ITEM 8 - Action
July 16, 2008

Approval of Air Quality Conformity Determination for the 2008 CLRP and the FY 2009-2014 TIP with NVTA Funded Projects

Staff Recommendation: If the Northern Virginia Transportation Authority (NVTA) funding has been identified by July 16, the Board will be asked to adopt Resolution R1-2009 finding that the 2008 CLRP and FY 2009-2014 TIP with NVTA funded projects conform with the requirements of the Clean Air Act Amendments of 1990.

Issues: None

Background: On June 18, the Board was briefed on the two versions of the draft 2008 CLRP and FY 2009-2014 TIP (with and without NVTA funded projects), and the related conformity assessments. If the NVTA funding has been identified by July 16, the Board will be asked under agenda items 8, 9 and 10 to approve the air quality conformity determination for the 2008 CLRP and FY 2009-2014 TIP with NVTA funded projects, the 2008 CLRP, and the FY 2009-2014 TIP with NVTA funded projects.

If NVTA funding has not been identified by July 16, the Board will be asked under agenda item 11 to approve the FY 2009 - 2014 TIP without NVTA funded projects

relying upon the air quality conformity determination for the 2007 CLRP as approved by the FHWA and FTA on June 11, 2008.

TPB R1-2009
July 16, 2008

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

RESOLUTION FINDING THAT THE 2008 CONSTRAINED LONG RANGE PLAN AND THE TRANSPORTATION IMPROVEMENT PROGRAM FOR FY 2009-2014 WITH NORTHERN VIRGINIA TRANSPORTATION AUTHORITY FUNDED PROJECTS CONFORM WITH THE REQUIREMENTS OF THE CLEAN AIR ACT AMENDMENTS OF 1990

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

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

WHEREAS, a work program was developed to address all procedures and requirements, including public and interagency consultation, and the work program was released for public comment on January 15 and approved by the TPB at its February 20, 2008 meeting; and

WHEREAS, on February 20, the TPB approved the major projects submitted for inclusion in the air quality conformity assessment for the 2008 CLRP and FY 2009-2014 TIP, on February 29, the Virginia Supreme Court declared that the taxing ability of the NVTA was unconstitutional; and

WHEREAS, the Virginia General Assembly acted by July 16 to restore the NVTA funding for the projects in the 2008 CLRP and FY 2009-2014 TIP; and

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

to 2005 levels; and

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

WHEREAS, while progress was made during 2008 in Congress and the legislatures of Maryland, Virginia, and District of Columbia to identify additional revenues for WMATA's future capital needs, this additional revenue was not assumed to be available in the financial plan and the transit ridership constraint to or through the core area was applied in the 2008 CLRP conformity analysis using 2010 ridership levels ; and

WHEREAS, on June 12, 2008, the draft Air Quality Conformity Determination of the 2008 CLRP and the FY 2009-2014 TIP with NVTA funded projects, the draft 2008 CLRP and the FY 2009-2014 TIP with NVTA projects and web-based information 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 July 16, 2008; and

WHEREAS, the analysis reported in *Air Quality Conformity Determination of the 2008 Constrained Long Range Plan and the FY 2009-2014 Transportation Improvement Program for the Washington Metropolitan Region*, dated July 16, 2008 demonstrates adherence to all mobile source emissions budgets for volatile organic compounds, nitrogen oxides, carbon monoxide and fine particle emissions (PM2.5), and demonstrates that PM2.5 emissions meet the requirement that such emissions are not greater than 2002 levels, meets all regulatory, planning and interagency consultation requirements, and therefore provides the basis for a finding of conformity of the plan and program with the requirements of the CAAA; and

WHEREAS, in the attached letter of July 9, 2008, MWAQC has provided favorable comments on the *Air Quality Conformity Determination of the 2008 Constrained Long Range Plan and the FY 2009-2014 Transportation Improvement Program for the Washington Metropolitan Region*, and also urged "... 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";

NOW, THEREFORE, BE IT RESOLVED THAT THE NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD determines that the 2008 Constrained Long Range Plan and the Transportation Improvement Program for FY 2009-2014 with NVTA Funded Projects 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

July 9, 2008

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 June 11, 2008 draft *Air Quality Conformity Determination Of The 2008 Constrained Long Range Plan And The FY2009-2014 Transportation Improvement Program For The Washington Metropolitan Region*. We are pleased the proposed transportation plan meets both the interim emissions tests and the proposed new motor vehicle emissions budgets for both the 8-hour ozone and $PM_{2.5}$ standards.

As allowed by EPA in the interim before 8-hour ozone and $PM_{2.5}$ 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. For $PM_{2.5}$, the region selected the build no greater than 2002 interim emissions test in this year's conformity analysis. We note that this analysis uses the same approach as the conformity determination for the 2007 CLRP and FY 2008-2013 TIP. The conformity analysis indicates that substantial reductions in transportation emissions will occur by 2010 and in succeeding years, resulting in transportation emissions well below the maximum allowable emission levels. These reductions were taken into account when establishing new motor vehicle emission budgets.

We were pleased that conformity was also tested against the new proposed motor vehicle emission budgets in the 8-hour ozone and PM2.5 State Implementation Plans submitted to EPA in 2007 and 2008. According to representatives from EPA Region III, the public comment period for the new 8-hour ozone budgets ended on April 21, 2008, and the budgets may be approved as soon as August 2008.

As you're aware, EPA has recently lowered the National Ambient Air Quality Standard (NAAQS) for both 8-hour ozone and $PM_{2.5}$. State Implementation Plans to meet these new standards will be due to EPA in 2013. Additional emission reductions may be needed to meet these new more stringent standards. As such, we continue to urge States and local governments to maintain their commitments to Transportation Emission Reduction Measures (TERMs) and other emission reduction measures to advance meeting the new ozone and particulate matter standards as soon as possible.

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.

Sincerely,

Hon. David Snyder, 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

July 9, 2008

To: Transportation Planning Board

From: Michael J. Clifford
Systems Planning Applications Director

Subject: Air Quality Conformity Assessment for the 2008 Update of the Constrained Long Range Plan (CLRP) and FY2009-2014 Transportation Improvement Program (TIP); Comments and Responses to Comments

INTRODUCTION

This memo documents: (1) summary results of the air quality conformity assessment of the 2008 CLRP and the FY2009-2014 TIP with respect to ozone season and fine particle (PM2.5) pollutants, and wintertime carbon monoxide (CO), and (2) comments received to date and responses to the comments upon the analysis. The results were presented to the TPB Technical Committee for review and comment, and have been endorsed by the committee. A public comment period for the Plan, TIP, and conformity assessment began at the June 12, 2008 TPB Citizens Advisory Committee meeting and ends on July 12, 2008.

Conformity assessment criteria vary by pollutant. Tests include adherence to mobile source emissions budgets in the case of ozone season pollutants (VOC and NOx) and CO, and a demonstration that forecast year PM 2.5 (including both directly emitted PM2.5 and precursor NOx) emissions are not greater than base year 2002 emissions. One hour ozone precursor mobile emissions budgets are taken from the Metropolitan Washington Air Quality Committee (MWAQC)'s Severe Area State Implementation Plan (SIP) (1-hour ozone non-attainment area) document, Plan to Improve Air Quality in the Washington, DC-MD-VA Region, February 19, 2004.

In addition, last year MWAQC completed the development of the 8-hour ozone SIP with new mobile emissions budgets, which also correspond to a different geographic area (relevant planning areas are shown in Exhibit 1). Similarly, in March 2008 MWAQC approved, and the state air agencies subsequently submitted to EPA, the region's PM2.5 Attainment Plan, which also contains proposed mobile source emissions budgets for direct PM2.5 and precursor NOx. Adherence to both the 8-hour ozone and PM2.5 SIP budgets is also documented in this report, even though EPA has not yet acted upon them.

