

Conformity Determination Report

2012–2018 Transportation Improvement Program

- **Burlington-Graham Metropolitan Planning Organization**
- **Greensboro Metropolitan Planning Organization**
- **High Point Metropolitan Planning Organization**
- **Winston Salem Metropolitan Planning Organization**
- **North Carolina Department of Transportation**
(for the portion of the Triad PM2.5 Area in Davidson County outside of the MPO boundary)

Date: June 6, 2011

This report was coordinated by the Piedmont Authority for Regional Transportation for the North Carolina Department of Transportation, the Burlington Graham Metropolitan Planning Organization, the Greensboro Metropolitan Planning Organization, the High Point Metropolitan Planning Organization and the Winston Salem Metropolitan Planning Organization, in cooperation with the Piedmont Triad and the Northwest Piedmont Rural Planning Organization.

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1.0 Introduction

The purpose of this report is to document compliance with the provisions of the Clean Air Act Amendments of 1990 (CAAA) and the Safe Accountable Efficient Transportation Equity Act: a Legacy for Users - 2005. The conformity determination for the FY 2012–2018 Transportation Improvement Program (TIP) is based primarily on a regional emissions analysis that utilized the transportation networks in adopted and conforming 2035 Long Range Transportation Plans (LRTPs) and the emissions factors developed by the North Carolina Division of Air Quality (NCDAQ). The Transportation Conformity Determination for the 2035 LRTP updates for the Triad Area (Burlington Graham MPO, Greensboro MPO, High Point MPO and the Winston Salem MPO) was completed on March 6, 2009. The 2035 LRTP Conformity Determination Report (CDR) is available on the following websites:

- Burlington Graham MPO: http://www.greensboro-nc.gov/NR/rdonlyres/4EBBDE0D-3F0E-4535-A858-4B2A770293B4/0/2008TriadAreaCDR111908UpdatedFinal_LRTP.pdf
- Greensboro MPO: http://www.greensboro-nc.gov/NR/rdonlyres/4EBBDE0D-3F0E-4535-A858-4B2A770293B4/0/2008TriadAreaCDR111908UpdatedFinal_LRTP.pdf
- High Point MPO: http://www.hpdot.net/hpmpo/plans/LRTP2035/Section_8_Conformity_Analysis_and_Determination_Report/Section_8_2008_Triad_Area_Draft_CDR_11_19_08_Updated_Final.pdf
- Winston Salem MPO: http://www.ci.winston-salem.nc.us/Assets/CityOfWS/Documents/forms%20and%20reports/Transportation/LRTP/2035final/lrtp2035final_7_triad_aq_conformity_doc.pdf
- Donut Area Davidson County-Amendment #1: <http://www.greensboro-nc.gov/NR/rdonlyres/86FB6E25-542E-4575-8E7E-1D1AC110DD3B/0/TriadAreaDonutAreaProjectAmendmentCDR22610.pdf>

The FY 2012-2018 TIPs for the Triad Area (Burlington Graham MPO, Greensboro MPO, High Point MPO and the Winston Salem MPO) contain a number of project changes which required 2035 LRTP amendments and a new Transportation Conformity Determination for the Triad Area. The FY 2012-2018 TIP conformity determination for the Triad Area includes a new regional emissions analysis that captures all the 2035 LRTP project changes to ensure that the FY 2012-2018 TIPs are direct subsets of the 2035 LRTPs.

MPOs and the NCDOT are required by 23 CFR 134 and 40 CFR Parts 51 and 93 to make a conformity determination on any newly adopted or amended fiscally-constrained LRTPs and TIPs. **Appendix A** contains relevant portions of 40 CFR Part 93. The intent of this report is to document the conformity determinations for the FY 2012–2018 TIPs for the Burlington-Graham MPO, the Greensboro MPO, the High Point MPO, the Winston Salem MPO and the donut portion of the Triad Area that is the responsibility of the North Carolina Department of Transportation (NCDOT). In addition, the United States Department of Transportation (USDOT), specifically, the Federal Highway Administration (FHWA) must make a conformity determination on the LRTPs and TIPs in all non-attainment and maintenance areas. The Triad Area is maintenance for CO (Forsyth) and non-attainment for PM 2.5 (Guilford and Davidson).

