. The following section summarizes the types of public meetings and strategies to receive effective input.

- **Open Houses** - An informal, drop-in session that provides an opportunity for residents to review draft plans or obtain information regarding ongoing projects. Residents may attend at any time during the stated open house hours. Open houses do not include a set agenda or presentation. Staff should

consider the most appropriate materials to display for the most effective resident participation.

- **Public Workshops** - These meetings have a set agenda and include one or more of the following elements:
  - Presentation can be used to convey plan recommendations. Presentations should be brief and avoid industry jargon and technical information.
  - Break-out sessions/group activities are appropriate for the beginning of the planning process, and developing goals and objectives. Break-out sessions may also be used collect public input on alternatives to evaluate and consider during the decision-making process.

- **Public meetings** - A formal event that educates residents on recommendations from a plan, project, or program. Public meetings can include a presentation, facilitated discussion, and information about next steps. Interactive activities may be incorporated during the public meeting to actively solicit public input. Written comments can be solicited during the public meeting. Comment forms may include a survey to measure meeting efforts.

- **Outreach at Events** - Hosting an information table at a scheduled event (e.g. the Latin American Festival) reaches residents who may not typically attend a public meeting. Informational materials will be displayed, and staff will be available to educate attendees one-on-one and receive public input. Outreach at specific events may be implemented if CRTPO is targeting a particular community or population in which an event is taking place.

- **Pop-up Events** - A staffed information table at locations in a community where residents typically gather, such as a transit station, farmer's market, or festival. The purpose of the pop-up event is to answer questions, inform residents of ongoing plans and distribute fliers and other plan information. Pop-up events may be hosted in specific communities or locations to reach targeted populations.

- **Small Group Meetings** - The purpose of this meeting format is to solicit input from participants in an informal setting. Typically, staff will contact the chairman or group organizer to request a short presentation or discussion on the agenda. This meeting format is effective because group members do not need to dedicate additional time to attend a public meeting on the subject. Small group meetings are effective in reaching residents within targeted communities that may not regularly participate in the public involvement process.

The following recommendations are intended to guide CRTPO to hold successful public engagement events:

Recommendations:

- Determine the type of input is being sought from residents and the ability that comments would have the ability to change the recommendations within a plan or project.
- Offer a variety of timeframes throughout the day if several open houses have been scheduled to provide residents convienent options for their schedules.
- Consider an offering at least one interactive component during a public engagement event to make the topic relevant and easy for residents to understand. The CRTPO has used interactive mapping and videos during previous open houses.
- Investigate the feasibility of holding public meetings in locations other than government buildings. Churches, community centers, and other neighborhood facilities may be appropriate venues.
- Coordinate with the respective TCC members and community leaders within the general area where the public meetings will be held to assist in promoting the event.
    - Ensure that the particular communities in which the meetings will be held have promoted the public engagement events on their websites and social media accounts.
- Staff should track the results of each public engagement events to record the number of residents that attended and the major themes that were identified within the resident comments. This data will be helpful in determining the type of outreach that is pursued in the future and will inform staff of the specific issues that will need to be documented.

2. Surveys

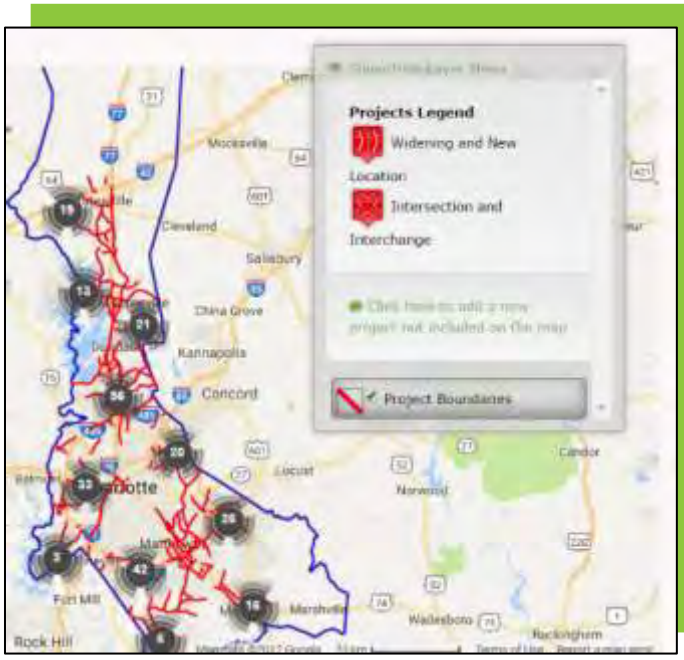
Public surveys should be implemented during public engagement efforts to garner input on plans or projects. Survey results enable staff to analyze the responses from a series of meetings and geographically reference the results to identify trends. The CRTPO has successfully implemented public surveys in planning efforts associated with the CTP, MTP, and update of the PIP. The following recommendations will ensure that the surveys are designed to seek the most effective public input:

Recommendations:

- Real-time surveys can be implemented during public meetings as an effective interactive engagement measure. Polling software can be downloaded to participant's phones, which also allows for the results to be displayed on a large screen on a real-time basis.
- Online surveys should be promoted through e-blasts, social media, and the website.
- Surveys should be translated into any necessary languages to provide all populations with the opportunity to provide input.
- Surveys may also be incorporated to obtain participant feedback regarding the facilitation and logistics of a meeting or event conducted by the CRTPO. Surveys may

include questions to gain insight on public preferences for future public engagement efforts. Collected data will help evaluate CRTPO's public participation efforts and may be included as a performance measure.

3. Online Interactive Mapping



The CRTPO has used website-based mapping to provide residents an interactive opportunity to review and comment on projects during the CTP and MTP public engagement processes. Residents may click on a project to view a description and add a comment. The interactive mapping tool may also be utilized at public meetings, open houses, and other public events as a method to increase participation. The CRTPO may choose to implement a blank map (without any projects listed) that will allow residents to comment anywhere on the map. This would allow the CRTPO to collect data on community concerns, vision, or areas where the community believes improvements are warranted. The CRTPO will solicit input from the public on the interactive maps through website announcements, social media, e-blasts, press releases, and other methods of outreach as appropriate.

4. Webinars

The CRTPO has incorporated webinars within its public engagement processes as a convenient method for residents to participate without having to attend a public meeting. Webinars are recorded presentations that are available online and may be viewed live or at a later time. Webinars will be promoted through notifications to media, e-blasts, and social media.

5. Web-based Public Engagement Platforms & Applications

CRTPO may implement a web-based public engagement application to increase outreach and provide residents with an alternative and convenient method to participate in the transportation planning process. Interactive public engagement applications have the ability to guide residents through a sequence of webpages to educate and seek input through a series of multiple choice or open-ended questions. Residents may view how other participants have responded to the questions, which provides a transparent process. Web-based public engagement applications can be utilized at a resident's convenience

as well as at in-person events. This tool may be implemented during the development or update of a plan or program.

6. Stakeholder Task Force

The CRTPO may consider forming a stakeholder task forces to receive input from residents from throughout the planning area. The goal of the task force would be to solicit feedback from members regarding a particular element of a plan or process. The task force would dissolve once its work has been completed within the specific plan or process. A task force could be comprised of residents, developers, members of an organization within the transportation industry, and other relevant participants at the discretion of staff. The following recommendations are intended to guide the formation of a stakeholder task force:

Recommendations:

- Identify a diverse group of residents from the three counties within CRTPO to receive balanced feedback;
- Include representatives of economically disadvantaged and/or minority populations on the task force;
- Target non-elected officials as members;
- Establish a meeting schedule, frequency and termination date so that the requested stakeholders are aware of the commitment.
- Staff should evaluate the effectiveness of input received from the task force at the conclusion to determine the benefits and lessons learned.

Table I: Implementation Guidelines

+ = Highly Recommended

+ = CRTPO May Consider Implementing Depending on Need

PLAN or PROGRAM	INFORMATIONAL TECHNIQUES								OUTREACH TOOLS							ENGAGEMENT METHODS											
	Handouts	Articles in Regular Electronic Newsletter	Website	Social Media	Multi-language Hotline	Radio Interviews	Informational Videos	TCC Member Outreach Assistance	Media Release	E-blasts	Direct Mail	Social Media Advertisements	Bus Flyer	Utility Bill Notices	Online Targeted Newspaper Ads	Open Houses	Public Workshops	Public Meetings	Outreach at Events (Information Tables)	Pop-up Events	Small Group Meetings	Surveys	Online Interactive Mapping	Webinars	Web-based Public Engagement Platforms & Applications	Stakeholder Task Force	Social Media
CTP Development	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+					+	+	+	+	+	+	+
MTP Project Submission	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+		+	+	+	+	+	+	+	+	+
MTP Fiscally Constrained Project List	+	+	+	+	+	+	+	+	+	+		+	+	+	+			+	+	+	+	+		+		+	+
TIP Project Submittal Phase	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+			+	+	+	+	+	+	+	+	+
TIP – Local Input Point Assignment Phase		+	+	+				+	+	+				+				+			+	+		+		+	+
CTP Map Amendments, MTP Amendments: Tier 1			+	+					+	+	+			+							+						+
CTP Map Amendments, MTP Amendments: Tier 2			+	+					+	+	+	+		+					+		+	+					+
CTP Map Amendments, MTP Amendments: Tier 3			+	+					+	+	+	+	+	+	+				+		+	+		+			+
TIP Amendments (depends upon level of change)			+	+					+	+	+	+	+	+	+				+		+	+		+			+
Transportation Conformity Determination		+	+	+						+				+				+	+	+				+			+
Unified Planning Work Program		+	+	+						+				+										+			+

GENERAL GUIDELINES & POLICIES







III. General Guidelines and Policies

The following sections provide guidelines for the CRTPO's public engagement efforts.

A. Open Meetings

Official CRTPO meetings (TCC and MPO Board) are open to the public and subject to the *North Carolina Open Meetings Law.* This law states that official meetings include a majority of members gathering "for purposes of conducting hearings, participating in deliberations, or voting upon or otherwise transacting the public business." The minutes and all materials presented at these meetings will be public record and will be available for review. The availability of these records will be posted on CRTPO's website and can be distributed on request.

B. Public Events

Public events will follow the guidelines outlined in *Chapter II, Section F: Engagement Methods*. All events should post clear directional signage to guide event participants from outside the facility to the designated meeting space. A sign-in sheet should be utilized at all CRTPO public events to collect names and contact information of attendees. Staff should be in attendance to provide information, answer questions, and solicit input as appropriate. The following guidelines provide details regarding implementation of CRTPO public events.

1. Adequate Notice

The CRTPO should provide adequate notice of all events where public participation is being requested. Adequate notice should be provided in advance of any public engagement events, public comment periods, and other opportunities where the resident

may participate and provide input. The list below provides guidelines regarding adequate public notice:

- Event notices should be posted on CRTPO's website and social media at least two weeks in advance of the meeting.
- Notice will be provided to mainstream and minority media at least one week prior to the event. If requested, a reading service for the blind will be enlisted to broadcast this information.
- If a mailing is required, they should be distributed at least two weeks prior to the public event.

2. Public Input

The CRTPO will solicit public input through a variety of methods for plans, projects and programs. Comment periods should occur for a minimum of 14 days and up to a maximum of 45 days in length, with a preference of a length of 30 days whenever possible.

The CRTPO will issue a media release, and post information on the website and on its social media accounts to inform residents of the topic in which public comment is being sought and the dates within the period. The results of the public comment period should be posted on the website and presented to the TCC and MPO. Public comments will be accepted up to close of business of the final day of the public comment period, unless otherwise specified. Public comments may be provided in the following methods:

- During the public comment portion of a regularly scheduled CRTPO meeting;
- In writing, including through e-mail and social media;
- With TTY (teletypewriter) and/or TDD (telecommunications device for the deaf); and,
- By voicemail/translator on the multi-language hotline.

3. Access by Persons with Disabilities

The *Americans with Disabilities Act of 1990* prohibits discrimination of persons with disabilities and affords persons with disabilities equal opportunities as persons without disabilities; including the ability to participate in State and local government services and programs. The following recommendations are designed to ensure that the CRTPO's public input meetings are ADA compliant.

Recommendations:

- All CRTPO events should be facilitated in venues that are ADA compliant;
- Meeting venues should provide free parking and access to transit, when applicable;
- All public documents may be provided in alternative formats, as necessary;
- Auxiliary aids and services to those participants in need will be provided. Public meeting announcements will include content with details regarding accommodations for persons with disabilities. Persons requiring special assistance should contact staff prior to the event to request services.
- The website will be updated and maintained according to the guidelines in the Rehabilitation Act Amendments of 1998 (Section 508).

In following the Americans with Disabilities Act (ADA) requirements CRTPO includes the following text on public event notices:

"In compliance with the Americans with Disabilities Act (ADA), accommodations will be provided for persons who require assistance in order to participate in Charlotte Regional Transportation Planning Organization meetings. If assistance is needed or to request this document in an alternative format, please contact CRTPO at (704) 336-2205 or (704) 336-5123 (fax) or info@crtpo.org."

C. Social Media Policy

The CRTPO utilizes social media as a method to communicate information to stakeholders and residents. The web links to social media are available on the CRTPO's website. In accordance with the City of Charlotte's social media guidelines, the following outlines the CRTPO's social media policy:

Comments posted on the CRTPO social media sites by the public are opinions expressed by the particular resident, not CRTPO. The comments will be seen by other members of the public. CRTPO reserves the right to remove comments/postings from their social media sites that contain the following:

- Vulgar, abusive or threatening language, defamatory statements or nudity in profile pictures or attachments;
- Personal attacks, hate speech or offensive terminology targeting individuals or groups of individuals;
- Suggestions or encouragement of illegal activity;
- Unsolicited business proposals or endorsements/promotion of commercial services, products or entities;
- Infringements of copyrights, trademarks or other intellectual property;
- Endorsements of political parties, candidates or groups; and,
- Off-topic comments/posts, spam or links to unrelated sites.

