

**ITEM 9 - Action**  
October 19, 2005

Approval of Air Quality Conformity Determination for the  
2005 CLRP and FY 2006-2011 TIP

**Staff**

**Recommendation:** Adopt Resolution R5-2006 finding that the 2005 CLRP and FY 2006-2011 TIP conform with the requirements of the Clean Air Act Amendments of 1990.

**Issues:** None

**Background:** At the September 21 meeting, the Board was briefed on the results of the air quality conformity analysis for the draft 2005 CLRP and FY 2006-2011 TIP. A summary of results is contained in the attached technical memorandum of October 11, 2005.

TPB R5-2006  
October 19, 2005

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

**RESOLUTION FINDING THAT  
THE 2005 CONSTRAINED LONG RANGE PLAN AND  
THE TRANSPORTATION IMPROVEMENT PROGRAM FOR FY 2006-2011  
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 this guidance, most recently on July 1, 2004, 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**, on February 19, 2004, the Metropolitan Washington Air Quality Committee (MWAQC) approved the region's severe area ozone State Implementation Plan (SIP) and on February 23, 2004 the state air agencies submitted this SIP with its associated mobile source emissions budgets to EPA; and

**WHEREAS**, in the May 13, 2005 *Federal Register* EPA approved SIP revisions submitted by the District of Columbia, Maryland, and Virginia, which included these mobile emissions budgets in a demonstration of attainment of the one-hour national ambient air quality standard for ozone; and

**WHEREAS**, TPB staff developed a work program to address all procedures and requirements, including public and interagency consultation, and the work program was released for public comment on February 10, 2005 and approved by the TPB at its April 20, 2005 meeting; and

**WHEREAS**, in each year's update of the CLRP since 2000, 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 recent "Metro Matters" commitments for Metro's near-term funding, the transit ridership constraint to or through the core area was applied in the 2005 CLRP conformity analysis using 2010 ridership levels rather than 2005 levels; and

**WHEREAS**, on July 20, 2005, the TPB announced that the air quality conformity analysis of the 2005 CLRP and FY 2006-2011 TIP had begun; and

**WHEREAS**, on September 15, 2005, the draft Air Quality Conformity Determination of the 2005 CLRP and the FY 2006-2011 TIP, the draft 2005 CLRP and the FY 2006-2011 TIP were released for a 30-day public comment period and inter-agency review, and the comments and staff responses to them were reviewed and accepted for inclusion in the CLRP and TIP by the TPB on October 19, 2005; and

**WHEREAS**, the analysis reported in *Air Quality Conformity Determination of the 2005 Constrained Long Range Plan and the FY 2006-2011 Transportation Improvement Program for the Washington Metropolitan Region*, dated October 19, 2005 demonstrates adherence to the approved mobile source emissions budgets, 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 September 28, 2005, MWAQC has provided favorable comments on the *Air Quality Conformity Determination of the 2005 Constrained Long Range Plan and the FY 2006-2011 Transportation Improvement Program for the Washington Metropolitan Region*, urging "... the States and local governments to maintain their commitments to TERMS and other emission reduction measures, regardless of whether implementation of these measures is necessary for conformity";

**NOW, THEREFORE, BE IT RESOLVED THAT THE NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD** determines that the 2005 Constrained Long Range Plan and the Transportation Improvement Program for FY 2006-2011 conform with all requirements of the Clean Air Act Amendments of 1990.

# **Metropolitan Washington Air Quality Committee**

Suite 300, 777 North Capitol Street, N.E. Washington , D.C. 20002-4239 202-962-3358 Fax: 202-962-3203

September 28, 2005

Honorable Phil Mendelson, Chair  
National Capital Region Transportation Planning Board  
777 North Capitol Street, NE  
Washington, D.C. 20002

Dear Chair Mendelson:

The Metropolitan Washington Air Quality Committee (MWAQC) has reviewed the September 15, 2005 draft *Air Quality Conformity Determination Of The 2005 Constrained Long Range Plan And The FY2006-2011 Transportation Improvement Program For The Washington Metropolitan Region*. We are pleased the proposed transportation plan meets the interim mobile emissions budgets based on the recently approved 1-hour ozone plan.

As allowed by EPA in the interim before 8-hour mobile budgets are developed and approved, conformity for the 8-hour ozone standard is being tested against the 1-hour ozone mobile budgets in the region's approved SIP. We note that this analysis uses the same approach as the conformity determination for the 2004 CLRP and FY 2005-2010 TIP, except that several new inputs such as seasonal adjustment factors were developed and incorporated into the analysis.

The conformity analysis indicates significant reductions in transportation emissions occurring by 2010 and beyond, creating a significant gap between the emissions budget and the estimated levels of transportation emissions. We note again that the gap is temporary since the existing, 1-hour standard-based emissions budgets will soon be replaced by new emissions budgets for the 8-hour ozone standard corresponding to year 2009.

We continue to urge States and local governments to maintain their commitments to TERMS and other emission reduction measures, regardless of whether implementation of these measures is currently necessary for conformity. Meeting the 8-hour ozone standard is expected to be a much more difficult effort, requiring continuation of all mobile and non-mobile emission reduction commitments, and possibly new ones in the near future.

Thank you for the opportunity to comment on the draft conformity analysis. We look forward to working closely with you on making further improvements to the region's air quality for attaining the new air quality standards and to integrate our new 8-hour and PM<sub>2.5</sub> standard planning efforts.

Sincerely,



Hon. T. Dana Kauffman, Chair  
Metropolitan Washington Air Quality Committee

# **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

## MEMORANDUM

October 11, 2005

To: Transportation Planning Board

From: Michael J. Clifford  
Systems Planning Applications Director

Subject: Air Quality Conformity Assessment for the 2005 Update of the Constrained Long Range Plan (CLRP) and the FY2006-2011 Transportation Improvement Program (TIP); Comments and Responses to Comments

## **INTRODUCTION**

This memo documents summary results of the air quality conformity assessment of the 2005 CLRP and the FY2006-2011 TIP. The results are based upon the analysis contained in the September 15, 2005 draft technical report, Air Quality Conformity Determination Of The 2005 Constrained Long Range Plan And The FY2006-2011 Transportation Improvement Program For The Washington Metropolitan Region. The results were released for public comment and interagency consultation on September 15, 2005; action by the Board is scheduled for the October 19, 2005 meeting.

## **BACKGROUND**

On April 20, 2005 the TPB approved the scope of work and the project submissions for inclusion in the conformity analysis for the year 2005 update of the CLRP and FY2006-2011 TIP. Key technical inputs to the analysis included: Round 7 Cooperative Forecasts; the Version 2.1D #50 Travel Demand Model utilizing the new project submissions, and reflecting updated transit service and transit fares; EPA's Mobile6.2 Emissions Factor Model; and a refined Mobile Emissions Post-Processor using latest travel demand and mobile emissions planning assumptions for specific use with the Version 2.1D #50 and Mobile6 models.

The ozone precursor mobile emissions budgets used in this analysis are taken from the Metropolitan Washington Air Quality Committee's (MWAQC) Severe Area State Implementation Plan (SIP) document, *Plan to Improve Air Quality in the Washington, DC-MD-VA Region*, February 19, 2004.

Staff proceeded with the technical analyses described below to ascertain whether the draft plan and program would meet the specific conformity criteria.

## **WORK ACTIVITIES**

Technical work activities for the conformity assessment of the 2005 CLRP and FY2006-2011 TIP included the preparation of volatile organic compound (VOC) and nitrogen oxide (NO<sub>x</sub>) emissions inventories for specified forecast years associated with the plan and program (base year 2002 & forecast years: 2010, 2020 and 2030). Wintertime carbon monoxide (CO) analysis for conformity has also been conducted. In meeting the requirements for use of latest planning assumptions and methods, this year marked the use of the updated Round 7.0 land activity forecasts, and a modification of the transit capacity constraint input assumptions.

These inventories address a primary conformity assessment criterion to demonstrate that the plan and program adhere to the established mobile source emissions budgets. In anticipation of possible emissions increases associated with implementation of the plan and program, staff (in conjunction with the TPB Technical Committee and its Travel Management Subcommittee) conducted parallel analyses of committed and potential new transportation emissions reduction measures (TERM)s. These results are described in the July 20, 2005 draft report, *Transportation Emissions Reduction Measures (TERMs) Under Consideration for Conformity of the 2005 CLRP and FY 2006 - FY 2011 TIP*.

Today's memo presents a summary of results of the conformity analysis, as follows.