BACKGROUND

On February 20, 2008 the TPB approved the scope of work and the project submissions for inclusion in the conformity analysis for the year 2008 update of the CLRP and FY2009-2014 TIP. Key technical inputs to the analysis included: Round 7.1 Cooperative Forecasts; the Version 2.2 Travel Demand Model utilizing the new project submissions, and reflecting updated transit service; EPA's Mobile6.2 Emissions Factor Model with use of 2005 vehicle registration data for all jurisdictions, use of hourly temperatures, relative humidity, barometric pressure and NOx rebuild effects.

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 2008 CLRP and FY2009-2014 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 (forecast years: 2009, 2010, 2020 and 2030). Wintertime carbon monoxide (CO) analyses for conformity were also conducted for the three later 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. Accordingly, staff applied seasonal adjustment factors to convert daily travel (annual average weekday traffic or AAWDT) to annual values.

These inventories address a primary conformity assessment criterion to demonstrate that emissions associated with the plan and program adhere to the established mobile source emissions levels. 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, and documented emissions benefits for each analysis year.

Plan Amendments and Program Elements

There have been some new projects and changes advanced for the CLRP / TIP in this year's approval cycle. Attachment A presents a listing of significant new projects or changes to existing major projects since the 2007 CLRP and the FY2008-2013 TIP were approved by the Board on January 16, 2008.

Land Activity Forecasts

This exercise included use of the Round 7.1 Cooperative Forecast data, which was originally approved for use in the 2007 CLRP air quality conformity analysis. The Round 7.1 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 7.1 reflects the Baltimore Metropolitan Council's 'Round 7' adopted figures.

Travel Modeling Process

For this conformity analysis staff used TPB's travel demand model, Version 2.2, with updated toll calculation capabilities. Using the Version 2.2 model, COG/TPB staff prepared travel demand forecasts for each of the required forecast years. Exhibit 1 presents the geographic areas for travel modeling and for emissions reporting for each non-attainment area. Exhibit 2 presents the resulting average weekday transit trips, vehicle trips, and vehicle miles traveled (VMT) results through time for each conformity analysis year, for the full modeled area.

Emissions Factors

Staff developed motor vehicle emissions factors through execution of EPA's MOBILE6.2 emissions factor model. These rates for each pollutant, shown for NOx using Fairfax County freeway data as an illustration in Exhibit 3, were developed following execution of the model in one mph speed increments, by jurisdiction, for each analysis year. The chart shows significantly reduced rates through time, primarily due to the impacts of having cleaner fuel and vehicles in the fleet. Exhibit 4 presents direct PM2.5 emissions rates through time for each of the three seasons; data are arrayed in a bar chart since these emissions rates do not vary by vehicle speed.

Emissions Analyses

Ozone Season and Wintertime CO – Daily Emissions

Prior to calculation of daily mobile source emissions, the above (AAWDT) travel forecasts produced through the travel demand modeling process 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 Exhibits 5 - 8 and indicate total VOC and NOx emissions for each analysis year. The charts show dramatic reductions throughout the period. Historical emissions reductions from the clean air act amendments 1990 base have been well documented in the past; 2030 VOC and NOx emissions represent about 12 and one half percent and less than 10 percent, respectively, of their 1990 levels. The results reflect the impact of the cleaner fuel / fleet and related programs, in conjunction with slowing VMT growth rates through time.

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 Exhibit 9 bar chart, exhibit similar dramatic reductions through time despite increases in vehicle trips and VMT in the forecast years. These reductions are also largely attributable to Tier II vehicle standards, cleaner fuels, and the heavy duty engine rule, and continue to generate additional emissions reductions through time as fleet turnover replaces older vehicles / truck engines with much cleaner ones.

Evaluation Criteria

Reference to Exhibits 5 – 9 provides a comparison of emissions levels associated with the CLRP and TIP to the maximum allowable for each pollutant. Net emissions for each forecast year are shown in comparison to emissions budgets, and are seen to be within the mobile budgets for all forecast years. Wintertime CO emissions (contained in a full technical report but not summarized here) follow these same general trends and are easily within the CO emissions budget level.

Exhibit 9 shows that both direct PM2.5 and precursor NOx emissions are much lower than base year 2002 conditions and are within the new mobile budgets, for all forecast years, satisfying this additional conformity assessment criterion for PM2.5. In view 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.

COMMENTS / RESPONSES TO COMMENTS

Comment: The Metropolitan Washington Air Quality Committee (MWAQC) provided written comments in its attached July 9, 2008 letter. Their letter notes that the proposed CLRP and TIP meet all mobile source emissions tests for conformity and also urges state and local governments to maintain their commitments to TERMs and other emissions reduction measures.

Response: The TPB appreciates MWAQC's support and, similarly, endorses the maintenance of commitments to TERMs and other emissions reduction measures.

SUMMARY

The analytical results described in this air quality assessment provide a basis for a determination by the TPB of conformity of the 2008 CLRP and the FY2009-2014 TIP.

