

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

September 15, 2010

To: Transportation Planning Board

From: Jane A. Posey
Senior Transportation Engineer

Subject: Mobile Source Emissions Assessment for 2009 CLRP and FY2010-2015 TIP
Amendment: Operational Change to I-66 Ramps at Stringfellow Rd. and
Monument Dr.

Introduction

In August the Virginia Department of Transportation (VDOT) requested an amendment (Attachment 1) to the 2009 Constrained Long Range Plan (CLRP) and the FY2010-2015 Transportation Improvement Program (TIP) to include an operational change to the I-66 ramps at Stringfellow Road and Monument Dr. in Fairfax County. The ramps are currently open on weekdays for four hours eastbound in the morning and four hours westbound in the afternoon, to HOV traffic only. They are closed to all traffic the rest of the day on weekdays and also closed on weekends. The proposal is to keep the ramps for HOV as they currently exist, but to open the ramps in the westbound direction for all traffic at all other times. Because the proposed change is considered regionally significant, a conformity analysis is necessary.

Analysis

Conformity regulations require that emissions be within the approved mobile source emission budgets for each analysis year for all pollutants, and not be greater than base year 2002 values for PM_{2.5} (both direct PM_{2.5} and NO_x precursors). Because this project is minor in scope, only involving operational changes and no additional lanes, staff decided to complete a network analysis (travel demand and emissions estimates) for the year in which regional emissions were closest to the budget to determine the regional impact of the project. As all pollutants are closest to the budgets in the 2010 forecast year, that was the year selected for the emissions analysis.

Staff updated the highway network to reflect the operational change, and completed travel demand and emissions estimates using exactly the same inputs (other than the network change) and methodology used for the most recently approved conformity analysis. Exhibit 1 compares vehicle miles traveled (VMT) and pollutant levels from the original 2010 analysis (2009 CLRP, Fall 2009) with those of the 2010 amendment analysis. The results show a drop in VMT and a corresponding drop in all pollutant levels. Exhibits 2-4 show emissions levels for each pollutant

as compared to the mobile emissions budgets. The values for 2010 include the operational change to the ramps, and it is clear that the effects of the project in the 2020 and 2030 forecast years would not cause the pollutant levels to increase above the approved mobile budgets.

Conclusion

Because the analysis shows that emissions resulting from the proposed project would be within the mobile budgets for the 2010 forecast year, it is reasonable to conclude that the pollutant levels for the 2020 and 2030 forecast years would also be within the mobile budgets. These results provide a basis for a determination of conformity of the year 2009 CLRP and the FY2010-2015 TIP as amended to include the operational changes on the I-66 ramps at Stringfellow Rd. and Monument Dr. for the Washington Metropolitan Region, with the requirements of the Clean Air Act Amendments of 1990.

Next Steps

Following a 30 day public comment period from September 9th to October 9th, and response to comments, the TPB will be asked to approve the amendment to the 2009 CLRP and FY2010-2015 TIP at its October meeting.

EXHIBIT 1

AIR QUALITY CONFORMITY
Mobile Source Emissions Inventories Summary
2009 CLRP and FY 2010-2015 TIP
(I-66 Ramps Amendment)

		2009 CLRP 2010	I-66 RAMPS 2010	DIFF
Vehicle Miles Traveled (thousands)		160911.3	160898.7	-12.6
8- Hour Ozone* (tons/day)				
	VOC	65.8	65.7	-0.1
	NOx	137.6	137.5	-0.1
Fine Particles (tons/year)				
	Direct PM _{2.5}	1030.3	1030.2	-0.1
	NOx	48382.2	48382.0	-0.2

* totals include TCMs

EXHIBIT 2

Mobile Source VOC Emissions for the 8-Hour Ozone Nonattainment Area 2009 CLRP and FY 2010-2015 TIP (I-66 Ramps Amendment)

NOTE: The 8-hour ozone budgets have been submitted to EPA, but have not yet been deemed adequate for use in conformity. The region adheres to these budgets, even though it is not yet a requirement.

