

AIR QUALITY ANALYSIS

Interstate 66 Spot Improvements

00066-809-15051878

(UPCs 78826, 78827, and 78828)

Prepared by:



**Environmental Division
Virginia Department of Transportation**

**November 2007
(Updated October 2008)**

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- A. Traffic Forecasts
- B. Sample MOBILE6.2 & CAL3QHC Inputs

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Executive Summary¹

The Virginia Department of Transportation (VDOT) has initiated preliminary engineering for three spot improvements on Interstate 66 (I-66) westbound inside the Capital Beltway (I-495) in Northern Virginia. The improvements will provide for continuous auxiliary lanes in three locations on I-66 westbound: (1) from the Fairfax Drive on-ramp to the Sycamore Street off-ramp, (2) from the Sycamore Street/Washington Boulevard (Route 237) on-ramp to the existing Dulles Airport Access Road (Route 267) off-ramp (as an added auxiliary lane), and (3) from the Lee Highway (Route 29)/Spout Run on-ramp to the existing deceleration lane at the Glebe Road off-ramp.

The proposed improvements were assessed for potential air quality impacts and conformity with applicable air quality regulations and requirements. The assessment indicates that the proposed improvements would meet all applicable air quality requirements of the National Environmental Policy Act (NEPA) and transportation conformity. As such, they will not cause or contribute to a new violation, increase the frequency or severity of any violation, or delay timely attainment of national ambient air quality standards (NAAQS) as established by the US Environmental Protection Agency (US EPA).

Additionally, best available information indicates that, nationwide, regional levels of air toxics are expected to decrease in the future due to fleet turnover and the continued implementation of more stringent emission and fuel quality regulations. Nevertheless, it is possible that some localized areas may show an increase in emissions and ambient levels of these pollutants due to locally increased traffic levels associated with the proposed improvements.

This project (i.e., the three proposed improvements) is located within a Moderate Ozone nonattainment area, a Fine Particulate Matter (PM_{2.5}) nonattainment area, and a volatile organic compounds (VOC) and nitrogen oxides (NO_x) emissions control area. Portions of the project are located within Arlington County, which is also subject to a maintenance plan for carbon monoxide (CO). As such, all reasonable precautions should be taken to limit the emissions of CO, VOC, NO_x, and particulate matter. In addition, the following Virginia Department of Environmental Quality (DEQ) air pollution regulations must be adhered to during the construction of this project: 9 VAC 5-40-5600 et seq., *Open Burning restrictions*; 9 VAC 5-40-5490 et seq., *Cutback Asphalt restrictions*; and 9 VAC 5-50-60 et seq., *Fugitive Dust precautions*.

Emissions may be produced in the construction of this project from heavy equipment and vehicle travel to and from the site, as well as from fugitive sources. Construction emissions are

¹ This study updates one completed in November 2007 for text addressing project inclusion in the Constrained Long Range Transportation Plan (CLRP) and associated Transportation Improvement Program (TIP). As the CLRP and TIP are subject to change over time, the text was updated to make a general reference to regulatory requirements addressing project inclusion in a conforming plan and program rather than making references to any specific CLRP or TIP. Additionally, Exhibit 17, which summarizes background concentrations of CO for the most recent year that data are available, was updated to reflect data for 2007 that became available in this period. Background concentrations for application in modeling were generally updated in July 2008 for urban areas across the Commonwealth of Virginia, based on monitoring data for 2005 through 2007. Finally, the modeling results for the study were updated to apply the updated background concentrations as well as an updated version of the Cal3Interface model that was released by the Federal Highway Administration (FHWA) in October 2008. Overall, the conclusions of the study were unchanged with this update, except to clarify that, in keeping with regulatory requirements, the project would not delay timely attainment of the standards.

short term or temporary in nature. In order to mitigate these emissions, all construction activities are to be performed in accordance with VDOT *Road and Bridge Specifications*.

Federal conformity requirements, including specifically 40 CFR 93.114 and 40 CFR 93.115 apply as the area in which the project is located is designated as nonattainment (for ozone and fine particulate matter) and maintenance (for CO). Accordingly, there must be a currently conforming transportation plan and program at the time of project approval, and the project must come from a conforming plan and program (or otherwise meet criteria specified in 40 CFR 93.109(b)).

1. Project Description

Exhibit 1 provides an overview of the project area. Exhibit 2 presents the project plan and profile title sheets. The proposed improvements involve the following:

The I-66 Spot Improvements inside the Capital Beltway (I-495) include the following proposed construction along the I-66 westbound (WB) lanes. All work will be done within existing I-66 right-of-way (ROW).

- (1) Spot Improvement #1--VDOT Project 0066-000-113, C501, P101; UPC 78826 (Federal Project NH-066-1(312)), Arlington County: Extend existing acceleration lane from the Fairfax Drive on-ramp to the existing deceleration lane at the Sycamore Street off-ramp, to create a continuous acceleration/deceleration lane approximately 1.5 mile in length. Modifications to the Ohio Street and Westover Park bridges, and replacement or modification of the pedestrian bridge between Patrick Henry Drive and Harrison Street, may be required.*
- (2) Spot Improvement #2 – VDOT Project 0066-96A-113, C501, P101; UPC 78828 (Federal Project NH-066-1(313)), Arlington and Fairfax Counties: Add an additional, continuous, approximately 1.6-mile long acceleration/deceleration lane, adjacent to the existing continuous acceleration/deceleration lane, from the Sycamore Street/Washington Boulevard (Route 237) on-ramp to existing the Dulles Airport Access Road (Route 267) off-ramp. Widening of the bridges at Winchester Street and Williamsburg Boulevard may be required.*
- (3) Spot Improvement #3--VDOT Project 0066-000-114, C501, P101; UPC 78827 (Federal Project NH-066-1(314)), Arlington County: Extend the existing acceleration lane from the Lee Highway (Route 29)/Spout Run on-ramp to the existing deceleration lane at the Glebe Road off-ramp, to create a continuous acceleration/deceleration lane approximately 0.9 mile in length.*

In addition to the above, the overall project will evaluate shoulder reconstruction, enforcement areas, safety pull offs, sight distance improvements, ramp metering, variable and static message signs, traffic management systems and roadway lighting, and construct new or upgraded facilities as needed within the specified project limits along WB I-66.

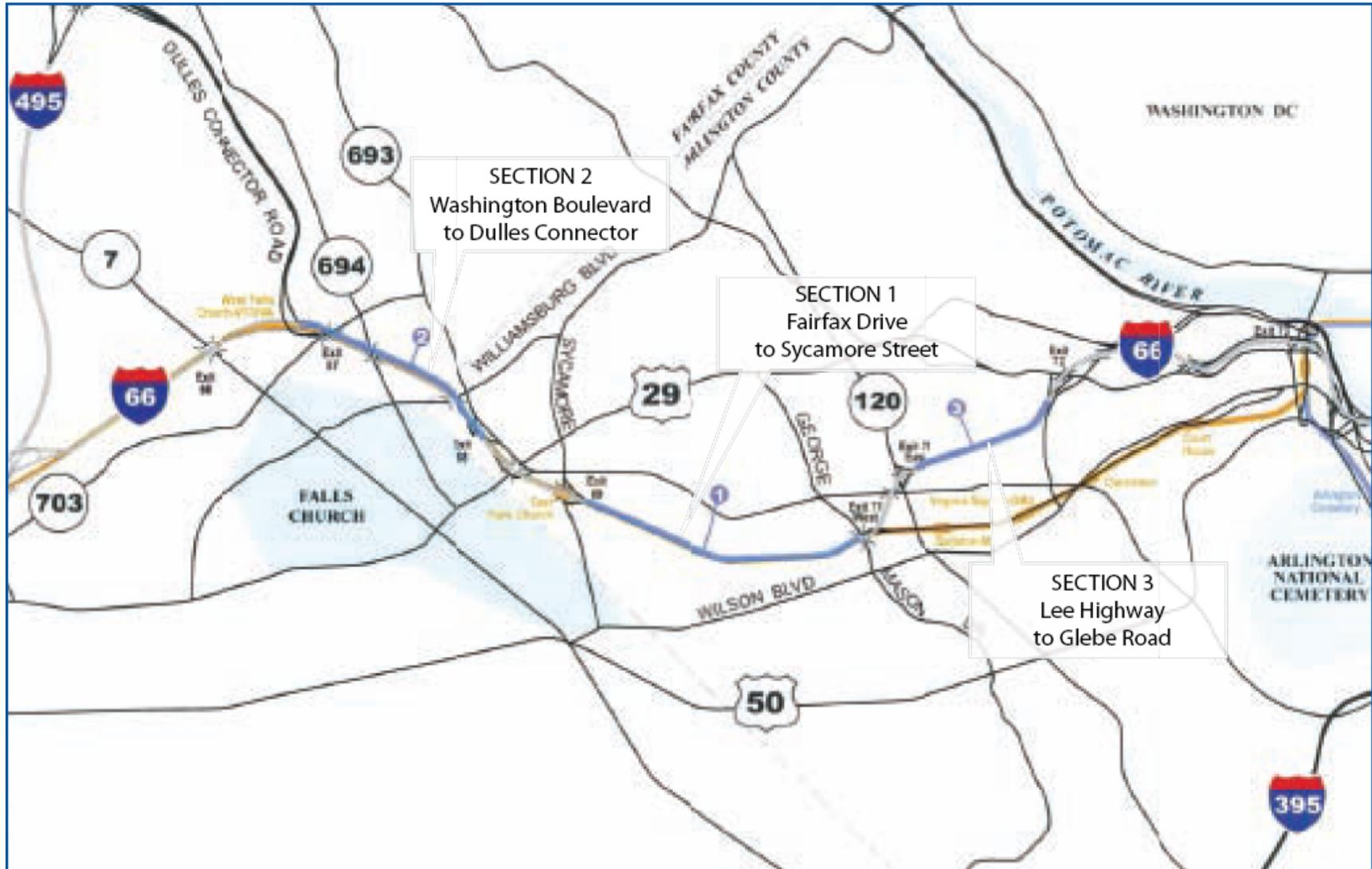
Modeling was conducted to generate demand estimates for average daily traffic (ADT) as well as hourly traffic volumes and speeds for a base year (2006), interim year (2013) and design year (2032). The peak forecast average daily traffic (ADT) volume forecasts for the design year is approximately 196,000, located in the segment of I-66 planned for Spot Improvement #2 (between Washington Boulevard and the Dulles Access Road). Excerpts from the traffic forecasts are provided in Attachment A².

2. Traffic Forecasts

Exhibit 3 presents a summary of the mainline traffic forecasts for this project. Excerpts of traffic data and forecasts (including turning movements) for the opening year (2013) and design year (2032) as developed by VDOT Northern Virginia District are copied in Attachment A.

² Memorandum "Environmental Traffic and Transportation Data for I-66 (Spot Improvements)", dated January 31, 2007.

Exhibit 1: Project Area



INDEX OF SHEETS
NOTE: SEE SHEET 10 FOR INDEX OF SHEETS



FHWA 534 DATA 4A/04

STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
VA.	NH-066-K(3)3	66	(FO) 0066-96A-113	1
	(See Tabulation Below For Section Number)		(See Tabulation Below For Section Number)	

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
**PLAN AND PROFILE OF PROPOSED
STATE HIGHWAY**

FROM: 0.211 MI. W. OF RTE. 703 (HAYCOCK RD.)
TO: 0.111 MI. E. OF RTE. 693 (WESTMORELAND ST.)

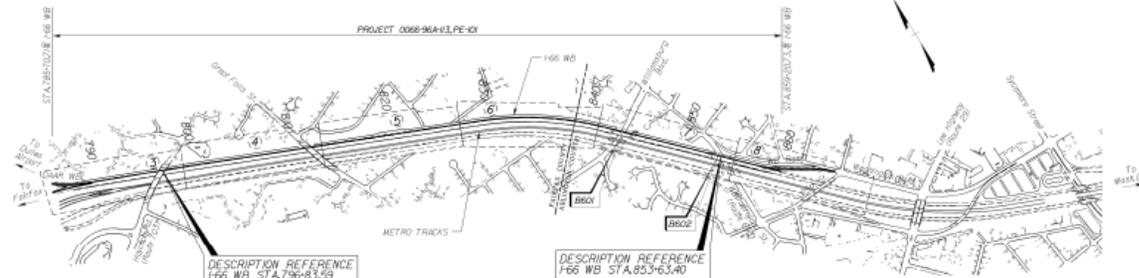
FUNCTIONAL CLASSIFICATION AND TRAFFIC DATA	
URBAN INTERSTATE ROLLING 60 MPH MINIMUM DESIGN SPEED	
	Fr Dulles Airport Access Road To Westmoreland Street
ADT 2006	156,000
ADT 2032	196,000
DHV	
D (1) (design hour)	
T (1) (design hour)	
V (MPH)	60 MPH

All's are a general coverage for study corridor.

SUPERVISED BY: JEFF DAVID, NAVA, L&D (703) 363-2205
DESIGNED BY: HYTE CORPORATION (703) 854-5100

CONVENTIONAL SIGNS

STATE LINE	-----
CITY/TOWN OR VILLAGE BOUNDARY OR PLAT LINE	-----
PRINCIPAL PROPERTY LINE	-----
EXISTING PROPERTY LINE	-----
WATER LINE	-----
SEWER LINE	-----
GAS LINE	-----
ELECTRIC OVERGROUND CABLE	-----
TRAVELED PAV	-----
GRAVEL PAV	-----
RETARDING WALL	-----
RAILROAD	-----
LAYER OR EMBANKMENT	-----
BRIDGE	-----
CULVERT	-----
ROAD TUNNEL	-----
POWER POLES	-----
TELEPHONE OR TELEGRAPH POLES	-----
TELEPHONE OR TELEGRAPH LINES	-----
ROCK	-----
TREES	-----
HEAVY WOOD	-----
GROUND ELEVATION	-----
GRADE ELEVATION	-----
RAIL OR RAILWAY LINE	-----



PRELIMINARY
January 2008

THESE PLANS ARE UNFINISHED
AND UNAPPROVED AND ARE NOT
TO BE USED FOR ANY TYPE
OF CONSTRUCTION.



THE COMPLETE ELECTRONIC TIF VERSION OF THE PLAN ASSEMBLY AS AWARDED INCLUDING ALL SUBSEQUENT REVISIONS WILL BE THE OFFICIAL CONSTRUCTION PLANS FOR INFORMATION RELATIVE TO ELECTRONIC FILES AND LAYERED PLANS. SEE GENERAL NOTES.

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT.

THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DEPARTMENT'S 2002 ROAD AND BRIDGE SPECIFICATIONS, ROAD AND BRIDGE STANDARDS, SOCS WORK AREA PROTECTION MANUAL AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE ELECTRONIC TIF VERSION OF THE PLAN ASSEMBLY.

ALL CURVES ARE TO BE SUPERELEVATED, TRANSITIONED AND ROUNDED IN ACCORDANCE WITH THE PLANS EXCEPT WHERE OTHERWISE NOTED.

THE ORIGINAL APPROVED TIF SHEETS, INCLUDING ORIGINAL SIGNATURES FILED IN THE VDOT CENTRAL OFFICE PLAN LIBRARY, ANY MISUSE OF ELECTRONIC FILES, INCLUDING SCANNED SIGNATURES IS ILLEGAL AND ENFORCED TO THE FULL EXTENT OF THE LAW.

THIS PROJECT WAS DEVELOPED UTILIZING GEOPAK DESIGN SOFTWARE
GEOPAK COMPUTER IDENTIFICATION NUMBER: 18808.

STATE PROJECT NO.	SECTION	FEDERAL AID PROJECT NO.	TYPE CODE	PPMS NO.	EQUALITIES		LENGTH INCLUDING BRIDGES		LENGTH EXCLUDING BRIDGES		TYPE PROJECT	DESCRIPTION
					FEET	MILES	FEET	MILES	FEET	MILES		
0066-96A-113	PE-101	NH-066-K(3)3	000	78826	7,379	1.398	6,985	1.325	PRELIMINARY ENGR	FR 0.211 MI. W. OF RTE. 703 (HAYCOCK RD.) TO 0.111 MI. E. OF RTE. 693 (WESTMORELAND ST.)		
	B-601	NH-066-K(3)3	3271	78826	99	0.002			BRIDGE	1-66 WB OVER WILLIAMSBURG BLVD		
	B-602	NH-066-K(3)3	3271	78826	225	0.043			BRIDGE	1-66 WB OVER WESTMORELAND ST		

RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION	
DATE	_____ THOMAS SWAN DIRECTOR
DATE	_____ TERRY LUCIANO WEB DESIGN ENGINEER
DATE	_____ CHIEF FINANCIAL OFFICER
DATE	_____ CHIEF ENGINEER
RECOMMENDED FOR APPROVAL FOR CONSTRUCTION	
DATE	_____ THOMAS SWAN DIRECTOR
DATE	_____ TERRY LUCIANO WEB DESIGN ENGINEER
DATE	_____ CHIEF FINANCIAL OFFICER
DATE	_____ CHIEF ENGINEER
APPROVED FOR CONSTRUCTION	
DATE	_____ CHIEF ENGINEER
APPROVED	
DATE	_____ THOMAS SWAN DIRECTOR
DATE	_____ TERRY LUCIANO WEB DESIGN ENGINEER
DATE	_____ CHIEF FINANCIAL OFFICER
DATE	_____ CHIEF ENGINEER

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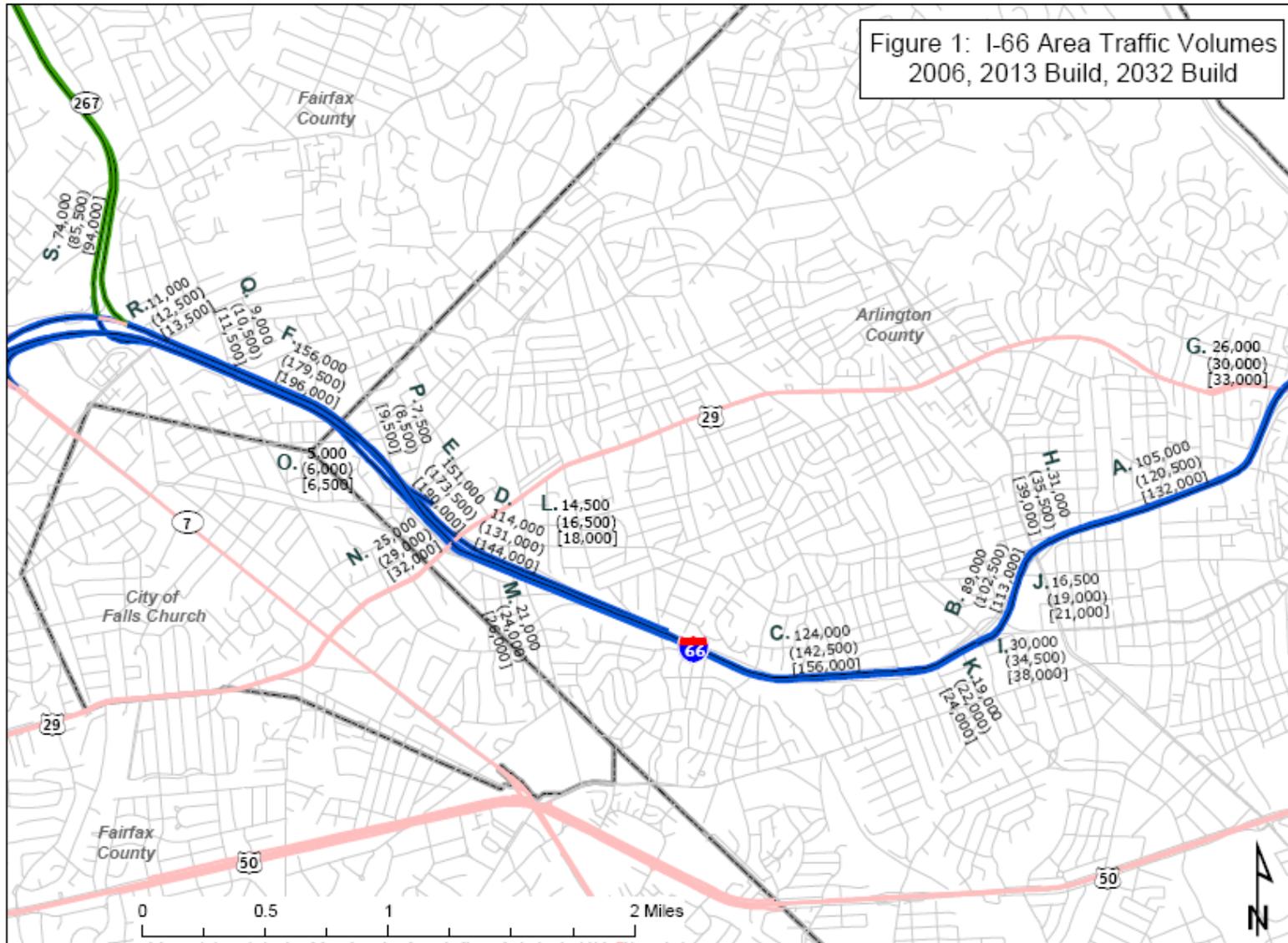
5:53:26 PM

CODE NO. 6010

LENGTH OF PROJECT IS BASED ON @ OF I-66 WB

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	0066-96A-113		1

Exhibit 3: Mainline Traffic Forecasts



Source: Excerpt from VDOT Northern District memo dated May 16, 2008 transmitting traffic forecasts for this project. Attachment A provides additional detail.

3. Regulatory Requirements

Applicable regulatory requirements and guidance are summarized below.

NEPA and Conformity Requirements & Guidance

Air quality analyses requirements are addressed both by NEPA (including recently issued federal guidance for the assessment of Mobile Source Air Toxics, or MSATs) and federal transportation conformity regulations. Applicable requirements and updates are summarized below.

On August 4, 2004, the Federal Highway Administration (FHWA) and VDOT completed a "Project Level Air Quality Studies Agreement"³ ("Agreement") addressing NEPA project level air quality analyses. Under this Agreement, project level air quality (hot-spot) analyses are conducted for carbon monoxide (CO) for projects that meet traffic and other criteria as specified in the agreement.

On October 28, 2004, FHWA provided related project-level analysis guidance⁴ to VDOT to address the process for updating existing air quality studies. The specified process applies, for example, to projects for which requisite air quality studies have already been completed (and related approvals obtained) but the project has been delayed in implementation or changes are made to assumptions (such as design year and traffic projections) relating to its design or implementation.

On February 3, 2006, FHWA and EPA issued joint guidance⁵ for the assessment of MSATs in the NEPA process for highways. The guidance includes specific criteria for determining which projects are to be considered exempt from MSAT analysis requirements, which may require a qualitative analysis, and which should undergo a quantitative assessment. The guidance is consistent with the federal conformity rule in that projects considered exempt (under section 40 CFR 93.126 of that rule) are also exempt from MSATs analysis requirements. The priority MSATs identified in the guidance are benzene, formaldehyde, acetaldehyde, diesel particulate matter/diesel exhaust organic gases, acrolein, and 1,3-butadiene. The priority list is noted in the guidance as subject to change.

The federal transportation conformity rule (40 CFR Parts 51 and 93) in general requires air quality conformity determinations for transportation plans, programs and projects in "non-attainment or maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan" (40 CFR 93.102(b)). Regional conformity analysis requirements apply for plans and programs; hot-spot analysis requirements apply for projects.

³ Documented in a letter agreement dated August 4, 2004 from FHWA to VDOT.

⁴ "Procedures for Updating Air Studies When New Planning Assumptions Become Available", letter dated October 28, 2004 from FHWA to VDOT.

⁵ "Interim Guidance on Air Toxic Analysis in NEPA Documents", dated 2/3/06, jointly issued by EPA and FHWA. A copy may be found online at: <http://www.fhwa.dot.gov/environment/airtoxic/020306guidmem.htm>.

Non-attainment and maintenance areas are ones that do not meet or have not met National Ambient Air Quality Standards (NAAQS). Transportation-related criteria pollutants as specified in the conformity rule (40 CFR 93.102(b)) include ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), and particulate matter less than 10 and 2.5 microns in diameter (PM₁₀ and PM_{2.5}, respectively). Precursors to these pollutants are also specified in the rule. Currently applicable NAAQS are listed in Exhibit 4 below.

The federal conformity rule requires a currently conforming transportation plan and program at the time of project approval (40 CFR 93.114) and for the project to be from a conforming plan and program (40 CFR 93.115). Conditions for this purpose are specified. For example, if the project is of a type or one that is not required to be specifically identified, it must be consistent with the policies and purpose of the transportation plan and not interfere with other projects specifically included in the transportation plan (40 CFR 93.115(b)). Additionally, the design concept and scope of the project as specified in the program at the time of the regional conformity determination should be adequate to determine its contribution to regional emissions, and any mitigation measures associated with the project should have written commitments from the project sponsor and/or operator (40 CFR 93.115(c)).

Project level (hot-spot) air quality conformity analysis requirements apply only for FHWA (and Federal Transit Administration, or FTA) projects and only for ones located in air quality non-attainment and/or maintenance areas for CO, PM₁₀ and/or PM_{2.5} (40 CFR 93.116(a)). FHWA and FTA projects are defined in the federal conformity rule and are generally considered ones for which federal funding or approvals are proposed or required (40 CFR 93.100).

The federal conformity rule requires that the “FHWA/FTA project must not cause or contribute to any new localized CO, PM₁₀, and/or PM_{2.5} violations or increase the frequency or severity of any existing CO, PM₁₀, and/or PM_{2.5} violations in CO, PM₁₀, and PM_{2.5} nonattainment and maintenance areas” (40 CFR 93.116(a)). Other general requirements for hot-spot analyses for CO and particulate are listed in Section 93.116 of the conformity rule.

