

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

DRAFT

September 13, 2006

To: Transportation Planning Board

From: Michael J. Clifford
Systems Planning Applications Director

Subject: Air Quality Conformity Assessment for the 2006 Update of the
Constrained Long Range Plan (CLRP) and the FY2007-2012
Transportation Improvement Program (TIP)

INTRODUCTION

This memo documents summary results of the air quality conformity assessment of the 2006 CLRP and the FY2007-2012 TIP with respect to ozone season and fine particle (PM_{2.5}) pollutants, and wintertime carbon monoxide (CO). The results are based upon analyses being summarized in the forthcoming September 20, 2006 draft technical report, Air Quality Conformity Determination Of The 2006 Constrained Long Range Plan And The FY2007-2012 Transportation Improvement Program For The Washington Metropolitan Region, and have been presented to the TPB Technical Committee for review and comment.

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. The wintertime CO emissions budget dates to state implementation plans approved by EPA in 1994. Conformity assessment criteria vary by pollutant; these tests include adherence to emissions budgets in the case of ozone season pollutants (VOC and NO_x) and CO, and a demonstration that forecast year PM_{2.5} (including both directly emitted and precursor NO_x) emissions are not greater than base year 2002 emissions.

According to the TPB's schedule for action on the plan, TIP, and conformity determination, the results will be released for public comment and interagency consultation on September 14, 2006, and comments will be accepted through October 14, 2006, with action by the Board scheduled for the October 18, 2006 meeting.

BACKGROUND

On April 19, 2006 the TPB approved the scope of work and the project submissions for inclusion in the conformity analysis for the year 2006 update of the CLRP and FY2007-2012 TIP. Key technical inputs to the analysis included: Round 7.0a Cooperative Forecasts; the Version 2.1D #50 Travel Demand Model utilizing the new project submissions, and reflecting updated transit service, transit fares and 2010 transit capacity constraints; EPA's Mobile6.2 Emissions Factor Model with updated fuel program specifications from the air management agencies; 2005 vehicle registration data, summarized through use of vehicle identification number (VIN) decoder software; and a refined Mobile Emissions Post-Processor using latest seasonal adjustments.

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 2006 CLRP and FY2007-2012 TIP included the preparation of volatile organic compound (VOC), nitrogen oxide (NOx), and PM2.5 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 was also conducted for the three forecast years. While ozone season pollutants (VOC and NOx) and wintertime CO are inventoried for average weekday conditions, precursor NOx and direct PM2.5 are inventoried to reflect emissions on a yearly total basis.

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 forthcoming September 20, 2006 draft report, Transportation Emissions Reduction Measures (TERMs) Under Consideration for Conformity of the 2006 CLRP and FY 2007 - FY 2012 TIP.

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 2005 CLRP and the FY2006-2011 TIP were approved by the Board on October 19, 2005.

Land Activity Forecasts

On May 10, 2006 COG's Metropolitan Development Policy Committee approved Round 7.0a Cooperative Forecast totals to be used for testing purposes in analysis of the CLRP and TIP. The Round 7.0a data, summarized in Attachment B, 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 7.0a reflects the Baltimore Metropolitan Council's 'Round 6-B' adopted figures, whereas their previous input to the COG Round 7.0 forecasts was their 'Round 6-A' 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 average weekday transit trips, vehicle trips, and vehicle miles traveled (VMT) results through time for each conformity analysis year.

Emissions Factors

Using 2005 vehicle registration data summarized via 'VIN decoder' software, and updated fuel program inputs specified by the air management agencies, staff developed motor vehicle emissions factors through execution of EPA's MOBILE6.2 emissions factor model. These rates for each pollutant, shown using Fairfax County freeway data as an illustration in Exhibits 3 and 4 for VOC and NO_x, 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 5 presents direct PM_{2.5} emissions rates through time; data are arrayed in a bar chart since these emissions rates do not vary by vehicle speed.

Emissions Analyses

Mobile Emissions Inventories

Ozone Season and Wintertime CO – Daily Emissions

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. These emissions results for ozone season pollutants are summarized in Exhibit 6 and indicate VOC and NO_x 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 falling below 40 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. Both VOC and NO_x emissions are well within the mobile budgets for all forecast years. Wintertime CO emissions (not summarized here) follow these same general trends and are easily within the CO emissions budget level.

Exhibits 7 and 8 present these VOC and NO_x results in a graphical format, which perhaps illustrates even better the steady and significant downward trends occurring in both VOC and NO_x 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 in 2002, but NO_x 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 about 66 T/D, and NOx emissions experience even greater reductions, from 284 T/D to 142 T/D.

PM2.5 – Yearly Emissions

To develop the yearly total PM2.5 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 PM2.5 and precursor NOx emissions, shown in the Exhibits 9 and 10 tables and Exhibit 11 bar chart, 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. Exhibits 9 – 11 show emissions much lower than base year 2002 conditions, satisfying the primary conformity assessment criterion for PM2.5. 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 Exhibits 6 – 11 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, with part A of the table documenting ozone season and part B documenting PM2.5 pollutants. The summary result of these measures, shown as the bottom line for each section of the table, amounts to additional reductions in 2010 of 2.3 tons per day of VOC and 5.5 tons per day of NOx, and 29.5 and 1140.9 tons per year of direct PM2.5 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. Combining the emissions results in Exhibits 6 – 11 with the additional reductions from TERMS would further improve the emissions margins for each pollutant.

SUMMARY

The analytical results described in this air quality assessment provide a basis for a determination by the TPB of conformity of the 2006 CLRP and the FY2007-2012 TIP.

Following: Exhibits 1-11
Attachments A-C

Exhibit 2

Travel Demand Summary Modeled Area Trips and Vehicle Miles Traveled (000's) Annualized Average Weekday Traffic (AAWDT)

	<u>2002</u>	<u>2010</u>	<u>2020</u>	<u>2030</u>
Transit Trips	924.1	1,006.5	1,213.5	1,315.1
Vehicle Trips	19,428.7	22,356.8	25,296.2	28,161.3
VMT	149,042.0	171,390.9	195,384.4	216,770.1

Adjustment Factors to Convert AAWDT to ADT By Season For PM2.5

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

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

Exhibit 3 TOTAL 2002-2030 VOC COMPOSITE MOBILE6.2 RUNNING EMISSION RATES FOR FAIRFAX COUNTY FREEWAY

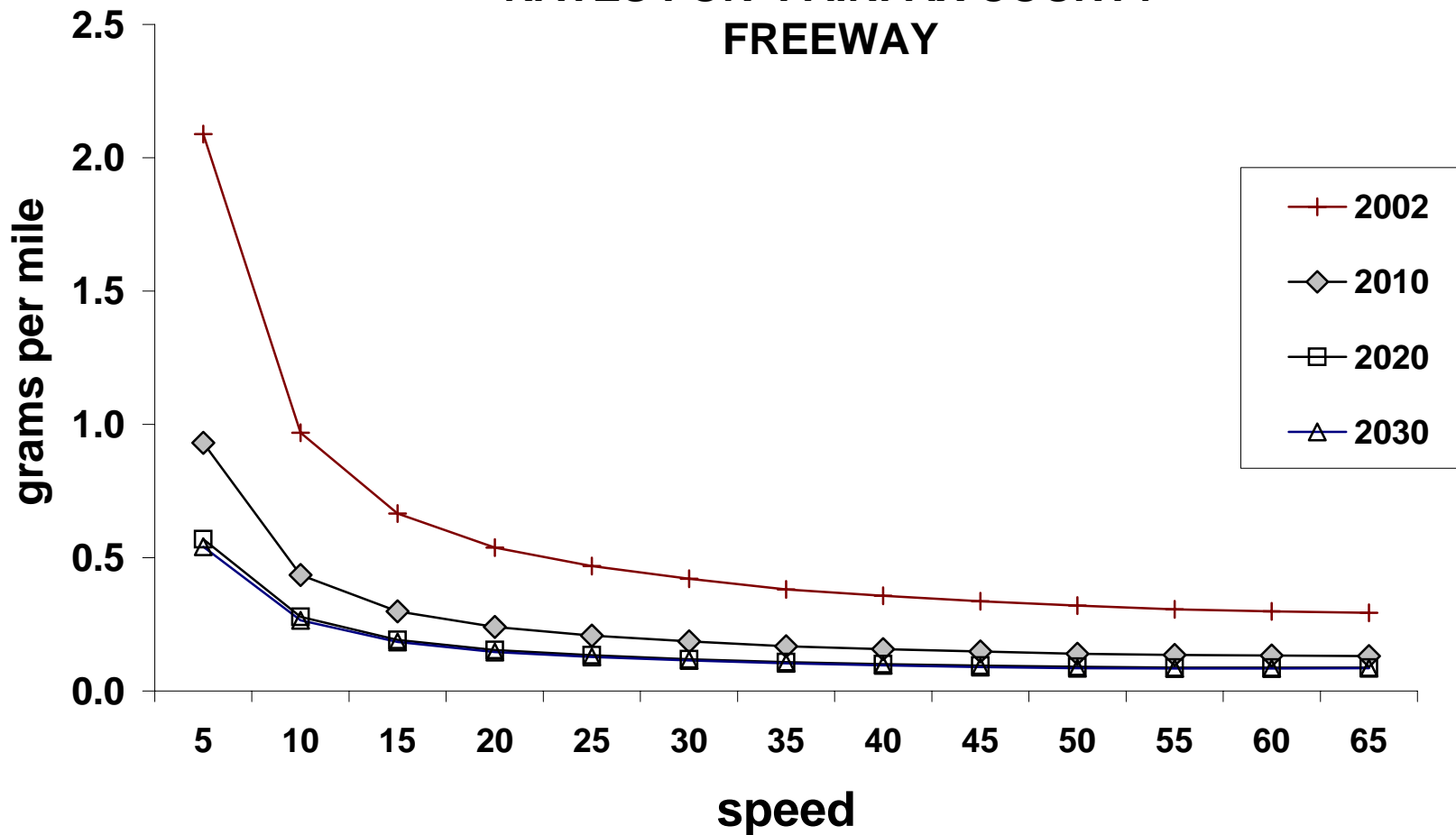


Exhibit 4 TOTAL 2022-2030 NOx COMPOSITE MOBILE6.2 RUNNING EMISSION RATES FOR FAIRFAX COUNTY FREEWAY

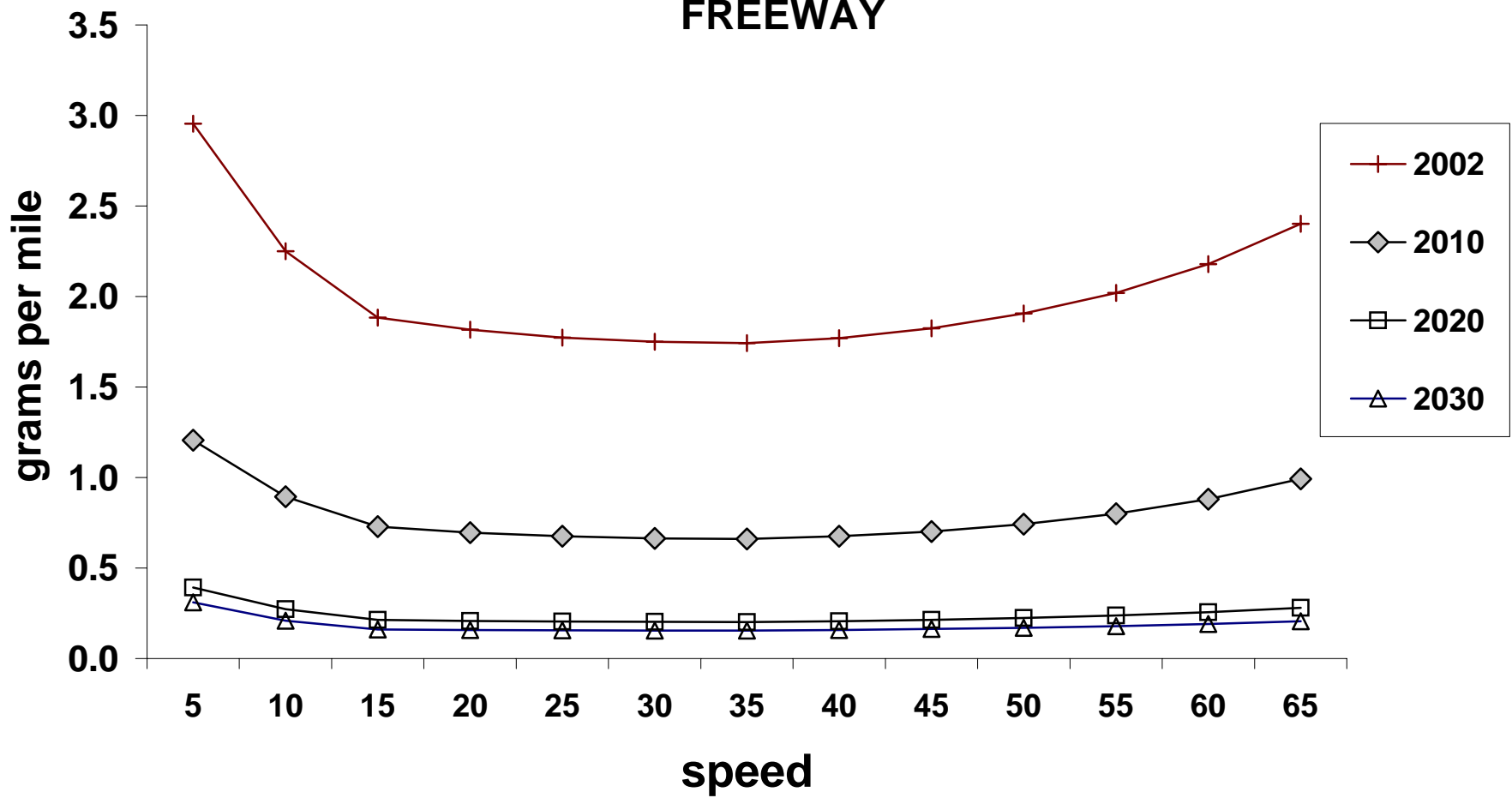


Exhibit 5
DIRECT PM2.5 EMISSION RATES FOR DISTRICT OF COLUMBIA
(MAJOR ROADS NETWORK)