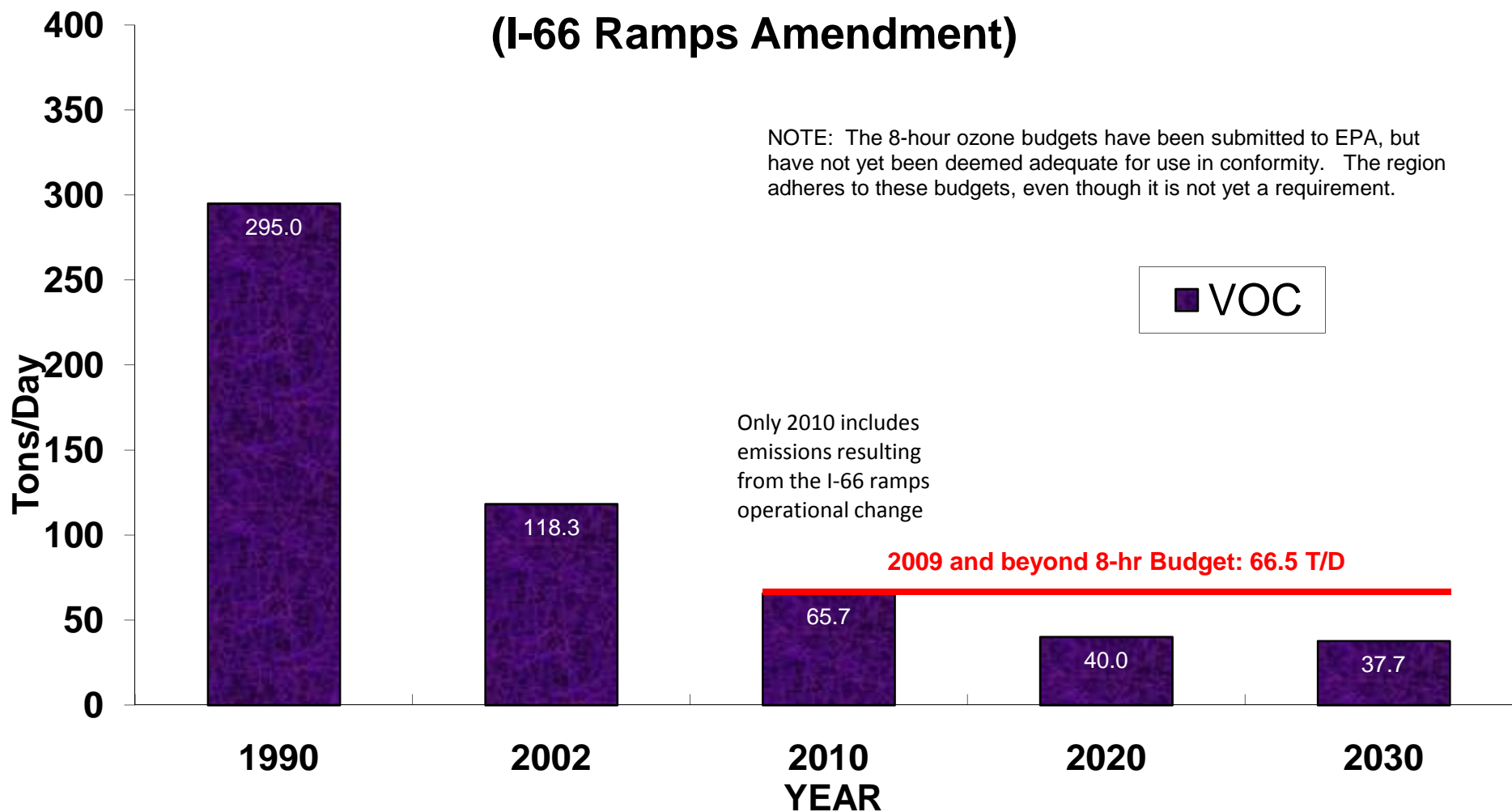


EXHIBIT 3 Mobile Source NOx Emissions for the 8-Hour Ozone Nonattainment Area 2009 CLRP and FY 2010-2015 TIP (I-66 Ramps Amendment)