### **Plan Amendments and Program Elements**

There have been a number of new projects and changes advanced for the CLRP / TIP in this year's approval cycle. Attachment A presents a listing of significant new projects since the 2004 CLRP and the FY2005-2010 TIP were approved by the Board on November 17, 2004.

### **Land Activity Forecasts**

On July 13, 2005 COG's Metropolitan Development Policy Committee approved Round 7.0 Cooperative Forecast totals to be used for testing purposes in analysis of the CLRP and TIP. The Round 7.0 data reflect not only the forecast small area land use distributions throughout the Washington area, but also the latest planning assumptions for areas outside the Washington region. For example, the Baltimore land use input to Round 7.0 reflects the Baltimore Metropolitan Council's 'Round 6-A' adopted figures, whereas their previous input to the COG Round 6.4A forecasts was their 'Round 6' figures.

## **Travel Modeling Process**

Using the Version 2.1D #50 model, COG/TPB staff prepared travel demand forecasts for each of the required forecast years. Exhibit 1 presents the geographic areas for modeling and for non-attainment reporting purposes. Exhibit 2 presents the resulting transit trips, vehicle trips, and vehicle miles traveled (VMT) results through time for each conformity analysis year.

## **Emissions Factors**

As with last year's conformity analysis, staff used motor vehicle emissions factors developed from EPA's MOBILE6.2 emissions factor model. (See Appendix D of the full technical report for model inputs and other details of the emissions factor development.) These rates for each pollutant, shown using Fairfax County freeway data as an illustration in Exhibits 3 and 4 for VOC and NO<sub>x</sub>, 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.

## **Emissions Analyses**

### Mobile Emissions Inventories

Prior to calculation of mobile source emissions, the above (AAWDT) 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 Mobile6.2 emissions factors to the travel demand forecasts by season to prepare mobile source emissions inventories for each forecast year. These emissions results are summarized in Exhibit 5 and indicate VOC and NO<sub>x</sub> emissions for network and off-network components for each analysis year. The table shows dramatic reductions between 2002 and 2020, and further reductions thereafter with emissions reaching about 38 tons per day for both pollutants in 2030. 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. Mobile source emissions are well within the mobile budgets for all forecast years.

Exhibits 6 and 7 present these VOC and NO<sub>x</sub> results in a graphical format, which perhaps illustrates even better the steady and significant downward trends occurring in both VOC and NO<sub>x</sub> 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 122 T/D, but NO<sub>x</sub> emissions have also dropped by nearly 100 T/D from 381 to 284 T/D). From 2002 to year 2010, VOC emissions will be cut further, nearly in half, from 122 T/D to 65 T/D. NO<sub>x</sub> emissions experience even greater reductions, from 284 T/D to 138 T/D. 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 and truck engines. 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.

### Net Emissions Analysis

The emissions inventory data contained in Exhibit 5 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. Attachment C 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. The summary result of these measures, shown as the bottom line of the 'TERM Tracking Sheet - Current Measures' table within the attachment, amounts to additional reductions in 2010 of 2.5 tons per day of VOC and 5.1 tons per day of NOx. 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. (Documentation from the implementation agencies regarding the status of each project is contained in Appendix J of the full conformity report.) Combining the emissions results in Exhibit 5 with the additional reductions from TERMS would further improve the emissions budget margins for VOC and NOx.

### **COMMENTS / RESPONSES**

The Metropolitan Washington Air Quality Committee provided written comments in its attached September 28, 2005 letter. Their letter recognizes that the proposed CLRP meets the interim mobile emissions budgets recently approved by EPA. Their letter also urges states and local governments to maintain their commitments to transportation emissions reduction measures and notes that meeting the 8-hour ozone standard is expected to be a much more difficult effort.

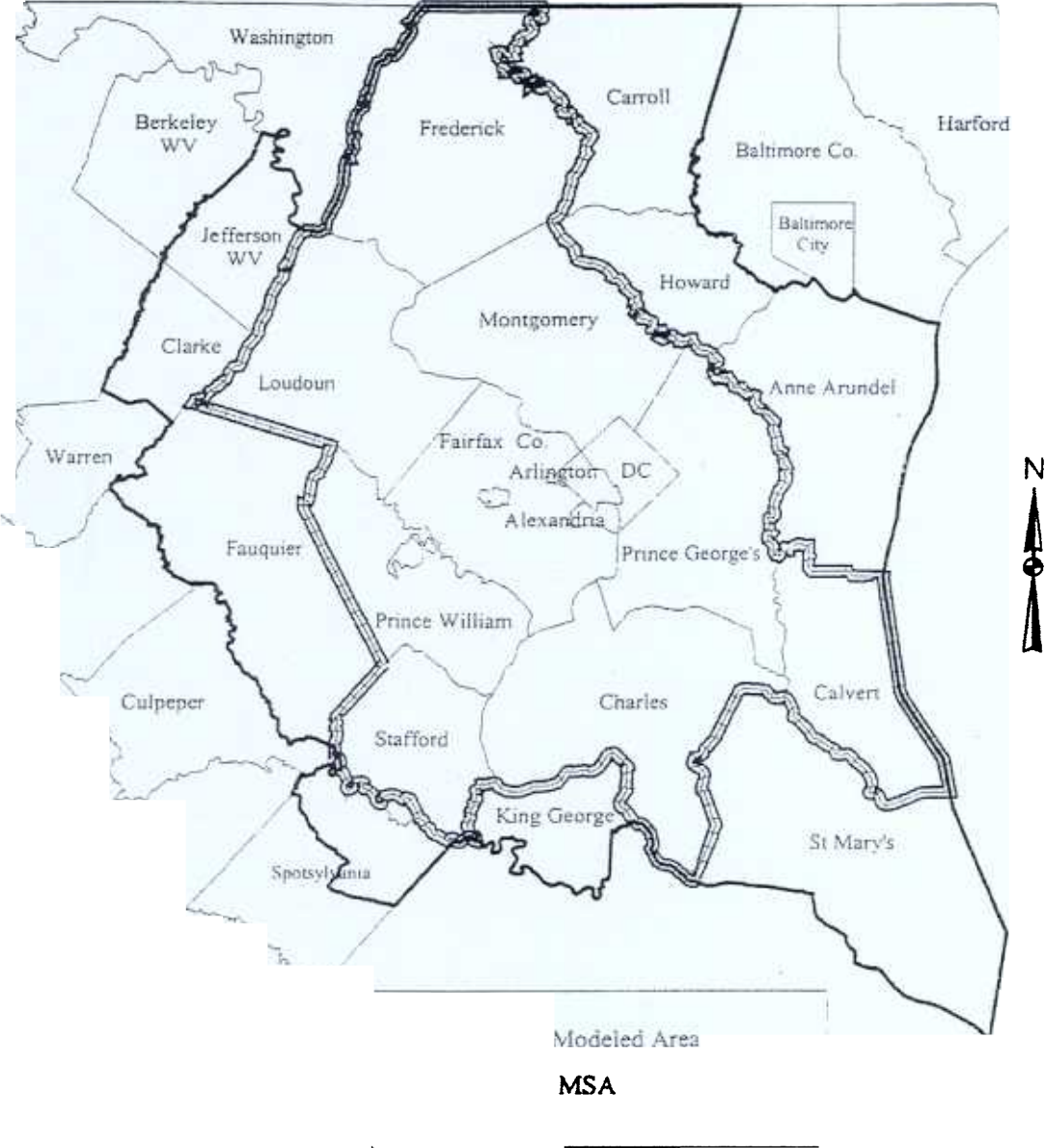
### **SUMMARY**

The analytical results described in this air quality assessment provide a basis for a determination by the TPB of conformity of the 2005 CLRP and the FY2006-2011 TIP.

