

**Final Amended Conformity Analysis  
and  
Determination Report for the Metrolina Area**

- Gaston Urban Area Metropolitan Planning Organization**
- **2035 Long Range Transportation Plan Amendment**
  - **FY 2009-2015 State Transportation Improvement Programs Amendment**
    - **Donut Area of Gaston County**

*USDOT Conformity Finding*  
**October 5, 2010**

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[www.gastonmpo.org](http://www.gastonmpo.org)

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## INTRODUCTION

This report constitutes Amendment 1 to the Conformity Determination Report dated May 3, 2010 for the following:

- The Cabarrus-Rowan Metropolitan Planning Organization (CRMPO);
- The Gaston Urban Area Metropolitan Planning Organization (GUAMPO);
- The Mecklenburg-Union Metropolitan Planning Organization (MUMPO);
- The portion of the Lake Norman Rural Planning Organization (RPO) in Western Gaston County, Lincoln County, and Southern Iredell County; and
- The portion of the Rocky River Rural Planning Organization (RPO) in Eastern and Southern Union County.

Based on the results of the analysis described in this report, the 2035 Long-Range Transportation Plans (LRTPs) for CRMPO, GUAMPO, and MUMPO, and their latest, respective Transportation Improvement Programs (TIPs) conform to the purpose of the North Carolina State Implementation Plan (SIP) (or interim emissions tests, in areas where no State Implementation Plan is approved or found adequate by EPA). This transportation conformity determination is supported by the following findings:

- The Fiscal Year (FY) 2009-2015 TIPs are direct subsets of the conforming 2035 LRTPs.
- Each LRTP has a 20-year planning horizon.
- The conformity determinations for the RPOs (donut areas<sup>1</sup>) were made by the North Carolina Department of Transportation (NCDOT). For the Donut Areas projects from the FY 2009-2015 TIP conform to the purpose of the North Carolina SIP (or interim emissions tests, in areas where no State Implementation Plan is approved or found adequate by EPA).

The 2035 LRTPs were adopted:

- by the Cabarrus-Rowan MPO on March 24, 2010
- by the Gaston Urban Area MPO on March 23, 2010
- by the Mecklenburg-Union MPO on March 24, 2010

Periodically, as needs and conditions change, it becomes necessary to amend the LRTPs and TIPs. The Gaston MPO is analyzing changes to project U-3321 Garden Parkway Project in the Gaston MPO 2035 LRTP and the FY 2009-2015 TIP. This change warrants reevaluation and reaffirmation of the transportation conformity determination.

A copy of the 2035 LRTPs for each MPO is available on-line at, [www.crmppo.org](http://www.crmppo.org), [www.gastonmpo.org](http://www.gastonmpo.org), and [www.mumpo.org](http://www.mumpo.org).

## AMENDED PROJECTS

As noted above, this amendment includes changes in the timing of projects included in the Gaston MPO 2035 LRTP and the FY 2009-2015 TIP. Changes in the horizon years resulted in having to do a new regional emission analysis for this transportation conformity determination. As agreed by the interagency consultation

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<sup>1</sup> Donut areas are geographic areas outside a MPO, but inside the boundary of a nonattainment or maintenance area. Donut areas are not isolated rural nonattainment and maintenance areas.

partners, the regional emissions analysis work for this process began on June 7, 2010 and was completed on July 1, 2010. The Federal Register notice deeming the FRP SIP MVEB adequate for transportation conformity is provided in [Appendix A](#). Because there are adequate county level SIP RFP MVEBs in place and this amendment only impacts Gaston County, then only the Gaston MPO is impacted for this transportation conformity process. The rest of the Metrolina Area transportation partners (i.e., Mecklenburg MPO, Cabarrus Rowan MPO and the donut areas of Iredell/Lincoln/Union) are not impacted by this process and do not have make a transportation conformity determination. Details related to the interagency consultation associated with this conformity determination can be found in [Appendix B](#).