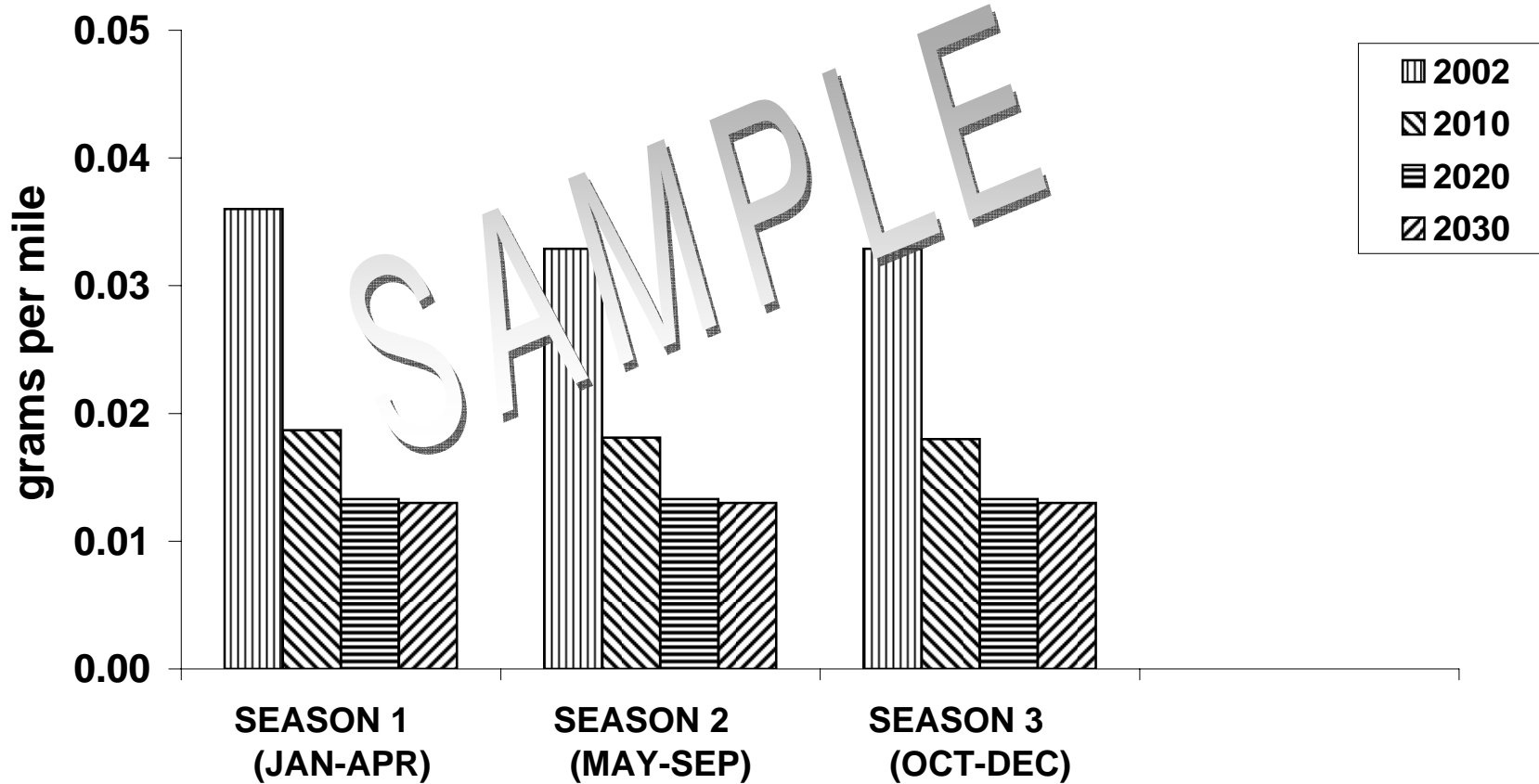


EXHIBIT 6

AIR QUALITY CONFORMITY
Summary Table - MSA (1-Hour Ozone Area)
Mobile Emissions Inventories
for 2006 CLRP and FY 2007-2012 TIP
(Tons/Day)

	2002		2010		2020		2030	
	VOC	NOx	VOC	NOx	VOC	NOx	VOC	NOx
I Network								
Start	25.75	14.04	11.55	6.85	7.28	3.19	7.06	2.57
Running	57.26	243.61	28.30	119.06	19.94	41.10	20.76	31.94
Soak	11.48	-----	9.63	-----	5.33	-----	4.34	-----
II Off-Network								
Diurnal	3.18	-----	2.15	-----	1.17	-----	0.81	-----
Resting Loss	12.12	-----	8.36	-----	3.72	-----	2.43	-----
Local Roads	9.59	12.07	4.66	6.34	3.21	2.79	3.28	2.48
School Buses	0.43	6.09	0.36	4.81	0.22	0.70	0.17	0.27
Transit Buses	0.38	6.59	0.17	3.76	0.12	1.01	0.12	0.30
Auto Access	1.34	1.65	0.67	0.82	0.46	0.42	0.44	0.38
Total	121.52	284.06	65.84	141.64	41.45	49.20	39.41	37.95

TCMs	-0.20	-0.49
Net Emissions	65.64	141.15
Mobile Emissions Budgets:	97.40	234.70
Budget Adherence Margin:	31.76	93.55

EXHIBIT 7

Mobile Source VOC Emissions Metropolitan Statistical Area 2006 CLRP and FY 2007-2012 TIP

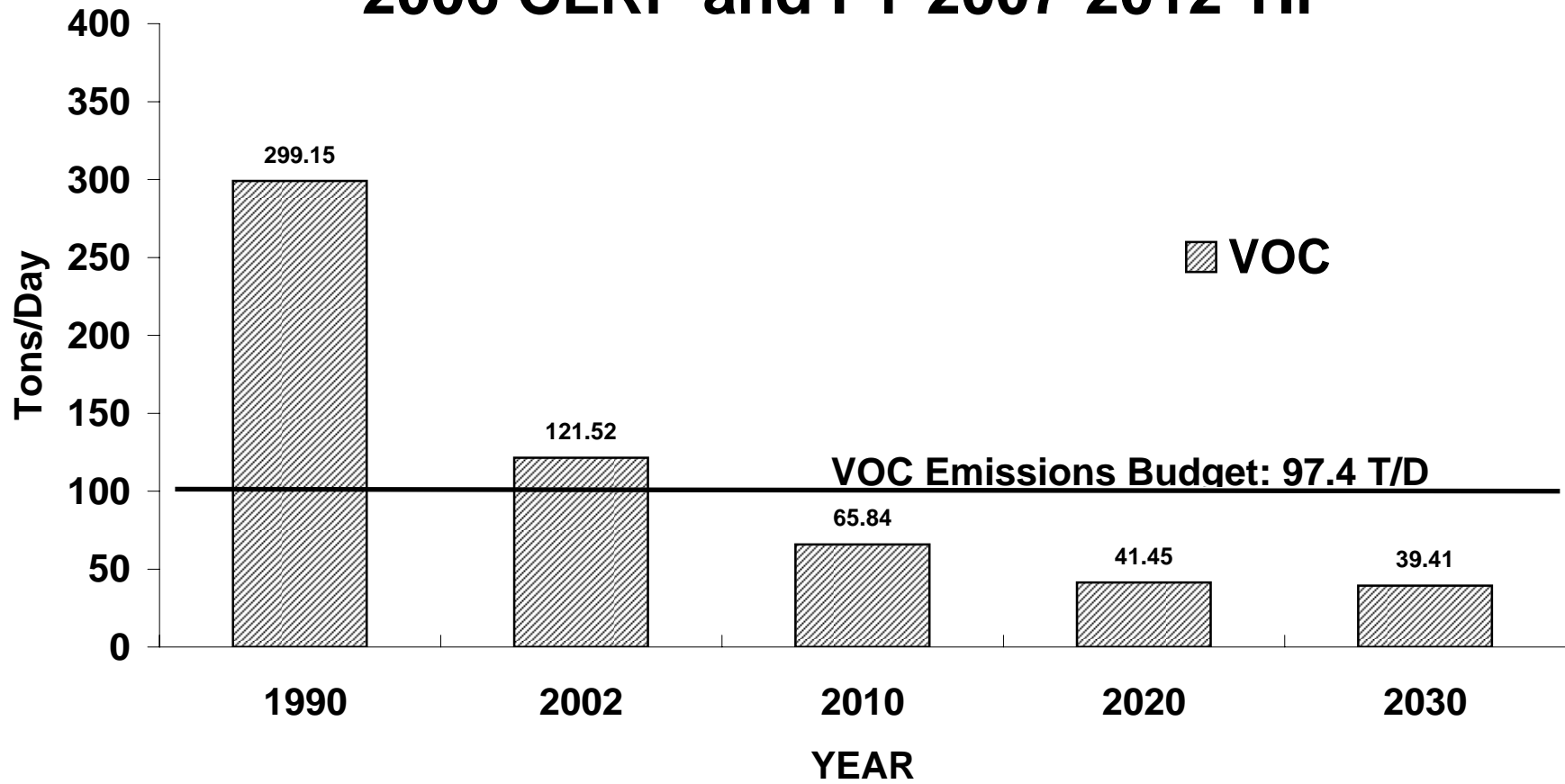
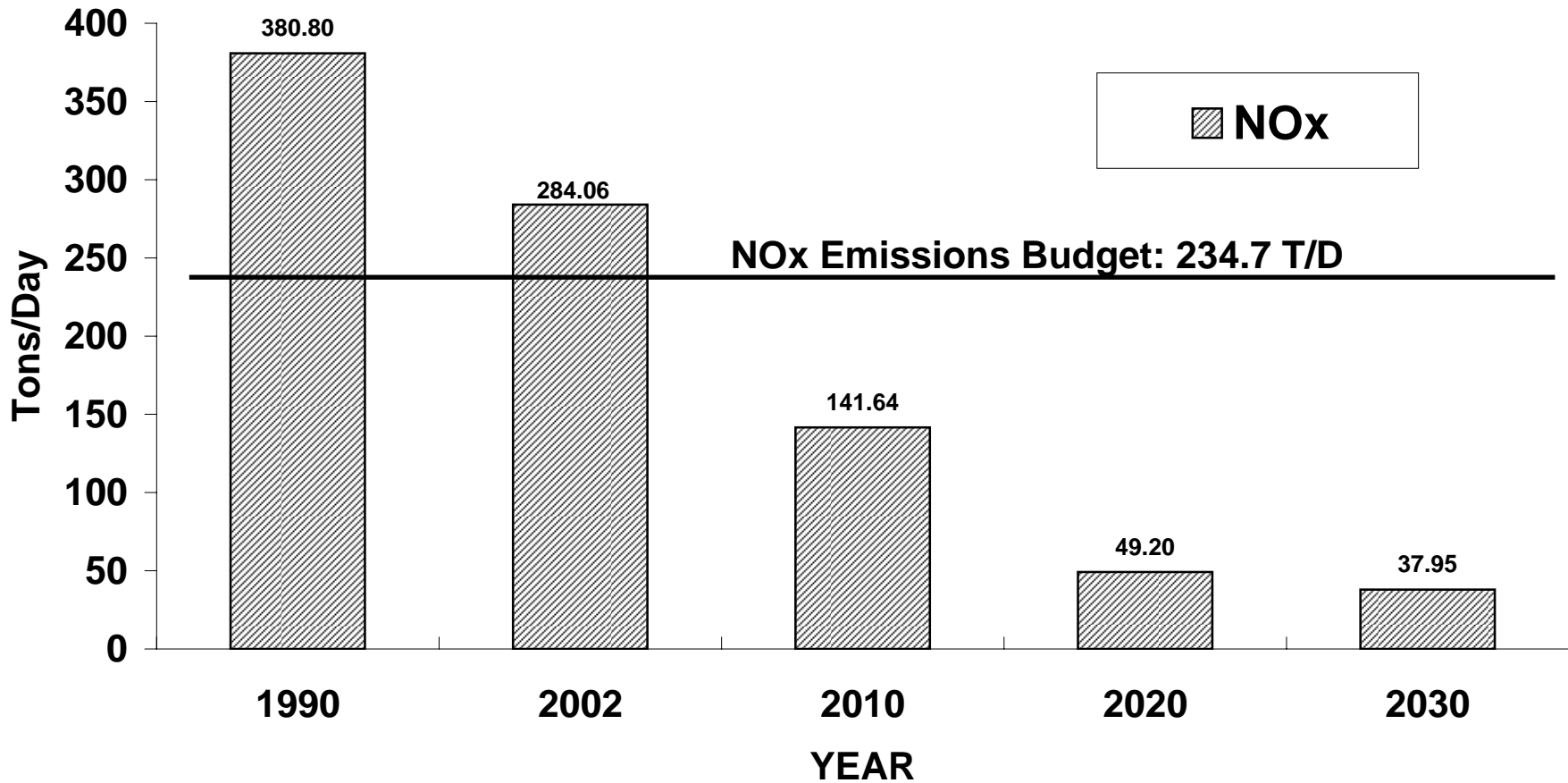