IMPLEMENTATION GUIDELINES



IV. Implementation Guidelines for Plans and Programs

This section provides public involvement guidelines for the CRTPO's programs and transportation plans. Recommended performance measures are listed for each plan to ensure targets are being met. The public involvement guidelines outlined in this section as well as the performance measures should be reviewed on an annual basis.

A. The Unified Planning Work Program (UPWP)

The UPWP is CRTPO's annual budget that identifies the major transportation planning activities to be undertaken the coming year. Estimated costs, funding sources, and a timeline of the associated activities are also provided within the UPWP. This document is developed and approved annually by the MPO Board. Residents will be given the opportunity to review and comment on the UPWP prior to adoption by the MPO Board. The UPWP will be available on CRTPO's website.

B. The Transportation Planning Process

The CRTPO is responsible for conducts its transportation process by developing and updating the following plans and programs:

Transportation Planning Process



Transportation projects are initially identified in the Comprehensive Transportation Plan (CTP). Based on data-driven prioritization process, a subset of these projects are scored and programmed into the Metropolitan Transportation Plan's (MTP) fiscally constrained project list and are ultimately submitted to NCDOT for consideration in an upcoming Transportation Improvement Plan (TIP) for design and construction. The four modes of transportation included in these plans are; highway and roadways, pedestrian, bicycle, and rail and transit.



Each plan requires public involvement as the purpose of these plans is to develop projects to improve connectivity and mobility for the regions residents. Amendments to these plans may require public involvement depending upon the level of change and impact to the residents. The plans and the recommended public involvement levels are further described below.

1. Comprehensive Transportation Plan (CTP)

The Comprehensive Transportation Plan (CTP) represents CRTPO's long-term vision for the evolution of the transportation network to serve residents and employers in the CRTPO planning area. It evaluates the condition of the entire surface transportation network through a needs-based assessment conveyed in four modal maps: highway, bicycle, pedestrian and public transit and rail. The four modal maps are mutually adopted by the CRTPO and North Carolina Board of Transportation. The CTP does not include specific projects or improvement schedules but instead represents the status of the network that will be required to support anticipated growth. Many jurisdictions reference the CTP in their development regulations to reserve rights-of-way for future transportation improvements.

North Carolina General Statute 136-66.2 requires each MPO to coordinate with NCDOT to develop a CTP that will serve present and anticipated travel demand in and around the organization's planning area. The plan shall be based upon population growth, economic conditions and prospects, and patterns of land development throughout the planning area and shall provide for the safe and effective use of the transportation system.

CTP Amendment Guidelines

The CTP Amendment Guidelines table, found in Appendix A, identifies the mode and facility type, as well as the examples of amendment types. This table is not meant to be all-inclusive but serves as a guide for the most common scenarios resulting in a CTP amendment. CRTPO staff makes the final recommendation regarding the classification of a change as an administrative modification or procedural amendment.

CTP Map Amendment Classification

The CTP workgroup identified the following two types of CTP map amendments: administrative modification and procedural amendment.

Administrative Modifications are determined to have no to very minor impact to the overall transportation network and adjoining residents and property owners. Administrative modifications are intended to correct minor cartographic errors or revisions and do not alter the intent of the existing CTP alignment. Public involvement is not required if the proposed amendment is determined to be an administrative modification. Notice of administrative modifications will be provided to the CRTPO Board at least once a year.

Note: The TCC Bylaws address map amendments: *Article V, Section 6 of the TCC bylaws, contains specified circumstances that authorize the TCC to approve map amendments. In other instances, procedural amendments require public involvement and CRTPO Board approval.*

Procedural Amendments have a greater impact on residents and/or property owners. These amendments may alter the intent of the future CTP component. Procedural amendments could enhance the scope, remove an alignment or portion of, change the facility type or change the impact to adjacent property(ies). Procedural amendments may vary due to the characteristics of each transportation mode represented within the four CTP maps. For example, an amendment to a bicycle facility will most likely not have the same impact to affected properties as an amendment to the highway map. The member jurisdiction is responsible for leading public engagement process.

The administrative modification and procedural amendments processes can be found in the Appendix C.

Public Involvement Process

The workgroup developed guidelines addressing the level of public involvement recommended based on the type of amendment. The guidelines are intended to provide a framework of potential public involvement methods that may be implemented based on a CTP amendment's magnitude of impact to stakeholders and the public.

Administrative modifications will not require public involvement and will be brought to the CRTPO Board as an information item at least once a year.

Procedural amendments require public involvement, including a public comment period open for 30 days in length if meeting schedules permit, with a minimum 14 days. Residents will have the opportunity to provide input during a public comment period, during a CRTPO Board meeting, by email, regular mail or facsimile.

Proposed changes will be reviewed to ensure that low-income and/or minority populations will not experience disproportionate impacts, as noted in Executive Order 12898 (see Chapter I, Section B). The CRTPO website will be updated with revised CTP maps once the CRTPO Board has approved the change.

Suggested tools and techniques that can be utilized by the member jurisdiction(s) or CRTPO staff to reach and engage residents can be found in Appendix D.

Waiver of Public Involvement Activities - Public involvement efforts for procedural amendments may be waived only if the agency proposing the amendment has conducted public involvement efforts sufficient to meet the guidelines in the CRTPO's PIP. The public involvement efforts must have been completed within twelve (12) months of the time the CRTPO receives the amendment request.

2. The Metropolitan Transportation Plan (MTP)

The MTP is the official intermodal transportation plan that is developed and adopted for the Charlotte region's metropolitan planning area that describes the programs and projects to be implemented within a 20-year horizon. FHWA requires MPO's that are classified as TMAs to update their MTP every four years based upon a re-evaluation of various components of the transportation planning process, socio-economic and financial assumptions, and transportation-related environmental and health issues. Since the MTP becomes the CRTPO's primary policy document upon adoption, plan-specific branding and a dedicated project website have been promoted through the most recent update.

There are two significant opportunities for public involvement during the development of the MTP. Residents are provided with an opportunity to provide input on the roadway projects that are submitted by the CRTPO jurisdictions for evaluation in the roadway ranking process. The second opportunity for public involvement exists during the public review of the draft fiscally constrained project list, which is the outcome of the roadway ranking process.

Roadway Project Submission Public Notification - Public notices should be concise and **specify that CRTPO is seeking input regarding the projects to be evaluated in the 2045 MTP** and why it is important for the public to participate. The following techniques may be utilized to inform residents and stakeholders about opportunities to participate in the prioritization process.

- E-blasts;
- Social Media;
- Bus Flyer;
- Utility Bill Notices;
- TCC Member Outreach; and,
- Online Targeted Newspaper Advertisements.

Roadway Project Submission Public Involvement Opportunities – The CRTPO should conduct public involvement activities to seek input regarding the proposed roadway projects to evaluate during the development of the MTP. Public engagement during the development may utilize the following:

- Online interactive mapping where residents can express support for project submissions;
- Open houses or public workshops;

- Informational presentation to an elected board or civic group; and,
- Staffed table (pop-up) at a regularly scheduled event

Fiscally Constrained Project List Public Notification - Public notices should be concise and **specify that CRTPO is seeking input on its draft fiscally constrained project list within the MTP** and why it is important for the public to participate. CRTPO Currently maintains a project website for the development of its MTP. This should be the central location for all online materials for this process. The following techniques may be utilized as appropriate to inform stakeholders and the public about participation opportunities.

- E-blasts;
- Social Media;
- Bus Flyer;
- Utility Bill Notices;
- TCC Member Outreach; and,
- Online Targeted Newspaper Advertisements

Fiscally Constrained Project List Involvement Opportunities – The CRTPO should conduct public involvement activities to seek input regarding the proposed roadway projects to evaluate during the development of the MTP. The following guidelines should be considered in planning for a public comment period for the fiscally constrained project list:

- The fiscally constrained project list should be made available for at least a 14-day public comment period. A 30-day public comment period is preferable if meeting schedules permit.
- The fiscally constrained project list should be made available on CRTPO's website along with instructions for residents to provide comments on the project list.
- A summary of public comments should be presented to the TCC and MPO in consideration with the adoption of the project list.

Public engagement during the fiscally constrained project list may include the following techniques:

- Online interactive mapping where residents can express support for the fiscally constrained projects;
- Open houses or public workshops;
- Informational presentation to an elected board or civic group;
- Staffed table (pop-up) at a regularly scheduled event; and,
- Recorded webinar that summarizes the process to develop the fiscally constrained project list.

Amendments to the Metropolitan Transportation Plan - MTP amendments are required when a project scope is modified, or when the project is included within the TIP. Residents will have the opportunity to review and provide input on the amendment. The following recommendations are intended to provide guidelines in accounting for public input in the MTP amendment process:

Recommendations:

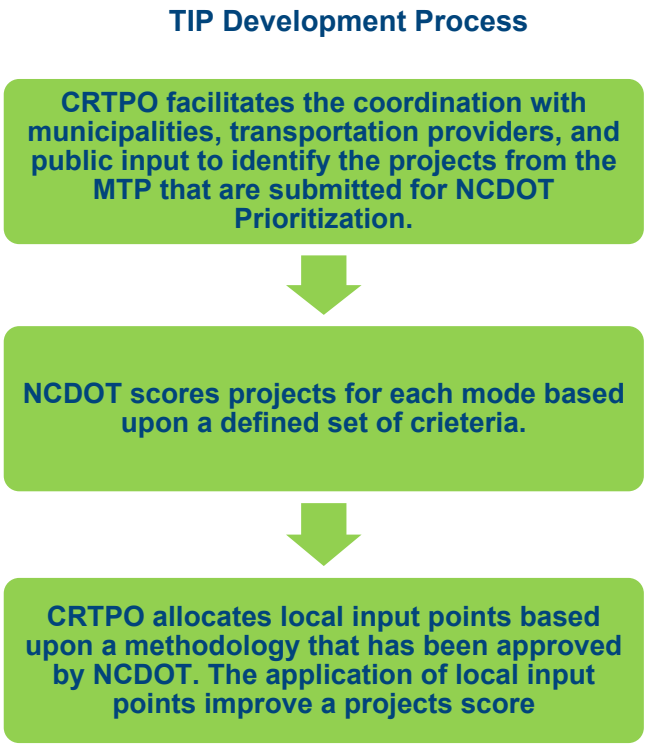
- MTP amendments should follow the three-tiered impact system in determining the appropriate level of public involvement activities as described previously for the CTP amendments (Chapter IV: Section B.1).
- Amendments to the MTP will follow the same procedures for notification and public input solicitation as the CTP. A 30-day comment period will be enacted. CRTPO should coordinate with the affected municipality to determine if a public meeting is warranted during the 30-day period. The municipality of the proposed amendment should post information regarding the amendment on its website, social media, and other appropriate techniques.

3. Transportation Improvement Program

The TIP is a staged, prioritized, ten-year intermodal program of transportation projects, prepared in each metropolitan area, which is consistent with that area's metropolitan transportation plan. Each metropolitan TIP is incorporated in its entirety into the STIP. In North Carolina, the TIP is separated into a five-year Transportation Improvement Program and a five-year Development Program and is updated every two years. The TIP is developed through NCDOT's decision-making tool referred to as the Prioritization process, which is the mechanism for allocating funding from the Strategic Transportation Investments (STI) legislation (HB 817, 2013).

TIP Development Process - NCDOT's Prioritization Process is a two-step, data-driven process to develop the State Transportation Improvement Program (STIP) every two years. The first step is the submission of projects to NCDOT for scoring and the second phase is the local input points assignment process that each MPO, Rural Planning Organization (RPO), and NCDOT Division participate to indicate their local priorities.

The CRTPO uses the MTP and other plans as a basis for submitting projects to NCDOT for the TIP Development process. Due to the technical nature of the TIP Development process following the passage of STI, the CRTPO should ensure that all materials prepared through this effort are easy to understand for all residents within the planning area.



Project Submittal Phase:

It is important that residents provide input in during the project submittal phase within the TIP development process because the STI legislation limits project submission to MPOs, RPOs, or NCDOT Divisions. This requires residents, local governments, and other public interest groups to actively participate in the CRTPO's public involvement period of its project submission phase to ensure that their priorities are being considered within this process.

The CRTPO collaborates with its member jurisdictions and other surface transportation providers within the planning area to develop project submittal lists to submit to NCDOT for scoring in the TIP development process. The CRTPO receives a set amount of submittal slots from NCDOT, and has the opportunity to submit aviation, bicycle/pedestrian, roadway, rail, and transit projects to NCDOT for scoring.

It should be noted that both NCDOT Division offices (10 & 12) within CRTPO also receive a smaller number of project submittal slots during each round of NCDOT Prioritization. Staff should coordinate the project submittal process to the extent possible with the NCDOT Division offices to ensure that residents are aware of the projects that are being submitted by each organization.

Public Involvement Process:
The CRTPO should consider the following process recommendations to provide an opportunity for adequate public involvement in the project submittal phase of the TIP development process.