Section 93.123 of the conformity rule specifies procedures for the conduct of hot-spot analyses for both CO and particulate. The VDOT-FHWA Agreement noted above responds to the federal requirements for CO analyses and provides additional or more specific procedures or criteria for their conduct.

Requirements for hot-spot analyses for particulate matter are limited to the following types of projects in the federal conformity rule (40 CFR 93.123(b)(1)):

- “(1) The hot-spot demonstration required by §93.116 must be based on quantitative analysis methods for the following types of projects:*
- (i) New highway projects that have a significant number of diesel vehicles, and expanded highway projects that have a significant increase in the number of diesel vehicles;*
 - (ii) Projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;*

Exhibit 4: National Ambient Air Quality Standards

Pollutant	Primary Standards		Secondary Standards	
	Level	Averaging Time	Level	Averaging Time
Carbon Monoxide	9 ppm (10 mg/m ³)	8-hour ⁽¹⁾	None	
	35 ppm (40 mg/m ³)	1-hour ⁽¹⁾		
Lead	1.5 µg/m ³	Quarterly Average	Same as Primary	
Nitrogen Dioxide	0.053 ppm (100 µg/m ³)	Annual (Arithmetic Mean)	Same as Primary	
Particulate Matter (PM ₁₀)	150 µg/m ³	24-hour ⁽²⁾	Same as Primary	
Particulate Matter (PM _{2.5})	15.0 µg/m ³	Annual ⁽³⁾ (Arithmetic Mean)	Same as Primary	
	35 µg/m ³	24-hour ⁽⁴⁾	Same as Primary	
Ozone	0.075 ppm	8-hour ⁽⁵⁾	Same as Primary	
	0.08 ppm	8-hour ⁽⁶⁾	Same as Primary	
	0.12 ppm	1-hour ⁽⁷⁾ (Applies only in limited areas)	Same as Primary	
Sulfur Dioxide	0.03 ppm	Annual (Arithmetic Mean)	0.5 ppm (1300 µg/m ³)	3-hour ⁽¹⁾
	0.14 ppm	24-hour ⁽¹⁾		

⁽¹⁾ Not to be exceeded more than once per year.

⁽²⁾ Not to be exceeded more than once per year on average over 3 years.

⁽³⁾ To attain this standard, the 3-year average of the weighted annual mean PM_{2.5} concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m³.

⁽⁴⁾ To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m³ (effective December 17, 2006).

⁽⁵⁾ To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. (effective March 2008.)

⁽⁶⁾ To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.

⁽⁷⁾ (a) The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is ≤ 1.

(b) As of June 15, 2005 EPA revoked the [1-hour ozone standard](#) in all areas except the 8-hour ozone nonattainment [Early Action Compact \(EAC\) Areas](#).

Source: US Environmental Protection Agency (<http://www.epa.gov/air/criteria.html>, accessed 3/13/08).

- (iii) *New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location:*
- (iv) *Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and*
- (v) *Projects in or affecting locations, areas, or categories of sites which are identified in the PM10 or PM2.5 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation."*

The following conditions are also specified:

40 CFR 93.123(b)(2): *"Where quantitative analysis methods are not available, the demonstration required by §93.116 for projects described in paragraph (b)(1) of this section must be based on a qualitative consideration of local factors."*

and

40 CFR 93.123(b)(4): *"The requirements for quantitative analysis contained in this paragraph (b) will not take effect until EPA releases modeling guidance on this subject and announces in the Federal Register that these requirements are in effect."*

As of the date of preparation of this document, the requirements of 40 CFR 93.123(b)(4) have not as yet been fulfilled by EPA. That is, EPA has not issued "modeling guidance on this subject" and has not announced "in the Federal Register that these [quantitative analysis] requirements are in effect". Federal conformity rule requirements for hot-spot analyses for particulate are therefore at present limited to qualitative analyses only. These analyses are required for projects determined to be of air quality concern, i.e., one of the types listed under 40 CFR 93.123(b)(1).

In March 2006, FHWA and EPA issued guidance⁶ for the conduct of qualitative hot-spot analyses for particulate. Appendices to that guidance provide examples of projects of air quality concern, i.e. ones for which qualitative analyses would be conducted.

4. Project Assessment

A hot-spot analysis for CO is required as the project, in part, is located in a maintenance area for CO and because forecast traffic volumes significantly exceed the threshold criteria specified in the 2004 FHWA-VDOT Agreement for project-level air quality analyses for NEPA documents. A worst-case hot-spot analysis for CO was therefore conducted and a summary of that analysis is provided below.

The project is not one of air quality concern for particulate, i.e. it is not one of the types listed in the federal conformity rule under 40 CFR 93.123(b)(1). A hot-spot analysis for particulate is therefore not required. A review of the project against the conformity rule requirements for hot-spot analyses for particulate is provided below.

⁶ "Transportation Conformity Guidance for Qualitative Hot-spot Analysis in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas", dated March 2006, Office of Transportation and Air Quality, US EPA and Office of Natural and Human Environment, FHWA. EPA420-B-06-902.

MSATs are addressed in this update in accordance with the recently issued (2006) federal guidance noted previously. Given relatively minor change in forecast traffic volumes for I-66 that are attributable to the project, the project is of a type that would be expected to have minimal impact on MSAT emissions.

Federal conformity requirements, including specifically 40 CFR 93.114 and 40 CFR 93.115 apply as the area in which the project is located is designated as nonattainment (for ozone and fine particulate matter) and maintenance (for CO). Accordingly, there must be a currently conforming transportation plan and program at the time of project approval, and the project must come from a conforming plan and program (or otherwise meet criteria specified in 40 CFR 93.109(b)).

4.1 Carbon Monoxide

Modeling for CO was conducted using inputs and procedures implemented following US EPA and FHWA general guidance^{7,8,9} as well as Department guidance for local (consultant) implementation¹⁰. Emissions and ambient concentrations were modeled, respectively, using standard US EPA models MOBILE6.2 and CAL3QHC/CALINE3 as incorporated into or employed by interface software developed and released by the FHWA. The interface software streamlines the file preparation and modeling process and provides a ready means to test worst-case (pre-screening) scenarios for project level analyses.

The interface software package used for the emission modeling was "EMIT"¹¹ as updated by the FHWA in March 2007. The corresponding interface software package applied for dispersion modeling of intersections was "Cal3Interface"¹², which was initially released by the FHWA in December 2006 and most recently updated in October 2008. More information on these models may be obtained from the FHWA web site¹³.

Worst-Case Scenarios

Modeling was conducted for four locations associated with the project. Two were selected for their location within the CO maintenance area (Arlington County), in which the project is partly located. The other two were selected for their location within or near the highest volume section of the project (the western end, in Fairfax County). All of the locations selected have relatively high traffic volumes and congestion that are the focus of CO analyses.

⁷ "Guidelines for Modeling Carbon Monoxide from Roadway Intersections", EPA-454/R-92-005, US EPA, 1992

⁸ "User's Guide to CAL3QHC Version 2.0: A Modeling Methodology for Predicting Pollutant Concentrations Near Roadway Intersections", EPA-454/R-92-006 (Revised), EPA, September 1995

⁹ "Discussion Paper. Appropriate Level of Highway Air Quality Analysis for a CE, EA/FONSI, and EIS", FHWA, March 1986

¹⁰ "Consultant Guide. Air Quality Conformity Project-Level Analysis", VDOT Environmental Division, Air Section, June 2007

¹¹ See "The Easy Mobile Inventory Tool – EMIT", Michael Claggett, Ph.D. (Principal Author and Model Designer), Air Quality Modeling Specialist, Federal Highway Administration Resource Center, 604 West San Mateo Road, Santa Fe, New Mexico 87505, and Jeffrey Houk, Air Quality Modeling Specialist, Federal Highway Administration Resource Center, 12300 West Dakota Avenue, Suite 340, Lakewood, Colorado 80228, dated November 2, 2006.

¹² See "CAL3Interface – A Graphical User Interface for the CALINE3 and CAL3QHC Highway Air Quality Models", Michael Claggett, Ph.D., FHWA Resource Center, 12300 West Dakota Avenue, Suite 340, Lakewood, Colorado 80228, ca 2006.

¹³ See <http://www.fhwa.dot.gov/index.html>.

The two locations inside the CO maintenance that were selected are:

- i) Arterial street intersection of Washington Boulevard and Sycamore Street - located near the relatively high volume west end of the project area, near "Spot 1".
- ii) Arterial street intersection of Fairfax Drive and North Glebe Road - located near the eastern end of the corridor, near "Spot 3".

While these two locations are not within the project area and are not themselves proposed for improvements as part of this freeway-improvement project, they were selected to represent potential impacts at local (high volume) arterial street intersections within the CO maintenance area.

The two locations outside of the CO maintenance area but within or near the highest volume section of I-66 affected by the project are:

- iii) Grade separation of I-66 and Haycock Road - located at the high-volume western end of "Spot 2", i.e., within the project area.
- iv) Freeway to freeway interchange for I-66 and the Dulles Access and Toll Road (DATR), located just outside the high-volume western end of the project area (west of and adjacent to Spot 2).

For each location, worst-case emissions and ambient concentrations of CO were modeled for the base year (No-build) (2006), opening year (2013) and design year (2032) associated with the project. Additionally, worst-case no-build scenarios were modeled for the opening and design years for the high volume I-66 and Haycock Road location that is within the project area. As well, a modeled speed and volume scenario was assessed for this location to provide a comparison (sensitivity test) to the worst-case modeling assumptions.

Emission Factors

Exhibit 5 presents a summary of the input data applied for the emission factor modeling using the EMIT interface model. In general, inputs included local vehicle registration data for 2005, emission inspection and maintenance program inputs as used for the regional conformity analysis for Northern Virginia and the CO Maintenance Plan¹⁴ for Arlington County (and Alexandria), fuel quality (sulfur, and Reid Vapor Pressure or RVP), and other data. Temperature data were selected as specified in the Consultant Guide and represents an average minimum monthly temperature for January. Other data such as absolute humidity were kept at EPA defaults.

Additionally, inputs for Arlington County were made consistent with those applied for modeling for the CO Maintenance Plan that included that jurisdiction. Latest planning assumptions were applied as appropriate for VMT mix and vehicle registrations. More conservative values were applied for temperature and gasoline Reid vapor pressure (RVP). For temperature, the value (22°F) specified in the VDOT Consultant Guide for projects located in Northern Virginia was applied as it was lower than the lower value of the range (33 to 53°F)

¹⁴ Metropolitan Washington Council of Governments, "Revised Carbon Monoxide Maintenance Plan and Revised 1990 Carbon Monoxide Base Year Emissions Inventory for the Washington DC-MD-VA Maintenance Area", February 19, 2004

assumed in the Maintenance Plan, and would therefore result in more conservative (higher) modeled emission factors to be applied in this analysis.

Exhibit 5: Key EMIT Interface Software (MOBILE6.2) Input Data

Parameter	Input
Evaluation Month	January
Min/Max Temperature (Fahrenheit)	NOVA Specific (22/22 °F)
Gasoline Reid Vapor Pressure (RVP)(psi)	NOVA Specific (13.5 psi)
Gasoline Sulfur	Conventional East
Fuel Oxygenate	NOVA Specific (3.5% ethanol)
Inspection and Maintenance / ATP	NOVA specific
VMT Mix by Vehicle Class	NOVA specific (2005 Data)
Vehicle Registration by Vehicle Class	2005 Data for Fairfax County and Arlington County, as appropriate for each location modeled.

Exhibit 6 presents the emission factors generated using the EPA MOBILE6.2 model (via the FHWA EMIT interface model). Note arterial and freeway emission factors as listed below are identical for speeds of 36 mph and above. The speeds listed are those identified in the traffic forecasts for each roadway (arterial street and freeway) segment assessed in this study. In general, since modeled emission factors increase with speed for speeds above about 30 miles per hour (mph), selection of higher speeds results in higher estimates for emission factors and ultimately higher estimates for emissions and ambient concentrations.

For this study, the speeds selected for each scenario were generally taken as its estimated free flow speed; this represents a very conservative approach to modeling emissions. For the scenario involving only freeway segments (i.e., for the I-66 and Dulles Access and Toll Road interchange), speeds were taken even more conservatively, as 65 mph, the maximum for which the EPA MOBILE6.2 model can model emission factors. Additionally, as a sensitivity test, one additional modeling run was conducted using forecast operating speeds instead of the estimated free flow speed, to show the sensitivity of the modeling approach to this assumption. The results for this sensitivity run, conducted for the grade separation at I-66 and Haycock Road, are presented with the overall results at the end of this section.

**Exhibit 6: Emission Factors Generated with MOBILE6.2 (via EMIT)
(g/mi)**

Speed* (mph)	Base Year (2006)	Interim Year (2013)	Design Year (2032)
<i>Arterial:</i>			
29	6.299	3.866	3.217
30	6.273	3.852	3.206
<i>Freeway/Arterial:</i>			
36	6.785	4.165	3.412
42	7.044	4.375	3.657
43	7.140		
45		4.566	
46	7.426	4.639	3.887
49	7.719	4.842	
61	8.930	5.686	4.801
65	9.343	5.975	5.055

** As modeled for the build and no-build scenarios, respectively.*

Dispersion Modeling

Exhibit 7 summarizes the input data applied for the dispersion modeling. The input data were generally selected as the Cal3Interface software worst-case analysis defaults unless otherwise noted. Ambient background concentrations of 2.9 parts per million (ppm) for the one hour standard and 2.3 ppm for the eight hour standard were applied, as specified for the Northern Virginia area in the VDOT 2008 guidance memo¹⁵ addressing background concentrations. A sample copy of an input file as generated using CAL3Interface for the CAL3QHC model is provided as Attachment B.

Receptor locations (points for which CO concentrations are estimated) were as specified the Cal3Interface software package for the worst-case scenario for each roadway configuration. Receptors were located at each corner, three meters from each intersecting roadway; along each side of the intersecting roadways at twenty-five meters and fifty meters from the corner; and at the midpoint on each side of the intersecting roadways. The option of having the model locate the worst-case wind direction for each receptor was applied to ensure that the maximum possible CO concentration was predicted.

¹⁵ VDOT, "Background Carbon Monoxide (CO) Values", July 11, 2008

Exhibit 7: Key Cal3Interface (CAL3QHC/CALINE3) Worst-Case Analysis Inputs*

Parameter	Data
Surface Roughness Coefficient, cm	108
Background CO Concentration, ppm**	
- One-hour	6
- Eight-Hour	3
Wind Speed, meters per second	1
Stability Class	4 (D – Neutral)
Mixing Height, meters	1000
Receptor Height, meters (ft)	1.8 (5.9)
Persistence Factor	0.7

* Cal3Interface Defaults unless otherwise specified.

** As specified in the VDOT Consultant Guide (2007).

Each roadway was modeled as at-grade with a source height of zero. Roadway widths were set at twelve feet. A minimum right of way of twenty feet was applied for the freeway. The EPA default wake distance of three meters (9.8 ft) was also applied. Right of way was taken as ten feet. As indicated in the guidance for the Cal3Interface model, intersection approaches were modeled with both a queue link and a free-flow link.

Worst-case modeling for the intersections were based on Cal3Interface model default volumes, which are intended to reflect over-capacity operating conditions (level of service or LOS E). A volume-to-capacity ratio of 1.44 and the EPA-recommended saturation flow rate of 1600 vehicles per hour per lane (vphpl) for each arterial link were assumed. The resulting default LOS E volume for intersections is 1037 vphpl. Cal3Interface model default volumes for freeway facilities operating at capacity of 2200 vphpl were applied for mainline freeway segments.

Arterial Street Intersection of Washington Boulevard and Sycamore Street

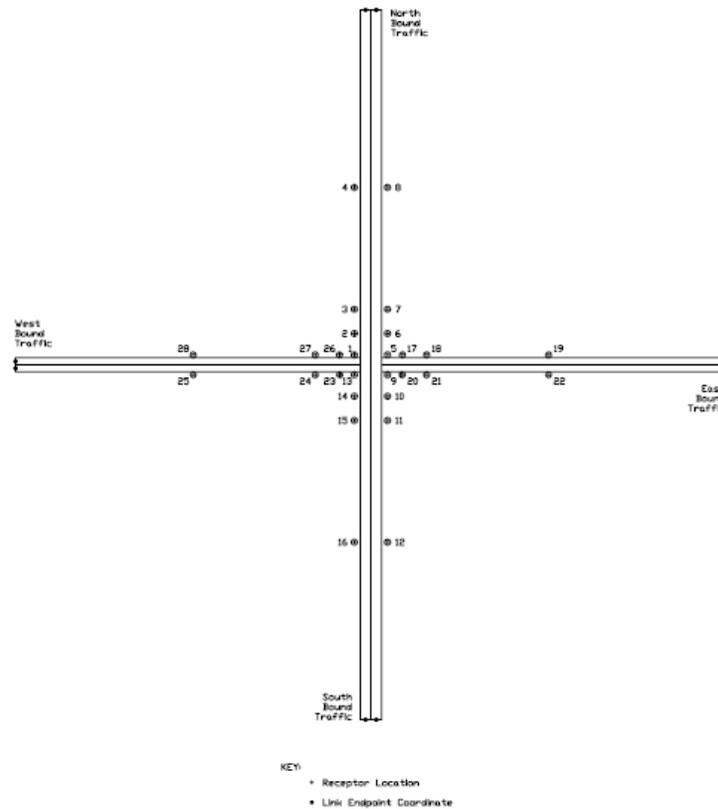
Exhibits 8 and 9 respectively present an aerial photo and modeling configuration for the intersection at Washington Boulevard and Sycamore Street in Arlington County, which is part of the CO maintenance area.

As part of the worst-case modeling approach, turn lanes were counted as full length through lanes with worst-case traffic volumes corresponding to the LOS E conditions as noted above. Accordingly, this intersection was modeled as having four approach and four departure lanes for each leg of the intersection even though, as may be seen in the aerial, each leg has only two through lanes and from zero to two turn lanes. Estimated free flow speeds of 36 mph were applied for each roadway. Since this intersection is not being improved, build and no-build scenarios are the same under the worst-case modeling approach that assigns worst-case traffic volumes based on the number of lanes.

Exhibit 8: Washington Boulevard & Sycamore Street Arterial Street Intersection (Aerial Photo)



Exhibit 9: Cal3Interface Pre-Screen Worst-Case Scenario Receptor Locations (for Washington Boulevard and Sycamore Street)



Source: Figure 2.2 (Receptor Locations / Link Configurations of the Pre-Defined Grade-Separated Crossover Freeway Option) reproduced from "CAL3Interface – A Graphical User Interface for the CALINE3 and CAL3QHC Highway Air Quality Models", Michael Claggett, Ph.D., FHWA Resource Center, 12300 West Dakota Avenue, Suite 340, Lakewood, Colorado, ca 2006.

Arterial Street Intersection of Fairfax Drive and North Glebe Road

Exhibits 10 and 11 present respectively an aerial photo and modeling configuration for the intersection at Fairfax Drive and North Glebe Road in Arlington County, which is part of the CO maintenance area. As shown in the model configuration, the skew angle for the intersection was matched.

As noted above, as part of the worst-case modeling approach, turn lanes were counted as full length through lanes with worst-case traffic volumes corresponding to the LOS E conditions. Accordingly, Fairfax Drive was modeled as having four approach and four departure lanes in each direction. North Glebe Road was similarly modeled with five lanes in each direction. For comparison, as may be seen in the aerial, Fairfax Drive has two through lanes in each direction while North Glebe Road has three lanes in each direction. The additional lanes models are for turn lanes. Since this intersection is not being improved, build and no-build scenarios are the same under the worst-case modeling approach that assigns worst-case traffic volumes based on the number of lanes.

Grade Separation of I-66 and Haycock Road

Exhibits 12 and 13 respectively present an aerial photo and modeling configuration for the grade separation of I-66 and Haycock Road, located in Fairfax County. This location was selected for analysis as it involves the highest volume grade-separation in the highest volume section of I-66 that is being improved as part of this project. The skew angle for the grade separation was modeled as well, although the overall view was not rotated to match the aerial.

As noted above, as part of the worst-case modeling approach, turn lanes were counted as full length through lanes with worst-case traffic volumes corresponding to the LOS E conditions. Accordingly, I-66 was modeled as having four lanes eastbound and three lanes westbound for the no-build scenario. It was modeled with an extra lane westbound for the build scenario. Haycock Road was modeled as having two lanes in each direction for both the build and no-build scenarios.

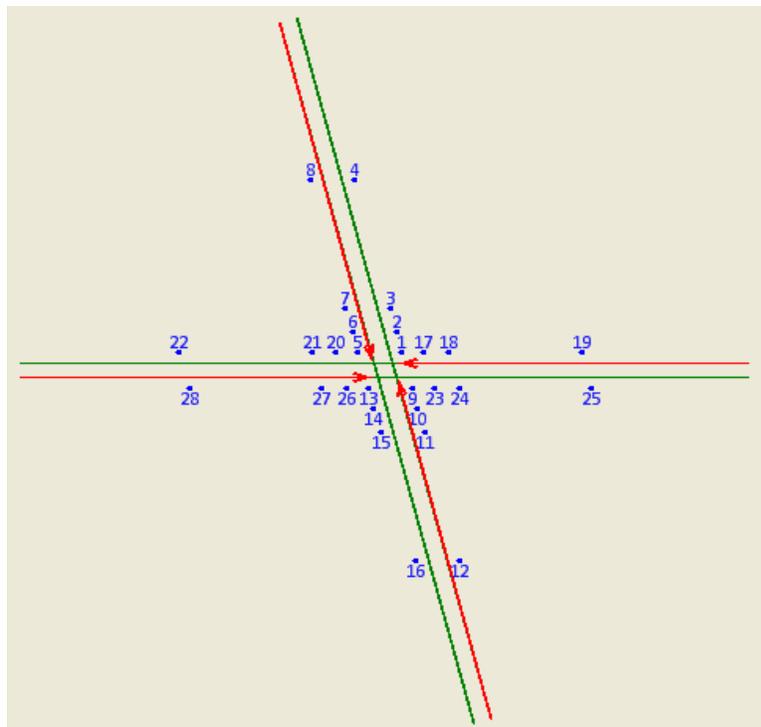
Worst-case scenario modeling was conducted for base, opening and design years as noted previously. Additionally, for this location, model runs were conducted based on modeled volumes and speeds (and not worst-case conditions) for each year, applying the traffic forecasts developed for this project and copied in Attachment A.

For comparison, worst-case traffic volumes in the design year exceeded the modeled volumes for Haycock Road by 520 percent in the northbound direction, and 660 percent in the southbound. Similarly, for the associated I-66 (freeway) segment, worst-case traffic volumes exceeded the modeled volumes by 36 percent in the westbound direction and 66 percent in the eastbound. Results for these sensitivity tests are presented with the overall modeling results at the end of this section.

Exhibit 10: Fairfax Drive and North Glebe Road Arterial Street Intersection (Aerial Photo)



Exhibit 11: Cal3Interface Pre-Screen Worst-Case Scenario Receptor Locations (for Fairfax Drive & North Glebe Road)

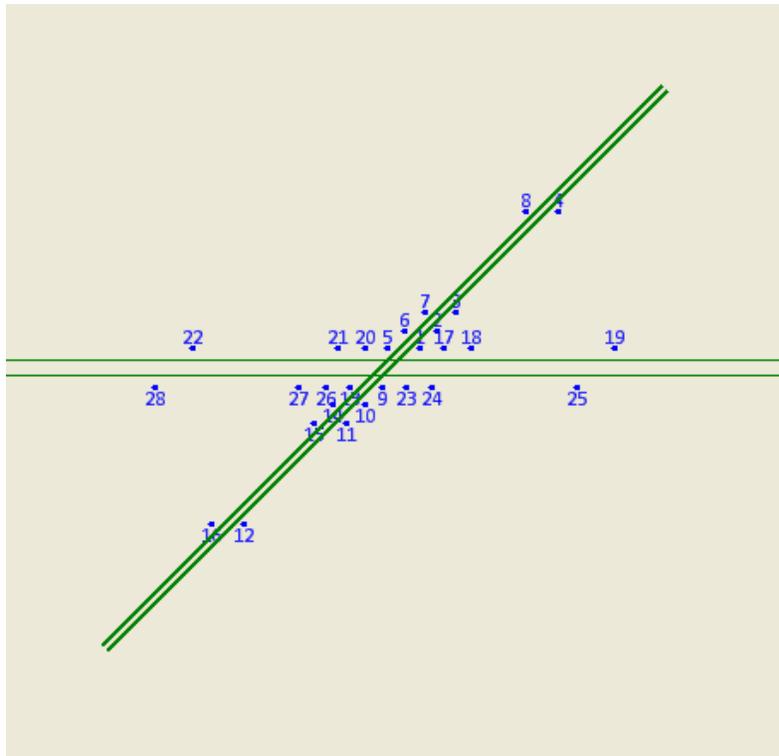


Source: Generated using the FHWA Cal3Interface mode (October 2008 release).

Exhibit 12: I-66 & Haycock Road/Route 703 Grade Separation (Aerial Photo)



Exhibit 13: Cal3Interface Pre-Screen Worst-Case Scenario Receptor Locations (for I-66 & Haycock Road)



Source: Generated using the FHWA Cal3Interface mode (October 2008 release).

Freeway to Freeway Interchange for I-66 & the Dulles Access and Toll Road

Exhibits 14 and 15 respectively present an aerial photo and modeling configuration for the grade separation of I-66 and Haycock Road, located in Fairfax County. This location was selected for analysis as it involves a high volume freeway-to-freeway interchange adjacent to the highest volume section of I-66 that is being improved as part of this project. All freeway links were modeled at 65 mph for this scenario.

