AIR QUALITY CONFORMITY DETERMINATION OF THE 2010 CONSTRAINED LONG RANGE PLAN AND THE FY2011-2016 TRANSPORTATION IMPROVEMENT PROGRAM FOR THE WASHINGTON METROPOLITAN REGION

November 17, 2010

The preparation of this report was financially aided through grants from the District of Columbia Department of Transportation, the Maryland Department of Transportation, the Virginia Department of Rail & Public Transportation, the Virginia Department of Transportation, the U.S. Department of Transportation, the Federal Highway Administration, and the Federal Transit Administration.

NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD
METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS

ABSTRACT

TITLE: Air Quality Conformity Determination Of The 2010 Constrained Long Range Plan And The FY2011-2016 Transportation Improvement Program For The Washington Metropolitan Region

DATE: November 17, 2010

AGENCY: The Metropolitan Washington Council of Governments is the regional planning organization of the Washington area's major local governments. COG works on finding solutions to regional problems, especially those related to regional growth, transportation, housing, human services, and the environment.

ABSTRACT: This report documents the assessment of the 2010 Constrained Long Range Plan (CLRP) and the FY2011-2016 Transportation Improvement Program (TIP) with respect to air quality conformity requirements under the 1990 Clean Air Act Amendments. The assessment used criteria and procedures contained in the Environmental Protection Agency (EPA)'s final conformity rule, published in the November 24, 1993 Federal Register, with subsequent amendments and additional federal guidance published by the Environmental Protection Agency (EPA) and by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). The assessment is a responsibility of the National Capital Region Transportation Planning Board (TPB).

The report presents an overview of the conformity requirements contained in the legislation and subsequent guidance, and documents the technical procedures used in the analysis including travel demand forecasting, emissions calculation procedures and impacts of transportation emission reduction measures. The analysis demonstrates that mobile source emissions, estimated for the TIP and for each analysis year of the long range plan, adhere to all carbon monoxide, ozone season volatile organic compound and nitrogen oxide, and fine particle ($PM_{2.5}$) pollutants (direct $PM_{2.5}$ and precursor nitrogen oxide) emissions budgets established by the Metropolitan Washington Air Quality Committee (MWAQC), which are either approved or under review by the EPA. Additionally, the "action scenario" (forecast year) emissions for fine particles are not greater than the base year 2002 emissions, thus satisfying the requirement for pollutants without an established budget. These results provide a basis for a determination of conformity of the 2010 CLRP and the FY2011-2016 TIP.

COPIES AVAILABLE FROM:

Metropolitan Washington Council of Governments
777 N. Capitol St, NE - Suite 300
Washington, DC 20002-4239
http://www.mwcog.org/transportation
(202) 962-3200

ACKNOWLEDGMENTS

Director,
Department of Transportation Planning

Ronald F. Kirby

Project Manager

Jane Posey

Project Engineers / Staff

Andrew Austin
William Bacon
Anant Choudhary
Yu Gao
Eulalie Gower-Lucas
Wanda Hamlin
Sunil Kumar
Ronald Milone
Erin Morrow
Jinchul Park
Daivamani Sivasailam
Daniel Son
Dusan Vuksan
Feng Xie

EXECUTIVE SUMMARY

This report documents the air quality conformity assessment of the 2010 Constrained Long Range Plan (CLRP) and the FY2011-2016 Transportation Improvement Program (TIP) as carried out under the regulations contained in the Environmental Protection Agency's final rule, published in the November 24, 1993 *Federal Register,* with subsequent amendments and additional federal guidance published by the Environmental Protection Agency (EPA) and by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). The process involved consultation with affected agencies such as the EPA, the FHWA, the FTA, and the Metropolitan Washington Air Quality Committee (MWAQC), as well as with the public. The assessment is a responsibility of the National Capital Region Transportation Planning Board.

The first chapter of this report provides a context for the analysis. Chapter II presents an overview of the conformity requirements. This includes a background section on guidance documents following the passage of the 1990 Clean Air Act Amendments, as well as an overview section of the conformity regulations.

Chapter III documents the technical methods and results of the analysis of the CLRP and TIP. The chapter begins with explicit consideration of the overall approach to performing the assessment, i.e., development of a work program which would address all technical and policy requirements of the regulations, respond to comments received on previous analyses and incorporate technical refinements. The discussion provides technical details relating to the travel demand forecasting procedures utilized (network development, transportation/land use interaction, trip table development, modal choice, and traffic assignment), the development of vehicular emissions rates and the subsequent calculation of emissions.

Conformity assessment criteria vary by pollutant. Tests include adherence to mobile source emissions budgets in the case of ozone season pollutants (VOC and NOx) and CO, and a demonstration that forecast year $PM_{2.5}$ (including both directly emitted $PM_{2.5}$ and precursor NOx) emissions are not greater than base year 2002 emissions. One hour ozone precursor mobile emissions budgets are taken from the Metropolitan Washington Air Quality Committee (MWAQC)'s Severe Area State Implementation Plan (SIP) (1-hour ozone non-attainment area) document, Plan to Improve Air Quality in the Washington, DC-MD-VA Region, February 19, 2004. In 2007 MWAQC completed the development of the 8-hour ozone SIP with new mobile emissions budgets, which also correspond to a different geographic area. Similarly, in 2008 MWAQC approved, and the state air agencies subsequently submitted to EPA, the region's $PM_{2.5}$ Attainment Plan. Adherence to both the 8-hour ozone and $PM_{2.5}$ budgets is also documented in this report, even though EPA has not yet acted upon them.

Emissions estimates for all pollutants were developed for 2011, 2020, 2030, and 2040 forecast years, using both network analysis and off-line emissions assessment. The results show that the 2010 CLRP and the FY2011-2016 TIP demonstrate adherence to relevant mobile source emissions budgets for all forecast years, and that forecast year fine particles pollutants emissions are not greater than the base year 2002 emissions.

Chapter IV addresses interagency and public consultation procedures. These procedures were originally developed in response to the November 1993 regulations and were subsequently updated in response to the August 15, 1997 amendments. The updated procedures were adopted by the TPB in May 1998 and were followed in development of this year's CLRP and TIP.

Chapter V presents the assessment of the 2010 CLRP and the FY2011-2016 TIP with respect to EPA's criteria and procedures. This chapter responds to specific sections of the conformity regulations on a point by point basis, documenting adherence of the overall conformity assessment to the specific technical, policy and procedural requirements.

Based upon this assessment, Chapter VI conveys the results of the study, that the technical analysis provides a basis for a determination of conformity of the 2010 CLRP and the FY2011-2016 TIP.

TABLE OF CONTENTS

LIST OF EXHIBITS

LIST OF APPENDICES

LIST OF REFERENCES

1. Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Funded or Approved Under Title 23 U.S.C. or the Federal Transit Act, Federal Register, November 24, 1993, with updates on August 7 and November 14, 1995 and August 15, 1997, EPA.

2. Memo from Gay MacGregor to EPA regional directors, "Conformity Guidance on Implementation of March 2, 1999 Conformity Court Decision", May 14, 1999.

3. Memo from Kenneth R. Wykle, FHWA and Gordon J. Linton, FTA, "Additional Supplemental Guidance for the Implementation of the Circuit Court Decision Affecting Transportation Conformity", June 18, 1999.

4. Transportation Planning Board Consultation Procedures With Respect to Transportation Conformity Regulations Governing TPB Plans and Programs, May 20, 1998, NCRTPB/MWCOG.

5. Federal Register Notice, Adequacy Status of Submitted State Implementation Plans for Transportation Conformity Purposes: Metropolitan Washington, DC Area - Phase I Rate of Progress Plan, August 11, 1999.

6. MWCOG Version 1 Travel Model User's Guide October 1998, MWCOG.

7. Revised State Implementation Plan (SIP) Revision, Phase I Attainment Plan, for the Washington, D.C.-MD-VA Nonattainment Area, April 16, 1999, MWCOG.

8. February 22, 1996 memo from Michael J. Clifford to the TPB Technical Committee, "Impacts of Increased Speed Limits on Mobile Emissions".

9. Air Quality Conformity Assessment, Transportation Improvements Associated with Proposed Washington Redskins Football Stadium in Prince George's County, May 15, 1996, MWCOG.

10. "Redesignation of the Metropolitan Washington Carbon Monoxide Area to Attainment and Approval of the Area's Maintenance Plan and Emissions Inventory", SIP revisions submitted to EPA by Virginia on October 4, 1995 and by the District of Columbia and Maryland on October 12, 1995.

11. Participation Plan, December 19, 2007, TPB.

12. Transportation Assessment, National Air & Space Museum Facility at Washington Dulles International Airport, February 1997, Barton-Aschman Associates, Inc.

13. Analysis of Potential Transportation Emissions Reduction Measures (TERMs) For The 2009 CLRP and FY2010-2015 TIP, June 5, 2009, TPB.

14. "1998 Air Passenger Survey", discussion materials at June 27, 2000 meeting of Aviation Technical Subcommittee.

15. Air Quality Conformity Determination of the Constrained Long Range Plan and the FY2000-2005 Transportation Improvement Program for the Washington Metropolitan Region, October 20, 1999, TPB .

16. State Implementation Plan (SIP) Revision, Phase II Attainment Plan, for the Washington DC-MD-VA Nonattainment Area, February 3, 2000, MWAQC.

17. Air Quality Conformity Assessment - Maryland Department of Transportation / District of Columbia Department of Public Works Amendments to 1999 Constrained Long Range Plan and FY2000-2005 Transportation Improvement Program, July 19, 2000, TPB.

18. Air Quality Conformity Determination of the 2000 Constrained Long Range Plan and the FY2001-2006 Transportation Improvement Program for the Washington Metropolitan Region, October 18, 2000, TPB.

19. "Heavy Duty Diesel Vehicles on Local Roads Study", May 8, 2002 technical memorandum from Robert Griffiths to the TPB.

20. Responses to a Critique of the Travel Demand and Air Emissions Models of the National Capital Region Transportation Planning Board, A Compendium of Comments, Responses, and Related Documents, June 13, 2002, TPB.

21. Governors' Initiative and Other Implemented Programs with Emissions Benefits for Conformity of the 2002 Constrained Long Range Plan (CLRP) and FY2003-2008 Transportation Improvement Program (TIP), June 28, 2002, TPB.

22. "Mobile Source Emissions Summary Results for All Forecast Years of Current Air Quality Conformity Analysis", July 18, 2001. Ron Kirby memorandum to TPB.

23. EPA memo, "Update -Attainment Mobile Budgets and 7/2 Court Decision", Robert Kramer, July 15, 2002.

24. COG/TPB Travel Forecasting Model, Version2.1/TP+, Release D, Calibration Report, TPB, November 17, 2004.

25. Air Quality Conformity Determination Of The 2002 Constrained Long Range Plan And The FY2003-2008 Transportation Improvement Program For The Washington Metropolitan Region, TPB , July 2002.

26. "Revised Guidance for Implementing the March 1999 Circuit Court Decision Affecting Transportation Conformity", FHWA/FTA, February 2002.

27. Technical Guidance on the Use of MOBILE6 for Emission Inventory Preparation, and User's Guide to MOBILE6.0, Mobile Source Emission Factor Model, US EPA, January 2002;

28. Plan To Improve Air Quality In The Washington, DC-MD-VA Region, State Implementation Plan (SIP), "Severe Area SIP", Demonstrating Rate of Progress for 2002 and 2005; Revision to 1990 Base Year Emissions; and Severe Area Attainment Demonstration, MWCOG, June 2, 2003

29. Technical Guidance on the Use of MOBILE6.2 for Emission Inventory Preparation, US EPA August, 2004 and User's Guide to MOBILE6.1 and MOBILE6.2, Mobile Source Emission Factor Model, US EPA, August, 2003.

30. "Methodology for Studying Highway Tolls Using the V2.1/TP+, C Model", December 16, 2003 technical memorandum from Ron Milone to the ICC files.

31. Air Quality Conformity Determination Of The 2004 Constrained Long Range Plan And The FY2005-2010 Transportation Improvement Program For The Washington Metropolitan Region, TPB , November 17, 2004.

32. Travel Forecasting Model, Version 2.2, Specification, Validation, and User's Guide; TPB, March 1, 2008.

33. "Round 8.0 – Based Travel Model Inputs to the Version 2.2 Travel Model", July 26, 2010 technical memorandum from Ronald Milone to DTP Technical staff.

34. Application for Developing MOBILE6 Inputs to Metropolitan Washington Council of Governments (MWCOG) Transportation Model: Draft User's Guide. E.H. Pechan & Associates, July, 2006.

35. Fine Particles ($PM_{2.5}$) Standards Air Quality Conformity Assessment; TPB, December 21, 2005.

36. "Update on Air Quality Planning Activities- Topic 1: VIN Decode Results", May 10, 2006 memorandum from Michael Clifford to the TPB

37. "$PM_{2.5}$ and PM_{10} Hot-Spot Analyses in Project-Level Transportation Conformity Determinations for the New $PM_{2.5}$ and Existing PM_{10} National Ambient Air Quality Standards" [Federal Register: March 10, 2006 (Volume 71, Number 47)]

38. Air Quality Conformity Determination Of The 2006 Constrained Long Range Plan And The FY2007-2012 Transportation Improvement Program For The Washington Metropolitan Region, TPB , October 2006.

39. Plan To Improve Air Quality In The Washington, DC-MD-VA Region, State Implementation Plan (SIP) for 8-Hour Ozone Standard Prepared for: District of Columbia Department of Environment, Maryland Department of the Environment and Virginia Department of Environmental Quality on behalf of the Metropolitan Washington Air Quality Committee, May 23, 2007.

40. Round 8.0 Cooperative Forecast totals approved for use by COG's Metropolitan Development Policy Committee. January 21, 2010.

41. Plan to Improve Air Quality in the Washington DC-MD-VA Region, State Implementation Plan (SIP) for Fine Particle ($PM_{2.5}$) Standard and 2002 Base Year Inventory for the Washington DC-MD-VA Nonattainment Area. Prepared by: Metropolitan Washington Council of Governments for the District of Columbia Department of Environment, Maryland Department of the Environment, and Virginia Department of Environmental Quality on behalf of the Metropolitan Washington Air Quality Committee, March 7, 2008.

42. Air Quality Conformity Assessment – Maryland Department of Transportation District of Columbia Department of Transportation Amendments to the 2009 Constrained Long Range Plan and the FY2010-2015 Transportation Improvement Program for the Washington Metropolitan Region, TPB , October 21, 2009.

LIST OF ACRONYMS

AWDT	Average Weekday Traffic
BMC	Baltimore Metropolitan Council
CAAA	Clean Air Act Amendments of 1990
CAC	Citizens Advisory Committee
CLRP	Constrained Long Range Plan
CMAQ	Congestion Mitigation & Air Quality
CO	Carbon Monoxide
DC DOT	District of Columbia Department of Transportation
DTP	(COG's) Department of Transportation Planning
FAMPO	Fredericksburg Area Metropolitan Planning Organization
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
G/MI	Grams Per Mile
HOV	High Occupancy Vehicle
I/M	Inspection and Maintenance
LOV	Low Occupancy Vehicle
MDOT	Maryland Department of Transportation
MPO	Metropolitan Planning Organization
MSA	Metropolitan Statistical Area
MWAQC	Metropolitan Washington Air Quality Committee
MWCOG	Metropolitan Washington Council of Governments
NOx	Nitrogen Oxides
P's & A's	Productions and Attractions
$PM_{2.5}$	Fine Particles
PNR	Park and Ride Lot
SIP	State Implementation Plan
TAD	Transportation Analysis District
TAZ	Transportation Analysis Zone
TCM	Transportation Control Measure
TERM	Transportation Emission Reduction Measure
T/D	Tons Per Day
TIP	Transportation Improvement Program
TPB	Transportation Planning Board
US DOT	United States Department of Transportation
US EPA	United States Environmental Protection Agency
V/C	Volume to Capacity Ratio
VDOT	Virginia Department of Transportation
VDRPT	Virginia Department of Rail and Public Transportation
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
WMATA	Washington Metropolitan Area Transit Authority

TPB R5-2011
November 17, 2010

NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD
777 North Capitol Street, N.E.
Washington, D.C. 20002

RESOLUTION FINDING THAT THE 2010 CONSTRAINED LONG RANGE PLAN AND THE TRANSPORTATION IMPROVEMENT PROGRAM FOR FY 2011-2016 CONFORM WITH THE REQUIREMENTS OF THE CLEAN AIR ACT AMENDMENTS OF 1990

WHEREAS, the National Capital Region Transportation Planning Board (TPB) has been designated by the Governors of Maryland and Virginia and the Mayor of the District of Columbia as the Metropolitan Planning Organization (MPO) for the Washington Metropolitan Area; and

WHEREAS, the U.S. Environmental Protection Agency (EPA), in conjunction with the U.S. Department of Transportation (DOT), under the Clean Air Act Amendments of 1990 (CAAA), issued on November 24, 1993 "Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Funded or Approved Under Title 23 U.S.C. or the Federal Transit Act," and, over the years, subsequently amended these regulations and provided additional guidance, which taken together provide the specific criteria for TPB to make a determination of conformity of its financially Constrained Long Range Transportation Plan (CLRP) and Transportation Improvement Program (TIP) with the state implementation plans for air quality attainment within the Metropolitan Washington non-attainment area; and

WHEREAS, a work program was developed to address all procedures and requirements, including public and interagency consultation, and the work program was released for public comment on April 15 and approved by the TPB at its May 19, 2010 meeting; and

WHEREAS, on May 19, 2010, the TPB approved the major projects submitted for inclusion in the air quality conformity assessment for the 2010 CLRP and FY 2011-2016 TIP; and

WHEREAS, in each year's update of the CLRP between 2000 and 2004, the TPB has explicitly accounted for the funding uncertainties affecting the Metrorail system capacity and levels of service beyond 2005 by constraining transit ridership to or through the core area to 2005 levels; and

WHEREAS, as a result of the "Metro Matters" commitments for Metro's near-term funding, the transit ridership constraint to or through the core area was applied in the 2005 through 2008 CLRP conformity analysis using 2010 ridership levels rather than 2005 levels; and

WHEREAS, in October 2008 federal legislation was enacted to authorize $150 million per year for 10 years in funding for WMATA's capital and preventive maintenance projects, and, the legislatures of Maryland, Virginia, and District of Columbia have taken steps to identify the required dedicated local matching revenues and this additional revenue was assumed to be available in the financial plan for the 2010 CLRP and the transit ridership constraint to or through the core area was applied in the 2010 CLRP conformity analysis using 2020 ridership levels for 2030 and 2040; and

WHEREAS, on October 14, 2010, the draft Air Quality Conformity Determination of the 2010 CLRP and FY 2011-2016 TIP was released for a 30-day public comment period and inter-agency review; and

WHEREAS, the analysis reported in *Air Quality Conformity Determination of the 2010 Constrained Long Range Plan and the FY 2011-2015 Transportation Improvement Program for the Washington Metropolitan Region*, dated October 14, 2010 demonstrates adherence to all mobile source emissions budgets for volatile organic compounds, nitrogen oxides, carbon monoxide and fine particle emissions (PM2.5), and demonstrates that PM2.5 emissions meet the requirement that such emissions are not greater than 2002 levels, meets all regulatory, planning and interagency consultation requirements, and therefore provides the basis for a finding of conformity of the plan and program with the requirements of the CAAA; and

WHEREAS, in the attached letter of November 10, 2010, the Metropolitan Washington Air Quality Committee (MWAQC) states that it has reviewed the *Air Quality Conformity Determination of the 2010 Constrained Long Range Plan and the FY 2011-2016 Transportation Improvement Program for the Washington Metropolitan Region*, and that the analysis demonstrates that all required emissions tests are being met.

NOW, THEREFORE, BE IT RESOLVED THAT THE NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD determines that the 2010 Constrained Long Range Plan and the Transportation Improvement Program for FY 2011-2016 conform to all requirements of the Clean Air Act Amendments of 1990.

Adopted by the Transportation Planning Board at its regular meeting on November 17, 2010

I. INTRODUCTION

The Washington region is currently designated nonattainment for the federal health standards for ozone and fine particles ($PM_{2.5}$). Clean air legislation in 1977 provided that a metropolitan planning organization may not approve any transportation project that did not conform to the approved state implementation plan (SIP) for the attainment of clean air standards. This established the responsibility on the part of COG/TPB to review transportation plans and programs and affirm that they conformed to air quality state implementation plans for the region.

This requirement means that TPB plans, programs and projects must be consistent with clean air objectives. In the 1990 Clean Air Act Amendments conformity to an implementation plan is defined as conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards. In addition, Federal activities may not cause or contribute to new violations of air quality standards, exacerbate existing violations, or interfere with timely attainment or required interim emission reductions towards attainment.

II. CONFORMITY ASSESSMENT - REQUIREMENTS

A. BACKGROUND

On November 15, 1990 President Bush signed into law the Clean Air Act Amendments of 1990. This legislation specified dates by which clean air standards must be attained and required preparation of a plan identifying the measures to be employed and an implementation schedule for attainment. In the Washington region the ozone standard was to have been met by November 15, 1999.

The clean air act legislation also specified that revised conformity procedures be brought into use, including the "interim" period before revised air quality attainment plans were prepared. According to the law, conformity would be demonstrated if:

> "(A) the transportation plans and programs - (i) are consistent with the most recent estimates of mobile source emissions; (ii) provide for the expeditious implementation of transportation control measures in the applicable implementation plan; and (iii) with respect to ozone and carbon monoxide nonattainment areas, contribute to annual emissions reductions..."; and "(B) the transportation projects - (i) come from a conforming transportation plan and program..."; and "(ii) in carbon monoxide nonattainment areas, eliminate or

reduce the severity and number of violations of the carbon monoxide standards in the area substantially affected by the project". In June 1991 US EPA and US DOT jointly issued the report, Guidance for Determining Conformity of Transportation Plans, Programs and Projects With Clean Air Act Implementation Plans During Phase I of the Interim Period, to provide guidance regarding the criteria and procedures to be followed by metropolitan planning organizations in making conformity determinations. The guidance indicated that "...conformity must now be based on detailed analysis of the potential impacts of transportation plans, programs, and projects on air quality", and provided procedures and definitions for conducting the analysis.

In Summer 1991, using the procedures contained in the guidance document, COG staff performed the first such "systems level" analysis, evaluating the FY92-96 Transportation Improvement Plan (TIP) and the regional long range plan. This analysis provided a general framework for subsequent TIP conformity evaluations.

For the assessment of the ozone season emissions reduction requirement for transportation plans and programs, the guidance document identified a comparison of emissions for future "build" versus "no-build" conditions. The resulting work tasks involved network simulations of regional travel demands and estimates of emissions for alternatives in three forecast years: 1996 - the end of the TIP period; 1999 - the attainment year in the region for ozone; and 2010 - the target year for the region's long range plan. In each case fewer volatile organic compound (VOC) emissions resulted with the "build" condition. Finding that the analysis provided a basis for determining conformity, on September 18, 1991 the TPB adopted the plan and program as conforming elements in support of the Clean Air Act Amendments of 1990 and the attainment of air quality standards for the Washington region.

Federal agencies provided additional guidance for subsequent analyses of the FY93-98 and FY94-99 TIPs. In an October 1991 joint release from DOT and EPA, the June 1991 guidance report was reaffirmed as the basis for conformity assessments. In July, 1992 Mr. Kevin Heanue, Director of FHWA's Office of Environment and Planning, sent a memo to Regional Administrators, which contained some additional guidance. The memo specified that in addition to the "build versus no-build" criterion, reductions from a 1990 base would also have to be demonstrated in order for a conformity finding to be made. Accordingly, staff incorporated this guidance into all subsequent evaluations of TPB plans and programs.

B. CONFORMITY REGULATIONS

Spring - Fall 1994 Experience

The November 24, 1993 *Federal Register* contained EPA's final rule (subsequently amended) on transportation conformity (Reference 1). This action established regulations governing procedures which FHWA, FTA and MPOs must carry out and specific requirements to which transportation plans, programs and projects must adhere. The regulations are comprehensive, covering definitions and specific technical, procedural, consultation and policy aspects of the analyses. Criteria and procedures to be employed are related to the area's standing with EPA in terms of its status in meeting state implementation plan requirements. Different tests apply depending on the time period and whether SIP revisions have been filed with EPA, which establish emissions budgets leading towards reasonable further progress and attainment of air quality standards.

The development of the FY95-2000 TIP and associated CLRP updates represented COG/TPB's first experience under the new regulations. That work established a basis of new procedures for meeting the new requirements, technical and consultative. Specifically, that year's conformity analysis, adopted by the TPB on September 21, 1994, met all of the technical requirements under the federal regulations.

On the consultation side, staff went through a lengthy process involving EPA and state and local air quality agencies to develop and execute transportation and air quality conformity consultation procedures. These procedures have been organized into a separate report, Transportation Planning Board Consultation Procedures with Respect to Transportation Conformity Regulations Governing TPB Plans and Programs (Reference 4). (These procedures were also adopted by the Board initially on September 21, 1994 and subsequently updated in response to EPA's August 15, 1997 amendments and formally adopted by the TPB on May 20, 1998.) Similarly, the consultation procedures executed as part of that conformity analysis also met all requirements under the federal conformity regulations.

Subsequent Experience

(1) Revisions to Technical Process

The regulations also established further technical requirements for conducting the travel demand forecasting and emissions analyses to be used to support conformity determinations. The applicability of these requirements would be phased in as of

January 1, 1995 for the Washington region, as an area in the "serious" ozone nonattainment category.

Staff undertook to address these requirements shortly after the regulations were published in November 1993. This involved significant transportation research activities, the most critical of which involved the development of a modeling capability to "recycle" congested system performance characteristics from the traffic assignment phase back to the trip distribution phase. Following months of staff work, under the policy and technical direction of the Travel Forecasting Subcommittee of the TPB Technical Committee, new procedures were adopted and used for the first time in production in the conformity analysis of the FY95-2000 TIP referenced above. These procedures have been incorporated into COG/TPB's regional travel demand forecasting processes and have also been used in all subsequent conformity assessments. The latest version of these procedures (referred to as the Version 2.2 model) is documented in the COG/TPB Travel Forecasting Model, Version 2.2, Specification, Validation, and User's Guide , (Reference 32) and meets all conformity regulations phased into applicability in the Washington region as of January 1, 1995.

(2) Revisions to Assessment Criteria

EPA's August 15, 1997 amendments to its conformity regulations enabled the transition to emissions budget tests, in lieu of the "action - baseline" emissions comparisons, following: (1) submission to EPA of a state implementation plan to establish appropriate mobile source emissions budgets for VOC and NOx and (2) review of the budgets and affirmative action by EPA to determine that the budgets were adequate for conformity purposes. These requirements were met initially with the October 23, 1997 submission by the District of Columbia, Maryland and Virginia air management agencies of MWAQC's Phase I Attainment Plan (Reference 7) to EPA and with EPA's subsequent review and adequacy determination of the budgets. These actions moved the Washington area away from "interim period" and "transitional period" conformity classifications and into a "control strategy" status. This enabled the air quality conformity assessment of the FY99-04 TIP to proceed through adherence to an emissions budget for each pollutant, rather than through use of the previous "action-baseline" emissions comparisons. While such budget adherence criteria were also utilized in that assessment, some significant updates in EPA's emissions budget "adequacy review procedures" also occurred, as described below.

(3) Impacts of March 1999 Court Decision

A March 2, 1999 court decision against EPA remanded several sections of the August 1997 conformity regulations to EPA for revision. Following this decision, EPA and

FHWA/FTA issued guidance (References 2 and 3) for use in the interim period until new regulations could be promulgated. One element of the guidance affected subsequent years' conformity assessments: the establishment of an adequacy review period of up to 90 days for mobile source emissions budgets contained in state air quality implementation plans submitted to EPA. This requirement affected EPA's review of MWAQC's Phase I Attainment Plan for ozone, which was submitted to EPA in May 1999 by the District of Columbia, Maryland and Virginia air management agencies. Following EPA's approval as being adequate for conformity purposes, new VOC and NOx motor vehicle emissions budgets were used in the conformity assessment of the 1999 CLRP and FY2000-2005 TIP (Reference 15). Similarly, MWAQC's Phase II Attainment Plan (Reference 16) in Spring 2000 led to updated emissions budgets, which were used in air quality conformity analyses leading to amendments to the 1999 CLRP and FY2000-2005 TIP (Reference 17), as well as the 2000 CLRP and FY2001-2006 TIP (Reference 18).

(4) Impacts of July 2002 Court Decision

On July 2, 2002 the US Court of Appeals for the District of Columbia vacated the EPA's approval of the State Implementation Plans (SIPs) for the Washington region and recommended them to EPA for further consideration. The mobile emissions attainment budgets in those SIPs were also vacated. In a communication of July 15, 2002, (Reference 23) EPA stated that the mobile budgets then in place for the Washington region were the Rate of Progress (ROP) budgets. EPA also stated its intention to make the attainment budgets effective through a new adequacy finding, and recommended that the TPB demonstrate conformity to both the ROP budgets and the attainment budgets. As documented in Chapter 3 of that report (Reference 25), emissions for all milestone years associated with the 2002 CLRP and FY2003-2008 TIP adhered to both sets of budgets requirements.

(5) 'Severe Area SIP' with MOBILE6 Budgets

In January 2003 EPA reclassified the Washington, D.C., Maryland, Virginia ozone nonattainment area from 'serious' to 'severe'. In anticipation of this, MWAQC was in the process of executing a work program to meet Clean Air Act requirements for severe areas, to attain the health standards by November 15, 2005. Such requirements included: assessment of rate of progress towards attainment; analysis of reasonably available control measures; selection of and commitment to control strategies; demonstration of attainment; and contingency measures.

In January 2002 EPA released an updated version of its mobile emissions factor model, MOBILE6 (Reference 27), or more recently MOBILE6.2 (Reference 29). Since this new

model version offered significant improvements to the estimation of emissions rates, its use was incorporated into the analysis to develop the 'severe area SIP'. Inputs to the MOBILE6 model were developed through the formation of a joint TPB and MWAQC technical group, called the Mobile6 Task Force, and with consultant assistant assistance to COG. Mobile source emissions inventories developed under this work program, for 1990, for rate of progress years, and for the 2005 attainment year, provided the basis for the mobile source component of that plan (referred to in this report as the 'severe area SIP' and included as Reference 28).

Following the completion of the planning and regulatory requirements, MWAQC adopted this plan on August 13, 2003 and the District of Columbia, Maryland and Virginia air management agencies submitted it to EPA. Of critical importance to this transportation conformity assessment is the specification in Chapter 9 of that plan of mobile source emissions budgets. The SIP sets VOC and NOx emissions budgets of 98.1 and 237.4 tons per day, respectively. On December 16, 2003 these budgets were certified by the EPA as being 'adequate' for conformity. The 2003 CLRP and FY2004-2009 TIP were subsequently found to be in conformity through a demonstration of adherence to the budgets.

(6) FY 2005 Conformity Assessments

A. Final 1- Hour Ozone Assessment

In November 2004 the TPB approved the air quality conformity assessment of the 2004 CLRP and FY2005 – 2010 TIP. This analysis effort, documented in detail in Reference 31, contained significant refinements to both the travel demand forecasting and air quality analysis processes, implemented following an earlier review performed by the Transportation Research Board. As EPA also finalized nonattainment designations and conformity requirements for the 8-hour standards during this time period, revoking the 1-hour standard as of June 15, 2005, this represented the region's final 1-hour ozone conformity assessment.

B. Transition to 8-Hour Ozone Standard

On April 15, 2004 EPA designated the Washington, DC - MD – VA region as 'moderate' nonattainment for the 8-hour ozone standard. The geographic coverage for the 8-hour area is smaller than the long-standing 1-hour area, since Stafford County, VA was removed. Publication on July 1, 2004 of the final rule for transportation conformity provided conformity assessment criteria and specified a one year grace period for demonstrating conformity to the new standard. Staff then prepared an "8-Hour Ozone Standard Conformity Assessment Scope of Work" as a supplement to the 1-hour ozone

assessment ongoing at that time. Included among EPA's conformity assessment criteria was use of existing 1-hour emissions budgets, since this work preceded SIP developmental work and creation of mobile source emissions budgets relevant to the 8-hour standard. The TPB approved this work scope in October 2004 and staff then executed the work tasks, which also included analyzing 2010 as the attainment year for the 8-hour ozone standard. Following public comment and interagency consultation, the Board adopted the final conformity assessment report in January 2004. FHWA and FTA approved both the 1-hour and 8-hour ozone assessments in June 2005.

In 2007 MWAQC developed an 8-hour ozone SIP (Reference 39) to reduce ozone-causing emissions of VOCs and NOx by at least 15 percent between 2002 and 2008, and to reduce all ozone precursor emissions to a level sufficient to attain the federal 8-hour standard by June 15, 2010. However, the region would be required to demonstrate attainment of the standard by the end of the last ozone season before that date, which is September 2009. Therefore, the actual date for planning purposes is 2009.

As part of the 8-hour ozone SIP, MWAQC developed mobile budgets for VOC and NOx. As required by federal guidance, MWAQC established 2008 budgets to show "reasonable further progress" in addition to the 2009 and 2010 attainment year budgets. The 8-hour ozone SIP sets the following mobile budgets: 2008 VOC = 70.8 tons/day, 2008 NOX = 159.8 tons/day, 2009 VOC = 66.5 tons/day, 2009 NOX = 146.1 tons/day, 2010 VOC = 66.5 tons/day, and 2010 NOX 144.3 tons/day.

(7) Introduction of Fine Particles ($PM_{2.5}$) Standards

On December 17, 2004 the Environmental Protection Agency (EPA) designated 224 counties, as well as the District of Columbia, that exceeded the health-based standards for fine particles ($PM_{2.5}$) as nonattainment areas. $PM_{2.5}$ standards refer to particulate matter less than or equal to 2.5 micrometers in diameter. The Washington, DC-MD-VA area (consisting of the Washington metropolitan statistical area, excluding Stafford County, Virginia, and Calvert County, Maryland) was designated nonattainment for $PM_{2.5}$ (see Exhibit 2 for area), and is required to attain clean air as soon as possible but no later than 2010.

As published in the January 5, 2005 Federal Register, these $PM_{2.5}$ nonattainment designations became effective on April 5, 2005. The new regulations affected transportation conformity planning requirements immediately: areas were given a 1 year grace period starting April 5, 2005 in which to demonstrate conformity of transportation plans and programs to the new standards. TPB staff conducted a conformity assessment for $PM_{2.5}$ (Reference 35) in the Fall of 2005, which was adopted by the TPB on December 21, 2005. The assessment received federal approval prior to

the April, 2006 deadline.

By April 5, 2008 nonattainment areas were required to submit to EPA a SIP to define the expected methods for reducing the fine particulate matter level in the air and emissions of $PM_{2.5}$ precursors. MWAQC adopted the Plan (Reference 41) on March 7, 2008 and submitted it to EPA prior to the April 5, 2008 deadline. As with other SIPs, MWAQC developed motor vehicle emissions budgets to be used as benchmarks as part of the conformity determination of the CLRP and TIP. The 2009 attainment year budgets are 1,105.4 tons/year and 52,052.9 tons/year for direct $PM_{2.5}$ and precursor NOx, respectively. The 2010 contingency budget, which is only set for precursor NOx, is 51,395.9 tons/year.

C. REPORT ORGANIZATION

Chapter III of this report documents the technical methods utilized and results obtained in analyzing the 2010 CLRP and the FY2011-2016 TIP. Chapter IV documents the consultation procedures followed in the conformity assessment.

Chapter V presents the conformity assessment of the plan and program, responding to specific sections of the conformity regulations on a point by point basis and documenting adherence of the overall conformity work effort to the specific technical, policy and procedural requirements. Chapter VI presents findings of the analysis.

III. TECHNICAL METHODS

A. APPROACH

In developing the work program for this year's conformity assessment, contained as Appendix A of this report, staff identified latest planning assumptions and modeling techniques, and considered requirements of the conformity regulations, as well as requirements associated with, and comments received upon, past conformity analyses. Mobile emissions budgets set in both the 8-hour ozone SIP and the $PM_{2.5}$ SIP have been submitted to EPA for approval, but have not yet been found adequate. Since it was possible that the budgets could be found adequate before the TPB was scheduled to act on the conformity assessment this year, it was necessary to assess the pollutant levels for each milestone year relative to the new budgets, as well as a comparison to the 2002 base.

Tasks included: preparation forecast years representing 2011, 2020, 2030, and 2040 for ozone season, $PM_{2.5}$ precursors, and wintertime CO analysis; use of current land activity forecasts for the region (Round 8.0 Cooperative Forecasts- Reference 40); use of the refined Version 2.2 (Reference 32) travel demand modeling process which incorporates updated travel characteristics based upon travel survey and Highway Capacity Manual information; and use of a refined Mobile Emissions Post-Processor (Appendix E using latest travel demand and mobile emissions planning assumptions), and Mobile6.2. Staff conducted a parallel technical process to identify and analyze Transportation Emission Reduction Measures (TERMs) for ozone season pollutants, as well as for $PM_{2.5}$ pollutants, under the oversight of the TPB Technical Committee and its Travel Management Subcommittee. This work is documented in Reference 13.

Staff drafted a work program for the analysis and presented it to regional technical and policy committees starting in May 2010. Staff also coordinated the draft work program with EPA, FHWA, FTA and the state and local air management agencies through the TPB consultation procedures. This scope was adopted by the TPB on May 19th 2010. Staff execution of the work activities is described in the following overview.

B. TECHNICAL WORK ACTIVITIES

Technical work activities for the 2010 CLRP and FY2011-2016 TIP included the preparation of: daily ozone season volatile organic compound (VOC) and nitrogen oxide (NOx) emissions; yearly direct $PM_{2.5}$ and $PM_{2.5}$ precursor NOx emissions; and daily wintertime carbon monoxide (CO) emissions inventories for specified years associated with the plan and program (base year 2002 and forecast years 2011, 2020, 2030, and 2040). These inventories address a primary conformity assessment criterion to demonstrate that the plan and program adhere to established mobile source emissions budgets for ozone season, $PM_{2.5}$ and wintertime CO pollutants. The inventories also allow the baseline (2002) vs. action (forecast year) comparison required for the $PM_{2.5}$ pollutants until the mobile budgets are found adequate.

The mobile source emissions estimation process utilized in this analysis involved the separate estimation of travel, vehicle and additional components. This structure is shown in Exhibit 1. While lengthy modeling procedures are involved to compute various travel components (number of trips, vehicle miles of travel, system performance, etc.) and rates of emissions (cold start emissions, tailpipe emissions, etc.) for each simulation, the calculation of mobile source emissions ultimately becomes a

EXHIBIT 1

Analysis Structure for On-Road Mobile Source Emissions

	Transportation Component	X	Emission Factor	=	Emissions
A. Network	1. Trip origins		Cold start rate (g/trip)		Startup
	2. VMT		Stabilized rate (g/mile)		Running
	3. Trip destinations		Hot soak (g/trip)		Hot soak
B. Off-Network	4. Number of vehicles (gasoline fueled)		Diurnal rate (g/day)		Diurnal evaporative
	5. Number of vehicles (gasoline fueled)		Resting loss (g/day)		Resting loss
	6. Auto access to transit		Travel components (above)		Startup, running, hot soak
	7. School & transit bus VMT		(HDDV) Stabilized rate (g/mile)		Running
	8. Local Road VMT		Stabilized Rate (g/mile)		Running

simple multiplication of a travel component by a rate of emissions associated with that component. As seen in the exhibit, the number of trip origins multiplied by a (gram/trip) cold start emissions rate yields an estimate of startup emissions. Vehicle miles of travel (VMT) multiplied by a (gram/mile) rate yields running emissions, and so on.

Exhibit 1 also illustrates the comprehensive scope of emissions contained in the mobile source inventory, addressing elements not directly available from current travel demand modeling procedures. This includes emissions associated with the number of vehicles in the region, "auto access" emissions and bus emissions. Exhibit 2 graphically defines the geographical analysis areas of the travel demand model (modeled area), the 1-hour ozone nonattainment area (1983 Metropolitan Statistical Area), the 8-hour ozone nonattainment area, the $PM_{2.5}$ nonattainment area, and the wintertime CO nonattainment area.

Emissions impacts associated with Congestion Mitigation and Air Quality (CMAQ) projects were also analyzed, in an off-line basis primarily by the sponsoring agencies, as a requirement associated with their use. These projects, and other similar projects funded by categories other than CMAQ, are also specifically considered in the analysis for the emissions budget and emissions reductions tests. Exhibit 3 presents an overview of the network analysis work activities and shows their interrelationship. This schematic illustrates the major operations only. It is useful, however, in conveying an overview of the major steps of the emissions calculation process from a data processing vantage. The "post-processor" is the emissions calculation software in use at COG for conformity analyses and SIP planning. Spreadsheets 1 - 3 address calculations required in assessing vehicle, auto access, school bus, and transit bus emissions, respectively.

An overview of the major components relating to traditional COG/TPB systems level analyses is presented below. The discussion of the process is organized into the three main functional areas of: Travel Forecasts, Emission Rates, and Emissions Calculations.

EXHIBIT 2
Washington,D.C.- Maryland - Virginia
Planning Areas

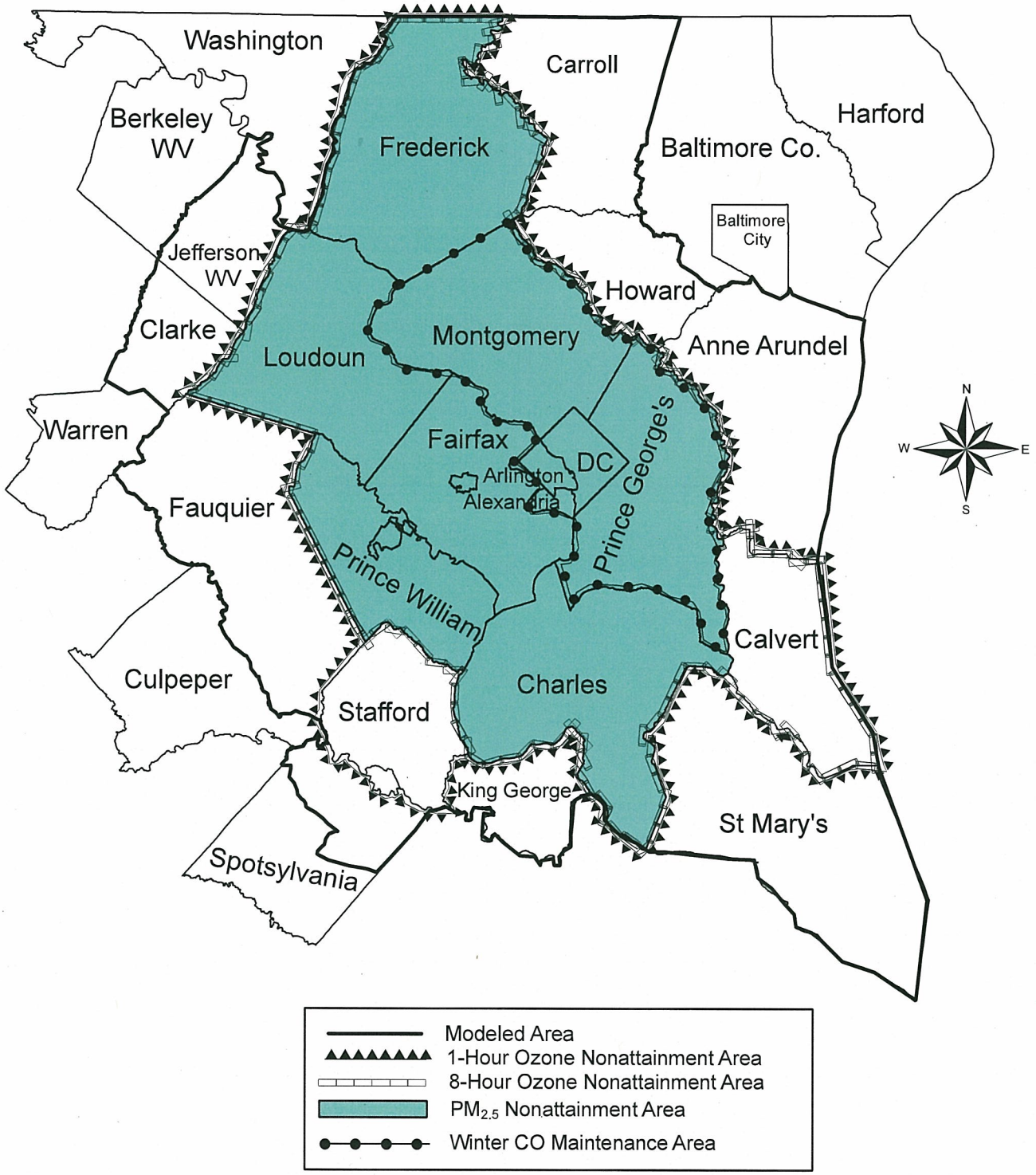
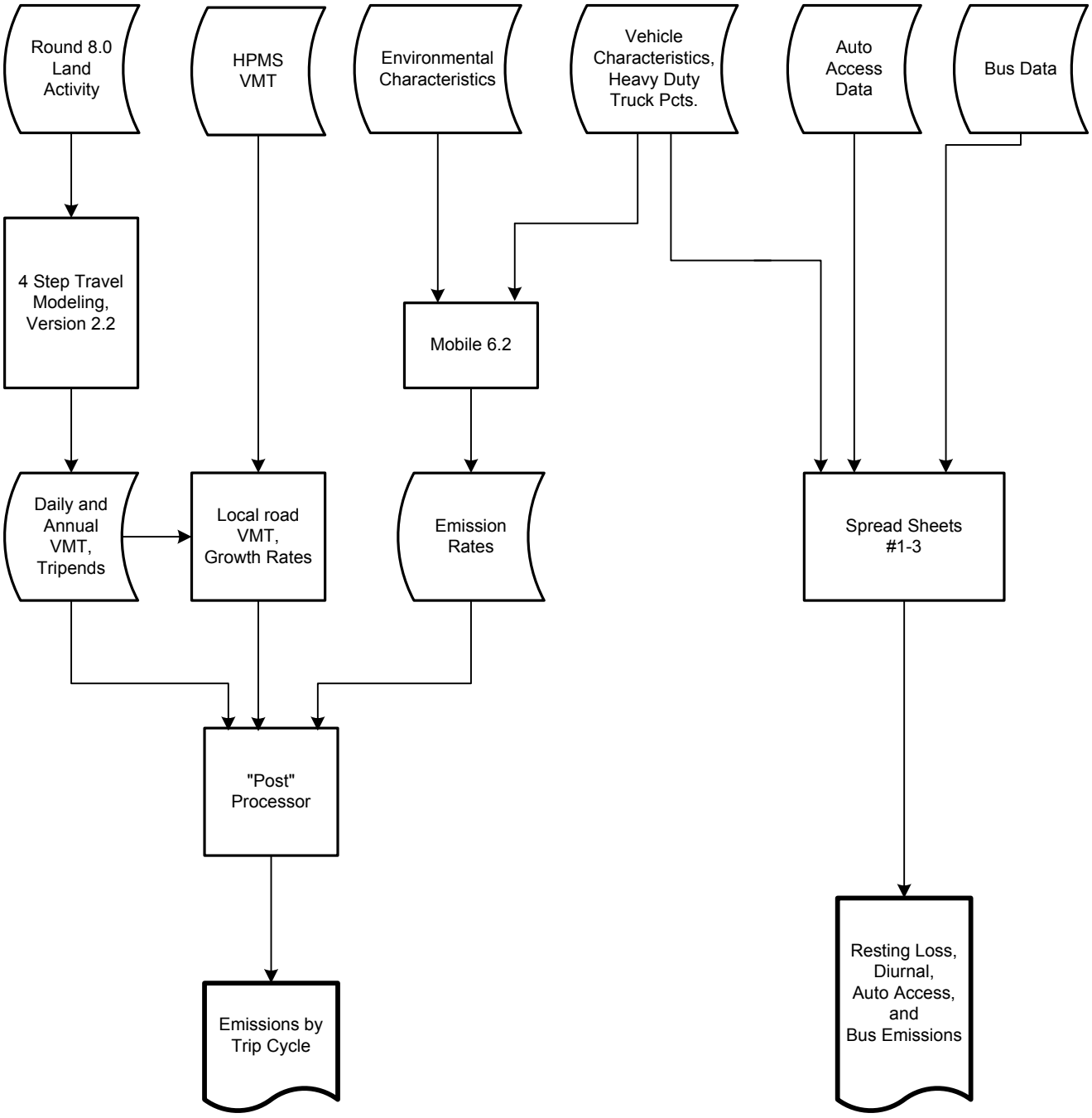


EXHIBIT 3

ON-ROAD MOBILE SOURCE EMISSIONS CALCULATIONS



C11EXH3.VSD

C. TRAVEL FORECASTS

As described above, the preparation of travel forecasts for each of the conformity alternatives was carried out using the Version 2.2 modeling process. As part of the technical methods originally employed in the 1999 CLRP / FY2000-2005 TIP amendments approved in July 2000, transit capacity constraint procedures, constraining trips to and through the regional core at 2020 levels, were applied to better relate transit forecast levels with transit carrying ability. These procedures are documented in Reference 17.

As in recent years' analyses, in addition to existing toll facilities the 2010 CLRP and the FY2011-2016 TIP includes the ICC in Maryland, and portions of the Virginia beltway and Shirley highway as managed facilities, with time-of-day tolls used to ensure that a high level of service is maintained throughout the day. References 30 and 32 document these procedures.

Ozone season and wintertime CO pollutants are reported for an average weekday (tons per day). However $PM_{2.5}$ pollutants are reported using annual totals, which also requires the application of seasonal travel adjustment factors. Since seasonal travel totals have to include weekend travel as well as weekday travel, it was necessary to prepare adjustment factors to represent ADT occurring in each season of the year. The lower table in Exhibit 10 presents the seasonal adjustment factor necessary to develop ADT VMT for each season.

Network Development

Work on this task began in last winter with the request for project inputs to the 2010 CLRP and the FY2012-2016 TIP. All project submissions were reviewed and organized by DTP staff into transportation networks for appropriate forecast years, according to the project's completion date as estimated by the programming agency. The TPB approved the final project inputs at its May meeting.

Summaries of key assumptions for each forecast year are contained as Exhibits 4 - 6. Exhibit 4 shows major transit elements. Exhibit 5 shows coded HOV & HOT improvements. Exhibit 6 presents mileage summaries for the highway system, according to LOV and HOV/HOT lane miles, and for the rail transit system.

These projects, summarized by state, agency, project characteristics and completion date are contained as Appendix B to this report. The list contains transit, highway, and HOV/HOT projects. Each project submission was reviewed and, where appropriate,

EXHIBIT 4

MAJOR TRANSIT IMPROVEMENTS FROM 2002 BASE

	SERVICE	LIMIT
2011:		
	MARC	Frederick to Pt. of Rocks
	Metrorail	Addison Road to Largo
	Metrorail	NY Avenue Station
	Metrorail	Revised Operating Plan
	MetroRail / Marc	Silver Spring Intermodal Transit Facility/Phase II
	Busway	Crystal City/Potomac Yards Busway (Glebe Road Ext. to Crystal City Metro)
	Bus	Georgia Avenue Rapid Bus (Eastern Ave./Silver Spring Metro Station to Archives Navy Memorial Metro Station)
	Bus	Pennsylvania Avenue Rapid Bus (Archives Navy Memorial Metro Station to Naylor Rd Metro Station)
2020:		
		SAME AS 2011, PLUS
	Metrorail	Revised Operating Plan
	Metrorail	Dulles Corridor (East Falls Church to VA 772)
	Rail	Purple Line Transitway (Bethesda to New Carrollton)
	Corridor Cities Transitway	Shady Grove to Comsat
	Streetcar	Anacostia Streetcar Phase I (Firth Sterling/S. Capitol St. to Howard Rd/MLK Jr. Ave.)
	Streetcar	Anacostia Streetcar Phase II (Howard Rd/MLK Jr. Ave. SE to Good Hope Rd/MLK Jr. Ave. SE)
	Streetcar	H St. / Benning Rd Streetcar (Union Station to 45th Street/Benning Road Metro)

EXHIBIT 4

MAJOR TRANSIT IMPROVEMENTS FROM 2002 BASE

	SERVICE	LIMIT
2020:		
	Streetcar	Columbia Pike (Skyline Center to Pentagon City)
	Corridor Cities Transitway	Shady Grove to Comsat
	VRE	Cherry Hill Commuter Rail Station
	VRE	Manassas & Fredericksburg lines Service Improvements
	Bus	ICC Corridor Bus Improvements
	Bus	K - St. Transitway (Mt. Vernon Sq. to Washington Circle)
	Busway	Potomac Yard Transit Bus Lanes (Four Mile Run to Braddock Road)
	Bus	New and Modified Service for Beltway HOT lanes-2020 level
	Bus	New and Modified Service for I-95/I-395 /HOT lanes-2020 level
2030		
		SAME AS 2020, PLUS
	Metrorail	Potomac Yards Station
	Bus	New and Modified Service for Beltway HOT lanes-2030 level
	Bus	New and Modified Service for I-95/I-395 /HOT lanes-2030 level

EXHIBIT 5

CODED HOV/HOT IMPROVEMENTS FROM 2002 BASE:

	FACILITY	IMPROVEMENT	LIMITS	DEFINITION
2011:				
	US 50	Construct	E. of US 301 / MD 3 to E. of I-95/I-495	2+
	I-66	Widen	VA 234 (Prince Wm. Parkway) to VA 234 Business (Sudley Road)	2+
	I-95 Wilson Bridge	Construct	US 1 (VA) to MD 210	2+
	I-66	Widen	US 29 (Gainesville) to VA 234 (Prince William Parkway)	2+
2020:				
			SAME AS 2010, PLUS	
	I-66	Widen	US 15 to US 29 (Gainesville)	3+
	I-95/I-395	Widen/Construct	Eads St to VA 610 in Stafford Co. (HOT lanes)	3+
	I-495	Construct	1mi.east of I-395/I-95 to S. of George Washington Parkway (HOT)	3+
	Fran./Sprfld. Pkwy.	Construct	Ffx. County Pkwy. to Frontier Drive	3+
2030:				
			SAME AS 2020, PLUS	
	I-270	Const./Re-sign	Shady Grove Metro to Biggs Ford Road	3+
	I-495	Construct	American Legion Bridge to S. of George Washington Parkway (HOT)	3+
	Fran./Sprfld. Pkwy.	Upgrade	VA 638 (Rolling Rd.) to VA 617 (Backlick Rd.)	3+
2040:				
			SAME AS 2030, PLUS	
	Fairfax Co. Pkwy	Construct	VA 267 (Dulles Toll Rd) to I-66	3+

NOTE: All HOV facilites assumed HOV 3+ by 2020

EXHIBIT 6
RAIL AND ROAD MILES

(modeled area)

	LOV LANE MILES TOTAL	HOV/HOT LANE MILES TOTAL	METRORAIL MILES TOTAL	MD/DC* NON-METRO RAIL MILES TOTAL	VA** NON-METRO RAIL MILES TOTAL
2002	19,203	187	103	116	95
2011	19,920	221	106	131	95
2020	21,294	323	131	169	100
2030	21,788	362	131	169	100
2040	21,891	378	131	169	100

* Includes MARC, Purple Line Transitway, and Corridor Cities Transitway in Maryland, and Anacostia, H St., & Benning Rd. Street Cars in the District of Columbia

** Includes VRE and Arlington Streetcar (Columbia Pike)

coded into gravity model, modal choice and assignment networks. In many cases the project inputs could not be coded into a regional network since such projects did not involve changes in capacity (e.g., transit operating assistance, highway rehabilitation, bridge reconstruction) or were too small to show up at the regional level (e.g., intersection improvements, improvements to a facility which is not contained in the regional networks).

The COG modeled area includes counties outside the MSA to enable better simulation results within the MSA. Project inputs from these outer counties are provided by their respective MPOs, state DOTs, or county DOTs, and are coded, when appropriate, into the highway and transit networks. While travel demand estimates include all counties in the modeled area, emissions estimates are only tabulated for the defined nonattainment area for each pollutant. As stated above, the modeled area, and the nonattainment areas for each pollutant analyzed, are shown in Exhibit 2.

Transportation/Land Use Interaction

In January 1994 a major milestone in the preparation of updated land activity forecasts for the Washington metropolitan area was achieved with the adoption by the COG Board of Round 5 Cooperative Forecasts. As was done with previous rounds, the Round 5 results contained control totals of households, population and jobs at the jurisdictional level, in five year increments through time to a horizon year of 2020. In order to assess the interaction between land activity and transportation system performance, the forecasts were adopted in draft form and work tasks were executed to assess the transportation system impacts of the new forecasts. Following the estimation of travel demands associated with the draft forecasts, members of the Planning Directors Committee and their Cooperative Forecast and Data Subcommittee revisited the draft Round 5.0 forecasts. Following their work of making updates where appropriate, a new round of forecasts, called Round 5.1, was prepared and adopted by the COG Board in May 1994. Similar processes involving Rounds 5 through 7.2a updates were executed for the analysis of subsequent plans and programs. On January 21, 2010 COG's Metropolitan Development Policy Committee released Round 8.0 forecasts for use in conformity testing of the proposed amendments to the 2010 CLRP and the FY2011-2016 TIP. Because the modeled area extends beyond the COG cooperative forecasting area, there is coordination with the surrounding jurisdictions to include the most recently approved land activity forecasts for the outer areas. For example, in this year's analysis, Baltimore Metropolitan Council's (BMC's) new forecasts, Round 7-B, were used.

The Round 8.0 Cooperative Forecasts are based on new national and regional econometric forecasts. When compared to the previous Round 7.2A Forecasts, the Round 8.0 Forecasts have fewer jobs and households in all forecast years. Job forecasts are 1.7 to 2.4 percent lower regionally in Round 8.0 than in Round 7.2A. Household forecasts are 1.3 to 2.0 percent lower regionally in Round 8.0 than in Round 7.2A. Decreases for some specific jurisdictions are dramatically higher. Even with this change, however, the projected regional growth from 2005 to 2040 includes a 47 percent increase in jobs and a 43 percent increase in households. Exhibit 7 presents Round 8.0 household data for each of the years in the conformity assessment. Exhibit 8 presents similar data for the employment assumptions. The employment data reflect census adjustments (see Reference 33).

Trip Table Development

After coding the networks, staff proceeded with the trip generation and trip distribution steps within the travel forecasting process. The travel modeling process utilized in this work represents a trip generation and distribution model set based upon results obtained through analysis of the 1994 Household Travel Survey in model calibration, and subsequent model update and validation for year 2000 using U.S. Census Journey to Work data. Separate person trip tables were prepared for home based work and nonwork purposes (for input to the mode choice modeling process) and for all other travel, i.e., taxi, visitor/tourist, school and through trips. The work and nonwork person trip tables were input to the mode choice process, and the output vehicle trip tables from that process were subsequently merged with the other trip purposes for each forecast year and used in traffic assignment. Capacity restrained speeds which are output from the traffic assignment process were then fed back into trip distribution and iterations of the entire process occur until equilibrium travel time conditions are achieved throughout the modeling process. Summary mode choice results are shown in Exhibit 9. Summary results from the last iteration of the process, for all trip purposes, are shown in the upper table of Exhibit 10. This table shows vehicle trips in the region increasing by 48%, from 19.5 million in 2002 to 28.8 million in the year 2040. As mentioned above, the lower table in Exhibit 10 presents the seasonal adjustment factor necessary to convert AAWDT to ADT for each season, for use in emissions calculations.

EXHIBIT 7

HOUSEHOLD DATA

MSA:	2002	2011	2020	2030	2040	2040/2002
D.C.	250354	269615	296765	317236	338980	1.35
MONTGOMERY	334301	365175	399682	439791	464802	1.39
PR.GEORGES	294712	307231	329385	347016	358310	1.22
ARLINGTON	89027	101996	114382	121341	124207	1.40
ALEXANDRIA	63670	67007	73678	82884	90555	1.42
FAIRFAX	373414	403885	442273	479839	502041	1.34
LOUDOUN	70935	104404	127412	150212	158303	2.23
PR. WILLIAM	120194	156444	188801	214454	231495	1.93
FREDERICK	73833	89351	104140	123126	147529	2.00
CHARLES	43981	52264	64300	75848	85902	1.95
STAFFORD	30404	45109	59037	72712	86205	2.84
CALVERT	27229	32498	36028	38348	40301	1.48
SUBTOTAL	1,772,054	1,994,979	2,235,883	2,462,807	2,628,630	1.48
ADDITIONAL COUNTIES:						
HOWARD	94673	110530	125045	132996	135065	1.43
ANNE ARUNDEL	184180	204032	217782	229368	234335	1.27
CARROLL	55263	62404	69642	76145	81453	1.47
FREDERICKSBURG (VA)	8191	10525	12462	13971	15469	1.89
JEFFERSON	17016	20980	25957	33075	41527	2.44
N. SPOTSYLVANIA	25357	37781	48536	58796	68631	2.71
FAUQUIER	21448	27693	35730	47502	63154	2.94
CLARKE	5182	6140	6722	7487	8308	1.60
K. GEORGE	6329	9101	11411	14030	16659	2.63
ST. MARY'S	32406	39985	49352	58143	66509	2.05
SUBTOTAL	450,045	529,171	602,639	671,513	731,110	1.62
TOTAL	2,222,099	2,524,150	2,838,522	3,134,320	3,359,740	1.51

SOURCE:
MWCOG Round 8.0 Cooperative Forecasts
BMC Round 7-B Cooperative Forecasts
GWRC/FAMPO Regional Demographic Control Forecasts for 2035 CLRP, June 2008
Tri-County Council for Southern Maryland data for Calvert, Charles and St. Mary's

EXHIBIT 8

EMPLOYMENT DATA

MSA:	2002	2011	2020	2030	2040	2040/2002
D.C.	746265	793350	868257	923988	977162	1.31
MONTGOMERY	484992	513109	585409	673515	723707	1.49
PR.GEORGES	341706	360418	383232	419127	473940	1.39
ARLINGTON	187501	207971	243988	268795	281308	1.50
ALEXANDRIA	95891	110651	124115	142257	160447	1.67
FAIRFAX	624194	689123	788508	863803	917484	1.47
LOUDOUN	106435	148499	206460	257196	285415	2.68
PR. WILLIAM	127881	148961	188769	232597	280697	2.19
FREDERICK	106647	144200	158254	167233	175084	1.64
CHARLES	48569	63485	71743	77549	83152	1.71
STAFFORD	33200	43859	55167	65741	74956	2.26
CALVERT	26639	36332	44441	47142	48936	1.84
SUBTOTAL	2,929,920	3,259,958	3,718,343	4,138,943	4,482,288	1.53
ADDITIONAL COUNTIES:						
HOWARD	140774	168941	195196	219748	227002	1.61
ANNE ARUNDEL	260717	293170	328008	357305	369880	1.42
CARROLL	57372	68004	70825	72455	74080	1.29
FREDERICKSBURG (VA)	24171	29491	35483	41786	47207	1.95
JEFFERSON	17008	21564	26112	30674	35782	2.10
N. SPOTSYLVANIA	29614	36806	46698	55689	63484	2.14
FAUQUIER	22320	27961	35765	43365	52576	2.36
CLARKE	6079	6882	7685	8550	9517	1.57
K. GEORGE	9334	9506	13150	16390	19339	2.07
ST. MARY'S	49629	60165	67273	71964	75849	1.53
SUBTOTAL	617,018	722,490	826,195	917,926	974,716	1.58
TOTAL	3,546,938	3,982,448	4,544,538	5,056,869	5,457,004	1.54

SOURCE:
MWCOG Round 8.0 Cooperative Forecasts
BMC Round 7-B Cooperative Forecasts
GWRC/FAMPO Regional Demographic Control Forecasts for 2035 CLRP, June 2008
Tri-County Council for Southern Maryland data for Calvert, Charles and St. Mary's

NOTE: Includes Census Adjustment

EXHIBIT 9A

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY
DAILY REGIONAL HOME BASED WORK PURPOSE MODE ANALYSIS BY YEAR
(Based on Mode Choice Output- 6th Iteration)

YEAR	HBW MOTORIZED PERSON	TOTAL HBW AUTO PSN	HBW LOV AUTO DRV	HBW HOV AUTO DRV	TOTAL HBW AUTO DRV	HBW CAROCC	HBW TRANSIT	HBW TRANSIT (%)
2002	4,199,210	3,609,023	3,194,248	23,010	3,217,258	1.120	590,187	14.10%
2011	4,756,097	4,145,724	3,655,238	28,992	3,684,230	1.130	610,373	12.80%
2020	5,294,168	4,552,381	3,968,834	43,440	4,012,274	1.130	741,787	14.00%
2030	5,783,866	4,972,860	4,331,725	49,956	4,381,681	1.130	811,006	14.00%
2040	6,186,569	5,315,217	4,633,479	53,523	4,687,002	1.130	871,352	14.10%

EXHIBIT 9B

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY
DAILY REGIONAL ANALYSIS BY YEAR FOR ALL TRIP PURPOSES
(Based on Mode Choice Output- 6th Iteration)

YEAR	TOTAL MOTORIZED PERSON	TOTAL AUTO PSN	LOV AUTO DRV	HOV AUTO DRV	TOTAL AUTO DRV	TOTAL CAROCC	TOTAL TRANSIT	TRANSIT (%)
2002	22,893,277	21,837,557	17,181,148	23,010	17,204,158	1.270	1,055,720	4.60%
2011	25,838,152	24,741,472	19,561,937	28,992	19,590,929	1.260	1,096,680	4.20%
2020	28,583,123	27,204,942	21,524,851	43,440	21,568,291	1.260	1,378,181	4.80%
2030	31,206,979	29,690,084	23,534,091	49,956	23,584,046	1.260	1,516,895	4.90%
2040	33,277,119	31,652,118	25,216,090	53,523	25,162,567	1.260	1,625,001	4.90%

*Note: Starting in 2020, all HOV facilities are HOV3+

EXHIBIT 10

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY
MODELED AREA TRIPS AND VEHICLE MILES TRAVELED (000's)
AVERAGE WEEKDAY TRAFFIC (AWDT)
(Based on Final Iteration)

YEAR	WORK AND NON-WORK AUTO DRV	TRUCKS (Med + Hvy)	MISC + THRU TRIPS	COMMERCIAL VEHICLES	TOTAL VEH. TRIPS	TOTAL VMT
2002	17,204,769	471,602	725,872	1,133,484	19,535,727	145,504,947
2011	19,591,441	538,791	823,940	1,282,625	22,236,797	160,327,029
2020	21,564,211	611,510	940,972	1,444,248	24,560,941	177,817,012
2030	23,584,550	677,990	1,050,262	1,574,555	26,887,357	190,672,489
2040	25,216,776	734,598	1,137,913	1,688,002	28,777,289	199,813,810

Adjustment Factors to Convert AAWDT to Appropriate Season:

Ozone Season AWDT: 1.05

Winter Season AWDT: 0.97

$PM_{2.5}$ Annual:

Season (ADT)	Factor
Season 1 (Jan- Apr)	0.9216
Season 2 (May- Sept)	0.9873
Season 3 (Oct- Dec)	0.9282

NOTE: AWDT reflects a five day average
ADT reflects a seven day average

Modal Choice

Transit networks were coded for all forecast years and mode choice analyses were executed based upon specific transit representations for 2011, 2020, 2030, and 2040. Transit capacity constraint procedures, in which 2020 constrains later years (Reference 17), were executed for the 2030 and 2040 forecast years.

Transit fares are component of the transit network development process. In 2010 WMATA made two policy changes that affect transit fares. For Metrorail there is a price differential for those who use SmarTrip vs. those who use paper fare cards. There is also the addition of a surcharge for those who travel in the peak-of-the-peak. Metrobus users also pay a different fare for SmarTrip vs. cash. Most other transit providers in the region implemented fare increases this year also. These fare increases were incorporated in the travel demand inputs and had a significant effect on transit trips. Compared to the 2009 CLRP, the 2010 CLRP has 10 percent fewer transit trips in 2020, and 9 percent fewer transit trips in 2030. Overall, however, the 2010 CLRP shows growth in transit trips, with approximately a 55% increase in transit travel from 2002 to the year 2040.

Traffic Assignment

Following the preparation of total vehicle travel demands, the resulting table was applied in traffic assignment to estimate vehicle loadings on each facility in the region. After multiple iterations of the process using the speed feedback procedures, this concluded the traditional travel forecasting elements of the conformity analysis. VMT summaries for each alternative are contained in Exhibit 10. The forecast VMT growth is somewhat less than in recent analyses due to the slower projected growth in Round 8.0 households and employment. Exhibit 11 shows percentage changes in vehicle miles traveled (VMT) through time compared with percentage changes in households and jobs.

A level of service analysis was not among the objectives of this work, however, aggregate summaries of volume to capacity (V/C) ratios (using level "E" service volumes) for the p.m. peak hour were prepared and are presented as Exhibit 12. The figure shows on a percentage basis the extent to which levels of congestion increase through time.

D. EMISSION RATES

In prior work as part of the conformity assessment of the 2007 CLRP and FY2008-2013 TIP COG / DTP staff, in conjunction with COG's Department of Environmental Programs staff and with consultant assistance of E.H. Pechan and

EXHIBIT 11
DAILY VMT vs CHANGES IN LAND ACTIVITY
(Modeled Area)

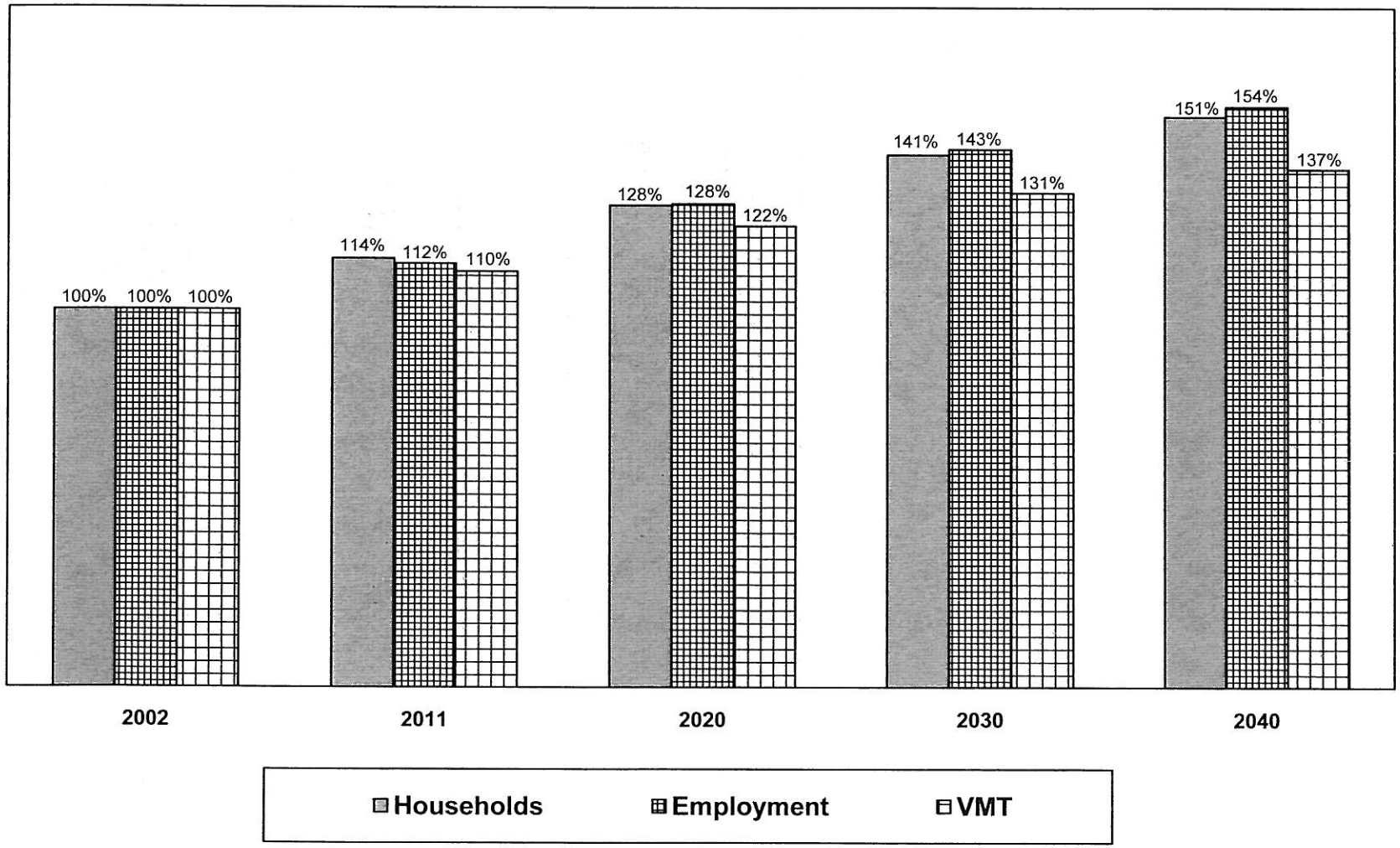
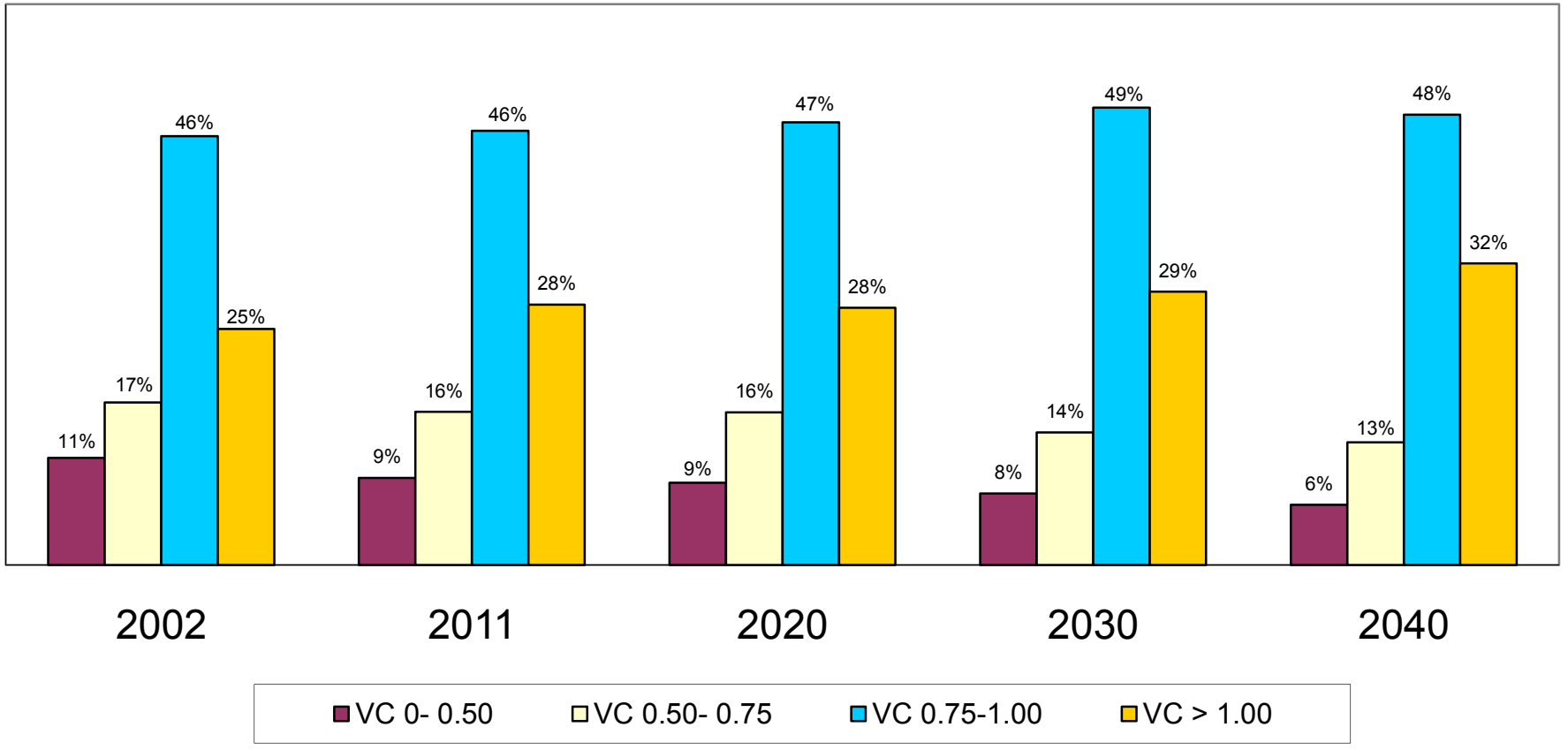


EXHIBIT 12
OZONE SEASON P.M. PEAK HOUR VMT BY YEAR AND VC RATIO (Level "E" Service Volumes) (Modeled Area)



Associates, developed mobile source emission factors for $PM_{2.5}$ pollutants, wintertime CO, and ozone precursors. These factors represented the rates of volatile organic compounds, carbon monoxide, direct particles, and nitrogen oxides produced by cars and trucks on the highway system. This work involved the application of EPA's MOBILE6.2 model, using vehicular and other characteristics specific to the Washington region, to develop factors which would be applied to the travel estimates associated with each forecast year. The model estimates the pollution rates based upon a variety of different vehicle characteristics (vehicle age, type, weight, fuel, speed, inspection/maintenance program) and environmental characteristics (ambient temperature, humidity).

This year's emission factors include the use of 2008 vehicle registration data, as well as the Maryland Department of the Environment's (MDE) data reflecting the adoption of Phase I of California's Low-Emission Vehicle II (LEV II) program in Maryland.

The rates for each pollutant, shown using Fairfax County data as an illustration in Exhibits 13 and 14 for VOC and NOx, respectively, were developed following execution of the model in one mph speed increments, by jurisdiction, for each analysis year. The charts show significantly reduced rates through time, primarily due to the impacts of having cleaner vehicles in the fleet. Exhibit 15 presents direct $PM_{2.5}$ emissions rates through time, by season; data are arrayed in a bar chart since these emissions rates do not vary by vehicle speed.

The mobile emissions post processor, which is a series of programs that uses travel demand and emission rates to calculate mobile source emissions estimates, was revised to reflect the Version 2.2 model table lookup speeds and capacities, and speed flow relationship. The post processor now better reflects speeds observed in travel time studies within the region.

Appendix D documents the input assumptions and Appendix E documents the emission factor results of this work.

E. EMISSIONS CALCULATIONS

While travel demand forecasts are prepared for the modeled area, emissions summaries are calculated for each pollutant's specified nonattainment area (or maintenance area, in the case of winter CO). Each of these planning areas is shown in Exhibit 2.

EXHIBIT 13

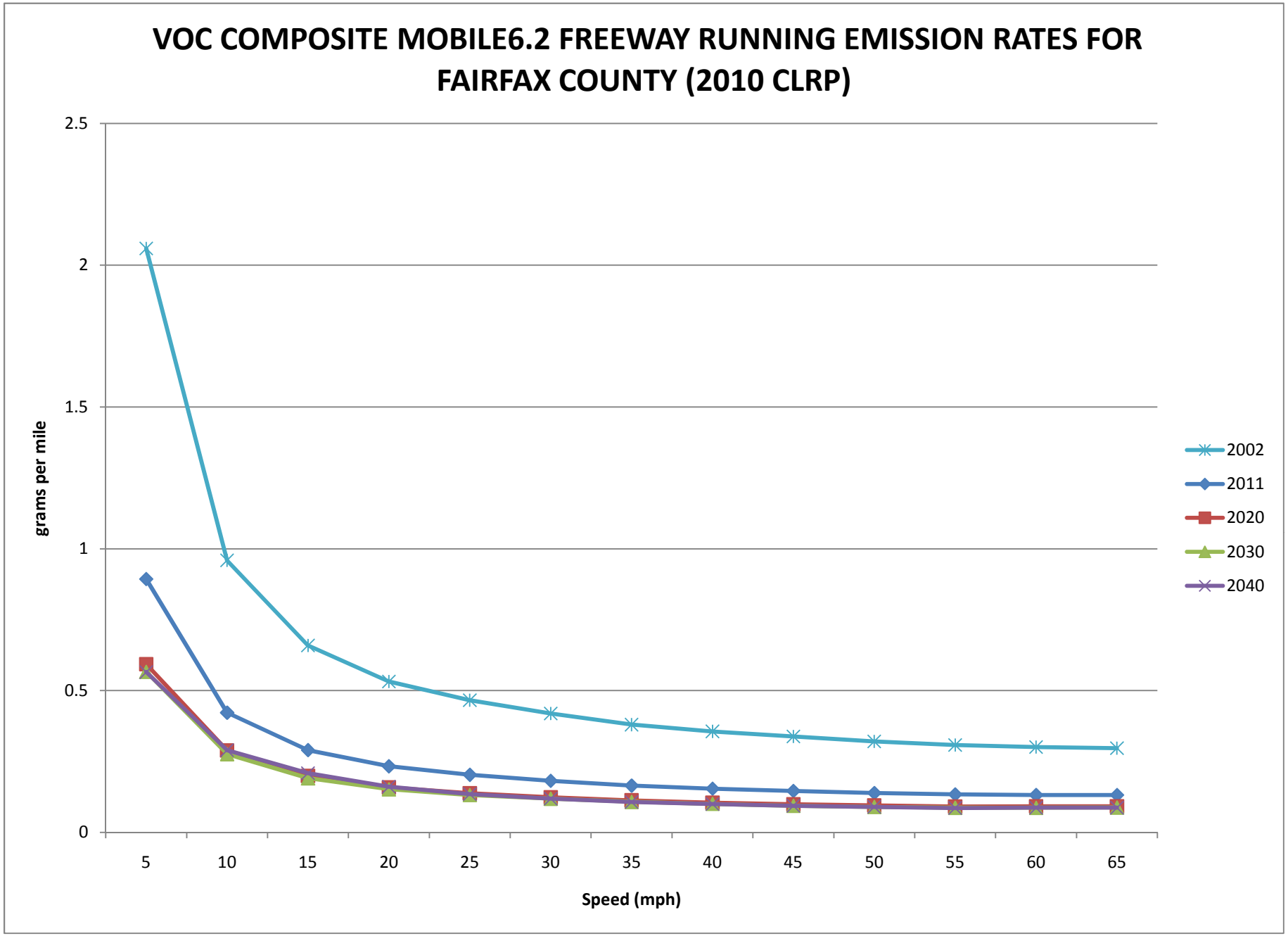

VOC COMPOSITE MOBILE6.2 FREEWAY RUNNING EMISSION RATES FOR FAIRFAX COUNTY (2010 CLRP)
grams per mile
2.5
2
1.5
1
0.5
0
5
10
15
20
25
30
35
40
45
50
55
60
65
Speed (mph)
2002
2011
2020
2030
2040

EXHIBIT 14

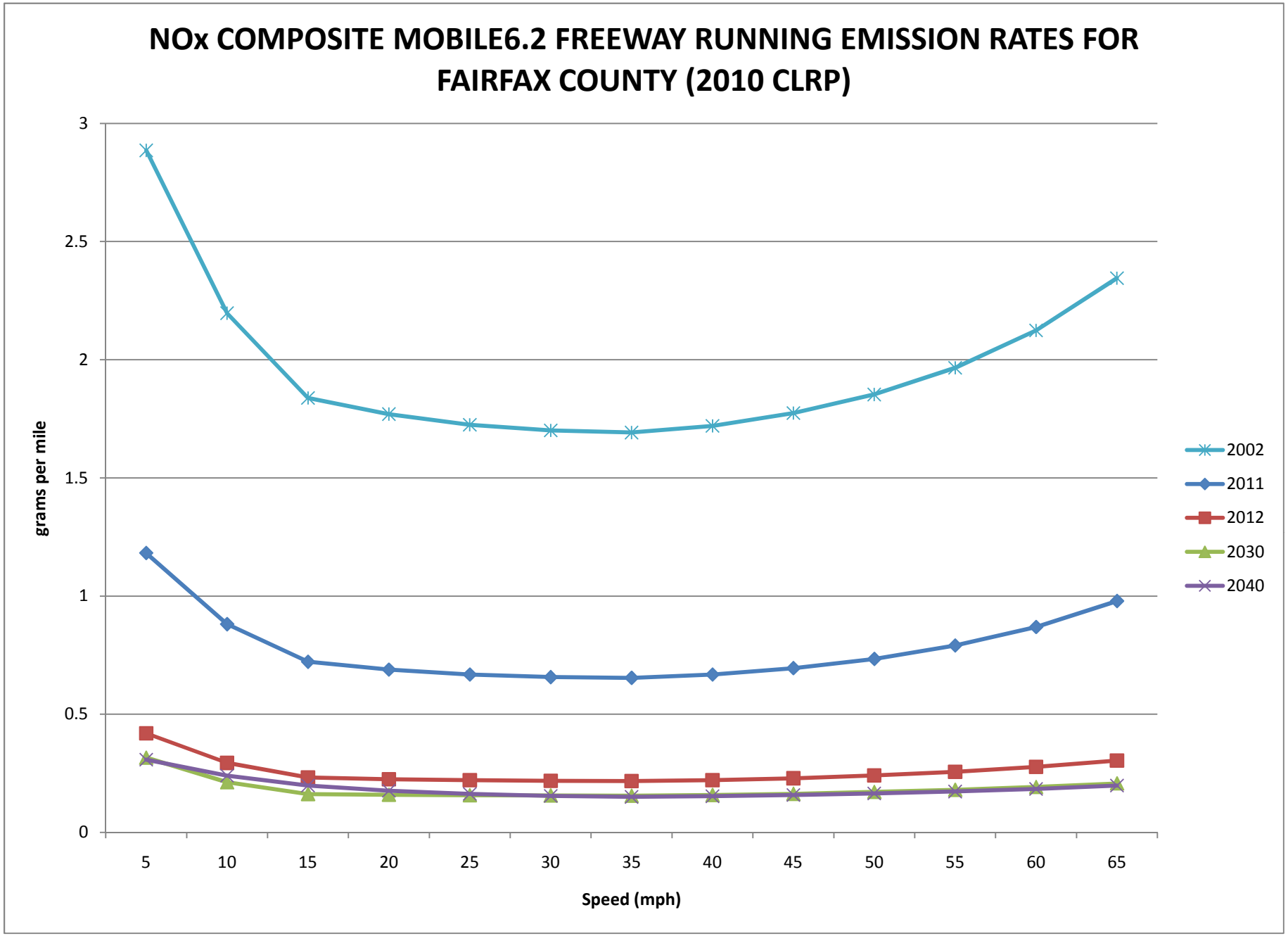
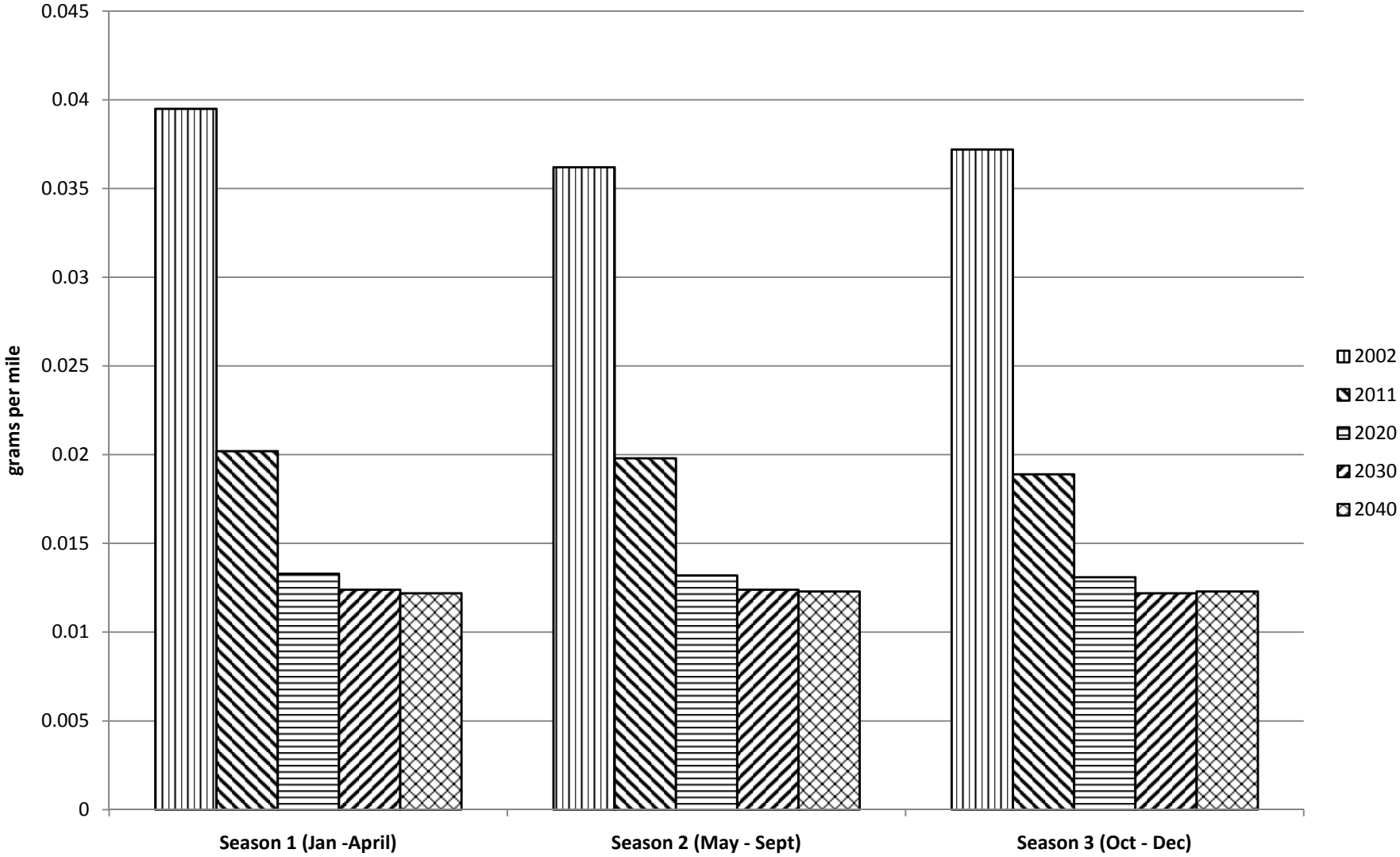

NOx COMPOSITE MOBILE6.2 FREEWAY RUNNING EMISSION RATES FOR FAIRFAX COUNTY (2010 CLRP)
grams per mile
3
2.5
2
1.5
1
0.5
0
5
10
15
20
25
30
35
40
45
50
55
60
65
Speed (mph)
2002
2011
2012
2030
2040

Exhibit 15
DIRECT $PM_{2.5}$ EMISSION RATES FOR FAIRFAX COUNTY (MAJOR ROADS NETWORK)



Two types of calculations are made for each pollutant. The first involves applying emissions rates directly to the travel demand results, to yield origin, network running, and destination emissions. The second deals with preparing estimates of emissions associated with diurnals, resting losses, auto access to transit, and buses. These are addressed on an off-line basis since they are not directly derived from the TPB travel demand modeling process. The technical methods associated with performing these off-line assessments are contained in Appendices F to H. Exhibit 3 provides an overview of the analysis structure and emissions calculation process and also identifies where each calculation takes place.

Each pollutant is assessed based on varying criteria. Ozone season pollutants must adhere to EPA approved totals from the Metropolitan Washington Air Quality Committee's (MWAQC's), February, 2004 'severe area' (1-hour ozone) State Implementation Plan (SIP). These budgets received federal approval in Spring, 2005. This analysis also addressed the emissions budgets contained in the 8-hour ozone SIP and the $PM_{2.5}$ SIP, which await EPA's signoff. Where there are no approved mobile budgets for $PM_{2.5}$ pollutants, EPA allows for an assessment that shows emissions in "action" scenarios are no greater than those in a 2002 base. This criterion was established and applied, with the concurrence of MWAQC, in all $PM_{2.5}$ conformity assessments done to date. The region is in maintenance for mobile source wintertime CO and is required to show that pollutant levels do not exceed the approved budget.

Mobile Emissions Inventories

Prior to calculation of daily mobile source emissions, the above (AAWDT) travel forecasts were first factored by seasonal adjustments (a 1.05 ozone season factor or a 0.97 winter season factor) to yield VMT appropriate to each season being analyzed. Staff then applied the appropriate Mobile6.2 emissions factors to the travel demand forecasts to prepare mobile source emissions inventories for each forecast year. Exhibit 16 shows, for purposes of illustration, emissions for each jurisdiction in the 1-hour ozone nonattainment area. The categories of emissions also include the additional elements of: running emissions on local streets, and vehicle related emissions for diurnals and resting loss; and regional estimates of auto access emissions, and bus emissions.

Exhibit 16

Eight-Hour Ozone Area

2010 CLRP and FY 2011-2016 TIP
DAILY MOBILE SOURCE EMISSIONS
BY JURISDICTION AND TRIP CYCLE
Year: 2011
VOC TONS PER DAY

JURIS	ORIGIN	RUNNING		DESTINATION	VEHICLE RELATED EMISSIONS		TOTAL CYCLE
		NETWORK	LOCAL		DIURNAL	REST. LOSS	
District of Columbia	1.06	2.72	0.68	0.99	0.10	0.53	6.08
Montgomery	1.93	4.91	0.59	1.64	0.26	1.31	10.64
Prince George's	1.62	5.28	0.67	1.51	0.29	1.47	10.84
Calvert	0.21	0.34	0.09	0.20	0.05	0.24	1.13
Charles	0.34	0.64	0.11	0.33	0.07	0.34	1.83
Frederick	0.65	2.07	0.28	0.61	0.11	0.55	4.26
Arlington	0.54	1.14	0.19	0.47	0.05	0.26	2.63
Fairfax	2.25	5.97	0.72	1.85	0.32	1.55	12.66
Loudoun	0.69	1.43	0.24	0.47	0.09	0.44	3.36
Pr.William	0.81	1.98	0.33	0.70	0.14	0.68	4.64
City of Alexandria	0.30	0.60	0.08	0.26	0.04	0.21	1.49
Sub Total	**10.41**	**27.07**	**3.98**	**9.00**	**1.52**	**7.57**	**59.55**
AUTO ACCESS							0.67
TRANSIT BUS							0.19
SCHOOL BUS							0.33
TOTAL EMISSIONS							**60.74**

The emissions results for ozone season pollutants are summarized in Exhibits 17A and B for both 1-hour and 8-hour ozone geographic areas. These charts contain VOC and NOx emissions for network and off-network components for each analysis year, and also compare totals against emissions budgets where relevant. The table shows dramatic reductions throughout time. 2040 VOC and NOx emissions represent about 13 percent and less than 10 percent, respectively, of their 1990 levels. The results reflect the impact of the cleaner fleet (continuing fleet turnover) and related programs, with slowing VMT growth rates through time. Net emissions for each forecast year are shown as the bottom line of the summary table. Both VOC and NOx emissions are within the mobile budgets for all forecast years.

To develop the yearly total $PM_{2.5}$ emissions, travel and emissions were estimated throughout the year by applying (three) seasonal factors to the primary travel data, followed by applying emissions rates for each of the seasons, and summarizing to obtain yearly totals. Direct $PM_{2.5}$ and precursor NOx emissions are shown in Exhibits 18 and 19 and exhibit similar dramatic reductions through time despite the steady increases in vehicle trips and VMT in the forecast years. These reductions are largely attributable to Tier II vehicle standards, cleaner fuels, and the heavy duty engine rule, and will continue to generate additional emissions reductions through time as fleet turnover replaces older vehicles / truck engines with much cleaner ones.

Wintertime CO emissions are shown in Exhibit 20. These same general trends through time of dramatic emissions reductions are also seen here; levels are easily within the CO emissions budget level.

AIR QUALITY CONFORMITY

Summary Table - 1-Hour Ozone Nonattainment Area

Mobile Source Emissions Inventories for 2010 CLRP and FY 2011-2016 TIP

(Tons/Day)

	2002		2011		2020		2030		2040	
	VOC	NOx	VOC	NOx	VOC	NOx	VOC	NOx	VOC	NOx
I Network										
Start	25.5380	12.9320	10.6610	6.1890	6.9000	2.9030	6.5860	2.3080	6.779	2.366
Running	58.9150	230.8940	27.8850	104.4310	19.7690	37.9530	20.1460	27.8800	21.288	27.925
Soak	11.5680	---------	9.2370	---------	5.4500	---------	4.5520	---------	4.763	---------
II Off-Network										
Diurnal	2.4248	----------	1.5829	----------	0.9177	----------	0.6639	----------	0.72575	----------
Resting Loss	12.2794	----------	7.8770	----------	3.8228	----------	2.6398	----------	2.93074	----------
Local Roads	8.9270	10.6340	4.0590	5.3750	2.8420	2.3150	2.8550	1.9850	2.97	2.042
School Buses	0.4258	6.0911	0.3341	4.0803	0.2195	1.7151	0.1780	0.4985	0.1662	0.2716
Transit Buses	0.3784	6.5914	0.1896	3.7766	0.1307	1.0436	0.1312	0.3690	0.1312	0.2786
Auto Access	1.3419	1.5400	0.6953	0.8244	0.5111	0.4428	0.4990	0.4048	0.5339	0.4323
Total	121.7983	268.6825	62.5209	124.6763	40.5628	46.3725	38.2509	33.4453	40.2878	33.3155
TCMs	-0.36	-0.078	-0.18	-0.41	-0.13	-0.28	-0.13	-0.27	-0.13	-0.27
Net Emissions	121.44	268.60	62.35	124.27	40.43	46.09	38.12	33.18	40.16	33.05
Mobile Emissions Budgets:			97.40	234.70	97.40	234.70	97.40	234.70	97.40	234.70
Budget Adherence Margin:			35.05	110.43	56.97	188.61	59.28	201.52	57.24	201.65

AIR QUALITY CONFORMITY

Summary Table - 8-Hour Ozone Nonattainment Area

Mobile Source Emissions Inventories for 2010 CLRP and FY 2011-2016 TIP

(Tons/Day)

	2002		2011		2020		2030		2040	
	VOC	NOx	VOC	NOx	VOC	NOx	VOC	NOx	VOC	NOx
I Network										
Start	24.9930	12.6910	10.4080	6.0550	6.6930	2.8140	6.3700	2.2310	6.534	2.279
Running	57.1530	222.5620	27.0680	100.8910	19.0940	36.4270	19.4230	26.6740	20.496	26.695
Soak	11.3330	---------	9.0040	---------	5.2900	----------	4.4130	---------	4.6	---------
II Off-Network										
Diurnal	2.3600	----------	1.5246	----------	0.8819	----------	0.6385	----------	0.69514	----------
Resting Loss	11.9300	----------	7.5710	----------	3.6598	----------	2.5344	----------	2.80516	----------
Local Roads	8.7490	10.3830	3.9790	5.2580	2.7790	2.2510	2.7890	1.9270	2.901	1.982
School Buses	0.4200	5.9700	0.3277	4.0010	0.2152	1.6817	0.1675	0.4888	0.163	0.2663
Transit Buses	0.3800	6.5115	0.1886	3.7308	0.1300	1.0310	0.1305	0.3645	0.1305	0.2753
Auto Access	1.2900	1.4900	0.6695	0.7906	0.4920	0.4246	0.4801	0.3881	0.5136	0.4145
Total	118.6080	259.6075	60.7403	120.7264	39.2349	44.6293	36.9459	32.0734	38.8384	31.9121
TCMs	-0.36	-0.078	-0.18	-0.41	-0.13	-0.28	-0.13	-0.27	-0.13	-0.27
Net Emissions	118.25	259.53	60.57	120.32	39.10	44.35	36.82	31.80	38.71	31.64
Mobile Emissions Budgets:			66.50	144.30	66.50	144.30	66.50	144.30	66.50	144.30
Budget Adherence Margin:			5.93	23.98	27.40	99.95	29.68	112.50	27.79	112.66

EXHIBIT 18
AIR QUALITY CONFORMITY SUMMARY TABLE
Direct $PM_{2.5}$ Emissions
Mobile Source Emissions Inventories
for 2010 CLRP and FY 2011-2016 TIP
(Tons)

SEASON 1 (JAN-APR)			Direct $PM_{2.5}$									
			2002		2011		2020		2030		2040	
	Days		Daily	seasonal	Daily	seasonal	Daily	seasonal	Daily	seasonal	Daily	seasonal
	Major Roads	120	4.09	490.56	2.31	277.56	1.68	201.96	1.70	203.52	1.74	208.92
	Local Roads	120	0.19	23.28	0.13	15.96	0.13	15.36	0.13	15.96	0.14	16.80
	School Buses	76	0.33	25.08	0.23	17.25	0.03	2.17	0.02	1.30	0.01	1.02
	Transit Buses	120	0.25	30.00	0.08	9.08	0.01	1.58	0.01	1.18	0.01	1.10
	Auto Access	83	0.01	0.83	0.01	0.84	0.01	1.05	0.01	1.16	0.02	1.25
	Total (Daily)		4.87		2.76		1.87		1.87			
	TOTAL			569.75		320.69		222.11		223.12		229.09

SEASON 2 (MAY-SEP)			Direct $PM_{2.5}$									
			2002		2011		2020		2030		2040	
	Days		Daily	seasonal	Daily	seasonal	Daily	seasonal	Daily	seasonal	Daily	seasonal
	Major Roads	153	4.05	619.80	2.42	369.65	1.79	274.02	1.81	277.24	1.88	287.2
	Local Roads	153	0.19	28.61	0.14	21.73	0.14	20.81	0.14	22.03	0.15	23.1
	School Buses	83	0.32	26.56	0.21	17.28	0.03	2.25	0.02	1.39	0.01	1.12
	Transit Buses	153	0.25	38.25	0.07	10.85	0.01	1.96	0.01	1.48	0.01	1.40
	Auto Access	107	0.01	1.07	0.01	1.16	0.01	1.45	0.01	1.60	0.02	1.73
	Total (Daily)		4.82		2.85		1.98		2.00			
	TOTAL			714.29		420.66		300.48		303.74		314.53

SEASON 3 (OCT-DEC)			Direct $PM_{2.5}$									
			2002		2011		2020		2030		2040	
	Days		Daily	seasonal	Daily	seasonal	Daily	seasonal	Daily	seasonal	Daily	seasonal
	Major Roads	92	3.87	355.67	2.18	200.19	1.67	153.82	1.68	154.93	1.77	162.38
	Local Roads	92	0.19	17.30	0.13	11.96	0.13	11.78	0.13	12.33	0.14	12.88
	School Buses	55	0.27	14.85	0.17	9.09	0.03	1.49	0.01	0.74	0.01	0.74
	Transit Buses	92	0.22	20.24	0.06	5.87	0.01	1.16	0.01	0.84	0.01	0.84
	Auto Access	61	0.01	0.61	0.01	0.62	0.01	0.77	0.01	0.86	0.02	0.93
	Total (Daily)		4.55		2.55		1.85		1.85			
	TOTAL			408.67		227.74		169.02		169.70		177.77

ANNUAL TOTAL			**1,692.71**		**969.09**		**691.62**		**696.56**		**721.39**

Mobile Emissions Budgets: 1105.4

Budget Adherence Margin: 136.31

EXHIBIT 19
AIR QUALITY CONFORMITY SUMMARY TABLE
$PM_{2.5}$ Precursor Emissions: NOx
Mobile Source Emissions Inventories
for 2010 CLRP and FY 2011-2016 TIP
(Tons)

SEASON 1 (JAN-APR)

		Precursor NOx									
		2002		2011		2020		2030		2040	
	Days	Daily	seasonal	Daily	seasonal	Daily	seasonal	Daily	seasonal	Daily	seasonal
Major Roads-Starts	120	20.99	2518.80	9.30	1115.88	4.11	493.56	3.14	377.04	3.18	381.72
Major Roads-VMT	120	252.32	30,278.28	106.26	12751.32	37.57	4508.28	27.33	3279.00	27.39	3286.20
Local Roads	120	12.89	1547.16	5.71	685.20	2.27	272.16	1.88	225.00	1.93	231.60
School Buses	76	4.86	369.36	3.51	266.96	1.48	112.33	0.41	31.24	0.21	16.31
Transit Buses	120	6.04	724.80	3.67	440.49	1.00	120.04	0.34	40.95	0.25	30.36
Auto Access	83	2.09	173.47	0.64	53.11	0.31	25.62	0.27	22.74	0.39	32.27
Total (Daily)		299.19		129.09		46.74		33.37			
SEASON 1 TOTAL			35,611.87		15,312.96		5,531.99		3,975.98		3,978.47

SEASON 2 (MAY-SEP)

		Precursor NOx									
		2002		2011		2020		2030		2040	
	Days	Daily	seasonal	Daily	seasonal	Daily	seasonal	Daily	seasonal	Daily	seasonal
Major Roads-Starts	153	13.83	2115.84	6.62	1013.47	3.02	462.06	2.36	360.93	2.39	366.13
Major Roads-VMT	153	217.60	33293.11	93.69	14334.11	33.57	5136.06	24.38	3730.29	24.64	3769.61
Local Roads	153	10.20	1560.60	4.69	716.96	1.97	301.41	1.66	254.44	1.72	262.40
School Buses	83	4.81	399.23	3.22	267.62	1.36	112.49	0.39	32.70	0.21	17.81
Transit Buses	153	5.99	916.47	3.43	524.78	0.95	145.01	0.34	51.27	0.25	38.71
Auto Access	107	1.48	158.36	0.48	51.50	0.25	26.47	0.23	24.17	0.32	34.37
Total (Daily)		253.91		112.13		41.11		29.36			
SEASON 2 TOTAL			38,443.60		16,908.44		6,183.49		4,453.79		4,489.04

SEASON 3 (OCT-DEC)

		Precursor NOx									
		2002		2011		2020		2030		2040	
	Days	Daily	seasonal	Daily	seasonal	Daily	seasonal	Daily	seasonal	Daily	seasonal
Major Roads-Starts	92	19.48	1792.34	8.37	770.13	3.75	345.09	2.97	272.87	3.01	276.83
Major Roads-VMT	92	237.27	21828.38	89.88	8268.68	34.36	3160.94	26.03	2394.39	26.86	2471.49
Local Roads	92	12.21	1123.32	4.80	441.88	2.08	191.45	1.79	164.31	1.86	171.21
School Buses	55	4.77	262.35	3.37	185.15	1.30	71.60	0.31	17.04	0.21	11.80
Transit Buses	92	5.78	531.76	3.21	295.34	0.84	77.42	0.29	26.98	0.25	23.28
Auto Access	61	1.99	121.39	0.54	33.14	0.28	17.36	0.26	15.99	0.37	22.78
Total (Daily)		281.50		110.17		42.62		31.64			
SEASON 3 TOTAL			25,659.54		9,994.33		3,863.85		2,891.58		2,977.39

ANNUAL TOTAL			**99,715.02**		**42,215.72**		**15,579.34**		**11,321.35**		**11,444.89**

Mobile Emissions Budget: 51,359.90

Budget Adherence Margin: 9,144.18

EXHIBIT 20
Summary Table
Mobile Source Emissions Inventories - Winter CO
CO Maintenance Area
for 2010 CLRP and FY 2011-2016 TIP
(Tons/Day)

	1990	2011	2020	2030	2040
	Winter CO	Winter CO	Winter CO	Winter CO	Winter CO
I Network					
Start	1051.80	340.16	294.80	302.57	311.52
Running	1403.80	310.54	248.21	248.68	255.70
II Off-Network					
Local Roads	97.90	22.91	19.56	19.79	20.33
School Buses	1.20	0.58	0.21	0.10	0.06
Transit Buses	3.50	1.18	0.28	0.16	0.14
Auto Access	31.30	12.92	12.93	13.84	14.89
TOTAL	2589.50	688.29	576.00	585.13	602.64
CO Budget		1671.50	1671.50	1671.50	1671.50

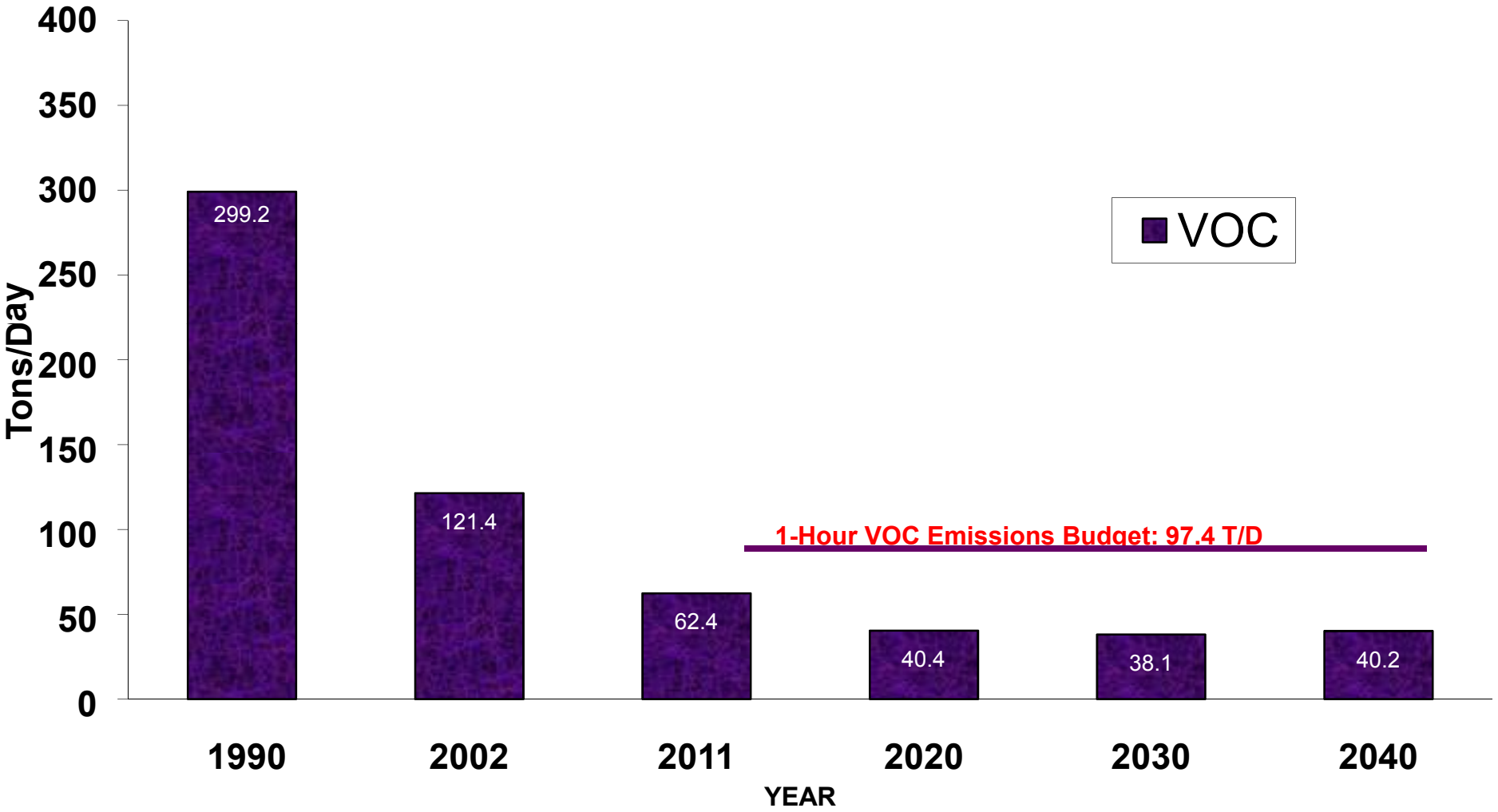
Exhibits 21A, 21B, 22A, and 22B present the VOC and NOx results in a graphical format, which perhaps illustrates even better the steady and significant downward trends occurring in both VOC and NOx emissions. Historical emissions reductions from the clean air act amendments 1990 base have been well documented in the past (especially VOC emissions which dropped from about 299 tons per day (T/D) to about 121 T/D in 2002, but NOx emissions have also dropped by more than 100 T/D from 381 to 269 T/D). From 2002 to year 2011, VOC emissions will be cut further, nearly in half, from 121 T/D to about 62 T/D, and NOx emissions experience even greater reductions, from 269 T/D to 124 T/D. Exhibit 23 presents direct $PM_{2.5}$ results. Exhibit 24 presents precursor NOx results. The data show emissions much lower than base year 2002 conditions, as well as being below the budget levels in all cases.

Exhibit 25 portrays similar information for wintertime CO conditions. These exhibits show that the mobile source inventories for the CLRP and the TIP, for each pollutant in each analysis year and scenario, adhere to each relevant emissions budget.

Assessment Criteria

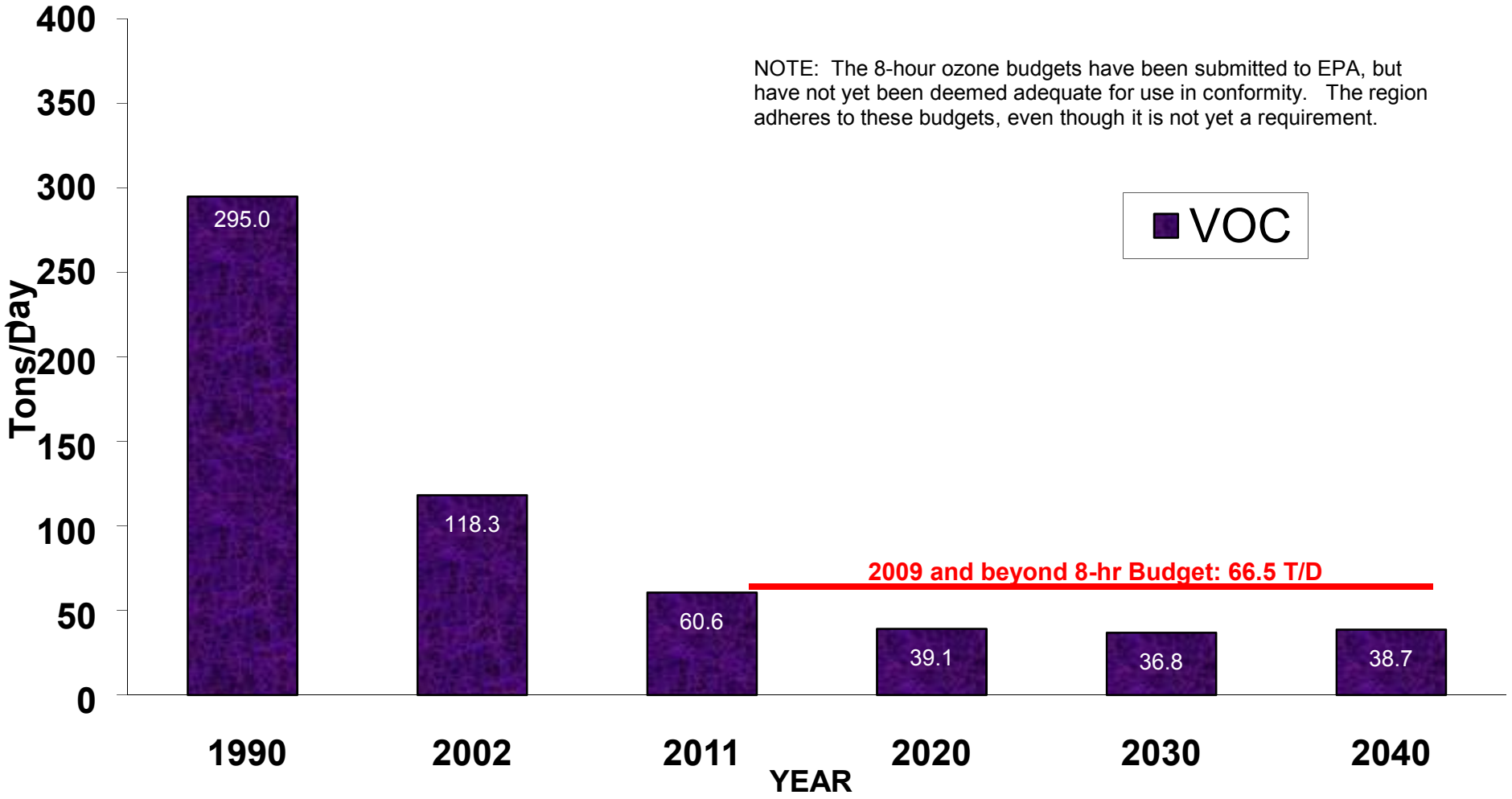
The data in the preceding exhibits 17 – 25 show that estimated emissions are either within the mobile source emissions budget for each pollutant (including the 8-hour ozone SIP budgets and $PM_{2.5}$ budgets awaiting EPA's approval actions), or meet emissions reduction requirements in the case of $PM_{2.5}$ pollutants. In recognition of the fact that estimated emissions are within the mobile source budget for each pollutant, no additional transportation emissions reduction measures are required to demonstrate conformity.