Non-exempt projects that represent a change in timing of an existing LRTP project may be required to be part of travel demand model assumptions for the appropriate analysis year. [Table 1](#) provides a summary of the new project and horizon year changes. This amendment also provides an opportunity to incorporate the most current cost estimates as required in the fiscal constraint requirements for the LRTPs. Significant overall cost or fiscal capacity changes associated with the changes of costs for some projects. This conformity analysis will focus on the project changes presented below:

Appendix C contains the Gaston MPO amended 2035 LRTP project(s) and the 09-15 TIP amended project(s).

Gaston Urban Area MPO Project

U-3321 Garden Parkway

The original plan initially had the Garden Parkway (U-3321) to be constructed in 2015 as a toll facility from I-485 in Mecklenburg County to US 321 in Gaston County with the project being extended westward to I-85 in the 2035 horizon year. Two changes to U-3321 plans have occurred since the original LRTP underwent conformity tests:

1. The Bud Wilson Road interchange has been removed from the project.
2. U-3321 will be constructed all the way from I-485 to I-85 in the 2015 horizon year period. The project will be a four-lane toll facility from I-485 to US 321 and from US 321 to I-85 will initially be constructed as a two-lane toll facility. The two-lane section will be upgraded to a four-lane facility by 2035

[Table 1](#). Project Amendment Summary

The “ORIGINAL” project descriptions in the 2035 LRTP as approved on March 23, 2010

Plan Id/County	Route	Description	Lanes	Scope Change Y= Yes N= No *= add to TIP	Original AQ Analysis Year
U-3321	Garden Parkway	I-485 in Mecklenburg Co. to US 321 (Gaston Co.)	4 lane, Toll Facility		2015
U-3321	Garden Parkway	US 321 in Gaston Co. westward to I-85 in Gaston Co.	4 lane, Toll Facility		2035

The “REVISED” project descriptions for the amendment<sup>(1)</sup> to the 2035 LRTP

Plan Id/County	Route	Description	Lanes	Scope Change Y= Yes N= No *= add to TIP	Revised AQ Analysis Year
U-3321 (A)	Garden Parkway	I-485 in Mecklenburg Co. to US 321 (Gaston Co.) & US 321 in Gaston Co. westward to I-85 in Gaston Co.	4 lane, Toll Facility  2 lane, Toll Facility	Y  Y Interchange at Bud Wilson Rd. eliminated	2015
U-3321 (B)	Garden Parkway	US 321 in Gaston Co. westward to I-85 in Gaston Co.	Add 2 additional lanes – Toll Facility	Y	2035

**AMENDED FISCAL CONSTRAINT DETERMINATION**

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

These LRTPs 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 LRTPs. The LRTPs also describe revenues from all sources that will be available to pay for capital and O&M costs. Each LRTP describes in detail its own financing plan.

Assumptions for revenues and expenditures are the same as shown in the original document because overall costs of projects did not change significantly. The only changes affect the air quality analysis years, as described in [Table 1](#).

## TRANSPORTATION CONFORMITY

The conformity determination accomplishes the intent of the North Carolina State Implementation Plan (SIP). This conformity determination is based on a regional emissions analysis that uses the transportation network approved by each of the above-named Metropolitan Planning Organizations (MPOs) for their 2035 LRTPs, donut area projects from the FY 2009-2015 for the Rural Planning Organizations (RPOs) and the emissions factors developed by the North Carolina Department of Environment and Natural Resources (DENR). Based on this analysis, the GUAMPO amended 2035 LRTP and their respective amended FY 2009-2015 Transportation Improvement Programs (TIP) conform to the purpose of the North Carolina SIP. The amended FY 2009-2015 TIP (i.e., project scope/description, project length, number of lanes) and horizon year (project completion) are direct subsets of the conforming amended 2035 Long-Range Transportation Plan (LRTP). The LRTP has a 20-year planning horizon. The conformity determination for the RPOs (donut areas) was made by the North Carolina Department of Transportation (NCDOT). RPO (donut area) projects conform to the purpose of the North Carolina SIP.