Following: Exhibits 1-7  
Attachments A-C



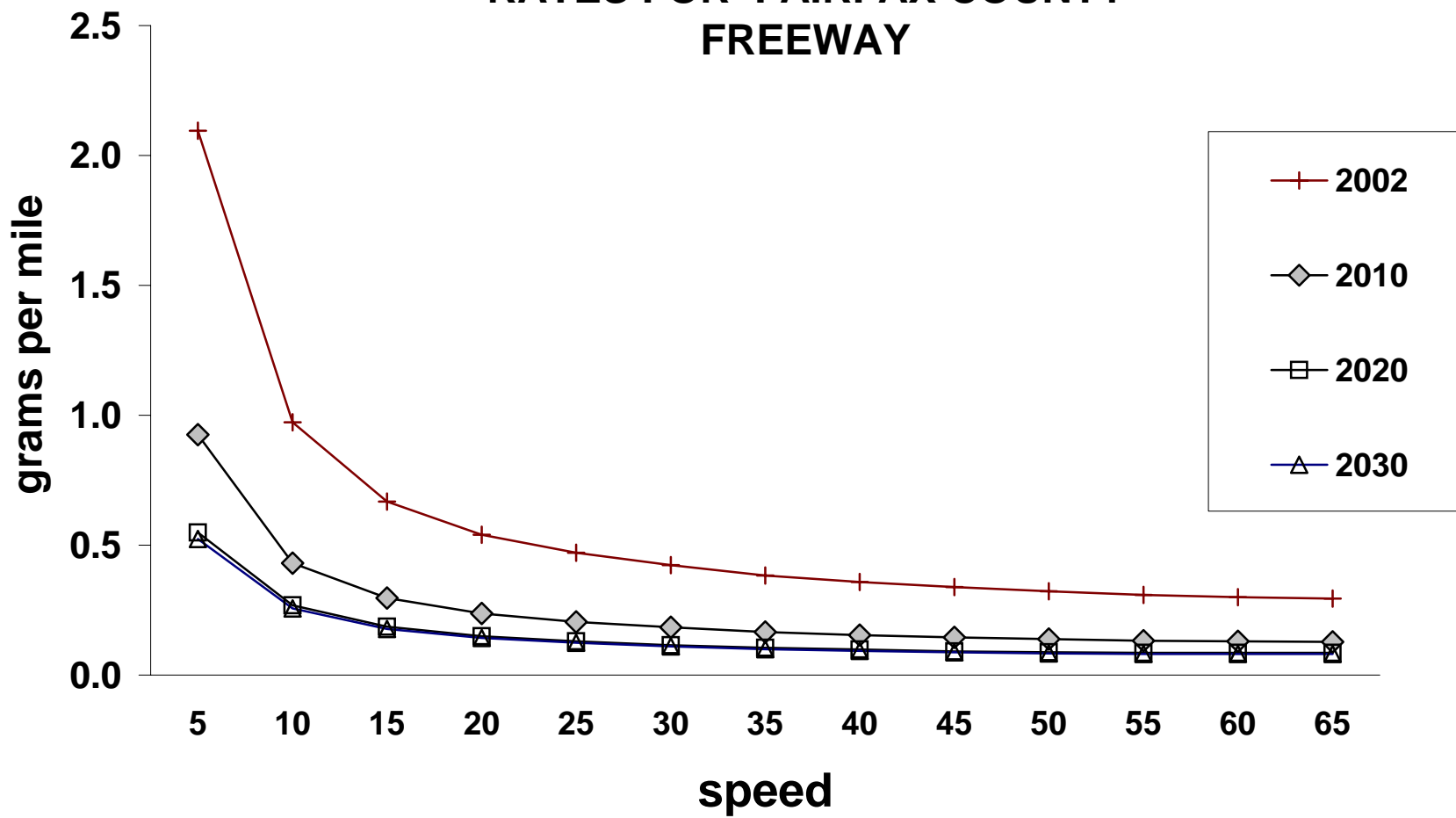
EXHIBIT 1  
**Washington, D.C. - Maryland - Virginia  
Modeled Area  
and  
Metropolitan Statistical Area**



**Exhibit 2**  
**Travel Demand Summary**  
**Modeled Area Trips and Vehicle Miles Traveled (000's)**

	<u>2002</u>	<u>2010</u>	<u>2020</u>	<u>2030</u>
<b>Transit Trips</b>	895.0	1,024.8	1,241.7	1,346.4
<b>Vehicle Trips</b>	19,407.7	22,283.5	25,173.9	28,042.0
<b>VMT</b>	149,065.6	169,740.6	195,371.9	217,051.1

**Exhibit 3**  
**TOTAL 2022-2030 VOC COMPOSITE MOBILE6.2 RUNNING EMISSION**  
**RATES FOR FAIRFAX COUNTY**  
**FREEWAY**



**Exhibit 4**  
**TOTAL 2022-2030 NOx COMPOSITE MOBILE6.2 RUNNING EMISSION**  
**RATES FOR FAIRFAX COUNTY**  
**FREEWAY**