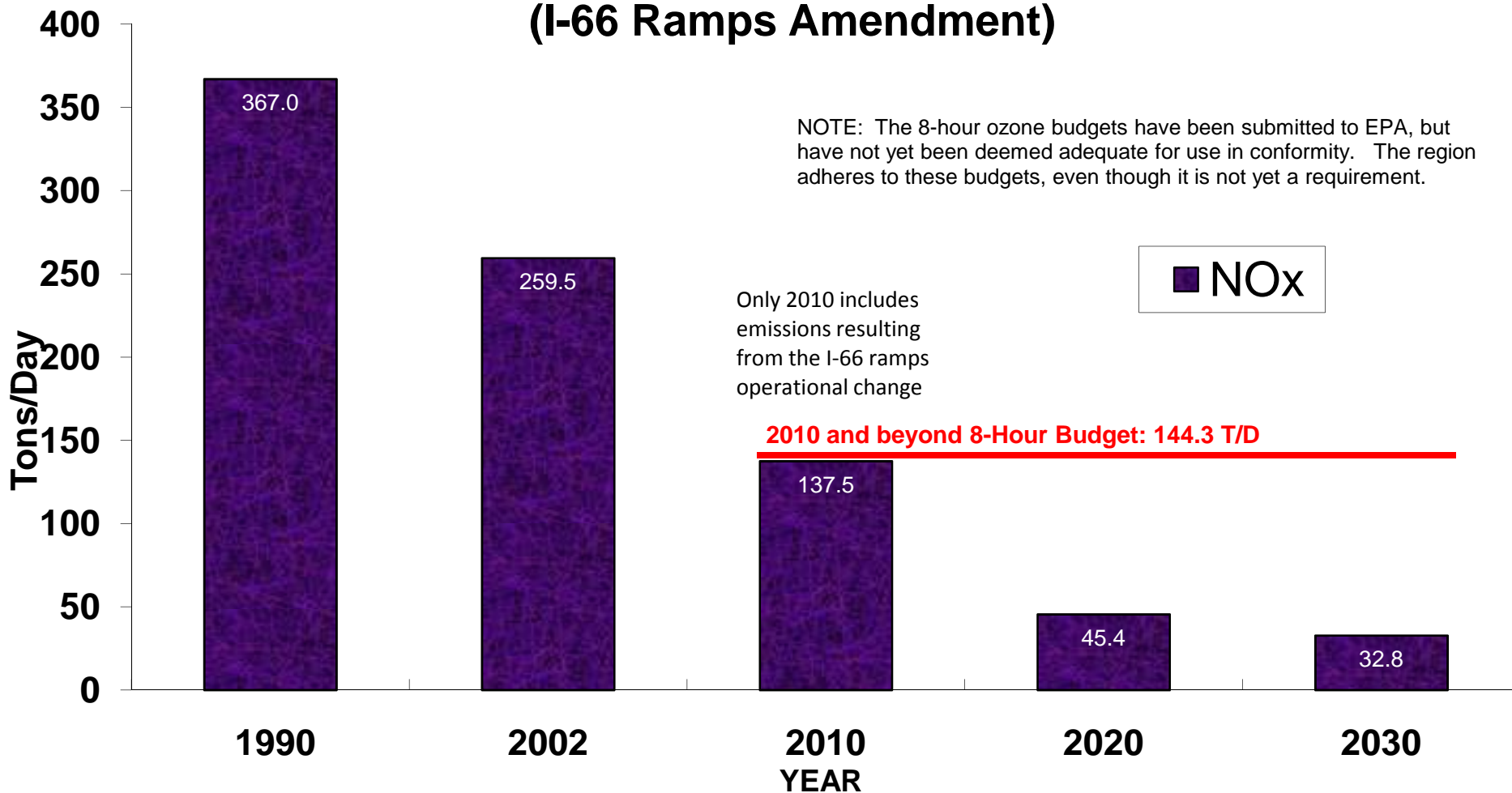
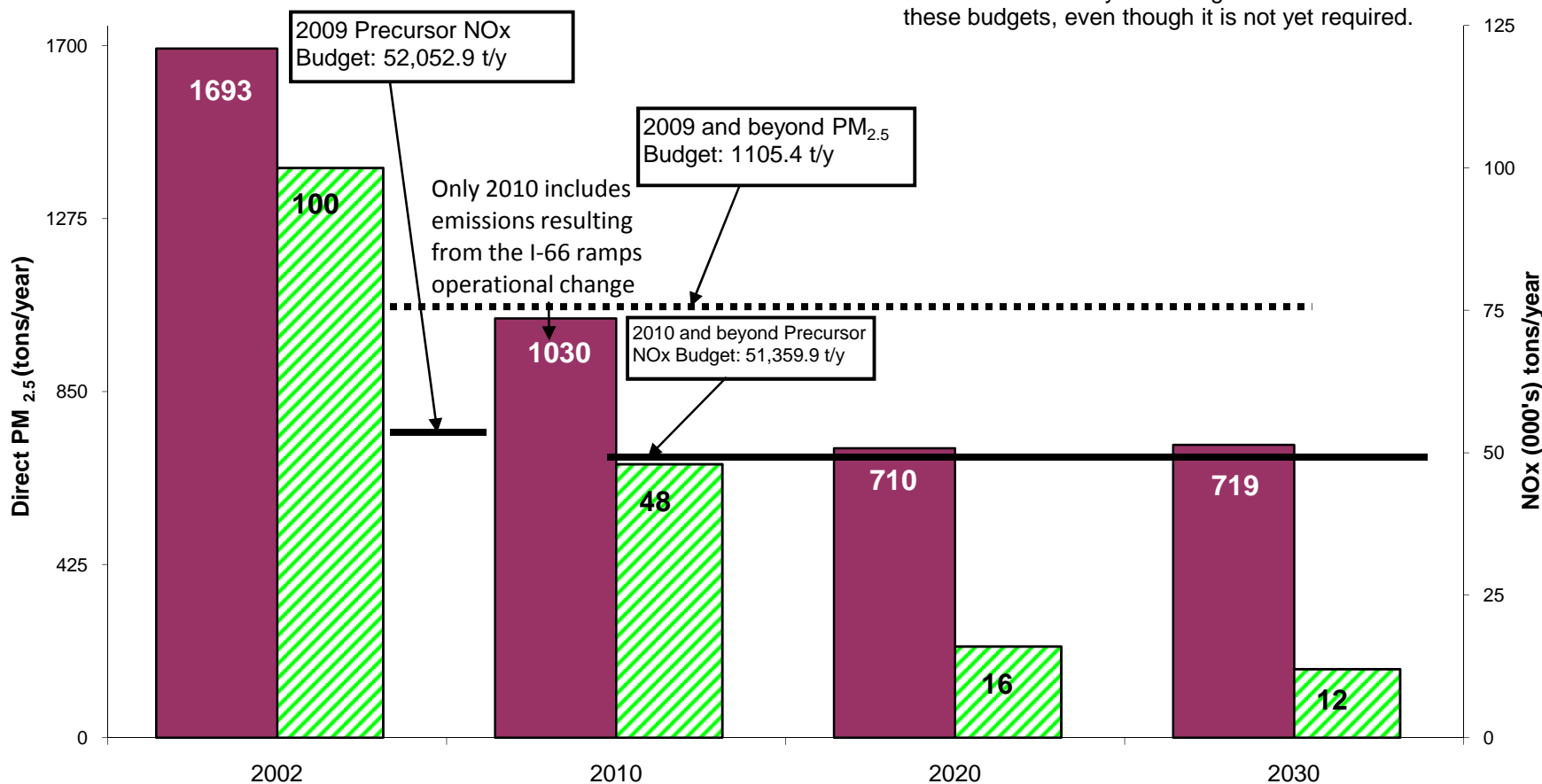