EXHIBIT 8

Mobile Source NOx Emissions Metropolitan Statistical Area 2006 CLRP and FY 2007-2012 TIP



NOTE: TCM emissions benefits applied in 2010

EXHIBIT 9
AIR QUALITY CONFORMITY SUMMARY TABLE
Direct PM2.5 Emissions
Mobile Source Emissions Inventories
for 2006 CLRP and FY 2007-2012 TIP
(Tons)

SEASON 1 (JAN-APR)		Days	Direct PM2.5							
			2002		2010		2020		2030	
			Daily	seasonal	Daily	seasonal	Daily	seasonal	Daily	seasonal
Major Roads										
Local Roads										
School Buses										
Transit Buses										
Auto Access										
Total (Daily)										
SEASON TOTAL										

SEASON 2 (MAY-SEP)		Days	Direct PM2.5							
			2002		2010		2020		2030	
			Daily	seasonal	Daily	seasonal	Daily	seasonal	Daily	seasonal
Major Roads										
Local Roads										
School Buses										
Transit Buses										
Auto Access										
Total (Daily)										
SEASON TOTAL										

SEASON 3 (OCT-DEC)		Days	Direct PM2.5							
			2002		2010		2020		2030	
			Daily	seasonal	Daily	seasonal	Daily	seasonal	Daily	seasonal
Major Roads										
Local Roads										
School Buses										
Transit Buses										
Auto Access										
Total (Daily)										
SEASON TOTAL										

ANNUAL TOTAL			0.00		0.00		0.00		0.00
---------------------	--	--	-------------	--	-------------	--	-------------	--	-------------

EXHIBIT 10
AIR QUALITY CONFORMITY SUMMARY TABLE
PM2.5 Precursor Emissions: NOx
Mobile Source Emissions Inventories
for 2006 CLRP and FY 2007-2012 TIP
(Tons)

SEASON 1 (JAN-APR)		Days	Precursor NOx							
			2002		2010		2020		2030	
			Daily	seasonal	Daily	seasonal	Daily	seasonal	Daily	seasonal
Major Roads-Starts										
Major Roads-VMT										
Local Roads										
School Buses										
Transit Buses										
Auto Access										
Total (Daily)										
SEASON 1 TOTAL										

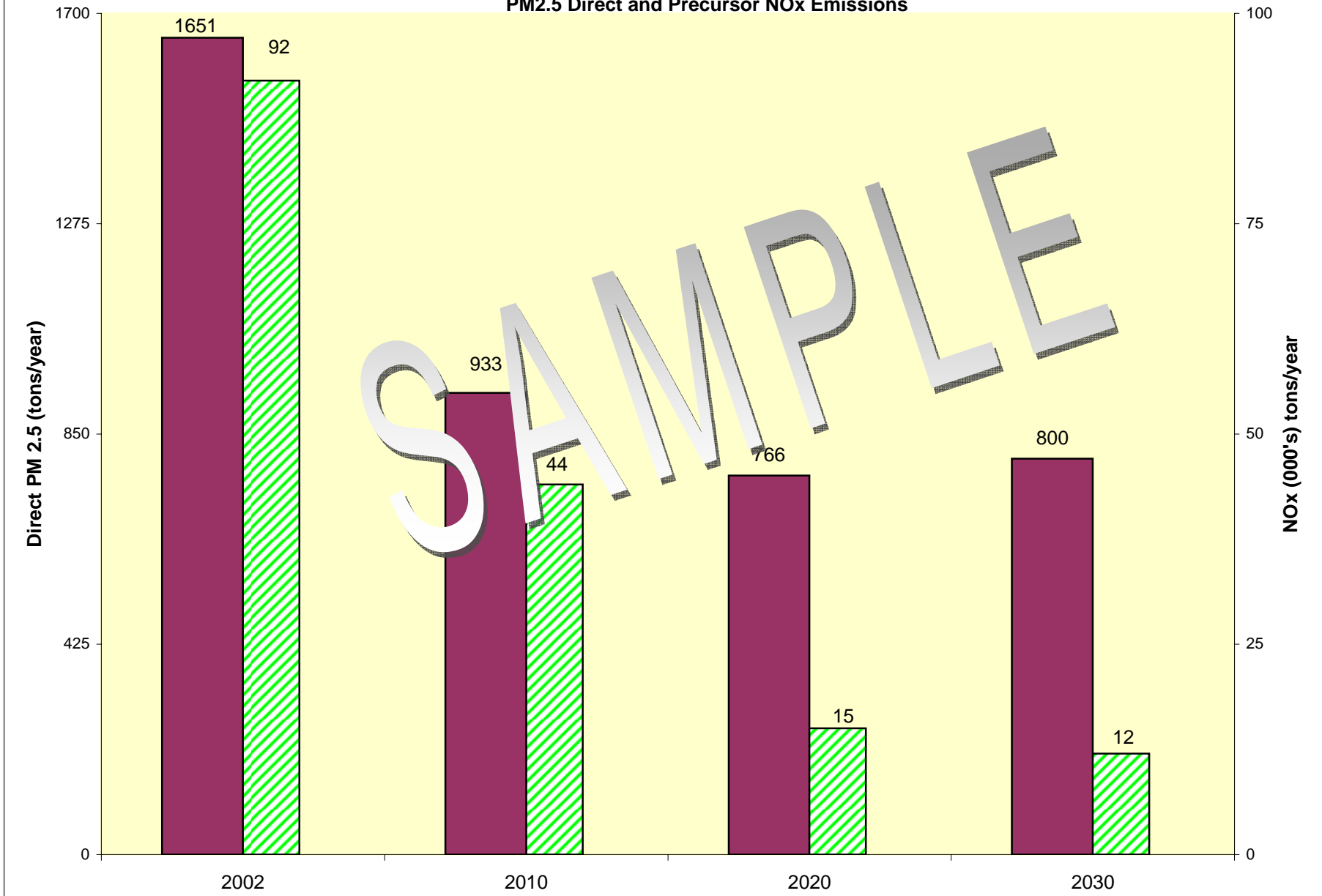
SEASON 2 (MAY-SEP)		Days	Precursor NOx							
			2002		2010		2020		2030	
			Daily	seasonal	Daily	seasonal	Daily	seasonal	Daily	seasonal
Major Roads-Starts										
Major Roads-VMT										
Local Roads										
School Buses										
Transit Buses										
Auto Access										
Total (Daily)										
SEASON 2 TOTAL										

SEASON 3 (OCT-DEC)		Days	Precursor NOx							
			2002		2010		2020		2030	
			Daily	seasonal	Daily	seasonal	Daily	seasonal	Daily	seasonal
Major Roads-Starts										
Major Roads-VMT										
Local Roads										
School Buses										
Transit Buses										
Auto Access										
Total (Daily)										
SEASON 3 TOTAL										

ANNUAL TOTAL									
---------------------	--	--	--	--	--	--	--	--	--

Exhibit 11
Air Quality Conformity
PM2.5 Direct and Precursor NOx Emissions

NOx
Direct PM2.5



ATTACHMENT A

PROJECT DESCRIPTIONS
2006 CLRP – SIGNIFICANT PROPOSED CHANGES

April 19, 2006

PROJECTS PROPOSED FOR CONSTRUCTION

DISTRICT OF COLUMBIA

1. South Capitol Street Corridor with Frederick Douglas Memorial Bridge Improvements

Between Independence Avenue and Martin Luther King, Jr. Avenue

Convert South Capitol Street from an urban highway to a grand six-lane boulevard. Construct a newly aligned, six-lane Frederick Douglas Bridge.

- Length: 3.5 miles
- Complete: 2015
- Cost: \$625 million
- Funding: Federal earmarks and local funds

2. 11th Street Bridges and Interchange Reconstruction

Between the Anacostia Freeway (I-295) and the Southeast Freeway (I-395)

Replace and reconfigure the 11th Street Bridges. The current two spans—carrying four inbound lanes on one span and four outbound lanes on the other—would be reconfigured so that each span carries traffic in both directions, with one span carrying freeway traffic and the other, local traffic. The freeway span would be four lanes in each direction; the local span would be two lanes in each direction. New ramps east of the Anacostia River would connect both directions of the Anacostia Freeway (I-295) with each span.

- Length: 1 mile
- Complete: 2011
- Cost: \$377 million
- Funding: Federal earmarks and local funds

3. Anacostia Streetcar Project

Phase I: From Firth Sterling Avenue and South Capitol Street to Howard Road and Martin Luther King, Jr. Avenue

Build the first phase of the streetcar line from Firth Sterling Avenue and South Capitol Street to Howard Road and Martin Luther King, Jr. Avenue. The remaining three phases of the project will be included in the CLRP for study (see S1 in “Studies” below). This project replaces the Anacostia Demonstration Rail Line (the CSX Shepard Branch Light Rail Project) previously in the CLRP.

- Length: Approximately ½ mile (Phase I only)
- Complete: **2007**
- Cost: \$21 million
- Funding: Bonds and local funds

VIRGINIA

4. Upgrade VA 28 at I-66 Interchange

Between VA 28/I-66 interchange and Braddock/Walney Roads

Eliminate turn movements and implement signal timing/phasing changes near the interchange of VA 28 and I-66 at three locations:

- VA28 and Braddock/Walney Road: Eliminate through and left turn movement from eastbound Braddock Road and from westbound Walney Road. Also eliminate left turn movements from southbound VA 28. The affected movements will be redirected towards the recently completed, grade separated interchange at VA 28 and Westfields Boulevard.
- VA 28 and ramps to westbound I-66: Eliminate left turn movements from northbound VA 28 to westbound I-66. The affected movements will be redirected to the VA 28 and VA 29 interchange.
- VA 28 and ramps from eastbound I-66: Eliminate left turn movements from eastbound I-66 off-ramp to southbound VA 28. The affected movements will be redirected to the I-66 and VA 29 interchange.

- Length: Operational improvements within a half-mile area
- Complete: 2008
- Cost: \$750,000
- Funding: Federal, state, local, private and bonds

MARYLAND

5. Widen MD 201, Kenilworth Avenue

Between River Road and Pontiac Street

Widen Kenilworth Avenue from 4 to 6 lanes between River Road and Pontiac Street, in the vicinity of Greenbelt Park. This project will support the planned development within the Riverside subdivision and the College Park – Riverdale Transit District.