Note the generic model representation for the T-interchange has the north-south roadway segment south of the east-west segment, which is opposite to the physical layout of the Dulles Access and Toll Road and I-66. However, the forecast maximum concentrations are unchanged by the difference in orientation. Additionally, the model configuration was skewed to better match the interchange.

As part of the worst-case modeling approach, ramp and adjacent roadway links were counted as full length freeway through lanes with worst-case traffic volumes corresponding to the LOS E conditions. Accordingly, for the build scenario, I-66 was modeled as having four lanes in the eastbound direction for both the western and eastern legs. For the westbound direction, five lanes were modeled for the eastern leg, with the fifth lane added to represent the portion of the Spot 2 improvement that extends to the ramp of this interchange; for modeling purposes, it was assumed to extend through to the center of the interchange. For the western leg of the interchange, I-66 was modeled as having ten freeway through-lanes in the westbound direction, based upon two freeway through-lanes, two freeway ramp lanes, and four arterial street lanes. The north-south (Dulles Access and Toll Road) segment was modeled as having three lanes in each direction. For the no-build scenario, the fifth lane was assumed not to be added for the eastern leg; all other lanes were as described for the build scenario.

Modeling Results

Exhibit 16 presents the forecast maximum concentrations for CO for each configuration and scenario tested. All forecasts include background concentrations as noted previously.

Overall, excepting the I-66 and DATR interchange that is outside the defined project area, modeled emissions and maximum concentrations are highest for the base year no-build scenario for the I-66 and Haycock Road grade separation for which Cal3Interface worst-case default (maximum) traffic volumes were applied. For this scenario, forecast maximum concentrations for CO reach 10.9 and 7.9 ppm, respectively, against the one- and eight-hour standards of 35 and 9 ppm. Emissions drop for this location to 7.9 and 5.8 ppm respectively for the one- and eight-hour standards for the opening year, and 7.1 and 5.2 ppm respectively for the design year.

For comparison, forecast peak concentrations for the worst-case build scenario for this same location reach 8.2 and 7.3 ppm for the one-hour standard for the opening and design years. The corresponding forecast peak concentrations for the eight-hour standard are 6.0 and 5.4 ppm respectively for the opening and design years.

Exhibit 14: I-66 & Dulles Access and Toll Road Interchange (Aerial Photo)

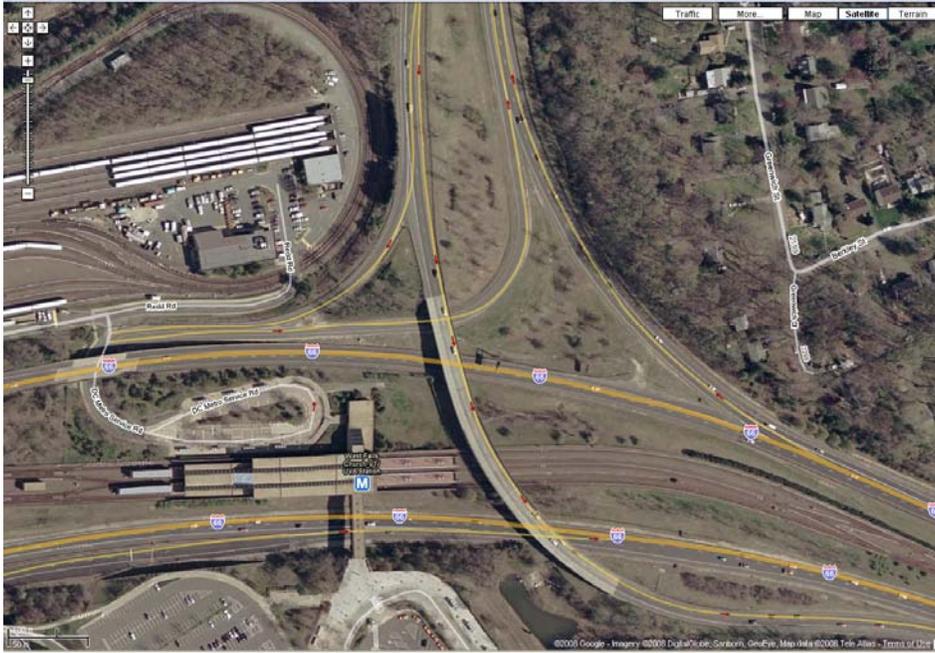
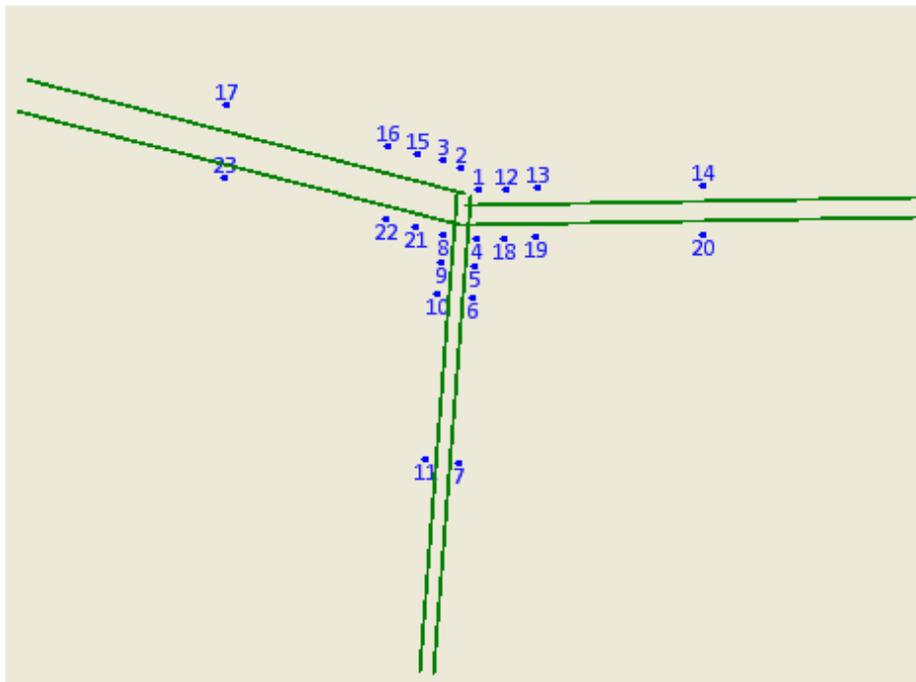


Exhibit 15: Cal3Interface Pre-Screen Worst-Case Scenario Receptor Locations (for the I-66 & Dulles Access and Toll Road Interchange)



Source: Generated using the FHWA Cal3Interface mode (October 2008 release).

If modeled traffic volumes are applied instead of the worst-case volumes for the build scenario for this location, the forecast peak concentrations for CO drop significantly, to 6.0 and 4.5 ppm for the one- and eight-hour standards respectively for this location for the base year, 5.1 and 3.8 ppm for the opening year, and 4.9 and 3.7 ppm for the design year. Since the modeled traffic volumes for this scenario are significantly less than the assumed worst-case volumes, the modeled emissions and ambient concentrations are also lower than for the worst-case scenario.

For the arterial street locations within the maintenance area, the highest concentration modeled for the base year was for the Fairfax Drive and North Glebe Road intersection, reaching 8.9 and 6.5 ppm for the one and eight-hour standards respectively. Forecast peak concentrations for the one-hour standard drop for this location to 6.5 and 5.9 ppm for the opening and design years, respectively, and similarly drop to 4.8 and 4.4 ppm respectively for the eight-hour standard. Emissions and modeled peak concentrations were the same for the build and no-build scenarios, as no changes in the number of traffic lanes at these intersections were planned as part of the planned improvements for I-66 and in the worst-case modeling approach the same worst-case LOS E traffic volumes were therefore applied for both scenarios.

For the I-66 and DATR interchange located adjacent to the project area, forecast peak worst-case concentrations reach 11.4 and 8.3 ppm in the opening year for the one- and eight-hour standards respectively, dropping to 10.2 and 7.4 ppm in the design year. Although results for individual receptors differed slightly, the results for the forecast *peak* concentration for the no-build scenario, which had one less lane (westbound only, and only on the eastern leg), were the same as for the build.

In all scenarios, forecast peak concentrations for CO are well below the respective one- and eight-hour standards of 35 and 9 ppm. In general, emissions and ambient concentrations drop significantly from the base through the opening and design years with continued fleet turnover to vehicles constructed to more stringent emission standards.

The results indicate that, despite the forecast increases in traffic between the base and design years, ambient levels of CO in the vicinity of the project are expected to decline significantly and remain well below both the one-hour and the eight-hour NAAQS. The project therefore is not expected to cause or contribute to a violation of the CO standards.

Exhibit 16: Forecast Maximum CO Concentrations (ppm) & Receptor Locations*

Scenario	Base Year (2006)	Opening (2013)	Design Year (2032)
<i><u>CO Maintenance Area (Arlington County)</u></i>			
<i>Washington Blvd and Sycamore Street: Worst-Case (8x8) Arterial Street Intersection at free-flow speeds (same configuration for Build and No-Build)</i>			
One-Hour Standard (35 ppm)	8.2 (1)	6.1 (1)	5.6 (1)
Eight-Hour Standard (9 ppm)	6.0 (1)	4.5 (1)	4.2 (1)

Exhibit 16: Forecast Maximum CO Concentrations (ppm) & Receptor Locations*

Scenario	Base Year (2006)	Opening (2013)	Design Year (2032)
<i>Fairfax Drive and North Glebe Road: Worst-Case (10x8) Arterial Street Intersection at free-flow speeds (same configuration for Build and No-Build)</i>			
One-Hour Standard (35 ppm)	8.9 (1)	6.5 (5)	5.9 (1)
Eight-Hour Standard (9 ppm)	6.5 (1)	4.8 (5)	4.4 (1)
<i>Highest Volume Segment of I-66</i>			
<i>I-66 & Haycock Road: Worst-Case (8x4) Grade-Separation at free-flow speeds</i>			
One-Hour Standard (35 ppm)	-	8.2 (1)	7.3 (1)
Eight-Hour Standard (9 ppm)	-	6.0 (1)	5.4 (1)
<i>I-66 & Haycock Road: Worst-Case No-Build (7x4) Grade-Separation at free-flow speeds</i>			
One-Hour Standard (35 ppm)	10.9 (13)	7.9 (1)	7.1 (1)
Eight-Hour Standard (9 ppm)	7.9 (13)	5.8 (1)	5.2 (1)
<i>I-66 & Haycock Road: Modeled Volumes and Speeds (8x4) Grade-Separation (Base year no-build 7x4)</i>			
One-Hour Standard (35 ppm)	6.0 (1)	5.1 (5)	4.9 (13)
Eight-Hour Standard (9 ppm)	4.5 (1)	3.8 (5)	3.7 (13)
<i>I-66 & Dulles Access & Toll Road Interchange: Worst-Case No-Build at max. speed(65 mph)(Same results for peak concentrations for Build and No-Build)</i>			
One-Hour Standard (35 ppm)	-	11.4 (4)	10.2 (4)
Eight-Hour Standard (9 ppm)	-	8.3 (4)	7.4 (4)

* Including background concentrations of 2.9 and 2.3 ppm for the one- and eight-hour standards respectively. Receptor locations noted are only for the first location if more than one location has the same value.

** Worst-case volumes are as specified in the FHWA Cal3Interface model using CAL3QHC.

Finally, for reference, Exhibit 17 presents ambient CO levels in northern Virginia for the last full year for which data are available, 2007. The monitored levels are well below the ambient one- and eight-hour standards, and significantly below the forecast values for the build scenario for

the proposed spot improvements. The monitored values therefore add to the weight of evidence that the project will not result in any new violations of the CO standards.

Exhibit 17: Ambient CO Levels in Northern Virginia, 2007

Site	2007			
	1-Hour Avg.		8-Hour Avg. *	
	1 st Max.	2 nd Max.	1 st Max.	2 nd Max.
(109-M) Roanoke	4.1	4.0	3.7	3.2
(158-W) Richmond	2.4	2.0	1.5	1.1
(179-C) Hampton	2.6	1.9	1.3	1.1
(181-A1) Norfolk	1.5	1.5	1.0	0.8
(46-B9) Fairfax Co.	1.7	1.5	1.3	1.2
(47-T) Arlington Co.	2.1	1.8	1.6	1.5
(L-46-A8) Fairfax Co.	2.3	2.1	1.8	1.6
(L-46-C1) Fairfax Co.	1.6	1.4	1.3	1.1
(L-46-F) Fairfax Co.	1.5	1.4	1.4	1.3
(L-126-C) Alexandria	2.1	2.1	1.6	1.4

* Eight Hour Averages stated as Ending Hour

Source: Excerpted from VDEQ, "Virginia Ambient Air Monitoring 2007 Data Report", August 28, 2008 (PDF version)

4.2 Particulate Matter

The federal conformity rule requires hotspot analyses for specific project types (40 CFR 93.123(b)(1)). An assessment of this project in relation to each project type is provided below.

40 CFR 93.123(b)(1) project types:

- (i) *New or expanded highway projects that have a significant number of or significant increase in diesel vehicles*

The proposed improvements are for an existing interstate freeway; I-66 is not a new facility. While total traffic is forecast to reach up to about 196,000 AADT, the forecast increase in total traffic associated with the spot improvements (i.e. build vs no-build) is less than five percent.

Additionally, truck percentages are low, currently ranging up to 1.5%, as truck traffic is prohibited. The truck percentage would not be expected to increase any faster than total traffic; that is, growth in diesel truck traffic would also be expected to be less than five percent. This increase in absolute or relative terms is not considered a significant increase in and of itself. Therefore, a PM_{2.5} hot-spot analysis would not be warranted for the proposed spot improvements for I-66.

- (ii) *Projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project*

Diesel truck volumes are not projected to be significant as indicated above.

(iii) *New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location:*

This project does not involve bus or rail terminals.

(iv) *Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and*

This project does not involve bus or rail terminals.

(v) *Projects in or affecting locations, areas, or categories of sites which are identified in the PM10 or PM2.5 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.*

This project is not located in such an area.

In summary, based on the criteria specified in the transportation conformity rule and associated guidance, this project is not expected to be one of air quality concern for particulate matter.

4.3 Mobile Source Air Toxics (MSATs)

The FHWA 2/3/2006 Interim Guidance establishes a three-tiered approach to determine the level of analysis needed for MSATs in a project-level study. These tiers or levels are reviewed below, using text from the guidance. The project is assessed in relation to the guidance following this review.

(1) Exempt Projects or Projects with No Meaningful Potential MSAT Effects.

The types of projects included in this category are:

- Projects qualifying as a categorical exclusion under 23 CFR 771.117(c);
- Projects exempt under the Clean Air Act conformity rule under 40 CFR 93.126; or
- Other projects with no meaningful impacts on traffic volumes or vehicle mix

Additionally, the guidance indicates that, “[f]or projects with no negligible traffic impacts, regardless of the class of NEPA environmental document, no MSAT analysis is required.” It is further noted in the guidance that “[t]he types of projects categorically excluded under 23 CFR 771.117(d) or exempt from conformity rule under 40 CFR 93.127 do not warrant an automatic exemption from an MSAT analysis, but they usually will have no meaningful impact.”

Projects in this category do not require either a qualitative or a quantitative analysis for MSATS, although documentation of the project category is required.

(2) Projects with Low Potential MSAT Effects

The types of projects included in this category are those that serve to improve operations of highway, transit or freight without adding substantial new capacity or without

creating a facility that is likely to meaningfully increase emissions. This category covers a broad range of projects. Examples of these types of projects are minor widening projects and new interchanges, such as those that replace a signalized intersection on a surface street or where design year traffic is not projected to meet the 140,000 to 150,000 AADT criteria.

Projects in this category are to be addressed with a qualitative analysis following the guidance provided by FHWA.

(3) *Projects with Higher Potential MSAT Effects*

The types of projects in this category must:

- Create or significantly alter a major intermodal freight facility that has the potential to concentrate high levels of diesel particulate matter in a single location; or
- Create new or add significant capacity to urban highways such as interstates, urban arterials, or urban collector-distributor routes with traffic volumes where the AADT is projected to be in the range of 140,000 to 150,000, or greater, by the design year;

AND

- Be proposed to be located in proximity to populated areas or in rural areas, in proximity to concentrations of vulnerable populations (i.e., schools, nursing homes, hospitals).

Projects in this category would be more rigorously assessed for impacts.

The proposed improvements are for an existing interstate freeway; I-66 is not a new facility. While total traffic is forecast to reach up to about 196,000 AADT, the forecast increase in total traffic associated with the spot improvements (i.e. build vs no-build) is less than five percent.

Additionally, truck percentages are low, currently ranging up to 1.5%, as truck traffic is prohibited. The truck percentage would not be expected to increase any faster than total traffic; that is, growth in diesel truck traffic would also be expected to be less than five percent. This increase in absolute or relative terms is not considered a significant increase in and of itself.

The project therefore falls into the second category, i.e., those with "*Low Potential MSAT Effects*". As noted above, projects in this category are addressed with a qualitative analysis following the guidance provided by FHWA. A qualitative analysis consistent with federal guidance is therefore provided below for this project.

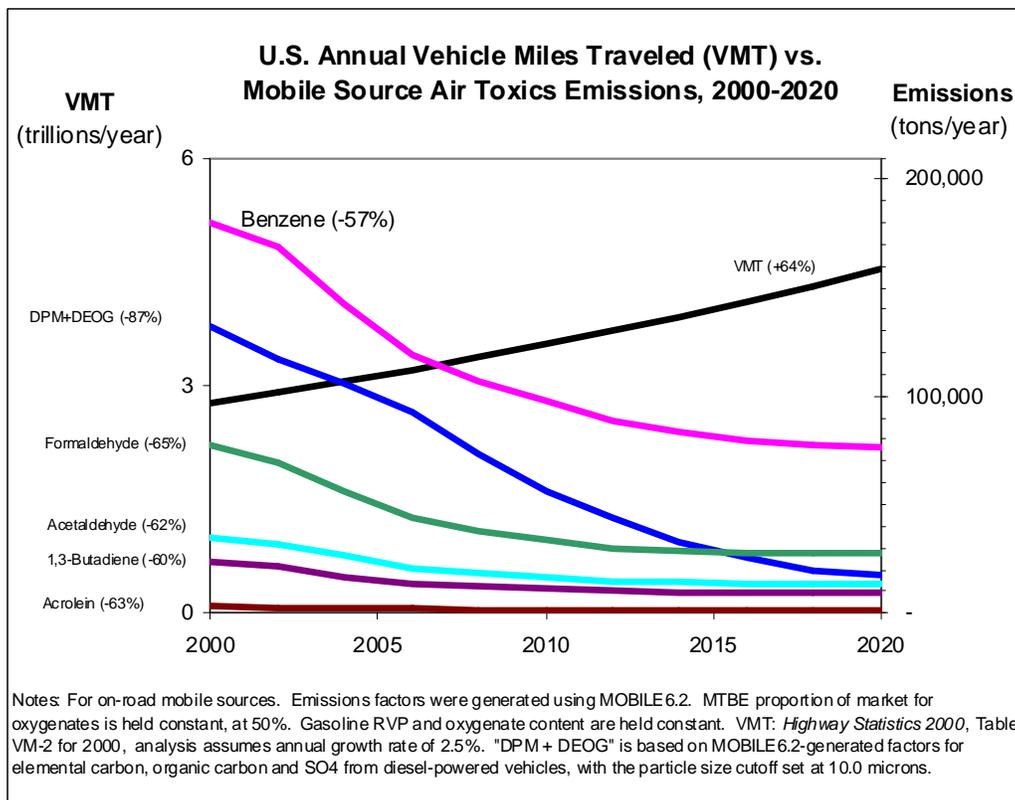
In addition to the criteria air pollutants for which there are national ambient air quality standards, EPA also regulates air toxics. Most air toxics originate from human-made sources,

including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries).

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the Clean Air Act. The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

The EPA is the lead Federal Agency for administering the Clean Air Act and has certain responsibilities regarding the health effects of MSATs. The EPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources. 66 FR 17229 (March 29, 2001). This rule was issued under the authority in Section 202 of the Clean Air Act. In its rule, EPA examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline (RFG) program, its national low emission vehicle (NLEV) standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. Between 2000 and 2020, FHWA projects that even with a 64 percent increase in VMT, these programs will reduce on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde by 57 percent to 65 percent, and will reduce on-highway diesel PM emissions by 87 percent, as shown in the graph below.

Exhibit 18: VMT and MSAT Emissions, 2000-2020



As a result, EPA concluded that no further motor vehicle emissions standards or fuel standards were necessary to further control MSATs. The agency is preparing another rule under authority of CAA Section 202(l) that will address these issues and could make adjustments to the full 21 and the primary six MSATs¹⁶.

Unavailable Information for Project Specific MSAT Impact Analysis

This document includes a basic analysis of the likely MSAT emission impacts of this project. However, available technical tools do not enable prediction of the health impacts of the emission changes associated with the project. Due to these limitations, the following discussion is included in accordance with Council of Environmental Quality (CEQ) regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information:

Information that is Unavailable or Incomplete

Evaluating the environmental and health impacts from MSATs on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling in order to estimate ambient concentrations resulting from the estimated emissions, exposure modeling in order to estimate human exposure to the estimated concentrations, and then final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the MSAT health impacts of this project.

1. **Emissions:** The EPA tools to estimate MSAT emissions from motor vehicles are not sensitive to key variables determining emissions of MSATs in the context of highway projects. While MOBILE 6.2 is used to predict emissions at a regional level, it has limited applicability at the project level. MOBILE 6.2 is a trip-based model--emission factors are projected based on a typical trip of 7.5 miles, and on average speeds for this typical trip. This means that MOBILE 6.2 does not have the ability to predict emission factors for a specific vehicle operating condition at a specific location at a specific time. Because of this limitation, MOBILE 6.2 can only approximate the operating speeds and levels of congestion likely to be present on the largest-scale projects, and cannot adequately capture emissions effects of smaller projects. For particulate matter, the model results are not sensitive to average trip speed, although the other MSAT emission rates do change with changes in trip speed. Also, the emissions rates used in MOBILE 6.2 for both particulate matter and MSATs are based on a limited number of tests of mostly older-technology vehicles. Lastly, in its discussions of PM under the conformity rule, EPA has identified problems with MOBILE6.2 as an obstacle to quantitative analysis. These deficiencies compromise

¹⁶ On February 9, 2007, EPA announced that it is issuing a final rule for the "Control of Hazardous Air Pollutants from Mobile Sources". The EPA fact sheet (EPA420-F-07-017) released for the final rule states: "The final standards will significantly lower emissions of benzene and the other air toxics in three ways: (1) by lowering benzene content in gasoline; (2) by reducing exhaust emissions from passenger vehicles operated at cold temperatures (under 75 degrees); and (3) by reducing emissions that evaporate from, and permeate through, portable fuel containers." Thus, although the graph provided in the text only forecasts emissions through 2020, EPA's new MSAT2 Rule should result in additional emission reductions beyond 2020 that were not envisioned when the MSAT1 Rule or this graph were developed.

the capability of MOBILE 6.2 to estimate MSAT emissions. MOBILE6.2 is an adequate tool for projecting emissions trends, and performing relative analyses between alternatives for very large projects, but it is not sensitive enough to capture the effects of travel changes tied to smaller projects or to predict emissions near specific roadside locations.

2. Dispersion. The tools to predict how MSATs disperse are also limited. The EPA's current regulatory models, CALINE3 and CAL3QHC, were developed and validated more than a decade ago for the purpose of predicting episodic concentrations of carbon monoxide to determine compliance with the NAAQS. The performance of dispersion models is more accurate for predicting maximum concentrations that can occur at some time at some location within a geographic area. This limitation makes it difficult to predict accurate exposure patterns at specific times at specific highway project locations across an urban area to assess potential health risk. The National Cooperative Highway Research Program (NCHRP) is conducting research on best practices in applying models and other technical methods in the analysis of MSATs. This work also will focus on identifying appropriate methods of documenting and communicating MSAT impacts in the NEPA process and to the general public. Along with these general limitations of dispersion models, FHWA is also faced with a lack of monitoring data in most areas for use in establishing project-specific MSAT background concentrations.
3. Exposure Levels and Health Effects. Finally, even if emission levels and concentrations of MSATs could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis preclude us from reaching meaningful conclusions about project-specific health impacts. Exposure assessments are difficult because it is difficult to accurately calculate annual concentrations of MSATs near roadways, and to determine the portion of a year that people are actually exposed to those concentrations at a specific location. These difficulties are magnified for 70-year cancer assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over a 70-year period. There are also considerable uncertainties associated with the existing estimates of toxicity of the various MSATs, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population. Because of these shortcomings, any calculated difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with calculating the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against other project impacts that are better suited for quantitative analysis.

Summary of Existing Credible Scientific Evidence Relevant to Evaluating the Impacts of MSATs

Research into the health impacts of MSATs is ongoing. For different emission types, there are a variety of studies that show that some either are statistically associated with adverse health outcomes through epidemiological studies (frequently based on emissions levels found in

occupational settings) or that animals demonstrate adverse health outcomes when exposed to large doses.

Exposure to toxics has been a focus of a number of EPA efforts. Most notably, the agency conducted the National Air Toxics Assessment (NATA) in 1996 to evaluate modeled estimates of human exposure applicable to the county level. While not intended for use as a measure of or benchmark for local exposure, the modeled estimates in the NATA database best illustrate the levels of various toxics when aggregated to a national or state level.