EXHIBIT 4
Mobile Source Emissions
2009 CLRP and FY 2010-2015 TIP
PM_{2.5} Direct and Precursor NOx
(I-66 Ramps Amendment)



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





COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

14685 Avion Parkway
Chantilly, VA 20151
(703) 383-VDOT (8368)

GREGORY A. WHIRLEY
ACTING COMMISSIONER

August 16, 2010

National Capital Region: 2009 CLRP
CLRP/Conformity Analyses Amendment

The Honorable David Snyder
Chairman, National Capital Region
Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capitol Street, N.E.; Suite 300
Washington, DC 20002-4201

Dear Chairman Snyder:

On behalf of Fairfax County and itself, VDOT's Northern Virginia District Office requests the National Capital Region Transportation Planning Board (TPB) to amend the 2009 Constrained Long Range Plan (CLRP) and FY 2010-2015 Transportation Improvement Program (TIP) to add an operational improvement project to the Plan and TIP. The proposed project will open the reversible ramps along I 66 at two locations, Monument Drive and Stringfellow Road, during the off-peak hours to function as exit ramps for traffic traveling in the westbound direction. The ramps are currently open on weekdays for four hours eastbound in the morning and four hours westbound in the afternoon, to HOV traffic only. They are closed to all traffic the rest of the day on weekdays and also closed all weekend. The project will involve no new construction, but require some additional signing and a change to the operations of the ramp and the gates on these ramps. This operational improvement at these two locations is anticipated to allow more convenient access to many high-density land uses near the two interchanges, reducing trip lengths, VMT and emissions. The ramps would also help relieve traffic from heavily traveled adjacent interchanges with US-50, the Fairfax County Parkway, and Route 28.