- Length: 2 miles
- Complete: 2010
- Cost: \$3 million
- Funding: **A group of developers including the University of Maryland**

STUDIES

DISTRICT OF COLUMBIA

S1. Anacostia Streetcar Study (Phases II-IV)

Phase II: Firth Sterling Avenue and South Capitol Street to Malcolm X Avenue

Phase III: Howard Road and Martin Luther King, Jr. Avenue to Good Hope Road and Minnesota Avenue

Phase IV: Martin Luther King, Jr. Avenue over the 11th Street Bridge on M Street, SE to South Capitol Street.

Phases II-IV of this project are included for study in the 2006 CLRP, while Phase I is included for construction (see description above). This project replaces the Anacostia Demonstration Rail Line (the CSX Shepard Branch Light Rail Project) previously in the CLRP.

- Length: Approximately 4 miles (all four phases, including half-mile in Phase I)
- Complete: 2011
- Cost: \$3 million

VIRGINIA

S2. Study Proposal to Build and Operate HOV/HOT Lanes on I-95/I-395

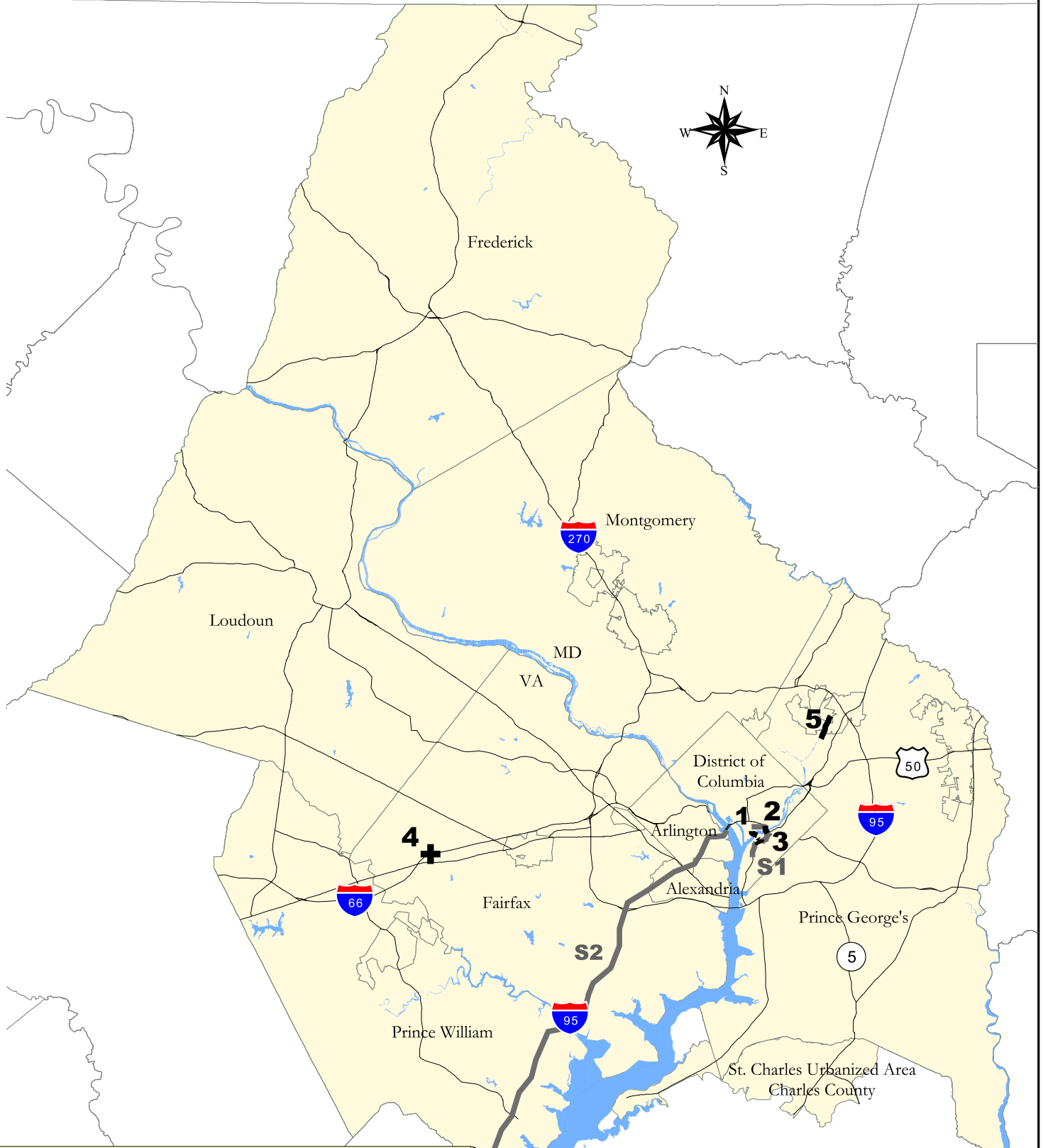
Between the District of Columbia line and the I-95 Massaponax exit in Spotsylvania County

The CLRP already includes the extension of HOV lanes from Quantico Creek to the Stafford County line and the re-striping to 3 lanes of existing HOV lanes from the District of Columbia line to Quantico Creek. The proposed change for the 2006 CLRP would provide for the development of environmental documents, consistent with federal (NEPA) and state requirements, for a proposal to build high occupancy/toll (HOT) lanes. The HOT lanes have been proposed by the private sector under Virginia's Public/Private Transportation Act (PPTA). The PPTA proposal consists of two actions: 1) Re-stripe two existing HOV lanes to three HOT lanes between the District of Columbia line and VA 234 in Dumfries; and 2) Construct two new HOT lanes on I-95 between VA 234 and the Massaponax exit. The study will be coordinated with the TPB and with the Fredericksburg MPO.






- Length: 47 miles
- Complete: 2007
- Cost: \$380,000

Figure 1: Significant Proposed Changes for the 2006 CLRP (Financially Constrained Long-Range Transportation Plan)

March 9, 2006

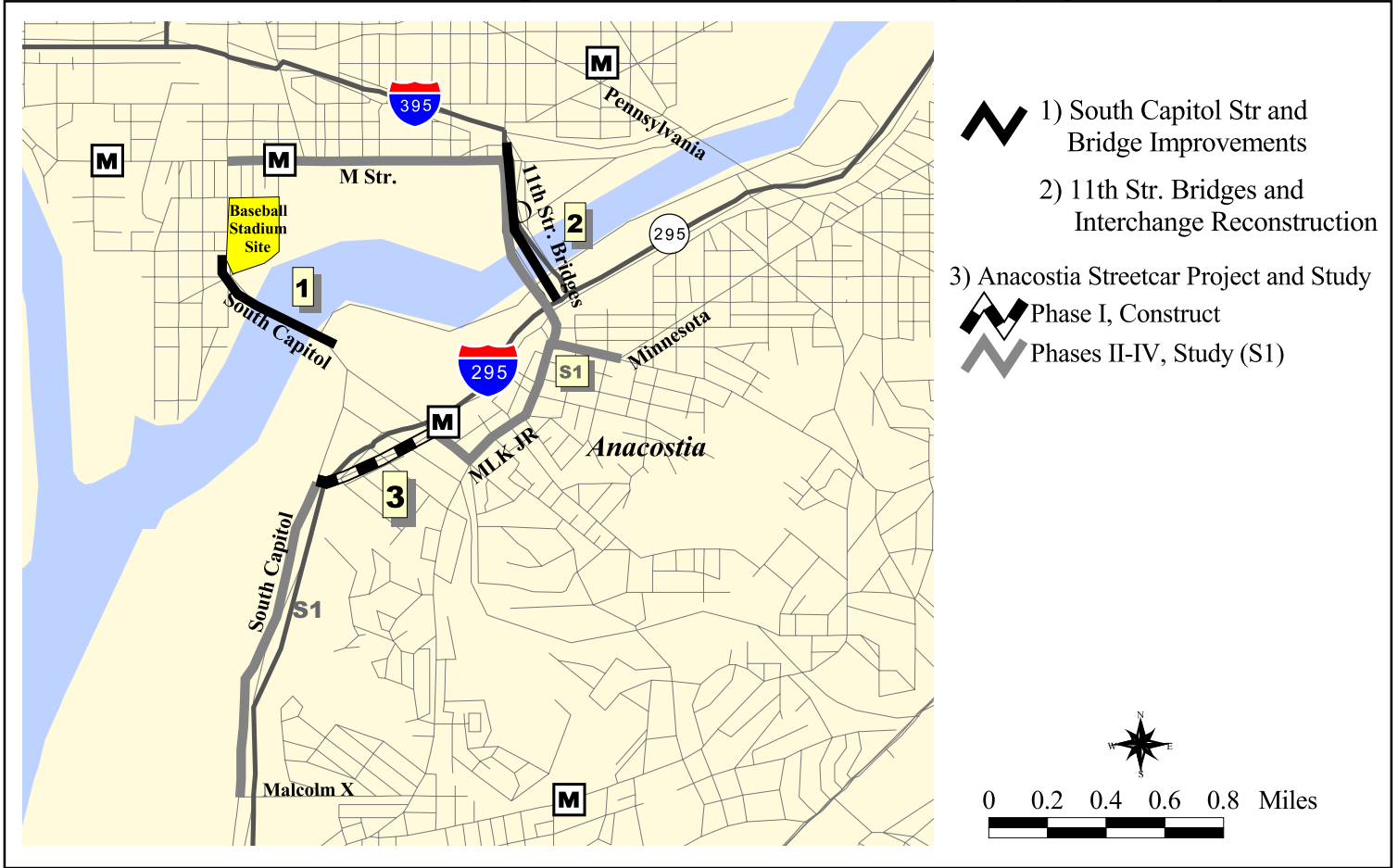


Legend

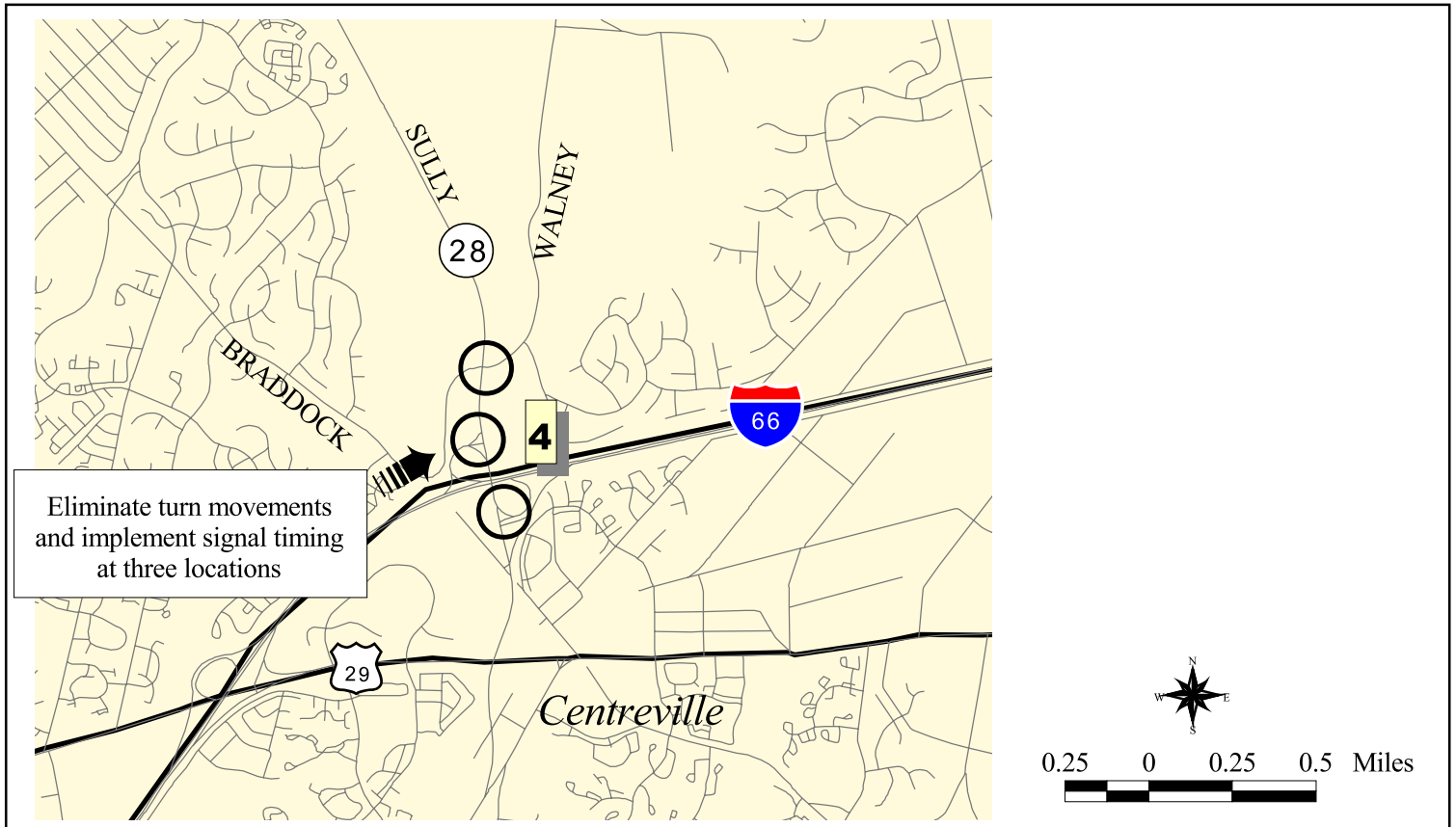
-  1, 2) D.C. Bridge & Interchange Improvements
-  3) Anacostia Streetcar Project
-  4) Upgrade VA 28 at I-66 Interchange
-  5) Widen MD 201/ Kenilworth Ave from 4 to 6 Lanes
-  S1 and S2) Significant New Studies