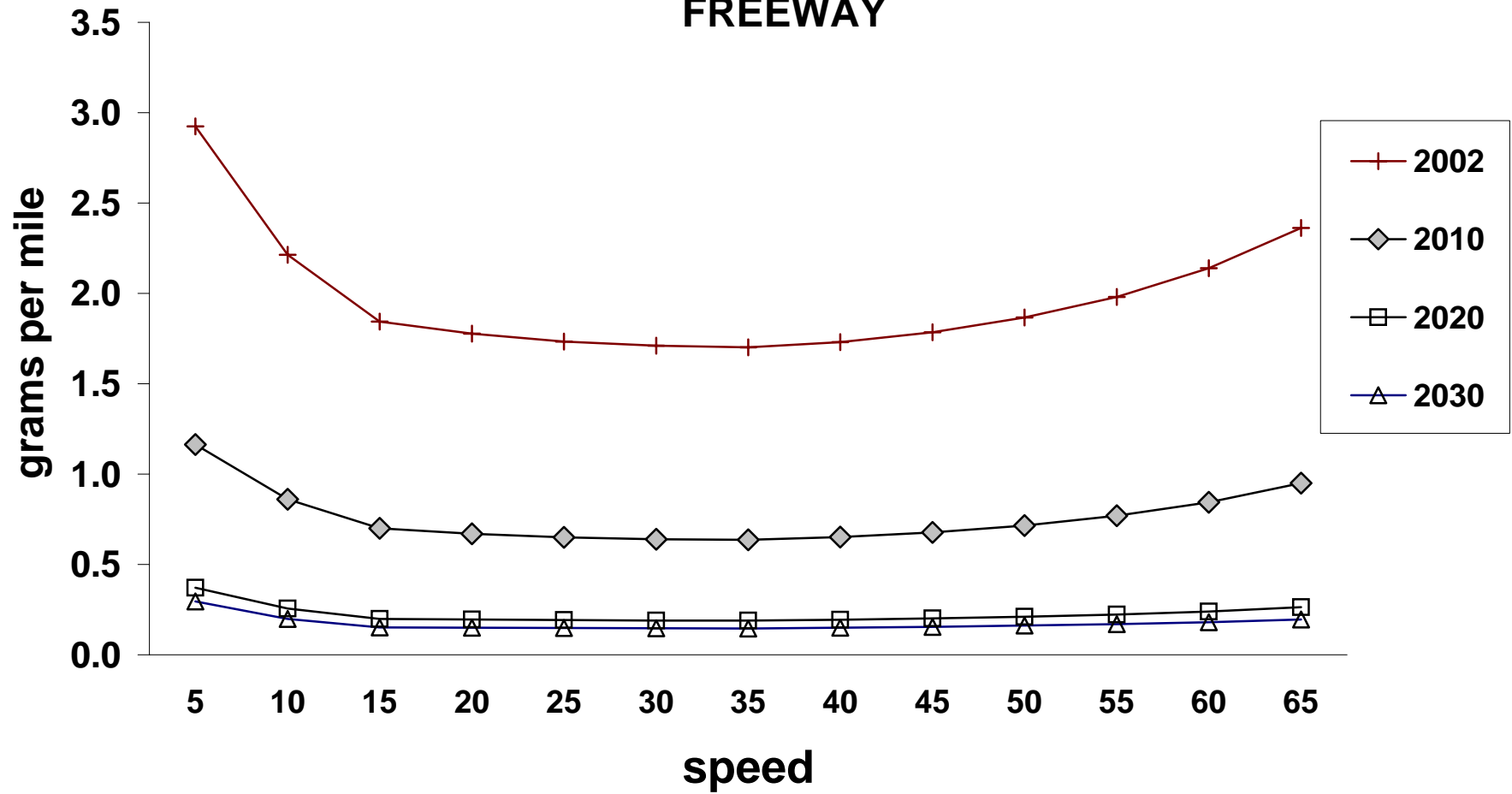


EXHIBIT 5

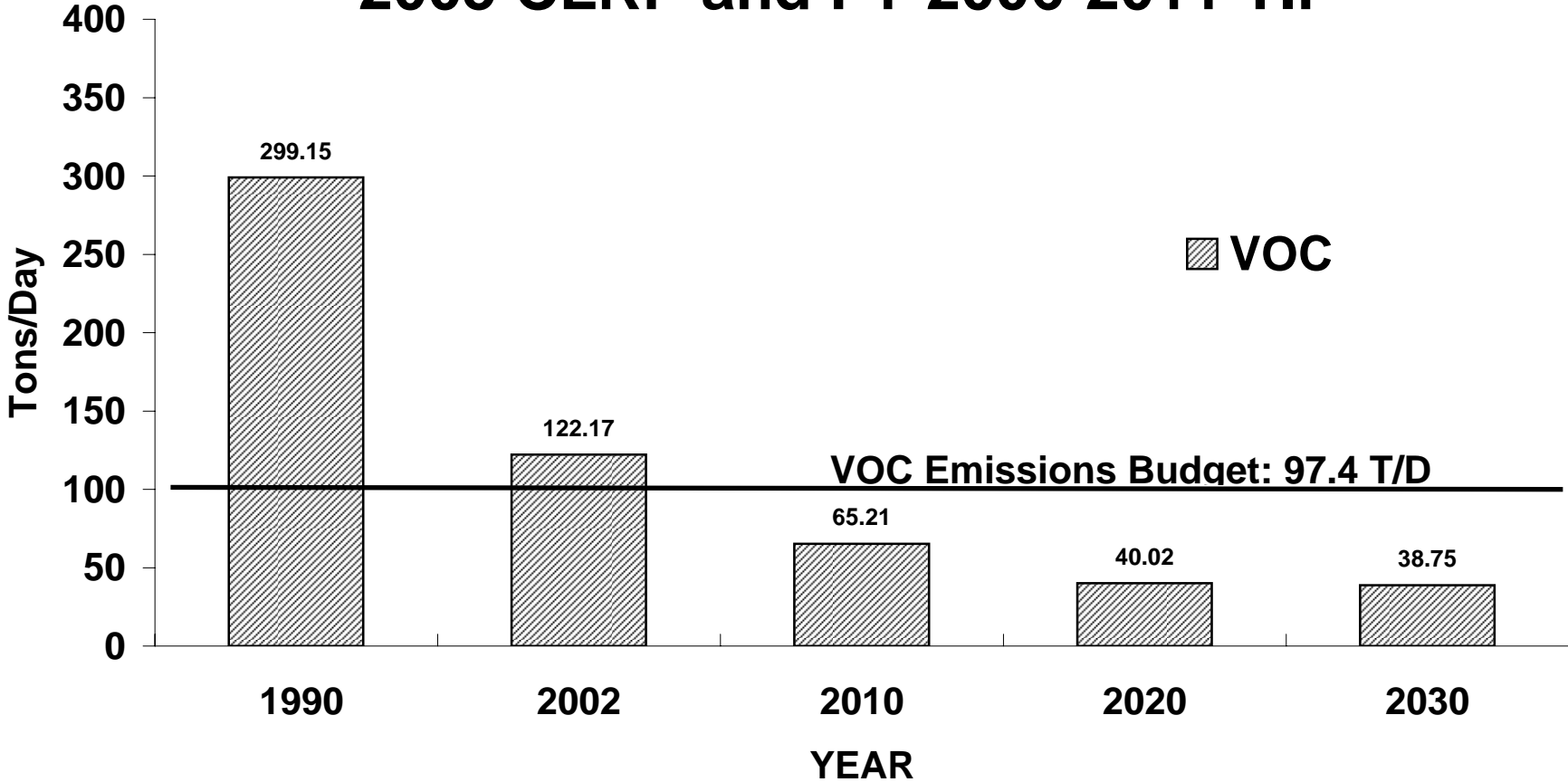
**AIR QUALITY CONFORMITY**  
**Summary Table - MSA (1-Hour Ozone Area)**  
**Mobile Emissions Inventories**  
**for 2005 CLRP and FY 2006-2011 TIP**  
**(Tons/Day)**

	2002		2010		2020		2030	
	VOC	NOx	VOC	NOx	VOC	NOx	VOC	NOx
<b>I Network</b>								
Start	25.95	14.17	11.20	6.93	7.09	3.18	6.85	2.54
Running	57.65	243.03	28.57	116.77	19.91	40.84	20.71	31.66
Soak	11.31	-----	9.72	-----	4.82	-----	4.16	-----
<b>II Off-Network</b>								
Diurnal	3.14	-----	2.07	-----	1.03	-----	0.75	-----
Resting Loss	12.32	-----	8.00	-----	3.21	-----	2.28	-----
Local Roads	9.63	12.24	4.76	6.42	3.21	2.82	3.28	2.47
School Buses	0.43	6.09	0.28	3.76	0.17	0.70	0.17	0.27
Transit Buses	0.38	6.57	0.12	3.86	0.12	0.92	0.12	0.25
Auto Access	1.37	1.70	0.69	0.86	0.46	0.44	0.45	0.39
<b>Total</b>	122.17	283.80	65.41	138.60	40.01	48.90	38.75	37.58

TCMs	-0.20	-0.49
Net Emissions	65.21	138.11
 Mobile Emissions Budgets:	97.40	234.70
 Budget Adherence Margin:	32.19	96.59

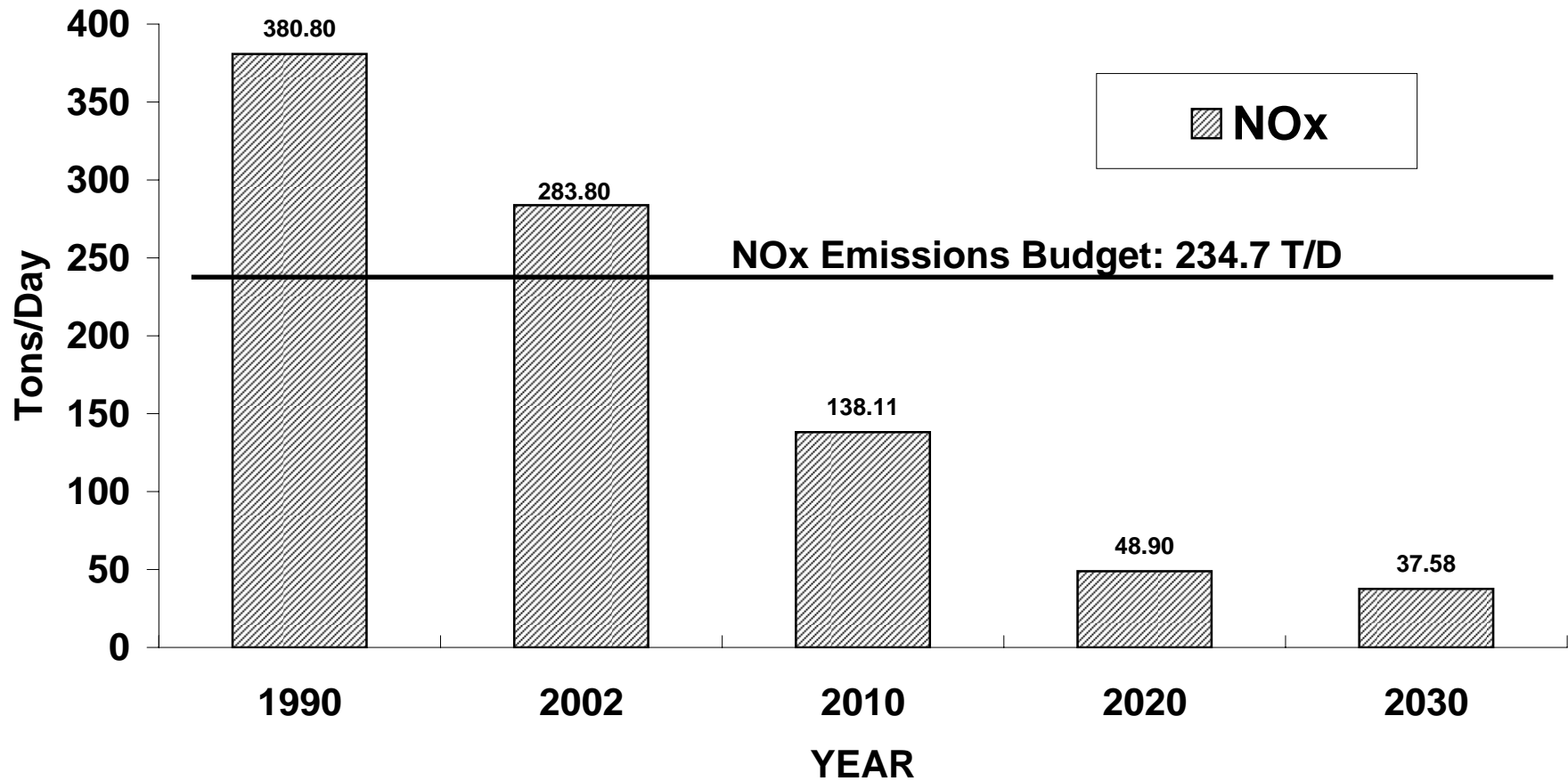
# EXHIBIT 6

## Mobile Source VOC Emissions Metropolitan Statistical Area 2005 CLRP and FY 2006-2011 TIP



# EXHIBIT 7

## Mobile Source NOx Emissions Metropolitan Statistical Area 2005 CLRP and FY 2006-2011 TIP



NOTE: TCM emissions benefits applied in 2010

# **ATTACHMENT A**



**Table A**  
**Significant Changes**  
**for the**  
**Air Quality Conformity Analysis**  
**of the**  
**2005 CLRP and FY2006-2011 TIP**  
**Projects Inside the TPB Planning Area**