EXHIBIT 21A
Mobile Source VOC Emissions for the 1-Hour Ozone Nonattainment Area 2010 CLRP and FY 2011-2016 TIP



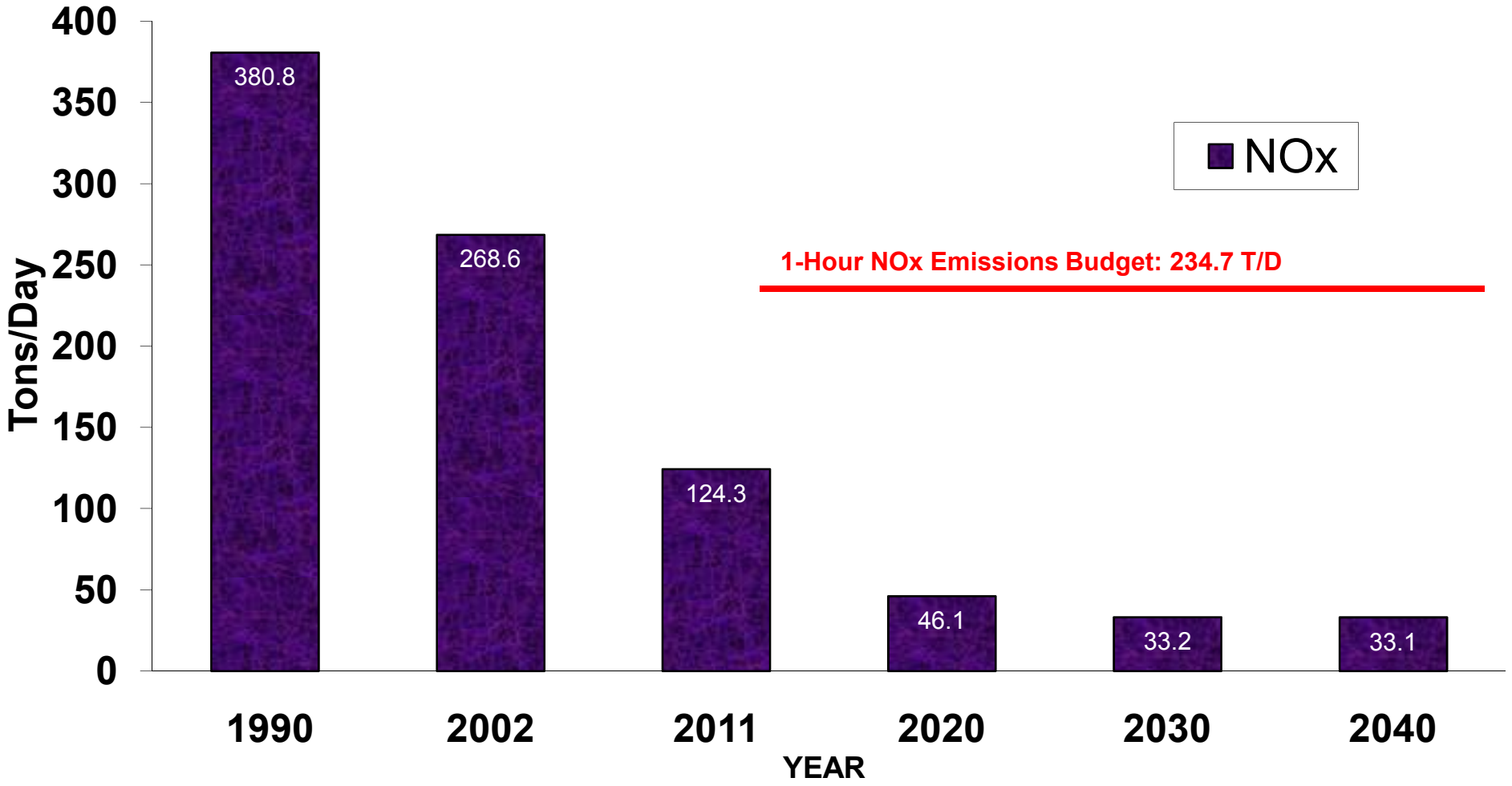
Values include TCMs, but not TERMs.

EXHIBIT 21B
Mobile Source VOC Emissions for the 8-Hour Ozone Nonattainment Area 2010 CLRP and FY 2011-2016 TIP



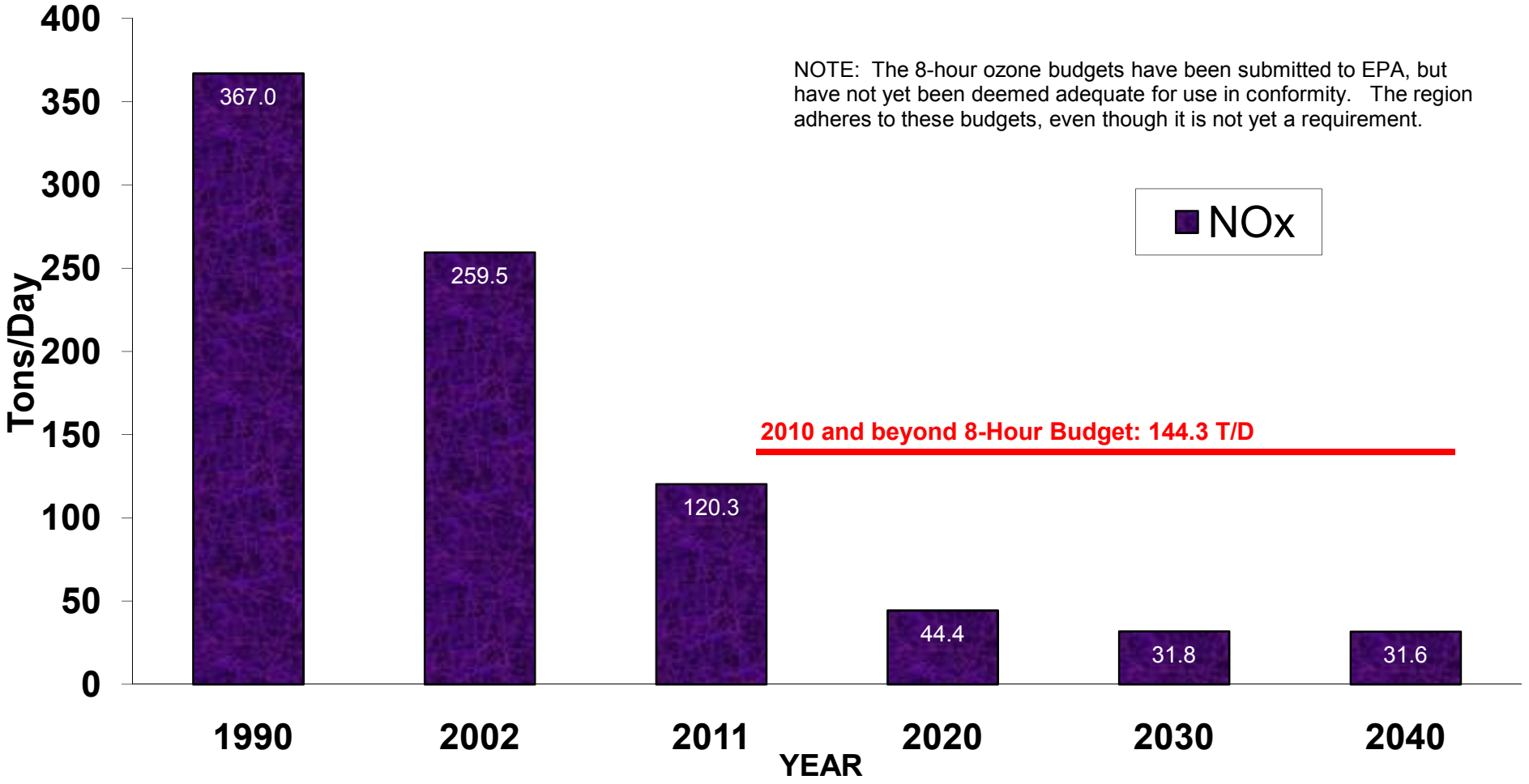
Values include TCMs, but not TERMs

EXHIBIT 22A
Mobile Source NOx Emissions for the 1-Hour Ozone Nonattainment Area 2010 CLRP and FY 2011-2016 TIP



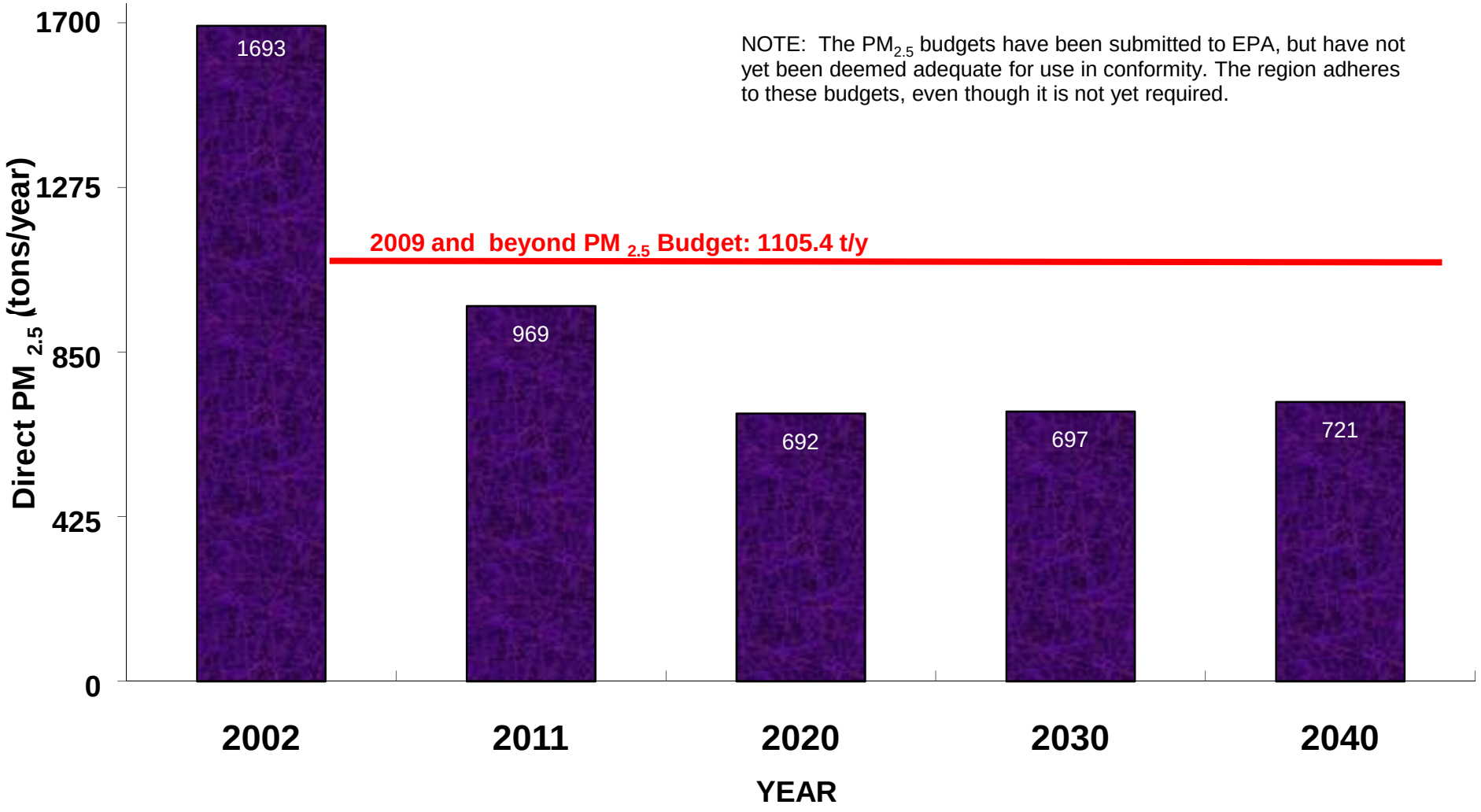
Values include TCMs, but not TERMs

EXHIBIT 22B
Mobile Source NOx Emissions for the 8-Hour Ozone Nonattainment Area 2010 CLRP and FY 2011-2016 TIP



Values include TCMs, but not TERMs

EXHIBIT 23
Mobile Source Emissions
2010 CLRP and FY 2011-2016 TIP
Direct $PM_{2.5}$



NOTE: The $PM_{2.5}$ budgets have been submitted to EPA, but have not yet been deemed adequate for use in conformity. The region adheres to these budgets, even though it is not yet required.

EXHIBIT 24
Mobile Source Emissions
2010 CLRP and FY 2011-2016 TIP
Precursor NOx

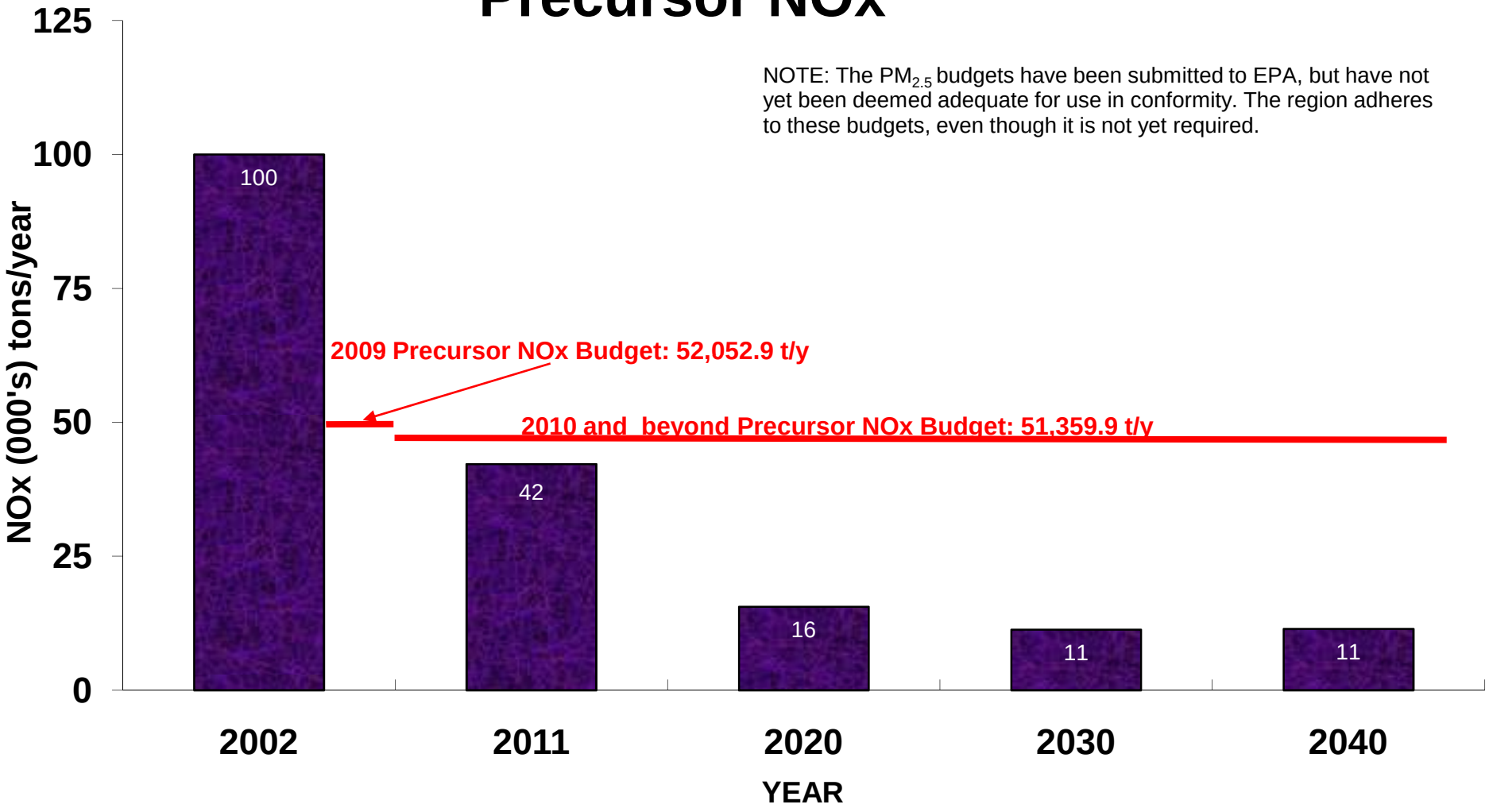
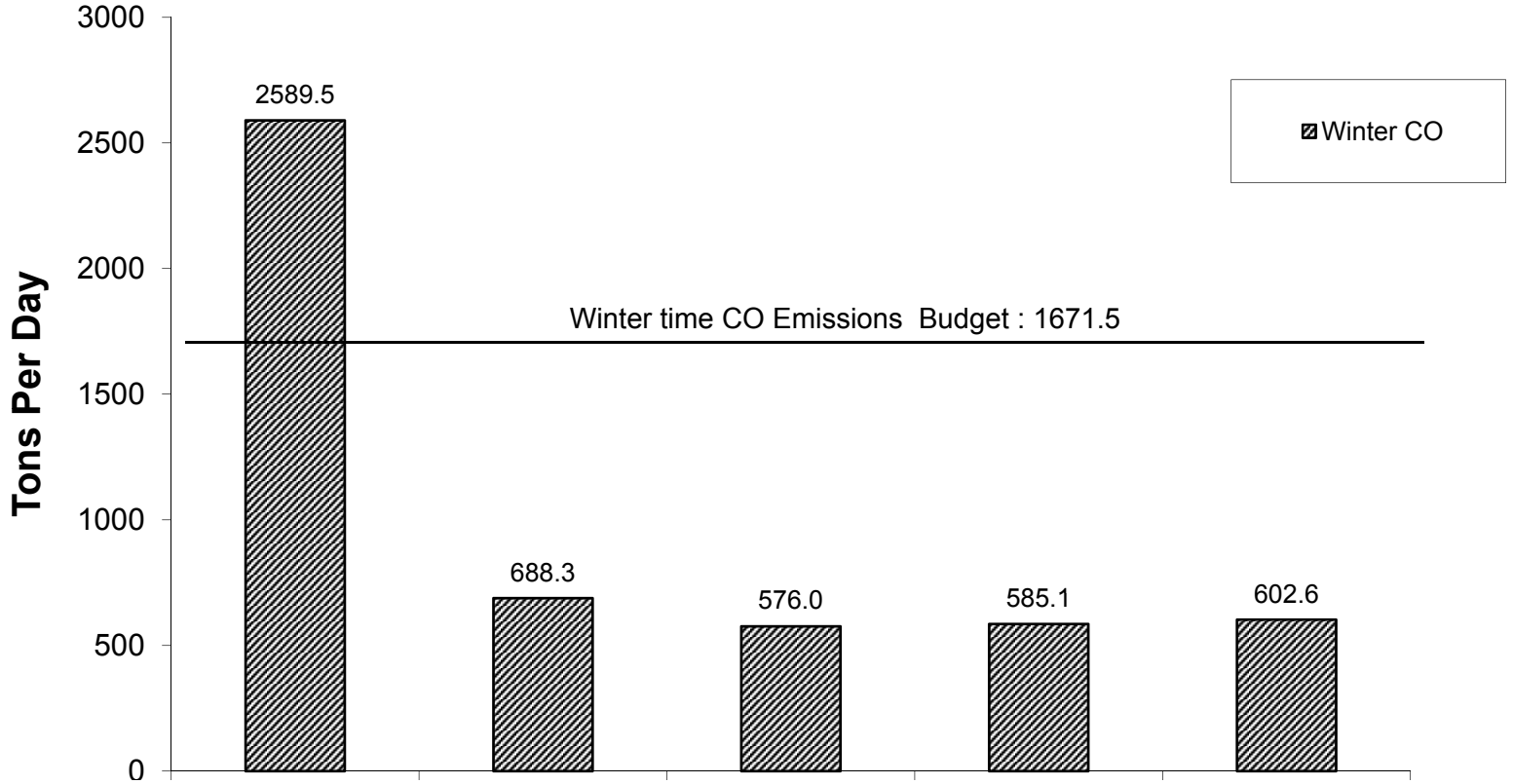


Exhibit 25
Mobile Source Winter CO Emissions
2010 CLRP and FY 2011-2016 TIP
CO Maintenance Area



F. NET EMISSIONS ANALYSIS

The emissions inventory data contained in the previous summary tables reflect total mobile source network and off-network emissions. However, there are also emissions benefits associated with certain other transportation programs and projects. These benefits, estimated on an off-line basis, are also creditable in conformity analyses. Exhibit 26 represents a summary table of these transportation emissions reduction measures, or TERMs, which have been previously planned or programmed by the TPB. They are arrayed in a 'Tracking Sheet' format to document the implementation status of each, with part A of the table documenting ozone season and part B documenting $PM_{2.5}$ pollutants. The summary result of these measures, shown as the bottom line for each section of the table, amounts to additional reductions in 2011 of better than 2 tons per day of VOC and almost 5 tons per day of NOx, and 18 and 898 tons per year of direct $PM_{2.5}$ and precursor NOx, respectively. Only those projects which have been affirmed by the implementing agency as having been completed, or are on a realistic schedule towards implementation, are being credited in this emissions analysis. These summary tables were prepared following COG staff's review of implementation status reports prepared by programming agencies; the agency status reports are contained in Appendix I. Combining network and off-network emissions results shown in each summary table with the additional reductions from TERMs would further improve the emissions margins for each pollutant.

EXHIBIT 26

TERM TRACKING SHEET

TRANSPORTATION EMISSION REDUCTION MEASURES

Part A - Daily Ozone Precursor Emissions

* Project Category: TR - Traffic Stream, C - Commute, H - Heavy Duty Vehicles (Engine Technology), SP- Specific Vehicle Type, TCM - Transportation Control Measures

NOs	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				ORIGINAL AC COMPLETION DATE	TUAL COMPLETION DATE	2011		2020		2030		2040		Project Category *
					FULL	SCALED-BACK	UNDER-WAY	REM			VOC	NOX	VOC	NOX	VOC	NOX	VOC	NOX	
9	X	1994-99	MDOT	Park & Ride Lot - MD 210/ MD 373	X				2000	2003	0.0006	0.0013	0.0003	0.0005	0.0003	0.0005	0.0003	0.0003	C
19	X	1994-99	PRTC	VRE Woodbridge Parking Expansion (add 500 spaces)	X					2002-2003	n/a	n/a	n/a	n/a	n/a	n/a			-
20	X	1994-99	ALEX	King St. Metrorail access improvements	X					**2006**	0.0011	0.0013	0.0007	0.0005	0.0006	0.0005	0.0005	0.0003	C
38	X	1995-00	MDOT	Signal Systems - MD 85 Executive Way to MD 355	X				1996	Pre 2000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	TR
39	X	1995-00	MDOT	Signal Systems - MD 355 ,I-70 ramps to Grove Rd.	X				1996	n/a	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	TR
44	X	1995-00	MDOT	Signal Systems - MD 410, 62nd Ave. to Riverdale Rd.	X				1996	2002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	TR
48	X	1995-00	MDOT	MARC Replacement Coaches	X				1999	2004	0.0006	0.0013	0.0003	0.0005	0.0003	0.0005	0.0003	0.0003	C (TCM)
49	X	1995-00	MDOT	MARC Expansion Coaches	X				1999	2004	0.0051	0.0122	0.0029	0.0051	0.0026	0.0042	0.0024	0.0029	C (TCM)
51	X	1995-00	VDOT	Alexandria Telecommuting Pilot Program	X					2000 & 2001	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000	C
52	X	1995-00	VDOT	Fairfax County Bus Shelter (Fairfax Co. TDM program)			X		2000	2001	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000	C
54	X	1995-00	VDOT	City of Fairfax Bus Shelters	X				1999	2004	0.0000	0.0004	0.0000	0.0002	0.0000	0.0002	0.0000	0.0001	C (TCM)
56	X	1995-00	VDOT	Cherry Hill VRE Access			X			Jul-08	0.0040	0.0104	0.0023	0.0044	0.0020	0.0036	0.0018	0.0025	C (TCM)
58	X	1995-00	WMATA	Bus Replacement (172 buses)	X				1998	1998	0.0661	0.2326					0.0000	0.0000	SP (TCM)
59	X	1995-00	MCG	Shady Grove West Park and Ride			X		2010		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	C
60	X	1995-00	MCG	White Oak Park and Ride			X		2010		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	C
61	X	1995-00	MCG	Bicycle Facilities			X		FY99		0.0017	0.0009	0.0010	0.0004	0.0009	0.0003	0.0008	0.0002	C
62	X	1995-00	MCG	Pedestrian Facilities to Metrorail			X				0.0028	0.0035	0.0016	0.0015	0.0015	0.0012	0.0013	0.0008	C
63	X	1995-00	MDOT	MARC Replacement Coaches	X				1999	2004	0.0023	0.0052	0.0013	0.0022	0.0012	0.0018	0.0011	0.0012	C
64	X	1995-00	MDOT	MARC Expansion Coaches	X				1999	2004	0.0181	0.0452	0.0104	0.0189	0.0094	0.0157	0.0084	0.0107	C (TCM)
66	X	1995-00	VDOT	Commuter Lots - District Wide	X				varies	1995, 2001	0.0062	0.0144	0.0036	0.0060	0.0032	0.0050	0.0029	0.0034	C
67	X	1995-00	VDOT	I-66 and Stringfellow Rd. Park and Ride	X				2000	2000 end	0.0056	0.0087	0.0033	0.0036	0.0029	0.0030	0.0026	0.0020	C
68	X	1995-00	VDOT	Lake Ridge Park and Ride (now called Tacketts Mill lot)	X					1999/2000	0.0000	0.0044	0.0000	0.0018	0.0000	0.0015	0.0000	0.0010	C
69	X	1995-00	VDOT	Bicycle Trails and Facilities (Arlington & Fairfax Co - 7 locations)			X		varies	2010-12	0.0011	0.0074	0.0007	0.0031	0.0006	0.0026	0.0005	0.0017	C
70	X	1995-00	VDOT	Improved Accesss to Metrorail Stations (VRE 2 Stn)			X		varies	2000-2012	0.0003	0.0004	0.0002	0.0002	0.0001	0.0002	0.0001	0.0001	C
71	X	1995-00	VDOT	I-66 HOV access at Monument Dr.	X					1997	0.0028	0.0044	0.0033	0.0036	0.0029	0.0030	0.0026	0.0020	C
72	X	1995-00	DC	Bicycle Facilities	X						0.0136	0.0087	0.0078	0.0036	0.0070	0.0030	0.0063	0.0020	C
73	X	1995-00	REGION	COG Regional Ridesharing Support	X					on-going	0.1323	0.2340	**0.0778**	**0.0980**	**0.0710**	**0.0818**	**0.0638**	**0.0555**	C
74	X	1995-00	REGION	M-47 Integrated Ridesharing	X					on-going	0.0477	0.0816	**0.0279**	**0.0342**	**0.0254**	**0.0285**	**0.0228**	**0.0193**	C
75	X	1995-00	REGION	M-92 Telecommuting Support	X					on-going	0.1099	0.1734	**0.0639**	**0.0726**	**0.0576**	**0.0603**	**0.0518**	**0.0409**	C
77		1996-01	VDOT	Duke Street Pedestrian Bridge	X				2005	2007	n/a	n/a	n/a	n/a	n/a	n/a			-
79	X	1996-01	VDOT	Fairfax County Bus Shelters (30 shelters with project #85)			X		1999	Summer 200	0.0011	0.0013	0.0007	0.0005	0.0006	0.0005	0.0005	0.0003	C
81	X	1996-01	VDOT	Arlington County Metrocheck Program	X				1997	1997 Onwards	0.0011	0.0013	0.0007	0.0005	0.0006	0.0005	0.0005	0.0003	C
82	X	1996-01	VDOT	Old Dominion Drive Bike Trail			X		2000	2010-11	0.0006	0.0004	0.0003	0.0002	0.0003	0.0002	0.0003	0.0001	C
83	X	1996-01	WMATA	Bus Replacement (see line 58, above)	X					1998	Credit taken in line 58, above								SP
85	X	1996-01	VDOT	Fairfax County Bus Shelters (30 shelters with project #79)	X				1999	2001	0.0006	0.0004	0.0003	0.0002	0.0003	0.0002	0.0003	0.0001	C

EXHIBIT 26

TERM TRACKING SHEET

TRANSPORTATION EMISSION REDUCTION MEASURES

Part A - Daily Ozone Precursor Emissions

* Project Category: TR - Traffic Stream, C - Commute, H - Heavy Duty Vehicles (Engine Technology), SP- Specific Vehicle Type, TCM - Transportation Control Measures

NOs	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				ORIGINAL AC COMPLETION DATE	TUAL COMPLETION DATE	2011		2020		2030		2040		Project Category *
					FULL	SCALED-BACK	UNDER-WAY	REM			VOC	NOX	VOC	NOX	VOC	NOX	VOC	NOX	
90	X	1996-01	REGION	M-47c Employer Outreach / Guaranteed Ride Home	X					on-going	0.3256	0.5041	**0.1887**	**0.2111**	**0.1698**	**0.1753**	**0.1527**	**0.1189**	C
91	X	1996-01	REGION	M-70a Bicycle Parking			X		1999		0.0040	0.0030	0.0023	0.0013	0.0020	0.0011	0.0018	0.0007	C
92	X			M-92 Telecommuting Support [1]	Combined with item #75						0.0000	0.0000							C
95	X	1997-02	MCG	Germantown Transit Center	X				2005		0.0028	0.0083	0.0016	0.0035	0.0015	0.0029	0.0013	0.0019	C (TCM)
102	X	1997-02	PG	Prince George's County Bus Replacement	X				1998	1998	0.0029	0.0083							SP (TCM)
106	X	1997-02	VDOT	PRTC Employer Commuting Outreach Program	X					1977 on-going	0.0011	0.0002	0.0007	0.0001	0.0006	0.0001	0.0005	0.0001	C
107	X	1997-02	VDOT	PRTC Multimodal Strategic Marketing Implementation Plan	X					1977 on-going	0.0000	0.0002	0.0000	0.0001	0.0000	0.0001	0.0000	0.0001	C
108	X	1997-02	MDOT	M-103 Taxicab Replacement in Maryland [2]	X				2005	Stopped	0.0764	0.2469	~~0.1340~~	~~0.1827~~	~~0.3120~~	~~0.4810~~			SP
109	X	1997-02	REGION	M-70b Employer Outreach for Bicycles	X				1998	on going	0.0005	0.0005	**0.0030**	**0.0090**	**0.0003**	**0.0002**	**0.0002**	**0.0001**	C
110		1997-02	VDOT	M-77b Vanpool Incentive Programs in Virginia				X	1999	delayed	n/a	n/a	n/a	n/a	n/a	n/a			C
111	X	1998-03	WMATA	Bus Replacement (108 buses)	X				1999	1999	0.0431	0.1493							SP
112	X	1998-03	MCG	Montgomery County Bus Replacement	X					Ongoing	0.0077	0.0249							SP
113	X	1998-03	PG	Prince George's County Bus Replacement	X				1998	Ongoing	0.0010	0.0018							SP
114	X	1998-03	FDC	Frederick County Bus Replacement	X						0.0010	0.0000							SP
117	X	1998-03	VDOT	Arlington County Four Mile Run Bike Trail	X				1999	2009	0.0006	0.0004	0.0003	0.0002	0.0003	0.0002	0.0003	0.0001	C
118	X	1998-03	VDOT	Northern Virginia Turn Bays	X				2000	1998	0.0006	0.0008	0.0003	0.0003	0.0003	0.0002	0.0003	0.0001	TR
119	X	1998-03	VDOT	Fairfax City Bus Replacement	X				2001	2003	n/a	n/a							SP
121	X	1998-03	WMATA	WMATA Bus Replacement (252 buses)	X				2001	2001	0.1016	0.3563							SP
122	X	97 & 98 TIP	REGION	M-101a Mass Marketing Campagin (Consumer)			X			2005	0.0166	0.0284	**0.0097**	**0.0119**	**0.0088**	**0.0099**	**0.0080**	**0.0067**	C
123	X	1999-04	MDOT	Various Park and Ride Lots(I-270/MD124, 450 & I-170/MD-75, 54 spaces)		X			2001/1999	2001	0.0045	0.0157	0.0026	0.0066	0.0023	0.0054	0.0021	0.0037	C
124	X	1999-04	MDOT	Signal Systems (197/MD-198, MD-382 TO US-301,US301)	X				2000	2002	0.0070	-0.0016	0.0041	-0.0005	0.0037	-0.0004	0.0033	-0.0002	TR
125	X	1999-04	VDOT	Transit Center at 7 Corners	X				2002	2001	0.0006	0.0009	0.0003	0.0004	0.0003	0.0003	0.0003	0.0002	C
126	X	1999-04	VDOT	Falls Church Clean Diesel Bus Service	X				2000	2003	0.0038	0.0046							SP
127	X	1999-04	VDOT	VA 234 Bike Trail			X		2001	**2010**	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	C
128	X	1999-04	VDOT	PRTC Ridesharing	X				on-going	2000 ongoing	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	C
130	X	1996-01	VDOT	M-14: I-66 Feeder Bus Fare Buy Down	X					1998 onward	0.0141	0.0239	0.0082	0.0100	0.0073	0.0083	0.0066	0.0056	C
131	X	2000-05	MDOT	Various park and Ride Lots	x				2002	2003	0.0039	0.0141	0.0023	0.0059	0.0020	0.0049	0.0018	0.0033	C
132	X	2000-05	MDOT	Signal Systems	X				Varies	on-going	0.0018	0.0000	0.0016	0.0000	0.0009	0.0000	0.0008	0.0000	TR
133	X	2000-05	VDOT	250 Spaces at Gambrill/Hooes Rds. Park and Ride	X				2002	2004	0.0040	0.0078	0.0023	0.0033	0.0020	0.0027	0.0018	0.0018	C
134	X	2000-05	VDOT	300 Spaces at Backlick Rd	X				2003	2007	0.0028	0.0057	0.0016	0.0024	0.0015	0.0020	0.0013	0.0013	C
135	X	2000-05	VDOT	Accotink-Gateway Connector Trail	X				2002	2005	0.0040	0.0044	0.0023	0.0018	0.0020	0.0015	0.0018	0.0010	C
136	X	2000-05	VDOT	Columbia Pike Trail	X				2000	2009	0.0034	0.0035	0.0020	0.0015	0.0018	0.0012	0.0016	0.0008	C
137	X	2000-05	VDOT	Lee Highway trail	X				2000	2007	0.0017	0.0017	0.0010	0.0007	0.0009	0.0006	0.0008	0.0004	C
138	X	2000-05	VDOT	Arlington Bus Shelter Improvements	X				2005	2005	0.0006	0.0004	0.0003	0.0002	0.0003	0.0002	0.0003	0.0001	C
139	X	2000-05	VDOT	Pentagon Metrostation Improvements	X					2003	0.0045	0.0074	0.0026	0.0031	0.0023	0.0026	0.0021	0.0017	C

EXHIBIT 26

TERM TRACKING SHEET

TRANSPORTATION EMISSION REDUCTION MEASURES

Part A - Daily Ozone Precursor Emissions

* Project Category: TR - Traffic Stream, C - Commute, H - Heavy Duty Vehicles (Engine Technology), SP- Specific Vehicle Type, TCM - Transportation Control Measures

NOs	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				ORIGINAL AC COMPLETION DATE	TUAL COMPLETION DATE	2011		2020		2030		2040		Project Category *
					FULL	SCALED-BACK	UNDER-WAY	REM			VOC	NOX	VOC	NOX	VOC	NOX	VOC	NOX	
140	X	2000-05	MDOT	East/West Intersection Improvements			X		2005	2005	0.0232	0.0109	0.0134	0.0046	0.0120	0.0038	0.0108	0.0026	C
141	X	2001-06	Feds	Federal Transit/Ridesharing subsidy	X				on-going		0.0576	0.0831	0.0333	0.0348	0.0298	0.0288	0.0268	0.0196	C
142	X	2002-07	WMATA	100 CNG buses	x				2002		0.0000	0.1254							SP (TCM)
143	X	2002-07	WMATA	ULSD with CRT filters	x				2006	Jun-06	0.2012	0.0000	0.4300	0.0000	0.4300	0.0000	0.3867	0.0000	H (TCM)
144		2003-08	DC	Replace ~~23~~ 12 Taxicabs with CNG cabs				x	2005	2006	0.0085	0.0145							H
145	X	2003-08	DC	D.C.Incident Response & TrafficManagement System	X				2005	2004	0.0162	0.0405	0.0094	0.0130	0.0100	0.0168	0.0090	0.0114	TR
146	X	2003-08	DC	Bicycle Lane in D. C. (35 Mile)	x				2005	2008	0.0094	0.0078	0.0054	0.0032	0.0049	0.0027	0.0044	0.0018	C (TCM)
147	X	2003-08	DC	Bicycle Racks in D. C. (500)	X				2005	2004	0.0013	0.0009	0.0008	0.0004	0.0007	0.0003	0.0006	0.0002	C (TCM)
148	X	2003-08	DC	External Bicycle Racks on WMATA Buses in D. C. (600)	x				2005	2003	0.0019	0.0028	0.0011	0.0012	0.0010	0.0010	0.0009	0.0007	C (TCM)
149		2003-08	DC	CNG Rental Cars (18)				X	2005		0.0000	0.0002							SP
150	X	2003-08	DC	Sidewalks in D.C. ($ 5 million)	X				2005	2004	0.0353	0.0510	0.0204	0.0213	0.0183	0.0177	0.0165	0.0120	C
151	X	2003-08	DC	CNG Refuse Haulers (2)	x				2005	2004	0.0000	0.0018							H (TCM)
152	X	2003-08	DC	Circulator /Feeder Bus Routes	x				2005	2003	0.0129	0.0184	0.0074	0.0077	0.0067	0.0064	0.0060	0.0043	C
153	X	2003-08	MDOT	Commuter Tax Credit	x				2005	n/a	0.0771	0.1123	0.0445	0.0470	0.0399	0.0390	0.0359	0.0264	C
155		2003-08	MDOT	Employer Vanpool Program (WWB)				X	2005		0.0018	0.0038							C
156	X	2003-08	MDOT	Green Line Link			X		2005	n/a	0.0025	0.0043	0.0015	0.0018	0.0013	0.0015	0.0012	0.0010	C
157	X	2003-08	MDOT	Park & Ride Lots - Southern Maryland			X		2005	2005	0.0049	0.0100	0.0028	0.0042	0.0025	0.0035	0.0023	0.0023	C
158	X	2003-08	MDOT	Prince George's County- Bus Exp			X		2005	n/a	0.0354	0.0603	0.0204	0.0252	0.0183	0.0209	0.0165	0.0142	C
159	X	2003-08	MDOT	MTA - Bus Service Expansion			X		2005	n/a	0.0080	0.0144	0.0046	0.0060	0.0041	0.0050	0.0037	0.0034	C
160	X	2003-08	MDOT	Ride- On - Super Discount			X		2005	n/a	0.0009	0.0013	0.0005	0.0005	0.0005	0.0005	0.0004	0.0003	C
161	X	2003-08	Regional	Regional Traveler Information Systems			x		2005		0.1016	0.5282	0.0594	0.1701	0.0533	0.1157	0.0480	0.0785	TR
162	X	2003-08	MDOT	Universal Transportation Access (MD + WMATA)			X		2005	n/a	0.0158	0.0229	0.0091	0.0096	0.0082	0.0079	0.0074	0.0054	C
163	X	2003-08	MCG	Construction of 1300 additional Parking Spaces at Grosvenor Metro Garage	x				2004		0.0045	0.0096	0.0026	0.0040	0.0025	0.0036	0.0022	0.0025	C (TCM)
164	X	2003-08	MCG	Bethesda Shuttle Bus Services	x				2004		0.0031	0.0044	0.0018	0.0018	0.0016	0.0015	0.0014	0.0010	C
165	X	2003-08	MCG	External Bicycle Racks on Ride-On Buses in Montgomery County	x				2004		0.0006	0.0009	0.0003	0.0004	0.0003	0.0003	0.0003	0.0002	C
166	X	2003-08	MCG	New CNG Powered Light Duty Vehicle fleet in the County	x				2004		0.0000	0.0001							SP
167	X	2003-08	MCG	Free Bus Service on Selected Routes on I-270	x				2004		0.0011	0.0015	0.0006	0.0006	0.0005	0.0005	0.0005	0.0004	C
168	X	2003-08	MCG	Annual Sidewalk Program	x				2004		0.0168	0.0243	0.0097	0.0102	0.0087	0.0084	0.0078	0.0057	C
169		2003-08	MDOT	Bethesda Breeze/International Express Metrobus				X	2005	Removed	0.0037	0.0049	0.0021	0.0020	0.0019	0.0017	0.0017	0.0012	C
170		2003-08	MDOT	Bethesda-8, Silver Spring Downtown Dasher and Prince Georges Co. Shuttles at 3 PNR lot				X	2005	Removed	0.0087	0.0096	0.0050	0.0040	0.0045	0.0033	0.0040	0.0023	C
171		2003-08	MDOT	Proposed Transportation Management District in Montgomery County (Rockville and Gaithersburg)				X	2005	Removed	0.0057	0.0072	0.0033	0.0030	0.0029	0.0025	0.0026	0.0017	C
172	X	2003-08	MDOT	Sidewalks (Bikes/Pedestrian) at / near Rail Stations	X				2005	2002	0.0092	0.0135	0.0053	0.0057	0.0048	0.0047	0.0043	0.0032	C
173	X	2003-08	MDOT	Neighborhood Sidewalks Improvements (Bike/Pedestrian)	x				2005	2004	0.0032	0.0015	0.0018	0.0006	0.0017	0.0005	0.0015	0.0004	C
174	X	2003-08	MDOT	Neighborhood Conservation Program - Neighborhood Sidewalks Improvements (Bikes/Pedestrian)		x			2005	Ongoing	0.0028	0.0013	0.0016	0.0006	0.0015	0.0005	0.0013	0.0003	C
175	X	2003-08	MDOT	Maryland bus Transit Service Expansion	x				2005	2004	0.0139	0.0296	0.0080	0.0124	0.0072	0.0103	0.0065	0.0070	C

EXHIBIT 26

TERM TRACKING SHEET

TRANSPORTATION EMISSION REDUCTION MEASURES

Part A - Daily Ozone Precursor Emissions

* Project Category: TR - Traffic Stream, C - Commute, H - Heavy Duty Vehicles (Engine Technology), SP- Specific Vehicle Type, TCM - Transportation Control Measures

NOs	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				ORIGINAL AC COMPLETION DATE	TUAL COMPLETION DATE	2011		2020		2030		2040		Project Category *
					FULL	SCALED-BACK	UNDER-WAY	REM			VOC	NOX	VOC	NOX	VOC	NOX	VOC	NOX	
176	X	2003-08	VDOT	Universal Transportation Access Program	X				2005	2005-07	0.0012	0.0017	0.0007	0.0007	0.0006	0.0006	0.0005	0.0004	C
177	X	2003-08	VDOT	Interactive Rideshare & Kiosk Initiative			X		2008 onward		0.0004	0.0007	0.0002	0.0003	0.0002	0.0002	0.0002	0.0002	C
178	X	2003-08	VDOT	Mobile Commuter Stores	X				2005	2005	0.0021	0.0036	0.0012	0.0015	0.0011	0.0012	0.0010	0.0008	C
179	X	2003-08	VDOT	Telework Incentive Program (Telework VA)[1]	x				2005	Fall 2006	0.0007	0.0011	0.0004	0.0005	0.0004	0.0004	0.0003	0.0003	C
180	X	2003-08	VDOT	Commuter Choice	X				2005		0.0009	0.0013	0.0005	0.0005	0.0005	0.0004	0.0004	0.0003	C
181	X	2003-08	VDOT	Employer Shuttle Services				x	2005		0.0112	0.0152	0.0065	0.0064	0.0058	0.0053	0.0052	0.0036	C
184	X	2003-08	VDOT	Van Start / Van Save	X				2005	till 2006	0.0014	0.0024							C
185	X	2003-08	VDOT	Metro Shuttle Bus			X		2005	1999-2005	0.0012	0.0024	0.0007	0.0010	0.0006	0.0008	0.0005	0.0006	C
187	X	2003-08	VDOT	VRE Mid-Day Train Service	X				2005	2002	0.0016	0.0027	0.0009	0.0011	0.0008	0.0009	0.0007	0.0006	C
190	X	2003-08	VDOT	Employer Vanpool Program (Bridge deck)	X				2005	2004 - 2008	0.0000	0.0000							C
191	X	2003-08	VDOT	Town of Leesburg P&R Lot	X				2005	2010	0.0019	0.0036	0.0011	0.0015	0.0010	0.0012	0.0009	0.0008	C
192	X	2003-08	VDOT	District-wide P&R Lots	X				2005	2001-2005	0.0111	0.0205	0.0064	0.0086	0.0058	0.0071	0.0052	0.0048	C
193	X	2003-08	VDOT	Additional Parking at 4 Metro stations	X				2005	2005	0.0143	0.0306	0.0083	0.0128	0.0074	0.0106	0.0067	0.0072	C
196	X	2003-08	WMATA	64 CNG Buses (Purchased in 2001)	X				2005	2004	0.0020	0.0804							SP (TCM)
197	X	2003-08	WMATA	250 CNG Buses (175 buses by Dec. 2004; 75 buses by mid 2006)	X				2005	Jun-06	0.0079	0.3139							SP
198	X	2003-08	WMATA	60 Engine Replacement (MY 1992 & 1993 MY buses)	X				2004	2004	0.0132	0.0697							SP
199	X	2003-08	WMATA	Car Sharing Program	X				2005	2004	0.0008	0.0017	0.0005	0.0007	0.0004	0.0006	0.0004	0.0004	C
200	X	2003-08	WMATA	Bikes Racks on WMATA Buses in VA (372 Bike Racks)	X				2005	2004	0.0012	0.0018	0.0007	0.0007	0.0006	0.0007	0.0006	0.0004	C (TCM)
202		2003-08	MDOT	Fleet Replacement (state auto fleet, gas to hybrid, 250 vehicles)				X	2005		0.005	0.012	0.0055	0.0133					SP
203	X	2003-08	MDOT	Replace 55 Montgomery County 10 yr. old buses w/ new CNG buses			X		2005	Ongoing	0.0440	0.1503	0.0459	0.1628					SP
204		2003-08	MDOT	Neighborhood Bus Shuttle (5 circulator routes)				X	2005		0.007	0.011	0.0043	0.0047	0.0038	0.0039	0.0034	0.0026	C
205	X	2003-08	MDOT	New Surface Parking at Transit Centers (500 spaces)			X		2005	2005	0.0026	0.0055	0.0015	0.0023	0.0013	0.0019	0.0012	0.0013	C
206		2003-08	MDOT	Additional Bike Lockers at Metro-Stations				X	2005		0.0130	0.0192	0.0075	0.0080	0.0067	0.0067	0.0061	0.0045	C
207	X	2003-08	MDOT	Bike Facilities at PnR Lots or other similar location			X		2005	2005	0.0092	0.0152	0.0053	0.0064	0.0048	0.0053	0.0043	0.0036	C
208		2003-08	MDOT	CNG Fueling Stations				X	2005		0.1217	0.1080							SP
209		2003-08	MDOT	Gas cap replacements (ROP Credit)				X	2005		N/A	N/A	N/A	N/A	N/A	N/A			SP
210		2003-08	MDOT	Gas can turnover (ROP Credit)				X	2005		N/A	N/A	N/A	N/A	N/A	N/A			SP
211	X	2003-08	MDOT	External Bicycle Racks on WMATA Buses (486 MD buses)	X				2005	2002	0.0014	0.0020	0.0008	0.0008	0.0007	0.0007	0.0006	0.0005	C (TCM)
212	X	2003-08	MDOT	Bike \ Pedestrian Trail - Anacostia River Walk			X		2005	Ongoing	0.0006	0.0004	0.0003	0.0002	0.0003	0.0001	0.0003	0.0001	C
213		2003-08	MDOT	Transit Prioritization - Queue Jumps				X	2005		0.003	0.003	0.0018	0.0014	0.0016	0.0012	0.0014	0.0008	C
214	X	2003-08	MDOT	Commuter Choice Benefit/Tax Credit - Marketing Expansion	X				2005	Ongoing	0.0539	0.0789	0.0311	0.0330	0.0279	0.0274	0.0251	0.0186	C
215	X	2003-08	MDOT	Improvements to Pedestrian Access in TOD areas (4 locations)			X		2005	Ongoing	0.0059	0.0080	0.0034	0.0033	0.0030	0.0028	0.0027	0.0019	C
216	X	2003-08	MDOT	Telecommuting Expansion[1]	x				2005	Ongoing	0.0636	0.1109	0.0367	0.0464	0.0330	0.0385	0.0296	0.0261	C
217		2003-08	MDOT	Replace older Diesel Engine in Public Sector vehicles				X	2005		0.0227	0.1200							H
218	X	2003-08	VDOT	MV-92 Telecommuting Program - Expanded[1]	x				2005	2005	0.0680	0.1184	0.0392	0.0496	0.0352	0.0411	0.0316	0.0279	C

EXHIBIT 26

TERM TRACKING SHEET

TRANSPORTATION EMISSION REDUCTION MEASURES

Part A - Daily Ozone Precursor Emissions

* Project Category: TR - Traffic Stream, C - Commute, H - Heavy Duty Vehicles (Engine Technology), SP- Specific Vehicle Type, TCM - Transportation Control Measures

NOs	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				ORIGINAL AC COMPLETION DATE	TUAL COMPLETION DATE	2011		2020		2030		2040		Project Category *
					FULL	SCALED-BACK	UNDER-WAY	REM			VOC	NOX	VOC	NOX	VOC	NOX	VOC	NOX	
219	X	2003-08	VDOT	MV-123 Employer Outreach for Public Sector Employees [2]	x				2005	2003	0.0151	0.0218	0.0087	0.0091	0.0078	0.0076	0.0070	0.0051	C
220	X	2003-08	REGION	Signal System Optimization	X				2005	2005	0.4291	0.1476	0.2509	0.0475	0.2252	0.0324	0.2025	0.0219	TR
221	X	2007-12	MDOT	Two P & R Lots in Frederick County (99 spaces)	X				2007	2008	0.0008	0.0016	0.0005	0.0007	0.0005	0.0005	0.0004	0.0004	C
222	X	2007-12	MDOT	MDOT P & R Lots at US 340 (66-99 spaces, Frederick Co.)	X				2007	2007	Credits shown in TS 221 (for 99 spaces)								
223	X	2008-13	MDOT	MCG/MDOT P & R Lots at US 340 & Mt Zion Rd. (37 speces)	X				2008	2008	0.0006	0.0012	0.0004	0.0005	0.0003	0.0004	0.0003	0.0003	
224	X	2008-13	MDOT	MCG/MDOT P & R Lots at US 340 & Mt Zion Rd. - expansion (39 speces)			X		2011	2011	Credits included in TS 224 (for 37+ 39 spaces)								
225	X	2008-13	MDOT	MCG/MDOT P & R Lots at I 70 & MD 355 (100 speces)			X		2010	2010	0.0008	0.0016	0.0005	0.0007	0.0005	0.0006	0.0004	0.0004	
226	X	2008-13	MDOT	MCG/MDOT P & R Lots at I 270 & MD 80 (164 speces)	X				2009	2009	0.0014	0.0026	0.0008	0.0011	0.0007	0.0009	0.0007	0.0006	
227	X	2008-13	MDOT	MDOT Syglal System Reviewing			X		2010	on-going	Credits shown in Regional signal TERM - TS 220								
228	X	2008-13	MDOT	MDOT Takoma Langely Transit Center			X		2012	2012	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
										Available Emissions Credits	**2.353**	**4.429**	**1.430**	**1.113**	**1.286**	**0.755**	**1.156**	**0.512**	

EXHIBIT 26

TRANSPORTATION EMISSION REDUCTION MEASURES (CLRP Projects Only)

Part A - Daily Ozone Precursor Emissions

Project Category: TR - Traffic Stream, C - Commute, H - Engine Technology (Heavy Dudy Vehicles), SP- Specific Vehicle Type

NOs	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				PROJECTED COMPLETION DATE	ACTUAL COMPLETION DATE	TONS/DAY REDUCTION CREDITED								Project Category
					FULL	SCALED-BACK	UNDER-WAY	REM			2011		2020		2030		2040		
											VOC	NOx	VOC	NOx	VOC	NOx	VOC	NOx	
221	X	1995-00 TIP	REGION	M-24 Speed Limit Adherence	X				2010		-0.0071	0.2525	-0.0021	0.1206	0.0005	0.0377	0.0005	0.0256	TR
222		1996-01 TIP	MGC	Rock Spring Park Pedestrian Amenities				X			0.0010	0.0037	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-
223	X	1996-01 TIP	MGC	Olney Transit Center Park and Ride					2015		0.0019	0.0074	0.0009	0.0030	0.0003	0.0007	0.0003	0.0005	C
224	X	1996-01 TIP	MGC	Damascus Park and Ride						2003	0.0010	0.0037	0.0004	0.0015	0.0001	0.0003	0.0001	0.0002	C
225	X	1996-01 TIP	DC	M-103 Taxicab Replacement (DC)				X	2015		0.0000	0.0000	0.1745	0.3000	0.3490	0.6000	0.3138	0.4070	H
226	X	STADIUM ANALYSIS		M-103 Taxicab Replacement (MD)				X	2008		0.0000	0.0000	0.1560	0.2400	0.1560	0.2400	0.1403	0.1628	H
227	X	1997-02 TIP	MDOT	Shady Grove West Transit Center Park and Ride				X			0.0000	0.0092	0.0000	0.0038	0.0000	0.0009	0.0000	0.0006	C
228	X	1997-02 TIP	MGC	Olney Transit Center Park and Ride					2015		0.0000	0.0000	0.0004	0.0012	0.0003	0.0007	0.0003	0.0005	C
229	X	1997-02 TIP	MGC	White Oak Park and Ride					2008		0.0000	0.0185	0.0000	0.0076	0.0000	0.0017	0.0000	0.0012	C
230	X	1997-02 TIP	MGC	Damascus Park and Ride						2003	0.0000	0.0000	0.0002	0.0005	0.0001	0.0003	0.0001	0.0002	C
231	X	1997-02 TIP	MGC	Four Corners Transit Center					2015		0.0000	0.0009	0.0000	0.0004	0.0000	0.0001	0.0000	0.0001	C
232		1997-02 TIP	MGC	Burtonsville Transit Center				X			0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-
233	X	1997-02 TIP	MGC	Silver Spring Transit Access							0.0000	0.0009	0.0000	0.0003	0.0000	0.0002	0.0000	0.0001	C
234	X	1997-02 TIP	MGC	Shady Grove Parking Construction						2003	0.0048	0.0175	0.0021	0.0072	0.0007	0.0017	0.0007	0.0011	C
				PLAN TOTAL							0.0005	0.3015	0.1764	0.4424	0.3512	0.6434	0.3158	0.4364	
				GRAND TOTAL (Current Measures + CLRP plan)							2.354	4.730	1.606	1.555	1.637	1.398	1.472	0.949	

DEFINITIONS: Project Numbers implemented fully prior to 2000 were removed from the TERM Tracking Sheet

CREDIT TAKEN (X means emissions reduction credits taken):

TIP - Emissions credits are taken for projects being implemented, according to the progress reporting schedules provided by the implementing agencies (contained in Appendix J of Conformity Document). No credit has been taken for projects in which only some components of the measure have been implemented.

CLRP - Credit is taken for each of these elements of the CLRP according to the schedule provided by the implementing agency.

IMPLEMENTATION STATUS:

FULL = project is completed as planned at the time of analysis.

SCALED BACK = project is completed, but at a different level than assumed at the time of analysis (i.e., purchased 50 buses instead of 100)

UNDERWAY = project is not complete, but is close enough that credit may be taken (i.e., under construction, NOT just out for bid)

REMOVED = project no longer expected to be implemented or constructed

COMPLETION DATE:

PROJECTED = project completion date originally expected (i.e., at time of emissions analysis)

ACTUAL = actual year project was open for use, or expected to be open for use if under construction

REMOVED projects Emissions credits are not counted in toal available emissions credits

1 Line items 218, 216, 179, 92 are all credited as part of M-92 Regional Telecommute Support TERM, line item # 75

2 Line item 108 & 219 credits are taken only for year 2010

EXHIBIT 26
TERM TRACKING SHEET
TRANSPORTATION EMISSION REDUCTION MEASURES
Part B - Yearly $PM_{2.5}$ and Precursor NOx Emissions

* Project Category: TR - Traffic Stream, C - Commute, H - Heavy Duty Vehicles (Engine Technology), SP- Specific Vehicle Type, TCM - Transportation Control Measures

NOs	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				ORIGINAL AC COMPLETION DATE	TUAL COMPLETION DATE	2011		2020		2030		2040		Project Category *
					FULL	SCALED-BACK	UNDER-WAY	REM			$PM_{2.5}$	Precursor NOx	$PM_{2.5}$	Precursor NOx	$PM_{2.5}$	Precursor NOx	$PM_{2.5}$	Precursor NOx	
9	X	1994-99	MDOT	Park & Ride Lot - MD 210/ MD 373	X				2000	2003	0.0094	0.3912	0.0095	0.1000	0.0095	0.0830	0.0092	0.0669	C
19	X	1994-99	PRTC	VRE Woodbridge Parking Expansion (add 500 spaces)	X					2002-2003	n/a	n/a	n/a	n/a	n/a	n/a			-
20	X	1994-99	ALEX	King St. Metrorail access improvements	X					2006	0.0094	0.3912	0.0095	0.1000	0.0095	0.0830	0.0092	0.0669	C
38	X	1995-00	MDOT	Signal Systems - MD 85 Executive Way to MD 355	X				1996	Pre 2000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	TR
39	X	1995-00	MDOT	Signal Systems - MD 355 ,I-70 ramps to Grove Rd.	X				1996	n/a	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	TR
44	X	1995-00	MDOT	Signal Systems - MD 410, 62nd Ave. to Riverdale Rd.	X				1996	2002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	TR
48	X	1995-00	MDOT	MARC Replacement Coaches	X				1999	2004	0.0094	0.3912	0.0095	0.1000	0.0095	0.0830	0.0092	0.0669	C (TCM)
49	X	1995-00	MDOT	MARC Expansion Coaches	X				1999	2004	0.0874	3.6515	0.0891	0.9332	0.0891	0.7745	0.0857	0.6247	C (TCM)
51	X	1995-00	VDOT	Alexandria Telecommuting Pilot Program	X					2000 & 2001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	C
52	X	1995-00	VDOT	Fairfax County Bus Shelter (Fairfax Co. TDM program)			X		2000	2001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	C
54	X	1995-00	VDOT	City of Fairfax Bus Shelters	X				1999	2004	0.0031	0.1304	0.0032	0.0333	0.0032	0.0277	0.0031	0.0223	C (TCM)
56	X	1995-00	VDOT	Cherry Hill VRE Access			X			Jul-08	0.0749	3.1299	0.0764	0.7999	0.0764	0.6639	0.0734	0.5354	C (TCM)
58	X	1995-00	WMATA	Bus Replacement (172 buses)	X				1998	1998									SP (TCM)
59	X	1995-00	MCG	Shady Grove West Park and Ride			X		2010		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	C
60	X	1995-00	MCG	White Oak Park and Ride			X		2010		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	C
61	X	1995-00	MCG	Bicycle Facilities			X		FY99		0.0062	0.2608	0.0064	0.0667	0.0064	0.0553	0.0061	0.0446	C
62	X	1995-00	MCG	Pedestrian Facilities to Metrorail			X				0.0250	1.0433	0.0255	0.2666	0.0255	0.2213	0.0245	0.1785	C
63	X	1995-00	MDOT	MARC Replacement Coaches	X				1999	2004	0.0375	1.5649	0.0382	0.4000	0.0382	0.3319	0.0367	0.2677	C
64	X	1995-00	MDOT	MARC Expansion Coaches	X				1999	2004	0.3246	13.5628	0.3309	3.4663	0.3309	2.8768	0.3182	2.3202	C (TCM)
66	X	1995-00	VDOT	Commuter Lots - District Wide			X		varies	1995, 2001	0.1030	4.3036	0.1050	1.0999	0.1050	0.9128	0.1010	0.7362	C
67	X	1995-00	VDOT	I-66 and Stringfellow Rd. Park and Ride	X				2000	2000 end	0.0624	2.6082	0.0636	0.6666	0.0636	0.5532	0.0612	0.4462	C
68	X	1995-00	VDOT	Lake Ridge Park and Ride (now called Tacketts Mill lot)	X					1999/2000	0.0312	1.3041	0.0318	0.3333	0.0318	0.2766	0.0306	0.2231	C
69	X	1995-00	VDOT	Bicycle Trails and Facilities (Arlington & Fairfax Co - 7 locations)			X		varies	2010-12	0.0531	2.2170	0.0541	0.5666	0.0541	0.4702	0.0520	0.3793	C
70	X	1995-00	VDOT	Improved Acceess to Metrorail Stations (VRE 2 Stn)			X		varies	2000-2012	0.0031	0.1304	0.0032	0.0333	0.0032	0.0277	0.0031	0.0223	C
71	X	1995-00	VDOT	I-66 HOV access at Monument Dr.	X					1997	0.0624	2.6082	0.0636	0.6666	0.0636	0.5532	0.0612	0.4462	C
72	X	1995-00	DC	Bicycle Facilities	X						0.0624	2.6082	0.0636	0.6666	0.0636	0.5532	0.0612	0.4462	C
73	X	1995-00	REGION	COG Regional Ridesharing Support	X					on-going	**1.7573**	**69.8906**	**1.7913**	**17.8484**	**1.7913**	**14.9204**	**1.7226**	**12.0338**	C
74	X	1995-00	REGION	M-47 Integrated Ridesharing	X					on-going	**0.6082**	**24.3995**	**0.6199**	**6.2319**	**0.6199**	**5.2028**	**0.5961**	**4.1962**	C
75	X	1995-00	REGION	M-92 Telecommuting Support	X					on-going	**1.2638**	**51.9120**	**1.2883**	**13.2638**	**1.2883**	**11.0351**	**1.2388**	**8.9002**	C
77		1996-01	VDOT	Duke Street Pedestrian Bridge	X				2005	2007	n/a	n/a	n/a	n/a	n/a	n/a			-
79	X	1996-01	VDOT	Fairfax County Bus Shelters (30 shelters with project #85)			X		1999	Summer 2001	0.0094	0.3912	0.0095	0.1000	0.0095	0.0830	0.0092	0.0669	C

EXHIBIT 26
TERM TRACKING SHEET
TRANSPORTATION EMISSION REDUCTION MEASURES
Part B - Yearly $PM_{2.5}$ and Precursor NOx Emissions

* Project Category: TR - Traffic Stream, C - Commute, H - Heavy Duty Vehicles (Engine Technology), SP- Specific Vehicle Type, TCM - Transportation Control Measures

NOs	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				ORIGINAL AC COMPLETION DATE	TUAL COMPLETION DATE	2011		2020		2030		2040		Project Category *
					FULL	SCALED-BACK	UNDER-WAY	REM			$PM_{2.5}$	Precursor NOx	$PM_{2.5}$	Precursor NOx	$PM_{2.5}$	Precursor NOx	$PM_{2.5}$	Precursor NOx	
81	X	1996-01	VDOT	Arlington County Metrocheck Program	X				1997	1997 Onwards	0.0094	0.3912	0.0095	0.1000	0.0095	0.0830	0.0092	0.0669	C
82	X	1996-01	VDOT	Old Dominion Drive Bike Trail			X		2000	2010-11	0.0031	0.1304	0.0032	0.0333	0.0032	0.0277	0.0031	0.0223	C
83	X	1996-01	WMATA	Bus Replacement (see line 58, above)	X					1998	Credit taken in line 58, above								SP
85	X	1996-01	VDOT	Fairfax County Bus Shelters (30 shelters with project #79)	X				1999	2001	0.0031	0.1304	0.0032	0.0333	0.0032	0.0277	0.0031	0.0223	C
90	X	1996-01	REGION	M-47c Employer Outreach / Guaranteed Ride Home	X					on-going	**3.6555**	**150.9969**	**3.7262**	**38.5840**	**3.7262**	**32.0744**	**3.5832**	**25.8692**	C
91	X	1996-01	REGION	M-70a Bicycle Parking			X		1999		0.0219	0.9129	0.0223	0.2333	0.0223	0.1936	0.0214	0.1562	C
92	X			M-92 Telecommuting Support [1]	Combined with item #75														C
95	X	1997-02	MCG	Germantown Transit Center	X				2005		0.0593	2.4778	0.0605	0.6333	0.0605	0.5256	0.0581	0.4239	C (TCM)
102	X	1997-02	PG	Prince George's County Bus Replacement	X				1998	1998									SP (TCM)
106	X	1997-02	VDOT	PRTC Employer Commuting Outreach Program	X					1977 on-going	0.0016	0.0652	0.0016	0.0167	0.0016	0.0138	0.0015	0.0112	C
107	X	1997-02	VDOT	PRTC Multimodal Strategic Marketing Implementation Plan	X					1977 on-going	0.0016	0.0652	0.0016	0.0167	0.0016	0.0138	0.0015	0.0112	C
108	X	1997-02	MDOT	M-103 Taxicab Replacement in Maryland [2]	X				2005	Stopped									SP
109	X	1997-02	REGION	M-70b Employer Outreach for Bicycles	X				1998	on going	**0.0034**	**0.1650**	**0.0035**	**0.0423**	**0.0035**	**0.0344**	**0.0034**	**0.0278**	C
110		1997-02	VDOT	M-77b Vanpool Incentive Programs in Virginia				x	1999	delayed	n/a	n/a	n/a	n/a	n/a	n/a			C
111	X	1998-03	WMATA	Bus Replacement (108 buses)	X				1999	1999									SP
112	X	1998-03	MCG	Montgomery County Bus Replacement	X					Ongoing									SP
113	X	1998-03	PG	Prince George's County Bus Replacement	X				1998	Ongoing									SP
114	X	1998-03	FDC	Frederick County Bus Replacement	X														SP
117	X	1998-03	VDOT	Arlington County Four Mile Run Bike Trail	X				1999	2009	0.0031	0.1304	0.0032	0.0333	0.0032	0.0277	0.0031	0.0223	C
118	X	1998-03	VDOT	Northern Virginia Turn Bays	X				2000	1998	0.0055	0.2295	0.0056	0.0587	0.0056	0.0487	0.0054	0.0393	TR
119	X	1998-03	VDOT	Fairfax City Bus Replacement	X				2001	2003									SP
121	X	1998-03	WMATA	WMATA Bus Replacement (252 buses)	X				2001	2001									SP
122	X	97 & 98 TIP	REGION	M-101a Mass Marketing Campagin (Consumer)			X			2005	0.211624493	**8.4931**	**0.2157**	**2.1692**	**0.2157**	**1.8109**	**0.2074**	**1.4606**	C
123	X	1999-04	MDOT	Various Park and Ride Lots(I-270/MD124, 450 & I-170/MD-75, 54 spaces)		X			2001/1999	2001	0.1124	4.6948	0.1146	1.1999	0.1146	0.9958	0.1102	0.8032	C
124	X	1999-04	MDOT	Signal Systems (197/MD-198, MD-382 TO US-301,US301)	X				2000	2002	-0.0110	-0.4591	-0.0112	-0.1173	-0.0112	-0.0974	-0.0108	-0.0785	TR
125	X	1999-04	VDOT	Transit Center at 7 Corners	X				2002	2001	0.0062	0.2608	0.0064	0.0667	0.0064	0.0553	0.0061	0.0446	C
126	X	1999-04	VDOT	Falls Church Clean Diesel Bus Service	X				2000	2003									SP
127	X	1999-04	VDOT	VA 234 Bike Trail			X		2001	2010	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	C
128	X	1999-04	VDOT	PRTC Ridesharing	X				on-going	2000 ongoing	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	C
130	X	1996-01	VDOT	M-14: I-66 Feeder Bus Fare Buy Down	X					1998 onward	0.1717	7.1726	0.1750	1.8331	0.1750	1.5214	0.1683	1.2270	C
131	X	2000-05	MDOT	Various park and Ride Lots	x				2002	2003	0.1015	4.2398	0.1035	1.0836	0.1035	0.8993	0.0995	0.7253	C

EXHIBIT 26
TERM TRACKING SHEET
TRANSPORTATION EMISSION REDUCTION MEASURES
Part B - Yearly $PM_{2.5}$ and Precursor NOx Emissions

* Project Category: TR - Traffic Stream, C - Commute, H - Heavy Duty Vehicles (Engine Technology), SP- Specific Vehicle Type, TCM - Transportation Control Measures

NOs	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				ORIGINAL AC COMPLETION DATE	TUAL COMPLETION DATE	2011		2020		2030		2040		Project Category *
					FULL	SCALED-BACK	UNDER-WAY	REM			$PM_{2.5}$	Precursor NOx	$PM_{2.5}$	Precursor NOx	$PM_{2.5}$	Precursor NOx	$PM_{2.5}$	Precursor NOx	
132	X	2000-05	MDOT	Signal Systems	X				Varies	on-going	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	TR
133	X	2000-05	VDOT	250 Spaces at Gambrill/Hooes Rds. Park and Ride	X				2002	2004	0.0562	2.3474	0.0573	0.5999	0.0573	0.4979	0.0551	0.4016	C
134	X	2000-05	VDOT	300 Spaces at Backlick Rd	X				2003	2007	0.0406	1.6954	0.0414	0.4333	0.0414	0.3596	0.0398	0.2900	C
135	X	2000-05	VDOT	Accotink-Gateway Connector Trail	X				2002	2005	0.0312	1.3041	0.0318	0.3333	0.0318	0.2766	0.0306	0.2231	C
136	X	2000-05	VDOT	Columbia Pike Trail			X		2000	2009	0.0250	1.0433	0.0255	0.2666	0.0255	0.2213	0.0245	0.1785	C
137	X	2000-05	VDOT	Lee Highway trail	X				2000	2007	0.0125	0.5216	0.0127	0.1333	0.0127	0.1106	0.0122	0.0892	C
138	X	2000-05	VDOT	Arlington Bus Shelter Improvements	X				2005	2005	0.0031	0.1304	0.0032	0.0333	0.0032	0.0277	0.0031	0.0223	C
139	X	2000-05	VDOT	Pentagon Metrostation Improvements	X					2003	0.0531	2.2170	0.0541	0.5666	0.0541	0.4702	0.0520	0.3793	C
140	X	2000-05	MDOT	East/West Intersection Improvements			X		2005	2005	0.0780	3.2603	0.0795	0.8332	0.0795	0.6915	0.0765	0.5577	C
141	X	2001-06	Feds	Federal Transit/Ridesharing subsidy	X				on-going		0.5962	24.9086	0.6078	6.3660	0.6078	5.2833	0.5844	4.2612	C
142	X	2002-07	WMATA	100 CNG buses	X				2002										SP (TCM)
143	X	2002-07	WMATA	ULSD with CRT filters	X				2006	Jun-06	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	H (TCM)
144		2003-08	DC	Replace ~~23~~ 12 Taxicabs with CNG cabs				X	2005	2006									H
145	X	2003-08	DC	D.C.Incident Response & TrafficManagement System	X				2005	2004	0.2709	11.3165	0.2761	2.8922	0.2761	2.4003	0.2655	1.9359	TR
146	X	2003-08	DC	Bicycle Lane in D. C. (35 Mile)	X				2005	2008	0.0420	2.3903	0.0428	0.6134	0.0428	0.4896	0.0411	0.3949	C (TCM)
147	X	2003-08	DC	Bicycle Racks in D. C. (500)	X				2005	2004	0.0039	0.2720	0.0040	0.0699	0.0040	0.0547	0.0038	0.0441	C (TCM)
148	X	2003-08	DC	External Bicycle Racks on WMATA Buses in D. C. (600)	X				2005	2003	0.0202	0.8493	0.0206	0.2171	0.0206	0.1800	0.0198	0.1452	C (TCM)
149		2003-08	DC	CNG Rental Cars (18)				X	2005										SP
150	X	2003-08	DC	Sidewalks in D.C. ($ 5 million)	X				2005	2004	0.3618	15.2986	0.3688	3.9106	0.3688	3.2400	0.3547	2.6131	C
151	X	2003-08	DC	CNG Refuse Haulers (2)	X				2005	2004									H (TCM)
152	X	2003-08	DC	Circulator /Feeder Bus Routes	X				2005	2003	0.1300	5.5181	0.1325	1.4106	0.1325	1.1681	0.1275	0.9421	C
153	X	2003-08	MDOT	Commuter Tax Credit	X				2005	n/a	0.7990	33.6796	0.8145	8.6087	0.8145	7.1356	0.7832	5.7551	C
155		2003-08	MDOT	Employer Vanpool Program (WWB)				X	2005										C
156	X	2003-08	MDOT	Green Line Link			X		2005	n/a	0.0320	1.2827	0.0326	0.3276	0.0326	0.2735	0.0314	0.2206	C
157	X	2003-08	MDOT	Park & Ride Lots - Southern Maryland			X		2005	2005	0.0690	2.6365	0.0704	0.6728	0.0704	0.5660	0.0677	0.4565	C
158	X	2003-08	MDOT	Prince George's County- Bus Exp			X		2005	n/a	0.4487	17.9877	0.4574	4.5942	0.4574	3.8360	0.4398	3.0939	C
159	X	2003-08	MDOT	MTA - Bus Service Expansion			X		2005	n/a	0.1087	4.2903	0.1108	1.0955	0.1108	0.9168	0.1065	0.7394	C
160	X	2003-08	MDOT	Ride- On - Super Discount			X		2005	n/a	0.0092	0.3892	0.0094	0.0995	0.0094	0.0824	0.0090	0.0665	C
161	X	2003-08	Regional	Regional Traveler Information Systems			X		2005		3.5324	147.5732	3.6007	37.7158	3.6007	31.3014	3.4626	25.2457	TR
162	X	2003-08	MDOT	Universal Transportation Access (MD + WMATA)			X		2005	n/a	0.1622	6.8595	0.1654	1.7534	0.1654	1.4527	0.1590	1.1717	C
163	X	2003-08	MCG	Construction of 1300 additional Parking Spaces at Grosvenor Metro Garage	X				2004		0.0751	2.8445	0.0765	0.7258	0.0765	0.6113	0.0736	0.4930	C (TCM)

EXHIBIT 26
TERM TRACKING SHEET
TRANSPORTATION EMISSION REDUCTION MEASURES
Part B - Yearly $PM_{2.5}$ and Precursor NOx Emissions

* Project Category: TR - Traffic Stream, C - Commute, H - Heavy Duty Vehicles (Engine Technology), SP- Specific Vehicle Type, TCM - Transportation Control Measures

NOs	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				ORIGINAL AC COMPLETION DATE	TUAL COMPLETION DATE	2011		2020		2030		2040		Project Category *
					FULL	SCALED-BACK	UNDER-WAY	REM			$PM_{2.5}$	Precursor NOx	$PM_{2.5}$	Precursor NOx	$PM_{2.5}$	Precursor NOx	$PM_{2.5}$	Precursor NOx	
164	X	2003-08	MCG	Bethesda Shuttle Bus Services	X				2004		0.0310	1.3151	0.0316	0.3362	0.0316	0.2784	0.0304	0.2245	C
165	X	2003-08	MCG	External Bicycle Racks on Ride-On Buses in Montgomery County	X				2004		0.0063	0.2649	0.0064	0.0677	0.0064	0.0561	0.0062	0.0453	C
166	X	2003-08	MCG	New CNG Powered Light Duty Vehicle fleet in the County	X				2004										SP
167	X	2003-08	MCG	Free Bus Service on Selected Routes on I-270	X				2004		0.0108	0.4555	0.0110	0.1164	0.0110	0.0965	0.0106	0.0778	C
168	X	2003-08	MCG	Annual Sidewalk Program	X				2004		0.1723	7.2850	0.1756	1.8622	0.1756	1.5428	0.1689	1.2444	C
169		2003-08	MDOT	Bethesda Breeze/International Express Metrobus				X	2005	Removed	0.0338	1.4723	0.0345	0.3765	0.0345	0.3107	0.0332	0.2506	C
170		2003-08	MDOT	Bethesda-8, Silver Spring Downtown Dasher and Prince Georges Co. Shuttles at 3 PNR lot				X	2005	Removed	0.0611	2.9008	0.0623	0.7427	0.0623	0.6058	0.0599	0.4886	C
171		2003-08	MDOT	Proposed Transportation Management District in Montgomery County (Rockville and Gaithersburg)				X	2005	Removed	0.0486	2.1622	0.0496	0.5531	0.0496	0.4550	0.0476	0.3670	C
172	X	2003-08	MDOT	Sidewalks (Bikes/Pedestrian) at / near Rail Stations	X				2005	2002	0.0964	4.0484	0.0983	1.0347	0.0983	0.8581	0.0945	0.6921	C
173	X	2003-08	MDOT	Neighborhood Sidewalks Improvements (Bike/Pedestrian)	X				2005	2004	0.0037	0.4876	0.0038	0.1259	0.0038	0.0944	0.0036	0.0761	C
174	X	2003-08	MDOT	Neighborhood Conservation Program - Neighborhood Sidewalks Improvements (Bikes/Pedestrian)		X			2005	Ongoing	0.0033	0.4266	0.0033	0.1102	0.0033	0.0826	0.0032	0.0666	C
175	X	2003-08	MDOT	Maryland bus Transit Service Expansion	X				2005	2004	0.2321	8.7946	0.2366	2.2442	0.2366	1.8900	0.2275	1.5243	C
176	X	2003-08	VDOT	Universal Transportation Access Program	X				2005	2005-07	0.0122	0.5144	0.0124	0.1315	0.0124	0.1090	0.0120	0.0879	C
177	X	2003-08	VDOT	Interactive Rideshare & Kiosk Initiative			X		2008 onward		0.0048	0.1943	0.0049	0.0496	0.0049	0.0414	0.0048	0.0334	C
178	X	2003-08	VDOT	Mobile Commuter Stores	X				2005	2005	0.0268	1.0743	0.0273	0.2744	0.0273	0.2291	0.0263	0.1848	C
179	X	2003-08	VDOT	Telework Incentive Program (Telework VA)[1]	X				2005	Fall 2006	0.0079	0.3283	0.0080	0.0839	0.0080	0.0696	0.0077	0.0562	C
180	X	2003-08	VDOT	Commuter Choice	X				2005		0.0089	0.3862	0.0091	0.0988	0.0091	0.0816	0.0088	0.0658	C
181	X	2003-08	VDOT	Employer Shuttle Services				X	2005		0.1060	4.5846	0.1081	1.1723	0.1081	0.9682	0.1039	0.7809	C
184	X	2003-08	VDOT	Van Start / Van Save	X				2005	till 2006									C
185	X	2003-08	VDOT	Metro Shuttle Bus			X		2005	1999-2005	0.0184	0.7031	0.0188	0.1794	0.0188	0.1509	0.0180	0.1217	C
187	X	2003-08	VDOT	VRE Mid-Day Train Service	X				2005	2002	0.0200	0.7986	0.0204	0.2040	0.0204	0.1704	0.0196	0.1374	C
190	X	2003-08	VDOT	Employer Vanpool Program (Bridge deck)	X				2005	2004 - 2008									C
191	X	2003-08	VDOT	Town of Leesburg P&R Lot	X				2005	2010	0.0274	1.0695	0.0280	0.2730	0.0280	0.2289	0.0269	0.1847	C
192	X	2003-08	VDOT	District-wide P&R Lots	X				2005	2001-2005	0.1558	6.1114	0.1589	1.5604	0.1589	1.3072	0.1528	1.0543	C
193	X	2003-08	VDOT	Additional Parking at 4 Metro stations	X				2005	2005	0.2394	9.0718	0.2440	2.3149	0.2440	1.9495	0.2347	1.5724	C
196	X	2003-08	WMATA	64 CNG Buses (Purchased in 2001)	X				2005	2004									SP (TCM)
197	X	2003-08	WMATA	250 CNG Buses (175 buses by Dec. 2004; 75 buses by mid 2006)	X				2005	Jun-06									SP
198	X	2003-08	WMATA	60 Engine Replacement (MY 1992 & 1993 MY buses)	X				2004	2004									SP
199	X	2003-08	WMATA	Car Sharing Program	X				2005	2004	0.0130	0.4933	0.0133	0.1259	0.0133	0.1060	0.0128	0.0855	C
200	X	2003-08	WMATA	Bikes Racks on WMATA Buses in VA (372 Bike Racks)	X				2005	2004	0.0126	0.5280	0.0128	0.1350	0.0128	0.1119	0.0123	0.0903	C (TCM)
202		2003-08	MDOT	Fleet Replacement (state auto fleet, gas to hybrid, 250 vehicles)				X	2005		0.0483	2.0171	0.0492	0.5155					SP

EXHIBIT 26
TERM TRACKING SHEET
TRANSPORTATION EMISSION REDUCTION MEASURES
Part B - Yearly $PM_{2.5}$ and Precursor NOx Emissions

* Project Category: TR - Traffic Stream, C - Commute, H - Heavy Duty Vehicles (Engine Technology), SP- Specific Vehicle Type, TCM - Transportation Control Measures

NOs	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				ORIGINAL AC COMPLETION DATE	TUAL COMPLETION DATE	2011		2020		2030		2040		Project Category *
					FULL	SCALED-BACK	UNDER-WAY	REM			$PM_{2.5}$	Precursor NOx	$PM_{2.5}$	Precursor NOx	$PM_{2.5}$	Precursor NOx	$PM_{2.5}$	Precursor NOx	
203	X	2003-08	MDOT	Replace 55 Montgomery County 10 yr. old buses w/ new CNG buses			X		2005	Ongoing	0.5910	24.6908	0.6024	6.3103					SP
204		2003-08	MDOT	Neighborhood Bus Shuttle (5 circulator routes)				X	2005		0.0808	3.3573	0.0824	0.8580	0.0824	0.7126	0.0792	0.5747	C
205	X	2003-08	MDOT	New Surface Parking at Transit Centers (500 spaces)			X		2005	2005	0.0428	1.6235	0.0436	0.4143	0.0436	0.3488	0.0419	0.2813	C
206		2003-08	MDOT	Additional Bike Lockers at Metro-Stations				X	2005		0.1368	5.7456	0.1395	1.4685	0.1395	1.2179	0.1341	0.9823	C
207	X	2003-08	MDOT	Bike Facilities at PnR Lots or other similar location			X		2005	2005	0.1122	4.5381	0.1144	1.1592	0.1144	0.9667	0.1100	0.7797	C
208		2003-08	MDOT	CNG Fueling Stations				X	2005										SP
209		2003-08	MDOT	Gas cap replacements (ROP Credit)				X	2005		N/A	N/A	N/A	N/A	N/A	N/A			SP
210		2003-08	MDOT	Gas can turnover (ROP Credit)				X	2005		N/A	N/A	N/A	N/A	N/A	N/A			SP
211	X	2003-08	MDOT	External Bicycle Racks on WMATA Buses (486 MD buses)	X				2005	2002	0.0145	0.6087	0.0148	0.1556	0.0148	0.1290	0.0142	0.1041	C (TCM)
212	X	2003-08	MDOT	Bike \ Pedestrian Trail - Anacostia River Walk			X		2005	Ongoing	0.0021	0.1320	0.0022	0.0339	0.0022	0.0268	0.0021	0.0216	C
213		2003-08	MDOT	Transit Prioritization - Queue Jumps				X	2005		0.0221	1.0366	0.0225	0.2654	0.0225	0.2168	0.0217	0.1748	C
214	X	2003-08	MDOT	Commuter Choice Benefit/Tax Credit - Marketing Expansion	X				2005	Ongoing	0.5623	23.6531	0.5732	6.0457	0.5732	5.0126	0.5512	4.0428	C
215	X	2003-08	MDOT	Improvements to Pedestrian Access in TOD areas (4 locations)			X		2005	Ongoing	0.0556	2.4022	0.0567	0.6142	0.0567	0.5074	0.0545	0.4092	C
216	X	2003-08	MDOT	Telecommuting Expansion[1]	X				2005	Ongoing	0.8305	33.0827	0.8466	8.4488	0.8466	7.0611	0.8141	5.6950	C
217		2003-08	MDOT	Replace older Diesel Engine in Public Sector vehicles				X	2005										H
218	X	2003-08	VDOT	MV-92 Telecommuting Program - Expanded[1]	X				2005	2005	0.8869	35.3306	0.9041	9.0228	0.9041	7.5408	0.8694	6.0819	C
219	X	2003-08	VDOT	MV-123 Employer Outreach for Public Sector Employees [2]	X				2005	2003	0.1544	6.5292	0.1574	1.6690	0.1574	1.3828	0.1514	1.1152	C
220	X	2003-08	REGION	Signal System Optimization	X				2005	2005	0.9874	41.2489	1.0065	10.5421	1.0065	8.7492	0.9678	7.0565	TR
221	X	2007-12	MDOT	Two P & R Lots in Frederick County (99 spaces)	X				2007	2008	0.0119	0.4660	0.0086	0.0831	0.0086	0.0709	0.0083	0.0572	C
222	X	2007-12	MDOT	MDOT P & R Lots at US 340 (66-99 spaces, Frederick Co.)	X				2007	2007									
223	X	2008-13	MDOT	MCG/MDOT P & R Lots at US 340 & Mt Zion Rd. (37 speces)	X				2008	2008	0.0091	0.3577	0.0093	0.0913	0.0093	0.0765	0.0090	0.0617	
224	X	2008-13	MDOT	MCG/MDOT P & R Lots at US 340 & Mt Zion Rd. - expansion (39 speces)			X		2011	2011									
225	X	2008-13	MDOT	MCG/MDOT P & R Lots at I 70 & MD 355 (100 speces)			X		2010	2010	0.0120	0.4707	0.0123	0.1202	0.0123	0.1007	0.0118	0.0812	
226	X	2008-13	MDOT	MCG/MDOT P & R Lots at I 270 & MD 80 (164 speces)	X				2009	2009	0.0197	0.7720	0.0201	0.1971	0.0201	0.1652	0.0193	0.1332	
227	X	2008-13	MDOT	MDOT Syglal System Reviewing			X		2010	on-going									
228	X	2008-13	MDOT	MDOT Takoma Langely Transit Center			X		2012	2012	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
										Available Emissions Credits	**17.320**	**807.642**	**15.744**	**187.199**	**15.141**	**150.310**	**14.560**	**121.230**	

EXHIBIT 26

TRANSPORTATION EMISSION REDUCTION MEASURES (CLRP Projects Only)
Part B - Yearly $PM_{2.5}$ and Precursor NOx Emissions

Project Category: TR - Traffic Stream, C - Commute, H - Engine Technology (Heavy Dudy Vehicles), SP- Specific Vehicle Type

NOs	CREDIT	TIP			IMPLEMENTATION STATUS				PROJECTED	ACTUAL	TONS/ANNUM REDUCTION CREDITED								Project
											2011		2020		2030		2040		
	TAKEN	CREDITED	AGENCY	PROJECT	FULL	SCALED-BACK	UNDER-WAY	REM	COMPLETION DATE	COMPLETION DATE	$PM_{2.5}$	Precursor NOx	$PM_{2.5}$	Precursor NOx	$PM_{2.5}$	Precursor NOx	$PM_{2.5}$	Precursor NOx	Category
221	X	1995-00 TIP	REGION	M-24 Speed Limit Adherence					2010		1.8120	75.7023	2.1072	22.0719	0.7941	6.9030	0.7636	5.5675	TR
222		1996-01 TIP	MGC	Rock Spring Park Pedestrian Amenities				X			0.0265	1.1069	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-
223	X	1996-01 TIP	MGC	Olney Transit Center Park and Ride					2015		0.0530	2.2138	0.0531	0.5559	0.0147	0.1279	0.0142	0.1032	C
224	X	1996-01 TIP	MGC	Damascus Park and Ride						2003	0.0265	1.1069	0.0265	0.2780	0.0074	0.0640	0.0071	0.0516	C
225	X	1996-01 TIP	DC	M-103 Taxicab Replacement (DC)				X	2015		0.0000	0.0000	5.2412	54.8984	12.6415	109.8936	12.1565	88.6330	H
226	X	STADIUM ANALYSIS		M-103 Taxicab Replacement (MD)				X	2008		0.0000	0.0000	4.1929	43.9187	5.0566	43.9574	4.8626	35.4532	H
227	X	1997-02 TIP	MDOT	Shady Grove West Transit Center Park and Ride				X			0.0662	2.7673	0.0663	0.6949	0.0184	0.1599	0.0177	0.1290	C
228	X	1997-02 TIP	MGC	Olney Transit Center Park and Ride					2015		0.0000	0.0000	0.0218	0.2280	0.0147	0.1279	0.0142	0.1032	C
229	X	1997-02 TIP	MGC	White Oak Park and Ride					2008		0.1325	5.5345	0.1327	1.3898	0.0368	0.3199	0.0354	0.2580	C
230	X	1997-02 TIP	MGC	Damascus Park and Ride						2003	0.0000	0.0000	0.0082	0.0855	0.0055	0.0480	0.0053	0.0387	C
231	X	1997-02 TIP	MGC	Four Corners Transit Center					2015		0.0066	0.2767	0.0066	0.0695	0.0018	0.0160	0.0018	0.0129	C
232		1997-02 TIP	MGC	Burtonsville Transit Center				X			0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-
233	X	1997-02 TIP	MGC	Silver Spring Transit Access							0.0066	0.2767	0.0054	0.0570	0.0037	0.0320	0.0035	0.0258	C
234	X	1997-02 TIP	MGC	Shady Grove Parking Construction						2003	0.1259	5.2578	0.1261	1.3204	0.0350	0.3039	0.0336	0.2451	C
PLAN TOTAL											0.3511	90.3688	5.6215	80.9544	12.7611	117.8361	12.2715	95.0389	
GRAND TOTAL (Current Measures + CLRP plan)											17.671	898.011	21.365	268.153	27.902	268.146	26.832	216.269	

DEFINITIONS: Project Numbers implemented fully prior to 2000 were removed from the TERM Tracking Sheet

CREDIT TAKEN (X means emissions reduction credits taken):
TIP - Emissions credits are taken for projects being implemented, according to the progress reporting schedules provided by the implementing agencies (contained in Appendix J of Conformity Document). No credit has been taken for projects in which only some components of the measure have been implemented.
CLRP - Credit is taken for each of these elements of the CLRP according to the schedule provided by the implementing agency.

IMPLEMENTATION STATUS:
FULL = project is completed as planned at the time of analysis.
SCALED BACK = project is completed, but at a different level than assumed at the time of analysis (i.e., purchased 50 buses instead of 100)
UNDERWAY = project is not complete, but is close enough that credit may be taken (i.e., under construction, NOT just out for bid)
REMOVED = project no longer expected to be implemented or constructed

COMPLETION DATE:
PROJECTED = project completion date originally expected (i.e., at time of emissions analysis)
ACTUAL = actual year project was open for use, or expected to be open for use if under construction

REMOVED projects Emissions credits are not counted in toal available emissions credits

1 Line items 218, 216, 179, 92 are all credited as part of M-92 Regional Telecommute Support TERM, line item # 75

2 Line item 108 & 219 credits are taken only for year 2010

IV. CONSULTATION

The November 1993 regulations identified specific requirements and processes for consultation on an interagency basis and with the public. The requirements addressed consultation as regards the preparation of state air quality implementation plans (SIP)s as well as conformity determinations. The regulations stated that in addition to establishing these procedures for the future, reasonable opportunity for consultation must be provided for current conformity assessments.

To address these requirements, the TPB began discussion of an appropriate approach starting in January 1994. Consultation agencies were identified as the Environmental Protection Agency (EPA), Federal Highway Administration (FHWA), Federal Transit Administration (FTA) and the Metropolitan Washington Air Quality Committee (MWAQC) and its member agencies.

Following a series of work sessions, public forums, comments and correspondence with the consultation agencies and the public, the TPB developed and adopted a set of procedures to fully address all requirements. The procedures involve invitations to the public and the consultation agencies to attend and become involved in all TPB matters regarding transportation conformity. Similarly, over the past few years the TPB has expanded the opportunity for public involvement through a series of new initiatives. Examples include: the public comment period at the start of each TPB meeting; regular public forums and workshops on major topics; a monthly newsletter; the institution of the Citizens Advisory Committee. The procedures have been summarized into a report called the TPB Participation Plan (Reference 11).

The TPB adopted the original set of procedures on September 21, 1994 and staff has subsequently executed them. In the August 15, 1997 amendments to its conformity regulations, EPA established additional requirements regarding consultation. Accordingly, COG/TPB staff, in consultation with MWAQC, appropriate federal agencies and the public, prepared draft updates to the TPB procedures. Following an extensive review and comment period, the TPB adopted revised consultation procedures (Reference 4), which were followed throughout the preparation of the 2010 CLRP and the FY2011-2016 TIP. Exhibit 27 lists the original schedule for these public involvement/consultation opportunities throughout the year. Additional materials are contained as Appendix C.

Exhibit 27

Schedule for the 2010 Financially Constrained Long-Range Transportation Plan (CLRP) and FY 2011 – 2016 Transportation Improvement Program (TIP)

October 15, 2009	TPB Hosts Public Outreach Planning Session on the 2010 update of the CLRP and FY 2011-2016 TIP at the Citizens Advisory Committee (CAC) meeting
*October 21, 2009	TPB is Briefed on Draft Call for Projects
*November 18, 2009	TPB Releases Final Call for Projects-- Transportation Agencies Begin Submitting Project Information through On-Line Database
April 2, 2010	DEADLINE: Transportation Agencies Complete Submission of Draft On-Line Project Inputs.
April 9, 2010	Technical Committee Reviews Draft CLRP and TIP Project Submissions and Draft Scope of Work for the Air Quality Conformity Assessment
April 15, 2010	CLRP and TIP Project Submissions and Draft Scope of Work Released for Public Comment
*April 21, 2010	TPB is Briefed on Project Submissions and Draft Scope of Work
May 16, 2010	Public Comment Period Ends
*May 19, 2010	TPB Reviews Public Comments and is asked to Approve Project Submissions and Draft Scope of Work
July 2, 2010	DEADLINE: Transportation Agencies Complete TIP Project Submissions and Finalize Congestion Management Documentation Forms (where needed) and CLRP Forms[1]. (Submissions must not impact conformity inputs; note that the deadline for conformity inputs was April 2, 2010).
*September 15, 2010	TPB Receives Status Report on the Draft CLRP, TIP and Conformity Assessment
October 14, 2010	Draft CLRP, TIP and Conformity Assessment Released for Public Comment at Citizens Advisory Committee (CAC) and the TPB Citizen Advisory Committee Hosts a Public Meeting on the Draft CLRP and TIP.
*October 20, 2010	TPB Briefed on the Draft CLRP, TIP and Conformity Assessment
November 14, 2010	Public Comment Period Ends
*November 17, 2010	TPB Reviews Public Comments and Responses to Comments, and is Presented the Draft CLRP, TIP and Conformity Assessment for Adoption

*TPB Meeting

[1] By this date, the CLRP forms must include information on the Planning Factors, Environmental Mitigation, Congestion Management Information, and Intelligent Transportation Systems; separate Congestion Management Documentation Forms (where needed) must also be finalized.

V. CONFORMITY ASSESSMENT - CRITERIA AND PROCEDURES

EPA's conformity regulations identify criteria and procedures for the determination of conformity. These regulations vary according to pollutants and to different actions being considered and according to the time period and the area's standing with EPA in terms of meeting SIP milestone requirements. The March 24, 2010 amendments to EPA's regulations represent the current transportation conformity requirements. The following sections indicate: (1) the appropriate sections of the regulations which must be adhered to in this conformity analysis, and (2) the manner in which the regulations have been met.

A. CONFORMITY CRITERIA

This section identifies the criteria (sections of the regulations) which the CLRP and TIP must meet in order to conform to current implementation plans in the District of Columbia, Maryland and Virginia. Exhibit 28 lists all sections of the regulations relevant at this time to assessment of the 2010 CLRP and the FY2011-2016 TIP. The following discussion indicates the manner in which each criterion was met.

B. RELATIONSHIP TO CRITERIA

Sec. 93.110 Criteria and procedures: Latest planning assumptions.

The conformity assessment is based upon the most current planning assumptions available for the Washington region. Round 8.0 Cooperative Forecasts were approved by the Metropolitan Development Policy Committee in 2010. These forecasts were developed and reviewed with an explicit perspective on transportation and land use interaction.

Travel demand modeling methods incorporating the latest travel time refinements were used in this study. Other refinements include development and use of a comprehensive set of transit and HOV networks. As with previous conformity analyses, transit fares are modeled explicitly in the modal choice process. The analysis includes actual fares for the base year simulation, with forecast year fares based on current (August, 2010) fares with increases through time as a function of increases in the consumer price index. Base year fares are modeled to reflect the WMATA tariff and other actual charges levied by each transit provider; the updated fare tariffs provided the basis for future analysis years. Transit operating policies, such as hours and frequency of service, are updated annually and modeled explicitly to reflect actual conditions in the peak

Exhibit 28

Conformity Criteria

All Actions at all times:

Sec. 93.110	Latest planning assumptions.
Sec. 93.111	Latest emissions model.
Sec. 93.112	Consultation.

Transportation Plan:

Sec. 93.113(b)	TCMs.
Sec. 93.118 and/or	Emissions budget and /or Interim
Sec. 93.119	emissions.

TIP:

Sec. 93.113(c)	TCMs.
Sec. 93.118 and/or	Emissions budget and /or Interim
Sec. 93.119	emissions.

Project (From a Conforming Plan and TIP):

Sec. 93.114	Currently conforming plan and TIP.
Sec. 93.115	Project from a conforming plan and TIP.
Sec. 93.116	CO, PM_{10}, and $PM_{2.5}$ hot spots.
Sec. 93.117	PM_{10} and $PM_{2.5}$ control measures.

Project (Not From a Conforming Plan and TIP):

Sec. 93.113(d)	TCMs.
Sec. 93.114	Currently conforming plan and TIP.
Sec. 93.116	CO, PM_{10}, and $PM_{2.5}$ hot spots.
Sec. 93.117	PM_{10} and $PM_{2.5}$ control measures.
Sec. 93.118 and/or	Emissions budget and/or Interim
Sec. 93.119	emissions

and off-peak hours. The overall travel demand modeling process is continually monitored and refined as needed to reflect changing conditions, whether related to travel patterns, TERM effectiveness or other changes, as new data become available.

Sec. 93.111 Criteria and procedures: Latest emissions model.

The current analysis used MOBILE6.2, the latest emission factor model specified by EPA for use in preparation of state implementation plans and conformity assessments.

Sec. 93.112 Criteria and procedures: Consultation.

As discussed in Chapter IV, appropriate and extensive interagency and public consultation procedures have been followed throughout this analysis.

Sec. 93.113 Criteria and procedures: Timely implementation of TCMs.

The policy element of the 2010 CLRP specifically addresses the implementation of projects and measures designed to achieve air quality attainment goals. Previous TIPs contained CMAQ-funded TERMs and TCM projects which are elements of the regional ozone attainment plan. As a means of addressing this section of the conformity regulations, implementing agencies prepared progress reports on the implementation status of each of these projects. Appendix I contains the responses from each implementing agency, which document the implementation progress. Some are subject to normal delays associated with the programming process.

Exhibit 29 summarizes funding totals by category in the Annual Element of the FY2011-2016 TIP. As seen in the table, almost 50% of programmed expenditures address transit, ridesharing and bikeways.

EXHIBIT 29

FUNDING CATEGORIES
IN THE ANNUAL ELEMENT OF THE FY2011-2016 TIP

CATEGORY	TOTAL ANNUAL ELEMENT COST (000's)
Transit	$ 1,873,990
Highway	$ 1,455,610
Ridesharing	$ 4,690
Bikeways	$ 32,740
CMAQ, TERMs, Enhancements	$ 574,990
TOTAL	$ 3,942,020

Sec. 93.114 Criteria and procedures: Currently conforming transportation plan and TIP.

There is a currently conforming plan and program in the Washington region. This current conformity analysis is designed to update and supersede the (conforming) FY2010-2015 TIP and the (conforming) 2009 CLRP, adopted by the TPB in October, 2009.

Sec. 93.115 Criteria and procedures: Projects from a plan and TIP.

All projects advanced for implementation will come from a conforming plan and program.

Sec. 93.116 Criteria and procedures: Localized CO and PM_{10} violations (hot spots).

Any project advanced to the FY2011-2016 TIP must first have met this criterion as an element of its environmental study. (The Washington area is now in attainment for both carbon monoxide and PM_{10}.)

Sec. 93.117 Criteria and procedures: Compliance with PM_{10} and $PM_{2.5}$ control measures.

The Washington area is in attainment for PM_{10}. Per $PM_{2.5}$ requirements, a SIP for the Washington nonattainment area was developed and submitted to EPA in April, 2008.

93.118 Motor vehicle emissions budget

As discussed in Chapter II, part B, this analysis includes use of the: (1) existing 1-hour ozone budgets as well as the budgets developed as part of the 8-hour ozone SIP, and (2) direct $PM_{2.5}$ and precursor NOx emissions budgets contained in the April 2008 $PM_{2.5}$ SIP submittal which are awaiting EPA's approval or adequacy finding for use in conformity. As discussed in Chapter III, total VOC, NOx, $PM_{2.5}$, and CO emissions for all program and plan milestone analysis years are within their respective emissions budgets.

Sec. 93.119 Criteria and procedures: Interim emissions in areas without motor vehicle budgets

The forecast year $PM_{2.5}$ pollutant emissions are below those of the 2002 base year.

NOTE: See EPA's conformity regulations for the full text associated with each section's requirements.

VI. FINDINGS

The analytical results described above provide a basis, in relation to US EPA conformity regulations, for a determination of conformity of the year 2010 Constrained Long Range Plan and the FY2011-2016 Transportation Improvement Program for The Washington Metropolitan Region, with requirements of the Clean Air Act Amendments of 1990.

APPENDIX A

Air Quality Conformity
Scope of Work

AIR QUALITY CONFORMITY ASSESSMENT: 2010 CONSTRAINED LONG RANGE PLAN AMENDMENTS AND FY2011-2016 TRANSPORTATION IMPROVEMENT PROGRAM

SCOPE OF WORK

I. INTRODUCTION

Projects solicited for the 2010 Constrained Long Range Plan (CLRP) and the FY2011-2016 Transportation Improvement Program (TIP) are scheduled to be finalized at the May 19, 2010 TPB meeting. This scope of work reflects the tasks and schedule designed for the air quality conformity assessment leading to adoption of the plan and program on November 17, 2010. This work effort addresses requirements associated with attainment of the ozone standards (volatile organic compounds (VOC) and nitrogen oxides (NOx) as ozone precursor pollutants), and fine particles ($PM_{2.5}$) standards (direct particles and precursor NOx), as well as maintenance of the wintertime carbon monoxide (CO) standard.

The plan and program must meet air quality conformity regulations: (1) as originally published by the Environmental Protection Agency (EPA) in the November 24, 1993 Federal Register, and (2) as subsequently amended, most recently on January 24, 2008, and (3) as detailed in periodic FHWA / FTA and EPA guidance. These regulations specify both technical criteria and consultation procedures to follow in performing the assessment.

This scope of work provides a context in which to perform the conformity analyses and presents an outline of the work tasks required to address all regulations currently applicable.

II. REQUIREMENTS AND APPROACH

A. **Criteria** (See Exhibit 1)

As described in the 1990 Clean Air Act Amendments, conformity is demonstrated if transportation plans and programs:

1. Are consistent with most recent estimates of mobile source emissions,

2. Provide expeditious implementation of TCMs, and

3. Contribute to annual emissions reductions.

Assessment criteria for ozone, CO, and $PM_{2.5}$ are discussed below.

Ozone season pollutants will be assessed by comparing the "action" scenarios to both the existing 1-hour VOC and NOx emissions budgets, as well as "new" 8-hour budgets contained in the State Implementation Plan (SIP) submitted by the Metropolitan Washington Air Quality Committee (MWAQC) to EPA in June 2007.

The region is in maintenance for mobile source wintertime CO and, as in prior conformity assessments, is required to show that pollutant levels do not exceed the approved budget.

$PM_{2.5}$ pollutants will be assessed both by comparing the "action" scenarios to a 2002 base and by comparing the pollutant levels to the budgets submitted by the MWAQC to EPA in April, 2008. $PM_{2.5}$ emissions will be inventoried for yearly totals (instead of on a daily basis as performed for Ozone and CO).

B. Approach (See Table 1 – Summary of Technical Approach)

The analytical approach is similar to that applied and documented in the air quality conformity assessment of the 2009 CLRP and the FY2010-2015 TIP. In addition to the highlighted elements below, explicit inputs include: a summary list of major policy and technical input assumptions, shown as Attachment A; and all transportation network elements which will be finalized at the May 19, 2010 TPB meeting.

TABLE 1 – Summary of Technical Approach

	Ozone Wintertime	CO	$PM_{2.5}$
Pollutant:	VOC, NOx	CO	Direct particles, Precursor NOx
Emissions Assessment Criteria:	Existing 1-hour ozone budgets & 8-hour ozone budgets	Approved wintertime CO emissions budget	Reductions from base 2002 inventory & comparison to budgets
Emissions Analysis Time-frame:	Daily Daily		Annual
Geography:	1-hour ozone non-attainment area 8-hour ozone non-attainment area (1-hr. area less Stafford)	DC, Arl., Alex., Mont., Pr. Geo.	1-hr. area less Stafford and Calvert counties
Network Inputs:	Regionally significant projects		
Land Activity:	Round 8.0		
Modeled Area:	Current Cordon (2191 zone)		
Travel Demand Model:	Version 2.2		
Mobile Model:	MOBILE6.2 emissions factors, consistent with the procedures utilized to establish the VOC and NOx mobile source emissions budgets	MOBILE6.2 Consistent with procedures used to establish the budget	MOBILE6.2 'Seasonal' approach, consistent with procedures used to establish the budget
Emissions Factor Refinements:	Use of 2008 vehicle registration data for all jurisdictions		

III. CONSULTATION

1. Execute TPB consultation procedures (as outlined in the consultation procedures report adopted by the TPB on May 20, 1998).

2. Participate in meetings of MWAQC, its Technical Advisory Committee and its Conformity Subcommittee to discuss the scope of work activities, TERM development process, and other elements as needed; discuss at TPB meetings or forums, as needed, the following milestones:

   - CLRP / TIP Call for Projects
   - Scope of work
   - TERM proposals
   - Project submissions: documentation and comments
   - Analysis of TERMs, list of mitigation measures
   - Conformity assessment: documentation and comments
   - Process: comments and responses

IV. WORK TASKS

1. Receive project inputs from programming agencies and organize into conformity documentation listings (endorsement of financially constrained project submissions scheduled for May 19, 2010)

   - Project type, limits, NEPA approval, etc.
   - Phasing with respect to forecast years
   - Transit operating parameters, e.g. schedules, service, fares
   - Action scenarios

2. Review and Update Land Activity files to reflect Round 8.0 Cooperative Forecasts

   - Households by auto ownership, population and employment
   - Zonal data files

3. Prepare forecast year highway, HOV, and transit networks

   - Update 2011, 2020, & 2030 highway networks & develop 2040 highway network
   - Prepare 2011, 2020, 2030, & 2040 transit network input files
   - Update transit fares and highway tolls, as necessary

4. Prepare 2011 travel and emissions estimates

   - Execute travel demand modeling
   - Develop Mobile6.2 emission factors
   - Calculate emissions (daily for ozone season VOC and NOx for ozone standard requirements; daily for winter CO; yearly for $PM_{2.5}$ direct particles and precursor NOx)

5. Prepare 2020 travel and emissions estimates

   - Tasks as in year 2011 analysis

6. Prepare 2030 travel and emissions estimates

   - Tasks as in year 2020 analysis
   - Apply “transit constraint” using 2020 levels.

7. Prepare 2040 travel and emissions estimates

   - Prepare Mobile6.2 emission factors
   - Prepare travel demand input files (controls & data sets) for new analysis year
   - Tasks as in year 2030 analysis, including transit constraint

8. Identify extent to which TIP and plan provide for expeditious implementation of TCMs contained in ozone state implementation plans and emissions mitigation requirements of previous TIP and CLRP commitments (TERMs)

   - In the CLRP / TIP Call for Projects document staff identified previous TCM and TERM commitments and requested a status report from the implementing agencies
   - Staff will review these reports as they are received and update the TERM tracking sheet that was included in the July 15, 2009 air quality conformity report
   - The status reports and the updated TERM tracking sheet will be included in the air quality conformity report.

9. Coordinate / analyze emissions reductions associated with CMAQ and similar projects

   - Obtain project-specific emissions reductions from programming agencies
   - Summarize daily ozone season VOC and NOx reductions for each milestone year
   - Summarize annual direct $PM_{2.5}$ and precursor NOx $PM_{2.5}$ pollutant reductions; explore additional TERMS
   - With oversight from the Travel Management Subcommittee, as needed, propose and analyze additional measures for their emissions benefits, costs, cost effectiveness, and other evaluation criteria

10. Analyze results of above technical analysis

    - Reductions from 1990 (ozone season VOC and NOx and winter CO) and 2002 base ($PM_{2.5}$)
    - 1-hour and 8-hour ozone season VOC and NOx budgets, direct $PM_{2.5}$ and precursor NOx budgets, and winter CO emissions budgets
    - With oversight from the Travel Management Subcommittee, the Technical Committee and the TPB, identify and recommend additional measures should the plan or program fail any test and incorporate measures into the plan

11. Assess conformity and document results in a report

    - Document methods
    - Draft conformity report
    - Forward to technical committees, policy committees
    - Make available for public and interagency consultation
    - Receive comments
    - Address comments and present to TPB for action
    - Finalize report and forward to FHWA, FTA and EPA

V. SCHEDULE

The schedule for the execution of these work activities is shown in Exhibit 2. The time line shows completion of the analytical tasks, preparation of a draft report, public and interagency review, response to comments and action by the TPB on November 17, 2010.

Exhibit 1

Conformity Criteria

All Actions at all times:

Sec. 93.110	Latest planning assumptions.
Sec. 93.111	Latest emissions model.
Sec. 93.112	Consultation.

Transportation Plan:

Sec. 93.113(b)	TCMs.
Sec. 93.118 and/or	Emissions budget and /or Interim
Sec. 93.119	emissions.

TIP:

Sec. 93.113(c)	TCMs.
Sec. 93.118 and/or	Emissions budget and /or Interim
Sec. 93.119	emissions.

Project (From a Conforming Plan and TIP):

Sec. 93.114	Currently conforming plan and TIP.
Sec. 93.115	Project from a conforming plan and TIP.
Sec. 93.116	CO, PM_{10}, and $PM_{2.5}$ hot spots.
Sec. 93.117	PM_{10} and $PM_{2.5}$ control measures.

Project (Not From a Conforming Plan and TIP):

Sec. 93.113(d)	TCMs.
Sec. 93.114	Currently conforming plan and TIP.
Sec. 93.116	CO, PM_{10}, and $PM_{2.5}$ hot spots.
Sec. 93.117	PM_{10} and $PM_{2.5}$ control measures.
Sec. 93.118 and/or	Emissions budget and/or Interim
Sec. 93.119	emissions

Sec. 93.110 Criteria and procedures: Latest planning assumptions.

The conformity determination must be based upon the most recent planning assumptions in force at the time of the conformity determination.

Sec. 93.111 Criteria and procedures: Latest emissions model.

The conformity determination must be based on the latest emission estimation model available.

Sec. 93.112 Criteria and procedures: Consultation.

Conformity must be determined according to the consultation procedures in this subpart and in the applicable implementation plan, and according to the public involvement procedures established in compliance with 23 CFR part 450.

Sec. 93.113 Criteria and procedures: Timely implementation of TCMs.

The transportation plan, TIP, or any FHWA/FTA project which is not from a conforming plan and TIP must provide for the timely implementation of TCMs from the applicable implementation plan.

Sec. 93.114 Criteria and procedures: Currently conforming transportation plan and TIP.

There must be a currently conforming transportation plan and currently conforming TIP at the time of project approval.

Sec. 93.115 Criteria and procedures: Projects from a plan and TIP.

The project must come from a conforming plan and program.

Sec. 93.116 Criteria and procedures: Localized CO, PM_{10}, and $PM_{2.5}$ violations (hot spots).

The FHWA/FTA project must not cause or contribute to any new localized CO, PM_{10}, and/or $PM_{2.5}$ violations or increase the frequency or severity of any existing CO, PM_{10}, and /or $PM_{2.5}$ violations in CO, PM_{10}, and $PM_{2.5}$ nonattainment and maintenance areas.

Sec. 93.117 Criteria and procedures: Compliance with PM_{10} and $PM_{2.5}$ control measures.

The FHWA/FTA project must comply with PM_{10} and $PM_{2.5}$ control measures in the applicable implementation plan.

Sec. 93.118 Criteria and procedures: Motor vehicle emissions budget

The transportation plan, TIP, and projects must be consistent with the motor vehicle emissions budget(s).

Sec. 93.119 Criteria and procedures: Interim emissions in areas without motor vehicle budgets

The FHWA/FTA project must satisfy the interim emissions test(s).

NOTE: See EPA's conformity regulations for the full text associated with each section's requirements.

Schedule for the 2010 Financially Constrained Long-Range Transportation Plan (CLRP) and FY 2011 – 2016 Transportation Improvement Program (TIP)

October 15, 2009	TPB Hosts Public Outreach Planning Session on the 2010 update of the CLRP and FY 2011-2016 TIP at the Citizens Advisory Committee (CAC) meeting
*October 21, 2009	TPB is Briefed on Draft Call for Projects
*November 18, 2009	TPB Releases Final Call for Projects-- Transportation Agencies Begin Submitting Project Information through On-Line Database
April 2, 2010	DEADLINE: Transportation Agencies Complete Submission of Draft On-Line Project Inputs.
April 9, 2010	Technical Committee Reviews Draft CLRP and TIP Project Submissions and Draft Scope of Work for the Air Quality Conformity Assessment
April 15, 2010	CLRP and TIP Project Submissions and Draft Scope of Work Released for Public Comment
*April 21, 2010	TPB is Briefed on Project Submissions and Draft Scope of Work
May 16, 2010	Public Comment Period Ends
*May 19, 2010	TPB Reviews Public Comments and is asked to Approve Project Submissions and Draft Scope of Work
July 2, 2010	DEADLINE: Transportation Agencies Complete TIP Project Submissions and Finalize Congestion Management Documentation Forms (where needed) and CLRP Forms[1]. (Submissions must not impact conformity inputs; note that the deadline for conformity inputs was April 2, 2010).
*September 15, 2010	TPB Receives Status Report on the Draft CLRP, TIP and Conformity Assessment
October 14, 2010	Draft CLRP, TIP and Conformity Assessment Released for Public Comment at Citizens Advisory Committee (CAC) and the TPB Citizen Advisory Committee Hosts a Public Meeting on the Draft CLRP and TIP.
*October 20, 2010	TPB Briefed on the Draft CLRP, TIP and Conformity Assessment
November 14, 2010	Public Comment Period Ends
*November 17, 2010	TPB Reviews Public Comments and Responses to Comments, and is Presented the Draft CLRP, TIP and Conformity Assessment for Adoption

*TPB Meeting

[1] By this date, the CLRP forms must include information on the Planning Factors, Environmental Mitigation, Congestion Management Information, and Intelligent Transportation Systems; separate Congestion Management Documentation Forms (where needed) must also be finalized.

WORK SCOPE ATTACHMENT A

POLICY AND TECHNICAL INPUT ASSUMPTIONS
AIR QUALITY CONFORMITY ANALYSIS OF 2010 CLRP AND FY2011-2016 TIP

1. Land Activity

- Round 8.0 Cooperative Forecasts

2. Policy and Project Inputs

- Highway, HOV, and transit projects and operating parameters
- Financially constrained project submissions to be advanced by the TPB on 5/19/2010

3. Travel Demand Modeling Methods

- Version 2.2 Travel Model
- All HOV facilities at HOV-3 in 2020 & beyond
- Transit "capacity constraint" procedures (2020 constrains later years)

4. Emissions Factors

- Use MOBILE6.2 emissions factors incorporating 2008 vehicle registration data
- Seasonal $PM_{2.5}$ factors for total directly emitted particles and precursor NOx

5. Emissions Modeling Methods / Credits

- Yearly $PM_{2.5}$ emissions (total $PM_{2.5}$ and precursor NOx) using seasonal traffic adjustments and above emissions factors
- Offline emissions analyses

6. Conformity Assessment Criteria

- Emissions budgets for ozone precursors, $PM_{2.5}$ pollutants, and wintertime CO
- Analysis years: 2011, 2020, 2030, & 2040

APPENDIX B

List of Project Inputs

Key to the Air Quality Conformity Table:

COLUMN 1:

Agency - identification of submitting agency

COLUMN 2:

Project ID - project identification number (for reference purposes)

COLUMN 3:

Type of improvement - defined as follows:

Construct	=	build a new facility
Widen	=	increase the number of lanes on an existing facility
Upgrade	=	improve the facility type of a roadway
Relocate	=	construct an existing facility on a new right-of-way
Reconstruct	=	modify an existing facility with no capacity increase i.e., shoulder paving, geometric improvements
Rehabilitate	=	repair existing structures - no capacity increase
Study	=	to review alternative transportation improvements- project planning or preliminary engineering only

COLUMN 4:

Facility - name of facility to be studied or improved

COLUMNS 5 and 6:

From and To - limits of the project

COLUMN 7:

Facility Type - defined as follows:

1 = Interstate
2 = Major Arterial
3 = Minor Arterial
4 = Collector
5 = Expressway or Freeway with at-grade intersections

If a facility is being upgraded, the old facility type is in the "from" column, and the new facility type is in the "to" column. If the facility is not being upgraded, the "from" and "to" columns are the same.

