



Conformity Analysis and Determination Report for the Triad Co and PM 2.5 Maintenance Areas Amendment #1

(Amended Projects: U-2524BC, I-5110 and U-2827B)

- **Burlington-Graham Metropolitan Planning Organization (Guilford County)**
- **Greensboro Urban Area Metropolitan Planning Organization (Guilford County)**
- **High Point Urban Area Metropolitan Planning Organization (Guilford and Forsyth Counties)**
- **Winston-Salem Urban Area Metropolitan Planning Organization (Forsyth County)**
(in parenthesis only counties impacted for this conformity process)

**September 30, 2013
Report**

Prepared by:
Greensboro MPO
The Federal Highway Administration

In cooperation with
The North Carolina Department of Environment and Natural Resources
Division of Air Quality

Contact Information

You may submit comments by mail or email at the addresses below:

If you reside in Guilford County:

Mail: Attention: Conformity Document
 Greensboro Department of Transportation
 P.O. Box 3136
 Greensboro, NC 27402-3136

E-mail: guampo@greensboro-nc.gov

For additional information, please call Lydia McIntyre at: (336) 373-3117 or visit the MPO's website at www.guampo.org and by clicking 'Air Quality.'

If you reside in Forsyth County:

Mail: Attention: MTIP Amendment and Conformity Document
 Winston-Salem Department of Transportation
 P.O. Box 2511
 Winston-Salem, NC 27102

E-mail: wendym@cityofws.org

For additional information, please call Wendy Miller at (336) 747-6878 or visit the Winston-Salem DOT website at www.dot.cityofws.org.

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List of Acronyms

<i>Acronym</i>	<i>Full Term</i>
BGMPO	Burlington-Graham Metropolitan Planning Organization.
Conformity Analysis	Demonstration that when the projects planned in the TIP and LRTP are implemented the area will not exceed allowable motor vehicle emissions thresholds (emissions budgets).
Conformity Finding	Statement that the projects contained in the MTIP are essentially consistent with those listed in the LRTP 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 Program. A federal highway fund category for projects that will improve air quality.
DAQ	Division of Air Quality.
DENR	North Carolina Department of Environment and Natural Resources.
Emissions Budget	See Conformity Analysis.
EIS	Environmental Impact Statement. Federally required environmental study for projects with potentially significant environmental effects.
FHWA	Federal Highway Administration (USDOT)
FCOEAP	Forsyth County Office of Environmental Assistance and Protection.
FTA	Federal Transit Administration (US Department of Transportation)
GUAMPO	Greensboro Urban Area Metropolitan Planning Organization.
HPMPO	High Point Metropolitan Planning Organization.
LRTP	Long Range Transportation Plan: 25 year planning document identifying long and short term transportation investment needs.
MAB	Metropolitan Area Boundary. The boundary of the area within the transportation planning jurisdiction of an MPO.
MPO	Metropolitan Planning Organization.
MTIP	Metropolitan Transportation Improvement Program.
MVEB	Motor Vehicle Emission Budgets.

List of Acronyms (cont'd)

NCDOT	North Carolina Department of Transportation.
NEPA	National Environmental Policy Act. Federal law that requires consideration of environmental impacts for all major expenditures of federal funds.
NOx	Oxides of Nitrogen: key precursor to smog. According to NCDAQ, roadway sources produce around 31% of total NC NOx emissions.
PART	Piedmont Authority for Regional Transportation.
Prospectus	Document outlining responsibilities and procedures for carrying out the cooperative transportation planning process. Defines ongoing work tasks cited in the Planning Work Program.
Planning Work Program	Accounting document for use of planning grant funds; lists approved activities that these funds may reimburse. The PWP thus guides transportation planning activities for the year.
RPO	Rural Planning Organization. RPOs are partnerships among non-MPO counties, established to provide rural areas a greater voice in state transportation decisions affecting those areas.
Section 104(f) PL	Funds distributed through the Federal Highway Administration for transportation planning tasks.
SIP	State Implementation Plan. The modeling analysis 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
TCM	Transportation Control Measures. Specific projects or programs enumerated in the SIP that are designed to improve air quality are implemented in a timely fashion.
TDM	Travel Demand Model.
TMA	Transportation Management Area: urbanized area over 200,000 in population.
PTRM	Piedmont Triad Regional Model.
US EPA	United States Environmental Protection Agency.
WSMPO	Winston-Salem Metropolitan Planning Organization.