Following: Exhibits 1-9
Attachment A

EXHIBIT 1
Washington, D.C. - Maryland - Virginia
Planning Areas

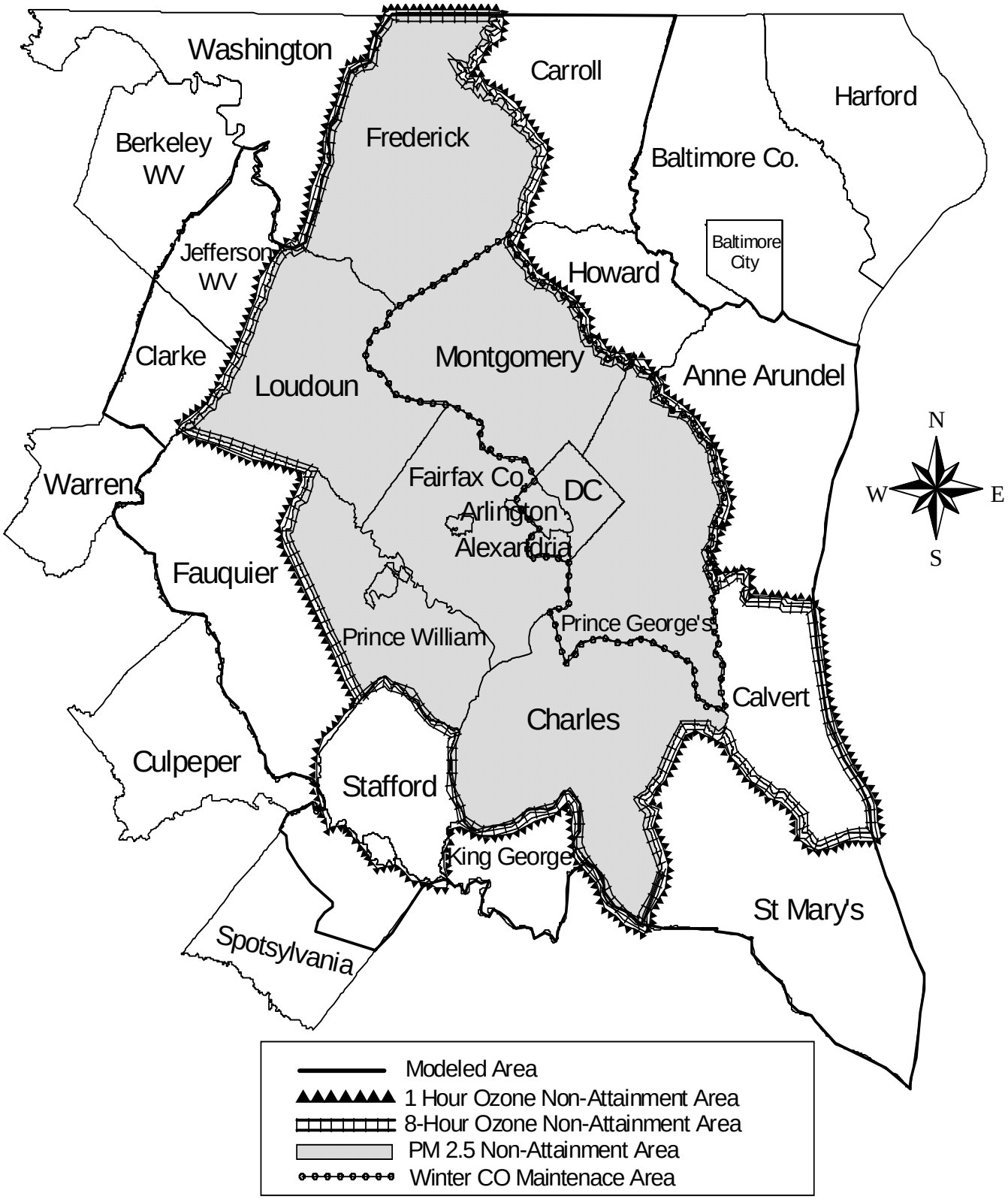


Exhibit 2

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

	2002	2009	2010	2020	2030
Transit Trips	1,058.9	1,132.5	1,163.4	1,406.8	1,516.1
Vehicle Trips	19,551.8	22,234.4	22,552.9	25,496.0	27,711.8
VMT	146,488.4	162,135.4	165,612.7	187,908.9	200,227.7

Adjustment Factors to Convert AAWDT to Appropriate Season:

Ozone Season AWDT: 1.05

Winter Season AWDT: 0.97

PM2.5 Annual:

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

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

Exhibit 3
2002-2030 NOx COMPOSITE MOBILE6.2 ARTERIAL RUNNING EMISSION RATES FOR FAIRFAX COUNTY

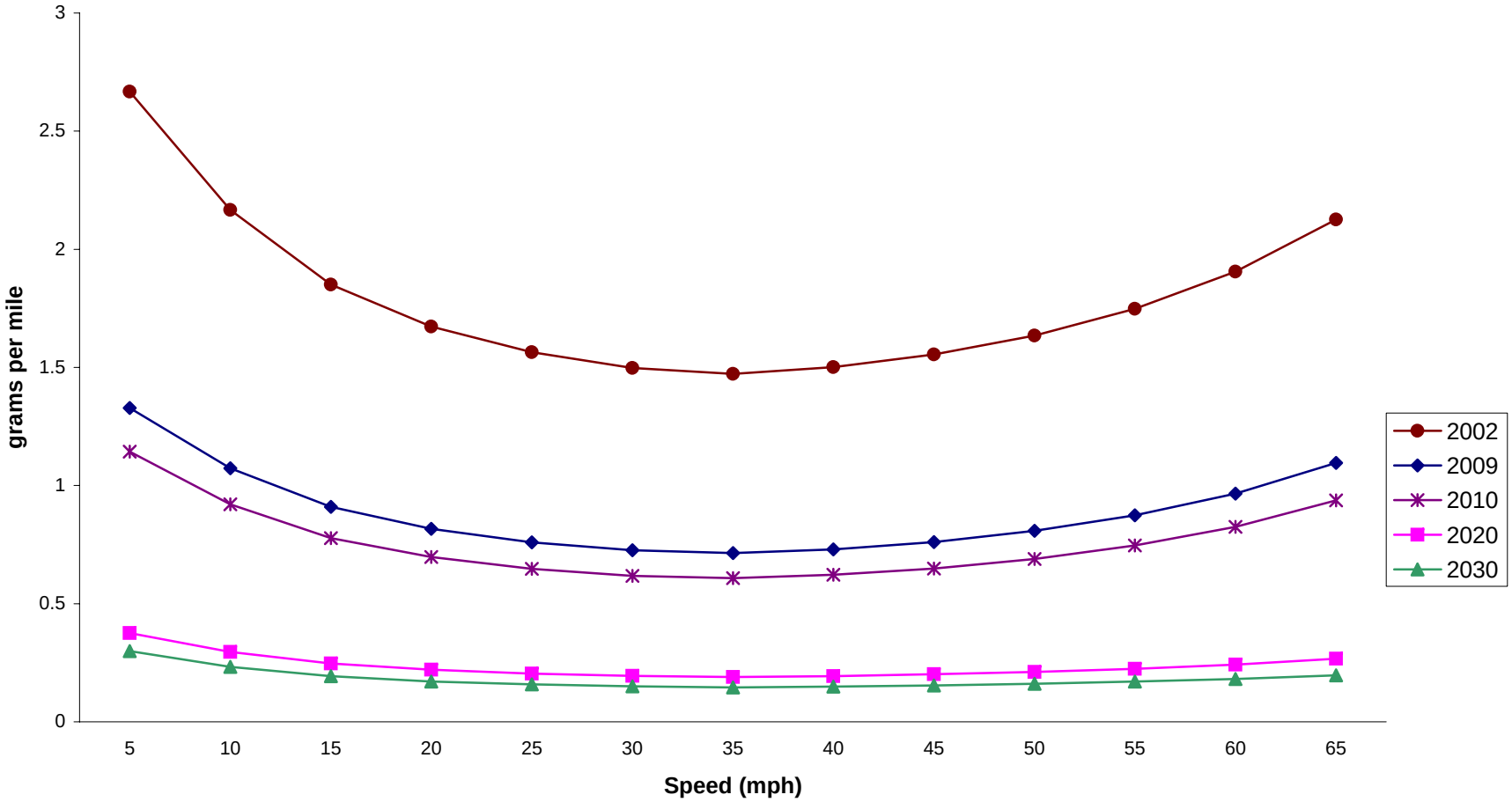


Exhibit 4
DIRECT PM2.5 EMISSION RATES FOR FAIRFAX COUNTY (MAJOR ROADS NETWORK)