Conformity Determinations for the 2035 LRTPs in the Triad PM 2.5 Non-Attainment Area were approved as follows:

- Burlington-Graham MPO: February 17, 2009
- Greensboro MPO: January 28, 2009
- High Point MPO: February 24, 2009
- Winston Salem MPO: January 29, 2009
- The NCDOT (for the donut portion of Davidson County in the Triad PM2.5 Non-Attainment Area): February 11, 2010

Conformity Determination for the 2035 LRTP in the Triad CO Maintenance Area was approved as follows:

- Winston Salem MPO: January 29, 2009

By these actions, the MPOs and NCDOT demonstrated that the 2035 LRTPs are consistent with Section 176(c) of the Clean Air Act, the State Implementation Plan, SAFETEA-LU, and 40 CFR Parts 51 and 93. These conformity demonstrations were documented by the MPOs and NCDOT in the report entitled *Conformity Analysis and Determination Report*. That report included the regional emissions test comparison prepared for the 2035 LRTPs demonstrating that emissions in each of the analysis years of the LRTP are less than or equal to, the motor vehicle emissions budget established by the State Implementation Plan (SIP) (or base year emissions, in areas where no SIP is approved or found adequate by EPA) in accordance with 40 CFR Part 93 and approved by USEPA.

AMENDED PROJECTS

As noted above, the 2035 LRTP amendments includes changes in the timing of projects included in the FY 2012-2018 TIP for the Triad Area. Changes in the horizon years for these regionally-significant projects resulted in having to do new regional emissions analysis for this transportation conformity determination. As agreed by the interagency consultation partners, the regional emissions analysis work for this process began on March 14, 2011 and was completed on April 19, 2011. Details related to the interagency consultation associated with this conformity determination can be found in [Appendix D](#).

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. All projects in this amendment are included in the travel model assumptions for the appropriate horizon year. Provided below is a summary of the project changes. 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 of costs for some projects. This conformity analysis will focus on the project changes presented below:

Burlington Graham MPO Project(s)

There were no project changes for the Burlington Graham MPO. The FY 2012-2018 TIP is a direct subset of the currently conforming 2035 LRTP

Greensboro MPO Project(s)

- Sandy Ridge Rd. – Project construction has shifted from horizon year 2015 to 2025.
- East Cone Blvd. Extension, Phase II – Project construction has shifted from horizon year

2015 to 2025.

- Fleming Rd. / Lewiston Rd. Connector – Project construction has shifted from horizon year 2015 to 2025.
- Benjamin Parkway / Bryan Blvd. - Project construction has shifted from horizon year 2015 to 2025.

A visual representation and detailed project descriptions of the aforementioned amended 2035 LRTP projects are provided in [Appendix B](#)

High Point MPO Project(s)

- U-2412A - Project construction has shifted from horizon year 2015 to 2025.
- U-4758 - Project construction has shifted from horizon year 2015 to 2025.

A visual representation and detailed project descriptions of the aforementioned amended 2035 LRTP projects are provided in [Appendix B](#)

Winston Salem MPO Project(s)

- U-4909 – Project construction has shifted from horizon year 2010 to 2015.
- U-4918A – Project construction has shifted from horizon year 2010 to 2015.
- U-2826B – Project construction has shifted from horizon year 2012 to 2015.
- U-2924 – Project construction has shifted from horizon year 2015 to 2025.
- U-2925A - Project construction has shifted from horizon year 2015 to 2025.

A visual representation and detailed project descriptions of the aforementioned amended 2035 LRTP projects are provided in [Appendix B](#)

Donut Area Project(s)

There were no project changes for the Donut Area Davidson County. Projects from the FY 2012-2018 STIP is consistent with the conformity determination completed on February 26, 2010.

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. The financial constraints for each LRTP were also summarized in the Triad Area Conformity Determination Report dated March 6, 2009 and the 2035 LRTPs.

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 shown in [Appendix B](#).