Conformity Analysis and Determination Report for the Triad Co and PM 2.5 Maintenance Area-Amendment #1

Amended Projects U-2524BC, I-5110 and U-2827B

Introduction:

This report constitutes the 2035 Long Range Transportation Plan (LRTP) and Fiscal Years (FY) 2012-2018 Transportation Improvement Program (TIP) amendments for the following areas:

- Burlington-Graham Metropolitan Planning Organization (BGMPO-Guilford County*)
- Greensboro Urban Area Metropolitan Planning Organization (GUAMPO-Guilford County*)
- High Point Urban Area Metropolitan Planning Organization (HPMPO-Guilford and Forsyth County*)
- Winston-Salem Urban Area Metropolitan Planning Organization (WSMPO-Davidson and Forsyth*)

**(in parenthesis only counties impacted for this conformity process)*

Based on the results of the analysis described in this report, the 2035 LRTP for BGMPO, GMPO, HPMPO and the WSMPO and their latest respective TIP conforms to the purpose of the North Carolina State Implementation Plan (SIP). This transportation conformity determination is supported by the following findings:

- The FY 2012-2018 TIPs are direct subsets of the conforming 2035 LRTPs

The previous MPO 2035 LRTP's were adopted on the following dates:

- BG MPO on January 15, 2013
- GUAMPO on January 23, 2013
- HPMPO on January 22, 2013
- WSMPO on January 17, 2013

Copies for the following MPO 2035 LRTPs are provided below:

- BG MPO on <http://www.bgmpo.org/>
- GUAMPO on <http://www.greensboro-nc.gov/LRTP>
- HPMPO on <http://www.hpdot.net/hpmpo/plans/plans.htm>
- WSMPO on <http://www.cityofws.org/Home/Departments/Transportation/Planning/Articles/Draft2035TransportationPlanUpdate>

Amended Projects

Table 1

o **U-2524**– Greensboro Western Loop. Construct 6-lane freeway on new location north of I-85 to Lawndale Drive. (*Model in horizon year 2025*)

▪ **Section BC- Bryan Boulevard (SR 2085)**. Interchange Modification.

The 2035 LRTP and FY 2012-2018 TIP amendment is needed to provide continuity for the I-73 connector from existing I-73/I-840 to Bryan Blvd (Future I-73), and improve the function and reduce conflicts (by providing an auxiliary lanes) extending the distance in which merge/weave/diverge will occur.

▪ Add auxiliary lane from the flyover in the northwest quadrant of I-73/I-840/Bryan Blvd Interchange going west along Bryan Blvd (Future I-73) just west of Inman Road Bridge (approximately 4150 feet).

▪ Add auxiliary lane from Inman Road Bridge and the ramp in the southwest quadrant going south along I-73/I-840 to the Ballinger Road Bridge (approximately 7400 feet).

The amendment also requires new regional emissions analysis for this project for years 2025 and 2035.

- **I-5110**– I-73 Connector. Construct 6-lane freeway on new location from NC 68 to Bryan Boulevard (Western Loop). (*Model in horizon year 2025*)

The FY 2012-2018 TIP amendment is needed to shift the construction timeframe from fiscal year 2016 to fiscal year 2014.

For this amendment there is no change in the project scope and the shifting of the construction timeframe does not change the LRTP horizon year. Therefore a new regional emissions analysis is not required for this project.

- **U-2827B**– Business 40 (US 421 Improvements. I-40 Bypass to west of US 158 (east of Church Street to west of Fourth Street) an existing 4-lane freeway/expressway to 4-lane freeway/expressway with interchange improvements. (*Model in horizon year 2021*)

The FY 2012-2018 TIP amendment is needed to combine sections BA and BB with U-2827B. The amendment also includes delaying section BA right-of-way from fiscal year 2015 to fiscal year 2016. Section BB includes accelerating right-of-way and construction from fiscal year 2018 to fiscal year 2016.

For this amendment there is no change in the project scope and the shifting of the right of way and construction timeframe does not change the LRTP horizon year. Therefore a new regional emissions analysis is not required for this project.