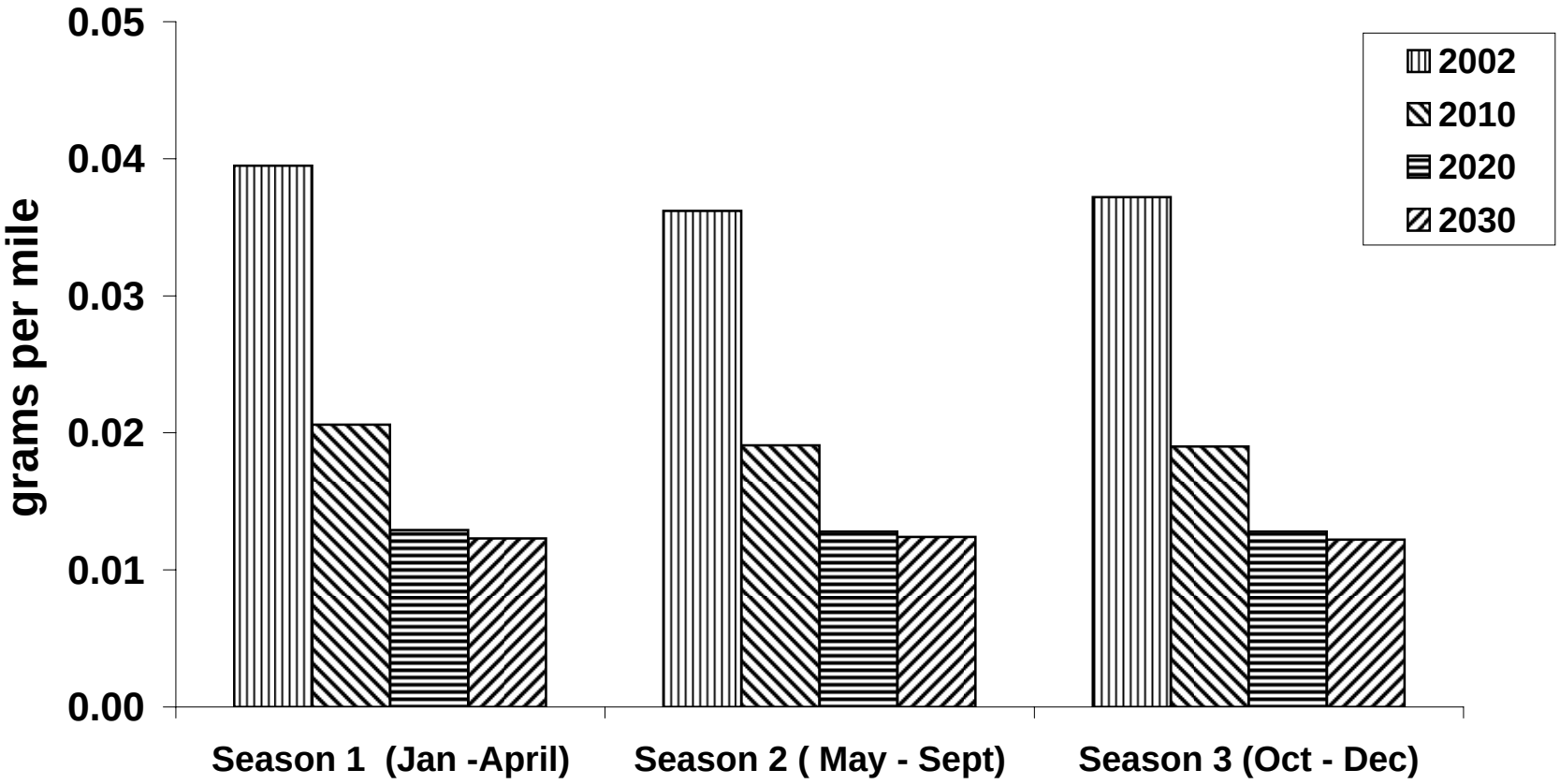


EXHIBIT 5
Mobile Source VOC Emissions for the 1-Hour Ozone Nonattainment Area 2008 CLRP and FY 2009-2014 TIP

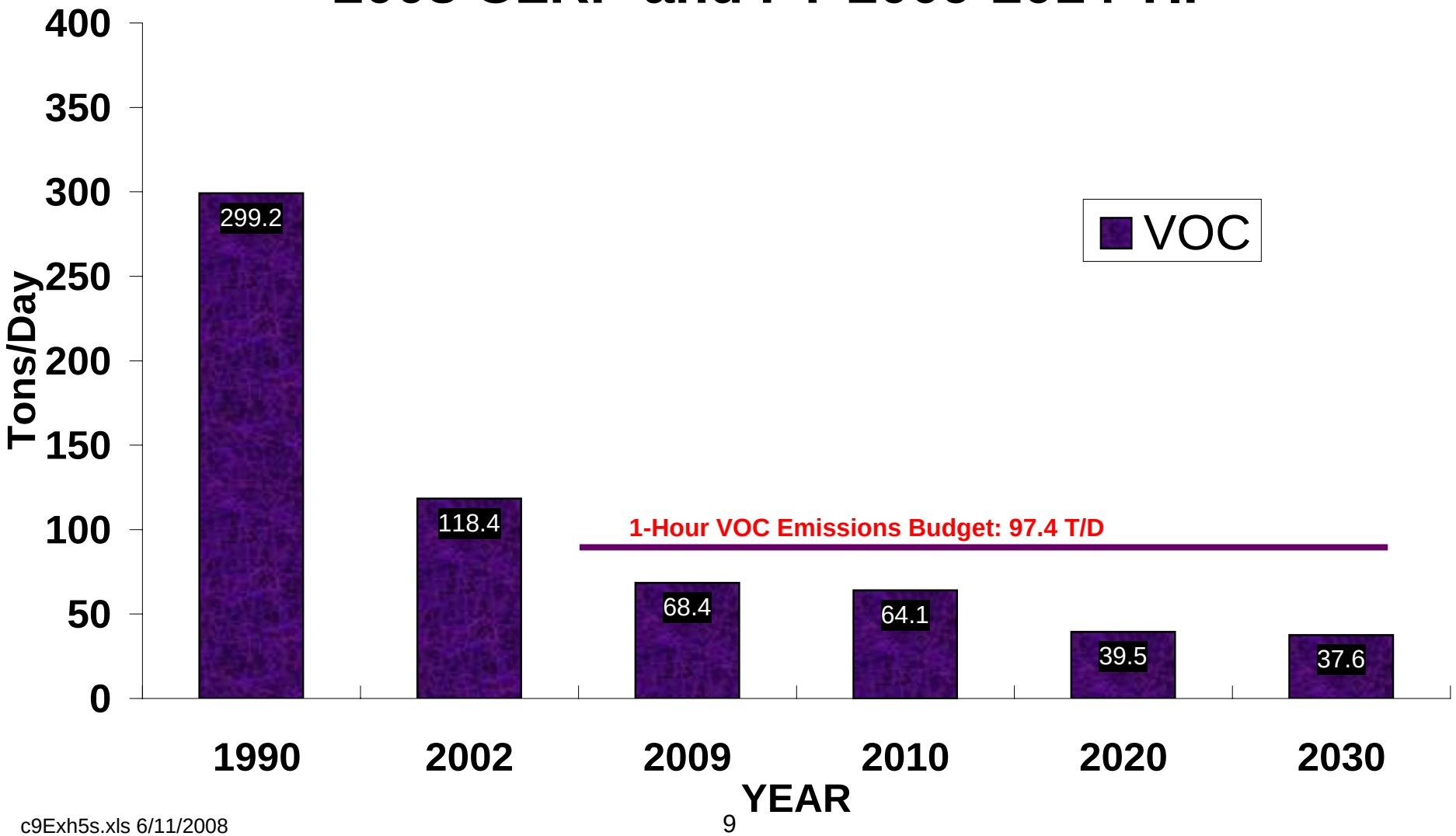


EXHIBIT 6
Mobile Source VOC Emissions for the 8-Hour Ozone Nonattainment Area 2008 CLRP and FY 2009-2014 TIP