- A minimum 14-day public comment and review period should be held for the proposed list of projects to submit to NCDOT for the TIP Development process. A 30-day comment period is desirable if CRTPO meeting schedules, and NCDOT milestones allow for this timeframe within this phase.
- Draft lists and maps of projects proposed for project submittal should be easily found on CRTPO's webpage. Context should be provided in regards CRTPO's process to give priority to the submission of roadway projects from the current MTP.
- The public comment period should be announced by using media releases, newsletter articles, social media posts and CRTPO's website.
- Residents may attend the MPO Board meeting to provide comments on the TIP Development project submittal lists.
- Staff should summarize the public comments received on the project submittal lists and post a summary on the NCDOT Prioritization webpage.
- A summary of public comments received should be presented to the TCC and MPO during the endorsement presentations.
- The MPO board can divert from the recommended project submittal list proposed by the TCC based upon public comment received.

Public Involvement Techniques:
Public engagement during the project submittal process list may include the following techniques:

- The CRTPO's NCDOT Prioritization webpage should be used as the central location for information regarding this process. Links to the recommended project submittal lists and PDF (static) maps should be easily viewed on the webpage.
- Consider implementing online interactive mapping within the webpage where residents can express support for submission of projects;
- Open houses or public workshops can be held as deemed necessary;
- Informational presentation to an elected board or civic group;
- Staffed table (pop-up) at a regularly scheduled event; and,
- Recorded webinar that summarizes CRTPO's role in the NCDOT Prioritization process.

Local Input Point Assignment Phase:

This is the second step of CRTPO's TIP Development process, and it usually begins four to six months following the submission of projects for scoring. Based upon the STI legislation, local input points define up to 30% of Regional Impact and 50% of Division Needs tier project scores in the TIP Development process. Statewide Mobility projects are scored by NCDOT based upon 100% criteria scoring, and generally are not eligible for

local input points unless they are unfunded in the Statewide Tier. In most cases, a Regional Impact or Division Needs project must receive allocations of local input points from both CRTPO and an NCDOT Division in order to be funded within the TIP, making this a critical step in the TIP Development process.

The STI legislation requires each MPO, RPO and NCDOT Division to adopt a local input points assignment methodology with at least one quantitative and one qualitative criteria. The CRTPO's local input points methodology uses the scores and horizon years from its most current fiscally constrained MTP project list as its primary prioritization criteria for assigning local input points. Roadway projects that are not included within the fiscally constrained project list and non-highway projects are prioritized for local input points based upon the NCDOT quantitative score. Given data-driven requirements required as part of the CRTPO's methodology, the draft assignment of local input points to projects is developed by members of the TCC and presented to the MPO board as an information report as a request to open a public comment period.

Coordination with both NCDOT Division offices (10 & 12) on the mutual assignment of local input points to priority projects is integral to funding projects in the forthcoming TIP. Staff should coordinate with the NCDOT Division offices to ensure that residents are aware projects will most likely require mutual local input point assignments from both the CRTPO and the respective division to receive funding in the draft TIP.

Public Involvement Process:
The CRTPO should consider the following process recommendations to provide an opportunity for adequate public involvement in the local input points assignment phase of the TIP development process.

- A minimum 14-day public comment and review period should be held for the proposed list of projects to submit to NCDOT for the TIP Development process. A 30-day comment period is desirable if CRTPO meeting schedules, and NCDOT milestones allow for this timeframe within this phase.
- Draft lists and maps of projects proposed for local input points assignment should be easily found on CRTPO's webpage. The assignment of the NCDOT Division's allocation of local input points to these projects should also be shown if the data is available.
- Context should be provided in regards to the STI legislations requirements for adherence to CRTPO's adopted local input points methodology.
- The public comment period should be announced by using media releases, newsletter articles, social media posts and CRTPO's website.
- Residents may attend the MPO Board meeting to provide comments on the draft list of projects proposed for local input point assignment.

- Staff should summarize the public comments received on the draft list of projects proposed for local input points assignment and post a summary on the NCDOT Prioritization webpage.
- A summary of public comments received should be presented to the TCC and MPO during the endorsement presentations.
- The MPO board can divert from the recommended list of projects proposed for local input point assignment by the TCC based upon public comment received. If a diversion from the recommended local input points assignment occurs, it should be clearly documented on the final project list that is posted to the CRTPO website.

Public Involvement Techniques:
Public engagement during the local input point assignment process list may include the following techniques:

- The CRTPO's NCDOT Prioritization webpage should be used as the central location for information regarding this process. Links to the recommended local input point assignment lists and PDF (static) maps should be easily viewed on the webpage.
- Consider implementing online interactive mapping within the webpage where residents can express support for local input point assignment for specific projects;
- Open houses or public workshops can be held as deemed necessary;
- Informational presentation to an elected board or civic group;
- Staffed table (pop-up) at a regularly scheduled event; and,
- Recorded webinar that summarizes CRTPO's role in the NCDOT Prioritization process.

Public Involvement Opportunities Following Release of DRAFT TIP- Once the NCDOT Prioritization process is complete; CRTPO should begin the process of informing the public regarding the contents of the draft TIP. The release of a draft TIP will usually require project amendments to the current MTP, and an air quality conformity determination. MTP amendments and air quality conformity determination are incorporated into the TIP adoption process.

The following recommendations are intended to ensure that residents are adequately notified of the release of the draft TIP:

- The CRTPO currently maintains a webpage on its website with content on the current TIP and TIP archives. During the TIP adoption process, the following materials should be included on the webpage:
  - TIP adoption schedule;
  - Information regarding the public comment period;
  - Links to PDF (Static) maps that clearly label the projects identified through the TIP Development process. Given the CRTPO's unique geography, it may be helpful to divide the maps by County;
  - Link to the TIP Financial Plan;
  - Link to Air Quality Conformity Determination document; and,

- Link to lists and maps of MTP amendments that have been identified by the release of the draft TIP.

- The draft TIP will be available for residents to review the document and other related materials on its website.
- Emphasis should be placed on CRTPO's involvement in the project submittal and local input points processes within the most current round of NCDOT Prioritization led to the projects that are identified in the draft TIP.
- A minimum 14-day public comment and review period should be held for the draft TIP. A 30-day comment period is desirable if CRTPO meeting schedules, and FHWA milestones allow for this timeframe within the TIP adoption process.
- The public comment period should be announced by using media releases, newsletter articles, social media posts and CRTPO's website.
- Residents may attend the MPO Board meeting to provide comments on the draft TIP.

Amendments and Modifications to the Transportation Improvement Program – An amendment or modification to the TIP is necessary when projects are added or removed, funding levels have changed, or a project schedule has shifted. Both TIP amendments and administrative modifications will require a recommendation from the TCC and adoption by the MPO.

- Administrative modifications may occur if a change will not alter the intent of a project and has minor impact. Public outreach is not necessary with an administrative modification.
- TIP Amendments are proposed when changes occur in funding sources, schedule, and project scope.
  - Staff should determine the level of public involvement that is appropriate for TIP amendments since their impacts may vary.
  - TIP amendments that also require an amendment to the MTP and/or a new conformity determination will be required to have a public involvement component.
  - Public involvement is recommended if the TIP amendment is recommended to cancel a regionally significant project.

C. Transportation Conformity Determinations

The CRTPO is required to demonstrate that projects included in the MTP and TIP follow the National Ambient Air Quality Standard (NAAQS). This requirement is important in protecting air quality for both residents and the environment. Conformity determinations are necessary during the TIP and MTP adoption process, and during certain TIP and MTP amendments.

A public comment period is required when a conformity determination is conducted. Staff will determine if a public meeting is warranted based upon the impact of the conformity determinations. Public involvement activities may be coordinated with MTP and TIP outreach efforts because the conformity determination is typically related to the requested action for the TIP and/or MTP.

D. Public Involvement Plan

A 45-day public comment period is required when an MPO updates its PIP. The recommended document should be available on the CRTPO's website. The public comment period should be announced by using media releases, newsletter articles, social media posts and the CRTPO's website.

Residents may attend the MPO board meeting to provide comments on the draft PIP.
Public comments will be evaluated and appropriately considered prior to the adoption of the PIP by the CRTPO. The final PIP will be available on the CRTPO website. Hard copies may be available upon request.

E. Public Involvement Performance Measures and Periodic Reporting

The CRTPO should consider producing periodic reports that summarize the public involvement activities and associated performance measures as staff time allows. The report should include an assessment of each activity and any resulting recommended changes to future public involvement efforts. The MPO board members and the TCC will be notified that this report is available on CRTPO's website. The chart on the next page describes a summary of potential performance measures for the CRTPO's public involvement activities.

CRTPO Public Involvement Performance Measures and Targets

Tool/Effort	Measurements	Method to Reach Goals
Public Involvement Efforts		
Americans with Disabilities Act (ADA) Accessibility	Number of meetings that are ADA compliant and near transit (when applicable)	- Host meetings in locations with ADA accessibility; and, - Utilize facilities that are accessible to transit when available.
Participant Satisfaction	Performance based on level of participant satisfaction with the public involvement activity	- Conduct participant satisfaction surveys following CRTPO facilitated public meetings and workshops; - Ask leading questions to receive constructive feedback in regards improvements that can be made to the public involvement process; and, - Staff to evaluate responses and make the appropriate adjustments to its public involvement activities.
Website	Number of visitors	- Track unique website visitors and repeat visitors; and, - Eliminate City staff IP addresses from the website visitor counts.
Social Media	Number of new followers on social media accounts	- Use advertisements to target populations that are not currently following CRTPO; - Post interesting and informative information regularly to retain followers' interest; and, - Follow stakeholder organizations and comment on their pages as appropriate
	Number of "likes"/"re-tweets"	- Track the number of positive affirmations that particular posts receive on the CRTPO's Social Media accounts; - Evaluate posts that receive the greatest number of positive affirmations, and design future postings with similar information.
Newsletter	Percentage of opens compared to the total number sent	- Track the number of "opened newsletters" for each edition; and, - Identify the topics that have the greatest amount of "opens" to help shape future newsletter content
Plan Specific		
Share of Municipality Visits / Coordination	Number of visits and/or communications a municipality issues on behalf of CRTPO	- Track the municipalities visited and/or coordinated with during a plan or program. The purpose is to make sure all impacted areas receive opportunities to be educated and participate in the process.
Comments Received Per Meeting	Percent of attendees who submit a comment form during a public meeting	- Ensure that all attendees are verbally notified about the opportunity to comment and are physically handed a comment form. - If a low percentage is received, reformat comment form for future meetings to make it more user friendly.
Total Plan Comments	Total number of comments received on a plan or program during the comment period and all outreach events	- Determine what method (meeting, mail, online, phone, etc.) was most popular for obtaining comments. Review outreach strategies for areas that are low.

CONCLUSION



V. Conclusion

The public engagement strategies outlined in this document serve as the CRTPO's PIP with the goal of increasing and encouraging public participation in the transportation planning process. The strategies have been developed through practice and are supported by the results from research efforts. A comprehensive update to the PIP was necessary for the following reasons:

- An increase in population, membership and area of the MPO due to the expansion of the Charlotte Urbanized Area, as a result of the 2010 Census;
- A new name for the MPO, the Charlotte Regional Transportation Planning Organization, triggered by the expansion of the MPO's planning area boundary;
- New Federal transportation legislation enacted in 2015, Fixing America's Surface Transportation Act (FAST); and
- New State transportation legislation enacted in 2013, Strategic Transportation Investments (STI), which materially changed the manner in which public involvement can be conducted as part of the TIP development process.
- Advancements made within the social media field as an effective method for government agencies to reach its residents more efficiently.
- Decrease the reliance on holding public meetings, and move towards having a "pop-up" presence at existing events.

The CRTPO recognizes the importance of conducting effective public engagement as a critical component of the continuing, cooperative and comprehensive (3-C) process upon which MPO activities were originally based. This comprehensive PIP should be reviewed and updated regularly to include new and innovative public engagement techniques to increase the CRTPO's ability to effectively engage audiences and successfully acquire input.



VI. Appendices

Appendix A

CTP Amendment Guidelines

Table II: CTP Amendment Guidelines

Mode	Facility Type	Administrative Modifications (Notification Only to TCC & MPO)	Procedural Amendments (MPO Adoption Required & Public Engagement)
Highway	• Thoroughfares (Minor, Major, Boulevard, Freeway, Expressway)	Status change from recommended to existing Status change from needs improvement to existing Minor change to alignment **	Add or remove facility Status change to recommended/needs improvement Major change to alignment ** *Classification change ** *
	• Grade Separations, Interchanges • Managed Lanes Interchange (Direct Access)	Status change from recommended to existing Status change from needs improvement to existing	Add or remove facility Status change to recommended/needs improvement Change to location *Classification change ** *
Bicycle and Pedestrian	• On-Road Facility • Multi-Use Path • Sidewalks	Status change from recommended to existing Status change from needs improvement to existing Realignment necessitated by roadway realignment Minor change to alignment ** Classification change **	Add or remove facility Status change to recommended/needs improvement Major change to alignment **
	• Greenways • Grade Separations	Status change from recommended to existing Status change from needs improvement to existing Minor change to alignment **	Add or remove facility Status change to recommended/needs improvement Major change to alignment **
Transit and Rail	• Fixed Guideway ** • Commuter Rail ** • Active Rail ** • High Speed Rail Corridor	Status change from recommended to existing Status change from needs improvement to existing Minor change to alignment **	Add or remove facility Status change to recommended/needs improvement Major change to alignment ** *Classification change ** *
	• Operational Strategies **	Status change from recommended to existing Realignment necessitated by roadway realignment	Add recommended/existing strategy
	• Rail Stops, Bus Park & Rides • Intermodal Connectors • Rail-Rail • Rail-Highway Grade Separations	Status change from recommended to existing Status change from needs improvement to existing	Add or remove facility Status change to recommended/needs improvement Change to location

** See Appendix B for definition

Classification change - CRTPO staff can determine if public engagement is needed or not.