The proposed project has been determined to be regionally significant for air quality conformity purposes as per the TPB's process of applying federal air quality conformity regulations in conducting regional air quality conformity analyses for the Plan and TIP. As such VDOT recognizes that the requested Plan/TIP amendment will warrant revisions to the currently federally approved regional air quality conformity analyses. VDOT agrees to reimburse the MPO for the

costs incurred in processing this Plan/TIP amendment including those for revising the regional air quality conformity analyses.

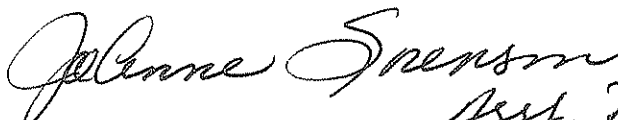
Given the small area of the network impacted by this operational change and the fact that this proposed change will not impact the modeling and/or emissions estimates for the peak periods, VDOT believes that the magnitude of any change in the estimated conformity emissions will be minimal and will not change the current conformity findings. Since the operational change can be implemented relatively quickly (in about 90 days), we request the TPB to process this Plan/TIP/Conformity amendment as soon as possible so that the traveling public can realize the anticipated improved mobility sooner rather than later.

The project is estimated to cost about \$250,000 with funding derived from the Traffic Operations portion of VDOT's FY 2011 budget utilizing state transportation funds. A CLRP form for the project is attached.

VDOT understands that the proposed amendment and revised emissions analyses will require a 30 day public comment period before the TPB can approve the amendment. We request that the TPB initiate public comment on the proposed Plan/TIP amendment in September and take action on the amendment in October of this year. Should you have any questions on this request please call Ms. Jo Anne Sorenson, Assistant District Administrator for Planning and Investment in VDOT's Northern Virginia office at 703-383-2461.

Thank you for your consideration of and action on this request.

Sincerely,


Asst. Dist. Admin.
for
Morteza Salehi
District Administrator
VDOT – Northern Virginia District

bcc:

Mr. Morteza Salehi, VDOT-NoVA	(w/ attach.)
Ms. Diane Mitchell, VDOT-PD	“
Ms. Deborah Grant, VDOT-PD	“
Ms. Jo Anne Sorenson, VDOT-NoVA	“
Mr. Hari Sripathi, VDOT -NoVA	“
Mr. Robert Iosco	“

FINANCIALLY CONSTRAINED LONG-RANGE TRANSPORTATION PLAN FOR 2030 PROJECT DESCRIPTION FORM



BASIC PROJECT INFORMATION

1. Submitting Agency: VDOT – Northern Virginia District
2. Secondary Agency:
3. Agency Project ID: OPC 00098103 (NoVA TE)
4. Project Type: Interstate Primary Secondary Urban Bridge Bike/Ped Transit CMAQ
 ITS Enhancement Other Federal Lands Highways Program
 Human Service Transportation Coordination TERMS
5. Category: System Expansion; System Maintenance; Operational Program; Study; Other

6. Project Name: I 66 HOV Ramps

	Prefix	Route	Name	Modifier
7. Facility:	I	66	HOV Ramps	WB
8. From (✓ at):			Monument Drive and Stringfellow Road	
9. To:				

10. Description:

The project proposes to make operational changes to the I-66 ramps at (1) Stringfellow Road and (2) Monument Drive. The ramps are currently open on weekdays for 4 hours eastbound in the morning and 4 hours westbound in the afternoon, to HOV traffic only. They are closed to all traffic the rest of the day on weekdays and also closed all weekend. This project is to open the ramps to westbound general purpose traffic during hours that they're currently closed (off-peak period). This would allow improved mobility and should help to reduce overall trip lengths. Additional use of the ramps would allow more convenient access to many high-density land uses near the two interchanges, reducing trip lengths, VMT and emissions. The ramps would also help relieve traffic from heavily traveled adjacent interchanges with US-50, the Fairfax County Parkway, and Route 28.