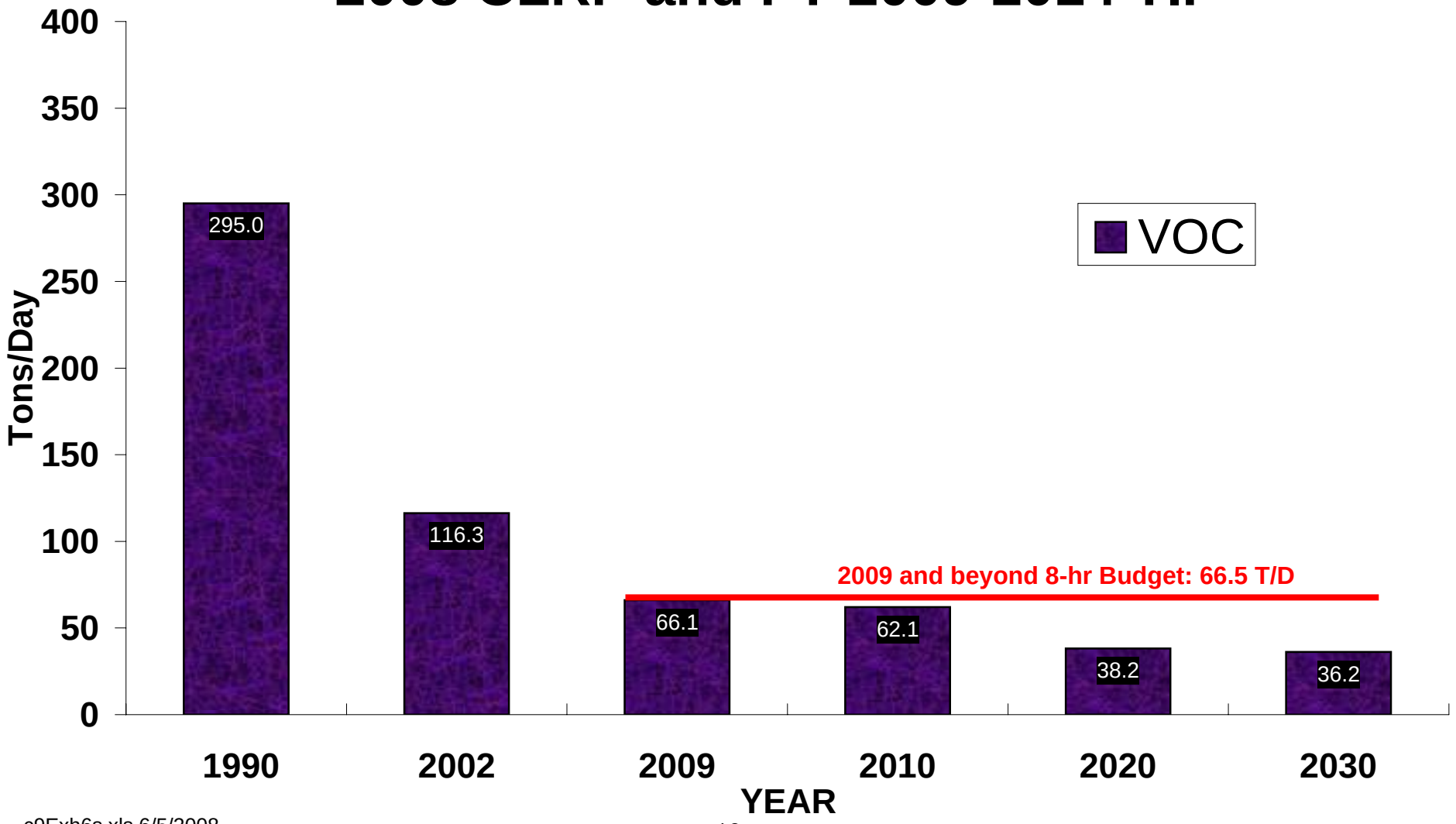


EXHIBIT 7
Mobile Source NOx Emissions for the 1-Hour Ozone Nonattainment Area 2008 CLRP and FY 2009-2014 TIP