Appendix B

Definitions

- ***Minor Change to alignment***:
  - If the recommended alignment stays on the same parcel(s) as the adopted alignment and does not move closer than 400 feet to an adjacent parcel unless the adjacent parcel(s) owner(s) provide agreement to the recommended alignment in written form; OR
  - If the recommended alignment is being proposed as part of a development proposal, has been approved by the jurisdiction and will be constructed as part of that development. If there are parcels affected by the recommended alignment that are outside the development proposal, those parcel owners must be notified and provide written concurrence to the recommended alignment; OR
  - If the recommended alignment is being proposed as part of a development proposal and public outreach related to the development proposal has included references to the CTP amendment and all parcel owners affected by the recommended alignment that are outside the development proposal must be notified and provide written concurrence to the recommended alignment.

- ***Major Change to alignment***: Any other amendment that is not defined as a minor change.

- ***Classification Change***: Refers to changes related to the type of facility. For example, a change for a highway facility may update a road from Freeway to Expressway or Boulevard to a Major Thoroughfare. The overall impact is significantly different depending on the transportation mode. CRTPO staff will determine the appropriate level of public engagement when the classification changes.

- ***Operational Strategies:*** Operational strategies are classified within the CTP as managed lanes on expressways, express bus or bus rapid transit modes.

- ***Transit and Rail:***
  The following describes the eligible transit technology within the CTP:
  - Fixed guideway is a facility that generally operates in a dedicated guideway separated from general vehicular travel for the exclusive use of public transit, high occupancy vehicles and light rail.
  - Commuter rail is a form of regional passenger rail service within a metropolitan area that provides travel between principal cities and adjacent suburban areas.
  - Active rail is defined as railways that carry primarily either freight or cargo in the railcars to and from its destination by private freight rail companies such as Norfolk-Southern, CSX, etc.

Appendix C

Administrative Modifications and Procedural Amendments Process

This appendix provides and overview of the Administrative Modifications and Procedural Amendments to the CTP.

Administrative Modifications Process:

1. Staff from the CRTPO member jurisdiction initiates the process by coordinating with CRTPO staff to verify and confirm the request is an administrative modification.
2. The proposed modification will be presented by the member jurisdiction at a Transportation Staff Meeting (TSM) for information.
3. Pending any comments from TSM, the modification is conducted internally without action from the Technical Coordinating Committee (TCC) and CRTPO Board.
4. CRTPO staff will present a comprehensive list of modifications to the TCC and CRTPO Board meetings once a year.
5. NCDOT staff brings a list of all amendments once a year to the NC Board of Transportation Meeting for inclusion within the statewide CTP.

Procedural Amendments Process:

1. Staff from the CRTPO member jurisdiction initiates the process by providing a map of the proposed amendment and coordinating with CRTPO staff to verify and confirm the request is a procedural amendment.
2. If confirmed, the member jurisdiction staff will conduct a presentation during a TSM for information and/or discussion as needed.
3. Provided no significant issues are identified during the presentation at TSM, the request will move to an upcoming TCC Meeting for information to recommend that the Board open a public comment period on the proposed amendment. Board approval of the request is required to start the public engagement period. The member jurisdiction must lead the public engagement process. The public engagement period is preferred to be 30 days in length if meeting schedules permit, with a minimum 14 days.
4. Following the close of the public comment period, member jurisdiction staff conducts a second presentation at TSM to summarize the comments received.
5. Member jurisdiction staff provides all agenda text, attachments and presentations to be included within an upcoming TCC and CRTBO Board agenda to present a summary of the comments received.
6. NCDOT staff brings a list of all amendments at least once a year to a NC Board of Transportation meeting for inclusion in the State CTP plan.

Public Comment Waiver for Procedural Amendments: The requirement for public comment can be waived if the member jurisdiction can demonstrate that an adequate

level of public engagement has been conducted within the last year as part of a local land development proposal or plan adoption the amendment has conducted public involvement efforts sufficient to meet the guidelines in the CRTPO's PIP (Section 4.3, Waiver of Public Involvement Activities).

Appendix D

Public Engagement Requirements and Techniques for CTP Amendments

This appendix summarizes the public involvement requirements and suggested techniques for member jurisdictions conducting engagement on CRTPO CTP amendments:

- The public engagement period for review and comment should be held for 30 days in length if meeting schedules permit, with a minimum 14 days.
- Media releases must specify the current alignment or project that will be amended within the CRTPO's CTP.
- Residents will have the opportunity to provide input during a public comment period during a CRTPO Board meeting, by email, regular mail or facsimile.
- The appropriate project, plan or study information, maps, or similar should be made available on CRTPO and/or jurisdiction's website along with instructions for residents to provide comments.
- Member jurisdiction staff should summarize the public comments received on the project submittal lists. Summaries will be posted on the member jurisdiction and CRTPO webpage.
- Member jurisdiction staff should present a summary of public comments received to the TCC and CRTPO Board.

Member jurisdiction and CRTPO may implement the following techniques to inform residents of an open public comment period on a CTP procedural amendment proposed by a member jurisdiction:

- Public comment period may be announced by distributing media releases, e-blasts and inclusion in newsletter articles.
- Post an announcement on the member jurisdiction and CRTPO website regarding the proposed amendment, with instructions on how residents can provide input.
- Social media advertisements may be used to promote the details of the CRTPO Board meetings scheduled to review and/or action on the amendment.
- Notices may be distributed as bus flyers or within utility bill mailings to affected communities.

Public engagement may include the following techniques:

- On-line interactive mapping where residents can express support for project submissions;
- Surveys (on-line or in-person);

- Open houses or public workshops;
- Informational presentation to an elected board, civic group or neighborhood association;
- Staffed table (pop-up) at a regularly scheduled event; and
- Virtual meetings or recorded webinars.

Additional Guidance for Member Jurisdictions:

The member jurisdiction or designee will distribute information to notify the residents within a reasonable vicinity of the proposed amendment. Notifications will include information summarizing the proposed CTP map modification, instructions for residents to obtain additional information regarding the proposal, a schedule of presentations to the TCC and CRTPO Board and ways the public can provide comments. Information can be distributed using one or more of the following methods:

- The distribution should be targeted to the affected property owners and adjacent parcels that may experience a secondary impact. The distribution area should be determined by CRTPO staff and the member jurisdiction's judgment.
- Media release to the appropriate markets.
- The jurisdiction of the proposed amendment should post information regarding the amendment on its website, social media and other appropriate channels.
- For transit and rail amendments, the local transit agency that has initiated the CTP map amendment will lead the public involvement activities in accordance with its local outreach policy.
- For State rail or freight amendments, amendments will follow the public notification methods described under Section I. Highway, Bicycle, and Pedestrian Mode Amendments. Proposed changes will be reviewed to ensure that low-income and/or minority populations will not experience disproportionate impacts, as noted in Executive Order 12898 (see Chapter I, Section B). The CRTPO website will be updated with revised CTP maps once the CRTPO Board has approved the change.

Cabarrus Rowan MPO Public Participation Policy

Cabarrus Rowan Metropolitan Planning Organization

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Cabarrus Rowan MPO Public Participation Policy

Cabarrus Rowan Metropolitan Planning Organization

Summary of Changes

The current Public Involvement Policy document was adopted in 2017. This Pubic Participation Policy document makes the following updates and revisions:

- Out of an abundance of caution, MPO staff are recommending adding language to the PPP that specifically mentions the permissibility of electronic meetings. Currently, the North Carolina Open Meetings Law, which the MPO abides by as stated in the approved PPP, includes language enabling electronic meetings and voting. The current proposed update lists the reasonable steps the MPO should take to ensure meetings held solely electronically are as publicly accessible as feasible. It addresses requirements for notification as well as providing the public with the means to both view or listen to the meeting in real-time.

  When Feasible:

  - Meetings will be streamed live on an online platform that allows visual and audio capabilities to the general public.
  - Meeting agendas and materials will be posted online in advance of the meeting.
  - If public comments cannot be made in person, a means to provide comments by phone call, email, letter, or video will be provided. It is requested that public comments be received 48 hours prior to the meeting.

The full Public Participation Policy document can be found at:
http://www.crmpo.org

Cabarrus Rowan MPO

The Cabarrus Rowan Metropolitan Planning Organization (CR MPO) is the officially designated body responsible for administrating the transportation planning process. The MPO plans for regional transportation needs including highway, transit, air, bicycle and pedestrian facilities within both Cabarrus and Rowan counties as well as connections to the greater Metrolina Area. The priority goals of the MPO planning process include:

- Promote the safe and efficient management, operation and development of the transportation system;
- Serve the mobility needs of people and freight;
- Public participation and partnership;
- Foster economic growth and development; and,
- Minimize the negative effects of transportation including air quality.

The MPO is responsible for developing and directing a continuous, comprehensive transportation planning process carried out cooperatively by the local, State and Federal governments in conformance with Federal laws and guidelines. Broad responsibilities include, but are not limited to, the following:

- To advise the policy boards within the MPO planning area on the status and needs identified through the transportation planning process.
- To assist the general public in understanding decisions and policies related to the transportation planning and decision-making process.
- Identifying existing and future transportation needs by analyzing existing conditions, data, and trends and making projections of future changes.
- Increase safety and security of the transportation system for motorized and non-motorized users.
- Increasing the accessibility and mobility options available for people and freight.
- Protecting and enhancing the environment and the improving quality of life.
- Enhance the integration and connectivity of the transportation system across and between modes.
- Support and improve transit services.

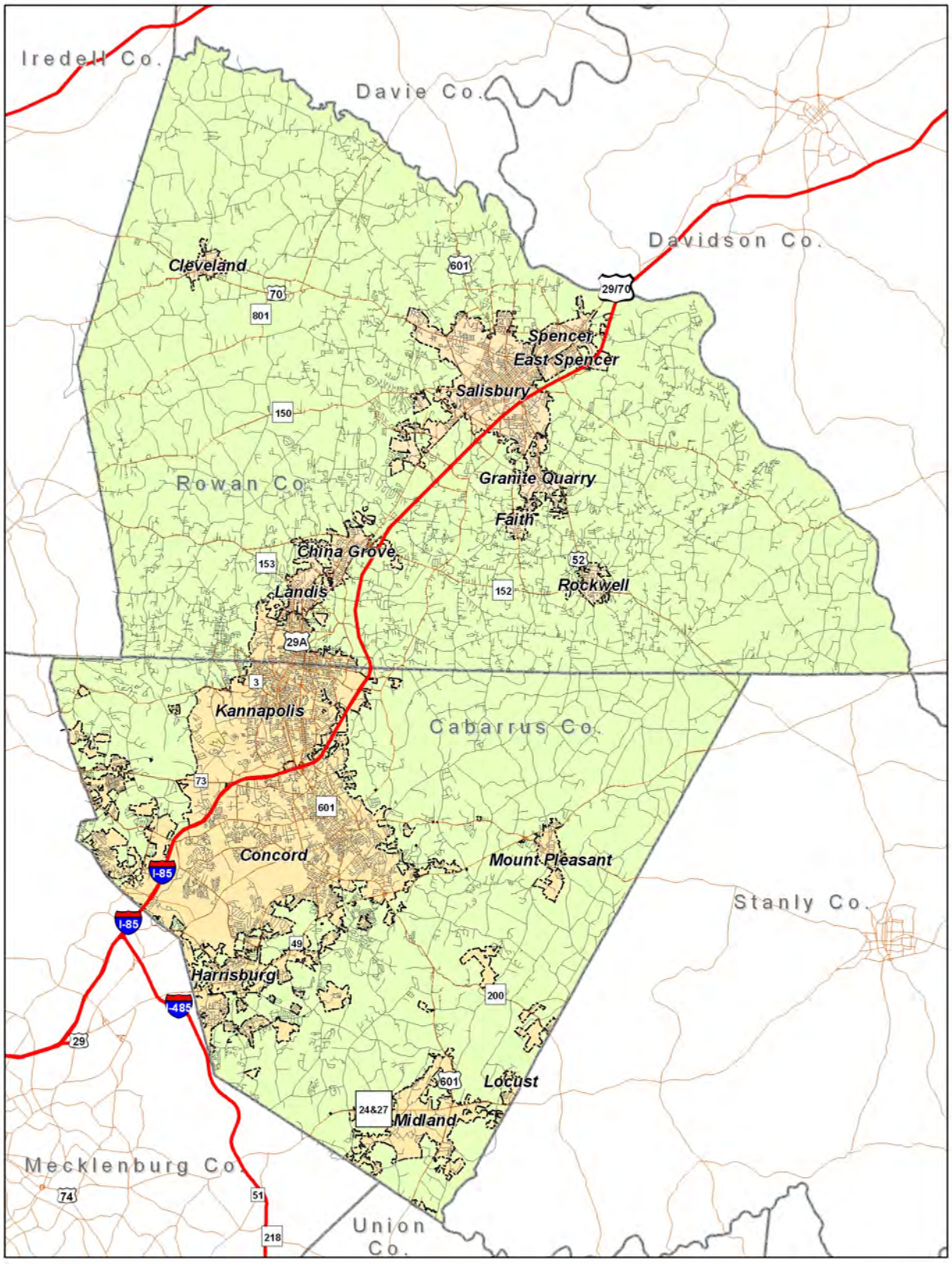


Figure 1 - Cabarrus Rowan Metropolitan Planning Organization

Participation in the Cabarrus Rowan MPO by member units of government is handled through two different groups: the **Transportation Advisory Committee (TAC)** and the **Technical Coordinating Committee (TCC)**.