ID	Agency	Improvement	Facility	From/At	To	Completion Date	Fac. Type		# Lanes	
							from	to	from	to
<b>MARYLAND</b>										
1	MDOT	Construct	I-95/I-495/Arena Drive Interchange	MD 214	MD 202	2010	1	1	8	8+2
2	MDOT	Widen	MD 27	MD 355	A 305	2006	2	2	4	6
<b>VIRGINIA</b>										
3a	VDOT	Widen/ Construct	<del>I-495 HOT</del> I-495 HOV (peak)	I-395	S. of VA 193 (Georgetown Pike)	2010 2012	1	1	8	8+4 10
3b	VDOT	Construct	I-495 HOT Lanes Interchange	Provides SB to WB, SB to EB, EB to SB, EB to NB, & NB to WB HOV to HOT or HOT to HOV movements	@ VA 267 (Dulles Toll Road)	2010	1	1	--	--
3c	VDOT	Construct	I-495 HOT Lanes Interchange	All movements	@ VA 123 (Chain Bridge Road)	2010	1	1	--	--
3d	VDOT	Construct	I-495 HOT Lanes Interchange	Provides SB to WB, WB to SB, EB to SB, NB to WB, NB to EB, & EB to NB HOV to HOT movements	@ I-66 HOV Lanes	2010	1	1	--	--
3e	VDOT	Construct	I-495 HOT Lanes Interchange	HOT movements to and from South Only	@ US 29	2010	1	1	--	--
3f	VDOT	Construct	I-495 HOT Lanes Interchange	All movements	@ VA 620 (Braddock Road)	2010	1	1	--	--
3g	VDOT	Construct	Construct ramps connecting the existing I-95 / I-395 HOV lanes on Shirley Highway to proposed HOT lanes on the Capital Beltway.	From I-95 / I-395 HOV lanes to I-495 HOT lanes		2010	1	1	--	--
4a	VDOT	Upgrade	VA 7900 (Franconia/Springfield Parkway)	VA 638 (Rolling Rd.)	VA 617 (Backlick Rd.)	2020	5	1	6+2	6+2
4b	VDOT	Construct	VA 7900 (Franconia/Springfield Parkway)	Interchange at Neuman Street		2020	1	1	--	--
5a	Arlington County	Construct	Crystal City-Potomac Yards busway (2-lane) Segment 1	Vicinity of Glebe Rd. Extended	26th St.	2006	--	--	0	2
5b	Arlington County	Construct	Crystal City-Potomac Yards busway (2-lane) Segment 2	26th St.	Crystal City Metro Station	2008	--	--	0	2
5c	Arlington County	Upgrade	Crystal City-Potomac Yards busway to BRT	Vicinity of Glebe Rd. Extended	Crystal City Metro Station	2012	--	--	0	2

**Table B  
 Significant Changes  
 for the  
 Air Quality Conformity Analysis  
 of the  
 2005 CLRP and FY2006-2011 TIP  
 Projects Outside the TPB Planning Area**

ID	Agency	Improvement	Facility	From/At	To	Completion Date	Fac. Type		# Lanes	
							from	to	from	to
<b>MARYLAND</b>										
1	MDOT	Construct	MD 2/4 at Lusby Southern Connector Rd.	MD 765	MD 2/4 at Lusby	2010	0	2	0	3

# **ATTACHMENT B**

## HOUSEHOLD DATA

MSA:	2002	2010	2020	2030	2030/2010
<b>D.C.</b>	249809	265303	292904	317696	1.20
<b>MONTGOMERY</b>	330970	367410	405294	438630	1.19
<b>PR. GEORGES</b>	299108	324343	349480	380811	1.17
<b>ARLINGTON</b>	89000	99577	111455	119855	1.20
<b>ALEXANDRIA</b>	63662	70964	76661	86450	1.22
<b>FAIRFAX</b>	374148	426019	479308	500221	1.17
<b>LOUDOUN</b>	70953	112664	149709	170149	1.51
<b>PR. WILLIAM</b>	119778	159345	188652	212864	1.34
<b>FREDERICK</b>	73833	87708	104139	123125	1.40
<b>CHARLES</b>	44286	52228	63654	76880	1.47
<b>STAFFORD</b>	32626	40899	51927	68404	1.67
<b>CALVERT</b>	26570	31045	34331	36212	1.17
<b>SUBTOTAL</b>	<b>1,774,743</b>	<b>2,037,505</b>	<b>2,307,514</b>	<b>2,531,297</b>	<b>1.24</b>
<b>ADDITIONAL COUNTIES:</b>					
<b>HOWARD</b>	94549	108700	124700	128130	1.18
<b>ANNE ARUNDEL</b>	183445	201097	217599	226001	1.12
<b>CARROLL</b>	55308	63550	69516	71822	1.13
<b>FREDERICKSBURG (VA)</b>	8561	10448	12391	13944	1.33
<b>JEFFERSON</b>	17016	20427	25957	33075	1.62
<b>N. SPOTSYLVANIA</b>	26787	35135	44012	52981	1.51
<b>FAUQUIER</b>	21448	26872	35729	47506	1.77
<b>CLARKE</b>	5182	6142	6860	7770	1.27
<b>K. GEORGE</b>	6533	8319	9850	11446	1.38
<b>ST. MARY'S</b>	31801	36441	42604	48399	1.33
<b>SUBTOTAL</b>	<b>450,630</b>	<b>517,131</b>	<b>589,218</b>	<b>641,074</b>	<b>1.24</b>
<b>TOTAL</b>	<b>2,225,373</b>	<b>2,554,636</b>	<b>2,896,732</b>	<b>3,172,371</b>	<b>1.24</b>

SOURCE:  
 MWCOG Revised Round 7.0 Cooperative Forecasts  
 BMC Round 6-A Cooperative Forecasts

## EMPLOYMENT DATA

<b>MSA:</b>	<b>2002</b>	<b>2010</b>	<b>2020</b>	<b>2030</b>	<b>2030/2010</b>
<b>D.C.</b>	744155	783606	830000	859991	1.10
<b>MONTGOMERY</b>	481693	542120	612065	666993	1.23
<b>PR.GEORGES</b>	349356	392866	463816	547696	1.39
<b>ARLINGTON</b>	187633	217836	254418	275798	1.27
<b>ALEXANDRIA</b>	95800	113251	132536	147957	1.31
<b>FAIRFAX</b>	624843	727012	827599	904191	1.24
<b>LOUDOUN</b>	103376	153736	212920	271159	1.76
<b>PR. WILLIAM</b>	127076	157719	190161	217764	1.38
<b>FREDERICK</b>	106647	142412	158278	167257	1.17
<b>CHARLES</b>	47700	62888	66797	69100	1.10
<b>STAFFORD</b>	33603	46140	59216	73394	1.59
<b>CALVERT</b>	25456	32897	34498	35599	1.08
<b>SUBTOTAL</b>	<b>2,927,338</b>	<b>3,372,483</b>	<b>3,842,304</b>	<b>4,236,899</b>	<b>1.26</b>
<b>ADDITIONAL COUNTIES:</b>					
<b>HOWARD</b>	141854	168878	194203	219539	1.30
<b>ANNE ARUNDEL</b>	260251	286363	311932	334723	1.17
<b>CARROLL</b>	56471	61603	64649	65465	1.06
<b>FREDERICKSBURG (VA)</b>	25892	40258	51666	62676	1.56
<b>JEFFERSON</b>	17008	21058	26113	30674	1.46
<b>N. SPOTSYLVANIA</b>	28045	36321	46660	56541	1.56
<b>FAUQUIER</b>	22320	27325	35767	43367	1.59
<b>CLARKE</b>	6079	6793	7685	8552	1.26
<b>K. GEORGE</b>	12084	16022	20557	34303	2.14
<b>ST. MARY'S</b>	48915	58165	61164	63139	1.09
<b>SUBTOTAL</b>	<b>618,919</b>	<b>722,786</b>	<b>820,396</b>	<b>918,979</b>	<b>1.27</b>
<b>TOTAL</b>	<b>3,546,257</b>	<b>4,095,269</b>	<b>4,662,700</b>	<b>5,155,878</b>	<b>1.26</b>