COLUMN 8:

Number of Lanes - same explanation of "from" and "to " columns as above

COLUMN 9:

Currently under construction or right-of-way acquired? -

"yes"	=	the facility is currently under construction and/or right-of-way has been acquired
"no"	=	the facility is not currently under construction and right-of-way has not been acquired
"completed"	=	the facility is open for use

COLUMN 10:

Project Completion Date or Status - date project will be open for use.
"not coded" indicates that project is not included in the conformity analysis

National Capital Region Transportation Planning Board
777 North Capitol Street, N.E., Suite 300, Washington, D.C. 20002-4290 (202) 962-3310 Fax: (202) 962-3202 TDD: (202) 962-3213

MEMORANDUM

April 15, 2010

To: Transportation Planning Board

From: Ronald F. Kirby
Director, Department of
Transportation Planning

Re: Proposed Significant Changes to the 2010 Constrained Long-Range Plan and the FY 2011-2016 Transportation Improvement Program for Air Quality Conformity Analysis

On April 15, 2010 the Transportation Planning Board (TPB) released the draft project submissions for the 2010 Update to the National Capital Region's Financially Constrained Long-Range Transportation Plan (CLRP) and the Scope of Work for the Air Quality Conformity Analysis for public comment. The 30-day public comment period will end at midnight on Saturday, May 15, 2010. Interested parties may submit their comments online at www.mwcog.org/transportation/public/, by phone at (202) 962-3262 or TDD: (202) 962-3213, or in person at the TPB meeting on April 21.

The TPB is scheduled to approve the project submissions and the Air Quality Conformity Scope of Work at their meeting on May 19. If approved, these projects will be included in the Air Quality Conformity Analysis of the 2010 CLRP and the FY 2011-2016 Transportation Improvement Program (TIP). This process takes several months and is done to ensure that the proposed projects do not prevent the region from meeting its air quality improvement goals in the decades ahead. Once the conformity modeling process is complete, the projects along with the results of the Conformity Analysis, and the FY 2011-2016 TIP will be released for a final 30-day comment period, currently scheduled for October 14 through November 14, 2010.

Information on the project submissions is presented in two pieces. First, in this memo, is a list of proposed significant additions and changes to the 2010 CLRP. These include new projects and changes, delays and removals of existing projects. This listing covers changes only to those projects that are considered to be regionally significant, i.e., interstates, principal arterials and some minor arterials, as well as transit facilities. The second piece is a complete listing of all proposed projects and changes titled, "2010 CLRP and FY 2011-2016 TIP Air Quality Conformity Inputs." This document is available for review online at http://www.mwcog.org/clrp/resources/.

For the 2010 Update to the CLRP, the only new regionally significant projects have been submitted by the District Department of Transportation, which has proposed four new projects. These projects include additional segments of the DC Streetcar system and access improvements to the St. Elizabeth's campus – the future home of the Department of Homeland Security. Also included are a pilot project of protected bike lanes in downtown DC and a street-scaping project on Wisconsin Avenue NW in Glover Park that will both result in a reduction in the number of lanes for automobile traffic. These four new projects are described beginning on page 3. Starting on page 7 is a list of regionally significant projects that have been changed, significantly delayed (by 10 years or more) or removed from the CLRP altogether as a result of transportation budget cuts related to the economic downturn.

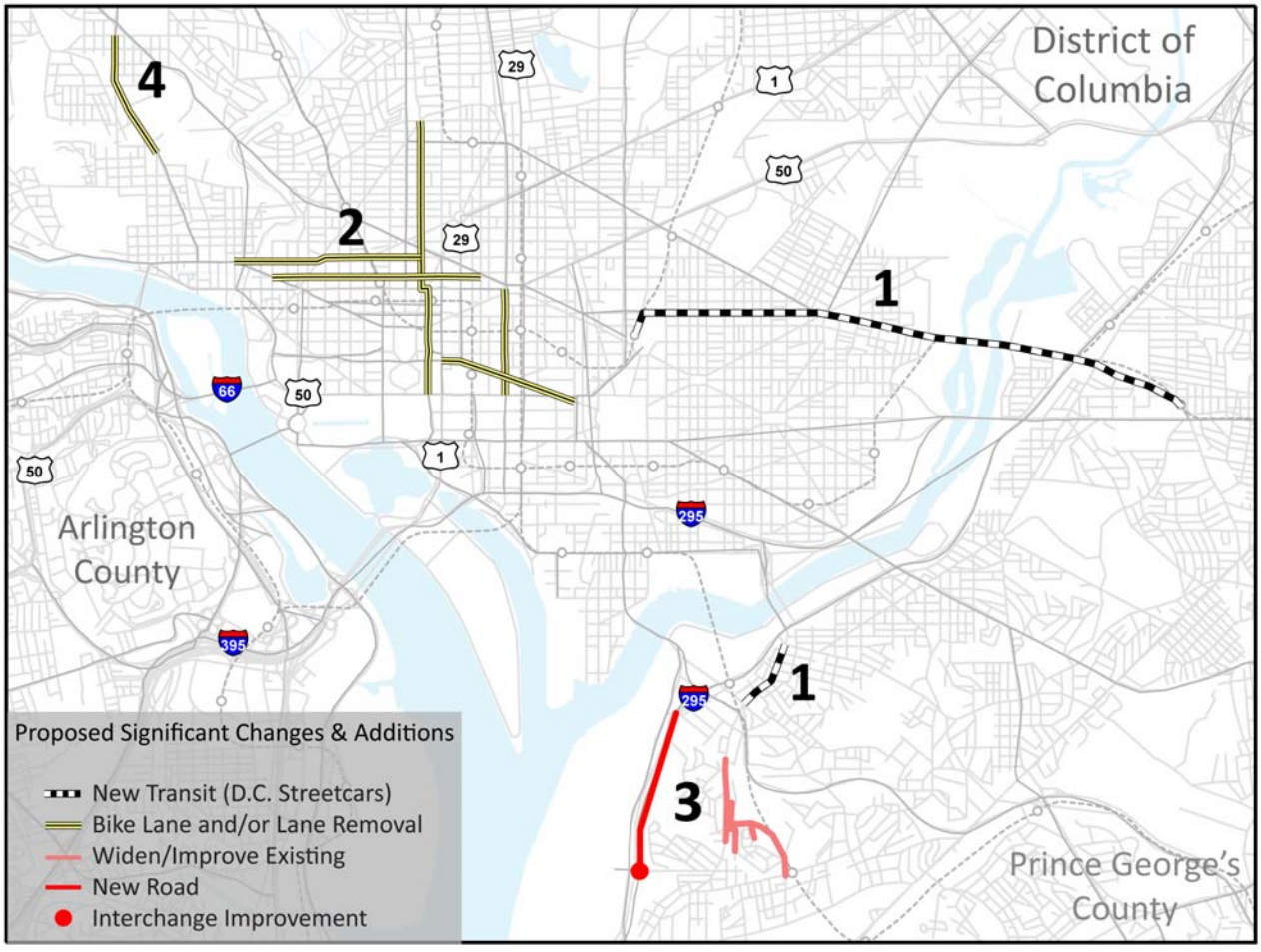
Future Toll Rate Assumptions

Also included in this item is information from the Metropolitan Washington Airports Authority (MWAA) regarding future toll rate assumptions for the Dulles Toll Rd. for the 2010 Constrained Long Range Plan (CLRP) Financial Plan revenue estimates. To date, the TPB's travel model procedures assumed that current toll rates would increase with inflation. In order to be consistent with assumptions in the CLRP Financial Plan, and to make use of specific available data, TPB staff will assume these future toll estimates, included as Attachment B, in the travel demand model for the air quality conformity analysis of the 2010 CLRP and FY 2011-2016 Transportation Improvement Program (TIP).

Significant Additions to the 2010 CLRP

Four regionally significant, new projects are being proposed by the District Department of Transportation (DDOT):

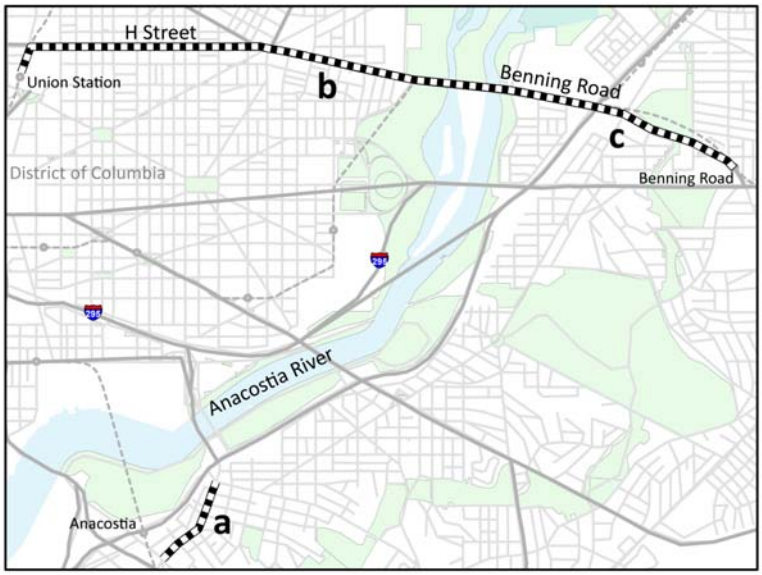
1. DC Streetcar Project
2. Bike Lane Pilot Project
3. St. Elizabeth's Campus Access Improvements
4. Glover Park Streetscaping/Wisconsin Avenue Reconfiguration



1. DC Streetcar Project

This project will build three new segments of a larger streetcar network that is currently being planned by the District Department of Transportation. These new segments will complement the initial Anacostia segment which was added to the CLRP in 2006 and is currently under construction. The streetcars will share a lane with automobile traffic and will run every 10 minutes during peak and off-peak periods. The three proposed segments are:

a) Continuation of the Anacostia Line along Martin Luther King, Jr. Avenue SE from Howard Road SE to Good Hope Road SE (0.5 miles, Complete 2012)
b) H Street/Benning Road NE from Union Station to Oklahoma Avenue (2 miles, Complete 2012)
c) Benning Road NE from Oklahoma Avenue NE to 45th Street NE/Benning Road Metro Station (1.8 miles, Complete 2015)



Two more segments will be added to the CLRP as studies:

d) Union Station to Mt. Vernon Square along H Street NW, New Jersey Avenue NW and K Street NW
e) K Street NW from Mt. Vernon Square to Wisconsin Avenue NW

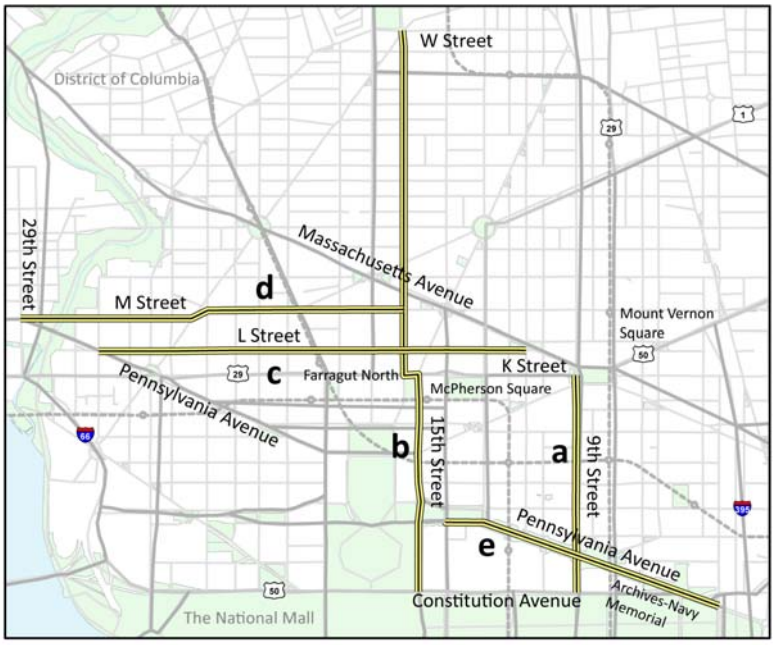
Length:	4.5 miles
Cost:	$183.8 million (Capital)
	$4.8 million per year (Operating)
Source:	General obligation bonds, FTA/Urban Circulator Program Capital Grant

See the CLRP project description and DDOT letter dated April 13, 2010 in Attachment A for more information.

2. Bike Lane Pilot Project

This pilot project* will add barrier-protected bike lanes on five streets in downtown DC. The bike lanes will be protected from automobile traffic by either a lane of parking or buffer zone. To accommodate the bike lanes, one lane of automobile traffic will be removed from 9th, 15th, L and M Streets. Two lanes will be removed from Pennsylvania Avenue and the bike lanes will travel down the center median.

a) 9th Street NW from Constitution Avenue NW to K Street NW (0.7 mile)
b) 15th Street NW from Constitution Avenue NW to W Street NW (2 miles)
c) L Street from 11th Street NW to 25th Street NW (1.3 miles)
d) M Street from 15th Street NW to 29th Street NW (1 mile)
e) Pennsylvania Avenue NW from 3rd Street NW to 14th Street NW (1 mile)



Length:	6 miles
Complete:	2010
Cost:	$1.2 million
Source:	Local

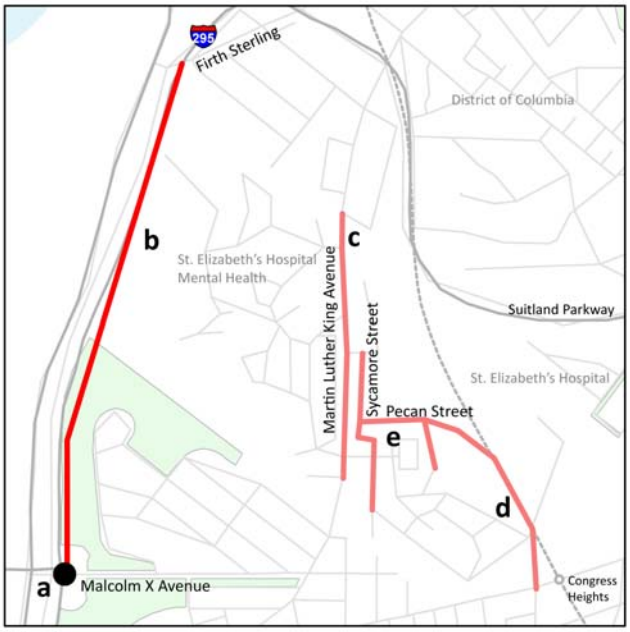
* Because this is a "pilot project", it will not be considered permanent until the District Department of Transportation (DDOT) has evaluated the effectiveness and impacts of the proposed changes. If DDOT decides to make them permanent, they will be required to submit them again for air quality conformity testing in the future.

See the CLRP project description in Attachment A for more information.

3. St. Elizabeth's Access Improvements

The following improvements are proposed to address the increased traffic expected when the Department of Homeland Security moves to the St. Elizabeth's campus.

a) Reconfigure the I-295/Malcolm X Avenue SE Interchange
b) Construct a new 3-lane access road to the West Campus, parallel to I-295 from Firth Sterling Avenue SE to Malcolm X Avenue SE
c) Reconstruct Martin Luther King, Jr. Avenue SE from Pomoroy Road SE to Milwaukee Place SE to add a 5th lane
d) Construct a 2-lane extension of 13th Street SE from Congress Heights Metro Station to Pecan Street SE
e) Reconstruct and reconfigure Pecan and Sycamore Streets to accommodate bus/transit

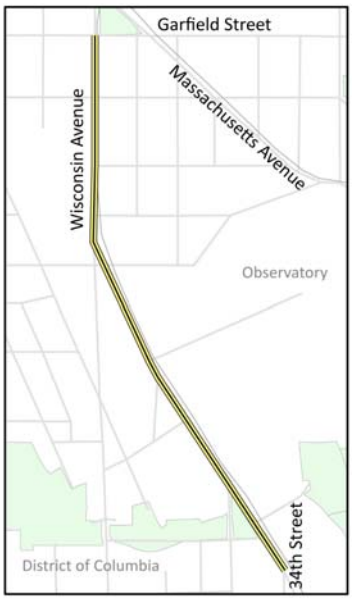


Complete: 2016
Cost: $158.2 million
Source: Federal funding

See the CLRP project description in Attachment A for more information.

4. Glover Park Streetscaping/Wisconsin Avenue Reconfiguration
Wisconsin Avenue NW from 34th Street NW to Garfield Street NW

Within the limits cited, Wisconsin Avenue NW will be reconfigured from six lanes down to four lanes with a center left-turn lane. The purpose of this project is to improve the attractiveness of the Glover Park commercial district and to address pedestrian and vehicular safety.



Complete: 2011
Cost: $4.7 million
Source: General obligation bonds and federal funding

See the CLRP project description in Attachment A for more information.

SIGNIFICANT CHANGES, DELAYS AND DELETIONS

The following is a list of regionally significant projects that have either changed in scope, have been delayed by ten years or more, or have been removed from the CLRP (or reduced to "study" status). The District of Columbia has not delayed nor removed any regionally significant projects for the 2010 update. The numbers shown in the third column reference the project locations on the map on page 9, except for those transit projects marked with a † which are shown on page 10.

Maryland

Projects delayed 10 years or more	Old Date	New Date	Map # (page 9)
• MD 2/4, construct 3 lanes from MD 765 to MD 2/4 at Lusby (Calvert County)	2020	2040	not mapped
• MD 4, construct interchange at Westphalia Road	2010	2020	30
• MD 201 Kenilworth Avenue, widen from Rittenhouse Road to Pontiac Street	2020	2030	22
Projects removed from the Plan			
• I-95/495 interchange at Greenbelt Metro	2016		14
• US 29 Columbia Pike, upgrade from Sligo Creek Pkwy to Howard Co line	2020		44
• US 301, upgrade and widen from north of Mount Oak Road to US 50	2020		45
• Middlebrook Road, widen to 6 lanes from MD 355 to M-83	2015		38
• M-83 (Mid-County Hwy Ext), construct 4/6 lanes from MD 27 to Montgomery Village Ave	2020		17

Virginia

Changes to Existing Projects

- VA 411, Tri-County Parkway, construct 4 lanes from VA 234 at I-66 to US 50

The limits of this project were previously defined from VA 234 to the Loudoun County line. VDOT is proposing to extend the project from the Loudoun County line to US 50.

Length: 4 miles
Complete: 2035

Virginia (continued)

Projects delayed 10 years or more	Old Date	New Date	Map # (page 9)
• US 1, bus right turn lanes from VA 235 N to I-95	2025	2035	20†
• VA 7/US 15 Bypass, widen to 6 lanes from VA 7 W to US 15 S	2025	2035	107
• US 15 (James Madison Highway), widen to 4 lanes from US 29 to I-66	2030	2040	71
• Tri-County Parkway, construct 4 lanes from I-66 to US 50	2025	2035	102
• VA 7 Bypass, widen/upgrade to 6 lanes from US 15 S to VA 7/US 15 E	2020	2035	107

Projects removed from the Plan			
• I-95, construct interchange at VA 7900 (Franconia-Springfield Pkwy)	2015		63
• US 1, widen to 6 lanes from Stafford Co line to Joplin Rd	2016		70
• VA 7, widen to 6 lanes from Rt 9 to Market St	2025		105
• US 15 (James Madison Hwy), widen to 4 lanes from VA 234 to Loudoun Co line	2030		71
• VA 28 (Centreville Road), widen to 6 lanes from NCL Manassas Park to Old Centreville Rd	2025		99
• US 50, widen to 8 lanes from I-66 to WCL Fairfax City	2020		81
• GeVA 7100 (Fairfax Co Pkwy), widen to 6 lanes from VA 636 to VA 640	2015		111
• VA 7100 (Fairfax Co Pkwy HOV), construct 2 lanes from VA 640 to VA 7900	2015		51
• VA 234 (Manassas Bypass), widen/upgrade to 6 lanes from VA 234 (South of Manassas) to I-66	2030		89
• VA 28, widen/upgrade to 6 lanes from VA 619 to VA 234 Bypass	2020		98
• US 29, widen to 6 lanes from US 50 to I-66	2010		79
• VA 123, widen to 6 lanes from Horner Rd. to Devil's Reach Rd.	2015		87

MAJOR HIGHWAY IMPROVEMENTS IN THE 2009 CLRP

As approved October 21, 2009

MAJOR TRANSIT AND HOV/HOT IMPROVEMENTS IN THE 2009 CLRP

As approved October 21, 2009

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS
(Transit)

Agency	Project ID	Improv.	Facility	From	To	Under Const. or ROW acquired?	Complt. Date or Status
Washington Metropolitan Area Transit Authority							
WMATA		Modify	Revised Metrorail Operating Plan				2010
WMATA		Modify	Revised Metrorail Operating Plan				2011
WMATA		Modify	Revised Metrorail Operating Plan				2015
District of Columbia							
DDOT		Construct	Anacostia Streetcar project Phase I (replaces CSX Shepherd Branch project)	Firth Sterling and S. Capitol St. SE	Howard Rd. and MLK Jr. Ave. SE		2012
DDOT		Construct	Anacostia Streetcar Phase II	Howard Rd and MLK Jr. Ave SE	Good Hope Rd. and MLK Jr. Ave. SE		2012
DDOT		Construct	H St. / Benning Rd Streetcar	Union Station	Oklahoma Ave., NE		2012
DDOT		Construct	Benning Rd. Streetcar	Oklahoma Ave., NE	45th St. / Benning Rd. Metro		2015
DDOT		Study	Union Station Streetcar	Union Station	Mt. Vernon Sq./ 7th St. NW		not coded
DDOT		Study	K St. Streetcar	Mt. Vernon Sq./9th St. NW	Wisconsin Ave.		not coded
~~DDOT~~		~~Construct~~	~~Banneker Circle Parking~~	~~1200 spaces~~			~~2011~~
DDOT		Operational Improvements	Pennsylvania Rapid Bus (Operation Enhancements)	Archives Navy Memorial Metro Station	Naylor Road Metrorail Station		2011
DDOT		Reconstruct	K St. Transitway	Mt. Vernon Sq./7th St. NW	Wash.Circle / 23rd St. NW		
DDOT		Implement	16th St. Bus Priority Improvements (TIGER Grant)				by 2016
DDOT		Implement	Georgia Ave Bus Priority Improvements				by 2016

Note: Shaded areas represent changes from the 2009 CLRP and FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS
(Transit)

Agency	Project ID	Improv.	Facility	From	To	Under Const. or ROW acquired?	Complt. Date or Status
DDOT		Implement	H St./ Benning Rd. Bus Priority Improvements (TIGER Grant)	16th St. NW	Capitol Heights Metro Station		by 2016
DDOT		Implement	Wisconsin Ave. Bus Priority Improvements (TIGER Grant)	Friendship Heights Metro Station	Naylor Road Metrorail Station		by 2016
DDOT		Implement	Theodore Roosevelt Bridge to K St. Bus Priority Improvements (TIGER Grant)				by 2016
DDOT		Implement	14th St. Bus Priority Improvements (TIGER Grant)				by 2016
Maryland							
MTA		Construct	Purple Line Transitway	Bethesda	New Carrollton	No	2020
MTA		Construct	Silver Spring Transit Center	Phase II		Yes	2011
MTA		Construct	Corridor Cities Transitway	Shady Grove	COMSAT		2020
MTA		Construct	Southern MD Commuter Bus Initiative	Park-and-Ride lots and increase bus service	Waldorf		2010
MTA		Implement	ICC Corridor Bus Service Improvements			No	2012
~~MTA~~		~~Implement~~	~~Extend evening/wk end service on Penn Line; mid-day on Camden~~	~~First phase of new MARC plan~~		~~No~~	~~2010~~
MTA		Construct	Takoma/ Langley Park Transit Center	Intersection New Hampshire Ave and University Blvd.	Takoma / Langley Park	No	2011
		Implement	Addison Rd. Transit Improvements (TIGER Grant)	near Seat Pleasant	Southern Ave. Metro Station		by 2016
		Implement	US 1 (MD) Bus Priority Improvements (TIGER Grant)				by 2016

Note: Shaded areas represent changes from the 2009 CLRP and FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS
(Transit)

Agency	Project ID	Improv.	Facility	From	To	Under Const. or ROW acquired?	Complt. Date or Status
Montgomery County							
Mont.Co.	MCT7	Construct	Olney Transit Center	adjacent to or north of MD 108		No	2015
Mont.Co.		Construct	University Blvd Bus Enhancement	Kensington	Silver Spring	No	2020
Mont.Co.	MCT22	Construct	Veirs Mill Road Bus Enhancement	Rockville	Wheaton	No	2015
Virginia							
VDOT		Widen	US 1 (bus/right-turn lanes)	VA 235 North	SCL Alexandria (I-95 Capital Beltway)	No	2035
Arlington Co.		Construct	Crystal City / Potomac Yard Busway (2-lane)	Vicinity of Glebe Rd. Ext.-City/County line	Crystal City Metro Station	ROW acquired	2010
VDOT		Construct	Potomac Yard Transit Bus lanes (2 lanes)	Four Mile Run	Braddock Rd.	No	2013
VDOT		Construct	Metro Station (Proposed)	@ Potomac Yards		No	2030
VDOT		Construct	Columbia Pike Streetcar	Skyline Center	Pentagon City	No	2016
VDOT		Construct	Transit Center (Bradlee Shopping Center)	King St. and Braddock Rd.		No	2013
VDOT		Construct	Transit Center (Seven Corners)	Seven Corners Shopping Center		No	2010
VDOT		Construct	Park-and-Ride Lot	Reston East Parking Structure	@ Reston East Park-and-Ride Lot	No	2011
VDOT		Construct	Park-and-Ride Lot	VA 7900 (F-S Pkwy.) PnR	@ Backlick Road North	Complete	2008
VDOT		Construct	Park-and-Ride Lot	Springfield CBD	vic. I-95 & Old Keene Mill Road	No	2014
VDOT		Relocate/ Construct	Park-and-Ride Lot (Leesburg)	Relocate to vic. of Leesburg Bypass and / or the Dulles	700 Spaces	Yes	2010
VDOT		Construct	Lease Commuter Parking Spaces at Lowes Island	Leesburg			2013

Note: Shaded areas represent changes from the 2009 CLRP and FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS
(Transit)

Agency	Project ID	Improv.	Facility	From	To	Under Const. or ROW acquired?	Complt. Date or Status
VDOT		Construct	Park-and-Ride Lot	Purcellville	100 Space Park & Ride Lot		2015
VDOT		Implement	Loudoun County Commuter Bus Service.	Town of Leesburg -Harrison St & Catoctin Circle	400 Space Park & Ride Lot	Yes	2010
~~VDOT~~		~~Implement~~	~~Loudoun County Commuter Bus Service.~~	~~VA 772 (Ryan) Station~~	~~300 Space Park & Ride Lot~~		~~2015~~
VDOT		Construct	Park-and-Ride Lot	Dulles Town Center	300 Spaces	Proffered	2015
VDOT		Construct	Park-and-Ride Lot	US 50 at Stone Ridge	150 Spaces	Proffered	2015
VDOT		Construct	Park-and-Ride Lot	US 50 Dulles at East Gate	200 Spaces	Yes	2025
VDOT		Construct	Park-and-Ride Lot	VA 234 (vicinity of I-66)	at Cushing Road	No	2011
VDOT		Construct	Park-and-Ride Lot	Sterling / Ashburn	223 Spaces	Complete	2009
VDOT		Construct	Park & Ride Facility	Round Hill	75 Spaces	ROW acquired	2015
VDOT		Construct	Park & Ride Facility	Brambleton	100 space expansion	No	2015
VDOT		Construct	Park & Ride Facility	Arcola Center	300 Spaces	Proffer	2015
VDOT		Construct	Park-and-Ride Lot	at EPG			2015
VDOT		Construct	Park-and-Ride Lot	Telegraph Rd.	400-500 spaces		2013
VDRPT		Construct	Dulles Corridor Metrorail	East Falls Church Metrorail Station	Wiehle Ave.	No	2013
VDRPT		Construct	Dulles Corridor Metrorail	Wiehle Ave. Station	Route 772	No	2016
VRE		Construct	VRE - Cherry Hill Commuter Rail Station	Cherry Hill	Prince William County	No	2012
VDOT		Implement	VRE Service Improvements (Reduce Headways)	Fredericksburg and Manassas lines		No	2020

Note: Shaded areas represent changes from the 2009 CLRP and FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS
(Transit)

Agency	Project ID	Improv.	Facility	From	To	Under Const. or ROW acquired?	Complt. Date or Status
VDOT		Construct	VRE- 3rd Track/ Cherry Hill Commuter Rail Station	Arkendale, Stafford Co.	Powell's Creek, Prince William Co.	No	2012
		Implement	Beltway HOT lanes transit service			No	2013
		Implement	Beltway HOT lanes transit service			No	2020
		Implement	Beltway HOT lanes transit service			No	2030
VDOT		Implement	I-95/I-395 HOV /BUS / HOT lanes: TAC transit service	Buses and additional VRE railcars		No	2012
VDOT		Implement	I-95/I-395 HOV /BUS / HOT lanes: TAC transit service	Buses and additional VRE railcars		No	2020
VDOT		Implement	I-95/I-395 HOV /BUS / HOT lanes: TAC transit service	Buses and additional VRE railcars		No	2030
VDOT		Implement	(Fairfax Connector Service Enhancements)			No	2011
		Implement	VA 7 Bus Priority Improvements (TIGER Grant)	Alexandria	Tyson's Corner		by 2016
		Implement	Van Dorn - Pentagon Rapid Bus (TIGER Grant)	Van Dorn St. Metro	Pentagon		by 2016
		Implement	I-95/I-395 Multimodal Improvements (TIGER Grant)				by 2016

Note: Shaded areas represent changes from the 2009 CLRP and FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
District of Columbia											
DDOT	DP9A	Widen / Realign	South Capitol St. Corridor: Frederick Douglass Bridge	S. Capitol St. (east)	Potomac Ave. (west)	2	2	5	6		2015
DDOT	DP9B	Widen	South Capitol St. Corridor: S. Capitol St.	O St.	Potomac Ave.	2	2	5	6	complete	2009
DDOT	DP9C	Construct	South Capitol St. Corridor: S. Capitol St. intersection	at Potomac Ave.							2015
DDOT	DP9D	Construct	South Capitol St. Corridor: Suitland Parkway Intch.	at MLK Jr. Blvd to complete movements							2016
DDOT	DI7A	Reconstruct/ Widen	11th St. Bridges (2 spans)	I-295	Southeast Freeway			8	8 freeway 4 local		2013
DDOT	DI7A	Construct	11th St. Bridges (2 spans)	ramp movements to/from the northbound Anacostia Freeway for each span							2013
DDOT		Remove	I-395 SB exit ramp (w/ Return to L'Enfant project)	SB to the 400 block of 3rd St. NW				1	0		2011
DDOT		Construct	F St. (w/ Return to L'Enfant project)	2nd St. NW	3rd St. NW			0	2		2014
DDOT	DI9	Reconstruct	I-295/ Malcolm X Interchange	add above grade ramp connection from NB I-295 off ramp to new St. Elizabeth's Access Rd.							2014
DDOT	DP10	Construct	St. Elizabeth's Access Rd. (along West Campus western boundary)	Firth Sterling	Malcolm X			0	3		2014
DDOT	DS3	Construct	Southern Ave. SE	Branch Ave. SE	Naylor Rd. SE			0	2		2016
DDOT		Study	Pennsylvania Ave. NW - add bike lanes	3rd St. NW	14th St. NW			8	6		not coded
DDOT		Study	15th St. NW- add bike lane	Constitution Ave. NW	W. St. NW			6	5		not coded
DDOT		Study	L St. NW - add bike lane	11th St. NW	25th St. NW			4	3		not coded
DDOT		Study	M St. NW - add bike lane	15th St., NW	29th St. NW			4	3		not coded

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
DDOT		Study	9th St. NW - add bike lane	Constitution Ave. NW	K St. NW			5	4		not coded
DDOT	DP11	Reduce Capacity	Wisconsin Ave.	Garfield St.	34th St.			4/6	4		2011
DDOT	DP12	Reconstruct-1-way to 2-way	17th St. NE/SE	Benning Rd. NE	Potomac Ave. SE			2 SB	1 SB/ 1 NB		2012
Maryland											
MDOT Freeway											
MDSHA	MI2q	Construct	I-270	Interchange at Watkins Mill Road Extended		1	1	8	8+2	No	2016
MDSHA	MI2SHOV MI2S	Construct	I-270/US 15 Corridor	Shady Grove Metro	Biggs Ford Rd	1	1	varies		No	2030
MDSHA		Reconstruct	I-270	Interchange at MD 121		1	1	1	2	No	2016
MDSHA	MI4	Widen	I-70	Mt. Phillip Rd.	MD 144FA	1	1	4	6	No	2016
MDSHA	MI4a	Reconstruct	I-70	Interchange at Meadow Rd.	to add missing movements	1	1			No	2016
MDSHA	MI1f	Construct	I-95	Contee Road Relocated w/ CD Roads		1	1	8	8+4	No	2020
MDSHA	MI1k	Construct	I-95/I-495 (Capital Beltway)	Branch Avenue Metro Access (Phases I & II)		1	1	8	8	Yes	2020 (Phase II)
MDSHA	MI1p	Study	I-95/I-495 (Capital Beltway)	Interchange at Greenbelt Metro		1	1	8	8+2	No	not coded
MDSHA	VA	Widen	I-95/I-495 Woodrow Wilson Bridge (see Virginia listing)	MD 210 Interchange	Virginia Line	1	1	6	12	complete	VI2K 2009
MDSHA	MI1m	Construct	I-95/I-495/Arena Drive Interchange	MD 214	MD 202	1	1	8	8+2	complete	**2009**
MDSHA	MP12	Construct	Intercounty Connector	I-270	MD 97	0	1	0	6	Yes	2011
MDSHA	MP12	Construct	Intercounty Connector	MD 97	I-95 / US 1	0	1	0	6	Yes	2012

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
MDOT Primary											
MDSHA	MP10a	Reconstruct	US 1 (Baltimore Avenue)	College Avenue	Sunnyside Avenue	2	2	4	4	No	2020
MDSHA	MP10b	Widen	US 1, Baltimore Avenue	Cherry Hill Road	I-95/I-495	2	2	4	6	No	2010
MDSHA	MP9b	Construct	MD 2/4 at Lusby Southern Conn. Rd.	MD 765	MD 2/4 at Lusby	0	2	0	3	No	2040
MDSHA	MP9c	Construct	MD 2/4	MD 231 Intersection Improvs.		2	2	4	6+2	Complete	2009
MDSHA	MP2c	Widen	MD 3 (Robert Crain Highway)	US 50	Anne Arundel County Line	2	2	4	6	No	2030
MDSHA		Construct	MD 4 (Pennsylvania Avenue)	Interchange at Westphalia Rd		2	5	4	6	No	2020
MDSA		Construct	MD 4 (Pennsylvania Avenue)	Interchange at Suitland Pkwy		2	5	4	6	No	2016
MDSHA	MP3a	Upgrade/ Widen	MD 4	MD 223	I-95/I-495	2	1	4	6	No	2020
MDSHA		Construct	MD 5 (Branch Avenue)	Interchange at Earnshaw/Burch Hill Roads		2	5	4	6	No	2015
MDSHA	MP4f	Upgrade/ Widen	MD 5 (Branch Avenue)	US 301 at T.B.	North of the Capital Beltway	2	5	4	6	No	2020
MDSHA		Construct	MD 5 (Branch Avenue)	Interchange at MD 373/Brandywine Road Rel.		2	5	4	6	No	2015
MDSHA		Construct	MD 5 (Branch Avenue)	Interchange at Surratts Road		2	5	4	6	No	2015
MDSHA	MP15	Construct	US 15	Interchange at Monocacy Blvd.		2	2	6	6	No	2016
MDSHA		Construct	US 29 (Columbia Pike)	Interchange at Musgrove/Fairland Rd.				6	6	No	2025
~~MDSHA~~	~~MP5a~~	~~Upgrade~~	~~US 29 (Columbia Pike)~~	~~Sligo Creek Parkway~~	~~south of MD 193~~	~~2~~	~~5~~	~~6~~	~~6~~	~~No~~	~~2020~~
~~MDSHA~~	~~MP5c~~	~~Upgrade~~	~~US 29 (Columbia Pike)~~	~~north of MD 193~~	~~south of MD 650~~	~~2~~	~~5~~	~~6~~	~~6~~	~~No~~	~~2020~~
MDSHA	MP5e	Study	US 29, Columbia Pike	north of MD 650	Howard County Line	2	5	6	6	No	not coded
MDSHA		Construct	MD 75 Relocated	MD 80		0	4	0	4	No	2020

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
MDSHA	FP1B	Construct	MD 80/MD 355 Relocated	South of Urbana	North of Urbana	0	2	0	4	Complete	2009
MDSHA	FP2	Widen	MD 85 (Buckeystown Pike)	English Muffin Way	north of Grove Road	2	2	2/4	4/6	No	2020
MDSHA	MP12c	Construct	MD 97 (Brookeville Bypass)	South of Brookeville	North of Brookeville	0	2	0	2	No	2020
MDSHA		Upgrade	MD 97 (Georgia Avenue)	interchange @ MD 28 (Norbeck Road)		2	2	6	6	No	2020
MDSHA		Upgrade	MD 97 (Georgia Avenue)	interchange @ Randolph Road		2	2	6	6	No	2015
MDSHA	MP14	Reconstruct	MD 202 (Largo Town Ctr. Metro Access Improvs.)	at Brightseat Rd		2	2	6	6	No	2015
MDSHA		Upgrade	MD 210 interchange improvs.	@ Livingston Rd. / Kerby Hill Rd.		2	5	6	6		2020
MDSHA	MP6d	Upgrade	MD 210 (Indian Head Highway) with interchange improvements at: Wilson Bridge Dr., Livingston Rd./Palmer Rd., Old Fort Rd. North, Ft. Washington Rd., and Livingston Rd/Swan Creek Rd. Intersections	MD 228	Capital Beltway	2	5	6	6	No	2030
MDSHA	MP8e	Study	US 301	North of Mount Oak Road	US 50	2	5	4/6	6+2	No	not coded
MDTA	MP18	Construct	US 301 Governor Nice Bridge	Charles County, MD	King George County, VA	2	2	2	4	No	2040
MDSHA	MP16	Construct	US 340 Interchange	@US 340 at Jefferson Tech Park		1	1	4	4	No	2016
MDSHA	BRAC	Reconstruct	BRAC Intersection Improvements near the National Naval Medical Center, Bethesda								2012
MDSHA		Construct	MD 355	Montrose/Randolph Rds.	CSX RR	2	2	6	6	No	2015/ 2020
MDSHA		Reconstruct	MD 450	CSX grade separation at Peace Cross		2	2	4	4	Complete	2009

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
MDOT Secondary											
MDSHA	MS33	Widen	MD 27	MD 355	A 305	2	2	4	6	No	2020
~~MDSHA~~	~~MS3e~~	~~Construct~~	~~MD 28/ West Montgomery Ave.~~	~~MD 586/MD 911~~		~~2~~	~~2~~	~~2~~	~~4~~	~~No~~	~~2020~~
MDSHA	MS2f	Widen	MD 28 (Norbeck Road) / MD 198 (Spencerville Road)	MD 97	I-95	2	2	2/4	4/6	No	2025
MDSHA	MS32	Widen	MD 117	I-270	Great Seneca Park	2	2	2	4	No	2025
MDSHA	MS34	Study	MD 121	I-270	W. Old Baltimore Rd.	3	3	4	6	No	not coded
MDSHA	MS6b	Widen	MD 124 (Woodfield Road)	Midcounty Highway	S. of Airpark Dr.	2	2	2	6	No	2020
MDSHA	MS6c	Widen	MD 124 (Woodfield Road)	S. of Airpark Dr.	N. of Fieldcrest Rd.	2	2	2	6	Yes	2010
MDSHA	MS6d	Widen	MD 124 (Woodfield Road)	N. of Fieldcrest Rd.	Warfield Road	2	2	2	6	No	2020
MDSHA		Study	MD 180/MD 351	Greenfield Dr.	Corporate Dr.					No	not coded
MDSHA	MS35	Widen	MD 197 (Collington Rd.)	MD 450 Relocated	Kenhill Dr.	2	2	2	4/5	No	2025
MDSHA	MS10b	Study	MD 201 (Kenilworth Ave.)	Rittenhouse Road	Pontiac St.	2	2	4	6	No	not coded
MDSHA	PGS6	Construct	MD 212 Relocated (Ammendale/Virginia Manor	US 1	I-95	3	2	2	4	complete	2009
MDSHA	MS30	Widen/ Construct	MD 414 Extended	MD 210	I-295	0	3	0	4	complete	2009
MDSHA	MS18d	Widen	MD 450 (Annapolis Road)	Stonybrook Drive	West of MD 3	2	2	2	4	No	2016
MDSHA	MS20c	Construct	MD 475 (East Street Extended)	South Street	proposed Monocacy Boulevard	0	3	0	4	complete	2010
Montgomery County											
Mont.Co.	MC11c	Construct	A-305 - MidCounty Highway Extended	MD 355	MD 27	0	3	0	4	No	2010
Mont.Co.	nrs	Construct	Burtonsville Access Rd.	MD 198	School Access Rd.	0	4	0	2	No	2017

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
Mont.Co.	nrs	Construct	Chapman Avenue	Randolph Road	Old Georgetown Road	0	3	0	2	No	2014
Mont.Co.	MC38a	Construct	Citadel Avenue Extended	dead end of existing road south of Marinelli Road	Nicholson Lane	0	4	0	2	Complete	2009
Mont.Co.	MC5d	Construct	Father Hurley Blvd.	Wisteria	MD 118 (Germantown Road)	0	2	0	4	Yes	2010
Mont.Co.	MC5c	Widen	Father Hurley/ Ridge Rd.	I-270	existing MD 27	2	2	4	6		2010
Mont.Co.	MC7a	Study	Goshen Rd. South	South of Girard Street	1000 feet north of Warfield Road	3	3	2	4	No	not coded
Mont.Co.	MC43	Construct	I-4 Bridge over I-270	Century Boulevard	Milestone Center Drive	0	3	0	4	No	2015
Mont.Co.	MC11a	Construct	M-83 - Midcounty Highway Extended	MD 27 (Ridge Road)	Middlebrook Road	0	2	0	4-6	No	2020
Mont.Co.	MC11d	Construct	M-83 - Midcounty Highway Extended	Middlebrook Road	Montgomery Village Avenue	0	2	0	4-6	No	2020
Mont.Co.	MC12f	Widen	MD 118 Ext (Grmntwn. Rd.)	MD 355	M-83/Watkins Mill Rd.	2	2	3	4	No	2020
Mont.Co.	MC14g	Widen	Middlebrook Road Ext.	MD 355	M-83	2	2	3	4	No	2020
Mont.Co.	MC15b	Construct	Montrose Parkway East	Parklawn Drive	MD 586 - Veirs Mill Road	0	2	0	4	No	2015
Mont.Co.	MC15	Construct	Montrose Parkway West	Montrose Road (Tower Oaks Blvd.)	old' Old Georgetown Road	0	2	0	4	complete	2009
Mont.Co.	nrs	Construct	Nebel St Extended	Randolph Rd	Target Store Site	0	3	0	4	Yes	2011
Mont.Co.	MC18a	Widen	Norbeck Rd. Ext.	MD 28	MD 198	3	3	2	4	Complete	2001
Mont.Co.	MC42	Construct	Randolph Road	Parklawn Drive	Rock Creek Park	2	2	4	5	No	2020
Mont.Co.	MC34	Widen	Snouffer School Rd. Fac. Planning	Goshen Rd.	MD 124	3	3	2	4	No	2016
Mont.Co.	MC28	Construct	Stringtown Rd. Ext.	I270/ MD 121 int.	existing Stringtown Rd. @ MD 355	0	3	0	4	Complete	2009
Mont.Co.	MC23a	Construct	Watkins Mill Rd. ext.	I 270 (future interchange)	MD 355	0	2	0	6	Yes	2011
Mont.Co.	MC13	Construct	Woodfield Rd.(MD 124 Ext.)	1200' North of MD 108	MD 27	0	2	0	2	Yes	2011

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
Prince Georges County											
PG Co.	PGS3a	Widen	Addison Road	MD 214	Walker Mill Road	3	3	2	4	Yes	2016
PG Co.		Reconstruct	Addison Road	Sheriff Road	MD 704	4	4	2	2	Yes	2014
PG Co.	PGS5	Construct	Allentown Road Relocated	Indian Head Highway (MD 210)	Brinkley Road	0	3	0	4	No	2025
PG Co.	PGS6	Widen	Ammendale/Virginia Manor Road	I-95	west of US 1	2	2	2	6	complete	2008
PG Co.	PGS73	Widen	Ardwick-Ardmore Road	MD 704	91st Ave.	4	4	2	4	Yes	2015
PG Co.	PGP4a	Construct	Baltimore Washington Pkwy/Greenbelt Rd (MD 193)	ramp to southbound Baltimore Washington Pkwy		0	5	0	4	No	2025
PG Co.	PGS74b	Construct	Bell Station Road	Annapolis Road (MD 450)	Church Road	0	4	0	4	complete	2009
PG Co.	PGS75	Widen	Berry Road	Livingston Road	Accokeek Road (MD 373)	4	4	2	4	No	2010
PG Co.	PGS9b	Widen	Bowie Race Track Road	Laurel-Bowie Road (MD 197)	Old Chapel Road	4	4	2	4	No	2015
PG Co.	PGS9a	Widen	Bowie Race Track Road	Annapolis Road (MD 450)	Old Chapel Road	4	4	2	4	No	2015
PG Co.	PGS10	Widen	Brandywine Road	north of Piscataway Road (MD 223)	Thrift Road	4	4	2	4	No	2020
PG Co.	PGS76	Widen	Briggs Chaney Road	Montgomery County line	Old Gunpowder Road	3	3	2	4	Yes	2010
PG Co.	PGS11	Widen	Brightseat Road	Sheriff road	MD 214	4	4	2	4	Complete	2009
PG Co.	PGS12	Widen	Brinkley Road	St. Barnabas Road (MD 414)	Allentown Road (MD 337)	3	3	4	6	No	2020
PG Co.	PGS13	Construct	Brooks Drive Extended	Marlboro Pike	Rollins Avenue	0	3	0	4	No	2020
PG Co.	PGS14	Widen	Cabin Branch Drive	Columbia Park Road	north of Sheriff Road	4	4	2	4	No	2015
PG Co.	PGS16a	Construct	Campus Way North	Lake Arbor Way	south of Lottsford Road	0	4	0	4	No	2004
PG Co.	PGS16b	Construct	Campus Way North Extended	south of Lottsford Road	Evarts Drive	0	4	0	4	No	2020

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
PG Co.	PGS17	Widen	Cherry Hill Road	Powder Mill Road	Baltimore Avenue (US 1)	3	3	2	4	No	2020
PG Co.	PGS17a	Widen	Cherry Hill Road	Montgomery County line	Powder Mill Road	3	3	2	4	complete	2009
PG Co.	PGS18	Widen	Church Road	Oak Grove Road	Annapolis Road (MD 450)	4	4	2	4	No	2025
PG Co.	PGS20a	Widen	Columbia Park Road	Cabin Branch Road	Columbia Terrace	4	4	2	4	No	2020
PG Co.	PGS20b	Widen	Columbia Park Road	US 50	Cabin Branch Road	4	4	2	4	No	2020
PG Co.	PGS21a	Widen/ Construct	Contee Road	US 1	Old Gunpowder Road	4	4	2	4	Yes	2014
PG Co.	PGS21b	Widen	Contee Road	Briarwood Drive	US 1	4	4	2	4	complete	2009
PG Co.	PGS22	Widen	Dangerfield Road	Cheltenham Avenue	Woodyard Road (MD 223)	4	4	2	4	No	2020
PG Co.	PGS24a	Widen	Dower House Road	Woodyard Road (MD 223)	Foxley Road	4	4	2	4	No	2025
PG Co.	PGS24b	Widen	Dower House Road	Foxley Road	Pennsylvania Avenue (MD 4)	4	4	2	6	No	2017
PG Co.	PGS25	Widen	Fisher road	Brinkley Road	Holton Lane	4	4	2	4	No	2025
PG Co.	PGS26	Construct	Forbes Boulevard Extended	south of Amtrak	Greenbelt Road (MD 193)	0	4	0	4	No	2020
PG Co.	PGS27	Widen	Forestville Road	Allentown Road (MD 337)	Pennsylvania Avenue (MD 4)	4	4	2	4	No	2025
PG Co.	PGS29	Widen	Fort Washington Road	Riverview road	Indian Head Highway (MD 210)	4	4	2	4	No	2025
PG Co.	PGS30a	Widen	Good Luck Road	east of Kenliworth Avenue (MD 201)	Cipriano Road	4	4	2	4	No	2025
PG Co.	PGS30b	Widen	Good Luck Road	Cipriano Road	Greenbelt Road (MD 193)	4	4	2	4	No	2025
PG Co.	PGS87	Widen	Governor Bridge Road	US301	Anne arundel County	4	4	2	4	No	2020
PG Co.	PGS34a	Widen	Hill Road	Central Avenue (MD 214)	ML King Jr Highway (MD 704)	4	4	2	4	No	2018
PG Co.	PGS34b	Construct	Hill Road	ML King Jr Highway (MD 704)	Sheriff Road	0	4	0	2	No	2015

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
PG Co.	PGS88	Construct	Iverson St. Extended	Wheeler Road	19th Avenue	0	4	0	4	No	2018
PG Co.	PGS35	Widen	Karen Boulevard	Walker Mill Road	Central Avenue (MD 214)	4	4	2	4	No	2020
PG Co.	PGS38a	Widen	Livingston Road	Indian Head Highway (MD 210) at Eastover	Kerby Hill Rd.	4	3/4	2	4	No	2015
PG Co.	PGS38b	Widen	Livingston Road	Piscataway Creek	Farmington Road	2	2	2	4	No	2020
PG Co.	PGS40a	Widen	Lottsford Road	Archer Lane	Enterprise Road (MD 193)	3	3	2	4	No	2012
PG Co.	PGS39b	Widen	Lottsford Vista Road	ML King Jr Highway (MD 704)	Ardwick-Ardmore Road/Relocated	4	4	2	4	No	2020
PG Co.	PGS44b	Widen	Metzerott Road	Adelphi Road	University Boulevard (MD 193)	4	4	2	4	No	2020
PG Co.	PGS44a	Widen	Metzerott Road	New Hampshire Avenue (MD 650)	Adelphi Road	4	4	2	4	No	2020
PG Co.	PGS45	Widen	Mitchellville Road	Collington Road (MD 197)	Atlantis Dr./Northview Dr.	4	4	2	6	Complete	2000
	PGS45a			Atlantis/Northview Dr.	Mount Oak Road	4	4	4	6		
PG Co.	PGS89	Widen	Mt. Oak	Church Road	Mitchellville Road	3	3	2	4	No	2010
PG Co.	PGS46	Widen	Murkirk Road	west of Baltimore Avenue (US 1)	Odell Road	4	4	2	4	No	2020
PG Co.	PGS47	Widen	Oak Grove and Leeland Roads	Watkins Park Road (MD 193)	Robert Crain Highway (US 301)	4	4	2	4	No	2020
PG Co.	PGS48	Widen	Old Alexandria Ferry Road	Woodyard Road (MD 223)	Branch Avenue (MD 5)	4	4	2	4	No	2015
PG Co.	PGS80	Construct	Old Baltimore Pike Extended	Muirkirk Road	Contee Road	0	4	0	2	Yes	2020
PG Co.	PGS50	Widen	Old Branch Avenue	north of Piscataway Road (MD 223)	Allentown Road (MD 337)	4	4	2	4	Yes	2020
PG Co.	PGS90	Construct	Old Fort Rd. Extended	Piscataway Road (MD 223)	Old Fort Rd	0	4	0	4	No	2020
PG Co.	PGS51a	Widen	Old Gunpowder Road	Powder Mill Road	Greencastle Road	3	3	2	4	No	2015
PG Co.	PGS52	Widen	Oxon Hill Road	Fort Foote Rd - North	MD 210	3	3	2	4	No	2011

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility		Lanes		Under Const. or ROW acquired?	Complt. Date or Status
						from	to	from	to		
PG Co.		Widen	Oxon Hill Road	National Harbor Entrance	Fort Foote Rd - North	4	4	2	4	Yes	2013
PG Co.	PGS81	Construct	Presidential Parkway	Suitland Parkway	Melwood Road	0	3	0	6	No	2025
PG Co.	PGS54	Widen	Rhode Island Avenue	University Boulevard (MD 193)	Baltimore Avenue (US 1)	4	4	2	4	No	2017
PG Co.	PGS55a	Widen	Ritchie Marlboro Road	Ritchie Rd	White House Road	3	3	2	4	Complete	2009
PG Co.	PGS55b	Widen	Ritchie Marlboro Road	White House Road	Old Marlboro Rd.	3	3	2	4		2020
PG Co.	PGS56a	Widen	Ritchie Road/Forestville Road	Alberta Drive	MD 4 Pennsylvania Avenue	2	2	2	4	Yes	2020
PG Co.	PGS57	Widen	Rollins Avenue	Central Avenue (MD 214)	Walker Mill Road	4	4	2	4	No	2020
PG Co.	PGS58	Widen	Rosaryville Road	Robert Crain Highway (US 301)	Woodyard Road (MD 223)	3	3	2	4	No	2020
PG Co.	PGS60b	Construct	Spine Road	Branch Avenue (MD 5)/US 301	Brandywine Road (MD 381)	3	3	0	4	No	2016
PG Co.	PGS61	Widen	Springfield Road	Lanham-Severn Road (MD 546)	Good Luck Road	4	4	2	4	No	2020
PG Co.	PGS82	Construct	St. Joseph's Drive	MD 202	Ardwick-Ardmore Road	0	4	0	4	No	2015
PG Co.	PGP2	Construct	Suitland Parkway	interchange at Rena/Forestville Roads		5	5	0	0	No	2025
PG Co.	PGS62a	Widen	Suitland Road	Allentown Road (MD 337)	Suitland Parkway	3	3	2	4	No	2018
PG Co.	PGS62b	Widen	Suitland Road	Suitland Parkway	Silver Hill Road (MD 458)	3	3	2	4	No	2018
PG Co.	PGS63	Widen	Sunnyside Avenue	Baltimore Avenue (US 1)	Kenliworth Avenue (MD 201)	4	4	2	4	No	2020
PG Co.	PGS64	Widen	Surratts Road	Beverly Avenue	Brandywine Road	4	4	2	4	No	2012
PG Co.	PGS65	Widen	Temple Hill Road	Piscataway Road (MD 223)	St. Barnabas Road (MD 414)	3	3	2	4	No	2020
PG Co.	PGP5a	Construct	US 50/Columbia Park Road Ramp	westbound ramp to Columbia Park Road		5	5	1	1	No	2025
PG Co.	PGP5b	Construct	US 50/Columbia Park Road Ramp	eastbound ramp Cheverly vicinity		5	5	1	1	Yes	2003

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
PG Co.	PGS67a	Widen	Van Dusen Road	Contee Road	Sandy Springs Road (MD 198)	3	3	2	4	No	2020
PG Co.	PGS67b	Construct	Van Dusen Road Interchange	@Contee Road		0	0	0	0	No	2025
PG Co.	PGS68	Widen	Virginia Manor Road	Muirkirk Road	Contee Road	4	4	2	4	No	2015
PG Co.	PGS69a	Widen	Walker Mill Road	Silver Hill Road	I-95	3	3	2	4	No	2020
PG Co.	PGS91	Widen	Westphalia Rd.	MD 4	Ritchie-Marlboro Rd.	4	3	2	4		2020
PG Co.	PGS70	Widen	Wheeler Road	St. Barnabas Road (MD 414)	District of Columbia limits	2	2	2	4	No	2020
PG Co.	PGS71	Widen	White House Road	Ritchie-Marlboro Road	Largo-Landover Road (MD 202)	3	3	2	6	Yes	2020
PG Co.	PGS72	Widen	Whitfield Chapel Road	Annapolis Road (MD 450)	Ardwick-Ardmore Road	4	4	2	4	No	2020
PG Co.	PGS40b	Construct	Woodmore Road	Enterprise Road (MD 193)	Church Road		3		4	No	2015
PG Co.	PGS42	Widen	Woodyard Road (MD 223)	Rosaryville Road	Dower House Road	2	2	2	4	No	2020
PG Co.	PGS42b	Construct	Woodyard Road Relocated (MD 223)	Piscataway Creek	Livingston Road	0	3	0	2	No	2010
PG Co.	PGS42c	Widen	Woodyard Road Relocated (MD 223)	Piscataway Creek / Floral Park Rd.	Livingston Road / MD 4	3	3	2	4	No	2017
City of Frederick											
City of Frederi	FS2	Construct	Monocacy Blvd	Hughes Ford Rd.	Gas House Pike	0	3	0	4	Yes	2012
Charles County											
Chas.Co.	CHS1	Widen/ Realign	Cross County Connector (Billingsly Rd.)	Middletown Rd.	MD 210	3	3	2	4		2009
Anne Arundel County											
BMC	AA1d	Widen	I-97	US 50/301	MD 32/3	1	1	4	6		2025
BMC	AA15a	Widen	I-295	I-195	MD 100	1	1	4	6		2015

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
BMC	AA15b	Construct	I-295 (New Interchange)	Hanover Road							2015
BMC	AA3e	Widen	MD 2	US 50	MD 10		2	4/5	6		2030
BMC	AA3g	Widen	MD 2	MD 450	South River Bridge	2	2	4	6		2030
BMC	AA4e	Widen	MD 3	MD 32	AA/Prince George Co. Line	2	2	4	6		2030
BMC	AA5c	Widen	MD 32	BW Parkway	Howard County Line		1	4	8		2020
BMC	AA14C	Widen	US50 / MD 301	AA / PG line	Bay Bridge	1	1	6	8		2020
BMC	AA6e	Widen	MD 100	Howard Co. Line	I-97		5/1	4	6		2025
BMC	AA7	Widen	MD 170	MD 175	MD 100		2	2	4		2020
BMC	AA8a	Widen	MD 175	MD 170	BW Parkway		2	2	4		2009
BMC	AA8b	Widen	MD 175	MD 170	BW Parkway		2	4	6		2015
BMC	AA29	Widen	MD 177	MD 100	South Carolina Avenue	2	2	3/2	5		2020
BMC	AA30	Widen	MD 198	MD 32	BW Parkway	2	2	2	4		2015
BMC	AA30a	Widen	MD 198	PG line	BW Parkway	2	2	4	6		2025
BMC		Widen	MD 607	Woods Rd.	MD 173			2	4		2025
BMC	AA34a	Widen	MD 713	MD 175	Arundel Mills Boulevard		2	2	4		2025
BMC	AA34b	Widen	MD 713	Arundel Mills Boulevard	MD 176		2	4	6		2025
Carroll County											
BMC	CA3A	Construct	MD 30 (Manchester Bypass)	North of MD 86	Brodbeck Rd		2	0	2		2030
BMC	CA1B	Widen	MD 140	Sullivan Road	Market St.		1	4/6	8		2020

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
BMC	nrs	Construct	MD 140 (3 new interchange)	@ MD 97S, Center St. & Englar Rd			1	-	-		2020
BMC	CA2a	Widen	MD 26	MD 32	MD 27		2	4	6		2025
BMC	in base	Widen	MD 32	MD 26	Howard County Line		2	2	4		2020
BMC	CA5	Widen	MD 97	MD 140	Pleasant Valley Rd		2	2	4		2020
Howard County											
BMC	HW1b	Widen	I-70	US 29	US 40	1	1	4	6		2020
BMC	HW1a	Reconstruct	I-70 (partial to full interchange)	@ Marriotsville Road		1	1				2020
BMC	HW19	Widen	I-95	Howard / PG line	Balt. / Howard line	1	1	8	10		2020
BMC	nrs	Reconstruct	US 1 (interchange)	@ MD 175							2015
BMC	HW10d	Widen	US 29	I-70	MD 100		5	6	8		2030
BMC	HW10b	Widen	US 29 NB	S. of MD 175	Middle Patuxent River		5	4	6		2010
BMC	HW3c	Widen	MD 32	Cedar Lane	Anne Arundel County Line		1	4/6	8		2015
BMC	HW3b	Widen	MD 32	MD 108	I-70		1	2	4		2015
BMC	HW3d	Widen	MD 32	I-70	Carroll County Line		2	2	4		2030
BMC	HW3e	construct/ reconstruct	MD 32 (interchanges)	@ I-70/ @ MD 144 @ Linden Church Rd/Dayton Shop @Rosemary Lane							2015
BMC		Construct	MD 32 (interchange)	@ Burntwoods Rd.							2009
BMC	HW6c	Widen	MD 108	Trotter Road	MD 32		2	2	4		2025
BMC	HW6d	Widen	MD 108	Woodland Rd.	1200' w. of Centennial Ln.	2	2	2	4		2011

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility		Lanes		Under Const. or ROW acquired?	Complt. Date or Status
						from	to	from	to		
BMC	HW6e	Widen	MD 108	MD 104	MD 175	2	2	2	4		2020
BMC	HW7d	Widen	MD 175	US 1	Anne Arundel County Line		2	2	5		2020
BMC	HW8b	Widen	MD 216	West of US 29	Sanner Road		3	2	4		2020
BMC	nrs	Construct	Dorsey Run Rd., North	MD 103	MD 175			0	4		2011
BMC	nrs	Construct	Dorsey Run Rd., South	MD 175	Gulford Rd.			0	4		2010
BMC	HW16C	Widen	Gorman Road	Stephens Road	US 1		3	2	3		2025
BMC	HW18a	Widen	Marriottsville Road	MD 99	US 40		3	2	6		2015
BMC	nrs	Widen	Patuxent Range Road	US 1	Dorsey Run Road			2	4		2015
BMC	HW11b	Widen	Rodgers Avenue	US 40	Courthouse Drive		3	2	4		2010
BMC	HW13a	Construct	Sanner Road South	Johns Hopkins Road	MD 216		3	0	4		2015
BMC	HW13b	Widen	Sanner Road North	Johns Hopkins Road	Pindell School Road		3	2	4		2015
BMC	HW14c	Widen	Snowden River Parkway	MD 100	Broken Land Parkway		3	4	6		2020
Federal Lands											
Fed. Lands	FED2	Widen	Old Mill Rd.(future Mulligan Rd.)	US 1	VA 611 (Telegraph Rd.)	4	4	0/2	4	Yes	2012
VIRGINIA											
VDOT Freeway											
VDOT	VI1w	Widen	I-66 HOV during peak	US 15 (includes intch. reconst.)	US 29 (Gainesville)	1	1	4	6	No	2020
VDOT	VI1z	Reconstruct	I-66 Interchange	@ US 29 (Gainesville)		1	1	-	-	No	2014
VDOT	VI1ca	Widen	I-66 HOV during peak	US 29 (Gainesville)	VA 234 (Prince William Pkwy)	1	1	4	8	Yes	2010

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
VDOT	VI1ab	Reconstruct	I-66 Interchange	@ I-495 (Capital Beltway)		1	1	-	-	Yes	2013
VDOT	VI1aj	Construct	I-66 Vienna Metro Station HOV Ramp	Transit Ramps - from EB to WB	at Saintsbury Dr.	1	1	0	2	No	2014
VDOT		Widen	I-66 EB Auxiliary Lanes	West of Gallows Road	Off Ramp I-495 SB	1	1	3+1	3+1+	No	2030
VDOT		Widen	I-66 WB Auxiliary Lanes	On Ramp from SB I-495	West of Gallows Road	1	1	3+1	3+1+	No	2030
VDOT	VI1ah	Widen	I-66 EB Auxiliary Lanes	Cedar Lane	West of Gallows Road	1	1	3+1	3+1+	No	2030
VDOT	VI1ai	Widen	I-66 WB Auxiliary Lanes	West of Gallows Road	Cedar Lane	1	1	3+1	3+1+	No	2030
VDOT	VI1ae	Reconstruct	I-66 WB Operational/ Spot Improvements- extend acceleration/deceleration lanes	Fairfax Dr.	Sycamore St.	1	1	2	3	No	2013
VDOT	VI1af	Reconstruct	I-66 WB Operational/ Spot Improvements- extend acceleration/deceleration lanes	Washington Blvd.	Dulles Airport Access Rd. connector	1	1	3	4	No	2020
VDOT	VI1ag	Reconstruct	I-66 WB Operational/ Spot Improvements	Lee Hwy. / Spout Run	Glebe Rd.	1	1	2	3	No	2020
VDOT	VI2ka	Widen	I-95 (Wilson Bridge and approaches)	VA 241 (Telegraph Rd.)	US 1	1	1	6	12	Yes	2011
VDOT	VI2k	Widen	I-95 (Wilson Bridge and approaches)	US 1	MD 210	1	1	6	12	Yes	2011
VDOT	VI2ac	Reconstruct	I-95 Interchange	@ VA 613 (Van Dorn Street)		1	1	-	-	No	2015
VDOT	VI2p	Widen	I-95 (provide 4th lane)	Newington	VA 123	1	1	6	8	Yes	2011
VDOT	VI2ab	Reconstruct	I-95 Interchange	@ VA 642 (Lorton Road)		1	1	-	-	No	2010
VDOT	~~VI2d~~	~~Construct~~	~~I-95 Interchange~~	~~@ VA 7900 (Franconia-Springfield Parkway)~~	~~LOV Access to & from West/from & to North~~	~~-~~	~~1~~	~~-~~	~~-~~	~~No~~	~~2015~~
VDOT	VI2r	Widen / Construct	I-395/I-95 HOV/ BUS/ HOT Lanes	Eads St.	VA 234 (Dumfries Rd.)	1	1	2	3	No	2012

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility		Lanes		Under Const. or ROW acquired?	Complt. Date or Status
						from	to	from	to		
VDOT	VI2r	Construct	I-395/I-95 HOV/ BUS/ HOT Lanes Transition	VA 234	Joplin Rd	1	1		2	No	2012
VDOT	VI2r	Construct	I-395/I-95 HOV/ BUS/ HOT Lanes Transition	Joplin Road	VA 610 (Garrisonville Rd.) in Stafford Co.	1	1		1	No	2012
VDOT	VI2r	Widen	I 95: HOV / Bus / HOT Ramp:	NB HOV/Bus/HOT lanes	Eads Street	1	1	1	2	No	2012
VDOT	VI2r	Widen	I 95: HOV / Bus / HOT Ramp:	Eads Street	SB HOV/Bus/HOT Lanes	1	1	1	2	No	2012
VDOT	VI2r	Remove	I 95: HOV / Bus / HOT Ramp:	SB Express to SB Gen. use lanes	Between S Hayes St. & Washington Blvd.	1	-	1	0	No	2012
VDOT	VI2r	Construct	I 95: HOV / Bus / HOT Ramp:	NB HOV/Bus/HOT Lanes	Shirlington Circle	-	1	0	1	No	2012
VDOT	VI2r	Construct	I 95: HOV / Bus / HOT Ramp:	Shirlington Circle	SB HOV/Bus/HOT Lanes	-	1	0	1	No	2012
VDOT	VI2r	Construct	I 95 : HOV / Bus / HOT Bus Only Ramp:	NB HOV/Bus/HOT Lanes	VA 420 (Seminary Road) (bus only)	-	1	0	1	No	2012
VDOT	VI2r	Construct	I 95: HOV / Bus / HOT Ramp:	VA 420 (Seminary Road) (bus only)	SB HOV/Bus/HOT Lanes	-	1	0	1	No	2012
VDOT	VI2r	Construct	I 95: HOV / Bus / HOT Ramp:	NB HOV/Bus/HOT to Gen. use lanes	Between VA 236 (Duke St.) and VA 648 (Edsall Rd.)	-	1	0	1	No	2012
VDOT	VI2r	Construct	I 95: HOV / Bus / HOT Ramp:	NB HOV/Bus/HOT Lanes	VA 7100 (Fairfax Co. Pkwy) (Alban Rd.)	-	1	0	1	No	2012
VDOT	VI2r	Construct	I 95: HOV / Bus / HOT Ramp:	VA 7100 (Fairfax Co. Pkwy) (Alban Rd.)	SB HOV/Bus/HOT Lanes	-	1	0	1	No	2012
VDOT	BRAC0004 / VI2ra	Construct	I-95 Reversible Ramp (Colocated w/ existing slip ramp from HOV to GP lanes)	NB HOV/BUS/HOT Lanes - Located N of Rte. 7100/I 95 I/C	EPG Southern Loop Road. - AM Only	1	1	0	1	No	2016
VDOT	BRAC0004 / VI2rb	Construct	I-95 Reversible Ramp (Colocated w/ existing slip ramp from HOV to GP lanes)	EPG Southern Loop Road. - PM Only	SB HOV/BUS/HOT Lanes - N of Rte. 7100/I 95 I/C	1	1	0	1	No	2012
VDOT	BRAC0004/ VI2rc	Construct	I-95 Ramp (Colocated w/ existing slip ramp from HOV to GP lanes)	EPG Southern Loop Road. - PM Only	NB I 95 GP Lanes	1	1	0	1	No	2012

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility		Lanes		Under Const. or ROW acquired?	Complt. Date or Status
						from	to	from	to		
VDOT	BRAC0005 / VI2rd	Widen	I-95 Ramp	SB I 95 General Purpose Lanes	NB Fairfax Co. Parkway / EPG Southern Loop Road	1	1	1	2	No	2010
VDOT	VI2r	Construct	I 95: HOV / Bus / HOT Ramp:	NB HOT lanes to new bus station, back to NB HOT	Between VA 7100 (Fairfax Co. Pkwy.) and VA 642	-	1	0	1	No	2012
VDOT	VI2r	Construct	I 95: HOV / Bus / HOT Ramp:	SB HOT lanes to new bus station, back to SB HOT lanes	Between VA 7100 (Fairfax Co. Pkwy.) and VA 642	-	1	0	1	No	2012
VDOT	VI2r	Construct	I 95: HOV / Bus / HOT Ramp:	NB HOV/Bus/HOT to Gen. use lanes	Between VA 7100 (Fairfax Co. Pkwy.) and VA 642	0	1	0	1	No	2012
VDOT	VI2r	Construct	I 95: HOV / Bus / HOT Ramp:	SB Gen Purpose Lanes to SB HOV/Bus/HOT lanes	Between VA 642 (Lorton Rd) and US 1	-	1	0	1	No	2012
VDOT	VI2r	Construct	I 95: HOV / Bus / HOT Ramp:	SB Gen Purpose Lanes to SB HOV/Bus/HOT lanes	Between Opitz Blvd. and Dale Blvd.	-	1	0	1	No	2012
VDOT	VI2r	Construct	I 95: HOV / Bus / HOT Ramp:	NB HOV/Bus/HOT to Gen. use lanes	Between VA 123 (Gordon Rd.) & VA 3000 (Prince	-	1	0	1	No	2012
VDOT	VI2r	Construct	I 95: HOV / Bus / HOT Ramp:	NB HOV/Bus/HOT to Gen. use lanes	Between VA 610 (Cardinal Rd.) & VA 234 (Dumfries	-	1	0	1	No	2012
VDOT	VI2r	Construct	I 95: HOV / Bus / HOT Ramp:	SB Gen Purpose Lanes to SB HOV/Bus/HOT lanes	Between Dumfries Rd. and Joplin Rd.	-	1	0	1	No	2014
VDOT	VI2r	Construct	I 95: HOV / Bus / HOT Ramp:	NB HOV/Bus/HOT lanes to NB Gen Purpose Lanes	Between Joplin Rd. and Russell Rd.	-	1	0	1	No	2014
VDOT	VI2ca	Construct	VIII of I-95/394/495 Interchange)	Backlick Rd. to 1. mi. E. of I95/I395/I495	& SB main & HOT to/from I-495/I-95 EB & WB main &	1	1	-	-	No	2013
VDOT	VI4laux	Widen	I-495 NB Auxiliary Lane	1. mi. East of I-95/395/495	North of Hemming Ave. underpass	1	1	4+2	5+1	Yes	2013
VDOT	VI4laux	Widen	I-495 SB Auxiliary Lane	North of Hemming Ave. Underpass	1. mi. East of I-95/395/495	1	1	4+2	5+1	Yes	2013
VDOT	VI4laux	Widen	I-495 NB Auxiliary Lane	North of Hemming Ave. Underpass	Off Ramp to Braddock Rd	1	1	4+2	5+2	Yes	2030
VDOT	VI4laux	Widen	I-495 SB Auxiliary Lane	On Ramp from Braddock Rd	North of Hemming Ave. Underpass	1	1	4+2	5+2	Yes	2030
VDOT	VI4laux	Widen	I-495 NB Auxiliary Lane	On Ramp from Braddock Rd	Off Ramp to Rte 236	1	1	4+2	5+2	Yes	2030
VDOT	VI4laux	Widen	I-495 SB Auxiliary Lane	On Ramp from Rte 236	Off Ramp to Braddock Rd	1	1	4+2	5+2	Yes	2013
VDOT	VI4laux	Widen	I-495 NB Auxiliary Lane	On Ramp from Rte 236	Off Ramp to Gallows Road	1	1	4+2	5+2	Yes	2030

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
VDOT	VI4laux	Widen	I-495 SB Auxiliary Lane	On Ramp from Gallows Road	Off Ramp to Rte 236	1	1	4+2	5+2	Yes	2030
VDOT	VI4laux	Widen	I-495 NB Auxiliary Lane	On Ramp from Gallows Road	Off Ramp to Route 50	1	1	4+2	6+2	Yes	2013
VDOT	VI4laux	Widen	I-495 SB Auxiliary Lane	On Ramp from Route 50	Off Ramp to Gallows Road	1	1	4+2	5+2	Yes	2013
VDOT	VI4laux	Widen	I-495 NB Auxiliary Lane	On Ramp from Route 50	Off Ramp to I-66	1	1	4+2	5+2	Yes	2013
VDOT	VI4laux	Widen	I-495 NB Auxiliary Lane	On Ramp from Route 50	Off Ramp to I-66	1	1	5+2	6+2	Yes	2030
VDOT	VI4laux	Widen	I-495 SB Auxiliary Lane	On Ramp from I-66	Off Ramp to Route 50	1	1	4+2	5+2	Yes	2013
VDOT	VI4laux	Widen	I-495 NB	On ramp from EB I 66	Off Ramp to Rte 7	1	1	4+2	5+2	Yes	2013
VDOT	VI4laux	Widen	I-495 SB Auxiliary Lane	On ramp from Rte 7	Off Ramp to WB I 66	1	1	4+2	5+2	Yes	2030
VDOT	VI4laux	Widen	I-495 NB Auxiliary Lane	On ramp from Rte 7	Off Ramp to Rte 123	1	1	4+2	5+2	Yes	2013
VDOT	VI4laux	Widen	I-495 SB Auxiliary Lane	On ramp from Rte 123	Off Ramp to Route 7	1	1	4+2	5+2	Yes	2013
VDOT	VI4laux	Widen	I-495 SB Auxiliary Lane	On Ramp from Rte 123	Off Ramp to Route 7	1	1	5+2	6+2	Yes	2030
VDOT	VI4laux	Widen	I-495 NB Auxiliary Lane	On Ramp from Rte 123	Off Ramp to Rte 267	1	1	4+2	5+3	Yes	2013
VDOT	VI4laux	Widen	I-495 SB Auxiliary Lane	On Ramp from Route 267	Off Ramp to Route 123	1	1	4+2	5+4	Yes	2013
VDOT	VI4laux	Widen	I-495 NB Auxiliary Lane	On Ramp from Route 267	Off Ramp to Route 193	1	1	4+2	5+2	Yes	2030
VDOT	VI4laux	Widen	I-495 SB Auxiliary Lane	On Ramp from Route 193	Off Ramp to Route 267	1	1	4+2	5+2	Yes	2030
VDOT	VI4k	Construct	I-495 HOT	American Legion Bridge	S. of George Washington Pkwy.	1	1	8	8+2	Yes	2030
VDOT	VI4ka	Construct	I-495 HOT Lanes	S. of George Washington Pkwy	S. of Old Dominion Dr.	1	1	8	8+2	No	2013
VDOT	VI4lHOT	Construct	I-495 HOT	S. of Old Dominion Dr.	Hemming Ave. Underpass	1	1	8	8+4	Yes	2013
VDOT	VI4lb	Construct	I-495 NB Auxiliary Lane	1 mi. east of I-95/I-395/I-495	North of Hemming Ave. Underpass	1	1	8	5+1	Yes	2013

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility		Lanes		Under Const. or ROW acquired?	Complt. Date or Status
						from	to	from	to		
VDOT	VI4Ib	Construct	I-495 SB Auxiliary Lane	Hemming Ave. Underpass	1 mi. east of I-95/I-395/I-495	1	1	8	5+1	Yes	2013
VDOT	part of VI4IHOT	Construct	I-495 HOT Lanes Interchange	Provides SB to WB, EB to SB, & NB to WB HOV movements	@ VA 267 (Dulles Toll Road)	1	1	-	-	Yes	2013
VDOT	part of VI4IHOTa	Construct	I-495 HOT Lanes Interchange	Provide SB HOT to EB HOV & EB DTR to NB HOT movements	@ VA 267 (Dulles Toll Road)	1	1	-	-	Yes	2030
VDOT	part of VI4IHOTa	Relocate / Reconstruct	I-495 HOT Lanes Interchange	Move ramps from left side to right side: NB GP lanes to WB DTR; SB GP lanes to EB DTR	@ VA 267 (Dulles Toll Road)	1	1	1	1	Yes	2030
VDOT		Construct	I-495 Interchange Ramp	SB I-495	WB Dulles Airport Access Highway (DAAH)	0	1	0	1	Yes	2013
VDOT		Construct	I-495 Interchange Ramp	EB Dulles Airport Access Highway (DAAH)	NB I-495	0	1	0	1	Yes	2013
VDOT		Construct	I-495 Interchange Ramp	EB Dulles Airport Access Highway (DAAH)	SB I-495	0	1	0	1	Yes	2013
VDOT	part of VI4IHOT	Construct	I-495 HOT Lanes Interchange	NB to WB, SB to WB, EB to NB, and EB to SB	@ Jones Branch Connector	1	1	-	-	Yes	2013
VDOT	part of VI4IHOT	Construct	I-495 HOT Lanes Interchange	NB to WB, SB to WB, EB to NB, and EB to SB	@ West Park Connector	1	1	-	-	Yes	2013
VDOT	part of VI4IHOT	Construct	I-495 HOT Lanes Interchange	NB to EB, NB to WB, EB to SB, and WB to SB	@ VA 7	1	1	-	-	No	2013
VDOT	part of VI4IHOT	Construct	I-495 HOT Lanes Interchange	Provides SB to WB, WB to SB, EB to SB, NB to WB, WB	@ I-66	1	1	-	-	Yes	2013
VDOT	part of VI4IHOT	Construct	I-495 HOT Lanes Interchange	NB to EB	@ I-66	1	1	-	-	Yes	2013
VDOT	part of VI4IHOT	Relocate	I-495 HOT Lanes Interchange	@ I-66	Left side off ramp from NB I 495 to WB I 66 relocated to	1	1	1	2	Yes	2013
VDOT	part of VI4IHOT	Construct	I-495 HOT Lanes Interchange	NB to EB, NB to WB, EB to SB, and WB to SB	@ US 29	1	1	-	-	Yes	2013
VDOT	part of VI4IHOT	Construct	I-495 HOT Lanes Interchange	EB to NB, WB to NB, SB to EB, and SB to WB	@ VA 650 (Gallows Road)	1	1	0	1	Yes	2013

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
VDOT	part of VI4IHOT	Construct	I-495 HOT Lanes Interchange	EB to NB, WB to NB, SB to EB, and SB to WB	@ VA 620 (Braddock Road)	1	1	-	-	Yes	2013
VDOT	part of VI4IHOTa	Construct	I-495 HOT Lanes Interchange	NB to EB, NB to WB, EB to SB, and WB to SB	@ VA 620 (Braddock Road)	1	1	-	-	Yes	2030
VDOT	MW1	Widen	Dulles Airport Access Road	Dulles Airport	VA 123	1	1	4	6	No	2017
VDOT	VP21d	Widen	Dulles Greenway	Goose Creek Bridge	VA 901 (Claiborne Parkway)	1	1	4	6	Complete	2009
VDOT	VP21e	Widen	Dulles Greenway	VA7/15 Bypass	Goose Creek Bridge	1	1	4	6	Complete	2009
VDOT	VP21b	Construct	Dulles Greenway Interchanges	@ VA 653 & @ Battlefield Parkway		1	1	-	-	Complete	2009
VDOT Primary											
~~VDOT~~	~~VP1ac~~	~~Widen~~	~~US 1~~	~~Stafford County Line~~	~~Joplin Rd.~~	~~2~~	~~2~~	~~4~~	~~6~~	~~No~~	~~2016~~
VDOT	VP1ab	Widen	US 1	Joplin Rd.	Brady's Hill Road	2	2	4	6	Yes	2011
VDOT	VP1ad	Widen	US 1	Brady's Hill Road	Cardinal Drive	2	2	4	6	No	2025
~~VDOT~~		~~Widen~~	~~US 1~~	~~Cardinal Drive~~	~~Blackburn Dr/Neabsco Mills Rd~~	~~2~~	~~2~~	~~4~~	~~6~~	~~Yes~~	~~2010~~
VDOT	VP1ae	Widen	US 1	Blackburn Dr/Neabsco Mills Rd	Featherstone Road	2	2	4	6	No	2025
~~VDOT~~	~~VP1a~~	~~Widen~~	~~US 1~~	~~Featherstone Rd.~~	~~Fairfax / P. W. Co. line~~	~~2~~	~~2~~	~~4~~	~~6~~	~~No~~	~~2015~~
VDOT	VP1a	Widen	US 1	Fairfax / P. W. Co. line	VA 235 South	2	2	4	6	No	2015
VDOT	VP1u	Widen	US 1	VA 235 South	VA 235 North	2	2	4	6	No	2015
VDOT	VP1o	Widen	US 1 (Neabsco Creek Bridge)	Cardinal Dr.	Blackburn Rd.	2	2	4	6	Complete	2009
VDOT	VP1p	Widen	US 1 (part of 1/123 interchange)	Occoquan Rd.	Annapolis Way	2	2	4	6	Yes	2017
~~VDOT~~	~~VP2s~~	~~Widen / Upgrade~~	~~VA 7~~	~~Route 9~~	~~Market Street (Leesburg)~~	~~2~~	~~2~~	~~4~~	~~5~~	~~No~~	~~2025~~

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
VDOT	VP2ja	Widen	VA 7 Bypass	VA 7 West	US 15 South (South King St)	5	1	4	6	No	2035
VDOT	VP2j	Widen	VA 7 Bypass	US 15 South (South King St)	VA 7/US 15 East	5	1	4	6	No	2035
VDOT	VP2m	Widen	VA 7	Reston Avenue	Lewinsville Road	2	2	4	6	No	2025
VDOT	nrs	Construct	VA 7	Bridge over Dulles Toll Road				4	6	No	2030
VDOT	VP2ma		VA 7	Rolling Holly Drive	Reston Avenue			4	6	No	2014
VDOT	VP2L	Widen	VA 7	Dulles Toll Rd.	I-495	2	2	6	8	No	2014
VDOT	VP2b	Widen	VA 7	Seven Corners	Bailey's Crossroads	2	2	4	6	No	2025
VDOT	VP2t	Construct	VA 7 interchange	@ Claiborne Pkwy./West Spine Rd.		-	-	-	-	Complete	2006
VDOT		Construct	VA 7 interchange	@ Ashburn Villiage Blvd.		-	-	-	-	Complete	2010
VDOT		Construct	VA 7 interchange	@ Loudoun County Parkway		-	-	-	-	Yes	2010
VDOT		Construct	VA 7 interchange	@ River Creek Parkway / Crosstrail Blvd.		-	-	-	-	Complete	2009
VDOT		Construct	VA 7 interchange	@ VA 659 (Belmont Ridge Rd.)		-	-	-	-	No	2025
VDOT	VP4e	Widen	US 15 (James Madison Highway)	US 29	I-66	2	2	2	4	No	2040
VDOT	VP4fa	Widen	US 15 (James Madison Highway)	I-66	VA 234	2	2	2	4	Complete	2009
~~VDOT~~	~~VP4fb~~	~~Widen~~	~~US 15 (James Madison Highway)~~	~~VA 234~~	~~Loudoun County Line~~	~~2~~	~~2~~	~~2~~	~~4~~	~~No~~	~~2030~~
VDOT	VP6h	Widen	VA 28	Fauquier County Line	VA 652 (Fitzwater Dr.)	3	3	2	4	No	2025
VDOT	VP6ka	Widen	VA 28	VA 652 (Fitzwater Dr.)	VA 619 (Linton Hall Road)	3	3	2	4	No	2025
~~VDOT~~	~~VP6k~~	~~Upgrade/ Widen~~	~~VA 28~~	~~VA 619 (Linton Hall Road)~~	~~VA 234 Bypass~~	~~3~~	~~2~~	~~4~~	~~6~~	~~No~~	~~2020~~
VDOT	VP6ma	Widen	VA 28 (Nokesville Rd.)	Goodwin Drive	Manassas City limits - west	3	2	4	6		2017

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
~~VDOT~~	~~VP6b~~	~~Widen~~	~~VA 28 (Centreville Road)~~	~~N. City Limits of Manassas Park~~	~~Old Centreville Rd.~~	~~2~~	~~2~~	~~4~~	~~6~~	~~No~~	~~2025~~
VDOT	VP6e	Widen/ Upgrade	VA 28 PPTA (Phase II)	I-66	VA 7	2	1	6	8	No	2025
VDOT	VP6ea	Widen/ Upgrade	VA 28	Dulles Toll Rd.	VA 606 (Old Ox Rd.)	2	1	6	6	Complete	2008
VDOT	VP6eb	Construct	VA 28 Interchange	@ VA 209 (Innovation Ave.)		-	-	-	-	Yes	2015
VDOT	VP6ec	Construct/ Upgrade	VA 28 Intersection	at Steeplechase Drive		1	1	6	6	Yes	2011
VDOT		Reconst.	VA 28 Interchange	@ New Braddock Rd.		-	-	-	-	No	2010
VDOT	VP6y	Construct	VA 28 PPTA Interchange	@Nokes Boulevard		-	-	-	-	Complete	2009
VDOT	VI1bb	Remove	VA 28 SB ramp	at I-66	EB I-66 off-ramp to SB VA 28					Complete	2008
VDOT	VI1cc	Remove	VA 28 NB ramp	at I-66	eliminate turn movement-NB VA 28 to WB I-66					Complete	2008
VDOT	VP7ae	Construct	US 29 Interchange	@ VA 55/VA 619		-	-	-	-	No	2014
VDOT	VP7r	Widen	US 29	Virginia Oaks Drive	I-66	2	5	4	6	No	2014
VDOT	VP7s	Widen	US 29 (add NB lane)	I-66	Entrance to Conway Robinson MSF	3	2	4	5	No	2014
~~VDOT~~	~~VP7ad~~	~~Widen~~	~~US 29~~	~~US 50~~	~~I-66~~	~~2~~	~~2~~	~~4~~	~~6~~	~~No~~	~~2010~~
VDOT	VP7aa	Widen	US 29	ECL City of Fairfax (vic. Nutley St.)	Espana Court	2	2	4	6	No	2025
VDOT	VP7ab	Complete	US 29	Espana Court	I-495	2	2	4	6	No	2015
VDOT	VSP57a	Construct	Route 29 (Parallel)	US 29 (Lee Highway) (near US 15)	Sommerset Crossing Drive	0	4	0	4	No	2040
VDOT	VP8q	Widen	US 50	VA 659 Relocated	VA 742 (Poland Rd.)	2	2	4/5	6	No	2015
VDOT	VP8c	Widen	US 50	VA 742 (Poland Rd.)	VA 609 (Pleasant Valley)	2	2	4/5	6	No	2012
VDOT	VP8r	Widen	US 50	VA 609 (Pleasant Valley)	VA 661 (Lee Rd.)	2	2	4/5	6	No	2012

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
VDOT	VP8n	Widen	US 50 (WBL)	I-66	Waples Mill Road	2	2	2	3	Complete	2007
VDOT	~~VP8g~~	~~Widen~~	~~US 50~~	~~I-66~~	~~WCL Fairfax City~~	~~2~~	~~2~~	~~6~~	~~8~~	~~No~~	~~2020~~
VDOT	VP8h	Widen	US 50	ECL City of Fairfax	Arlington County Line	2	2	4	6	No	2025
VDOT	AR2e	Reconstruct	US 50 (Arlington Blvd.)	ARC/FFX Line	Washington Blvd.	2	2	6	6	No	2015
VDOT	AR2f	Reconstruct	US 50 (Arlington Blvd.)	Pershing Dr.	Ft. Myer Dr.	5	5	6	6	No	2015
VDOT	VP8o	Reconstruct	US 50 Interchange	@ Courthouse Road / 10th Street		1	1	6	8	Yes	2012
VDOT		Construct	US 50 Interchange	VA 606 (Loudoun County Parkway)		-	-	-	-	No	2025
VDOT	VP10g	Widen	VA 123	Route 1	Horner Road	2	2	4	6	No	2017
~~VDOT~~	~~VP10s~~	~~Widen~~	~~VA 123~~	~~Horner Road~~	~~Devil's Reach Road~~	~~2~~	~~2~~	~~4~~	~~6~~	~~No~~	~~2015~~
VDOT	VP10h	Widen	VA 123 (Ox Road)	Hooes Rd.	Fairfax Co. Parkway	2	2	4	6	No	2015
VDOT	VP10f	Widen	VA 123 (Ox Road)	Fairfax Co. Parkway	Burke Center Parkway	2	2	4	6	No	2015
VDOT	VP10r	Widen	VA 123	Burke Center Parkway	Braddock Road	2	2	4	6	No	2025
~~VDOT~~	~~VP10j~~	~~Widen~~	~~VA 123~~	~~I-495~~	~~VA 123~~	~~2~~	~~2~~	~~6~~	~~8~~	~~No~~	~~2013~~
~~VDOT~~	~~VP24a~~	~~Relocate/ Widen~~	~~VA 215~~	~~0.5 mi. west of VA 28 intersection~~	~~VA 28~~	~~4~~	~~3~~	~~2~~	~~4~~	~~No~~	~~2011~~
~~VDOT~~	~~VP12k~~	~~Widen/ Upgrade~~	~~VA 234 (Manassas Bypass)~~	~~VA 234 S. of Manassas~~	~~I-66~~	~~5~~	~~1~~	~~4~~	~~6~~	~~No~~	~~2030~~
VDOT	VP13a	Widen	VA 236	Pickett Road	I-395	2	2	4	6	No	2025
VDOT	VP12o	Construct	Tri-County Parkway (CTB alignment C & D)	VA 234 @ I 66	US 50	0	5	0	4	No	2035
VDOT Urban											
VDOT	VU28b	Construct	Battlefield Parkway	US 15 south of Leesburg	Dulles Greenway	0	2	0	4	Complete	2005

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
VDOT	VU28c	Construct	Battlefield Parkway	Dulles Greenway	Sycolin Road	0	2	0	4	Complete	2007
VDOT	VU28d	Widen/ Upgrade	Battlefield Parkway / Lawson Rd.	Sycolin Road	Kincaid Boulevard	4	2	2	4	Complete	2007
VDOT	VU28da	Construct	Battlefield Parkway	Kincaid Boulevard	Route 7	0	2	0	4	Complete	2009
VDOT	VU28f	Construct	Battlefield Parkway	Fort Evans Road	Edwards Ferry Road	0	2	0	4	Yes	2010
~~VDOT~~	~~VU2b~~	~~Construct~~	~~Clermont Ave.~~	~~Eisenhower Ave.~~	~~Duke St.~~	~~-~~	~~3~~	~~-~~	~~4~~	~~No~~	~~2015~~
VDOT	VU30f	Widen	East Elden Street	Van Buren St.	Fairfax County Parkway	2	2	4	6	No	2016
VDOT	VU52	Widen	Eisenhower Ave.	Stovall St.	Holland Lane	3	3	4	6	No	2013
VDOT	VU35b	Construct	Mill Road Extension	Telegraph Rd.	DMV complex	-	3	-	2	No	2010
VDOT	VU51a	Construct	Potomac Yard Spine Road	US Route 1	Crystal Dr.	0	4	0	4	No	2014
VDOT	VU10b	Widen	Spring Street	Herndon Parkway East	Fairfax County Parkway	3	3	4	6	No	2014
VDOT	VU33	Widen	Sycolin Road	VA 7/US 15 Bypass	SCL of Leesburg	3	3	2	4	No	2015
VDOT	VU32	Widen	US 15 (South King Street)	Evergreen Mill Road	SCL of Leesburg	3	2	2	4	No	2015
VDOT		Construct	US 15 Bypass Interchange	Edwards Ferry Rd.		2	2	-	-	No	2025
VDOT	VU40	Widen	US 29 (Lee Highway)	US 50	Chain Bridge Road	2	2	4	6	No	2040
VDOT	VU6b	Widen	US 29 (Lee Highway)/US 50	VA 123 (Chain Bridge Road)	Eaton Place	2	2	4	6	No	2013
VDOT	VU29	Construct	VA 123 (Chain Bridge Road)	US 50	I-66	2	2	5	6	No	2013
VDOT		Reconstruct	Chain Bridge Road/Eaton Place Intersection	intersection at NB Chain Bridge Rd. & Willow Crescent		2	2			No	2011
VDOT	VU45	Widen	VA 234 (Dumfries Road)	South Corporate Limits	Hastings Drive	3	3	2	4	No	2011
VDOT	VU48b	Widen	Wellington Road	Godwin Drive	VA 28 (Nokesville Road)	3	3	2	4	No	2010

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
VDOT	VU14a	Widen	Liberia Ave.	Rt.e 28	Quarry Road	3	3	4	6		2017
ARLINGTON COUNTY SECONDARY											
VDOT	AR17a	Widen	Washington Blvd.	Wilson	Kirkwood	3	3	3	4	No	2015
FAIRFAX COUNTY SECONDARY											
VDOT	FFX2a	Construct	VA 602 (Reston Pkwy.)	VA 5320 (Sunrise Valley Dr.)	VA 606 (Baron Cameron Avenue)	2	2	4	6	No	2020
VDOT	nrs	Reconstruct/ Widen	Rte 603 Beach Mill Road - Bridge over Nichols Branch	Rte 603 Beach Mill Road	Rte 674 Springvale Road (west of intersection)	3	3				2014
VDOT	VSF2a	Widen	VA 608 (West Ox Road)	VA 6558 (Penderbrook Drive)	VA 6985 (Ox Trail)	3	3	2	4	complete	2008
VDOT	VSF4f	Widen	VA 611 (Furnace Road)	VA 123 (Ox Road)	VA 642 (Lorton Road)	3	3	2	4	No	2013
VDOT	VSF4c	Widen	VA 611 (Telegraph Road)	VA 613 (Beulah St.)	Leaf Road North	3	3	2	4	Yes	2012
VDOT	VSF4ca	Widen	VA 611 (Telegraph Road)	Leaf Road North	VA 635 (Hayfield Road)	3	3	2	4	No	2020
VDOT	VSF4i	Widen	VA 611 (Telegraph Road)	VA 635 (Hayfield Road)	VA 633 (S. Kings Hwy.)	3	3	2	4	No	2025
VDOT	VSF4h	Widen	VA 611 (Telegraph Road)	VA 633 (S. Kings Hwy.)	VA 644 (Franconia Road)	3	3	2	3	No	2025
VDOT	VSF15b	Construct	VA 613 (Van Dorn Street)	@ VA 644 (Franconia Road)	interchange	0	0	0	0	No	2020
VDOT	VSF8g	Widen	VA 620 (Braddock Rd)	VA 7100 (Fairfax Co. Pkwy.)	VA 123 (Ox Road)	3	3	4	6	No	2020
VDOT	VSF8j	Construct/ Widen	VA 620 (New Braddock Rd.)	VA 28	US 29 @ VA 662 (Stone Rd.)	0/4	3	0/2	4	No	2020
VDOT	VSF10c	Widen	VA 638 (Pohick Road)	US 1	I-95	3	3	2	4	No	2025
~~VDOT~~	~~VSF10e~~	~~Widen~~	~~VA 638 (Rolling Road)~~	VA ~~5297~~ 5497 (Delong Dr.)	Fullerton Rd. ~~VA 6922 (Odell Street) / Fairfax County Parkway~~	~~3~~	~~3~~	~~2~~	~~4~~	~~No~~	~~2015~~
~~VDOT~~	~~VSF10a~~	~~Widen~~	~~VA 638 (Rolling Road)~~	~~VA 7100 (Fairfax County Parkway)~~	Fullerton Rd. ~~VA 644 (Old Keene Mill Road)~~	~~3~~	~~3~~	~~2~~	~~4~~	~~No~~	~~2012~~

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
VDOT	VSF13d	Widen	VA 642 (Lorton Road)	VA 123 (Ox Road)	VA 600 (Silverbrook Road)	3	3	2	4	No	2013
~~VDOT~~	~~VSF15~~	~~Widen~~	~~VA 644 (Franconia Road)~~	~~VA 3290 (Craft Road)~~	~~VA 611 (Telegraph Road)~~	~~3~~	~~3~~	~~2~~	~~4~~	~~No~~	~~2015~~
VDOT	FFX11a	Widen	VA 645 (Stringfellow Rd.)	US 50	VA 7100 (Fairfax County Parkway)	3	3	2	4	No	2020
VDOT	VSF16g	Widen	VA 645 (Stringfellow Road)	VA 7735 (Fair Lakes Blvd.)	US 50	3	3	2	4	No	2013
VDOT	VSF37	Widen	VA 650 (Gallows Road)	Gatehouse Road	Providence Forest Dr.	2	2	4	6	Yes	2020
VDOT	VSF33d	Widen	VA 651 (Guinea Road)	VA 620 (Braddock Road)	VA 2430 (Braeburn Road)	3	3	2	4	No	2020
VDOT	VSF33a	Widen	VA 651 (Guinea Road)	VA 6197 (Roberts Parkway)	VA 4807 (Pommeroy Drive)	3	3	2	4	No	2020
VDOT	FFX12a	Construct	VA 651 (New Guinea Rd.)	VA 123 (Ox Road)	Roberts Rd.	0	3	0	4	No	2020
VDOT	VSF17b	Construct	VA 655 (Shirley Gate Road)	VA 7100 (Fairfax County Parkway)	VA 620 (Braddock Road)	0	3	0	4	No	2020
VDOT	VSF18c	Widen	VA 657 (Centreville Road)	VA 8390 (Metrotech Dr.)	VA 668 (McLearen Road)	3	3	4	6	No	2040
VDOT	VSF18h	Widen	VA 657 (Centreville Road)	VA 608 (West Ox Rd)	VA 608 (Frying Pan Rd)	3	3	2	4	Yes	2010
~~VDOT~~	~~FFX17b~~	~~Widen~~	~~VA 666 (Monroe St.)~~	~~VA 665 (Fox Mill)~~	~~Herndon~~	~~3~~	~~3~~	~~2~~	~~6~~	~~No~~	~~2010~~
~~VDOT~~	~~FFX18~~	~~Widen~~	~~VA 668 (McLearen Rd.)~~	~~VA 28~~	~~VA 657 (Centreville Rd.)~~	~~3~~	~~3~~	~~2/4~~	~~6~~	~~Yes~~	~~2020~~
~~VDOT~~	~~VSf21c~~	~~Construct~~	~~VA 673 (McLearen Rd)~~	~~VA 608~~	~~VA 602/Interchange at Fairfax Co. Parkway~~	~~0~~	~~3~~	~~0~~	~~4~~	~~No~~	~~2015~~
~~VDOT~~	~~VSF21b~~	~~Widen~~	~~VA 673 (McLearen Rd)~~	~~VA 657 (Centreville Road)~~	~~VA 608~~	~~3~~	~~3~~	~~2~~	~~4~~	~~No~~	~~2015~~
~~VDOT~~	~~VSF36~~	~~Relocate~~	~~VA 675 (Sunset Hills Rd.)~~	~~West of Edlin School~~	~~VA 675 (Crowell Road)~~	~~3~~	~~3~~	~~4~~	~~4~~	~~No~~	~~2012~~
VDOT	VSF24	Widen	VA 684 (Spring Hill Road)	VA 7 (Leesburg Pike)	VA 6034 (International Drive)	3	3	2	4	Yes	2010
VDOT	VSF25aa	Convert	VA 7100 (Fairfax Co Pkwy HOV)	VA 267 (Dulles Toll Road)	Sunrise Valley Dr.	5	5	6	4+2	No	2035
VDOT	VSF25ea	Widen	VA 7100 (Fairfax Co Pkwy HOV)	Sunrise Valley	Rugby Rd.	5	5	4	4+2	No	2035

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
VDOT	VSF25e	Widen	VA 7100 (Fairfax Co Pkwy HOV)	Rugby Rd.	US 50	5	5	4	4+2	No	2035
VDOT	VSF25y	Upgrade/ Widen	VA 7100 (Fairfax Co Pkwy HOV)	US 50	VA 7735 (Fair Lakes Pkwy)	2	5	4	4+2	No	2035
VDOT	VSF25z	Upgrade /Widen	VA 7100 (Fairfax Co Pkwy HOV)	VA 7735 (Fair Lakes Pkwy)	I-66	2	5	6	6+2	No	2035
VDOT	VSF25g	Widen	VA 7100 (Fairfax Co Pkwy)	I-66	VA 123 (Ox Road)	5	5	4	6	No	2020
~~VDOT~~	~~VSF25j~~	~~Widen~~	~~VA 7100 (Fairfax County Parkway)~~	~~VA 636 (Hooes Road)~~	~~VA 640 (Sydenstricker Road)~~	~~2~~	~~2~~	~~4~~	~~6~~	~~No~~	~~2015~~
~~VDOT~~	~~VSF25l~~	~~Construct~~	~~VA 7100 (Fairfax Co Pkwy HOV)~~	~~VA 640 (Sydenstricker Road)~~	~~VA 7900 (Franconia-Springfield Parkway)~~	~~0~~	~~2~~	~~0~~	~~2~~	~~No~~	~~2015~~
VDOT	VSF25n	Construct	VA 7100 (Fairfax County Parkway) Phase 1	VA 4600 (Fullerton Road)	Donegal La. / Hooes Rd.	0	1	0	4/6	Yes	2010
VDOT	VSF25na	Construct	VA 7100 (Fairfax County Parkway) Phase 3	Donegal La. / Hooes Rd.	VA 7900 (Franconia-Springfield Parkway)	0	1	0	6	Yes	2012
VDOT	BRAC	Construct	VA 7100 (Fairfax County Parkway) Interchange (Phase 3)	@ Franconia Springfield Parkway	Various movements; includes relocated Rolling Rd.	-	-	-	-	Yes	2012
VDOT	BRAC / VSF25nc	Construct	VA 7100 (Fairfax County Parkway) Interchange (Phase 2)	@ Rolling Rd. / EPG Access Road	Ramp movements: EB F.C.Pkwy to NB & SB Rolling Rd. via one ramp; NB Rolling Rd. to EB F.C.Pkwy; NB Rolling Rd. to WB F.C.Pkwy; WB F.C.Pkwy to NB & SB Rolling Rd. via one ramp;	-	-	-	-	Yes	2010
VDOT	BRAC / VSF25nd	Construct	VA 7100 (Fairfax County Parkway) Interchange (Phase 2)	@ Rolling Rd. / EPG Southern Loop Road (SLR)	Ramp movements: EPG (SLR) to NB F.C.Pkwy.; EPG (SLR) to SB F.C.Pkwy.	1	1	0	1/2	Yes	2010
VDOT	BRAC / VSF25nb	Construct	VA 7100 (Fairfax County Parkway) Interchange (Phase 4)	@ Boudinat Drive (BD)	Ramp movements: EB F.C.Pkwy. To SB BD; WB F.C.Pkwy to SB BD; NB BD to WB F.C.Pkwy.	-	-	-	-	No	2025

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
VDOT		Construct	VA 7100 (Fairfax County Parkway) Interchange (Phase 1)	@ Boudinat Drive (BD)	Ramp movements:NB BD to EB F. C. Parkway	-	-	0	2	Yes	2011
VDOT		Construct	VA 7100 Interchange	@ VA 7700 (Fair Lakes Pkwy) & Monument Dr.		2	5	4	6	No	2011
VDOT	VSF39	Widen	VA 7735 (Fair Lakes Pkwy) (3rd EB Lane)	VA 7100	Fair Lakes Circle	4	4	4	5	No	2010
VDOT	VSF26	Construct	VA 7900 HOV (Franconia-Springfield Parkway)	VA 7100 (Fairfax County Parkway)	VA 2677 (Frontier Drive)	5	5	-	2	No	2020
VDOT	VSF26a	Construct	VA 7900 HOV (Franconia-Springfield Parkway)	Interchange @ Neuman St.		1	1	-	-	No	2025
VDOT	VSF26b	Upgrade	VA 7900 HOV (Franconia-Springfield Parkway)	VA 638 (Rolling Rd.)	VA 617 (Backlick Rd.)	5	1	6+2	6+2	No	2025
~~VDOT~~	~~FFX24c~~	~~Widen~~	~~VA 8460 (Stonecroft Blvd.)~~	~~VA 661 (Old Lee Rd.)~~	~~Willard Rd.~~	~~3~~	~~3~~	~~4~~	~~6~~	~~No~~	~~2010~~
VDOT	FED2	Widen/ construct	Old Mill Rd. (Future Mulligan Rd)	US 1	VA 611 (Telegraph Road)	4	4	2	4	No	2012
LOUDOUN COUNTY SECONDARY											
VDOT	VSL51	Construct	Atlantic Boulevard	VA 625 (Church Road)	VA 7	-	3	-	4	No	2011
VDOT	VSL39	Construct	Broadlands Boulevard (Ryan Bypass)	VA 659	VA 625	0	3	0	4	complete	2010
VDOT	VSL1b	Widen/ Upgrade	VA 606 (Ldn Co. Pkwy) (nee Old Ox Rd.)	VA 634	VA 621	4	3	2	4	No	2015
VDOT		Widen	VA 606 (Dulles Greenway Interchange)	within Greenway R/W		1	1	2	6	complete	2004
VDOT	VSL10c	Construct	VA 607 (Loudoun County Pkwy)	VA 606 / VA 842	VA 772 / VA 607	0	3	0	4	Yes	2010
~~VDOT~~	~~VSL10ba~~	~~Widen~~	~~VA 607 (Loudoun County Pkwy)~~	~~VA 625 (Waxpool Road)~~	~~W&OD Trail~~	~~3~~	~~3~~	~~4~~	~~6~~	~~No~~	~~2020~~
VDOT	VSL10bb	Widen/ Upgrade	VA 607 (Loudoun County Pkwy)	W&OD Trail	Redskin Park Drive	4	3	2	6	No	2025
VDOT	VSL10bf	Widen/ Upgrade	VA 607 (Loudoun County Pkwy) (dirt road)	Redskin Park Drive	Gloucester Parkway	4	3	2	4	No	2015
VDOT	VSL10bc	Widen	VA 607 (Loudoun County Pkwy)	Redskin Park Drive	Gloucester Parkway	3	3	4	6	No	2025

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility		Lanes		Under Const. or ROW acquired?	Complt. Date or Status
						from	to	from	to		
VDOT	VSL10bd	Widen/ Upgrade	VA 607 (Loudoun County Pkwy)	Gloucester Parkway	VA 7	4	3	2	4	complete	2005
VDOT	VSL12c	Widen	VA 625 (Waxpool Rd.)	Broad Run	VA 28	3	3	4	6	complete	2005
VDOT	VSL12d	Construct	VA 625 (Waxpool Rd.)	VA 2920 Faulkner Parkway	Unbridled Way	4	3	2	4	No	2012
VDOT	VSL45	Widen/ Upgrade	VA 643 (Sycolin Road) Phase II	Leesburg Town Limits	Crosstrails Blvd.	4	3	2	4	No	2035
VDOT	VSL4a	Study	VA 659 (Belmont Ridge Rd.) - PE ONLY	National Rec. & Park Ent.	Dulles Greenway	4	3	2	4	No	not coded
VDOT	VSL4ab	Study	VA 659 (Belmont Ridge Road)~~/VA 659 Relocated -~~	Dulles Greenway	Russell Branch Pkwy.	4	3	2	4	No	not coded
VDOT	VSL4d	Widen/ Upgrade	VA 659 (Belmont RidgeRoad)	VA 659 Relocated	National Rec. & Park Ent.	4	3	2	4	complete	2007
VDOT	VSL4e	Widen/ Upgrade	VA 659 (Gum Spring Rd.)	VA 620 (Braddock Road)	US 50	4	3	2	4	No	2015
VDOT	VSL4f	Widen/ Upgrade	VA 659 (Gum Spring Rd.)	Prince William County Line	VA 620 (Braddock Road)	4	3	2	4	No	2025
~~VDOT~~	~~VSL4c~~	~~Construct~~	~~VA 659 Relocated~~	~~PWCL / VA 234 Bypass~~	~~US 50~~	~~0~~	~~3~~	~~0~~	~~4~~	~~No~~	~~2020~~
~~VDOT~~	~~VSL4b~~	~~Construct~~	~~VA 659 Relocated~~	~~US 50~~	~~VA 659 (Belmont Ridge Rd.)~~	~~0~~	~~3~~	~~0~~	~~4~~	~~No~~	~~2020~~
VDOT	VSL44	Widen/ Upgrade	VA 772 (Ryan Road)	VA 659 (Belmont Ridge Rd.)	Dulles Greenway @ exit #6	4	3	2	4	complete	2004
VDOT	VSL50	Widen/ Upgrade	VA 773 (Fort Evans Road)	Leesburg Town Limits	Kingsport Rd.	4	3	2	4	No	2015
VDOT	nrs	Construct	VA 868 (Davis Dr.)	VA 606 (Old Ox Road)	VA 846 (Sterling Blvd)	-	4	-	4	No	2025
VDOT	nrs	Construct	VA 868 (Davis Dr.)	VA 846 (Sterling Blvd)	VA 625 (Church Road)	-	4	-	4	complete	2007
VDOT	VSL40a	Widen	VA 901 (Claiborne Parkway)	VA 640 (Ashburn Farm Pkwy)	W&OD Trail	4	3	2	4	complete	2007
VDOT	VSL40b	Construct	VA 901 (Claiborne Parkway)	W&OD Trail	VA 7	0	3	0	4	complete	2006
VDOT	VSL46	Construct	VA 1036 (Pacific Boulevard)	Sterling Blvd.	Gloucester Parkway	-	3	-	4	No	2015
VDOT	VSL47	Widen/ Upgrade	River Creek Parkway	Riverside Parkway	VA 773 (Edwards Ferry Road)	4	3	2	4	complete	2007

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
VDOT	VSL49	Construct	Russell Branch Parkway	VA 659 (Belmont Ridge Road)	Loudoun County Parkway	-	3	-	4	No	2015
PRINCE WILLIAM COUNTY SECONDARY											
VDOT	BRAC	Construct	Bypass Rd.	Russell Rd.	MDIA site entrance	0	3	0	2	No	2011
VDOT	VSP49b	Construct	Heathcote Boulevard	VA 625 (Old Carolina Rd.)	US 15 (James Madison Highway)	0	3	0	4	complete	2009
VDOT	VSP49	Construct	Heathcote Boulevard	US 29	VA 676 (Catharpin Road)	0	3	0	4	complete	2009
VDOT	VSP59	Construct	Peaks Mill (Purcell Road east)	Route 643 (Purcell Road)	Route 3000 (Prince William Parkway)	0	4	0	2	No	2035
VDOT	VSP39	Widen	Russell Road	I-95	Ponderosa Y-Gate	3	3	2	4	No	2011
~~VDOT~~	~~VSP21c~~	~~Widen~~	~~VA 1600 (Ashton Ave.)~~	~~Coverstone Dr.~~	~~VA 621 (Balls Ford Rd.)~~	~~3~~	~~3~~	~~2~~	~~4~~	~~No~~	~~2020~~
VDOT	VSP25b	Widen	VA 1781 (NewTelegraph Rd/Summit School Road)	VA 849 (Caton Hill Road)	VA 640 (Minnieville Rd.)	4	4	2	4	No	2040
VDOT	VSP25c	Widen	VA 1781 (Telegraph Rd.)	VA 3000 (Prince William Parkway)	VA 849 (Caton Hill Rd.)	4	4	2	4	No	2040
VDOT	VSP23d	Widen	VA 3000 (Prince William Pkwy.)	VA 776 (Liberia Ave.)	Hoadley Rd.	2	2	4	6	No	2025
VDOT	VSP23e	Widen	VA 3000 (Prince William Pkwy.)	Hoadley Rd.	Old Bridge Rd.	2	2	4	6	No	2012
VDOT	VSP23f	Widen	VA 3000 (Prince William Pkwy.)	Old Bridge Rd.	Minnieville Rd.	2	2	4	6	No	2025
VDOT	VSP2ea	Widen/ Upgrade	VA 619 (Linton Hall Road)	VA 1566 (Sudley Manor Dr.)	VA 28 (Nokesville Road)	4	3	2	4	complete	2009
VDOT	VSP3a	Widen/ Upgrade	VA 621 (Balls Ford Road)	VA 234 (Sudley Road)	Bethlehem Road	4	3	2	4	No	2035
VDOT	VSP3b	Widen/ Upgrade	VA 621 (Balls Ford Road)	Bethlehem Road	VA 234 Bypass	4	3	2	4	No	2035
~~VDOT~~	~~VSP3d~~	~~Widen~~	~~VA 621 (Devlin Road)~~	~~Route 674 (Wellington Road)~~	~~Route 619 (Linton Hall Road)~~	~~3~~	~~3~~	~~2~~	~~4~~	~~No~~	~~2030~~
~~VDOT~~	~~VSP3e~~	~~Widen~~	~~VA 621 (Devlin Road)~~	~~Route 674 (Wellington Road)~~	~~VA 234~~	~~3~~	~~3~~	~~2~~	~~4~~	~~No~~	~~2015~~
~~VDOT~~	~~VSP40a~~	~~Construct~~	~~VA 635 (Cherry Hill VRE Access Road)~~	~~US 1~~	~~Future VRE Station site~~	~~0~~	~~4~~	~~0~~	~~2~~	~~No~~	~~2010~~

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
VDOT	VSP5d	Widen	VA 640 (Minnieville Road)	VA 610 (Cardinal Drive)	VA 643 (Spriggs Road)	3	3	2	4	complete	2009
VDOT	VSP5e	Widen	VA 640 (Minnieville Road)	VA 643 (Spriggs Road)	VA 234	3	3	2	4	No	2025
VDOT	VSP15c	Widen	VA 640 (Minnieville Road)	VA 849 (Caton Hill Road)	VA 641 (Old Bridge Road)	3	3	2	4	complete	2008
VDOT	VSP8a	Widen	VA 643 (Purcell Rd.)	VA 234 (Dumfries Rd.)	VA 642 (Hoadly Rd.)	3	3	2	4	No	2025
VDOT	VSP17b	Widen	VA 674 (Wellington Rd.)	VA 621 (Devlin Road)	VA 668 (Rixlew Lane)	3	3	2	4	No	2025
VDOT	VSP18	Widen	VA 676 (Catharpin Rd.)	VA 55 (John Marshall Highway)	Heathcote Blvd.	3	3	2	4	No	2040
~~VDOT~~	~~VSP20b~~	~~Widen~~	~~VA 784 (Dale Blvd.)~~	~~I 95~~	~~VA 640 (Minnieville Rd.)~~		~~3~~	~~4~~	~~6~~	~~No~~	~~2020~~
VDOT	VSP20c	Widen/ Upgrade	VA 1392 (Rippon Boulevard Extension)	West of Wigeon Way	Rippon VRE Station	4	3	2	4	No	2040
VDOT	VSP47d	Construct	VA 840 (University Blvd.) (nee East-West Connector)	Route 660 (Hornbaker Road)	Sudley Manor Dr.	0	3	0	4	No	2025
VDOT	VSP62	Construct	Rollins Ford Rd.	Songsparrow Dr.	VA 215 (Vint Hill Rd.)	0		0	4	No	2025
FAMPO											
	VI2rf	Construct	I 95 : HOV / Bus / HOT Lanes	Rte. 610 (Garrisonville Rd.) in Stafford County	VA 17 in Spotsylvania County (exit 126)	1	1	0	2	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	South of Telegraph Road (North of Aquia Creek)	SB GP Lanes to SB HOT Lanes	1	1	0	1	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	South of Telegraph Road (North of Aquia Creek)	NB HOT Lanes to NB GP Lanes	1	1	0	1	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	North of Garrisonville Road (south of Aquia Creek)	NB GP Lanes to NB HOT Lanes	1	1	0	1	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Garrisonsville Road and Courthouse Road	SB GP Lanes to SB HOT Lanes	1	1	0	1	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Garrisonsville Road and Courthouse Road	NB HOT Lanes to NB GP Lanes	1	1	0	1	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Garrisonsville Road and Courthouse Road	SB HOT Lanes to SB GP Lanes	1	1	0	1	No	2014

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Garrisonsville Road and Courthouse Road	NB GP Lanes to NB HOT Lanes	1	1	0	1	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	South of Rt 628 (North of Stafford Regional Airport)	SB HOT Lanes to SB GP Lanes	1	1	0	1	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	South of Rt 628 (North of Stafford Regional Airport)	NB GP Lanes to NB HOT Lanes	1	1	0	1	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	(St.Co.Airport Access Rd.) and Rt 652	SB GP Lanes to SB HOT Lanes	1	1	0	1	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	(St.Co.Airport Access Rd.) and Rt 652	NB HOT Lanes to NB GP Lanes	1	1	0	1	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	(St.Co.Airport Access Rd.) and Rt 652	SB HOT Lanes to SB GP Lanes	1	1	0	1	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	(St.Co.Airport Access Rd.) and Rt 652	NB GP Lanes to NB HOT Lanes	1	1	0	1	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	South of Rt 17 (North of Rappahannock River)	NB HOT Lanes to NB GP Lanes	1	1	0	1	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Just South of Rappahannock River	SB HOT Lanes to SB GP Lanes	1	1	0	1	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Just north of Rt 3	NB GP Lanes to NB HOT Lanes	1	1	0	1	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Rt 620 and Rt 208	NB GP Lanes to NB HOT Lanes	1	1	0	1	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Rt 620 and Rt 208	SB HOT Lanes to SB GP Lanes	1	1	0	1	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Rt 1 and Rt 17	NB GP Lanes to NB HOT Lanes	1	1	0	1	No	2014
		Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Rt 1 and Rt 17	SB HOT Lanes to SB GP Lanes	1	1	0	1	No	2014
	FAI1D	Reconstruct	I-95 interchange	at Mills Drive (US 17 Bypass)/Spotsvlvania		1	1	0	0	No	2020
	FAP5F	Widen	US 1	Prince William County Line	US 17(Warrenton Rd)/VA 218	2	2	4	6	No	2020
	FAP5I	Widen	US 1(Bridge Replacement)	US 17 (Butler Rd.)	Fredericksburg N. City Limit	2	2	4	6	No	2020
	FAP5B	Widen	US 1	Princess Anne St.	VA 3 (Plank Rd.)	2	2	4	6	No	2025

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility from	Facility to	Lanes from	Lanes to	Under Const. or ROW acquired?	Complt. Date or Status
	FAP5E	Widen	US 1	VA 620 (Harrison Road)	Spotsylvania Parkway	2	2	4	8	No	2020
	FAP5H	Widen	US 1	Spotsylvania Parkway	VA 608 (Massaponax Church Rd)	2	2	4	6		2015
	FAP5G	Widen	US 1	Rt 610	Rt 630	2	2	4	6	No	2025
		Reconstruct	US 1 interchange	at US 17						No	2015
	FAP6A	Widen	US 17 Bypass (Mills Dr.)	I-95	VA 2 (Tidewater Trail)	2	2	2	4	No	2015
	FAP6E	Widen	US 17 Business/VA 2	SCL Frederickburg	US 17 Bypass (Mills Dr.)	2	2	2	4		2035
	FAP6C	Widen	US 17 (Warrenton Rd.)	McLane Drive	VA 654 (Bera Church Rd)	2	2	4	6	No	2015
	FAP6D	Widen	US 17 (Warrenton Rd.)	VA 654 (Bera Church Rd)	VA 612 (Hartwood Road)	2	2	4	6		2030
	FAP7	Widen	VA 212 (Butler Rd)	US 1	VA 212 / VA 218 Connection	4	4	2	4	No	2025
	FAS23A	Construct	VA 208 Bypass (Spotsylvania)*	West of Ta River	East of Po River	0	3	0	2	ROW	2009
		Widen		US 1 (Jefferson Davis Hwy)	VA 628 (Station Road)	3	3	4	6		2035
STAFFORD COUNTY SECONDARY											
	Stafford# 17E11/19C3 nrs	Upgrade/ Intersection	VA 606 (Ferry Rd)	VA 3 (Kings Highway)	VA 608 (Brook Rd)	4	3				2030
		Upgrade	VA 608 (Brooke Rd.)	VA 605 (New Hope Ch. Rd.)	Dead End	4	3			No	2035
	FAS3c	Widen	VA 610 (Garrisonville Rd.)	VA 610 (existing 4 lane section)	VA 643	4	4	2	4		2015
		Upgrade/ Intersection	VA 610 (Garrisonville Rd.)	VA 643 (Joshua Road)	Fauquier County Line	4	3				2035
		Widen	VA 610 (Garrisonville Rd.)	.13 miles west of VA 643 (Joshua Rd)	.42 miles east of VA 643 (Joshua Rd)	4	4	2	4		2015
	FAS3e	Widen	VA 610 (Garrisonville Rd.)	VA 648 (Shelton Shop Rd.)	VA 641(Onville Rd)	4	3	4	6	No	2030
	FAS3d	Widen	VA 610 (Garrisonville Rd.)	VA 641(Onville Rd)	VA 684 (Mine Rd)	4	3	4	6	No	2015
		upgrade	VA 616 (Poplar Rd.)	VA 652 (Truslow Rd.)	Fauquier County Line	4	3			No	2035

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

2010 CLRP AND FY2011-2016 TIP AIR QUALITY CONFORMITY INPUTS

(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility		Lanes		Under Const. or ROW acquired?	Complt. Date or Status
						from	to	from	to		
		upgrade	VA 627 (Mountainview Rd.)	VA 648 (Stefaniga Rd.)	Centreport Pkwy.	4	3			No	2035
		upgrade	VA 627	VA 616	Choptank Rd.	4	3			No	2035
	FAS5b	Widen	VA 630 (Courthouse Rd)	VA 732 (Cedar Lane)	VA 648 (Shelton Shop Rd)	4	4	2	4	No	2025
		upgrade	VA 637	I-95	Woodstock Ln.	4	3			No	2035
		upgrade	VA 644	VA 627	VA 610	4	3			No	2035
	FAS13	Reconstruct	VA 648 (Shelton Shop Rd.)	VA 610 (Garrisonville Rd)	VA 627 (Mountainvie Rd)	4	4	2	4	No	2025
SPOTSULVANIA COUNTY SECONDARY											
	FAS22	Widen	VA 3 (Spotsylvania)	Chewing Lane	VA 627 (Gordon Rd.)	2	2	3	6	No	2015
	FAS27	Widen	VA 608 (Massaponax Church Rd.)	VA 628	I-95	3	3	2	4	No	2025
	FAS31	Widen	VA 610 (Old Plank Rd.)	VA 627	VA 612	4	4	2	4	No	2030
	FAS18c	Widen	VA 620 (Harrison Rd)	VA 3 (Plank Road)	VA 627 (Gordon Rd.)	4	4	2	4		2015
	FAS9b	Widen	VA 627 (Gordon Rd.)	VA 628	VA 620	4	4	2	4	No	2015
		Widen	VA 627 (Gordon Rd.)	VA 628 (Smith Station Rd)	VA 613 (Brock Road)	4	4	2	4		2035
	FAS28	Widen	VA 628 (Smith Station Rd)	VA 608	VA 627	4	4	2	4	No	2025
	FAS19	Widen	VA 636 (Mine Rd.)	VA 208 (Courthouse Rd.)	VA 638	4	4	2	4	No	2025
		Widen	VA 638 (Lansdowne Rd)	SCL Frederickburg	VA 636 (Mine Rd)	3	3	2	4		2035
	FAS20b	Widen	VA 639 (Leavells Rd.)	VA 208	VA 628	4	4	2	4	Yes	2025
	FAS20c	Widen	VA 639 (Bragg Rd.)	VA 618	VA 3	4	4	2	4	No	2015
		Widen	VA 674 (Chancellor Rd.)	VA 610 (Old Plank Rd)	VA 627 (Gordon Rd.)	4	4	2	4		2035

NOTE: Shaded areas represent changes from the 2009 CLRP and the FY2010-2015 TIP Amendments

APPENDIX C

Interagency and Public Involvement Process

National Capital Region Transportation Planning Board

777 North Capitol Street, N.E., Suite 300, Washington, D.C. 20002-4290 (202) 962-3310 Fax: (202)962-3202

NOTE: Illustration of monthly Consultation letter

May 14, 2010

TO: Transportation Consultation Agencies
(United States Environmental Protection Agency, Federal Highway Administration, Federal Transit Administration, Metropolitan Washington Air Quality Committee, Air Quality Public Advisory Committee, and Transportation Planning Board Citizens Advisory Committee)

FROM: Ronald F. Kirby
Director, Department of
Transportation Planning

SUBJECT: Consultation with respect to TPB plans and programs

Enclosure:
1) Agenda for May 19, 2010 TPB meeting

This memo transmits the agenda for the May TPB meeting, which is relevant to TPB consultation with respect to air quality conformity. Materials associated with each agenda item are available on the TPB web site www.mwcog.org under Dates and Events. As always, you are welcome to attend the TPB meetings (and/or any meetings of the TPB committees and their subcommittees). A schedule of monthly meetings is listed in the "Calendar of Events" in *TPB NEWS.*

Please be aware that there will be a meeting of the TPB Scenario Task Force from 10:30 a.m. to 11:45 a.m. in the COG Board Room. The purpose of the meeting is to review the final results of the "What Would it Take?" Greenhouse Gas Reduction Scenario, and to discuss future TPB scenario planning activities.