The Transportation Advisory Committee is the policy and decision-making body for the Cabarrus-Rowan Metropolitan Planning Organization. The TAC is comprised of elected and appointed officials from the City of Concord, the City of Kannapolis, City of Salisbury, the Town of Landis, the Town of China Grove, the Town of Harrisburg, the Town of Spencer, the Town of Granite Quarry, the Town of Rockwell, the Town of Mount Pleasant, the Town of Cleveland, Cabarrus County, Rowan County, Town of Midland, Town of Faith, Town of East Spencer, and the North Carolina Department of Transportation. The TAC is responsible for approving the transportation planning documents and reports prepared by the MPO staff, developing policies on various transportation conditions and issues, and providing opportunities for citizen participation in the transportation planning process.

The Technical Coordinating Committee is the technical advisory body for the Cabarrus-Rowan Metropolitan Planning Organization. The TCC is comprised of professional planning and engineering staff from the City of Concord, the City of Kannapolis, City of Salisbury, the Town of Landis, the Town of China Grove, the Town of Harrisburg, the Town of Spencer, the Town of Granite Quarry, the Town of Rockwell, the Town of Mount Pleasant, the Town of Cleveland, Cabarrus County, Rowan County, Town of Midland, Town of Faith, Town of East Spencer, and the North Carolina Department of Transportation. The TCC makes recommendations to the TAC and is also responsible for providing opportunities for citizen participation in the transportation planning process.

MPO Plans and Programs

The Cabarrus Rowan MPO is responsible for creating and maintaining documents essential to the on-going transportation planning effort and guiding the prioritization and implementation of transportation projects.

Federally Required Documents

Metropolitan Transportation Plan (MTP)

The MTP is a multimodal plan with a minimum 20-year planning horizon that is fiscally constrained. The MTP must currently undergo an air quality conformity analysis determination. The MTP must be updated at least every four (4) years. The current MTP is the 2040 Metropolitan Transportation Plan Update approved March 2014 and amended August 2015.

Air Quality Conformity Determination (AQCD) (Clean Air Act (CAA) Amendments of 1990)

Transportation conformity is required for MPOs that are non-conforming or in maintenance for the State Implementation Plan (SIP) air quality standards regulated by the CAA. The MPO must meet conformity requirements or risk a conformity lapse where the use of Federal transportation funds is restricted to projects that do not increase roadway capacity.

Metropolitan Transportation Improvement Program (MTIP) and Rider Transit System Program of Projects (POP)

The MTIP is a ten-year (10) program that schedules State and Federal funding for roadway, bridge, safety, public transportation, passenger rail, bicycle, and pedestrian projects transportation projects in the MPO. The MTIP is a subset of the State Transportation Improvement Program (STIP) and must meet AQCD. The City of Concord Rider Transit System's Program of Projects (POP) is included in MTIP document.

Major Investment Study

A major investment study (MIS) is a planning tool to support decisions on significant federally funded transportation investments along a corridor or sub area level within the MPO. It is a detailed analysis designed to provide local decision-makers with more comprehensive corridor level technical analysis early in the transportation planning process.

Congestion Management Processes (CMP)

As a TMA, the Cabarrus Rowan MPO produces a CMP as an integral part of the MTP. The purposes of the CMP are to identify and address most of the major existing traffic congestion problems and conditions in the urban area and to identify a variety of tools and techniques that can be used to mitigate the identified problems.

Environmental Justice (EJ) Plan (Executive Order (EO) 12898, 1994)

The EJ Plan outlines specific goals and procedures the MPO will follow to involve minority and low-income populations in transportation planning processes and avoid disproportionately high and adverse impacts on minority and low-income populations.

Public Participation Policy

The Public Participation Policy details the MPO's commitment to public participation for all transportation plans and air quality conformity determination reports with clear, timely information; early and continuous involvement; and increased access for citizens, public agencies, providers of public transportation, and low income and limited English segments of the community. The Public Participation Policy outlines techniques to engage the public and provide outreach through traditional and new social media outlets. The Public Participation Policy includes performance measures that will provide information on the effectiveness of public involvement strategies. The Public Participation Plan will be implemented as a part of the MTP processes and outreach.

Unified Planning Work Program

The MPO prepares an annual work program known as the Unified Planning Work Program (UPWP). The UPWP must identify the MPO planning tasks to be undertaken with the use of federal transportation funds, including highway and transit.

Annual List of Federal Project Authorizations

Each year the North Carolina Department of Transportation (NCDOT) provides the CR MPO with an annual list of project that receive Federal Authorizations.

State Required Documents

Comprehensive Transportation Plan (CTP)

The MPO, with the cooperation of North Carolina Department of Transportation (NCDOT), develops a CTP based on population growth, economic conditions, and land use patterns. The CTP includes highway, transit, rail, bicycle and pedestrian elements in five maps to guide the development of the transportation system and document all expected projects at build-out with no regard to funding and/or timing constraints.

Strategic Prioritization Process

The NCDOT Strategic Planning Office of Transportation (SPOT) manages the STIP Project Prioritization process through a transparent, data-driven decision-making process for transportation projects along with local MPO input. The SPOT process develops an initial ranking and Statewide projects are prioritized with available funding. Remaining Statewide projects and Regional and Division level projects receive local

ranking and points through the MPO and NCDOT Division. Final STIP funding decisions are made using project scores and points along with the application of financial and scheduling constraints.

Other MPO Plans

Livable Communities Blueprint

The Livable Community Blueprint is a guide to assist Cabarrus County and the municipalities to identify bicycle and pedestrian routes on which they may focus over the next decade. The plan is located at https://www.cabarruscounty.us/government/departments/active-living-parks/Pages/Livable-Community-Blueprint.aspx

Carolina Thread Trail Masterplan for Cabarrus County

The Cabarrus County vision for greenway and trail development to connect the county, cities, towns and region within the Cabarrus Rowan MPO. The plan is located at https://www.cabarruscounty.us/government/departments/active-living-parks/Documents/parks_carolina_thread_trail_master_plan.pdf

Public Participation Policy

The Cabarrus-Rowan Metropolitan Planning Organization's (CR MPO's) Public Participation Policy is an umbrella policy, encompassing the plans and programs of the Urban Area's transportation planning process. Public involvement is an integral part of the CR MPO's planning efforts and is intended to offer opportunities for the general public and particularly, historically disadvantaged populations to provide meaningful input into the transportation planning and decision-making process. The Public Participation Policy is comprised of the public involvement programs for all the major planning activities, including the Metropolitan Transportation Plan (MTP), Metropolitan Transportation Improvement Program (MTIP), Major Investment Studies (MIS), and the Unified Planning Work Program (UPWP). The CR MPO will seek public input through a menu of techniques, including but not limited to, public notices, comment periods, workshops, charrettes, public hearings, newsletters, surveys, social media outreach, website and traditional media relations. The techniques employed will vary, depending on the specific planning task. The MPO will hold a forty-five (45) day public comment period for amendments to the Public Participation Policy. The CR MPO's Public Participation Policy will be consistent with the requirements of the Fixing America's Surface Transportation Act (FAST Act), the National Environmental Policy Act (NEPA) and the FTA/FHWA Guidance on Public Participation.

Federal Requirements

The MPO's Public Participation Policy is designed to be consistent with the requirements of the following Federal laws and processes detailed in **Appendix A – Acronyms, Glossary of Terms and Federal Requirements**:

- FAST Act – Fixing America's Surface Transportation
- Title VI of the Civil Rights Act of 1964
- Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (1994)
- Executive Order 13166 – Improving Access to Services for Persons with Limited English Proficiency (2000)
- Americans with Disabilities Act of 1990
- Rehabilitation Act of 1973, Section 504

- Rehabilitation Act Amendments of 1998, Section 508
- National Environmental Policy Act
- Clean Air Act Amendments of 1990

Purpose

The purpose of the CR MPO Public Participation Policy is to have a proactive public participation process that provides complete information, timely public notice, and full public access to MPO activities at all key stages in the decision

-making process. This Policy is designed to ensure that the involvement of communities most affected by particular plans or projects are afforded ample opportunity to participate in the development of these plans and that transportation decisions will reflect public priorities.

Objectives

1. Bring a broad cross-section of the public into the public policy and transportation planning decision-making process.
2. Maintain public involvement from the early stages of the planning process through detailed project development.
3. Use different combinations of public involvement techniques to meet the diverse needs of the general public.
4. Make special efforts to increase the involvement by groups of people who do not generally participate, particularly low-income and minority populations.
5. Determine the public's knowledge of the metropolitan transportation system and the public's values and attitudes concerning transportation.
6. Ensure that technical information is available to the public in an understandable form and that all segments of the population are afforded access to this information.
7. Maximize the use of communications technology to facilitate the exchange of information, including use of the MPO web site and other electronically accessible formats (dropbox, e-mail, etc.).
8. Establish a channel for an effective feedback process.
9. Evaluate the public involvement process and procedures to assess their success at meeting requirements specified in the FAST Act, NEPA and the FTA/FHWA Guidance on Public Participation.

The Public Participation Policy consists of levels of public involvement depending on the nature and scope of each project or plan. Special emphasis will be given to engage the public in planning studies that form the basis for later programming decisions. Planning activities include corridor studies and special regional studies, environmental assessment studies, development of the MPO MTP and CTP. The MPO shall make every effort to involve the affected community through methods such as local direct mailing, transportation committees of local jurisdictions, public information meetings, and newsletters.

Public Involvement Opportunities

Open Meetings

The TCC holds regular monthly meetings on the 3rd Wednesday of every month and the TAC holds regular monthly meetings on the 4th Wednesday of every month except the months of December and July. All of

these meetings are open to members of the public and media and subject to the North Carolina Open Meetings Law. At the beginning of each regular meeting, the TCC and TAC provide time to receive public comments. All materials presented during MPO committee meetings will be public record and made available for review at the CR MPO office. Copies of archived records are available upon request.

Electronic Meetings

The CR MPO may choose to hold electronic meetings solely online or electronically. For CR MPO boards, the decision to hold an electronic meeting will be made by the Chair and Vice-Chair of each respective board in consultation with the MPO Director. In these cases, a telephone number will also be published for individuals without internet access.

When Feasible:

- Meetings will be streamed live on an online platform that allows visual and audio capabilities to the general public.
- Meeting agendas and materials will be posted online in advance of the meeting.
- If public comments cannot be made in person, a means to provide comments by phone call, email, letter, or video will be provided. It is requested that public comments be received 48 hours prior to the meeting.

Adequate Notice

The local news media will receive notification of all TCC and TAC meetings. The CR MPO will provide at least a week notice to citizens and media outlets of meetings in accordance with North Carolina Open Meetings Law. Meeting notices and the meeting schedule for the year is posted on the CR MPO website and publicized.

Access by Persons with Disabilities

All TAC, TCC and other MPO meetings will be held in facilities that are accessible to people with disabilities. All notices for planning activities of the Cabarrus Rowan Metropolitan Planning Organization will include an announcement that states that persons with disabilities will be accommodated. Special provisions will be made if notified 48 hours in advance (i.e. having available large print documents, audio material, someone proficient in sign language, a translator or other provisions requested). The MPO will use the North Carolina Department of Health and Human Services database of sign language interpreters in our region to secure a sign language interpreter for a scheduled meeting upon request. Currently the database is available at HTTP://WWW.NCDHHS.GOV/DSDHH/DIRECTORIES.HTM.

Public Outreach for General Programs and Plans: The MPO will involve residents, member municipalities, affected public agencies, representatives of neighborhood groups, planning committees, public and private providers of transportation, freight handlers, non-motorized transportation users, the disabled, economic development and business groups and associations, and other parties who express an interest in the process.

Public Outreach for Special Studies: For special studies, the MPO will identify and involve persons and groups that might be affected by potential changes to transportation services or facilities under review. Examples include: abutting property owners, neighborhood associations, environmental groups, appropriate federal, State and local agencies responsible for land-use, environmental and economic

development, and businesses within the study area.

Transportation Equity

During the adoption of transportation plans, policies and programs, the MPO will ensure fair and full participation in the transportation planning process by all citizens who may be potentially affected and be consistent with the Environmental Justice Executive Order guidance from the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). The MPO will identify low-income and minority populations by traffic analysis zones or by census tracts, so the effects or burdens of transportation programs and on these groups can be reviewed and addressed to ensure transportation programs are distributed throughout the planning area fairly. Public outreach to low-income and minority populations will be made by maintaining a distribution email or mailing list of community organizations and leaders, inviting them to public meetings/workshops and speaking at community meetings. Public notices for adoption of new or major updates to the MTP or MTIP will be placed in newspapers and other available media outlets to reach low-income, minority and Spanish speaking communities.

Format of Public Meetings

Public meetings allow the MPO staff an opportunity to interact with citizens that may be directly affected by specific transportation plans. The general format of public meetings may include: a presentation by MPO staff; a question and answer period, and a summary of materials covered. Meetings may also incorporate using maps to identify where citizens are located, and an interactive activity. The CR MPO will hold multiple public meetings at various locations throughout the planning area. At least one will be in the evening or on a weekend to allow those with traditional work schedules to attend, and at least one will be during the traditional work day to allow those who work in the evenings or on weekends to attend. As appropriate, meetings will be held in minority communities.