SOURCE:

MWCOG Revised Round 7.0 Cooperative Forecasts

BMC Round 6-A Cooperative Forecasts

NOTE: Includes Census Adjustment

# **ATTACHMENT C**

**TERM TRACKING SHEET - CURRENT MEASURES**  
**IMPLEMENTATAION: YEAR 2000 AND LATER**  
**Credits are taken in Air Quality Conformity Analysis FY 2005-2010**

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

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					FULL	SCALED-BACK	UNDER-WAY	REM			2010		2020		2030		
											VOC	NOX	VOC	NOX	VOC	NOX	
9	X	1994-99	MDOT	Park & Ride Lot - MD 210/ MD 373	X				2000	2003	0.0006	0.0014	0.0004	0.0006	0.0004	0.0006	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		2002, '04, '05	0.0011	0.0014	0.0007	0.0006	0.0008	0.0009	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	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	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	TR
48	X	1995-00	MDOT	MARC Replacement Coaches	X				1999	2004	0.0006	0.0014	0.0004	0.0006	0.0012	0.0018	C (TCM)
49	X	1995-00	MDOT	MARC Expansion Coaches	X				1999	2004	0.0052	0.0133	0.0033	0.0055	0.0054	0.0145	C (TCM)
51	X	1995-00	VDOT	Alexandria Telecommuting Pilot Program	X					2000 & 2001	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					C
54	X	1995-00	VDOT	City of Fairfax Bus Shelters				X	1999	2004	0.0000	0.0005	0.0000	0.0002	0.0000	0.0000	C (TCM)
56	X	1995-00	VDOT	Cherry Hill VRE Access				X		2007	0.0040	0.0114	0.0026	0.0047	0.0023	0.0047	C (TCM)
58	X	1995-00	WMATA	Bus Replacement (172 buses)	X				1998	1998	0.0690	0.2520					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	0.0030	C
60	X	1995-00	MCG	White Oak Park and Ride				X	2010		0.0000	0.0000	0.0000	0.0000	0.0000	0.0059	C
61	X	1995-00	MCG	Bicycle Facilities				X	FY99		0.0017	0.0009	0.0011	0.0004	0.0012	0.0006	C
62	X	1995-00	MCG	Pedestrian Facilities to Metrorail				X			0.0029	0.0038	0.0018	0.0016	0.0015	0.0021	C
63	X	1995-00	MDOT	MARC Replacement Coaches	X				1999	2004	0.0023	0.0057	0.0015	0.0024	0.0031	0.0059	C
64	X	1995-00	MDOT	MARC Expansion Coaches	X				1999	2004	0.0183	0.0493	0.0118	0.0205	0.0283	0.0482	C (TCM)
66	X	1995-00	VDOT	Commuter Lots - District Wide				X	varies	1995, 2000	0.0063	0.0156	0.0040	0.0065	0.0062	0.0157	C
67	X	1995-00	VDOT	I-66 and Stringfellow Rd. Park and Ride	X				2000	2000 end	0.0057	0.0095	0.0037	0.0039	0.0039	0.0059	C
68	X	1995-00	VDOT	Lake Ridge Park and Ride (now called Tacketts Mill lot)	X					1999/2000	0.0000	0.0047	0.0000	0.0020	0.0000	0.0030	C
69	X	1995-00	VDOT	Bicycle Trails and Facilities				X	varies	varies	0.0011	0.0081	0.0007	0.0034	0.0074	0.0053	C
70	X	1995-00	VDOT	Improved Accesses to Metrorail Stations				X	varies	2000-2010	0.0003	0.0005	0.0002	0.0002	0.0004	0.0006	C
71	X	1995-00	VDOT	I-66 HOV access at Monument Dr.	X					1997	0.0057	0.0095	0.0037	0.0039	0.0004	0.0059	C
72	X	1995-00	DC	Bicycle Facilities				X			0.0137	0.0095	0.0088	0.0039	0.0093	0.0065	C
73	X	1995-00	REGION	COG Regional Ridesharing Support	X					on-going	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	C

**TERM TRACKING SHEET - CURRENT MEASURES**  
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					FULL	SCALED-BACK	UNDER-WAY	REM			2010		2020		2030		
											VOC	NOX	VOC	NOX	VOC	NOX	
74	X	1995-00	REGION	M-47 Integrated Ridesharing	X					on-going	0.0264	0.0493	0.0165	0.0206	0.0139	0.0172	C
75	X	1995-00	REGION	M-92 Telecommuting Support	X					on-going	0.2069	0.3951	0.1763	0.2256	0.1889	0.2374	C
77		1996-01	VDOT	Duke Street Pedestrian Bridge				2005	n/a	n/a	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)				1999	Summer 2001	0.0011	0.0014	0.0007	0.0006	0.0008	0.0009		C
81	X	1996-01	VDOT	Arlington County Metrocheck Program	X			1997	1997 Onwards	0.0011	0.0014	0.0007	0.0006	0.0004	0.0009		C
82	X	1996-01	VDOT	Old Dominion Drive Bike Trail				2000	2004	0.0006	0.0005	0.0004	0.0002	0.0004	0.0003		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)				1999	2001	0.0006	0.0005	0.0004	0.0002	0.0004	0.0009		C
90	X	1996-01	REGION	M-47c Employer Outreach / Guaranteed Ride Home	X				on-going	0.3460	0.5748	0.2209	0.2395	0.1777	0.1989		C
91	X	1996-01	REGION	M-70a Bicycle Parking				1999		0.0040	0.0033	0.0026	0.0014	0.0039	0.0030		C
92	X			M-92 Telecommuting Support <sup>1</sup>	Combined with item #75												C
95	X	1997-02	MCG	Germantown Transit Center				2004		0.0029	0.0090	0.0018	0.0038	0.0019	0.0053		C (TCM)
102	X	1997-02	PG	Prince George's County Bus Replacement	X			1998	1998	0.0030	0.0090						SP (TCM)
106	X	1997-02	VDOT	PRTC Employer Commuting Outreach Program	X				1977 on-going	0.0011	0.0002	0.0007	0.0001	0.0008	0.0000		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	0.0003		C
108	X	1997-02	MDOT	M-103 Taxicab Replacement in Maryland <sup>2</sup>		X		1999	On-going	0.0797	0.2675	0.1340	0.1827	0.3120	0.4810		SP
109	X	1997-02	REGION	M-70b Employer Outreach for Bicycles	X			1998	on going	0.0007	0.0007	0.0005	0.0003	0.0003	0.0002		C
110		1997-02	VDOT	M-77b Vanpool Incentive Programs in Virginia				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	0.0450	0.1617						SP
112	X	1998-03	MCG	Montgomery County Bus Replacement	X					0.0080	0.0270						SP
113	X	1998-03	PG	Prince George's County Bus Replacement	X			1998	1998	0.0010	0.0020						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				1999	delayed	0.0006	0.0005	0.0004	0.0002	0.0004	0.0003		C
118	X	1998-03	VDOT	Northern Virginia Turn Bays	X			2000	1998	0.0006	0.0008	0.0004	0.0003	0.0008	0.0003		TR
119	X	1998-03	VDOT	Fairfax City Bus Replacement				2001	2003	n/a	n/a						SP
121	X	1998-03	WMATA	WMATA Bus Replacement (252 buses)	X			2001	2001	0.1060	0.3860						SP
122	X	97 & 98 TIP	REGION	M-101a Mass Marketing Campagin (Consumer)					Underway	0.1479	0.2237	0.0952	0.0973	0.0752	0.0807		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	0.0046	0.0171	0.0029	0.0071	0.0039	0.0136		C