5 0 5 10 15 Miles

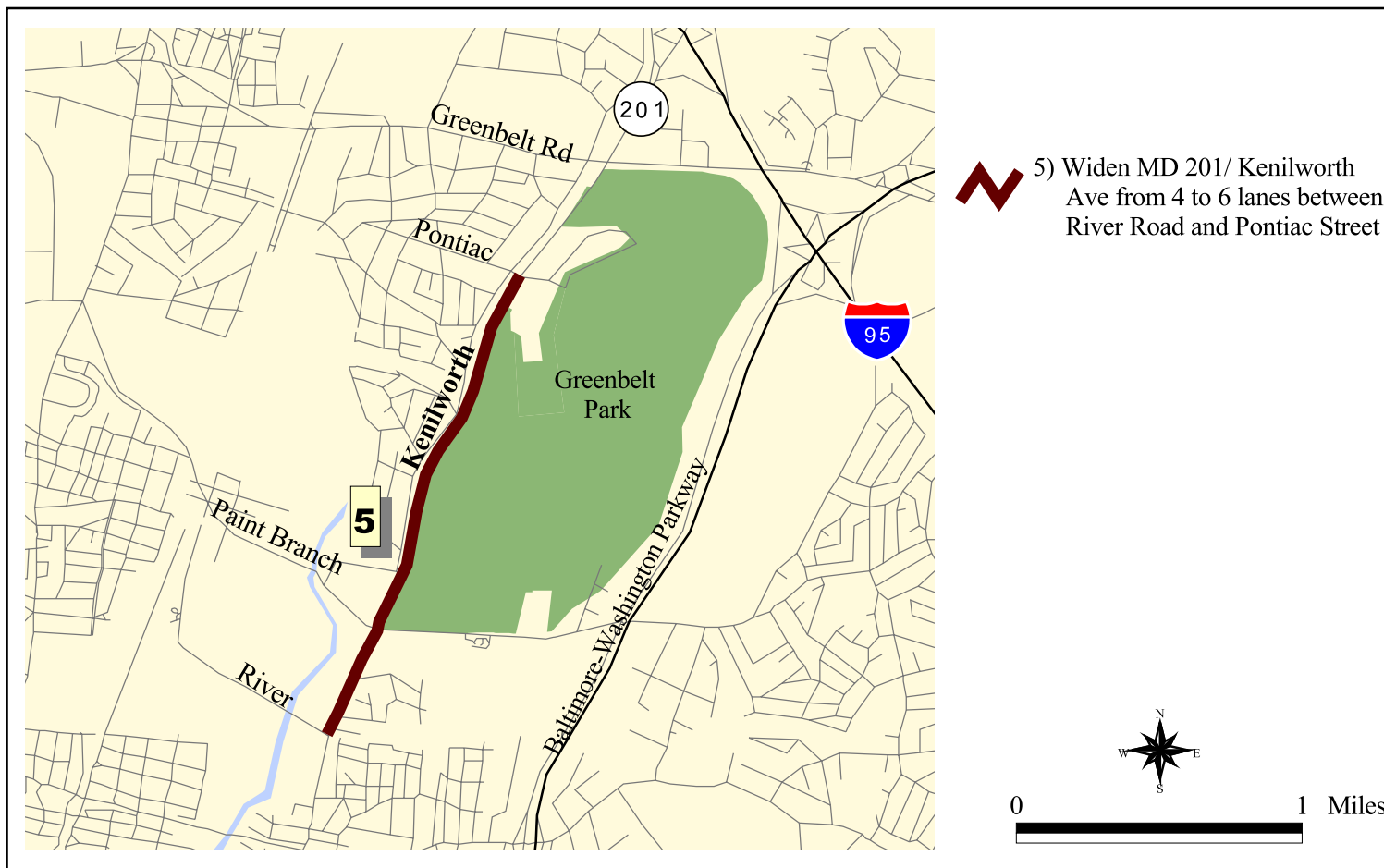
**Figure 2:
District of Columbia Bridges and Anacostia Streetcar Project (Projects 1 to 3)**



**Figure 3:
Upgrade VA 28 at I-66 (Project 4)**



**Figure 4:
Widen MD 201 / Kenilworth Avenue (Project 5)**



ATTACHMENT B

EMPLOYMENT DATA

MSA:	2002	2010	2020	2030	2030/2002
D.C.	744,071	783,462	829,531	859,102	1.15
MONTGOMERY	484,880	545,305	615,355	670,404	1.38
PR.GEORGE'S	346,169	389,681	460,526	544,285	1.57
ARLINGTON	187,633	217,836	254,418	275,798	1.47
ALEXANDRIA	95,800	113,251	132,536	147,957	1.54
FAIRFAX	624,843	727,012	827,599	904,191	1.45
LOUDOUN	103,376	153,736	212,920	271,159	2.62
PR. WILLIAM	127,076	157,719	190,161	217,764	1.71
FREDERICK	106,647	142,412	158,278	167,257	1.57
CHARLES	47,726	62,929	66,843	69,148	1.45
STAFFORD	33,641	46,193	59,285	73,478	2.18
CALVERT	25,425	32,855	34,455	35,556	1.40
SUBTOTAL	2,927,287	3,372,391	3,841,907	4,236,099	1.45
ADDITIONAL COUNTIES:					
HOWARD	141,853	168,875	194,205	219,541	1.55
ANNE ARUNDEL	260,253	285,532	323,908	361,203	1.39
CARROLL	57,373	67,604	70,820	72,450	1.26
FREDERICKSBURG (VA)	25,892	40,258	51,666	62,676	2.42
JEFFERSON	17,008	21,058	26,113	30,674	1.80
N. SPOTSYLVANIA	31,482	40,769	52,378	63,469	2.02
FAUQUIER	22,320	27,325	35,767	43,367	1.94
CLARKE	6,079	6,793	7,685	8,552	1.41
K. GEORGE	12,084	16,022	20,557	34,303	2.84
ST. MARY'S	48,915	58,165	61,164	63,139	1.29
SUBTOTAL	623,259	732,401	844,263	959,374	1.54
TOTAL	3,550,546	4,104,792	4,686,170	5,195,473	1.46

SOURCE:

MWCOG Revised Round 7.0a Cooperative Forecasts

BMC Round 6-B Cooperative Forecasts

NOTE: Includes Census Adjustment

HOUSEHOLD DATA

MSA:	2002	2010	2020	2030	2030/2002
D.C.	249,809	265,303	293,266	318,696	1.28
MONTGOMERY	334,305	370,764	408,661	442,081	1.32
PR. GEORGE'S	295,773	320,989	346,113	377,360	1.28
ARLINGTON	89,000	99,577	111,455	119,855	1.35
ALEXANDRIA	63,662	70,964	76,661	86,450	1.36
FAIRFAX	374,148	426,019	479,308	500,221	1.34
LOUDOUN	70,953	112,664	149,709	170,149	2.40
PR. WILLIAM	119,778	159,345	188,652	212,864	1.78
FREDERICK	73,833	87,708	104,139	123,125	1.67
CHARLES	44,286	52,228	63,654	76,880	1.74
STAFFORD	32,626	40,899	51,927	68,404	2.10
CALVERT	26,570	31,045	34,331	36,212	1.36
SUBTOTAL	1,774,743	2,037,505	2,307,876	2,532,297	1.43
ADDITIONAL COUNTIES:					
HOWARD	94,549	108,700	124,700	127,558	1.35
ANNE ARUNDEL	183,445	201,097	218,399	228,101	1.24
CARROLL	55,308	63,550	69,516	71,822	1.30
FREDERICKSBURG (VA)	8,561	10,448	12,391	13,944	1.63
JEFFERSON	17,016	20,427	25,957	33,075	1.94
N. SPOTSYLVANIA	26,787	35,135	44,012	52,981	1.98
FAUQUIER	21,448	26,872	35,729	47,506	2.21
CLARKE	5,182	6,142	6,860	7,770	1.50
K. GEORGE	6,533	8,319	9,850	11,446	1.75
ST. MARY'S	31,801	36,441	42,604	48,399	1.52
SUBTOTAL	450,630	517,131	590,018	642,602	1.43
TOTAL	2,225,373	2,554,636	2,897,894	3,174,899	1.43

SOURCE:
 MWCOG Revised Round 7.0a Cooperative Forecasts
 BMC Round 6-B Cooperative Forecasts

ATTACHMENT C

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 COMPLETION DATE	ACTUAL COMPLETION DATE	EMISSIONS (gpm/veh/day)						Project Category *
					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	0.0003	0.0006	0.0003	0.0005	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	0.0006	0.0006	0.0006	0.0005	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	0.0003	0.0006	0.0003	0.0005	C (TCM)
49	X	1995-00	MDOT	MARC Expansion Coaches	X				1999	2004	0.0052	0.0133	0.0029	0.0055	0.0026	0.0046	C (TCM)
51	X	1995-00	VDOT	Alexandria Telecommuting Pilot Program	X					2000 & 2001	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	C
54	X	1995-00	VDOT	City of Fairfax Bus Shelters			X		1999	2004	0.0000	0.0005	0.0000	0.0002	0.0000	0.0002	C (TCM)
56	X	1995-00	VDOT	Cherry Hill VRE Access			X			2007	0.0040	0.0114	0.0023	0.0047	0.0020	0.0039	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	0.0000	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	C
61	X	1995-00	MCG	Bicycle Facilities			X		FY99		0.0017	0.0009	0.0010	0.0004	0.0009	0.0003	C
62	X	1995-00	MCG	Pedestrian Facilities to Metrorail			X				0.0029	0.0038	0.0016	0.0016	0.0015	0.0013	C
63	X	1995-00	MDOT	MARC Replacement Coaches	X				1999	2004	0.0023	0.0057	0.0013	0.0024	0.0012	0.0020	C
64	X	1995-00	MDOT	MARC Expansion Coaches	X				1999	2004	0.0183	0.0493	0.0104	0.0205	0.0093	0.0170	C (TCM)
66	X	1995-00	VDOT	Commuter Lots - District Wide			X		varies	1995, 2000	0.0063	0.0156	0.0036	0.0065	0.0032	0.0054	C
67	X	1995-00	VDOT	I-66 and Stringfellow Rd. Park and Ride	X				2000	2000 end	0.0057	0.0095	0.0032	0.0039	0.0029	0.0033	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	0.0016	C
69	X	1995-00	VDOT	Bicycle Trails and Facilities			X		varies	varies	0.0011	0.0081	0.0006	0.0034	0.0006	0.0028	C
70	X	1995-00	VDOT	Improved Access to Metrorail Stations			X		varies	2000-2010	0.0003	0.0005	0.0002	0.0002	0.0001	0.0002	C
71	X	1995-00	VDOT	I-66 HOV access at Monument Dr.	X					1997	0.0057	0.0095	0.0032	0.0039	0.0029	0.0033	C
72	X	1995-00	DC	Bicycle Facilities		X					0.0137	0.0095	0.0078	0.0039	0.0070	0.0033	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
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 COMPLETION DATE	ACTUAL COMPLETION DATE	EMISSIONS						Project Category *
					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	0.0381	0.0696	0.0218	0.0290	0.0199	0.0242	C
75	X	1995-00	REGION	M-92 Telecommuting Support	X					on-going	0.0634	0.1095	0.0361	0.0456	0.0328	0.0380	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	0.0006	0.0006	0.0006	0.0005	0.0005	C
81	X	1996-01	VDOT	Arlington County Metrocheck Program	X			1997	1997 Onwards	0.0011	0.0014	0.0006	0.0006	0.0006	0.0005	0.0005	C
82	X	1996-01	VDOT	Old Dominion Drive Bike Trail				2000	2004	0.0006	0.0005	0.0003	0.0002	0.0003	0.0002	0.0002	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	0.0003	0.0002	0.0003	0.0002	0.0002	C
90	X	1996-01	REGION	M-47c Employer Outreach / Guaranteed Ride Home	X				on-going	0.4873	0.8152	0.2767	0.3396	0.2506	0.2822	0.2822	C
91	X	1996-01	REGION	M-70a Bicycle Parking				1999		0.0040	0.0033	0.0023	0.0014	0.0020	0.0011	0.0011	C
92	X			M-92 Telecommuting Support ¹	Combined with item #75												C
95	X	1997-02	MCG	Germantown Transit Center				2004		0.0029	0.0090	0.0016	0.0038	0.0015	0.0031	0.0031	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	0.0006	0.0001	0.0006	0.0001	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	0.0001	C
108	X	1997-02	MDOT	M-103 Taxicab Replacement in Maryland ²	X			2005		0.0797	0.2675	0.1349	0.1827	0.3120	0.4810	0.4810	SP
109	X	1997-02	REGION	M-70b Employer Outreach for Bicycles	X			1998	on going	0.0013	0.0018	0.0007	0.0007	0.0006	0.0006	0.0006	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	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				Ongoing	0.0080	0.0270						SP
113	X	1998-03	PG	Prince George's County Bus Replacement	X			1998	Ongoing	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	0.0003	0.0002	0.0003	0.0002	0.0002	C
118	X	1998-03	VDOT	Northern Virginia Turn Bays	X			2000	1998	0.0006	0.0009	0.0003	0.0002	0.0003	0.0002	0.0002	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 Campaign (Consumer)					Underway	0.0385	0.0646	0.0219	0.0269	0.0198	0.0224	0.0224	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	0.0026	0.0071	0.0023	0.0059	0.0059	C