As shown above, this amendment includes changes in the timing of projects included in the GUAMPO 2035 LRTP. Changes in projects and/or horizon years resulted in having to do a new regional emission analysis for this conformity determination. As agreed by the interagency consultation partners, the county emissions analysis work for this process began on April 26, 2013 and was completed on May 29, 2013. Details related to the interagency

consultation associated with this conformity determination can be found in Appendix B.

This amendment also provides an opportunity to incorporate the most current cost estimates as required in the fiscal constraint requirements for the LRTPs. No significant overall cost or fiscal capacity changes are associated with the changes for the projects.

Appendix C contains the GUAMPO and the WSMPO amended projects from the 2035 LRTP and FY 2012-2018 TIP

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 under the amended project section.

TRANSPORTATION CONFORMITY

This report addresses amended projects U-2524BC (Guilford), I-5110 (Guilford), and U-2827B (Forsyth) located in Guilford and Forsyth Counties. The purpose of this report is to comply with the provisions of the Clean Air Act Amendments of 1990 and the Moving Ahead for Progress in the 21st Century Act (MAP-21) of July 6, 2012. This report demonstrates that the amended projects listed above will not "cause or contribute to any new violation of any standard in any area, increase the frequency or severity of any existing violation of any standard in any area, or delay timely attainment of any standard or any required interim emission reductions or other milestones in any area." of the following Triad Area CO or PM 2.5 maintenance area jurisdictions:

- The portion of Guilford County within the Burlington-Graham Urban Area Metropolitan Planning Organization (BGMPO)
- The portions of Guilford County within the Greensboro Urban Area Metropolitan Planning Organization (GUAMPO)
- The portions of Guilford and Forsyth Counties within the High Point Urban Area Metropolitan Planning Organization (HPMPO)

- The portion of Forsyth County within the Winston-Salem Urban Area Metropolitan Planning Organization (WSMPO)

This conformity determination is based on a regional emissions analysis that uses the transportation network approved by the above-named Metropolitan Planning Organizations (MPOs) for the 2035 LRTPs, VMT and Speed input data developed by the Model Custodian (PART) (See Appendix D), and emissions developed by the North Carolina Division of Air Quality (NCDAQ). **A new regional emissions analysis was only required for U-2524BC. U-2524BC is located in Guilford County, therefore PM 2.5 pollutants will only be analyzed.**