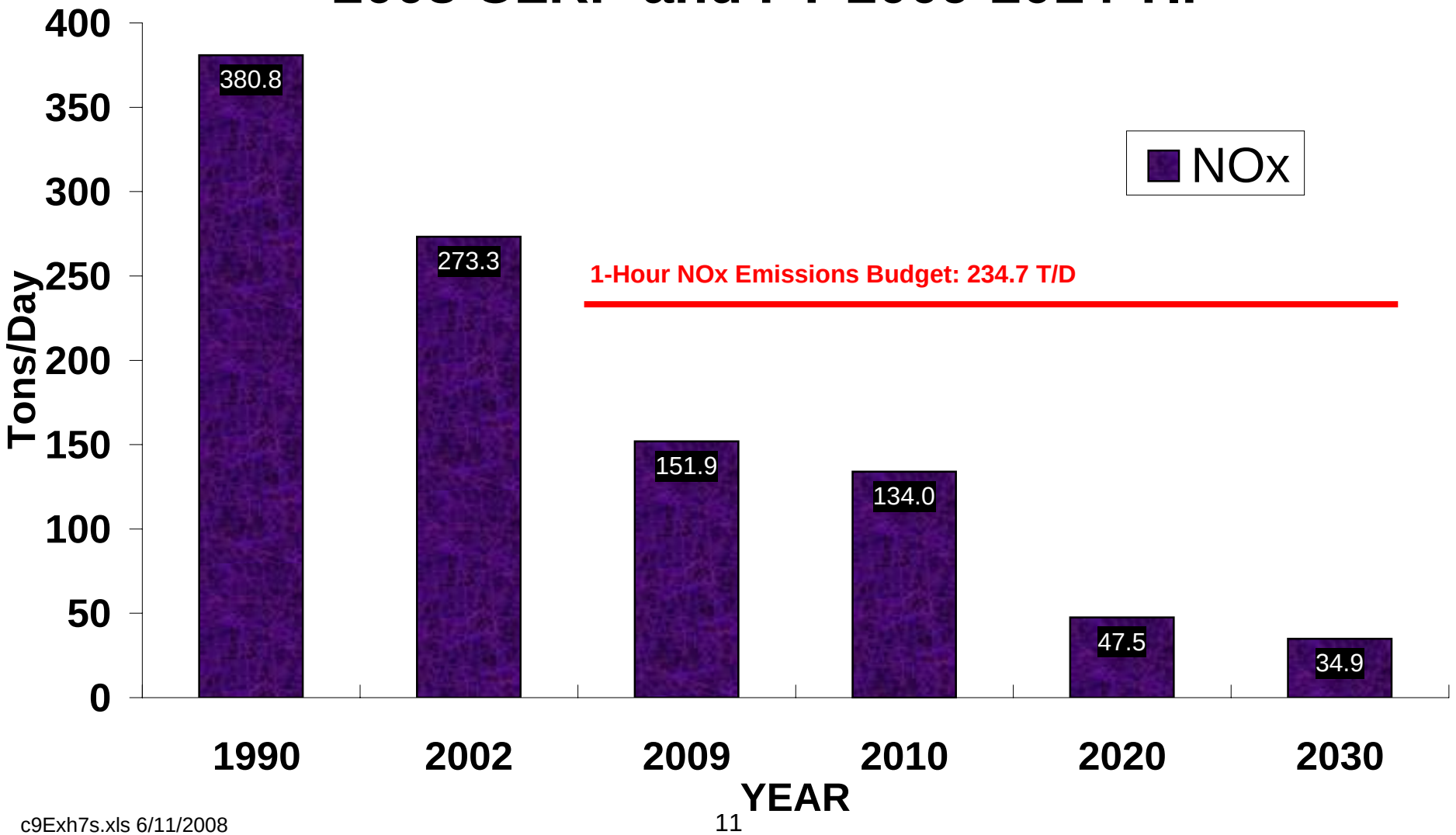
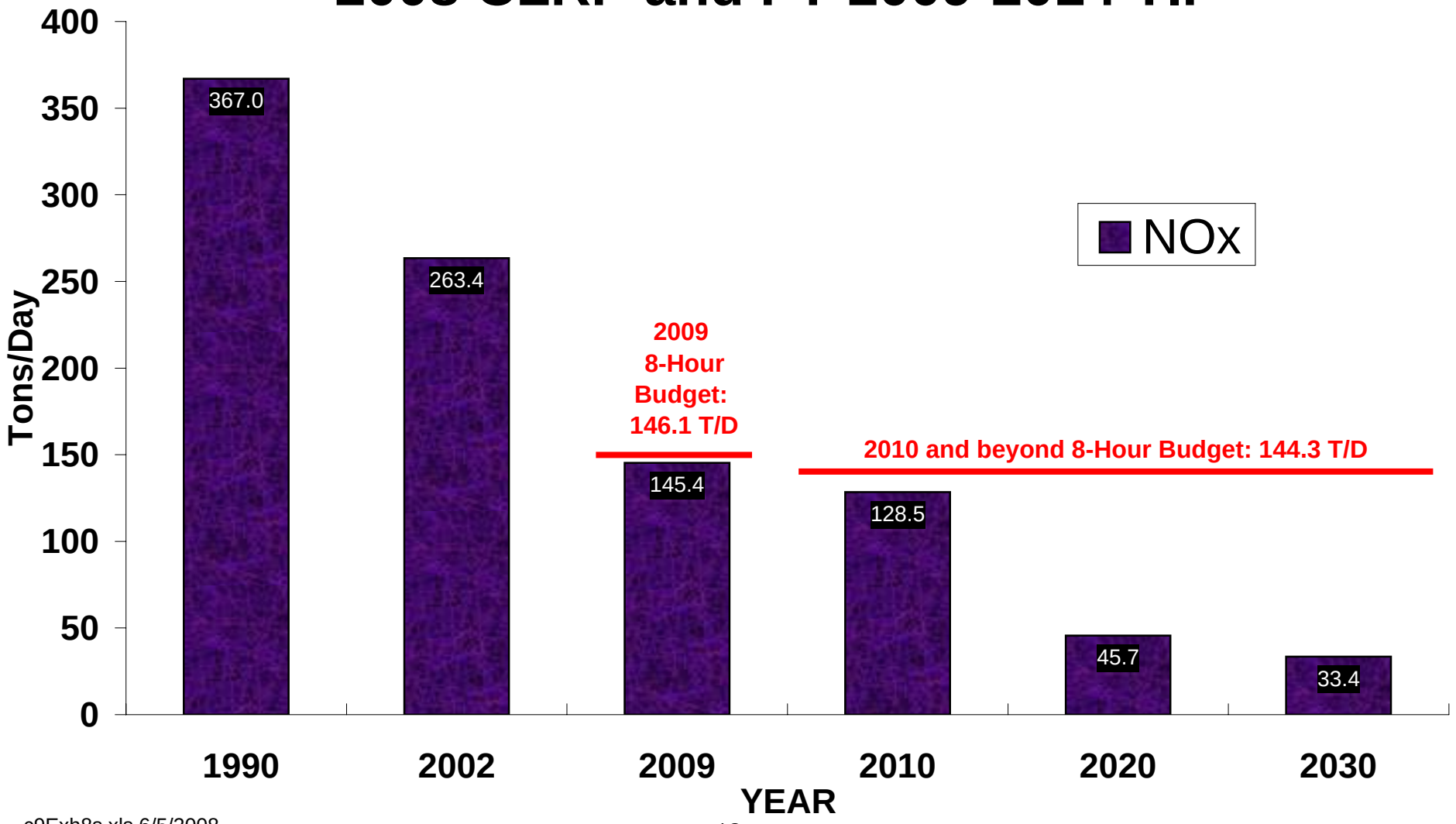
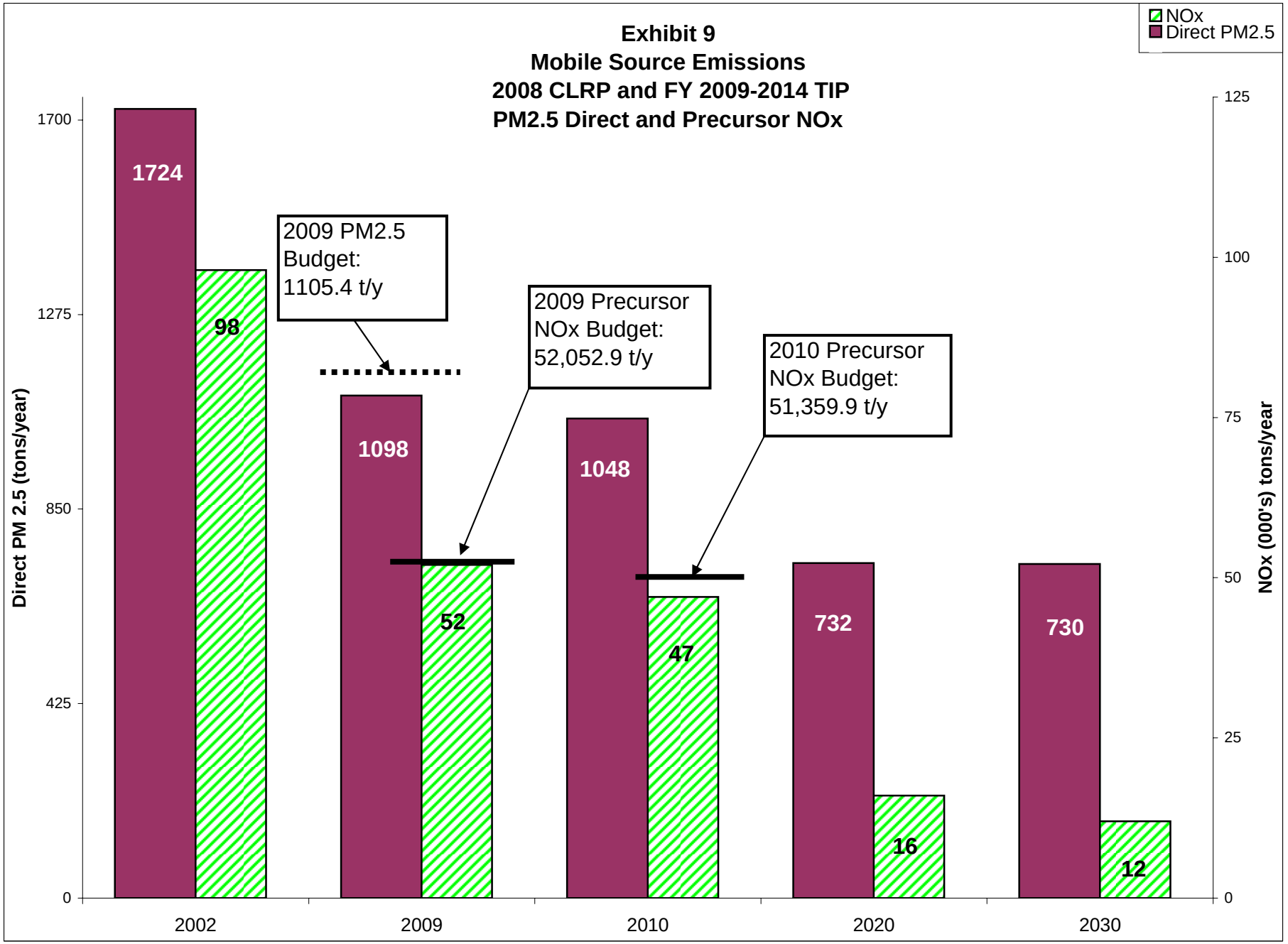


EXHIBIT 8
Mobile Source NOx Emissions for the 8-Hour Ozone Nonattainment Area 2008 CLRP and FY 2009-2014 TIP