Visualization Techniques

The Cabarrus Rowan MPO will use visualization techniques to clearly present information relating to MPO transportation plans, MTIPs and other planning projects. The goal of the MPO visualization policy 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. See the definition of visualization in the glossary (Appendix A) for examples of visualization techniques.

Time Period for Public Comments

The MPO shall allow reasonable time for public review and comment at key decision points. Minimum public review and notification periods shall be as follows:

- Amendments to the MPO's Public Participation Policy – 45 days
- Adoption of the MTIP & major MTIP amendments, Air Quality Conformity Determination, MTP/CTP & major amendments – 30 days
- TAC & TCC Meetings – 7 days

Public Outreach Timelines and Actions Table

Planning Document	Update	Amendment	Administrative Modification
Metropolitan Transportation Plan (MTP)	At least one public meeting during the 30 days public review period prior to approval	Public Review and Comment period to last 30 days prior to approval	No public participation required for correcting small, non-substantial items

Metropolitan Transportation Improvement Program (MTIP) **Air Quality Conformity Determinations (AQCD)**	Public Review and Comment Period to last 30 days prior to approval Public comment period during the TAC Meeting prior to final approval	Public comment period on the MTP during the TAC Meeting prior to final approval	
Prioritization List	Public Review and Comment Period to last 28 days after initial TAC list approval	NA	No public participation required
Comprehensive Transportation Plan (CTP)	Public Review and Comment Period to last 30 days prior to approval	Public Review and Comment period to last 30 days prior to approval	No public participation required for correcting small, non-substantial items
Public Participation Policy	Public Review and Comment Period to last 45 days prior to approval Public comment period during the TAC Meeting prior to final approval	Public Review and Comment Period to last 45 days prior to approval	No public participation required for correcting small, non-substantial items
Major Investment Study (MIS)	Public comment on a case by case basis to meet goals of MIS.	Public comment on a case by case basis to meet goals of MIS.	No public participation required
Unified Planning Work Program (UPWP)	Public comment period during the TAC Meeting prior to draft approval	Public comment period during the TAC Meeting prior to draft approval	No public participation required
Annual List of Federal Project Authorizations	Annual Authorizations made available for review and comment at MPO and on the website.	Annual Authorizations made available for review and comment at MPO and on the website.	No public participation required

General Guidelines

The following are general minimum requirements for all plans and projects requiring public involvement:

1. A public notice inviting comments at the beginning of the review period containing the following:
    a. Locations where the document can be reviewed;
    b. Instructions for submitting comments;
    c. Contact information for questions or additional information, noting that comments on the public participation process are also welcome;
    d. The due date for comments;
    e. Date, time, location and special accommodations for any scheduled public meetings;
    f. A link for additional information on the Internet.
2. MPO will include maps, photos, or renderings on public notices to attract interest, when possible.
3. The public notice (ad, poster or website notification) may be submitted to the following outlets, which will also be advised of any significant developments during the public review period:
    a. For major updates of the MTP, CTP, MTIP or AQCD only, at least one major newspaper and publications serving minority communities. MPO will maintain the list of newspapers;
    b. MPO Web site;
    c. Press release to media outlets. MPO will maintain the list of media contacts;
    d. Local newspapers and representatives of the MPO municipalities based on the project;
    e. TCC and TAC members, as well as representatives of stakeholder agencies.
4. Documents may be available for public review for at least 28 calendar days at the following locations:

    a. Municipal and county government offices;
    b. The MPO and NCDOT Division 9 and 10 offices;
    c. Libraries in Rowan and Cabarrus Counties.
5. Documents should contain maps, photos, renderings, or other visualization tools to aid in understanding and shall be as jargon-free and succinct as possible.
6. The document shall also be available on the MPO website for the duration of the public review period. The website should be accessible and compatible with assistive technology tools.
7. During the public review period, comments should be submitted:
    a. in writing;
    b. via standard mail, e-mail and fax or Internet forms, if available.
8. Public comments received will be:
    a. Acknowledged with a written or e-mailed receipt message;
    b. Responded to as appropriate, which could include a direct communication to the commenter or a response in the revised document;
    c. Documented and presented to the MPO's TCC and TAC, in summary form or verbatim, before a vote is taken to adopt the plan or document in question; and
    d. Included in summary form or verbatim with final documents, if sufficiently significant.

Implementation Guidelines

Minor items are performed administratively with limited public involvement outside the regular meeting structure of the MPO. Members of the TAC will represent citizens in making decisions, and materials will be distributed to inform stakeholders and implementing agencies of changes. Residents may also attend and speak at the beginning of each TAC meeting upon recognition by the TAC Chair, who may impose a reasonable time limit for speakers. Items in this category would include:

- Administrative modifications to the MTIP, MTP or CTP;
- Small projects with few impacts; and
- Technical/preliminary/exploratory studies.

Full updates of the MTP, CTP, MTIP and major MTIP amendments with Air Quality Conformity Determinations, or other major projects, studies, plans, or amendments, especially those impacting much of the urban area or substantially affecting minority or low-income populations, will have additional involvement to increase public participation:

1. The MPO will ensure that as many people as possible receive information including:
    a. Progress/update newsletters to provide timely notice at project kick-off, at the beginning of public comment periods, and otherwise as appropriate;
    b. Targeted postal mailings to generate interest and announce public meetings or workshops where possible; and survey material to elicit comments that might not otherwise be volunteered.
2. Public notices (announcements, ads or posters) may be placed in the following additional locations:
    a. Transit hubs and onboard buses, where possible;
    b. Bulletin boards in recreation centers, especially those in minority or low-income communities impacted by the item in question or places of worship in affected areas.

2. An electronic notice will be sent to a list of interested parties, including representatives of neighborhood and community organizations, especially in minority and low-income communities, to provide timely information about public comment periods and meetings.
3. Multiple public meetings will be held in transit-accessible locations during regular service hours.
4. Special services will be provided upon seven business days advance notice, when practical and subject to availability, of services and resources including translation for non-English speakers, materials for the visually impaired, and services for the deaf and hard of hearing, in accordance with MPO policies. The availability of these services should be mentioned in public notices.

Metropolitan Transportation Plan (MTP) and Air Quality Conformity Determinations (AQCD)

The multi-modal Metropolitan Transportation Plan (MTP) public review and participation process is designed to provide early and adequate opportunities for citizens, public and elected officials to be involved in the Cabarrus-Rowan (CR) MTP development. This public participation program is designed to involve all parties in the early stages of plan development and the subsequent update process. It is also designed to provide gradual progression from the general information (vision setting and formulation of goals, objectives and policies) pertaining to the plan to very specific information regarding alternatives and plan selection.

1. The Cabarrus-Rowan (CR) Metropolitan Planning Organization will provide opportunity for early and meaningful public involvement in the development and update of the MTP.
2. Proactive participation techniques will be employed to involve citizens and provide full access to information and technical data. The technique will generally include, but not be limited to: public meetings/hearings, surveys, charrettes, mass media, etc. Visualization techniques shall be utilized to enhance the public's understanding of MPO plans and programs. The techniques will be utilized in an appropriate manner when presenting and describing MPO plans and programs.
3. Information dissemination, notification of meeting, publication of proposed plans will be integral elements of the public involvement process.
4. The MPO will initiate the MTP update process as required by the FAST Act, the Clean Air Act Amendments (CAAA) and subsequent federal regulations. Elements of the Transportation Plan, and/or amendments will meet all current Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Environmental Protection Agency (EPA), and the North Carolina Department of Transportation (NCDOT) requirements.
5. The public comment period for all elements of the MTP will be for a minimum 30 day public comment period, effective from the date of the public notice publication. Written comments will be received during the comment period and will be directed to the MPO. The contact person, phone number and e-mail address will be included in the public notice.
6. Public meeting(s) will be held to: formulate a vision for the MTP development; provide the public background information on the metropolitan transportation system and other issues as well as the proposed framework of the Transportation Plan update process; and to receive citizen input.
7. All public meetings (forums) designed to solicit public comment will be held at various locations and times of day around the metropolitan area to encourage the greatest public participation. Public meetings will be held at a location which is accessible to persons with disabilities. Outreach activities will be conducted to inform minority and low-income groups and limited English-speaking

groups of the opportunity for public comment. At least one-quarter of these meeting shall be held in minority and/or low income areas and within ¼ mile walk of a transit route in an easily accessible area.

8. The Cabarrus-Rowan MPO will maintain a website which shall include information on the MTP, meetings, other programs and appropriate information. The MPO staff shall post on the CR MPO website draft documents that are subject to the MPO's public review process for review and comment. Staff will also use the website to distribute information to the MPO membership.
9. The MPO shall assess the distribution of impacts on low-income and minority groups for investments identified in the MTP and publicize these findings on the MPO website.
10. The TCC will assemble all comments and forward comments to the Transportation Advisory Committee (TAC). The TAC may choose to hold a public hearing before adopting the Metropolitan Transportation Plan.
11. Any significant revision and amendment to the MTP will be subject to the public review process as outlined above.
12. The public participation component of the MTP will generally follow the same citizen input and review as outlined in this policy. Public input will be solicited to review and comment on any major MTP amendment proposal as well as analyses conducted as part of the amendment request. Adequate opportunity will be provided for public involvement in the amendment of the MTP, and any significant revisions to the MTP will also be subject to public comment period as described in # 5 of this policy.
13. The CR MPO will endeavor to involve the public at key decision points of the MTP development. Decision points are those stages where the TAC will be required to endorse or take action on particular work elements. These include, but are not limited to:
    - Formulation of vision, goals and objectives
    - Policy development
    - Review and approval of socio-economic and demographic projections
    - Review of land use information and scenarios
    - Review and determination of transportation deficiencies
    - Identification of transportation (facility) needs
    - Evaluation of alternatives and selection of preferred option
    - Development of the Financial Plan
    - Plan recommendation and adoption

Metropolitan Transportation Improvement Program (MTIP) and Public Transit Systems Program of Projects (POP)

The Metropolitan Transportation Improvement Program (MTIP) is the document that describes the funding and scheduling of transportation improvement projects (highway, bicycle, pedestrian, and transit capital and operating assistance) using Federal, State, local and public-private funds. The MTIP serves as the project selection document for transportation projects and, therefore, is the implementation mechanism by which the objectives of the Transportation Plan are reached. The Fixing America's Surface Transportation Act (FAST Act) mandates an opportunity for public review of the MTIP. The City of Concord, City of Salisbury, Rowan County and Cabarrus County rely on this public involvement policy by the MPO to satisfy their public participation requirements for their respective Transit System's Program of Projects (POP). The CR MPO will prepare an MTIP based on 1) revenue estimates provided by the North Carolina Department of

Transportation (NCDOT) and 2) the CR MPO Regional Priority List. The public input element of the Metropolitan Transportation Improvement Program is presented as follows:

1. The Cabarrus Rowan Technical Coordinating Committee (TCC) will develop a draft Regional Multi-Modal Priority List from the Local Project Priorities of the MPO jurisdictions.
2. The Regional Priority List will be published for a minimum four week (28-day) public comment period and the notice will be published by the Metropolitan Planning Organization (MPO) in:
   Independent Tribune
   Salisbury Post
   The notices for the public comment period will include an announcement that states that persons with disabilities will be accommodated. The Regional Priority List will be on file in the Cabarrus-Rowan MPO office, Cabarrus County Planning Department, Rowan County Planning Department, CR MPO website, and any participating municipal and county websites.
3. The Transportation Advisory Committee (TAC) will solicit public comment from interested parties on the draft Regional Priority List. The TAC will approve a final Regional Priority List after considering the public comments received.
4. The CR MPO Technical Coordinating Committee will develop a draft MTIP from the approved Regional Priority List and from revenue estimates provided by the North Carolina Department of Transportation. The TCC will forward the draft MTIP to the Transportation Advisory Committee. The Transportation Advisory Committee will publish the draft MTIP for public review and comment.
5. Copies of a draft MTIP will be distributed to TAC members and via the CR MPO website. Each jurisdiction will also have copies, available for public review. The draft MTIP will follow the same notification procedures as outlined above for the Regional Priority List. The TAC will solicit public comment from interested parties on the draft MTIP. Public comments will be addressed and considered in the adoption of the MTIP.
6. The public comments will be assembled and presented to the Cabarrus-Rowan TAC.
7. Amendments to MTIP will be available for public review and comment, if they make a major or substantial change to the MTIP. The NCDOT has identified a delineation between STIP Amendments and Modifications and issued guidelines to address each category . The Cabarrus-Rowan MPO wishes to incorporate the language from these guidelines into their own MTIP amendment procedures. A major change in the MTIP is considered the addition or deletion of a project that is regionally significant and in the first 4 years of the TIP or can affect fiscal constraint in the STIP or LRTP. Additional public comment on project additions or deletions that do not meet any of these 3 criteria may be sought at the discretion of the TAC by majority vote. Administrative modification is a streamlining process recommended in a recent FHWA/FTA/NCDOT Joint STIP Review and do not require documentation of public review or comment, re-demonstration of fiscal constraint, or a transportation conformity determination.
8. Written public comments and their responses will be published as an appendix to the final MTIP.