11. Projected Completion Date: 2010
12. Project Manager: Mr. Randy Dittberner
13. Project Manager E-Mail: Randy.Dittberner@VDOT.Virginia.gov
14. Project Information URL: N/A
15. Total Miles: N/A (Opening gates at existing ramp)
16. Schematic:
17. Documentation:
18. Bicycle or Pedestrian Accommodations: Not Included; Included; Primarily a Bike/Ped Project; N/A
19. Jurisdictions: Fairfax County
20. Total cost (in Thousands): \$250,000
21. Remaining cost (in Thousands): N/A
22. Funding Sources: Federal; State; Local; Private; Bonds; Other

CLRP PROJECT DESCRIPTION FORM

SAFETEA-LU PLANNING FACTORS

23. Please identify any and all planning factors that are addressed by this project:
- Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
 - Increase the **safety** of the transportation system for all motorized and non-motorized users.
 - a. Is this project being proposed specifically to address a safety issue? Yes; No
 - b. If yes, briefly describe (in quantifiable terms, where possible) the nature of the safety problem:
 - Increase the ability of the transportation system to support **homeland security** and to safeguard the personal security of all motorized and non-motorized users.
 - Increase **accessibility and mobility** of people and freight.
 - Protect and enhance the **environment**, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
 - Enhance the **integration and connectivity** of the transportation system, across and between modes, for people and freight.
 - Promote efficient system **management and operation**.
 - Emphasize the **preservation** of the existing transportation system.

ENVIRONMENTAL MITIGATION

24. Have any potential mitigation activities been identified for this project? Yes; No
- a. If yes, what types of mitigation activities have been identified?
 - Air Quality; Floodplains; Socioeconomics; Geology, Soils and Groundwater; Vibrations;
 - Energy; Noise; Surface Water; Hazardous and Contaminated Materials; Wetlands

CONGESTION MANAGEMENT INFORMATION

25. Do traffic congestion conditions necessitate the proposed project? Yes; No
- a. If so, is the congestion recurring or non-recurring? Recurring; Non-recurring
 - b. If the congestion is on another facility, please identify it:
 - c. What is the measured or estimated Level of Service on this facility? _____; Measured; Estimated
26. Is this a capacity-increasing project on a limited access highway or other arterial highway of a functional class higher than minor arterial? Yes; No
- a. If yes, does this project require a Congestion Management Documentation form under the given criteria (see *Call for Projects* document)? Yes; No
 - b. If not, please identify the criteria that exempt the project here:
 - The number of lane-miles added to the highway system by the project totals less than 1 lane-mile
 - The project is an intersection reconstruction or other traffic engineering improvement, including replacement of an at-grade intersection with an interchange
 - The project, such as a transit, bicycle or pedestrian facility, will not allow private single-occupant motor vehicles.
 - The project consists of preliminary studies or engineering only, and is not funded for construction
 - The project will not use federal funds in any phase of development or construction (100% state, local and/or private funding).
 - The construction costs for the project are less than \$10 million.

CLRP PROJECT DESCRIPTION FORM

INTELLIGENT TRANSPORTATION SYSTEMS

27. Is this an Intelligent Transportation Systems (ITS)-project as defined in federal law and regulation, _____ and therefore subject to Federal Rule 940 Requirements? Yes; No
28. If yes, what is the status of the systems engineering analysis compliant with Federal Rule 940 for the project? Not Started; Ongoing, not complete; Complete
29. Under which Architecture:
- DC, Maryland or Virginia State Architecture
 - WMATA Architecture
 - COG/TPB Regional ITS Architecture
 - Other, please specify:
30. Completed Date:
31. Project is being withdrawn from the CLRP.
32. Withdrawn Date: N/A
33. Record Creator: Kanti Srikanth
34. Created On: August 15, 2010
35. Last Updated by:
36. Last Updated On:
37. Comments: This operational improvement project was amended to the 2009 CLRP as an out of cycle Plan/TIP & Conformity amendment in October of 2010. The project is part of the Operational improvements and was funded with the agency's Traffic Operations budget.