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 COMPLETION DATE	ACTUAL COMPLETION DATE	EMISSIONS						Project Category *
					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	0.0040	-0.0005	0.0036	-0.0004	TR
125	X	1999-04	VDOT	Transit Center at 7 Corners	X				2002		0.0006	0.0009	0.0003	0.0004	0.0003	0.0003	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	0.0081	0.0109	0.0073	0.0090	C
131	X	2000-05	MDOT	Various park and Ride Lots	x				2002	2003	0.0040	0.0154	0.0022	0.0064	0.0020	0.0053	C
132	X	2000-05	MDOT	Signal Systems	X				Varies	on-going	0.0017	0.0000	0.0016	0.0000	0.0009	0.0000	TR
133	X	2000-05	VDOT	450 Spaces at Gambrell/Hooes Rds. Park and Ride			X		2002	2004	0.0040	0.0085	0.0023	0.0036	0.0020	0.0029	C
134	X	2000-05	VDOT	300 Spaces at Backlick Rd			X		2003	2006	0.0029	0.0062	0.0016	0.0026	0.0015	0.0021	C
135	X	2000-05	VDOT	Accotink-Gateway Connector Trail			X		2002	2005	0.0040	0.0047	0.0023	0.0020	0.0020	0.0016	C
136	X	2000-05	VDOT	Columbia Pike Trail			X		2000	2001, 2005	0.0034	0.0038	0.0019	0.0016	0.0018	0.0013	C
137	X	2000-05	VDOT	Lee Highway trail			X		2000	2005	0.0017	0.0019	0.0010	0.0008	0.0009	0.0007	C
138	X	2000-05	VDOT	Arlington Bus Shelter Improvements			X		2005	2005	0.0006	0.0005	0.0003	0.0002	0.0003	0.0002	C
139	X	2000-05	VDOT	Pentagon Metrostation Improvements	X					2003	0.0046	0.0081	0.0026	0.0034	0.0023	0.0028	C
140	X	2000-05	MDOT	East/West Intersection Improvements			X		2005	2005	0.0235	0.0119	0.0133	0.0049	0.0120	0.0041	C
141	X	2001-06	Feds	Federal Transit/Ridesharing subsidy	X				on-going		0.0584	0.0905	0.0330	0.0377	0.0298	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 23 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	0.0160	0.0426	0.0091	0.0117	0.0100	0.0168	TR
146	X	2003-08	DC	Bicycle Lane in D. C. (35 Mile)			X		2005	2006	0.0095	0.0085	0.0054	0.0035	0.0049	0.0029	C (TCM)
147	X	2003-08	DC	Bicycle Racks in D. C. (500)	X				2005	2004	0.0013	0.0009	0.0007	0.0004	0.0007	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	0.0011	0.0013	0.0010	0.0011	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	0.0358	0.0555	0.0203	0.0231	0.0183	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	0.0074	0.0083	0.0067	0.0069	C

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 COMPLETION DATE	ACTUAL COMPLETION DATE	EMISSIONS						Project Category *
					FULL	SCALED-BACK	UNDER-WAY	REM			2010		2020		2030		
											VOC	NOX	VOC	NOX	VOC	NOX	
153	X	2003-08	MDOT	Commuter Tax Credit	X				2005	n/a	0.0782	0.1223	0.0442	0.0509	0.0399	0.0423	C
155		2003-08	MDOT	Employer Vanpool Program (WWB)				X	2005		0.0018	0.0041			0.0009	0.0014	C
156	X	2003-08	MDOT	Green Line Link				X	2005	n/a	0.0026	0.0047	0.0014	0.0019	0.0013	0.0016	C
157	X	2003-08	MDOT	Park & Ride Lots - Southern Maryland				X	2005	2005	0.0050	0.0109	0.0028	0.0045	0.0025	0.0038	C
158	X	2003-08	MDOT	Prince George's County- Bus Exp				X	2005	n/a	0.0358	0.0657	0.0203	0.0273	0.0183	0.0227	C
159	X	2003-08	MDOT	MTA - Bus Service Expansion				X	2005	n/a	0.0081	0.0157	0.0046	0.0065	0.0041	0.0054	C
160	X	2003-08	MDOT	Ride- On - Super Discount				X	2005	n/a	0.0009	0.0014	0.0005	0.0006	0.0005	0.0005	C
161	X	2003-08	Regional	Regional Traveler Information Systems				X	2005		0.1006	0.5552	0.0572	0.1522	0.0517	0.1147	TR
162	X	2003-08	MDOT	Universal Transportation Access (MD + WMATA)				X	2005	n/a	0.0161	0.0249	0.0091	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	0.0026	0.0044	0.0025	0.0036	C (TCM)
164	X	2003-08	MCG	Bethesda Shuttle Bus Services	X				2004		0.0031	0.0048	0.0018	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	0.0003	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	0.0006	0.0007	0.0005	0.0006	C
168	X	2003-08	MCG	Annual Sidewalk Program	X				2004		0.0171	0.0264	0.0096	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	0.0021	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	0.0050	0.0043	0.0045	0.0036	C
171		2003-08	MDOT	Proposed Transportation Management District in Montgomery County (Rockville and Gaithersburg)				X	2005		0.0057	0.0078	0.0032	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	0.0053	0.0061	0.0047	0.0051	C
173	X	2003-08	MDOT	Neighborhood Sidewalks Improvements (Bike/Pedestrian)	X				2005	2004	0.0032	0.0017	0.0018	0.0007	0.0017	0.0006	C
174	X	2003-08	MDOT	Neighborhood Conservation Program - Neighborhood Sidewalks Improvements (Bikes/Pedestrian)		X			2005	n/a	0.0028	0.0014	0.0016	0.0006	0.0014	0.0005	C
175	X	2003-08	MDOT	Maryland bus Transit Service Expansion	X				2005	2004	0.0141	0.0323	0.0080	0.0134	0.0072	0.0112	C
176	X	2003-08	VDOT	Universal Transportation Access Program				X	2005	2005	0.0012	0.0019	0.0007	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	0.0012	0.0016	0.0011	0.0014	C
179	X	2003-08	VDOT	Telework Incentive Program (Telework VA) ¹	X				2005	2001	0.0007	0.0012	0.0004	0.0005	0.0004	0.0004	C
180	X	2003-08	VDOT	Commuter Choice				X	2005		0.0010	0.0014	0.0005	0.0006	0.0005	0.0005	C
181	X	2003-08	VDOT	Employer Shuttle Services				X	2005		0.0114	0.0166	0.0064	0.0069	0.0058	0.0057	C

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 COMPLETION DATE	ACTUAL COMPLETION DATE	2010		2020		2030		Project Category *
					FULL	SCALED-BACK	UNDER-WAY	REM			VOC	NOX	VOC	NOX	VOC	NOX	
184	X	2003-08	VDOT	Van Start / Van Save			X		2005	till 2006	0.0014	0.0026			0.0007	0.0009	C
185	X	2003-08	VDOT	Metro Shuttle Bus			X		2005	1999-2005	0.0012	0.0026	0.0007	0.0011	0.0006	0.0009	C
187	X	2003-08	VDOT	VRE Mid-Day Train Service	X				2005	2002	0.0016	0.0029	0.0009	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			0.0005	0.0007	C
191	X	2003-08	VDOT	Town of Leesburg P&R Lot			X		2005	2004	0.0019	0.0039	0.0011	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	0.0064	0.0093	0.0057	0.0077	C
193	X	2003-08	VDOT	Additional Parking at 4 Metro stations			X		2005	2001, 2005	0.0145	0.0333	0.0082	0.0139	0.0074	0.0115	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	0.0004	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	0.0007	0.0008	0.0006	0.0007	C (TCM)
202		2003-08	MDOT	Fleet Replacement (state auto fleet, gas to hybrid, 250 vehicles)				X	2005		0.0055	0.0133	0.0019	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		0.0075	0.0122	0.0042	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	0.0015	0.0025	0.0013	0.0021	C
206		2003-08	MDOT	Additional Bike Lockers at Metro-Stations				X	2005		0.0132	0.0209	0.0075	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	0.0165	0.0053	0.0069	0.0048	0.0057	C
208		2003-08	MDOT	CNG Fueling Stations				X	2005		0.1270	0.1170					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	0.0022	0.0008	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	0.0003	0.0002	0.0003	0.0002	C
213		2003-08	MDOT	Transit Prioritization - Queue Jumps				X	2005		0.0031	0.0037	0.0017	0.0016	0.0016	0.0013	C
214	X	2003-08	MDOT	Commuter Choice Benefit/Tax Credit - Marketing Expansion			X		2005	Ongoing	0.0546	0.0859	0.0309	0.0358	0.0279	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	0.0034	0.0036	0.0030	0.0030	C
216	X	2003-08	MDOT	Telecommuting Expansion ¹	X				2005	n/a	0.0645	0.1208	0.0365	0.0503	0.0329	0.0417	C
217		2003-08	MDOT	Replace older Diesel Engine in Public Sector vehicles				X	2005		0.0237	0.1300					H
218	X	2003-08	VDOT	MV-92 Telecommuting Program - Expanded ¹	X				2005	2003	0.0689	0.1290	0.0390	0.0537	0.0352	0.0446	C
219	X	2003-08	VDOT	MV-123 Employer Outreach for Public Sector Employees ²	X				2005	2003	0.0153	0.0237	0.0086	0.0099	0.0078	0.0082	C
220	X	2003-08	REGION	Signal System Optimization			X		2005	2005	0.4246	0.1552	0.2415	0.0425	0.2183	0.0321	TR
Available Emissions Credits											2.352	4.894	1.437	1.130	1.343	0.878	

TRANSPORTATION EMISSION REDUCTION MEASURES (CLRP Projects Only) Part A - Daily Ozone Precursor Emissions

Project Category: TR - Traffic Stream, C - Commute, H - Engine Technology (Heavy Duty 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
------------	---------	--------	--------	--------	--------	--------

GRAND TOTAL (Current Measures + CLRP plan)	2.345	5.493	1.612	1.692	1.695	1.558
--	-------	-------	-------	-------	-------	-------

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 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