MTIP Amendments:

- Change in project cost beyond a predetermined threshold; increases in highway projects that exceed both $2 million and 20% of the original cost and may affect fiscal constraint

- Change in federally-funded or state-funded regionally significant transit, bicycle or pedestrian project that exceeds either $1 million or 20% of the project cost
- Any addition or deletion of a federally funded or state funded regionally significant project or project schedule shifts that move ROW, major capital acquisitions, or construction authorization dates either in or out of to the first 4 years of the TIP
- Project schedule shifts in years 1 through 4 that move project completion dates across Horizon Years as determined by the Metropolitan Transportation Plan
- Project schedule shifts to incorporate the project from an out-year into the current (four-year) TIP
- Change in the project design or scope that significantly changes the termini or project type, purpose, or number of through lanes on a non-exempt (for transportation conformity purposes) project
- Any addition, deletion or significant modification of non-traditional funding sources to a project (Nontraditional sources include state bonding and/or private participation)
- Public comment on project additions or deletions of less than $1 million may be sought at the discretion of the TAC by majority vote.

MTIP Modifications

When a MTIP change is not substantial enough to trigger a MTIP amendment, a MTIP administrative modification takes place. A public hearing and 30-day public notice is not required for a MTIP administrative modification; however there will be a public comment opportunity provided at the TAC meeting where the MTIP modifications are being adopted. A MTIP administrative modification takes place under one of the following criteria:

- Any change to projects in years 5 or later
- Minor change to project descriptions, scopes, sponsor funding
- Minor cost increases in highway projects that do not exceed both $2 million and 20% of the original project cost
- Addition or changes to locally-funded bicycle or pedestrian projects in the MTIP
- Schedule changes that move project authorization dates within the first 4 year MTIP time window and do not affect local air quality conformity findings
- Funding source changes between traditional funding sources (i.e. substituting available Congestion Mitigation Air Quality (CMAQ) funds for FTA section 5307 formula transit funds)
- Projects approved for Emergency Relief funds do not generally have to be included in the MTIP, so any changes made for emergency projects may be considered minor modifications.

Prioritization List

The TCC will develop a draft prioritization list from the local project priorities of the MPO jurisdictions using the approved local ranking criteria and point assignments process. Public participation for the prioritization list will include:

- Public input will be sought in the development of the prioritization criteria and local point assignments for regional and division level projects through the Strategic Transportation Initiative (STI)

- The draft prioritized list will be available for public comment for 28 days prior a final prioritization list approval by the TAC. The prioritization list will be submitted to the NCDOT for fiscal constraint prior to the release of the draft STIP.

Comprehensive Transportation Plan (CTP)

Additional public involvement at key decision points may include:

- Formulation of vision, goals and objectives
- Coordination of socio-economic and demographic projections with land use planning agencies

Public Participation Policy Updates

An important step in public involvement is evaluating the effectiveness of the policy and outreach activities in order to ensure a full and open involvement process. The CR MPO shall periodically review the overall effectiveness of the public involvement process in order to ensure that the process is providing meaningful citizen input. The public involvement policy is a work in progress and strives to improve CR MPO's efforts toward increasing public awareness and involvement in transportation planning. The CR MPO initially used a Public Involvement Survey, which was distributed in the fall of 2007, to gauge the public's satisfaction with the public involvement process. (The Public Involvement Survey is included as **Appendix C**.) Surveys will be developed to determine the success of public outreach methods and to judge how responsive they are in providing public input in the transportation decision-making process will be ongoing. Strategies and measures to evaluate public involvement effectiveness will rely on information gathered through surveys and data readily available to MPO staff. The CR MPO public involvement policy will be evaluated on a short and long-term basis.

Short Term

At every public involvement event, participants will be asked to evaluate the activity or opportunity. MPO staff will ask how the public found out about this opportunity and solicit feedback on the effectiveness of it or any suggestions for improvement. The MPO will develop public involvement objectives or strategies for evaluating the effectiveness of the public participation policy and track changes in public input and outreach or identify areas for improvement.

Long Term

The Public Involvement Policy must be reviewed at least every 4 years and updated in coordination with the development of the MTP.

Measures of Effectiveness and Biennial Evaluation Survey

Evaluation is a key component of any successful plan. Both short and long term evaluations ensure that the appropriate revisions to the public involvement approach are being recognized and addressed by the CR MPO. The objectives, strategies and measures below will be tracked by the MPO. The sources of data for these measures are meeting and attendance logs, surveys distributed at public meetings and events, records of public comments, and data on the total and unique number of hits on the MPO's website. Following these evaluations, it is possible that some public involvement activities will be refined, revisited, or discontinued. It is the philosophy of the CR MPO to strengthen the relationship with the public through these periodic evaluations and to report on the measures of effectiveness on a biennial basis.

Objective – Hold Regularly Scheduled and Advertised Meetings Open and Accessible to the General Public

Strategy	Measures
All MPO Meetings, times, agendas, and locations will be publicly noted in newspapers and online	Overall increase in meeting attendance Increase in number of attendees who are first time
MPO meetings will be held in ADA compliant locations accessible to transit or near traditionally underserved communities	% of meetings that are handicapped accessible % of meetings that are within ¼ mile of transit Overall increase in participation from transit riders, physically challenged or underserved communities
Incorporate specialized surveys and questionnaires in meetings and events where appropriate	% increase in recipients who responded to the survey or questionnaire

Objective – Seek Out Traditionally Underserved Communities

Strategy	Measures
Staff will provide presentations to community groups and provide one-on-one small group dialogue throughout the MPO to discuss process and projects	% increase in minority community and underserved participants in MPO outreach efforts. Geographic distribution of meeting attendees and comments
Identify communities with higher concentrations of under-served populations, develop relationships with community and religious leaders and hold workshops and meetings in these communities	Overall increase in participation by minority and underserved communities.

Objective – Engagement through a Variety of Outreach Activities to Maximize Public and Agency Input

Strategy	Measures
Provide opportunities through the website for people to access plans and have input into transportation plan or project decision-making	Overall increase in on-line comments
Schedule at least two community presentations or meetings per year in the evening and at locations out in the community.	Overall increase in telephone, email, and public inquiries about MPO programs and plans Increase in small municipalities and rural attendee participation.
Explore new tools and techniques through social media engagement and visualization	Overall increase in comments and survey responses
Partner with agencies to broaden MPO awareness and maintain information to ensure planning continuity	Overall increase in meetings with other agencies on MPO related topics % Increase in public inquiries about MTP and other plans

Limited English Proficiency Plan (LEP)

The CR MPO LEP plan provides public outreach to comply with Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency (2000) and is included in this plan by this reference. In addition, the Cabarrus Rowan MPO will use special strategies in special situations for engaging low-income, low-literacy, or limited-English-proficiency populations, including but not limited to the following:

- **Identifying LEP populations**
  Areas within the CR MPO with high LEP populations will be identified and provided with specialized staff and materials for planning sessions or events.
- **Translation Services**
  Interpretation assistance should be made available where possible and be as seamless as possible.
  Create a list of staff translators serving CR MPO on an ad hoc basis.
  Provide written materials translated into appropriate languages with general information and directions until an interpreter can be located.

Prepare documents, flyers, notifications, agendas, etc. in the language know by the LEP population. Phone notices for public input should be provided in the language of the known LEP population

- **Evaluation of LEP services**
  Distribute translated evaluation cards for feedback from LEP persons at meetings and CR MPO offices.

Appendices

Appendix A – Glossary, Federal Requirements and Key Acronyms

ADA – Americans with Disabilities Act; Federal legislation passed in 1990 prohibiting discrimination on the basis of disability. The act requires all transportation facilities and services must be accessible to individuals with physical handicaps.

- **Rehabilitation Act of 1973, Section 504 -** Section 504 states that "no qualified individual with a disability in the United States shall be excluded from, denied the benefits of, or be subjected to discrimination under" any program or activity that receives Federal financial assistance.
- **Rehabilitation Act Amendments of 1998, Section 508 -** Section 508 states that Federal agencies must ensure that electronic and information technology is accessible to employees and members of the public with disabilities to the extent it does not pose an "undue burden."

CAAA – Clean Air Act Amendments of 1990; The original Clean Air Act from 1963 was revised in 1970, instituting the national air pollution control program. The 1990 Clean Air Act Amendments are the most far-reaching revisions of the 1970 law and include transportation conformity.

Charrette – A meeting to resolve a problem or issue. Within a specified time limit, participants work together intensely to reach a resolution.

Enhanced Mobility of Seniors and Individuals with Disabilities (FTA Section 5310)

The Federal Transit Administration (FTA) Section 5310 grant program, formerly called New Freedom, supports additional transportation service options to Americans with disabilities to overcome barriers to employment and seeks to expand the transportation mobility options available to people with disabilities beyond the requirements of ADA.

FAST Act – Fixing America's Surface Transportation

The FAST Act continues the public involvement requirements of MAP-21 and emphasizes the public involvement with Planning and Environmental Linkages and incorporates new stakeholders including Intercity Bus and Public Ports as public entities. The Act reinforces the emphasis on performance based approach to planning and programming and includes two new planning factors dealing with resiliency and creative stormwater mitigation strategies

JARC – Job Access Reverse Commute (FTA Section 5307)

The JARC program was established to address the unique transportation challenges faced by low-income persons seeking to obtain and maintain employment.

LEP – Limited English Proficiency - Federal regulations define Persons with Limited English Proficiency as individuals with a primary or home language other than English who must, due to limited fluency in English, communicate in that primary language if the individuals are to have an equal opportunity to participate effectively in or benefit from any aid, service or benefit in federally-funded programs and activities.

MAP-21 – Moving Ahead for Progress in the 21st Century

MAP-21 regulations require that an opportunity for public involvement be provided throughout the planning process. Metropolitan area plans include a public participation plan, with a minimum public comment period of 45 days required when a public participation plan is updated. Specific provisions should give affected parties a reasonable opportunity to comment on transportation plans. These parties include, but are not limited to, those identified as stakeholders.

NEPA – National Environmental Policy Act of 1969; An Act to establish a national environmental policy to provide for the establishment of a Council on Environmental Quality, and to promote efforts to prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare.

Nonattainment Area – An urbanized area which does not meet federal air quality standards defined in the Clean Air Act.

Public participation – The active and meaningful involvement of the public in the development of transportation plans and programs.

SAFETEA-LU - The Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users Enacted August 10, 2005, SAFETEA-LU expanded the list of interested parties to be engaged during public participation (see "stakeholders" below). Provisions of SAFETEA-LU expanded consultation and cooperation with Federal, State, Local and Tribal agencies responsible for land use, natural resources and other environmental issues and promoted consistency of transportation plans with state and local planned growth and economic development patterns during the adoption of long and short-term plans. Additional requirements included methods to better communicate transportation plans with the general public by the use of visualization techniques and the integration of transportation and air quality planning in the areas designated by the U.S. Environmental Agency (EPA) as non-attainment or maintenance areas.

Stakeholders

An individual or organization involved in or affected by the transportation planning process. In order to create and implement transportation plans with long-lasting benefits, appropriate stakeholders must be identified. In accordance with MAP-21, stakeholders will include "citizens, affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties". Citizens include the general public, environmental health, neighborhood, citizen, and civic organizations, and traditionally underserved communities such as people with disabilities, and /or low-income, minority, and elderly.

TAZ – Traffic Analysis Zone; The unit of geographic area, generally small and with similar development characteristics, used in travel demand modeling.

Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d-1) - Title VI of the 1964 Civil Rights Act states, "No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to the discrimination under any program or activity receiving federal financial assistance. The Executive Order issued on Environmental Justice in 1999 further amplifies Title VI by providing that "each federal agency shall make achieving Environmental Justice part of its mission by identifying, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." The Executive Order requires all federal agencies to establish internal policies to meet the requirements of Environmental Justice.

- **Executive Order 12898** requires federal agencies and their sub recipients achieve environmental justice as part of its mission. MPOs must identify and address as appropriate disportionately high and adverse human health or environmental effects, including interrelated social and economic effects of its programs, policies, and activities on minority populations in the United States.
- **Executive Order 13166** requires public outreach to include people of limited English proficiency. Combined with nondiscrimination statutes, meaningful access would extend to people who cannot

read and understand what is read: thus the need to include outreach to low-literate populations is needed as well. MPOs must work to provide "meaningful access" to their limited English proficiency applicants and beneficiaries.

Urbanized Area – An urbanized area is a statistical geographic entity designated by the Census Bureau, consisting of a central core and adjacent densely settled area that contain at least 50,000 people with an overall population density of at least 1,000 people per square mile.

Visualization – The formation of visual images to describe information. Examples of visualization techniques include sketches, drawings, artist renderings, physical models and maps, simulated photos, videos, computer modeled images, interactive mapping, photo manipulation and computer simulation.

Sources:

- Atlanta Regional Commission, **CITIZEN'S GUIDE TO REGIONAL LAND USE & TRANSPORTATION PLANNING**, 2005
- Federal Highway Administration, **TRANSPORTATION CONFORMITY REFERENCE GUIDE**, 2006
  Federal Highway Administration, **VISUALIZATION IN PLANNING**, 2006

• Key Acronyms and Technical Terms Defined

Acronym or Term	Description
Conformity Analysis	Demonstration that when the projects planned in the MTIP and MTP are implemented the area will not exceed allowable motor vehicle emissions budgets.
Conformity Finding	Statement that the projects contained in the MTIP are essentially consistent with those listed in the MTP and that no new Conformity Analysis is needed to account for noted differences.
CMS	Congestion Management System. A program of strategies for monitoring, evaluating, and addressing traffic congestion. Required for Transportation Management Areas.
CMAQ	Congestion Mitigation and Air Quality Improvement Program. A federal highway fund category for projects intended to improve air quality.
CTP	Comprehensive Transportation Plan. A multimodal plan of maps of the MPO area that is not financially constrained and developed in consultation with NCDOT.
DENR	North Carolina Department of Environment and Natural Resources.
Emissions Budget	See Conformity Analysis.
EIS	Environmental Impact Statement. Technical review of impacts caused by a project on the environment. Required by NEPA.
EPA	United States Environmental Protection Agency.
FHWA	Federal Highway Administration (US Department of Transportation).
FTA	Federal Transit Administration (US Department of Transportation).
HTF	North Carolina State Highway Trust Fund.
MAB	Metropolitan Area Boundary. The boundary of the area within the transportation planning jurisdiction of an MPO.
MTIP	Metropolitan Transportation Improvement Program. Current MTIP covers FY 16-25, took effect October 1, 2015.
MTP	Metropolitan Transportation Plan. Long Range Plan for all modes of transportation and federal requirement. Last MTP was locally adopted on April 23, 2014.