The May TPB agenda items relevant for transportation conformity and consultation are identified below.

Item 7 is an action item in which the Board will be briefed on the comments received and recommended responses, and asked to approve project submissions for inclusion in the air quality conformity assessment for the 2010 Constrained Long Range Plan (CLRP) and FY2011-2016 Transportation Improvement Program (TIP). At the April 21 meeting, the Board was briefed on the major project changes submitted for inclusion in the air quality conformity assessment. The submissions were released for a public comment period that ended May 16.

Item 8 is an action item in which the Board will be briefed on the comments received and recommended responses, and asked to approve the scope of work for the air quality conformity assessment for the 2010 CLRP and FY2011-2016 TIP. At the April 21 meeting, the Board was briefed on the draft scope of work, which was released for a public comment period that ended May 16.

Item 10 is an information item in which the Board will be briefed on the final results for the "What Would It Take ?" scenario for greenhouse gas reduction. The scenario starts with goals for reducing greenhouse gas emissions for 2030 and beyond, and examines how such goals might be pursued in the transportation sector through different combinations of three major strategies: increasing fuel efficiency, reducing the carbon-intensity of fuel, and improving travel efficiency. These results will be presented to COG's Climate, Energy and Environment Policy Committee (CEEPC) at its May 26 meeting.

Item 14 is a notice item in which Washington Metropolitan Area Transit Authority (WMATA) has requested an amendment to the FY2010-2015 TIP to update project information on use of new federal funding for a number of projects. These include: system safety improvements, rail car replacement, track maintenance, and system infrastructure rehabilitation. The Board will be asked to approve this amendment at the June 16 meeting.

National Capital Region Transportation Planning Board

777 North Capitol Street, N.E., Suite 300, Washington, D.C. 20002-4290 (202) 962-3310 Fax: (202) 962-3202

MEETING NOTICE

Date: May 19, 2010
Time: 12 noon
Place: COG Board Room

Meeting of the TPB Scenario Task Force: From 10:30 to 11:45 am, the task force will meet in the **COG Board Room** to review the final results of the "What Would it Take?" Greenhouse Gas Reduction Scenario, and to discuss future TPB scenario planning activities.

A-G-E-N-D-A
(BEGINS PROMPTLY AT NOON)

12 noon 1. **Public Comment on TPB Procedures and Activities** ..... Chairman Snyder

Interested members of the public will be given the opportunity to make brief comments on transportation issues under consideration by the TPB. Each speaker will be allowed up to three minutes to present his or her views. Board members will have an opportunity to ask questions of the speakers, and to engage in limited discussion. Speakers are asked to bring written copies of their remarks (65 copies) for distribution at the meeting.

12:20 pm 2. **Approval of Minutes of April 21 Meeting** ..... Chairman Snyder

12:25 pm 3. **Report of Technical Committee** .....Mr. Verzosa
Chair, Technical Committee

12:30 pm 4. **Report of Citizen Advisory Committee** .....Ms. Budetti
Chair, Citizen Advisory Committee

12:40 am 5. **Report of Steering Committee** .....Mr. Kirby
Director, Department of Transportation Planning (DTP)

12:45 pm 6. **Chairman's Remarks** ..... Chairman Snyder

Alternative formats of this agenda and all other meeting materials can be made available for persons with disabilities. Phone: 202.962.3300 or 202-962.3213 TDD) Email: accommodations@mwcog.org. Allow 7 working days for preparation of the material. Electronic versions are available at: www.mwcog.org.

ACTION ITEMS

12:50 pm 7. **Review of Comments Received and Approval of Project Submissions for the Air Quality Conformity Assessment for the 2010 Financially Constrained Long Range Transportation Plan (CLRP) and FY 2011-2016 Transportation Improvement Program (TIP)**

.....Mr. Kirby

At the April 21 meeting, the Board was briefed on the major project changes submitted for inclusion in the air quality conformity assessment for the 2010 CLRP and FY 2011-2016 TIP which were released for a public comment period that ended May 16. The Board will be briefed on the comments received and recommended responses, and asked to approve project submissions for inclusion in the air quality conformity assessment for the 2010 CLRP and FY 2011-2016 TIP.

Action: Adopt Resolution R22-2010 to approve project submissions for inclusion in the air quality conformity assessment for the 2010 CLRP and FY 2011-2016 TIP.

12:55 pm 8. **Approval of Scope of Work for the Air Quality Conformity Assessment for the 2010 CLRP and FY 2011-2016 TIP**

.....Ms. Posey, DTP

At the April 21 meeting, the Board was briefed on the draft scope of work for the air quality conformity assessment for the 2010 CLRP and FY 2011-2016 TIP, which was released for a public comment period that ended May 16. The Board will be briefed on the comments received and recommended responses, and asked to approve the scope of work for the air quality conformity assessment for the 2010 CLRP and FY 2011-2016 TIP.

Action: Approve the enclosed scope of work for the air quality conformity assessment for the 2010 CLRP and FY 2011-2016 TIP.

INFORMATION ITEMS

1:00 pm 9. **Update on the TPB Regional Priority Bus Project under the Transportation Investments Generating Economic Recovery (TIGER) Program, and Briefing on the "TIGER II" Grant Program Announced on April 26**

.....Mr. Kirby

Over the past two months, TPB staff has worked closely with FTA and the agencies responsible for implementing the Regional Priority Bus Project components under the $58 million TIGER grant to meet initial grant requirements. The Board will be updated on these requirements, which include FTA approval of project scopes, schedules and budgets by May 15. On April 26, USDOT released in the *Federal Register* the Interim Notice of Funding Availability (NOFA) for $600 million in discretionary surface transportation grant funding. Because the requirements of the new program are quite similar to the TIGER

Program, it is referred to as “TIGER II.” The Board will be briefed on the key features of this new grant program.

1:10 pm 10. **Briefing on the Final Results for the "What Would It Take?" Greenhouse Gas Reduction Scenario**
..... Ms. Bansal

The "What Would It Take?" scenario starts with goals for reducing greenhouse gas emissions for 2030 and beyond and examines how such goals might be pursued in the transportation sector through different combinations of three major strategies: increasing fuel efficiency, reducing the carbon-intensity of fuel, and improving travel efficiency. The Board will be briefed on the final results from the analysis of this scenario. These results will be presented to COG’s Climate, Energy and Environment Policy Committee (CEEPC) at its May 26 meeting.

1:25 pm 11. **Status Report on “Conversation on Setting Regional Transportation Priorities,” May 26, 2010**
.....Mr. Kirby

The Conversation on Setting Regional Transportation Priorities is an invitation-based event including TPB members, TPB Technical Committee members, members of the Citizens Advisory Committee (CAC), and representatives of other committees and subcommittees in the TPB committee structure. It will feature presentations by the TPB Officers and the CAC, followed by interactive discussion of regional transportation challenges and opportunities, and ideas for enhancing the process of setting and implementing regional transportation priorities. The Board will be updated on the expected attendees and final details for the meeting.

1:30 pm 12. **Briefing on Proposed Response to the Request by Martz National Coach for Federal Assistance for Commuter Bus Service between Fredericksburg and Washington DC**
..... Mr. Kirby

In the enclosed letter of January 21, 2010, Martz National Coach has requested TPB support for its proposal to direct FTA Section 5307 funding for bus procurement, preventive maintenance, or capital cost of contracting for its commuter bus service between Fredericksburg and Washington, DC. The Board will be briefed on the request and on a proposed TPB response.

1:40 pm 13. **Briefing on the Strategic Plan for the Management, Operations, and Intelligent Transportation Systems (MOITS) Program**
.....Mr. Andrew Meese, DTP

The Board will be briefed on the Strategic Plan for MOITS developed by a consultant team and staff. The Strategic Plan identifies MOITS-related projects or actions for future consideration by regional stakeholders, and will help guide upcoming MOITS committee activities.

NOTICE ITEM

1:50 pm 14. **Notice of Proposed Amendment to the FY 2010-2015 TIP to Update Project Information on Use of New Federal Funding for the Washington Metropolitan Area Transit Authority (WMATA)**
.....Mr. Bottigheimer

On November 6, 2009, the TPB Steering Committee approved an amendment to the FY 2010-2015 TIP to include up to $150 million per year in new federal funding beginning in FY 2011. Notice is provided that WMATA has requested an amendment to the FY 2010-2015 TIP to update information on the use of the funds for a number of projects including system safety improvements, rail car replacement, track maintenance, and system infrastructure rehabilitation. The Board will be asked to approve this amendment at the June16 meeting.

1:55 pm 15. **Other Business**

2:00 pm 16. **Adjourn**

2 hours
Lunch will be served to Board members and alternates at 11:30 am

Jane Posey

From: MWCOG.org [tpbpubliccomment@mwcog.org]
Sent: Thursday, April 15, 2010 8:35 PM
To: Jane Posey
Subject: TPB Public Comment Notice: Project Submissions for the 2010 CLRP and FY2011-2016 TIP

TPB Releases Project Submissions for the 2010 CLRP and FY2011-2016 TIP for Public Comment

On Thursday, April 15, 2010 the TPB released for public comment the draft project inputs for the air quality analysis of the 2010 Update to the National Capital Region's Financially Constrained Long-Range Transportation Plan (CLRP) and the FY 2010-2015 Transportation Improvement Program (TIP). The TPB also released the Draft Scope of Work for the Air Quality Conformity Assessment. Comments can be submitted online at http://www.mwcog.org/tpbpubliccomment. The 30-day public comment period will close at midnight on Saturday, May 15, 2010.

For the 2010 Update to the CLRP, the only new regionally significant projects have been submitted by the District Department of Transportation, which has proposed four new projects. These projects include three additional segments of the DC Streetcar system and access improvements to the St. Elizabeth's campus – the future home of the Department of Homeland Security. Also included are a pilot project of protected bike lanes in downtown DC and a street-scaping project on Wisconsin Avenue NW in Glover Park that will both result in a reduction in the number of lanes for automobile traffic.

The following documents provide more information on the draft project inputs, the scope of work for the air quality analysis and the CLRP:

- Summary of the Proposed Significant Changes to the 2010 CLRP and FY 2011-2016 TIP for Air Quality Conformity Analysis
- Draft 2010 CLRP and FY 2011-2016 TIP Air Quality Conformity Inputs
- Draft Scope of Work for the Air Quality Conformity Assessment
- More information on existing projects in the CLRP and TIP

Members of the public are invited to review and comment on the project inputs and scope of work by midnight on May 15, 2010. For additional information or for special assistance, please call (202) 962-3311 or (202) 962-3213 (TDD).

Metropolitan Washington Council of Governments

Serving the National Capital Region

Transportation
Environment
Housing & Planning
Health & Human Services
Homeland Security & Public Safety
Cooperative Purchasing
Information & Publications
Events Calendar
Committee Business
News Room

Events Calendar

Events Calendar

Events: List Format

October 14 2010

Title:	Public Information Session on the Financial Forecast for the Region's Constrained Long-Range Transportation Plan (CLRP)
Start Time:	07:00 PM
End Time:	08:00 PM
Category:	Meeting
Location:	Training Center
Contact:	John Swanson
Email:	John Swanson
Description:	***What is the financial outlook for transportation projects in the region, both in the next couple years and over the next three decades?***

On October 14, the National Capital Region Transportation Planning Board (TPB) will host a public meeting to discuss this question.

We will look at the changing financial context for transportation planning, including the funding that is forecast to be available over the next 30 years and the funding that is needed to fulfill the transportation system envisioned in the TPB's Constrained Long-Range Transportation Plan (CLRP). TPB staff will also present information about projects in the Transportation Improvement Program (TIP), which lists projects and programs that will be funded in the next six years.

The CLRP and TIP will be released for a 30-day public comment period at this meeting. For more information, contact John Swanson at 202-962-3295 or jswanson@mwcog.org. More information on the documents may be found here: CLRP Website.

? Download Instructions

Reasonable accommodations are provided for persons with disabilities. Please allow up to 7 business days to process requests.
Phone: 202.962.3300 or 202-962.3213 (TDD). Contact John Swanson for assistance.
Click here for more information.

Afro - American April 17, 2010

PUBLIC COMMENT PERIOD FOR THE WASHINGTON REGION'S PROPOSED SUBMISSIONS FOR THE 2010 UPDATE TO THE CONSTRAINED LONG-RANGE PLAN (CLRP), FY 2011-2016 TRANSPORTATION IMPROVEMENT PROGRAM (TIP), AND AIR QUALITY CONFORMITY ANALYSIS

The National Capital Region Transportation Planning Board (TPB) will initiate a 30-day public comment period for the proposed submissions for the 2010 update to the Constrained Long-Range Plan (CLRP) and FY2011-2016 Transportation Improvement Program (TIP), including an air quality conformity analysis, on April 15. This public comment period will extend through Saturday May 15, 2010. The TPB is scheduled to approve these submissions at its May 19, 2010 meeting. Members of the public are invited to review these draft documents on the COG website, www.mwcog.org/transportation/. These materials may also be reviewed at the Metropolitan Washington Council of Governments (COG), 777 N. Capitol St. NE, Washington, DC 20002.

The CLRP shows the road, bridge, high-occupancy vehicle (HOV), transit, bicycle and pedestrian projects funded through the year 2040. The six-year TIP includes all projects, programs, and strategies that state and local transportation agencies plan to implement between 2010 and 2016. The TIP comment process is being used to obtain comments on the region's projects that are funded by the Federal Transit Administration (including Section 5307 funds) and the Federal Highway Administration. The air quality conformity analysis assesses the plan amendments and program with respect to the air quality requirements under the 1990 Clean Air Act Amendments.

Members of the public are invited to submit comments on the draft documents on-line at www.mwcog.org/tpbpubliccomment/. Written comments can also be mailed to TPB Chairman David Snyder, Metropolitan Washington Council of Governments (COG), 777 N. Capitol St. NE, Suite 300, Washington, DC 20002.

For additional information or for special assistance, please call (202)962-3311 or (202)962-3213 (TDD).

El Pregonero April 15, 2010

EL PREGONERO

PERIODO DE COMENTARIO PÚBLICO PARA LA PROPUESTAS DE LA REGIÓN DE WASHINGTON Y LA ACTUALIZACIÓN DE LA ENMIENDA DEL PLAN ABLIGATORIO DE LARGO ALCANZE (CLRP), DEL AÑO FISCAL 2011-2016 PROGRAMA DE MEJORA DE TRANSPORTE (TIP), Y ANÁLISIS DE LA CONFORMIDAD DE LA CALIDAD DEL AIRE.

La Junta de Planificación Regional Metropolitana de Transporte (TPB) iniciará un período de comentarios públicos por 30 días para la presentación propuestas para la actualización del Plan obligatorio de largo alcanze del 2010 (CLRP) y del Programa del Mejoramiento de Transporte (TIP) del año fiscal 2011-2016, incluyendo un análisis de la conformidad de la calidad del aire, el 15 de Abril.
Este período de comentarios públicos se extenderá hasta el Sábado 15 de Mayo del 2010.
El TPB tiene previsto aprobar estas propuestas en su reunión del 19 de Mayo del 2010.
Los miembros del público está invitado a revisar los documentos de estos proyectos de en la página web del COG, *www.mwcog.org/transportation/*. Estos materiales también se podrán revisar en el Consejo Metropolitano de Gobierno de Washington (COG), en la 777 N. Capitol St. NE, Washington, DC 20002.

El CLRP muestra los camino, puente, las rutas de los vehículos de alta ocupación (HOV), de tránsito en general, bicicletas y proyectos para peatones financiados hasta el año 2040.
El TIP incluye todos los proyectos, programas y estrategias que las agencias estatales y locales del Plan de Transport planean aplicar entre 2010 y 2016.
El proceso de comentarios TIP se está utilizando para obtener comentarios sobre los proyectos de la región que son financiados por la Administración Federal de Tránsito (incluida la Sección 5307 de fondos) y la Administración Federal de Carreteras. En el análisis de la calidad de conformidad del aire se evalúan los ajustes en el plan y el programa con respecto a los requisitos de calidad del aire en el marco de la Enmienda y la Ley del Aire Limpio del 1990.

Los miembros del público están invitados a presentar sus observaciones en línea sobre los documentos en *www.mwcog.org/tpbpubliccomment/*. Los comentarios escritos pueden ser enviados a Presidente del TPB David Snyder,
Al Consejo de Gobierno del área Metropolitana de Washington (COG), 777 N. Capitol St. NE, Suite 300, Washington, DC 20002.

Para obtener información adicional o para recibir asistencia especial, por favor llame al (202) 962-3311 o (202) 962-3213 (TDD).

Washington Post April 15, 2010

PUBLIC COMMENT PERIOD FOR THE WASHINGTON REGION'S PROPOSED SUBMISSIONS FOR THE 2010 UPDATE TO THE CONSTRAINED LONG-RANGE PLAN (CLRP), FY 2011-2016 TRANSPORTATION IMPROVEMENT PROGRAM (TIP), AND AIR QUALITY CONFORMITY ANALYSIS

The National Capital Region Transportation Planning Board (TPB) will initiate a 30-day public comment period for the proposed submissions for the 2010 update to the Constrained Long-Range Plan (CLRP) and FY2011-2016 Transportation Improvement Program (TIP), including an air quality conformity analysis, on April 15. This public comment period will extend through Saturday May 15, 2010. The TPB is scheduled to approve these submissions at its May 19, 2010 meeting. Members of the public are invited to review these draft documents on the COG website, www.mwcog.org/transportation/. These materials may also be reviewed at the Metropolitan Washington Council of Governments (COG), 777 N. Capitol St. NE, Washington, DC 20002.

The CLRP shows the road, bridge, high-occupancy vehicle (HOV), transit, bicycle and pedestrian projects funded through the year 2040. The six-year TIP includes all projects, programs, and strategies that state and local transportation agencies plan to implement between 2010 and 2016. The TIP comment process is being used to obtain comments on the region's projects that are funded by the Federal Transit Administration (including Section 5307 funds) and the Federal Highway Administration. The air quality conformity analysis assesses the plan amendments and program with respect to the air quality requirements under the 1990 Clean Air Act Amendments.

Members of the public are invited to submit comments on the draft documents on-line at www.mwcog.org/tpbpubliccomment/. Written comments can also be mailed to TPB Chairman David Snyder, Metropolitan Washington Council of Governments (COG), 777 N. Capitol St. NE, Suite 300, Washington, DC 20002.

For additional information or for special assistance, please call (202) 962-3311 or (202) 962-3213 (TDD).

Washington Post October 14, 2010

B20 Official Notices | B20 Official Notices

PUBLIC COMMENT PERIOD FOR THE WASHINGTON REGION'S PROPOSED 2010 UPDATE TO THE CONSTRAINED LONG-RANGE PLAN (CLRP), FY 2011-2016 TRANSPORTATION IMPROVEMENT PROGRAM (TIP), AND AIR QUALITY CONFORMITY ANALYSIS

The National Capital Region Transportation Planning Board (TPB) will initiate a 30-day public comment period for the proposed 2010 update to the Constrained Long-Range Plan (CLRP) and amendments to the FY2011-2016 Transportation Improvement Program (TIP), including an air quality conformity analysis, on October 14, 2010 at the TPB Citizen Advisory Committee (CAC) meeting. The CAC meets from 6 pm to 8 pm in the Metropolitan Washington Council of Governments (COG) first floor conference center, 777 N. Capitol St. NE, Washington, DC 20002. These documents are scheduled to be approved at the November 17, 2010 TPB meeting. This public comment period will extend through 6 pm Saturday November 13, 2010. Members of the public are invited to review these draft documents on the COG website, www.mwcog.org/transportation/. These materials may also be reviewed at COG.

The CLRP shows the road, bridge, high-occupancy vehicle (HOV), transit, bicycle and pedestrian projects funded through the year 2040. The six-year TIP includes all projects, programs, and strategies that state and local transportation agencies plan to implement between 2011 and 2016. The TIP comment process is being used to obtain comments on the region's program of projects that are funded by the Federal Transit Administration (including projects funded by the Urbanized Area Formula Program) and the Federal Highway Administration. The air quality conformity analysis assesses the plan amendments and program with respect to the air quality requirements under the 1990 Clean Air Act Amendments.

Members of the public are invited to submit comments on the draft documents on-line at www.mwcog.org/tpbpubliccomment/. Written comments can also be mailed to TPB Chairman David Snyder, Metropolitan Washington Council of Governments (COG), 777 N. Capitol St. NE, Suite 300, Washington, DC 20002.

For additional information or for special assistance, please call (202) 962-3311 or (202) 962-3213 (TDD).

APPENDIX D

Documentation of Emission Factor Development

Memorandum

Date: October 12, 2010

To: Jane Posey, TPB

From: Sunil Kumar, MWAQC

Subject: Documentation for Some MOBILE6 Inputs for 2011, 2020, 2030, and 2040 Ozone Season Day, Winter Season Day, and Annual Inventories for 2010 CLRP & 2011-2016 TIP

The purpose of this memorandum is to document the MOBILE6 inputs related to meteorology, fuel programs, Inspection & Maintenance (I&M) Programs, Anti Tempering Programs (ATP), additional state-specific emissions control programs, and NOx Rebuild Effects, which were used for developing the onroad emission inventories for calendar years 2011, 2020, 2030, and 2040 for the ozone season day, winter season day, and annual analyses for the 2010 CLRP & 2011-2016 TIP analysis. These inputs are being presented below.

Meteorology

Temperature and humidity used in the ozone SIP (May 2007), PM2.5 SIP (March 2008), and CO maintenance plan (September 1995) were used for the ozone season day, winter season day, and annual 2010 CLRP analyses respectively and are being presented below.

Ozone Season Day

Hour	Temperature (°F)	Relative Humidity (%)
1	70.7	84.0
2	74.3	76.5
3	78.6	66.7
4	82.3	59.3
5	85.5	52.9
6	88.1	48.8
7	90.0	45.0
8	91.2	42.1
9	91.9	42.2
10	92.5	43.1
11	92.1	42.3
12	91.0	43.6
13	89.2	47.6
14	86.7	52.3
15	82.8	60.4
16	80.3	67.2
17	78.6	72.2
18	77.7	74.4
19	76.7	78.1
20	75.4	80.9
21	74.9	79.5
22	74.7	79.4
23	74.2	79.3
24	73.6	81.1

Barometric Pressure (inches of mercury (Hg) – 29.8

Winter Season Day

Maximum Temperature (°F) = 33.0
Minimum Temperature (°F) = 53.0

Absolute Humidity (grains/lb) = 75

Annual

Hour	Temperature (°F)			Relative Humidity (%)		
	Winter/Season1 (Jan-Apr)	Summer/Season2 (May-Sep)	Fall/Season3 (Oct-Dec)	Winter/Season1 (Jan-Apr)	Summer/Season2 (May-Sep)	Fall/Season3 (Oct-Dec)
1	36.9	65.7	42.4	72.4	85.1	78.9
2	37.4	67.6	42.6	71.7	81.0	78.7
3	38.9	69.9	43.9	68.2	76.0	77.1
4	41.2	72.3	46.3	63.4	70.4	71.6
5	43.4	74.5	48.8	58.1	65.1	65.8
6	45.5	76.3	50.7	54.2	60.6	60.8
7	47.2	77.9	52.4	50.7	57.6	56.6
8	48.6	78.9	53.6	48.1	55.2	53.9
9	49.7	79.5	54.2	46.5	53.6	52.7
10	50.2	79.5	54.3	45.5	53.6	52.6
11	50.2	79.1	53.7	45.5	54.5	53.9
12	49.3	78.4	52.0	47.1	55.9	57.2
13	47.5	76.9	50.1	49.9	59.2	61.7
14	45.8	74.7	48.8	53.4	64.2	65.1
15	44.3	72.5	47.7	56.9	69.8	67.5
16	43.1	71.2	46.9	59.4	73.5	70.4
17	42.3	69.9	46.3	60.8	76.7	71.6
18	41.4	68.9	45.6	63.0	79.2	73.4
19	40.6	68.0	45.0	65.0	81.1	74.9
20	39.8	67.3	44.6	66.5	82.5	75.8
21	39.0	66.6	44.1	68.0	83.5	76.8
22	38.2	66.2	43.6	69.3	84.3	78.1
23	37.6	65.8	43.2	71.0	84.7	78.1
24	37.2	65.3	42.7	72.0	85.5	79.1

Barometric Pressure (inches of mercury (Hg) – 29.9 (All three seasons)

Fuel Programs

Separate sets of input files were created to model emission factors corresponding to travel in the COG region for each analysis years 1) on network and local roadways, 2) during auto access to transit, and 3) by diesel transit and school buses. While network, local, and auto-access facilities were modeled on a county level, buses were modeled on a regional level. For this reason, two separate sets of fuel programs were developed and are being provided below. Ether & Ethanol oxygen content and market share data are based on the Energy Policy Act (20050 and therefore common for network, local, and auto-access facilities and buses.

Network, Local, Auto-Access

	DC - RFG [a]			MD - RFG Counties			MD - NonRFG Counties	VA - RFG Counties			VA - NonRFG Counties
Season	Gas S [b] (ppm)	RVP	HWY Diesel S (ppm)	Gas S (ppm)	RVP	HWY Diesel S (ppm)	RVP	Gas S (ppm)	RVP	HWY Diesel S (ppm)	RVP
Winter	30.0	10.2	11.0	30.0	11.6	14.8	12.1	30.0	12.9	11.0	12.9
Summer/ Ozone Season	30.0	6.8	11.0	30.0	6.9	8.8	8.2	30.0	6.8	11.0	8.4
Fall	30.0	10.1	11.0	30.0	10.9	9.7	11.5	30.0	12.9	11.0	12.9

[a] RFG = Reformulated Gasoline
[b] S = Sulfur

Notes:
1. Season average RVP values were developed from monthly RVP values provided by states.
2. Gas & Highway Diesel Sulfur values are Mob6 defaults except for Maryland, which provided its own monthly Highway Diesel Sulfur values (email from M. Khan, MDE dt. 03.10.09).

Bus

Season	Gas S (ppm)	RVP	HWY Diesel S (ppm)
Winter	30.0	12.1	12.5
Summer/ Ozone Season	30.0	6.9	10.1
Fall	30.0	11.8	10.5

Network, Local, Auto-Access, & Bus

Season	Ether Oxy. Content (% by wt)	Ether Market Share (%)	Ethanol Oxy. Content (% by wt.)	Ethanol Market Share (%)
Winter	0.0	0.0	3.5	100.0
Summer/ Ozone Season	0.0	0.0	3.5	100.0
Fall	0.0	0.0	3.5	100.0
Note: Ether & Ethanol Oxygen Content and Market Share data are based on Energy Policy Act (2005).				

I/M Programs

Details of the format for the I/M programs listed here can found in the Mobile6 model user guide.

District of Columbia

* Inspection and Maintenance (I/M) Source File - DCpost2004.IM
* FEBRUARY 8, 2006
* District of Columbia's I/M input parameters for MOBILE6 for year 2004 and beyond:
* The actual start date of the IM240 was 1999
* The actual start date of the OBD testing was 2004
* The dates used below for IM240 and OBD testing are needed to obtain the appropriate I/M credit in MOBILE6.

> Exhaust I/M - LDV pre-83 MY IDLE test program #1
I/M PROGRAM : 1 1983 2050 2 T/O IDLE
I/M MODEL YEARS : 1 1972 1983
I/M VEHICLES : 1 22222 11111111 1
I/M STRINGENCY : 1 20.0
I/M COMPLIANCE : 1 96.0
I/M WAIVER RATES : 1 3.0 3.0
I/M EXEMPTION AGE : 1 25.0

> Exhaust I/M - LDV MY 84-95 IM240 test program #2 (DC IM240 Start:1999)
I/M PROGRAM : 2 1983 2050 2 T/O IM240
I/M MODEL YEARS : 2 1984 1995
I/M VEHICLES : 2 22222 11111111 1
I/M STRINGENCY : 2 20.0
I/M COMPLIANCE : 2 96.0
I/M WAIVER RATES : 2 3.0 3.0
I/M CUTPOINTS : 2 IM_ATP\DC.C02
I/M EXEMPTION AGE : 2 25.0

> Evap I/M - LDV pre-95 MY Gas Cap pressure test program #3
I/M PROGRAM : 3 1999 2050 2 T/O GC
I/M MODEL YEARS : 3 1972 1995
I/M VEHICLES : 3 22222 11111111 1
I/M COMPLIANCE : 3 96.0
I/M WAIVER RATES : 3 3.0 3.0
I/M EXEMPTION AGE : 3 25.0

> Exhaust I/M - LDV post-96 MY OBD test program #4(DC OBD Start:Jan 2004)
I/M PROGRAM : 4 1983 2050 2 T/O OBD I/M
I/M MODEL YEARS : 4 1996 2050
I/M VEHICLES : 4 22222 11111111 1
I/M STRINGENCY : 4 20.0
I/M COMPLIANCE : 4 96.0
I/M WAIVER RATES : 4 3.0 3.0
I/M EXEMPTION AGE : 4 25.0

> Evap I/M - LDV post-96 OBD Evap test program #5(DC OBD Start:Jan 2004)
I/M PROGRAM : 5 1999 2050 2 T/O EVAP OBD & GC
I/M MODEL YEARS : 5 1996 2050
I/M VEHICLES : 5 22222 11111111 1
I/M STRINGENCY : 5 20.0
I/M COMPLIANCE : 5 96.0
I/M WAIVER RATES : 5 3.0 3.0
I/M EXEMPTION AGE : 5 25.0

> Exhaust I/M - HDGV IDLE program #6
I/M PROGRAM : 6 1983 2050 2 T/O IDLE
I/M MODEL YEARS : 6 1972 2050
I/M VEHICLES : 6 11111 22222111 1
I/M STRINGENCY : 6 20.0
I/M COMPLIANCE : 6 96.0
I/M WAIVER RATES : 6 3.0 3.0
I/M EXEMPTION AGE : 6 25.0

Maryland

>IM Program as described in post-2009 RFP. Idle, OBD, and Mandatory Gas Cap for Non-OBD Vehicles.
>Waiver rates based on rates observed for January - June 2006 initial tests through 18 months after testing.
>Gas Cap waver rate is performance standard.

>Stringency based on July - December 2007

*Idle older LDGV, LDGT
I/M PROGRAM : 1 1984 2050 2 T/O Idle
I/M MODEL YEARS : 1 1977 1995
I/M VEHICLES : 1 22222 11111111 1
I/M STRINGENCY : 1 17.9
I/M COMPLIANCE : 1 96.0
I/M WAIVER RATES : 1 13.7 13.7
I/M GRACE PERIOD : 1 2

*Idle HDGT
I/M PROGRAM : 2 1984 2050 2 T/O Idle
I/M MODEL YEARS : 2 1977 2050
I/M VEHICLES : 2 11111 22222111 1
I/M STRINGENCY : 2 17.9
I/M COMPLIANCE : 2 96.0
I/M WAIVER RATES : 2 13.7 13.7
I/M GRACE PERIOD : 2 2

*OBD
I/M PROGRAM : 3 1984 2050 2 T/O OBD I/M
I/M MODEL YEARS : 3 1996 2050
I/M VEHICLES : 3 22222 11111111 1
I/M STRINGENCY : 3 17.9
I/M COMPLIANCE : 3 96.0
I/M WAIVER RATES : 3 6.3 6.3
I/M GRACE PERIOD : 3 2

*OBD Evap (Actual Start Year: July 2002)
I/M PROGRAM : 4 2002 2050 2 T/O EVAP OBD
I/M MODEL YEARS : 4 1996 2050
I/M VEHICLES : 4 22222 11111111 1
I/M COMPLIANCE : 4 96.0
I/M WAIVER RATES : 4 6.3 6.3
I/M GRACE PERIOD : 4 2

*Gas Cap older LDGV, LDGT
I/M PROGRAM : 5 2009 2050 2 T/O GC
I/M MODEL YEARS : 5 1977 1995
I/M VEHICLES : 5 22222 11111111 1
I/M COMPLIANCE : 5 96.0
I/M WAIVER RATES : 5 3.0 3.0
I/M GRACE PERIOD : 5 2

*Gas Cap HDGT
I/M PROGRAM : 6 2009 2050 2 T/O GC
I/M MODEL YEARS : 6 1977 2050
I/M VEHICLES : 6 11111 22222111 1
I/M COMPLIANCE : 6 96.0
I/M WAIVER RATES : 6 3.0 3.0
I/M GRACE PERIOD : 6 2

Virginia

Alexandria, Arlington County, Fairfax County, and Prince William

* Virginia's 2009 I/M programs for Alexandria, Arlington County, Fairfax County, and Prince William County.
* I/M Effectiveness reported in Program #3 applies to all exhaust programs modeled as TRC.
* First 4 years exempt.

> Exhaust I/M - IDLE test program #1
I/M PROGRAM : 1 1983 2050 2 TRC 2500/IDLE
I/M MODEL YEARS : 1 1968 1980
I/M VEHICLES : 1 22222 21111111 1
I/M STRINGENCY : 1 35
I/M COMPLIANCE : 1 98.0
I/M WAIVER RATES : 1 2.5 2.5
I/M EXEMPTION AGE : 1 24

> Exhaust I/M - ASM final program #2
I/M PROGRAM : 2 1983 2050 2 TRC ASM 2525/5015 FINAL
I/M MODEL YEARS : 2 1981 1995
I/M VEHICLES : 2 22222 11111111 1
I/M STRINGENCY : 2 35
I/M COMPLIANCE : 2 98.0
I/M WAIVER RATES : 2 2.5 2.5
I/M EXEMPTION AGE : 2 24

> Exhaust I/M - OBD test program #3
I/M PROGRAM : 3 1983 2050 2 TRC OBD I/M
I/M MODEL YEARS : 3 1996 2050
I/M VEHICLES : 3 22222 11111111 1
I/M STRINGENCY : 3 35
I/M COMPLIANCE : 3 98.0
I/M WAIVER RATES : 3 2.5 2.5
I/M EXEMPTION AGE : 3 24
I/M EFFECTIVENESS : 0.94 0.94 0.94
I/M GRACE PERIOD : 3 4

> Evap I/M - Evap OBD test program #4
I/M PROGRAM : 4 1998 2050 2 TRC EVAP OBD & GC
I/M MODEL YEARS : 4 1996 2050
I/M VEHICLES : 4 22222 11111111 1
I/M COMPLIANCE : 4 98.0
I/M WAIVER RATES : 4 2.5 2.5
I/M EXEMPTION AGE : 4 24
I/M GRACE PERIOD : 4 4

> Evap I/M - Gas Cap test program #5
I/M PROGRAM : 5 1998 2050 2 TRC GC
I/M MODEL YEARS : 5 1973 1995
I/M VEHICLES : 5 22222 11111111 1
I/M COMPLIANCE : 5 98.0
I/M WAIVER RATES : 5 2.5 2.5
I/M EXEMPTION AGE : 5 24

> Exhaust I/M - IDLE test program #6
I/M PROGRAM : 6 1983 2050 2 TRC 2500/IDLE
I/M MODEL YEARS : 6 1981 2050
I/M VEHICLES : 6 11111 21111111 1
I/M STRINGENCY : 6 35
I/M COMPLIANCE : 6 98.0
I/M WAIVER RATES : 6 2.5 2.5
I/M EXEMPTION AGE : 6 24
I/M GRACE PERIOD : 6 4

> Evap I/M - Gas Cap test program #7
I/M PROGRAM : 7 1998 2050 2 TRC GC
I/M MODEL YEARS : 7 1973 2050
I/M VEHICLES : 7 11111 21111111 1
I/M COMPLIANCE : 7 98.0
I/M WAIVER RATES : 7 2.5 2.5
I/M EXEMPTION AGE : 7 24
I/M GRACE PERIOD : 7 4

Loudoun and Stafford

* Virginia's 2009 I/M programs for Loudoun and Stafford Counties.
* I/M Effectiveness reported in Program #3 applies to all exhaust programs modeled as TRC.
* First 4 years exempt.

> Exhaust I/M - IDLE test program #1
I/M PROGRAM : 1 1998 2050 2 TRC 2500/IDLE
I/M MODEL YEARS : 1 1968 1980
I/M VEHICLES : 1 22222 21111111 1
I/M STRINGENCY : 1 35
I/M COMPLIANCE : 1 98.0
I/M WAIVER RATES : 1 2.5 2.5
I/M EXEMPTION AGE : 1 24

> Exhaust I/M - ASM final program #2
I/M PROGRAM : 2 1998 2050 2 TRC ASM 2525/5015 FINAL
I/M MODEL YEARS : 2 1981 1995
I/M VEHICLES : 2 22222 11111111 1
I/M STRINGENCY : 2 35
I/M COMPLIANCE : 2 98.0
I/M WAIVER RATES : 2 2.5 2.5
I/M EXEMPTION AGE : 2 24

> Exhaust I/M - OBD test program #3
I/M PROGRAM : 3 1998 2050 2 TRC OBD I/M
I/M MODEL YEARS : 3 1996 2050
I/M VEHICLES : 3 22222 11111111 1
I/M STRINGENCY : 3 35
I/M COMPLIANCE : 3 98.0
I/M WAIVER RATES : 3 2.5 2.5
I/M EXEMPTION AGE : 3 24
I/M EFFECTIVENESS : 0.94 0.94 0.94
I/M GRACE PERIOD : 3 4

> Evap I/M - Evap OBD test program #4
I/M PROGRAM : 4 1998 2050 2 TRC EVAP OBD & GC
I/M MODEL YEARS : 4 1996 2050
I/M VEHICLES : 4 22222 11111111 1
I/M COMPLIANCE : 4 98.0
I/M WAIVER RATES : 4 2.5 2.5
I/M EXEMPTION AGE : 4 24
I/M GRACE PERIOD : 4 4

> Evap I/M - Gas Cap test program #5
I/M PROGRAM : 5 1998 2050 2 TRC GC
I/M MODEL YEARS : 5 1973 1995
I/M VEHICLES : 5 22222 11111111 1
I/M COMPLIANCE : 5 98.0
I/M WAIVER RATES : 5 2.5 2.5
I/M EXEMPTION AGE : 5 24

> Exhaust I/M - IDLE test program #6
I/M PROGRAM : 6 1998 2050 2 TRC 2500/IDLE
I/M MODEL YEARS : 6 1981 2050
I/M VEHICLES : 6 11111 21111111 1
I/M STRINGENCY : 6 35
I/M COMPLIANCE : 6 98.0
I/M WAIVER RATES : 6 2.5 2.5
I/M EXEMPTION AGE : 6 24
I/M GRACE PERIOD : 6 4

> Evap I/M - Gas Cap test program #7
I/M PROGRAM : 7 1998 2050 2 TRC GC
I/M MODEL YEARS : 7 1973 2050
I/M VEHICLES : 7 11111 21111111 1
I/M COMPLIANCE : 7 98.0
I/M WAIVER RATES : 7 2.5 2.5
I/M EXEMPTION AGE : 7 24
I/M GRACE PERIOD : 7 4

Cut-Points

District of Columbia

Details of the format for the cut-points listed here can found in the Mobile6 model user guide.

Calendar Year: 2011

* District of Columbia IM cutpoints - applies to calendar year 2011
* Air Quality Division, District Department of the Environment
>

I/M CUTPOINTS									
* Model Years									
* 11	10	09	08	07	06	05	04	03	02
* 01	00	99	98	97	96	95	94	93	92
* 91	90	89	88	87					

* Block 1 (LDGV, Light LDGT1(EPA LD1))
0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800
0.800 0.800 0.800 0.800 0.800 0.800 1.200 1.200 1.200 1.200
1.200 2.000 2.000 2.000 2.000
15.000 15.000 15.000 15.000 15.000 15.000 15.000 15.000 15.000 15.000
15.000 15.000 15.000 15.000 15.000 15.000 20.000 20.000 20.000 20.000
20.000 30.000 30.000 30.000 30.000
2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000
2.000 2.000 2.000 2.000 2.000 2.000 2.500 2.500 2.500 2.500
2.500 3.000 3.000 3.000 3.000

* Block 2 (Heavy LDGT1, Light LDGT2 (EPA LD2&3))
1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000
1.000 1.000 1.000 1.000 1.000 1.000 2.400 2.400 2.400 2.400
2.400 3.200 3.200 3.200 3.200
20.000 20.000 20.000 20.000 20.000 20.000 20.000 20.000 20.000 20.000
20.000 20.000 20.000 20.000 20.000 20.000 60.000 60.000 60.000 60.000
60.000 80.000 80.000 80.000 80.000
2.500 2.500 2.500 2.500 2.500 2.500 2.500 2.500 2.500 2.500
2.500 2.500 2.500 2.500 2.500 2.500 3.000 3.000 3.000 3.000
3.000 3.500 3.500 3.500 7.000

* Block 3 (Heavy LDGT2(EPA LD4))
2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400
2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400
2.400 3.200 3.200 3.200 3.200
60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000
60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000
60.000 80.000 80.000 80.000 80.000
4.000 4.000 4.000 4.000 4.000 4.000 4.000 4.000 4.000 4.000
4.000 4.000 4.000 4.000 4.000 4.000 4.500 4.500 4.500 4.500
4.500 5.000 5.000 5.000 7.000

* Block 4 (HDGV)
2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400
2.400 2.400 2.400 2.400 3.000 3.000 3.000 3.000 3.000 3.000
3.000 3.200 3.200 3.200 3.200
60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000
60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000
60.000 80.000 80.000 80.000 80.000
4.000 4.000 4.000 4.000 4.000 4.000 4.000 4.000 4.000 4.000
4.000 4.000 4.000 4.000 6.000 6.000 6.000 6.000 6.000 6.000
6.000 8.000 8.000 8.000 8.000

Calendar Year: 2020

* District of Columbia IM cutpoints - applies to calendar year 2020
* Air Quality Division, District Department of the Environment
>

I/M CUTPOINTS
* Model Years
* 20 19 18 17 16 15 14 13 12 11
* 10 09 08 07 06 05 04 03 02 01
* 00 99 98 97 96

* Block 1 (LDGV, Light LDGT1(EPA LD1))										
0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800
0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800
0.800	0.800	0.800	0.800	0.800					
15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000
15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000
15.000	15.000	15.000	15.000	15.000					
2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
2.000	2.000	2.000	2.000	2.000					

* Block 2 (Heavy LDGT1, Light LDGT2 (EPA LD2&3))									
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000					
20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000
20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000
20.000	20.000	20.000	20.000	20.000					
2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500
2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500
2.500	2.500	2.500	2.500	2.500					

* Block 3 (Heavy LDGT2(EPA LD4))									
2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400
2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400
2.400	2.400	2.400	2.400	2.400					
60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000
60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000
60.000	60.000	60.000	60.000	60.000					
4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000
4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000
4.000	4.000	4.000	4.000	4.000					

* Block 4 (HDGV)									
2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400
2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400
2.400	2.400	2.400	3.000	3.000					
60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000
60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000
60.000	60.000	60.000	60.000	60.000					
4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000
4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000
4.000	4.000	4.000	6.000	6.000					

Calendar Year: 2030

* District of Columbia IM cutpoints - applies to calendar year 2030
* Air Quality Division, District Department of the Environment
>

I/M CUTPOINTS									
* Model Years									
* 30	29	28	27	26	25	24	23	22	21
* 20	19	18	17	16	15	14	13	12	11
* 10	09	08	07	06					

* Block 1 (LDGV, Light LDGT1(EPA LD1))
0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800
0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800
0.800 0.800 0.800 0.800 0.800
15.000 15.000 15.000 15.000 15.000 15.000 15.000 15.000 15.000 15.000
15.000 15.000 15.000 15.000 15.000 15.000 15.000 15.000 15.000 15.000
15.000 15.000 15.000 15.000 15.000
2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000
2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000
2.000 2.000 2.000 2.000 2.000

* Block 2 (Heavy LDGT1, Light LDGT2 (EPA LD2&3))
1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000
1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000
1.000 1.000 1.000 1.000 1.000
20.000 20.000 20.000 20.000 20.000 20.000 20.000 20.000 20.000 20.000
20.000 20.000 20.000 20.000 20.000 20.000 20.000 20.000 20.000 20.000
20.000 20.000 20.000 20.000 20.000
2.500 2.500 2.500 2.500 2.500 2.500 2.500 2.500 2.500 2.500
2.500 2.500 2.500 2.500 2.500 2.500 2.500 2.500 2.500 2.500
2.500 2.500 2.500 2.500 2.500

* Block 3 (Heavy LDGT2(EPA LD4))
2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400
2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400
2.400 2.400 2.400 2.400 2.400
60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000
60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000
60.000 60.000 60.000 60.000 60.000
4.000 4.000 4.000 4.000 4.000 4.000 4.000 4.000 4.000 4.000
4.000 4.000 4.000 4.000 4.000 4.000 4.000 4.000 4.000 4.000
4.000 4.000 4.000 4.000 4.000

* Block 4 (HDGV)
2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400
2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400 2.400
2.400 2.400 2.400 2.400 2.400
60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000
60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000 60.000
60.000 60.000 60.000 60.000 60.000
4.000 4.000 4.000 4.000 4.000 4.000 4.000 4.000 4.000 4.000
4.000 4.000 4.000 4.000 4.000 4.000 4.000 4.000 4.000 4.000
4.000 4.000 4.000 4.000 4.000

Calendar Year: 2040

* District of Columbia IM cutpoints - applies to calendar year 2040
* Air Quality Division, District Department of the Environment
>

I/M CUTPOINTS									
* Model Years									
* 40	39	38	37	36	35	34	33	32	31
* 30	29	28	27	26	25	24	23	22	21
* 20	19	18	17	16					

* Block 1 (LDGV, Light LDGT1(EPA LD1))										
0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	
0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	
0.800	0.800	0.800	0.800	0.800						
15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	
15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	
15.000	15.000	15.000	15.000	15.000						
2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	
2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	
2.000	2.000	2.000	2.000	2.000						

* Block 2 (Heavy LDGT1, Light LDGT2 (EPA LD2&3))										
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
1.000	1.000	1.000	1.000	1.000						
20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	
20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	
20.000	20.000	20.000	20.000	20.000						
2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	
2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	
2.500	2.500	2.500	2.500	2.500						

* Block 3 (Heavy LDGT2(EPA LD4))										
2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	
2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	
2.400	2.400	2.400	2.400	2.400						
60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	
60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	
60.000	60.000	60.000	60.000	60.000						
4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	
4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	
4.000	4.000	4.000	4.000	4.000						

* Block 4 (HDGV)										
2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	
2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	
2.400	2.400	2.400	2.400	2.400						
60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	
60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	
60.000	60.000	60.000	60.000	60.000						
4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	
4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	
4.000	4.000	4.000	4.000	4.000						

Anti-Tempering Programs (ATP)

Anti-tampering Program Parameters for DC

Program Parameters	Recent Update
Program Start Year	1983
First Model Year	1968
Last Model Year	2050
Program Type	Test Only
Inspection Frequency	Biennial
Compliance Rate (%)	96
LDGV	Yes
LDGT1	Yes
LDGT2	Yes
LDGT3	Yes
LDGT4	Yes
HDGV2B	Yes
HDGV3	Yes
HDGV4	Yes
HDGV5	Yes
HDGV6	Yes
HDGV7	No
HDGV8A	No
HDGV8B	No
GAS BUS	No
Inspections Performed	
Air pump system disablement	No
Catalyst removal	Yes
Fuel inlet restrictor disablement	Yes
Tailpipe lead deposit test	No
EGR disablement	No
Evaporative system disablement	No
PCV system disablement	No
Missing gas cap	Yes

Anti-tampering Program Parameters for Maryland

Program Parameters	Recent Update**
Program Start Year	1989
First Model Year	1977
Last Model Year	2050
Program Type	Test Only
Inspection Frequency	Biennial
Compliance Rate (%)	96
Vehicle Types	
LDGV	Yes
LDGT1	Yes
LDGT2	Yes
LDGT3	Yes
LDGT4	Yes
HDGV2B	Yes
HDGV3	Yes
HDGV4	Yes
HDGV5	Yes
HDGV6	Yes
HDGV7	No
HDGV8A	No
HDGV8B	No
GAS BUS	No
Inspections Performed	
Air pump system disablement	No
Catalyst removal	Yes
Fuel inlet restrictor disablement	Yes
Tailpipe lead deposit test	No
EGR disablement	No
Evaporative system disablement	No
PCV system disablement	No
Missing gas cap	Yes
*** Maryland's ATP applies to all counties except St. Mary's County.**	

Anti-tampering Program Parameters for Virginia*

Program Parameters	Recent Update
Program Start Year	1989**
First Model Year	1968
Last Model Year	2050
Program Type	Test and Repair Computerized***
Inspection Frequency	Biennial
Compliance Rate (%)	98
Vehicle Types	
LDGV	Yes
LDGT1	Yes
LDGT2	Yes
LDGT3	Yes
LDGT4	Yes
HDGV2B	Yes
HDGV3	No
HDGV4	No
HDGV5	No
HDGV6	No
HDGV7	No
HDGV8A	No
HDGV8B	No
GAS BUS	No
Inspections Performed	
Air pump system disablement	Yes
Catalyst removal	Yes
Fuel inlet restrictor disablement	No
Tailpipe lead deposit test	No
EGR disablement	Yes
Evaporative system disablement	Yes
PCV system disablement	Yes
Missing gas cap	Yes

*** Virginia's ATP applies to all jurisdictions except Clark and Spotsylvania counties.**

**** ATP start year is 1998 for Loudoun and Stafford Counties.**

***** Modeled as Test Only (T/O). Per Mobile6 User's Guide (Section 2.8.9.3), EPA no longer support test and repair benefit discount.**

Additional State-Specific Control Programs

Maryland adopted CAL-LEV II program and it is applicable for any evaluation year beginning 2011. Therefore, this program was modeled for all four conformity analysis years. Following auxiliary files provided by the Maryland Department of the Environment (MDE) staff were used to model the above program for Maryland jurisdictions. Details of the format for these auxiliary files can be found in the Mobile6 model user guide.

LevIIExh.S11 (T2 EXH PHASE-IN)

T2 EXH PHASE-IN
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.100,0.100,0.250,0.250,0.598,0.653,0.653,0.653,0.683
0.000,0.000,0.000,0.300,0.300,0.550,0.550,0.200,0.144,0.144,0.144,0.113
0.000,0.000,0.000,0.200,0.200,0.100,0.100,0.101,0.101,0.101,0.101,0.102
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.061,0.061,0.061,0.061,0.061
0.386,0.787,1.000,0.400,0.400,0.100,0.100,0.040,0.041,0.041,0.041,0.041
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.614,0.213,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.100,0.100,0.250,0.250,0.598,0.653,0.653,0.653,0.683
0.000,0.000,0.000,0.300,0.300,0.550,0.550,0.200,0.144,0.144,0.144,0.113
0.000,0.000,0.000,0.200,0.200,0.100,0.100,0.101,0.101,0.101,0.101,0.102
0.386,0.787,1.000,0.400,0.400,0.100,0.100,0.061,0.061,0.061,0.061,0.061
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.040,0.041,0.041,0.041,0.041
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.614,0.213,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.100,0.100,0.250,0.250,0.598,0.653,0.653,0.653,0.683
0.000,0.000,0.000,0.300,0.300,0.550,0.550,0.200,0.144,0.144,0.144,0.113
0.000,0.000,0.000,0.200,0.200,0.100,0.100,0.101,0.101,0.101,0.101,0.102
0.386,0.787,1.000,0.400,0.400,0.100,0.100,0.061,0.061,0.061,0.061,0.061

0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.040,0.041,0.041,0.041,0.041
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.614,0.213,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.100,0.100,0.250,0.250,0.598,0.653,0.653,0.653,0.683
0.000,0.000,0.000,0.300,0.300,0.550,0.550,0.200,0.144,0.144,0.144,0.113
0.000,0.000,0.000,0.200,0.200,0.100,0.100,0.101,0.101,0.101,0.101,0.102
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.061,0.061,0.061,0.061,0.061
0.386,0.787,1.000,0.400,0.400,0.100,0.100,0.040,0.041,0.041,0.041,0.041
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.614,0.213,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.100,0.100,0.250,0.250,0.598,0.653,0.653,0.653,0.683
0.000,0.000,0.000,0.300,0.300,0.550,0.550,0.200,0.144,0.144,0.144,0.113
0.000,0.000,0.000,0.200,0.200,0.100,0.100,0.101,0.101,0.101,0.101,0.102
0.386,0.787,1.000,0.400,0.400,0.100,0.100,0.061,0.061,0.061,0.061,0.061
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.040,0.041,0.041,0.041,0.041
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.614,0.213,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.100,0.100,0.250,0.250,0.598,0.653,0.653,0.653,0.683
0.000,0.000,0.000,0.300,0.300,0.550,0.550,0.200,0.144,0.144,0.144,0.113
0.000,0.000,0.000,0.200,0.200,0.100,0.100,0.101,0.101,0.101,0.101,0.102
0.386,0.787,1.000,0.400,0.400,0.100,0.100,0.061,0.061,0.061,0.061,0.061
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.040,0.041,0.041,0.041,0.041
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000

0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.614,0.213,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.200,0.200,0.200,0.200,0.200,0.200,0.200
0.000,0.000,0.000,0.000,0.400,0.000,0.000,0.450,0.450,0.450,0.450,0.450
0.000,0.000,0.337,1.000,0.600,0.800,0.800,0.350,0.350,0.350,0.350,0.350
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
1.000,1.000,0.663,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.200,0.200,0.200,0.200,0.200,0.200,0.200
0.000,0.000,0.337,0.400,0.400,0.200,0.200,0.450,0.450,0.450,0.450,0.450
0.000,0.000,0.000,0.300,0.300,0.300,0.300,0.350,0.350,0.350,0.350,0.350
0.000,0.000,0.000,0.300,0.300,0.300,0.300,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
1.000,1.000,0.663,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.200,0.200,0.200,0.200,0.200,0.200,0.200
0.000,0.000,0.337,0.400,0.400,0.200,0.200,0.450,0.450,0.450,0.450,0.450
0.000,0.000,0.000,0.300,0.300,0.300,0.300,0.350,0.350,0.350,0.350,0.350
0.000,0.000,0.000,0.300,0.300,0.300,0.300,0.000,0.000,0.000,0.000,0.000
1.000,1.000,0.663,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000

0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.740,0.740,0.740,1.000,1.000,1.000,1.000,1.000
0.370,0.740,1.000,1.000,0.260,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.630,0.260,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.260,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.260,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.740,0.740,0.740,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,1.000,1.000,1.000,1.000,1.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.370,0.740,1.000,1.000,0.260,0.260,0.260,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.630,0.260,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.740,0.740,0.740,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,1.000,1.000,1.000,1.000,1.000
0.370,0.740,1.000,1.000,0.260,0.260,0.260,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.630,0.260,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000

0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,1.000,1.000,1.000,1.000,1.000
0.000,0.000,0.220,1.000,1.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
1.000,1.000,0.780,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,1.000,1.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,1.000,1.000,1.000,1.000,1.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.220,1.000,1.000,1.000,1.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
1.000,1.000,0.780,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,1.000,1.000,1.000,1.000,1.000
0.000,0.000,0.220,1.000,1.000,1.000,1.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
1.000,1.000,0.780,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000
0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000,0.000

LevIIEvp.S11 (T2 EVAP PHASE-IN)

T2 EVAP PHASE-IN
0.25,0.50,0.75,1.00,1.00,1.00,1.00,1.00,1.00,1.00,1.00,1.00,
0.25,0.50,0.75,1.00,1.00,1.00,1.00,1.00,1.00,1.00,1.00,1.00,
0.25,0.50,0.75,1.00,1.00,1.00,1.00,1.00,1.00,1.00,1.00,1.00,
0.00,0.00,0.00,0.00,0.50,1.00,1.00,1.00,1.00,1.00,1.00,1.00,
0.00,0.00,0.00,0.00,0.50,1.00,1.00,1.00,1.00,1.00,1.00,1.00/

LevIIStd.d (T2 CERT)

T2 CERT

0.000	0.000	0.000	0.000	0.000
0.007	0.007	0.007	0.007	0.007
0.040	0.040	0.040	0.040	0.040
0.051	0.051	0.051	0.051	0.051
0.040	0.040	0.040	0.040	0.040
0.075	0.075	0.075	0.075	0.075
0.100	0.100	0.100	0.125	0.125
0.075	0.075	0.100	0.140	0.140
0.125	0.125	0.125	0.160	0.195
0.040	0.040	0.050	0.100	0.117
0.075	0.075	0.100	0.160	0.195
0.000	0.000	0.000	0.000	0.000

0.000	0.000	0.000	0.000	0.000
1.700	1.700	1.700	1.700	1.700
1.700	1.700	1.700	1.700	1.700
1.700	1.700	1.700	1.700	1.700
1.700	1.700	1.700	1.700	1.700
3.400	3.400	3.400	3.400	3.400
3.400	3.400	3.400	3.400	3.400
3.400	3.400	3.400	3.400	3.400
3.400	3.400	3.400	3.400	3.400
1.700	1.700	2.200	4.400	5.000
3.400	3.400	4.400	4.400	5.000
0.000	0.000	0.000	0.000	0.000

0.000	0.000	0.000	0.000	0.000
0.014	0.014	0.014	0.014	0.014
0.021	0.021	0.021	0.021	0.021
0.029	0.029	0.029	0.029	0.029
0.050	0.050	0.050	0.050	0.050
0.050	0.050	0.050	0.050	0.050
0.140	0.140	0.140	0.140	0.140
0.200	0.200	0.200	0.200	0.200
0.400	0.400	0.400	0.400	0.400
0.200	0.200	0.400	0.400	0.600
0.200	0.200	0.400	0.400	0.600
0.000	0.000	0.000	0.000	0.000/

LevII94.S11 (94+ LDG IMP)

94+ LDG IMPLEMENTATION

* The data is divided into 5 blocks, one each for LDGV, LDGT1, LDGT2,
* LDGT3, and LDGT4. In each data block there is one data line for each
* calendar year from 1994 to 2025. Each line contains the phase-in
* values for that year for 11 different vehicle standards categories.
* The first column is Tier0 the second is intermediate Tier1, the third
* is Tier1, and the fourth column is Tier2. The remaining columns are
* intermediate TLEV, TLEV, intermediate LEV, LEV, intermediate ULEV, ULEV,
* and ZEV. These are the standards categories defined by the California
* LEV program.

* LDGV
* T0 T1 T1 T2 TLEV TLEV LEV LEV ULEV ULEV ZEV
* (int) (int) (int) (int)
0.6 0.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.2 0.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.6 0.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.2 0.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.3 0.0 0.0 0.4 0.0 0.3 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.4 0.0 0.6 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0
0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.99 0.0 0.0 0.0 0.0 0.0 0.0 0.01
0.0 0.0 0.0 0.986 0.0 0.0 0.0 0.0 0.0 0.0 0.014
0.0 0.0 0.0 0.986 0.0 0.0 0.0 0.0 0.0 0.0 0.014

0.0	0.0	0.0	0.986	0.0	0.0	0.0	0.0	0.0	0.0	0.014
0.0	0.0	0.0	0.981	0.0	0.0	0.0	0.0	0.0	0.0	0.019
0.0	0.0	0.0	0.981	0.0	0.0	0.0	0.0	0.0	0.0	0.019
0.0	0.0	0.0	0.981	0.0	0.0	0.0	0.0	0.0	0.0	0.019
0.0	0.0	0.0	0.976	0.0	0.0	0.0	0.0	0.0	0.0	0.024
0.0	0.0	0.0	0.976	0.0	0.0	0.0	0.0	0.0	0.0	0.024
0.0	0.0	0.0	0.976	0.0	0.0	0.0	0.0	0.0	0.0	0.024
0.0	0.0	0.0	0.976	0.0	0.0	0.0	0.0	0.0	0.0	0.024
0.0	0.0	0.0	0.976	0.0	0.0	0.0	0.0	0.0	0.0	0.024
0.0	0.0	0.0	0.976	0.0	0.0	0.0	0.0	0.0	0.0	0.024
0.0	0.0	0.0	0.976	0.0	0.0	0.0	0.0	0.0	0.0	0.024
0.0	0.0	0.0	0.976	0.0	0.0	0.0	0.0	0.0	0.0	0.024

* LDGT1										
0.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.3	0.0	0.0	0.4	0.0	0.3	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.6	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.99	0.0	0.0	0.0	0.0	0.0	0.0	0.01
0.0	0.0	0.0	0.986	0.0	0.0	0.0	0.0	0.0	0.0	0.014
0.0	0.0	0.0	0.986	0.0	0.0	0.0	0.0	0.0	0.0	0.014
0.0	0.0	0.0	0.986	0.0	0.0	0.0	0.0	0.0	0.0	0.014
0.0	0.0	0.0	0.981	0.0	0.0	0.0	0.0	0.0	0.0	0.019
0.0	0.0	0.0	0.981	0.0	0.0	0.0	0.0	0.0	0.0	0.019
0.0	0.0	0.0	0.981	0.0	0.0	0.0	0.0	0.0	0.0	0.019
0.0	0.0	0.0	0.976	0.0	0.0	0.0	0.0	0.0	0.0	0.024
0.0	0.0	0.0	0.976	0.0	0.0	0.0	0.0	0.0	0.0	0.024
0.0	0.0	0.0	0.976	0.0	0.0	0.0	0.0	0.0	0.0	0.024
0.0	0.0	0.0	0.976	0.0	0.0	0.0	0.0	0.0	0.0	0.024
0.0	0.0	0.0	0.976	0.0	0.0	0.0	0.0	0.0	0.0	0.024
0.0	0.0	0.0	0.976	0.0	0.0	0.0	0.0	0.0	0.0	0.024
0.0	0.0	0.0	0.976	0.0	0.0	0.0	0.0	0.0	0.0	0.024
0.0	0.0	0.0	0.976	0.0	0.0	0.0	0.0	0.0	0.0	0.024

* LDGT2										
0.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.3	0.0	0.0	0.4	0.0	0.3	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.6	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

* LDGT3										
1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

* LDGT4										
1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

NOx Rebuild Effects

Following NOx rebuild effects percentages were used for all 2010 CLRP analysis years:

Jurisdiction	NOx Rebuild Effects (%)
District of Columbia	0.11
Maryland	0.90
Virginia	0.25
Regional (Average of above three jurisdictions)	0.50
Note: Regional average NOx rebuild effect data was used for modeling buses, which are modeled on a regional level.	

Memo

To: Air Quality Conformity Files

From: Eulalie G. Lucas

Date: 10/8/2010

Re: Inputs to MOBILE6 Emissions Factor Development: Ozone season, Wintertime CO and $PM_{2.5}$ Annual.

Introduction

This memo documents updates to the preparation of mobile emission rates associated with the air quality analysis of the 2010 Constrained Long Range Plan (CLRP) and the FY 2011-2016 Transportation Improvement Plan (TIP). Inputs for this analysis are for typical ozone, winter day and for annual conditions.

Procedures used in the development of MOBILE6.2 inputs decks have not changed and detailed information is available in a January 27, 2003 memo to the Council of Governments (COG) staff from Maureen Mullen of EH Pechan staff. This memo is contained in previous air quality conformity determination reports, e.g., the October 19, 2005 report for the 2005 CLRP and the FY 2006-2011 TIP

Process and Inputs

Development of MOBILE6.2 input decks is an inter-departmental work task. COG's Department of Environmental Programs (DEP) staff requests non- travel related inputs from the states and the District of Columbia air agency staff. DTP staff incorporates these inputs into MOBILE input decks and the decks are returned to DEP staff for review and approval. Once input files are approved the MOBILE model is executed and emission rates are generated. Rates are then applied along with travel data using COG's post-processor, for all milestone years.

The following tables describe and list either Mobile default values or a reference to a local data source. Table 1 shows command line information specific to the current analysis as well as input requirement with a description of these inputs. Table 2 shows trip length distributions and Table 3 shows LEV implementation schedules for COG's non-attainment areas as described in the one-hour and eight-hour ozone day State Implementation Plans. Table 4 is summary of scenarios by analysis type along with a brief description. Table 5 contains values for the distribution of engine starts for three modes stabilized, cold and hot for each hour of the day, separately for weekdays and weekends. Included in this appendix is a memo from Daivamani Sivasailam documenting 2008 vehicle registration and diesel sales fractions, these two inputs vary by jurisdiction and contribute significantly to emission rates development.

Results

Tables 6, 7 and 8 show Vehicle Miles of Travel (VMT) fractions for the three traffic streams modeled: network, local roads and auto access to transit. MOBILE6.2 default heavy duty truck VMT percents are replaced to represent local conditions for network and local roads. The network traffic stream includes all vehicle types and all facility types. Local roads traffic stream accounts for VMT on facility types that are not represented on our network and has a significantly lower heavy duty truck percent. Auto-access to transit traffic stream represents VMT associated with trips made to access transit and does not include heavy duty trucks. Table 9 shows the percent VMT mix associated with school and transit bus operation. Year 2011 is illustrated here but all milestone years are available upon request.

Updates

Updates specified by the District of Columbia, Maryland and Virginia air management agencies are covered in more detail in Sunil Kumar's memo dated 10/12/2010 included in this Appendix.

Table 1

MOBILE62 Run Information Common to All COG Counties For Ozone day, Annual Runs and Winter CO

Command	Input	Description
MOBILE6 INPUT FILE	No input required.	Specific to Jurisdiction
REPORT FILE	No input required.	Specifies name for descriptive output file(s).
EMISSIONS TABLE	User-supplied	Specifies a file name for the database output file.
SPREADSHEET	User-supplied	Instructs MOBILE6 to output the average calendar year emission factors in a form suitable for direct input into a spreadsheet program.
POLLUTANTS*	Specific to seasonal runs	Controls which HC, CO, and NOx pollutants will be calculated and output to the database report and descriptive output.
PARTICULATE EF*	PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV PMDDR2.CSV	Used for seasonal runs particulate matter ($PM_{2.5}$) and NOx as a precursor for $PM_{2.5}$.
EXPRESS HC AS VOC +	No input required.	Directs MOBILE6 to output exhaust HC as volatile organic compounds.
EXPAND EVAPORATIVE+	No input required.	Six evaporative emission types in descriptive output.
EXPAND EXHAUST+	No input required.	Start, running and total exhaust EFs displayed in descriptive output.
NO REFUELING+	No input required.	"zero " for refueling (Stage 2) emissions.
WE DA TRI LEN DI	Varies. .	Table 2 Varies by time range
94+ LDG IMP	User-supplied	1994 and later fleet penetration fractions for light-duty gasoline vehicles under the Tier 1, NLEV (or California LEV 1), and Tier 2 standards. Table 3
REBUILD EFFECTS	Values supplied by state air agency staff.	Rebuild program effectiveness rate used to reduce heavy-duty diesel vehicle NOx off-cycle emissions for years 2009 and beyond Vary by state: DC 11%,MD 90%, VA 25%
REG DIST	Vary by jurisdiction	2008 Vehicle Registration specific to jurisdiction for 16 composite vehicles types. Updated every three years. See D. Sivasailam memo attached.
ANTI-TAMP PROG	Vary by state	See S. Kumar memo of 10/12/2010
I/M DESC FILE#	User-supplied	See S. Kumar memo of 10/12/2010
FUEL PROGRAM	Vary by state	See S. Kumar memo of 10/12/2010
OXYGENATED FUELS	Regional Values	See S. Kumar memo of 10/12/2010
TEMPERATURE	Ozone season	See S. Kumar memo of 10/12/2010
	Seasonal	See S. Kumar memo of 10/12/2010
	Winter	See S. Kumar memo of 10/12/2010
DIESEL FRACTIONS	Vary by jurisdiction	See D. Sivasailam memo attached
FUEL RVP	Vary by jurisdiction Ozone season	See S. Kumar memo of 9/12/2010
	Seasonal	See S. Kumar memo of 10/12/2010
HUMIDITY	Ozone season	See S. Kumar memo of 10/12/2010
	Winter CO	See S. Kumar memo of 10/12/2010
	Seasonal	See S. Kumar memo of 10/12/2010
SCENARIO RECORD	Automatically generated.	Allows user to label individual scenario results. Marks start of new scenario. Table 4

CALENDAR YEAR	Varies.	Calendar year of scenario evaluated.
EVALUATION MONTH	Varies.	Specifies January 1 (1) or July 1 (7) for calendar year of interest.
ALTITUDE	1	High or low altitude of area evaluated.
BAROMETRIC PRES*	User-supplied	See S. Kumar memo of 10/12/2010
AVERAGE SPEED	Varies. .	Table 4 Varies by scenario
SOAK DISTRIBUTION	Regional	Table 5 Varies by operating mode
VMT FRACTIONS	Varies by jurisdiction.	See Tables 6,7,8,9
VMT BY FACILITY	FV4.FV for freeway ramp; FV3.FV for local roads	Values represent MOBILE6 defaults for each scenario.
DIESEL SULFUR*	Varies. by jurisdiction.	See S. Kumar memo of 10/12/2010
PARTICLE SIZE*	Regional	2.5

+ - Does not apply to $PM_{2.5}$ analysis (Annual runs).
* - Applies only when modeling $PM_{2.5}$.
# - Used when an ATP or I/M control programs are in effect.

Table 2
Trip Length Distributions

Length of Trip	MWCOG Regional Percentage of VMT (%)	MOBILE6 Default Percentage of VMT (%)
< 10 Minutes	10.86	6.74
11 - 20 Minutes	24.98	18.51
21 - 30 Minutes	19.71	16.78
31 - 40 Minutes	13.44	13.11
41 - 50 Minutes	9.29	8.33
> 50 Minutes	21.72	36.53

Table 3
LEV Implementation Schedule for MWCOG Region

Percentage of New Vehicle Sales				
Model Year	Tier 1	Transitional LEV	LEV	Tier 2
1999	30	40	30	0
2000	0	40	60	0
2001	0	0	100	0
2002	0	0	100	0
2003	0	0	100	0
2004+	0	0	0	100

Table 4
Summary of Scenarios Modeled in MOBILE6.2
Network, Local roads and Auto Access to Transit, School and Transit bus
Analysis: Ozone and winter day and annual runs

Scenario Number	Operating Mode	Facility Type	Average Speed	VMT Fractions	Month\Season Sequence
Ozone\Winter Analysis					
1-65	Stabilized	Arterial\Collectors	1-65 mph	Network or Auto Access	
66-130	Stabilized	Freeways excluding Ramps	1-65 mph	Network or Auto Access	
131	Stabilized	Freeway Ramps	34.6 mph	Network or Auto Access	
132	Cold	Local Roadways	12.9 mph	Network or Auto Access	
133	Hot	Local Roadways	12.9 mph	Network or Auto Access	
134	Stabilized	Local Roadways	12.9 mph	Network or Auto Access	
135-179*	Stabilized	Local Roadways as Arterial	1-45 mph	Local	
Seasonal Analysis					
1-195	Stabilized	Arterial\Collectors	1-65 mph	Network or Auto Access	1-3
196-390	Stabilized	Freeways excluding Ramps	1-65 mph	Network or Auto Access	1-4
391-393	Stabilized	Freeway Ramps	34.6 mph	Network or Auto Access	1-3
394-402	Cold	Local Roadways	12.9 mph	Network or Auto Access	1-3 (for each season, data sequence is as follow: cold, hot, then stabilized)
	Hot	Local Roadways	12.9 mph	Network or Auto Access	
	Stabilized	Local Roadways	12.9 mph	Local or Auto Access	
403-537*	Stabilized	Local Roadways as Arterial	1-45 mph	Local	
Transit and School Bus					
1-65	Stabilized	Arterial/Collectors	1-65 mph	100%	Ozone, winter, annual
66	Stabilized	Freeway Ramps	34.6 mph	100%	Ozone, winter, annual
67	Stabilized	Local Road	12.9 mph	100%	Ozone, winter, annual

Notes:
1. Season: 1 – January thru April; 2 – May thru September; 3 – October thru December
2. * - Applies to network and local road types only.

Table 5
Soak Distributions

Stabilized Operating Mode

SOAK DISTRIBUTION									
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*1.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*1.00

Cold Start Operating Mode

SOAK DISTRIBUTION									
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*1.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*1.00	24*0.00	24*0.00

Hot Start Operating Mode

SOAK DISTRIBUTION									
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*1.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*1.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00
24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00	24*0.00

Table 6

2011 Summer VMT Mix Fractions for Network Analysis

Vehicle Type	2011 Summer VMT Mix Fractions											
	DC	Maryland Counties					Virginia Counties					
		Calvert	Charles	Frederick	Montgomery	Prince Ge	Alexandria	Arlington	Fairfax	Loudon	Prince William	Stafford
LDGV	0.3367	0.3425	0.3436	0.3439	0.3334	0.3403	0.3325	0.3349	0.3336	0.3335	0.3367	0.3389
LDGT1	0.0873	0.0889	0.0850	0.0855	0.0875	0.0854	0.0825	0.0867	0.0884	0.0887	0.0892	0.0934
LDGT2	0.3237	0.3153	0.3166	0.3198	0.3247	0.3191	0.3277	0.3238	0.3231	0.3229	0.3200	0.3110
LDGT3	0.1085	0.1076	0.1092	0.1065	0.1112	0.1098	0.1127	0.1107	0.1108	0.1105	0.1094	0.1039
LDGT4	0.0531	0.0554	0.0552	0.0541	0.0532	0.0549	0.0543	0.0534	0.0535	0.0540	0.0540	0.0478
HDGV2B	0.0211	0.0202	0.0192	0.0198	0.0195	0.0184	0.0200	0.0198	0.0197	0.0197	0.0194	0.0196
HDGV3	0.0012	0.0009	0.0008	0.0009	0.0008	0.0008	0.0010	0.0010	0.0010	0.0010	0.0010	0.0007
HDGV4	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0002
HDGV5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0007
HDGV6	0.0004	0.0005	0.0004	0.0004	0.0004	0.0004	0.0005	0.0005	0.0005	0.0005	0.0005	0.0016
HDGV7	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0007
HDGV8A	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDGV8B	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LDDV	0.0007	0.0009	0.0009	0.0009	0.0009	0.0009	0.0006	0.0008	0.0008	0.0008	0.0008	0.0033
LDDT12	0.0004	0.0003	0.0004	0.0004	0.0004	0.0004	0.0005	0.0004	0.0005	0.0005	0.0004	0.0111
HDDV2B	0.0060	0.0087	0.0083	0.0084	0.0084	0.0078	0.0074	0.0072	0.0073	0.0072	0.0071	0.0059
HDDV3	0.0016	0.0021	0.0020	0.0021	0.0019	0.0018	0.0017	0.0016	0.0017	0.0018	0.0018	0.0018
HDDV4	0.0018	0.0018	0.0018	0.0019	0.0019	0.0018	0.0019	0.0018	0.0019	0.0019	0.0018	0.0021
HDDV5	0.0026	0.0020	0.0020	0.0020	0.0020	0.0019	0.0017	0.0018	0.0019	0.0020	0.0019	0.0010
HDDV6	0.0059	0.0066	0.0059	0.0066	0.0064	0.0067	0.0072	0.0060	0.0061	0.0061	0.0064	0.0048
HDDV7	0.0061	0.0045	0.0057	0.0054	0.0058	0.0059	0.0049	0.0044	0.0056	0.0055	0.0063	0.0069
HDDV8A	0.0080	0.0078	0.0079	0.0078	0.0079	0.0083	0.0078	0.0082	0.0082	0.0082	0.0081	0.0084
HDDV8B	0.0285	0.0280	0.0291	0.0278	0.0280	0.0294	0.0290	0.0308	0.0293	0.0292	0.0288	0.0293
MC	0.0049	0.0047	0.0047	0.0046	0.0044	0.0048	0.0043	0.0045	0.0045	0.0044	0.0047	0.0047
HDGB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDDBT	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDDBS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LDDT34	0.0008	0.0006	0.0006	0.0006	0.0006	0.0005	0.0011	0.0009	0.0009	0.0009	0.0008	0.0022

Table 7
2011 Summer VMT Mix Fractions for Local Analysis

Vehicle Type	2011 Summer VMT Mix Fractions											
	DC	Maryland Counties					Virginia Counties					
		Calvert	Charles	Frederick	Montgomery	Prince George's	Alexandria	Arlington	Fairfax	Loudon	Prince William	Stafford
LDGV	0.3608	0.3671	0.3681	0.3684	0.3573	0.3646	0.3563	0.3589	0.3575	0.3574	0.3609	0.3632
LDGT1	0.0936	0.0953	0.0911	0.0916	0.0937	0.0915	0.0884	0.0930	0.0947	0.0950	0.0956	0.1001
LDGT2	0.3469	0.3378	0.3393	0.3427	0.3479	0.3419	0.3511	0.3470	0.3463	0.3460	0.3429	0.3332
LDGT3	0.1163	0.1152	0.1170	0.1140	0.1191	0.1175	0.1207	0.1185	0.1188	0.1184	0.1172	0.1113
LDGT4	0.0569	0.0594	0.0592	0.0580	0.0570	0.0589	0.0582	0.0572	0.0574	0.0579	0.0579	0.0511
HDGV2B	0.0046	0.0044	0.0042	0.0043	0.0043	0.0040	0.0044	0.0043	0.0043	0.0043	0.0042	0.0043
HDGV3	0.0003	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
HDGV4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000
HDGV5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002
HDGV6	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0004
HDGV7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
HDGV8A	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDGV8B	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LDDV	0.0008	0.0009	0.0010	0.0010	0.0009	0.0010	0.0007	0.0008	0.0008	0.0008	0.0008	0.0035
LDDT12	0.0004	0.0004	0.0004	0.0004	0.0005	0.0004	0.0005	0.0005	0.0005	0.0005	0.0005	0.0119
HDDV2B	0.0013	0.0019	0.0018	0.0018	0.0018	0.0017	0.0016	0.0016	0.0016	0.0016	0.0016	0.0013
HDDV3	0.0003	0.0004	0.0004	0.0005	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
HDDV4	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0005
HDDV5	0.0006	0.0005	0.0005	0.0005	0.0005	0.0004	0.0004	0.0004	0.0004	0.0005	0.0004	0.0002
HDDV6	0.0013	0.0015	0.0013	0.0014	0.0014	0.0015	0.0016	0.0013	0.0013	0.0013	0.0014	0.0010
HDDV7	0.0014	0.0010	0.0013	0.0012	0.0013	0.0013	0.0011	0.0010	0.0012	0.0012	0.0014	0.0016
HDDV8A	0.0017	0.0017	0.0017	0.0017	0.0017	0.0018	0.0017	0.0018	0.0018	0.0018	0.0018	0.0018
HDDV8B	0.0062	0.0061	0.0063	0.0062	0.0061	0.0065	0.0063	0.0066	0.0064	0.0064	0.0063	0.0063
MC	0.0052	0.0050	0.0050	0.0049	0.0047	0.0052	0.0046	0.0049	0.0048	0.0047	0.0050	0.0050
HDGB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDDBT	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDDBS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LDDT34	0.0008	0.0006	0.0006	0.0006	0.0007	0.0006	0.0012	0.0009	0.0009	0.0010	0.0009	0.0024

Table 8

2011 Summer VMT Mix Fractions for Auto Access to Transit Analysis

Vehicle Type	2011 Summer VMT Mix Fractions											
	DC	Maryland Counties					Virginia Counties					
		Calvert	Charles	Frederick	Montgomery	Prince Ge	Alexandria	Arlington	Fairfax	Loudon	Prince William	Stafford
LDGV	0.3675	0.3738	0.3750	0.3753	0.3640	0.3715	0.3699	0.3655	0.3642	0.3641	0.3641	0.3699
LDGT1	0.0953	0.0971	0.0928	0.0933	0.0954	0.0931	0.1020	0.0947	0.0965	0.0968	0.0968	0.1020
LDGT2	0.3534	0.3441	0.3456	0.3491	0.3544	0.3483	0.3394	0.3534	0.3527	0.3524	0.3524	0.3394
LDGT3	0.1185	0.1174	0.1192	0.1162	0.1214	0.1197	0.1133	0.1207	0.1209	0.1206	0.1206	0.1133
LDGT4	0.0580	0.0605	0.0603	0.0591	0.0580	0.0600	0.0521	0.0583	0.0584	0.0590	0.0590	0.0521
HDGV2B	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDGV3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDGV4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDGV5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDGV6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDGV7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDGV8A	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDGV8B	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LDDV	0.0008	0.0010	0.0010	0.0010	0.0009	0.0010	0.0036	0.0009	0.0009	0.0008	0.0008	0.0036
LDDT12	0.0004	0.0004	0.0004	0.0004	0.0005	0.0004	0.0121	0.0005	0.0005	0.0005	0.0005	0.0121
HDDV2B	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDDV3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDDV4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDDV5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDDV6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDDV7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDDV8A	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDDV8B	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MC	0.0053	0.0051	0.0051	0.0050	0.0048	0.0053	0.0051	0.0050	0.0049	0.0048	0.0048	0.0051
HDGB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDDBT	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HDDBS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LDDT34	0.0008	0.0006	0.0006	0.0006	0.0007	0.0006	0.0024	0.0010	0.0010	0.0010	0.0010	0.0024

Table 9
2011 VMT Mix Fractions
For School Bus and Transit Bus Analysis

Vehicle Type	VMT Mix Fractions	
	School Bus	Transit Bus
LDV	0.0000	0.0000
LDT1	0.0000	0.0000
LDT2	0.0000	0.0000
LDT3	0.0000	0.0000
LDT4	0.0000	0.0000
HDV2B	0.0000	0.0000
HDV3	0.0000	0.0000
HDV4	0.0000	0.0000
HDV5	0.0000	0.0000
HDV6	0.0000	0.0000
HDV7	0.0000	0.0000
HDV8A	0.0000	0.0000
HDV8B	0.0000	0.0000
HDBS	1.0000	0.0000
HDBT	0.0000	1.0000
MC	0.0000	0.0000

National Capital Region Transportation Planning Board

777 North Capitol Street, N.E., Suite 300, Washington, D.C. 20002-4290 (202) 962-3310 Fax: (202) 962-3202

October 12, 2010

To: Air Quality Conformity Files

From: Daivamani Sivasailam
Principal Transportation Engineer

Subject: Development of vehicle age distributions and diesel vehicle percentages for Mobile 6.2 model using VIN decoder software – 2008 Registration Data

Introduction

This memorandum summarizes the methodology used, and the results obtained, in developing Mobile 6 input files of vehicle characteristics data summarized from 2008 District of Columbia, Maryland and Virginia vehicle registration data. EPA's Mobile 6 model requires age distribution (1-25+ years) and diesel fueled vehicle percentages for 16 separate vehicle types (passenger cars, motorcycles, light trucks, and heavy trucks in ascending weight categories). The model then generates 28 vehicle types by applying the diesel percentages to the relevant vehicle types. This work continues the cycle of obtaining consistent vehicle registrations on a 3 year basis. These results will be used in the development of the mobile source emissions inventories for the air quality conformity assessment of 2009 Constrained Long Range Plan (CLRP) and FY 2010-2015 Transportation Improvement Program.

Background

In 2005, Department of Transportation Planning staff embarked on the use of VIN decoder software to develop registration and diesel sales percentages. Similarly during the Summer of 2008 the newest version of the software was purchased and registration data were obtained from the three state air agencies as of July 1, 2008. Using an approach similar to the 2005 exercise staff successfully decoded the VIN numbers and developed jurisdictional level vehicle age distribution and diesel sales fraction files.

Committee Review

Several conference calls and meetings were held with air and transportation department representatives to discuss the results, and a number of changes were suggested to improve the vehicle age distributions and diesel vehicle percentages. Changes to the procedures as compared to the 2005 exercise are listed below.

1) Vehicles Aged 25 Years and Older:

Since the VIN decoder software could not fully decode vehicles manufactured prior to 1981, staff used the registration data base (which contained control totals of total number of vehicle registrations by model year) to identify the total number of vehicles that were 25 years and older. These vehicles were then distributed among the 16 vehicle types using the vehicle type distribution of vehicles aged 25 through 27 that were decoded using the software.

2) Aggregation of Diesel Fractions by Jurisdiction

In Maryland and Northern Virginia, age distributions by vehicle type were developed at the county level. However, diesel percentages by vehicle type were aggregated to represent all counties in Maryland, and all jurisdictions in Northern Virginia. The District's data, due to an under-representation of vehicles for some types, were combined with the urban jurisdictions of Montgomery, Prince George's, Alexandria, Arlington and Fairfax to develop diesel vehicle percentages for the District of Columbia. For school bus and transit bus there is a single regional diesel fraction file.

Detailed Documentation

Three individual detailed memoranda, one each for the District of Columbia, Maryland, and Virginia, have been prepared and are available upon request. These memos detail the work activities including control totals, data tables, and charts of the age distribution and diesel vehicle fractions for each vehicle type.

Final Input Files

Attached are the final input files (XX.RDT) and (XX.DSF) for the Mobile 6.2 model prepared using the vehicle registration data.
Attachments

Alexandria, VA--2008 Registration Data

* LDV									
0.1468	0.1295	0.0726	0.0577	0.0572	0.0633	0.0595	0.0567	0.0568	0.0469
0.0409	0.0382	0.0292	0.0300	0.0228	0.0186	0.0140	0.0109	0.0100	0.0064
0.0046	0.0036	0.0026	0.0021	0.0189					
* LDT1									
0.0251	0.0689	0.0589	0.0562	0.0328	0.1214	0.1104	0.0962	0.0536	0.0645
0.0711	0.0787	0.0483	0.0120	0.0077	0.0055	0.0066	0.0087	0.0044	0.0077
0.0068	0.0066	0.0077	0.0000	0.0403					
* LDT2									
0.1637	0.1608	0.0731	0.0731	0.0766	0.0630	0.0620	0.0556	0.0503	0.0414
0.0376	0.0301	0.0229	0.0220	0.0169	0.0110	0.0069	0.0058	0.0040	0.0037
0.0031	0.0017	0.0018	0.0009	0.0120					
* LDT3									
0.1798	0.1351	0.1007	0.0783	0.0772	0.0729	0.0605	0.0526	0.0511	0.0435
0.0263	0.0195	0.0166	0.0158	0.0147	0.0078	0.0068	0.0046	0.0043	0.0051
0.0036	0.0021	0.0017	0.0017	0.0176					
* LDT4									
0.2031	0.2115	0.0685	0.0785	0.0862	0.0714	0.0352	0.0379	0.0454	0.0479
0.0337	0.0282	0.0077	0.0073	0.0128	0.0042	0.0031	0.0005	0.0031	0.0026
0.0026	0.0020	0.0020	0.0000	0.0048					
* HDV2B									
0.1247	0.0906	0.0787	0.0861	0.0705	0.0732	0.0656	0.0489	0.0615	0.0391
0.0226	0.0342	0.0225	0.0330	0.0181	0.0133	0.0108	0.0045	0.0054	0.0060
0.0143	0.0104	0.0102	0.0058	0.0500					
* HDV3									
0.1174	0.0741	0.0969	0.0896	0.0515	0.0804	0.0477	0.0398	0.0695	0.0465
0.0256	0.0277	0.0109	0.0532	0.0239	0.0068	0.0051	0.0138	0.0088	0.0084
0.0207	0.0161	0.0127	0.0042	0.0487					
* HDV4									
0.0288	0.0806	0.1727	0.0461	0.0288	0.0576	0.0633	0.0633	0.0864	0.0921
0.0374	0.0604	0.0201	0.0461	0.0201	0.0115	0.0086	0.0115	0.0058	0.0144
0.0115	0.0058	0.0029	0.0029	0.0213					
* HDV5									
0.0326	0.0762	0.0653	0.0435	0.1850	0.1088	0.0000	0.0435	0.0544	0.1197
0.0218	0.0762	0.0544	0.0109	0.0109	0.0109	0.0000	0.0000	0.0109	0.0109
0.0000	0.0326	0.0109	0.0109	0.0098					
* HDV6									
0.1140	0.1374	0.1268	0.1672	0.0484	0.0375	0.0349	0.0433	0.0426	0.0273
0.0245	0.0375	0.0219	0.0304	0.0115	0.0063	0.0112	0.0030	0.0030	0.0002
0.0046	0.0074	0.0118	0.0031	0.0441					
* HDV7									
0.0000	0.0366	0.0366	0.0183	0.0366	0.0275	0.0275	0.0183	0.1465	0.0183
0.0458	0.0366	0.0550	0.0916	0.0000	0.0366	0.0458	0.0641	0.0366	0.0366
0.0092	0.0366	0.0092	0.0092	0.1208					
* HDV8A									
0.0622	0.0957	0.0335	0.0813	0.0478	0.0478	0.0526	0.0526	0.0718	0.0813
0.0383	0.0191	0.0478	0.0431	0.0526	0.0191	0.0191	0.0191	0.0048	0.0191
0.0144	0.0048	0.0144	0.0048	0.0526					
* HDV8B									
0.0769	0.1154	0.0385	0.0769	0.0385	0.0385	0.0769	0.0385	0.0769	0.0769
0.0385	0.0385	0.0385	0.0385	0.0385	0.0385	0.0385	0.0385	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0385					
* HDBS									
0.0876	0.0537	0.0407	0.0093	0.0860	0.0416	0.0644	0.0658	0.0618	0.0723
0.0604	0.0450	0.0197	0.0325	0.0241	0.0139	0.0117	0.0236	0.0415	0.0404
0.0111	0.0179	0.0089	0.0042	0.0618					
* HDBT									
0.0564	0.0312	0.0839	0.1056	0.0594	0.0545	0.0651	0.0641	0.0947	0.0426
0.0634	0.0756	0.0156	0.0208	0.0179	0.0096	0.0166	0.0096	0.0085	0.0259
0.0190	0.0216	0.0015	0.0063	0.0306					
* MC									
0.0528	0.1196	0.1366	0.0838	0.0880	0.0813	0.0686	0.0546	0.0461	0.0285
0.0297	0.0206	0.0182	0.0219	0.0140	0.0079	0.0073	0.0055	0.0067	0.0030
0.0042	0.0055	0.0091	0.0085	0.0779					

Arlington County, VA—2008 Registration Data

* LDV									
0.0468	0.0743	0.0737	0.0708	0.0731	0.0752	0.0771	0.0720	0.0694	0.0606
0.0522	0.0460	0.0356	0.0353	0.0275	0.0220	0.0177	0.0150	0.0118	0.0081
0.0058	0.0048	0.0036	0.0026	0.0189					
* LDT1									
0.0278	0.0722	0.0559	0.0673	0.0183	0.0861	0.1052	0.1035	0.0618	0.0618
0.0687	0.0644	0.0644	0.0132	0.0061	0.0096	0.0113	0.0070	0.0061	0.0122
0.0104	0.0165	0.0073	0.0026	0.0403					
* LDT2									
0.0521	0.0825	0.0847	0.0907	0.1026	0.0855	0.0820	0.0733	0.0688	0.0515
0.0483	0.0382	0.0299	0.0269	0.0201	0.0140	0.0086	0.0083	0.0057	0.0045
0.0034	0.0026	0.0024	0.0016	0.0120					
* LDT3									
0.0682	0.0772	0.1126	0.0932	0.0947	0.0868	0.0740	0.0703	0.0585	0.0588
0.0305	0.0294	0.0246	0.0219	0.0208	0.0109	0.0083	0.0049	0.0078	0.0105
0.0074	0.0041	0.0040	0.0028	0.0176					
* LDT4									
0.0660	0.1687	0.0687	0.0872	0.1167	0.0959	0.0498	0.0554	0.0567	0.0675
0.0561	0.0305	0.0199	0.0125	0.0125	0.0025	0.0044	0.0033	0.0056	0.0044
0.0037	0.0052	0.0019	0.0002	0.0048					
* HDV2B									
0.0269	0.0454	0.1217	0.0613	0.0725	0.0888	0.0690	0.0787	0.0731	0.0554
0.0241	0.0407	0.0299	0.0368	0.0294	0.0202	0.0107	0.0085	0.0096	0.0138
0.0141	0.0083	0.0056	0.0057	0.0500					
* HDV3									
0.0265	0.0329	0.1241	0.1021	0.0874	0.0833	0.0279	0.0478	0.0619	0.0742
0.0232	0.0501	0.0171	0.0326	0.0227	0.0114	0.0062	0.0066	0.0095	0.0175
0.0379	0.0156	0.0208	0.0118	0.0487					
* HDV4									
0.0087	0.0173	0.0996	0.0779	0.0390	0.0563	0.0779	0.0693	0.0953	0.0563
0.0779	0.0779	0.0173	0.0476	0.0433	0.0303	0.0303	0.0173	0.0043	0.0130
0.0130	0.0043	0.0043	0.0000	0.0213					
* HDV5									
0.0183	0.0550	0.0733	0.1467	0.1100	0.0550	0.0367	0.1284	0.0917	0.1100
0.0000	0.0183	0.0183	0.0183	0.0000	0.0183	0.0183	0.0183	0.0183	0.0000
0.0000	0.0367	0.0000	0.0000	0.0098					
* HDV6									
0.0105	0.0879	0.0910	0.0574	0.1047	0.0441	0.0412	0.0352	0.0729	0.0974
0.0419	0.0726	0.0276	0.0247	0.0178	0.0098	0.0022	0.0165	0.0165	0.0162
0.0025	0.0327	0.0086	0.0241	0.0441					
* HDV7									
0.0000	0.0412	0.0412	0.0000	0.0000	0.0000	0.0137	0.0687	0.0137	0.0412
0.1236	0.0550	0.0137	0.0412	0.0412	0.0412	0.0412	0.0137	0.0137	0.0687
0.0687	0.0275	0.0412	0.0687	0.1208					
* HDV8A									
0.0136	0.0543	0.0950	0.0407	0.0633	0.1131	0.0317	0.0724	0.1629	0.0452
0.0317	0.0136	0.0226	0.0226	0.0317	0.0362	0.0136	0.0226	0.0181	0.0226
0.0226	0.0000	0.0045	0.0045	0.0407					
* HDV8B									
0.0000	0.0588	0.1176	0.0588	0.0588	0.1176	0.0588	0.0588	0.1765	0.0588
0.0588	0.0000	0.0000	0.0000	0.0588	0.0588	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0588					
* HDBS									
0.0876	0.0537	0.0407	0.0093	0.0860	0.0416	0.0644	0.0658	0.0618	0.0723
0.0604	0.0450	0.0197	0.0325	0.0241	0.0139	0.0117	0.0236	0.0415	0.0404
0.0111	0.0179	0.0089	0.0042	0.0618					
* HDBT									
0.0564	0.0312	0.0839	0.1056	0.0594	0.0545	0.0651	0.0641	0.0947	0.0426
0.0634	0.0756	0.0156	0.0208	0.0179	0.0096	0.0166	0.0096	0.0085	0.0259
0.0190	0.0216	0.0015	0.0063	0.0306					
* MC									
0.0459	0.1028	0.1014	0.1097	0.0854	0.0959	0.0615	0.0643	0.0473	0.0317
0.0271	0.0193	0.0216	0.0165	0.0211	0.0142	0.0096	0.0073	0.0092	0.0055
0.0037	0.0028	0.0110	0.0073	0.0779					

Calvert County, MD—2008 Registration Data

* LDV
0.0521 0.0741 0.0730 0.0784 0.0721 0.0753 0.0746 0.0657 0.0677 0.0564
0.0496 0.0435 0.0328 0.0347 0.0272 0.0223 0.0167 0.0148 0.0120 0.0085
0.0073 0.0067 0.0059 0.0045 0.0241

* LDT1
0.0459 0.0879 0.1116 0.0953 0.0342 0.0798 0.0684 0.0667 0.0293 0.0358
0.0326 0.0277 0.0342 0.0065 0.0033 0.0147 0.0130 0.0065 0.0081 0.0231
0.0442 0.0293 0.0247 0.0114 0.0660

* LDT2
0.0396 0.0684 0.0750 0.0926 0.0925 0.0845 0.0819 0.0649 0.0686 0.0538
0.0456 0.0410 0.0303 0.0275 0.0244 0.0190 0.0129 0.0122 0.0096 0.0107
0.0087 0.0069 0.0068 0.0037 0.0190

* LDT3
0.0420 0.0684 0.0790 0.0880 0.0998 0.0985 0.0832 0.0685 0.0566 0.0521
0.0346 0.0316 0.0310 0.0326 0.0277 0.0166 0.0129 0.0079 0.0120 0.0082
0.0080 0.0063 0.0055 0.0028 0.0264

* LDT4
0.0488 0.1431 0.0981 0.1133 0.1437 0.1018 0.0559 0.0470 0.0437 0.0578
0.0406 0.0289 0.0115 0.0155 0.0115 0.0063 0.0031 0.0044 0.0050 0.0045
0.0045 0.0008 0.0015 0.0012 0.0074

* HDV2B
0.0320 0.0471 0.0951 0.0806 0.0929 0.1043 0.0812 0.0616 0.0642 0.0430
0.0223 0.0450 0.0279 0.0317 0.0160 0.0150 0.0132 0.0057 0.0111 0.0148
0.0105 0.0072 0.0098 0.0070 0.0608

* HDV3
0.0526 0.0568 0.1295 0.1088 0.0768 0.0866 0.0652 0.0544 0.0470 0.0498
0.0224 0.0292 0.0059 0.0206 0.0109 0.0104 0.0124 0.0047 0.0096 0.0225
0.0211 0.0132 0.0139 0.0049 0.0709

* HDV4
0.0379 0.0379 0.0730 0.0433 0.0352 0.1055 0.0595 0.0379 0.0703 0.0703
0.0270 0.0460 0.0406 0.0514 0.0433 0.0243 0.0135 0.0189 0.0270 0.0298
0.0243 0.0162 0.0081 0.0162 0.0425

* HDV5
0.0253 0.0505 0.1178 0.1263 0.1263 0.0926 0.0842 0.0253 0.0421 0.0505
0.0253 0.0842 0.0084 0.0505 0.0421 0.0000 0.0084 0.0000 0.0084 0.0000
0.0000 0.0084 0.0000 0.0084 0.0152

* HDV6
0.0302 0.0692 0.0693 0.0521 0.1250 0.0778 0.0649 0.0648 0.0908 0.0777
0.0217 0.0131 0.0216 0.0348 0.0217 0.0133 0.0218 0.0044 0.0131 0.0218
0.0174 0.0088 0.0130 0.0044 0.0474

* HDV7
0.0000 0.0000 0.0150 0.0450 0.0674 0.0375 0.0150 0.0300 0.0375 0.0225
0.0150 0.0375 0.0075 0.0450 0.0075 0.0225 0.0450 0.0599 0.0749 0.0824
0.0749 0.0300 0.0375 0.0525 0.1382

* HDV8A
0.0294 0.0490 0.0588 0.0621 0.0817 0.0490 0.0294 0.0686 0.0621 0.0458
0.0458 0.0392 0.0359 0.0490 0.0425 0.0229 0.0098 0.0392 0.0131 0.0229
0.0229 0.0196 0.0131 0.0163 0.0719

* HDV8B
0.0268 0.0536 0.0536 0.0625 0.0804 0.0446 0.0268 0.0714 0.0625 0.0446
0.0446 0.0446 0.0357 0.0536 0.0446 0.0268 0.0089 0.0357 0.0089 0.0179
0.0268 0.0179 0.0179 0.0179 0.0714

* HDBS
0.0876 0.0537 0.0407 0.0093 0.0860 0.0416 0.0644 0.0658 0.0618 0.0723
0.0604 0.0450 0.0197 0.0325 0.0241 0.0139 0.0117 0.0236 0.0415 0.0404
0.0111 0.0179 0.0089 0.0042 0.0618

* HDBT
0.0564 0.0312 0.0839 0.1056 0.0594 0.0545 0.0651 0.0641 0.0947 0.0426
0.0634 0.0756 0.0156 0.0208 0.0179 0.0096 0.0166 0.0096 0.0085 0.0259
0.0190 0.0216 0.0015 0.0063 0.0306

* MC
0.0473 0.1172 0.1052 0.0999 0.0784 0.0905 0.0676 0.0514 0.0455 0.0353
0.0247 0.0191 0.0206 0.0153 0.0109 0.0118 0.0100 0.0050 0.0082 0.0065
0.0071 0.0050 0.0109 0.0088 0.0981

Charles County,MD—2008 Registration Data

* LDV									
0.0463	0.0722	0.0745	0.0774	0.0730	0.0800	0.0764	0.0666	0.0703	0.0565
0.0478	0.0451	0.0352	0.0361	0.0269	0.0217	0.0172	0.0131	0.0105	0.0083
0.0066	0.0057	0.0047	0.0035	0.0241					
* LDT1									
0.0425	0.0744	0.0600	0.0906	0.0319	0.0853	0.0794	0.0683	0.0410	0.0440
0.0304	0.0364	0.0486	0.0167	0.0076	0.0094	0.0091	0.0137	0.0139	0.0182
0.0519	0.0258	0.0182	0.0170	0.0660					
* LDT2									
0.0352	0.0707	0.0732	0.0950	0.0937	0.0865	0.0840	0.0671	0.0655	0.0483
0.0490	0.0421	0.0301	0.0275	0.0278	0.0185	0.0115	0.0122	0.0089	0.0086
0.0094	0.0067	0.0058	0.0039	0.0190					
* LDT3									
0.0358	0.0671	0.0910	0.0914	0.1101	0.1024	0.0848	0.0641	0.0537	0.0571
0.0333	0.0298	0.0279	0.0301	0.0255	0.0142	0.0108	0.0064	0.0097	0.0078
0.0070	0.0050	0.0053	0.0034	0.0264					
* LDT4									
0.0443	0.1350	0.0900	0.1166	0.1502	0.1028	0.0533	0.0561	0.0530	0.0612
0.0421	0.0264	0.0119	0.0089	0.0057	0.0049	0.0019	0.0026	0.0050	0.0050
0.0083	0.0043	0.0015	0.0015	0.0074					
* HDV2B									
0.0309	0.0455	0.0894	0.0751	0.0978	0.0989	0.0751	0.0650	0.0556	0.0488
0.0210	0.0419	0.0306	0.0348	0.0201	0.0169	0.0128	0.0096	0.0140	0.0143
0.0121	0.0076	0.0141	0.0074	0.0608					
* HDV3									
0.0347	0.0569	0.1080	0.1027	0.0756	0.0921	0.0925	0.0796	0.0536	0.0469
0.0176	0.0188	0.0184	0.0177	0.0184	0.0152	0.0015	0.0036	0.0099	0.0146
0.0110	0.0120	0.0164	0.0114	0.0709					
* HDV4									
0.0417	0.0636	0.0894	0.0457	0.0556	0.0576	0.0715	0.0477	0.0556	0.0556
0.0258	0.0377	0.0199	0.0338	0.0656	0.0358	0.0219	0.0219	0.0258	0.0417
0.0278	0.0040	0.0040	0.0079	0.0425					
* HDV5									
0.0556	0.0556	0.1892	0.0779	0.0779	0.0779	0.0779	0.0389	0.0445	0.0779
0.0278	0.0389	0.0278	0.0334	0.0056	0.0056	0.0167	0.0167	0.0056	0.0000
0.0167	0.0167	0.0000	0.0000	0.0152					
* HDV6									
0.0080	0.0565	0.0701	0.0565	0.0778	0.0725	0.0590	0.0644	0.0804	0.0725
0.0404	0.0456	0.0431	0.0379	0.0243	0.0083	0.0189	0.0109	0.0243	0.0164
0.0135	0.0082	0.0323	0.0107	0.0474					
* HDV7									
0.0270	0.0270	0.0338	0.0575	0.0304	0.0372	0.0406	0.0575	0.0575	0.0270
0.0439	0.0304	0.0372	0.0642	0.0304	0.0270	0.0237	0.0304	0.0304	0.0338
0.0203	0.0541	0.0237	0.0169	0.1382					
* HDV8A									
0.0306	0.0881	0.0252	0.0773	0.0414	0.0791	0.0396	0.0629	0.0953	0.0540
0.0486	0.0252	0.0360	0.0414	0.0198	0.0288	0.0054	0.0198	0.0180	0.0180
0.0216	0.0252	0.0162	0.0144	0.0683					
* HDV8B									
0.0357	0.0952	0.0238	0.0833	0.0476	0.0833	0.0357	0.0595	0.0952	0.0476
0.0476	0.0238	0.0357	0.0357	0.0238	0.0238	0.0119	0.0238	0.0119	0.0119
0.0238	0.0238	0.0119	0.0119	0.0714					
* HDBS									
0.0876	0.0537	0.0407	0.0093	0.0860	0.0416	0.0644	0.0658	0.0618	0.0723
0.0604	0.0450	0.0197	0.0325	0.0241	0.0139	0.0117	0.0236	0.0415	0.0404
0.0111	0.0179	0.0089	0.0042	0.0618					
* HDBT									
0.0564	0.0312	0.0839	0.1056	0.0594	0.0545	0.0651	0.0641	0.0947	0.0426
0.0634	0.0756	0.0156	0.0208	0.0179	0.0096	0.0166	0.0096	0.0085	0.0259
0.0190	0.0216	0.0015	0.0063	0.0306					
* MC									
0.0495	0.1138	0.1112	0.0993	0.0769	0.0896	0.0678	0.0596	0.0460	0.0335
0.0251	0.0209	0.0181	0.0153	0.0132	0.0097	0.0091	0.0071	0.0056	0.0065
0.0039	0.0048	0.0078	0.0076	0.0981					

District of Columbia--2008 Registration Data

* LDV									
0.0392	0.0695	0.0668	0.0653	0.0679	0.0724	0.0691	0.0718	0.0731	0.0629
0.0534	0.0521	0.0400	0.0412	0.0313	0.0250	0.0210	0.0157	0.0143	0.0103
0.0088	0.0068	0.0047	0.0033	0.0142					
* LDT1									
0.0460	0.0272	0.0763	0.0590	0.0201	0.0862	0.1030	0.0888	0.0602	0.0648
0.0732	0.0726	0.0654	0.0143	0.0091	0.0039	0.0084	0.0026	0.0026	0.0494
0.0207	0.0138	0.0078	0.0032	0.0215					
* LDT2									
0.0434	0.0763	0.0833	0.0904	0.0959	0.0787	0.0828	0.0695	0.0630	0.0553
0.0491	0.0429	0.0335	0.0303	0.0236	0.0194	0.0115	0.0100	0.0070	0.0072
0.0072	0.0056	0.0027	0.0024	0.0090					
* LDT3									
0.0527	0.0673	0.0970	0.0829	0.1017	0.0856	0.0744	0.0623	0.0565	0.0591
0.0339	0.0312	0.0294	0.0318	0.0273	0.0165	0.0129	0.0085	0.0128	0.0102
0.0116	0.0074	0.0050	0.0049	0.0173					
* LDT4									
0.0537	0.1422	0.0664	0.0793	0.1236	0.0957	0.0505	0.0606	0.0661	0.0674
0.0576	0.0444	0.0167	0.0141	0.0102	0.0056	0.0046	0.0042	0.0055	0.0096
0.0088	0.0033	0.0025	0.0018	0.0055					
* HDV2B									
0.0368	0.0621	0.0694	0.0603	0.0580	0.0628	0.0634	0.0721	0.0712	0.0617
0.0530	0.0469	0.0320	0.0297	0.0254	0.0210	0.0131	0.0165	0.0157	0.0181
0.0226	0.0243	0.0073	0.0117	0.0451					
* HDV3									
0.0716	0.0341	0.0585	0.0738	0.0589	0.1298	0.0595	0.0777	0.0544	0.0463
0.0598	0.0326	0.0134	0.0211	0.0451	0.0197	0.0072	0.0129	0.0191	0.0285
0.0148	0.0213	0.0076	0.0047	0.0276					
* HDV4									
0.0141	0.0141	0.2322	0.0264	0.0180	0.0225	0.0663	0.0619	0.1136	0.0574
0.0888	0.0551	0.0259	0.0219	0.0365	0.0141	0.0214	0.0129	0.0219	0.0202
0.0107	0.0090	0.0051	0.0062	0.0239					
* HDV5									
0.1745	0.0929	0.1266	0.0816	0.1097	0.0450	0.0563	0.0281	0.0366	0.0872
0.0028	0.0084	0.0028	0.0084	0.0056	0.0028	0.0113	0.0028	0.0028	0.0056
0.0169	0.0113	0.0225	0.0084	0.0489					
* HDV6									
0.0149	0.0664	0.0582	0.0371	0.0332	0.0235	0.0905	0.0712	0.0455	0.0340
0.0386	0.0158	0.0243	0.0489	0.0357	0.0374	0.0209	0.0528	0.0177	0.0349
0.0527	0.0475	0.0076	0.0232	0.0674					
* HDV7									
0.0282	0.0377	0.0282	0.0126	0.0188	0.0628	0.0879	0.0471	0.0534	0.0188
0.0220	0.0094	0.0094	0.0847	0.0628	0.0471	0.0910	0.0220	0.0471	0.0314
0.0282	0.0659	0.0157	0.0157	0.0522					
* HDV8A									
0.0431	0.0254	0.0626	0.0450	0.0117	0.0587	0.1037	0.2035	0.0372	0.0548
0.0215	0.0489	0.0078	0.0196	0.0274	0.0313	0.0059	0.0235	0.0431	0.0000
0.0587	0.0391	0.0117	0.0000	0.0157					
* HDV8B									
0.0435	0.0290	0.0580	0.0435	0.0145	0.0580	0.1014	0.2029	0.0435	0.0580
0.0290	0.0435	0.0000	0.0145	0.0290	0.0290	0.0000	0.0290	0.0435	0.0000
0.0580	0.0435	0.0145	0.0000	0.0145					
* HDBS									
0.0876	0.0537	0.0407	0.0093	0.0860	0.0416	0.0644	0.0658	0.0618	0.0723
0.0604	0.0450	0.0197	0.0325	0.0241	0.0139	0.0117	0.0236	0.0415	0.0404
0.0111	0.0179	0.0089	0.0042	0.0618					
* HDBT									
0.0564	0.0312	0.0839	0.1056	0.0594	0.0545	0.0651	0.0641	0.0947	0.0426
0.0634	0.0756	0.0156	0.0208	0.0179	0.0096	0.0166	0.0096	0.0085	0.0259
0.0190	0.0216	0.0015	0.0063	0.0306					
* MC									
0.0479	0.1423	0.1180	0.0978	0.0853	0.0833	0.0752	0.0614	0.0310	0.0368
0.0179	0.0651	0.0125	0.0118	0.0317	0.0185	0.0074	0.0047	0.0037	0.0051
0.0047	0.0013	0.0051	0.0040	0.0274					