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					FULL	SCALED-BACK	UNDER-WAY	REM			2010		2020		2030		
											VOC	NOX	VOC	NOX	VOC	NOX	
124	X	1999-04	MDOT	Signal Systems (197/MD-198, MD-382 TO US-301,US301)	X				2000	2002	0.0070	-0.0017	0.0047	-0.0008	0.0079	-0.0014	TR
125	X	1999-04	VDOT	Transit Center at 7 Corners	X				2002		0.0006	0.0009	0.0004	0.0004	0.0004	0.0006	C
126	X	1999-04	VDOT	Falls Church Clean Diesel Bus Service	X				2000	2003	0.0040	0.0050					SP
127	X	1999-04	VDOT	VA 234 Bike Trail			X		2001	2007	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	C
130	X	1996-01	VDOT	M-14: I-66 Feeder Bus Fare Buy Down	X					1998 onward	0.0143	0.0261	0.0092	0.0109	0.0081	0.0124	C
131	X	2000-05	MDOT	Various park and Ride Lots	x				2002	2003	0.0040	0.0154	0.0025	0.0064	0.0038	0.0119	C
132	X	2000-05	MDOT	Signal Systems	X				Varies	on-going	0.0017	0.0000	0.1244	0.0000	0.0007	0.0000	TR
133	X	2000-05	VDOT	450 Spaces at Gambrill/Hoos Rds. Park and Ride			X		2002	2004	0.0040	0.0085	0.0026	0.0036	0.0021	0.0041	C
134	X	2000-05	VDOT	300 Spaces at Backlick Rd			X		2003	2006	0.0029	0.0062	0.0018	0.0026	0.0015	0.0030	C
135	X	2000-05	VDOT	Accotink-Gateway Connector Trail			X		2002	2005	0.0040	0.0047	0.0026	0.0020	0.0018	0.0020	C
136	X	2000-05	VDOT	Columbia Pike Trail			X		2000	2001, 2005	0.0034	0.0038	0.0022	0.0016	0.0014	0.0015	C
137	X	2000-05	VDOT	Lee Highway trail			X		2000	2005	0.0017	0.0019	0.0011	0.0008	0.0006	0.0008	C
138	X	2000-05	VDOT	Arlington Bus Shelter Improvements			X		2005	2005	0.0006	0.0005	0.0004	0.0002	0.0002	0.0002	C
139	X	2000-05	VDOT	Pentagon Metrostation Improvements	X					2003	0.0046	0.0081	0.0029	0.0034	0.0022	0.0033	C
140	X	2000-05	MDOT	East/West Intersection Improvements			X		2005	2005	0.0235	0.0119	0.0151	0.0049	0.0859	0.0337	C
141	X	2001-06	Feds	Federal Transit/Ridesharing subsidy	X				on-going		0.0584	0.0905	0.0375	0.0377	0.0286	0.0313	C
142	X	2002-07	WMATA	100 CNG buses	X				2002		0.0000	0.1358					SP (TCM)
143	X	2002-07	WMATA	ULSD with CRT filters			X		on-going		0.2100	0.0000	0.4300	0.0000	0.4300	0.0000	H (TCM)
144	X	2003-08	DC	Replace <del>23</del> 12 Taxicabs with CNG cabs			X		2005	2006	0.0089	0.0157					H
145	X	2003-08	DC	D.C.Incident Response & TrafficManagement System	X				2005	2004	0.0161	0.0414	0.0108	0.0206	0.0100	0.0168	TR
146	X	2003-08	DC	Bicycle Lane in D. C. (35 Mile)			X		2005	2006	0.0095	0.0085	0.0061	0.0035	0.0046	0.0029	C (TCM)
147	X	2003-08	DC	Bicycle Racks in D. C. (500)	X				2005	2004	0.0013	0.0009	0.0008	0.0004	0.0006	0.0003	C (TCM)
148	X	2003-08	DC	External Bicycle Racks on WMATA Buses in D. C. (600)	X				2005	2003	0.0020	0.0031	0.0013	0.0013	0.0010	0.0011	C (TCM)
149		2003-08	DC	CNG Rental Cars (18)				X	2005	Removed	0.0000	0.0002					SP
150	X	2003-08	DC	Sidewalks in D.C. (\$ 5 million)	X				2005	2004	0.0358	0.0555	0.0230	0.0231	0.0182	0.0192	C
151	X	2003-08	DC	CNG Refuse Haulers (2)	X				2005	2004	0.0001	0.0020					H (TCM)
152	X	2003-08	DC	Circulator /Feeder Bus Routes	X				2005	2003	0.0131	0.0200	0.0084	0.0083	0.0066	0.0069	C

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											VOC	NOX	VOC	NOX	VOC	NOX	
153	X	2003-08	MDOT	Commuter Tax Credit			X		2005	n/a	0.0782	0.1223	0.0502	0.0509	0.0398	0.0422	C
155		2003-08	MDOT	Employer Vanpool Program (WWB)				X	2005	Removed	0.0018	0.0041					C
156	X	2003-08	MDOT	Green Line Link			X		2005	n/a	0.0026	0.0047	0.0016	0.0019	0.0013	0.0016	C
157	X	2003-08	MDOT	Park & Ride Lots - Southern Maryland			X		2005	2003/2005	0.0050	0.0109	0.0032	0.0045	0.0026	0.0038	C
158	X	2003-08	MDOT	Prince George's County- Bus Exp			X		2005	n/a	0.0359	0.0657	0.0230	0.0273	0.0186	0.0228	C
159	X	2003-08	MDOT	MTA - Bus Service Expansion			X		2005	n/a	0.0081	0.0157	0.0052	0.0065	0.0042	0.0054	C
160	X	2003-08	MDOT	Ride- On - Super Discount			X		2005	n/a	0.0009	0.0014	0.0006	0.0006	0.0005	0.0005	C
161	X	2003-08	Regional	Regional Traveler Information Systems			X		2005		0.1012	0.5401	0.0682	0.2686	0.0686	0.2195	TR
162	X	2003-08	MDOT	Universal Transportation Access (MD + WMATA)			X		2005	n/a	0.0161	0.0249	0.0103	0.0104	0.0082	0.0086	C
163	X	2003-08	MCG	Construction of 1300 additional Parking Spaces at Grosvenor Metro Garage	X				2004		0.0046	0.0104	0.0029	0.0044	0.0025	0.0036	C (TCM)
164	X	2003-08	MCG	Bethesda Shuttle Bus Services	X				2004		0.0031	0.0048	0.0020	0.0020	0.0016	0.0016	C
165	X	2003-08	MCG	External Bicycle Racks on Ride-On Buses in Montgomery County	X				2004		0.0006	0.0010	0.0004	0.0004	0.0003	0.0003	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	0.0017	0.0007	0.0007	0.0005	0.0006	C
168	X	2003-08	MCG	Annual Sidewalk Program	X				2004		0.0171	0.0264	0.0110	0.0110	0.0087	0.0091	C
169	X	2003-08	MDOT	Bethesda Breeze/International Express Metrobus			X		2005	n/a	0.0037	0.0053	0.0024	0.0022	0.0019	0.0018	C
170	X	2003-08	MDOT	Bethesda-8, Silver Spring Downtown Dasher and Prince Georges Co. Shuttles at 3 PNR lot			X		2005	n/a	0.0088	0.0104	0.0057	0.0043	0.0043	0.0036	C
171		2003-08	MDOT	Proposed Transportation Management District in Montgomery County (Rockville and Gaithersburg)				X	2005	Removed	0.0057	0.0078	0.0037	0.0033	0.0029	0.0027	C
172	X	2003-08	MDOT	Sidewalks (Bikes/Pedestrian) at / near Rail Stations	X				2005	2002	0.0093	0.0147	0.0060	0.0061	0.0047	0.0051	C
173	X	2003-08	MDOT	Neighborhood Sidewalks Improvements (Bike/Pedestrian)	X				2005	2004	0.0032	0.0017	0.0021	0.0007	0.0015	0.0005	C
174	X	2003-08	MDOT	Neighborhood Conservation Program - Neighborhood Sidewalks Improvements (Bikes/Pedestrian)		X			2005	n/a	0.0028	0.0014	0.0018	0.0006	0.0013	0.0005	C
175	X	2003-08	MDOT	Maryland bus Transit Service Expansion	X				2005	2004	0.0141	0.0323	0.0091	0.0134	0.0076	0.0112	C
176	X	2003-08	VDOT	Universal Transportation Access Program			X		2005	2005	0.0012	0.0019	0.0008	0.0008	0.0006	0.0006	C
177	X	2003-08	VDOT	Interactive Rideshare & Kiosk Initiative			X		2005		0.0004	0.0007	0.0002	0.0003	0.0002	0.0002	C
178	X	2003-08	VDOT	Mobile Commuter Stores			X		2005		0.0021	0.0039	0.0014	0.0016	0.0011	0.0014	C
179	X	2003-08	VDOT	Telework Incentive Program (Telework VA) <sup>1</sup>	X				2005	2001	0.0007	0.0012	0.0005	0.0005	0.0004	0.0004	C
180	X	2003-08	VDOT	Commuter Choice			X		2005		0.0010	0.0014	0.0006	0.0006	0.0005	0.0005	C
181	X	2003-08	VDOT	Employer Shuttle Services			X		2005		0.0114	0.0186	0.0073	0.0069	0.0057	0.0057	C