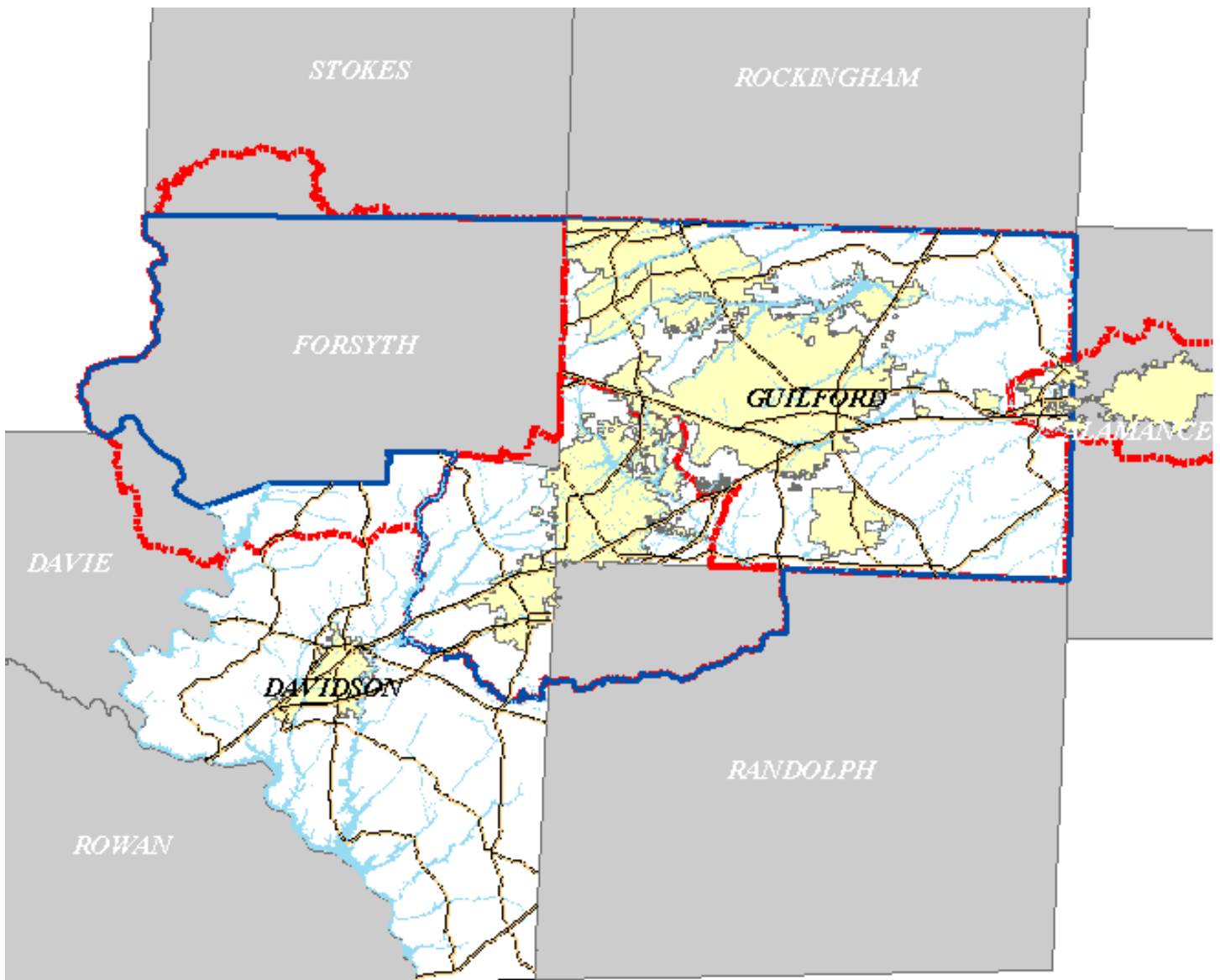
The FY 2012-2018 TIP amendment for projects I-5110 and U-2827B do not need to be included in the regional emissions analysis because in accordance with 40 CFR 93.122(g), no further regional emissions analysis is required for the TIP if the TIP is a direct subset of the LRTP and if the following conditions are met:

- The TIP is consistent with the conforming LRTP such that the regional emissions analysis performed on the LRTP 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 LRTP 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 LRTP horizon years;
- The design concept and scope of each regionally significant project identified in the TIP is not significantly different from that described in the LRTP; and
- The number of travel lanes of each regionally significant project identified in the TIP is not significantly different from that described in the LRTP.

Based on this analysis U-2524BC amendment along with the projects previously modeled from the 2035 LRTPs for the Piedmont Triad Region (BGMPO, GUAMPO, HPMPO, and the WSMPO) are consistent with the intent of conformity requirement.

The USEPA designated Guilford County, in their entirety, as a non-attainment area for the 1997 PM 2.5 Standard with an effective date of April 5, 2005. This area was redesignated from non-attainment to maintenance for the 1997 PM 2.5 Standard effective on December 19, 2011. The Federal Register Notice containing this information is provided in Appendix A. Maps showing the Triad PM2.5 and the CO maintenance areas are provided in Figures 1 and 2.