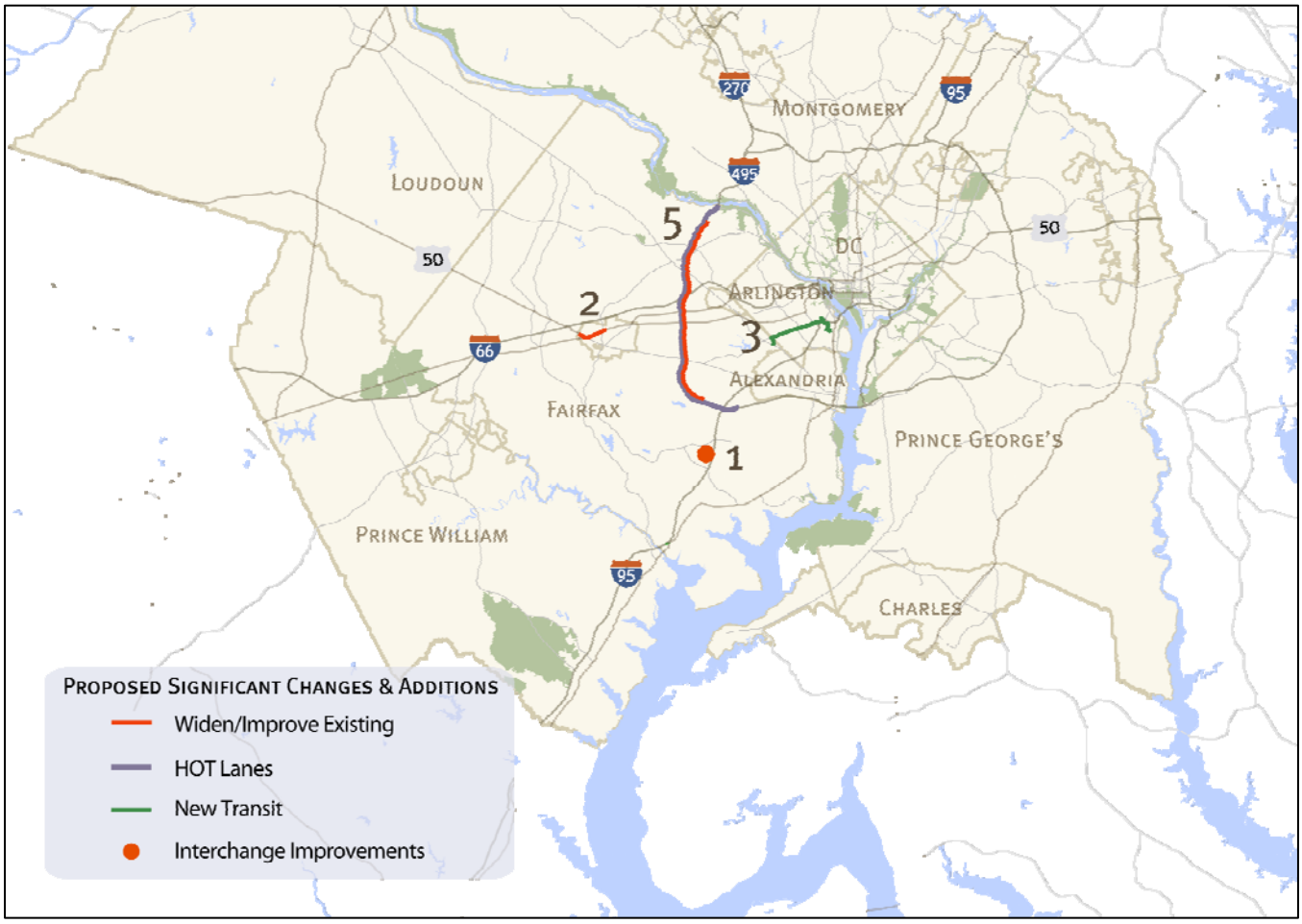


NOTE: The 2009 Precursor NOx emission total is 51,740.6 tons/year

ATTACHMENT A

Significant Additions and Changes to The 2008 Update to the Financially Constrained Long-Range Transportation Plan (CLRP)

Figure 1: Significant Additions and Changes to the 2008 Update to the CLRP



Significant Additions to the CLRP

1. Access to Ft. Belvoir Engineering Proving Grounds (EPG): I-95 and Fairfax County Parkway (BRAC)
2. Widen Segments of US 50 between Eaton Place and Jermantown Road Within the City of Fairfax
3. Columbia Pike Streetcar From Skyline to Pentagon City
4. Fairfax Connector Service Transit Development Plan (Not shown on map)

Significant Changes to the CLRP

5. I-495 Capital Beltway HOV-HOT Lanes
6. I-95/395 HOV-HOT-Bus Lanes Transit Plan Revisions (Not shown on map)

Significant Additions to the CLRP

1. Access to Ft. Belvoir Engineering Proving Grounds (EPG): I-95 and Fairfax County Parkway (BRAC)

Two projects have been proposed to meet expected demand at the Fort Belvoir EPG due to the Base Realignment and Closures (BRAC) act.

A. I-95 Access to Fort Belvoir includes the following improvements:

- Widen the existing ramp from southbound I-95 to the Fairfax County Parkway and EPG southern loop road with an additional barrier-separated lane, providing dedicated access to the EPG for DOD personnel only.
- A new reversible, single-lane approach bridge from the northbound HOV/Bus/HOT lanes to the EPG's southern loop road. This connection will provide access from the northbound I-95 HOV lanes in the morning. In the evening, access will reverse to the northbound I-95 general purpose lanes and the southbound HOV lanes.

Complete: 2011, 2013
Cost: $28.8 million
Source: Federal funding

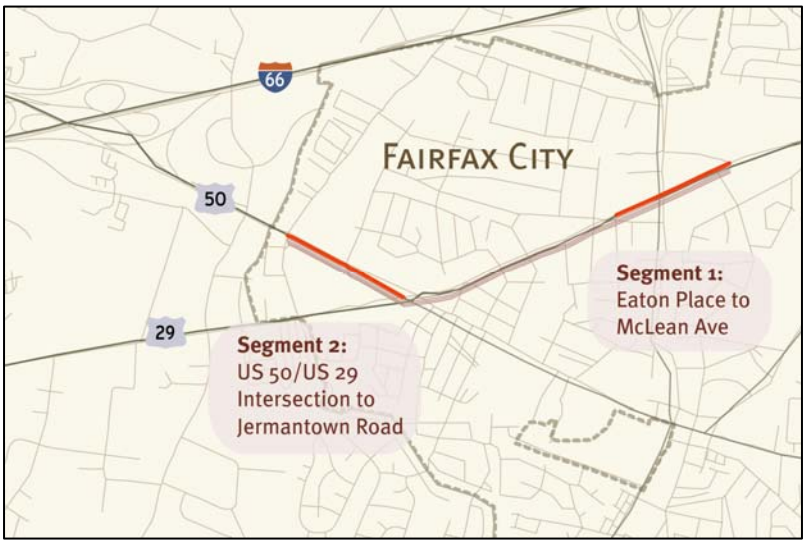
B. Fairfax County Parkway Access to Fort Belvoir

- A one-lane ramp from the EPG Access Road to northbound Fairfax County Parkway and a two-lane ramp from the Access Road to southbound Fairfax County Parkway. The proposed ramps will connect to the proposed interchange at Rolling Road, which is already included in the CLRP.

Complete: 2011
Cost: $6.8 million
Source: Federal funding

2. Widen Segments of US 50 between Eaton Place and Jermantown Road Within the City of Fairfax

Widen two segments of US 50 from Eaton Place to McLean Avenue and from the VA 236/VA 29 to Jermantown Road from four to five lanes. Project will also include pedestrian improvements and support the development of express shuttle service to the Vienna/Fairfax-GMU Metrorail Station and other circulator shuttle services to connect activity centers.

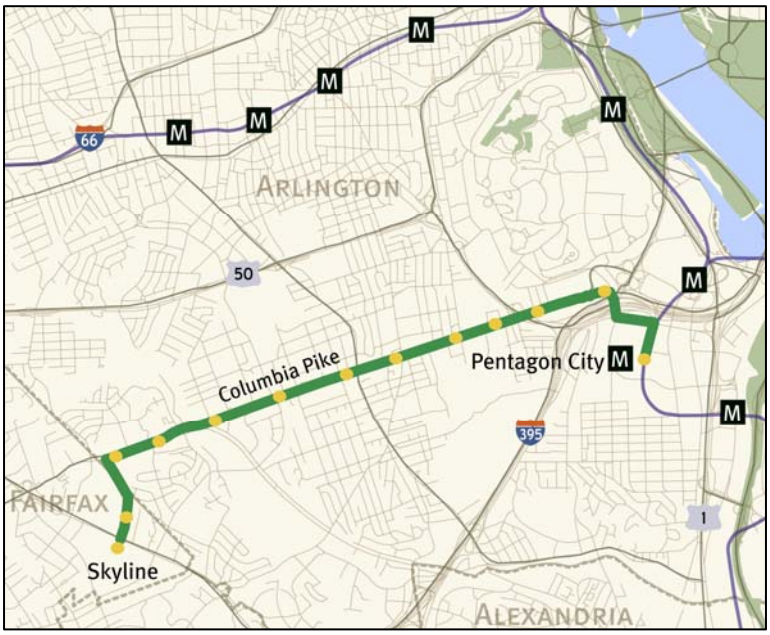


Length: 5 miles
Complete: 2009

Cost: $2 million
Source: Local funding

3. Columbia Pike Streetcar From Skyline to Pentagon City

Design, construct and operate a streetcar system running approximately 4.7 miles between Pentagon City in Arlington County and Skyline in Fairfax County. For most of the route, streetcars will travel in mixed traffic.