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											VOC	NOX	VOC	NOX	VOC	NOX	
184	X	2003-08	VDOT	Van Start / Van Save			X		2005	till 2006	0.0014	0.0026					C
185	X	2003-08	VDOT	Metro Shuttle Bus			X		2005	1999-2005	0.0012	0.0026	0.0008	0.0011	0.0006	0.0009	C
187	X	2003-08	VDOT	VRE Mid-Day Train Service	X				2005	2002	0.0016	0.0029	0.0010	0.0012	0.0008	0.0010	C
190	X	2003-08	VDOT	Employer Vanpool Program (Bridge deck)			X		2005	2004 - 2008	0.0009	0.0019					C
191	X	2003-08	VDOT	Town of Leesburg P&R Lot			X		2005	2004	0.0019	0.0039	0.0012	0.0016	0.0010	0.0014	C
192	X	2003-08	VDOT	District-wide P&R Lots	X		X		2005	2001-2005	0.0113	0.0224	0.0072	0.0093	0.0059	0.0078	C
193	X	2003-08	VDOT	Additional Parking at 4 Metro stations			X		2005	2001, 2005	0.0145	0.0333	0.0093	0.0139	0.0078	0.0116	C
196	X	2003-08	WMATA	64 CNG Buses (Purchased in 2001)	X				2005	2004	0.0021	0.0870					SP (TCM)
197	X	2003-08	WMATA	250 CNG Buses (175 buses by Dec. 2004; 75 buses by mid 2006)			X		2005	2004-2006	0.0083	0.3400					SP
198	X	2003-08	WMATA	60 Engine Replacement (MY 1992 & 1993 MY buses)	X				2004	2004	0.0138	0.0755					SP
199	X	2003-08	WMATA	Car Sharing Program	X				2005	2004	0.0008	0.0018	0.0005	0.0008	0.0004	0.0006	C
200	X	2003-08	WMATA	Bikes Racks on WMATA Buses in VA (372 Bike Racks)	X				2005	2004	0.0012	0.0019	0.0008	0.0008	0.0006	0.0007	C (TCM)
202		2003-08	MDOT	Fleet Replacement (state auto fleet, gas to hybrid, 250 vehicles)				X	2005	Removed	0.0055	0.0133	0.0022	0.0031			SP
203	X	2003-08	MDOT	Replace 55 Montgomery County 10 yr. old buses w/ new CNG buses			X		2005	n/a	0.0000	0.2861	0.0000	0.0657			SP
204		2003-08	MDOT	Neighborhood Bus Shuttle (5 circulator routes)				X	2005	Removed	0.0075	0.0122	0.0048	0.0051	0.0038	0.0042	C
205	X	2003-08	MDOT	New Surface Parking at Transit Centers (500 spaces)			X		2005	n/a	0.0026	0.0060	0.0017	0.0025	0.0014	0.0021	C
206		2003-08	MDOT	Additional Bike Lockers at Metro-Stations				X	2005	Removed	0.0132	0.0209	0.0085	0.0087	0.0067	0.0072	C
207	X	2003-08	MDOT	Bike Facilities at PnR Lots or other similar location			X		2005	n/a	0.0093	0.0166	0.0060	0.0069	0.0048	0.0057	C
208		2003-08	MDOT	CNG Fueling Stations				X	2005	Removed	0.1270	0.1170					SP
209		2003-08	MDOT	Gas cap replacements (ROP Credit)				X	2005	Removed	N/A	N/A	N/A	N/A	N/A	N/A	SP
210		2003-08	MDOT	Gas can turnover (ROP Credit)				X	2005	Removed	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	0.0022	0.0009	0.0009	0.0007	0.0008	C (TCM)
212	X	2003-08	MDOT	Bike \ Pedestrian Trail - Anacostia River Walk			X		2005	n/a	0.0006	0.0005	0.0004	0.0002	0.0003	0.0002	C
213		2003-08	MDOT	Transit Prioritization - Queue Jumps				X	2005	Removed	0.0031	0.0037	0.0020	0.0016	0.0015	0.0013	C
214	X	2003-08	MDOT	Commuter Choice Benefit/Tax Credit - Marketing Expansion			X		2005	n/a	0.0546	0.0859	0.0351	0.0358	0.0278	0.0297	C
215	X	2003-08	MDOT	Improvements to Pedestrian Access in TOD areas (4 locations)			X		2005	n/a	0.0060	0.0087	0.0038	0.0036	0.0030	0.0030	C
216	X	2003-08	MDOT	Telecommuting Expansion <sup>1</sup>	X				2005	n/a	0.0645	0.1208	0.0414	0.0503	0.0336	0.0419	C
217		2003-08	MDOT	Replace older Diesel Engine in Public Sector vehicles				X	2005	Removed	0.0237	0.1300					H
218	X	2003-08	VDOT	MV-92 Telecommuting Program - Expanded <sup>1</sup>	X				2005	2003	0.0689	0.1291	0.0442	0.0537	0.0359	0.0447	C
219	X	2003-08	VDOT	MV-123 Employer Outreach for Public Sector Employees <sup>2</sup>	X				2005	2003	0.0153	0.0237	0.0098	0.0099	0.0078	0.0082	C
220	X	2003-08	REGION	Signal System Optimization			X		2005	2005	0.4272	0.1510	0.2879	0.0751	0.2896	0.0613	TR
<b>Available Emissions Credits</b>											<b>2.467</b>	<b>5.072</b>	<b>1.826</b>	<b>1.436</b>	<b>1.689</b>	<b>1.319</b>	

## TRANSPORTATION EMISSION REDUCTION MEASURES (CLRP Projects Only)

Credited in Air Quality Conformity Analyses (calendar years 1993-2004)  
(TRACKING SHEET)

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			2010		2020		2030		
											VOC	NOx	VOC	NOx	VOC	NOx	
221	X	1995-00 TIP	REGION	M-24 Speed Limit Adherence					2010		-0.0146	0.5364	-0.0042	0.2365	0.0010	0.0739	TR
222		1996-01 TIP	MGC	Rock Spring Park Pedestrian Amenities				X			0.0010	0.0040	0.0000	0.0000	0.0000	0.0000	-
223	X	1996-01 TIP	MGC	Olney Transit Center Park and Ride					2015		0.0020	0.0080	0.0009	0.0030	0.0003	0.0007	C
224	X	1996-01 TIP	MGC	Damascus Park and Ride						2003	0.0010	0.0040	0.0004	0.0015	0.0001	0.0003	C
225	X	1996-01 TIP	DC	M-103 Taxicab Replacement (DC)					2015		0.0000	0.0000	0.1745	0.3000	0.3490	0.6000	H
226	X	STADIUM ANALYSIS		M-103 Taxicab Replacement (MD)		X			2008		0.0000	0.0000	0.1560	0.2400	0.1560	0.2400	H
227	X	1997-02 TIP	MDOT	Shady Grove West Transit Center Park and Ride							0.0000	0.0100	0.0000	0.0038	0.0000	0.0009	C
228	X	1997-02 TIP	MGC	Olney Transit Center Park and Ride							0.0000	0.0000	0.0004	0.0012	0.0003	0.0007	C
229	X	1997-02 TIP	MGC	White Oak Park and Ride							0.0000	0.0200	0.0000	0.0076	0.0000	0.0017	C
230	X	1997-02 TIP	MGC	Damascus Park and Ride						2003	0.0000	0.0000	0.0002	0.0005	0.0001	0.0003	C
231	X	1997-02 TIP	MGC	Four Corners Transit Center					2015		0.0000	0.0010	0.0000	0.0004	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	-
233	X	1997-02 TIP	MGC	Silver Spring Transit Access							0.0000	0.0010	0.0000	0.0003	0.0000	0.0002	C
234	X	1997-02 TIP	MGC	Shady Grove Parking Construction						2003	0.0050	0.0190	0.0021	0.0072	0.0007	0.0017	C

PLAN TOTAL	-0.0066	0.5994	0.1743	0.5621	0.3516	0.6804
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GRAND TOTAL (Current Measures + CLRP plan)	2.460	5.671	2.000	1.998	2.041	1.999
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### DEFINITIONS:

#### 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 total 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