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 COMPLETION DATE	ACTUAL COMPLETION DATE	TONS/ANNUM REDUCTION CREDITED						
					FULL	SCALED-BACK	UNDER-WAY	REM			2010		2020		2030		Project Category *
											PM2.5	Precursor NOx	PM2.5	Precursor NOx	PM2.5	Precursor NOx	
9	X	1994-99	MDOT	Park & Ride Lot - MD 210/ MD 373	X				2000	2003	0.0099	0.3565	0.0095	0.1451	0.0095	0.1199	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	0.0099	0.3565	0.0095	0.1451	0.0095	0.1199	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	0.0099	0.3565	0.0095	0.1451	0.0095	0.1199	C (TCM)
49	X	1995-00	MDOT	MARC Expansion Coaches	X				1999	2004	0.0922	3.3278	0.0891	1.3543	0.0891	1.1191	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	0.0033	0.1188	0.0032	0.0484	0.0032	0.0400	C (TCM)
56	X	1995-00	VDOT	Cherry Hill VRE Access			X			2007	0.0791	2.8524	0.0764	1.1608	0.0764	0.9593	C (TCM)
58	X	1995-00	WMATA	Bus Replacement (172 buses)	X				1998	1998	0.9655	34.8307	0.9325	14.1746	0.9325	11.7135	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	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	C
61	X	1995-00	MCG	Bicycle Facilities			X		FY99		0.0066	0.2377	0.0064	0.0967	0.0064	0.0799	C
62	X	1995-00	MCG	Pedestrian Facilities to Metrorail			X				0.0264	0.9508	0.0255	0.3869	0.0255	0.3198	C
63	X	1995-00	MDOT	MARC Replacement Coaches	X				1999	2004	0.0395	1.4262	0.0382	0.5804	0.0382	0.4796	C
64	X	1995-00	MDOT	MARC Expansion Coaches	X				1999	2004	0.3426	12.3603	0.3309	5.0301	0.3309	4.1568	C (TCM)
66	X	1995-00	VDOT	Commuter Lots - District Wide			X		varies	1995, 2000	0.1087	3.9220	0.1050	1.5961	0.1050	1.3190	C
67	X	1995-00	VDOT	I-66 and Stringfellow Rd. Park and Ride	X				2000	2000 end	0.0659	2.3770	0.0636	0.9673	0.0636	0.7994	C
68	X	1995-00	VDOT	Lake Ridge Park and Ride (now called Tacketts Mill lot)	X					1999/2000	0.0329	1.1885	0.0318	0.4837	0.0318	0.3997	C
69	X	1995-00	VDOT	Bicycle Trails and Facilities			X		varies	varies	0.0560	2.0204	0.0541	0.8222	0.0541	0.6795	C
70	X	1995-00	VDOT	Improved Access to Metrorail Stations			X		varies	2000-2010	0.0033	0.1188	0.0032	0.0484	0.0032	0.0400	C
71	X	1995-00	VDOT	I-66 HOV access at Monument Dr.	X					1997	0.0659	2.3770	0.0636	0.9673	0.0636	0.7994	C
72	X	1995-00	DC	Bicycle Facilities		X					0.0659	2.3770	0.0636	0.9673	0.0636	0.7994	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
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 COMPLETION DATE	ACTUAL COMPLETION DATE	TONS/ANNUM REDUCTION CREDITED						
					FULL	SCALED-BACK	UNDER-WAY	REM			2010		2020		2030		Project Category *
											PM2.5	Precursor NOx	PM2.5	Precursor NOx	PM2.5	Precursor NOx	
74	X	1995-00	REGION	M-47 Integrated Ridesharing	X				on-going	0.5025	17.4290	0.4853	7.0961	0.4853	5.8907	C	
75	X	1995-00	REGION	M-92 Telecommuting Support	X				on-going	0.7777	27.425	0.7511	11.1663	0.7511	9.2494	C	
77		1996-01	VDOT	Duke Street Pedestrian Bridge				2005	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	0.0099	0.3565	0.0095	0.1451	0.0095	0.1199	C	
81	X	1996-01	VDOT	Arlington County Metrocheck Program	X			1997	1997 Onwards	0.0099	0.3565	0.0095	0.1451	0.0095	0.1199	C	
82	X	1996-01	VDOT	Old Dominion Drive Bike Trail				2000	2004	0.0033	0.1188	0.0032	0.0484	0.0032	0.0400	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	0.0033	0.1188	0.0032	0.0484	0.0032	0.0400	C	
90	X	1996-01	REGION	M-47c Employer Outreach / Guaranteed Ride Home	X				on-going	5.7371	204.265	5.5409	83.1721	5.5409	68.8075	C	
91	X	1996-01	REGION	M-70a Bicycle Parking				1999		0.0231	0.8319	0.0223	0.3386	0.0223	0.2798	C	
92	X			M-92 Telecommuting Support ¹	Combined with item #75											C	
95	X	1997-02	MCG	Germantown Transit Center				2004		0.0626	2.2581	0.0605	0.9190	0.0605	0.7594	C (TCM)	
102	X	1997-02	PG	Prince George's County Bus Replacement	X			1998	1998	0.0345	1.2440	0.0333	0.5062	0.0333	0.4183	SP (TCM)	
106	X	1997-02	VDOT	PRTC Employer Commuting Outreach Program	X				1977 on-going	0.0016	0.0594	0.0016	0.0242	0.0016	0.0200	C	
107	X	1997-02	VDOT	PRTC Multimodal Strategic Marketing Implementation Plan	X				1977 on-going	0.0016	0.0594	0.0016	0.0242	0.0016	0.0200	C	
108	X	1997-02	MDOT	M-103 Taxicab Replacement in Maryland ²				1999	On-going	1.0249	36.9731	0.9899	15.0465	0.9899	12.4340	SP	
109	X	1997-02	REGION	M-70b Employer Outreach for Bicycles	X			1998	on going	0.0118	0.4461	0.0114	0.1817	0.0114	0.1491	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	0.6196	22.3497	0.5984	9.0954	0.5984	7.5162	SP	
112	X	1998-03	MCG	Montgomery County Bus Replacement	X				Ongoing	0.1035	3.7319	0.0999	1.5187	0.0999	1.2550	SP	
113	X	1998-03	PG	Prince George's County Bus Replacement	X			1998	Ongoing	0.0077	0.2764	0.0074	0.1125	0.0074	0.0930	SP	
114	X	1998-03	FDC	Frederick County Bus Replacement	X					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	SP	
117	X	1998-03	VDOT	Arlington County Four Mile Run Bike Trail				1999	delayed	0.0033	0.1188	0.0032	0.0484	0.0032	0.0400	C	
118	X	1998-03	VDOT	Northern Virginia Turn Bays	X			2000	1998	0.0058	0.2092	0.0056	0.0851	0.0056	0.0703	TR	
119	X	1998-03	VDOT	Fairfax City Bus Replacement				2001	2003	n/a	n/a	n/a	n/a	n/a	n/a	SP	
121	X	1998-03	WMATA	WMATA Bus Replacement (252 buses)	X			2001	2001	1.4790	53.3518	1.4284	21.7119	1.4284	17.9421	SP	
122	X	97 & 98 TIP	REGION	M-101a Mass Marketing Campagin (Consumer)					Underway	0.4554	16.1981	0.4398	6.5955	0.4398	5.4570	C	

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 COMPLETION DATE	ACTUAL COMPLETION DATE	TONS/ANNUM REDUCTION CREDITED						
					FULL	SCALED-BACK	UNDER-WAY	REM			2010		2020		2030		Project Category *
											PM2.5	Precursor NOx	PM2.5	Precursor NOx	PM2.5	Precursor NOx	
123	X	1999-04	MDOT	Various Park and Ride Lots(I-270/MD124, 450 & I-170/MD-75, 54 spaces)	X				2001/1999	2001	0.1186	4.2786	0.1146	1.7412	0.1146	1.4389	C
124	X	1999-04	MDOT	Signal Systems (197/MD-198, MD-382 TO US-301,US301)	X				2000	2002	-0.0116	-0.4184	-0.0112	-0.1703	-0.0112	-0.1407	TR
125	X	1999-04	VDOT	Transit Center at 7 Corners	X				2002		0.0066	0.2377	0.0064	0.0967	0.0064	0.0799	C
126	X	1999-04	VDOT	Falls Church Clean Diesel Bus Service	X				2000	2003	0.0192	0.6911	0.0185	0.2812	0.0185	0.2324	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	0.1812	6.5367	0.1750	2.6602	0.1750	2.1983	C
131	X	2000-05	MDOT	Various park and Ride Lots	x				2002	2003	0.1071	3.8639	0.1035	1.5725	0.1035	1.2994	C
132	X	2000-05	MDOT	Signal Systems	X				Varies	on-going	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	TR
133	X	2000-05	VDOT	450 Spaces at Gambrill/Hoes Rds. Park and Ride			X		2002	2004	0.0593	2.1393	0.0573	0.8706	0.0573	0.7194	C
134	X	2000-05	VDOT	300 Spaces at Backlick Rd			X		2003	2006	0.0428	1.5450	0.0414	0.6288	0.0414	0.5196	C
135	X	2000-05	VDOT	Accotink-Gateway Connector Trail			X		2002	2005	0.0329	1.1885	0.0318	0.4837	0.0318	0.3997	C
136	X	2000-05	VDOT	Columbia Pike Trail			X		2000	2001, 2005	0.0264	0.9508	0.0255	0.3869	0.0255	0.3198	C
137	X	2000-05	VDOT	Lee Highway trail			X		2000	2005	0.0132	0.4754	0.0127	0.1935	0.0127	0.1599	C
138	X	2000-05	VDOT	Arlington Bus Shelter Improvements			X		2005	2005	0.0033	0.1188	0.0032	0.0484	0.0032	0.0400	C
139	X	2000-05	VDOT	Pentagon Metrostation Improvements	X					2003	0.0560	2.0204	0.0541	0.8222	0.0541	0.6795	C
140	X	2000-05	MDOT	East/West Intersection Improvements			X		2005	2005	0.0824	2.9712	0.0795	1.2092	0.0795	0.9992	C
141	X	2001-06	Feds	Federal Transit/Ridesharing subsidy	X				on-going		0.6293	22.7002	0.6078	9.2380	0.6078	7.6341	C
142	X	2002-07	WMATA	100 CNG buses	X				2002		0.5203	18.7699	0.5025	7.6386	0.5025	6.3123	SP (TCM)
143	X	2002-07	WMATA	ULSD with CRT filters			X		on-going		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	H (TCM)
144	X	2003-08	DC	Replace 23 12 Taxicabs with CNG cabs			X		2005	2006	0.0602	2.1700					H
145	X	2003-08	DC	D.C.Incident Response & TrafficManagement System	X				2005	2004	0.2859	10.3131	0.2761	4.1970	0.2761	3.4683	TR
146	X	2003-08	DC	Bicycle Lane in D. C. (35 Mile)			X		2005	2006	0.0443	2.1829	0.0428	0.8897	0.0428	0.7095	C (TCM)
147	X	2003-08	DC	Bicycle Racks in D. C. (500)	X				2005	2004	0.0041	0.2486	0.0040	0.1014	0.0040	0.0794	C (TCM)
148	X	2003-08	DC	External Bicycle Racks on WMATA Buses in D. C. (600)	X				2005	2003	0.0214	0.7740	0.0206	0.3152	0.0206	0.2601	C (TCM)
149		2003-08	DC	CNG Rental Cars (18)				X	2005	Removed	0.0008	0.0276					SP
150	X	2003-08	DC	Sidewalks in D.C. (\$ 5 million)	X				2005	2004	0.3818	13.9434	0.3688	5.6779	0.3688	4.6821	C