2.0 Relationship of the LRTP and TIP

In accordance with 40 CFR Parts 51 and 93, no further regional emissions analysis is required for the Transportation Improvement Program 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; and
- The design concept and scope of each regionally significant project identified in the TIP is not significantly different from that described in the LRTP.
- The number of travel lanes of each regionally significant project identified in the TIP is not significantly different from that described in the LRTP.

This report documents that the TIP for FY 2012-2018 is a direct subset of the 2035 LRTPs for the Burlington Graham MPO, the Greensboro MPO, the High Point MPO, the Winston Salem MPO and the donut portion of Davidson County. The 2035 LRTP for each of 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 LRTP conforms to the provisions of the Clean Air Act Amendments of 1990 and the Safe Accountable, Flexible, Efficient Transportation Equity Act: a Legacy for Users - 2005 (SAFETEA-LU) approved by the USDOT on August 10, 2005. Also, this LRTP conforms to the purpose of the SIP in accordance with 40 CFR Part 93.

Copies of the FY 2012-2018 TIPs and the FY 2012-2018 STIP (for dount Davidson County) are attached to this report ([Appendix C](#)).

3.0 Latest Planning Assumptions

The planning assumptions used to develop the Conformity Determination Report are the latest planning assumptions 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.

4.0 Interagency Consultation

The FY 2012-2018 TIP has undergone interagency consultation as required in the North Carolina Administrative Code Title 15A Subpart 2D 2002-2003 inclusive. Interagency consultation meetings involving the MPOs, NCDOT, NCDENR, FHWA and USEPA- Region 4 were held on November 4, 2010, December 8, 2010, January 6, 2011, February 16, 2011, March 16, 2011, and April 20, 2011. A summary of issues raised and responses, along with any written agency comments, are provided in [Appendix D](#).

5.0 Public Involvement

The FY 2012 -2018 TIP was reviewed by the public in accordance with the Public Involvement Policies of the Burlington Graham MPO, the Greensboro MPO, the High Point MPO, the Winston Salem MPO and the NCDOT. This report was also made available for public review by the Piedmont Authority for Regional Transportation (PART), Northwest Piedmont and Piedmont Triad Rural Planning Organization (RPO). Copies of citizen comments and agency responses to them are attached to this report in [Appendix E](#). The newspaper advertisements for public review and comment period are attached to this report in [Appendix F](#).

6.0 Emission Comparison Summary Tests by Location and Pollutants

On November 15, 2010, NCDAQ submitted the PM2.5 Redesignation Update to EPA and proposed Motor Vehicle Emissions Simulator (MOVES) based PM2.5 motor vehicle emissions budgets (MVEBs). On May 2, 2011, EPA published in the Federal Register the 1997 Annual PM2.5 Maintenance Plan adequacy finding for PM2.5 and NOx MVEBs with an effective date of May 17, 2011. These MVEBs found adequate by EPA will be used for this emissions comparisons provided below. The EPA Federal Register notice of adequacy is provided in [Appendix J](#).

Guilford County PM2.5 SIP MVEB Emissions Comparison Summary

Guilford County PM2.5 (Kg/Yr)		
Analysis Year	PM2.5	
	L RTP Emissions (Kg/Yr)	SIP MVEB (Kg/Yr)
2011	321,045	421,841
2015	222,895	421,841
2021	187,614	421,841
2025	164,093	421,841
2035	175,785	421,841

Analysis Year	Guilford County NOx (for PM 2.5)	
	L RTP Emissions (Kg/Yr)	SIP MVEB (Kg/Yr)
2011	10,014,353	11,133,065
2015	7,117,060	11,133,065
2021	5,551,372	6,309,650
2025	4,507,580	6,309,650
2035	4,088,720	6,309,650

Davidson County PM2.5 SIP MVEB Emissions Comparison Summary

Davidson County PM2.5 (Kg/Yr)		
Analysis Year	PM2.5	
	L RTP Emissions (Kg/Yr)	SIP MVEB (Kg/Yr)
2011	112,567	153,313
2015	76,331	153,313
2021	58,367	153,313
2025	46,391	153,313
2035	42,957	153,313