Figure 1. Triad Area PM 2.5 Maintenance Areas

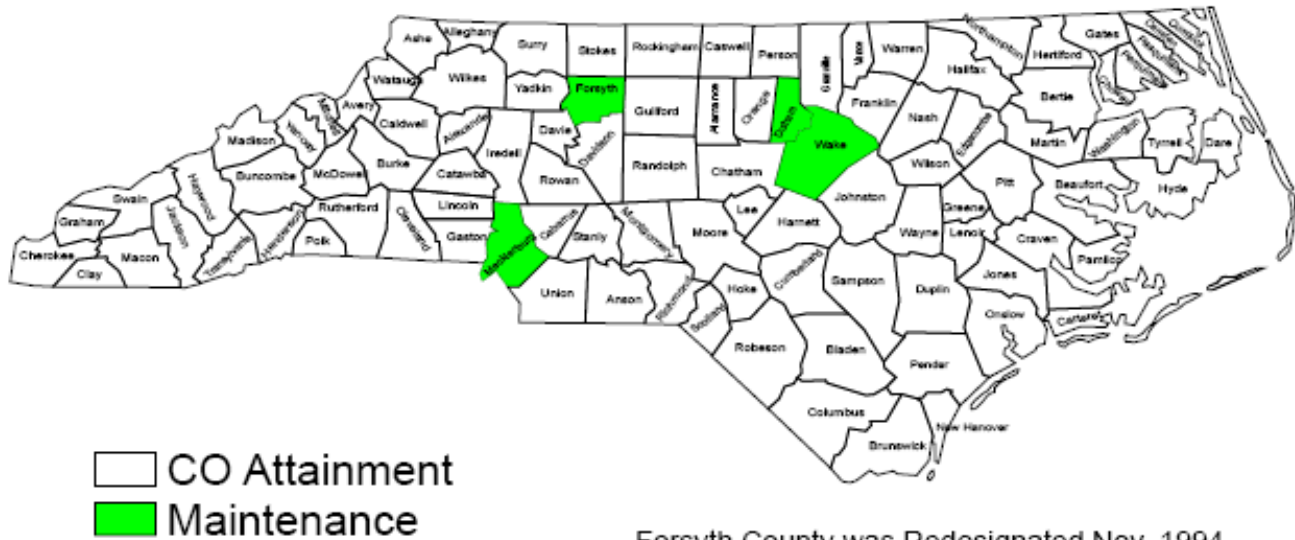


Legend

- Triad PM 2.5 Non Attainment Area
- MunicipalBoundaries_polys selection selection
- Triad Modeled Area boundary
- MPO Boundaries
- Surrounding County Boundaries
- Streams and Rivers

Figure 2. North Carolina CO Maintenance Areas

North Carolina CO Maintenance Areas



Forsyth County was Redesignated Nov, 1994
Redesignation was projected Sept. 18, 1995
for Mecklenburg, Durham and Wake Counties

Note: Not to Scale
April 6, 2004

Table 2. Guilford County PM2.5 Emissions Comparison Summary (including project U-2524BC)

PM 2.5 (NO_x): The PM 2.5 Redesignation Effective 12/19/11 (kg/year)				
Area	Comparison Year			
	2015	2021	2025	2035
GUILFORD MVEB (NO_x)	11,133,605	6,309,650	6,309,650	6,309,650
GUILFORD Emission Model Results	6,271,100	4,446,500	3,230,100	2,883,190

PM 2.5 (PM 2.5): The PM 2.5 Redesignation Effective 12/19/11 (kg/year)				
Area	Comparison Year			
	2015	2021	2025	2035
GUILFORD MVEB (PM 2.5)	421,841	421,841	421,841	421,841
GUILFORD Emission Model Results	151,092	117,066	94,383	95,672

The Triad Area LRTPs have the following horizon years: 2015, 2021, 2025 and 2035. Each analysis year includes anticipated population, employment data, and roadway projects that are expected open. The LRTPs are fiscally constrained meaning that funding sources for roadway projects are identified

NCDENR-DAQ calculated emissions with the MOVES2010b model. There are State Implementation Plan (SIP) motor vehicle motor vehicle emission budgets (MVEB) for the PM 2.5 standard.

Based on the results of the analysis and the conformity interagency consultation meetings for the 2035 LRTP/FY 2012-2018 TIP amendments conform to the purpose of the North Carolina SIP. In every analysis year for every pollutant, the emissions expected from the implementation of the 2035 LRTP/FY 2012-2018 TIP amendments are less than the emissions budgets for the Triad Area PM2.5 Redesignation Maintenance Plan that was effective on December 19, 2011. The results of the regional emissions analysis is provided in Appendix E. The regional emissions analysis documentation 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, as well as the Conformity Determination Report, were developed with significant attention to public involvement. Provisions for public comment for this LRTP/TIP amendment/conformity work were provided through a 30-day public review and comment period. The BGMPO's, the GUAMPO's, the HPMPO's and the WSMPO's Public Participation Policy is provided in Appendix G. Advertisements and public comments are summarized in Appendix H.