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 COMPLETION DATE	ACTUAL COMPLETION DATE	TONS/ANNUM REDUCTION CREDITED						
					FULL	SCALED-BACK	UNDER-WAY	REM			2010		2020		2030		Project Category *
											PM2.5	Precursor NOx	PM2.5	Precursor NOx	PM2.5	Precursor NOx	
151	X	2003-08	DC	CNG Refuse Haulers (2)	X				2005	2004	0.0077	0.2764					H (TCM)
152	X	2003-08	DC	Circulator /Feeder Bus Routes	X				2005	2003	0.1373	5.0295	0.1325	2.0481	0.1325	1.6881	C
153	X	2003-08	MDOT	Commuter Tax Credit			X		2005	n/a	0.8434	30.6955	0.8145	12.4995	0.8145	10.3114	C
155		2003-08	MDOT	Employer Vanpool Program (WWB)				X	2005	Removed	0.0312	1.0252	0.0301	0.0417	0.0301	0.0349	C
156	X	2003-08	MDOT	Green Line Link			X		2005	n/a	0.0338	1.1686	0.0326	0.4758	0.0326	0.3951	C
157	X	2003-08	MDOT	Park & Ride Lots - Southern Maryland			X		2005	2008	0.0729	2.4009	0.0703	0.9773	0.0703	0.8170	C
158	X	2003-08	MDOT	Prince George's County- Bus Exp			X		2005	n/a	0.4736	16.3874	0.4578	6.6719	0.4578	5.5404	C
159	X	2003-08	MDOT	MTA - Bus Service Expansion			X		2005	n/a	0.1147	3.9082	0.1108	1.5911	0.1108	1.3240	C
160	X	2003-08	MDOT	Ride- On - Super Discount			X		2005	n/a	0.0097	0.3547	0.0094	0.1445	0.0094	0.1191	C
161	X	2003-08	Regional	Regional Traveler Information Systems			X		2005		3.7282	134.4892	3.6007	54.7315	3.6007	45.2286	TR
162	X	2003-08	MDOT	Universal Transportation Access (MD + WMATA)			X		2005	n/a	0.1712	6.2518	0.2414	3.7169	0.2414	3.0650	C
163	X	2003-08	MCG	Construction of 1300 additional Parking Spaces at Grosvenor Metro Garage	X				2004		0.1157	3.7816	0.1653	2.5458	0.1653	2.0993	C (TCM)
164	X	2003-08	MCG	Bethesda Shuttle Bus Services	X				2004		0.0327	1.1987	0.3158	0.4882	0.0316	0.4023	C
165	X	2003-08	MCG	External Bicycle Racks on Ride-On Buses in Montgomery County	X				2004		0.0066	0.2414	0.0064	0.0983	0.0064	0.0811	C
166	X	2003-08	MCG	New CNG Powered Light Duty Vehicle fleet in the County	X				2004		0.0004	0.0138					SP
167	X	2003-08	MCG	Free Bus Service on Selected Routes on I-270	X				2004		0.0114	0.4152	0.0110	0.1691	0.0110	0.1394	C
168	X	2003-08	MCG	Annual Sidewalk Program	X				2004		0.1818	6.6397	0.1756	2.7038	0.1756	2.2296	C
169	X	2003-08	MDOT	Bethesda Breeze/International Express Metrobus				X	2005	n/a	0.0357	1.3422	0.0345	0.5466	0.0345	0.4491	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	0.0645	2.6461	0.0623	1.0779	0.0623	0.8764	C
171		2003-08	MDOT	Proposed Transportation Management District in Montgomery County (Rockville and Gaithersburg)				X	2005	Removed	0.0513	1.9714	0.0495	0.8029	0.0495	0.6579	C
172	X	2003-08	MDOT	Sidewalks (Bikes/Pedestrian) at / near Rail Stations	X				2005	2002	0.1017	3.6896	0.0983	1.5024	0.0983	1.2400	C
173	X	2003-08	MDOT	Neighborhood Sidewalks Improvements (Bike/Pedestrian)	X				2005	2004	0.0039	0.4468	0.0038	0.1823	0.0038	0.1374	C
174	X	2003-08	MDOT	Neighborhood Conservation Program - Neighborhood Sidewalks Improvements (Bikes/Pedestrian)		X			2005	n/a	0.0034	0.3909	0.0033	0.1595	0.0033	0.1202	C
175	X	2003-08	MDOT	Maryland bus Transit Service Expansion	X				2005	2004	0.2449	8.0083	0.2366	3.2599	0.2366	2.7281	C
176	X	2003-08	VDOT	Universal Transportation Access Program			X		2005	2005	0.0129	0.4688	0.0125	0.1909	0.0125	0.1575	C
177	X	2003-08	VDOT	Interactive Rideshare & Kiosk Initiative			X		2005		0.0051	0.1771	0.0049	0.0721	0.0049	0.0599	C
178	X	2003-08	VDOT	Mobile Commuter Stores			X		2005		0.0283	0.9788	0.0273	0.3985	0.0273	0.3297	C

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 COMPLETION DATE	ACTUAL COMPLETION DATE	TONS/ANNUM REDUCTION CREDITED						
					FULL	SCALED-BACK	UNDER-WAY	REM			2010		2020		2030		Project Category *
											PM2.5	Precursor NOx	PM2.5	Precursor NOx	PM2.5	Precursor NOx	
179	X	2003-08	VDOT	Telework Incentive Program (Telework VA) ¹	X				2005	2001	0.0083	0.2992	0.0080	0.1218	0.0080	0.1006	C
180	X	2003-08	VDOT	Commuter Choice				X	2005		0.0095	0.3521	0.0091	0.1434	0.0091	0.1179	C
181	X	2003-08	VDOT	Employer Shuttle Services				X	2005		0.1119	4.1792	0.1081	1.7020	0.1081	1.3995	C
184	X	2003-08	VDOT	Van Start / Van Save				X	2005	till 2006	0.0185	0.6399	0.0179	0.2605	0.0179	0.2164	C
185	X	2003-08	VDOT	Metro Shuttle Bus				X	2005	1999-2005	0.0195	0.6403	0.0188	0.2606	0.0188	0.2179	C
187	X	2003-08	VDOT	VRE Mid-Day Train Service	X				2005	2002	0.0211	0.7275	0.0203	0.2962	0.0203	0.2461	C
190	X	2003-08	VDOT	Employer Vanpool Program (Bridge deck)				X	2005	2004 - 2008	0.0139	0.4694	0.0134	0.0000	0.0134	0.0000	C
191	X	2003-08	VDOT	Town of Leesburg P&R Lot				X	2005	2004	0.0290	0.9740	0.0279	0.3966	0.0279	0.3305	C
192	X	2003-08	VDOT	District-wide P&R Lots	X			X	2005	2001-2005	0.1645	5.5666	0.1588	2.2662	0.1588	1.8875	C
193	X	2003-08	VDOT	Additional Parking at 4 Metro stations				X	2005	2001, 2005	0.2527	8.2607	0.2440	3.3626	0.2440	2.8140	C
196	X	2003-08	WMATA	64 CNG Buses (Purchased in 2001)	X				2005	2004	0.3335	12.0304					SP (TCM)
197	X	2003-08	WMATA	250 CNG Buses (175 buses by Dec. 2004; 75 buses by mid 2006)				X	2005	2004-2006	0.0316	46.9938					SP
198	X	2003-08	WMATA	60 Engine Replacement (MY 1992 & 1993 MY buses)	X				2004	2004	0.2892	10.4326					SP
199	X	2003-08	WMATA	Car Sharing Program	X				2005	2004	0.0138	0.4492	0.0133	0.1828	0.0133	0.1530	C
200	X	2003-08	WMATA	Bikes Racks on WMATA Buses in VA (372 Bike Racks)	X				2005	2004	0.0194	0.7026	0.0187	0.2861	0.0184	0.2361	C (TCM)
202		2003-08	MDOT	Fleet Replacement (state auto fleet, gas to hybrid, 250 vehicles)					2005	Removed	0.0510	1.8383	0.0492	0.7481	0.0492	0.6182	SP
203	X	2003-08	MDOT	Replace 55 Montgomery County 10 yr. old buses w/ new CNG buses				X	2005	n/a	1.0962	39.5439	1.0587	16.0927	1.0587	13.2986	SP
204		2003-08	MDOT	Neighborhood Bus Shuttle (5 circulator routes)					2005	Removed	0.0853	3.0595	0.0824	1.2458	0.0824	1.0296	C
205	X	2003-08	MDOT	New Surface Parking at Transit Centers (500 spaces)				X	2005	n/a	0.0451	1.4784	0.0436	0.6018	0.0436	0.5035	C
206		2003-08	MDOT	Additional Bike Lockers at Metro-Stations				X	2005	Removed	0.1444	5.2364	0.1395	2.1323	0.1395	1.7599	C
207	X	2003-08	MDOT	Bike Facilities at PnR Lots or other similar location				X	2005	n/a	0.1184	4.1347	0.1144	1.6834	0.1144	1.3963	C
208		2003-08	MDOT	CNG Fueling Stations				X	2005	Removed	0.4483	16.1714					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	0.0223	0.8100	0.0216	0.3298	0.0216	0.2722	C (TCM)
212	X	2003-08	MDOT	Bike \ Pedestrian Trail - Anacostia River Walk				X	2005	n/a	0.0023	0.1206	0.0022	0.0492	0.0022	0.0389	C
213		2003-08	MDOT	Transit Prioritization - Queue Jumps				X	2005	Removed	0.0233	0.9455	0.0225	0.3851	0.0225	0.3136	C
214	X	2003-08	MDOT	Commuter Choice Benefit/Tax Credit - Marketing Expansion				X	2005	Ongoing	0.5935	21.5571	0.5732	8.7782	0.5732	7.2434	C

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 COMPLETION DATE	ACTUAL COMPLETION DATE	TONS/ANNUM REDUCTION CREDITED						
					FULL	SCALED-BACK	UNDER-WAY	REM			2010		2020		2030		Project Category *
											PM2.5	Precursor NOx	PM2.5	Precursor NOx	PM2.5	Precursor NOx	
215	X	2003-08	MDOT	Improvements to Pedestrian Access in TOD areas (4 locations)			X		2005	n/a	0.0587	2.1898	0.0566	0.8918	0.0566	0.7334	C
216	X	2003-08	MDOT	Telecommuting Expansion ¹	X				2005	n/a	0.8765	30.1378	0.8466	12.2700	0.8466	10.1977	C
217		2003-08	MDOT	Replace older Diesel Engine in Public Sector vehicles				X	2005	Removed	0.4981	17.9682					H
218	X	2003-08	VDOT	MV-92 Telecommuting Program - Expanded ¹	X				2005	2003	0.9361	32.1855	0.9041	13.1037	0.9041	10.8905	C
219	X	2003-08	VDOT	MV-123 Employer Outreach for Public Sector Employees ²	X				2005	2003	0.1629	5.9508	0.1574	2.4232	0.1574	1.9982	C
220	X	2003-08	REGION	Signal System Optimization			X		2005	2005	1.0421	37.5917	1.0065	15.2983	1.0065	12.6420	TR
Available Emissions Credits											25.326	990.642	23.029	358.494	22.745	296.403	

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 TAKEN	TIP CREDITED	AGENCY	PROJECT	IMPLEMENTATION STATUS				PROJECTED COMPLETION DATE	ACTUAL COMPLETION DATE	TONS/ANNUM REDUCTION CREDITED						Project Category
					FULL	SCALED- BACK	UNDER- WAY	REM			2010		2020		2030		
											PM2.5	Precursor NOx	PM2.5	Precursor NOx	PM2.5	Precursor NOx	
221	X	1995-00 TIP	REGION	M-24 Speed Limit Adherence					2010		3.7282	134.4889	3.8136	57.9425	1.4355	18.0353	TR
222		1996-01 TIP	MGC	Rock Spring Park Pedestrian Amenities				X			0.0278	1.0029	0.0000	0.0000	0.0000	0.0000	-
223	X	1996-01 TIP	MGC	Olney Transit Center Park and Ride					2015		0.0556	2.0058	0.0490	0.7443	0.0136	0.1705	C
224	X	1996-01 TIP	MGC	Damascus Park and Ride					2003		0.0278	1.0029	0.0245	0.3722	0.0068	0.0852	C
225	X	1996-01 TIP	DC	M-103 Taxicab Replacement (DC)					2015		0.0000	0.0000	4.8375	73.5000	11.6550	146.4300	H
226	X	STADIUM ANALYSIS		M-103 Taxicab Replacement (MD)				X			0.0000	0.0000	3.8700	58.8000	4.6620	58.5720	H
227	X	1997-02 TIP	MDOT	Shady Grove West Transit Center Park and Ride							0.0695	2.5073	0.0612	0.9304	0.0170	0.2131	C
228	X	1997-02 TIP	MGC	Olney Transit Center Park and Ride							0.0000	0.0000	0.0201	0.3053	0.0136	0.1705	C
229	X	1997-02 TIP	MGC	White Oak Park and Ride							0.1390	5.0145	0.1225	1.8608	0.0339	0.4262	C
230	X	1997-02 TIP	MGC	Damascus Park and Ride					2003		0.0000	0.0000	0.0075	0.1145	0.0051	0.0639	C
231	X	1997-02 TIP	MGC	Four Corners Transit Center					2015		0.0070	0.2507	0.0061	0.0930	0.0017	0.0213	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							0.0070	0.2507	0.0050	0.0763	0.0034	0.0426	C
234	X	1997-02 TIP	MGC	Shady Grove Parking Construction					2003		0.1321	4.7638	0.1163	1.7677	0.0322	0.4049	C
PLAN TOTAL											4.1661	150.2846	9.0634	137.7070	13.2177	166.0636	
GRAND TOTAL (Current Measures + CLRP plan)											29.492	1140.926	32.093	496.202	35.963	462.466	

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 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