Frederick County, MD--2008 Registration Data

* LDV									
0.0464	0.0683	0.0744	0.0777	0.0740	0.0778	0.0795	0.0704	0.0715	0.0590
0.0492	0.0443	0.0358	0.0346	0.0257	0.0205	0.0156	0.0138	0.0108	0.0081
0.0060	0.0055	0.0040	0.0030	0.0241					
* LDT1									
0.0462	0.0676	0.0637	0.0733	0.0256	0.0816	0.0882	0.0866	0.0495	0.0422
0.0396	0.0388	0.0552	0.0157	0.0109	0.0051	0.0091	0.0074	0.0115	0.0183
0.0412	0.0308	0.0194	0.0067	0.0660					
* LDT2									
0.0358	0.0682	0.0758	0.0955	0.0965	0.0882	0.0860	0.0707	0.0693	0.0530
0.0487	0.0394	0.0285	0.0272	0.0241	0.0155	0.0114	0.0103	0.0089	0.0077
0.0074	0.0057	0.0044	0.0027	0.0190					
* LDT3									
0.0405	0.0578	0.0793	0.0840	0.0991	0.1001	0.0845	0.0661	0.0604	0.0549
0.0361	0.0309	0.0295	0.0352	0.0275	0.0166	0.0135	0.0077	0.0091	0.0102
0.0087	0.0093	0.0085	0.0044	0.0264					
* LDT4									
0.0442	0.1264	0.0839	0.1140	0.1429	0.0926	0.0623	0.0536	0.0472	0.0681
0.0378	0.0352	0.0115	0.0102	0.0108	0.0064	0.0058	0.0027	0.0069	0.0081
0.0112	0.0085	0.0011	0.0010	0.0074					
* HDV2B									
0.0267	0.0441	0.0768	0.0742	0.1017	0.0938	0.0758	0.0754	0.0613	0.0557
0.0243	0.0526	0.0315	0.0336	0.0178	0.0141	0.0102	0.0075	0.0126	0.0152
0.0092	0.0072	0.0102	0.0079	0.0608					
* HDV3									
0.0588	0.0614	0.1241	0.1098	0.0746	0.0721	0.0693	0.0584	0.0552	0.0491
0.0135	0.0295	0.0190	0.0256	0.0139	0.0125	0.0087	0.0091	0.0121	0.0109
0.0145	0.0085	0.0109	0.0076	0.0709					
* HDV4									
0.0291	0.0381	0.0762	0.0672	0.0632	0.0602	0.0632	0.0732	0.0712	0.0722
0.0341	0.0501	0.0341	0.0361	0.0461	0.0221	0.0211	0.0201	0.0150	0.0291
0.0180	0.0080	0.0050	0.0050	0.0425					
* HDV5									
0.0313	0.0797	0.1309	0.1053	0.0911	0.0882	0.0712	0.0598	0.0712	0.0911
0.0085	0.0455	0.0199	0.0370	0.0171	0.0114	0.0028	0.0028	0.0085	0.0057
0.0000	0.0028	0.0000	0.0028	0.0152					
* HDV6									
0.0162	0.0981	0.0797	0.0721	0.0734	0.0436	0.0621	0.0658	0.0832	0.0746
0.0646	0.0300	0.0152	0.0523	0.0150	0.0213	0.0089	0.0137	0.0126	0.0100
0.0113	0.0139	0.0087	0.0063	0.0474					
* HDV7									
0.0234	0.0371	0.0234	0.0567	0.0293	0.0430	0.0215	0.0293	0.0547	0.0313
0.0293	0.0313	0.0176	0.0391	0.0313	0.0215	0.0313	0.0469	0.0489	0.0293
0.0508	0.0528	0.0469	0.0352	0.1382					
* HDV8A									
0.0217	0.0462	0.0774	0.0943	0.0491	0.0462	0.0283	0.0481	0.0689	0.0745
0.0302	0.0358	0.0396	0.0481	0.0292	0.0226	0.0151	0.0113	0.0217	0.0170
0.0349	0.0283	0.0151	0.0142	0.0821					
* HDV8B									
0.0223	0.0446	0.0764	0.0955	0.0478	0.0446	0.0287	0.0478	0.0701	0.0732
0.0318	0.0350	0.0382	0.0478	0.0287	0.0223	0.0159	0.0127	0.0223	0.0159
0.0350	0.0287	0.0159	0.0159	0.0828					
* HDBS									
0.0876	0.0537	0.0407	0.0093	0.0860	0.0416	0.0644	0.0658	0.0618	0.0723
0.0604	0.0450	0.0197	0.0325	0.0241	0.0139	0.0117	0.0236	0.0415	0.0404
0.0111	0.0179	0.0089	0.0042	0.0618					
* HDBT									
0.0564	0.0312	0.0839	0.1056	0.0594	0.0545	0.0651	0.0641	0.0947	0.0426
0.0634	0.0756	0.0156	0.0208	0.0179	0.0096	0.0166	0.0096	0.0085	0.0259
0.0190	0.0216	0.0015	0.0063	0.0306					
* MC									
0.0497	0.1040	0.1084	0.0973	0.0731	0.0866	0.0681	0.0530	0.0469	0.0315
0.0292	0.0191	0.0216	0.0151	0.0127	0.0131	0.0105	0.0095	0.0081	0.0066
0.0082	0.0080	0.0116	0.0100	0.0981					

Fairfax County, VA—2008 Registration Data

* LDV
0.0499 0.0776 0.0744 0.0721 0.0723 0.0770 0.0737 0.0699 0.0728 0.0607
0.0518 0.0454 0.0358 0.0355 0.0274 0.0213 0.0167 0.0132 0.0108 0.0077
0.0053 0.0042 0.0031 0.0024 0.0189
* LDT1
0.0357 0.0854 0.0583 0.0593 0.0230 0.0996 0.1231 0.0951 0.0555 0.0633
0.0550 0.0640 0.0519 0.0091 0.0075 0.0075 0.0069 0.0080 0.0048 0.0089
0.0134 0.0116 0.0094 0.0035 0.0403
* LDT2
0.0494 0.0824 0.0886 0.0967 0.1041 0.0861 0.0835 0.0719 0.0689 0.0530
0.0467 0.0380 0.0278 0.0245 0.0193 0.0131 0.0081 0.0075 0.0049 0.0044
0.0034 0.0026 0.0020 0.0012 0.0120
* LDT3
0.0635 0.0789 0.1102 0.0936 0.1095 0.0966 0.0796 0.0684 0.0620 0.0514
0.0296 0.0253 0.0211 0.0237 0.0188 0.0098 0.0069 0.0053 0.0068 0.0070
0.0056 0.0037 0.0030 0.0019 0.0176
* LDT4
0.0553 0.1456 0.0862 0.1128 0.1332 0.1003 0.0547 0.0577 0.0530 0.0671
0.0416 0.0321 0.0130 0.0098 0.0099 0.0051 0.0018 0.0016 0.0031 0.0037
0.0041 0.0018 0.0007 0.0008 0.0048
* HDV2B
0.0316 0.0527 0.0903 0.0757 0.1019 0.1013 0.0762 0.0740 0.0656 0.0569
0.0266 0.0396 0.0262 0.0335 0.0203 0.0131 0.0107 0.0066 0.0101 0.0104
0.0086 0.0055 0.0070 0.0056 0.0500
* HDV3
0.0444 0.0502 0.1242 0.1006 0.0844 0.0754 0.0632 0.0651 0.0656 0.0550
0.0282 0.0333 0.0159 0.0265 0.0219 0.0116 0.0081 0.0069 0.0128 0.0122
0.0190 0.0127 0.0081 0.0061 0.0487
* HDV4
0.0237 0.0608 0.0773 0.0762 0.0691 0.0638 0.0758 0.0608 0.0845 0.0848
0.0285 0.0777 0.0267 0.0372 0.0357 0.0165 0.0161 0.0135 0.0109 0.0139
0.0101 0.0064 0.0049 0.0038 0.0213
* HDV5
0.0432 0.0833 0.1160 0.0917 0.1023 0.0949 0.0738 0.0569 0.0960 0.0833
0.0148 0.0390 0.0169 0.0285 0.0127 0.0032 0.0042 0.0042 0.0063 0.0032
0.0084 0.0042 0.0021 0.0011 0.0098
* HDV6
0.0213 0.0977 0.0786 0.0816 0.0852 0.0353 0.0523 0.0732 0.0764 0.0628
0.0425 0.0452 0.0248 0.0692 0.0144 0.0145 0.0105 0.0081 0.0152 0.0115
0.0097 0.0090 0.0067 0.0101 0.0441
* HDV7
0.0151 0.0429 0.0324 0.0498 0.0510 0.0266 0.0348 0.0718 0.0765 0.0533
0.0487 0.0197 0.0266 0.0440 0.0336 0.0185 0.0290 0.0127 0.0452 0.0336
0.0359 0.0382 0.0209 0.0185 0.1208
* HDV8A
0.0201 0.0726 0.0659 0.0944 0.0815 0.0648 0.0430 0.0787 0.0921 0.0475
0.0480 0.0436 0.0352 0.0324 0.0296 0.0179 0.0117 0.0151 0.0128 0.0140
0.0145 0.0084 0.0089 0.0028 0.0447
* HDV8B
0.0193 0.0740 0.0675 0.0932 0.0804 0.0643 0.0418 0.0804 0.0932 0.0482
0.0482 0.0418 0.0354 0.0322 0.0289 0.0161 0.0129 0.0161 0.0129 0.0129
0.0129 0.0096 0.0096 0.0032 0.0450
* HDBS
0.0876 0.0537 0.0407 0.0093 0.0860 0.0416 0.0644 0.0658 0.0618 0.0723
0.0604 0.0450 0.0197 0.0325 0.0241 0.0139 0.0117 0.0236 0.0415 0.0404
0.0111 0.0179 0.0089 0.0042 0.0618
* HDBT
0.0564 0.0312 0.0839 0.1056 0.0594 0.0545 0.0651 0.0641 0.0947 0.0426
0.0634 0.0756 0.0156 0.0208 0.0179 0.0096 0.0166 0.0096 0.0085 0.0259
0.0190 0.0216 0.0015 0.0063 0.0306
* MC
0.0452 0.1023 0.1040 0.0971 0.0780 0.0953 0.0727 0.0617 0.0550 0.0383
0.0287 0.0214 0.0215 0.0171 0.0150 0.0128 0.0098 0.0066 0.0061 0.0054
0.0050 0.0054 0.0089 0.0088 0.0779

Loudoun County, VA—2008 Registration Data

* LDV									
0.0581	0.0808	0.0796	0.0797	0.0781	0.0791	0.0756	0.0706	0.0716	0.0596
0.0486	0.0414	0.0327	0.0316	0.0240	0.0186	0.0143	0.0108	0.0088	0.0056
0.0040	0.0034	0.0026	0.0018	0.0189					
* LDT1									
0.0406	0.0901	0.0736	0.0840	0.0317	0.0977	0.1097	0.0824	0.0514	0.0590
0.0438	0.0425	0.0520	0.0089	0.0082	0.0051	0.0095	0.0108	0.0089	0.0120
0.0141	0.0146	0.0054	0.0038	0.0403					
* LDT2									
0.0490	0.0871	0.0929	0.1090	0.1100	0.0886	0.0860	0.0726	0.0660	0.0482
0.0417	0.0352	0.0245	0.0192	0.0170	0.0105	0.0068	0.0063	0.0040	0.0042
0.0033	0.0027	0.0018	0.0013	0.0120					
* LDT3									
0.0614	0.0814	0.1124	0.1060	0.1237	0.1032	0.0795	0.0668	0.0568	0.0460
0.0264	0.0206	0.0185	0.0204	0.0151	0.0099	0.0067	0.0032	0.0058	0.0055
0.0044	0.0033	0.0033	0.0019	0.0176					
* LDT4									
0.0564	0.1720	0.0817	0.1237	0.1514	0.1078	0.0579	0.0526	0.0427	0.0486
0.0328	0.0232	0.0081	0.0088	0.0088	0.0042	0.0029	0.0007	0.0028	0.0020
0.0035	0.0017	0.0003	0.0007	0.0048					
* HDV2B									
0.0325	0.0499	0.0869	0.0771	0.1000	0.0990	0.0731	0.0769	0.0798	0.0534
0.0218	0.0431	0.0316	0.0296	0.0193	0.0143	0.0091	0.0059	0.0082	0.0119
0.0062	0.0056	0.0074	0.0074	0.0500					
* HDV3									
0.0488	0.0540	0.1275	0.1196	0.0930	0.0721	0.0617	0.0663	0.0632	0.0634
0.0177	0.0305	0.0200	0.0182	0.0178	0.0107	0.0073	0.0061	0.0069	0.0142
0.0135	0.0106	0.0056	0.0028	0.0487					
* HDV4									
0.0397	0.0659	0.1047	0.0605	0.0831	0.0686	0.0596	0.0524	0.0876	0.0921
0.0244	0.0722	0.0289	0.0334	0.0370	0.0117	0.0108	0.0108	0.0090	0.0099
0.0108	0.0036	0.0018	0.0000	0.0213					
* HDV5									
0.0497	0.0644	0.1693	0.1141	0.1307	0.0939	0.0718	0.0626	0.0644	0.0736
0.0074	0.0129	0.0000	0.0147	0.0129	0.0129	0.0037	0.0018	0.0110	0.0018
0.0055	0.0074	0.0018	0.0018	0.0098					
* HDV6									
0.0277	0.0868	0.0649	0.1084	0.0926	0.0358	0.0489	0.0640	0.0940	0.0565
0.0560	0.0372	0.0282	0.0441	0.0148	0.0199	0.0145	0.0073	0.0145	0.0108
0.0134	0.0039	0.0073	0.0046	0.0441					
* HDV7									
0.0221	0.0258	0.0331	0.0497	0.0478	0.0294	0.0166	0.0533	0.0920	0.0515
0.0533	0.0478	0.0294	0.0405	0.0497	0.0239	0.0313	0.0184	0.0349	0.0129
0.0441	0.0386	0.0166	0.0166	0.1208					
* HDV8A									
0.0161	0.1001	0.0784	0.0784	0.0557	0.0642	0.0491	0.0746	0.0689	0.0548
0.0453	0.0415	0.0189	0.0463	0.0434	0.0198	0.0085	0.0066	0.0161	0.0189
0.0198	0.0094	0.0170	0.0057	0.0425					
* HDV8B									
0.0180	0.1007	0.0791	0.0791	0.0540	0.0647	0.0504	0.0719	0.0683	0.0540
0.0468	0.0432	0.0180	0.0468	0.0432	0.0180	0.0072	0.0072	0.0144	0.0180
0.0180	0.0108	0.0180	0.0072	0.0432					
* HDBS									
0.0876	0.0537	0.0407	0.0093	0.0860	0.0416	0.0644	0.0658	0.0618	0.0723
0.0604	0.0450	0.0197	0.0325	0.0241	0.0139	0.0117	0.0236	0.0415	0.0404
0.0111	0.0179	0.0089	0.0042	0.0618					
* HDBT									
0.0564	0.0312	0.0839	0.1056	0.0594	0.0545	0.0651	0.0641	0.0947	0.0426
0.0634	0.0756	0.0156	0.0208	0.0179	0.0096	0.0166	0.0096	0.0085	0.0259
0.0190	0.0216	0.0015	0.0063	0.0306					
* MC									
0.0472	0.1071	0.1076	0.0983	0.0710	0.0995	0.0742	0.0606	0.0469	0.0388
0.0255	0.0240	0.0226	0.0185	0.0139	0.0122	0.0093	0.0065	0.0079	0.0076
0.0041	0.0041	0.0063	0.0085	0.0779					

Montgomery County, MD--2008 Registration Data

* LDV
0.0646 0.0753 0.0684 0.0702 0.0709 0.0768 0.0754 0.0702 0.0714 0.0596
0.0514 0.0455 0.0360 0.0358 0.0264 0.0196 0.0154 0.0117 0.0100 0.0066
0.0050 0.0043 0.0030 0.0023 0.0241
* LDT1
0.0434 0.0716 0.0603 0.0529 0.0193 0.1035 0.1246 0.1091 0.0563 0.0621
0.0527 0.0625 0.0496 0.0090 0.0054 0.0042 0.0092 0.0052 0.0054 0.0044
0.0080 0.0077 0.0060 0.0016 0.0660
* LDT2
0.0650 0.0857 0.0862 0.0953 0.1028 0.0861 0.0841 0.0712 0.0674 0.0516
0.0440 0.0355 0.0266 0.0231 0.0168 0.0117 0.0066 0.0057 0.0042 0.0031
0.0030 0.0024 0.0017 0.0010 0.0190
* LDT3
0.0941 0.0743 0.0985 0.0867 0.1075 0.0931 0.0814 0.0685 0.0596 0.0515
0.0277 0.0243 0.0205 0.0214 0.0179 0.0094 0.0068 0.0050 0.0065 0.0060
0.0045 0.0036 0.0029 0.0016 0.0264
* LDT4
0.0650 0.1398 0.0837 0.1020 0.1293 0.0980 0.0608 0.0611 0.0515 0.0664
0.0386 0.0333 0.0131 0.0125 0.0098 0.0046 0.0032 0.0020 0.0049 0.0038
0.0052 0.0023 0.0011 0.0006 0.0074
* HDV2B
0.0485 0.0596 0.0958 0.0799 0.0916 0.0935 0.0766 0.0755 0.0674 0.0527
0.0262 0.0383 0.0266 0.0284 0.0156 0.0112 0.0080 0.0065 0.0080 0.0088
0.0063 0.0045 0.0055 0.0044 0.0608
* HDV3
0.0386 0.0579 0.1198 0.0996 0.0815 0.0716 0.0727 0.0626 0.0574 0.0637
0.0206 0.0263 0.0162 0.0293 0.0182 0.0144 0.0069 0.0091 0.0138 0.0095
0.0126 0.0087 0.0125 0.0056 0.0709
* HDV4
0.0370 0.0441 0.0957 0.0542 0.0714 0.0644 0.0683 0.0741 0.0793 0.0723
0.0309 0.0688 0.0216 0.0397 0.0384 0.0176 0.0119 0.0119 0.0194 0.0132
0.0115 0.0053 0.0026 0.0040 0.0425
* HDV5
0.0679 0.0761 0.1077 0.1288 0.1382 0.1077 0.0761 0.0515 0.0550 0.0621
0.0199 0.0211 0.0117 0.0129 0.0141 0.0105 0.0059 0.0047 0.0047 0.0023
0.0023 0.0035 0.0000 0.0000 0.0152
* HDV6
0.0202 0.1068 0.0672 0.0860 0.0830 0.0462 0.0604 0.0686 0.0760 0.0698
0.0479 0.0530 0.0247 0.0354 0.0134 0.0216 0.0108 0.0089 0.0183 0.0095
0.0082 0.0095 0.0032 0.0038 0.0474
* HDV7
0.0393 0.0328 0.0508 0.0524 0.0393 0.0311 0.0229 0.0590 0.0508 0.0475
0.0393 0.0393 0.0377 0.0311 0.0131 0.0295 0.0344 0.0279 0.0524 0.0279
0.0377 0.0279 0.0197 0.0180 0.1382
* HDV8A
0.0376 0.0716 0.0615 0.0781 0.0701 0.0441 0.0542 0.0463 0.0875 0.0557
0.0499 0.0347 0.0275 0.0304 0.0202 0.0217 0.0123 0.0275 0.0181 0.0210
0.0130 0.0217 0.0123 0.0116 0.0716
* HDV8B
0.0387 0.0718 0.0608 0.0773 0.0691 0.0442 0.0552 0.0470 0.0884 0.0552
0.0497 0.0359 0.0276 0.0304 0.0193 0.0221 0.0110 0.0276 0.0166 0.0221
0.0138 0.0221 0.0110 0.0110 0.0718
* HDBS
0.0876 0.0537 0.0407 0.0093 0.0860 0.0416 0.0644 0.0658 0.0618 0.0723
0.0604 0.0450 0.0197 0.0325 0.0241 0.0139 0.0117 0.0236 0.0415 0.0404
0.0111 0.0179 0.0089 0.0042 0.0618
* HDBT
0.0564 0.0312 0.0839 0.1056 0.0594 0.0545 0.0651 0.0641 0.0947 0.0426
0.0634 0.0756 0.0156 0.0208 0.0179 0.0096 0.0166 0.0096 0.0085 0.0259
0.0190 0.0216 0.0015 0.0063 0.0306
* MC
0.0429 0.1078 0.1038 0.0971 0.0725 0.0888 0.0652 0.0601 0.0453 0.0326
0.0293 0.0206 0.0196 0.0176 0.0147 0.0138 0.0111 0.0083 0.0069 0.0074
0.0084 0.0081 0.0101 0.0102 0.0981

Prince George's County, MD—2008 Registration Data

* LDV									
0.0363	0.0609	0.0652	0.0683	0.0661	0.0727	0.0715	0.0664	0.0733	0.0605
0.0543	0.0514	0.0431	0.0441	0.0348	0.0270	0.0209	0.0158	0.0135	0.0094
0.0071	0.0057	0.0043	0.0032	0.0241					
* LDT1									
0.0257	0.0559	0.0427	0.0518	0.0230	0.0907	0.1057	0.1137	0.0512	0.0575
0.0490	0.0575	0.0640	0.0160	0.0070	0.0102	0.0083	0.0106	0.0075	0.0186
0.0263	0.0155	0.0173	0.0081	0.0660					
* LDT2									
0.0330	0.0615	0.0697	0.0856	0.0915	0.0802	0.0819	0.0707	0.0723	0.0585
0.0547	0.0483	0.0383	0.0340	0.0282	0.0182	0.0120	0.0104	0.0080	0.0069
0.0064	0.0048	0.0039	0.0021	0.0190					
* LDT3									
0.0349	0.0572	0.0853	0.0836	0.1073	0.0979	0.0870	0.0662	0.0651	0.0641
0.0359	0.0318	0.0279	0.0303	0.0247	0.0161	0.0107	0.0078	0.0108	0.0086
0.0068	0.0055	0.0047	0.0034	0.0264					
* LDT4									
0.0454	0.1278	0.0760	0.0936	0.1278	0.1029	0.0540	0.0672	0.0640	0.0719
0.0584	0.0408	0.0135	0.0103	0.0098	0.0065	0.0023	0.0022	0.0036	0.0046
0.0055	0.0028	0.0010	0.0007	0.0074					
* HDV2B									
0.0397	0.0494	0.0999	0.0680	0.0777	0.0863	0.0640	0.0699	0.0724	0.0495
0.0307	0.0461	0.0295	0.0349	0.0213	0.0141	0.0118	0.0084	0.0110	0.0127
0.0126	0.0083	0.0104	0.0104	0.0608					
* HDV3									
0.0550	0.0502	0.1228	0.0835	0.0705	0.0651	0.0604	0.0583	0.0615	0.0633
0.0275	0.0323	0.0155	0.0272	0.0235	0.0089	0.0089	0.0073	0.0131	0.0130
0.0179	0.0203	0.0118	0.0111	0.0709					
* HDV4									
0.0378	0.0703	0.0789	0.0546	0.0506	0.0687	0.0506	0.0595	0.0891	0.0841
0.0325	0.0516	0.0276	0.0365	0.0509	0.0171	0.0164	0.0125	0.0174	0.0174
0.0171	0.0062	0.0039	0.0059	0.0425					
* HDV5									
0.0473	0.0946	0.1164	0.0880	0.1230	0.0861	0.0473	0.0549	0.0634	0.0643
0.0161	0.0710	0.0359	0.0237	0.0170	0.0076	0.0085	0.0019	0.0028	0.0057
0.0019	0.0028	0.0019	0.0028	0.0152					
* HDV6									
0.0426	0.1203	0.1095	0.1059	0.0599	0.0489	0.0537	0.0514	0.0620	0.0520
0.0447	0.0379	0.0299	0.0457	0.0131	0.0144	0.0099	0.0114	0.0115	0.0054
0.0051	0.0063	0.0065	0.0046	0.0474					
* HDV7									
0.0318	0.0457	0.0498	0.0579	0.0318	0.0416	0.0433	0.0465	0.0579	0.0612
0.0433	0.0277	0.0228	0.0433	0.0212	0.0253	0.0188	0.0367	0.0481	0.0269
0.0318	0.0245	0.0106	0.0131	0.1382					
* HDV8A									
0.0500	0.0741	0.0887	0.0949	0.0470	0.0587	0.0441	0.0649	0.0587	0.0545
0.0516	0.0250	0.0304	0.0354	0.0221	0.0137	0.0125	0.0121	0.0175	0.0200
0.0158	0.0154	0.0079	0.0083	0.0766					
* HDV8B									
0.0508	0.0733	0.0883	0.0959	0.0470	0.0583	0.0451	0.0658	0.0583	0.0545
0.0508	0.0244	0.0301	0.0357	0.0226	0.0132	0.0132	0.0132	0.0169	0.0207
0.0150	0.0150	0.0075	0.0075	0.0771					
* HDBS									
0.0876	0.0537	0.0407	0.0093	0.0860	0.0416	0.0644	0.0658	0.0618	0.0723
0.0604	0.0450	0.0197	0.0325	0.0241	0.0139	0.0117	0.0236	0.0415	0.0404
0.0111	0.0179	0.0089	0.0042	0.0618					
* HDBT									
0.0564	0.0312	0.0839	0.1056	0.0594	0.0545	0.0651	0.0641	0.0947	0.0426
0.0634	0.0756	0.0156	0.0208	0.0179	0.0096	0.0166	0.0096	0.0085	0.0259
0.0190	0.0216	0.0015	0.0063	0.0306					
* MC									
0.0453	0.1243	0.1154	0.0976	0.0734	0.0864	0.0691	0.0628	0.0476	0.0346
0.0210	0.0183	0.0186	0.0173	0.0113	0.0085	0.0092	0.0060	0.0058	0.0052
0.0048	0.0047	0.0085	0.0062	0.0981					

Prince William, VA—2008 Registration Data

* LDV
0.0485 0.0754 0.0752 0.0782 0.0734 0.0765 0.0697 0.0648 0.0690 0.0567
0.0507 0.0461 0.0380 0.0370 0.0297 0.0236 0.0185 0.0149 0.0118 0.0078
0.0055 0.0045 0.0032 0.0024 0.0189
* LDT1
0.0486 0.0967 0.0680 0.0753 0.0224 0.0899 0.0937 0.0760 0.0541 0.0515
0.0372 0.0456 0.0532 0.0119 0.0084 0.0106 0.0097 0.0080 0.0101 0.0186
0.0253 0.0249 0.0154 0.0044 0.0403
* LDT2
0.0380 0.0754 0.0836 0.0963 0.0992 0.0847 0.0823 0.0673 0.0689 0.0522
0.0493 0.0423 0.0312 0.0296 0.0243 0.0166 0.0103 0.0093 0.0071 0.0065
0.0050 0.0038 0.0028 0.0018 0.0120
* LDT3
0.0398 0.0692 0.0968 0.0980 0.1142 0.1022 0.0879 0.0675 0.0639 0.0573
0.0318 0.0266 0.0250 0.0259 0.0197 0.0123 0.0102 0.0051 0.0072 0.0067
0.0056 0.0045 0.0027 0.0023 0.0176
* LDT4
0.0403 0.1263 0.0946 0.1283 0.1487 0.1001 0.0571 0.0557 0.0505 0.0688
0.0432 0.0317 0.0118 0.0090 0.0083 0.0039 0.0025 0.0013 0.0032 0.0034
0.0040 0.0018 0.0005 0.0003 0.0048
* HDV2B
0.0198 0.0402 0.0857 0.0794 0.1047 0.0977 0.0744 0.0794 0.0736 0.0606
0.0301 0.0432 0.0273 0.0281 0.0223 0.0131 0.0096 0.0060 0.0089 0.0127
0.0094 0.0076 0.0085 0.0076 0.0500
* HDV3
0.0380 0.0468 0.1215 0.1343 0.0885 0.0774 0.0684 0.0690 0.0607 0.0659
0.0191 0.0245 0.0134 0.0230 0.0162 0.0096 0.0085 0.0040 0.0110 0.0076
0.0170 0.0101 0.0093 0.0074 0.0487
* HDV4
0.0295 0.0403 0.0869 0.0915 0.0729 0.0636 0.0558 0.0574 0.0737 0.0861
0.0326 0.0512 0.0279 0.0372 0.0458 0.0209 0.0163 0.0093 0.0240 0.0302
0.0202 0.0016 0.0008 0.0031 0.0213
* HDV5
0.0269 0.0688 0.1225 0.0890 0.1427 0.0940 0.0587 0.0688 0.0789 0.0957
0.0050 0.0504 0.0168 0.0101 0.0084 0.0101 0.0067 0.0000 0.0134 0.0134
0.0034 0.0067 0.0000 0.0000 0.0098
* HDV6
0.0284 0.0766 0.1006 0.1021 0.0993 0.0538 0.0637 0.0566 0.0740 0.0659
0.0393 0.0229 0.0236 0.0422 0.0212 0.0159 0.0090 0.0109 0.0133 0.0113
0.0020 0.0100 0.0102 0.0032 0.0441
* HDV7
0.0259 0.0628 0.0499 0.0813 0.0462 0.0462 0.0351 0.0425 0.0646 0.0536
0.0277 0.0425 0.0296 0.0369 0.0166 0.0166 0.0296 0.0148 0.0388 0.0222
0.0222 0.0296 0.0240 0.0203 0.1208
* HDV8A
0.0082 0.0686 0.0890 0.0955 0.0710 0.0620 0.0522 0.0555 0.0694 0.0718
0.0449 0.0384 0.0376 0.0473 0.0310 0.0220 0.0106 0.0073 0.0114 0.0188
0.0212 0.0090 0.0082 0.0049 0.0441
* HDV8B
0.0067 0.0705 0.0906 0.0940 0.0705 0.0604 0.0537 0.0570 0.0705 0.0705
0.0470 0.0403 0.0369 0.0470 0.0302 0.0201 0.0101 0.0067 0.0101 0.0201
0.0201 0.0101 0.0067 0.0067 0.0436
* HDBS
0.0876 0.0537 0.0407 0.0093 0.0860 0.0416 0.0644 0.0658 0.0618 0.0723
0.0604 0.0450 0.0197 0.0325 0.0241 0.0139 0.0117 0.0236 0.0415 0.0404
0.0111 0.0179 0.0089 0.0042 0.0618
* HDBT
0.0564 0.0312 0.0839 0.1056 0.0594 0.0545 0.0651 0.0641 0.0947 0.0426
0.0634 0.0756 0.0156 0.0208 0.0179 0.0096 0.0166 0.0096 0.0085 0.0259
0.0190 0.0216 0.0015 0.0063 0.0306
* MC
0.0445 0.1182 0.1112 0.1094 0.0798 0.0924 0.0706 0.0615 0.0491 0.0368
0.0249 0.0202 0.0209 0.0124 0.0137 0.0096 0.0078 0.0058 0.0049 0.0056
0.0034 0.0053 0.0076 0.0065 0.0779

District of Columbia--2008 Diesel Sales Fractions

*LDV
0.0000 0.0000 0.0057 0.0057 0.0025 0.0022 0.0031 0.0020 0.0017 0.0027
0.0021 0.0017 0.0021 0.0021 0.0004 0.0018 0.0027 0.0071 0.0014 0.0009
0.0009 0.0342 0.0197 0.1269 0.1269
*LDT1
0.0000 0.0000 0.0127 0.0136 0.0000 0.0000 0.0002 0.0000 0.0000 0.0000
0.0002 0.0000 0.0007 0.0011 0.0040 0.0000 0.0022 0.0013 0.0000 0.0039
0.0014 0.0054 0.0074 0.0115 0.0115
*LDT2
0.0000 0.0000 0.0010 0.0009 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0002 0.0000 0.0002 0.0000 0.0003 0.0002 0.0000 0.0013
0.0006 0.0023 0.0037 0.0034 0.0034
*LDT3
0.0066 0.0038 0.0005 0.0000 0.0004 0.0000 0.0002 0.0002 0.0001 0.0007
0.0013 0.0024 0.0021 0.0069 0.0037 0.0034 0.0009 0.0071 0.0053 0.0058
0.0085 0.0153 0.0144 0.0302 0.0302
*LDT4
0.0092 0.0024 0.0008 0.0000 0.0005 0.0000 0.0003 0.0002 0.0002 0.0007
0.0010 0.0022 0.0044 0.0192 0.0094 0.0091 0.0040 0.0276 0.0140 0.0130
0.0129 0.0355 0.0595 0.1294 0.1294
*HDV2B
0.1827 0.1813 0.2401 0.2472 0.2263 0.1824 0.1887 0.1809 0.1688 0.2256
0.2031 0.2563 0.2171 0.1831 0.1962 0.2278 0.1777 0.1917 0.2028 0.1914
0.1282 0.2577 0.2331 0.1586 0.1586
*HDV3
0.5873 0.5419 0.5403 0.5479 0.3985 0.5310 0.4618 0.4162 0.5045 0.5776
0.3933 0.4257 0.4710 0.3796 0.3563 0.5035 0.3854 0.4647 0.5669 0.4169
0.5132 0.4741 0.4139 0.1761 0.1761
*HDV4
0.7659 0.7298 0.8404 0.7818 0.7713 0.6388 0.5366 0.4719 0.5624 0.5561
0.6060 0.4581 0.4138 0.5246 0.3365 0.6453 0.2857 0.2803 0.3333 0.3659
0.2443 0.0896 0.0238 0.0204 0.0204
*HDV5
0.9442 0.9686 0.9316 0.9305 0.9263 0.8974 0.9324 0.9379 0.8904 0.8911
0.8039 0.6950 0.7606 0.5294 0.8000 0.9565 0.7391 0.5000 0.7500 0.6429
0.3333 0.6316 0.7692 0.0000 0.0000
*HDV6
0.9309 0.8810 0.8980 0.9633 0.8973 0.8906 0.9035 0.8921 0.9134 0.8581
0.8766 0.9027 0.8965 0.9151 0.8156 0.8920 0.7168 0.7483 0.7354 0.7290
0.5872 0.6115 0.5407 0.6127 0.6127
*HDV7
1.0000 1.0000 1.0000 1.0000 1.0000 0.9914 0.9922 0.9887 0.9752 0.9565
0.9786 0.9070 0.9762 0.9867 1.0000 0.9770 0.9623 0.9091 0.8933 0.9082
0.8889 0.8224 0.7692 0.7963 0.7963
*HDV8A
1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 0.9940 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 0.9910
0.9833 1.0000 0.9677 1.0000 1.0000
*HDV8B
1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 0.9900 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000
*HDBS
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
*HDBT
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000

Maryland--2008 Diesel Sales Fractions

*LDV
0.0001 0.0000 0.0072 0.0065 0.0030 0.0028 0.0039 0.0025 0.0023 0.0033
0.0024 0.0015 0.0022 0.0022 0.0005 0.0018 0.0025 0.0092 0.0014 0.0015
0.0011 0.0356 0.0213 0.1174 0.1174
*LDT1
0.0004 0.0000 0.0137 0.0113 0.0000 0.0002 0.0006 0.0000 0.0000 0.0003
0.0003 0.0000 0.0008 0.0000 0.0093 0.0043 0.0034 0.0020 0.0021 0.0074
0.0021 0.0061 0.0095 0.0106 0.0106
*LDT2
0.0000 0.0000 0.0013 0.0009 0.0000 0.0000 0.0001 0.0000 0.0000 0.0000
0.0000 0.0000 0.0002 0.0000 0.0004 0.0003 0.0004 0.0002 0.0003 0.0021
0.0011 0.0029 0.0048 0.0041 0.0041
*LDT3
0.0050 0.0032 0.0005 0.0001 0.0002 0.0001 0.0001 0.0004 0.0001 0.0006
0.0021 0.0020 0.0036 0.0090 0.0034 0.0034 0.0016 0.0046 0.0062 0.0053
0.0105 0.0135 0.0142 0.0283 0.0283
*LDT4
0.0058 0.0017 0.0006 0.0001 0.0002 0.0001 0.0002 0.0005 0.0001 0.0006
0.0016 0.0018 0.0081 0.0254 0.0090 0.0091 0.0057 0.0146 0.0136 0.0096
0.0119 0.0239 0.0663 0.1156 0.1156
*HDV2B
0.2489 0.2799 0.3226 0.3024 0.3018 0.2465 0.2574 0.2273 0.2142 0.2780
0.1759 0.3466 0.3010 0.2688 0.2802 0.3135 0.2249 0.2684 0.2284 0.1576
0.1451 0.1966 0.2637 0.1867 0.1867
*HDV3
0.7295 0.6937 0.6385 0.6512 0.5498 0.6095 0.5424 0.5236 0.6010 0.6499
0.4335 0.4679 0.5568 0.4406 0.3695 0.5414 0.4535 0.4405 0.5072 0.4088
0.4464 0.4861 0.3768 0.1739 0.1739
*HDV4
0.7909 0.7538 0.7521 0.7392 0.7381 0.6108 0.6000 0.5000 0.6163 0.5696
0.4602 0.5439 0.4740 0.6007 0.3858 0.6454 0.3333 0.3107 0.3704 0.4444
0.3361 0.0000 0.0000 0.0476 0.0476
*HDV5
0.9242 0.9569 0.9126 0.9405 0.8964 0.8912 0.8476 0.9098 0.8289 0.7977
0.6000 0.5317 0.6230 0.3443 0.6429 0.9091 0.7368 0.5000 0.5833 0.8000
0.7143 0.5455 1.0000 0.2000 0.2000
*HDV6
0.9316 0.8757 0.8770 0.9450 0.8068 0.8317 0.8559 0.8795 0.8739 0.8325
0.8966 0.9438 0.9464 0.9586 0.8876 0.9417 0.7353 0.7612 0.8295 0.7308
0.6596 0.6667 0.6042 0.6129 0.6129
*HDV7
1.0000 1.0000 1.0000 0.9935 1.0000 1.0000 0.9891 0.9845 0.9868 0.9771
0.9813 0.9091 0.9722 1.0000 0.9500 0.9577 0.9315 0.9417 0.9111 0.9186
0.8942 0.8723 0.8525 0.7895 0.7895
*HDV8A
1.0000 1.0000 1.0000 0.9980 1.0000 1.0000 1.0000 1.0000 0.9975 1.0000
1.0000 1.0000 0.9946 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
0.9911 1.0000 0.9846 1.0000 1.0000
*HDV8B
1.0000 1.0000 1.0000 0.9919 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 0.9815 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000
*HDBS
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
*HDBT
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000

Virginia--2008 Diesel Sales Fractions

*LDV
0.0000 0.0000 0.0068 0.0067 0.0032 0.0024 0.0033 0.0022 0.0020 0.0027
0.0021 0.0017 0.0019 0.0019 0.0003 0.0024 0.0025 0.0055 0.0017 0.0012
0.0002 0.0324 0.0175 0.1350 0.1350
*LDT1
0.0000 0.0000 0.0160 0.0180 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0003 0.0035 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0024 0.0012 0.0127 0.0210 0.0210
*LDT2
0.0000 0.0000 0.0011 0.0012 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0001 0.0001 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0010 0.0006 0.0057 0.0052 0.0052
*LDT3
0.0069 0.0032 0.0008 0.0000 0.0005 0.0000 0.0001 0.0001 0.0001 0.0011
0.0035 0.0032 0.0037 0.0077 0.0057 0.0029 0.0016 0.0076 0.0065 0.0027
0.0102 0.0098 0.0185 0.0212 0.0212
*LDT4
0.0099 0.0023 0.0013 0.0000 0.0005 0.0000 0.0001 0.0001 0.0002 0.0012
0.0034 0.0035 0.0090 0.0251 0.0144 0.0090 0.0069 0.0360 0.0181 0.0074
0.0189 0.0250 0.1038 0.1000 0.1000
*HDV2B
0.2244 0.2015 0.2735 0.3024 0.2835 0.2364 0.2169 0.2321 0.2146 0.2567
0.1356 0.2791 0.2887 0.2108 0.2491 0.2957 0.2366 0.2623 0.2062 0.2299
0.1474 0.1680 0.2313 0.2231 0.2231
*HDV3
0.6152 0.5965 0.6516 0.6250 0.4485 0.5224 0.5456 0.5118 0.5369 0.5917
0.3981 0.5286 0.5172 0.4000 0.4022 0.5567 0.4167 0.5614 0.5102 0.5000
0.5394 0.5000 0.4304 0.1481 0.1481
*HDV4
0.8280 0.7461 0.7872 0.7749 0.7892 0.6648 0.5658 0.5271 0.5501 0.5496
0.4773 0.4439 0.4667 0.5592 0.3868 0.5684 0.3837 0.3529 0.3836 0.4316
0.2500 0.0769 0.0556 0.0000 0.0000
*HDV5
0.9545 0.9758 0.9228 0.9346 0.8804 0.9095 0.9384 0.8929 0.8962 0.8653
0.7391 0.4634 0.5938 0.5349 0.6000 0.8889 0.6364 0.6667 0.7273 0.8462
0.2308 0.5882 0.0000 0.0000 0.0000
&HDV6
0.9108 0.8445 0.8244 0.9495 0.8416 0.8284 0.8340 0.8966 0.8782 0.8251
0.8802 0.8783 0.8651 0.8745 0.8642 0.8571 0.7593 0.8095 0.7206 0.7736
0.5500 0.6047 0.4634 0.5294 0.5294
*HDV7
1.0000 1.0000 0.9875 1.0000 1.0000 0.9701 0.9839 1.0000 0.9524 0.9167
0.9700 0.8784 0.9194 0.9677 0.9706 0.9778 0.9848 0.9459 0.9405 0.8596
0.8356 0.8026 0.6818 0.7143 0.7143
*HDV8A
1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 0.9947 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 0.9870
1.0000 1.0000 1.0000 1.0000 1.0000
*HDV8B
1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 0.9865 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000
*HDBS
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
*HDBT
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000

Region--2008 Diesel Sales Fractions for Bus

*LDV
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
*LDT1
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
*LDT2
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
*LDT3
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
*LDT4
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
*HDV2B
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
*HDV3
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
*HDV4
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
*HDV5
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
*HDV6
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
*HDV7
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
*HDV8A
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
*HDV8B
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
*HDBS
1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000
*HDBT
1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000

APPENDIX E

Documentation of Mobile Source Emission Calculations (post-processor)

MEMORANDUM

TO: Files

FROM: Ronald Milone & Hamid Humeida

DATE: May 26, 2009

SUBJECT: Mobile Emissions Post-Processor Description and Results

1.0 Introduction

This memorandum describes the mobile emissions post-processor used to support the Air Quality Conformity Determination of the 2009 CLRP and the FY2010-2015 TIP. The post-processor is a series of TP+ scripts that are used to calculate regional mobile source emissions. The emissions are developed on the basis of travel demand information produced by the regional travel demand model and emission rates produced from the EPA mandated Mobile model. The TPB's currently adopted travel model is known as the Version 2.2 (Spring 2009). The current Mobile program is version 6.2.03[1] (September 2003). The post-processor computes mobile emissions in terms of volatile organic compounds (VOC/HC), carbon monoxide (CO), oxides of nitrogen (NOx), and fine particulates ($PM_{2.5}$)[2] which include NOx precursors. The post-processor computes average *daily* VOC, CO, and NOx emissions for both wintertime and summer seasons. It is also used to compute *annual* NOx precursor and $PM_{2.5}$ emissions.

The post-processor computes mobile emissions attributable to *modeled* trips and VMT. It is also used to compute emissions of local, or off-network, traffic. These account for most, but not all, of mobile emissions that occur on a given day. Other off-network sources include vehicle-related (diurnal and resting loss) emissions as well as emissions relating to buses, and park-and-ride travel, which are computed using off-line procedures. These types of emission calculations are not addressed in this memorandum.

2.0 Post-Processor Overview

Mobile emissions are computed essentially by multiplying a unit of travel, as produced by the travel demand model, by an associated emission rate, as developed by the Mobile 6 model. The TPB emissions forecasts are based on computations for each stage of the trip cycle. In other words, *per trip* rates are developed to compute starting and soaking emissions, while *per mile* rates are developed to compute hot-stabilized (or running) emissions. Table 1 shows greater detail regarding the generalized emission calculation by trip cycle and pollutant. It is important to note that the emission rates are developed for specific seasons because weather conditions are important factors used in the emissions model. It is also important to note that emissions rates

[1] U.S. Environmental Protection Agency, Office of transportation and Air Quality. (2004). Technical Guidance on the Use of Mobile6.2 for Emission Inventory Preparation. U.S. Environmental Protection Agency.

[2] Airborne Particulate Matter (of size<2.5 μm) are air pollutants with a diameter of 2.5 micrometers or less, small enough to invade even the smallest airways.

are calculated by hour of the day, so the emissions post processor includes a peak spreading routine (see Table 12). Since the regional travel demand model develops forecasts in terms of average annual weekday (AAWT) conditions, seasonal factors are applied to the travel model data to be consistent with the seasonal emissions rate. Table 2 shows the conversion factors, which were developed based on local permanent count data. Seasonal adjustments are currently applied only to network link VMT. At present, there are no such conversion factors applied to modeled vehicle trips which are used to develop starting or soak emissions.

Table 1: Summary of Mobile Emissions Calculation by Emission Type and Pollutant

Emission Type	Pollutant	Emission Rate Description	Travel Unit Description	How Emissions are Computed
Running/ On-Network	VOC CO NOx	gm/mile, by jurisdiction, facility type and speed	Vehicle miles	Emission rate * travel unit, computed at network link level, by hour of day
	$PM_{2.5}$	gm/mile, by jurisdiction	vehicle miles	Emission rate * travel unit, computed at network link level
Start-Up	VOC CO NOx	gm/trip, by jurisdiction and engine condition (hot/cold)	Vehicle starts	Emission rate * travel unit, computed at TAZ level, by hour of day
Soak	VOC	gm/trip, by jurisdiction	Vehicle stops	Emission rate * travel unit, computed at TAZ level
Running / Local (Off-Network)	VOC CO NOx	gm/mile, by jurisdiction in urbanized areas; by jurisdiction and speed in rural areas	vehicle miles	Emission rate * travel unit, computed at jurisdiction level, stratified by urban and rural areas; rural areas are further stratified by speed ranges
	$PM_{2.5}$	gm/mile, by jurisdiction	vehicle miles	Emission rate * travel unit, Computed at jurisdiction level

Table 2: Conversion Factors for Converting AAWT to Seasonal Travel

Analysis Period	Pollutants Analyzed	Duration of Seasonal Period	Conversion Factor Applied to AAWT	Result of Conversion
Summer / Ozone Season	VOC NOx	May to September	1.05	Seasonal AAWT
Wintertime Season	CO	December to February	0.97	Seasonal AAWT
Annual Total (sum of 3 seasons)	$PM_{2.5}$ NOx precursor	January to April	0.92	Seasonal ADT
		May to September	0.99	Seasonal ADT
		October to December	0.93	Seasonal ADT

Table 2 also indicates the key pollutants of interest in the Washington, D.C. region vary by season. VOC and NOx emissions are most severe during the summer season while CO emissions are highest during the winter. $PM_{2.5}$ and NOx precursor emissions are developed as annualized figures based on the sum of three separate seasonal computations.

3.0 Mobile 6 Rates

Table 1 indicates that the emission rates are developed on a jurisdictional basis. This is done because many parameters used the Mobile 6 model vary by location, for example, inspection and maintenance programs, vehicle fleet mix, etc. Emission rates are currently prepared for 16 individual jurisdictions which are listed in Table 3. These include jurisdictions both in and around the non-attainment area. The table indicates that the 16 sets of modeled emission rates are ultimately applied to reflect 27 jurisdictions (or external stations) using 'nearest-neighbor' assumptions.

Table 3: Jurisdictional Emission Areas

Emission Area System Number	Jurisdiction / External Area	MSA Member Yes/No	Mobile Rates Modeled/Borrowed
1	Washington, DC	Yes	Modeled
2	Montgomery County	Yes	Modeled
3	Prince George's County	Yes	Modeled
4	Howard County	No	Borrowed (Prince George's Co.)
5	Anne Arundel County	No	Borrowed (Prince George's Co.)
6	Carroll County	No	Borrowed (Prince George's Co.)
7	Baltimore Area Externals	No	Borrowed (Prince George's Co.)
8	Calvert County	Yes	Modeled
9	Charles County	Yes	Modeled
10	Frederick County	Yes	Modeled
11	Frederick Co. Externals	No	Borrowed (Frederick Co.)
12	Arlington	Yes	Modeled
13	Fairfax County	Yes	Modeled
14	Loudoun County	Yes	Modeled
15	Prince William County	Yes	Modeled
16	Stafford County	Yes	Modeled
17	City of Alexandria	Yes	Modeled
18	St. Mary's County	No	Modeled
19	Washington Co. Externals	No	Modeled
20	Clarke County	No	Modeled
21	Fauquier County	No	Borrowed (Clarke Co.)
22	Jefferson Co, WVA	No	Borrowed (Clarke Co.)
23	Western External Area	No	Borrowed (Clarke Co.)
24	Spotsylvania County	No	Modeled
25	King George County	No	Borrowed (Spotsylvania Co.)
26	City of Fredericksburg	No	Borrowed (Spotsylvania Co.)
27	Southern External Area	No	Borrowed (Spotsylvania Co.)

Table 1 also indicates that, beyond jurisdictional considerations, the running emission rates are further specified by facility and speed, and starting emissions are further segmented by 'hot' and 'cold' engine conditions. In all, 179 Mobile model executions are prepared for each jurisdiction, for given season. These executions are currently run in batch. The sequence of scenarios generated by the batch of Mobile 6 executions is shown on Table 4. Each scenario represents a unique condition pertaining to the vehicle operating mode, facility type, and speed. Because annualized emissions are desired for the $PM_{2.5}$ pollutant, the generation of Mobile rates procedures is expanded to reflect multiple seasons. Annualized NOx and $PM_{2.5}$ emissions are

currently developed on the basis of three seasonal periods. The associated Mobile 6 scenarios that are batched together for three seasons are listed shown on Table 5. Three utility programs have been developed to read the Mobile 6 output rate listings and create emission rate files that are readable by the TP+ scripts. These programs are named:

1) M6RATES.EXE (single season / VOC, CO, NOx rates)
2) M6RATES_3S_HCN.EXE (three-season VOC, CO, NOx rates)
3) M6RATES_3S_PM.EXE (three-season $PM_{2.5}$ rates)

Table 4: Sequence of Mobile Scenarios Generated for a Single Season

MOBILE6 'Scenarios'	Operating Mode	Facility Type	Speed Specifications
1- 65	Stabilized	Arterial	1 to 65 mph in 1 mph increments
66-130	Stabilized	Freeway, Non-Ramp	1 to 65 mph in 1 mph increments
131	Stabilized	Freeway Ramp	Single speed / 35.0 mph
132	Cold	Local	Single speed / 12.9 mph
133	Hot	Local	Single speed / 12.9 mph
134	Stabilized	Local	Single speed / 12.9 mph
135-179	Stabilized	Arterial(w/ Rural VMT Mix)	1 to 45 mph in 1 mph increments

Table 5: Sequence of Mobile Scenarios Generated for Three Seasons

MOBILE6 'Scenarios'	Season	Op. Mode	Facility Type	Speed Specifications
1- 65	Jan-Apr	Stabilized	Arterial	1 to 65 mph in 1 mph increments
66-130		Stabilized	Freeway, Non-Ramp	1 to 65 mph in 1 mph increments
131		Stabilized	Freeway Ramp	Single speed / 35.0 mph
132		Cold	Local	Single speed / 12.9 mph
133		Hot	Local	Single speed / 12.9 mph
134		Stabilized	Local	Single speed / 12.9 mph
135-179		Stabilized	Arterial(w/ Rural VMT Mix)	1 to 45 mph in 1 mph increments
180- 244	May-Sep	Stabilized	Arterial	1 to 65 mph in 1 mph increments
245-309		Stabilized	Freeway, Non-Ramp	1 to 65 mph in 1 mph increments
310		Stabilized	Freeway Ramp	Single speed / 35.0 mph
311		Cold	Local	Single speed / 12.9 mph
312		Hot	Local	Single speed / 12.9 mph
313		Stabilized	Local	Single speed / 12.9 mph
314-358		Stabilized	Arterial(w/ Rural VMT Mix)	1 to 45 mph in 1 mph increments
359-423	Oct-Dec	Stabilized	Arterial	1 to 65 mph in 1 mph increments
424-488		Stabilized	Freeway, Non-Ramp	1 to 65 mph in 1 mph increments
489		Stabilized	Freeway Ramp	Single speed / 35.0 mph
490		Cold	Local	Single speed / 12.9 mph
491		Hot	Local	Single speed / 12.9 mph
492		Stabilized	Local	Single speed / 12.9 mph
493-537		Stabilized	Arterial(w/ Rural VMT Mix)	1 to 45 mph in 1 mph increments

The final emission rate files used in single-season post-processor runs and three-season post-processor runs are shown on Tables 5 and 6 respectively. The tables indicate the filename

convention used for a given post-processor run. The first characters of the file name are user specified, but the end-characters of the name are standardized. Table 5 indicates that 96 rate files are used in a single-season run, while 320 rate files are used in three season post-processor runs.

Table 6: Listing of Emission Rate Filenames Prepared for the Post-Processor / Single-Season Post-Processor

Jurisdiction	Running Arterial Rates *VOC, CO, Nx Rates by speed*	Running Freeway Rates *VOC, CO, Nx Rates by speed*	Running Freeway Ramp Rates *VOC, CO, Nx Rates @ 35 mph*	Starting (Hot/Cold) Rates *Hot VOC, CO, Nox / Cold VOC, CO, Nox Rates*	Running Local Rates *VOC, CO, Nox Rates @ 12.9 mph*	Running Local -Rural Arterial Rates *VOC, CO, Nx Rates by speed*
Alexandria	<prefix>AL.r_a	<prefix>AL.r_f	<prefix>AL.ram	<prefix>AL.stt	<prefix>AL.lcl	<prefix>AL.r_r
Arlington	<prefix>AR.r_a	<prefix>AR.r_f	<prefix>AR.ram	<prefix>AR.stt	<prefix>AR.lcl	<prefix>AR.r_r
Calvert	<prefix>CA.r_a	<prefix>CA.r_f	<prefix>CA.ram	<prefix>CA.stt	<prefix>CA.lcl	<prefix>CA.r_r
Charles	<prefix>CH.r_a	<prefix>CH.r_f	<prefix>CH.ram	<prefix>CH.stt	<prefix>CH.lcl	<prefix>CH.r_r
Calvert	<prefix>CL.r_a	<prefix>CL.r_f	<prefix>CL.ram	<prefix>CL.stt	<prefix>CL.lcl	<prefix>CL.r_r
DC	<prefix>DC.r_a	<prefix>DC.r_f	<prefix>DC.ram	<prefix>DC.stt	<prefix>DC.lcl	<prefix>DC.r_r
Frederick	<prefix>FR.r_a	<prefix>FR.r_f	<prefix>FR.ram	<prefix>FR.stt	<prefix>FR.lcl	<prefix>FR.r_r
Fairfax	<prefix>FX.r_a	<prefix>FX.r_f	<prefix>FX.ram	<prefix>FX.stt	<prefix>FX.lcl	<prefix>FX.r_r
Loudoun	<prefix>LD.r_a	<prefix>LD.r_f	<prefix>LD.ram	<prefix>LD.stt	<prefix>LD.lcl	<prefix>LD.r_r
Montgomery	<prefix>MC.r_a	<prefix>MC.r_f	<prefix>MC.ram	<prefix>MC.stt	<prefix>MC.lcl	<prefix>MC.r_r
Pr. George's	<prefix>PG.r_a	<prefix>PG.r_f	<prefix>PG.ram	<prefix>PG.stt	<prefix>PG.lcl	<prefix>PG.r_r
Pr. William	<prefix>PW.r_a	<prefix>PW.r_f	<prefix>PW.ram	<prefix>PW.stt	<prefix>PW.lcl	<prefix>PW.r_r
St. Mary's	<prefix>SM.r_a	<prefix>SM.r_f	<prefix>SM.ram	<prefix>SM.stt	<prefix>SM.lcl	<prefix>SM.r_r
Sprotsylvania	<prefix>SP.r_a	<prefix>SP.r_f	<prefix>SP.ram	<prefix>SP.stt	<prefix>SP.lcl	<prefix>SP.r_r
Stafford	<prefix>ST.r_a	<prefix>ST.r_f	<prefix>ST.ram	<prefix>ST.stt	<prefix>ST.lcl	<prefix>ST.r_r
Washington Co	<prefix>WE.r_a	<prefix>WE.r_f	<prefix>WE.ram	<prefix>WE.stt	<prefix>WE.lcl	<prefix>WE.r_r

Table 7: Listing of Emission Rate Filenames Prepared for the Post-Processor / Three – Season Post-Processor

Pollutant	Jurisdiction	Running Arterial Rates *Seasonal Rates by speed*	Running Freeway Rates *Seasonal Rates by speed*	Running Freeway Ramp Rates *Seasonal Rates @ 35 mph speed*	Starting (Hot/Cold) Rates *Seasonal Hot/Cold Rates*	Running Local Rates *Seasonal Rates @ 12.9 mph speed*	Running Local -Rural Arterial Rates *Seasonal Rates by speed*
	Alexandria	<prefix>COAL.arC	<prefix>COAL.frC	<prefix>COAL.rmC	<prefix>COAL.stC	<prefix>COAL.lcC	<prefix>COAL.rrC
CO	Arlington	<prefix>COAR.arC	<prefix>COAR.frC	<prefix>COAR.rmC	<prefix>COAR.stC	<prefix>COAR.lcC	<prefix>COAR.rrC
	Calvert	<prefix>COCA.arC	<prefix>COCA.frC	<prefix>COCA.rmC	<prefix>COCA.stC	<prefix>COCA.lcC	<prefix>COCA.rrC
	Charles	<prefix>COCH.arC	<prefix>COCH.frC	<prefix>COCH.rmC	<prefix>COCH.stC	<prefix>COCH.lcC	<prefix>COCH.rrC
	Calvert	<prefix>COCL.arC	<prefix>COCL.frC	<prefix>COCL.rmC	<prefix>COCL.stC	<prefix>COCL.lcC	<prefix>COCL.rrC
	DC	<prefix>CODC.arC	<prefix>CODC.frC	<prefix>CODC.rmC	<prefix>CODC.stC	<prefix>CODC.lcC	<prefix>CODC.rrC
	Frederick	<prefix>COFR.arC	<prefix>COFR.frC	<prefix>COFR.rmC	<prefix>COFR.stC	<prefix>COFR.lcC	<prefix>COFR.rrC
	Fairfax	<prefix>COFX.arC	<prefix>COFX.frC	<prefix>COFX.rmC	<prefix>COFX.stC	<prefix>COFX.lcC	<prefix>COFX.rrC
	Loudoun	<prefix>COLD.arC	<prefix>COLD.frC	<prefix>COLD.rmC	<prefix>COLD.stC	<prefix>COLD.lcC	<prefix>COLD.rrC
	Montgomery	<prefix>COMC.arC	<prefix>COMC.frC	<prefix>COMC.rmC	<prefix>COMC.stC	<prefix>COMC.lcC	<prefix>COMC.rrC
	Pr. George's	<prefix>COPG.arC	<prefix>COPG.frC	<prefix>COPG.rmC	<prefix>COPG.stC	<prefix>COPG.lcC	<prefix>COPG.rrC
	Pr. William	<prefix>COPW.arC	<prefix>COPW.frC	<prefix>COPW.rmC	<prefix>COPW.stC	<prefix>COPW.lcC	<prefix>COPW.rrC
	St. Mary's	<prefix>COSM.arC	<prefix>COSM.frC	<prefix>COSM.rmC	<prefix>COSM.stC	<prefix>COSM.lcC	<prefix>COSM.rrC
	Sprotsylvania	<prefix>COSP.arC	<prefix>COSP.frC	<prefix>COSP.rmC	<prefix>COSP.stC	<prefix>COSP.lcC	<prefix>COSP.rrC
	Stafford	<prefix>COST.arC	<prefix>COST.frC	<prefix>COST.rmC	<prefix>COST.stC	<prefix>COST.lcC	<prefix>COST.rrC
	Washington Co	<prefix>COWE.arC	<prefix>COWE.frC	<prefix>COWE.rmC	<prefix>COWE.stC	<prefix>COWE.lcC	<prefix>COWE.rrC
VOC	Alexandria	<prefix>HCAL.arH	<prefix>HCAL.frH	<prefix>HCAL.rmH	<prefix>HCAL.stH	<prefix>HCAL.lcH	<prefix>HCAL.rrH
	Arlington	<prefix>HCAR.arH	<prefix>HCAR.frH	<prefix>HCAR.rmH	<prefix>HCAR.stH	<prefix>HCAR.lcH	<prefix>HCAR.rrH
	Calvert	<prefix>HCCA.arH	<prefix>HCCA.frH	<prefix>HCCA.rmH	<prefix>HCCA.stH	<prefix>HCCA.lcH	<prefix>HCCA.rrH
	Charles	<prefix>HCCH.arH	<prefix>HCCH.frH	<prefix>HCCH.rmH	<prefix>HCCH.stH	<prefix>HCCH.lcH	<prefix>HCCH.rrH
	Calvert	<prefix>HCCL.arH	<prefix>HCCL.frH	<prefix>HCCL.rmH	<prefix>HCCL.stH	<prefix>HCCL.lcH	<prefix>HCCL.rrH
	DC	<prefix>HCDC.arH	<prefix>HCDC.frH	<prefix>HCDC.rmH	<prefix>HCDC.stH	<prefix>HCDC.lcH	<prefix>HCDC.rrH
	Frederick	<prefix>HCFR.arH	<prefix>HCFR.frH	<prefix>HCFR.rmH	<prefix>HCFR.stH	<prefix>HCFR.lcH	<prefix>HCFR.rrH
	Fairfax	<prefix>HCFX.arH	<prefix>HCFX.frH	<prefix>HCFX.rmH	<prefix>HCFX.stH	<prefix>HCFX.lcH	<prefix>HCFX.rrH
	Loudoun	<prefix>HCLD.arH	<prefix>HCLD.frH	<prefix>HCLD.rmH	<prefix>HCLD.stH	<prefix>HCLD.lcH	<prefix>HCLD.rrH
	Montgomery	<prefix>HCMC.arH	<prefix>HCMC.frH	<prefix>HCMC.rmH	<prefix>HCMC.stH	<prefix>HCMC.lcH	<prefix>HCMC.rrH
	Pr. George's	<prefix>HCPG.arH	<prefix>HCPG.frH	<prefix>HCPG.rmH	<prefix>HCPG.stH	<prefix>HCPG.lcH	<prefix>HCPG.rrH
	Pr. William	<prefix>HCPW.arH	<prefix>HCPW.frH	<prefix>HCPW.rmH	<prefix>HCPW.stH	<prefix>HCPW.lcH	<prefix>HCPW.rrH
	St. Mary's	<prefix>HCSM.arH	<prefix>HCSM.frH	<prefix>HCSM.rmH	<prefix>HCSM.stH	<prefix>HCSM.lcH	<prefix>HCSM.rrH
	Sprotsylvania	<prefix>HCSP.arH	<prefix>HCSP.frH	<prefix>HCSP.rmH	<prefix>HCSP.stH	<prefix>HCSP.lcH	<prefix>HCSP.rrH
	Stafford	<prefix>HCST.arH	<prefix>HCST.frH	<prefix>HCST.rmH	<prefix>HCST.stH	<prefix>HCST.lcH	<prefix>HCST.rrH
	Washington Co	<prefix>HCWE.arH	<prefix>HCWE.frH	<prefix>HCWE.rmH	<prefix>HCWE.stH	<prefix>HCWE.lcH	<prefix>HCWE.rrH
NOx	Alexandria	<prefix>NXAL.arN	<prefix>NXAL.frN	<prefix>NXAL.rmN	<prefix>NXAL.stN	<prefix>NXAL.lcN	<prefix>NXAL.rrN
	Arlington	<prefix>NXAR.arN	<prefix>NXAR.frN	<prefix>NXAR.rmN	<prefix>NXAR.stN	<prefix>NXAR.lcN	<prefix>NXAR.rrN
	Calvert	<prefix>NXCA.arN	<prefix>NXCA.frN	<prefix>NXCA.rmN	<prefix>NXCA.stN	<prefix>NXCA.lcN	<prefix>NXCA.rrN
	Charles	<prefix>NXCH.arN	<prefix>NXCH.frN	<prefix>NXCH.rmN	<prefix>NXCH.stN	<prefix>NXCH.lcN	<prefix>NXCH.rrN
	Calvert	<prefix>NXCL.arN	<prefix>NXCL.frN	<prefix>NXCL.rmN	<prefix>NXCL.stN	<prefix>NXCL.lcN	<prefix>NXCL.rrN
	DC	<prefix>NXDC.arN	<prefix>NXDC.frN	<prefix>NXDC.rmN	<prefix>NXDC.stN	<prefix>NXDC.lcN	<prefix>NXDC.rrN
	Frederick	<prefix>NXFR.arN	<prefix>NXFR.frN	<prefix>NXFR.rmN	<prefix>NXFR.stN	<prefix>NXFR.lcN	<prefix>NXFR.rrN
	Fairfax	<prefix>NXFX.arN	<prefix>NXFX.frN	<prefix>NXFX.rmN	<prefix>NXFX.stN	<prefix>NXFX.lcN	<prefix>NXFX.rrN
	Loudoun	<prefix>NXLD.arN	<prefix>NXLD.frN	<prefix>NXLD.rmN	<prefix>NXLD.stN	<prefix>NXLD.lcN	<prefix>NXLD.rrN
	Montgomery	<prefix>NXMC.arN	<prefix>NXMC.frN	<prefix>NXMC.rmN	<prefix>NXMC.stN	<prefix>NXMC.lcN	<prefix>NXMC.rrN
	Pr. George's	<prefix>NXPG.arN	<prefix>NXPG.frN	<prefix>NXPG.rmN	<prefix>NXPG.stN	<prefix>NXPG.lcN	<prefix>NXPG.rrN
	Pr. William	<prefix>NXPW.arN	<prefix>NXPW.frN	<prefix>NXPW.rmN	<prefix>NXPW.stN	<prefix>NXPW.lcN	<prefix>NXPW.rrN
	St. Mary's	<prefix>NXSM.arN	<prefix>NXSM.frN	<prefix>NXSM.rmN	<prefix>NXSM.stN	<prefix>NXSM.lcN	<prefix>NXSM.rrN
	Sprotsylvania	<prefix>NXSP.arN	<prefix>NXSP.frN	<prefix>NXSP.rmN	<prefix>NXSP.stN	<prefix>NXSP.lcN	<prefix>NXSP.rrN
	Stafford	<prefix>NXST.arN	<prefix>NXST.frN	<prefix>NXST.rmN	<prefix>NXST.stN	<prefix>NXST.lcN	<prefix>NXST.rrN
	Washington Co	<prefix>NXWE.arN	<prefix>NXWE.frN	<prefix>NXWE.rmN	<prefix>NXWE.stN	<prefix>NXWE.lcN	<prefix>NXWE.rrN

Pollutant	Jurisdiction	*Seasonal $PM_{2.5}$ Network and Local Rates*
$PM_{2.5}$	Alexandria	<prefix>pmAL.N_L
	Arlington	<prefix>pmAR.N_L
Seasonal Network /	Calvert	<prefix>pmCA.N_L
Seasonal Local	Charles	<prefix>pmCH.N_L
	Calvert	<prefix>pmCL.N_L
	DC	<prefix>pmDC.N_L
	Frederick	<prefix>pmFR.N_L
	Fairfax	<prefix>pmFX.N_L
	Loudoun	<prefix>pmLD.N_L
	Montgomery	<prefix>pmMC.N_L
	Pr. George's	<prefix>pmPG.N_L
	Pr. William	<prefix>pmPW.N_L
	St. Mary's	<prefix>pmSM.N_L
	Sprotsylvania	<prefix>pmSP.N_L
	Stafford	<prefix>pmST.N_L
	Washington Co	<prefix>pmWE.N_L

Pollutant	Jurisdiction	*Seasonal Soak Rates*
	Alexandria	<prefix>HCAL.SDR
Soak, Diurnal,	Arlington	<prefix>HCAR.SDR
Resting Loss	Calvert	<prefix>HCCA.SDR
Rates	Charles	<prefix>HCCH.SDR
	Calvert	<prefix>HCCL.SDR
Seasonal Soak,	DC	<prefix>HCDC.SDR
Seasonal Diurnal,	Frederick	<prefix>HCFR.SDR
Seasonal Rest Loss	Fairfax	<prefix>HCFX.SDR
	Loudoun	<prefix>HCLD.SDR
	Montgomery	<prefix>HCMC.SDR
	Pr. George's	<prefix>HCPG.SDR
	Pr. William	<prefix>HCPW.SDR
	St. Mary's	<prefix>HCSM.SDR
	Sprotsylvania	<prefix>HCSP.SDR
	Stafford	<prefix>HCST.SDR
	Washington Co	<prefix>HCWE.SDR

4.0 Post–Processor Computations

The post-processor computes three classes of mobile emissions: Trip-end emissions, comprised of starting and soaking types, running emissions, and local emissions. The computation procedures are described below, in turn.

4.1 Trip-End Emissions

Starting emissions are developed by applying per-trip emission rates to modeled vehicle trips at the zone level, on an hour-by-hour basis. Starting pollutant rates are associated with VOC, CO, and NOx emissions, and are expressed in terms of *cold* and *hot transient* types. Cold starts relate to those auto trips with fully cooled engines (i.e., engines that have been turned off for at least one hour prior to the trip starting time). Alternatively, hot transient starts are those auto trips with warm engines (i.e., engines that have been turned off less than one hour prior to the trip start time). An hourly allocation of trip origins is necessary for the starting emission calculation since the proportion of cold and hot starts is dependent upon the time of day. The assumed hourly distribution of AM, PM, and Off-peak vehicle trips is shown on Table 8. The distribution shown was derived from the 1994 Household Travel Survey (HTS). The assumed hourly distribution for cold and hot transient starts is shown on Table 9. This table was also derived from the 1994 HTS.

Soaking emissions are associated with the evaporative VOC/HC emissions that result when the engine is turned off. The soak emissions consist of a single emission rate that is applied to trip destinations. There is no temporal component to the soaking emission computation.

It was stated earlier that emission rates are developed on a county-by-county basis. An averaged emission rate is used in the post-processor, as opposed to a single county-specific rate, because the vehicle starts in any given jurisdiction are realistically made by residents of that jurisdiction as well as by residents of many other jurisdictions. For example, the emission rate used within the District of Columbia is the average of all emission rates weighted by the proportion of daily vehicle trips from each jurisdiction to the District. The general equation for computing starting emissions for a specific TAZ and hour of the day is as follows:

$$StartEm_{ih} = Starts_h * \sum_{j=1}^{27} ((CSR_j * CPCT_h + HSR_j * HPCT_h) * Tprop_{ij})$$

Where:

$StartEm_{ih}$ = Zonal starting-up emissions (in grams) at hour h in jurisdiction i
$Starts_h$ = Zonal vehicle starts at hour h
CSR_j = Cold Start rate (gm/trip) for jurisdiction j
$CPCT_h$ = Cold start proportion at hour h
HSR_j = Hot Start rate (gm/trip) for jurisdiction j
$HPCT_h$ = Hot start proportion at hour h
$Tprop_{ij}$ = Proportion of daily trips between jurisdiction i/j

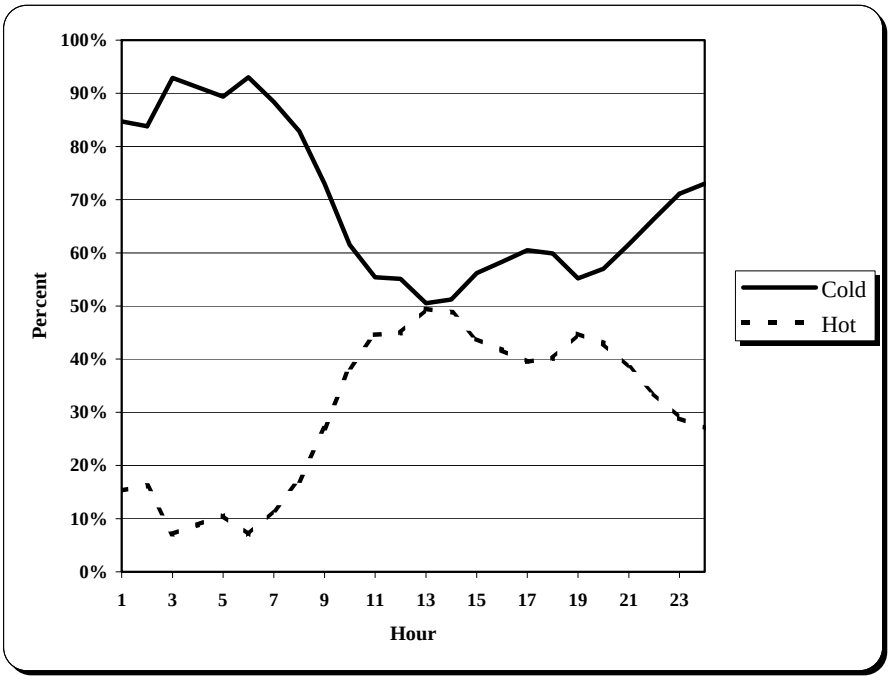
Table 8

Distribution of AM, PM, and Off-Peak Period Auto Driver Trips
Among
Hourly Periods

Hour No.		% AM	% PM	Off-Peak
1	12mid - 12:59AM			0.30%
2	1:00AM - 1:59AM			0.40%
3	2:00AM - 2:59AM			0.30%
4	3:00AM - 3:59AM			0.30%
5	4:00AM - 4:59AM			0.50%
6	5:00AM - 5:59AM			2.20%
7	6:00AM - 6:59AM	20.10%		
8	7:00AM - 7:59AM	39.80%		
9	8:00AM - 8:59AM	40.10%		
10	9:00AM - 9:59AM			9.70%
11	10:00AM - 10:59AM			8.20%
12	11:00AM - 11:59AM			9.20%
13	12noon - 12:59PM			10.10%
14	1:00PM - 1:59PM			8.90%
15	2:00PM - 2:59PM			9.00%
16	3:00PM - 3:59PM			11.60%
17	4:00PM - 4:59PM		31.40%	
18	5:00PM - 5:59PM		37.30%	
19	6:00PM - 6:59PM		31.30%	
20	7:00PM - 7:59PM			10.80%
21	8:00PM - 8:59PM			7.70%
22	9:00PM - 9:59PM			5.80%
23	10:00PM - 10:59PM			3.40%
24	11:00PM - 11:59PM			1.60%
Total		100.00%	100.00%	100.00%

Table 9
Distribution of Cold / Hot Transient Vehicle Starts by Hour

Hour No.		% Cold	% Hot	Total
1	12mid - 12:59AM	84.70%	15.30%	100.00%
2	1:00AM - 1:59AM	83.80%	16.20%	100.00%
3	2:00AM - 2:59AM	92.90%	7.10%	100.00%
4	3:00AM - 3:59AM	91.20%	8.80%	100.00%
5	4:00AM - 4:59AM	89.40%	10.60%	100.00%
6	5:00AM - 5:59AM	93.00%	7.00%	100.00%
7	6:00AM - 6:59AM	88.40%	11.60%	100.00%
8	7:00AM - 7:59AM	82.90%	17.10%	100.00%
9	8:00AM - 8:59AM	73.00%	27.00%	100.00%
10	9:00AM - 9:59AM	61.50%	38.50%	100.00%
11	10:00AM - 10:59AM	55.40%	44.60%	100.00%
12	11:00AM - 11:59AM	55.10%	44.90%	100.00%
13	12noon - 12:59PM	50.50%	49.50%	100.00%
14	1:00PM - 1:59PM	51.20%	48.80%	100.00%
15	2:00PM - 2:59PM	56.20%	43.80%	100.00%
16	3:00PM - 3:59PM	58.30%	41.70%	100.00%
17	4:00PM - 4:59PM	60.50%	39.50%	100.00%
18	5:00PM - 5:59PM	59.90%	40.10%	100.00%
19	6:00PM - 6:59PM	55.20%	44.80%	100.00%
20	7:00PM - 7:59PM	57.00%	43.00%	100.00%
21	8:00PM - 8:59PM	61.60%	38.40%	100.00%
22	9:00PM - 9:59PM	66.40%	33.60%	100.00%
23	10:00PM - 10:59PM	71.10%	28.90%	100.00%
24	11:00PM - 11:59PM	73.00%	27.00%	100.00%



Similarly, the equation for computing hot soak emissions is as follows:

$$SoakEm_{ih} = Stops_h * \sum_{j=1}^{27} (HSR_j * Tprop_{ij})$$

Where:

$SoakEm_{ih}$ = Zonal hot soak emissions (in grams) at hour h in jurisdiction i
$Stops_h$ = Vehicle stops at hour h
HSR_j = Hot Soak rate (gm/trip) for jurisdiction j
$Tprop_{ij}$ = Proportion of daily trips between jurisdiction i and jurisdiction j

The regional total of starting/soaking emissions is, therefore, based on the result of the above equations accumulated over all TAZ's, over all hours of the day. Regional emissions in grams are converted to tons using a conversion factor of 907,184.74 gm/ton.

4.2 Running (Hot Stabilized) Emissions

Running emissions are associated with VOC/HC, CO, NOx, and $PM_{2.5}$ pollutants emitted on the regional highway network. They are computed by applying per-mile emission rates to VMT at the network link level, and are computed on an hour-by-hour basis. The calculation is applied on an hourly basis because the running emission rates are provided as a function of highway speed[3], which varies with congestion throughout the day. As with the trip-end emission calculation, the running emission rate for a given link is a weighted average of all jurisdictional rates based on the proportion of daily vehicle trips from each county to the specific county in which the network link is located.

The post-processor now incorporates global link volume adjustment factors used to adjust AAWT volume to the specific season that is appropriate. The current seasonal factors were shown on Table 2, above. Before link volumes are disaggregated among hourly periods, the total daily volume on the link is adjusted with the seasonal factor.

The allocation of link volumes among hourly periods is done in a two-step manner. First, an initial hourly distribution based on observed data for the Washington region is applied to the daily link volume, based on the facility class and *peaking* classification of the link. Facility classifications are defined as freeway, arterial, or local. COG has established three peaking types, AM-oriented, PM-oriented, and Even, based on the following *peaking percentage*[4]:

Peaking Percentage = ((AM Volume* PM scale factor) – PM Volume) / Daily Link Volume
Where:
Peaking Percentage > 7.5% indicates AM oriented class
Peaking Percentage < - 7.5% indicates PM oriented class
Peaking Percentage - 7.5% to 7.5% indicates Even oriented class

[3] The current $PM_{2.5}$ emission rate, however, does not vary by speed. Nonetheless, the $PM_{2.5}$ computation is still made on an hourly basis.
[4] See August 27, 2002 Memorandum from Michael Freeman to File, Subject: Development and Recommendations of Hourly Distributions of Daily Traffic Volumes.

The PM scale factor shown is applied to all AM period volumes so that the sum of regional AM link volumes will equal the sum of regional PM volumes. The scaled volume is used *only* for the purpose of computing the peaking index, and is necessary to ensure that a reasonable regional balance of AM and PM oriented links are attained. Default hourly distributions associated with specific facility and peaking classifications are shown on Table 10. The distribution selected for a given link is applied to the *daily seasonal* link volume to arrive at initial hourly volume estimates. Next, the initial hourly estimates are scaled on a gross time period basis so that the hourly link volumes in the AM peak, PM peak, and off-peak periods are consistent with the original (seasonally adjusted) link volumes produced by the traffic assignment process. The hourly link speed is developed from the volume–to-capacity ratio developed at this point based on the speed flow relationship shown on Table 11. The functions shown on Table 11 are based on observed speed and density data collected in the Washington region.

Table 10
Hourly Distribution of Daily Traffic by Orientation and Facility Type

Hour		AM			PM			EVEN		
No.		Freeway	Arterial	Collector	Freeway	Arterial	Collector	Freeway	Arterial	Collector
1	12mid - 12:59AM	0.77	0.49	0.34	1.11	0.76	0.62	1.07	0.67	0.52
2	1:00AM - 1:59AM	0.55	0.30	0.20	0.64	0.41	0.32	0.73	0.40	0.31
3	2:00AM - 2:59AM	0.52	0.25	0.18	0.48	0.28	0.24	0.61	0.30	0.24
4	3:00AM - 3:59AM	0.72	0.37	0.29	0.42	0.24	0.20	0.68	0.33	0.30
5	4:00AM - 4:59AM	1.88	1.09	0.96	0.58	0.38	0.32	1.24	0.72	0.70
6	5:00AM - 5:59AM	6.20	4.05	3.80	1.38	1.08	0.96	3.60	2.27	2.37
7	6:00AM - 6:59AM	8.66	8.75	9.19	3.24	2.70	2.58	4.99	4.58	4.83
8	7:00AM - 7:59AM	11.13	12.38	13.40	4.63	4.62	4.67	6.96	7.65	8.06
9	8:00AM - 8:59AM	8.04	9.82	10.92	4.71	5.15	5.07	5.44	6.90	7.27
10	9:00AM - 9:59AM	6.94	6.39	6.10	3.84	4.38	4.10	5.93	6.11	5.80
11	10:00AM - 10:59AM	5.14	4.71	4.50	3.90	4.19	3.94	5.18	5.15	4.80
12	11:00AM - 11:59AM	4.68	4.53	4.51	4.21	4.67	4.54	5.15	5.40	5.14
13	12noon - 12:59PM	4.65	4.72	4.81	4.61	5.25	5.25	5.34	5.80	5.50
14	1:00PM - 1:59PM	4.58	4.64	4.64	4.83	5.21	5.01	5.45	5.68	5.34
15	2:00PM - 2:59PM	4.66	4.80	4.85	5.95	5.87	5.76	6.10	5.97	5.89
16	3:00PM - 3:59PM	4.70	5.09	5.17	7.32	7.14	7.03	6.80	6.62	6.68
17	4:00PM - 4:59PM	4.56	5.26	5.24	9.95	9.58	10.06	5.94	6.26	6.61
18	5:00PM - 5:59PM	4.76	5.55	5.58	10.87	10.93	11.57	6.63	7.15	7.66
19	6:00PM - 6:59PM	4.32	4.98	4.92	8.55	9.03	9.65	5.35	5.92	6.44
20	7:00PM - 7:59PM	3.66	3.90	3.72	5.61	6.01	6.17	4.99	5.29	5.45
21	8:00PM - 8:59PM	2.95	2.97	2.70	4.25	4.44	4.60	3.89	4.05	4.09
22	9:00PM - 9:59PM	2.64	2.40	2.01	3.68	3.58	3.52	3.44	3.27	3.06
23	10:00PM - 10:59PM	2.06	1.64	1.30	2.80	2.41	2.20	2.70	2.21	1.90
24	11:00PM - 11:59PM	1.23	0.92	0.72	2.45	1.71	1.62	1.81	1.29	1.05
Total		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

In the second step, the initial hourly volume is compared to the hourly link capacity (Level-of-Service 'E') and adjusted if necessary. The adjustment procedure (see Table 12) begins with the comparison of AM peak hour traffic and PM peak hour traffic with the available capacity. If the initial peak hour volume exceeds capacity, then the peak hour volume is adjusted to equal the capacity and the portion of volume exceeding capacity is then apportioned in equal parts to the hour before and the hour after the peak hour. In the case of overly congested freeways, the capacity is moderated to reflect the fact that the 'through-put' volumes cannot be sustained at LOS 'E' service levels when the V/C ratio exceeds 1.0. Table 13 shows the assumed relationship between freeway capacities and congested V/C ratios. Because this adjustment could potentially cause the 'shoulder' hour volumes to exceed capacity, added steps are undertaken to compare the resulting volumes in each successive shoulder hour with the capacity. If a given shoulder hour volume exceeds capacity, then the volume is similarly adjusted to equal capacity and the 'overflow' volume is added to the volume of the adjacent hourly period. Traffic assignments on rare occasions produce severely overloaded link volumes to the point where a given link volume could exceed the capacity over *all* hours of the day. Because of this possibility, volume adjustments are *not* made for the first, noon, and last hours (hours 1, 13, and 24), even if a given link volume is determined to exceed capacity in those particular hours.

Subsequent to the development of 'final' hourly link volumes and restrained speeds, the general equation for computing running emissions is:

$$RunningEm_{ih} = VMT_h * \sum_{j=1}^{27} (RRate_j * Tprop_{ij})$$

Where:

$RunningEm_{ih}$	=	Running link emissions at hour h in jurisdiction i
VMT_h	=	Vehicle Miles Travel (after peak-spreading) at hour h
$RRate_j$	=	Running rate (gm/mi) as a function of highway speed for jurisdiction j
$Tprop_{ij}$	=	Proportion of daily trips between jurisdiction i/j

The regional running emissions are the accumulation of calculated hourly emissions over all network links in the study area. Emissions in grams are converted to tons using a conversion factor of 907,184.74 gm/ton.

Table 11
Speed Delay Functions Used in the MWCOG Mobile Emissions Post-Processor
By
Facility Type and Area Type (1-7)

V/C	Freeway			Major Arterial				Minor arterial				Collector				Expressway		
Atp -->	1-2	3-4	5-7	1-2	3-4	5	6-7	1-2	3-4	5	6-7	1-2	3-4	5	6-7	1-2	3-5	6-7
0.000	55.000	60.000	67.000	25.000	35.000	40.000	45.000	20.000	30.000	35.000	40.000	15.000	20.000	25.000	30.000	45.000	50.000	55.000
0.100	54.783	59.764	66.736	24.774	34.683	39.638	44.593	19.762	29.643	34.583	39.523	14.630	19.506	24.383	29.259	44.649	49.610	54.571
0.200	54.479	59.431	66.365	24.464	34.250	39.143	44.036	19.441	29.161	34.022	38.882	14.171	18.895	23.619	28.342	44.166	49.074	53.981
0.300	54.174	59.099	65.994	24.155	33.817	38.648	43.479	19.120	28.680	33.460	38.240	13.713	18.284	22.855	27.426	43.683	48.537	53.390
0.400	53.645	58.522	65.350	23.646	33.105	37.834	42.563	18.611	27.916	32.569	37.222	13.093	17.457	21.822	26.186	42.878	47.642	52.406
0.500	53.116	57.945	64.705	23.138	32.393	37.020	41.648	18.102	27.152	31.678	36.203	12.473	16.631	20.789	24.947	42.073	46.747	51.422
0.600	51.976	56.701	63.316	22.165	31.031	35.465	39.898	17.193	25.790	30.088	34.387	11.631	15.508	19.385	23.262	40.485	44.984	49.482
0.700	50.835	55.456	61.926	21.193	29.670	33.909	38.147	16.285	24.427	28.499	32.570	10.789	14.385	17.982	21.578	38.898	43.220	47.542
0.800	48.329	52.722	58.873	19.427	27.198	31.083	34.969	14.789	22.183	25.880	29.577	9.762	13.016	16.270	19.524	35.880	39.867	43.853
0.900	42.731	46.616	52.054	16.595	23.233	26.552	29.871	12.669	19.003	22.171	25.338	8.643	11.524	14.405	17.286	30.702	34.113	37.524
1.000	27.500	30.000	33.500	12.500	17.500	20.000	22.500	10.000	15.000	17.500	20.000	7.500	10.000	12.500	15.000	22.500	25.000	27.500
1.100	22.610	24.665	27.543	11.200	15.681	17.921	20.161	9.155	13.733	16.022	18.311	7.141	9.521	11.901	14.282	19.893	22.103	24.313
1.170	19.187	20.931	23.373	10.291	14.407	16.465	18.524	8.564	12.846	14.987	17.129	6.889	9.186	11.482	13.779	18.068	20.075	22.083
1.200	17.719	19.330	21.585	9.901	13.861	15.842	17.822	8.311	12.466	14.544	16.622	6.782	9.042	11.303	13.563	17.286	19.206	21.127
1.300	12.829	13.995	15.628	8.601	12.042	13.762	15.483	7.466	11.200	13.066	14.933	6.423	8.563	10.704	12.845	14.678	16.309	17.940
1.400	12.829	13.995	15.628	8.601	12.042	13.762	15.483	7.466	11.200	13.066	14.933	6.423	8.563	10.704	12.845	14.678	16.309	17.940
1.500	12.829	13.995	15.628	8.601	12.042	13.762	15.483	7.466	11.200	13.066	14.933	6.423	8.563	10.704	12.845	14.678	16.309	17.940
1.600	12.829	13.995	15.628	8.601	12.042	13.762	15.483	7.466	11.200	13.066	14.933	6.423	8.563	10.704	12.845	14.678	16.309	17.940
1.800	12.829	13.995	15.628	8.601	12.042	13.762	15.483	7.466	11.200	13.066	14.933	6.423	8.563	10.704	12.845	14.678	16.309	17.940
2.000	12.829	13.995	15.628	8.601	12.042	13.762	15.483	7.466	11.200	13.066	14.933	6.423	8.563	10.704	12.845	14.678	16.309	17.940
2.250	12.829	13.995	15.628	8.601	12.042	13.762	15.483	7.466	11.200	13.066	14.933	6.423	8.563	10.704	12.845	14.678	16.309	17.940
99.990	12.829	13.995	15.628	8.601	12.042	13.762	15.483	7.466	11.200	13.066	14.933	6.423	8.563	10.704	12.845	14.678	16.309	17.940

Table 12	
Peak Spreading Procedure ***Adjustment Process for Spreading Hourly Volumes When Initial Volumes Exceed Capacity***	
Step 1:	The AM peak hour (hour 8) initial volume is compared to the link capacity. If the initial hour 8 volume exceeds capacity, then the hour 8 volume is set to capacity (or a moderated capacity value in the case of freeways) and the excess volume portion is added to the volume in periods occurring before *and* after the AM peak hour (hours 7 and 9) on a 50/50 basis.
Step 2:	The PM peak hour (hour 18) initial volume is compared to the link capacity. If the initial volume exceeds capacity, then the hour 18 volume is set to capacity (or a moderated capacity value in the case of freeways) and the excess volume portion is added to the volume in periods occurring before *and* after the PM peak hour (hours 17 and 19) on a 50/50 basis.
Step 3:	The volume occurring during pre-AM peak hours (hours 1 to 7) are sequentially checked against the link capacity as in steps 1 and 2, and adjusted (if necessary) in a backward-moving fashion. If the volume occurring in hour 7 exceeds capacity then the hour 7 volume is set to capacity and the excess volume portion is added to the volume of hour 6 volume, and so on. There is no volume spreading at hour 1, even for rare cases where the resulting hour 1 volume exceeds capacity.
Step 4:	The volume occurring during post-AM peak hours (hours 9 to 13) are sequentially checked against the link capacity as in steps 1 and 2, and adjusted (if necessary) in a forward-moving fashion. If the volume occurring in hour 9 exceeds capacity then the hour 9 volume is set to capacity and the excess volume portion is added to the volume of hour 10 volume, and so on. There is no volume spreading at hour 13 (the midday hour), even for rare cases where the resulting hour 13 volume exceeds capacity.
Step 5:	The volume occurring during pre-PM peak hours (hours 13 to 17) are sequentially checked against the link capacity as in steps 1 and 2, and adjusted (if necessary) in a backward-moving fashion. If the volume occurring in hour 17 exceeds capacity then the hour 17 volume is set to capacity and the excess volume portion is added to the volume of hour 16 volume, and so on. There is no volume spreading at hour 13 (the midday hour), even for rare cases where the resulting hour 13 volume exceeds capacity.
Step 6:	The volume occurring during post-PM peak hours (hours 19 to 24) are sequentially checked against the link capacity as in steps 1 and 2, and adjusted (if necessary) in a forward-moving fashion. If the volume occurring in hour 19 exceeds capacity then the hour 19 volume is set to capacity and the excess volume portion is added to the volume of hour 20 volume, and so on. There is no volume spreading at hour 24, even for rare cases where the resulting hour 24 volume exceeds capacity.

Table 13
Freeway Through-Put Capacities Under Congested Conditions

V/C	Fwy AT1	Fwy AT2	Fwy AT3	Fwy AT4	Fwy AT5	FWY AT6	FWY AT7
1.00	1500	1600	1800	1800	2000	2000	2100
1.20	1433	1528	1719	1719	1911	1911	2006
1.40	1366	1457	1639	1639	1821	1821	1912
1.60	1366	1457	1639	1639	1821	1821	1912
1.80	1366	1457	1639	1639	1821	1821	1912
2.00	1366	1457	1639	1639	1821	1821	1912
2.25	1366	1457	1639	1639	1821	1821	1912
99.99	1366	1457	1639	1639	1821	1821	1912

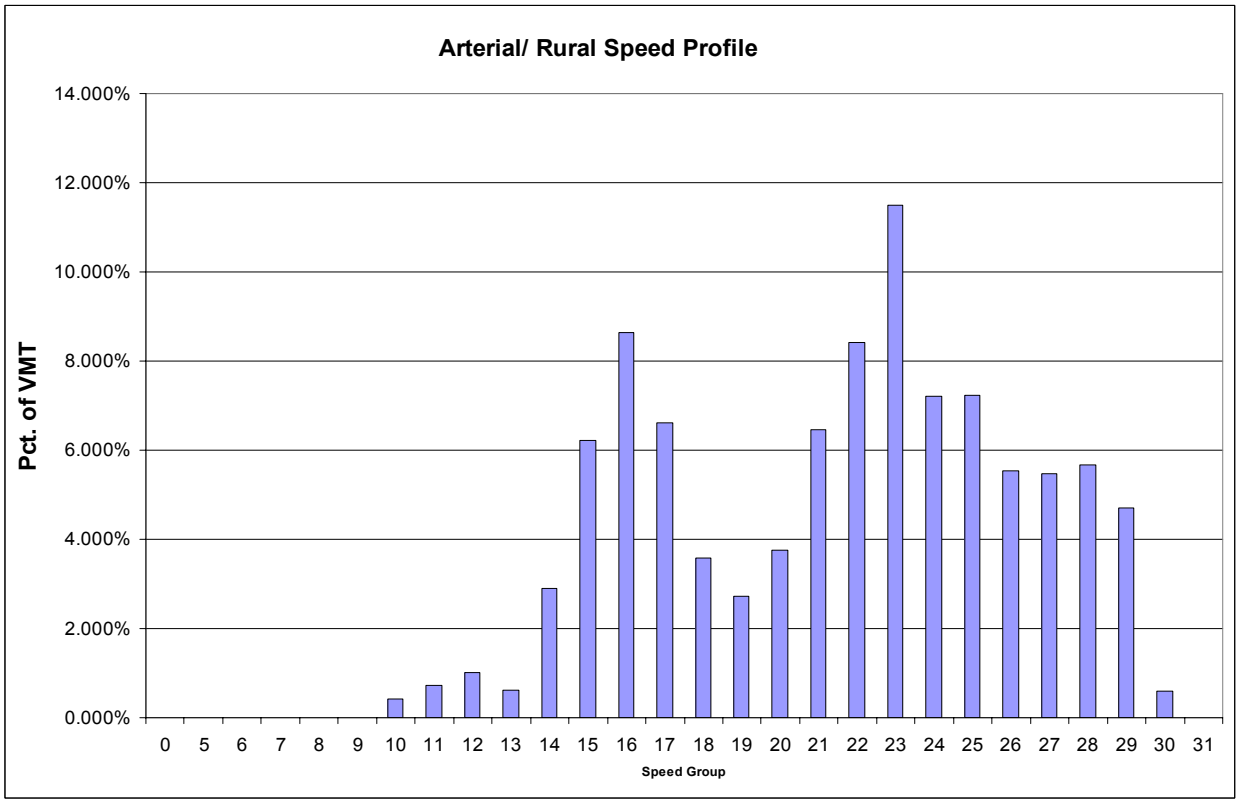
4.3 Local Emissions

Local (or off-network) emissions are those generated on smaller facilities that are not included in the regional network. Local emissions are associated with VOC/HC, CO, NOx, and $PM_{2.5}$ pollutants and are computed at jurisdiction level by applying per-mile emission rates to the local VMT. However, the local emission calculation requires that local VMT be further allocated among urban and rural categories, as the emission calculation is different. The calculation steps are listed below:

1) The small file containing base year jurisdictional modeled network VMT, observed local VMT, and base year urban/rural local VMT percentages is prepared.
2) Modeled network VMT for the analysis year is summarized at jurisdiction level and merged with the base year information, above.
3) Local urban and rural VMT is estimated for the analysis year. First, local VMT is estimated by applying a growth factor to the base year (2002) local VMT. The growth factor is based on modeled VMT change between the base year and analysis year. Next, the base year urban and rural percentages are applied to the local VMT computed for the analysis year.
4) Local $PM_{2.5}$ emissions are computed based on total (urban and rural) VMT.
5) Urban/local NOx, CO, and VOC emissions are computed using the single local/stabilized emission factor produced by Mobile. This factor is based on an assumed speed of 12.9 mph.
6) Rural/local NOx, CO, and VOC emissions are computed by first allocating the rural VMT among speed 'bins' using an assumed average speed profile. The profile reflects a VMT distribution for rural jurisdictions that was summarized from previous modeling files. The profile, shown on Figure 1, was determined to be a reasonable basis for local facilities speeds in rural areas. Secondly, rural arterial rates are applied to the VMT on the basis of speed.

Previous local emissions calculations have been made using the single (12.9 mph-based) local rate. It is believed that the use of arterial rates at higher speed levels will yield a more accurate emission result for rural areas of the region.

Figure 1:



5.0 Post-Processor Program Steps

The post-processor is executed when provided with: 1) travel demand output files, 2) emission rate files by jurisdiction as described above, and 3) a small text file containing jurisdiction level VMT information. The travel demand output files include the final iteration loaded highway network (I6HWY.NET) and three vehicle trip tables corresponding to the AM, PM, and off peak periods (I6AM.VTT, I6PM.VTT, I6OP.VTT). The jurisdictional VMT file (Base_Juris_VMT.txt) is a pre-existing file containing base (2002) year estimates of network-based VMT, local (or off-network) VMT, and the estimated proportion of network VMT that is urban and rural. This information is used to develop future year local VMT that is urban and local. All VMT information corresponds only to jurisdictions within the MSA as defined above.

The post-processor is normally executed using batch files that are called in a command prompt window. A list of subdirectories established to execute post-processor work is shown on Table 14. The batch file used for a single-season post-processor execution (e.g., ozone or wintertime

model runs) is named EMISS.BAT. The batch file used for a three-season post-processor execution is named 3_Season_EMISS.BAT. Single-season and three-season flowcharts are shown on Figures 2 and 3. The batch files contain environmental or global variables useful for executing different scenarios. A list defining those environmental variables is shown in Table 15.

The batch files call five TP+ scripts which are summarized below. The TP+ script names are in parenthesis:

1) Trip Table Formatting (AQTRIPS.S): AM, PM, and off-peak trip tables produced by the travel demand model are read. The program produces zonal trip-ends for each of the three time periods. It also produces a file containing the proportion of daily vehicle trips from/to each of the 27 emission areas. Since the trip proportions are developed with daily trips, the proportion in the *i/j* direction is generally the same as that in the *j/i* direction.

2) Time-of-Day Trip-Ends Program (ZONESPRD.S): The program reads the zonal origins and destinations, described above, and apportions them among discrete hourly periods.

3) Jurisdiction level VMT Formatting Program (Pre_Local.S): The program summarizes modeled VMT at the jurisdiction level and writes a summary file to be used in the LOCAL.S program.

4) Time-of-Day VMT and speeds program (PEAK_SPREAD.S for the single season post-processor or PEAK_SPREAD_Seasonal.S for the three-season post-processor): The program reads the AM, PM, and off-peak network link volumes produced by the travel demand model. It produces hourly volumes, VMT, and restrained speed for each highway link. The hourly VMT and highway speeds are sensitive to seasonal adjustment factors.

5) Running Emissions Program (RUNNING.S for the single season post-processor or RUNNING_Seasonal.S for the three-season post-processor): The program computes hot stabilized emissions on a link-by-link and hour-by-hour basis. It reads 1) the hourly link VMT and highway speed files developed above, 2) MOBILE6-based running emission rates which are provided on the basis of speed, and 3) the county level trip proportions file. VOC, CO, and NOx emissions are produced from the program ($PM_{2.5}$ emissions are additionally produced from the three-season run).

6) Start/Soak Emissions Program (STRT_SKR.S for the single season post-processor or STRT_SKR_Seasonal.S for the three season post-processor): The program applies emission rates to the trip- ends to compute start-up and soaking emissions on a zone-by-zone and hour-by-hour basis. The program reads: 1) hourly trip-ends, 2) the MOBILE6-generated cold/hot starting rates, and 3) the county-level trip proportions file. Note that trip tables are not affected by seasonal adjustments. VOC, CO, and NOx emissions are produced from the program.

7) Local Emissions Programs (LOCAL.S and pre-local.s for the single season post-processor or LOCAL_Seasonal.S for the three-season post-processor): The program computes hot stabilized

emissions on a link-by-link and hour-by-hour basis. It reads 1) a file containing forecasted local/urban and local/rural VMT at the jurisdiction level and 2) $PM_{2.5}$ and Arterial NOx stabilized rates specially developed for local roads. Note that the forecasted VMT is produced by a program called pre-local.s which, in turn, is based on 2002 observed data. VOC, CO, and NOx emissions are produced from the program ($PM_{2.5}$ emissions are additionally produced from the three-season run).

8) The post processor includes several TP+ programs which are used to facilitate the creation of technical documentation. The emission calculation scripts (Running.S, Strt_Skr.S, and Local.S) produce text files containing basic summaries. An additional script was added (Report.S) to read different summary files and to combine them into a single overall summary file.

.

Table 14 Post-Processor Subdirectories

Description of Contents	Subdirectory
Locations of Post processor Executions / Outputs	
2002 Ozone Season VOC, CO, Nx	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\2002_ozone
2002 Annual Nx Precursor, $PM_{2.5}$	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\2002_annual
2010 Ozone Season VOC, CO, Nx	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\2010_ozone
2010 Winter Season VOC, CO, Nx	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\2010_WCO
2010 Annual Nx Precursor, $PM_{2.5}$	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\2010_annual
2020 Ozone Season VOC, CO, Nx	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\2020_ozone
2020 Winter Season VOC, CO, Nx	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\2020_WCO
2020 Annual Nx Precursor, $PM_{2.5}$	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\2020_annual
2030 Ozone Season VOC, CO, Nx	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\2030_ozone
2030 Winter Season VOC, CO, Nx	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\2030_WCO
2030 Annual Nx Precursor, $PM_{2.5}$	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\2030_annual
Emission Rate Inputs	
2002 VOC, CO, Nx rates Ozone Season	I:\CGV2_2_Aug_07_Conformity2008\EMISSIONS\M6RATES\2002\
2002 VOC, CO, Nx, PM rates–3 Seasons	I:\CGV2_1D_50_SEP_07_PM_SIP\M6RATES\2002\
2010 VOC, CO, Nx rates Ozone Season	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\m6rates\2010_ozone
2010 VOC, CO, Nx rates– Winter Season	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\m6rates\2010_WCO
2010 VOC, CO, Nx, PM rates–3 Seasons	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\m6rates\2010_annual
2020 VOC, CO, Nx rates Ozone Season	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\m6rates\2020_ozone
2020 VOC, CO, Nx rates– Winter Season	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\m6rates\2020_WCO
2020 VOC, CO, Nx, PM rates–3 Seasons	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\m6rates\2020_annual
2030 VOC, CO, Nx rates Ozone Season	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\m6rates\2030_ozone
2030 VOC, CO, Nx rates– Winter Season	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\m6rates\2030_WCO
2030 VOC, CO, Nx, PM rates–3 Seasons	I:\CGV2_2_May_09_Conformity2010\EMISSIONS\m6rates\2030_annual
Travel Model Inputs	
2002 Travel Model Files	M:\model_app\CGV2_2_Conformity2010\2002_Conf
2010 Travel Model Files	M:\model_app\CGV2_2_Conformity2010\2010_Conf
2020 Travel Model Files	M:\model_app\CGV2_2_Conformity2010_SA\2020_Final
2030 Travel Model Files	M:\model_app\CGV2_2_Conformity2010_SA\2030_Final

Figure 2

Ozone Season / Wintertime Emissions Data Processing Flowchart:
Job stream executed once with one set of environment variables.

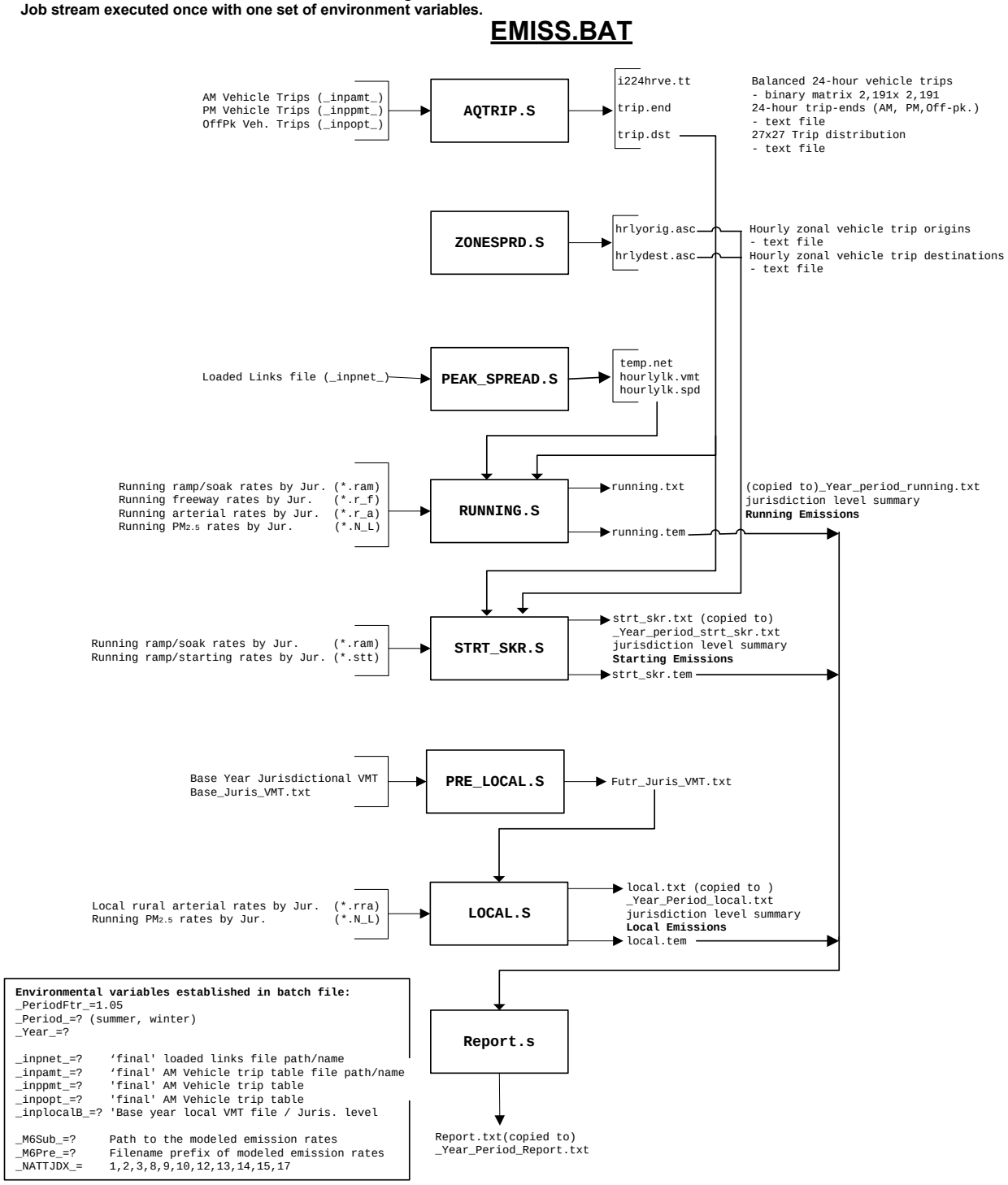


Figure 3

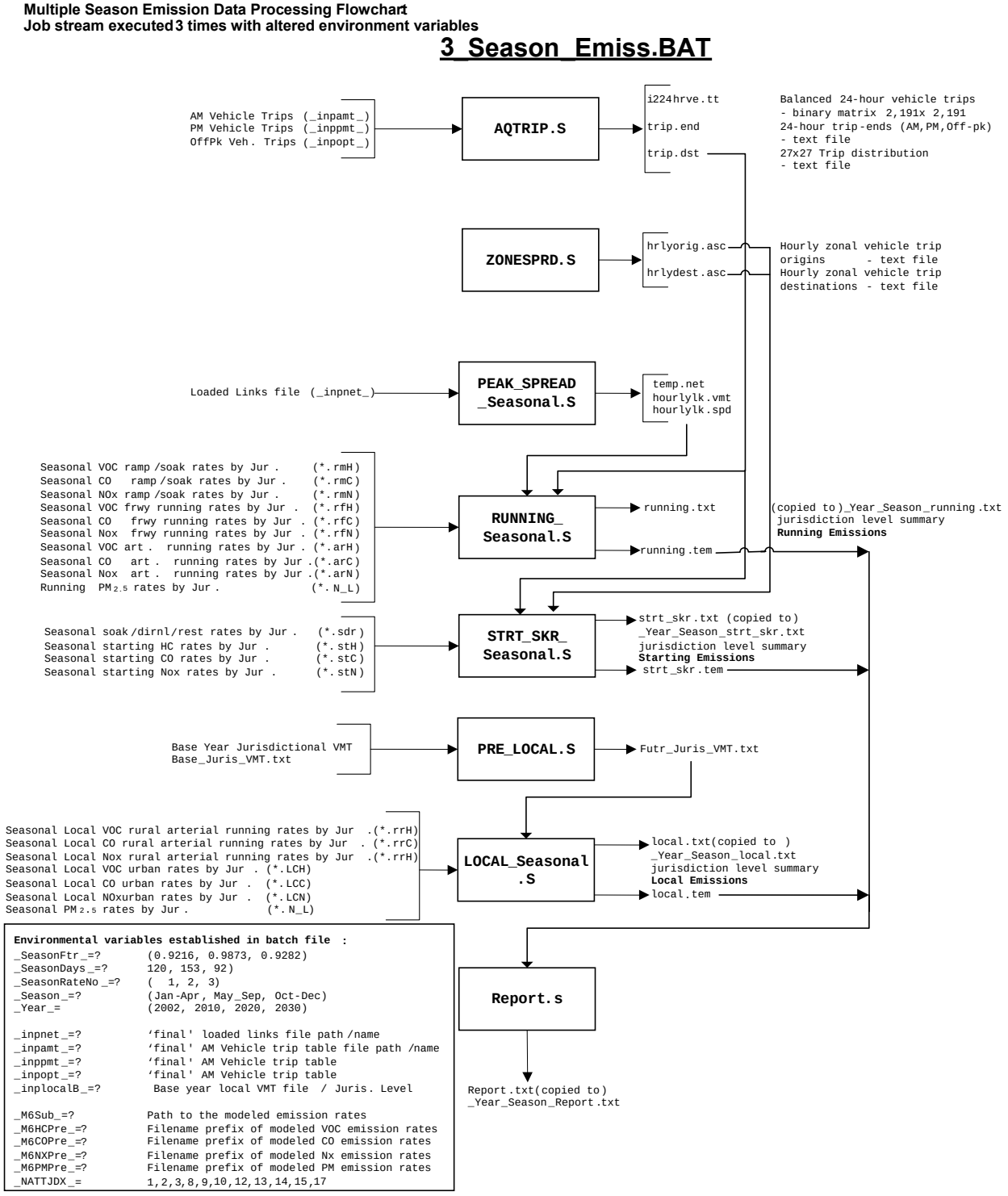

Multiple Season Emission Data Processing Flowchart
Job stream executed 3 times with altered environment variables
3_Season_Emiss.BAT
AM Vehicle Trips (_inpamt_)
PM Vehicle Trips (_inppmt_)
OffPk Veh. Trips (_inpopt_)
AQTRIP.S
i224hrve.tt
trip.end
trip.dst
Balanced 24-hour vehicle trips - binary matrix 2,191x 2,191
24-hour trip-ends (AM,PM,Off-pk) - text file
27x27 Trip distribution - text file
ZONESPRD.S
hrlyorig.asc
hrlydest.asc
Hourly zonal vehicle trip origins - text file
Hourly zonal vehicle trip destinations - text file
Loaded Links file (_inpnet_)
PEAK_SPREAD _Seasonal.S
temp.net
hourlylk.vmt
hourlylk.spd
Seasonal VOC ramp/soak rates by Jur. (*.rmH)
Seasonal CO ramp/soak rates by Jur. (*.rmC)
Seasonal NOx ramp/soak rates by Jur. (*.rmN)
Seasonal VOC frwy running rates by Jur. (*.rfH)
Seasonal CO frwy running rates by Jur. (*.rfC)
Seasonal Nox frwy running rates by Jur. (*.rfN)
Seasonal VOC art. running rates by Jur. (*.arH)
Seasonal CO art. running rates by Jur. (*.arC)
Seasonal Nox art. running rates by Jur. (*.arN)
Running PM2.5 rates by Jur. (*.N_L)
RUNNING_ Seasonal.S
running.txt
running.tem
(copied to)_Year_Season_running.txt jurisdiction level summary
Running Emissions
Seasonal soak/dirnl/rest rates by Jur. (*.sdr)
Seasonal starting HC rates by Jur. (*.stH)
Seasonal starting CO rates by Jur. (*.stC)
Seasonal starting Nox rates by Jur. (*.stN)
STRT_SKR_ Seasonal.S
strt_skr.txt (copied to) _Year_Season_strt_skr.txt jurisdiction level summary
Starting Emissions
strt_skr.tem
Base Year Jurisdictional VMT
Base_Juris_VMT.txt
PRE_LOCAL.S
Futr_Juris_VMT.txt
Seasonal Local VOC rural arterial running rates by Jur .(*.rrH)
Seasonal Local CO rural arterial running rates by Jur . (*.rrC)
Seasonal Local Nox rural arterial running rates by Jur .(*.rrH)
Seasonal Local VOC urban rates by Jur . (*.LCH)
Seasonal Local CO urban rates by Jur . (*.LCC)
Seasonal Local NOxurban rates by Jur . (*.LCN)
Seasonal PM2.5 rates by Jur. (*.N_L)
LOCAL_Seasonal .S
local.txt(copied to) _Year_Season_local.txt jurisdiction level summary
Local Emissions
local.tem
Environmental variables established in batch file :
SeasonFtr=? (0.9216, 0.9873, 0.9282)
SeasonDays=? 120, 153, 92)
SeasonRateNo=? (1, 2, 3)
Season=? (Jan-Apr, May_Sep, Oct-Dec)
Year= (2002, 2010, 2020, 2030)
inpnet=? 'final' loaded links file path/name
inpamt=? 'final' AM Vehicle trip table file path /name
inppmt=? 'final' AM Vehicle trip table
inpopt=? 'final' AM Vehicle trip table
inplocalB=? Base year local VMT file / Juris. Level
M6Sub=? Path to the modeled emission rates
M6HCPre=? Filename prefix of modeled VOC emission rates
M6COPre=? Filename prefix of modeled CO emission rates
M6NXPre=? Filename prefix of modeled Nx emission rates
M6PMPre=? Filename prefix of modeled PM emission rates
NATTJDX= 1,2,3,8,9,10,12,13,14,15,17
Report.s
Report.txt(copied to) _Year_Season_Report.txt

Table 15: List of Environmental/Global variables

Global Variable	Application	Description
NATTJDX	Single Season & Annual	Designate jurisdiction to be included in the final summaries (27 jur numbering system.
INPnet	Single Season & Annual	Location of input subdirectory - Network
INPamt	Single Season & Annual	Location of input subdirectory - AM peak vehicle trips
INPpmt	Single Season & Annual	Location of input subdirectory - PM peak vehicle trips
INPopt	Single Season & Annual	Location of input subdirectory - Off-Peak peak vehicle trips
INPlocalB	Single Season & Annual	Location of Base Jurisdiction VMT text file - provided by user
INPlocalF	Single Season & Annual	Location of future year Jurisdiction VMT text file - computed by pre_local.s program
M6Sub	Single Season & Annual	Location of Mobile 6 Emission rates file subdirectory
M6Pre	Single Season Only	File naming prefix for Mobile 6 Emission rates
M6HCPre	Annual Only	File naming prefix for Mobile 6 Emission rates for Hydrocarbons and Volatile Organic Compounds
M6COPre	Annual Only	File naming prefix for Mobile 6 Emission rates for Carbon Monoxide
M6NXPre	Annual Only	File naming prefix for Mobile 6 Emission rates for Nitrogen Oxides
M6PMPre	Annual Only	File naming prefix for Mobile 6 Emission rates for Particulate Matter size < 2.5 micrometers
Season	Annual Only	Define season of analysis: Jan-Apr, May-Sep, Oct-Dec
SeasonFtr	Annual Only	Seasonal conversion factor applied to AAWT to make it consistent with the seasonal emission rates. (Jan-Apr: 0.9216, May-Sep: 0.9873, Oct-Dec: 0.9282)
SeasonDays	Annual Only	Number of days in each season. (Jan-Apr: 120, May-Sep: 153, Oct-Dec: 92)
SeasonRateNo	Annual Only	An index used in rate lookups. (1=Jan-Apr, 2=May-Sep, 3=Oct-Dec)
PeriodFtr	Single Season Only	Seasonal conversion factor applied to network link VMT to make it consistent with the seasonal emission rates.
Period	Single Season Only	Period label in summary reports. For example Summer (Ozone), Winter or

APPENDIX F

Vehicle-related Emissions Calculations

Memo

To: Air Quality Files

From: Erin Morrow, MWCOG/DTP

Date: October 7, 2010

Re: Vehicle Related Emissions: Diurnal and Resting Loss - 2010 CLRP & FY2011-FY2016 TIP

This memo illustrates the calculation of Diurnal and Resting Loss emissions associated with the 2010 CLRP & FY2011-2016 TIP. A detailed description of work regarding emissions factor updates using Mobile6 is contained in a report by Maureen Mullen of E.H. Pechan & Associates, dated January 27, 2003. Adopting the approach developed by E.H. Pechan & Associates emissions rates were developed using version 6.2 of mobile model.