Gaston County was declared to be in nonattainment for ozone on November 15, 1990. Gaston County was re-designated as a maintenance area for ozone on July 5, 1995.

In 1997 the 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 eight-hour ozone standard was established. In April 2004, the USEPA declared the entire Metrolina area (as shown in [Figure 1](#)) as being in moderate nonattainment for eight-hour ozone. This area includes:

- The Cabarrus-Rowan Metropolitan Planning Organization (CRMPO);
- The Gaston Urban Area Metropolitan Planning Organization (GUAMPO);
- The Mecklenburg-Union Metropolitan Planning Organization (MUMPO);
- The portion of the Lake Norman Rural Planning Organization in western Gaston County, Lincoln County, and southern Iredell County;
- The portion of the Rocky River Rural Planning Organization in eastern and southern Union County; and
- The Rock Hill, Fort Mill Area Transportation Study (RFATS) an MPO comprising the urbanized (eastern) half of York County, SC.

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. As thus, 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.

This conformity analysis applies the same travel model and planning assumptions, except the highway network amendments described in [Table 1](#), as included in the original 2035 LRTPs. There were slight changes in some of the Mobile 6.2 emissions factors as a result of the shifting of projects. Those changes are documented in the amended [Appendix E](#).

The transportation conformity emissions for NO<sub>x</sub> and VOC for 2010, 2011, 2015, 2025 and 2035 use vehicle miles of travel (VMT) and speeds from the GUAMPO 2035 LRTP are provided in [Appendix D](#)

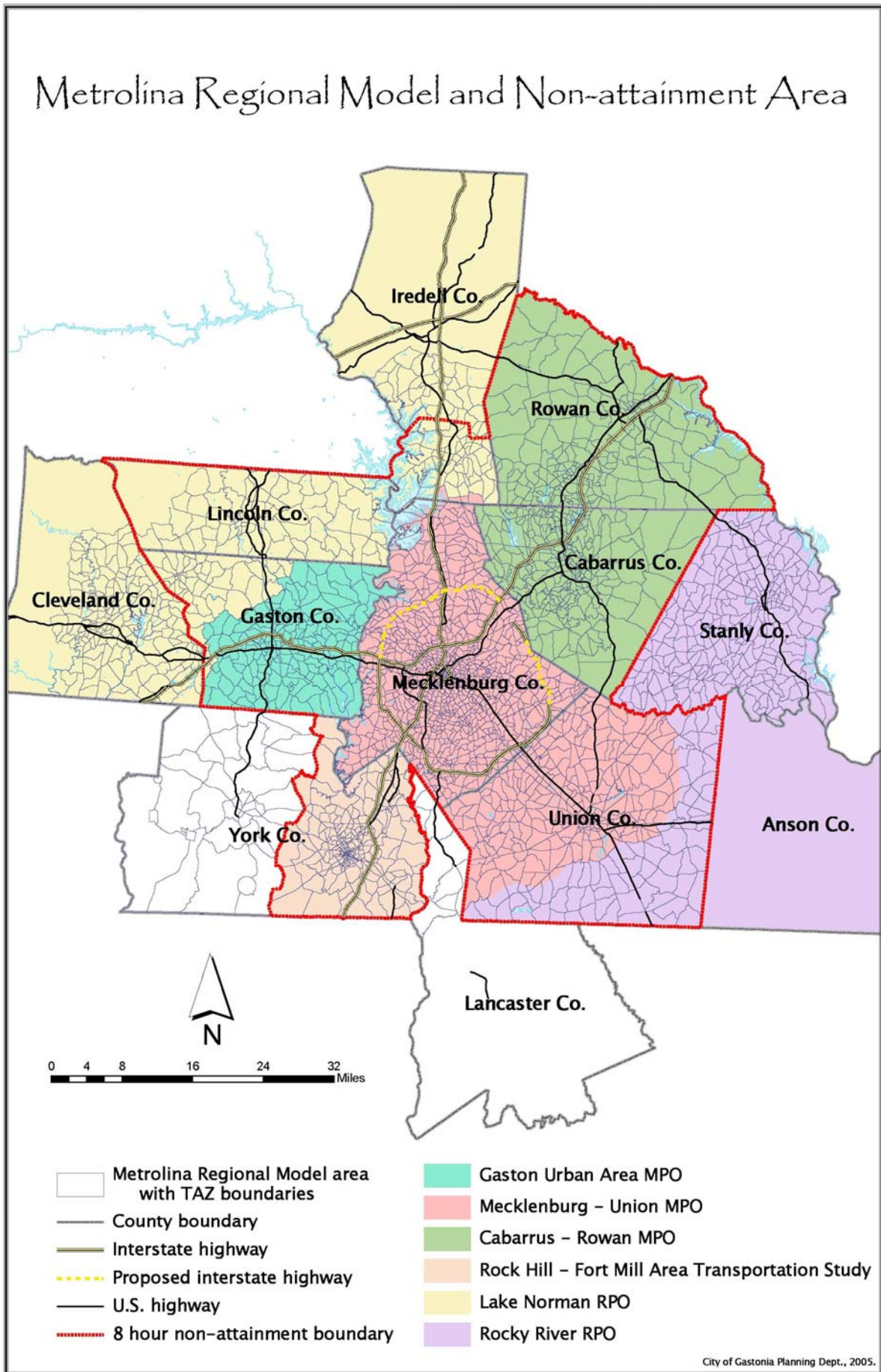
[Table 2](#) contains a summary of results from the Gaston County emissions budget comparison.