Analysis Year	Davidson County NOx (for PM 2.5)	
	L RTP Emissions (Kg/Yr)	SIP MVEB (Kg/Yr)
2011	3,521,800	4,086,413
2015	2,480,760	4,086,413
2021	1,800,348	2,148,938
2025	1,346,740	2,148,938
2035	1,060,510	2,148,938

Forsyth County CO MVEB Emissions Comparison Summary

Forsyth County CO (Tons/Day)¹		
Analysis Year	CO	
	LRTP Emissions (Tons/Day)	SIP MVEB (Tons/Day)
2015	186.84	247.64
2025	105.31	247.64
2035	119.83	247.64

The MOVES input and output files are provided in [Appendix H](#).

7.0 Findings of Conformity

7.1 The Burlington Graham MPO TAC, as the decision making body of the Burlington Graham MPO, finds that the FY 2012 -2018 TIP is a direct subset of the 2035 LRTP for the Burlington Graham MPO Area. The TIP meets the conditions described earlier in this document and thus conforms to the intent of the Clean Air Act and the requirements of 40 CFR §93.

7.2 The Greensboro MPO TAC, as the decision making body of the Greensboro MPO, finds that the FY 2012 -2018 TIP is a direct subset of the amended 2035 LRTP for the Greensboro MPO Area. The TIP meets the conditions described earlier in this document and thus conforms to the intent of the Clean Air Act and the requirements of 40 CFR §93.

7.3 The High Point MPO TAC, as the decision making body of the High Point MPO, finds that the FY 2012 -2018 TIP is a direct subset of the amended 2035 LRTP for the High Point MPO Area. The TIP meets the conditions described earlier in this document and thus conforms to the intent of the Clean Air Act and the requirements of 40 CFR §93.

7.4 The Winston Salem MPO TAC, as the decision making body of the Winston Salem MPO, finds that the FY 2012 -2018 TIP is a direct subset of the amended 2035 LRTP for the Winston Salem MPO Area. The TIP meets the conditions described earlier in this document and thus conforms to the intent of the Clean Air Act and the requirements of 40 CFR §93.

7.5 Based on the analysis and consultation and involvement process described in this report, the projects from the FY 2012-2018 State Transportation Improvement Program for the donut areas of counties in the Triad area that are outside of the MPO boundaries are found to conform to the purpose of the North Carolina State Implementation Plan (SIP). The emissions expected from the implementation of the projects from the FY 2012-2018 State Transportation Improvement Program are in conformity with the PM2.5 standard.

The MPO/NCDOT conformity determinations and TIP/LRTP adoptions are provided in [Appendix G](#).

The USDOT Conformity Determination Letter is provided in [Appendix I](#).

Appendix A: Air Quality Regulations

40 CFR 93.122(g)

(g) Reliance on previous regional emissions analysis.

(1) Conformity determinations for a new transportation plan and/or TIP may be demonstrated to satisfy the requirements of §§93.118 (“Motor vehicle emissions budget”) or 93.119 (“Interim emissions in areas without motor vehicle emissions budgets”) without new regional emissions analysis if the previous regional emissions analysis also applies to the new plan and/or TIP. This requires a demonstration that:

(i) The new plan and/or TIP contain all projects which must be started in the plan and TIP’s timeframes in order to achieve the highway and transit system envisioned by the transportation plan;

(ii) All plan and TIP projects which are regionally significant are included in the transportation plan with design concept and scope adequate to determine their contribution to the transportation plan’s and/or TIP’s regional emissions at the time of the previous conformity determination;

(iii) The design concept and scope of each regionally significant project in the new plan and/or TIP are not significantly different from that described in the previous transportation plan; and

(iv) The previous regional emissions analysis is consistent with the requirements of §§93.118 (including that conformity to all currently applicable budgets is demonstrated) and/or 93.119, as applicable.