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**RESOLUTION FINDING THE 2035 GREENSBORO URBAN AREA LONG RANGE
TRANSPORTATION PLAN UPDATE (as amended) AND THE FY 2012-2018
METROPOLITAN TRANSPORTATION IMPROVEMENT PROGRAM (as amended) IN
CONFORMANCE WITH THE NORTH CAROLINA STATE IMPLEMENTATION PLAN
(SIP)**

A motion was made by TAC Member Zack Matheny and seconded by TAC Member Cheryl McQueary for the adoption of the following resolution, and upon being put to a vote was duly adopted.

WHEREAS, the Transportation Advisory Committee has found the Metropolitan Planning Organization is conducting transportation planning in a continuous, cooperative, and comprehensive (3-C) manner in accordance with 23 U.S.C. and 49 U.S.C. 1607; AND

WHEREAS, the United States Environmental Protection Agency revoked the 1-hour ozone standard for Guilford County; AND

WHEREAS, the Greensboro Urban Area MPO, effective April 15, 2009, is no longer required to demonstrate conformity for the 1-hour ozone standard; AND

WHEREAS, the United States Environmental Protection Agency (EPA) redesignated Davidson, and Guilford Counties as maintenance areas for PM_{2.5} on December 19, 2011; AND

WHEREAS, the conformity analysis of the Greensboro Urban Area 2035 LRTP is based on the most recent estimates of population, employment, travel and congestion; AND

WHEREAS, that conformity determination used the latest emissions model approved by the United States Environmental Protection Agency; AND

WHEREAS, there are no transportation control measures listed in North Carolina's State Implementation Plan; AND

WHEREAS, that conformity determination was made according to the established interagency consultation procedures for North Carolina; AND

WHEREAS, the 2035 Long Range Transportation Plan Update and Metropolitan Transportation Improvement Program for FY 2012-2018 reflect the addition of projects U-2524BC and I-5110; AND

WHEREAS, the programs and projects included in the Greensboro Urban Area 2035 Long Range Transportation Plan Update and Metropolitan Transportation Improvement Program for FY 2012 - 2018 are financially constrained in accordance with State and Federal law; AND

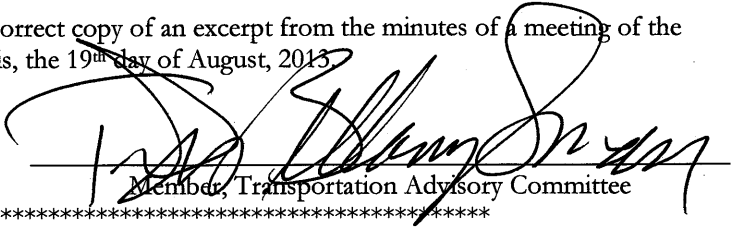
WHEREAS, the programs and projects included in the Greensboro Urban Area Metropolitan Transportation Improvement Program for FY 2012 - 2018 are a direct subset of the conforming Greensboro Urban Area 2035 Long Range Transportation Plan Update; AND

WHEREAS, the Transportation Advisory Committee has provided for a public comment period for the proposed Conformity Finding based on the Public Participation Plan adopted June 26th, 2013; and

NOW, THEREFORE, BE IT RESOLVED that the Greensboro Urban Area Transportation Advisory Committee finds that the 2035 LRTP Update and FY 2012-2018 MTIP conforms to the purposes of the SIP in accordance with the Clean Air Act as Amended (CAAA) and the Safe, Accountable, Flexible, Efficient Transportation Equity Act-A Legacy for Users (SAFETEA-LU) and Moving Ahead for Progress in the 21st Century (MAP-21) on this, the 19th day of August, 2013.

I, T. Dianne Bellamy-Small, TAC Member,
(Name of Certifying Official) (Title of Certifying Official)

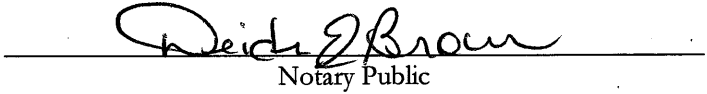
do hereby certify that the above is a true and correct copy of an excerpt from the minutes of a meeting of the Greensboro Urban Area TAC duly held on this, the 19th day of August, 2013.



Member, Transportation Advisory Committee

Subscribed and sworn to me on this, the 19th day of August, 2013.

DEIDRE E. BROWN
NOTARY PUBLIC
GUILFORD COUNTY, NC
My Commission Expires 2-17-2018



Notary Public

My commission expires _____.