There were no updates to either the vehicle forecast component or the procedure used to calculate these emissions. Vehicle ownership forecasts reflect trends through time for each jurisdiction; using the 2008 vehicle registration data, the slope of the forecast trend line in each jurisdiction was maintained but revised to 'intercept' 2008 conditions. A detailed description of this process can be found in a June 9, 2009 memo from Daivamani Sivasailam in Appendix D. This approach is illustrated on the attached graph for Prince George's County. Table 1 shows summary of vehicle registration forecasts. Also included is a copy of a spreadsheet displaying the calculation of diurnal and resting loss emissions for year 2011 (Table 2). Diurnal and Resting Loss emissions for other milestone years 2002, 2020, 2030, and 2040 are available in the Air Quality Conformity files.

The calculation of these emissions is an off-line process utilizing a spreadsheet format with a very basic calculation:

Number of vehicles by jurisdiction X jurisdiction emissions factor = Emissions

Attachments (3)

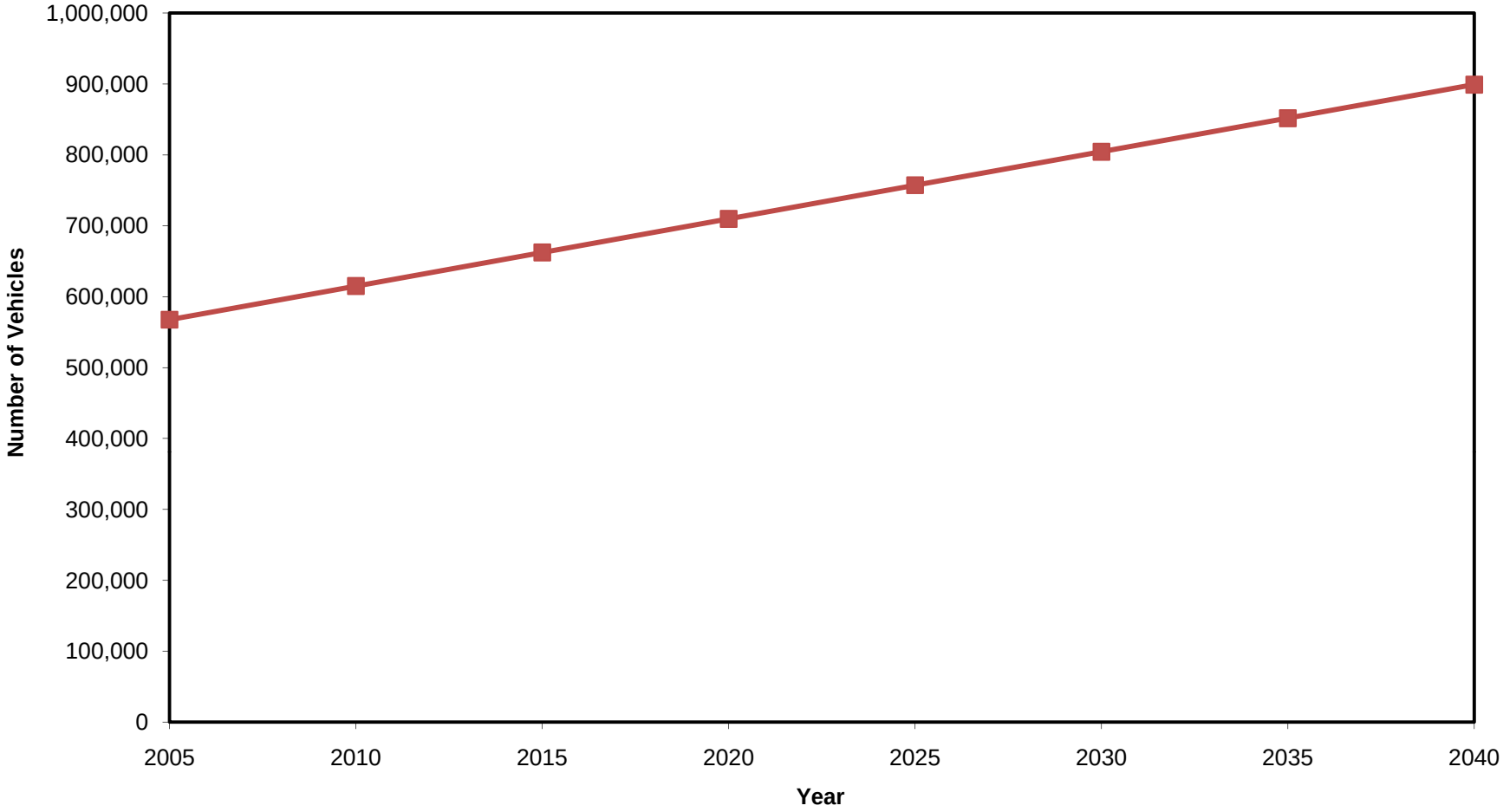
.

Table 1
VEHICLE REGISTRATION FORECASTS BY JURISDICTION (USING 2008 VIN)
REGISTRATION ADJUSTED TO YEAR 2008

Jurisdiction	2005	2008	2011	2020	2030	2040
District of Columbia	239,919	**243,164**	246,409	256,143	266,959	277,775
Calvert	76,827	**87,093**	97,359	128,155	162,374	196,592
Charles	119,186	**129,719**	140,252	171,850	206,959	242,068
Frederick	198,819	**215,863**	232,907	284,039	340,852	397,665
Montgomery	661,659	**706,176**	750,693	884,245	1,032,636	1,181,027
Prince George's	567,652	**596,053**	624,454	709,657	804,327	898,997
Alexandria	129,001	**130,742**	132,483	137,706	143,509	149,312
Arlington	135,070	**136,888**	138,706	144,159	150,218	156,278
Fairfax	788,113	**831,961**	875,809	1,007,352	1,153,511	1,299,669
Loudoun	222,115	**243,902**	265,689	331,049	403,671	476,294
Prince William	295,047	**318,329**	341,611	411,459	489,067	566,675
Stafford	104,053	**115,721**	127,389	162,392	201,285	240,178
Total	3,537,462	**3,755,611**	3,973,760	4,628,206	5,355,368	6,082,530

The above forecasts are based on 2008 vehicle registration data decoded from raw VIN numbers provided by District of Columbia DMV, Maryland MVA, and Virginia DMV.
2005 registration data were adjusted based on the 2008 numbers.

Vehicle Registration for Prince George's County by Year



MVA 2008 Vehicle Registration data

Table 2
DIURNAL AND RESTING LOSS EMISSIONS
VOC
YEAR 2011

		FACTORS		EMISSIONS	
JURISDICTION	TOTAL VEHICLES	DIURNAL (gm/day/veh)	RESTGL (gm/hr/veh)	DIURNAL (Tons/day)	RESTGL (Tons/day)
District of Columbia	246,409	0.392	1.973	0.104	0.525
Montgomery	750,693	0.326	1.621	0.264	1.315
Prince Georges	624,454	0.429	2.174	0.289	1.467
Frederick	232,907	0.430	2.184	0.108	0.549
Charles	140,252	0.448	2.247	0.068	0.340
Calvert	97,359	0.449	2.320	0.047	0.244
Arlington	138,706	0.346	1.720	0.052	0.258
Alexandria	132,483	0.291	1.443	0.042	0.207
Fairfax	875,809	0.337	1.636	0.319	1.548
Loudoun	265,689	0.326	1.537	0.094	0.441
Prince William	341,611	0.372	1.836	0.137	0.678
Stafford	127,389	0.424	2.224	0.058	0.306
MSA - SUBTOTAL	3,973,761			1.583	7.877
MODELED AREA					
TOTAL	3,973,761			1.583	7.877

Note: 98% of vehicles, which are gas operated, are used to compute Diurnal and Resting Loss emissions
Based on 2008 vehicle registration

APPENDIX G

Auto Access Emissions Calculations

Memorandum

To: Air Quality Files

From: Eulalie G. Lucas
Transportation Engineer

Date: 10/12/2010

Re: Off- Network Emissions Calculations: Auto Access to transit

---

Introduction:

This memo documents emissions associated with auto access to transit for the following: 8-Hour Ozone season precursors VOC and NO_X, Wintertime CO, direct $PM_{2.5}$, and precursor NO_X. Travel data associated with these emission calculations reflect network updates as part of the air quality conformity analysis of the 2010 Constrained Long Range Plan (CLRP) and the FY 2011-2016 Transportation Improvement Plan (TIP). Procedures used for these calculations are consistent with those used for the Severe State Implementation Plan (SIP) submittal. The following paragraphs describe these procedures and updates.

Auto Access to transit emissions:

VMT Mix percent associated with auto access to transit includes only light duty trucks (LDGT2) and not heavy duty trucks as with network VMT mix percents. The LDGT2 weight category includes Ford Navigators, which are used by some commuters to transit and park and ride lots.

Methodology:

There were no changes to the approach used in previous analysis and the following paragraphs describe the steps applied.

The procedure used in the calculation of emissions associated with auto access to transit is an off-line process. The approach is very simple; it involves the application of an emissions rate to the various components of travel, i.e. start up, running (35 mph for arterials and 45 mph for freeways) and hot soak. For trips originating outside the MSA, only those miles within the MSA are used in the calculation. Forecasting for 'out years' is based on growth rates developed from total internal modeled transit trips. The growth rates are then applied to the MWCOG/DTP 2002 Park and Ride Utilization inventory data.

Separate emissions rates are applied by components of a trip cycle i.e. a start up rate for trip origins, a running rate for the running component and hot soak rate for trip destinations. These three rates represent an average of the twelve composite rates for jurisdictions in the non-attainment area and for seven MOBILE6 vehicle types, HDD fractions were zeroed out of the VMT Mix. This adjustment was made based on the assumption that heavy duty vehicles such as tractor trailers are typically not used by commuters for trips to and from transit locations or to

park and ride lots, however as mentioned in the above paragraph Light Duty Trucks are included in the VMT Mix percents.

As with the other components of the annual emissions inventory for fine particles, seasonal adjustments to travel data associated were applied. Totals for each of the three seasons were then added to provide an annual total for each pollutant.

Results:

There were no significant changes to emission rates therefore any changes in emission estimates are related to changes in network assumptions. Total Auto Access Emissions by year are listed in Exhibits 18 and 19 of the AQC report for annual emissions, Exhibits 17A and 17B for ozone season and Exhibit 20 for Winter CO. The attached exhibits show detailed results for 2011 for pollutants that are part of this analysis. Results for all other analysis years are contained in the air quality conformity files and are available upon request, this year's analysis was extended to 2040.

C9 auto access documentation.doc

Table
2011 VOC AIR QUALITY EMISSIONS INVENTORY
AUTO ACCESS TO TRANSIT
(8-HOUR OZONE AREA)
2010 CLRP/FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION	2002				2011	2011	AVERAGE	2002	2010	EMISSIONS									
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	VMT	ARTERIAL %	FREEWAY %	ARTERIAL VMT	FREEWAY VMT	COLD START Rate (gm/mile)	RUNNING Arterial Rate (gm/mile)	RUNNING Freeway Rate (gm/mile)	RUNNING Total (tons/day) Running	HOT SOAK Rate (gm/mile)	TOTAL
					1.22	1.22								0.92114167	0.165775	0.147525		0.53805833	
COMMUTER RAIL LOTS																			
BRUNSWICK 25%	25	305	102	**407**	373	124	7.5	3052.5	3,726	57	43	2,124	1,602	0.0009	0.0008	0.0005	0.0013	0.0005	0.0027
PT OF ROCKS 25%	25	204	68	**272**	249	83	7.5	2040	2,490	57	43	1,419	1,071	0.0006	0.0005	0.0003	0.0009	0.0003	0.0018
DICKERSON	0	15	0	**15**	18	0	7.5	112.5	137	57	43	78	59	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
BARNESVILLE	0	46	0	**46**	56	0	7.5	345	421	57	43	240	181	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003
GERMANTOWN	0	386	0	**386**	471	0	7.5	2895	3,534	57	43	2,014	1,519	0.0010	0.0007	0.0005	0.0012	0.0006	0.0027
MET GROVE	0	352	0	**352**	430	0	7.5	2640	3,222	57	43	1,837	1,386	0.0009	0.0007	0.0005	0.0011	0.0005	0.0025
WAS GROVE	0	15	0	**15**	18	0	7.5	112.5	137	57	43	78	59	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
GARRETT PARK	0	22	0	**22**	27	0	7.5	165	201	57	43	115	87	0.0001	0.0000	0.0000	0.0001	0.0000	0.0002
BOWIE 50%	50	188	188	**375**	229	229	7.5	2812.5	3,433	57	43	1,957	1,476	0.0007	0.0007	0.0005	0.0012	0.0004	0.0023
SEABROOK 15%	15	224	40	**264**	274	48	7.5	1980	2,417	57	43	1,378	1,039	0.0006	0.0005	0.0003	0.0008	0.0004	0.0018
KENSINGTON	0	45	0	**45**	55	0	7.5	337.5	412	57	43	235	177	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003
LAUREL 30%	30	209	90	**299**	255	109	7.5	2242.5	2,737	57	43	1,560	1,177	0.0006	0.0006	0.0004	0.0010	0.0004	0.0020
GAITHESBURG	0	280	0	**280**	342	0	7.5	2100	2,563	57	43	1,461	1,102	0.0007	0.0005	0.0004	0.0009	0.0004	0.0020
BERWYN HEIGHTS	0	30	0	**30**	37	0	4.5	135	165	57	43	94	71	0.0001	0.0000	0.0000	0.0001	0.0000	0.0002
RIVERDALE	0	65	0	**65**	79	0	4.5	292.5	357	57	43	204	154	0.0002	0.0001	0.0000	0.0001	0.0001	0.0004
								0	0										
METRO RAIL LOTS								0	0										
ADDISON ROAD 40%	40	791	527	**1318**	965	644	7.5	9885	12,066	57	43	6,877	5,188	0.0026	0.0025	0.0017	0.0042	0.0015	0.0083
ARCHIVES	0	12	0	12	15	0	4.5	54	66	57	43	38	28	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
ARLING	0	10	0	10	12	0	4.5	45	55	57	43	31	24	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
BALLSTON	0	1175	0	1175	1434	0	4.5	5287.5	6,454	57	43	3,679	2,775	0.0029	0.0013	0.0009	0.0022	0.0017	0.0069
BENN.RD	0	520	0	520	635	0	4.5	2340	2,856	57	43	1,628	1,228	0.0013	0.0006	0.0004	0.0010	0.0008	0.0030
BETH	0	395	0	395	482	0	4.5	1777.5	2,170	57	43	1,237	933	0.0010	0.0005	0.0003	0.0008	0.0006	0.0023
BRADD RD	0	10	0	**10**	12	0	4.5	45	55	57	43	31	24	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
BROOKLAND	0	27	0	**27**	33	0	4.5	121.5	148	57	43	85	64	0.0001	0.0000	0.0000	0.0001	0.0000	0.0002
CHEVERLY	0	557	0	**557**	680	0	4.5	2506.5	3,059	57	43	1,744	1,316	0.0014	0.0006	0.0004	0.0011	0.0008	0.0033
CLARENDON	0	554	0	554	676	0	4.5	2493	3,043	57	43	1,734	1,308	0.0014	0.0006	0.0004	0.0011	0.0008	0.0032
CLEVELAND PK	0	366	0	366	447	0	4.5	1647	2,010	57	43	1,146	864	0.0009	0.0004	0.0003	0.0007	0.0005	0.0021
COURT HOUSE	0	256	0	256	312	0	4.5	1152	1,406	57	43	801	605	0.0006	0.0003	0.0002	0.0005	0.0004	0.0015
CRYSTAL CITY	0	347	0	347	424	0	4.5	1561.5	1,906	57	43	1,086	820	0.0009	0.0004	0.0003	0.0007	0.0005	0.0020
DEANWOOD	0	194	0	**194**	237	0	4.5	873	1,066	57	43	607	458	0.0005	0.0002	0.0001	0.0004	0.0003	0.0011
DUN LORING 10%	10	1220	136	**1355**	1489	165	4.5	6097.5	7,443	57	43	4,242	3,200	0.0032	0.0016	0.0010	0.0026	0.0019	0.0076
DUPONT CIRCLE	0	165	0	165	201	0	4.5	742.5	906	57	43	517	390	0.0004	0.0002	0.0001	0.0003	0.0002	0.0010
EASTERN MKT	0	178	0	178	217	0	4.5	801	978	57	43	557	420	0.0004	0.0002	0.0001	0.0003	0.0003	0.0010
EAST FALLS CH	0	442	0	**442**	540	0	4.5	1989	2,428	57	43	1,384	1,044	0.0011	0.0005	0.0003	0.0008	0.0006	0.0026
EIS	0	352	0	352	430	0	4.5	1584	1,933	57	43	1,102	831	0.0009	0.0004	0.0003	0.0007	0.0005	0.0021
FARRAGUT NORTH	0	102	0	102	125	0	4.5	459	560	57	43	319	241	0.0003	0.0001	0.0001	0.0002	0.0001	0.0006
FARRAGUT WEST	0	221	0	221	270	0	4.5	994.5	1,214	57	43	692	522	0.0005	0.0003	0.0002	0.0004	0.0003	0.0013
FEDERAL CENTER	0	75	0	75	92	0	4.5	337.5	412	57	43	235	177	0.0002	0.0001	0.0001	0.0001	0.0001	0.0004
FEDERAL TRI	0	54	0	54	66	0	4.5	243	297	57	43	169	128	0.0001	0.0001	0.0000	0.0001	0.0001	0.0003
FOGGY	0	102	0	102	125	0	4.5	459	560	57	43	319	241	0.0003	0.0001	0.0001	0.0002	0.0001	0.0006
FORT TROTTEN	0	445	0	**445**	543	0	4.5	2002.5	2,444	57	43	1,393	1,051	0.0011	0.0005	0.0003	0.0009	0.0006	0.0026
FRH.HEIGHTS	0	679	0	679	829	0	4.5	3055.5	3,730	57	43	2,126	1,604	0.0017	0.0008	0.0005	0.0013	0.0010	0.0040
GALLERY PLACE	0	124	0	124	151	0	4.5	558	681	57	43	388	293	0.0003	0.0001	0.0001	0.0002	0.0002	0.0007
GROSVENOR	0	716	0	**716**	874	0	4.5	3222	3,933	57	43	2,242	1,691	0.0018	0.0008	0.0006	0.0014	0.0010	0.0042
HUNT NORTH 40%	40	1873	1249	**3122**	2286	1524	7.5	23415	28,580	57	43	16,291	12,290	0.0062	0.0060	0.0040	0.0100	0.0036	0.0198
JUD SQUARE	0	110	0	110	134	0	4.5	495	604	57	43	344	260	0.0003	0.0001	0.0001	0.0002	0.0002	0.0006
KING ST	0	30	0	**30**	37	0	4.5	135	165	57	43	94	71	0.0001	0.0000	0.0000	0.0001	0.0000	0.0002
								0	0										
								0	0										
LANDOVER 25%	25	1410	470	**1880**	1721	574	7.5	14100	17,210	57	43	9,810	7,401	0.0041	0.0036	0.0024	0.0060	0.0024	0.0125
L'ENFANT PLAZA	0	296	0	296	361	0	4.5	1332	1,626	57	43	927	699	0.0007	0.0003	0.0002	0.0006	0.0004	0.0017
MCPHERSON SQ	0	52	0	52	63	0	4.5	234	286	57	43	163	123	0.0001	0.0001	0.0000	0.0001	0.0001	0.0003
MEDICAL CENTER	0	14	0	**14**	17	0	4.5	63	77	57	43	44	33	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
METRO CENTER	0	177	0	177	216	0	4.5	796.5	972	57	43	554	418	0.0004	0.0002	0.0001	0.0003	0.0003	0.0010
MINNES	0	353	0	**353**	431	0	4.5	1588.5	1,939	57	43	1,105	834	0.0009	0.0004	0.0003	0.0007	0.0005	0.0021
NAT AIR	0	87	0	87	106	0	4.5	391.5	478	57	43	272	205	0.0002	0.0001	0.0001	0.0002	0.0001	0.0005
NEW CARROL 50%	50	1049	1049	**2097**	1280	1280	7.5	15727.5	19,197	57	43	10,942	8,255	0.0039	0.0040	0.0027	0.0067	0.0023	0.0129
PENTAGON	0	561	0	561	685	0	4.5	2524.5	3,081	57	43	1,756	1,325	0.0014	0.0006	0.0004	0.0011	0.0008	0.0033
PENTAGON CITY	0	381	0	381	465	0	4.5	1714.5	2,093	57	43	1,193	900	0.0009	0.0004	0.0003	0.0007	0.0006	0.0022

Table
2011 VOC AIR QUALITY EMISSIONS INVENTORY
AUTO ACCESS TO TRANSIT
(8-HOUR OZONE AREA)
2010 CLRP/FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION	2002				2011	2011	AVERAGE	2002	2010	EMISSIONS								
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	VMT	ARTERIAL %	FREEWAY %	ARTERIAL VMT	FREEWAY VMT	COLD START Rate (gm/mile)	RUNNING Arterial Rate (gm/mile)	RUNNING Freeway Rate (gm/mile)	RUNNING Total (tons/day) Running	HOT SOAK Rate (gm/mile)	TOTAL
					1.22	1.22								0.92114167	0.165775	0.147525		0.53805833	
COMMUTER RAIL LOTS																			
POTOMAC AVE	0	533	0	533	651	0	4.5	2398.5	2,928	57	43	1,669	1,259	0.0013	0.0006	0.0004	0.0010	0.0008	0.0031
ROCKVILLE	0	667	0	**667**	814	0	4.5	3001.5	3,664	57	43	2,088	1,575	0.0017	0.0008	0.0005	0.0013	0.0010	0.0039
ROSSLYN	0	356	0	356	435	0	4.5	1602	1,955	57	43	1,115	841	0.0009	0.0004	0.0003	0.0007	0.0005	0.0021
SHADY GROVE 10%	10	3903	434	**4337**	4764	529	7.5	32527.5	39,703	57	43	22,631	17,072	0.0102	0.0083	0.0056	0.0138	0.0060	0.0300
SILVER SPRING	0	44	0	**44**	54	0	4.5	198	242	57	43	138	104	0.0001	0.0001	0.0000	0.0001	0.0001	0.0003
SMITH MALL	0	120	0	120	146	0	4.5	540	659	57	43	376	283	0.0003	0.0001	0.0001	0.0002	0.0002	0.0007
STADIUM ARM	0	976	0	976	1191	0	4.5	4392	5,361	57	43	3,056	2,305	0.0024	0.0011	0.0007	0.0019	0.0014	0.0057
TAKOMA PK	0	146	0	**146**	178	0	4.5	657	802	57	43	457	345	0.0004	0.0002	0.0001	0.0003	0.0002	0.0009
TENLEYTON	0	17	0	**17**	21	0	4.5	76.5	93	57	43	53	40	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
TWINBROOK	0	1136	0	**1136**	1387	0	4.5	5112	6,240	57	43	3,557	2,683	0.0028	0.0013	0.0009	0.0022	0.0016	0.0066
UNION STAT	0	378	0	378	461	0	4.5	1701	2,076	57	43	1,183	893	0.0009	0.0004	0.0003	0.0007	0.0005	0.0022
VAN NESS	0	343	0	343	419	0	4.5	1543.5	1,884	57	43	1,074	810	0.0009	0.0004	0.0003	0.0007	0.0005	0.0020
VIENNA 25%	25	2798	933	**3731**	3416	1139	7.5	27982.5	34,155	57	43	19,469	14,687	0.0081	0.0071	0.0048	0.0119	0.0047	0.0247
VA SQUARE	0	642	0	642	784	0	4.5	2889	3,526	57	43	2,010	1,516	0.0016	0.0007	0.0005	0.0012	0.0009	0.0037
WEST FALLS CHURCH	0	2183	0	**2183**	2665	0	4.5	9823.5	11,991	57	43	6,835	5,156	0.0054	0.0025	0.0017	0.0042	0.0032	0.0127
WHITE FLINT	0	1633	0	1633	1993	0	4.5	7348.5	8,970	57	43	5,113	3,857	0.0040	0.0019	0.0013	0.0031	0.0024	0.0095
WOODLEY	0	68	0	68	83	0	4.5	306	374	57	43	213	161	0.0002	0.0001	0.0001	0.0001	0.0001	0.0004
RHODE ISLAND 30%	30	266	114	**380**	325	139	7.5	2850	3,479	57	43	1,983	1,496	0.0008	0.0007	0.0005	0.0012	0.0005	0.0025
								0	0										
BUS & CAR POOL LOTS								0	0										
								0	0										
CARTER BARRON	0	798	0	798	974	0	4.5	3591	4,383	57	43	2,498	1,885	0.0020	0.0009	0.0006	0.0015	0.0012	0.0047
PG PLAZA	0	47	0	47	57	0	4.5	211.5	258	57	43	147	111	0.0001	0.0001	0.0000	0.0001	0.0001	0.0003
PENN MAR SHOPP.	0	100	0	**100**	122	0	4.5	450	549	57	43	313	236	0.0002	0.0001	0.0001	0.0002	0.0001	0.0006
CAP PLAZA	0	100	0	**100**	122	0	4.5	450	549	57	43	313	236	0.0002	0.0001	0.0001	0.0002	0.0001	0.0006
EASTOVER	0	100	0	**100**	122	0	4.5	450	549	57	43	313	236	0.0002	0.0001	0.0001	0.0002	0.0001	0.0006
FOUR MILE RUN	0	28	0	**28**	34	0	4.5	126	154	57	43	88	66	0.0001	0.0000	0.0000	0.0001	0.0000	0.0002
SPRINGFIELD MALL	0	580	0	**580**	708	0	4.5	2610	3,186	57	43	1,816	1,370	0.0014	0.0007	0.0004	0.0011	0.0008	0.0034
SPRINGFIELD METH CH	0	48	0	**48**	59	0	4.5	216	264	57	43	150	113	0.0001	0.0001	0.0000	0.0001	0.0001	0.0003
FRED ARMORY	0	33	0	**33**	40	0	7.5	247.5	302	57	43	172	130	0.0001	0.0001	0.0000	0.0001	0.0000	0.0002
MYERSVILLE	0	65	0	**65**	79	0	7.5	487.5	595	57	43	339	256	0.0002	0.0001	0.0001	0.0002	0.0001	0.0005
ROSEMONT	0	45	0	**45**	55	0	7.5	337.5	412	57	43	235	177	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003
URBANA	0	193	0	**193**	236	0	7.5	1447.5	1,767	57	43	1,007	760	0.0005	0.0004	0.0002	0.0006	0.0003	0.0014
JEFFERSON	0	40	0	**40**	49	0	7.5	300	366	57	43	209	157	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003
NORBECK RD	0	248	0	**248**	303	0	7.5	1860	2,270	57	43	1,294	976	0.0006	0.0005	0.0003	0.0008	0.0004	0.0018
MONTROSE RD	0	650	0	**650**	793	0	7.5	4875	5,950	57	43	3,392	2,559	0.0016	0.0012	0.0008	0.0021	0.0009	0.0046
BRIGG CHENNY 50%	50	215	215	**430**	262	262	7.5	3225	3,936	57	43	2,244	1,693	0.0008	0.0008	0.0006	0.0014	0.0005	0.0026
COMUS ROAD	0	30	0	**30**	37	0	7.5	225	275	57	43	157	118	0.0001	0.0001	0.0000	0.0001	0.0000	0.0002
LAKEFOREST MALL	0	300	0	**300**	366	0	7.5	2250	2,746	57	43	1,565	1,181	0.0007	0.0006	0.0004	0.0010	0.0004	0.0021
BURTONSVILLE	0	500	0	**500**	610	0	7.5	3750	4,577	57	43	2,609	1,968	0.0012	0.0010	0.0006	0.0016	0.0007	0.0036
FORCEY MEM.	0	200	0	**200**	244	0	7.5	1500	1,831	57	43	1,044	787	0.0005	0.0004	0.0003	0.0006	0.0003	0.0014
TECH ROAD	0	155	0	**155**	189	0	7.5	1162.5	1,419	57	43	809	610	0.0004	0.0003	0.0002	0.0005	0.0002	0.0011
BELTWAY	0	265	0	**265**	323	0	7.5	1987.5	2,426	57	43	1,383	1,043	0.0007	0.0005	0.0003	0.0008	0.0004	0.0019
LAUREL VAN DUSEN	0	62	0	**62**	76	0	7.5	465	568	57	43	324	244	0.0002	0.0001	0.0001	0.0002	0.0001	0.0004
ACCOKEEK	0	450	0	**450**	549	0	7.5	3375	4,120	57	43	2,348	1,771	0.0011	0.0009	0.0006	0.0014	0.0007	0.0032
ABC DRIVE IN	0	100	0	**100**	122	0	7.5	750	915	57	43	522	394	0.0002	0.0002	0.0001	0.0003	0.0001	0.0007
BOWIE 20%	20	526	131	**657**	642	160	7.5	4927.5	6,015	57	43	3,428	2,586	0.0015	0.0013	0.0008	0.0021	0.0009	0.0044
CLINTON 50%	50	212	212	**424**	259	259	7.5	3180	3,882	57	43	2,212	1,669	0.0008	0.0008	0.0005	0.0014	0.0005	0.0026
OXON HILL 20%	20	519	130	**649**	634	158	7.5	4867.5	5,941	57	43	3,387	2,555	0.0014	0.0012	0.0008	0.0021	0.0008	0.0044
EQUESTRIAN CENTER	50	150	150	**300**	183	183	7.5	2250	2,746	57	43	1,565	1,181	0.0006	0.0006	0.0004	0.0010	0.0003	0.0018
BOWIE MARKET PLACE	0	50	0	**50**	61	0	7.5	375	458	57	43	261	197	0.0001	0.0001	0.0001	0.0002	0.0001	0.0004
FT.WASHINGTON	0	412	0	**412**	503	0	7.5	3090	3,772	57	43	2,150	1,622	0.0010	0.0008	0.0005	0.0013	0.0006	0.0029
MONTPELIER REC PARK	0	70	0	**70**	85	0	7.5	525	641	57	43	365	276	0.0002	0.0001	0.0001	0.0002	0.0001	0.0005
RESTON	0	1547	0	**1547**	1888	0	7.5	11602.5	14,162	57	43	8,072	6,090	0.0038	0.0030	0.0020	0.0049	0.0022	0.0110
GREENBRIAR	0	55	0	**55**	67	0	7.5	412.5	503	57	43	287	217	0.0001	0.0001	0.0001	0.0002	0.0001	0.0004
FAIR OAKS	0	150	0	**150**	183	0	7.5	1125	1,373	57	43	783	590	0.0004	0.0003	0.0002	0.0005	0.0002	0.0011
ROLLING VALLEY	0	628	0	**628**	767	0	7.5	4710	5,749	57	43	3,277	2,472	0.0016	0.0012	0.0008	0.0020	0.0009	0.0045
SPRINGFIELD PLAZA	0	230	0	**230**	281	0	7.5	1725	2,106	57	43	1,200	905	0.0006	0.0004	0.0003	0.0007	0.0003	0.0016
FAIRLANES BOWL	0	35	0	**35**	43	0	7.5	262.5	320	57	43	183	138	0.0001	0.0001	0.0000	0.0001	0.0001	0.0002
NOTTOWAY PARK	0	14	0	**14**	17	0	7.5	105	128	57	43	73	55	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
HORNER RD	0	2397	0	**2397**	2926	0	7.5	17977.5	21,943	57	43	12,508	9,436	0.0059	0.0046	0.0031	0.0076	0.0035	0.0171

Table
2011 VOC AIR QUALITY EMISSIONS INVENTORY
AUTO ACCESS TO TRANSIT
(8-HOUR OZONE AREA)
2010 CLRP/FY2011-2016 TIP AIR QUALITY CONFORMITY

										EMISSIONS									
LOCATION	2002				2011	2011	AVERAGE	2002	2010	ARTERIAL	FREEWAY	ARTERIAL	FREEWAY	COLD START	RUNNING			HOT SOAK	TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	VMT	%		VMT	VMT		Arterial	Freeway	Total (tons/day)		
														Rate (gm/mile)	Rate (gm/mile)	Rate (gm/mile)	Running	Rate (gm/mile)	
					1.22	1.22								0.92114167	0.165775	0.147525		0.53805833	
COMMUTER RAIL LOTS																			
LAKE RIDGE	0	555	0	**555**	677	0	7.5	4162.5	5,081	57	43	2,896	2,185	0.0014	0.0011	0.0007	0.0018	0.0008	0.0039
MINNIEVILLE RD 40%	40	336	224	560	410	273	7.5	4200	5,127	57	43	2,922	2,204	0.0011	0.0011	0.0007	0.0018	0.0006	0.0035
GORDON BLVD	0	156	0	156	190	0	7.5	1170	1,428	57	43	814	614	0.0004	0.0003	0.0002	0.0005	0.0002	0.0011
HILLENDALE	0	248	0	**248**	303	0	7.5	1860	2,270	57	43	1,294	976	0.0006	0.0005	0.0003	0.0008	0.0004	0.0018
POTOMAC MILLS	0	946	0	**946**	1155	0	7.5	7095	8,660	57	43	4,936	3,724	0.0023	0.0018	0.0012	0.0030	0.0014	0.0067
								0	0										
								0	0										
PARK-AND-RIDE LOTS - MARYLAND								0	0										
CALVERT COUNTY								0	0										
Dunkirk	25	32	11	42	38	13	7.5	315	384	57	43	219	165	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003
Huntingtown	25	26	9	35	32	11	7.5	262.5	320	57	43	183	138	0.0001	0.0001	0.0000	0.0001	0.0000	0.0002
Lord Calvert Bowling Alley	25	83	28	110	101	34	7.5	825	1,007	57	43	574	433	0.0002	0.0002	0.0001	0.0004	0.0001	0.0007
Lusby	25	23	8	30	27	9	7.5	225	275	57	43	157	118	0.0001	0.0001	0.0000	0.0001	0.0000	0.0002
North Beach VFD	25	53	18	70	64	21	7.5	525	641	57	43	365	276	0.0002	0.0001	0.0001	0.0002	0.0001	0.0005
Prince Frederick	25	53	18	70	64	21	7.5	525	641	57	43	365	276	0.0002	0.0001	0.0001	0.0002	0.0001	0.0005
St. Leonard	25	38	13	50	46	15	7.5	375	458	57	43	261	197	0.0001	0.0001	0.0001	0.0002	0.0001	0.0003
Sunderland	25	80	27	106	97	32	7.5	795	970	57	43	553	417	0.0002	0.0002	0.0001	0.0003	0.0001	0.0007
PARK-AND-RIDE LOTS - MARYLAND								0	0										
CHARLES COUNTY								0	0										
301 Park & Ride	25	287	96	383	351	117	7.5	2872.5	3,506	57	43	1,999	1,508	0.0008	0.0007	0.0005	0.0012	0.0005	0.0025
Charles County Governme	25	26	9	35	32	11	7.5	262.5	320	57	43	183	138	0.0001	0.0001	0.0000	0.0001	0.0000	0.0002
Food Lion Shopping Cent	25	38	13	50	46	15	7.5	375	458	57	43	261	197	0.0001	0.0001	0.0001	0.0002	0.0001	0.0003
La Plata Armory	25	15	5	20	18	6	7.5	150	183	57	43	104	79	0.0000	0.0000	0.0000	0.0001	0.0000	0.0001
Laurel Springs Regional P	25	38	13	50	46	15	7.5	375	458	57	43	261	197	0.0001	0.0001	0.0001	0.0002	0.0001	0.0003
Life Wesleyan Church	25	38	13	50	46	15	7.5	375	458	57	43	261	197	0.0001	0.0001	0.0001	0.0002	0.0001	0.0003
Mattawoman-Beantown R	25	435	145	580	531	177	7.5	4350	5,310	57	43	3,026	2,283	0.0013	0.0011	0.0007	0.0018	0.0007	0.0038
Smallwood Village	25	75	25	100	92	31	7.5	750	915	57	43	522	394	0.0002	0.0002	0.0001	0.0003	0.0001	0.0007
St. Charles Towne	25	263	88	350	320	107	7.5	2625	3,204	57	43	1,826	1,378	0.0008	0.0007	0.0004	0.0011	0.0004	0.0023
PARK-AND-RIDE LOTS -	25	0	0		0	0	7.5	0	0	57	43	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
FREDERICK COUNTY	25	0	0		0	0	7.5	0	0	57	43	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Frederick (north)	25	123	41	164	150	50	7.5	1230	1,501	57	43	856	646	0.0004	0.0003	0.0002	0.0005	0.0002	0.0011
Frederick (south)	25	173	58	230	211	70	7.5	1725	2,106	57	43	1,200	905	0.0005	0.0004	0.0003	0.0007	0.0003	0.0015
Monacacy Marcst	25	600	200	800	732	244	7.5	6000	7,324	57	43	4,174	3,149	0.0017	0.0015	0.0010	0.0025	0.0010	0.0053
PARK-AND-RIDE LOTS - MARYLAND								0	0										
MONTGOMERY COUNTY								0	0										
Colesville	0	190	0	190	232	0	7.5	1425	1,739	57	43	991	748	0.0005	0.0004	0.0002	0.0006	0.0003	0.0014
Damascus	50	0	0		0	0	7.5	0	0	57	43	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Gaithersburg	50	259	259	517	316	316	7.5	3877.5	4,733	57	43	2,698	2,035	0.0010	0.0010	0.0007	0.0016	0.0006	0.0032
Gaithersburg	50	175	175	350	214	214	7.5	2625	3,204	57	43	1,826	1,378	0.0007	0.0007	0.0004	0.0011	0.0004	0.0021
Germantown Town	50	0	0		0	0	7.5	0	0	57	43	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Greencastle	50	75	75	150	92	92	7.5	1125	1,373	57	43	783	590	0.0003	0.0003	0.0002	0.0005	0.0002	0.0009
Milestone Shopping	50	88	88	175	107	107	7.5	1312.5	1,602	57	43	913	689	0.0003	0.0003	0.0002	0.0006	0.0002	0.0011
PARK-AND-RIDE LOTS - MAYLAND								0	0										
PRINCE GEORGE'S COUNTY								0	0										
Hampton Mall	0	100	0	100	122	0	4.5	450	549	57	43	313	236	0.0002	0.0001	0.0001	0.0002	0.0001	0.0006
Laurel (south)	25	513	171	684	626	209	7.5	5130	6,262	57	43	3,569	2,693	0.0015	0.0013	0.0009	0.0022	0.0009	0.0045
PARK-AND-RIDE LOTS - VIRGINIA	0	0		0	0	0	7.5	0	0	57	43	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ARLINGTON COUNTY		0	0		0	0	7.5	0	0	57	43	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Ballston Public Parking Ga	25	375	125	500	458	153	7.5	3750	4,577	57	43	2,609	1,968	0.0011	0.0010	0.0006	0.0016	0.0006	0.0033
Washington-Lee	50	178	178	356	217	217	7.5	2670	3,259	57	43	1,858	1,401	0.0007	0.0007	0.0005	0.0011	0.0004	0.0022
PARK-AND-RIDE LOTS - VIRGINIA								0	0										
FAIRFAX COUNTY								0	0										
American Legion	50	50	50	100	61	61	7.5	750	915	57	43	522	394	0.0002	0.0002	0.0001	0.0003	0.0001	0.0006
Canterbury Woods Pk	50	17	17	34	21	21	7.5	255	311	57	43	177	134	0.0001	0.0001	0.0000	0.0001	0.0000	0.0002
Centreville	50	185	185	370	226	226	7.5	2775	3,387	57	43	1,931	1,456	0.0007	0.0007	0.0005	0.0012	0.0004	0.0023
Centreville United Method	50	74	74	147	90	90	7.5	1102.5	1,346	57	43	767	579	0.0003	0.0003	0.0002	0.0005	0.0002	0.0009
Fairfax County Governme	50	85	85	170	104	104	7.5	1275	1,556	57	43	887	669	0.0003	0.0003	0.0002	0.0005	0.0002	0.0010
Greenbriar Park	50	28	28	55	34	34	7.5	412.5	503	57	43	287	217	0.0001	0.0001	0.0001	0.0002	0.0001	0.0003
Herndon-Monroe	50	873	873	1,745	1065	1065	7.5	13087.5	15,975	57	43	9,106	6,869	0.0032	0.0033	0.0022	0.0056	0.0019	0.0107
Michael's	50	100	100	200	122	122	7.5	1500	1,831	57	43	1,044	787	0.0004	0.0004	0.0003	0.0006	0.0002	0.0012
Parkwood Baptist	50	9	9	18	11	11	7.5	135	165	57	43	94	71	0.0000	0.0000	0.0000	0.0001	0.0000	0.0001
South Run District Pk	50	170	170	340	208	208	7.5	2550	3,113	57	43	1,774	1,338	0.0006	0.0006	0.0004	0.0011	0.0004	0.0021

Table
2011 VOC AIR QUALITY EMISSIONS INVENTORY
AUTO ACCESS TO TRANSIT
(8-HOUR OZONE AREA)
2010 CLRP/FY2011-2016 TIP AIR QUALITY CONFORMITY

										E M I S S I O N S									
LOCATION		2002			2011	2011	AVERAGE	2002	2010	ARTERIAL	FREEWAY	ARTERIAL	FREEWAY	COLD START	RUNNING			HOT SOAK	TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	VMT	%		VMT	VMT		Arterial	Freeway	Total (tons/day)		
					1.22	1.22								Rate (gm/mile)	Rate (gm/mile)	Rate (gm/mile)	Running	Rate (gm/mile)	
														0.92114167	0.165775	0.147525		0.53805833	
COMMUTER RAIL LOTS																			
St Paul Chung Catholic Cl	50	50	50	100	61	61	7.5	750	915	57	43	522	394	0.0002	0.0002	0.0001	0.0003	0.0001	0.0006
Stringfellow Rd	50	181	181	361	220	220	7.5	2707.5	3,305	57	43	1,884	1,421	0.0007	0.0007	0.0005	0.0012	0.0004	0.0022
Sully Station	50	70	70	140	85	85	7.5	1050	1,282	57	43	731	551	0.0003	0.0003	0.0002	0.0004	0.0002	0.0009
Sydenstricker Rd	50	84	84	167	102	102	7.5	1252.5	1,529	57	43	871	657	0.0003	0.0003	0.0002	0.0005	0.0002	0.0010
Wakefield Chapel Pk	50	25	25	50	31	31	7.5	375	458	57	43	261	197	0.0001	0.0001	0.0001	0.0002	0.0001	0.0003
PARK-AND-RIDE LOTS - VIRGINIA								0	0										
LOUDOUN COUNTY								0	0										
Ashburn Farm	50	10	10	20	12	12	7.5	150	183	57	43	104	79	0.0000	0.0000	0.0000	0.0001	0.0000	0.0001
Ashburn Village	50	20	20	40	24	24	7.5	300	366	57	43	209	157	0.0001	0.0001	0.0001	0.0001	0.0000	0.0002
Cascades	50	28	28	55	34	34	7.5	412.5	503	57	43	287	217	0.0001	0.0001	0.0001	0.0002	0.0001	0.0003
Dulles North Transit	50	375	375	750	458	458	7.5	5625	6,866	57	43	3,914	2,952	0.0014	0.0014	0.0010	0.0024	0.0008	0.0046
Hamilton	50	25	25	50	31	31	7.5	375	458	57	43	261	197	0.0001	0.0001	0.0001	0.0002	0.0001	0.0003
Innovation Avenue	50	38	38	75	46	46	7.5	562.5	687	57	43	391	295	0.0001	0.0001	0.0001	0.0002	0.0001	0.0005
Leesburg	50	25	25	50	31	31	7.5	375	458	57	43	261	197	0.0001	0.0001	0.0001	0.0002	0.0001	0.0003
Leesburg Kohls	50	600	600	1200	732	732	7.5	9000	10,985	57	43	6,262	4,724	0.0022	0.0023	0.0015	0.0038	0.0013	0.0074
Purcellville	50	18	18	35	21	21	7.5	262.5	320	57	43	183	138	0.0001	0.0001	0.0000	0.0001	0.0000	0.0002
Sterling Park SC	50	23	23	45	27	27	7.5	337.5	412	57	43	235	177	0.0001	0.0001	0.0001	0.0001	0.0000	0.0003
Sterling Shaw Rd	50	24	24	48	29	29	7.5	360	439	57	43	250	189	0.0001	0.0001	0.0001	0.0002	0.0001	0.0003
PARK-AND-RIDE LOTS - VIRGINIA								0	0										
PRINCE WILLIAM COUNTY								0	0										
Brittany	50	48	48	95	58	58	7.5	712.5	870	57	43	496	374	0.0002	0.0002	0.0001	0.0003	0.0001	0.0006
Dale City	50	294	294	587	358	358	7.5	4402.5	5,374	57	43	3,063	2,311	0.0011	0.0011	0.0008	0.0019	0.0006	0.0036
Harbor Drive	50	100	100	200	122	122	7.5	1500	1,831	57	43	1,044	787	0.0004	0.0004	0.0003	0.0006	0.0002	0.0012
Lindendale	50	108	108	216	132	132	7.5	1620	1,977	57	43	1,127	850	0.0004	0.0004	0.0003	0.0007	0.0002	0.0013
Montclair	50	25	25	50	31	31	7.5	375	458	57	43	261	197	0.0001	0.0001	0.0001	0.0002	0.0001	0.0003
PRTC Transit Center	50	93	93	185	113	113	7.5	1387.5	1,694	57	43	965	728	0.0003	0.0004	0.0002	0.0006	0.0002	0.0011
Tackett's Mill	50	85	85	169	103	103	7.5	1267.5	1,547	57	43	882	665	0.0003	0.0003	0.0002	0.0005	0.0002	0.0010
Triangle	50	15	15	29	18	18	7.5	217.5	265	57	43	151	114	0.0001	0.0001	0.0000	0.0001	0.0000	0.0002
I-95 / Rt 123	50	282	282	563	344	344	7.5	4222.5	5,154	57	43	2,938	2,216	0.0010	0.0011	0.0007	0.0018	0.0006	0.0035
US 1 / VA 234	50	137	137	274	167	167	7.5	2055	2,508	57	43	1,430	1,079	0.0005	0.0005	0.0004	0.0009	0.0003	0.0017
MARC TRAIN COMMUTER LOTS								0	0										
College Park	25	431	144	574	525	175	7.5	4305	5,255	57	43	2,995	2,260	0.0012	0.0011	0.0007	0.0018	0.0007	0.0038
Frederick	0	0	0	0	0	0	7.5	0	0	57	43	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Greenbelt	60	1346	2018	3364	1642	2464	7.5	25230	30,796	57	43	17,554	13,242	0.0058	0.0064	0.0043	0.0107	0.0034	0.0200
Harpers Ferry		98	0	98	120	0	7.5	735	897	57	43	511	386	0.0002	0.0002	0.0001	0.0003	0.0001	0.0007
Muirkirk	60	260	390	650	317	476	7.5	4875	5,950	57	43	3,392	2,559	0.0011	0.0012	0.0008	0.0021	0.0007	0.0039
Seabrook	0	264	0	264	322	0	4.5	1188	1,450	57	43	827	624	0.0007	0.0003	0.0002	0.0005	0.0004	0.0015
Silver Spring	0	0	0	0	0	0	4.5	0	0	57	43	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Union Station	0	781	0	781	953	0	7.5	5857.5	7,150	57	43	4,075	3,074	0.0019	0.0015	0.0010	0.0025	0.0011	0.0056
VIRGINIA RAILWAY EXPRESS COMMUTER LOTS								0	0										
Backlick Road	50	110	110	220	134	134	7.5	1650	2,014	57	43	1,148	866	0.0004	0.0004	0.0003	0.0007	0.0002	0.0013
Broad Run	50	198	198	396	242	242	7.5	2970	3,625	57	43	2,066	1,559	0.0007	0.0008	0.0005	0.0013	0.0004	0.0024
Burke Center	50	275	275	550	336	336	7.5	4125	5,035	57	43	2,870	2,165	0.0010	0.0010	0.0007	0.0018	0.0006	0.0034
Franconia/Springfield (ope	50	1900	1900	3800	2319	2319	7.5	28500	34,787	57	43	19,829	14,958	0.0071	0.0072	0.0049	0.0121	0.0041	0.0233
Lorton	50	100	100	200	122	122	7.5	1500	1,831	57	43	1,044	787	0.0004	0.0004	0.0003	0.0006	0.0002	0.0012
Manassas	50	187	187	374	228	228	7.5	2805	3,424	57	43	1,952	1,472	0.0007	0.0007	0.0005	0.0012	0.0004	0.0023
Manassas Park	50	150	150	300	183	183	7.5	2250	2,746	57	43	1,565	1,181	0.0006	0.0006	0.0004	0.0010	0.0003	0.0018
Quantico	50	109	109	217	132	132	7.5	1627.5	1,987	57	43	1,132	854	0.0004	0.0004	0.0003	0.0007	0.0002	0.0013
Rippon 50		150	150	300	183	183	7.5	2250	2,746	57	43	1,565	1,181	0.0006	0.0006	0.0004	0.0010	0.0003	0.0018
Rolling Road	50	185	185	370	226	226	7.5	2775	3,387	57	43	1,931	1,456	0.0007	0.0007	0.0005	0.0012	0.0004	0.0023
Woodbridge	50	294	294	588	359	359	7.5	4410	5,383	57	43	3,068	2,315	0.0011	0.0011	0.0008	0.0019	0.0006	0.0036
METRORAIL PARKING LOTS								0	0										
Anacostia	25	861	287	1148	1051	350	7.5	8610	10,509	57	43	5,990	4,519	0.0025	0.0022	0.0015	0.0037	0.0015	0.0076
Branch Avenue	50	1611	1611	3222	1966	1966	7.5	24165	29,496	57	43	16,813	12,683	0.0060	0.0061	0.0041	0.0103	0.0035	0.0198
Capitol Heights	50	194	194	387	236	236	7.5	2902.5	3,543	57	43	2,019	1,523	0.0007	0.0007	0.0005	0.0012	0.0004	0.0024
College Park	25	465	155	620	568	189	7.5	4650	5,676	57	43	3,235	2,441	0.0013	0.0012	0.0008	0.0020	0.0008	0.0041
Congress Heights	0	66	0	66	81	0	4.5	297	363	57	43	207	156	0.0002	0.0001	0.0001	0.0001	0.0001	0.0004
Deanwood	0	194	0	194	237	0	7.5	1455	1,776	57	43	1,012	764	0.0005	0.0004	0.0002	0.0006	0.0003	0.0014
East Falls Church	50	221	221	442	270	270	7.5	3315	4,046	57	43	2,306	1,740	0.0008	0.0008	0.0006	0.0014	0.0005	0.0027
Forest Glen	50	329	329	658	402	402	7.5	4935	6,024	57	43	3,433	2,590	0.0012	0.0013	0.0008	0.0021	0.0007	0.0040
Franconia - Springfield	50	1987	1987	3973	2425	2425	4.5	17878.5	21,823	57	43	12,439	9,384	0.0074	0.0045	0.0031	0.0076	0.0043	0.0193
Glenmont	50	925	925	1850	1129	1129	4.5	8325	10,162	57	43	5,792	4,369	0.0034	0.0021	0.0014	0.0035	0.0020	0.0090
Greenbelt	50	1783	1783	3565	2176	2176	7.5	26737.5	32,636	57	43	18,602	14,033	0.0066	0.0068	0.0046	0.0114	0.0039	0.0219

Table
2011 VOC AIR QUALITY EMISSIONS INVENTORY
AUTO ACCESS TO TRANSIT
(8-HOUR OZONE AREA)
2010 CLRP/FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION	2002				2011	2011	AVERAGE	2002	2010	EMISSIONS									TOTAL
										ARTERIAL	FREEWAY	ARTERIAL	FREEWAY	COLD START	RUNNING			HOT SOAK	
										%		VMT	VMT		Arterial	Freeway	Total (tons/day)		
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	VMT					Rate (gm/mile)	Rate (gm/mile)	Rate (gm/mile)	Running	Rate (gm/mile)	
					1.22	1.22								0.92114167	0.165775	0.147525		0.53805833	
COMMUTER RAIL LOTS																			
Naylor Road	50	216	216	431	263	263	7.5	3232.5	3,946	57	43	2,249	1,697	0.0008	0.0008	0.0006	0.0014	0.0005	0.0026
Prince George's Plaza	25	927	309	1236	1131	377	7.5	9270	11,315	57	43	6,450	4,865	0.0027	0.0024	0.0016	0.0039	0.0016	0.0082
Southern Avenue	50	1090	1090	2180	1330	1330	4.5	9810	11,974	57	43	6,825	5,149	0.0041	0.0025	0.0017	0.0042	0.0024	0.0106
Suitland	50	1033	1033	2065	1260	1260	4.5	9292.5	11,342	57	43	6,465	4,877	0.0038	0.0024	0.0016	0.0039	0.0022	0.0100
Van Dorn Street	50	204	204	407	248	248	4.5	1831.5	2,236	57	43	1,274	961	0.0008	0.0005	0.0003	0.0008	0.0004	0.0020
West Hyattsville	25	453	151	604	553	184	7.5	4530	5,529	57	43	3,152	2,378	0.0013	0.0012	0.0008	0.0019	0.0008	0.0040
Wheaton	25	759	253	1012	926	309	7.5	7590	9,264	57	43	5,281	3,984	0.0022	0.0019	0.0013	0.0032	0.0013	0.0067
		78629	29681	108,310	95974	36229		711714	868,719					0.2317	0.1810	0.1215	0.3025	0.1353	0.6695

Bold figures: New numbers taken from P & R directory

Figures in bracket: Carry forward figures from conformity doc.

Park lot Growth Rate	
transit trips 2011	**1,096,680**
transit trips 2000	863783
Annual growth rate	0.02451131
Growth factor (2002-2011)	1.22060181

Table
2011 NOx AIR QUALITY EMISSIONS INVENTORY
AUTO ACCESS TO TRANSIT
(8-HOUR OZONE AREA)
2010 CLRP/FY2011-2016 TIP AIR QUALITY CONFORMITY

10/07/2010

LOCATION	2002				2011		AVERAGE	VMT	ARTERIAL	FREEWAY	ARTERIAL	FREEWAY	EMISSIONS				
	OUTSIDE	INSIDE	OUTSIDE	Total	INSIDE	OUTSIDE	TRIP LENGTH		%		VMT	VMT	COLD START	RUNNING			TOTAL
	MSA (%)	MSA	MSA		Growth Rate	Growth Rate								Arterial	Freeway	Total Running Emission	(tons/day)
					1.22	1.22							Rate (gm/mile) 0.51815833	Rate (gm/mile) 0.339	Rate (gm/mile) 0.35241667		
COMMUTER RAIL LOTS																	
BRUNSWICK 25%	25	305	102	**407**	373	124	7.5	3,726	57	43	2,124	1,602	0.0005	0.0016	0.0012	0.0028	0.0033
PT OF ROCKS 25%	25	204	68	**272**	249	83	7.5	2,490	57	43	1,419	1,071	0.0003	0.0011	0.0008	0.0019	0.0022
DICKERSON	0	15	0	**15**	18	0	7.5	137	57	43	78	59	0.0000	0.0001	0.0000	0.0001	0.0001
BARNESVILLE	0	46	0	**46**	56	0	7.5	421	57	43	240	181	0.0001	0.0002	0.0001	0.0003	0.0004
GERMANTOWN	0	386	0	**386**	471	0	7.5	3,534	57	43	2,014	1,519	0.0005	0.0015	0.0012	0.0027	0.0032
MET GROVE	0	352	0	**352**	430	0	7.5	3,222	57	43	1,837	1,386	0.0005	0.0014	0.0011	0.0024	0.0029
WAS GROVE	0	15	0	**15**	18	0	7.5	137	57	43	78	59	0.0000	0.0001	0.0000	0.0001	0.0001
GARRETT PARK	0	22	0	**22**	27	0	7.5	201	57	43	115	87	0.0000	0.0001	0.0001	0.0002	0.0002
BOWIE 50%	50	188	188	**375**	229	229	7.5	3,433	57	43	1,957	1,476	0.0004	0.0015	0.0011	0.0026	0.0030
SEABROOK 15%	15	224	40	**264**	274	48	7.5	2,417	57	43	1,378	1,039	0.0003	0.0010	0.0008	0.0018	0.0022
KENSINGTON	0	45	0	**45**	55	0	7.5	412	57	43	235	177	0.0001	0.0002	0.0001	0.0003	0.0004
LAUREL 30%	30	209	90	**299**	255	109	7.5	2,737	57	43	1,560	1,177	0.0004	0.0012	0.0009	0.0021	0.0024
GAITHESBURG	0	280	0	**280**	342	0	7.5	2,563	57	43	1,461	1,102	0.0004	0.0011	0.0009	0.0019	0.0023
BERWYN HEIGHTS	0	30	0	**30**	37	0	4.5	165	57	43	94	71	0.0000	0.0001	0.0001	0.0001	0.0002
RIVERDALE	0	65	0	**65**	79	0	4.5	357	57	43	204	154	0.0001	0.0002	0.0001	0.0003	0.0004
								0									
METRO RAIL LOTS								0									
								0									
ADDISON ROAD 40%	40	791	527	**1318**	965	644	7.5	12,066	57	43	6,877	5,188	0.0015	0.0051	0.0040	0.0092	0.0106
ARCHIVES	0	12	0	12	15	0	4.5	66	57	43	38	28	0.0000	0.0000	0.0000	0.0001	0.0001
ARLING	0	10	0	10	12	0	4.5	55	57	43	31	24	0.0000	0.0000	0.0000	0.0000	0.0001
BALLSTON	0	1175	0	1175	1434	0	4.5	6,454	57	43	3,679	2,775	0.0016	0.0027	0.0022	0.0049	0.0065
BENN.RD	0	520	0	520	635	0	4.5	2,856	57	43	1,628	1,228	0.0007	0.0012	0.0010	0.0022	0.0029
BETH	0	395	0	395	482	0	4.5	2,170	57	43	1,237	933	0.0006	0.0009	0.0007	0.0016	0.0022
BRADD RD	0	10	0	**10**	12	0	4.5	55	57	43	31	24	0.0000	0.0000	0.0000	0.0000	0.0001
BROOKLAND	0	27	0	**27**	33	0	4.5	148	57	43	85	64	0.0000	0.0001	0.0000	0.0001	0.0002
CHEVERLY	0	557	0	**557**	680	0	4.5	3,059	57	43	1,744	1,316	0.0008	0.0013	0.0010	0.0023	0.0031
CLARENDON	0	554	0	554	676	0	4.5	3,043	57	43	1,734	1,308	0.0008	0.0013	0.0010	0.0023	0.0031
CLEVELAND PK	0	366	0	366	447	0	4.5	2,010	57	43	1,146	864	0.0005	0.0009	0.0007	0.0015	0.0020
COURT HOUSE	0	256	0	256	312	0	4.5	1,406	57	43	801	605	0.0004	0.0006	0.0005	0.0011	0.0014
CRYSTAL CITY	0	347	0	347	424	0	4.5	1,906	57	43	1,086	820	0.0005	0.0008	0.0006	0.0014	0.0019
DEANWOOD	0	194	0	**194**	237	0	4.5	1,066	57	43	607	458	0.0003	0.0005	0.0004	0.0008	0.0011
DUN LORING 10%	10	1220	136	**1355**	1489	165	4.5	7,443	57	43	4,242	3,200	0.0018	0.0032	0.0025	0.0057	0.0075
DUPONT CIRCLE	0	165	0	165	201	0	4.5	906	57	43	517	390	0.0002	0.0004	0.0003	0.0007	0.0009
EASTERN MKT	0	178	0	178	217	0	4.5	978	57	43	557	420	0.0002	0.0004	0.0003	0.0007	0.0010
EAST FALLS CH	0	442	0	**442**	540	0	4.5	2,428	57	43	1,384	1,044	0.0006	0.0010	0.0008	0.0018	0.0025
EIS	0	352	0	352	430	0	4.5	1,933	57	43	1,102	831	0.0005	0.0008	0.0006	0.0015	0.0020
FARRAGUT NORTH	0	102	0	102	125	0	4.5	560	57	43	319	241	0.0001	0.0002	0.0002	0.0004	0.0006
FARRAGUT WEST	0	221	0	221	270	0	4.5	1,214	57	43	692	522	0.0003	0.0005	0.0004	0.0009	0.0012
FEDERAL CENTER	0	75	0	75	92	0	4.5	412	57	43	235	177	0.0001	0.0002	0.0001	0.0003	0.0004
FEDERAL TRI	0	54	0	54	66	0	4.5	297	57	43	169	128	0.0001	0.0001	0.0001	0.0002	0.0003
FOGGY	0	102	0	102	125	0	4.5	560	57	43	319	241	0.0001	0.0002	0.0002	0.0004	0.0006
FORT TROTTEN	0	445	0	**445**	543	0	4.5	2,444	57	43	1,393	1,051	0.0006	0.0010	0.0008	0.0019	0.0025
FRH.HEIGHTS	0	679	0	679	829	0	4.5	3,730	57	43	2,126	1,604	0.0009	0.0016	0.0012	0.0028	0.0038
GALLERY PLACE	0	124	0	124	151	0	4.5	681	57	43	388	293	0.0002	0.0003	0.0002	0.0005	0.0007
GROSVENOR	0	716	0	**716**	874	0	4.5	3,933	57	43	2,242	1,691	0.0010	0.0017	0.0013	0.0030	0.0040
HUNT NORTH 40%	40	1873	1249	**3122**	2286	1524	7.5	28,580	57	43	16,291	12,290	0.0035	0.0122	0.0095	0.0217	0.0252
JUD SQUARE	0	110	0	110	134	0	4.5	604	57	43	344	260	0.0002	0.0003	0.0002	0.0005	0.0006
KING ST	0	30	0	**30**	37	0	4.5	165	57	43	94	71	0.0000	0.0001	0.0001	0.0001	0.0002
								0									
								0									
LANDOVER 25%	25	1410	470	**1880**	1721	574	7.5	17,210	57	43	9,810	7,401	0.0023	0.0073	0.0057	0.0131	0.0154
L'ENFANT PLAZA	0	296	0	296	361	0	4.5	1,626	57	43	927	699	0.0004	0.0007	0.0005	0.0012	0.0016
MCPHERSON SQ	0	52	0	52	63	0	4.5	286	57	43	163	123	0.0001	0.0001	0.0001	0.0002	0.0003
MEDICAL CENTER	0	14	0	**14**	17	0	4.5	77	57	43	44	33	0.0000	0.0000	0.0000	0.0001	0.0001
METRO CENTER	0	177	0	177	216	0	4.5	972	57	43	554	418	0.0002	0.0004	0.0003	0.0007	0.0010
MINNES	0	353	0	**353**	431	0	4.5	1,939	57	43	1,105	834	0.0005	0.0008	0.0006	0.0015	0.0020
NAT AIR	0	87	0	87	106	0	4.5	478	57	43	272	205	0.0001	0.0002	0.0002	0.0004	0.0005
NEW CARROL 50%	50	1049	1049	**2097**	1280	1280	7.5	19,197	57	43	10,942	8,255	0.0022	0.0082	0.0064	0.0146	0.0168
PRNTAGON	0	561	0	561	685	0	4.5	3,081	57	43	1,756	1,325	0.0008	0.0013	0.0010	0.0023	0.0031

Table
2011 NOx AIR QUALITY EMISSIONS INVENTORY
AUTO ACCESS TO TRANSIT
(8-HOUR OZONE AREA)
2010 CLRP/FY2011-2016 TIP AIR QUALITY CONFORMITY

10/07/2010

LOCATION	2002				2011		AVERAGE	VMT	ARTERIAL	FREEWAY	ARTERIAL	FREEWAY	EMISSIONS				
									%		VMT	VMT	COLD START	RUNNING			TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH							Arterial	Freeway	Total Running Emission	(tons/day)
					1.22	1.22							Rate (gm/mile) 0.51815833	Rate (gm/mile) 0.339	Rate (gm/mile) 0.35241667		
COMMUTER RAIL LOTS																	
PENTAGON CITY	0	381	0	381	465	0	4.5	2,093	57	43	1,193	900	0.0005	0.0009	0.0007	0.0016	0.0021
POTOMAC AVE	0	533	0	533	651	0	4.5	2,928	57	43	1,669	1,259	0.0007	0.0012	0.0010	0.0022	0.0030
ROCKVILLE	0	667	0	**667**	814	0	4.5	3,664	57	43	2,088	1,575	0.0009	0.0016	0.0012	0.0028	0.0037
ROSSLYN	0	356	0	356	435	0	4.5	1,955	57	43	1,115	841	0.0005	0.0008	0.0007	0.0015	0.0020
SHADY GROVE 10%	10	3903	434	**4337**	4764	529	7.5	39,703	57	43	22,631	17,072	0.0057	0.0169	0.0133	0.0302	0.0359
SILVER SPRING	0	44	0	**44**	54	0	4.5	242	57	43	138	104	0.0001	0.0001	0.0001	0.0002	0.0002
SMITH MALL	0	120	0	120	146	0	4.5	659	57	43	376	283	0.0002	0.0003	0.0002	0.0005	0.0007
STADIUM ARM	0	976	0	976	1191	0	4.5	5,361	57	43	3,056	2,305	0.0014	0.0023	0.0018	0.0041	0.0054
TAKOMA PK	0	146	0	**146**	178	0	4.5	802	57	43	457	345	0.0002	0.0003	0.0003	0.0006	0.0008
TENLEYTON	0	17	0	**17**	21	0	4.5	93	57	43	53	40	0.0000	0.0000	0.0000	0.0001	0.0001
TWINBROOK	0	1136	0	**1136**	1387	0	4.5	6,240	57	43	3,557	2,683	0.0016	0.0027	0.0021	0.0047	0.0063
UNION STAT	0	378	0	378	461	0	4.5	2,076	57	43	1,183	893	0.0005	0.0009	0.0007	0.0016	0.0021
VAN NESS	0	343	0	343	419	0	4.5	1,884	57	43	1,074	810	0.0005	0.0008	0.0006	0.0014	0.0019
VIENNA 25%	25	2798	933	**3731**	3416	1139	7.5	34,155	57	43	19,469	14,687	0.0046	0.0146	0.0114	0.0260	0.0305
VA SQUARE	0	642	0	642	784	0	4.5	3,526	57	43	2,010	1,516	0.0009	0.0015	0.0012	0.0027	0.0036
WEST FALLS CHURCH	0	2183	0	**2183**	2665	0	4.5	11,991	57	43	6,835	5,156	0.0030	0.0051	0.0040	0.0091	0.0122
WHITE FLINT	0	1633	0	1633	1993	0	4.5	8,970	57	43	5,113	3,857	0.0023	0.0038	0.0030	0.0068	0.0091
WOODLEY	0	68	0	68	83	0	4.5	374	57	43	213	161	0.0001	0.0002	0.0001	0.0003	0.0004
RHODE ISLAND 30%	30	266	114	**380**	325	139	7.5	3,479	57	43	1,983	1,496	0.0005	0.0015	0.0012	0.0026	0.0031
								0									
BUS & CAR POOL LOTS								0									
								0									
CARTER BARRON	0	798	0	798	974	0	4.5	4,383	57	43	2,498	1,885	0.0011	0.0019	0.0015	0.0033	0.0044
PG PLAZA	0	47	0	47	57	0	4.5	258	57	43	147	111	0.0001	0.0001	0.0001	0.0002	0.0003
PENN MAR SHOPP.	0	100	0	**100**	122	0	4.5	549	57	43	313	236	0.0001	0.0002	0.0002	0.0004	0.0006
CAP PLAZA	0	100	0	**100**	122	0	4.5	549	57	43	313	236	0.0001	0.0002	0.0002	0.0004	0.0006
EASTOVER	0	100	0	**100**	122	0	4.5	549	57	43	313	236	0.0001	0.0002	0.0002	0.0004	0.0006
FOUR MILE RUN	0	28	0	**28**	34	0	4.5	154	57	43	88	66	0.0000	0.0001	0.0001	0.0001	0.0002
SPRINGFIELD MALL	0	580	0	**580**	708	0	4.5	3,186	57	43	1,816	1,370	0.0008	0.0014	0.0011	0.0024	0.0032
SPRINGFIELD METH CH	0	48	0	**48**	59	0	4.5	264	57	43	150	113	0.0001	0.0001	0.0001	0.0002	0.0003
FRED ARMORY	0	33	0	**33**	40	0	7.5	302	57	43	172	130	0.0000	0.0001	0.0001	0.0002	0.0003
MYERSVILLE	0	65	0	**65**	79	0	7.5	595	57	43	339	256	0.0001	0.0003	0.0002	0.0005	0.0005
ROSEMONT	0	45	0	**45**	55	0	7.5	412	57	43	235	177	0.0001	0.0002	0.0001	0.0003	0.0004
URBANA	0	193	0	**193**	236	0	7.5	1,767	57	43	1,007	760	0.0003	0.0008	0.0006	0.0013	0.0016
JEFFERSON	0	40	0	**40**	49	0	7.5	366	57	43	209	157	0.0001	0.0002	0.0001	0.0003	0.0003
NORBECK RD	0	248	0	**248**	303	0	7.5	2,270	57	43	1,294	976	0.0003	0.0010	0.0008	0.0017	0.0021
MONTROSE RD	0	650	0	**650**	793	0	7.5	5,950	57	43	3,392	2,559	0.0009	0.0025	0.0020	0.0045	0.0054
BRIGG CHENNY 50%	50	215	215	**430**	262	262	7.5	3,936	57	43	2,244	1,693	0.0004	0.0017	0.0013	0.0030	0.0034
COMUS ROAD	0	30	0	**30**	37	0	7.5	275	57	43	157	118	0.0000	0.0001	0.0001	0.0002	0.0003
LAKEFOREST MALL	0	300	0	**300**	366	0	7.5	2,746	57	43	1,565	1,181	0.0004	0.0012	0.0009	0.0021	0.0025
BURTONSVILLE	0	500	0	**500**	610	0	7.5	4,577	57	43	2,609	1,968	0.0007	0.0019	0.0015	0.0035	0.0042
FORCEY MEM.	0	200	0	**200**	244	0	7.5	1,831	57	43	1,044	787	0.0003	0.0008	0.0006	0.0014	0.0017
TECH ROAD	0	155	0	**155**	189	0	7.5	1,419	57	43	809	610	0.0002	0.0006	0.0005	0.0011	0.0013
BELTWAY	0	265	0	**265**	323	0	7.5	2,426	57	43	1,383	1,043	0.0004	0.0010	0.0008	0.0018	0.0022
LAUREL VAN DUSEN	0	62	0	**62**	76	0	7.5	568	57	43	324	244	0.0001	0.0002	0.0002	0.0004	0.0005
ACCOKEEK	0	450	0	**450**	549	0	7.5	4,120	57	43	2,348	1,771	0.0006	0.0018	0.0014	0.0031	0.0038
ABC DRIVE IN	0	100	0	**100**	122	0	7.5	915	57	43	522	394	0.0001	0.0004	0.0003	0.0007	0.0008
BOWIE 20%	20	526	131	**657**	642	160	7.5	6,015	57	43	3,428	2,586	0.0008	0.0026	0.0020	0.0046	0.0054
CLINTON 50%	50	212	212	**424**	259	259	7.5	3,882	57	43	2,212	1,669	0.0004	0.0017	0.0013	0.0030	0.0034
OXON HILL 20%	20	519	130	**649**	634	158	7.5	5,941	57	43	3,387	2,555	0.0008	0.0025	0.0020	0.0045	0.0053
EQUESTRIAN CENTER 50	50	150	150	**300**	183	183	7.5	2,746	57	43	1,565	1,181	0.0003	0.0012	0.0009	0.0021	0.0024
BOWIE MARKET PLACE	0	50	0	**50**	61	0	7.5	458	57	43	261	197	0.0001	0.0002	0.0002	0.0003	0.0004
FT.WASHINGTON	0	412	0	**412**	503	0	7.5	3,772	57	43	2,150	1,622	0.0006	0.0016	0.0013	0.0029	0.0034
MONTPELIER REC PARK	0	70	0	**70**	85	0	7.5	641	57	43	365	276	0.0001	0.0003	0.0002	0.0005	0.0006
RESTON	0	1547	0	**1547**	1888	0	7.5	14,162	57	43	8,072	6,090	0.0022	0.0060	0.0047	0.0108	0.0129
GREENBRIAR	0	55	0	**55**	67	0	7.5	503	57	43	287	217	0.0001	0.0002	0.0002	0.0004	0.0005
FAIR OAKS	0	150	0	**150**	183	0	7.5	1,373	57	43	783	590	0.0002	0.0006	0.0005	0.0010	0.0013
ROLLING VALLEY	0	628	0	**628**	767	0	7.5	5,749	57	43	3,277	2,472	0.0009	0.0024	0.0019	0.0044	0.0052
SPRINGFIELD PLAZA	0	230	0	**230**	281	0	7.5	2,106	57	43	1,200	905	0.0003	0.0009	0.0007	0.0016	0.0019
FAIRLANES BOWL	0	35	0	**35**	43	0	7.5	320	57	43	183	138	0.0000	0.0001	0.0001	0.0002	0.0003
NOTTOWAY PARK	0	14	0	**14**	17	0	7.5	128	57	43	73	55	0.0000	0.0001	0.0000	0.0001	0.0001

Table
2011 NOx AIR QUALITY EMISSIONS INVENTORY
AUTO ACCESS TO TRANSIT
(8-HOUR OZONE AREA)
2010 CLRP/FY2011-2016 TIP AIR QUALITY CONFORMITY

10/07/2010

LOCATION		2002			2011		AVERAGE		ARTERIAL	FREEWAY	ARTERIAL	FREEWAY	EMISSIONS				
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	%		VMT	VMT	COLD START Rate (gm/mile)	RUNNING Arterial Rate (gm/mile)	RUNNING Freeway Rate (gm/mile)	RUNNING Total Running Emission	TOTAL (tons/day)
					1.22	1.22							0.51815833	0.339	0.35241667		
COMMUTER RAIL LOTS																	
HORNER RD	0	2397	0	**2397**	2926	0	7.5	21,943	57	43	12,508	9,436	0.0033	0.0093	0.0073	0.0167	0.0200
LAKE RIDGE	0	555	0	**555**	677	0	7.5	5,081	57	43	2,896	2,185	0.0008	0.0022	0.0017	0.0039	0.0046
MINNIEVILLE RD 40%	40	336	224	560	410	273	7.5	5,127	57	43	2,922	2,204	0.0006	0.0022	0.0017	0.0039	0.0045
GORDON BLVD	0	156	0	156	190	0	7.5	1,428	57	43	814	614	0.0002	0.0006	0.0005	0.0011	0.0013
HILLENDALE	0	248	0	**248**	303	0	7.5	2,270	57	43	1,294	976	0.0003	0.0010	0.0008	0.0017	0.0021
POTOMAC MILLS	0	946	0	**946**	1155	0	7.5	8,660	57	43	4,936	3,724	0.0013	0.0037	0.0029	0.0066	0.0079
								0									
								0									
PARK-AND-RIDE LOTS - MARYLAND								0									
CALVERT COUNTY								0									
Dunkirk	25	32	11	42	38	13	7.5	384	57	43	219	165	0.0001	0.0002	0.0001	0.0003	0.0003
Huntingtown	25	26	9	35	32	11	7.5	320	57	43	183	138	0.0000	0.0001	0.0001	0.0002	0.0003
Lord Calvert Bowling Alley	25	83	28	110	101	34	7.5	1,007	57	43	574	433	0.0001	0.0004	0.0003	0.0008	0.0009
Lusby	25	23	8	30	27	9	7.5	275	57	43	157	118	0.0000	0.0001	0.0001	0.0002	0.0002
North Beach VFD	25	53	18	70	64	21	7.5	641	57	43	365	276	0.0001	0.0003	0.0002	0.0005	0.0006
Prince Frederick	25	53	18	70	64	21	7.5	641	57	43	365	276	0.0001	0.0003	0.0002	0.0005	0.0006
St. Leonard	25	38	13	50	46	15	7.5	458	57	43	261	197	0.0001	0.0002	0.0002	0.0003	0.0004
Sunderland	25	80	27	106	97	32	7.5	970	57	43	553	417	0.0001	0.0004	0.0003	0.0007	0.0009
PARK-AND-RIDE LOTS - MARYLAND								0									
CHARLES COUNTY								0									
301 Park & Ride	25	287	96	383	351	117	7.5	3,506	57	43	1,999	1,508	0.0005	0.0015	0.0012	0.0027	0.0031
Charles County Government	25	26	9	35	32	11	7.5	320	57	43	183	138	0.0000	0.0001	0.0001	0.0002	0.0003
Food Lion Shopping Center	25	38	13	50	46	15	7.5	458	57	43	261	197	0.0001	0.0002	0.0002	0.0003	0.0004
La Plata Armory	25	15	5	20	18	6	7.5	183	57	43	104	79	0.0000	0.0001	0.0001	0.0001	0.0002
Laurel Springs Regional Park	25	38	13	50	46	15	7.5	458	57	43	261	197	0.0001	0.0002	0.0002	0.0003	0.0004
Life Wesleyan Church	25	38	13	50	46	15	7.5	458	57	43	261	197	0.0001	0.0002	0.0002	0.0003	0.0004
Mattawoman-Beantown Rd	25	435	145	580	531	177	7.5	5,310	57	43	3,026	2,283	0.0007	0.0023	0.0018	0.0040	0.0047
Smallwood Village	25	75	25	100	92	31	7.5	915	57	43	522	394	0.0001	0.0004	0.0003	0.0007	0.0008
St. Charles Towne	25	263	88	350	320	107	7.5	3,204	57	43	1,826	1,378	0.0004	0.0014	0.0011	0.0024	0.0029
PARK-AND-RIDE LOTS - MARYLAND								0									
FREDERICK COUNTY								0									
Frederick (north)	25	123	41	164	150	50	7.5	1,501	57	43	856	646	0.0002	0.0006	0.0005	0.0011	0.0013
Frederick (south)	25	173	58	230	211	70	7.5	2,106	57	43	1,200	905	0.0003	0.0009	0.0007	0.0016	0.0019
Monacacy Marcst	25	600	200	800	732	244	7.5	7,324	57	43	4,174	3,149	0.0010	0.0031	0.0024	0.0056	0.0065
PARK-AND-RIDE LOTS - MARYLAND								0									
MONTGOMERY COUNTY								0									
Colesville	0	190	0	190	232	0	7.5	1,739	57	43	991	748	0.0003	0.0007	0.0006	0.0013	0.0016
Damascus	50	0	0		0	0	7.5	0	57	43	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Gaithersburg	50	259	259	517	316	316	7.5	4,733	57	43	2,698	2,035	0.0005	0.0020	0.0016	0.0036	0.0041
Gaithersburg	50	175	175	350	214	214	7.5	3,204	57	43	1,826	1,378	0.0004	0.0014	0.0011	0.0024	0.0028
Germantown Town	50	0	0		0	0	7.5	0	57	43	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Greencastle	50	75	75	150	92	92	7.5	1,373	57	43	783	590	0.0002	0.0006	0.0005	0.0010	0.0012
Milestone Shopping	50	88	88	175	107	107	7.5	1,602	57	43	913	689	0.0002	0.0007	0.0005	0.0012	0.0014
PARK-AND-RIDE LOTS - MAYLAND								0									
PRINCE GEORGE'S COUNTY								0									
Hampton Mall	0	100	0	100	122	0	4.5	549	57	43	313	236	0.0001	0.0002	0.0002	0.0004	0.0006
Laurel (south)	25	513	171	684	626	209	7.5	6,262	57	43	3,569	2,693	0.0008	0.0027	0.0021	0.0048	0.0056
PARK-AND-RIDE LOTS - VIRGINIA								0									
ARLINGTON COUNTY								0									
Ballston Public Parking Garag	25	375	125	500	458	153	7.5	4,577	57	43	2,609	1,968	0.0006	0.0019	0.0015	0.0035	0.0041
Washington-Lee	50	178	178	356	217	217	7.5	3,259	57	43	1,858	1,401	0.0004	0.0014	0.0011	0.0025	0.0028
PARK-AND-RIDE LOTS - VIRGINIA								0									
FAIRFAX COUNTY								0									
American Legion	50	50	50	100	61	61	7.5	915	57	43	522	394	0.0001	0.0004	0.0003	0.0007	0.0008
Canterbury Woods Pk	50	17	17	34	21	21	7.5	311	57	43	177	134	0.0000	0.0001	0.0001	0.0002	0.0003
Centreville	50	185	185	370	226	226	7.5	3,387	57	43	1,931	1,456	0.0004	0.0014	0.0011	0.0026	0.0030
Centreville United Methodist C	50	74	74	147	90	90	7.5	1,346	57	43	767	579	0.0002	0.0006	0.0004	0.0010	0.0012
Fairfax County Government C	50	85	85	170	104	104	7.5	1,556	57	43	887	669	0.0002	0.0007	0.0005	0.0012	0.0014
Greenbriar Park	50	28	28	55	34	34	7.5	503	57	43	287	217	0.0001	0.0002	0.0002	0.0004	0.0004
Herndon-Monroe	50	873	873	1,745	1065	1065	7.5	15,975	57	43	9,106	6,869	0.0018	0.0068	0.0053	0.0121	0.0140
Michael's	50	100	100	200	122	122	7.5	1,831	57	43	1,044	787	0.0002	0.0008	0.0006	0.0014	0.0016

Table
2011 NOx AIR QUALITY EMISSIONS INVENTORY
AUTO ACCESS TO TRANSIT
(8-HOUR OZONE AREA)
2010 CLRP/FY2011-2016 TIP AIR QUALITY CONFORMITY

10/07/2010

LOCATION		2002			2011		AVERAGE		ARTERIAL	FREEWAY	ARTERIAL	FREEWAY	EMISSIONS				
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	%		VMT	VMT	COLD START Rate (gm/mile)	RUNNING Arterial Rate (gm/mile)	RUNNING Freeway Rate (gm/mile)	RUNNING Total Running Emission	TOTAL (tons/day)
					1.22	1.22							0.51815833	0.339	0.35241667		
COMMUTER RAIL LOTS																	
Parkwood Baptist	50	9	9	18	11	11	7.5	165	57	43	94	71	0.0000	0.0001	0.0001	0.0001	0.0001
South Run District Pk	50	170	170	340	208	208	7.5	3,113	57	43	1,774	1,338	0.0004	0.0013	0.0010	0.0024	0.0027
St Paul Chung Catholic Churc	50	50	50	100	61	61	7.5	915	57	43	522	394	0.0001	0.0004	0.0003	0.0007	0.0008
Stringfellow Rd	50	181	181	361	220	220	7.5	3,305	57	43	1,884	1,421	0.0004	0.0014	0.0011	0.0025	0.0029
Sully Station	50	70	70	140	85	85	7.5	1,282	57	43	731	551	0.0001	0.0005	0.0004	0.0010	0.0011
Sydenstricker Rd	50	84	84	167	102	102	7.5	1,529	57	43	871	657	0.0002	0.0007	0.0005	0.0012	0.0013
Wakefield Chapel Pk	50	25	25	50	31	31	7.5	458	57	43	261	197	0.0001	0.0002	0.0002	0.0003	0.0004
PARK-AND-RIDE LOTS - VIRGINIA								0									
LOUDOUN COUNTY								0									
Ashburn Farm	50	10	10	20	12	12	7.5	183	57	43	104	79	0.0000	0.0001	0.0001	0.0001	0.0002
Ashburn Village	50	20	20	40	24	24	7.5	366	57	43	209	157	0.0000	0.0002	0.0001	0.0003	0.0003
Cascades	50	28	28	55	34	34	7.5	503	57	43	287	217	0.0001	0.0002	0.0002	0.0004	0.0004
Dulles North Transit	50	375	375	750	458	458	7.5	6,866	57	43	3,914	2,952	0.0008	0.0029	0.0023	0.0052	0.0060
Hamilton	50	25	25	50	31	31	7.5	458	57	43	261	197	0.0001	0.0002	0.0002	0.0003	0.0004
Innovation Avenue	50	38	38	75	46	46	7.5	687	57	43	391	295	0.0001	0.0003	0.0002	0.0005	0.0006
Leesburg	50	25	25	50	31	31	7.5	458	57	43	261	197	0.0001	0.0002	0.0002	0.0003	0.0004
Leesburg Kohls	50	600	600	1200	732	732	7.5	10,985	57	43	6,262	4,724	0.0013	0.0047	0.0037	0.0083	0.0096
Purcellville	50	18	18	35	21	21	7.5	320	57	43	183	138	0.0000	0.0001	0.0001	0.0002	0.0003
Sterling Park SC	50	23	23	45	27	27	7.5	412	57	43	235	177	0.0000	0.0002	0.0001	0.0003	0.0004
Sterling Shaw Rd	50	24	24	48	29	29	7.5	439	57	43	250	189	0.0001	0.0002	0.0001	0.0003	0.0004
PARK-AND-RIDE LOTS - VIRGINIA								0									
PRINCE WILLIAM COUNTY								0									
Brittany	50	48	48	95	58	58	7.5	870	57	43	496	374	0.0001	0.0004	0.0003	0.0007	0.0008
Dale City	50	294	294	587	358	358	7.5	5,374	57	43	3,063	2,311	0.0006	0.0023	0.0018	0.0041	0.0047
Harbor Drive	50	100	100	200	122	122	7.5	1,831	57	43	1,044	787	0.0002	0.0008	0.0006	0.0014	0.0016
Lindendale	50	108	108	216	132	132	7.5	1,977	57	43	1,127	850	0.0002	0.0008	0.0007	0.0015	0.0017
Montclair	50	25	25	50	31	31	7.5	458	57	43	261	197	0.0001	0.0002	0.0002	0.0003	0.0004
PRTC Transit Center	50	93	93	185	113	113	7.5	1,694	57	43	965	728	0.0002	0.0007	0.0006	0.0013	0.0015
Tackett's Mill	50	85	85	169	103	103	7.5	1,547	57	43	882	665	0.0002	0.0007	0.0005	0.0012	0.0014
Triangle	50	15	15	29	18	18	7.5	265	57	43	151	114	0.0000	0.0001	0.0001	0.0002	0.0002
I-95 / Rt 123	50	282	282	563	344	344	7.5	5,154	57	43	2,938	2,216	0.0006	0.0022	0.0017	0.0039	0.0045
US 1 / VA 234	50	137	137	274	167	167	7.5	2,508	57	43	1,430	1,079	0.0003	0.0011	0.0008	0.0019	0.0022
MARC TRAIN COMMUTER LOTS								0									
College Park	25	431	144	574	525	175	7.5	5,255	57	43	2,995	2,260	0.0007	0.0022	0.0018	0.0040	0.0047
Frederick	0	0	0	0	0	0	7.5	0	57	43	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Greenbelt	60	1346	2018	3364	1642	2464	7.5	30,796	57	43	17,554	13,242	0.0033	0.0131	0.0103	0.0234	0.0267
Harpers Ferry		98	0	98	120	0	7.5	897	57	43	511	386	0.0001	0.0004	0.0003	0.0007	0.0008
Muirkirk	60	260	390	650	317	476	7.5	5,950	57	43	3,392	2,559	0.0006	0.0025	0.0020	0.0045	0.0052
Seabrook	0	264	0	264	322	0	4.5	1,450	57	43	827	624	0.0004	0.0006	0.0005	0.0011	0.0015
Silver Spring	0	0	0	0	0	0	4.5	0	57	43	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Union Station	0	781	0	781	953	0	7.5	7,150	57	43	4,075	3,074	0.0011	0.0030	0.0024	0.0054	0.0065
VIRGINIA RAILWAY EXPRESS COMMUTER LOTS								0									
Backlick Road	50	110	110	220	134	134	7.5	2,014	57	43	1,148	866	0.0002	0.0009	0.0007	0.0015	0.0018
Broad Run	50	198	198	396	242	242	7.5	3,625	57	43	2,066	1,559	0.0004	0.0015	0.0012	0.0028	0.0032
Burke Center	50	275	275	550	336	336	7.5	5,035	57	43	2,870	2,165	0.0006	0.0021	0.0017	0.0038	0.0044
Franconia/Springfield (operat	50	1900	1900	3800	2319	2319	7.5	34,787	57	43	19,829	14,958	0.0040	0.0148	0.0116	0.0264	0.0304
Lorton	50	100	100	200	122	122	7.5	1,831	57	43	1,044	787	0.0002	0.0008	0.0006	0.0014	0.0016
Manassas	50	187	187	374	228	228	7.5	3,424	57	43	1,952	1,472	0.0004	0.0015	0.0011	0.0026	0.0030
Manassas Park	50	150	150	300	183	183	7.5	2,746	57	43	1,565	1,181	0.0003	0.0012	0.0009	0.0021	0.0024
Quantico	50	109	109	217	132	132	7.5	1,987	57	43	1,132	854	0.0002	0.0008	0.0007	0.0015	0.0017
Rippon 50		150	150	300	183	183	7.5	2,746	57	43	1,565	1,181	0.0003	0.0012	0.0009	0.0021	0.0024
Rolling Road	50	185	185	370	226	226	7.5	3,387	57	43	1,931	1,456	0.0004	0.0014	0.0011	0.0026	0.0030
Woodbridge	50	294	294	588	359	359	7.5	5,383	57	43	3,068	2,315	0.0006	0.0023	0.0018	0.0041	0.0047
METRORAIL PARKING LOTS		0	0		0	0	7.5	0	57	43	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Anacostia	25	861	287	1148	1051	350	7.5	10,509	57	43	5,990	4,519	0.0014	0.0045	0.0035	0.0080	0.0094
Branch Avenue	50	1611	1611	3222	1966	1966	7.5	29,496	57	43	16,813	12,683	0.0034	0.0126	0.0099	0.0224	0.0258
Capitol Heights	50	194	194	387	236	236	7.5	3,543	57	43	2,019	1,523	0.0004	0.0015	0.0012	0.0027	0.0031
College Park	25	465	155	620	568	189	7.5	5,676	57	43	3,235	2,441	0.0008	0.0024	0.0019	0.0043	0.0051
Congress Heights	0	66	0	66	81	0	4.5	363	57	43	207	156	0.0001	0.0002	0.0001	0.0003	0.0004
Deanwood	0	194	0	194	237	0	7.5	1,776	57	43	1,012	764	0.0003	0.0008	0.0006	0.0013	0.0016
East Falls Church	50	221	221	442	270	270	7.5	4,046	57	43	2,306	1,740	0.0005	0.0017	0.0014	0.0031	0.0035

Table
2011 NOx AIR QUALITY EMISSIONS INVENTORY
AUTO ACCESS TO TRANSIT
(8-HOUR OZONE AREA)
2010 CLRP/FY2011-2016 TIP AIR QUALITY CONFORMITY

10/07/2010

LOCATION		2002			2011		AVERAGE		ARTERIAL	FREEWAY	ARTERIAL	FREEWAY	E M I S S I O N S				
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	%		VMT	VMT	COLD START Rate (gm/mile)	RUNNING Arterial Rate (gm/mile)	RUNNING Freeway Rate (gm/mile)	RUNNING Total Running Emission	TOTAL (tons/day)
					1.22	1.22							0.51815833	0.339	0.35241667		
COMMUTER RAIL LOTS																	
Forest Glen	50	329	329	658	402	402	7.5	6,024	57	43	3,433	2,590	0.0007	0.0026	0.0020	0.0046	0.0053
Franconia - Springfield	50	1987	1987	3973	2425	2425	4.5	21,823	57	43	12,439	9,384	0.0042	0.0093	0.0073	0.0166	0.0207
Glenmont	50	925	925	1850	1129	1129	4.5	10,162	57	43	5,792	4,369	0.0019	0.0043	0.0034	0.0077	0.0097
Greenbelt	50	1783	1783	3565	2176	2176	7.5	32,636	57	43	18,602	14,033	0.0037	0.0139	0.0109	0.0248	0.0285
Naylor Road	50	216	216	431	263	263	7.5	3,946	57	43	2,249	1,697	0.0005	0.0017	0.0013	0.0030	0.0034
Prince George's Plaza	25	927	309	1236	1131	377	7.5	11,315	57	43	6,450	4,865	0.0015	0.0048	0.0038	0.0086	0.0101
Southern Avenue	50	1090	1090	2180	1330	1330	4.5	11,974	57	43	6,825	5,149	0.0023	0.0051	0.0040	0.0091	0.0114
Suitland	50	1033	1033	2065	1260	1260	4.5	11,342	57	43	6,465	4,877	0.0022	0.0048	0.0038	0.0086	0.0108
Van Dorn Street	50	204	204	407	248	248	4.5	2,236	57	43	1,274	961	0.0004	0.0010	0.0007	0.0017	0.0021
West Hyattsville	25	453	151	604	553	184	7.5	5,529	57	43	3,152	2,378	0.0007	0.0024	0.0018	0.0042	0.0049
Wheaton	25	759	253	1012	926	309	7.5	9,264	57	43	5,281	3,984	0.0012	0.0039	0.0031	0.0070	0.0083
				108,310				868,719					0.1303	0.3701	0.2902	0.6603	0.7906

Bold figures: New numbers taken from P & R directory
Figures in bracket: Carry forward figures from conformity doc.

Park lot Growth Rate	
transit trips 2010	**1,096,680**
transit trips 2000	863783
Annual growth rate	0.024511312
Growth factor (2002-2011)	1.220601807

SEASON 1 (Jan-Apr)
2011 Precursor NOx
AUTO ACCESS TO TRANSIT
2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

															E M I S S I O N S				
LOCATION		2002			2010		AVERAGE	2010	ARTERIAL	FREEWAY	ARTERIAL	Adj.Art	FREEWAY	Adj.Fwy	COLD START	RUNNING			TOTAL
	OUTSIDE	INSIDE	OUTSIDE	Total	INSIDE	OUTSIDE	TRIP LENGTH	VMT	%		VMT	VMT	VMT	VMT		Arterial	Freeway	Total Running	
	MSA (%)	MSA	MSA		Growth Rate	Growth Rate									Rate (gm/mile)	Rate (gm/mile)	Rate (gm/mile)	Emission	(tons/day)
					1.22	1.22						Wk Days =	83		0.4895	0.2976	0.3121	(tones/day)	
COMMUTER RAIL LOTS												Seasonal adj =	0.9216						
BRUNSWICK 25%	25	305	102	**407**	373	124	7.5	3,726	57	43	2,124	1,957	1,602	1,477	0.0004	0.0013	0.0010	0.0023	0.0027
PT OF ROCKS 25%	25	204	68	**272**	249	83	7.5	2,490	57	43	1,419	1,308	1,071	987	0.0003	0.0009	0.0007	0.0015	0.0018
DICKERSON	0	15	0	**15**	18	0	7.5	137	57	43	78	72	59	54	0.0000	0.0000	0.0000	0.0001	0.0001
BARNESVILLE	0	46	0	**46**	56	0	7.5	421	57	43	240	221	181	167	0.0000	0.0001	0.0001	0.0003	0.0003
GERMANTOWN	0	386	0	**386**	471	0	7.5	3,534	57	43	2,014	1,856	1,519	1,400	0.0004	0.0012	0.0010	0.0022	0.0026
MET GROVE	0	352	0	**352**	430	0	7.5	3,222	57	43	1,837	1,693	1,386	1,277	0.0004	0.0011	0.0009	0.0020	0.0024
WAS GROVE	0	15	0	**15**	18	0	7.5	137	57	43	78	72	59	54	0.0000	0.0000	0.0000	0.0001	0.0001
GARRETT PARK	0	22	0	**22**	27	0	7.5	201	57	43	115	106	87	80	0.0000	0.0001	0.0001	0.0001	0.0001
BOWIE 50%	50	188	188	**375**	229	229	7.5	3,433	57	43	1,957	1,803	1,476	1,360	0.0003	0.0012	0.0009	0.0021	0.0024
SEABROOK 15%	15	224	40	**264**	274	48	7.5	2,417	57	43	1,378	1,270	1,039	958	0.0003	0.0008	0.0007	0.0015	0.0018
KENSINGTON	0	45	0	**45**	55	0	7.5	412	57	43	235	216	177	163	0.0000	0.0001	0.0001	0.0003	0.0003
LAUREL 30%	30	209	90	**299**	255	109	7.5	2,737	57	43	1,560	1,438	1,177	1,085	0.0003	0.0009	0.0007	0.0017	0.0020
GAITHESBURG	0	280	0	**280**	342	0	7.5	2,563	57	43	1,461	1,347	1,102	1,016	0.0003	0.0009	0.0007	0.0016	0.0019
BERWYN HEIGHTS	0	30	0	**30**	37	0	4.5	165	57	43	94	87	71	65	0.0000	0.0001	0.0000	0.0001	0.0001
RIVERDALE	0	65	0	**65**	79	0	4.5	357	57	43	204	188	154	141	0.0001	0.0001	0.0001	0.0002	0.0003
METRO RAIL LOTS																			
ADDISON ROAD 40%	40	791	527	**1318**	965	644	7.5	12,066	57	43	6,877	6,338	5,188	4,781	0.0011	0.0042	0.0033	0.0074	0.0086
ARCHIVES	0	12	0	12	15	0	4.5	66	57	43	38	35	28	26	0.0000	0.0000	0.0000	0.0000	0.0001
ARLING	0	10	0	10	12	0	4.5	55	57	43	31	29	24	22	0.0000	0.0000	0.0000	0.0000	0.0000
BALLSTON	0	1175	0	1175	1434	0	4.5	6,454	57	43	3,679	3,390	2,775	2,558	0.0013	0.0022	0.0018	0.0040	0.0053
BENN.RD	0	520	0	520	635	0	4.5	2,856	57	43	1,628	1,500	1,228	1,132	0.0006	0.0010	0.0008	0.0018	0.0023
BETH	0	395	0	395	482	0	4.5	2,170	57	43	1,237	1,140	933	860	0.0004	0.0007	0.0006	0.0013	0.0018
BRADD RD	0	10	0	**10**	12	0	4.5	55	57	43	31	29	24	22	0.0000	0.0000	0.0000	0.0000	0.0000
BROOKLAND	0	27	0	**27**	33	0	4.5	148	57	43	85	78	64	59	0.0000	0.0001	0.0000	0.0001	0.0001
CHEVERLY	0	557	0	**557**	680	0	4.5	3,059	57	43	1,744	1,607	1,316	1,212	0.0006	0.0011	0.0008	0.0019	0.0025
CLARENDON	0	554	0	554	676	0	4.5	3,043	57	43	1,734	1,599	1,308	1,206	0.0006	0.0010	0.0008	0.0019	0.0025
CLEVELAND PK	0	366	0	366	447	0	4.5	2,010	57	43	1,146	1,056	864	797	0.0004	0.0007	0.0005	0.0012	0.0016
COURT HOUSE	0	256	0	256	312	0	4.5	1,406	57	43	801	739	605	557	0.0003	0.0005	0.0004	0.0009	0.0011
CRYSTAL CITY	0	347	0	347	424	0	4.5	1,906	57	43	1,086	1,001	820	755	0.0004	0.0007	0.0005	0.0012	0.0016
DEANWOOD	0	194	0	**194**	237	0	4.5	1,066	57	43	607	560	458	422	0.0002	0.0004	0.0003	0.0007	0.0009
DUN LORING 10%	10	1220	136	**1355**	1489	165	4.5	7,443	57	43	4,242	3,910	3,200	2,949	0.0014	0.0026	0.0020	0.0046	0.0060
DUPONT CIRCLE	0	165	0	165	201	0	4.5	906	57	43	517	476	390	359	0.0002	0.0003	0.0002	0.0006	0.0007
EASTERN MKT	0	178	0	178	217	0	4.5	978	57	43	557	514	420	387	0.0002	0.0003	0.0003	0.0006	0.0008
EAST FALLS CH	0	442	0	**442**	540	0	4.5	2,428	57	43	1,384	1,275	1,044	962	0.0005	0.0008	0.0007	0.0015	0.0020
EIS	0	352	0	352	430	0	4.5	1,933	57	43	1,102	1,016	831	766	0.0004	0.0007	0.0005	0.0012	0.0016
FARRAGUT NORTH	0	102	0	102	125	0	4.5	560	57	43	319	294	241	222	0.0001	0.0002	0.0002	0.0003	0.0005
FARRAGUT WEST	0	221	0	221	270	0	4.5	1,214	57	43	692	638	522	481	0.0002	0.0004	0.0003	0.0007	0.0010
FEDERAL CENTER	0	75	0	75	92	0	4.5	412	57	43	235	216	177	163	0.0001	0.0001	0.0001	0.0003	0.0003
FEDERAL TRI	0	54	0	54	66	0	4.5	297	57	43	169	156	128	118	0.0001	0.0001	0.0001	0.0002	0.0002
FOGGY	0	102	0	102	125	0	4.5	560	57	43	319	294	241	222	0.0001	0.0002	0.0002	0.0003	0.0005
FORT TROTTEN	0	445	0	**445**	543	0	4.5	2,444	57	43	1,393	1,284	1,051	969	0.0005	0.0008	0.0007	0.0015	0.0020
FRH.HEIGHTS	0	679	0	679	829	0	4.5	3,730	57	43	2,126	1,959	1,604	1,478	0.0007	0.0013	0.0010	0.0023	0.0030
GALLERY PLACE	0	124	0	124	151	0	4.5	681	57	43	388	358	293	270	0.0001	0.0002	0.0002	0.0004	0.0006
GROSVENOR	0	716	0	**716**	874	0	4.5	3,933	57	43	2,242	2,066	1,691	1,559	0.0008	0.0014	0.0011	0.0024	0.0032
HUNT NORTH 40%	40	1873	1249	**3122**	2286	1524	7.5	28,580	57	43	16,291	15,014	12,290	11,326	0.0027	0.0098	0.0078	0.0176	0.0203
JUD SQUARE	0	110	0	110	134	0	4.5	604	57	43	344	317	260	239	0.0001	0.0002	0.0002	0.0004	0.0005
KING ST	0	30	0	**30**	37	0	4.5	165	57	43	94	87	71	65	0.0000	0.0001	0.0000	0.0001	0.0001
LANDOVER 25%	25	1410	470	**1880**	1721	574	7.5	17,210	57	43	9,810	9,041	7,401	6,820	0.0018	0.0059	0.0047	0.0106	0.0124
L'ENFANT PLAZA	0	296	0	296	361	0	4.5	1,626	57	43	927	854	699	644	0.0003	0.0006	0.0004	0.0010	0.0013
MCPHERSON SQ	0	52	0	52	63	0	4.5	286	57	43	163	150	123	113	0.0001	0.0001	0.0001	0.0002	0.0002
MEDICAL CENTER	0	14	0	**14**	17	0	4.5	77	57	43	44	40	33	30	0.0000	0.0000	0.0000	0.0000	0.0001
METRO CENTER	0	177	0	177	216	0	4.5	972	57	43	554	511	418	385	0.0002	0.0003	0.0003	0.0006	0.0008
MINNES	0	353	0	**353**	431	0	4.5	1,939	57	43	1,105	1,019	834	768	0.0004	0.0007	0.0005	0.0012	0.0016
NAT AIR	0	87	0	87	106	0	4.5	478	57	43	272	251	205	189	0.0001	0.0002	0.0001	0.0003	0.0004
NEW CARROL 50%	50	1049	1049	**2097**	1280	1280	7.5	19,197	57	43	10,942	10,084	8,255	7,608	0.0017	0.0066	0.0052	0.0119	0.0135
PRNTAGON	0	561	0	561	685	0	4.5	3,081	57	43	1,756	1,619	1,325	1,221	0.0006	0.0011	0.0008	0.0019	0.0025

SEASON 1 (Jan-Apr)
2011 Precursor NOx
AUTO ACCESS TO TRANSIT
2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

																EMISSIONS				
LOCATION		2002			2010		AVERAGE	2010	ARTERIAL	FREEWAY	ARTERIAL	Adj.Art	FREEWAY	Adj.Fwy	COLD START	RUNNING			TOTAL
	OUTSIDE	INSIDE	OUTSIDE	Total	INSIDE	OUTSIDE	TRIP LENGTH	VMT	%		VMT	VMT	VMT	VMT		Arterial	Freeway	Total Running	
	MSA (%)	MSA	MSA		Growth Rate	Growth Rate									Rate (gm/mile)	Rate (gm/mile)	Rate (gm/mile)	Emission	(tons/day)
					1.22	1.22						Wk Days =	83		0.4895	0.2976	0.3121	(tones/day)	
COMMUTER RAIL LOTS												Seasonal adj =	0.9216						
PENTAGON CITY	0	381	0	381	465	0	4.5	2,093	57	43	1,193	1,099	900	829	0.0004	0.0007	0.0006	0.0013	0.0017
POTOMAC AVE	0	533	0	533	651	0	4.5	2,928	57	43	1,669	1,538	1,259	1,160	0.0006	0.0010	0.0008	0.0018	0.0024
ROCKVILLE	0	667	0	**667**	814	0	4.5	3,664	57	43	2,088	1,925	1,575	1,452	0.0007	0.0013	0.0010	0.0023	0.0030
ROSSLYN	0	356	0	356	435	0	4.5	1,955	57	43	1,115	1,027	841	775	0.0004	0.0007	0.0005	0.0012	0.0016
SHADY GROVE 10%	10	3903	434	**4337**	4764	529	7.5	39,703	57	43	22,631	20,857	17,072	15,734	0.0044	0.0137	0.0108	0.0245	0.0290
SILVER SPRING	0	44	0	**44**	54	0	4.5	242	57	43	138	127	104	96	0.0000	0.0001	0.0001	0.0001	0.0002
SMITH MALL	0	120	0	120	146	0	4.5	659	57	43	376	346	283	261	0.0001	0.0002	0.0002	0.0004	0.0005
STADIUM ARM	0	976	0	976	1191	0	4.5	5,361	57	43	3,056	2,816	2,305	2,124	0.0011	0.0018	0.0015	0.0033	0.0044
TAKOMA PK	0	146	0	**146**	178	0	4.5	802	57	43	457	421	345	318	0.0002	0.0003	0.0002	0.0005	0.0007
TENLEYTON	0	17	0	**17**	21	0	4.5	93	57	43	53	49	40	37	0.0000	0.0000	0.0000	0.0001	0.0001
TWINBROOK	0	1136	0	**1136**	1387	0	4.5	6,240	57	43	3,557	3,278	2,683	2,473	0.0012	0.0022	0.0017	0.0039	0.0051
UNION STAT	0	378	0	378	461	0	4.5	2,076	57	43	1,183	1,091	893	823	0.0004	0.0007	0.0006	0.0013	0.0017
VAN NESS	0	343	0	343	419	0	4.5	1,884	57	43	1,074	990	810	747	0.0004	0.0006	0.0005	0.0012	0.0015
VIENNA 25%	25	2798	933	**3731**	3416	1139	7.5	34,155	57	43	19,469	17,942	14,687	13,535	0.0035	0.0118	0.0093	0.0211	0.0246
VA SQUARE	0	642	0	642	784	0	4.5	3,526	57	43	2,010	1,852	1,516	1,397	0.0007	0.0012	0.0010	0.0022	0.0029
WEST FALLS CHURCH	0	2183	0	**2183**	2665	0	4.5	11,991	57	43	6,835	6,299	5,156	4,752	0.0024	0.0041	0.0033	0.0074	0.0098
WHITE FLINT	0	1633	0	1633	1993	0	4.5	8,970	57	43	5,113	4,712	3,857	3,555	0.0018	0.0031	0.0024	0.0055	0.0073
WOODLEY	0	68	0	68	83	0	4.5	374	57	43	213	196	161	148	0.0001	0.0001	0.0001	0.0002	0.0003
RHODE ISLAND 30%	30	266	114	**380**	325	139	7.5	3,479	57	43	1,983	1,827	1,496	1,379	0.0003	0.0012	0.0009	0.0021	0.0025
BUS & CAR POOL LOTS																			
CARTER BARRON	0	798	0	798	974	0	4.5	4,383	57	43	2,498	2,303	1,885	1,737	0.0009	0.0015	0.0012	0.0027	0.0036
PG PLAZA	0	47	0	47	57	0	4.5	258	57	43	147	136	111	102	0.0001	0.0001	0.0001	0.0002	0.0002
PENN MAR SHOPP.	0	100	0	**100**	122	0	4.5	549	57	43	313	289	236	218	0.0001	0.0002	0.0001	0.0003	0.0004
CAP PLAZA	0	100	0	**100**	122	0	4.5	549	57	43	313	289	236	218	0.0001	0.0002	0.0001	0.0003	0.0004
EASTOVER	0	100	0	**100**	122	0	4.5	549	57	43	313	289	236	218	0.0001	0.0002	0.0001	0.0003	0.0004
FOUR MILE RUN	0	28	0	**28**	34	0	4.5	154	57	43	88	81	66	61	0.0000	0.0001	0.0000	0.0001	0.0001
SPRINGFIELD MALL	0	580	0	**580**	708	0	4.5	3,186	57	43	1,816	1,674	1,370	1,262	0.0006	0.0011	0.0009	0.0020	0.0026
SPRINGFIELD METH CH	0	48	0	**48**	59	0	4.5	264	57	43	150	138	113	104	0.0001	0.0001	0.0001	0.0002	0.0002
FRED ARMORY	0	33	0	**33**	40	0	7.5	302	57	43	172	159	130	120	0.0000	0.0001	0.0001	0.0002	0.0002
MYERSVILLE	0	65	0	**65**	79	0	7.5	595	57	43	339	313	256	236	0.0001	0.0002	0.0002	0.0004	0.0004
ROSEMONT	0	45	0	**45**	55	0	7.5	412	57	43	235	216	177	163	0.0000	0.0001	0.0001	0.0003	0.0003
URBANA	0	193	0	**193**	236	0	7.5	1,767	57	43	1,007	928	760	700	0.0002	0.0006	0.0005	0.0011	0.0013
JEFFERSON	0	40	0	**40**	49	0	7.5	366	57	43	209	192	157	145	0.0000	0.0001	0.0001	0.0002	0.0003
NORBECK RD	0	248	0	**248**	303	0	7.5	2,270	57	43	1,294	1,193	976	900	0.0003	0.0008	0.0006	0.0014	0.0017
MONTROSE RD	0	650	0	**650**	793	0	7.5	5,950	57	43	3,392	3,126	2,559	2,358	0.0007	0.0021	0.0016	0.0037	0.0044
BRIGG CHENNY 50%	50	215	215	**430**	262	262	7.5	3,936	57	43	2,244	2,068	1,693	1,560	0.0003	0.0014	0.0011	0.0024	0.0028
COMUS ROAD	0	30	0	**30**	37	0	7.5	275	57	43	157	144	118	109	0.0000	0.0001	0.0001	0.0002	0.0002
LAKEFOREST MALL	0	300	0	**300**	366	0	7.5	2,746	57	43	1,565	1,443	1,181	1,088	0.0003	0.0009	0.0007	0.0017	0.0020
BURTONSVILLE	0	500	0	**500**	610	0	7.5	4,577	57	43	2,609	2,404	1,968	1,814	0.0005	0.0016	0.0012	0.0028	0.0034
FORCEY MEM.	0	200	0	**200**	244	0	7.5	1,831	57	43	1,044	962	787	726	0.0002	0.0006	0.0005	0.0011	0.0013
TECH ROAD	0	155	0	**155**	189	0	7.5	1,419	57	43	809	745	610	562	0.0002	0.0005	0.0004	0.0009	0.0010
BELTWAY	0	265	0	**265**	323	0	7.5	2,426	57	43	1,383	1,274	1,043	961	0.0003	0.0008	0.0007	0.0015	0.0018
LAUREL VAN DUSEN	0	62	0	**62**	76	0	7.5	568	57	43	324	298	244	225	0.0001	0.0002	0.0002	0.0004	0.0004
ACCOKEEK	0	450	0	**450**	549	0	7.5	4,120	57	43	2,348	2,164	1,771	1,633	0.0005	0.0014	0.0011	0.0025	0.0030
ABC DRIVE IN	0	100	0	**100**	122	0	7.5	915	57	43	522	481	394	363	0.0001	0.0003	0.0002	0.0006	0.0007
BOWIE 20%	20	526	131	**657**	642	160	7.5	6,015	57	43	3,428	3,159	2,586	2,383	0.0006	0.0021	0.0016	0.0037	0.0044
CLINTON 50%	50	212	212	**424**	259	259	7.5	3,882	57	43	2,212	2,039	1,669	1,538	0.0003	0.0013	0.0011	0.0024	0.0027
OXON HILL 20%	20	519	130	**649**	634	158	7.5	5,941	57	43	3,387	3,121	2,555	2,354	0.0006	0.0020	0.0016	0.0037	0.0043
EQUESTRIAN CENTER 50	50	150	150	**300**	183	183	7.5	2,746	57	43	1,565	1,443	1,181	1,088	0.0002	0.0009	0.0007	0.0017	0.0019
BOWIE MARKET PLACE	0	50	0	**50**	61	0	7.5	458	57	43	261	240	197	181	0.0001	0.0002	0.0001	0.0003	0.0003
FT.WASHINGTON	0	412	0	**412**	503	0	7.5	3,772	57	43	2,150	1,981	1,622	1,495	0.0004	0.0013	0.0010	0.0023	0.0028
MONTPELIER REC PARK	0	70	0	**70**	85	0	7.5	641	57	43	365	337	276	254	0.0001	0.0002	0.0002	0.0004	0.0005
RESTON	0	1547	0	**1547**	1888	0	7.5	14,162	57	43	8,072	7,439	6,090	5,612	0.0017	0.0049	0.0039	0.0087	0.0104
GREENBRIAR	0	55	0	**55**	67	0	7.5	503	57	43	287	264	217	200	0.0001	0.0002	0.0001	0.0003	0.0004
FAIR OAKS	0	150	0	**150**	183	0	7.5	1,373	57	43	783	721	590	544	0.0002	0.0005	0.0004	0.0008	0.0010
ROLLING VALLEY	0	628	0	**628**	767	0	7.5	5,749	57	43	3,277	3,020	2,472	2,278	0.0007	0.0020	0.0016	0.0035	0.0042
SPRINGFIELD PLAZA	0	230	0	**230**	281	0	7.5	2,106	57	43	1,200	1,106	905	834	0.0002	0.0007	0.0006	0.0013	0.0015
FAIRLANES BOWL	0	35	0	**35**	43	0	7.5	320	57	43	183	168	138	127	0.0000	0.0001	0.0001	0.0002	0.0002

SEASON 1 (Jan-Apr)
2011 Precursor NOx
AUTO ACCESS TO TRANSIT
2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