In every horizon year for every pollutant, the emissions expected from the implementation of the LRTPs are less than the RFP SIP motor vehicle emissions budgets for Gaston County adopted in the Maintenance Plan and established in the SIP.

**Table 2. Gaston County Emissions Comparison Summary - 8 Hour Ozone**

Gaston County Emissions Comparison Summary (kilograms/day)				
Year	NO <sub>x</sub>		VOC	
	LRTP Emissions	RFP SIP MVEBs	LRTP Emissions	RFP SIP MVEBs
2010	6002	7647	3824	5132
2011	5305	7647	3596	5132
2015	3326	7647	2912	5132
2025	1819	7647	2216	5132
2035	1848	7647	2564	5132

Figure 1. MPO and Non-MPO areas comprising the Metrolina Nonattainment Area



Based on the results of the analysis and the interagency consultation meetings discussed in the Amendment 1, the GUAMPO 2035 LRTP, the FY 2009-2015 TIP and projects from the FY 2009-2015 STIP conform to the purpose of the North Carolina State Implementation Plan. In every analysis year for every pollutant, the emissions expected from the implementation of the GUAMPO LRTP/TIP are less than the emissions budgets for GUAMPO in the RFP SIP for the 8-hour ozone standard. The Federal Register notice deeming the FRP SIP MVEB adequate for transportation conformity is provided in [Appendix A](#). The documentation and results of the regional emissions analysis is provided in [Appendix F](#)

The North Carolina SIP does not contain any transportation control measures (TCM's).

[Appendix I](#) contains all the MPO TAC Adoptions, Endorsements, and Agency Determinations

### **PUBLIC INVOLVEMENT**

The 2035 LRTPs for CRMPO, GUAMPO, and MUMPO, as well as the Transportation Conformity Report, were developed with significant attention to public involvement. Provisions for public comment on this Amendment 1 were provided through a 30-day public review and comment period. GUAMPO's Public Participation Policy is provided in [Appendix G](#). Advertisements and Public comments are summarized in [Appendix H](#).