(2) A project which is not from a conforming transportation plan and a conforming TIP may be demonstrated to satisfy the requirements of §93.118 or §93.119 without additional regional emissions analysis if allocating funds to the project will not delay the implementation of projects in the transportation plan or TIP which are necessary to achieve the highway and transit system envisioned by the transportation plan, the previous regional emissions analysis is still consistent with the requirements of §93.118 (including that conformity to all currently applicable budgets is demonstrated) and/or §93.119, as applicable, and if the project is either:

(i) Not regionally significant; or

(ii) Included in the conforming transportation plan (even if it is not specifically included in the latest conforming TIP) with design concept and scope adequate to determine its contribution to the transportation plan’s regional emissions at the time of the transportation plan’s conformity determination, and the design concept and scope of the project is not significantly different from that described in the transportation plan.

(3) A conformity determination that relies on paragraph (g) of this section does not satisfy the frequency requirements of §93.104(b) or (c).

Appendix B: 2035 LRTP Amended Projects

- Burlington Graham 2035 LRTP Amended Project List-**No amended projects**
- Greensboro MPO 2035 LRTP Amended Project List
- High Point MPO 2035 LRTP Amended Project List
- Winston Salem MPO 2035 LRTP Amended Project List
- Projects from the FY 2012-2018 STIP for the donut area- **No amended projects**

SEE ATTACHED FOLDER: “APPENDIX B” for a visual representation and descriptions of the amended projects.

Appendix C: 2012-2018 Transportation Improvement Program

The Files contained within the Appendix C folder include TIPs (STIPs for donut areas), by MPOs and RPO donut area counties. For digital versions of this document, refer to the Appendix C folder for the following pdf files of the documents listed below:

- Burlington Graham MPO FY 2012-2018 TIP
- Greensboro MPO FY 2012-2018 TIP
- High Point MPO FY 2012-2018 TIP
- Winston Salem MPO FY 2012-2018 TIP
- Davidson County MPO FY 2012-2018 STIP

SEE ATTACHED FOLDER: “APPENDIX C”

Appendix D: Interagency Consultation

- Interagency Consultation Meeting Minutes
- Consensus Plan
- Conformity Process Schedule

SEE ATTACHED FOLDER: “APPENDIX D”

Appendix E: Comments and Responses from Public Involvement Process

SEE ATTACHED FOLDER: “APPENDIX E”

Appendix F: Newspaper Advertisements for Public Review and Comment Period

- Burlington Graham MPO
- Greensboro MPO
- High Point MPO
- Winston Salem Forsyth MPO
- Donut Area of Davidson County

SEE ATTACHED FOLDER: “APPENDIX F”

Appendix G: TIP Adoption and Conformity Resolutions

Appendix G includes TIP adoption/endorsement and conformity finding resolutions for applicable MPOs (adoption), RPOs (endorsement) and the NCDOT (conformity findings for rural counties).

- Burlington Graham MPO FY 2012-2018 TIP adoption
- Burlington Graham MPO FY 2012-2018 TIP conformity finding
- Greensboro MPO amended 2035 LRTP adoption
- Greensboro MPO amended 2035 LRTP conformity finding
- Greensboro MPO FY 2012-2018 TIP adoption
- Greensboro MPO FY 2012-2018 TIP conformity finding
- High Point MPO amended 2035 LRTP adoption
- High Point MPO amended 2035 LRTP conformity finding
- High Point MPO FY 2012-2018 TIP adoption
- High Point MPO FY 2012-2018 TIP conformity finding
- Winston Salem MPO amended 2035 LRTP adoption
- Winston Salem MPO amended 2035 LRTP conformity finding
- Winston Salem MPO FY 2012-2018 TIP adoption
- Winston Salem MPO FY 2012-2018 TIP conformity finding
- NCDOT Davidson County (rural portion) FY 2012-2018 STIP conformity finding

SEE ATTACHED FOLDER: “APPENDIX G”

Appendix H: MOVES Input/Output Files

SEE ATTACHED FOLDER: “APPENDIX H”

Appendix I: USDOT Conformity Determination Letter

SEE ATTACHED FOLDER: "APPENDIX I"

APPENDIX J: Federal Register Notice and applicable communication

SEE ATTACHED FOLDER: “APPENDIX J”