															E M I S S I O N S				
LOCATION		2002			2010		AVERAGE	2010	ARTERIAL	FREEWAY	ARTERIAL	Adj.Art	FREEWAY	Adj.Fwy	COLD START	RUNNING			TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	%		VMT	VMT	VMT	VMT	Rate (gm/mile)	Arterial Rate (gm/mile)	Freeway Rate (gm/mile)	Total Running Emission (tones/day)	(tons/day)
					1.22	1.22						Wk Days =	83		0.4895	0.2976	0.3121		
COMMUTER RAIL LOTS												Seasonal adj =	0.9216						
NOTTOWAY PARK	0	14	0	**14**	17	0	7.5	128	57	43	73	67	55	51	0.0000	0.0000	0.0000	0.0001	0.0001
HORNER RD	0	2397	0	**2397**	2926	0	7.5	21,943	57	43	12,508	11,527	9,436	8,696	0.0026	0.0076	0.0060	0.0135	0.0161
LAKE RIDGE	0	555	0	**555**	677	0	7.5	5,081	57	43	2,896	2,669	2,185	2,013	0.0006	0.0018	0.0014	0.0031	0.0037
MINNIEVILLE RD 40%	40	336	224	560	410	273	7.5	5,127	57	43	2,922	2,693	2,204	2,032	0.0005	0.0018	0.0014	0.0032	0.0036
GORDON BLVD	0	156	0	156	190	0	7.5	1,428	57	43	814	750	614	566	0.0002	0.0005	0.0004	0.0009	0.0010
HILLENDALE	0	248	0	**248**	303	0	7.5	2,270	57	43	1,294	1,193	976	900	0.0003	0.0008	0.0006	0.0014	0.0017
POTOMAC MILLS	0	946	0	**946**	1155	0	7.5	8,660	57	43	4,936	4,549	3,724	3,432	0.0010	0.0030	0.0024	0.0053	0.0064
List of new lots to be added in Conformity Document list																			
PARK-AND-RIDE LOTS - MARYLAND																			
PARK-AND-RIDE LOTS - MARYLAND																			
CHARLES COUNTY																			
301 Park & Ride	25	287	96	383	351	117	7.5	3,506	57	43	1,999	1,842	1,508	1,389	0.0004	0.0012	0.0010	0.0022	0.0025
Charles County Government	25	26	9	35	32	11	7.5	320	57	43	183	168	138	127	0.0000	0.0001	0.0001	0.0002	0.0002
Food Lion Shopping Center	25	38	13	50	46	15	7.5	458	57	43	261	240	197	181	0.0000	0.0002	0.0001	0.0003	0.0003
La Plata Armory	25	15	5	20	18	6	7.5	183	57	43	104	96	79	73	0.0000	0.0001	0.0000	0.0001	0.0001
Laurel Springs Regional Park	25	38	13	50	46	15	7.5	458	57	43	261	240	197	181	0.0000	0.0002	0.0001	0.0003	0.0003
Life Wesleyan Church	25	38	13	50	46	15	7.5	458	57	43	261	240	197	181	0.0000	0.0002	0.0001	0.0003	0.0003
Mattawoman-Beantown Rd	25	435	145	580	531	177	7.5	5,310	57	43	3,026	2,789	2,283	2,104	0.0005	0.0018	0.0014	0.0033	0.0038
Smallwood Village	25	75	25	100	92	31	7.5	915	57	43	522	481	394	363	0.0001	0.0003	0.0002	0.0006	0.0007
St. Charles Towne	25	263	88	350	320	107	7.5	3,204	57	43	1,826	1,683	1,378	1,270	0.0003	0.0011	0.0009	0.0020	0.0023
PARK-AND-RIDE LOTS - MARYLAND					0	0			0										
FREDERICK COUNTY					0	0		0											
Frederick (north)	25	123	41	164	150	50	7.5	1,501	57	43	856	789	646	595	0.0002	0.0005	0.0004	0.0009	0.0011
Frederick (south)	25	173	58	230	211	70	7.5	2,106	57	43	1,200	1,106	905	834	0.0002	0.0007	0.0006	0.0013	0.0015
Monacacy Marcst	25	600	200	800	732	244	7.5	7,324	57	43	4,174	3,847	3,149	2,902	0.0008	0.0025	0.0020	0.0045	0.0053
PARK-AND-RIDE LOTS - MARYLAND					0	0		0											
MONTGOMERY COUNTY					0	0		0											
Colesville	0	190	0	190	232	0	7.5	1,739	57	43	991	914	748	689	0.0002	0.0006	0.0005	0.0011	0.0013
Damascus	50	0	0		0	0	7.5	0	57	43	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Gaithersburg	50	259	259	517	316	316	7.5	4,733	57	43	2,698	2,486	2,035	1,876	0.0004	0.0016	0.0013	0.0029	0.0033
Gaithersburg	50	175	175	350	214	214	7.5	3,204	57	43	1,826	1,683	1,378	1,270	0.0003	0.0011	0.0009	0.0020	0.0023
Germantown Town	50	0	0		0	0	7.5	0	57	43	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Greencastle	50	75	75	150	92	92	7.5	1,373	57	43	783	721	590	544	0.0001	0.0005	0.0004	0.0008	0.0010
Milestone Shopping	50	88	88	175	107	107	7.5	1,602	57	43	913	842	689	635	0.0001	0.0006	0.0004	0.0010	0.0011
PARK-AND-RIDE LOTS - MAYLAND					0	0		0											
PRINCE GEORGE'S COUNTY					0	0		0											
Hampton Mall	0	100	0	100	122	0	4.5	549	57	43	313	289	236	218	0.0001	0.0002	0.0001	0.0003	0.0004
Laurel (south)	25	513	171	684	626	209	7.5	6,262	57	43	3,569	3,289	2,693	2,481	0.0006	0.0022	0.0017	0.0039	0.0045
PARK-AND-RIDE LOTS - VIRGINIA					0	0		0				0		0	0.0000	0.0000	0.0000		
ARLINGTON COUNTY					0	0		0				0		0	0.0000	0.0000	0.0000		
Ballston Public Parking Garag	25	375	125	500	458	153	7.5	4,577	57	43	2,609	2,404	1,968	1,814	0.0005	0.0016	0.0012	0.0028	0.0033
Washington-Lee	50	178	178	356	217	217	7.5	3,259	57	43	1,858	1,712	1,401	1,292	0.0003	0.0011	0.0009	0.0020	0.0023
PARK-AND-RIDE LOTS - VIRGINIA					0	0		0				0							
FAIRFAX COUNTY					0	0		0				0							
American Legion	50	50	50	100	61	61	7.5	915	57	43	522	481	394	363	0.0001	0.0003	0.0002	0.0006	0.0006
Canterbury Woods Pk	50	17	17	34	21	21	7.5	311	57	43	177	164	134	123	0.0000	0.0001	0.0001	0.0002	0.0002
Centreville	50	185	185	370	226	226	7.5	3,387	57	43	1,931	1,779	1,456	1,342	0.0003	0.0012	0.0009	0.0021	0.0024
Centreville United Methodist	50	74	74	147	90	90	7.5	1,346	57	43	767	707	579	533	0.0001	0.0005	0.0004	0.0008	0.0009
Fairfax County Government C	50	85	85	170	104	104	7.5	1,556	57	43	887	818	669	617	0.0001	0.0005	0.0004	0.0010	0.0011
Greenbriar Park	50	28	28	55	34	34	7.5	503	57	43	287	264	217	200	0.0000	0.0002	0.0001	0.0003	0.0004
Herndon-Monroe	50	873	873	1,745	1065	1065	7.5	15,975	57	43	9,106	8,392	6,869	6,331	0.0014	0.0055	0.0044	0.0099	0.0113
Michael's	50	100	100	200	122	122	7.5	1,831	57	43	1,044	962	787	726	0.0002	0.0006	0.0005	0.0011	0.0013
Parkwood Baptist	50	9	9	18	11	11	7.5	165	57	43	94	87	71	65	0.0000	0.0001	0.0000	0.0001	0.0001
South Run District Pk	50	170	170	340	208	208	7.5	3,113	57	43	1,774	1,635	1,338	1,233	0.0003	0.0011	0.0008	0.0019	0.0022
St Paul Chung Catholic Chur	50	50	50	100	61	61	7.5	915	57	43	522	481	394	363	0.0001	0.0003	0.0002	0.0006	0.0006
Stringfellow Rd	50	181	181	361	220	220	7.5	3,305	57	43	1,884	1,736	1,421	1,310	0.0003	0.0011	0.0009	0.0020	0.0023
Sully Station	50	70	70	140	85	85	7.5	1,282	57	43	731	673	551	508	0.0001	0.0004	0.0003	0.0008	0.0009

SEASON 1 (Jan-Apr)
2011 Precursor NOx
AUTO ACCESS TO TRANSIT
2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

															EMISSIONS				
LOCATION		2002			2010		AVERAGE	2010	ARTERIAL	FREEWAY	ARTERIAL	Adj.Art	FREEWAY	Adj.Fwy	COLD START	RUNNING			TOTAL
	OUTSIDE	INSIDE	OUTSIDE	Total	INSIDE	OUTSIDE	TRIP LENGTH	VMT	%		VMT	VMT	VMT	VMT		Arterial	Freeway	Total Running	
	MSA (%)	MSA	MSA		Growth Rate	Growth Rate									Rate (gm/mile)	Rate (gm/mile)	Rate (gm/mile)	Emission	(tons/day)
					1.22	1.22						Wk Days =	83		0.4895	0.2976	0.3121	(tones/day)	
COMMUTER RAIL LOTS												Seasonal adj =	0.9216						
Sydenstricker Rd	50	84	84	167	102	102	7.5	1,529	57	43	871	803	657	606	0.0001	0.0005	0.0004	0.0009	0.0011
Wakefield Chapel Pk	50	25	25	50	31	31	7.5	458	57	43	261	240	197	181	0.0000	0.0002	0.0001	0.0003	0.0003
PARK-AND-RIDE LOTS - VIRGINIA																			
LOUDOUN COUNTY																			
Ashburn Farm	50	10	10	20	12	12	7.5	183	57	43	104	96	79	73	0.0000	0.0001	0.0000	0.0001	0.0001
Ashburn Village	50	20	20	40	24	24	7.5	366	57	43	209	192	157	145	0.0000	0.0001	0.0001	0.0002	0.0003
Cascades	50	28	28	55	34	34	7.5	503	57	43	287	264	217	200	0.0000	0.0002	0.0001	0.0003	0.0004
Dulles North Transit	50	375	375	750	458	458	7.5	6,866	57	43	3,914	3,607	2,952	2,721	0.0006	0.0024	0.0019	0.0042	0.0048
Hamilton	50	25	25	50	31	31	7.5	458	57	43	261	240	197	181	0.0000	0.0002	0.0001	0.0003	0.0003
Innovation Avenue	50	38	38	75	46	46	7.5	687	57	43	391	361	295	272	0.0001	0.0002	0.0002	0.0004	0.0005
Leesburg	50	25	25	50	31	31	7.5	458	57	43	261	240	197	181	0.0000	0.0002	0.0001	0.0003	0.0003
Leesburg Kohls	50	600	600	1200	732	732	7.5	10,985	57	43	6,262	5,771	4,724	4,353	0.0010	0.0038	0.0030	0.0068	0.0078
Purcellville	50	18	18	35	21	21	7.5	320	57	43	183	168	138	127	0.0000	0.0001	0.0001	0.0002	0.0002
Sterling Park SC	50	23	23	45	27	27	7.5	412	57	43	235	216	177	163	0.0000	0.0001	0.0001	0.0003	0.0003
Sterling Shaw Rd	50	24	24	48	29	29	7.5	439	57	43	250	231	189	174	0.0000	0.0002	0.0001	0.0003	0.0003
PARK-AND-RIDE LOTS - VIRGINIA																			
PRINCE WILLIAM COUNTY																			
Brittany	50	48	48	95	58	58	7.5	870	57	43	496	457	374	345	0.0001	0.0003	0.0002	0.0005	0.0006
Dale City	50	294	294	587	358	358	7.5	5,374	57	43	3,063	2,823	2,311	2,130	0.0005	0.0019	0.0015	0.0033	0.0038
Harbor Drive	50	100	100	200	122	122	7.5	1,831	57	43	1,044	962	787	726	0.0002	0.0006	0.0005	0.0011	0.0013
Lindendale	50	108	108	216	132	132	7.5	1,977	57	43	1,127	1,039	850	784	0.0002	0.0007	0.0005	0.0012	0.0014
Montclair	50	25	25	50	31	31	7.5	458	57	43	261	240	197	181	0.0000	0.0002	0.0001	0.0003	0.0003
PRTC Transit Center	50	93	93	185	113	113	7.5	1,694	57	43	965	890	728	671	0.0001	0.0006	0.0005	0.0010	0.0012
Tackett's Mill	50	85	85	169	103	103	7.5	1,547	57	43	882	813	665	613	0.0001	0.0005	0.0004	0.0010	0.0011
Triangle	50	15	15	29	18	18	7.5	265	57	43	151	139	114	105	0.0000	0.0001	0.0001	0.0002	0.0002
I-95 / Rt 123	50	282	282	563	344	344	7.5	5,154	57	43	2,938	2,707	2,216	2,042	0.0005	0.0018	0.0014	0.0032	0.0036
US 1 / VA 234	50	137	137	274	167	167	7.5	2,508	57	43	1,430	1,318	1,079	994	0.0002	0.0009	0.0007	0.0015	0.0018
MARC TRAIN COMMUTER LOTS																	0.0000		
College Park	25	431	144	574	525	175	7.5	5,255	57	43	2,995	2,760	2,260	2,082	0.0005	0.0018	0.0014	0.0032	0.0038
Frederick	0	0	0	0	0	0	7.5	0	57	43	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Greenbelt	60	1346	2018	3364	1642	2464	7.5	30,796	57	43	17,554	16,177	13,242	12,204	0.0025	0.0106	0.0084	0.0190	0.0216
Harpers Ferry		98	0	98	120	0	7.5	897	57	43	511	471	386	356	0.0001	0.0003	0.0002	0.0006	0.0007
Muirkirk	60	260	390	650	317	476	7.5	5,950	57	43	3,392	3,126	2,559	2,358	0.0005	0.0021	0.0016	0.0037	0.0042
Seabrook	0	264	0	264	322	0	4.5	1,450	57	43	827	762	624	575	0.0003	0.0005	0.0004	0.0009	0.0012
Silver Spring	0	0	0	0	0	0	4.5	0	57	43	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Union Station	0	781	0	781	953	0	7.5	7,150	57	43	4,075	3,756	3,074	2,833	0.0008	0.0025	0.0019	0.0044	0.0053
VIRGINIA RAILWAY EXPRESS COMMUTER LOTS																			
Backlick Road	50	110	110	220	134	134	7.5	2,014	57	43	1,148	1,058	866	798	0.0002	0.0007	0.0005	0.0012	0.0014
Broad Run	50	198	198	396	242	242	7.5	3,625	57	43	2,066	1,904	1,559	1,437	0.0003	0.0012	0.0010	0.0022	0.0026
Brooke	50	150	150	300	183	183	7.5	2,746	57	43	1,565	1,443	1,181	1,088	0.0002	0.0009	0.0007	0.0017	0.0019
Burke Center	50	275	275	550	336	336	7.5	5,035	57	43	2,870	2,645	2,165	1,995	0.0004	0.0017	0.0014	0.0031	0.0036
Franconia/Springfield (opera	50	1900	1900	3800	2319	2319	7.5	34,787	57	43	19,829	18,274	14,958	13,786	0.0031	0.0120	0.0095	0.0215	0.0245
Leeland Road	50	326	326	652	398	398	7.5	5,969	57	43	3,402	3,135	2,567	2,365	0.0005	0.0021	0.0016	0.0037	0.0042
Lorton	50	100	100	200	122	122	7.5	1,831	57	43	1,044	962	787	726	0.0002	0.0006	0.0005	0.0011	0.0013
Manassas	50	187	187	374	228	228	7.5	3,424	57	43	1,952	1,799	1,472	1,357	0.0003	0.0012	0.0009	0.0021	0.0024
Manassas Park	50	150	150	300	183	183	7.5	2,746	57	43	1,565	1,443	1,181	1,088	0.0002	0.0009	0.0007	0.0017	0.0019
Quantico	50	109	109	217	132	132	7.5	1,987	57	43	1,132	1,044	854	787	0.0002	0.0007	0.0005	0.0012	0.0014
Rippon 50		150	150	300	183	183	7.5	2,746	57	43	1,565	1,443	1,181	1,088	0.0002	0.0009	0.0007	0.0017	0.0019
Rolling Road	50	185	185	370	226	226	7.5	3,387	57	43	1,931	1,779	1,456	1,342	0.0003	0.0012	0.0009	0.0021	0.0024
Woodbridge	50	294	294	588	359	359	7.5	5,383	57	43	3,068	2,828	2,315	2,133	0.0005	0.0019	0.0015	0.0033	0.0038
METRORAIL PARKING LOTS																			
Anacostia	25	861	287	1148	1051	350	7.5	10,509	57	43	5,990	5,521	4,519	4,165	0.0011	0.0036	0.0029	0.0065	0.0076
Branch Avenue	50	1611	1611	3222	1966	1966	7.5	29,496	57	43	16,813	15,495	12,683	11,689	0.0026	0.0102	0.0080	0.0182	0.0208
Capitol Heights	50	194	194	387	236	236	7.5	3,543	57	43	2,019	1,861	1,523	1,404	0.0003	0.0012	0.0010	0.0022	0.0025
College Park	25	465	155	620	568	189	7.5	5,676	57	43	3,235	2,982	2,441	2,249	0.0006	0.0020	0.0015	0.0035	0.0041
Congress Heights	0	66	0	66	81	0	4.5	363	57	43	207	190	156	144	0.0001	0.0001	0.0001	0.0002	0.0003
Deanwood	0	194	0	194	237	0	7.5	1,776	57	43	1,012	933	764	704	0.0002	0.0006	0.0005	0.0011	0.0013
East Falls Church	50	221	221	442	270	270	7.5	4,046	57	43	2,306	2,126	1,740	1,603	0.0004	0.0014	0.0011	0.0025	0.0029
Forest Glen	50	329	329	658	402	402	7.5	6,024	57	43	3,433	3,164	2,590	2,387	0.0005	0.0021	0.0016	0.0037	0.0043
Franconia - Springfield	50	1987	1987	3973	2425	2425	4.5	21,823	57	43	12,439	11,464	9,384	8,648	0.0032	0.0075	0.0060	0.0135	0.0167

SEASON 1 (Jan-Apr)
2011 Precursor NOx
AUTO ACCESS TO TRANSIT
2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION	2002				2010		AVERAGE	2010	ARTERIAL	FREEWAY	ARTERIAL	Adj.Art	FREEWAY	Adj.Fwy	EMISSIONS: COLD START	EMISSIONS: RUNNING			EMISSIONS: TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	%		VMT	VMT	VMT	VMT	Rate (gm/mile)	Arterial Rate (gm/mile)	Freeway Rate (gm/mile)	Total Running Emission (tones/day)	(tons/day)
					1.22	1.22						Wk Days =	83		0.4895	0.2976	0.3121		
COMMUTER RAIL LOTS												Seasonal adj =	0.9216						
Glenmont	50	925	925	1850	1129	1129	4.5	10,162	57	43	5,792	5,338	4,369	4,027	0.0015	0.0035	0.0028	0.0063	0.0078
Greenbelt	50	1783	1783	3565	2176	2176	7.5	32,636	57	43	18,602	17,144	14,033	12,933	0.0029	0.0112	0.0089	0.0201	0.0230
Naylor Road	50	216	216	431	263	263	7.5	3,946	57	43	2,249	2,073	1,697	1,564	0.0003	0.0014	0.0011	0.0024	0.0028
Prince George's Plaza	25	927	309	1236	1131	377	7.5	11,315	57	43	6,450	5,944	4,865	4,484	0.0012	0.0039	0.0031	0.0070	0.0082
Southern Avenue	50	1090	1090	2180	1330	1330	4.5	11,974	57	43	6,825	6,290	5,149	4,745	0.0018	0.0041	0.0033	0.0074	0.0092
Suitland	50	1033	1033	2065	1260	1260	4.5	11,342	57	43	6,465	5,958	4,877	4,495	0.0017	0.0039	0.0031	0.0070	0.0087
Van Dorn Street	50	204	204	407	248	248	4.5	2,236	57	43	1,274	1,174	961	886	0.0003	0.0008	0.0006	0.0014	0.0017
West Hyattsville	25	453	151	604	553	184	7.5	5,529	57	43	3,152	2,905	2,378	2,191	0.0006	0.0019	0.0015	0.0034	0.0040
Wheaton	25	759	253	1012	926	309	7.5	9,264	57	43	5,281	4,867	3,984	3,671	0.0010	0.0032	0.0025	0.0057	0.0067
				108,749				872,738							0.1011	0.3008	0.2380	0.5387	0.639893
																	Seasonal Total (tons/season) =		53.11

Bold figures: New numbers taken from P & R directory
Figures in bracket: Carry forward figures from conformity doc.

Park lot Growth Rate	
Transit trips 2011	1096680
Transit trips 2000	863783
Annual growth rate	0.024511312
Growth factor (2002-2011)	1.22060181

SEASON 2 (May-Sep)
2011 Precursor NOx
AUTO ACCESS TO TRANSIT
2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

																EMISSIONS				
LOCATION		2002			2010		AVERAGE	2010	ARTERIAL	FREEWAY	ARTERIAL	Adj.Art	FREEWAY	Adj.Fwy	COLD START	RUNNING			TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	%		VMT	VMT	VMT	VMT	Rate (gm/mile)	Arterial Rate (gm/mile)	Freeway Rate (gm/mile)	Total Running Emission (tones/day)	(tons/day)
					1.22	1.22						Wk Days =	107		0.3446	0.2116	0.2215		
COMMUTER RAIL LOTS												Seasonal adj =	0.9873						
BRUNSWICK 25%	25	305	102	**407**	373	124	7.5	3,726	57	43	2,124	2,097	1,602	1,582	0.0003	0.0010	0.0008	0.0018	0.0020
PT OF ROCKS 25%	25	204	68	**272**	249	83	7.5	2,490	57	43	1,419	1,401	1,071	1,057	0.0002	0.0007	0.0005	0.0012	0.0014
DICKERSON	0	15	0	**15**	18	0	7.5	137	57	43	78	77	59	58	0.0000	0.0000	0.0000	0.0001	0.0001
BARNESVILLE	0	46	0	**46**	56	0	7.5	421	57	43	240	237	181	179	0.0000	0.0001	0.0001	0.0002	0.0002
GERMANTOWN	0	386	0	**386**	471	0	7.5	3,534	57	43	2,014	1,989	1,519	1,500	0.0003	0.0009	0.0007	0.0017	0.0020
MET GROVE	0	352	0	**352**	430	0	7.5	3,222	57	43	1,837	1,813	1,386	1,368	0.0003	0.0008	0.0007	0.0015	0.0018
WAS GROVE	0	15	0	**15**	18	0	7.5	137	57	43	78	77	59	58	0.0000	0.0000	0.0000	0.0001	0.0001
GARRETT PARK	0	22	0	**22**	27	0	7.5	201	57	43	115	113	87	86	0.0000	0.0001	0.0000	0.0001	0.0001
BOWIE 50%	50	188	188	**375**	229	229	7.5	3,433	57	43	1,957	1,932	1,476	1,457	0.0002	0.0009	0.0007	0.0016	0.0018
SEABROOK 15%	15	224	40	**264**	274	48	7.5	2,417	57	43	1,378	1,360	1,039	1,026	0.0002	0.0006	0.0005	0.0011	0.0013
KENSINGTON	0	45	0	**45**	55	0	7.5	412	57	43	235	232	177	175	0.0000	0.0001	0.0001	0.0002	0.0002
LAUREL 30%	30	209	90	**299**	255	109	7.5	2,737	57	43	1,560	1,540	1,177	1,162	0.0002	0.0007	0.0006	0.0013	0.0015
GAITHESBURG	0	280	0	**280**	342	0	7.5	2,563	57	43	1,461	1,443	1,102	1,088	0.0002	0.0007	0.0005	0.0012	0.0014
BERWYN HEIGHTS	0	30	0	**30**	37	0	4.5	165	57	43	94	93	71	70	0.0000	0.0000	0.0000	0.0001	0.0001
RIVERDALE	0	65	0	**65**	79	0	4.5	357	57	43	204	201	154	152	0.0000	0.0001	0.0001	0.0002	0.0002
METRO RAIL LOTS																			
ADDISON ROAD 40%	40	791	527	**1318**	965	644	7.5	12,066	57	43	6,877	6,790	5,188	5,122	0.0008	0.0032	0.0025	0.0057	0.0065
ARCHIVES	0	12	0	12	15	0	4.5	66	57	43	38	37	28	28	0.0000	0.0000	0.0000	0.0000	0.0000
ARLING	0	10	0	10	12	0	4.5	55	57	43	31	31	24	23	0.0000	0.0000	0.0000	0.0000	0.0000
BALLSTON	0	1175	0	1175	1434	0	4.5	6,454	57	43	3,679	3,632	2,775	2,740	0.0009	0.0017	0.0013	0.0030	0.0039
BENN.RD	0	520	0	520	635	0	4.5	2,856	57	43	1,628	1,607	1,228	1,213	0.0004	0.0007	0.0006	0.0013	0.0017
BETH	0	395	0	395	482	0	4.5	2,170	57	43	1,237	1,221	933	921	0.0003	0.0006	0.0004	0.0010	0.0013
BRADD RD	0	10	0	**10**	12	0	4.5	55	57	43	31	31	24	23	0.0000	0.0000	0.0000	0.0000	0.0000
BROOKLAND	0	27	0	**27**	33	0	4.5	148	57	43	85	83	64	63	0.0000	0.0000	0.0000	0.0001	0.0001
CHEVERLY	0	557	0	**557**	680	0	4.5	3,059	57	43	1,744	1,722	1,316	1,299	0.0004	0.0008	0.0006	0.0014	0.0019
CLARENDON	0	554	0	554	676	0	4.5	3,043	57	43	1,734	1,712	1,308	1,292	0.0004	0.0008	0.0006	0.0014	0.0019
CLEVELAND PK	0	366	0	366	447	0	4.5	2,010	57	43	1,146	1,131	864	853	0.0003	0.0005	0.0004	0.0009	0.0012
COURT HOUSE	0	256	0	256	312	0	4.5	1,406	57	43	801	791	605	597	0.0002	0.0004	0.0003	0.0007	0.0009
CRYSTAL CITY	0	347	0	347	424	0	4.5	1,906	57	43	1,086	1,073	820	809	0.0003	0.0005	0.0004	0.0009	0.0012
DEANWOOD	0	194	0	**194**	237	0	4.5	1,066	57	43	607	600	458	452	0.0001	0.0003	0.0002	0.0005	0.0006
DUN LORING 10%	10	1220	136	**1355**	1489	165	4.5	7,443	57	43	4,242	4,188	3,200	3,160	0.0010	0.0020	0.0015	0.0035	0.0045
DUPONT CIRCLE	0	165	0	165	201	0	4.5	906	57	43	517	510	390	385	0.0001	0.0002	0.0002	0.0004	0.0006
EASTERN MKT	0	178	0	178	217	0	4.5	978	57	43	557	550	420	415	0.0001	0.0003	0.0002	0.0005	0.0006
EAST FALLS CH	0	442	0	**442**	540	0	4.5	2,428	57	43	1,384	1,366	1,044	1,031	0.0003	0.0006	0.0005	0.0011	0.0015
EIS	0	352	0	352	430	0	4.5	1,933	57	43	1,102	1,088	831	821	0.0003	0.0005	0.0004	0.0009	0.0012
FARRAGUT NORTH	0	102	0	102	125	0	4.5	560	57	43	319	315	241	238	0.0001	0.0001	0.0001	0.0003	0.0003
FARRAGUT WEST	0	221	0	221	270	0	4.5	1,214	57	43	692	683	522	515	0.0002	0.0003	0.0003	0.0006	0.0007
FEDERAL CENTER	0	75	0	75	92	0	4.5	412	57	43	235	232	177	175	0.0001	0.0001	0.0001	0.0002	0.0003
FEDERAL TRI	0	54	0	54	66	0	4.5	297	57	43	169	167	128	126	0.0000	0.0001	0.0001	0.0001	0.0002
FOGGY	0	102	0	102	125	0	4.5	560	57	43	319	315	241	238	0.0001	0.0001	0.0001	0.0003	0.0003
FORT TROTTEN	0	445	0	**445**	543	0	4.5	2,444	57	43	1,393	1,376	1,051	1,038	0.0003	0.0006	0.0005	0.0011	0.0015
FRH.HEIGHTS	0	679	0	679	829	0	4.5	3,730	57	43	2,126	2,099	1,604	1,583	0.0005	0.0010	0.0008	0.0018	0.0023
GALLERY PLACE	0	124	0	124	151	0	4.5	681	57	43	388	383	293	289	0.0001	0.0002	0.0001	0.0003	0.0004
GROSVENOR	0	716	0	**716**	874	0	4.5	3,933	57	43	2,242	2,213	1,691	1,670	0.0005	0.0010	0.0008	0.0018	0.0024
HUNT NORTH 40%	40	1873	1249	**3122**	2286	1524	7.5	28,580	57	43	16,291	16,084	12,290	12,133	0.0019	0.0075	0.0059	0.0134	0.0153
JUD SQUARE	0	110	0	110	134	0	4.5	604	57	43	344	340	260	257	0.0001	0.0002	0.0001	0.0003	0.0004
KING ST	0	30	0	**30**	37	0	4.5	165	57	43	94	93	71	70	0.0000	0.0000	0.0000	0.0001	0.0001
LANDOVER 25%	25	1410	470	**1880**	1721	574	7.5	17,210	57	43	9,810	9,685	7,401	7,307	0.0012	0.0045	0.0036	0.0081	0.0093
L'ENFANT PLAZA	0	296	0	296	361	0	4.5	1,626	57	43	927	915	699	690	0.0002	0.0004	0.0003	0.0008	0.0010
MCPHERSON SQ	0	52	0	52	63	0	4.5	286	57	43	163	161	123	121	0.0000	0.0001	0.0001	0.0001	0.0002
MEDICAL CENTER	0	14	0	**14**	17	0	4.5	77	57	43	44	43	33	33	0.0000	0.0000	0.0000	0.0000	0.0000
METRO CENTER	0	177	0	177	216	0	4.5	972	57	43	554	547	418	413	0.0001	0.0003	0.0002	0.0005	0.0006
MINNES	0	353	0	**353**	431	0	4.5	1,939	57	43	1,105	1,091	834	823	0.0003	0.0005	0.0004	0.0009	0.0012
NAT AIR	0	87	0	87	106	0	4.5	478	57	43	272	269	205	203	0.0001	0.0001	0.0001	0.0002	0.0003
NEW CARROL 50%	50	1049	1049	**2097**	1280	1280	7.5	19,197	57	43	10,942	10,803	8,255	8,150	0.0012	0.0050	0.0040	0.0090	0.0102
PRNTAGON	0	561	0	561	685	0	4.5	3,081	57	43	1,756	1,734	1,325	1,308	0.0004	0.0008	0.0006	0.0014	0.0019

SEASON 2 (May-Sep) 10/12/10

2011 Precursor NOx

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

															E M I S S I O N S				
LOCATION		2002			2010		AVERAGE	2010	ARTERIAL	FREEWAY	ARTERIAL	Adj.Art	FREEWAY	Adj.Fwy	COLD START	RUNNING			TOTAL
	OUTSIDE	INSIDE	OUTSIDE	Total	INSIDE	OUTSIDE	TRIP LENGTH	VMT	%		VMT	VMT	VMT	VMT		Arterial	Freeway	Total Running	
	MSA (%)	MSA	MSA		Growth Rate	Growth Rate									Rate (gm/mile)	Rate (gm/mile)	Rate (gm/mile)	Emission	(tons/day)
					1.22	1.22						Wk Days =	107		0.3446	0.2116	0.2215	(tones/day)	
COMMUTER RAIL LOTS												Seasonal adj =	0.9873						
PENTAGON CITY	0	381	0	381	465	0	4.5	2,093	57	43	1,193	1,178	900	888	0.0003	0.0005	0.0004	0.0010	0.0013
POTOMAC AVE	0	533	0	533	651	0	4.5	2,928	57	43	1,669	1,648	1,259	1,243	0.0004	0.0008	0.0006	0.0014	0.0018
ROCKVILLE	0	667	0	**667**	814	0	4.5	3,664	57	43	2,088	2,062	1,575	1,555	0.0005	0.0010	0.0008	0.0017	0.0022
ROSSLYN	0	356	0	356	435	0	4.5	1,955	57	43	1,115	1,100	841	830	0.0003	0.0005	0.0004	0.0009	0.0012
SHADY GROVE 10%	10	3903	434	**4337**	4764	529	7.5	39,703	57	43	22,631	22,343	17,072	16,856	0.0031	0.0104	0.0082	0.0187	0.0218
SILVER SPRING	0	44	0	**44**	54	0	4.5	242	57	43	138	136	104	103	0.0000	0.0001	0.0001	0.0001	0.0001
SMITH MALL	0	120	0	120	146	0	4.5	659	57	43	376	371	283	280	0.0001	0.0002	0.0001	0.0003	0.0004
STADIUM ARM	0	976	0	976	1191	0	4.5	5,361	57	43	3,056	3,017	2,305	2,276	0.0007	0.0014	0.0011	0.0025	0.0033
TAKOMA PK	0	146	0	**146**	178	0	4.5	802	57	43	457	451	345	340	0.0001	0.0002	0.0002	0.0004	0.0005
TENLEYTON	0	17	0	**17**	21	0	4.5	93	57	43	53	53	40	40	0.0000	0.0000	0.0000	0.0000	0.0001
TWINBROOK	0	1136	0	**1136**	1387	0	4.5	6,240	57	43	3,557	3,511	2,683	2,649	0.0009	0.0016	0.0013	0.0029	0.0038
UNION STAT	0	378	0	378	461	0	4.5	2,076	57	43	1,183	1,168	893	881	0.0003	0.0005	0.0004	0.0010	0.0013
VAN NESS	0	343	0	343	419	0	4.5	1,884	57	43	1,074	1,060	810	800	0.0003	0.0005	0.0004	0.0009	0.0011
VIENNA 25%	25	2798	933	**3731**	3416	1139	7.5	34,155	57	43	19,469	19,221	14,687	14,500	0.0025	0.0090	0.0071	0.0160	0.0185
VA SQUARE	0	642	0	642	784	0	4.5	3,526	57	43	2,010	1,984	1,516	1,497	0.0005	0.0009	0.0007	0.0017	0.0021
WEST FALLS CHURCH	0	2183	0	**2183**	2665	0	4.5	11,991	57	43	6,835	6,748	5,156	5,090	0.0017	0.0031	0.0025	0.0056	0.0073
WHITE FLINT	0	1633	0	1633	1993	0	4.5	8,970	57	43	5,113	5,048	3,857	3,808	0.0012	0.0024	0.0019	0.0042	0.0055
WOODLEY	0	68	0	68	83	0	4.5	374	57	43	213	210	161	159	0.0001	0.0001	0.0001	0.0002	0.0002
RHODE ISLAND 30%	30	266	114	**380**	325	139	7.5	3,479	57	43	1,983	1,958	1,496	1,477	0.0002	0.0009	0.0007	0.0016	0.0019
BUS & CAR POOL LOTS																			
CARTER BARRON	0	798	0	798	974	0	4.5	4,383	57	43	2,498	2,467	1,885	1,861	0.0006	0.0012	0.0009	0.0021	0.0027
PG PLAZA	0	47	0	47	57	0	4.5	258	57	43	147	145	111	110	0.0000	0.0001	0.0001	0.0001	0.0002
PENN MAR SHOPP.	0	100	0	**100**	122	0	4.5	549	57	43	313	309	236	233	0.0001	0.0001	0.0001	0.0003	0.0003
CAP PLAZA	0	100	0	**100**	122	0	4.5	549	57	43	313	309	236	233	0.0001	0.0001	0.0001	0.0003	0.0003
EASTOVER	0	100	0	**100**	122	0	4.5	549	57	43	313	309	236	233	0.0001	0.0001	0.0001	0.0003	0.0003
FOUR MILE RUN	0	28	0	**28**	34	0	4.5	154	57	43	88	87	66	65	0.0000	0.0000	0.0000	0.0001	0.0001
SPRINGFIELD MALL	0	580	0	**580**	708	0	4.5	3,186	57	43	1,816	1,793	1,370	1,352	0.0004	0.0008	0.0007	0.0015	0.0019
SPRINGFIELD METH CH	0	48	0	**48**	59	0	4.5	264	57	43	150	148	113	112	0.0000	0.0001	0.0001	0.0001	0.0002
FRED ARMORY	0	33	0	**33**	40	0	7.5	302	57	43	172	170	130	128	0.0000	0.0001	0.0001	0.0001	0.0002
MYERSVILLE	0	65	0	**65**	79	0	7.5	595	57	43	339	335	256	253	0.0000	0.0002	0.0001	0.0003	0.0003
ROSEMONT	0	45	0	**45**	55	0	7.5	412	57	43	235	232	177	175	0.0000	0.0001	0.0001	0.0002	0.0002
URBANA	0	193	0	**193**	236	0	7.5	1,767	57	43	1,007	994	760	750	0.0001	0.0005	0.0004	0.0008	0.0010
JEFFERSON	0	40	0	**40**	49	0	7.5	366	57	43	209	206	157	155	0.0000	0.0001	0.0001	0.0002	0.0002
NORBECK RD	0	248	0	**248**	303	0	7.5	2,270	57	43	1,294	1,278	976	964	0.0002	0.0006	0.0005	0.0011	0.0013
MONTROSE RD	0	650	0	**650**	793	0	7.5	5,950	57	43	3,392	3,349	2,559	2,526	0.0005	0.0016	0.0012	0.0028	0.0033
BRIGG CHENNY 50%	50	215	215	**430**	262	262	7.5	3,936	57	43	2,244	2,215	1,693	1,671	0.0002	0.0010	0.0008	0.0018	0.0021
COMUS ROAD	0	30	0	**30**	37	0	7.5	275	57	43	157	155	118	117	0.0000	0.0001	0.0001	0.0001	0.0002
LAKEFOREST MALL	0	300	0	**300**	366	0	7.5	2,746	57	43	1,565	1,546	1,181	1,166	0.0002	0.0007	0.0006	0.0013	0.0015
BURTONSVILLE	0	500	0	**500**	610	0	7.5	4,577	57	43	2,609	2,576	1,968	1,943	0.0004	0.0012	0.0009	0.0022	0.0025
FORCEY MEM.	0	200	0	**200**	244	0	7.5	1,831	57	43	1,044	1,030	787	777	0.0002	0.0005	0.0004	0.0009	0.0010
TECH ROAD	0	155	0	**155**	189	0	7.5	1,419	57	43	809	799	610	602	0.0001	0.0004	0.0003	0.0007	0.0008
BELTWAY	0	265	0	**265**	323	0	7.5	2,426	57	43	1,383	1,365	1,043	1,030	0.0002	0.0006	0.0005	0.0011	0.0013
LAUREL VAN DUSEN	0	62	0	**62**	76	0	7.5	568	57	43	324	319	244	241	0.0000	0.0001	0.0001	0.0003	0.0003
ACCOKEEK	0	450	0	**450**	549	0	7.5	4,120	57	43	2,348	2,318	1,771	1,749	0.0003	0.0011	0.0009	0.0019	0.0023
ABC DRIVE IN	0	100	0	**100**	122	0	7.5	915	57	43	522	515	394	389	0.0001	0.0002	0.0002	0.0004	0.0005
BOWIE 20%	20	526	131	**657**	642	160	7.5	6,015	57	43	3,428	3,385	2,586	2,553	0.0004	0.0016	0.0012	0.0028	0.0033
CLINTON 50%	50	212	212	**424**	259	259	7.5	3,882	57	43	2,212	2,184	1,669	1,648	0.0002	0.0010	0.0008	0.0018	0.0021
OXON HILL 20%	20	519	130	**649**	634	158	7.5	5,941	57	43	3,387	3,344	2,555	2,522	0.0004	0.0016	0.0012	0.0028	0.0032
EQUESTRIAN CENTER 50	50	150	150	**300**	183	183	7.5	2,746	57	43	1,565	1,546	1,181	1,166	0.0002	0.0007	0.0006	0.0013	0.0015
BOWIE MARKET PLACE	0	50	0	**50**	61	0	7.5	458	57	43	261	258	197	194	0.0000	0.0001	0.0001	0.0002	0.0003
FT.WASHINGTON	0	412	0	**412**	503	0	7.5	3,772	57	43	2,150	2,123	1,622	1,601	0.0003	0.0010	0.0008	0.0018	0.0021
MONTPELIER REC PARK	0	70	0	**70**	85	0	7.5	641	57	43	365	361	276	272	0.0001	0.0002	0.0001	0.0003	0.0004
RESTON	0	1547	0	**1547**	1888	0	7.5	14,162	57	43	8,072	7,970	6,090	6,012	0.0012	0.0037	0.0029	0.0067	0.0078
GREENBRIAR	0	55	0	**55**	67	0	7.5	503	57	43	287	283	217	214	0.0000	0.0001	0.0001	0.0002	0.0003
FAIR OAKS	0	150	0	**150**	183	0	7.5	1,373	57	43	783	773	590	583	0.0001	0.0004	0.0003	0.0006	0.0008
ROLLING VALLEY	0	628	0	**628**	767	0	7.5	5,749	57	43	3,277	3,235	2,472	2,441	0.0005	0.0015	0.0012	0.0027	0.0032
SPRINGFIELD PLAZA	0	230	0	**230**	281	0	7.5	2,106	57	43	1,200	1,185	905	894	0.0002	0.0006	0.0004	0.0010	0.0012
FAIRLANES BOWL	0	35	0	**35**	43	0	7.5	320	57	43	183	180	138	136	0.0000	0.0001	0.0001	0.0002	0.0002

SEASON 2 (May-Sep) 10/12/10

2011 Precursor NOx

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION		2002			2010		AVERAGE	2010	ARTERIAL	FREEWAY	ARTERIAL	Adj.Art	FREEWAY	Adj.Fwy	EMISSIONS				
	OUTSIDE	INSIDE	OUTSIDE	Total	INSIDE	OUTSIDE	TRIP LENGTH	VMT	%		VMT	VMT	VMT	VMT	COLD START	RUNNING			TOTAL
	MSA (%)	MSA	MSA		Growth Rate	Growth Rate									Rate (gm/mile)	Arterial Rate (gm/mile)	Freeway Rate (gm/mile)	Total Running Emission (tones/day)	(tons/day)
					1.22	1.22						Wk Days =	107		0.3446	0.2116	0.2215		
COMMUTER RAIL LOTS												Seasonal adj =	0.9873						
NOTTOWAY PARK	0	14	0	**14**	17	0	7.5	128	57	43	73	72	55	54	0.0000	0.0000	0.0000	0.0001	0.0001
HORNER RD	0	2397	0	**2397**	2926	0	7.5	21,943	57	43	12,508	12,349	9,436	9,316	0.0018	0.0058	0.0045	0.0103	0.0121
LAKE RIDGE	0	555	0	**555**	677	0	7.5	5,081	57	43	2,896	2,859	2,185	2,157	0.0004	0.0013	0.0011	0.0024	0.0028
MINNIEVILLE RD 40%	40	336	224	560	410	273	7.5	5,127	57	43	2,922	2,885	2,204	2,176	0.0003	0.0013	0.0011	0.0024	0.0027
GORDON BLVD	0	156	0	156	190	0	7.5	1,428	57	43	814	804	614	606	0.0001	0.0004	0.0003	0.0007	0.0008
HILLENDALE	0	248	0	**248**	303	0	7.5	2,270	57	43	1,294	1,278	976	964	0.0002	0.0006	0.0005	0.0011	0.0013
POTOMAC MILLS	0	946	0	**946**	1155	0	7.5	8,660	57	43	4,936	4,874	3,724	3,677	0.0007	0.0023	0.0018	0.0041	0.0048
List of new lots to be added in Conformity Document list																			
PARK-AND-RIDE LOTS - MARYLAND																			
PARK-AND-RIDE LOTS - MARYLAND																			
CHARLES COUNTY																			
301 Park & Ride	25	287	96	383	351	117	7.5	3,506	57	43	1,999	1,973	1,508	1,489	0.0003	0.0009	0.0007	0.0016	0.0019
Charles County Government	25	26	9	35	32	11	7.5	320	57	43	183	180	138	136	0.0000	0.0001	0.0001	0.0002	0.0002
Food Lion Shopping Center	25	38	13	50	46	15	7.5	458	57	43	261	258	197	194	0.0000	0.0001	0.0001	0.0002	0.0002
La Plata Armory	25	15	5	20	18	6	7.5	183	57	43	104	103	79	78	0.0000	0.0000	0.0000	0.0001	0.0001
Laurel Springs Regional Park	25	38	13	50	46	15	7.5	458	57	43	261	258	197	194	0.0000	0.0001	0.0001	0.0002	0.0002
Life Wesleyan Church	25	38	13	50	46	15	7.5	458	57	43	261	258	197	194	0.0000	0.0001	0.0001	0.0002	0.0002
Mattawoman-Beantown Rd	25	435	145	580	531	177	7.5	5,310	57	43	3,026	2,988	2,283	2,254	0.0004	0.0014	0.0011	0.0025	0.0029
Smallwood Village	25	75	25	100	92	31	7.5	915	57	43	522	515	394	389	0.0001	0.0002	0.0002	0.0004	0.0005
St. Charles Towne	25	263	88	350	320	107	7.5	3,204	57	43	1,826	1,803	1,378	1,360	0.0002	0.0008	0.0007	0.0015	0.0017
PARK-AND-RIDE LOTS - MARYLAND					0	0		0											
FREDERICK COUNTY					0	0		0											
Frederick (north)	25	123	41	164	150	50	7.5	1,501	57	43	856	845	646	637	0.0001	0.0004	0.0003	0.0007	0.0008
Frederick (south)	25	173	58	230	211	70	7.5	2,106	57	43	1,200	1,185	905	894	0.0002	0.0006	0.0004	0.0010	0.0011
Monacacy Marcst	25	600	200	800	732	244	7.5	7,324	57	43	4,174	4,121	3,149	3,109	0.0005	0.0019	0.0015	0.0034	0.0040
PARK-AND-RIDE LOTS - MARYLAND					0	0		0											
MONTGOMERY COUNTY					0	0		0											
Colesville	0	190	0	190	232	0	7.5	1,739	57	43	991	979	748	738	0.0001	0.0005	0.0004	0.0008	0.0010
Damascus	50	0	0		0	0	7.5	0	57	43	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Gaithersburg	50	259	259	517	316	316	7.5	4,733	57	43	2,698	2,663	2,035	2,009	0.0003	0.0012	0.0010	0.0022	0.0025
Gaithersburg	50	175	175	350	214	214	7.5	3,204	57	43	1,826	1,803	1,378	1,360	0.0002	0.0008	0.0007	0.0015	0.0017
Germantown Town	50	0	0		0	0	7.5	0	57	43	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Greencastle	50	75	75	150	92	92	7.5	1,373	57	43	783	773	590	583	0.0001	0.0004	0.0003	0.0006	0.0007
Milestone Shopping	50	88	88	175	107	107	7.5	1,602	57	43	913	902	689	680	0.0001	0.0004	0.0003	0.0008	0.0009
PARK-AND-RIDE LOTS - MAYLAND					0	0		0											
PRINCE GEORGE'S COUNTY					0	0		0											
Hampton Mall	0	100	0	100	122	0	4.5	549	57	43	313	309	236	233	0.0001	0.0001	0.0001	0.0003	0.0003
Laurel (south)	25	513	171	684	626	209	7.5	6,262	57	43	3,569	3,524	2,693	2,658	0.0005	0.0016	0.0013	0.0029	0.0034
PARK-AND-RIDE LOTS - VIRGINIA					0	0		0				0		0	0.0000	0.0000	0.0000		
ARLINGTON COUNTY					0	0		0				0		0	0.0000	0.0000	0.0000		
Ballston Public Parking Garag	25	375	125	500	458	153	7.5	4,577	57	43	2,609	2,576	1,968	1,943	0.0003	0.0012	0.0009	0.0022	0.0025
Washington-Lee	50	178	178	356	217	217	7.5	3,259	57	43	1,858	1,834	1,401	1,384	0.0002	0.0009	0.0007	0.0015	0.0017
PARK-AND-RIDE LOTS - VIRGINIA					0	0		0				0							
FAIRFAX COUNTY					0	0		0				0							
American Legion	50	50	50	100	61	61	7.5	915	57	43	522	515	394	389	0.0001	0.0002	0.0002	0.0004	0.0005
Canterbury Woods Pk	50	17	17	34	21	21	7.5	311	57	43	177	175	134	132	0.0000	0.0001	0.0001	0.0001	0.0002
Centreville	50	185	185	370	226	226	7.5	3,387	57	43	1,931	1,906	1,456	1,438	0.0002	0.0009	0.0007	0.0016	0.0018
Centreville United Methodist C	50	74	74	147	90	90	7.5	1,346	57	43	767	757	579	571	0.0001	0.0004	0.0003	0.0006	0.0007
Fairfax County Government C	50	85	85	170	104	104	7.5	1,556	57	43	887	876	669	661	0.0001	0.0004	0.0003	0.0007	0.0008
Greenbriar Park	50	28	28	55	34	34	7.5	503	57	43	287	283	217	214	0.0000	0.0001	0.0001	0.0002	0.0003
Herndon-Monroe	50	873	873	1,745	1065	1065	7.5	15,975	57	43	9,106	8,990	6,869	6,782	0.0010	0.0042	0.0033	0.0075	0.0085
Michael's	50	100	100	200	122	122	7.5	1,831	57	43	1,044	1,030	787	777	0.0001	0.0005	0.0004	0.0009	0.0010
Parkwood Baptist	50	9	9	18	11	11	7.5	165	57	43	94	93	71	70	0.0000	0.0000	0.0000	0.0001	0.0001
South Run District Pk	50	170	170	340	208	208	7.5	3,113	57	43	1,774	1,752	1,338	1,321	0.0002	0.0008	0.0006	0.0015	0.0017
St Paul Chung Catholic Churc	50	50	50	100	61	61	7.5	915	57	43	522	515	394	389	0.0001	0.0002	0.0002	0.0004	0.0005
Stringfellow Rd	50	181	181	361	220	220	7.5	3,305	57	43	1,884	1,860	1,421	1,403	0.0002	0.0009	0.0007	0.0016	0.0018
Sully Station	50	70	70	140	85	85	7.5	1,282	57	43	731	721	551	544	0.0001	0.0003	0.0003	0.0006	0.0007

SEASON 2 (May-Sep) 10/12/10

2011 Precursor NOx

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION		2002			2010		AVERAGE	2010	ARTERIAL	FREEWAY	ARTERIAL	Adj.Art	FREEWAY	Adj.Fwy	EMISSIONS				
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	%		VMT	VMT	VMT	VMT	COLD START Rate (gm/mile)	RUNNING Arterial Rate (gm/mile)	RUNNING Freeway Rate (gm/mile)	RUNNING Total Running Emission (tones/day)	TOTAL (tons/day)
					1.22	1.22						Wk Days =	107		0.3446	0.2116	0.2215		
COMMUTER RAIL LOTS												Seasonal adj =	0.9873						
Sydenstricker Rd	50	84	84	167	102	102	7.5	1,529	57	43	871	860	657	649	0.0001	0.0004	0.0003	0.0007	0.0008
Wakefield Chapel Pk	50	25	25	50	31	31	7.5	458	57	43	261	258	197	194	0.0000	0.0001	0.0001	0.0002	0.0002
PARK-AND-RIDE LOTS - VIRGINIA																			
LOUDOUN COUNTY																			
Ashburn Farm	50	10	10	20	12	12	7.5	183	57	43	104	103	79	78	0.0000	0.0000	0.0000	0.0001	0.0001
Ashburn Village	50	20	20	40	24	24	7.5	366	57	43	209	206	157	155	0.0000	0.0001	0.0001	0.0002	0.0002
Cascades	50	28	28	55	34	34	7.5	503	57	43	287	283	217	214	0.0000	0.0001	0.0001	0.0002	0.0003
Dulles North Transit	50	375	375	750	458	458	7.5	6,866	57	43	3,914	3,864	2,952	2,915	0.0004	0.0018	0.0014	0.0032	0.0037
Hamilton	50	25	25	50	31	31	7.5	458	57	43	261	258	197	194	0.0000	0.0001	0.0001	0.0002	0.0002
Innovation Avenue	50	38	38	75	46	46	7.5	687	57	43	391	386	295	291	0.0000	0.0002	0.0001	0.0003	0.0004
Leesburg	50	25	25	50	31	31	7.5	458	57	43	261	258	197	194	0.0000	0.0001	0.0001	0.0002	0.0002
Leesburg Kohls	50	600	600	1200	732	732	7.5	10,985	57	43	6,262	6,182	4,724	4,664	0.0007	0.0029	0.0023	0.0052	0.0058
Purcellville	50	18	18	35	21	21	7.5	320	57	43	183	180	138	136	0.0000	0.0001	0.0001	0.0002	0.0002
Sterling Park SC	50	23	23	45	27	27	7.5	412	57	43	235	232	177	175	0.0000	0.0001	0.0001	0.0002	0.0002
Sterling Shaw Rd	50	24	24	48	29	29	7.5	439	57	43	250	247	189	187	0.0000	0.0001	0.0001	0.0002	0.0002
PARK-AND-RIDE LOTS - VIRGINIA																			
PRINCE WILLIAM COUNTY																			
Brittany	50	48	48	95	58	58	7.5	870	57	43	496	489	374	369	0.0001	0.0002	0.0002	0.0004	0.0005
Dale City	50	294	294	587	358	358	7.5	5,374	57	43	3,063	3,024	2,311	2,281	0.0003	0.0014	0.0011	0.0025	0.0029
Harbor Drive	50	100	100	200	122	122	7.5	1,831	57	43	1,044	1,030	787	777	0.0001	0.0005	0.0004	0.0009	0.0010
Lindendale	50	108	108	216	132	132	7.5	1,977	57	43	1,127	1,113	850	839	0.0001	0.0005	0.0004	0.0009	0.0011
Montclair	50	25	25	50	31	31	7.5	458	57	43	261	258	197	194	0.0000	0.0001	0.0001	0.0002	0.0002
PRTC Transit Center	50	93	93	185	113	113	7.5	1,694	57	43	965	953	728	719	0.0001	0.0004	0.0004	0.0008	0.0009
Tackett's Mill	50	85	85	169	103	103	7.5	1,547	57	43	882	871	665	657	0.0001	0.0004	0.0003	0.0007	0.0008
Triangle	50	15	15	29	18	18	7.5	265	57	43	151	149	114	113	0.0000	0.0001	0.0001	0.0001	0.0001
I-95 / Rt 123	50	282	282	563	344	344	7.5	5,154	57	43	2,938	2,900	2,216	2,188	0.0003	0.0014	0.0011	0.0024	0.0027
US 1 / VA 234	50	137	137	274	167	167	7.5	2,508	57	43	1,430	1,412	1,079	1,065	0.0002	0.0007	0.0005	0.0012	0.0013
MARC TRAIN COMMUTER LOTS																	0.0000		
College Park	25	431	144	574	525	175	7.5	5,255	57	43	2,995	2,957	2,260	2,231	0.0004	0.0014	0.0011	0.0025	0.0029
Frederick	0	0	0	0	0	0	7.5	0	57	43	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Greenbelt	60	1346	2018	3364	1642	2464	7.5	30,796	57	43	17,554	17,331	13,242	13,074	0.0018	0.0081	0.0064	0.0145	0.0163
Harpers Ferry		98	0	98	120	0	7.5	897	57	43	511	505	386	381	0.0001	0.0002	0.0002	0.0004	0.0005
Muirkirk	60	260	390	650	317	476	7.5	5,950	57	43	3,392	3,349	2,559	2,526	0.0003	0.0016	0.0012	0.0028	0.0031
Seabrook	0	264	0	264	322	0	4.5	1,450	57	43	827	816	624	616	0.0002	0.0004	0.0003	0.0007	0.0009
Silver Spring	0	0	0	0	0	0	4.5	0	57	43	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Union Station	0	781	0	781	953	0	7.5	7,150	57	43	4,075	4,024	3,074	3,035	0.0006	0.0019	0.0015	0.0034	0.0040
VIRGINIA RAILWAY EXPRESS COMMUTER LOTS																			
Backlick Road	50	110	110	220	134	134	7.5	2,014	57	43	1,148	1,133	866	855	0.0001	0.0005	0.0004	0.0009	0.0011
Broad Run	50	198	198	396	242	242	7.5	3,625	57	43	2,066	2,040	1,559	1,539	0.0002	0.0010	0.0008	0.0017	0.0019
Brooke	50	150	150	300	183	183	7.5	2,746	57	43	1,565	1,546	1,181	1,166	0.0002	0.0007	0.0006	0.0013	0.0015
Burke Center	50	275	275	550	336	336	7.5	5,035	57	43	2,870	2,833	2,165	2,138	0.0003	0.0013	0.0010	0.0024	0.0027
Franconia/Springfield (operate	50	1900	1900	3800	2319	2319	7.5	34,787	57	43	19,829	19,577	14,958	14,769	0.0022	0.0091	0.0072	0.0163	0.0185
Leeland Road	50	326	326	652	398	398	7.5	5,969	57	43	3,402	3,359	2,567	2,534	0.0004	0.0016	0.0012	0.0028	0.0032
Lorton	50	100	100	200	122	122	7.5	1,831	57	43	1,044	1,030	787	777	0.0001	0.0005	0.0004	0.0009	0.0010
Manassas	50	187	187	374	228	228	7.5	3,424	57	43	1,952	1,927	1,472	1,454	0.0002	0.0009	0.0007	0.0016	0.0018
Manassas Park	50	150	150	300	183	183	7.5	2,746	57	43	1,565	1,546	1,181	1,166	0.0002	0.0007	0.0006	0.0013	0.0015
Quantico	50	109	109	217	132	132	7.5	1,987	57	43	1,132	1,118	854	843	0.0001	0.0005	0.0004	0.0009	0.0011
Rippon 50		150	150	300	183	183	7.5	2,746	57	43	1,565	1,546	1,181	1,166	0.0002	0.0007	0.0006	0.0013	0.0015
Rolling Road	50	185	185	370	226	226	7.5	3,387	57	43	1,931	1,906	1,456	1,438	0.0002	0.0009	0.0007	0.0016	0.0018
Woodbridge	50	294	294	588	359	359	7.5	5,383	57	43	3,068	3,029	2,315	2,285	0.0003	0.0014	0.0011	0.0025	0.0029
METRORAIL PARKING LOTS																			
Anacostia	25	861	287	1148	1051	350	7.5	10,509	57	43	5,990	5,914	4,519	4,462	0.0008	0.0028	0.0022	0.0049	0.0057
Branch Avenue	50	1611	1611	3222	1966	1966	7.5	29,496	57	43	16,813	16,599	12,683	12,522	0.0018	0.0077	0.0061	0.0139	0.0157
Capitol Heights	50	194	194	387	236	236	7.5	3,543	57	43	2,019	1,994	1,523	1,504	0.0002	0.0009	0.0007	0.0017	0.0019
College Park	25	465	155	620	568	189	7.5	5,676	57	43	3,235	3,194	2,441	2,410	0.0004	0.0015	0.0012	0.0027	0.0031
Congress Heights	0	66	0	66	81	0	4.5	363	57	43	207	204	156	154	0.0001	0.0001	0.0001	0.0002	0.0002
Deanwood	0	194	0	194	237	0	7.5	1,776	57	43	1,012	999	764	754	0.0001	0.0005	0.0004	0.0008	0.0010
East Falls Church	50	221	221	442	270	270	7.5	4,046	57	43	2,306	2,277	1,740	1,718	0.0003	0.0011	0.0008	0.0019	0.0022
Forest Glen	50	329	329	658	402	402	7.5	6,024	57	43	3,433	3,390	2,590	2,557	0.0004	0.0016	0.0012	0.0028	0.0032
Franconia - Springfield	50	1987	1987	3973	2425	2425	4.5	21,823	57	43	12,439	12,281	9,384	9,265	0.0023	0.0057	0.0045	0.0103	0.0125

SEASON 2 (May-Sep) 10/12/10

2011 Precursor NOx

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION		2002			2010		AVERAGE	2010	ARTERIAL	FREEWAY	ARTERIAL	Adj.Art	FREEWAY	Adj.Fwy	E M I S S I O N S COLD START	RUNNING			TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	%		VMT	VMT	VMT	VMT	Rate (gm/mile)	Arterial Rate (gm/mile)	Freeway Rate (gm/mile)	Total Running Emission (tones/day)	(tons/day)
					1.22	1.22						Wk Days =	107		0.3446	0.2116	0.2215		
COMMUTER RAIL LOTS												Seasonal adj =	0.9873						
Glenmont	50	925	925	1850	1129	1129	4.5	10,162	57	43	5,792	5,719	4,369	4,314	0.0011	0.0027	0.0021	0.0048	0.0058
Greenbelt	50	1783	1783	3565	2176	2176	7.5	32,636	57	43	18,602	18,366	14,033	13,855	0.0020	0.0086	0.0068	0.0153	0.0174
Naylor Road	50	216	216	431	263	263	7.5	3,946	57	43	2,249	2,220	1,697	1,675	0.0002	0.0010	0.0008	0.0019	0.0021
Prince George's Plaza	25	927	309	1236	1131	377	7.5	11,315	57	43	6,450	6,368	4,865	4,804	0.0008	0.0030	0.0023	0.0053	0.0061
Southern Avenue	50	1090	1090	2180	1330	1330	4.5	11,974	57	43	6,825	6,739	5,149	5,083	0.0012	0.0031	0.0025	0.0056	0.0069
Suitland	50	1033	1033	2065	1260	1260	4.5	11,342	57	43	6,465	6,383	4,877	4,815	0.0012	0.0030	0.0024	0.0053	0.0065
Van Dorn Street	50	204	204	407	248	248	4.5	2,236	57	43	1,274	1,258	961	949	0.0002	0.0006	0.0005	0.0011	0.0013
West Hyattsville	25	453	151	604	553	184	7.5	5,529	57	43	3,152	3,112	2,378	2,347	0.0004	0.0015	0.0011	0.0026	0.0030
Wheaton	25	759	253	1012	926	309	7.5	9,264	57	43	5,281	5,214	3,984	3,933	0.0007	0.0024	0.0019	0.0044	0.0050
				108,749				872,738							0.0712	0.2291	0.1809	0.4101	0.4813

Seasonal Total (tons/season) = 51.50

Bold figures: New numbers taken from P & R directory

Figures in bracket: Carry forward figures from conformity doc.

Park lot Growth Rate	
Transit trips 2011	1096680
Transit trips 2000	863783
Annual growth rate	0.024511312
Growth factor (2002-2011)	1.220601807

SEASON 3 (Oct-Dec)
2011 Precursor NOx
AUTO ACCESS TO TRANSIT
2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

10/12/10

LOCATION	2002				2010		AVERAGE	2010	ARTERIAL	FREEWAY	ARTERIAL	Adj.Art	FREEWAY	Adj.Fwy	EMISSIONS				
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	%		VMT	VMT	VMT	VMT	COLD START Rate (gm/mile)	RUNNING Arterial Rate (gm/mile)	RUNNING Freeway Rate (gm/mile)	Total Running Emission (tones/day)	TOTAL (tons/day)
					1.22	1.22						Wk Days =	61		0.4418	0.2477	0.2603		
COMMUTER RAIL LOTS												Seasonal adj =	0.9282						
BRUNSWICK 25%	25	305	102	**407**	373	124	7.5	3,726	57	43	2,124	1,971	1,602	1,487	0.0003	0.0011	0.0009	0.0019	0.0023
PT OF ROCKS 25%	25	204	68	**272**	249	83	7.5	2,490	57	43	1,419	1,317	1,071	994	0.0002	0.0007	0.0006	0.0013	0.0015
DICKERSON	0	15	0	**15**	18	0	7.5	137	57	43	78	73	59	55	0.0000	0.0000	0.0000	0.0001	0.0001
BARNESVILLE	0	46	0	**46**	56	0	7.5	421	57	43	240	223	181	168	0.0000	0.0001	0.0001	0.0002	0.0003
GERMANTOWN	0	386	0	**386**	471	0	7.5	3,534	57	43	2,014	1,870	1,519	1,410	0.0004	0.0010	0.0008	0.0018	0.0022
MET GROVE	0	352	0	**352**	430	0	7.5	3,222	57	43	1,837	1,705	1,386	1,286	0.0003	0.0009	0.0007	0.0017	0.0020
WAS GROVE	0	15	0	**15**	18	0	7.5	137	57	43	78	73	59	55	0.0000	0.0000	0.0000	0.0001	0.0001
GARRETT PARK	0	22	0	**22**	27	0	7.5	201	57	43	115	107	87	80	0.0000	0.0001	0.0000	0.0001	0.0001
BOWIE 50%	50	188	188	**375**	229	229	7.5	3,433	57	43	1,957	1,816	1,476	1,370	0.0003	0.0010	0.0008	0.0018	0.0021
SEABROOK 15%	15	224	40	**264**	274	48	7.5	2,417	57	43	1,378	1,279	1,039	965	0.0002	0.0007	0.0006	0.0013	0.0015
KENSINGTON	0	45	0	**45**	55	0	7.5	412	57	43	235	218	177	164	0.0000	0.0001	0.0001	0.0002	0.0003
LAUREL 30%	30	209	90	**299**	255	109	7.5	2,737	57	43	1,560	1,448	1,177	1,092	0.0002	0.0008	0.0006	0.0014	0.0017
GAITHESBURG	0	280	0	**280**	342	0	7.5	2,563	57	43	1,461	1,356	1,102	1,023	0.0003	0.0007	0.0006	0.0013	0.0016
BERWYN HEIGHTS	0	30	0	**30**	37	0	4.5	165	57	43	94	87	71	66	0.0000	0.0000	0.0000	0.0001	0.0001
RIVERDALE	0	65	0	**65**	79	0	4.5	357	57	43	204	189	154	142	0.0001	0.0001	0.0001	0.0002	0.0002
METRO RAIL LOTS																			
ADDISON ROAD 40%	40	791	527	**1318**	965	644	7.5	12,066	57	43	6,877	6,384	5,188	4,816	0.0010	0.0035	0.0028	0.0062	0.0073
ARCHIVES	0	12	0	12	15	0	4.5	66	57	43	38	35	28	26	0.0000	0.0000	0.0000	0.0000	0.0000
ARLING	0	10	0	10	12	0	4.5	55	57	43	31	29	24	22	0.0000	0.0000	0.0000	0.0000	0.0000
BALLSTON	0	1175	0	1175	1434	0	4.5	6,454	57	43	3,679	3,415	2,775	2,576	0.0011	0.0019	0.0015	0.0033	0.0045
BENN.RD	0	520	0	520	635	0	4.5	2,856	57	43	1,628	1,511	1,228	1,140	0.0005	0.0008	0.0007	0.0015	0.0020
BETH	0	395	0	395	482	0	4.5	2,170	57	43	1,237	1,148	933	866	0.0004	0.0006	0.0005	0.0011	0.0015
BRADD RD	0	10	0	**10**	12	0	4.5	55	57	43	31	29	24	22	0.0000	0.0000	0.0000	0.0000	0.0000
BROOKLAND	0	27	0	**27**	33	0	4.5	148	57	43	85	78	64	59	0.0000	0.0000	0.0000	0.0001	0.0001
CHEVERLY	0	557	0	**557**	680	0	4.5	3,059	57	43	1,744	1,619	1,316	1,221	0.0005	0.0009	0.0007	0.0016	0.0021
CLARENDON	0	554	0	554	676	0	4.5	3,043	57	43	1,734	1,610	1,308	1,215	0.0005	0.0009	0.0007	0.0016	0.0021
CLEVELAND PK	0	366	0	366	447	0	4.5	2,010	57	43	1,146	1,064	864	802	0.0004	0.0006	0.0005	0.0010	0.0014
COURT HOUSE	0	256	0	256	312	0	4.5	1,406	57	43	801	744	605	561	0.0002	0.0004	0.0003	0.0007	0.0010
CRYSTAL CITY	0	347	0	347	424	0	4.5	1,906	57	43	1,086	1,008	820	761	0.0003	0.0006	0.0004	0.0010	0.0013
DEANWOOD	0	194	0	**194**	237	0	4.5	1,066	57	43	607	564	458	425	0.0002	0.0003	0.0002	0.0006	0.0007
DUN LORING 10%	10	1220	136	**1355**	1489	165	4.5	7,443	57	43	4,242	3,938	3,200	2,971	0.0013	0.0022	0.0017	0.0039	0.0051
DUPONT CIRCLE	0	165	0	165	201	0	4.5	906	57	43	517	479	390	362	0.0002	0.0003	0.0002	0.0005	0.0006
EASTERN MKT	0	178	0	178	217	0	4.5	978	57	43	557	517	420	390	0.0002	0.0003	0.0002	0.0005	0.0007
EAST FALLS CH	0	442	0	**442**	540	0	4.5	2,428	57	43	1,384	1,284	1,044	969	0.0004	0.0007	0.0006	0.0013	0.0017
EIS	0	352	0	352	430	0	4.5	1,933	57	43	1,102	1,023	831	772	0.0003	0.0006	0.0004	0.0010	0.0013
FARRAGUT NORTH	0	102	0	102	125	0	4.5	560	57	43	319	296	241	224	0.0001	0.0002	0.0001	0.0003	0.0004
FARRAGUT WEST	0	221	0	221	270	0	4.5	1,214	57	43	692	642	522	484	0.0002	0.0004	0.0003	0.0006	0.0008
FEDERAL CENTER	0	75	0	75	92	0	4.5	412	57	43	235	218	177	164	0.0001	0.0001	0.0001	0.0002	0.0003
FEDERAL TRI	0	54	0	54	66	0	4.5	297	57	43	169	157	128	118	0.0001	0.0001	0.0001	0.0002	0.0002
FOGGY	0	102	0	102	125	0	4.5	560	57	43	319	296	241	224	0.0001	0.0002	0.0001	0.0003	0.0004
FORT TROTTEN	0	445	0	**445**	543	0	4.5	2,444	57	43	1,393	1,293	1,051	976	0.0004	0.0007	0.0006	0.0013	0.0017
FRH.HEIGHTS	0	679	0	679	829	0	4.5	3,730	57	43	2,126	1,973	1,604	1,489	0.0007	0.0011	0.0009	0.0019	0.0026
GALLERY PLACE	0	124	0	124	151	0	4.5	681	57	43	388	360	293	272	0.0001	0.0002	0.0002	0.0004	0.0005
GROSVENOR	0	716	0	**716**	874	0	4.5	3,933	57	43	2,242	2,081	1,691	1,570	0.0007	0.0011	0.0009	0.0020	0.0027
HUNT NORTH 40%	40	1873	1249	**3122**	2286	1524	7.5	28,580	57	43	16,291	15,121	12,290	11,407	0.0024	0.0083	0.0065	0.0148	0.0172
JUD SQUARE	0	110	0	110	134	0	4.5	604	57	43	344	320	260	241	0.0001	0.0002	0.0001	0.0003	0.0004
KING ST	0	30	0	**30**	37	0	4.5	165	57	43	94	87	71	66	0.0000	0.0000	0.0000	0.0001	0.0001
LANDOVER 25%	25	1410	470	**1880**	1721	574	7.5	17,210	57	43	9,810	9,106	7,401	6,869	0.0016	0.0050	0.0039	0.0089	0.0105
L'ENFANT PLAZA	0	296	0	296	361	0	4.5	1,626	57	43	927	860	699	649	0.0003	0.0005	0.0004	0.0008	0.0011
MCPHERSON SQ	0	52	0	52	63	0	4.5	286	57	43	163	151	123	114	0.0001	0.0001	0.0001	0.0001	0.0002
MEDICAL CENTER	0	14	0	**14**	17	0	4.5	77	57	43	44	41	33	31	0.0000	0.0000	0.0000	0.0000	0.0001
METRO CENTER	0	177	0	177	216	0	4.5	972	57	43	554	514	418	388	0.0002	0.0003	0.0002	0.0005	0.0007
MINNES	0	353	0	**353**	431	0	4.5	1,939	57	43	1,105	1,026	834	774	0.0003	0.0006	0.0004	0.0010	0.0013
NAT AIR	0	87	0	87	106	0	4.5	478	57	43	272	253	205	191	0.0001	0.0001	0.0001	0.0002	0.0003
NEW CARROL 50%	50	1049	1049	**2097**	1280	1280	7.5	19,197	57	43	10,942	10,157	8,255	7,662	0.0015	0.0055	0.0044	0.0099	0.0115
PRNTAGON	0	561	0	561	685	0	4.5	3,081	57	43	1,756	1,630	1,325	1,230	0.0005	0.0009	0.0007	0.0016	0.0021

SEASON 3 (Oct-Dec)
2011 Precursor NOx
AUTO ACCESS TO TRANSIT
2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

10/12/10

LOCATION	2002				2010		AVERAGE	2010	ARTERIAL	FREEWAY	ARTERIAL	Adj.Art	FREEWAY	Adj.Fwy	EMISSIONS				
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	%		VMT	VMT	VMT	VMT	COLD START Rate (gm/mile)	RUNNING Arterial Rate (gm/mile)	RUNNING Freeway Rate (gm/mile)	Total Running Emission (tones/day)	TOTAL (tons/day)
					1.22	1.22						Wk Days =	61		0.4418	0.2477	0.2603		
COMMUTER RAIL LOTS												Seasonal adj =	0.9282						
PENTAGON CITY	0	381	0	381	465	0	4.5	2,093	57	43	1,193	1,107	900	835	0.0004	0.0006	0.0005	0.0011	0.0015
POTOMAC AVE	0	533	0	533	651	0	4.5	2,928	57	43	1,669	1,549	1,259	1,168	0.0005	0.0008	0.0007	0.0015	0.0020
ROCKVILLE	0	667	0	**667**	814	0	4.5	3,664	57	43	2,088	1,938	1,575	1,462	0.0006	0.0011	0.0008	0.0019	0.0025
ROSSLYN	0	356	0	356	435	0	4.5	1,955	57	43	1,115	1,035	841	780	0.0003	0.0006	0.0004	0.0010	0.0014
SHADY GROVE 10%	10	3903	434	**4337**	4764	529	7.5	39,703	57	43	22,631	21,006	17,072	15,847	0.0040	0.0115	0.0091	0.0206	0.0246
SILVER SPRING	0	44	0	**44**	54	0	4.5	242	57	43	138	128	104	96	0.0000	0.0001	0.0001	0.0001	0.0002
SMITH MALL	0	120	0	120	146	0	4.5	659	57	43	376	349	283	263	0.0001	0.0002	0.0002	0.0003	0.0005
STADIUM ARM	0	976	0	976	1191	0	4.5	5,361	57	43	3,056	2,836	2,305	2,140	0.0010	0.0015	0.0012	0.0028	0.0037
TAKOMA PK	0	146	0	**146**	178	0	4.5	802	57	43	457	424	345	320	0.0001	0.0002	0.0002	0.0004	0.0006
TENLEYTON	0	17	0	**17**	21	0	4.5	93	57	43	53	49	40	37	0.0000	0.0000	0.0000	0.0000	0.0001
TWINBROOK	0	1136	0	**1136**	1387	0	4.5	6,240	57	43	3,557	3,301	2,683	2,490	0.0011	0.0018	0.0014	0.0032	0.0043
UNION STAT	0	378	0	378	461	0	4.5	2,076	57	43	1,183	1,098	893	829	0.0004	0.0006	0.0005	0.0011	0.0014
VAN NESS	0	343	0	343	419	0	4.5	1,884	57	43	1,074	997	810	752	0.0003	0.0005	0.0004	0.0010	0.0013
VIENNA 25%	25	2798	933	**3731**	3416	1139	7.5	34,155	57	43	19,469	18,071	14,687	13,632	0.0032	0.0099	0.0078	0.0177	0.0209
VA SQUARE	0	642	0	642	784	0	4.5	3,526	57	43	2,010	1,866	1,516	1,407	0.0006	0.0010	0.0008	0.0018	0.0025
WEST FALLS CHURCH	0	2183	0	**2183**	2665	0	4.5	11,991	57	43	6,835	6,344	5,156	4,786	0.0021	0.0035	0.0027	0.0062	0.0083
WHITE FLINT	0	1633	0	1633	1993	0	4.5	8,970	57	43	5,113	4,746	3,857	3,580	0.0016	0.0026	0.0021	0.0046	0.0062
WOODLEY	0	68	0	68	83	0	4.5	374	57	43	213	198	161	149	0.0001	0.0001	0.0001	0.0002	0.0003
RHODE ISLAND 30%	30	266	114	**380**	325	139	7.5	3,479	57	43	1,983	1,840	1,496	1,388	0.0003	0.0010	0.0008	0.0018	0.0021
BUS & CAR POOL LOTS																			
CARTER BARRON	0	798	0	798	974	0	4.5	4,383	57	43	2,498	2,319	1,885	1,749	0.0008	0.0013	0.0010	0.0023	0.0030
PG PLAZA	0	47	0	47	57	0	4.5	258	57	43	147	137	111	103	0.0000	0.0001	0.0001	0.0001	0.0002
PENN MAR SHOPP.	0	100	0	**100**	122	0	4.5	549	57	43	313	291	236	219	0.0001	0.0002	0.0001	0.0003	0.0004
CAP PLAZA	0	100	0	**100**	122	0	4.5	549	57	43	313	291	236	219	0.0001	0.0002	0.0001	0.0003	0.0004
EASTOVER	0	100	0	**100**	122	0	4.5	549	57	43	313	291	236	219	0.0001	0.0002	0.0001	0.0003	0.0004
FOUR MILE RUN	0	28	0	**28**	34	0	4.5	154	57	43	88	81	66	61	0.0000	0.0000	0.0000	0.0001	0.0001
SPRINGFIELD MALL	0	580	0	**580**	708	0	4.5	3,186	57	43	1,816	1,686	1,370	1,272	0.0006	0.0009	0.0007	0.0016	0.0022
SPRINGFIELD METH CH	0	48	0	**48**	59	0	4.5	264	57	43	150	139	113	105	0.0000	0.0001	0.0001	0.0001	0.0002
FRED ARMORY	0	33	0	**33**	40	0	7.5	302	57	43	172	160	130	121	0.0000	0.0001	0.0001	0.0002	0.0002
MYERSVILLE	0	65	0	**65**	79	0	7.5	595	57	43	339	315	256	237	0.0001	0.0002	0.0001	0.0003	0.0004
ROSEMONT	0	45	0	**45**	55	0	7.5	412	57	43	235	218	177	164	0.0000	0.0001	0.0001	0.0002	0.0003
URBANA	0	193	0	**193**	236	0	7.5	1,767	57	43	1,007	935	760	705	0.0002	0.0005	0.0004	0.0009	0.0011
JEFFERSON	0	40	0	**40**	49	0	7.5	366	57	43	209	194	157	146	0.0000	0.0001	0.0001	0.0002	0.0002
NORBECK RD	0	248	0	**248**	303	0	7.5	2,270	57	43	1,294	1,201	976	906	0.0002	0.0007	0.0005	0.0012	0.0014
MONTROSE RD	0	650	0	**650**	793	0	7.5	5,950	57	43	3,392	3,148	2,559	2,375	0.0006	0.0017	0.0014	0.0031	0.0037
BRIGG CHENNY 50%	50	215	215	**430**	262	262	7.5	3,936	57	43	2,244	2,083	1,693	1,571	0.0003	0.0011	0.0009	0.0020	0.0024
COMUS ROAD	0	30	0	**30**	37	0	7.5	275	57	43	157	145	118	110	0.0000	0.0001	0.0001	0.0001	0.0002
LAKEFOREST MALL	0	300	0	**300**	366	0	7.5	2,746	57	43	1,565	1,453	1,181	1,096	0.0003	0.0008	0.0006	0.0014	0.0017
BURTONSVILLE	0	500	0	**500**	610	0	7.5	4,577	57	43	2,609	2,422	1,968	1,827	0.0005	0.0013	0.0010	0.0024	0.0029
FORCEY MEM.	0	200	0	**200**	244	0	7.5	1,831	57	43	1,044	969	787	731	0.0002	0.0005	0.0004	0.0009	0.0011
TECH ROAD	0	155	0	**155**	189	0	7.5	1,419	57	43	809	751	610	566	0.0002	0.0004	0.0003	0.0007	0.0009
BELTWAY	0	265	0	**265**	323	0	7.5	2,426	57	43	1,383	1,284	1,043	968	0.0003	0.0007	0.0006	0.0013	0.0015
LAUREL VAN DUSEN	0	62	0	**62**	76	0	7.5	568	57	43	324	300	244	227	0.0001	0.0002	0.0001	0.0003	0.0004
ACCOKEEK	0	450	0	**450**	549	0	7.5	4,120	57	43	2,348	2,180	1,771	1,644	0.0004	0.0012	0.0009	0.0021	0.0026
ABC DRIVE IN	0	100	0	**100**	122	0	7.5	915	57	43	522	484	394	365	0.0001	0.0003	0.0002	0.0005	0.0006
BOWIE 20%	20	526	131	**657**	642	160	7.5	6,015	57	43	3,428	3,182	2,586	2,401	0.0006	0.0017	0.0014	0.0031	0.0037
CLINTON 50%	50	212	212	**424**	259	259	7.5	3,882	57	43	2,212	2,054	1,669	1,549	0.0003	0.0011	0.0009	0.0020	0.0023
OXON HILL 20%	20	519	130	**649**	634	158	7.5	5,941	57	43	3,387	3,143	2,555	2,371	0.0006	0.0017	0.0014	0.0031	0.0036
EQUESTRIAN CENTER 50	50	150	150	**300**	183	183	7.5	2,746	57	43	1,565	1,453	1,181	1,096	0.0002	0.0008	0.0006	0.0014	0.0016
BOWIE MARKET PLACE	0	50	0	**50**	61	0	7.5	458	57	43	261	242	197	183	0.0000	0.0001	0.0001	0.0002	0.0003
FT.WASHINGTON	0	412	0	**412**	503	0	7.5	3,772	57	43	2,150	1,995	1,622	1,505	0.0004	0.0011	0.0009	0.0020	0.0024
MONTPELIER REC PARK	0	70	0	**70**	85	0	7.5	641	57	43	365	339	276	256	0.0001	0.0002	0.0001	0.0003	0.0004
RESTON	0	1547	0	**1547**	1888	0	7.5	14,162	57	43	8,072	7,493	6,090	5,652	0.0015	0.0041	0.0032	0.0073	0.0088
GREENBRIAR	0	55	0	**55**	67	0	7.5	503	57	43	287	266	217	201	0.0001	0.0001	0.0001	0.0003	0.0003
FAIR OAKS	0	150	0	**150**	183	0	7.5	1,373	57	43	783	727	590	548	0.0001	0.0004	0.0003	0.0007	0.0009
ROLLING VALLEY	0	628	0	**628**	767	0	7.5	5,749	57	43	3,277	3,042	2,472	2,295	0.0006	0.0017	0.0013	0.0030	0.0036
SPRINGFIELD PLAZA	0	230	0	**230**	281	0	7.5	2,106	57	43	1,200	1,114	905	840	0.0002	0.0006	0.0005	0.0011	0.0013
FAIRLANES BOWL	0	35	0	**35**	43	0	7.5	320	57	43	183	170	138	128	0.0000	0.0001	0.0001	0.0002	0.0002

SEASON 3 (Oct-Dec)
2011 Precursor NOx
AUTO ACCESS TO TRANSIT
2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

10/12/10

LOCATION	2002				2010		AVERAGE	2010	ARTERIAL	FREEWAY	ARTERIAL	Adj.Art	FREEWAY	Adj.Fwy	EMISSIONS				
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	%		VMT	VMT	VMT	VMT	COLD START Rate (gm/mile)	RUNNING Arterial Rate (gm/mile)	RUNNING Freeway Rate (gm/mile)	Total Running Emission (tones/day)	TOTAL (tons/day)
					1.22	1.22						Wk Days =	61		0.4418	0.2477	0.2603		
COMMUTER RAIL LOTS												Seasonal adj =	0.9282						
NOTTOWAY PARK	0	14	0	**14**	17	0	7.5	128	57	43	73	68	55	51	0.0000	0.0000	0.0000	0.0001	0.0001
HORNER RD	0	2397	0	**2397**	2926	0	7.5	21,943	57	43	12,508	11,610	9,436	8,758	0.0023	0.0063	0.0050	0.0114	0.0137
LAKE RIDGE	0	555	0	**555**	677	0	7.5	5,081	57	43	2,896	2,688	2,185	2,028	0.0005	0.0015	0.0012	0.0026	0.0032
MINNIEVILLE RD 40%	40	336	224	560	410	273	7.5	5,127	57	43	2,922	2,712	2,204	2,046	0.0004	0.0015	0.0012	0.0027	0.0031
GORDON BLVD	0	156	0	156	190	0	7.5	1,428	57	43	814	756	614	570	0.0002	0.0004	0.0003	0.0007	0.0009
HILLENDALE	0	248	0	**248**	303	0	7.5	2,270	57	43	1,294	1,201	976	906	0.0002	0.0007	0.0005	0.0012	0.0014
POTOMAC MILLS	0	946	0	**946**	1155	0	7.5	8,660	57	43	4,936	4,582	3,724	3,456	0.0009	0.0025	0.0020	0.0045	0.0054
List of new lots to be added in Conformity Document list																			
PARK-AND-RIDE LOTS - MARYLAND																			
PARK-AND-RIDE LOTS - MARYLAND																			
CHARLES COUNTY																			
301 Park & Ride	25	287	96	383	351	117	7.5	3,506	57	43	1,999	1,855	1,508	1,399	0.0003	0.0010	0.0008	0.0018	0.0021
Charles County Government	25	26	9	35	32	11	7.5	320	57	43	183	170	138	128	0.0000	0.0001	0.0001	0.0002	0.0002
Food Lion Shopping Center	25	38	13	50	46	15	7.5	458	57	43	261	242	197	183	0.0000	0.0001	0.0001	0.0002	0.0003
La Plata Armory	25	15	5	20	18	6	7.5	183	57	43	104	97	79	73	0.0000	0.0001	0.0000	0.0001	0.0001
Laurel Springs Regional Park	25	38	13	50	46	15	7.5	458	57	43	261	242	197	183	0.0000	0.0001	0.0001	0.0002	0.0003
Life Wesleyan Church	25	38	13	50	46	15	7.5	458	57	43	261	242	197	183	0.0000	0.0001	0.0001	0.0002	0.0003
Mattawoman-Beantown Rd	25	435	145	580	531	177	7.5	5,310	57	43	3,026	2,809	2,283	2,119	0.0005	0.0015	0.0012	0.0027	0.0032
Smallwood Village	25	75	25	100	92	31	7.5	915	57	43	522	484	394	365	0.0001	0.0003	0.0002	0.0005	0.0006
St. Charles Towne	25	263	88	350	320	107	7.5	3,204	57	43	1,826	1,695	1,378	1,279	0.0003	0.0009	0.0007	0.0017	0.0020
PARK-AND-RIDE LOTS - MARYLAND					0	0		0											
FREDERICK COUNTY					0	0		0											
Frederick (north)	25	123	41	164	150	50	7.5	1,501	57	43	856	794	646	599	0.0001	0.0004	0.0003	0.0008	0.0009
Frederick (south)	25	173	58	230	211	70	7.5	2,106	57	43	1,200	1,114	905	840	0.0002	0.0006	0.0005	0.0011	0.0013
Monacacy Marcst	25	600	200	800	732	244	7.5	7,324	57	43	4,174	3,875	3,149	2,923	0.0007	0.0021	0.0017	0.0038	0.0045
PARK-AND-RIDE LOTS - MARYLAND					0	0		0											
MONTGOMERY COUNTY					0	0		0											
Colesville	0	190	0	190	232	0	7.5	1,739	57	43	991	920	748	694	0.0002	0.0005	0.0004	0.0009	0.0011
Damascus	50	0	0		0	0	7.5	0	57	43	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Gaithersburg	50	259	259	517	316	316	7.5	4,733	57	43	2,698	2,504	2,035	1,889	0.0004	0.0014	0.0011	0.0025	0.0028
Gaithersburg	50	175	175	350	214	214	7.5	3,204	57	43	1,826	1,695	1,378	1,279	0.0003	0.0009	0.0007	0.0017	0.0019
Germantown Town	50	0	0		0	0	7.5	0	57	43	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Greencastle	50	75	75	150	92	92	7.5	1,373	57	43	783	727	590	548	0.0001	0.0004	0.0003	0.0007	0.0008
Milestone Shopping	50	88	88	175	107	107	7.5	1,602	57	43	913	848	689	639	0.0001	0.0005	0.0004	0.0008	0.0010
PARK-AND-RIDE LOTS - MAYLAND					0	0		0											
PRINCE GEORGE'S COUNTY					0	0		0											
Hampton Mall	0	100	0	100	122	0	4.5	549	57	43	313	291	236	219	0.0001	0.0002	0.0001	0.0003	0.0004
Laurel (south)	25	513	171	684	626	209	7.5	6,262	57	43	3,569	3,313	2,693	2,499	0.0006	0.0018	0.0014	0.0032	0.0038
PARK-AND-RIDE LOTS - VIRGINIA					0	0		0				0		0	0.0000	0.0000	0.0000		
ARLINGTON COUNTY					0	0		0				0		0	0.0000	0.0000	0.0000		
Ballston Public Parking Garag	25	375	125	500	458	153	7.5	4,577	57	43	2,609	2,422	1,968	1,827	0.0004	0.0013	0.0010	0.0024	0.0028
Washington-Lee	50	178	178	356	217	217	7.5	3,259	57	43	1,858	1,724	1,401	1,301	0.0003	0.0009	0.0007	0.0017	0.0019
PARK-AND-RIDE LOTS - VIRGINIA					0	0		0				0							
FAIRFAX COUNTY					0	0		0				0							
American Legion	50	50	50	100	61	61	7.5	915	57	43	522	484	394	365	0.0001	0.0003	0.0002	0.0005	0.0005
Canterbury Woods Pk	50	17	17	34	21	21	7.5	311	57	43	177	165	134	124	0.0000	0.0001	0.0001	0.0002	0.0002
Centreville	50	185	185	370	226	226	7.5	3,387	57	43	1,931	1,792	1,456	1,352	0.0003	0.0010	0.0008	0.0018	0.0020
Centreville United Methodist	50	74	74	147	90	90	7.5	1,346	57	43	767	712	579	537	0.0001	0.0004	0.0003	0.0007	0.0008
Fairfax County Government C	50	85	85	170	104	104	7.5	1,556	57	43	887	823	669	621	0.0001	0.0004	0.0004	0.0008	0.0009
Greenbriar Park	50	28	28	55	34	34	7.5	503	57	43	287	266	217	201	0.0000	0.0001	0.0001	0.0003	0.0003
Herndon-Monroe	50	873	873	1,745	1065	1065	7.5	15,975	57	43	9,106	8,452	6,869	6,376	0.0013	0.0046	0.0037	0.0083	0.0095
Michael's	50	100	100	200	122	122	7.5	1,831	57	43	1,044	969	787	731	0.0001	0.0005	0.0004	0.0009	0.0011
Parkwood Baptist	50	9	9	18	11	11	7.5	165	57	43	94	87	71	66	0.0000	0.0000	0.0000	0.0001	0.0001
South Run District Pk	50	170	170	340	208	208	7.5	3,113	57	43	1,774	1,647	1,338	1,242	0.0002	0.0009	0.0007	0.0016	0.0019
St Paul Chung Catholic Chur	50	50	50	100	61	61	7.5	915	57	43	522	484	394	365	0.0001	0.0003	0.0002	0.0005	0.0005
Stringfellow Rd	50	181	181	361	220	220	7.5	3,305	57	43	1,884	1,748	1,421	1,319	0.0003	0.0010	0.0008	0.0017	0.0020
Sully Station	50	70	70	140	85	85	7.5	1,282	57	43	731	678	551	512	0.0001	0.0004	0.0003	0.0007	0.0008

SEASON 3 (Oct-Dec)

2011 Precursor NOx

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

10/12/10

LOCATION		2002			2010		AVERAGE	2010	ARTERIAL	FREEWAY	ARTERIAL	Adj.Art	FREEWAY	Adj.Fwy	EMISSIONS				
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	%		VMT	VMT	VMT	VMT	COLD START Rate (gm/mile)	RUNNING Arterial Rate (gm/mile)	RUNNING Freeway Rate (gm/mile)	Total Running Emission (tones/day)	TOTAL (tons/day)
					1.22	1.22						Wk Days =	61		0.4418	0.2477	0.2603		
												Seasonal adj =	0.9282						
COMMUTER RAIL LOTS																			
Sydenstricker Rd	50	84	84	167	102	102	7.5	1,529	57	43	871	809	657	610	0.0001	0.0004	0.0004	0.0008	0.0009
Wakefield Chapel Pk	50	25	25	50	31	31	7.5	458	57	43	261	242	197	183	0.0000	0.0001	0.0001	0.0002	0.0003
PARK-AND-RIDE LOTS - VIRGINIA																			
LOUDOUN COUNTY																			
Ashburn Farm	50	10	10	20	12	12	7.5	183	57	43	104	97	79	73	0.0000	0.0001	0.0000	0.0001	0.0001
Ashburn Village	50	20	20	40	24	24	7.5	366	57	43	209	194	157	146	0.0000	0.0001	0.0001	0.0002	0.0002
Cascades	50	28	28	55	34	34	7.5	503	57	43	287	266	217	201	0.0000	0.0001	0.0001	0.0003	0.0003
Dulles North Transit	50	375	375	750	458	458	7.5	6,866	57	43	3,914	3,633	2,952	2,740	0.0005	0.0020	0.0016	0.0036	0.0041
Hamilton	50	25	25	50	31	31	7.5	458	57	43	261	242	197	183	0.0000	0.0001	0.0001	0.0002	0.0003
Innovation Avenue	50	38	38	75	46	46	7.5	687	57	43	391	363	295	274	0.0001	0.0002	0.0002	0.0004	0.0004
Leesburg	50	25	25	50	31	31	7.5	458	57	43	261	242	197	183	0.0000	0.0001	0.0001	0.0002	0.0003
Leesburg Kohls	50	600	600	1200	732	732	7.5	10,985	57	43	6,262	5,812	4,724	4,385	0.0009	0.0032	0.0025	0.0057	0.0066
Purcellville	50	18	18	35	21	21	7.5	320	57	43	183	170	138	128	0.0000	0.0001	0.0001	0.0002	0.0002
Sterling Park SC	50	23	23	45	27	27	7.5	412	57	43	235	218	177	164	0.0000	0.0001	0.0001	0.0002	0.0002
Sterling Shaw Rd	50	24	24	48	29	29	7.5	439	57	43	250	232	189	175	0.0000	0.0001	0.0001	0.0002	0.0003
PARK-AND-RIDE LOTS - VIRGINIA																			
PRINCE WILLIAM COUNTY																			
Brittany	50	48	48	95	58	58	7.5	870	57	43	496	460	374	347	0.0001	0.0003	0.0002	0.0005	0.0005
Dale City	50	294	294	587	358	358	7.5	5,374	57	43	3,063	2,843	2,311	2,145	0.0004	0.0016	0.0012	0.0028	0.0032
Harbor Drive	50	100	100	200	122	122	7.5	1,831	57	43	1,044	969	787	731	0.0001	0.0005	0.0004	0.0009	0.0011
Lindendale	50	108	108	216	132	132	7.5	1,977	57	43	1,127	1,046	850	789	0.0002	0.0006	0.0005	0.0010	0.0012
Montclair	50	25	25	50	31	31	7.5	458	57	43	261	242	197	183	0.0000	0.0001	0.0001	0.0002	0.0003
PRTC Transit Center	50	93	93	185	113	113	7.5	1,694	57	43	965	896	728	676	0.0001	0.0005	0.0004	0.0009	0.0010
Tackett's Mill	50	85	85	169	103	103	7.5	1,547	57	43	882	819	665	617	0.0001	0.0004	0.0004	0.0008	0.0009
Triangle	50	15	15	29	18	18	7.5	265	57	43	151	140	114	106	0.0000	0.0001	0.0001	0.0001	0.0002
I-95 / Rt 123	50	282	282	563	344	344	7.5	5,154	57	43	2,938	2,727	2,216	2,057	0.0004	0.0015	0.0012	0.0027	0.0031
US 1 / VA 234	50	137	137	274	167	167	7.5	2,508	57	43	1,430	1,327	1,079	1,001	0.0002	0.0007	0.0006	0.0013	0.0015
MARC TRAIN COMMUTER LOTS																	0.0000		
College Park	25	431	144	574	525	175	7.5	5,255	57	43	2,995	2,780	2,260	2,097	0.0005	0.0015	0.0012	0.0027	0.0032
Frederick	0	0	0	0	0	0	7.5	0	57	43	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Greenbelt	60	1346	2018	3364	1642	2464	7.5	30,796	57	43	17,554	16,293	13,242	12,291	0.0023	0.0089	0.0071	0.0159	0.0182
Harpers Ferry		98	0	98	120	0	7.5	897	57	43	511	475	386	358	0.0001	0.0003	0.0002	0.0005	0.0006
Muirkirk	60	260	390	650	317	476	7.5	5,950	57	43	3,392	3,148	2,559	2,375	0.0004	0.0017	0.0014	0.0031	0.0035
Seabrook	0	264	0	264	322	0	4.5	1,450	57	43	827	767	624	579	0.0003	0.0004	0.0003	0.0008	0.0010
Silver Spring	0	0	0	0	0	0	4.5	0	57	43	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Union Station	0	781	0	781	953	0	7.5	7,150	57	43	4,075	3,783	3,074	2,854	0.0008	0.0021	0.0016	0.0037	0.0045
VIRGINIA RAILWAY EXPRESS COMMUTER LOTS																			
Backlick Road	50	110	110	220	134	134	7.5	2,014	57	43	1,148	1,066	866	804	0.0002	0.0006	0.0005	0.0010	0.0012
Broad Run	50	198	198	396	242	242	7.5	3,625	57	43	2,066	1,918	1,559	1,447	0.0003	0.0010	0.0008	0.0019	0.0022
Brooke	50	150	150	300	183	183	7.5	2,746	57	43	1,565	1,453	1,181	1,096	0.0002	0.0008	0.0006	0.0014	0.0016
Burke Center	50	275	275	550	336	336	7.5	5,035	57	43	2,870	2,664	2,165	2,010	0.0004	0.0015	0.0012	0.0026	0.0030
Franconia/Springfield (operat	50	1900	1900	3800	2319	2319	7.5	34,787	57	43	19,829	18,405	14,958	13,884	0.0028	0.0101	0.0080	0.0180	0.0208
Leeland Road	50	326	326	652	398	398	7.5	5,969	57	43	3,402	3,158	2,567	2,382	0.0005	0.0017	0.0014	0.0031	0.0036
Lorton	50	100	100	200	122	122	7.5	1,831	57	43	1,044	969	787	731	0.0001	0.0005	0.0004	0.0009	0.0011
Manassas	50	187	187	374	228	228	7.5	3,424	57	43	1,952	1,811	1,472	1,367	0.0003	0.0010	0.0008	0.0018	0.0020
Manassas Park	50	150	150	300	183	183	7.5	2,746	57	43	1,565	1,453	1,181	1,096	0.0002	0.0008	0.0006	0.0014	0.0016
Quantico	50	109	109	217	132	132	7.5	1,987	57	43	1,132	1,051	854	793	0.0002	0.0006	0.0005	0.0010	0.0012
Rippon 50		150	150	300	183	183	7.5	2,746	57	43	1,565	1,453	1,181	1,096	0.0002	0.0008	0.0006	0.0014	0.0016
Rolling Road	50	185	185	370	226	226	7.5	3,387	57	43	1,931	1,792	1,456	1,352	0.0003	0.0010	0.0008	0.0018	0.0020
Woodbridge	50	294	294	588	359	359	7.5	5,383	57	43	3,068	2,848	2,315	2,148	0.0004	0.0016	0.0012	0.0028	0.0032
METRORAIL PARKING LOTS																			
Anacostia	25	861	287	1148	1051	350	7.5	10,509	57	43	5,990	5,560	4,519	4,195	0.0010	0.0030	0.0024	0.0054	0.0064
Branch Avenue	50	1611	1611	3222	1966	1966	7.5	29,496	57	43	16,813	15,605	12,683	11,773	0.0024	0.0085	0.0068	0.0153	0.0176
Capitol Heights	50	194	194	387	236	236	7.5	3,543	57	43	2,019	1,874	1,523	1,414	0.0003	0.0010	0.0008	0.0018	0.0021
College Park	25	465	155	620	568	189	7.5	5,676	57	43	3,235	3,003	2,441	2,265	0.0005	0.0016	0.0013	0.0029	0.0035
Congress Heights	0	66	0	66	81	0	4.5	363	57	43	207	192	156	145	0.0001	0.0001	0.0001	0.0002	0.0003
Deanwood	0	194	0	194	237	0	7.5	1,776	57	43	1,012	940	764	709	0.0002	0.0005	0.0004	0.0009	0.0011
East Falls Church	50	221	221	442	270	270	7.5	4,046	57	43	2,306	2,141	1,740	1,615	0.0003	0.0012	0.0009	0.0021	0.0024
Forest Glen	50	329	329	658	402	402	7.5	6,024	57	43	3,433	3,187	2,590	2,404	0.0005	0.0017	0.0014	0.0031	0.0036
Franconia - Springfield	50	1987	1987	3973	2425	2425	4.5	21,823	57	43	12,439	11,546	9,384	8,710	0.0029	0.0063	0.0050	0.0113	0.0142

SEASON 3 (Oct-Dec)

2011 Precursor NOx

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

10/12/10

LOCATION	OUTSIDE MSA (%)	2002 INSIDE MSA	2002 OUTSIDE MSA	2002 Total	2010 INSIDE Growth Rate	2010 OUTSIDE Growth Rate	AVERAGE TRIP LENGTH	2010 VMT	ARTERIAL %	FREEWAY %	ARTERIAL VMT	Adj.Art VMT	FREEWAY VMT	Adj.Fwy VMT	EMISSIONS COLD START Rate (gm/mile)	EMISSIONS RUNNING Arterial Rate (gm/mile)	EMISSIONS RUNNING Freeway Rate (gm/mile)	EMISSIONS RUNNING Total Running Emission (tones/day)	TOTAL (tons/day)
					1.22	1.22						Wk Days =	61		0.4418	0.2477	0.2603		
COMMUTER RAIL LOTS												Seasonal adj =	0.9282						
Glenmont	50	925	925	1850	1129	1129	4.5	10,162	57	43	5,792	5,376	4,369	4,056	0.0014	0.0029	0.0023	0.0053	0.0066
Greenbelt	50	1783	1783	3565	2176	2176	7.5	32,636	57	43	18,602	17,267	14,033	13,026	0.0026	0.0094	0.0075	0.0169	0.0195
Naylor Road	50	216	216	431	263	263	7.5	3,946	57	43	2,249	2,088	1,697	1,575	0.0003	0.0011	0.0009	0.0020	0.0024
Prince George's Plaza	25	927	309	1236	1131	377	7.5	11,315	57	43	6,450	5,986	4,865	4,516	0.0011	0.0033	0.0026	0.0059	0.0069
Southern Avenue	50	1090	1090	2180	1330	1330	4.5	11,974	57	43	6,825	6,335	5,149	4,779	0.0016	0.0035	0.0027	0.0062	0.0078
Suitland	50	1033	1033	2065	1260	1260	4.5	11,342	57	43	6,465	6,001	4,877	4,527	0.0015	0.0033	0.0026	0.0059	0.0074
Van Dorn Street	50	204	204	407	248	248	4.5	2,236	57	43	1,274	1,183	961	892	0.0003	0.0006	0.0005	0.0012	0.0015
West Hyattsville	25	453	151	604	553	184	7.5	5,529	57	43	3,152	2,925	2,378	2,207	0.0005	0.0016	0.0013	0.0029	0.0034
Wheaton	25	759	253	1012	926	309	7.5	9,264	57	43	5,281	4,902	3,984	3,698	0.0009	0.0027	0.0021	0.0048	0.0057
				108,749				872,738							0.0913	0.2521	0.1999	0.4520	0.5433

Seasonal Total (tons/season) 33.14

Bold figures: New numbers taken from P & R directory

Figures in bracket: Carry forward figures from conformity doc.

Park lot Growth Rate	
Transit trips 2011	1096680
Transit trips 2000	863783
Annual growth rate	0.024511312
Growth factor (2002-2011)	1.220601807

SEASON 1 (Jan-Apr)

2011 PM AIR QUALITY EMISSIONS INVENTORY

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION		2002			2010		AVERAGE	2010	ADJ	RUNNING	TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	WINTER VMT	Rate (gm/mile)	(tons/day)
					1.22	1.22		Wk Days =	83	0.0114	
COMMUTER RAIL LOTS								Seasonal adj =	0.9216		
BRUNSWICK 25%	25	305	102	**407**	373	124	7.5	3,726	3,434	39	0.0000
PT OF ROCKS 25%	25	204	68	**272**	249	83	7.5	2,490	2,295	26	0.0000
DICKERSON	0	15	0	**15**	18	0	7.5	137	127	1	0.0000
BARNESVILLE	0	46	0	**46**	56	0	7.5	421	388	4	0.0000
GERMANTOWN	0	386	0	**386**	471	0	7.5	3,534	3,257	37	0.0000
MET GROVE	0	352	0	**352**	430	0	7.5	3,222	2,970	34	0.0000
WAS GROVE	0	15	0	**15**	18	0	7.5	137	127	1	0.0000
GARRETT PARK	0	22	0	**22**	27	0	7.5	201	186	2	0.0000
BOWIE 50%	50	188	188	**375**	229	229	7.5	3,433	3,164	36	0.0000
SEABROOK 15%	15	224	40	**264**	274	48	7.5	2,417	2,227	25	0.0000
KENSINGTON	0	45	0	**45**	55	0	7.5	412	380	4	0.0000
LAUREL 30%	30	209	90	**299**	255	109	7.5	2,737	2,523	29	0.0000
GAITHESBURG	0	280	0	**280**	342	0	7.5	2,563	2,362	27	0.0000
BERWYN HEIGHTS	0	30	0	**30**	37	0	4.5	165	152	2	0.0000
RIVERDALE	0	65	0	**65**	79	0	4.5	357	329	4	0.0000
METRO RAIL LOTS											
ADDISON ROAD 40%	40	791	527	**1318**	965	644	7.5	12,066	11,120	127	0.0001
ARCHIVES	0	12	0	12	15	0	4.5	66	61	1	0.0000
ARLING	0	10	0	10	12	0	4.5	55	51	1	0.0000
BALLSTON	0	1175	0	1175	1434	0	4.5	6,454	5,948	68	0.0001
BENN.RD	0	520	0	520	635	0	4.5	2,856	2,632	30	0.0000
BETH	0	395	0	395	482	0	4.5	2,170	2,000	23	0.0000
BRADD RD	0	10	0	**10**	12	0	4.5	55	51	1	0.0000
BROOKLAND	0	27	0	**27**	33	0	4.5	148	137	2	0.0000
CHEVERLY	0	557	0	**557**	680	0	4.5	3,059	2,820	32	0.0000
CLARENDON	0	554	0	554	676	0	4.5	3,043	2,804	32	0.0000
CLEVELAND PK	0	366	0	366	447	0	4.5	2,010	1,853	21	0.0000
COURT HOUSE	0	256	0	256	312	0	4.5	1,406	1,296	15	0.0000
CRYSTAL CITY	0	347	0	347	424	0	4.5	1,906	1,757	20	0.0000
DEANWOOD	0	194	0	**194**	237	0	4.5	1,066	982	11	0.0000
DUN LORING 10%	10	1220	136	**1355**	1489	165	4.5	7,443	6,859	78	0.0001
DUPONT CIRCLE	0	165	0	165	201	0	4.5	906	835	10	0.0000
EASTERN MKT	0	178	0	178	217	0	4.5	978	901	10	0.0000
EAST FALLS CH	0	442	0	**442**	540	0	4.5	2,428	2,237	26	0.0000
EIS	0	352	0	352	430	0	4.5	1,933	1,782	20	0.0000
FARRAGUT NORTH	0	102	0	102	125	0	4.5	560	516	6	0.0000
FARRAGUT WEST	0	221	0	221	270	0	4.5	1,214	1,119	13	0.0000
FEDERAL CENTER	0	75	0	75	92	0	4.5	412	380	4	0.0000
FEDERAL TRI	0	54	0	54	66	0	4.5	297	273	3	0.0000
FOGGY	0	102	0	102	125	0	4.5	560	516	6	0.0000
FORT TROTTEN	0	445	0	**445**	543	0	4.5	2,444	2,253	26	0.0000
FRH.HEIGHTS	0	679	0	679	829	0	4.5	3,730	3,437	39	0.0000
GALLERY PLACE	0	124	0	124	151	0	4.5	681	628	7	0.0000
GROSVENOR	0	716	0	**716**	874	0	4.5	3,933	3,624	41	0.0000
HUNT NORTH 40%	40	1873	1249	**3122**	2286	1524	7.5	28,580	26,340	300	0.0003
JUD SQUARE	0	110	0	110	134	0	4.5	604	557	6	0.0000
KING ST	0	30	0	**30**	37	0	4.5	165	152	2	0.0000

SEASON 1 (Jan-Apr)

2011 PM AIR QUALITY EMISSIONS INVENTORY

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION		2002			2010		AVERAGE	2010	ADJ	RUNNING	TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	WINTER VMT	Rate (gm/mile)	(tons/day)
					1.22	1.22		Wk Days =	83	0.0114	
COMMUTER RAIL LOTS								Seasonal adj =	0.9216		
LANDOVER 25%	25	1410	470	**1880**	1721	574	7.5	17,210	15,861	181	0.0002
L'ENFANT PLAZA	0	296	0	296	361	0	4.5	1,626	1,498	17	0.0000
MCPHERSON SQ	0	52	0	52	63	0	4.5	286	263	3	0.0000
MEDICAL CENTER	0	14	0	**14**	17	0	4.5	77	71	1	0.0000
METRO CENTER	0	177	0	177	216	0	4.5	972	896	10	0.0000
MINNES	0	353	0	**353**	431	0	4.5	1,939	1,787	20	0.0000
NAT AIR	0	87	0	87	106	0	4.5	478	440	5	0.0000
NEW CARROL 50%	50	1049	1049	**2097**	1280	1280	7.5	19,197	17,692	202	0.0002
PRNTAGON	0	561	0	561	685	0	4.5	3,081	2,840	32	0.0000
PENTAGON CITY	0	381	0	381	465	0	4.5	2,093	1,929	22	0.0000
POTOMAC AVE	0	533	0	533	651	0	4.5	2,928	2,698	31	0.0000
ROCKVILLE	0	667	0	**667**	814	0	4.5	3,664	3,376	38	0.0000
ROSSLYN	0	356	0	356	435	0	4.5	1,955	1,802	21	0.0000
SHADY GROVE 10%	10	3903	434	**4337**	4764	529	7.5	39,703	36,590	417	0.0005
SILVER SPRING	0	44	0	**44**	54	0	4.5	242	223	3	0.0000
SMITH MALL	0	120	0	120	146	0	4.5	659	607	7	0.0000
STADIUM ARM	0	976	0	976	1191	0	4.5	5,361	4,941	56	0.0001
TAKOMA PK	0	146	0	**146**	178	0	4.5	802	739	8	0.0000
TENLEYTON	0	17	0	**17**	21	0	4.5	93	86	1	0.0000
TWINBROOK	0	1136	0	**1136**	1387	0	4.5	6,240	5,751	66	0.0001
UNION STAT	0	378	0	378	461	0	4.5	2,076	1,913	22	0.0000
VAN NESS	0	343	0	343	419	0	4.5	1,884	1,736	20	0.0000
VIENNA 25%	25	2798	933	**3731**	3416	1139	7.5	34,155	31,478	359	0.0004
VA SQUARE	0	642	0	642	784	0	4.5	3,526	3,250	37	0.0000
WEST FALLS CHURCH	0	2183	0	**2183**	2665	0	4.5	11,991	11,051	126	0.0001
WHITE FLINT	0	1633	0	1633	1993	0	4.5	8,970	8,266	94	0.0001
WOODLEY	0	68	0	68	83	0	4.5	374	344	4	0.0000
RHODE ISLAND 30%	30	266	114	**380**	325	139	7.5	3,479	3,206	37	0.0000
BUS & CAR POOL LOTS											
CARTER BARRON	0	798	0	798	974	0	4.5	4,383	4,040	46	0.0001
PG PLAZA	0	47	0	47	57	0	4.5	258	238	3	0.0000
PENN MAR SHOPP.	0	100	0	**100**	122	0	4.5	549	506	6	0.0000
CAP PLAZA	0	100	0	**100**	122	0	4.5	549	506	6	0.0000
EASTOVER	0	100	0	**100**	122	0	4.5	549	506	6	0.0000
FOUR MILE RUN	0	28	0	**28**	34	0	4.5	154	142	2	0.0000
SPRINGFIELD MALL	0	580	0	**580**	708	0	4.5	3,186	2,936	33	0.0000
SPRINGFIELD METH CH	0	48	0	**48**	59	0	4.5	264	243	3	0.0000
FRED ARMORY	0	33	0	**33**	40	0	7.5	302	278	3	0.0000
MYERSVILLE	0	65	0	**65**	79	0	7.5	595	548	6	0.0000
ROSEMONT	0	45	0	**45**	55	0	7.5	412	380	4	0.0000
URBANA	0	193	0	**193**	236	0	7.5	1,767	1,628	19	0.0000
JEFFERSON	0	40	0	**40**	49	0	7.5	366	337	4	0.0000
NORBECK RD	0	248	0	**248**	303	0	7.5	2,270	2,092	24	0.0000
MONTROSE RD	0	650	0	**650**	793	0	7.5	5,950	5,484	63	0.0001
BRIGG CHENNY 50%	50	215	215	**430**	262	262	7.5	3,936	3,628	41	0.0000
COMUS ROAD	0	30	0	**30**	37	0	7.5	275	253	3	0.0000
LAKEFOREST MALL	0	300	0	**300**	366	0	7.5	2,746	2,531	29	0.0000

SEASON 1 (Jan-Apr)

2011 PM AIR QUALITY EMISSIONS INVENTORY

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION		2002			2010		AVERAGE	2010	ADJ	RUNNING	TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	WINTER VMT	Rate (gm/mile)	(tons/day)
					1.22	1.22		Wk Days =	83	0.0114	
COMMUTER RAIL LOTS								Seasonal adj =	0.9216		
BURTONSVILLE	0	500	0	**500**	610	0	7.5	4,577	4,218	48	0.0001
FORCEY MEM.	0	200	0	**200**	244	0	7.5	1,831	1,687	19	0.0000
TECH ROAD	0	155	0	**155**	189	0	7.5	1,419	1,308	15	0.0000
BELTWAY	0	265	0	**265**	323	0	7.5	2,426	2,236	25	0.0000
LAUREL VAN DUSEN	0	62	0	**62**	76	0	7.5	568	523	6	0.0000
ACCOKEEK	0	450	0	**450**	549	0	7.5	4,120	3,797	43	0.0000
ABC DRIVE IN	0	100	0	**100**	122	0	7.5	915	844	10	0.0000
BOWIE 20%	20	526	131	**657**	642	160	7.5	6,015	5,543	63	0.0001
CLINTON 50%	50	212	212	**424**	259	259	7.5	3,882	3,577	41	0.0000
OXON HILL 20%	20	519	130	**649**	634	158	7.5	5,941	5,475	62	0.0001
EQUESTRIAN CENTER 5	50	150	150	**300**	183	183	7.5	2,746	2,531	29	0.0000
BOWIE MARKET PLACE	0	50	0	**50**	61	0	7.5	458	422	5	0.0000
FT.WASHINGTON	0	412	0	**412**	503	0	7.5	3,772	3,476	40	0.0000
MONTPELIER REC PARK	0	70	0	**70**	85	0	7.5	641	591	7	0.0000
RESTON	0	1547	0	**1547**	1888	0	7.5	14,162	13,052	149	0.0002
GREENBRIAR	0	55	0	**55**	67	0	7.5	503	464	5	0.0000
FAIR OAKS	0	150	0	**150**	183	0	7.5	1,373	1,266	14	0.0000
ROLLING VALLEY	0	628	0	**628**	767	0	7.5	5,749	5,298	60	0.0001
SPRINGFIELD PLAZA	0	230	0	**230**	281	0	7.5	2,106	1,940	22	0.0000
FAIRLANES BOWL	0	35	0	**35**	43	0	7.5	320	295	3	0.0000
NOTTOWAY PARK	0	14	0	**14**	17	0	7.5	128	118	1	0.0000
HORNER RD	0	2397	0	**2397**	2926	0	7.5	21,943	20,223	231	0.0003
LAKE RIDGE	0	555	0	**555**	677	0	7.5	5,081	4,682	53	0.0001
MINNIEVILLE RD 40%	40	336	224	560	410	273	7.5	5,127	4,725	54	0.0001
GORDON BLVD	0	156	0	156	190	0	7.5	1,428	1,316	15	0.0000
HILLENDALE	0	248	0	**248**	303	0	7.5	2,270	2,092	24	0.0000
POTOMAC MILLS	0	946	0	**946**	1155	0	7.5	8,660	7,981	91	0.0001
List of new lots to be added in Conformity Document list											
PARK-AND-RIDE LOTS - MARYLAND											
PARK-AND-RIDE LOTS - MARYLAND											
CHARLES COUNTY											
301 Park & Ride	25	287	96	383	351	117	7.5	3,506	3,231	37	0.0000
Charles County Governmer	25	26	9	35	32	11	7.5	320	295	3	0.0000
Food Lion Shopping Cente	25	38	13	50	46	15	7.5	458	422	5	0.0000
La Plata Armory	25	15	5	20	18	6	7.5	183	169	2	0.0000
Laurel Springs Regional Pa	25	38	13	50	46	15	7.5	458	422	5	0.0000
Life Wesleyan Church	25	38	13	50	46	15	7.5	458	422	5	0.0000
Mattawoman-Beantown Rc	25	435	145	580	531	177	7.5	5,310	4,893	56	0.0001
Smallwood Village	25	75	25	100	92	31	7.5	915	844	10	0.0000
St. Charles Towne	25	263	88	350	320	107	7.5	3,204	2,953	34	0.0000
PARK-AND-RIDE LOTS - MARYLAND											
FREDERICK COUNTY											
Frederick (north)	25	123	41	164	150	50	7.5	1,501	1,384	16	0.0000
Frederick (south)	25	173	58	230	211	70	7.5	2,106	1,940	22	0.0000
Monacacy Marcst	25	600	200	800	732	244	7.5	7,324	6,749	77	0.0001
PARK-AND-RIDE LOTS - MARYLAND											
MONTGOMERY COUNTY											
Colesville	0	190	0	190	232	0	7.5	1,739	1,603	18	0.0000
Damascus	50	0	0		0	0	7.5	0	0	0	0.0000
Gaithersburg	50	259	259	517	316	316	7.5	4,733	4,362	50	0.0001
Gaithersburg	50	175	175	350	214	214	7.5	3,204	2,953	34	0.0000
Germantown Town	50	0	0		0	0	7.5	0	0	0	0.0000

SEASON 1 (Jan-Apr)

2011 PM AIR QUALITY EMISSIONS INVENTORY

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION		2002			2010		AVERAGE	2010	ADJ	RUNNING	TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	WINTER VMT	Rate (gm/mile)	(tons/day)
					1.22	1.22		Wk Days =	83	0.0114	
COMMUTER RAIL LOTS								Seasonal adj =	0.9216		
Greencastle	50	75	75	150	92	92	7.5	1,373	1,266	14	0.0000
Milestone Shopping	50	88	88	175	107	107	7.5	1,602	1,476	17	0.0000
PARK-AND-RIDE LOTS - MAYLAND											
PRINCE GEORGE'S COUNTY											
Hampton Mall	0	100	0	100	122	0	4.5	549	506	6	0.0000
Laurel (south)	25	513	171	684	626	209	7.5	6,262	5,771	66	0.0001
PARK-AND-RIDE LOTS - VIRGINIA					0	0		0	0	0	0.0000
ARLINGTON COUNTY					0	0		0	0	0	0.0000
Ballston Public Parking Garag	25	375	125	500	458	153	7.5	4,577	4,218	48	0.0001
Washington-Lee	50	178	178	356	217	217	7.5	3,259	3,004	34	0.0000
PARK-AND-RIDE LOTS - VIRGINIA											
FAIRFAX COUNTY											
American Legion	50	50	50	100	61	61	7.5	915	844	10	0.0000
Canterbury Woods Pk	50	17	17	34	21	21	7.5	311	287	3	0.0000
Centreville	50	185	185	370	226	226	7.5	3,387	3,122	36	0.0000
Centreville United Methodis	50	74	74	147	90	90	7.5	1,346	1,240	14	0.0000
Fairfax County Governmen	50	85	85	170	104	104	7.5	1,556	1,434	16	0.0000
Greenbriar Park	50	28	28	55	34	34	7.5	503	464	5	0.0000
Herndon-Monroe	50	873	873	1,745	1065	1065	7.5	15,975	14,722	168	0.0002
Michael's	50	100	100	200	122	122	7.5	1,831	1,687	19	0.0000
Parkwood Baptist	50	9	9	18	11	11	7.5	165	152	2	0.0000
South Run District Pk	50	170	170	340	208	208	7.5	3,113	2,869	33	0.0000
St Paul Chung Catholic Ch	50	50	50	100	61	61	7.5	915	844	10	0.0000
Stringfellow Rd	50	181	181	361	220	220	7.5	3,305	3,046	35	0.0000
Sully Station	50	70	70	140	85	85	7.5	1,282	1,181	13	0.0000
Sydenstricker Rd	50	84	84	167	102	102	7.5	1,529	1,409	16	0.0000
Wakefield Chapel Pk	50	25	25	50	31	31	7.5	458	422	5	0.0000
PARK-AND-RIDE LOTS - VIRGINIA											
LOUDOUN COUNTY											
Ashburn Farm	50	10	10	20	12	12	7.5	183	169	2	0.0000
Ashburn Village	50	20	20	40	24	24	7.5	366	337	4	0.0000
Cascades	50	28	28	55	34	34	7.5	503	464	5	0.0000
Dulles North Transit	50	375	375	750	458	458	7.5	6,866	6,328	72	0.0001
Hamilton	50	25	25	50	31	31	7.5	458	422	5	0.0000
Innovation Avenue	50	38	38	75	46	46	7.5	687	633	7	0.0000
Leesburg	50	25	25	50	31	31	7.5	458	422	5	0.0000
Leesburg Kohls	50	600	600	1200	732	732	7.5	10,985	10,124	115	0.0001
Purcellville	50	18	18	35	21	21	7.5	320	295	3	0.0000
Sterling Park SC	50	23	23	45	27	27	7.5	412	380	4	0.0000
Sterling Shaw Rd	50	24	24	48	29	29	7.5	439	405	5	0.0000
PARK-AND-RIDE LOTS - VIRGINIA											
PRINCE WILLIAM COUNTY											
Brittany	50	48	48	95	58	58	7.5	870	801	9	0.0000
Dale City	50	294	294	587	358	358	7.5	5,374	4,952	56	0.0001
Harbor Drive	50	100	100	200	122	122	7.5	1,831	1,687	19	0.0000
Lindendale	50	108	108	216	132	132	7.5	1,977	1,822	21	0.0000
Montclair	50	25	25	50	31	31	7.5	458	422	5	0.0000
PRTC Transit Center	50	93	93	185	113	113	7.5	1,694	1,561	18	0.0000
Tackett's Mill	50	85	85	169	103	103	7.5	1,547	1,426	16	0.0000
Triangle	50	15	15	29	18	18	7.5	265	245	3	0.0000
I-95 / Rt 123	50	282	282	563	344	344	7.5	5,154	4,750	54	0.0001
US 1 / VA 234	50	137	137	274	167	167	7.5	2,508	2,312	26	0.0000
MARC TRAIN COMMUTER LOTS					0	0		0			
College Park	25	431	144	574	525	175	7.5	5,255	4,843	55	0.0001

SEASON 1 (Jan-Apr)

2011 PM AIR QUALITY EMISSIONS INVENTORY

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION		2002			2010		AVERAGE	2010	ADJ	RUNNING	TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	WINTER VMT	Rate (gm/mile)	(tons/day)
					1.22	1.22		Wk Days =	83	0.0114	
COMMUTER RAIL LOTS								Seasonal adj =	0.9216		
Frederick	0	0	0	0	0	0	7.5	0	0	0	0.0000
Greenbelt	60	1346	2018	3364	1642	2464	7.5	30,796	28,381	324	0.0004
Harpers Ferry		98	0	98	120	0	7.5	897	827	9	0.0000
Muirkirk	60	260	390	650	317	476	7.5	5,950	5,484	63	0.0001
Seabrook	0	264	0	264	322	0	4.5	1,450	1,336	15	0.0000
Silver Spring	0	0	0	0	0	0	4.5	0	0	0	0.0000
Union Station	0	781	0	781	953	0	7.5	7,150	6,589	75	0.0001
VIRGINIA RAILWAY EXPRESS COMMUTER LOTS											
Backlick Road	50	110	110	220	134	134	7.5	2,014	1,856	21	0.0000
Broad Run	50	198	198	396	242	242	7.5	3,625	3,341	38	0.0000
Brooke	50	150	150	300	183	183	7.5	2,746	2,531	29	0.0000
Burke Center	50	275	275	550	336	336	7.5	5,035	4,640	53	0.0001
Franconia/Springfield (oper	50	1900	1900	3800	2319	2319	7.5	34,787	32,060	365	0.0004
Leeland Road	50	326	326	652	398	398	7.5	5,969	5,501	63	0.0001
Lorton	50	100	100	200	122	122	7.5	1,831	1,687	19	0.0000
Manassas	50	187	187	374	228	228	7.5	3,424	3,155	36	0.0000
Manassas Park	50	150	150	300	183	183	7.5	2,746	2,531	29	0.0000
Quantico	50	109	109	217	132	132	7.5	1,987	1,831	21	0.0000
Rippon 50		150	150	300	183	183	7.5	2,746	2,531	29	0.0000
Rolling Road	50	185	185	370	226	226	7.5	3,387	3,122	36	0.0000
Woodbridge	50	294	294	588	359	359	7.5	5,383	4,961	57	0.0001
METRORAIL PARKING LOTS											
Anacostia	25	861	287	1148	1051	350	7.5	10,509	9,685	110	0.0001
Branch Avenue	50	1611	1611	3222	1966	1966	7.5	29,496	27,183	310	0.0003
Capitol Heights	50	194	194	387	236	236	7.5	3,543	3,265	37	0.0000
College Park	25	465	155	620	568	189	7.5	5,676	5,231	60	0.0001
Congress Heights	0	66	0	66	81	0	4.5	363	334	4	0.0000
Deanwood	0	194	0	194	237	0	7.5	1,776	1,637	19	0.0000
East Falls Church	50	221	221	442	270	270	7.5	4,046	3,729	43	0.0000
Forest Glen	50	329	329	658	402	402	7.5	6,024	5,551	63	0.0001
Franconia - Springfield	50	1987	1987	3973	2425	2425	4.5	21,823	20,112	229	0.0003
Glenmont	50	925	925	1850	1129	1129	4.5	10,162	9,365	107	0.0001
Greenbelt	50	1783	1783	3565	2176	2176	7.5	32,636	30,077	343	0.0004
Naylor Road	50	216	216	431	263	263	7.5	3,946	3,636	41	0.0000
Prince George's Plaza	25	927	309	1236	1131	377	7.5	11,315	10,428	119	0.0001
Southern Avenue	50	1090	1090	2180	1330	1330	4.5	11,974	11,035	126	0.0001
Suitland	50	1033	1033	2065	1260	1260	4.5	11,342	10,453	119	0.0001
Van Dorn Street	50	204	204	407	248	248	4.5	2,236	2,060	23	0.0000
West Hyattsville	25	453	151	604	553	184	7.5	5,529	5,096	58	0.0001
Wheaton	25	759	253	1012	926	309	7.5	9,264	8,538	97	0.0001
				108,749				872,738		9,169.1973	0.0101
									Seasonal Total (tons/season) =		0.8389

Bold figures: New numbers taken from P & R directory

Figures in bracket: Carry forward figures from conformity doc.