Length: 4.7 miles
Complete: 2014
Cost: $138.5 million
Source: State and local funding

4. Fairfax Connector Service Transit Development Plan

Not shown on map.

Increase bus service on priority routes and purchase 76 new Fairfax Connector buses. Expand the West Ox Bus Operations Facility to accommodate new buses and increased service. Also includes bus stop access and safety improvements identified as part of the Bus Stop Inventory and Safety Study.

Complete: 2010
Cost: $91.9
Source: Local funding

Significant Changes to the CLRP

The following projects are included in the 2007 CLRP, but significant changes have been proposed for the 2008 CLRP.

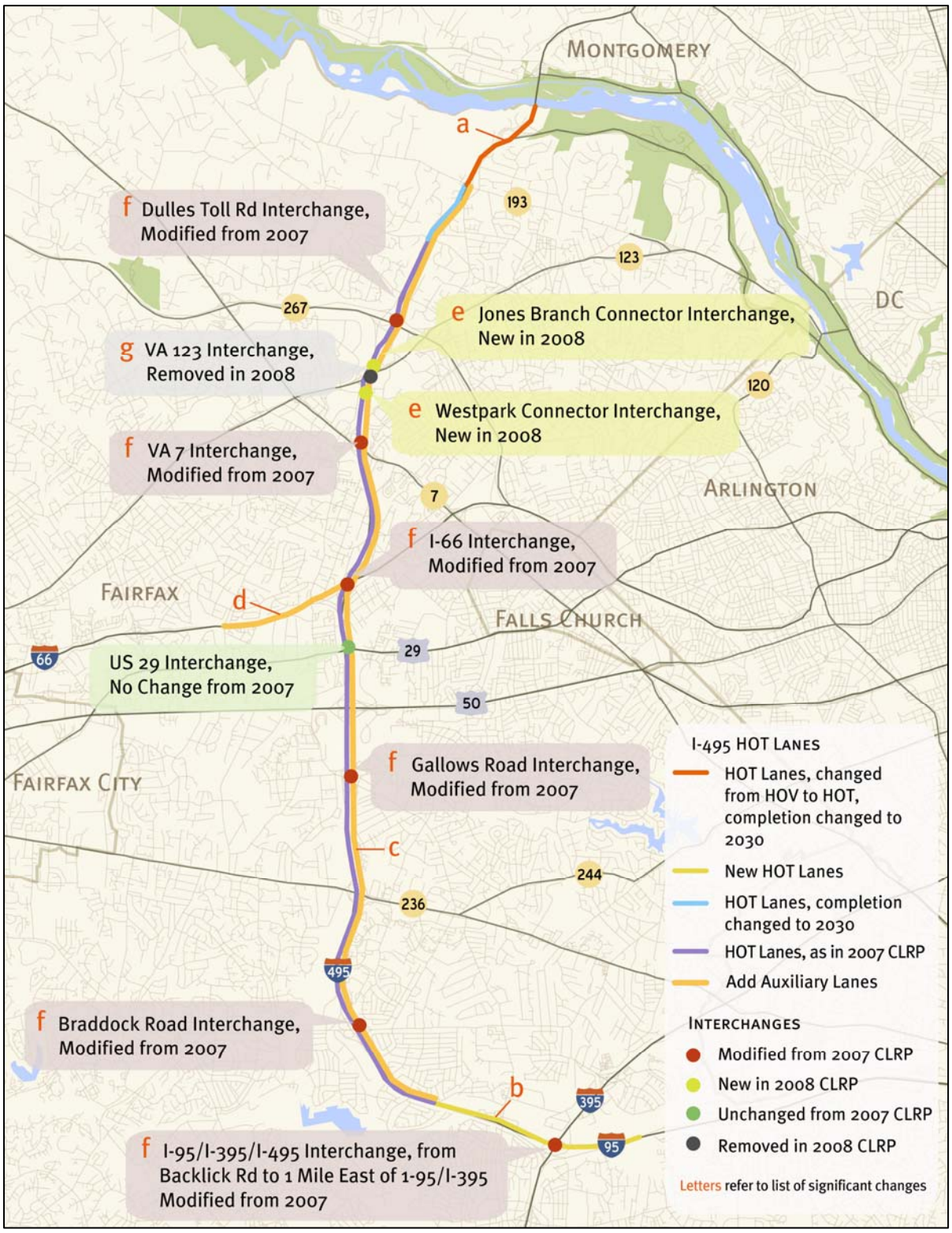
5. I-495 Capital Beltway HOV-HOT Lanes

The 14 mile stretch of HOV-HOT Lanes on the Capital Beltway between Backlick Road and Old Dominion Drive is scheduled to be complete in 2013. The following changes have been proposed for the Capital Beltway HOT-HOV Lanes Project, as shown in the figure on the following page:

a) The northern terminus of the HOT lanes will extend 2 lanes from Georgetown Pike to the American Legion Bridge. These were previously planned as HOV lanes to be complete in 2015 and are now proposed as HOT lanes to be complete in 2030.
   A 4 lane stretch of HOT lanes from Georgetown Pike (193) to Old Dominion Drive will be complete in 2030 instead of 2013.
b) The southern terminus of the HOT lanes has been extended to include 2 HOT lanes from the Hemming Avenue underpass to one mile east of the I-95/395/495 Interchange. This segment is scheduled to be completed by 2013.
c) One additional general purpose auxiliary lane from Georgetown Pike to the Hemming Avenue underpass will be added in each direction to connect the on-ramps and off-ramps between interchanges.
d) Auxiliary lanes will be added on eastbound and westbound I-66 between the I-495 interchange and Cedar Lane (see accompanying CLRP description Form for details).
e) Two new interchanges are planned at the westbound Jones Branch Connector and the westbound WestPark Connector.
f) Planned HOT lane interchanges at the Dulles toll Road, VA 7, I-66, Gallows Road, Braddock Road and I-95/395 will be modified (see accompanying CLRP Description Form for details).
g) A planned HOT lane interchange at VA 123 is being removed from the project scope.

Length: 14 miles
Complete: 2013, 2030
Cost: $1.619 billion
Source: Federal, state, private and bond funding

Proposed Changes to the I-495 Capital Beltway HOV-HOT Lanes Project for the 2008 CLRP



6. I-95/395 HOV-HOT-Bus Lanes Transit Plan Revisions

Not shown on map.

The Transit Plan for the I-95/395 HOT Lanes project has been revised to reflect the results of the Transit/Transportation Demand Management (TDM) Study conducted by the Virginia Department of Rail and Public transportation (DRPT) and the Technical Advisory Committee. The following significant changes have been proposed for the Transit Plan. Full details can be found in Attachment A to the accompanying CLRP Description Form).

- The Transit/TDM plan's cost and revenue estimates have been revised to reflect the revised transit investment strategy for the corridor.
    - Earlier capital investments of $76 million revised to $152 million to reflect increased investment into transit facilities
    - Earlier operating expenses of $314 million revised to $245 million to reflect revised service plan, service duration and fare box recovery

- Greater level of improvement/investment into transit facilities.
    - 3 new transit stations along the corridor
    - Improvements at 4 VRE stations – platform extension and overnight storage
    - 9 new or enhanced TDM initiatives
    - 3,750 park and ride spaces in addition to the 3,000 proposed earlier
    - 3 new/improved transit centers instead of 1 bus maintenance facility
    - 76 new buses and 6 VRE rail cars instead of 184 new buses