Acronym or Term	Description
NEPA	National Environmental Policy Act. Federal law that requires consideration of environmental impacts for all major expenditures of federal funds.
RABA	Revenue Aligned Budget Authority. A budget-balancing provision of the FAST Act.
Section 104(f) PL	Funds distributed through the Federal Highway Administration for transportation planning tasks.
Section 5307	Funds distributed through the Federal Transit Administration for public transportation capital assistance, operating assistance, and planning needs.
SIP	State Implementation Plan. The modeling analyses and the state and federal regulations demonstrating that the air in an area will meet National Ambient Air Quality Standards.
STIP	State Transportation Improvement Program—FY 16-25. STIP was adopted in June 2015.
STP-DA Funds	Statewide Transportation Planning funds that are Directly Apportioned to a TMA.
TEA-21	Transportation Equity Act for the 21st Century. Current federal highway funding legislation.
TMA	Transportation Management Area: an urbanized area over 200,000 in population. The Cabarrus-Rowan MPO has been classified as a TMA beginning with the 2000 Census.
TPB	The NCDOT Transportation Planning Branch, formerly Statewide Planning Branch.
UA or UZA	Urbanized Area. The census-defined boundary that is the basis for establishing an MPO.
UPWP	Accounting document for use of planning grant funds; lists approved activities that these funds may reimburse. The UPWP guides transportation planning activities for the year.

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Appendix B – Public Outreach Toolkits

The following tools are listed to provide a range of methods to more effectively engage the public in the transportation planning process. Not all of these tools are required, but should be considered as part of the public participation efforts of the Cabarrus Rowan MPO (CR MPO).

Non-Participating Minority and Low-Income Populations

Public Outreach activities will include efforts to involve traditionally underserved groups (i.e., minorities, elderly, low-income persons) in the transportation planning process. These efforts may include, but not be limited to, the following:

- Identifying areas in the CR MPO region with concentrations of minority, elderly, and low income populations;
- Including organizations that deal directly with minority groups on the Stakeholder List;
- Posting notification and/or holding meetings and open houses in county health departments, senior centers, major retail centers and public schools;
- Publishing notification of meetings, public hearings, and open houses in Spanish.

Outreach and Education Program

Public involvement is at its best when the general public is thoroughly informed of the issues surrounding a project. Outreach also includes informing the public and other agencies about the roles and responsibilities of the MPO. When necessary, the MPO will develop outreach and educational programs to inform various parties of the public involvement process for a particular project or to provide technical framework. English and Spanish materials will be a part of this program.

Outreach Professionals

To promote increased levels of public participation, the MPO will collaborate with outreach professionals with long-standing relationships with target communities that are aware of the various concerns expressed by the citizens they represent.

Reverse Flow

In order to reverse the traditional flow of information, interested parties or groups could be invited to make presentations to the TAC, TCC, or other policy boards.

Newsletters

The MPO will provide information to be included as part of a newsletter to keep the general public and agencies informed of MPO activities and public involvement opportunities. The newsletter is distributed through e-mail on an "as needed" basis.

Data Storage Devices

It is the policy of the CR MPO to make project or plan documents available to individuals on CD, DVD, portable USB drive, or other media formats upon request.

Advertisements, Press Releases and Media Outlets

The CR MPO will post advertisements and press releases in newspapers, on radio and television stations including municipal government channel, at community centers, YMCA and YWCA locations, major retail centers, public schools, churches, and agencies that work with the non-English-speaking population, based on a project's location and impacts.

Briefings and Presentations

Briefings and presentations will be used as a method of delivering information to the public, key individuals, civic groups, professional organizations, neighborhood associations, and other groups about

the regional transportation planning process and transportation plans. Elected officials, business leaders, the media, regional groups, or special interest groups can participate. Briefings usually involve issue-focused communication and are held at critical times in plan development or project schedule.

Workshops

Informational workshops designed to educate participants on specific topics, such as air quality, associated with the transportation planning process provide a means for allowing participants to express their ideas and concerns in an informal setting. Information workshops will be conducted on an as needed basis.

Focus Groups

Focus groups allow the MPO to directly collect feedback from the general public. The MPO may also gather small groups of citizens or residents of affected project area neighborhoods to create focus groups that will provide feedback regarding a specific topic or transportation plan.

Surveys and Response Sheets

Surveys allow the MPO to directly collect feedback from the general public. Strategies for disseminating surveys will consider differences in language and technology access among affected citizens. Some methods may include inserting surveys in social media announcements, providing links to surveys on government websites, and having available comment sheets at public events and hearings.

Site Visits/Tours

It is recommended that the MPO utilize site visits when possible. Site visits are trips taken by community residents, officials, agencies, and consultants to proposed or actual project areas, corridors, impacted areas, or affected properties. Site visits show the physical environment of a proposal, give participants a common frame of reference, and help people understand each other's point-of-view. Site visits also improve media coverage and accuracy of reporting, and can help gain credibility for the agency by going into the community.

Open Houses

Open houses provide an informal setting for the public to access general information on the transportation planning process. Open houses have no fixed agendas and no formal presentations. The MPO technical staff would be on hand to answer questions and provide details on a one-on-one basis. Open houses may precede public meetings.

Neighborhood Meetings

The MPO may consider the use of neighborhood meetings, usually in conjunction with neighborhood association planned events. While not applicable for all types of plans or projects, a neighborhood meeting can be very effective at maximizing two-way communication in a relaxed setting.

Web-Based Meetings

The CR MPO may use online webcasts, wikis, and community forums to augment face-to-face meetings. The MPO may also explore the use of podcasts of MPO minutes or highlights of meetings.

Charrettes

A charrette, a meeting to resolve a specific problem or issue, may also be a useful public participation technique. Within a specified time limit, participants work together intensely to reach a resolution. The sponsoring agency usually sets the goals and time limit and announces them ahead of time. A leader's responsibility is to bring out all points of view from concerned local residents as well as agency representatives and experts. The usual components of a charrette include issue definition and analysis; data collection; small group development of alternatives; and presentation and consensus on final solution.

Advisory Committees

The MPO may use advisory committees to increase public participation in and ownership of the transportation planning process. These committees could include citizens or interest groups that would meet to discuss transportation issues or project-specific topics when needed.

Interagency Consultations

The MPO consults with officials and agencies that are affected by transportation decisions to gather input and coordinate between the MPO and planning underway by others. The MPO consultations include air quality conformity processes, notification of the development of certification documents, as well as requests for reviews and comparisons of information during the development of the MTP such as state and local planned growth, economic development, environmental protection, historic resources, airport and rail operations, freight movements, and federal land management.

Website

The CR MPO website is a tool that provides timely information to the public. Interested parties have the ability to review all MPO documents, technical information, access updates on the status of specific plans and projects, as well as make public comments. An online calendar provides dates of upcoming meetings and public involvement opportunities. Anyone can access the DOT website at WWW.CRMPO.ORG.

Social Media

The MPO seeks to use all available forms of media in an effort to increase public involvement. Strategies to encourage public input may include social marketing mediums such as Facebook, Twitter and blogs and efforts to include them will be made when deemed appropriate. The MPO will consider using an online project journal (blog) and podcasts for projects where progress updates will be frequent and important in sustaining momentum.

TAC and TCC Meetings

Formal MPO business is conducted during TAC and TCC meetings. MPO TAC and TCC meetings allot time for public comment at the beginning of the meeting. These public comments are documented and become a part of the meeting minutes. In the event that an individual seeks to address a specific agenda item, they may contact the MPO prior to the meeting to comment on that specific agenda item. The chair has the discretion to address anyone wishing to speak on a particular agenda item whose name is not on the list previously mentioned. In the event that the public is unable to make comments during a meeting time, comments may be submitted in written or electronic form.

Related Outreach Conducted by Individual MPO Members

The MPO agencies and municipalities conduct public participation activities related to MPO activities and their particular agency and program needs. Agencies are encouraged to coordinate their outreach plans, when possible, with MPO events to consolidate public involvement activities.

Appendix C – Public Involvement Survey

Cabarrus-Rowan Metropolitan Planning Organization

May 2017: Cabarrus-Rowan Metropolitan Planning Organization (CR MPO) is seeking input on Public Involvement from Cabarrus and Rowan County citizens. The survey will be used to determine the best methods for CR MPO to effectively share information and consult with the public. The information from this survey will be used in modifying the comprehensive Public Involvement Policy for citizens throughout the Cabarrus-Rowan Metropolitan Area.

Public Involvement Survey

1. What portions of transportation planning interest you?
   Check as many as apply.
   - ✎ Roads and Highways
   - ✎ Traffic Congestion
   - ✎ Public Transportation or Transit
   - ✎ Bicycle and Pedestrian
   - ✎ Trucking and Freight
   - ✎ Railroad
   - ✎ Environmental Concerns
   - ✎ Aviation
   - ✎ Other _____

2. Have you participated in transportation planning public meetings in the past?
   - ✎ Yes
   - ✎ No

3. When do you tend to become involved in transportation-related issues?
   - ✎ I am never involved
   - ✎ When the project interests me
   - ✎ When the project affects me
   - ✎ I am highly involved

4. Which of the following affects your level of participation?
   - ✎ I regularly participate
   - ✎ I do not receive enough information to participate
   - ✎ The events are not accessible
   - ✎ The times are inconvenient
   - ✎ I do not think participation is useful
   - ✎ Other _____

5. How do you find out about public meetings and workshops?
   Check as many as apply.
   - ✎ Newspaper
   - ✎ Direct mailing
   - ✎ Poster or Flyer
   - ✎ Internet
   - ✎ E-mail
   - ✎ Telephone
   - ✎ Other _____

6. How much time is necessary for public review and comment for updates and major amendments to all primary transportation plans/programs for which the MPO is responsible?
   - ✎ 7 days
   - ✎ 15 days
   - ✎ 30 days
   - ✎ 45 days
   - ✎ 60 days
   - ✎ Other _____

7. Please select your preferred method of communicating with CR MPO.
   - ✎ Phone a CR MPO employee
   - ✎ Meet with a CR MPO employee
   - ✎ E-mail CR MPO
   - ✎ Mail a letter to CR MPO
   - ✎ Comment at public hearing or meeting
   - ✎ Other _____

Cabarrus-Rowan Metropolitan Planning Organization

Public Involvement Survey (Continued)

8. Are you satisfied with CRMPO's efforts to solicit public participation?
   - Very Satisfied
   - Satisfied
   - Unsatisfied
   - Very Unsatisfied
   - Don't Know

9. Should public comments be included in the final plan document?
   - As written with the name of submitter
   - Summarized with no names included
   - Both
   - Neither

10. How should the Cabarrus-Rowan MPO release public comments (Mark all that apply)?
    - In public comment section of Final Plans/programs/projects
    - Available at MPO meetings
    - Documented and available for review as requested, but not included in final plans
    - Available on the MPO web site
    - Available at public meetings
    - Other _____

Contact Information:

Name _____

Address _____

_____

Phone _____

Email _____

Please provide the name and contact information of any group, committee, or individual you feel would be interested in completing this survey.

Name _____

Contact _____

Thank you for taking time to complete this survey. If you have any comments or questions, please contact the CR MPO.

Cabarrus-Rowan Metropolitan Planning Organization

Attn: Phil Conrad
164 Edgewater Drive
Concord, NC 28027

704-795-7528
pconrad@mblsolution.com
www.crmpo.org

Appendix D – Media Contacts

NEWSPAPERS

Salisbury Post
(704) 797-4286

Independent Tribune
(704) 789-9105

TELEVISION STATIONS

WBTV
(704) 374-3500

WCNC
(704) 329-3636

WSOC
(704) 338-9999

WUNG
(919) 549-7000

WJZY
(704) 398-0046

WAXN
(704) 338-9999

RADIO STATIONS

WFDD
(336) 758-8850

WFAE
(704) 549-9323

WEND
(704) 714-9444

WTIX
(704) 633-0621

WSAT
(704) 633-0621

WRNA
(704) 857.1101

WMFR/WSJS
(336) 777-3900

LIBRARIES

South Rowan Regional Library
China Grove, NC
(704) 216-7727

Rowan Public Library - East Branch
Rockwell, NC
(704) 216-7838

Rowan Public Library: Headquarters
Salisbury, NC
(704) 216-8228

Spencer Public Library
Spencer, NC
(704) 636-9072

Cabarrus County Public Library
Concord, NC
(704) 920-2050

Kannapolis Branch Library
Kannapolis, NC
(704) 920-1180

Harrisburg Branch Library
Harrisburg, NC
(704) 920-2080

Mt Pleasant Branch Library
Mt Pleasant, NC
(704) 436-2202

Appendix I: Comments & Responses from the Agency Review and Public Involvement Process

Appendix J: Adoption and Endorsement Resolutions and Agency Determinations (TBA)

Appendix K: USDOT Conformity Determination (TBA)