Park lot Growth Rate	
Transit trips 2011	1096680
Transit trips 2000	863783
Annual growth rate	0.024511312
Growth factor (2002-2011)	1.220601807

SEASON 2 (May-Sep)

2011 PM AIR QUALITY EMISSIONS INVENTORY

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION	2002				2010		AVERAGE	2010	ADJ	RUNNING	TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	WINTER VMT	Rate (gm/mile)	(tons/day)
					1.22	1.22		Wk Days =	107	0.0114	
COMMUTER RAIL LOTS								Seasonal adj =	0.9873		
BRUNSWICK 25%	25	305	102	**407**	373	124	7.5	3,726	3,679	42	0.0000
PT OF ROCKS 25%	25	204	68	**272**	249	83	7.5	2,490	2,458	28	0.0000
DICKERSON	0	15	0	**15**	18	0	7.5	137	136	2	0.0000
BARNESVILLE	0	46	0	**46**	56	0	7.5	421	416	5	0.0000
GERMANTOWN	0	386	0	**386**	471	0	7.5	3,534	3,489	40	0.0000
MET GROVE	0	352	0	**352**	430	0	7.5	3,222	3,181	36	0.0000
WAS GROVE	0	15	0	**15**	18	0	7.5	137	136	2	0.0000
GARRETT PARK	0	22	0	**22**	27	0	7.5	201	199	2	0.0000
BOWIE 50%	50	188	188	**375**	229	229	7.5	3,433	3,389	39	0.0000
SEABROOK 15%	15	224	40	**264**	274	48	7.5	2,417	2,386	27	0.0000
KENSINGTON	0	45	0	**45**	55	0	7.5	412	407	5	0.0000
LAUREL 30%	30	209	90	**299**	255	109	7.5	2,737	2,702	31	0.0000
GAITHESBURG	0	280	0	**280**	342	0	7.5	2,563	2,531	29	0.0000
BERWYN HEIGHTS	0	30	0	**30**	37	0	4.5	165	163	2	0.0000
RIVERDALE	0	65	0	**65**	79	0	4.5	357	352	4	0.0000
METRO RAIL LOTS											
ADDISON ROAD 40%	40	791	527	**1318**	965	644	7.5	12,066	11,912	136	0.0001
ARCHIVES	0	12	0	12	15	0	4.5	66	65	1	0.0000
ARLING	0	10	0	10	12	0	4.5	55	54	1	0.0000
BALLSTON	0	1175	0	1175	1434	0	4.5	6,454	6,372	73	0.0001
BENN.RD	0	520	0	520	635	0	4.5	2,856	2,820	32	0.0000
BETH	0	395	0	395	482	0	4.5	2,170	2,142	24	0.0000
BRADD RD	0	10	0	**10**	12	0	4.5	55	54	1	0.0000
BROOKLAND	0	27	0	**27**	33	0	4.5	148	146	2	0.0000
CHEVERLY	0	557	0	**557**	680	0	4.5	3,059	3,021	34	0.0000
CLARENDON	0	554	0	554	676	0	4.5	3,043	3,004	34	0.0000
CLEVELAND PK	0	366	0	366	447	0	4.5	2,010	1,985	23	0.0000
COURT HOUSE	0	256	0	256	312	0	4.5	1,406	1,388	16	0.0000
CRYSTAL CITY	0	347	0	347	424	0	4.5	1,906	1,882	21	0.0000
DEANWOOD	0	194	0	**194**	237	0	4.5	1,066	1,052	12	0.0000
DUN LORING 10%	10	1220	136	**1355**	1489	165	4.5	7,443	7,348	84	0.0001
DUPONT CIRCLE	0	165	0	165	201	0	4.5	906	895	10	0.0000
EASTERN MKT	0	178	0	178	217	0	4.5	978	965	11	0.0000
EAST FALLS CH	0	442	0	**442**	540	0	4.5	2,428	2,397	27	0.0000
EIS	0	352	0	352	430	0	4.5	1,933	1,909	22	0.0000
FARRAGUT NORTH	0	102	0	102	125	0	4.5	560	553	6	0.0000
FARRAGUT WEST	0	221	0	221	270	0	4.5	1,214	1,198	14	0.0000
FEDERAL CENTER	0	75	0	75	92	0	4.5	412	407	5	0.0000
FEDERAL TRI	0	54	0	54	66	0	4.5	297	293	3	0.0000
FOGGY	0	102	0	102	125	0	4.5	560	553	6	0.0000
FORT TROTTEN	0	445	0	**445**	543	0	4.5	2,444	2,413	28	0.0000
FRH.HEIGHTS	0	679	0	679	829	0	4.5	3,730	3,682	42	0.0000
GALLERY PLACE	0	124	0	124	151	0	4.5	681	672	8	0.0000
GROSVENOR	0	716	0	**716**	874	0	4.5	3,933	3,883	44	0.0000
HUNT NORTH 40%	40	1873	1249	**3122**	2286	1524	7.5	28,580	28,217	322	0.0004
JUD SQUARE	0	110	0	110	134	0	4.5	604	597	7	0.0000
KING ST	0	30	0	**30**	37	0	4.5	165	163	2	0.0000

SEASON 2 (May-Sep)

2011 PM AIR QUALITY EMISSIONS INVENTORY

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION		2002			2010		AVERAGE	2010	ADJ	RUNNING	TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	WINTER VMT	Rate (gm/mile)	(tons/day)
					1.22	1.22		Wk Days =	107	0.0114	
COMMUTER RAIL LOTS								Seasonal adj =	0.9873		
LANDOVER 25%	25	1410	470	**1880**	1721	574	7.5	17,210	16,992	194	0.0002
L'ENFANT PLAZA	0	296	0	296	361	0	4.5	1,626	1,605	18	0.0000
MCPHERSON SQ	0	52	0	52	63	0	4.5	286	282	3	0.0000
MEDICAL CENTER	0	14	0	**14**	17	0	4.5	77	76	1	0.0000
METRO CENTER	0	177	0	177	216	0	4.5	972	960	11	0.0000
MINNES	0	353	0	**353**	431	0	4.5	1,939	1,914	22	0.0000
NAT AIR	0	87	0	87	106	0	4.5	478	472	5	0.0000
NEW CARROL 50%	50	1049	1049	**2097**	1280	1280	7.5	19,197	18,953	216	0.0002
PRNTAGON	0	561	0	561	685	0	4.5	3,081	3,042	35	0.0000
PENTAGON CITY	0	381	0	381	465	0	4.5	2,093	2,066	24	0.0000
POTOMAC AVE	0	533	0	533	651	0	4.5	2,928	2,890	33	0.0000
ROCKVILLE	0	667	0	**667**	814	0	4.5	3,664	3,617	41	0.0000
ROSSLYN	0	356	0	356	435	0	4.5	1,955	1,931	22	0.0000
SHADY GROVE 10%	10	3903	434	**4337**	4764	529	7.5	39,703	39,199	447	0.0005
SILVER SPRING	0	44	0	**44**	54	0	4.5	242	239	3	0.0000
SMITH MALL	0	120	0	120	146	0	4.5	659	651	7	0.0000
STADIUM ARM	0	976	0	976	1191	0	4.5	5,361	5,293	60	0.0001
TAKOMA PK	0	146	0	**146**	178	0	4.5	802	792	9	0.0000
TENLEYTON	0	17	0	**17**	21	0	4.5	93	92	1	0.0000
TWINBROOK	0	1136	0	**1136**	1387	0	4.5	6,240	6,160	70	0.0001
UNION STAT	0	378	0	378	461	0	4.5	2,076	2,050	23	0.0000
VAN NESS	0	343	0	343	419	0	4.5	1,884	1,860	21	0.0000
VIENNA 25%	25	2798	933	**3731**	3416	1139	7.5	34,155	33,722	384	0.0004
VA SQUARE	0	642	0	642	784	0	4.5	3,526	3,482	40	0.0000
WEST FALLS CHURCH	0	2183	0	**2183**	2665	0	4.5	11,991	11,838	135	0.0001
WHITE FLINT	0	1633	0	1633	1993	0	4.5	8,970	8,856	101	0.0001
WOODLEY	0	68	0	68	83	0	4.5	374	369	4	0.0000
RHODE ISLAND 30%	30	266	114	**380**	325	139	7.5	3,479	3,435	39	0.0000
BUS & CAR POOL LOTS											
CARTER BARRON	0	798	0	798	974	0	4.5	4,383	4,328	49	0.0001
PG PLAZA	0	47	0	47	57	0	4.5	258	255	3	0.0000
PENN MAR SHOPP.	0	100	0	**100**	122	0	4.5	549	542	6	0.0000
CAP PLAZA	0	100	0	**100**	122	0	4.5	549	542	6	0.0000
EASTOVER	0	100	0	**100**	122	0	4.5	549	542	6	0.0000
FOUR MILE RUN	0	28	0	**28**	34	0	4.5	154	152	2	0.0000
SPRINGFIELD MALL	0	580	0	**580**	708	0	4.5	3,186	3,145	36	0.0000
SPRINGFIELD METH CH	0	48	0	**48**	59	0	4.5	264	260	3	0.0000
FRED ARMORY	0	33	0	**33**	40	0	7.5	302	298	3	0.0000
MYERSVILLE	0	65	0	**65**	79	0	7.5	595	587	7	0.0000
ROSEMONT	0	45	0	**45**	55	0	7.5	412	407	5	0.0000
URBANA	0	193	0	**193**	236	0	7.5	1,767	1,744	20	0.0000
JEFFERSON	0	40	0	**40**	49	0	7.5	366	362	4	0.0000
NORBECK RD	0	248	0	**248**	303	0	7.5	2,270	2,241	26	0.0000
MONTROSE RD	0	650	0	**650**	793	0	7.5	5,950	5,875	67	0.0001
BRIGG CHENNY 50%	50	215	215	**430**	262	262	7.5	3,936	3,886	44	0.0000
COMUS ROAD	0	30	0	**30**	37	0	7.5	275	271	3	0.0000
LAKEFOREST MALL	0	300	0	**300**	366	0	7.5	2,746	2,711	31	0.0000

SEASON 2 (May-Sep)

2011 PM AIR QUALITY EMISSIONS INVENTORY

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION		2002			2010		AVERAGE	2010	ADJ	RUNNING	TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	WINTER VMT	Rate (gm/mile)	(tons/day)
					1.22	1.22		Wk Days =	107	0.0114	
COMMUTER RAIL LOTS								Seasonal adj =	0.9873		
BURTONSVILLE	0	500	0	**500**	610	0	7.5	4,577	4,519	52	0.0001
FORCEY MEM.	0	200	0	**200**	244	0	7.5	1,831	1,808	21	0.0000
TECH ROAD	0	155	0	**155**	189	0	7.5	1,419	1,401	16	0.0000
BELTWAY	0	265	0	**265**	323	0	7.5	2,426	2,395	27	0.0000
LAUREL VAN DUSEN	0	62	0	**62**	76	0	7.5	568	560	6	0.0000
ACCOKEEK	0	450	0	**450**	549	0	7.5	4,120	4,067	46	0.0001
ABC DRIVE IN	0	100	0	**100**	122	0	7.5	915	904	10	0.0000
BOWIE 20%	20	526	131	**657**	642	160	7.5	6,015	5,938	68	0.0001
CLINTON 50%	50	212	212	**424**	259	259	7.5	3,882	3,832	44	0.0000
OXON HILL 20%	20	519	130	**649**	634	158	7.5	5,941	5,866	67	0.0001
EQUESTRIAN CENTER	50	150	150	**300**	183	183	7.5	2,746	2,711	31	0.0000
BOWIE MARKET PLACE	0	50	0	**50**	61	0	7.5	458	452	5	0.0000
FT.WASHINGTON	0	412	0	**412**	503	0	7.5	3,772	3,724	42	0.0000
MONTPELIER REC PARK	0	70	0	**70**	85	0	7.5	641	633	7	0.0000
RESTON	0	1547	0	**1547**	1888	0	7.5	14,162	13,982	159	0.0002
GREENBRIAR	0	55	0	**55**	67	0	7.5	503	497	6	0.0000
FAIR OAKS	0	150	0	**150**	183	0	7.5	1,373	1,356	15	0.0000
ROLLING VALLEY	0	628	0	**628**	767	0	7.5	5,749	5,676	65	0.0001
SPRINGFIELD PLAZA	0	230	0	**230**	281	0	7.5	2,106	2,079	24	0.0000
FAIRLANES BOWL	0	35	0	**35**	43	0	7.5	320	316	4	0.0000
NOTTOWAY PARK	0	14	0	**14**	17	0	7.5	128	127	1	0.0000
HORNER RD	0	2397	0	**2397**	2926	0	7.5	21,943	21,665	247	0.0003
LAKE RIDGE	0	555	0	**555**	677	0	7.5	5,081	5,016	57	0.0001
MINNIEVILLE RD 40%	40	336	224	560	410	273	7.5	5,127	5,061	58	0.0001
GORDON BLVD	0	156	0	156	190	0	7.5	1,428	1,410	16	0.0000
HILLENDALE	0	248	0	**248**	303	0	7.5	2,270	2,241	26	0.0000
POTOMAC MILLS	0	946	0	**946**	1155	0	7.5	8,660	8,550	97	0.0001
List of new lots to be added in Conformity Document lis											
PARK-AND-RIDE LOTS - MARYLAND											
PARK-AND-RIDE LOTS - MARYLAND											
CHARLES COUNTY											
301 Park & Ride	25	287	96	383	351	117	7.5	3,506	3,462	39	0.0000
Charles County Governme	25	26	9	35	32	11	7.5	320	316	4	0.0000
Food Lion Shopping Cente	25	38	13	50	46	15	7.5	458	452	5	0.0000
La Plata Armory	25	15	5	20	18	6	7.5	183	181	2	0.0000
Laurel Springs Regional Pa	25	38	13	50	46	15	7.5	458	452	5	0.0000
Life Wesleyan Church	25	38	13	50	46	15	7.5	458	452	5	0.0000
Mattawoman-Beantown Rd	25	435	145	580	531	177	7.5	5,310	5,242	60	0.0001
Smallwood Village	25	75	25	100	92	31	7.5	915	904	10	0.0000
St. Charles Towne	25	263	88	350	320	107	7.5	3,204	3,163	36	0.0000
PARK-AND-RIDE LOTS - MARYLAND											
FREDERICK COUNTY											
Frederick (north)	25	123	41	164	150	50	7.5	1,501	1,482	17	0.0000
Frederick (south)	25	173	58	230	211	70	7.5	2,106	2,079	24	0.0000
Monacacy Marcst	25	600	200	800	732	244	7.5	7,324	7,231	82	0.0001
PARK-AND-RIDE LOTS - MARYLAND											
MONTGOMERY COUNTY											
Colesville	0	190	0	190	232	0	7.5	1,739	1,717	20	0.0000
Damascus	50	0	0		0	0	7.5	0	0	0	0.0000
Gaithersburg	50	259	259	517	316	316	7.5	4,733	4,673	53	0.0001
Gaithersburg	50	175	175	350	214	214	7.5	3,204	3,163	36	0.0000
Germantown Town	50	0	0		0	0	7.5	0	0	0	0.0000

SEASON 2 (May-Sep)

2011 PM AIR QUALITY EMISSIONS INVENTORY

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION		2002			2010		AVERAGE	2010	ADJ	RUNNING	TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	WINTER VMT	Rate (gm/mile)	(tons/day)
					1.22	1.22		Wk Days =	107	0.0114	
COMMUTER RAIL LOTS								Seasonal adj =	0.9873		
Greencastle	50	75	75	150	92	92	7.5	1,373	1,356	15	0.0000
Milestone Shopping	50	88	88	175	107	107	7.5	1,602	1,582	18	0.0000
PARK-AND-RIDE LOTS - MAYLAND											
PRINCE GEORGE'S COUNTY											
Hampton Mall	0	100	0	100	122	0	4.5	549	542	6	0.0000
Laurel (south)	25	513	171	684	626	209	7.5	6,262	6,182	70	0.0001
PARK-AND-RIDE LOTS - VIRGINIA					0	0		0	0	0	0.0000
ARLINGTON COUNTY					0	0		0	0	0	0.0000
Ballston Public Parking Gar	25	375	125	500	458	153	7.5	4,577	4,519	52	0.0001
Washington-Lee	50	178	178	356	217	217	7.5	3,259	3,218	37	0.0000
PARK-AND-RIDE LOTS - VIRGINIA											
FAIRFAX COUNTY											
American Legion	50	50	50	100	61	61	7.5	915	904	10	0.0000
Canterbury Woods Pk	50	17	17	34	21	21	7.5	311	307	4	0.0000
Centreville	50	185	185	370	226	226	7.5	3,387	3,344	38	0.0000
Centreville United Methodis	50	74	74	147	90	90	7.5	1,346	1,329	15	0.0000
Fairfax County Governmen	50	85	85	170	104	104	7.5	1,556	1,537	18	0.0000
Greenbriar Park	50	28	28	55	34	34	7.5	503	497	6	0.0000
Herndon-Monroe	50	873	873	1,745	1065	1065	7.5	15,975	15,772	180	0.0002
Michael's	50	100	100	200	122	122	7.5	1,831	1,808	21	0.0000
Parkwood Baptist	50	9	9	18	11	11	7.5	165	163	2	0.0000
South Run District Pk	50	170	170	340	208	208	7.5	3,113	3,073	35	0.0000
St Paul Chung Catholic Ch	50	50	50	100	61	61	7.5	915	904	10	0.0000
Stringfellow Rd	50	181	181	361	220	220	7.5	3,305	3,263	37	0.0000
Sully Station	50	70	70	140	85	85	7.5	1,282	1,265	14	0.0000
Sydenstricker Rd	50	84	84	167	102	102	7.5	1,529	1,509	17	0.0000
Wakefield Chapel Pk	50	25	25	50	31	31	7.5	458	452	5	0.0000
PARK-AND-RIDE LOTS - VIRGINIA											
LOUDOUN COUNTY											
Ashburn Farm	50	10	10	20	12	12	7.5	183	181	2	0.0000
Ashburn Village	50	20	20	40	24	24	7.5	366	362	4	0.0000
Cascades	50	28	28	55	34	34	7.5	503	497	6	0.0000
Dulles North Transit	50	375	375	750	458	458	7.5	6,866	6,779	77	0.0001
Hamilton	50	25	25	50	31	31	7.5	458	452	5	0.0000
Innovation Avenue	50	38	38	75	46	46	7.5	687	678	8	0.0000
Leesburg	50	25	25	50	31	31	7.5	458	452	5	0.0000
Leesburg Kohls	50	600	600	1200	732	732	7.5	10,985	10,846	124	0.0001
Purcellville	50	18	18	35	21	21	7.5	320	316	4	0.0000
Sterling Park SC	50	23	23	45	27	27	7.5	412	407	5	0.0000
Sterling Shaw Rd	50	24	24	48	29	29	7.5	439	434	5	0.0000
PARK-AND-RIDE LOTS - VIRGINIA											
PRINCE WILLIAM COUNTY											
Brittany	50	48	48	95	58	58	7.5	870	859	10	0.0000
Dale City	50	294	294	587	358	358	7.5	5,374	5,305	60	0.0001
Harbor Drive	50	100	100	200	122	122	7.5	1,831	1,808	21	0.0000
Lindendale	50	108	108	216	132	132	7.5	1,977	1,952	22	0.0000
Montclair	50	25	25	50	31	31	7.5	458	452	5	0.0000
PRTC Transit Center	50	93	93	185	113	113	7.5	1,694	1,672	19	0.0000
Tackett's Mill	50	85	85	169	103	103	7.5	1,547	1,527	17	0.0000
Triangle	50	15	15	29	18	18	7.5	265	262	3	0.0000
I-95 / Rt 123	50	282	282	563	344	344	7.5	5,154	5,089	58	0.0001
US 1 / VA 234	50	137	137	274	167	167	7.5	2,508	2,476	28	0.0000
MARC TRAIN COMMUTER LOTS					0	0		0			
College Park	25	431	144	574	525	175	7.5	5,255	5,188	59	0.0001

SEASON 2 (May-Sep)

2011 PM AIR QUALITY EMISSIONS INVENTORY

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION	2002				2010		AVERAGE	2010	ADJ	RUNNING	TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	WINTER VMT	Rate (gm/mile)	(tons/day)
					1.22	1.22		Wk Days =	107	0.0114	
COMMUTER RAIL LOTS								Seasonal adj =	0.9873		
Frederick	0	0	0	0	0	0	7.5	0	0	0	0.0000
Greenbelt	60	1346	2018	3364	1642	2464	7.5	30,796	30,405	347	0.0004
Harpers Ferry		98	0	98	120	0	7.5	897	886	10	0.0000
Muirkirk	60	260	390	650	317	476	7.5	5,950	5,875	67	0.0001
Seabrook	0	264	0	264	322	0	4.5	1,450	1,432	16	0.0000
Silver Spring	0	0	0	0	0	0	4.5	0	0	0	0.0000
Union Station	0	781	0	781	953	0	7.5	7,150	7,059	80	0.0001
VIRGINIA RAILWAY EXPRESS COMMUTER LOTS											
Backlick Road	50	110	110	220	134	134	7.5	2,014	1,988	23	0.0000
Broad Run	50	198	198	396	242	242	7.5	3,625	3,579	41	0.0000
Brooke	50	150	150	300	183	183	7.5	2,746	2,711	31	0.0000
Burke Center	50	275	275	550	336	336	7.5	5,035	4,971	57	0.0001
Franconia/Springfield (oper	50	1900	1900	3800	2319	2319	7.5	34,787	34,345	392	0.0004
Leeland Road	50	326	326	652	398	398	7.5	5,969	5,893	67	0.0001
Lorton	50	100	100	200	122	122	7.5	1,831	1,808	21	0.0000
Manassas	50	187	187	374	228	228	7.5	3,424	3,380	39	0.0000
Manassas Park	50	150	150	300	183	183	7.5	2,746	2,711	31	0.0000
Quantico	50	109	109	217	132	132	7.5	1,987	1,961	22	0.0000
Rippon 50		150	150	300	183	183	7.5	2,746	2,711	31	0.0000
Rolling Road	50	185	185	370	226	226	7.5	3,387	3,344	38	0.0000
Woodbridge	50	294	294	588	359	359	7.5	5,383	5,314	61	0.0001
METRORAIL PARKING LOTS											
Anacostia	25	861	287	1148	1051	350	7.5	10,509	10,376	118	0.0001
Branch Avenue	50	1611	1611	3222	1966	1966	7.5	29,496	29,121	332	0.0004
Capitol Heights	50	194	194	387	236	236	7.5	3,543	3,498	40	0.0000
College Park	25	465	155	620	568	189	7.5	5,676	5,604	64	0.0001
Congress Heights	0	66	0	66	81	0	4.5	363	358	4	0.0000
Deanwood	0	194	0	194	237	0	7.5	1,776	1,753	20	0.0000
East Falls Church	50	221	221	442	270	270	7.5	4,046	3,995	46	0.0001
Forest Glen	50	329	329	658	402	402	7.5	6,024	5,947	68	0.0001
Franconia - Springfield	50	1987	1987	3973	2425	2425	4.5	21,823	21,545	246	0.0003
Glenmont	50	925	925	1850	1129	1129	4.5	10,162	10,032	114	0.0001
Greenbelt	50	1783	1783	3565	2176	2176	7.5	32,636	32,221	367	0.0004
Naylor Road	50	216	216	431	263	263	7.5	3,946	3,895	44	0.0000
Prince George's Plaza	25	927	309	1236	1131	377	7.5	11,315	11,171	127	0.0001
Southern Avenue	50	1090	1090	2180	1330	1330	4.5	11,974	11,822	135	0.0001
Suitland	50	1033	1033	2065	1260	1260	4.5	11,342	11,198	128	0.0001
Van Dorn Street	50	204	204	407	248	248	4.5	2,236	2,207	25	0.0000
West Hyattsville	25	453	151	604	553	184	7.5	5,529	5,459	62	0.0001
Wheaton	25	759	253	1012	926	309	7.5	9,264	9,147	104	0.0001
				108,749				872,738		9,822.8607	0.0108
									Seasonal Total (tons/season) =		1.1586

Bold figures: New numbers taken from P & R directory

Figures in bracket: Carry forward figures from conformity doc.

Park lot Growth Rate	
Transit trips 2011	1096680
Transit trips 2000	863783
Annual growth rate	0.024511312
Growth factor (2002-2011)	1.220601807

SEASON 3 (Oct-Dec)

2011 PM AIR QUALITY EMISSIONS INVENTORY

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION		2002			2010		AVERAGE	2010	ADJ	RUNNING	TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	WINTER VMT	Rate (gm/mile)	(tons/day)
					1.22	1.22		Wk Days =	61	0.0114	
COMMUTER RAIL LOTS								Seasonal adj =	0.9282		
BRUNSWICK 25%	25	305	102	**407**	373	124	7.5	3,726	3,458	39	0.0000
PT OF ROCKS 25%	25	204	68	**272**	249	83	7.5	2,490	2,311	26	0.0000
DICKERSON	0	15	0	**15**	18	0	7.5	137	127	1	0.0000
BARNESVILLE	0	46	0	**46**	56	0	7.5	421	391	4	0.0000
GERMANTOWN	0	386	0	**386**	471	0	7.5	3,534	3,280	37	0.0000
MET GROVE	0	352	0	**352**	430	0	7.5	3,222	2,991	34	0.0000
WAS GROVE	0	15	0	**15**	18	0	7.5	137	127	1	0.0000
GARRETT PARK	0	22	0	**22**	27	0	7.5	201	187	2	0.0000
BOWIE 50%	50	188	188	**375**	229	229	7.5	3,433	3,186	36	0.0000
SEABROOK 15%	15	224	40	**264**	274	48	7.5	2,417	2,243	26	0.0000
KENSINGTON	0	45	0	**45**	55	0	7.5	412	382	4	0.0000
LAUREL 30%	30	209	90	**299**	255	109	7.5	2,737	2,541	29	0.0000
GAITHESBURG	0	280	0	**280**	342	0	7.5	2,563	2,379	27	0.0000
BERWYN HEIGHTS	0	30	0	**30**	37	0	4.5	165	153	2	0.0000
RIVERDALE	0	65	0	**65**	79	0	4.5	357	331	4	0.0000
METRO RAIL LOTS											
ADDISON ROAD 40%	40	791	527	**1318**	965	644	7.5	12,066	11,199	128	0.0001
ARCHIVES	0	12	0	12	15	0	4.5	66	61	1	0.0000
ARLING	0	10	0	10	12	0	4.5	55	51	1	0.0000
BALLSTON	0	1175	0	1175	1434	0	4.5	6,454	5,991	68	0.0001
BENN.RD	0	520	0	520	635	0	4.5	2,856	2,651	30	0.0000
BETH	0	395	0	395	482	0	4.5	2,170	2,014	23	0.0000
BRADD RD	0	10	0	**10**	12	0	4.5	55	51	1	0.0000
BROOKLAND	0	27	0	**27**	33	0	4.5	148	138	2	0.0000
CHEVERLY	0	557	0	**557**	680	0	4.5	3,059	2,840	32	0.0000
CLARENDON	0	554	0	554	676	0	4.5	3,043	2,824	32	0.0000
CLEVELAND PK	0	366	0	366	447	0	4.5	2,010	1,866	21	0.0000
COURT HOUSE	0	256	0	256	312	0	4.5	1,406	1,305	15	0.0000
CRYSTAL CITY	0	347	0	347	424	0	4.5	1,906	1,769	20	0.0000
DEANWOOD	0	194	0	**194**	237	0	4.5	1,066	989	11	0.0000
DUN LORING 10%	10	1220	136	**1355**	1489	165	4.5	7,443	6,908	79	0.0001
DUPONT CIRCLE	0	165	0	165	201	0	4.5	906	841	10	0.0000
EASTERN MKT	0	178	0	178	217	0	4.5	978	908	10	0.0000
EAST FALLS CH	0	442	0	**442**	540	0	4.5	2,428	2,253	26	0.0000
EIS	0	352	0	352	430	0	4.5	1,933	1,795	20	0.0000
FARRAGUT NORTH	0	102	0	102	125	0	4.5	560	520	6	0.0000
FARRAGUT WEST	0	221	0	221	270	0	4.5	1,214	1,127	13	0.0000
FEDERAL CENTER	0	75	0	75	92	0	4.5	412	382	4	0.0000
FEDERAL TRI	0	54	0	54	66	0	4.5	297	275	3	0.0000
FOGGY	0	102	0	102	125	0	4.5	560	520	6	0.0000
FORT TROTTEN	0	445	0	**445**	543	0	4.5	2,444	2,269	26	0.0000
FRH.HEIGHTS	0	679	0	679	829	0	4.5	3,730	3,462	39	0.0000
GALLERY PLACE	0	124	0	124	151	0	4.5	681	632	7	0.0000
GROSVENOR	0	716	0	**716**	874	0	4.5	3,933	3,650	42	0.0000
HUNT NORTH 40%	40	1873	1249	**3122**	2286	1524	7.5	28,580	26,528	302	0.0003
JUD SQUARE	0	110	0	110	134	0	4.5	604	561	6	0.0000
KING ST	0	30	0	**30**	37	0	4.5	165	153	2	0.0000

SEASON 3 (Oct-Dec)

2011 PM AIR QUALITY EMISSIONS INVENTORY

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION		2002			2010		AVERAGE	2010	ADJ	RUNNING	TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	WINTER VMT	Rate (gm/mile)	(tons/day)
					1.22	1.22		Wk Days =	61	0.0114	
COMMUTER RAIL LOTS								Seasonal adj =	0.9282		
LANDOVER 25%	25	1410	470	**1880**	1721	574	7.5	17,210	15,975	182	0.0002
L'ENFANT PLAZA	0	296	0	296	361	0	4.5	1,626	1,509	17	0.0000
MCPHERSON SQ	0	52	0	52	63	0	4.5	286	265	3	0.0000
MEDICAL CENTER	0	14	0	**14**	17	0	4.5	77	71	1	0.0000
METRO CENTER	0	177	0	177	216	0	4.5	972	902	10	0.0000
MINNES	0	353	0	**353**	431	0	4.5	1,939	1,800	21	0.0000
NAT AIR	0	87	0	87	106	0	4.5	478	444	5	0.0000
NEW CARROL 50%	50	1049	1049	**2097**	1280	1280	7.5	19,197	17,819	203	0.0002
PRNTAGON	0	561	0	561	685	0	4.5	3,081	2,860	33	0.0000
PENTAGON CITY	0	381	0	381	465	0	4.5	2,093	1,942	22	0.0000
POTOMAC AVE	0	533	0	533	651	0	4.5	2,928	2,717	31	0.0000
ROCKVILLE	0	667	0	**667**	814	0	4.5	3,664	3,401	39	0.0000
ROSSLYN	0	356	0	356	435	0	4.5	1,955	1,815	21	0.0000
SHADY GROVE 10%	10	3903	434	**4337**	4764	529	7.5	39,703	36,852	420	0.0005
SILVER SPRING	0	44	0	**44**	54	0	4.5	242	224	3	0.0000
SMITH MALL	0	120	0	120	146	0	4.5	659	612	7	0.0000
STADIUM ARM	0	976	0	976	1191	0	4.5	5,361	4,976	57	0.0001
TAKOMA PK	0	146	0	**146**	178	0	4.5	802	744	8	0.0000
TENLEYTON	0	17	0	**17**	21	0	4.5	93	87	1	0.0000
TWINBROOK	0	1136	0	**1136**	1387	0	4.5	6,240	5,792	66	0.0001
UNION STAT	0	378	0	378	461	0	4.5	2,076	1,927	22	0.0000
VAN NESS	0	343	0	343	419	0	4.5	1,884	1,749	20	0.0000
VIENNA 25%	25	2798	933	**3731**	3416	1139	7.5	34,155	31,703	361	0.0004
VA SQUARE	0	642	0	642	784	0	4.5	3,526	3,273	37	0.0000
WEST FALLS CHURCH	0	2183	0	**2183**	2665	0	4.5	11,991	11,130	127	0.0001
WHITE FLINT	0	1633	0	1633	1993	0	4.5	8,970	8,326	95	0.0001
WOODLEY	0	68	0	68	83	0	4.5	374	347	4	0.0000
RHODE ISLAND 30%	30	266	114	**380**	325	139	7.5	3,479	3,229	37	0.0000
BUS & CAR POOL LOTS											
CARTER BARRON	0	798	0	798	974	0	4.5	4,383	4,068	46	0.0001
PG PLAZA	0	47	0	47	57	0	4.5	258	240	3	0.0000
PENN MAR SHOPP.	0	100	0	**100**	122	0	4.5	549	510	6	0.0000
CAP PLAZA	0	100	0	**100**	122	0	4.5	549	510	6	0.0000
EASTOVER	0	100	0	**100**	122	0	4.5	549	510	6	0.0000
FOUR MILE RUN	0	28	0	**28**	34	0	4.5	154	143	2	0.0000
SPRINGFIELD MALL	0	580	0	**580**	708	0	4.5	3,186	2,957	34	0.0000
SPRINGFIELD METH CH	0	48	0	**48**	59	0	4.5	264	245	3	0.0000
FRED ARMORY	0	33	0	**33**	40	0	7.5	302	280	3	0.0000
MYERSVILLE	0	65	0	**65**	79	0	7.5	595	552	6	0.0000
ROSEMONT	0	45	0	**45**	55	0	7.5	412	382	4	0.0000
URBANA	0	193	0	**193**	236	0	7.5	1,767	1,640	19	0.0000
JEFFERSON	0	40	0	**40**	49	0	7.5	366	340	4	0.0000
NORBECK RD	0	248	0	**248**	303	0	7.5	2,270	2,107	24	0.0000
MONTROSE RD	0	650	0	**650**	793	0	7.5	5,950	5,523	63	0.0001
BRIGG CHENNY 50%	50	215	215	**430**	262	262	7.5	3,936	3,654	42	0.0000
COMUS ROAD	0	30	0	**30**	37	0	7.5	275	255	3	0.0000
LAKEFOREST MALL	0	300	0	**300**	366	0	7.5	2,746	2,549	29	0.0000

SEASON 3 (Oct-Dec)

2011 PM AIR QUALITY EMISSIONS INVENTORY

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION		2002			2010		AVERAGE	2010	ADJ	RUNNING	TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	WINTER VMT	Rate (gm/mile)	(tons/day)
					1.22	1.22		Wk Days =	61	0.0114	
COMMUTER RAIL LOTS								Seasonal adj =	0.9282		
BURTONSVILLE	0	500	0	**500**	610	0	7.5	4,577	4,249	48	0.0001
FORCEY MEM.	0	200	0	**200**	244	0	7.5	1,831	1,699	19	0.0000
TECH ROAD	0	155	0	**155**	189	0	7.5	1,419	1,317	15	0.0000
BELTWAY	0	265	0	**265**	323	0	7.5	2,426	2,252	26	0.0000
LAUREL VAN DUSEN	0	62	0	**62**	76	0	7.5	568	527	6	0.0000
ACCOKEEK	0	450	0	**450**	549	0	7.5	4,120	3,824	44	0.0000
ABC DRIVE IN	0	100	0	**100**	122	0	7.5	915	850	10	0.0000
BOWIE 20%	20	526	131	**657**	642	160	7.5	6,015	5,583	64	0.0001
CLINTON 50%	50	212	212	**424**	259	259	7.5	3,882	3,603	41	0.0000
OXON HILL 20%	20	519	130	**649**	634	158	7.5	5,941	5,515	63	0.0001
EQUESTRIAN CENTER 50%	50	150	150	**300**	183	183	7.5	2,746	2,549	29	0.0000
BOWIE MARKET PLACE	0	50	0	**50**	61	0	7.5	458	425	5	0.0000
FT.WASHINGTON	0	412	0	**412**	503	0	7.5	3,772	3,501	40	0.0000
MONTPELIER REC PARK	0	70	0	**70**	85	0	7.5	641	595	7	0.0000
RESTON	0	1547	0	**1547**	1888	0	7.5	14,162	13,145	150	0.0002
GREENBRIAR	0	55	0	**55**	67	0	7.5	503	467	5	0.0000
FAIR OAKS	0	150	0	**150**	183	0	7.5	1,373	1,275	15	0.0000
ROLLING VALLEY	0	628	0	**628**	767	0	7.5	5,749	5,336	61	0.0001
SPRINGFIELD PLAZA	0	230	0	**230**	281	0	7.5	2,106	1,954	22	0.0000
FAIRLANES BOWL	0	35	0	**35**	43	0	7.5	320	297	3	0.0000
NOTTOWAY PARK	0	14	0	**14**	17	0	7.5	128	119	1	0.0000
HORNER RD	0	2397	0	**2397**	2926	0	7.5	21,943	20,368	232	0.0003
LAKE RIDGE	0	555	0	**555**	677	0	7.5	5,081	4,716	54	0.0001
MINNIEVILLE RD 40%	40	336	224	560	410	273	7.5	5,127	4,758	54	0.0001
GORDON BLVD	0	156	0	156	190	0	7.5	1,428	1,326	15	0.0000
HILLENDALE	0	248	0	**248**	303	0	7.5	2,270	2,107	24	0.0000
POTOMAC MILLS	0	946	0	**946**	1155	0	7.5	8,660	8,038	92	0.0001
List of new lots to be added in Conformity Document list											
PARK-AND-RIDE LOTS - MARYLAND											
PARK-AND-RIDE LOTS - MARYLAND											
CHARLES COUNTY											
301 Park & Ride	25	287	96	383	351	117	7.5	3,506	3,254	37	0.0000
Charles County Government B	25	26	9	35	32	11	7.5	320	297	3	0.0000
Food Lion Shopping Center	25	38	13	50	46	15	7.5	458	425	5	0.0000
La Plata Armory	25	15	5	20	18	6	7.5	183	170	2	0.0000
Laurel Springs Regional Park	25	38	13	50	46	15	7.5	458	425	5	0.0000
Life Wesleyan Church	25	38	13	50	46	15	7.5	458	425	5	0.0000
Mattawoman-Beantown Rd	25	435	145	580	531	177	7.5	5,310	4,928	56	0.0001
Smallwood Village	25	75	25	100	92	31	7.5	915	850	10	0.0000
St. Charles Towne	25	263	88	350	320	107	7.5	3,204	2,974	34	0.0000
PARK-AND-RIDE LOTS - MARYLAND											
FREDERICK COUNTY											
Frederick (north)	25	123	41	164	150	50	7.5	1,501	1,394	16	0.0000
Frederick (south)	25	173	58	230	211	70	7.5	2,106	1,954	22	0.0000
Monacacy Marcst	25	600	200	800	732	244	7.5	7,324	6,798	77	0.0001
PARK-AND-RIDE LOTS - MARYLAND											
MONTGOMERY COUNTY											
Colesville	0	190	0	190	232	0	7.5	1,739	1,614	18	0.0000
Damascus	50	0	0		0	0	7.5	0	0	0	0.0000
Gaithersburg	50	259	259	517	316	316	7.5	4,733	4,393	50	0.0001
Gaithersburg	50	175	175	350	214	214	7.5	3,204	2,974	34	0.0000
Germantown Town	50	0	0		0	0	7.5	0	0	0	0.0000

SEASON 3 (Oct-Dec)

2011 PM AIR QUALITY EMISSIONS INVENTORY

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION		2002			2010		AVERAGE	2010	ADJ	RUNNING	TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	WINTER VMT	Rate (gm/mile)	(tons/day)
					1.22	1.22		Wk Days =	61	0.0114	
COMMUTER RAIL LOTS								Seasonal adj =	0.9282		
Greencastle	50	75	75	150	92	92	7.5	1,373	1,275	15	0.0000
Milestone Shopping	50	88	88	175	107	107	7.5	1,602	1,487	17	0.0000
PARK-AND-RIDE LOTS - MAYLAND											
PRINCE GEORGE'S COUNTY											
Hampton Mall	0	100	0	100	122	0	4.5	549	510	6	0.0000
Laurel (south)	25	513	171	684	626	209	7.5	6,262	5,812	66	0.0001
PARK-AND-RIDE LOTS - VIRGINIA					0	0		0	0	0	0.0000
ARLINGTON COUNTY					0	0		0	0	0	0.0000
Ballston Public Parking Garage	25	375	125	500	458	153	7.5	4,577	4,249	48	0.0001
Washington-Lee	50	178	178	356	217	217	7.5	3,259	3,025	34	0.0000
PARK-AND-RIDE LOTS - VIRGINIA											
FAIRFAX COUNTY											
American Legion	50	50	50	100	61	61	7.5	915	850	10	0.0000
Canterbury Woods Pk	50	17	17	34	21	21	7.5	311	289	3	0.0000
Centreville	50	185	185	370	226	226	7.5	3,387	3,144	36	0.0000
Centreville United Methodist C	50	74	74	147	90	90	7.5	1,346	1,249	14	0.0000
Fairfax County Government Ce	50	85	85	170	104	104	7.5	1,556	1,445	16	0.0000
Greenbriar Park	50	28	28	55	34	34	7.5	503	467	5	0.0000
Herndon-Monroe	50	873	873	1,745	1065	1065	7.5	15,975	14,828	169	0.0002
Michael's	50	100	100	200	122	122	7.5	1,831	1,699	19	0.0000
Parkwood Baptist	50	9	9	18	11	11	7.5	165	153	2	0.0000
South Run District Pk	50	170	170	340	208	208	7.5	3,113	2,889	33	0.0000
St Paul Chung Catholic Church	50	50	50	100	61	61	7.5	915	850	10	0.0000
Stringfellow Rd	50	181	181	361	220	220	7.5	3,305	3,067	35	0.0000
Sully Station	50	70	70	140	85	85	7.5	1,282	1,190	14	0.0000
Sydenstricker Rd	50	84	84	167	102	102	7.5	1,529	1,419	16	0.0000
Wakefield Chapel Pk	50	25	25	50	31	31	7.5	458	425	5	0.0000
PARK-AND-RIDE LOTS - VIRGINIA											
LOUDOUN COUNTY											
Ashburn Farm	50	10	10	20	12	12	7.5	183	170	2	0.0000
Ashburn Village	50	20	20	40	24	24	7.5	366	340	4	0.0000
Cascades	50	28	28	55	34	34	7.5	503	467	5	0.0000
Dulles North Transit	50	375	375	750	458	458	7.5	6,866	6,373	73	0.0001
Hamilton	50	25	25	50	31	31	7.5	458	425	5	0.0000
Innovation Avenue	50	38	38	75	46	46	7.5	687	637	7	0.0000
Leesburg	50	25	25	50	31	31	7.5	458	425	5	0.0000
Leesburg Kohls	50	600	600	1200	732	732	7.5	10,985	10,197	116	0.0001
Purcellville	50	18	18	35	21	21	7.5	320	297	3	0.0000
Sterling Park SC	50	23	23	45	27	27	7.5	412	382	4	0.0000
Sterling Shaw Rd	50	24	24	48	29	29	7.5	439	408	5	0.0000
PARK-AND-RIDE LOTS - VIRGINIA											
PRINCE WILLIAM COUNTY											
Brittany	50	48	48	95	58	58	7.5	870	807	9	0.0000
Dale City	50	294	294	587	358	358	7.5	5,374	4,988	57	0.0001
Harbor Drive	50	100	100	200	122	122	7.5	1,831	1,699	19	0.0000
Lindendale	50	108	108	216	132	132	7.5	1,977	1,835	21	0.0000
Montclair	50	25	25	50	31	31	7.5	458	425	5	0.0000
PRTC Transit Center	50	93	93	185	113	113	7.5	1,694	1,572	18	0.0000
Tackett's Mill	50	85	85	169	103	103	7.5	1,547	1,436	16	0.0000
Triangle	50	15	15	29	18	18	7.5	265	246	3	0.0000
I-95 / Rt 123	50	282	282	563	344	344	7.5	5,154	4,784	55	0.0001
US 1 / VA 234	50	137	137	274	167	167	7.5	2,508	2,328	27	0.0000
MARC TRAIN COMMUTER LOTS					0	0		0			
College Park	25	431	144	574	525	175	7.5	5,255	4,877	56	0.0001

SEASON 3 (Oct-Dec)

2011 PM AIR QUALITY EMISSIONS INVENTORY

AUTO ACCESS TO TRANSIT

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY

LOCATION		2002			2010		AVERAGE	2010	ADJ	RUNNING	TOTAL
	OUTSIDE MSA (%)	INSIDE MSA	OUTSIDE MSA	Total	INSIDE Growth Rate	OUTSIDE Growth Rate	TRIP LENGTH	VMT	WINTER VMT	Rate (gm/mile)	(tons/day)
					1.22	1.22		Wk Days =	61	0.0114	
COMMUTER RAIL LOTS								Seasonal adj =	0.9282		
Frederick	0	0	0	0	0	0	7.5	0	0	0	0.0000
Greenbelt	60	1346	2018	3364	1642	2464	7.5	30,796	28,585	326	0.0004
Harpers Ferry		98	0	98	120	0	7.5	897	833	9	0.0000
Muirkirk	60	260	390	650	317	476	7.5	5,950	5,523	63	0.0001
Seabrook	0	264	0	264	322	0	4.5	1,450	1,346	15	0.0000
Silver Spring	0	0	0	0	0	0	4.5	0	0	0	0.0000
Union Station	0	781	0	781	953	0	7.5	7,150	6,636	76	0.0001
VIRGINIA RAILWAY EXPRESS COMMUTER LOTS											
Backlick Road	50	110	110	220	134	134	7.5	2,014	1,869	21	0.0000
Broad Run	50	198	198	396	242	242	7.5	3,625	3,365	38	0.0000
Brooke	50	150	150	300	183	183	7.5	2,746	2,549	29	0.0000
Burke Center	50	275	275	550	336	336	7.5	5,035	4,673	53	0.0001
Franconia/Springfield (operate	50	1900	1900	3800	2319	2319	7.5	34,787	32,289	368	0.0004
Leeland Road	50	326	326	652	398	398	7.5	5,969	5,540	63	0.0001
Lorton	50	100	100	200	122	122	7.5	1,831	1,699	19	0.0000
Manassas	50	187	187	374	228	228	7.5	3,424	3,178	36	0.0000
Manassas Park	50	150	150	300	183	183	7.5	2,746	2,549	29	0.0000
Quantico	50	109	109	217	132	132	7.5	1,987	1,844	21	0.0000
Rippon 50		150	150	300	183	183	7.5	2,746	2,549	29	0.0000
Rolling Road	50	185	185	370	226	226	7.5	3,387	3,144	36	0.0000
Woodbridge	50	294	294	588	359	359	7.5	5,383	4,996	57	0.0001
METRORAIL PARKING LOTS											
Anacostia	25	861	287	1148	1051	350	7.5	10,509	9,755	111	0.0001
Branch Avenue	50	1611	1611	3222	1966	1966	7.5	29,496	27,378	312	0.0003
Capitol Heights	50	194	194	387	236	236	7.5	3,543	3,288	37	0.0000
College Park	25	465	155	620	568	189	7.5	5,676	5,268	60	0.0001
Congress Heights	0	66	0	66	81	0	4.5	363	336	4	0.0000
Deanwood	0	194	0	194	237	0	7.5	1,776	1,648	19	0.0000
East Falls Church	50	221	221	442	270	270	7.5	4,046	3,756	43	0.0000
Forest Glen	50	329	329	658	402	402	7.5	6,024	5,591	64	0.0001
Franconia - Springfield	50	1987	1987	3973	2425	2425	4.5	21,823	20,256	231	0.0003
Glenmont	50	925	925	1850	1129	1129	4.5	10,162	9,432	108	0.0001
Greenbelt	50	1783	1783	3565	2176	2176	7.5	32,636	30,293	345	0.0004
Naylor Road	50	216	216	431	263	263	7.5	3,946	3,662	42	0.0000
Prince George's Plaza	25	927	309	1236	1131	377	7.5	11,315	10,503	120	0.0001
Southern Avenue	50	1090	1090	2180	1330	1330	4.5	11,974	11,114	127	0.0001
Suitland	50	1033	1033	2065	1260	1260	4.5	11,342	10,528	120	0.0001
Van Dorn Street	50	204	204	407	248	248	4.5	2,236	2,075	24	0.0000
West Hyattsville	25	453	151	604	553	184	7.5	5,529	5,132	59	0.0001
Wheaton	25	759	253	1012	926	309	7.5	9,264	8,599	98	0.0001
				108,749				872,738		9,234.8621	0.0102
									Seasonal Total (tons/season) =		0.6210

Bold figures: New numbers taken from P & R directory

Figures in bracket: Carry forward figures from conformity doc.

Park lot Growth Rate	
Transit trips 2011	1096680
Transit trips 2000	863783
Annual growth rate	0.024511312
Growth factor (2002-2011)	1.220601807

APPENDIX H

Bus Emissions Estimation

MEMORANDUM

October 7, 2010

To: Files

From: Erin Morrow, MWCOG/DTP

Subject: Transit and School Bus Emissions

Background

For the development of the HDV percentage in the VMT mix for Mobile6.2, staff divided the vehicle class into trucks and buses, with the further breakdown of buses into transit bus and school bus categories. This memo discusses the collection of information from regional transit providers and the development of ozone season NOx and VOC, winter CO, and $PM_{2.5}$ precursor NOx and direct $PM_{2.5}$ emissions estimates for transit and school buses for various analysis years.

Approach

Data Collection

In order to obtain current regional transit data, staff developed a questionnaire for transit providers and school bus operators in the region. The technique of emailing and then conducting follow-up phone calls produced a high response rate. Staff used response data to complete table a table showing daily VMT with average operating speed, by provider (Table 1).

Fleet Age Distribution

Using 2008 VIN data, staff developed regional school bus and transit bus age distributions (shown in Tables 2A and 2B respectively) and diesel sales fractions which were used in the Mobile6.2 model to develop emissions rates. A detailed description of this process can be found in a June 9, 2009 memo from Daivamani Sivasailam in the VIN Decoder Project Files. For simplification purposes, because the number of buses other than diesel is statistically insignificant, the fleet will be input to the Mobil6.2 model as 100 percent diesel. Emissions for buses that are not diesel (e.g. CNG buses) are accounted for using TERM analysis.

VMT Estimates

The annual VMT from the survey was divided by the number of service days for each provider to calculate a daily VMT. To account for bus VMT for providers in the region for which no survey data was received, staff estimated VMT by using data from providers with similar service type. In many cases, where VMT data was not provided, total number of buses was provided, making the estimate process more accurate. In Table 1B, estimated VMT values are shown in italics. Daily school bus VMT represents a school day in May.

The resulting daily 2001 VMT from the survey, including estimation values from providers for which no data was received, is 277,000 for transit buses (compared to 180,000 in the FY03-08 TIP), and 489,900 for school buses.

For estimating bus VMT for the future, staff used the HDBS (school bus) and HDBT (transit bus) values in the "National Average Vehicle Miles Traveled Fractions by Vehicle Class" table from EPA's *Technical Guidance on the use of Mobile 6 for Emission Inventory Preparation* to modify current data. This is shown as Table 3.

Emission Estimates

Using the survey data, staff created transit bus and school bus emission tables. In the tables, the daily VMT was adjusted from the base (survey) year (2001) using the method described above. The fleet age distributions as an input to the Mobile6.2 model to produce emission factors for each pollutant, by speed. Factors for $PM_{2.5}$ pollutants were prepared for each of 3 seasons (Season 1:January-April, Season 2: May-September, Season 3: October-December) Using the appropriate emission factor, based on the average operating speed for each provider, staff calculated each pollutant's emissions for transit buses and school buses for each analysis year. Table 4 shows a one-year sample of bus emission factors. Tables 5A-5F show a one-year sample of transit and school bus emissions for each of the pollutants analyzed.

TABLE 1
2001 Bus
Operating Statistics

Service	Contact Name	Average Speed	Daily VMT
Metrobus	Lora Byala	*10*	123,299
Fairfax Connector	Andy Szakos	*15*	18,036
PRTC Omnilink	Tim Roseboom	*15*	4038
Alexandria DASH	Cindy Modell	13	3,454
City of Fairfax CUE	Alex Verzosa	15	1,483
Arlington Co. ART	Jim Maslanka	16	794
Loudoun Transportation Assc.	Mark McGregor	15	4,532
Mont. Co. Ride-On	Phil McLaughlin	14.5	35,616
PG Co. The Bus	Frank Bell	15-20	9,723
Fredrick Co. TransiT	Sherry Burford	11.78	3,082
Corridor Transit (CTC)	Joe Gann	17.8	1,265
Crystal City Express		*15*	96
Skyline Crystal Express		*15*	144
PRTC OmniRide	Tim Roseboom	26.62	*5,700*
Loudoun Commuter Service	Sharon Affinito	*25*	1,866
MTA Commuter buses	Larry Dougherty	*45*	10,453
Lee Coaches	Joe Ann Foweler	*45*	70
Brooks Transit		*45*	750
Quicks Commuter Service	Robbie Quick	*45*	1,320
Eyre buses (under MTA)	Teri Lee Cosker	*45*	(under MTA)
Dillon buses (under MTA)	Ron Dillon Sr.	*45*	(under MTA)
Keller buses (under MTA)	Charles D. Keller	*45*	(under MTA)
National Coach Works	Jeff Bodnar	*45*	1,650
Greyhound / Trailways (VA)	David Cohen	*55*	*5000*
Peter Pan / Trailways	Christ Crean	*55*	*2000*
Carolina Trailways		*55*	*500*
Capitol Trailways	Ms.Gale Ellsworth	*55*	*500*
Martz / Grey Line sightseeing	Robert Lynch	55-68	*5000*
New World	Arnold Brown	*20*	299
Washington Flyer Coach Service	Nicholas Marshall	65	1,370
ShuttleUM (U. of MD)	Cynthia Trombly	11.1	1,864

TABLE 1
2001 Bus
Operating Statistics

Service	Contact Name	Average Speed	Daily VMT
Georgetown U. shuttle	Diann Nock Smith	15	*100*
American U. shuttle	Thomas Leathers	20-25	83
George Washington U shuttle	John Kane	*15*	*100*
CIA Shuttle		*15*	*200*
EPA Shuttle		*15*	*200*
USDOT Shuttle	Franklin Weaver	*15*	*200*
Gallaudet Shuttle	Darnese Nicholson	*15*	100
Tourmobile	Richard Lewis	*15*	(Gas powered)
Old Town "trolley" buses		*20*	*300*
Metro Access - paratransit	Avon Mackel	15	*5000*
Fairfax Co. Fastran- paratransit	Steve Yaffe	14.53	11,427
Alexandria DOT-paratransit	Lakeshia Lewis	*15*	924
Arlington STAR-paratransit	Eric Smith	*15*	3,245
City of Ffx, City Wheels-paratransit.	Alex Verzosa	*15*	*100*
City of Falls Ch. Fare Wheels-paratransit	Letha Flippin	*15*	*100*
Loudoun Transit (LCTA)-paratransit	Mark McGregor	*15*	*100*
P.G. Co. paratransit	Frank Bell	*15*	*3000*
All buses excluding school			**277,361**
School buses - DC	Alfred Winder	14	*10000*
School buses- Mont. Co.	Qiyu C. Wu	*30*	27,000
School buses- P.G. Co.	Mark Dreszer	*30*	28,896
School buses- Fred. Co.	Richard Wandres	*30*	10,747
School buses- Alexandria	Velma Tsongos	*25*	*3520*
School buses- Arl. Co.	Daniel Roseboro	*25*	*4800*
School buses- Ffx. Co.	Tim Parker	30-35	24,112
School buses- Loud. Co.	J Michael Lunsfurg	*30*	11,906
School buses- P.W. Co.	Eward Bishop	*30*	8,144

Total for School Buses **129,126**

Table 2A
2008 Regional Age Fractions
Vehicle Type=HDBS
Number of Decoded Vins=6484

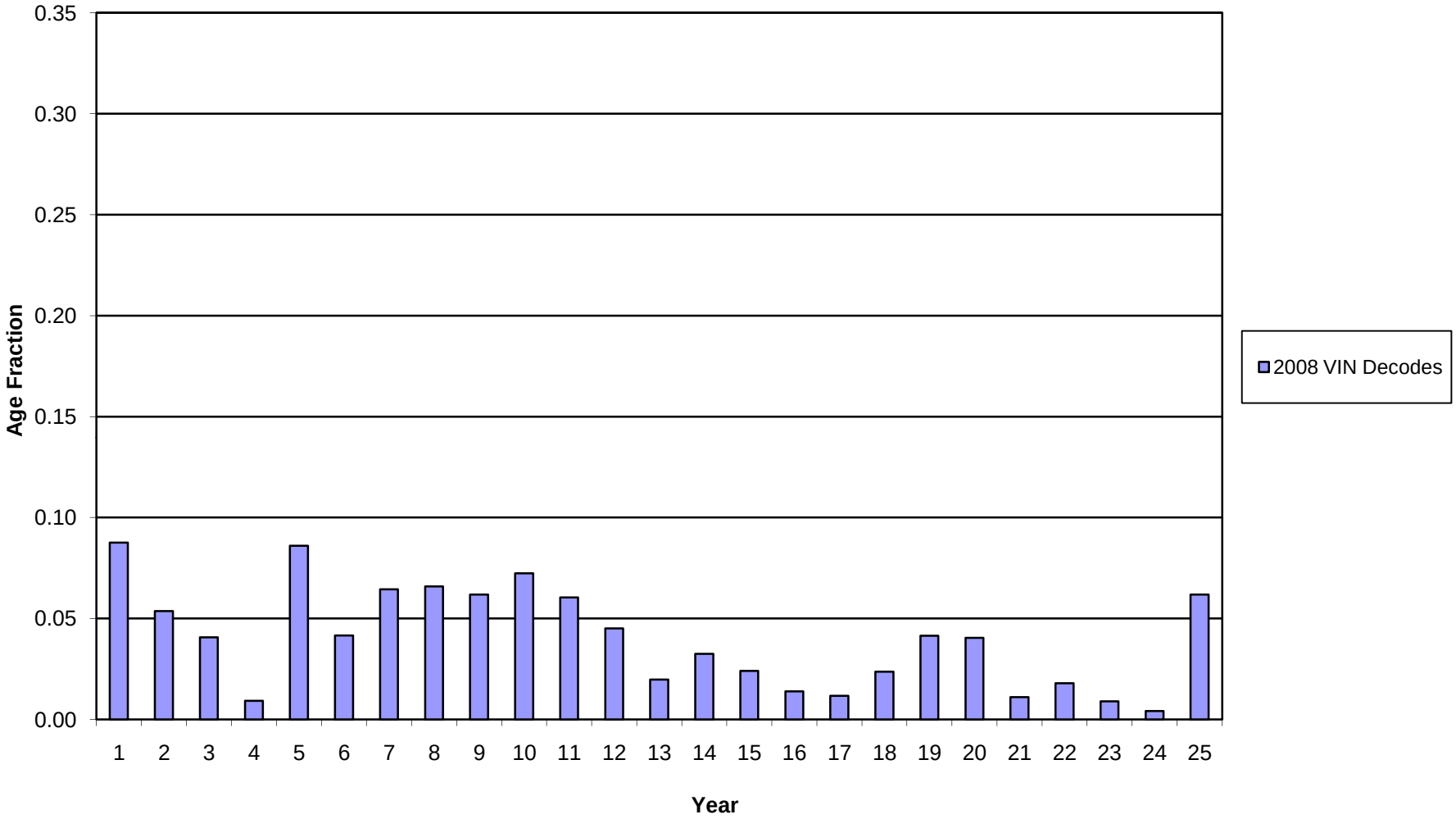


Table 2B
2008 Regional Age Fractions
Vehicle Type=HDBT
Number of Decoded Vins=6148

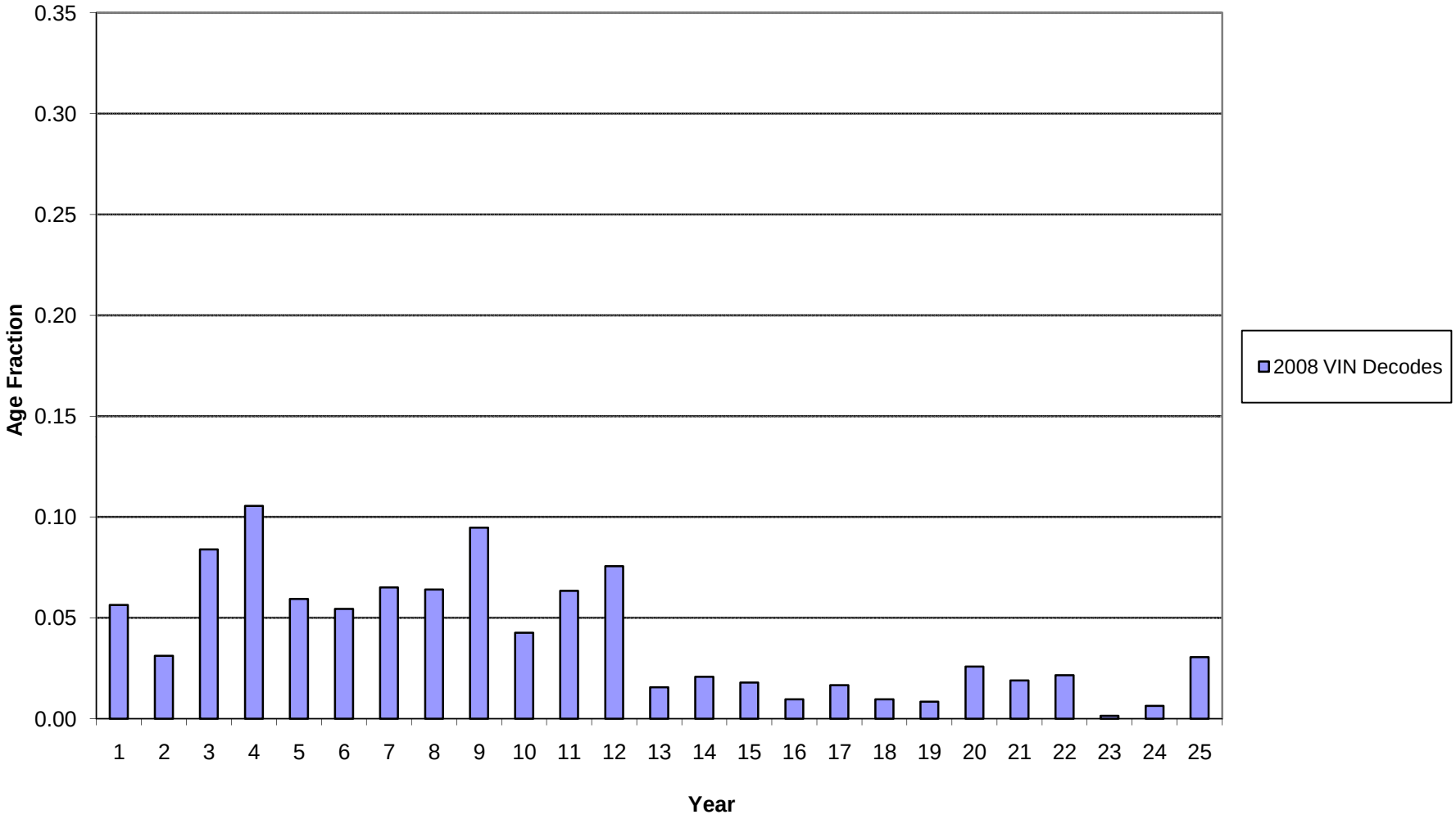


Table 3

National Average Vehicle Miles Traveled Fractions By Vehicle Class Using MOBILE6

Calendar Year	LDV 1	LDT1 2	LDT2 3	LDT3 4	LDT4 5	HDV2B 6	HDV3 7	HDV4 8	HDV5 9	HDV6 10	HDV7 11	HDV8A 12	HDV8B 13	HDBS 14	HDBT 15	MC 16
1990	0.6284	0.0420	0.1397	0.0566	0.0260	0.0332	0.0034	0.0020	0.0018	0.0064	0.0079	0.0094	0.0337	0.0017	0.0008	0.0073
1991	0.6212	0.0435	0.1446	0.0560	0.0257	0.0336	0.0035	0.0021	0.0017	0.0066	0.0081	0.0095	0.0341	0.0017	0.0008	0.0072
1992	0.6109	0.0456	0.1518	0.0555	0.0255	0.0342	0.0036	0.0022	0.0017	0.0068	0.0083	0.0097	0.0346	0.0017	0.0008	0.0071
1993	0.6009	0.0477	0.1587	0.0551	0.0253	0.0348	0.0036	0.0023	0.0018	0.0070	0.0085	0.0098	0.0350	0.0017	0.0008	0.0070
1994	0.5910	0.0497	0.1655	0.0546	0.0251	0.0354	0.0037	0.0024	0.0018	0.0072	0.0087	0.0100	0.0355	0.0018	0.0008	0.0070
1995	0.5815	0.0517	0.1721	0.0542	0.0249	0.0358	0.0037	0.0025	0.0019	0.0073	0.0089	0.0101	0.0360	0.0018	0.0009	0.0069
1996	0.5721	0.0534	0.1776	0.0547	0.0252	0.0362	0.0037	0.0025	0.0019	0.0075	0.0090	0.0102	0.0364	0.0018	0.0009	0.0068
1997	0.5569	0.0557	0.1853	0.0571	0.0263	0.0367	0.0037	0.0026	0.0020	0.0077	0.0092	0.0104	0.0370	0.0016	0.0009	0.0067
1998	0.5360	0.0590	0.1983	0.0605	0.0278	0.0372	0.0038	0.0027	0.0021	0.0079	0.0095	0.0106	0.0376	0.0019	0.0009	0.0065
1999	0.5153	0.0622	0.2071	0.0638	0.0294	0.0377	0.0038	0.0026	0.0021	0.0081	0.0097	0.0107	0.0382	0.0019	0.0009	0.0064
2000	0.4953	0.0655	0.2179	0.0672	0.0309	0.0380	0.0038	0.0029	0.0022	0.0082	0.0098	0.0108	0.0386	0.0019	0.0009	0.0062
2001	0.4785	0.0683	0.2273	0.0700	0.0322	0.0381	0.0038	0.0029	0.0022	0.0083	0.0099	0.0109	0.0388	0.0019	0.0009	0.0061
2002	0.4646	0.0706	0.2349	0.0724	0.0333	0.0382	0.0038	0.0030	0.0022	0.0084	0.0100	0.0109	0.0390	0.0019	0.0009	0.0060
2003	0.4507	0.0729	0.2425	0.0748	0.0344	0.0384	0.0038	0.0030	0.0023	0.0085	0.0100	0.0110	0.0392	0.0019	0.0009	0.0059
2004	0.4365	0.0752	0.2503	0.0771	0.0355	0.0386	0.0038	0.0030	0.0023	0.0085	0.0101	0.0111	0.0394	0.0019	0.0009	0.0058
2005	0.4231	0.0774	0.2577	0.0794	0.0365	0.0387	0.0038	0.0031	0.0023	0.0086	0.0102	0.0111	0.0395	0.0020	0.0009	0.0057
2006	0.4096	0.0797	0.2654	0.0818	0.0376	0.0387	0.0038	0.0031	0.0023	0.0086	0.0102	0.0111	0.0396	0.0020	0.0009	0.0056
2007	0.3952	0.0822	0.2735	0.0843	0.0388	0.0387	0.0038	0.0031	0.0023	0.0086	0.0102	0.0111	0.0396	0.0020	0.0009	0.0056
2008	0.3807	0.0848	0.2817	0.0868	0.0399	0.0388	0.0038	0.0031	0.0024	0.0087	0.0102	0.0111	0.0397	0.0020	0.0009	0.0055
2009	0.3669	0.0869	0.2894	0.0892	0.0410	0.0389	0.0038	0.0032	0.0024	0.0087	0.0103	0.0112	0.0398	0.0020	0.0010	0.0054
2010	0.3544	0.0891	0.2965	0.0914	0.0420	0.0390	0.0038	0.0032	0.0024	0.0087	0.0103	0.0112	0.0399	0.0020	0.0010	0.0054
2011	0.3428	0.0911	0.3031	0.0934	0.0430	0.0390	0.0038	0.0032	0.0024	0.0087	0.0103	0.0112	0.0398	0.0020	0.0010	0.0053
2012	0.3325	0.0928	0.3090	0.0952	0.0438	0.0390	0.0038	0.0032	0.0024	0.0087	0.0103	0.0112	0.0399	0.0020	0.0010	0.0053
2013	0.3231	0.0944	0.3143	0.0969	0.0445	0.0390	0.0038	0.0032	0.0024	0.0087	0.0103	0.0112	0.0399	0.0020	0.0010	0.0053
2014	0.3145	0.0959	0.3191	0.0983	0.0452	0.0391	0.0038	0.0032	0.0024	0.0088	0.0103	0.0112	0.0400	0.0020	0.0010	0.0052
2015	0.3071	0.0971	0.3233	0.0996	0.0458	0.0391	0.0039	0.0032	0.0024	0.0088	0.0104	0.0112	0.0400	0.0020	0.0010	0.0052
2016	0.3004	0.0982	0.3270	0.1008	0.0463	0.0392	0.0039	0.0033	0.0024	0.0088	0.0104	0.0112	0.0400	0.0020	0.0010	0.0052
2017	0.2944	0.0992	0.3304	0.1018	0.0466	0.0392	0.0039	0.0033	0.0024	0.0088	0.0104	0.0113	0.0401	0.0020	0.0010	0.0051
2018	0.2892	0.1001	0.3332	0.1027	0.0472	0.0393	0.0039	0.0033	0.0024	0.0088	0.0104	0.0113	0.0402	0.0020	0.0010	0.0051
2019	0.2846	0.1008	0.3357	0.1035	0.0476	0.0394	0.0039	0.0033	0.0025	0.0088	0.0104	0.0113	0.0403	0.0020	0.0010	0.0051
2020 - 2050	0.2793	0.1017	0.3384	0.1043	0.0480	0.0396	0.0039	0.0033	0.0025	0.0089	0.0105	0.0114	0.0405	0.0020	0.0010	0.0051

Source: Technical Guidance on the use of Mobile 6 for Emission Inventory Preparation, U.S. EPA, January 2002.

Table 4
MWCOG Regional 2011 Ozone Season Bus Emission Factors

		Diesel Bus Emission Factors (grams/mile)			
		School Bus		Transit Bus	
Road Type	Speed (mph)	VOC	NOx	VOC	NOx
Arterial/Freeway	1.00	1.766	14.362	1.059	17.398
Arterial/Freeway	2.00	1.766	14.362	1.059	17.398
Arterial/Freeway	3.00	1.695	13.871	1.016	16.8
Arterial/Freeway	4.00	1.606	13.257	0.963	16.051
Arterial/Freeway	5.00	1.552	12.888	0.931	15.602
Arterial/Freeway	6.00	1.441	12.145	0.864	14.696
Arterial/Freeway	7.00	1.362	11.614	0.816	14.048
Arterial/Freeway	8.00	1.302	11.216	0.781	13.563
Arterial/Freeway	9.00	1.256	10.906	0.753	13.185
Arterial/Freeway	10.0	1.219	10.658	0.731	12.883
Arterial/Freeway	11.0	1.153	10.242	0.691	12.376
Arterial/Freeway	12.0	1.098	9.896	0.658	11.954
Arterial/Freeway	13.0	1.052	9.602	0.631	11.597
Arterial/Freeway	14.0	1.012	9.351	0.607	11.29
Arterial/Freeway	15.0	0.978	9.133	0.586	11.025
Arterial/Freeway	16.0	0.934	8.878	0.56	10.714
Arterial/Freeway	17.0	0.895	8.653	0.537	10.439
Arterial/Freeway	18.0	0.861	8.453	0.516	10.195
Arterial/Freeway	19.0	0.83	8.274	0.498	9.977
Arterial/Freeway	20.0	0.802	8.113	0.481	9.781
Arterial/Freeway	21.0	0.771	7.96	0.463	9.595
Arterial/Freeway	22.0	0.743	7.821	0.446	9.425
Arterial/Freeway	23.0	0.718	7.694	0.43	9.271
Arterial/Freeway	24.0	0.694	7.578	0.416	9.129
Arterial/Freeway	25.0	0.673	7.471	0.403	8.999
Arterial/Freeway	26.0	0.651	7.394	0.39	8.904
Arterial/Freeway	27.0	0.63	7.322	0.378	8.817
Arterial/Freeway	28.0	0.611	7.255	0.366	8.736
Arterial/Freeway	29.0	0.593	7.193	0.356	8.66
Arterial/Freeway	30.0	0.577	7.135	0.346	8.589
Arterial/Freeway	31.0	0.561	7.12	0.336	8.571
Arterial/Freeway	32.0	0.546	7.106	0.327	8.553
Arterial/Freeway	33.0	0.531	7.092	0.319	8.537
Arterial/Freeway	34.0	0.518	7.08	0.311	8.522
Arterial/Freeway	35.0	0.505	7.068	0.303	8.507
Arterial/Freeway	36.0	0.494	7.111	0.296	8.56
Arterial/Freeway	37.0	0.483	7.151	0.289	8.609
Arterial/Freeway	38.0	0.472	7.19	0.283	8.656
Arterial/Freeway	39.0	0.462	7.227	0.277	8.701
Arterial/Freeway	40.0	0.453	7.261	0.271	8.743
Arterial/Freeway	41.0	0.444	7.366	0.266	8.87
Arterial/Freeway	42.0	0.436	7.465	0.262	8.991
Arterial/Freeway	43.0	0.429	7.56	0.257	9.107
Arterial/Freeway	44.0	0.422	7.65	0.253	9.217
Arterial/Freeway	45.0	0.415	7.737	0.249	9.323

Table 4
MWCOG Regional 2011 Ozone Season Bus Emission Factors

		Diesel Bus Emission Factors (grams/mile)			
		School Bus		Transit Bus	
Road Type	Speed (mph)	VOC	NOx	VOC	NOx
Arterial/Freeway	46.0	0.409	7.913	0.245	9.537
Arterial/Freeway	47.0	0.403	8.082	0.242	9.743
Arterial/Freeway	48.0	0.398	8.244	0.239	9.94
Arterial/Freeway	49.0	0.393	8.399	0.236	10.13
Arterial/Freeway	50.0	0.388	8.548	0.233	10.311
Arterial/Freeway	51.0	0.385	8.816	0.231	10.638
Arterial/Freeway	52.0	0.381	9.074	0.228	10.952
Arterial/Freeway	53.0	0.378	9.321	0.226	11.254
Arterial/Freeway	54.0	0.375	9.56	0.225	11.545
Arterial/Freeway	55.0	0.371	9.79	0.223	11.826
Arterial/Freeway	56.0	0.37	10.183	0.222	12.304
Arterial/Freeway	57.0	0.368	10.561	0.221	12.765
Arterial/Freeway	58.0	0.366	10.927	0.22	13.211
Arterial/Freeway	59.0	0.365	11.28	0.219	13.642
Arterial/Freeway	60.0	0.363	11.622	0.218	14.058
Arterial/Freeway	61.0	0.363	12.191	0.218	14.752
Arterial/Freeway	62.0	0.363	12.742	0.218	15.424
Arterial/Freeway	63.0	0.363	13.276	0.218	16.074
Arterial/Freeway	64.0	0.363	13.793	0.218	16.705
Arterial/Freeway	65.0	0.363	14.294	0.218	17.315
Fwy Ramp	34.6	0.51	7.268	0.306	8.859
Local	12.9	1.07	9.703	0.641	11.719

TABLE 5A

2010 CLRP/FY2011-2016 TIP AIR QUALITY CONFORMITY ANALYSIS

2011 SCHOOL BUS CHARACTERISTICS / EMISSIONS (8-HOUR OZONE AREA*)

Jurisdiction	2002 Daily VMT	2010 Daily VMT	Average Speed	VOC			NOx		
				factors (g/mile)	emissions (grams)	emissions (tons)	factors (g/mile)	emissions (grams)	emissions (tons)
District of Columbia	12,696	13,331	14	1.012	13490.7696	0.0149	9.351	124656.3108	0.1374
Montgomery	100,000	105,000	30	0.577	60585.0000	0.0668	7.135	749175.0000	0.8258
Prince George's	129,967	136,465	30	0.577	78740.5070	0.0868	7.135	973680.2723	1.0733
Frederick	25,589	26,868	30	0.577	15503.0957	0.0171	7.135	191706.3908	0.2113
Charles	20,801	21,841	30	0.577	12602.2859	0.0139	7.135	155835.8918	0.1718
Calvert	25,653	26,936	30	0.577	15541.8701	0.0171	7.135	192185.8628	0.2118
Alexandria	2,028	2,129	25	0.673	1433.0862	0.0016	7.471	15908.7474	0.0175
Arlington	2,600	2,730	25	0.673	1837.2900	0.0020	7.471	20395.8300	0.0225
Fairfax	96,524	101,350	30	0.577	58479.0654	0.0645	7.135	723133.6770	0.7971
Prince William	36,114	37,920	30	0.577	21879.6669	0.0241	7.135	270557.0595	0.2982
Loudoun	28,347	29,764	30	0.577	17174.0300	0.0189	7.135	212368.6373	0.2341
TOTAL	480,319				297266.6666	0.3277		3629603.6795	4.0010

* MSA excluding Stafford County

TABLE 5B

2010 CLRP/FY2011-2016 TIP AIR QUALITY CONFORMITY ANALYSIS

2011 TRANSIT BUS CHARACTERISTICS / EMISSIONS (8-HOUR OZONE AREA*)

Jurisdiction	Operator	2002 Daily VMT	2010 VMT w/o Stafford	Average Speed	VOC			NOx		
					factors (g/mile)	emissions (grams)	emissions (tons)	factors (g/mile)	emissions (grams)	emissions (tons)
District of Columbia	Metrobus	50,552	56,113	*10*	0.7310	41018.3983	0.0452	12.8830	722900.1718	0.7969
District of Columbia	MTA Commuter buses	2,510	2,786	*45*	0.2490	693.7389	0.0008	9.3230	25974.8103	0.0286
District of Columbia	Peter Pan / Trailways	200	222	*55*	0.2230	49.5060	0.0001	11.8260	2625.3720	0.0029
District of Columbia	Carolina Trailways	20	22	*55*	0.2230	4.9506	0.0000	11.8260	262.5372	0.0003
District of Columbia	Capitol Trailways	100	111	*55*	0.2230	24.7530	0.0000	11.8260	1312.6860	0.0014
District of Columbia	Martz / Grey Line sightseeing	500	555	55	0.2230	123.7650	0.0001	11.8260	6563.4300	0.0072
District of Columbia	New World Tours	100	111	*20*	0.4810	53.3910	0.0001	9.7810	1085.6910	0.0012
District of Columbia	Georgetown U. shuttle	100	111	15	0.5860	65.0460	0.0001	11.0250	1223.7750	0.0013
District of Columbia	American U. shuttle	83	92	20	0.4810	44.3145	0.0000	9.7810	901.1235	0.0010
District of Columbia	George Washington U shuttle	100	111	*15*	0.5860	65.0460	0.0001	11.0250	1223.7750	0.0013
District of Columbia	EPA Shuttle	200	222	*15*	0.5860	130.0920	0.0001	11.0250	2447.5500	0.0027
District of Columbia	USDOT Shuttle	200	222	*15*	0.5860	130.0920	0.0001	11.0250	2447.5500	0.0027
District of Columbia	Gallaudet Shuttle	100	111	*15*	0.5860	65.0460	0.0001	11.0250	1223.7750	0.0013
District of Columbia	Metro Access - paratransit	5,000	5,550	15	0.5860	3252.3000	0.0036	11.0250	61188.7500	0.0674
Maryland	Corridor Transit (CTC)	1,265	1,404	18	0.5160	724.5414	0.0008	10.1950	14315.3093	0.0158
Maryland	Peter Pan / Trailways	1,800	1,998	*55*	0.2230	445.5540	0.0005	11.8260	23628.3480	0.0260
Maryland	Carolina Trailways	225	250	*55*	0.2230	55.6943	0.0001	11.8260	2953.5435	0.0033
Maryland	Capitol Trailways	400	444	*55*	0.2230	99.0120	0.0001	11.8260	5250.7440	0.0058
Maryland	Martz / Grey Line sightseeing	2,250	2,498	55	0.2230	556.9425	0.0006	11.8260	29535.4350	0.0326
Maryland	New World Tours	100	111	*20*	0.4810	53.3910	0.0001	9.7810	1085.6910	0.0012
Montgomery	Metrobus	17,262	19,161	*15*	0.5860	11228.2405	0.0124	11.0250	211248.0405	0.2329
Montgomery	MTA Commuter buses	2,180	2,420	*45*	0.2490	602.5302	0.0007	9.3230	22559.7954	0.0249
Montgomery	Mont. Co. Ride-On	35,616	39,534	15	0.5860	23166.7834	0.0255	11.0250	435859.7040	0.4805
Prince George's	Metrobus	24,660	27,373	*15*	0.5860	16040.3436	0.0177	11.0250	301782.9150	0.3327

TABLE 5B

2010 CLRP/FY2011-2016 TIP AIR QUALITY CONFORMITY ANALYSIS

2011 TRANSIT BUS CHARACTERISTICS / EMISSIONS (8-HOUR OZONE AREA*)

Jurisdiction	Operator	2002 Daily VMT	2010 VMT w/o Stafford	Average Speed	VOC			NOx		
					factors (g/mile)	emissions (grams)	emissions (tons)	factors (g/mile)	emissions (grams)	emissions (tons)
Prince George's	MTA Commuter buses	6,840	7,592	*45*	0.2490	1890.5076	0.0021	9.3230	70783.9452	0.0780
Prince George's	PG Co. The Bus	9,723	10,793	15	0.5860	6324.4226	0.0070	11.0250	118987.6433	0.1312
Prince George's	ShuttleUM (U. of MD)	1,864	2,069	11	0.6910	1429.7066	0.0016	12.3760	25606.4390	0.0282
Prince George's	P.G. Co. paratransit	3,000	3,330	*15*	0.5860	1951.3800	0.0022	11.0250	36713.2500	0.0405
Frederick	MTA Commuter buses	370	411	*45*	0.2490	102.2643	0.0001	9.3230	3828.9561	0.0042
Frederick	Fredrick Co. TransiT	3,082	3,421	12	0.6580	2251.0312	0.0025	11.9540	40894.8731	0.0451
Charles	MTA Commuter buses	2,290	2,542	*45*	0.2490	632.9331	0.0007	9.3230	23698.1337	0.0261
Calvert	MTA Commuter buses	1,080	1,199	*45*	0.2490	298.5012	0.0003	9.3230	11176.4124	0.0123
Virginia	Metrobus	30,825	34,216	*15*	0.5860	20050.4295	0.0221	11.0250	377228.6438	0.4158
Virginia	Lee Coaches	70	54	*45*	0.2490	13.5431	0.0000	9.3230	507.0780	0.0006
Virginia	Brooks Transit	750	583	*45*	0.2490	145.1048	0.0002	9.3230	5432.9783	0.0060
Virginia	Quicks Commuter Service	1,320	1,026	*45*	0.2490	255.3844	0.0003	9.3230	9562.0417	0.0105
Virginia	National Coach Works	1,650	1,282	*45*	0.2490	319.2305	0.0004	9.3230	11952.5522	0.0132
Virginia	Greyhound / Trailways (VA)	5,000	3,885	*55*	0.2230	866.3550	0.0010	11.8260	45944.0100	0.0506
Virginia	Carolina Trailways	225	175	*55*	0.2230	38.9860	0.0000	11.8260	2067.4805	0.0023
Virginia	Martz / Grey Line sightseeing	2,250	1,748	55	0.2230	389.8598	0.0004	11.8260	20674.8045	0.0228
Virginia	New World Tours	100	78	*20*	0.4810	37.3737	0.0000	9.7810	759.9837	0.0008
Alexandria	Alexandria DASH	3,454	3,834	13	0.6310	2419.2161	0.0027	11.5970	44462.2022	0.0490
Alexandria	Old Town "trolley" buses	300	333	*20*	0.4810	160.1730	0.0002	9.7810	3257.0730	0.0036
Alexandria	Alexandria DOT-paratransit	924	1,026	*15*	0.5860	601.0250	0.0007	11.0250	11307.6810	0.0125
Arlington	Arlington Co. ART	794	881	16	0.5600	493.5504	0.0005	10.7140	9442.6768	0.0104
Arlington	Crystal City Express	96	107	*15*	0.5860	62.4442	0.0001	11.0250	1174.8240	0.0013
Arlington	Skyline Crystal Express	144	160	*15*	0.5860	93.6662	0.0001	11.0250	1762.2360	0.0019
Arlington	Arlington STAR-paratransit	3,245	3,602	*15*	0.5860	2110.7427	0.0023	11.0250	39711.4988	0.0438

TABLE 5B

2010 CLRP/FY2011-2016 TIP AIR QUALITY CONFORMITY ANALYSIS

2011 TRANSIT BUS CHARACTERISTICS / EMISSIONS (8-HOUR OZONE AREA*)

Jurisdiction	Operator	2002 Daily VMT	2010 VMT w/o Stafford	Average Speed	VOC			NOx		
					factors (g/mile)	emissions (grams)	emissions (tons)	factors (g/mile)	emissions (grams)	emissions (tons)
Fairfax	Fairfax Connector	18,036	20,020	*15*	0.5860	11731.6966	0.0129	11.0250	220720.0590	0.2433
Fairfax	Washington Flyer Coach Service	1,370	1,521	65	0.2180	331.5126	0.0004	17.3150	26330.9205	0.0290
Fairfax	Fairfax Co. Fastran- paratransit	11,427	12,684	15	0.5860	7432.8064	0.0082	11.0250	139840.7693	0.1541
Fairfax	City of Fairfax CUE	1,483	1,646	15	0.5860	964.6322	0.0011	11.0250	18148.5833	0.0200
Fairfax	City of Ffx, City Wheels-paratransit.	100	111	*15*	0.5860	65.0460	0.0001	11.0250	1223.7750	0.0013
Fairfax	City of Falls Ch. Fare Wheels-paratransit	100	111	*15*	0.5860	65.0460	0.0001	11.0250	1223.7750	0.0013
Prince William	PRTC Omnilink	4,038	4,482	*15*	0.5860	2626.5575	0.0029	11.0250	49416.0345	0.0545
Prince William	PRTC OmniRide	5,700	6,327	27	0.3780	2391.6060	0.0026	8.8170	55785.1590	0.0615
Loudoun	Loudoun Transportation Assc.	4,532	5,031	15	0.5860	2947.8847	0.0032	11.0250	55461.4830	0.0611
Loudoun	Loudoun Commuter Service	1,866	2,071	*25*	0.4030	834.7178	0.0009	8.9990	18639.2687	0.0205
Loudoun	Loudoun Transit (LCTA)-paratransit	100	111	*15*	0.5860	65.0460	0.0001	11.0250	1223.7750	0.0013
TOTAL		273,671	299,990			171087.8548	0.1886		3384551.5416	3.7308

* MSA excluding Stafford County

Notes:

1) Used WMATA percent VMT by jurisdiction from FY03-08 AQC, Appendix I (page I-3)
2) Assumed average freeway speed of 55 mph where higher than 55 speed limit is available, and 45 mph where speed limit is 55

Table 5C

2010 CLRP / FY2011-2016 TIP AIR QUALITY CONFORMITY ANALYSIS

2011 SCHOOL BUS CHARACTERISTICS / EMISSIONS ($PM_{2.5}$)

WINTER (January - April)

Jurisdiction	2001 Annual VMT	2002 Daily VMT	2010 Daily VMT	Average Speed	PM 2.5 factors (g/mile)	PM 2.5 emissions (grams)	PM 2.5 emissions (tons)	precursor NOx factors (g/mile)	precursor NOx emissions (grams)	precursor NOx emissions (tons)
District of Columbia	2,800,000	12,670	13,303	14	0.5077	6754.0181	0.0074	10.1870	135519.3665	0.1494
Montgomery	19,000,000	85,973	90,271	30	0.5077	45830.8371	0.0505	7.7730	701680.3167	0.7735
Prince George's	21,000,000	95,023	99,774	30	0.5077	50655.1357	0.0558	7.7730	775541.4027	0.8549
Frederick	6,400,000	28,959	30,407	30	0.5077	15437.7557	0.0170	7.7730	236355.4751	0.2605
Charles	3,950,000	17,873	18,767	30	0.5077	9527.9898	0.0105	7.7730	145875.6448	0.1608
Alexandria	446,264	2,019	2,120	25	0.5077	1076.4554	0.0012	8.1390	17256.7866	0.0190
Arlington	571,986	2,588	2,718	25	0.5077	1379.7156	0.0015	8.1390	22118.3880	0.0244
Fairfax	18,200,000	82,353	86,471	30	0.5077	43901.1176	0.0484	7.7730	672135.8824	0.7409
Prince William	6,900,000	31,222	32,783	30	0.5077	16643.8303	0.0183	7.7730	254820.7466	0.2809
Loudoun	6,100,000	27,602	28,982	30	0.5077	14714.1109	0.0162	7.7730	225276.3122	0.2483
TOTAL	85,368,250	386,282	405,596			205920.9663	0.2270		3186580.3217	3.5126

SUMMER (May - September)

Jurisdiction	2001 Annual VMT	2002 Daily VMT	2010 Daily VMT	Average Speed	PM 2.5 factors (g/mile)	PM 2.5 emissions (grams)	PM 2.5 emissions (tons)	precursor NOx factors (g/mile)	precursor NOx emissions (grams)	precursor NOx emissions (tons)
District of Columbia	2,800,000	12,670	13,303	14	0.4657	6195.2851	0.0068	9.3510	124397.9186	0.1371
Montgomery	19,000,000	85,973	90,271	30	0.4657	42039.4344	0.0463	7.1350	644087.1041	0.7100
Prince George's	21,000,000	95,023	99,774	30	0.4657	46464.6380	0.0512	7.1350	711885.7466	0.7847
Frederick	6,400,000	28,959	30,407	30	0.4657	14160.6516	0.0156	7.1350	216955.6561	0.2392
Charles	3,950,000	17,873	18,767	30	0.4657	8739.7771	0.0096	7.1350	133902.3190	0.1476
Alexandria	446,264	2,019	2,120	25	0.4657	987.4045	0.0011	7.4710	15840.4537	0.0175
Arlington	571,986	2,588	2,718	25	0.4657	1265.5773	0.0014	7.4710	20303.0442	0.0224
Fairfax	18,200,000	82,353	86,471	30	0.4657	40269.3529	0.0444	7.1350	616967.6471	0.6801
Prince William	6,900,000	31,222	32,783	30	0.4657	15266.9525	0.0168	7.1350	233905.3167	0.2578
Loudoun	6,100,000	27,602	28,982	30	0.4657	13496.8710	0.0149	7.1350	206785.8597	0.2279
TOTAL	85,368,250	386,282	405,596			188885.9445	0.2082		2925031.0658	3.2243

FALL (October - December)

Jurisdiction	2001 Annual VMT	2002 Daily VMT	2010 Daily VMT	Average Speed	PM 2.5 factors (g/mile)	PM 2.5 emissions (grams)	PM 2.5 emissions (tons)	precursor NOx factors (g/mile)	precursor NOx emissions (grams)	precursor NOx emissions (tons)
District of Columbia	2,800,000	12,670	13,303	14	0.3696	4916.8507	0.0054	9.7720	129998.5520	0.1433
Montgomery	19,000,000	85,973	90,271	30	0.3696	33364.3439	0.0368	7.4490	672432.3529	0.7412
Prince George's	21,000,000	95,023	99,774	30	0.3696	36876.3801	0.0406	7.4490	743214.7059	0.8193
Frederick	6,400,000	28,959	30,407	30	0.3696	11238.5158	0.0124	7.4490	226503.5294	0.2497
Charles	3,950,000	17,873	18,767	30	0.3696	6936.2715	0.0076	7.4490	139795.1471	0.1541
Alexandria	446,264	2,019	2,120	25	0.3696	783.6477	0.0009	7.8010	16540.1391	0.0182
Arlington	571,986	2,588	2,718	25	0.3696	1004.4178	0.0011	7.8010	21199.8458	0.0234
Fairfax	18,200,000	82,353	86,471	30	0.3696	31959.5294	0.0352	7.4490	644119.4118	0.7100
Prince William	6,900,000	31,222	32,783	30	0.3696	12116.5249	0.0134	7.4490	244199.1176	0.2692
Loudoun	6,100,000	27,602	28,982	30	0.3696	10711.7104	0.0118	7.4490	215886.1765	0.2380
TOTAL	85,368,250	386,282	405,596			149908.1921	0.1652		3053888.9781	3.3663

Table 5D
2010 CLRP/FY2011-2016 TIP AIR QUALITY CONFORMITY

2011 SCHOOL BUS CHARACTERISTICS / EMISSIONS
Wintertime CO

Jurisdiction	Daily VMT	Average Speed	Wintertime CO		
			factors (g/mile)	emissions (grams)	emissions (tons)
District of Columbia *	13,331	14	4.061	54136	0.0597
Montgomery *	105,000	30	1.9000	199500	0.2199
Prince George's *	136,465	30	1.9000	259284	0.2858
Frederick	26,868	30	1.9000	51050	0.0563
Charles	21,841	30	1.9000	41498	0.0457
Calvert	26,936	30	1.9000	51178	0.0564
Alexandria *	2,129	25	2.2970	4891	0.0054
Arlington *	2,730	25	2.2970	6271	0.0069
Fairfax	101,350	30	1.9000	192565	0.2123
Prince William	37,920	30	1.9000	72047	0.0794
Loudoun	29,764	30	1.9000	56552	0.0623
Stafford	10,091	30	1.9000	19172	0.0211
TOTAL	514,425			1008145.3956	1.1113
TOTAL FOR CO NON-ATTAINMENT AREA*:					**0.5777**

* The non-attainment area for wintertime CO includes:

DC, ARL, ALEX, MONT, PG

APPENDIX I

TERMs Implementation Reports

From: Hodgson, Fred R [mailto:Randy.Hodgson@VDOT.Virginia.gov]
Sent: Wednesday, September 29, 2010 1:44 PM
To: Anant Choudhary
Cc: Srikanth, Kanathur N.; Allahdoust, Fatemeh; McDonald, Robert, P.E.
Subject: TERMS Status Report

Sir: Attached is the updated TERMS Status Report for the NoVa District. The changes are shown in purple. Please let me know if you have any questions. Thank you. Randy Hodgson

<<TERM Status Report FY11 TIP.xls>>

Randy Hodgson, AICP

Regional Transporation Planning Engineer

Virginia Department of Transportation

Ph. 703-383-2216

Fx. 703-383-2230

Randy.Hodgson@VDOT.Virginia.gov

Transportation Emission Reduction Measures - Status Report For Post Year 2000 TERMs

FROM VDOT FOR FY 2010- 2015 TIP AND 2009 CLRP Changes made during this review are in bold font.

TERM No.	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				STATUS REPORT	Project Category *
					FULL	SCALED BACK	UNDER-WAY	REMOVED		
56	X	1995-00	VDOT	Cherry Hill VRE Access				X	Complete construction -July 2008 **Developer defaulted on project, so no timetable to providing access.**	C (TCM)
69	X	1995-00	ARLG / FFX CO.	Bicycle Trails and Facilities (Arlington & Fairfax Co. - 7 locations)	X		X		Projects 4 & 6 incomplete due to incomplete funding. Project #6 projected to be complete in 2008, and Project # 4 projected to be completed in mid 2009. Project 3 revised to sidewalks & wide-curb lanes ony,not bike lanes. All others complete. **#4 - Phase I of project under construction. Phase 2 in final design. Possible construction in 2010 depending upon funding. #6 - Project design complete but underfunded. Negotiating with National Park Service which could result in reduced costs.**	C
70	X	1995-00	VDOT		X		X		Burke station completed 2001. Phase 2 completed in 2007, improved geometry on Rte. 630 between Brooke High School and Rte. 629. Phase 3 replacing Rte. 630 bridge over railroad crossing expected to be completed after Six Year Plan **Only change is possibility of securing ARRA Stimulus funds to advance bridge replacement to a Jan.2010 Ad. Otherwise, bridge replacement set for July 2012.**	C
82	X	1996-01	ARLG / FF	Old Dominion Drive Bike Trail			X		Arlington completing design review and permitting. **Construction anticipated in early 2008. Contract to construct Phase I of bike lanes& sidewalks awarded. Construction in summer '09. Construction of Phase 2 expected to occur in 2010.**	C
117	X	1998-03	ARLG	Arlington County Four Mile Run Bike Trail	**X**				Construction commenced September, 2007, to be completed March, 2009. **Project now complete.**	C
127	X	1999-04	VDOT	VA 234 Bike Trail	X				Completion by 2008. **PWC reports that trail should be finished by 12/30/09.**	C
136	X	2000-05	VDOT	Columbia Pike Trail - Now named Cross County Trail	**X**				Construction of Phase 2 (Cross County Trail -Accotink Stream Valley-Lake Accotink dam to Hunter Village Drive) includes three bridge crossings and an underpass of Old Keen mill Rd began in spring 2008 and scheduled to be complete summer 2009. **Project completed in March 2009,**	C
137	X	2000-05	VDOT	Lee Highway trail	**X**				**Project complete & open to public.**	C
177	X	2003-08	VDRPT	Interactive Rideshare & Kiosk Initiative	X				Phase I of project to be complete in January, 2008 and then Phase II will start. **DRPT states that Phase I of TDM software System complete.Phase II mostly complete, & Phase III began in July.**	C
190	X	2003-08	VDOT	Employer Vanpool Program **(Bridge Bucks)**	**X**				Pilot program started in 2004. Funded till 2008. **Program completed with opening of bridge.**	C
191	X	2003-08	LOU CO.	Town of Leesburg P&R Lot (150 spaces)	X				Project scheduled for completion in late 2008 or early 2009. **County reports that P&R lot under construction, planned completion,Jan 2010.**	C
221	X	**1995-00**	**REGION**	**M-24 Spped Limit Adherence**	**X**				**Thisprogram has been underway since about 2000 and is anticipated to continue at least thru 2013.**	**TR**

1. These TERM projects were a one-time, limited term (two years) infusion of funding from NoVa to support extra activities.

2010 UPDATES :

#69 - Bicycle Trail Facilities. #4 - Phase 1 was completed. Phase 2 is in final design and $250,000 short on construction. Want to build in 2011 provided that County bond money becomes availalble. Revenue Sharing request was denied. #6 Project is still in design and need of supplemental; funding. Hope for construction in late 2011 or 2012 providing get grant.

#82 Old Dominion Drive. Phase 1 completed in 2010. Phase 2 in final design and right of way acquisition. Funds for construcition largely secured and construction expected in 2011.

#70 - Fredericksburg District Projects . Fredericksburg officials indicate that the Rte. 630 Bridge over Railroad is now under Construction.

Current updates highlighted.

-----Original Message-----
From: Lyn Erickson [mailto:lerickson@mdot.state.md.us]
Sent: Monday, September 13, 2010 12:05 PM
To: Reena Mathews; Daivamani Sivasailam; Vaughn Lewis; Eric Beckett
Cc: Howard Simons
Subject: FW: TERMS Tracking - review, comment and add by Sept 10

Hi Siva-
Here are our comments on the TERMS tracking sheet. If you have trouble reading them, please let us know and we'll get you something cleaner. I haven't gotten anything yet from MTA so there still is the potential for more comments, but there won't be many. Thanks!
Lyn

Lyn Erickson, AICP
Maryland Department of Transportation
7201 Corporate Center Drive
Hanover, MD 21076
W410-865-1279
C703-587-7935

From: Reena Mathews
Sent: Friday, September 10, 2010 3:35 PM
To: Lyn Erickson
Cc: Howard Simons; Vaughn Lewis; Eric Beckett; Roy Gothie; L'Kiesha Markley
Subject: RE: TERMS Tracking - review, comment and add by Sept 10

Hi Lyn,

Let me know if you have a problem reading our comments.

Reena Mathews

410-545-5668

EXHIBIT 25

TERM TRACKING SHEET

TRANSPORTATION EMISSION REDUCTION MEASURES

Part A - Daily Ozone Precursor Emissions

* Project Category: TR - Traffic Stream, C - Commute, H - Heavy Duty Vehicles (Engine Technology), SP- Specific Vehicle Type, TCM - Transportation Control Measures

TMOs	CREDIT TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS: FULL	SCALED-BACK	UNDER-WAY	REM	ORIGINAL COMPLETION DATE	ACTUAL COMPLETION DATE	2010 VOC	2010 NOX	2020 VOC	2020 NOX	2030 VOC	2030 NOX	Project Category*
219	X	2003-08	VDOT	MV-123 Employer Outreach for Public Sector Employees[2]	x				2005	2003	0.0147	0.0210	0.0086	0.0090	0.0077	0.0076	C
220	X	2003-08	REGION	Signal System Optimization	x				2005	2005	0.4155	0.1468	0.2445	0.0463	0.2204	0.0323	TR
221		2007-12	MDOT	Two P & R Lots in Frederick County (70 spaces)	x				2007	2008	0.0006	0.0011	0.0003	0.0005	0.0003	0.0004	C
										Available Emissions Credits	2.325	4.497	1.406	1.088	1.270	0.756	

~~222~~ mdot Parkland Ride Lot US 340 (Frederick Co.) expanded 66-97 spaces X 2009 2007

~~223~~ mdot " US 340 Mt Zion Rd. X 2008 2008
new lot 37 spaces

~~224~~ mdot Park/Ride I-70 @ 355 (Frederick county) new lot 120 spaces X 2010 2010

~~225~~ MDOT US 340 Mt Zion Rd Expansion 39 new spaces 2011 2011

226 MDOT I-270 @ MD80 North Lot Expansion 164 New Spaces 2009 2009

227 MDOT Signal Systems Review 2010 ongoing

OOTS reviews the signal systems every 3 years (400 signals a year) They estimate that they save between 600,000 - in. hours of delay, hundreds of thousands of fuel saved, and reduced emissions. The Annual User Cost Savings is between $20 and $30 million. This is statewide.

228 MDOT Takoma Langley Transit Center 2012 2012
↳ Check with MTA

COMMUTER CONNECTIONS
A SMARTER WAY TO WORK

MEMORANDUM

DATE: July 8, 2009
TO: FY2010-2015 TIP Air Quality Conformity File
FROM: Nicholas W. Ramfos, Director
Alternative Commute Programs
SUBJECT: Implementation of Commuter Connections Regional Transportation Emission Reduction Measure (TERMs)

The Commuter Connections regional TERM projects programmed and implemented for the FY95, FY96, FY97 and FY98 Transportation Improvement Programs (TIP) for the Washington metropolitan region for the purpose of reducing Nitrogen Oxides and Volatile Organic Compound emissions and achieving air quality conformity for the TIP include Employer Outreach, Guaranteed Ride Home, Telework Resource Center, Integrated Rideshare programs, and the Mass Marketing TERM (M-101a) adopted in the FY 97-02 TIP and advanced for implementation in the FY 98-03 TIP. In addition to the above pollutants the programs reduce PM 2.5, and Pre-cursor NOx which the region needs to mitigate.

Impact results for each of these TERMs were produced through a vigorous evaluation methodology implemented by Commuter Connections staff and several consulting firms.

An analysis report was completed in 2008 and the emissions benefit in 2008 is as shown below.

TERM Number	TERM Name	VOC (T/Day)	NOx (T/Day)	PM 2.5 Annual Tons	Precursor NOx Annual Tons
M-92	Telework Resource Center	0.126	0.211	1.3	50
M-47C	Guaranteed Ride Home	0.056	0.106	0.7	25.2
M-47C	Employer Outreach	0.102	0.178	2.9	109.7
M-70B	Employer Outreach – Bicycle	0.001	0.001	0.0	0.2
M-47*	Integrated Rideshare	0.016	0.027	0.2	6.4
M-101A	Mass Marketing	0.017	0.032	0.2	7.6

*Virginia discontinued the kiosk project portion of the TERM on December 31, 2006.

Jane Posey

-----Original Message-----
From: Kristin M. Haldeman [mailto:khaldeman@wmata.com]
Sent: Monday, September 25, 2006 9:32 AM
To: Daivamani Sivasailam
Cc: Nat Bottigheimer; Tomika Hughey; Thomas Harrington; Wendy Jia
Subject: WMATA projects on the TERM Tracking Sheet

Two projects that WMATA had underway on the TERM Tracking sheet have been fully implemented. They are:

Item 143: Ultra Low Sulfur Diesel Fuel with CRT filters * completed installation, June 2006
Item 197: 250 CNG buses * completed purchase and in service, June 2006.

With this status report all the WMATA projects have been fully implemented.

Kristin Haldeman
Office of Business Planning & Project Development
Washington Metropolitan Area Transit Authority
600 Fifth Street, NW
Washington, DC 20001
202-962-1848
202-962-1409 (fax)

From: Casey, Austina (DDOT) [mailto:austina.casey@dc.gov]
Sent: Tuesday, September 28, 2010 10:17 AM
To: Daivamani Sivasailam; Keys, Maurice (DDOT)
Cc: Jane Posey; Anant Choudhary
Subject: RE: TERMs

Hello Siva,

Thanks for sending me the information. Here is the update for the DC projects:

#	Project	Current Status	Updated Status
72	Bicycle Facility	Scaled back	Full
146	Bicycle Lane in D.C. (35 miles)	Underway	Full
225	M-103 Taxicab Replacement (DC)	None	Remove

Currently, I do not have any new projects to add to the list. Maurice and other DDOT Executives have to meet and decide on which ones need to be added to the TERMS tracking. I don't know when that meeting would occur but I will update you as soon as the decision is made.

Please let me know if you have any questions.

Thanks
-Tina

From: Daivamani Sivasailam [mailto:siva@mwcog.org]
Sent: Monday, September 27, 2010 2:41 PM
To: Casey, Austina (DDOT); Keys, Maurice (DDOT)
Cc: Jane Posey; Anant Choudhary
Subject: TERMs

Tina:

Find attached a copy of the tracking sheet with projects 221 through 224. Please send an email to remove project number "225" from the list. You need to report only on projects that are underway which is two or three in DC. Also if you can add new projects that have already been funded to the list it will be good since we have not added projects since FY 2003 TIP. The reported will be presented to the TPB Tech this Friday and the full report will be released for public comment next Thursday. We need comments by Wednesday so we can incorporate them for Friday's release.

Siva

Daivamani Sivasailam
Principal Transportation Engineer
MWCOG
202 962-3226
siva@mwcog.org