The EPA is in the process of assessing the risks of various kinds of exposures to these pollutants. The EPA Integrated Risk Information System (IRIS) is a database of human health effects that may result from exposure to various substances found in the environment. The IRIS database is located at <http://www.epa.gov/iris>. The following toxicity information for the six prioritized MSATs was taken from the IRIS database Weight of Evidence Characterization summaries. This information is taken verbatim from EPA's IRIS database and represents the Agency's most current evaluations of the potential hazards and toxicology of these chemicals or mixtures.

- Benzene is characterized as a known human carcinogen.
- The potential carcinogenicity of acrolein cannot be determined because the existing data are inadequate for an assessment of human carcinogenic potential for either the oral or inhalation route of exposure.
- Formaldehyde is a probable human carcinogen, based on limited evidence in humans, and sufficient evidence in animals.
- 1,3-butadiene is characterized as carcinogenic to humans by inhalation.
- Acetaldehyde is a probable human carcinogen based on increased incidence of nasal tumors in male and female rats and laryngeal tumors in male and female hamsters after inhalation exposure.
- Diesel exhaust (DE) is likely to be carcinogenic to humans by inhalation from environmental exposures. Diesel exhaust as reviewed in this document is the combination of diesel particulate matter and diesel exhaust organic gases.
- Diesel exhaust also represents chronic respiratory effects, possibly the primary non-cancer hazard from MSATs. Prolonged exposures may impair pulmonary function and could produce symptoms such as cough, phlegm, and chronic bronchitis. Exposure relationships have not been developed from these studies.

There have been other studies that address MSAT health impacts in proximity to roadways. The Health Effects Institute, a non-profit organization funded by EPA, FHWA, and industry, has undertaken a major series of studies to research near-roadway MSAT hot spots, the health implications of the entire mix of mobile source pollutants, and other topics. The final summary of the series is not expected for several years.

Some recent studies have reported that proximity to roadways is related to adverse health outcomes -- particularly respiratory problems¹⁷. Much of this research is not specific to MSATs,

¹⁷ South Coast Air Quality Management District, Multiple Air Toxic Exposure Study-II (2000); Highway Health Hazards, The Sierra Club (2004) summarizing 24 Studies on the relationship between health and air quality); NEPA's Uncertainty in the

instead surveying the full spectrum of both criteria and other pollutants. The FHWA cannot evaluate the validity of these studies, but more importantly, they do not provide information that would be useful to alleviate the uncertainties listed above or to perform a more comprehensive evaluation of the health impacts specific to this project.

Relevance of Unavailable or Incomplete Information to Evaluating Reasonably Foreseeable Significant Adverse Impacts on the Environment, and Evaluation of impacts based upon theoretical approaches or research methods generally accepted in the scientific community.

Because of the uncertainties outlined above, a quantitative assessment of the effects of air toxic emissions impacts on human health cannot be made at the project level. While available tools do allow a reasonable prediction of relative emissions changes between alternatives for larger projects, the amount of MSAT emissions from this project and MSAT concentrations or exposures created by this project cannot be predicted with enough accuracy to be useful in estimating health impacts. (As noted above, the current emissions model is not capable of serving as a meaningful emissions analysis tool for smaller projects.) Therefore, the relevance of the unavailable or incomplete information is that it is not possible to make a determination of whether this project would have "significant adverse impacts on the human environment."

In this document, FHWA provides a qualitative assessment and acknowledges that the project may result in increased exposure to MSAT emissions in certain locations, although the concentrations and duration of exposures are uncertain, and because of this uncertainty, the health effects from these emissions cannot be estimated.

As discussed above, technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions and effects of this project. However, even though reliable methods do not exist to accurately estimate the health impacts of MSATs at the project level, it is possible to qualitatively assess the levels of future MSAT emissions under the project. The qualitative assessment presented is derived in part from a study conducted by the FHWA entitled *A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives*, which may be obtained from the FHWA website (<http://www.fhwa.dot.gov/environment/airtoxic/msatcompare/msatemissions.htm>).

Emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent from 2000 to 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in virtually all locations.

Federal Legal Scheme Controlling Air Pollution from Motor Vehicles, Environmental Law Institute, 35 ELR 10273 (2005) with health studies cited therein.

Accordingly, for this project, there may be localized areas where VMT would increase, and other areas where VMT would decrease. Therefore it is possible that localized increases and decreases in MSAT emissions may occur. However, even if these increases do occur, they too will be substantially reduced in the future due to implementation of EPA's vehicle and fuel regulations.

In sum, in the design year it is expected that MSAT levels could be higher in some locations than others, but current tools and science are not adequate to quantify them. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.

5. Construction & Other Potential Impacts

Comments provided by the DEQ in relation to the State Environmental Review Process (SERP) for projects located in Arlington County and Fairfax County, Virginia¹⁸ are as follows:

This project is located within a Moderate Ozone Nonattainment area, a Fine Particulate Matter (PM2.5) Nonattainment area, and a volatile organic compounds (VOC) and oxides of nitrogen (NOx) Emissions Control Area. As such, all reasonable precautions should be taken to limit the emissions of VOC, NOx, and particulate matter. In addition, the following DEQ air pollution regulations must be adhered to during the construction of this project: 9 VAC 5-40-5600 et seq., Open Burning restrictions; 9 VAC 5-40-5490 et seq., Cutback Asphalt restrictions; and 9 VAC 5-50-60 et seq., Fugitive Dust precautions.

Arlington County is also subject to a maintenance plan for carbon monoxide (CO).

Emissions may be produced in the construction of this project from heavy equipment and vehicle travel to and from the site, as well as from fugitive sources. Construction emissions are short term or temporary in nature. In order to mitigate these emissions, all construction activities are to be performed in accordance with VDOT *Road and Bridge Specifications*.

6. Conclusion

The proposed improvements were assessed for potential air quality impacts and conformity with applicable air quality regulations and requirements. The assessment indicates that the proposed improvements would meet all applicable air quality requirements of the National Environmental Policy Act (NEPA) and transportation conformity. As such, they will not cause or contribute to a new violation, increase the frequency or severity of any violation, or delay timely attainment of national ambient air quality standards (NAAQS) as established by the US Environmental Protection Agency (US EPA).

Additionally, best available information indicates that, nationwide, regional levels of air toxics are expected to decrease in the future due to fleet turnover and the continued implementation of more stringent emission and fuel quality regulations. Nevertheless, it is possible that some

¹⁸ "DEQ SERP Comments Rev.3", spreadsheet listing DEQ comments by county, dated June 29, 2007.

localized areas may show an increase in emissions and ambient levels of these pollutants due to locally increased traffic levels associated with the proposed improvements.

This project (i.e., the three proposed improvements) is located within a Moderate Ozone nonattainment area, a Fine Particulate Matter (PM_{2.5}) nonattainment area, and a volatile organic compounds (VOC) and nitrogen oxides (NO_x) emissions control area. Portions of the project are located within Arlington County, which is also subject to a maintenance plan for carbon monoxide (CO). As such, all reasonable precautions should be taken to limit the emissions of CO, VOC, NO_x, and particulate matter. In addition, the following Virginia Department of Environmental Quality (DEQ) air pollution regulations must be adhered to during the construction of this project: 9 VAC 5-40-5600 et seq., *Open Burning restrictions*; 9 VAC 5-40-5490 et seq., *Cutback Asphalt restrictions*; and 9 VAC 5-50-60 et seq., *Fugitive Dust precautions*.

Emissions may be produced in the construction of this project from heavy equipment and vehicle travel to and from the site, as well as from fugitive sources. Construction emissions are short term or temporary in nature. In order to mitigate these emissions, all construction activities are to be performed in accordance with VDOT *Road and Bridge Specifications*.

Federal conformity requirements, including specifically 40 CFR 93.114 and 40 CFR 93.115 apply as the area in which the project is located is designated as nonattainment (for ozone and fine particulate matter) and maintenance (for CO). Accordingly, there must be a currently conforming transportation plan and program at the time of project approval, and the project must come from a conforming plan and program (or otherwise meet criteria specified in 40 CFR 93.109(b)).

Attachment A

Traffic Forecasts



COMMONWEALTH of VIRGINIA
DEPARTMENT OF TRANSPORTATION

DAVID S. EKERN, P.E.
COMMISSIONER

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

January 31, 2007

TO: Monica Franz

FROM: Bahram Jamei, Ph.D., P.E.

SUBJECT: ENVIRONMENTAL TRAFFIC AND TRANSPORTATION DATA FOR I-66 (Spot Improvements)

Requesting Agency: Central Office Environmental Quality Division

Request Date: July 13, 2006

Route and Location: I-66 between Lee Highway (Route 29 at Spout Run) to Dulles Airport Access Road (Route 267), Dulles Airport Access Road, Haycock Street, Great Falls Road, Williamsburg Road, Westmoreland Street, Sycamore Street, Lee Highway (at Spout Run and Falls Church), Washington Boulevard (at Glebe Road and Sycamore Street), George Mason Drive, Fairfax Drive, and Glebe Road (Arlington and Fairfax Counties)

Data Requested: Hourly Volume, Percent ADT and estimated Operating Speed, Percent of trucks with two axles and six tires, Percent of trucks with three or more axles, and Directional Distribution. All of the above information for each hour starting at 6 A.M. through 9 P.M. and for the Existing Year 2006 and Interim Year 2013 (Build and No-Build), and Design Year of 2032 (Build and No-Build).

Traffic Counts: Received on December 11, 2006

Procedure Used: MWCOG Round 7.0A Cooperative Forecast Land Use FY 2006 CLRP and FY 07-12 TIP Air Quality Conformity Analysis Model VDOT's Six-Year Plan, VDOT's existing ground counts 2005/2006 Traffic Engineering classification counts and turning movements

Approach Used: Ran MWCOG's 2002, 2010 and 2030 TP+ model from 2006 CLRP Air Quality Conformity Process. Existing peak hour volume, directional distribution, and truck percentages were used for design year estimates. Land use growth was checked against simulated volume growth. 2006-2013 ADT annual growth rate = 2.00% 2013-2032 ADT annual growth rate = 1.00%

Results: The results of the above procedures and approaches are as follow:

- A. I-66 mainline transportation data are provided in the ENTRADA worksheets.
- B. Crossing Roads transportation data are provided in the ENTRADA worksheets.

Existing Year 2006 and Interim Year 2013 and Design Year 2032 ADT's are provided in Figure 1.

ENTRADA Worksheet

A. I-66	Lee Highway - Glebe Road	Table 1
B. I-66	Glebe Road - Fairfax Drive	Table 2
C. I-66	Fairfax Drive – Sycamore Street	Table 3
D. I-66	Sycamore Street – Lee Highway	Table 4
E. I-66	Lee Highway – Westmoreland Street	Table 5
F. I-66	Westmoreland Street – Dulles Access Road	Table 6
G. Lee Highway	Near I-66 & Spout Run	Table 7
H. Glebe Road	Near I-66	Table 8
I. Fairfax Drive	Near I-66	Table 9
J. Washington Boulevard	Near I-66 & Glebe Road	Table 10
K. George Mason Drive	Near I-66	Table 11
L. Washington Boulevard	Near I-66 & Sycamore Street	Table 12
M. Sycamore Street	Near I-66	Table 13
N. Lee Highway	Near I-66 and Falls Church	Table 14
O. Williamsburg Boulevard	Near I-66	Table 15
P. Westmoreland Street	Near I-66	Table 16
Q. Great Falls Street	Near I-66	Table 17
R. Haycock Road	Near I-66	Table 18
S. Dulles Access Road	Near I-66	Table 19

Average Daily Traffic Volumes for 2006, 2013 Build and No-Build, and 2032 Build and No-Build

Roadway	2006	2013 Build	2013 No-Build	2032 Build	2032 No-Build
A. I-66	105,000	120,500	115,500	132,000	126,000
B. I-66	89,000	102,500	97,500	113,000	107,000
C. I-66	124,000	142,500	136,000	156,000	150,000
D. I-66	114,000	131,000	126,000	144,000	138,000
E. I-66	151,000	173,500	166,000	190,000	182,000
F. I-66	156,000	179,500	171,500	196,000	188,000
G. Lee Highway	26,000	30,000	28,500	33,000	31,000
H. Glebe Road	31,000	35,500	34,000	39,000	37,000
I. Fairfax Drive	30,000	34,500	33,000	38,000	36,000
J. Washington Boulevard	16,500	19,000	18,000	21,000	20,000
K. George Mason Drive	19,000	22,000	21,000	24,000	23,000
L. Washington Boulevard	14,500	16,500	16,000	18,000	17,000
M. Sycamore Street	21,000	24,000	23,000	26,000	25,000
N. Lee Highway	25,000	29,000	27,500	32,000	30,000
O. Williamsburg Boulevard	5,000	6,000	5,500	6,500	6,000
P. Westmoreland Street	7,500	8,500	8,000	9,500	9,000
Q. Great Falls Street	9,000	10,500	10,000	11,500	11,000
R. Haycock Road	11,000	12,500	12,000	13,500	13,000
S. Dulles Access Road	74,500	85,500	82,000	94,000	90,000

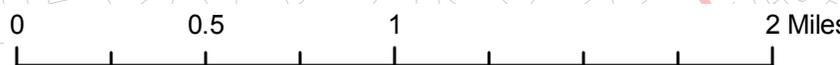
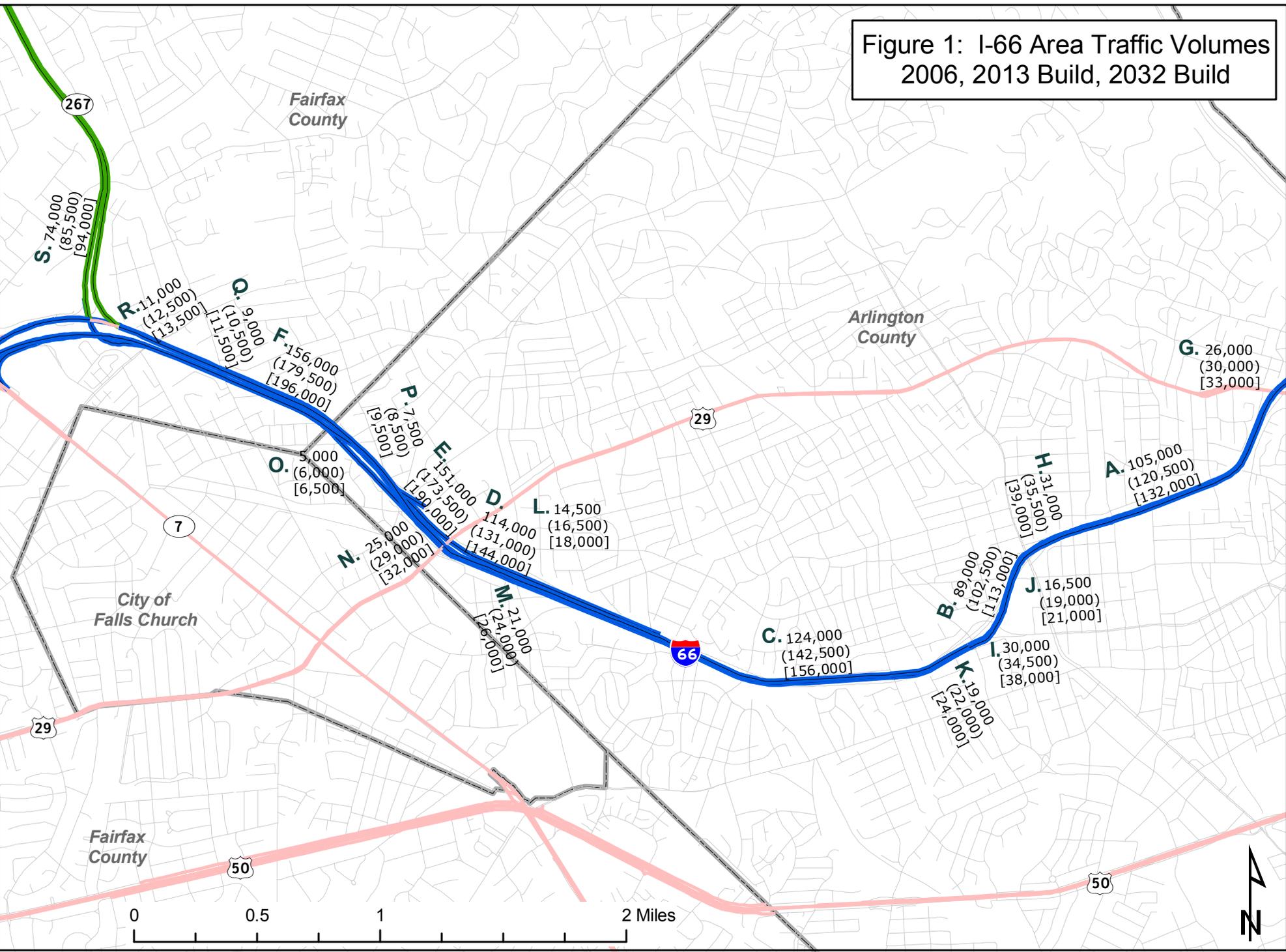
C. The trucks are prohibited on this facility. However, if the trucks were allowed on I-66, it would have been practical to divert trucks to other facilities. The facilities in the area that trucks could use include Lee Highway (Route 29), Arlington Boulevard (US 50), and Leesburg Pike (Route 7).

Further Contact: Bahram Jamei @ (703) 383-2214 or Bahram.Jamei@VDOT.Virginia.gov

Note: Idea-66 report was used for developing environmental traffic and transportation data for this study. Spot improvements mentioned here include providing acceleration lanes on westbound I-66 at the following locations: 1) Between Lee Road @ Spout Run to Glebe Road, 2) Between Fairfax Drive to Sycamore Street, and 3) Between Sycamore Street to Dulles Access Road.

Cc: Bill Mann, H. Sripathi, J. Lynch, J. Muse, D. Shiells, B. Costello, L. Henley

Figure 1: I-66 Area Traffic Volumes
2006, 2013 Build, 2032 Build



**DEPARTMENT OF TRANSPORTATION
INTER-DEPARTMENTAL MEMORANDUM**

July 13, 2006

TO: Mr. Robert McDonald, PE
ATTN: Mr. William Mann, PE
FROM: Ms. Monica Franz

Route: I-66 (Spot Improvements)
Cnty: Arlington
Project: 0066-000-113, C-501
0066-000-114, C-501
0066-96A-113, C-501
From: Fairfax Drive
To: Dulles Airport Access Road
UPC: 78826, 78827, 78828

SUBJECT: Request for Environmental Traffic and Transportation Information

ENVIRONMENTAL TRAFFIC AND TRANSPORTATION DATA REQUEST

I. INTRODUCTION

An environmental document is to be prepared for the above noted project. This document will include air and noise technical analyses between the above noted termini to determine the effects the spot improvements of I-66 will have on adjoining properties. The attached graphic offers a view of the project area.

II. TRAFFIC DATA REQUIRED FOR AIR AND NOISE ANALYSES

In reference to the technical studies, we request the following traffic information, using the standardized data reporting forms. Please include a stick diagram showing links and identifiers to match the data forms.

A. Mainline Roadway
I-66

B. Crossing, Intersecting or Other Roadways in the Project Area:

Fairfax Drive
Sycamore Street
Westmoreland Street
Great Falls Street
Glebe Road
Haycock Road
Dulles Access Road

Additional intersecting roadways for which the predicted design year ADT exceeds 10% of the mainline I-66 volumes.

Provide the following information for the: a.m., noon and p.m. peak hour periods and any other hour between 6:00 a.m. and 9:00 p.m. that may exceed these hours' volumes.

Hourly volume, percent ADT and estimated operation speed¹
Percent of trucks with two axles and six tires
Percent of trucks with three or more axles
Directional distribution

B. All the above information should be developed for the following years:

- Y Existing year 2006
- Y Interim year 2013 build and no-build
- Y Design year 2032 build and no-build

C. Please answer the following questions concerning heavy truck traffic on I-66:

- 1) To the best of your knowledge about regional traffic pattern, is it practical and reasonable to direct heavy trucks to another facility?
- 2) If yes, what percentage of heavy trucks can be diverted and to what facility. If no. Please explain.

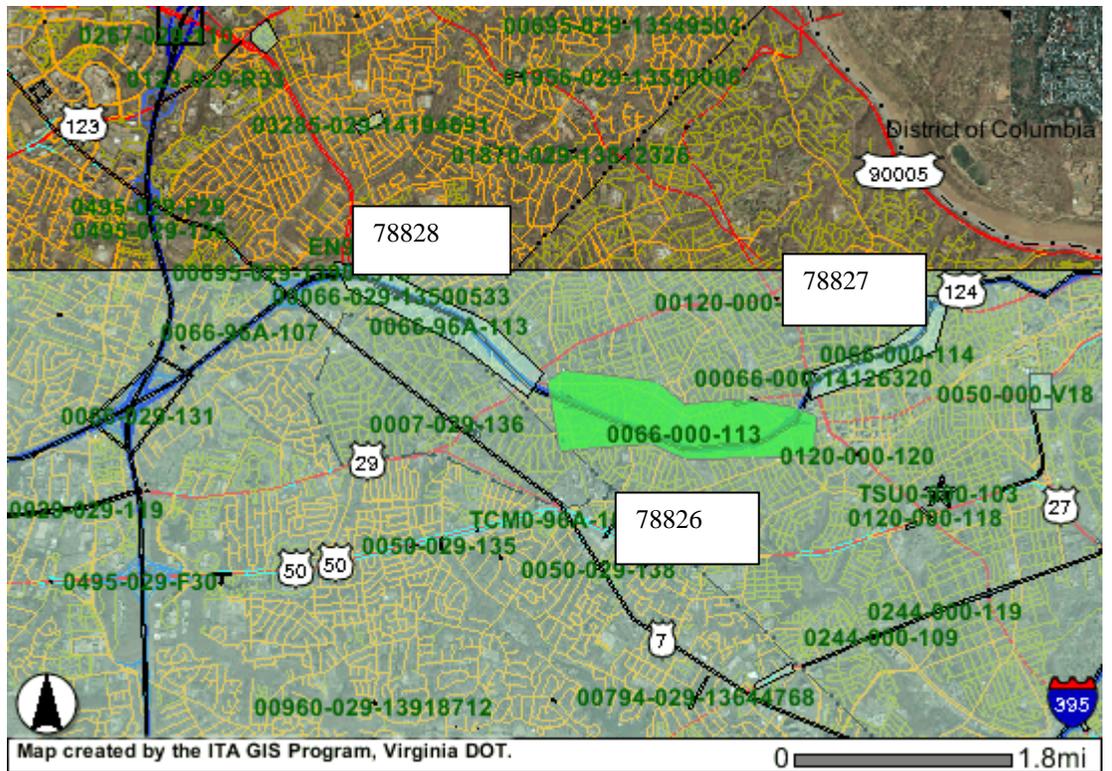
III NOTES

A) Please provide the requested information to our office as soon as possible or no later than October 31, 2006. If you cannot meet this deadline, please notify us immediately so adjustments to the project schedule can be made. If questions arise from this request, please call me at (804) 371-6767.

Ms. Monica Franz.
Noise Abatement Engineer

Cc: Mr. Jeff Daily
Ms. Theresa DeFore
Mr. Steve Lemont
Ms. Amy Costello
Mr. Jim Ponticello

¹ Estimated operating speed should be based on mainline operation.





ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 1. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	I-66				Reference Map #	NOVA 16-J3	
From	Lee Highway				Unit= US & Model= Mod. BPR		
To	Glebe Road				Present Year 2006 ADT	105,000	No-build
City/County	Arlington				Interim Year 2013 ADT	120,500	115,500
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	132,000	126,000

Eastbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	3,150	3,615	3,465	3,960	3,780	5.00%	60%	1.0%	0.5%	1.5%
7:00	3,465	3,977	3,812	4,356	4,158	6.00%	55%	1.0%	0.5%	1.5%
8:00	3,465	3,977	3,812	4,356	4,158	6.00%	55%	1.0%	0.5%	1.5%
9:00	3,176	3,645	3,494	3,993	3,812	5.50%	55%	1.0%	0.5%	1.5%
10:00	3,150	3,615	3,465	3,960	3,780	5.00%	60%	1.0%	0.5%	1.5%
11:00	2,888	3,314	3,176	3,630	3,465	5.00%	55%	1.0%	0.5%	1.5%
12:00	2,888	3,314	3,176	3,630	3,465	5.00%	55%	1.0%	0.5%	1.5%
13:00	2,888	3,314	3,176	3,630	3,465	5.50%	50%	1.0%	0.5%	1.5%
14:00	3,150	3,615	3,465	3,960	3,780	6.00%	50%	1.0%	0.5%	1.5%
15:00	3,176	3,645	3,494	3,993	3,812	5.50%	55%	1.0%	0.5%	1.5%
16:00	3,176	3,645	3,494	3,993	3,812	5.50%	55%	1.0%	0.5%	1.5%
17:00	3,465	3,977	3,812	4,356	4,158	6.00%	55%	1.0%	0.5%	1.5%
18:00	3,150	3,615	3,465	3,960	3,780	6.00%	50%	1.0%	0.5%	1.5%
19:00	2,888	3,314	3,176	3,630	3,465	5.50%	50%	1.0%	0.5%	1.5%
20:00	2,126	2,440	2,339	2,673	2,552	4.50%	45%	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
	0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	45	57	40	56	42	57	36	56	38	56
7:00	42	57	36	56	38	56	31	55	34	55
8:00	42	57	36	56	38	56	31	55	34	55
9:00	44	57	40	56	41	57	36	56	38	56
10:00	45	57	40	56	42	57	36	56	38	56
11:00	47	58	43	57	44	57	40	56	42	57
12:00	47	58	43	57	44	57	40	56	42	57
13:00	47	58	43	57	44	57	40	56	42	57
14:00	45	57	40	56	42	57	36	56	38	56
15:00	44	57	40	56	41	57	36	56	38	56
16:00	44	57	40	56	41	57	36	56	38	56
17:00	42	57	36	56	38	56	31	55	34	55
18:00	45	57	40	56	42	57	36	56	38	56
19:00	47	58	43	57	44	57	40	56	42	57
20:00	51	59	50	58	50	58	48	58	49	58
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 1. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	I-66				Reference Map #	NOVA 16-J3	
From	Lee Highway				Unit= US & Model= Mod. BPR		
To	Glebe Road				Present Year 2006 ADT	105,000	No-build
City/County	Arlington				Interim Year 2013 ADT	120,500	115,500
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	132,000	126,000

Westbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	2,100	2,410	2,310	2,640	2,520	5.00%	40%	1.0%	0.5%	1.5%
7:00	2,835	3,254	3,119	3,564	3,402	6.00%	45%	1.0%	0.5%	1.5%
8:00	2,835	3,254	3,119	3,564	3,402	6.00%	45%	1.0%	0.5%	1.5%
9:00	2,599	2,982	2,859	3,267	3,119	5.50%	45%	1.0%	0.5%	1.5%
10:00	2,100	2,410	2,310	2,640	2,520	5.00%	40%	1.0%	0.5%	1.5%
11:00	2,363	2,711	2,599	2,970	2,835	5.00%	45%	1.0%	0.5%	1.5%
12:00	2,363	2,711	2,599	2,970	2,835	5.00%	45%	1.0%	0.5%	1.5%
13:00	2,888	3,314	3,176	3,630	3,465	5.50%	50%	1.0%	0.5%	1.5%
14:00	3,150	3,615	3,465	3,960	3,780	6.00%	50%	1.0%	0.5%	1.5%
15:00	2,599	2,982	2,859	3,267	3,119	5.50%	45%	1.0%	0.5%	1.5%
16:00	2,599	2,982	2,859	3,267	3,119	5.50%	45%	1.0%	0.5%	1.5%
17:00	2,835	3,254	3,119	3,564	3,402	6.00%	45%	1.0%	0.5%	1.5%
18:00	3,150	3,615	3,465	3,960	3,780	6.00%	50%	1.0%	0.5%	1.5%
19:00	2,888	3,314	3,176	3,630	3,465	5.50%	50%	1.0%	0.5%	1.5%
20:00	2,599	2,982	2,859	3,267	3,119	4.50%	55%	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
	0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	51	59	54	59	50	58	54	59	49	58
7:00	47	58	52	59	45	57	51	59	42	57
8:00	47	58	52	59	45	57	51	59	42	57
9:00	49	58	53	59	47	58	52	59	45	57
10:00	51	59	54	59	50	58	54	59	49	58
11:00	50	58	54	59	49	58	53	59	47	58
12:00	50	58	54	59	49	58	53	59	47	58
13:00	47	58	52	59	44	57	51	59	42	57
14:00	45	57	51	59	42	57	50	58	38	56
15:00	49	58	53	59	47	58	52	59	45	57
16:00	49	58	53	59	47	58	52	59	45	57
17:00	47	58	52	59	45	57	51	59	42	57
18:00	45	57	51	59	42	57	50	58	38	56
19:00	47	58	52	59	44	57	51	59	42	57
20:00	49	58	53	59	47	58	52	59	45	57
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 1. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	I-66				Reference Map #	NOVA 16-J3	
From	Lee Highway				Unit= US & Model= Mod. BPR		
To	Glebe Road				Present Year 2006 ADT	105,000	No-build
City/County	Arlington				Interim Year 2013 ADT	120,500	115,500
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	132,000	126,000

Two-way

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	5,250	6,025	5,775	6,600	6,300	5.00%	=	1.0%	0.5%	1.5%
7:00	6,300	7,230	6,930	7,920	7,560	6.00%	=	1.0%	0.5%	1.5%
8:00	6,300	7,230	6,930	7,920	7,560	6.00%	=	1.0%	0.5%	1.5%
9:00	5,775	6,628	6,353	7,260	6,930	5.50%	=	1.0%	0.5%	1.5%
10:00	5,250	6,025	5,775	6,600	6,300	5.00%	=	1.0%	0.5%	1.5%
11:00	5,250	6,025	5,775	6,600	6,300	5.00%	=	1.0%	0.5%	1.5%
12:00	5,250	6,025	5,775	6,600	6,300	5.00%	=	1.0%	0.5%	1.5%
13:00	5,775	6,628	6,353	7,260	6,930	5.50%	=	1.0%	0.5%	1.5%
14:00	6,300	7,230	6,930	7,920	7,560	6.00%	=	1.0%	0.5%	1.5%
15:00	5,775	6,628	6,353	7,260	6,930	5.50%	=	1.0%	0.5%	1.5%
16:00	5,775	6,628	6,353	7,260	6,930	5.50%	=	1.0%	0.5%	1.5%
17:00	6,300	7,230	6,930	7,920	7,560	6.00%	=	1.0%	0.5%	1.5%
18:00	6,300	7,230	6,930	7,920	7,560	6.00%	=	1.0%	0.5%	1.5%
19:00	5,775	6,628	6,353	7,260	6,930	5.50%	=	1.0%	0.5%	1.5%
20:00	4,725	5,423	5,198	5,940	5,670	4.50%	=	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	47	58	46	58	45	57	43	57	43	57
7:00	44	57	43	57	41	57	40	56	38	56
8:00	44	57	43	57	41	57	40	56	38	56
9:00	46	58	46	58	44	57	43	57	41	57
10:00	47	58	46	58	45	57	43	57	43	57
11:00	48	58	48	58	46	58	46	58	44	57
12:00	48	58	48	58	46	58	46	58	44	57
13:00	47	58	48	58	44	57	46	58	42	57
14:00	45	57	46	58	42	57	43	57	38	56
15:00	46	58	46	58	44	57	43	57	41	57
16:00	46	58	46	58	44	57	43	57	41	57
17:00	44	57	43	57	41	57	40	56	38	56
18:00	45	57	46	58	42	57	43	57	38	56
19:00	47	58	48	58	44	57	46	58	42	57
20:00	50	58	52	59	49	58	51	59	47	58
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 2. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	I-66				Reference Map #	NOVA 16-G4	
From	Glebe Road				Unit= US & Model= Mod. BPR		
To	Fairfax Drive				Present Year 2006 ADT	89,000	No-build
City/County	Arlington				Interim Year 2013 ADT	102,500	97,500
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	113,000	107,000

Eastbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	2,893	3,331	3,169	3,673	3,478	5.00%	65%	1.0%	0.5%	1.5%
7:00	2,937	3,383	3,218	3,729	3,531	6.00%	55%	1.0%	0.5%	1.5%
8:00	2,937	3,383	3,218	3,729	3,531	6.00%	55%	1.0%	0.5%	1.5%
9:00	2,692	3,101	2,949	3,418	3,237	5.50%	55%	1.0%	0.5%	1.5%
10:00	2,937	3,383	3,218	3,729	3,531	5.50%	60%	1.0%	0.5%	1.5%
11:00	2,448	2,819	2,681	3,108	2,943	5.00%	55%	1.0%	0.5%	1.5%
12:00	2,448	2,819	2,681	3,108	2,943	5.50%	50%	1.0%	0.5%	1.5%
13:00	2,448	2,819	2,681	3,108	2,943	5.50%	50%	1.0%	0.5%	1.5%
14:00	2,670	3,075	2,925	3,390	3,210	6.00%	50%	1.0%	0.5%	1.5%
15:00	2,670	3,075	2,925	3,390	3,210	6.00%	50%	1.0%	0.5%	1.5%
16:00	2,670	3,075	2,925	3,390	3,210	6.00%	50%	1.0%	0.5%	1.5%
17:00	2,670	3,075	2,925	3,390	3,210	6.00%	50%	1.0%	0.5%	1.5%
18:00	2,403	2,768	2,633	3,051	2,889	6.00%	45%	1.0%	0.5%	1.5%
19:00	2,203	2,537	2,413	2,797	2,648	5.50%	45%	1.0%	0.5%	1.5%
20:00	1,802	2,076	1,974	2,288	2,167	4.50%	45%	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	47	58	43	57	45	57	39	56	42	57
7:00	46	58	42	57	44	57	39	56	41	57
8:00	46	58	42	57	44	57	39	56	41	57
9:00	48	58	45	57	46	58	42	57	44	57
10:00	46	58	42	57	44	57	39	56	41	57
11:00	50	58	47	58	48	58	45	57	46	58
12:00	50	58	47	58	48	58	45	57	46	58
13:00	50	58	47	58	48	58	45	57	46	58
14:00	48	58	45	57	47	58	42	57	44	57
15:00	48	58	45	57	47	58	42	57	44	57
16:00	48	58	45	57	47	58	42	57	44	57
17:00	48	58	45	57	47	58	42	57	44	57
18:00	50	58	48	58	49	58	46	58	47	58
19:00	51	59	49	58	50	58	48	58	49	58
20:00	52	59	51	59	52	59	50	58	51	59
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

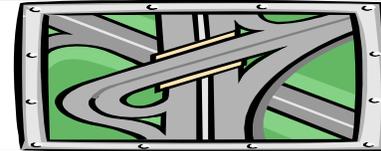
* Shown when volume exceeds Max. Service Flow Underlined values indicate STOP&GO condition ENTRADA Ver. 107 VDOT-NOVA



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Table 2. I-66 Spot Improvements

PPMS 78826, 78827, 78828



Route	I-66			Reference Map #	NOVA 16-G4	
From	Glebe Road			Unit= US & Model= Mod. BPR		
To	Fairfax Drive			Present Year 2006 ADT	89,000	No-build
City/County	Arlington			Interim Year 2013 ADT	102,500	97,500
Date	1/29/2007	Time Span	15 Hours	Design Year 2032 ADT	113,000	107,000

Westbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	1,558	1,794	1,706	1,978	1,873	5.00%	35%	1.0%	0.5%	1.5%
7:00	2,403	2,768	2,633	3,051	2,889	6.00%	45%	1.0%	0.5%	1.5%
8:00	2,403	2,768	2,633	3,051	2,889	6.00%	45%	1.0%	0.5%	1.5%
9:00	2,203	2,537	2,413	2,797	2,648	5.50%	45%	1.0%	0.5%	1.5%
10:00	1,958	2,255	2,145	2,486	2,354	5.50%	40%	1.0%	0.5%	1.5%
11:00	2,003	2,306	2,194	2,543	2,408	5.00%	45%	1.0%	0.5%	1.5%
12:00	2,448	2,819	2,681	3,108	2,943	5.50%	50%	1.0%	0.5%	1.5%
13:00	2,448	2,819	2,681	3,108	2,943	5.50%	50%	1.0%	0.5%	1.5%
14:00	2,670	3,075	2,925	3,390	3,210	6.00%	50%	1.0%	0.5%	1.5%
15:00	2,670	3,075	2,925	3,390	3,210	6.00%	50%	1.0%	0.5%	1.5%
16:00	2,670	3,075	2,925	3,390	3,210	6.00%	50%	1.0%	0.5%	1.5%
17:00	2,670	3,075	2,925	3,390	3,210	6.00%	50%	1.0%	0.5%	1.5%
18:00	2,937	3,383	3,218	3,729	3,531	6.00%	55%	1.0%	0.5%	1.5%
19:00	2,692	3,101	2,949	3,418	3,237	5.50%	55%	1.0%	0.5%	1.5%
20:00	2,203	2,537	2,413	2,797	2,648	4.50%	55%	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	53	59	52	59	52	59	52	59	52	59
7:00	50	58	48	58	49	58	46	58	47	58
8:00	50	58	48	58	49	58	46	58	47	58
9:00	51	59	49	58	50	58	48	58	49	58
10:00	52	59	51	59	51	59	49	58	50	58
11:00	52	59	50	58	51	59	49	58	50	58
12:00	50	58	47	58	48	58	45	57	46	58
13:00	50	58	47	58	48	58	45	57	46	58
14:00	48	58	45	57	47	58	42	57	44	57
15:00	48	58	45	57	47	58	42	57	44	57
16:00	48	58	45	57	47	58	42	57	44	57
17:00	48	58	45	57	47	58	42	57	44	57
18:00	46	58	42	57	44	57	39	56	41	57
19:00	48	58	45	57	46	58	42	57	44	57
20:00	51	59	49	58	50	58	48	58	49	58
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow Underlined values indicate STOP&GO condition ENTRADA Ver. 107 VDOT-NOVA



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Table 2. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	I-66				Reference Map #	NOVA 16-G4	
From	Glebe Road				Unit= US & Model= Mod. BPR		
To	Fairfax Drive				Present Year 2006 ADT	89,000	No-build
City/County	Arlington				Interim Year 2013 ADT	102,500	97,500
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	113,000	107,000

Two-way

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	4,450	5,125	4,875	5,650	5,350	5.00%	=	1.0%	0.5%	1.5%
7:00	5,340	6,150	5,850	6,780	6,420	6.00%	=	1.0%	0.5%	1.5%
8:00	5,340	6,150	5,850	6,780	6,420	6.00%	=	1.0%	0.5%	1.5%
9:00	4,895	5,638	5,363	6,215	5,885	5.50%	=	1.0%	0.5%	1.5%
10:00	4,895	5,638	5,363	6,215	5,885	5.50%	=	1.0%	0.5%	1.5%
11:00	4,450	5,125	4,875	5,650	5,350	5.00%	=	1.0%	0.5%	1.5%
12:00	4,895	5,638	5,363	6,215	5,885	5.50%	=	1.0%	0.5%	1.5%
13:00	4,895	5,638	5,363	6,215	5,885	5.50%	=	1.0%	0.5%	1.5%
14:00	5,340	6,150	5,850	6,780	6,420	6.00%	=	1.0%	0.5%	1.5%
15:00	5,340	6,150	5,850	6,780	6,420	6.00%	=	1.0%	0.5%	1.5%
16:00	5,340	6,150	5,850	6,780	6,420	6.00%	=	1.0%	0.5%	1.5%
17:00	5,340	6,150	5,850	6,780	6,420	6.00%	=	1.0%	0.5%	1.5%
18:00	5,340	6,150	5,850	6,780	6,420	6.00%	=	1.0%	0.5%	1.5%
19:00	4,895	5,638	5,363	6,215	5,885	5.50%	=	1.0%	0.5%	1.5%
20:00	4,005	4,613	4,388	5,085	4,815	4.50%	=	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	49	58	46	58	47	58	44	57	45	57
7:00	48	58	45	57	46	58	42	57	44	57
8:00	48	58	45	57	46	58	42	57	44	57
9:00	49	58	47	58	48	58	45	57	46	58
10:00	49	58	46	58	47	58	43	57	45	57
11:00	51	59	49	58	49	58	47	58	48	58
12:00	50	58	47	58	48	58	45	57	46	58
13:00	50	58	47	58	48	58	45	57	46	58
14:00	48	58	45	57	47	58	42	57	44	57
15:00	48	58	45	57	47	58	42	57	44	57
16:00	48	58	45	57	47	58	42	57	44	57
17:00	48	58	45	57	47	58	42	57	44	57
18:00	48	58	45	57	46	58	42	57	44	57
19:00	49	58	47	58	48	58	45	57	46	58
20:00	51	59	50	58	51	59	49	58	50	58
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 3. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	I-66				Reference Map #	NOVA 16-D4	
From	Fairfax Drive				Unit= US & Model= Mod. BPR		
To	Sycamore Street				Present Year 2006 ADT	124,000	No-build
City/County	Arlington				Interim Year 2013 ADT	142,500	136,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	156,000	150,000

Eastbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	Present hourly % truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	3,720	4,275	4,080	4,680 *	4,500	5.00%	60%	1.0%	0.5%	1.5%
7:00	3,720	4,275	4,080	4,680 *	4,500	6.00%	50%	1.0%	0.5%	1.5%
8:00	3,720	4,275	4,080	4,680 *	4,500	6.00%	50%	1.0%	0.5%	1.5%
9:00	4,092	4,703 *	4,488	5,148 *	4,950 *	6.00%	55%	1.0%	0.5%	1.5%
10:00	3,410	3,919	3,740	4,290	4,125	5.00%	55%	1.0%	0.5%	1.5%
11:00	3,410	3,919	3,740	4,290	4,125	5.00%	55%	1.0%	0.5%	1.5%
12:00	3,410	3,919	3,740	4,290	4,125	5.50%	50%	1.0%	0.5%	1.5%
13:00	3,410	3,919	3,740	4,290	4,125	5.50%	50%	1.0%	0.5%	1.5%
14:00	3,720	4,275	4,080	4,680 *	4,500	6.00%	50%	1.0%	0.5%	1.5%
15:00	3,720	4,275	4,080	4,680 *	4,500	6.00%	50%	1.0%	0.5%	1.5%
16:00	3,751	4,311	4,114	4,719 *	4,538 *	5.50%	55%	1.0%	0.5%	1.5%
17:00	4,092	4,703 *	4,488	5,148 *	4,950 *	6.00%	55%	1.0%	0.5%	1.5%
18:00	3,720	4,275	4,080	4,680 *	4,500	6.00%	50%	1.0%	0.5%	1.5%
19:00	3,720	4,275	4,080	4,680 *	4,500	6.00%	50%	1.0%	0.5%	1.5%
20:00	2,511	2,886	2,754	3,159	3,038	4.50%	45%	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	39	56	32	55	35	55	28	54	30	54
7:00	39	56	32	55	35	55	28	54	30	54
8:00	39	56	32	55	35	55	28	54	30	54
9:00	35	55	27	54	30	54	23	53	25	53
10:00	42	57	37	56	39	56	32	55	34	55
11:00	42	57	37	56	39	56	32	55	34	55
12:00	42	57	37	56	39	56	32	55	34	55
13:00	42	57	37	56	39	56	32	55	34	55
14:00	39	56	32	55	35	55	28	54	30	54
15:00	39	56	32	55	35	55	28	54	30	54
16:00	39	56	32	55	34	55	27	54	29	54
17:00	35	55	27	54	30	54	23	53	25	53
18:00	39	56	32	55	35	55	28	54	30	54
19:00	39	56	32	55	35	55	28	54	30	54
20:00	49	58	47	58	48	58	45	57	46	58
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow Underlined values indicate STOP&GO condition ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 3. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	I-66				Reference Map #	NOVA 16-D4		
From	Fairfax Drive				Unit= US & Model= Mod. BPR			
To	Sycamore Street				Present Year 2006 ADT	124,000	No-build	
City/County	Arlington				Interim Year 2013 ADT	142,500	136,000	
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	156,000	150,000	

Westbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	2,480	2,850	2,720	3,120	3,000	5.00%	40%	1.0%	0.5%	1.5%
7:00	3,720	4,275	4,080	4,680	4,500	6.00%	50%	1.0%	0.5%	1.5%
8:00	3,720	4,275	4,080	4,680	4,500	6.00%	50%	1.0%	0.5%	1.5%
9:00	3,348	3,848	3,672	4,212	4,050	6.00%	45%	1.0%	0.5%	1.5%
10:00	2,790	3,206	3,060	3,510	3,375	5.00%	45%	1.0%	0.5%	1.5%
11:00	2,790	3,206	3,060	3,510	3,375	5.00%	45%	1.0%	0.5%	1.5%
12:00	3,410	3,919	3,740	4,290	4,125	5.50%	50%	1.0%	0.5%	1.5%
13:00	3,410	3,919	3,740	4,290	4,125	5.50%	50%	1.0%	0.5%	1.5%
14:00	3,720	4,275	4,080	4,680	4,500	6.00%	50%	1.0%	0.5%	1.5%
15:00	3,720	4,275	4,080	4,680	4,500	6.00%	50%	1.0%	0.5%	1.5%
16:00	3,069	3,527	3,366	3,861	3,713	5.50%	45%	1.0%	0.5%	1.5%
17:00	3,348	3,848	3,672	4,212	4,050	6.00%	45%	1.0%	0.5%	1.5%
18:00	3,720	4,275	4,080	4,680	4,500	6.00%	50%	1.0%	0.5%	1.5%
19:00	3,720	4,275	4,080	4,680	4,500	6.00%	50%	1.0%	0.5%	1.5%
20:00	3,069	3,527	3,366	3,861	3,713	4.50%	55%	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	50	58	53	59	48	58	53	59	46	58
7:00	39	56	48	58	35	55	46	58	30	54
8:00	39	56	48	58	35	55	46	58	30	54
9:00	43	57	50	58	39	56	49	58	35	55
10:00	48	58	53	59	45	57	52	59	43	57
11:00	48	58	53	59	45	57	52	59	43	57
12:00	42	57	50	58	39	56	48	58	34	55
13:00	42	57	50	58	39	56	48	58	34	55
14:00	39	56	48	58	35	55	46	58	30	54
15:00	39	56	48	58	35	55	46	58	30	54
16:00	45	57	52	59	43	57	50	58	39	56
17:00	43	57	50	58	39	56	49	58	35	55
18:00	39	56	48	58	35	55	46	58	30	54
19:00	39	56	48	58	35	55	46	58	30	54
20:00	45	57	52	59	43	57	50	58	39	56
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 3. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	I-66				Reference Map #	NOVA 16-D4	
From	Fairfax Drive				Unit= US & Model= Mod. BPR		
To	Sycamore Street				Present Year 2006 ADT	124,000	No-build
City/County	Arlington				Interim Year 2013 ADT	142,500	136,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	156,000	150,000

Two-way

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	6,200	7,125	6,800	7,800	7,500	5.00%	=	1.0%	0.5%	1.5%
7:00	7,440	8,550	8,160	9,360	9,000	6.00%	=	1.0%	0.5%	1.5%
8:00	7,440	8,550	8,160	9,360	9,000	6.00%	=	1.0%	0.5%	1.5%
9:00	7,440	8,550	8,160	9,360	9,000	6.00%	=	1.0%	0.5%	1.5%
10:00	6,200	7,125	6,800	7,800	7,500	5.00%	=	1.0%	0.5%	1.5%
11:00	6,200	7,125	6,800	7,800	7,500	5.00%	=	1.0%	0.5%	1.5%
12:00	6,820	7,838	7,480	8,580	8,250	5.50%	=	1.0%	0.5%	1.5%
13:00	6,820	7,838	7,480	8,580	8,250	5.50%	=	1.0%	0.5%	1.5%
14:00	7,440	8,550	8,160	9,360	9,000	6.00%	=	1.0%	0.5%	1.5%
15:00	7,440	8,550	8,160	9,360	9,000	6.00%	=	1.0%	0.5%	1.5%
16:00	6,820	7,838	7,480	8,580	8,250	5.50%	=	1.0%	0.5%	1.5%
17:00	7,440	8,550	8,160	9,360	9,000	6.00%	=	1.0%	0.5%	1.5%
18:00	7,440	8,550	8,160	9,360	9,000	6.00%	=	1.0%	0.5%	1.5%
19:00	7,440	8,550	8,160	9,360	9,000	6.00%	=	1.0%	0.5%	1.5%
20:00	5,580	6,413	6,120	7,020	6,750	4.50%	=	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	43	57	41	57	40	56	38	56	36	56
7:00	39	56	40	56	35	55	37	56	30	54
8:00	39	56	40	56	35	55	37	56	30	54
9:00	38	56	38	56	34	55	34	55	29	54
10:00	45	57	44	57	42	57	41	57	38	56
11:00	45	57	44	57	42	57	41	57	38	56
12:00	42	57	43	57	39	56	40	56	34	55
13:00	42	57	43	57	39	56	40	56	34	55
14:00	39	56	40	56	35	55	37	56	30	54
15:00	39	56	40	56	35	55	37	56	30	54
16:00	42	57	41	57	38	56	38	56	34	55
17:00	38	56	38	56	34	55	34	55	29	54
18:00	39	56	40	56	35	55	37	56	30	54
19:00	39	56	40	56	35	55	37	56	30	54
20:00	47	58	49	58	45	57	48	58	42	57
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

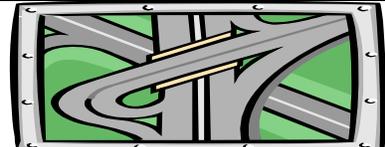
ENTRADA Ver. 107 VDOT-NOVA



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Table 4. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	I-66				Reference Map #	NOVA 16-A3	
From	Sycamore Street				Unit= US & Model= Mod. BPR		
To	Lee Highway				Present Year 2006 ADT	114,000	No-build
City/County	Arlington				Interim Year 2013 ADT	131,000	126,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	144,000	138,000

Eastbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	3,135	3,603	3,465	3,960	3,795	5.00%	55%	1.0%	0.5%	1.5%
7:00	3,420	3,930	3,780	4,320	4,140	6.00%	50%	1.0%	0.5%	1.5%
8:00	3,420	3,930	3,780	4,320	4,140	6.00%	50%	1.0%	0.5%	1.5%
9:00	3,762	4,323	4,158	4,752 *	4,554 *	6.00%	55%	1.0%	0.5%	1.5%
10:00	3,135	3,603	3,465	3,960	3,795	5.00%	55%	1.0%	0.5%	1.5%
11:00	3,135	3,603	3,465	3,960	3,795	5.00%	55%	1.0%	0.5%	1.5%
12:00	3,135	3,603	3,465	3,960	3,795	5.50%	50%	1.0%	0.5%	1.5%
13:00	3,135	3,603	3,465	3,960	3,795	5.50%	50%	1.0%	0.5%	1.5%
14:00	3,420	3,930	3,780	4,320	4,140	6.00%	50%	1.0%	0.5%	1.5%
15:00	3,420	3,930	3,780	4,320	4,140	6.00%	50%	1.0%	0.5%	1.5%
16:00	3,449	3,963	3,812	4,356	4,175	5.50%	55%	1.0%	0.5%	1.5%
17:00	3,762	4,323	4,158	4,752 *	4,554 *	6.00%	55%	1.0%	0.5%	1.5%
18:00	3,420	3,930	3,780	4,320	4,140	6.00%	50%	1.0%	0.5%	1.5%
19:00	3,420	3,930	3,780	4,320	4,140	6.00%	50%	1.0%	0.5%	1.5%
20:00	2,309	2,653	2,552	2,916	2,795	4.50%	45%	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
	0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	45	57	40	56	42	57	36	56	38	56
7:00	42	57	36	56	38	56	32	55	34	55
8:00	42	57	36	56	38	56	32	55	34	55
9:00	38	56	32	55	34	55	27	54	29	54
10:00	45	57	40	56	42	57	36	56	38	56
11:00	45	57	40	56	42	57	36	56	38	56
12:00	45	57	40	56	42	57	36	56	38	56
13:00	45	57	40	56	42	57	36	56	38	56
14:00	42	57	36	56	38	56	32	55	34	55
15:00	42	57	36	56	38	56	32	55	34	55
16:00	42	57	36	56	38	56	31	55	34	55
17:00	38	56	32	55	34	55	27	54	29	54
18:00	42	57	36	56	38	56	32	55	34	55
19:00	42	57	36	56	38	56	32	55	34	55
20:00	50	58	49	58	49	58	47	58	48	58
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 4. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	I-66				Reference Map #	NOVA 16-A3	
From	Sycamore Street				Unit= US & Model= Mod. BPR		
To	Lee Highway				Present Year 2006 ADT	114,000	No-build
City/County	Arlington				Interim Year 2013 ADT	131,000	126,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	144,000	138,000

Westbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	2,565	2,948	2,835	3,240	3,105	5.00%	45%	1.0%	0.5%	1.5%
7:00	3,420	3,930	3,780	4,320	4,140	6.00%	50%	1.0%	0.5%	1.5%
8:00	3,420	3,930	3,780	4,320	4,140	6.00%	50%	1.0%	0.5%	1.5%
9:00	3,078	3,537	3,402	3,888	3,726	6.00%	45%	1.0%	0.5%	1.5%
10:00	2,565	2,948	2,835	3,240	3,105	5.00%	45%	1.0%	0.5%	1.5%
11:00	2,565	2,948	2,835	3,240	3,105	5.00%	45%	1.0%	0.5%	1.5%
12:00	3,135	3,603	3,465	3,960	3,795	5.50%	50%	1.0%	0.5%	1.5%
13:00	3,135	3,603	3,465	3,960	3,795	5.50%	50%	1.0%	0.5%	1.5%
14:00	3,420	3,930	3,780	4,320	4,140	6.00%	50%	1.0%	0.5%	1.5%
15:00	3,420	3,930	3,780	4,320	4,140	6.00%	50%	1.0%	0.5%	1.5%
16:00	2,822	3,242	3,119	3,564	3,416	5.50%	45%	1.0%	0.5%	1.5%
17:00	3,078	3,537	3,402	3,888	3,726	6.00%	45%	1.0%	0.5%	1.5%
18:00	3,420	3,930	3,780	4,320	4,140	6.00%	50%	1.0%	0.5%	1.5%
19:00	3,420	3,930	3,780	4,320	4,140	6.00%	50%	1.0%	0.5%	1.5%
20:00	2,822	3,242	3,119	3,564	3,416	4.50%	55%	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	49	58	53	59	47	58	52	59	45	57
7:00	42	57	50	58	38	56	48	58	34	55
8:00	42	57	50	58	38	56	48	58	34	55
9:00	45	57	52	59	42	57	50	58	39	56
10:00	49	58	53	59	47	58	52	59	45	57
11:00	49	58	53	59	47	58	52	59	45	57
12:00	45	57	51	59	42	57	50	58	38	56
13:00	45	57	51	59	42	57	50	58	38	56
14:00	42	57	50	58	38	56	48	58	34	55
15:00	42	57	50	58	38	56	48	58	34	55
16:00	47	58	52	59	45	57	51	59	42	57
17:00	45	57	52	59	42	57	50	58	39	56
18:00	42	57	50	58	38	56	48	58	34	55
19:00	42	57	50	58	38	56	48	58	34	55
20:00	47	58	52	59	45	57	51	59	42	57
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 4. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	I-66				Reference Map #	NOVA 16-A3	
From	Sycamore Street				Unit= US & Model= Mod. BPR		
To	Lee Highway				Present Year 2006 ADT	114,000	No-build
City/County	Arlington				Interim Year 2013 ADT	131,000	126,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	144,000	138,000

Two-way

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblnd	Design Bld	Design Nblnd	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	5,700	6,550	6,300	7,200	6,900	5.00%	=	1.0%	0.5%	1.5%
7:00	6,840	7,860	7,560	8,640	8,280	6.00%	=	1.0%	0.5%	1.5%
8:00	6,840	7,860	7,560	8,640	8,280	6.00%	=	1.0%	0.5%	1.5%
9:00	6,840	7,860	7,560	8,640	8,280	6.00%	=	1.0%	0.5%	1.5%
10:00	5,700	6,550	6,300	7,200	6,900	5.00%	=	1.0%	0.5%	1.5%
11:00	5,700	6,550	6,300	7,200	6,900	5.00%	=	1.0%	0.5%	1.5%
12:00	6,270	7,205	6,930	7,920	7,590	5.50%	=	1.0%	0.5%	1.5%
13:00	6,270	7,205	6,930	7,920	7,590	5.50%	=	1.0%	0.5%	1.5%
14:00	6,840	7,860	7,560	8,640	8,280	6.00%	=	1.0%	0.5%	1.5%
15:00	6,840	7,860	7,560	8,640	8,280	6.00%	=	1.0%	0.5%	1.5%
16:00	6,270	7,205	6,930	7,920	7,590	5.50%	=	1.0%	0.5%	1.5%
17:00	6,840	7,860	7,560	8,640	8,280	6.00%	=	1.0%	0.5%	1.5%
18:00	6,840	7,860	7,560	8,640	8,280	6.00%	=	1.0%	0.5%	1.5%
19:00	6,840	7,860	7,560	8,640	8,280	6.00%	=	1.0%	0.5%	1.5%
20:00	5,130	5,895	5,670	6,480	6,210	4.50%	=	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblnd		Design Bld		Design Nblnd	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	47	58	46	58	44	57	43	57	41	57
7:00	42	57	43	57	38	56	40	56	34	55
8:00	42	57	43	57	38	56	40	56	34	55
9:00	42	57	41	57	38	56	37	56	34	55
10:00	47	58	46	58	44	57	43	57	41	57
11:00	47	58	46	58	44	57	43	57	41	57
12:00	45	57	46	58	42	57	43	57	38	56
13:00	45	57	46	58	42	57	43	57	38	56
14:00	42	57	43	57	38	56	40	56	34	55
15:00	42	57	43	57	38	56	40	56	34	55
16:00	44	57	43	57	41	57	40	56	37	56
17:00	42	57	41	57	38	56	37	56	34	55
18:00	42	57	43	57	38	56	40	56	34	55
19:00	42	57	43	57	38	56	40	56	34	55
20:00	49	58	51	59	47	58	49	58	45	57
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 5. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	I-66				Reference Map #	NOVA 16-A3	
From	Lee Highway				Unit= US & Model= Mod. BPR		
To	Westmoreland Street				Present Year 2006 ADT	151,000	No-build
City/County	Arlington				Interim Year 2013 ADT	173,500	166,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	190,000	182,000

Eastbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	4,153	4,771	4,565	5,225	5,005	5.00%	55%	1.0%	0.5%	1.5%
7:00	4,530	5,205	4,980	5,700	5,460	6.00%	50%	1.0%	0.5%	1.5%
8:00	4,077	4,685	4,482	5,130	4,914	6.00%	45%	1.0%	0.5%	1.5%
9:00	4,530	5,205	4,980	5,700	5,460	6.00%	50%	1.0%	0.5%	1.5%
10:00	4,153	4,771	4,565	5,225	5,005	5.00%	55%	1.0%	0.5%	1.5%
11:00	4,153	4,771	4,565	5,225	5,005	5.00%	55%	1.0%	0.5%	1.5%
12:00	4,153	4,771	4,565	5,225	5,005	5.50%	50%	1.0%	0.5%	1.5%
13:00	4,153	4,771	4,565	5,225	5,005	5.50%	50%	1.0%	0.5%	1.5%
14:00	4,530	5,205	4,980	5,700	5,460	6.00%	50%	1.0%	0.5%	1.5%
15:00	4,530	5,205	4,980	5,700	5,460	6.00%	50%	1.0%	0.5%	1.5%
16:00	4,153	4,771	4,565	5,225	5,005	5.50%	50%	1.0%	0.5%	1.5%
17:00	4,153	4,771	4,565	5,225	5,005	5.50%	50%	1.0%	0.5%	1.5%
18:00	4,530	5,205	4,980	5,700	5,460	6.00%	50%	1.0%	0.5%	1.5%
19:00	4,153	4,771	4,565	5,225	5,005	5.50%	50%	1.0%	0.5%	1.5%
20:00	3,058	3,513	3,362	3,848	3,686	4.50%	45%	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
	0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	49	58	46	58	47	58	43	57	44	57
7:00	47	58	43	57	44	57	39	56	41	57
8:00	49	58	46	58	47	58	43	57	45	57
9:00	47	58	43	57	44	57	39	56	41	57
10:00	49	58	46	58	47	58	43	57	44	57
11:00	49	58	46	58	47	58	43	57	44	57
12:00	49	58	46	58	47	58	43	57	44	57
13:00	49	58	46	58	47	58	43	57	44	57
14:00	47	58	43	57	44	57	39	56	41	57
15:00	47	58	43	57	44	57	39	56	41	57
16:00	49	58	46	58	47	58	43	57	44	57
17:00	49	58	46	58	47	58	43	57	44	57
18:00	47	58	43	57	44	57	39	56	41	57
19:00	49	58	46	58	47	58	43	57	44	57
20:00	53	59	52	59	52	59	50	58	51	59
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

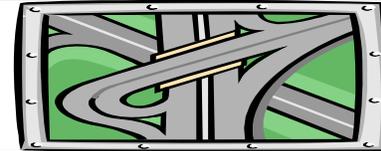
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Table 5. I-66 Spot Improvements

PPMS 78826, 78827, 78828



Route	I-66			Reference Map #	NOVA 16-A3		
From	Lee Highway			Unit= US & Model= Mod. BPR			
To	Westmoreland Street			Present Year 2006 ADT	151,000	No-build	
City/County	Arlington			Interim Year 2013 ADT	173,500	166,000	
Date	1/29/2007	Time Span	15 Hours	Design Year 2032 ADT	190,000	182,000	

Westbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nbld	Design Bld	Design Nbld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	3,398	3,904	3,735	4,275	4,095	5.00%	45%	1.0%	0.5%	1.5%
7:00	4,530	5,205	4,980	5,700	5,460	6.00%	50%	1.0%	0.5%	1.5%
8:00	4,983	5,726	5,478	6,270	6,006	6.00%	55%	1.0%	0.5%	1.5%
9:00	4,530	5,205	4,980	5,700	5,460	6.00%	50%	1.0%	0.5%	1.5%
10:00	3,398	3,904	3,735	4,275	4,095	5.00%	45%	1.0%	0.5%	1.5%
11:00	3,398	3,904	3,735	4,275	4,095	5.00%	45%	1.0%	0.5%	1.5%
12:00	4,153	4,771	4,565	5,225	5,005	5.50%	50%	1.0%	0.5%	1.5%
13:00	4,153	4,771	4,565	5,225	5,005	5.50%	50%	1.0%	0.5%	1.5%
14:00	4,530	5,205	4,980	5,700	5,460	6.00%	50%	1.0%	0.5%	1.5%
15:00	4,530	5,205	4,980	5,700	5,460	6.00%	50%	1.0%	0.5%	1.5%
16:00	4,153	4,771	4,565	5,225	5,005	5.50%	50%	1.0%	0.5%	1.5%
17:00	4,153	4,771	4,565	5,225	5,005	5.50%	50%	1.0%	0.5%	1.5%
18:00	4,530	5,205	4,980	5,700	5,460	6.00%	50%	1.0%	0.5%	1.5%
19:00	4,153	4,771	4,565	5,225	5,005	5.50%	50%	1.0%	0.5%	1.5%
20:00	3,737	4,294	4,109	4,703	4,505	4.50%	55%	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nbld		Design Bld		Design Nbld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	52	59	55	59	51	59	54	59	49	58
7:00	47	58	52	59	44	57	50	58	41	57
8:00	44	57	50	58	41	57	47	58	37	56
9:00	47	58	52	59	44	57	50	58	41	57
10:00	52	59	55	59	51	59	54	59	49	58
11:00	52	59	55	59	51	59	54	59	49	58
12:00	49	58	53	59	47	58	52	59	44	57
13:00	49	58	53	59	47	58	52	59	44	57
14:00	47	58	52	59	44	57	50	58	41	57
15:00	47	58	52	59	44	57	50	58	41	57
16:00	49	58	53	59	47	58	52	59	44	57
17:00	49	58	53	59	47	58	52	59	44	57
18:00	47	58	52	59	44	57	50	58	41	57
19:00	49	58	53	59	47	58	52	59	44	57
20:00	51	59	54	59	49	58	53	59	47	58
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow Underlined values indicate STOP&GO condition ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 5. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	I-66				Reference Map #	NOVA 16-A3	
From	Lee Highway				Unit= US & Model= Mod. BPR		
To	Westmoreland Street				Present Year 2006 ADT	151,000	No-build
City/County	Arlington				Interim Year 2013 ADT	173,500	166,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	190,000	182,000

Two-way

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	7,550	8,675	8,300	9,500	9,100	5.00%	=	1.0%	0.5%	1.5%
7:00	9,060	10,410	9,960	11,400	10,920	6.00%	=	1.0%	0.5%	1.5%
8:00	9,060	10,410	9,960	11,400	10,920	6.00%	=	1.0%	0.5%	1.5%
9:00	9,060	10,410	9,960	11,400	10,920	6.00%	=	1.0%	0.5%	1.5%
10:00	7,550	8,675	8,300	9,500	9,100	5.00%	=	1.0%	0.5%	1.5%
11:00	7,550	8,675	8,300	9,500	9,100	5.00%	=	1.0%	0.5%	1.5%
12:00	8,305	9,543	9,130	10,450	10,010	5.50%	=	1.0%	0.5%	1.5%
13:00	8,305	9,543	9,130	10,450	10,010	5.50%	=	1.0%	0.5%	1.5%
14:00	9,060	10,410	9,960	11,400	10,920	6.00%	=	1.0%	0.5%	1.5%
15:00	9,060	10,410	9,960	11,400	10,920	6.00%	=	1.0%	0.5%	1.5%
16:00	8,305	9,543	9,130	10,450	10,010	5.50%	=	1.0%	0.5%	1.5%
17:00	8,305	9,543	9,130	10,450	10,010	5.50%	=	1.0%	0.5%	1.5%
18:00	9,060	10,410	9,960	11,400	10,920	6.00%	=	1.0%	0.5%	1.5%
19:00	8,305	9,543	9,130	10,450	10,010	5.50%	=	1.0%	0.5%	1.5%
20:00	6,795	7,808	7,470	8,550	8,190	4.50%	=	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
	0:00	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	50	58	50	58	49	58	48	58	47	58
7:00	47	58	47	58	44	57	44	57	41	57
8:00	47	58	48	58	44	57	46	58	40	56
9:00	47	58	47	58	44	57	44	57	41	57
10:00	50	58	50	58	49	58	48	58	47	58
11:00	50	58	50	58	49	58	48	58	47	58
12:00	49	58	49	58	47	58	47	58	44	57
13:00	49	58	49	58	47	58	47	58	44	57
14:00	47	58	47	58	44	57	44	57	41	57
15:00	47	58	47	58	44	57	44	57	41	57
16:00	49	58	49	58	47	58	47	58	44	57
17:00	49	58	49	58	47	58	47	58	44	57
18:00	47	58	47	58	44	57	44	57	41	57
19:00	49	58	49	58	47	58	47	58	44	57
20:00	52	59	53	59	51	59	52	59	49	58
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

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Table 6. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	I-66				Reference Map #	NOVA 15-J1	
From	Westmoreland Street				Unit= US & Model= Mod. BPR		
To	Dulles Access Road				Present Year 2006 ADT	156,000	No-build
City/County	Fairfax				Interim Year 2013 ADT	179,500	171,500
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	196,000	188,000

Eastbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	2A-6T	3A+	Total
	0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	3,900	4,488	4,288	4,900	4,700	5.00%	50%	1.0%	0.5%	1.5%
7:00	4,212	4,847	4,631	5,292	5,076	6.00%	45%	1.0%	0.5%	1.5%
8:00	4,212	4,847	4,631	5,292	5,076	6.00%	45%	1.0%	0.5%	1.5%
9:00	4,680	5,385	5,145	5,880	5,640	6.00%	50%	1.0%	0.5%	1.5%
10:00	4,290	4,936	4,716	5,390	5,170	5.00%	55%	1.0%	0.5%	1.5%
11:00	4,290	4,936	4,716	5,390	5,170	5.00%	55%	1.0%	0.5%	1.5%
12:00	4,290	4,936	4,716	5,390	5,170	5.50%	50%	1.0%	0.5%	1.5%
13:00	4,290	4,936	4,716	5,390	5,170	5.50%	50%	1.0%	0.5%	1.5%
14:00	4,680	5,385	5,145	5,880	5,640	6.00%	50%	1.0%	0.5%	1.5%
15:00	4,680	5,385	5,145	5,880	5,640	6.00%	50%	1.0%	0.5%	1.5%
16:00	4,719	5,430	5,188	5,929	5,687	5.50%	55%	1.0%	0.5%	1.5%
17:00	4,719	5,430	5,188	5,929	5,687	5.50%	55%	1.0%	0.5%	1.5%
18:00	4,719	5,430	5,188	5,929	5,687	5.50%	55%	1.0%	0.5%	1.5%
19:00	4,680	5,385	5,145	5,880	5,640	6.00%	50%	1.0%	0.5%	1.5%
20:00	3,159	3,635	3,473	3,969	3,807	4.50%	45%	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
	0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	50	58	47	58	48	58	45	57	46	58
7:00	49	58	45	57	47	58	42	57	44	57
8:00	49	58	45	57	47	58	42	57	44	57
9:00	46	58	41	57	43	57	38	56	40	56
10:00	48	58	45	57	46	58	41	57	43	57
11:00	48	58	45	57	46	58	41	57	43	57
12:00	48	58	45	57	46	58	41	57	43	57
13:00	48	58	45	57	46	58	41	57	43	57
14:00	46	58	41	57	43	57	38	56	40	56
15:00	46	58	41	57	43	57	38	56	40	56
16:00	46	58	41	57	43	57	37	56	39	56
17:00	46	58	41	57	43	57	37	56	39	56
18:00	46	58	41	57	43	57	37	56	39	56
19:00	46	58	41	57	43	57	38	56	40	56
20:00	53	59	51	59	52	59	50	58	51	59
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow Underlined values indicate STOP&GO condition ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 6. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	I-66				Reference Map #	NOVA 15-J1		
From	Westmoreland Street				Unit= US & Model= Mod. BPR			
To	Dulles Access Road				Present Year 2006 ADT	156,000	No-build	
City/County	Fairfax				Interim Year 2013 ADT	179,500	171,500	
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	196,000	188,000	

Westbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	3,900	4,488	4,288	4,900	4,700	5.00%	50%	1.0%	0.5%	1.5%
7:00	5,148	5,924	5,660	6,468	6,204	6.00%	55%	1.0%	0.5%	1.5%
8:00	5,148	5,924	5,660	6,468	6,204	6.00%	55%	1.0%	0.5%	1.5%
9:00	4,680	5,385	5,145	5,880	5,640	6.00%	50%	1.0%	0.5%	1.5%
10:00	3,510	4,039	3,859	4,410	4,230	5.00%	45%	1.0%	0.5%	1.5%
11:00	3,510	4,039	3,859	4,410	4,230	5.00%	45%	1.0%	0.5%	1.5%
12:00	4,290	4,936	4,716	5,390	5,170	5.50%	50%	1.0%	0.5%	1.5%
13:00	4,290	4,936	4,716	5,390	5,170	5.50%	50%	1.0%	0.5%	1.5%
14:00	4,680	5,385	5,145	5,880	5,640	6.00%	50%	1.0%	0.5%	1.5%
15:00	4,680	5,385	5,145	5,880	5,640	6.00%	50%	1.0%	0.5%	1.5%
16:00	3,861	4,443	4,245	4,851	4,653	5.50%	45%	1.0%	0.5%	1.5%
17:00	3,861	4,443	4,245	4,851	4,653	5.50%	45%	1.0%	0.5%	1.5%
18:00	3,861	4,443	4,245	4,851	4,653	5.50%	45%	1.0%	0.5%	1.5%
19:00	4,680	5,385	5,145	5,880	5,640	6.00%	50%	1.0%	0.5%	1.5%
20:00	3,861	4,443	4,245	4,851	4,653	4.50%	55%	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	50	58	54	59	48	58	52	59	46	58
7:00	43	57	49	58	39	56	46	58	35	55
8:00	43	57	49	58	39	56	46	58	35	55
9:00	46	58	51	59	43	57	49	58	40	56
10:00	52	59	54	59	50	58	54	59	49	58
11:00	52	59	54	59	50	58	54	59	49	58
12:00	48	58	52	59	46	58	51	59	43	57
13:00	48	58	52	59	46	58	51	59	43	57
14:00	46	58	51	59	43	57	49	58	40	56
15:00	46	58	51	59	43	57	49	58	40	56
16:00	50	58	54	59	49	58	53	59	46	58
17:00	50	58	54	59	49	58	53	59	46	58
18:00	50	58	54	59	49	58	53	59	46	58
19:00	46	58	51	59	43	57	49	58	40	56
20:00	50	58	54	59	49	58	53	59	46	58
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 6. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	I-66				Reference Map #	NOVA 15-J1	
From	Westmoreland Street				Unit= US & Model= Mod. BPR		
To	Dulles Access Road				Present Year 2006 ADT	156,000	No-build
City/County	Fairfax				Interim Year 2013 ADT	179,500	171,500
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	196,000	188,000

Two-way

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	7,800	8,975	8,575	9,800	9,400	5.00%	=	1.0%	0.5%	1.5%
7:00	9,360	10,770	10,290	11,760	11,280	6.00%	=	1.0%	0.5%	1.5%
8:00	9,360	10,770	10,290	11,760	11,280	6.00%	=	1.0%	0.5%	1.5%
9:00	9,360	10,770	10,290	11,760	11,280	6.00%	=	1.0%	0.5%	1.5%
10:00	7,800	8,975	8,575	9,800	9,400	5.00%	=	1.0%	0.5%	1.5%
11:00	7,800	8,975	8,575	9,800	9,400	5.00%	=	1.0%	0.5%	1.5%
12:00	8,580	9,873	9,433	10,780	10,340	5.50%	=	1.0%	0.5%	1.5%
13:00	8,580	9,873	9,433	10,780	10,340	5.50%	=	1.0%	0.5%	1.5%
14:00	9,360	10,770	10,290	11,760	11,280	6.00%	=	1.0%	0.5%	1.5%
15:00	9,360	10,770	10,290	11,760	11,280	6.00%	=	1.0%	0.5%	1.5%
16:00	8,580	9,873	9,433	10,780	10,340	5.50%	=	1.0%	0.5%	1.5%
17:00	8,580	9,873	9,433	10,780	10,340	5.50%	=	1.0%	0.5%	1.5%
18:00	8,580	9,873	9,433	10,780	10,340	5.50%	=	1.0%	0.5%	1.5%
19:00	9,360	10,770	10,290	11,760	11,280	6.00%	=	1.0%	0.5%	1.5%
20:00	7,020	8,078	7,718	8,820	8,460	4.50%	=	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	50	58	50	58	48	58	49	58	46	58
7:00	46	58	47	58	43	57	44	57	39	56
8:00	46	58	47	58	43	57	44	57	39	56
9:00	46	58	46	58	43	57	43	57	40	56
10:00	50	58	49	58	48	58	47	58	46	58
11:00	50	58	49	58	48	58	47	58	46	58
12:00	48	58	49	58	46	58	46	58	43	57
13:00	48	58	49	58	46	58	46	58	43	57
14:00	46	58	46	58	43	57	43	57	40	56
15:00	46	58	46	58	43	57	43	57	40	56
16:00	48	58	47	58	45	57	44	57	42	57
17:00	48	58	47	58	45	57	44	57	42	57
18:00	48	58	47	58	45	57	44	57	42	57
19:00	46	58	46	58	43	57	43	57	40	56
20:00	51	59	53	59	50	58	51	59	48	58
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



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Table 7. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Lee Highway				Reference Map #	NOVA 16-K1	
From	Near I-66 @ Spout Run				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	26,000	No-build
City/County	Arlington				Interim Year 2013 ADT	30,000	28,500
Date	1/29/2007	Time Span	15 Hours	Design Year 2032 ADT	33,000	31,000	

Eastbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nbl	Design Bld	Design Nbl	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	910	1,050	998	1,155	1,085	5.00%	70%	4.0%	2.0%	6.0%
7:00	1,274	1,470	1,397	1,617	1,519	7.00%	70%	6.0%	0.0%	6.0%
8:00	1,690	1,950	1,853	2,145	2,015	10.00%	65%	5.0%	1.0%	6.0%
9:00	858	990	941	1,089	1,023	6.00%	55%	5.0%	1.0%	6.0%
10:00	468	540	513	594	558	4.00%	45%	6.0%	1.0%	7.0%
11:00	527	608	577	668	628	4.50%	45%	4.0%	0.0%	4.0%
12:00	520	600	570	660	620	5.00%	40%	6.0%	1.0%	7.0%
13:00	585	675	641	743	698	5.00%	45%	4.0%	0.0%	4.0%
14:00	572	660	627	726	682	5.50%	40%	6.0%	1.0%	7.0%
15:00	624	720	684	792	744	6.00%	40%	5.0%	1.0%	6.0%
16:00	624	720	684	792	744	8.00%	30%	3.0%	1.0%	4.0%
17:00	780	900	855	990	930	10.00%	30%	6.0%	2.0%	8.0%
18:00	702	810	770	891	837	9.00%	30%	2.0%	0.0%	2.0%
19:00	728	840	798	924	868	7.00%	40%	2.0%	1.0%	3.0%
20:00	585	675	641	743	698	5.00%	45%	3.0%	0.0%	3.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nbl		Design Bld		Design Nbl	
	Interrupted	Uninterrupt.								
0:00	n/a	n/a								
1:00	n/a	n/a								
2:00	n/a	n/a								
3:00	n/a	n/a								
4:00	n/a	n/a								
5:00	n/a	n/a								
6:00	28	36	28	36	28	36	27	36	28	36
7:00	27	36	27	36	27	36	27	36	27	36
8:00	27	36	27	36	27	36	26	36	27	36
9:00	28	36	28	36	28	36	28	36	28	36
10:00	28	36	28	36	28	36	28	36	28	36
11:00	28	36	28	36	28	36	28	36	28	36
12:00	28	36	28	36	28	36	28	36	28	36
13:00	28	36	28	36	28	36	28	36	28	36
14:00	28	36	28	36	28	36	28	36	28	36
15:00	28	36	28	36	28	36	28	36	28	36
16:00	28	36	28	36	28	36	28	36	28	36
17:00	28	36	28	36	28	36	28	36	28	36
18:00	28	36	28	36	28	36	28	36	28	36
19:00	28	36	28	36	28	36	28	36	28	36
20:00	28	36	28	36	28	36	28	36	28	36
21:00	n/a	n/a								
22:00	n/a	n/a								
23:00	n/a	n/a								

* Shown when volume exceeds Max. Service Flow Underlined values indicate STOP&GO condition ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 7. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Lee Highway				Reference Map #	NOVA 16-K1	
From	Near I-66 @ Spout Run				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	26,000	No-build
City/County	Arlington				Interim Year 2013 ADT	30,000	28,500
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	33,000	31,000

Westbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	390	450	428	495	465	5.00%	30%	6.0%	2.0%	8.0%
7:00	546	630	599	693	651	7.00%	30%	5.0%	1.0%	6.0%
8:00	910	1,050	998	1,155	1,085	10.00%	35%	4.0%	1.0%	5.0%
9:00	702	810	770	891	837	6.00%	45%	5.0%	1.0%	6.0%
10:00	572	660	627	726	682	4.00%	55%	7.0%	1.0%	8.0%
11:00	644	743	705	817	767	4.50%	55%	6.0%	1.0%	7.0%
12:00	780	900	855	990	930	5.00%	60%	5.0%	1.0%	6.0%
13:00	715	825	784	908	853	5.00%	55%	4.0%	1.0%	5.0%
14:00	858	990	941	1,089	1,023	5.50%	60%	3.0%	1.0%	4.0%
15:00	936	1,080	1,026	1,188	1,116	6.00%	60%	3.0%	0.0%	3.0%
16:00	1,456	1,680	1,596	1,848	1,736	8.00%	70%	3.0%	0.0%	3.0%
17:00	1,820	2,100	1,995	2,310	2,170	10.00%	70%	3.0%	0.0%	3.0%
18:00	1,638	1,890	1,796	2,079	1,953	9.00%	70%	2.0%	0.0%	2.0%
19:00	1,092	1,260	1,197	1,386	1,302	7.00%	60%	2.0%	0.0%	2.0%
20:00	715	825	784	908	853	5.00%	55%	2.0%	0.0%	2.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
	0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	28	36	28	36	28	36	28	36	28	36
7:00	28	36	28	36	28	36	28	36	28	36
8:00	28	36	28	36	28	36	27	36	28	36
9:00	28	36	28	36	28	36	28	36	28	36
10:00	28	36	28	36	28	36	28	36	28	36
11:00	28	36	28	36	28	36	28	36	28	36
12:00	28	36	28	36	28	36	28	36	28	36
13:00	28	36	28	36	28	36	28	36	28	36
14:00	28	36	28	36	28	36	28	36	28	36
15:00	28	36	28	36	28	36	27	36	28	36
16:00	27	36	27	36	27	36	27	36	27	36
17:00	27	36	27	36	27	36	26	36	26	36
18:00	27	36	27	36	27	36	27	36	27	36
19:00	28	36	27	36	27	36	27	36	27	36
20:00	28	36	28	36	28	36	28	36	28	36
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 7. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Lee Highway				Reference Map #	NOVA 16-K1	
From	Near I-66 @ Spout Run				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	26,000	No-build
City/County	Arlington				Interim Year 2013 ADT	30,000	28,500
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	33,000	31,000

Two-way

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	1,300	1,500	1,425	1,650	1,550	5.00%	=	4.6%	2.0%	6.6%
7:00	1,820	2,100	1,995	2,310	2,170	7.00%	=	5.7%	0.3%	6.0%
8:00	2,600	3,000	2,850	3,300	3,100	10.00%	=	4.7%	1.0%	5.7%
9:00	1,560	1,800	1,710	1,980	1,860	6.00%	=	5.0%	1.0%	6.0%
10:00	1,040	1,200	1,140	1,320	1,240	4.00%	=	6.6%	1.0%	7.6%
11:00	1,170	1,350	1,283	1,485	1,395	4.50%	=	5.1%	0.6%	5.7%
12:00	1,300	1,500	1,425	1,650	1,550	5.00%	=	5.4%	1.0%	6.4%
13:00	1,300	1,500	1,425	1,650	1,550	5.00%	=	4.0%	0.6%	4.6%
14:00	1,430	1,650	1,568	1,815	1,705	5.50%	=	4.2%	1.0%	5.2%
15:00	1,560	1,800	1,710	1,980	1,860	6.00%	=	3.8%	0.4%	4.2%
16:00	2,080	2,400	2,280	2,640	2,480	8.00%	=	3.0%	0.3%	3.3%
17:00	2,600	3,000	2,850	3,300	3,100	10.00%	=	3.9%	0.6%	4.5%
18:00	2,340	2,700	2,565	2,970	2,790	9.00%	=	2.0%	0.0%	2.0%
19:00	1,820	2,100	1,995	2,310	2,170	7.00%	=	2.0%	0.4%	2.4%
20:00	1,300	1,500	1,425	1,650	1,550	5.00%	=	2.5%	0.0%	2.5%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	28	36	28	36	28	36	28	36	28	36
7:00	27	36	27	36	27	36	27	36	27	36
8:00	27	36	27	36	27	36	27	36	27	36
9:00	28	36	28	36	28	36	28	36	28	36
10:00	28	36	28	36	28	36	28	36	28	36
11:00	28	36	28	36	28	36	28	36	28	36
12:00	28	36	28	36	28	36	28	36	28	36
13:00	28	36	28	36	28	36	28	36	28	36
14:00	28	36	28	36	28	36	28	36	28	36
15:00	28	36	28	36	28	36	28	36	28	36
16:00	27	36	27	36	27	36	27	36	27	36
17:00	27	36	27	36	27	36	27	36	27	36
18:00	27	36	27	36	27	36	27	36	27	36
19:00	28	36	28	36	28	36	27	36	27	36
20:00	28	36	28	36	28	36	28	36	28	36
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

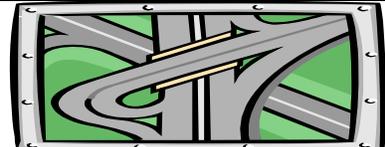
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Table 8. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Glebe Road				Reference Map #	NOVA 16-G1			
From	Near I-66				Unit= US & Model= Mod. BPR				
To					Present Year 2006 ADT	31,000	No-build		
City/County	Arlington				Interim Year 2013 ADT	35,500	34,000		
Date	1/29/2007	Time Span	15 Hours	Design Year 2032 ADT	39,000	37,000			

Northbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nbl	Design Bld	Design Nbl	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	372	426	408	468	444	3.00%	40%	7.0%	1.0%	8.0%
7:00	682	781	748	858	814	5.50%	40%	6.0%	1.0%	7.0%
8:00	806	923	884	1,014	962	6.50%	40%	5.0%	1.0%	6.0%
9:00	806	923	884	1,014	962	6.50%	40%	5.0%	1.0%	6.0%
10:00	775	888	850	975	925	5.00%	50%	5.0%	1.0%	6.0%
11:00	775	888	850	975	925	5.00%	50%	5.0%	1.0%	6.0%
12:00	930	1,065	1,020	1,170	1,110	6.00%	50%	5.0%	1.0%	6.0%
13:00	930	1,065	1,020	1,170	1,110	6.00%	50%	5.0%	0.0%	5.0%
14:00	930	1,065	1,020	1,170	1,110	6.00%	50%	5.0%	1.0%	6.0%
15:00	1,008	1,154	1,105	1,268	1,203	6.50%	50%	3.0%	0.0%	3.0%
16:00	1,302	1,491	1,428	1,638	1,554	7.00%	60%	3.0%	0.0%	3.0%
17:00	1,488	1,704	1,632	1,872	1,776	8.00%	60%	2.0%	0.0%	2.0%
18:00	1,194	1,367	1,309	1,502	1,425	7.00%	55%	2.0%	0.0%	2.0%
19:00	930	1,065	1,020	1,170	1,110	6.00%	50%	1.0%	0.0%	1.0%
20:00	698	799	765	878	833	4.50%	50%	1.0%	0.0%	1.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nbl		Design Bld		Design Nbl	
	Interrupted	Uninterrupt.								
0:00	n/a	n/a								
1:00	n/a	n/a								
2:00	n/a	n/a								
3:00	n/a	n/a								
4:00	n/a	n/a								
5:00	n/a	n/a								
6:00	25	34	25	34	25	34	25	34	25	34
7:00	25	34	25	34	25	34	25	34	25	34
8:00	25	34	25	34	25	34	25	34	25	34
9:00	25	34	25	34	25	34	25	34	25	34
10:00	25	34	25	34	25	34	25	34	25	34
11:00	25	34	25	34	25	34	25	34	25	34
12:00	25	34	25	34	25	34	25	34	25	34
13:00	25	34	25	34	25	34	25	34	25	34
14:00	25	34	25	34	25	34	25	34	25	34
15:00	25	34	25	34	25	34	25	34	25	34
16:00	25	34	25	34	25	34	25	34	25	34
17:00	25	34	25	34	25	34	25	34	25	34
18:00	25	34	25	34	25	34	25	34	25	34
19:00	25	34	25	34	25	34	25	34	25	34
20:00	25	34	25	34	25	34	25	34	25	34
21:00	n/a	n/a								
22:00	n/a	n/a								
23:00	n/a	n/a								

* Shown when volume exceeds Max. Service Flow Underlined values indicate STOP&GO condition ENTRADA Ver. 107 VDOT-NOVA



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Table 8. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Glebe Road				Reference Map #	NOVA 16-G1	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	31,000	No-build
City/County	Arlington				Interim Year 2013 ADT	35,500	34,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	39,000	37,000

Southbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	558	639	612	702	666	3.00%	60%	5.0%	0.0%	5.0%
7:00	1,023	1,172	1,122	1,287	1,221	5.50%	60%	4.0%	1.0%	5.0%
8:00	1,209	1,385	1,326	1,521	1,443	6.50%	60%	4.0%	1.0%	5.0%
9:00	1,209	1,385	1,326	1,521	1,443	6.50%	60%	5.0%	0.0%	5.0%
10:00	775	888	850	975	925	5.00%	50%	4.0%	0.0%	4.0%
11:00	775	888	850	975	925	5.00%	50%	7.0%	1.0%	8.0%
12:00	930	1,065	1,020	1,170	1,110	6.00%	50%	5.0%	0.0%	5.0%
13:00	930	1,065	1,020	1,170	1,110	6.00%	50%	6.0%	0.0%	6.0%
14:00	930	1,065	1,020	1,170	1,110	6.00%	50%	5.0%	1.0%	6.0%
15:00	1,008	1,154	1,105	1,268	1,203	6.50%	50%	4.0%	0.0%	4.0%
16:00	868	994	952	1,092	1,036	7.00%	40%	5.0%	0.0%	5.0%
17:00	992	1,136	1,088	1,248	1,184	8.00%	40%	4.0%	1.0%	5.0%
18:00	977	1,118	1,071	1,229	1,166	7.00%	45%	2.0%	1.0%	3.0%
19:00	930	1,065	1,020	1,170	1,110	6.00%	50%	3.0%	1.0%	4.0%
20:00	698	799	765	878	833	4.50%	50%	2.0%	0.0%	2.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
	0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	25	34	25	34	25	34	25	34	25	34
7:00	25	34	25	34	25	34	25	34	25	34
8:00	25	34	25	34	25	34	25	34	25	34
9:00	25	34	25	34	25	34	25	34	25	34
10:00	25	34	25	34	25	34	25	34	25	34
11:00	25	34	25	34	25	34	25	34	25	34
12:00	25	34	25	34	25	34	25	34	25	34
13:00	25	34	25	34	25	34	25	34	25	34
14:00	25	34	25	34	25	34	25	34	25	34
15:00	25	34	25	34	25	34	25	34	25	34
16:00	25	34	25	34	25	34	25	34	25	34
17:00	25	34	25	34	25	34	25	34	25	34
18:00	25	34	25	34	25	34	25	34	25	34
19:00	25	34	25	34	25	34	25	34	25	34
20:00	25	34	25	34	25	34	25	34	25	34
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



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Table 8. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Glebe Road				Reference Map #	NOVA 16-G1	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	31,000	No-build
City/County	Arlington				Interim Year 2013 ADT	35,500	34,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	39,000	37,000

Two-way

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblnd	Design Bld	Design Nblnd	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	930	1,065	1,020	1,170	1,110	3.00%	=	5.8%	0.4%	6.2%
7:00	1,705	1,953	1,870	2,145	2,035	5.50%	=	4.8%	1.0%	5.8%
8:00	2,015	2,308	2,210	2,535	2,405	6.50%	=	4.4%	1.0%	5.4%
9:00	2,015	2,308	2,210	2,535	2,405	6.50%	=	5.0%	0.4%	5.4%
10:00	1,550	1,775	1,700	1,950	1,850	5.00%	=	4.5%	0.5%	5.0%
11:00	1,550	1,775	1,700	1,950	1,850	5.00%	=	6.0%	1.0%	7.0%
12:00	1,860	2,130	2,040	2,340	2,220	6.00%	=	5.0%	0.5%	5.5%
13:00	1,860	2,130	2,040	2,340	2,220	6.00%	=	5.5%	0.0%	5.5%
14:00	1,860	2,130	2,040	2,340	2,220	6.00%	=	5.0%	1.0%	6.0%
15:00	2,015	2,308	2,210	2,535	2,405	6.50%	=	3.5%	0.0%	3.5%
16:00	2,170	2,485	2,380	2,730	2,590	7.00%	=	3.8%	0.0%	3.8%
17:00	2,480	2,840	2,720	3,120	2,960	8.00%	=	2.8%	0.4%	3.2%
18:00	2,170	2,485	2,380	2,730	2,590	7.00%	=	2.0%	0.5%	2.5%
19:00	1,860	2,130	2,040	2,340	2,220	6.00%	=	2.0%	0.5%	2.5%
20:00	1,395	1,598	1,530	1,755	1,665	4.50%	=	1.5%	0.0%	1.5%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblnd		Design Bld		Design Nblnd	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	25	34	25	34	25	34	25	34	25	34
7:00	25	34	25	34	25	34	25	34	25	34
8:00	25	34	25	34	25	34	25	34	25	34
9:00	25	34	25	34	25	34	25	34	25	34
10:00	25	34	25	34	25	34	25	34	25	34
11:00	25	34	25	34	25	34	25	34	25	34
12:00	25	34	25	34	25	34	25	34	25	34
13:00	25	34	25	34	25	34	25	34	25	34
14:00	25	34	25	34	25	34	25	34	25	34
15:00	25	34	25	34	25	34	25	34	25	34
16:00	25	34	25	34	25	34	25	34	25	34
17:00	25	34	25	34	25	34	25	34	25	34
18:00	25	34	25	34	25	34	25	34	25	34
19:00	25	34	25	34	25	34	25	34	25	34
20:00	25	34	25	34	25	34	25	34	25	34
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

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Table 9. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Fairfax Drive				Reference Map #	NOVA 16-G4			
From	Near I-66				Unit= US & Model= Mod. BPR				
To					Present Year 2006 ADT	30,000	No-build		
City/County	Arlington				Interim Year 2013 ADT	34,500	33,000		
Date	1/29/2007	Time Span	15 Hours	Design Year 2032 ADT	38,000	36,000			

Eastbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	2A-6T	3A+	Total
	0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	600	690	660	760	720	5.00%	40%	2.0%	0.0%	2.0%
7:00	450	518	495	570	540	5.00%	30%	4.0%	0.0%	4.0%
8:00	675	776	743	855	810	4.50%	50%	4.0%	1.0%	5.0%
9:00	750	863	825	950	900	5.00%	50%	2.0%	1.0%	3.0%
10:00	750	863	825	950	900	5.00%	50%	2.0%	0.0%	2.0%
11:00	750	863	825	950	900	5.00%	50%	2.0%	0.0%	2.0%
12:00	825	949	908	1,045	990	5.50%	50%	2.0%	0.0%	2.0%
13:00	825	949	908	1,045	990	5.50%	50%	1.0%	0.0%	1.0%
14:00	810	932	891	1,026	972	6.00%	45%	2.0%	0.0%	2.0%
15:00	900	1,035	990	1,140	1,080	6.00%	50%	2.0%	0.0%	2.0%
16:00	900	1,035	990	1,140	1,080	5.00%	60%	2.0%	0.0%	2.0%
17:00	825	949	908	1,045	990	5.00%	55%	2.0%	0.0%	2.0%
18:00	1,073	1,233	1,180	1,359	1,287	6.50%	55%	1.0%	0.0%	1.0%
19:00	1,073	1,233	1,180	1,359	1,287	6.50%	55%	2.0%	1.0%	3.0%
20:00	908	1,044	998	1,150	1,089	5.50%	55%	2.0%	1.0%	3.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
	0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	24	34	24	34	24	34	24	34	24	34
7:00	24	34	24	34	24	34	24	34	24	34
8:00	24	34	24	34	24	34	23	33	23	33
9:00	24	34	23	33	23	33	23	33	23	33
10:00	24	34	23	33	23	33	23	33	23	33
11:00	24	34	23	33	23	33	23	33	23	33
12:00	23	33	23	33	23	33	23	33	23	33
13:00	23	33	23	33	23	33	23	33	23	33
14:00	24	34	23	33	23	33	23	33	23	33
15:00	23	33	23	33	23	33	23	33	23	33
16:00	23	33	23	33	23	33	23	33	23	33
17:00	23	33	23	33	23	33	23	33	23	33
18:00	23	33	23	33	23	33	23	33	23	33
19:00	23	33	23	33	23	33	23	33	23	33
20:00	23	33	23	33	23	33	23	33	23	33
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow Underlined values indicate STOP&GO condition ENTRADA Ver. 107 VDOT-NOVA



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Table 9. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Fairfax Drive				Reference Map #	NOVA 16-G4	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	30,000	No-build
City/County	Arlington				Interim Year 2013 ADT	34,500	33,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	38,000	36,000

Westbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	900	1,035	990	1,140	1,080	5.00%	60%	3.0%	0.0%	3.0%
7:00	1,050	1,208	1,155	1,330	1,260	5.00%	70%	1.0%	1.0%	2.0%
8:00	675	776	743	855	810	4.50%	50%	5.0%	2.0%	7.0%
9:00	750	863	825	950	900	5.00%	50%	1.0%	1.0%	2.0%
10:00	750	863	825	950	900	5.00%	50%	1.0%	0.0%	1.0%
11:00	750	863	825	950	900	5.00%	50%	2.0%	0.0%	2.0%
12:00	825	949	908	1,045	990	5.50%	50%	1.0%	0.0%	1.0%
13:00	825	949	908	1,045	990	5.50%	50%	1.0%	0.0%	1.0%
14:00	990	1,139	1,089	1,254	1,188	6.00%	55%	2.0%	1.0%	3.0%
15:00	900	1,035	990	1,140	1,080	6.00%	50%	2.0%	1.0%	3.0%
16:00	600	690	660	760	720	5.00%	40%	4.0%	1.0%	5.0%
17:00	675	776	743	855	810	5.00%	45%	2.0%	1.0%	3.0%
18:00	878	1,009	965	1,112	1,053	6.50%	45%	1.0%	0.0%	1.0%
19:00	878	1,009	965	1,112	1,053	6.50%	45%	1.0%	0.0%	1.0%
20:00	743	854	817	941	891	5.50%	45%	1.0%	1.0%	2.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	23	33	23	33	23	33	23	33	23	33
7:00	23	33	23	33	23	33	23	33	23	33
8:00	24	34	24	34	24	34	23	33	23	33
9:00	24	34	23	33	23	33	23	33	23	33
10:00	24	34	23	33	23	33	23	33	23	33
11:00	24	34	23	33	23	33	23	33	23	33
12:00	23	33	23	33	23	33	23	33	23	33
13:00	23	33	23	33	23	33	23	33	23	33
14:00	23	33	23	33	23	33	23	33	23	33
15:00	23	33	23	33	23	33	23	33	23	33
16:00	24	34	24	34	24	34	24	34	24	34
17:00	24	34	24	34	24	34	23	33	23	33
18:00	23	33	23	33	23	33	23	33	23	33
19:00	23	33	23	33	23	33	23	33	23	33
20:00	24	34	23	33	23	33	23	33	23	33
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



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Table 9. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Fairfax Drive				Reference Map #	NOVA 16-G4	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	30,000	No-build
City/County	Arlington				Interim Year 2013 ADT	34,500	33,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	38,000	36,000

Two-way

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	1,500	1,725	1,650	1,900	1,800	5.00%	=	2.6%	0.0%	2.6%
7:00	1,500	1,725	1,650	1,900	1,800	5.00%	=	1.9%	0.7%	2.6%
8:00	1,350	1,553	1,485	1,710	1,620	4.50%	=	4.5%	1.5%	6.0%
9:00	1,500	1,725	1,650	1,900	1,800	5.00%	=	1.5%	1.0%	2.5%
10:00	1,500	1,725	1,650	1,900	1,800	5.00%	=	1.5%	0.0%	1.5%
11:00	1,500	1,725	1,650	1,900	1,800	5.00%	=	2.0%	0.0%	2.0%
12:00	1,650	1,898	1,815	2,090	1,980	5.50%	=	1.5%	0.0%	1.5%
13:00	1,650	1,898	1,815	2,090	1,980	5.50%	=	1.0%	0.0%	1.0%
14:00	1,800	2,070	1,980	2,280	2,160	6.00%	=	2.0%	0.6%	2.6%
15:00	1,800	2,070	1,980	2,280	2,160	6.00%	=	2.0%	0.5%	2.5%
16:00	1,500	1,725	1,650	1,900	1,800	5.00%	=	2.8%	0.4%	3.2%
17:00	1,500	1,725	1,650	1,900	1,800	5.00%	=	2.0%	0.5%	2.5%
18:00	1,950	2,243	2,145	2,470	2,340	6.50%	=	1.0%	0.0%	1.0%
19:00	1,950	2,243	2,145	2,470	2,340	6.50%	=	1.6%	0.6%	2.1%
20:00	1,650	1,898	1,815	2,090	1,980	5.50%	=	1.6%	1.0%	2.6%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	23	33	23	33	23	33	23	33	23	33
7:00	23	33	23	33	23	33	23	33	23	33
8:00	24	34	24	34	24	34	23	33	23	33
9:00	24	34	23	33	23	33	23	33	23	33
10:00	24	34	23	33	23	33	23	33	23	33
11:00	24	34	23	33	23	33	23	33	23	33
12:00	23	33	23	33	23	33	23	33	23	33
13:00	23	33	23	33	23	33	23	33	23	33
14:00	23	33	23	33	23	33	23	33	23	33
15:00	23	33	23	33	23	33	23	33	23	33
16:00	23	33	23	33	23	33	23	33	23	33
17:00	24	34	23	33	23	33	23	33	23	33
18:00	23	33	23	33	23	33	23	33	23	33
19:00	23	33	23	33	23	33	23	33	23	33
20:00	23	33	23	33	23	33	23	33	23	33
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

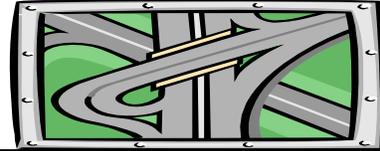
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Table 10. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Washington Boulevard				Reference Map #	NOVA 16-G3		
From	Near I-66 and Glebe Road				Unit= US & Model= Mod. BPR			
To					Present Year 2006 ADT	16,500	No-build	
City/County	Arlington				Interim Year 2013 ADT	19,000	18,000	
Date	1/29/2007	Time Span	15 Hours	Design Year 2032 ADT	21,000	20,000		

Eastbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	404	466	441	515	490	3.50%	70%	3.0%	0.0%	3.0%
7:00	866	998	945	1,103	1,050	7.50%	70%	3.0%	0.0%	3.0%
8:00	912	1,050	995	1,160 *	1,105	8.50%	65%	3.0%	1.0%	4.0%
9:00	594	684	648	756	720	6.00%	60%	3.0%	1.0%	4.0%
10:00	446	513	486	567	540	4.50%	60%	2.0%	1.0%	3.0%
11:00	371	428	405	473	450	4.50%	50%	3.0%	0.0%	3.0%
12:00	371	428	405	473	450	5.00%	45%	2.0%	0.0%	2.0%
13:00	413	475	450	525	500	5.00%	50%	5.0%	1.0%	6.0%
14:00	408	470	446	520	495	5.50%	45%	4.0%	0.0%	4.0%
15:00	429	494	468	546	520	6.50%	40%	3.0%	1.0%	4.0%
16:00	495	570	540	630	600	7.50%	40%	3.0%	0.0%	3.0%
17:00	520	599	567	662	630	9.00%	35%	1.0%	1.0%	2.0%
18:00	462	532	504	588	560	8.00%	35%	2.0%	0.0%	2.0%
19:00	483	556	527	614	585	6.50%	45%	1.0%	0.0%	1.0%
20:00	330	380	360	420	400	4.00%	50%	2.0%	0.0%	2.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	22	33	22	33	22	33	21	33	21	33
7:00	17	32	15	32	16	32	13	31	14	32
8:00	16	32	14	32	15	32	11	31	13	31
9:00	21	33	20	33	20	33	19	33	19	33
10:00	22	33	21	33	21	33	21	33	21	33
11:00	22	33	22	33	22	33	22	33	22	33
12:00	22	33	22	33	22	33	22	33	22	33
13:00	22	33	22	33	22	33	21	33	21	33
14:00	22	33	22	33	22	33	21	33	21	33
15:00	22	33	21	33	22	33	21	33	21	33
16:00	21	33	21	33	21	33	20	33	21	33
17:00	21	33	21	33	21	33	20	33	21	33
18:00	22	33	21	33	21	33	21	33	21	33
19:00	22	33	21	33	21	33	21	33	21	33
20:00	22	33	22	33	22	33	22	33	22	33
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 10. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Washington Boulevard				Reference Map #	NOVA 16-G3	
From	Near I-66 and Glebe Road				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	16,500	No-build
City/County	Arlington				Interim Year 2013 ADT	19,000	18,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	21,000	20,000

Westbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblnd	Design Bld	Design Nblnd	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	173	200	189	221	210	3.50%	30%	8.0%	2.0%	10.0%
7:00	371	428	405	473	450	7.50%	30%	6.0%	0.0%	6.0%
8:00	491	565	536	625	595	8.50%	35%	4.0%	1.0%	5.0%
9:00	396	456	432	504	480	6.00%	40%	4.0%	1.0%	5.0%
10:00	297	342	324	378	360	4.50%	40%	4.0%	0.0%	4.0%
11:00	371	428	405	473	450	4.50%	50%	3.0%	1.0%	4.0%
12:00	454	523	495	578	550	5.00%	55%	3.0%	0.0%	3.0%
13:00	413	475	450	525	500	5.00%	50%	4.0%	0.0%	4.0%
14:00	499	575	545	635	605	5.50%	55%	4.0%	0.0%	4.0%
15:00	644	741	702	819	780	6.50%	60%	3.0%	1.0%	4.0%
16:00	743	855	810	945	900	7.50%	60%	3.0%	1.0%	4.0%
17:00	965	1,112	1,053	1,229 *	1,170 *	9.00%	65%	1.0%	0.0%	1.0%
18:00	858	988	936	1,092	1,040	8.00%	65%	2.0%	0.0%	2.0%
19:00	590	679	644	751	715	6.50%	55%	1.0%	0.0%	1.0%
20:00	330	380	360	420	400	4.00%	50%	1.0%	0.0%	1.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblnd		Design Bld		Design Nblnd	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	22	33	22	33	22	33	22	33	22	33
7:00	22	33	22	33	22	33	22	33	22	33
8:00	21	33	21	33	21	33	20	33	21	33
9:00	22	33	22	33	22	33	21	33	22	33
10:00	22	33	22	33	22	33	22	33	22	33
11:00	22	33	22	33	22	33	22	33	22	33
12:00	22	33	21	33	21	33	21	33	21	33
13:00	22	33	22	33	22	33	21	33	21	33
14:00	21	33	21	33	21	33	20	33	21	33
15:00	20	33	19	33	20	33	18	32	19	33
16:00	19	33	17	32	18	32	16	32	17	32
17:00	16	32	13	31	14	32	11	31	12	31
18:00	17	32	15	32	16	32	13	31	14	32
19:00	21	33	20	33	20	33	19	33	20	33
20:00	22	33	22	33	22	33	22	33	22	33
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 10. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Washington Boulevard				Reference Map #	NOVA 16-G3	
From	Near I-66 and Glebe Road				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	16,500	No-build
City/County	Arlington				Interim Year 2013 ADT	19,000	18,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	21,000	20,000

Two-way

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	578	665	630	735	700	3.50%	=	4.5%	0.6%	5.1%
7:00	1,238	1,425	1,350	1,575	1,500	7.50%	=	3.9%	0.0%	3.9%
8:00	1,403	1,615	1,530	1,785	1,700	8.50%	=	3.4%	1.0%	4.4%
9:00	990	1,140	1,080	1,260	1,200	6.00%	=	3.4%	1.0%	4.4%
10:00	743	855	810	945	900	4.50%	=	2.8%	0.6%	3.4%
11:00	743	855	810	945	900	4.50%	=	3.0%	0.5%	3.5%
12:00	825	950	900	1,050	1,000	5.00%	=	2.6%	0.0%	2.6%
13:00	825	950	900	1,050	1,000	5.00%	=	4.5%	0.5%	5.0%
14:00	908	1,045	990	1,155	1,100	5.50%	=	4.0%	0.0%	4.0%
15:00	1,073	1,235	1,170	1,365	1,300	6.50%	=	3.0%	1.0%	4.0%
16:00	1,238	1,425	1,350	1,575	1,500	7.50%	=	3.0%	0.6%	3.6%
17:00	1,485	1,710	1,620	1,890	1,800	9.00%	=	1.0%	0.4%	1.4%
18:00	1,320	1,520	1,440	1,680	1,600	8.00%	=	2.0%	0.0%	2.0%
19:00	1,073	1,235	1,170	1,365	1,300	6.50%	=	1.0%	0.0%	1.0%
20:00	660	760	720	840	800	4.00%	=	1.5%	0.0%	1.5%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	22	33	22	33	22	33	22	33	22	33
7:00	19	33	17	32	18	32	15	32	16	32
8:00	18	32	16	32	17	32	15	32	15	32
9:00	21	33	21	33	21	33	20	33	20	33
10:00	22	33	22	33	22	33	21	33	21	33
11:00	22	33	22	33	22	33	22	33	22	33
12:00	22	33	21	33	22	33	21	33	21	33
13:00	22	33	22	33	22	33	21	33	21	33
14:00	22	33	21	33	21	33	21	33	21	33
15:00	21	33	20	33	20	33	19	33	20	33
16:00	20	33	19	33	19	33	18	32	18	32
17:00	18	32	16	32	16	32	14	32	15	32
18:00	19	33	17	32	18	32	16	32	16	32
19:00	21	33	21	33	21	33	20	33	20	33
20:00	22	33	22	33	22	33	22	33	22	33
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



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Table 11. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	George Mason Drive				Reference Map #	NOVA 16-G4			
From	Near I-66				Unit= US & Model= Mod. BPR				
To					Present Year 2006 ADT	19,000	No-build		
City/County	Arlington				Interim Year 2013 ADT	22,000	21,000		
Date	1/29/2007	Time Span	15 Hours	Design Year 2032 ADT	24,000	23,000			

Eastbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nbld	Design Bld	Design Nbld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	257	297	284	324	311	3.00%	45%	4.0%	0.0%	4.0%
7:00	713	825	788	900	863	7.50%	50%	2.0%	0.0%	2.0%
8:00	855	990	945	1,080	1,035	9.00%	50%	1.0%	0.0%	1.0%
9:00	618	715	683	780	748	6.50%	50%	1.0%	0.0%	1.0%
10:00	418	484	462	528	506	5.50%	40%	2.0%	1.0%	3.0%
11:00	418	484	462	528	506	5.50%	40%	3.0%	0.0%	3.0%
12:00	456	528	504	576	552	6.00%	40%	3.0%	0.0%	3.0%
13:00	513	594	567	648	621	6.00%	45%	3.0%	0.0%	3.0%
14:00	456	528	504	576	552	6.00%	40%	3.0%	0.0%	3.0%
15:00	599	693	662	756	725	7.00%	45%	1.0%	0.0%	1.0%
16:00	684	792	756	864	828	8.00%	45%	1.0%	0.0%	1.0%
17:00	727	842	803	918	880	8.50%	45%	1.0%	0.0%	1.0%
18:00	599	693	662	756	725	7.00%	45%	0.0%	0.0%	0.0%
19:00	428	495	473	540	518	5.00%	45%	1.0%	0.0%	1.0%
20:00	299	347	331	378	362	3.50%	45%	1.0%	0.0%	1.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nbld		Design Bld		Design Nbld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	24	34	24	34	24	34	24	34	24	34
7:00	23	33	23	33	23	33	23	33	23	33
8:00	23	33	23	33	23	33	23	33	23	33
9:00	24	34	23	33	23	33	23	33	23	33
10:00	24	34	24	34	24	34	24	34	24	34
11:00	24	34	24	34	24	34	24	34	24	34
12:00	24	34	24	34	24	34	24	34	24	34
13:00	24	34	24	34	24	34	23	33	24	34
14:00	24	34	24	34	24	34	24	34	24	34
15:00	24	34	23	33	23	33	23	33	23	33
16:00	23	33	23	33	23	33	23	33	23	33
17:00	23	33	23	33	23	33	23	33	23	33
18:00	24	34	23	33	23	33	23	33	23	33
19:00	24	34	24	34	24	34	24	34	24	34
20:00	24	34	24	34	24	34	24	34	24	34
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow Underlined values indicate STOP&GO condition ENTRADA Ver. 107 VDOT-NOVA



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Table 11. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	George Mason Drive				Reference Map #	NOVA 16-G4	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	19,000	No-build
City/County	Arlington				Interim Year 2013 ADT	22,000	21,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	24,000	23,000

Westbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	314	363	347	396	380	3.00%	55%	2.0%	0.0%	2.0%
7:00	713	825	788	900	863	7.50%	50%	3.0%	0.0%	3.0%
8:00	855	990	945	1,080	1,035	9.00%	50%	3.0%	1.0%	4.0%
9:00	618	715	683	780	748	6.50%	50%	2.0%	0.0%	2.0%
10:00	627	726	693	792	759	5.50%	60%	4.0%	0.0%	4.0%
11:00	627	726	693	792	759	5.50%	60%	3.0%	0.0%	3.0%
12:00	684	792	756	864	828	6.00%	60%	2.0%	1.0%	3.0%
13:00	627	726	693	792	759	6.00%	55%	3.0%	1.0%	4.0%
14:00	684	792	756	864	828	6.00%	60%	2.0%	0.0%	2.0%
15:00	732	847	809	924	886	7.00%	55%	3.0%	0.0%	3.0%
16:00	836	968	924	1,056	1,012	8.00%	55%	2.0%	0.0%	2.0%
17:00	888	1,029	982	1,122	1,075	8.50%	55%	2.0%	0.0%	2.0%
18:00	732	847	809	924	886	7.00%	55%	1.0%	0.0%	1.0%
19:00	523	605	578	660	633	5.00%	55%	1.0%	0.0%	1.0%
20:00	366	424	404	462	443	3.50%	55%	0.0%	0.0%	0.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	24	34	24	34	24	34	24	34	24	34
7:00	23	33	23	33	23	33	23	33	23	33
8:00	23	33	23	33	23	33	23	33	23	33
9:00	24	34	23	33	23	33	23	33	23	33
10:00	24	34	23	33	23	33	23	33	23	33
11:00	24	34	23	33	23	33	23	33	23	33
12:00	23	33	23	33	23	33	23	33	23	33
13:00	24	34	23	33	23	33	23	33	23	33
14:00	23	33	23	33	23	33	23	33	23	33
15:00	23	33	23	33	23	33	23	33	23	33
16:00	23	33	23	33	23	33	23	33	23	33
17:00	23	33	23	33	23	33	23	33	23	33
18:00	23	33	23	33	23	33	23	33	23	33
19:00	24	34	24	34	24	34	23	33	24	34
20:00	24	34	24	34	24	34	24	34	24	34
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 11. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	George Mason Drive				Reference Map #	NOVA 16-G4	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	19,000	No-build
City/County	Arlington				Interim Year 2013 ADT	22,000	21,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	24,000	23,000

Two-way

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	570	660	630	720	690	3.00%	=	2.9%	0.0%	2.9%
7:00	1,425	1,650	1,575	1,800	1,725	7.50%	=	2.5%	0.0%	2.5%
8:00	1,710	1,980	1,890	2,160	2,070	9.00%	=	2.0%	0.5%	2.5%
9:00	1,235	1,430	1,365	1,560	1,495	6.50%	=	1.5%	0.0%	1.5%
10:00	1,045	1,210	1,155	1,320	1,265	5.50%	=	3.2%	0.4%	3.6%
11:00	1,045	1,210	1,155	1,320	1,265	5.50%	=	3.0%	0.0%	3.0%
12:00	1,140	1,320	1,260	1,440	1,380	6.00%	=	2.4%	0.6%	3.0%
13:00	1,140	1,320	1,260	1,440	1,380	6.00%	=	3.0%	0.6%	3.6%
14:00	1,140	1,320	1,260	1,440	1,380	6.00%	=	2.4%	0.0%	2.4%
15:00	1,330	1,540	1,470	1,680	1,610	7.00%	=	2.1%	0.0%	2.1%
16:00	1,520	1,760	1,680	1,920	1,840	8.00%	=	1.6%	0.0%	1.6%
17:00	1,615	1,870	1,785	2,040	1,955	8.50%	=	1.6%	0.0%	1.6%
18:00	1,330	1,540	1,470	1,680	1,610	7.00%	=	0.6%	0.0%	0.6%
19:00	950	1,100	1,050	1,200	1,150	5.00%	=	1.0%	0.0%	1.0%
20:00	665	770	735	840	805	3.50%	=	0.5%	0.0%	0.5%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
	0:00	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	24	34	24	34	24	34	24	34	24	34
7:00	23	33	23	33	23	33	23	33	23	33
8:00	23	33	23	33	23	33	23	33	23	33
9:00	24	34	23	33	23	33	23	33	23	33
10:00	24	34	23	33	24	34	23	33	23	33
11:00	24	34	23	33	24	34	23	33	23	33
12:00	24	34	23	33	23	33	23	33	23	33
13:00	24	34	23	33	23	33	23	33	23	33
14:00	24	34	23	33	23	33	23	33	23	33
15:00	23	33	23	33	23	33	23	33	23	33
16:00	23	33	23	33	23	33	23	33	23	33
17:00	23	33	23	33	23	33	23	33	23	33
18:00	23	33	23	33	23	33	23	33	23	33
19:00	24	34	24	34	24	34	24	34	24	34
20:00	24	34	24	34	24	34	24	34	24	34
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 12. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Washington Boulevard				Reference Map #	NOVA 16-B3	
From	Near I-66 and Sycamore Street				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	14,500	No-build
City/County	Arlington				Interim Year 2013 ADT	16,500	16,000
Date	1/29/2007	Time Span	15 Hours	Design Year 2032 ADT	18,000	17,000	

Eastbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	305	347	336	378	357	3.50%	60%	4.0%	0.0%	4.0%
7:00	522	594	576	648	612	8.00%	45%	4.0%	1.0%	5.0%
8:00	616	701	680	765	723	8.50%	50%	2.0%	0.0%	2.0%
9:00	435	495	480	540	510	6.00%	50%	4.0%	0.0%	4.0%
10:00	479	545	528	594	561	5.50%	60%	2.0%	0.0%	2.0%
11:00	326	371	360	405	383	4.50%	50%	3.0%	0.0%	3.0%
12:00	290	330	320	360	340	4.00%	50%	4.0%	0.0%	4.0%
13:00	261	297	288	324	306	4.50%	40%	4.0%	0.0%	4.0%
14:00	319	363	352	396	374	5.50%	40%	3.0%	0.0%	3.0%
15:00	348	396	384	432	408	6.00%	40%	3.0%	0.0%	3.0%
16:00	522	594	576	648	612	8.00%	45%	3.0%	0.0%	3.0%
17:00	653	743	720	810	765	10.00%	45%	3.0%	0.0%	3.0%
18:00	653	743	720	810	765	9.00%	50%	2.0%	0.0%	2.0%
19:00	435	495	480	540	510	6.00%	50%	2.0%	0.0%	2.0%
20:00	279	318	308	347	327	3.50%	55%	1.0%	0.0%	1.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	24	34	24	34	24	34	24	34	24	34
7:00	24	34	24	34	24	34	23	33	24	34
8:00	24	34	23	33	23	33	23	33	23	33
9:00	24	34	24	34	24	34	24	34	24	34
10:00	24	34	24	34	24	34	24	34	24	34
11:00	24	34	24	34	24	34	24	34	24	34
12:00	24	34	24	34	24	34	24	34	24	34
13:00	24	34	24	34	24	34	24	34	24	34
14:00	24	34	24	34	24	34	24	34	24	34
15:00	24	34	24	34	24	34	24	34	24	34
16:00	24	34	24	34	24	34	23	33	24	34
17:00	23	33	23	33	23	33	23	33	23	33
18:00	23	33	23	33	23	33	23	33	23	33
19:00	24	34	24	34	24	34	24	34	24	34
20:00	24	34	24	34	24	34	24	34	24	34
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow Underlined values indicate STOP&GO condition ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 12. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Washington Boulevard				Reference Map #	NOVA 16-B3	
From	Near I-66 and Sycamore Street				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	14,500	No-build
City/County	Arlington				Interim Year 2013 ADT	16,500	16,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	18,000	17,000

Westbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	203	231	224	252	238	3.50%	40%	3.0%	0.0%	3.0%
7:00	638	726	704	792	748	8.00%	55%	3.0%	0.0%	3.0%
8:00	616	701	680	765	723	8.50%	50%	2.0%	0.0%	2.0%
9:00	435	495	480	540	510	6.00%	50%	4.0%	0.0%	4.0%
10:00	319	363	352	396	374	5.50%	40%	5.0%	1.0%	6.0%
11:00	326	371	360	405	383	4.50%	50%	5.0%	1.0%	6.0%
12:00	290	330	320	360	340	4.00%	50%	5.0%	1.0%	6.0%
13:00	392	446	432	486	459	4.50%	60%	4.0%	0.0%	4.0%
14:00	479	545	528	594	561	5.50%	60%	4.0%	1.0%	5.0%
15:00	522	594	576	648	612	6.00%	60%	4.0%	0.0%	4.0%
16:00	638	726	704	792	748	8.00%	55%	3.0%	0.0%	3.0%
17:00	798	908	880	990	935	10.00%	55%	1.0%	1.0%	2.0%
18:00	653	743	720	810	765	9.00%	50%	2.0%	0.0%	2.0%
19:00	435	495	480	540	510	6.00%	50%	4.0%	0.0%	4.0%
20:00	228	260	252	284	268	3.50%	45%	3.0%	0.0%	3.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	24	34	24	34	24	34	24	34	24	34
7:00	24	34	23	33	23	33	23	33	23	33
8:00	24	34	23	33	23	33	23	33	23	33
9:00	24	34	24	34	24	34	24	34	24	34
10:00	24	34	24	34	24	34	24	34	24	34
11:00	24	34	24	34	24	34	24	34	24	34
12:00	24	34	24	34	24	34	24	34	24	34
13:00	24	34	24	34	24	34	24	34	24	34
14:00	24	34	24	34	24	34	24	34	24	34
15:00	24	34	24	34	24	34	23	33	24	34
16:00	24	34	23	33	23	33	23	33	23	33
17:00	23	33	23	33	23	33	23	33	23	33
18:00	23	33	23	33	23	33	23	33	23	33
19:00	24	34	24	34	24	34	24	34	24	34
20:00	24	34	24	34	24	34	24	34	24	34
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 12. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Washington Boulevard				Reference Map #	NOVA 16-B3	
From	Near I-66 and Sycamore Street				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	14,500	No-build
City/County	Arlington				Interim Year 2013 ADT	16,500	16,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	18,000	17,000

Two-way

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	508	578	560	630	595	3.50%	=	3.6%	0.0%	3.6%
7:00	1,160	1,320	1,280	1,440	1,360	8.00%	=	3.5%	0.5%	3.9%
8:00	1,233	1,403	1,360	1,530	1,445	8.50%	=	2.0%	0.0%	2.0%
9:00	870	990	960	1,080	1,020	6.00%	=	4.0%	0.0%	4.0%
10:00	798	908	880	990	935	5.50%	=	3.2%	0.4%	3.6%
11:00	653	743	720	810	765	4.50%	=	4.0%	0.5%	4.5%
12:00	580	660	640	720	680	4.00%	=	4.5%	0.5%	5.0%
13:00	653	743	720	810	765	4.50%	=	4.0%	0.0%	4.0%
14:00	798	908	880	990	935	5.50%	=	3.6%	0.6%	4.2%
15:00	870	990	960	1,080	1,020	6.00%	=	3.6%	0.0%	3.6%
16:00	1,160	1,320	1,280	1,440	1,360	8.00%	=	3.0%	0.0%	3.0%
17:00	1,450	1,650	1,600	1,800	1,700	10.00%	=	1.9%	0.6%	2.5%
18:00	1,305	1,485	1,440	1,620	1,530	9.00%	=	2.0%	0.0%	2.0%
19:00	870	990	960	1,080	1,020	6.00%	=	3.0%	0.0%	3.0%
20:00	508	578	560	630	595	3.50%	=	1.9%	0.0%	1.9%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	24	34	24	34	24	34	24	34	24	34
7:00	24	34	23	33	23	33	23	33	23	33
8:00	24	34	23	33	23	33	23	33	23	33
9:00	24	34	24	34	24	34	24	34	24	34
10:00	24	34	24	34	24	34	24	34	24	34
11:00	24	34	24	34	24	34	24	34	24	34
12:00	24	34	24	34	24	34	24	34	24	34
13:00	24	34	24	34	24	34	24	34	24	34
14:00	24	34	24	34	24	34	24	34	24	34
15:00	24	34	24	34	24	34	24	34	24	34
16:00	24	34	23	33	23	33	23	33	23	33
17:00	23	33	23	33	23	33	23	33	23	33
18:00	23	33	23	33	23	33	23	33	23	33
19:00	24	34	24	34	24	34	24	34	24	34
20:00	24	34	24	34	24	34	24	34	24	34
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 13. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Sycamore Street				Reference Map #	NOVA 16-B3			
From	Near I-66				Unit= US & Model= Mod. BPR				
To					Present Year 2006 ADT	21,000	No-build		
City/County	Arlington				Interim Year 2013 ADT	24,000	23,000		
Date	1/29/2007	Time Span	15 Hours	Design Year 2032 ADT	26,000	25,000			

Northbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nbl	Design Bld	Design Nbl	% ADT	Dir. Dist.	2A-6T	3A+	Total
	0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	630	720	690	780	750	4.00%	75%	1.0%	0.0%	1.0%
7:00	1,181	1,350	1,294	1,463	1,406	7.50%	75%	2.0%	1.0%	3.0%
8:00	956	1,092	1,047	1,183	1,138	7.00%	65%	1.0%	1.0%	2.0%
9:00	756	864	828	936	900	6.00%	60%	1.0%	0.0%	1.0%
10:00	525	600	575	650	625	5.00%	50%	1.0%	0.0%	1.0%
11:00	525	600	575	650	625	5.00%	50%	1.0%	0.0%	1.0%
12:00	525	600	575	650	625	5.00%	50%	3.0%	1.0%	4.0%
13:00	635	726	696	787	756	5.50%	55%	2.0%	1.0%	3.0%
14:00	578	660	633	715	688	5.50%	50%	2.0%	1.0%	3.0%
15:00	567	648	621	702	675	6.00%	45%	1.0%	1.0%	2.0%
16:00	588	672	644	728	700	7.00%	40%	2.0%	0.0%	2.0%
17:00	630	720	690	780	750	7.50%	40%	1.0%	0.0%	1.0%
18:00	588	672	644	728	700	7.00%	40%	1.0%	0.0%	1.0%
19:00	462	528	506	572	550	5.50%	40%	0.0%	0.0%	0.0%
20:00	378	432	414	468	450	4.00%	45%	1.0%	0.0%	1.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nbl		Design Bld		Design Nbl	
	Interrupted	Uninterrupt.								
	0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a								
2:00	n/a	n/a								
3:00	n/a	n/a								
4:00	n/a	n/a								
5:00	n/a	n/a								
6:00	24	34	23	33	23	33	23	33	23	33
7:00	23	33	22	33	22	33	21	33	22	33
8:00	23	33	23	33	23	33	23	33	23	33
9:00	23	33	23	33	23	33	23	33	23	33
10:00	24	34	24	34	24	34	24	34	24	34
11:00	24	34	24	34	24	34	24	34	24	34
12:00	24	34	24	34	24	34	23	33	24	34
13:00	24	34	23	33	23	33	23	33	23	33
14:00	24	34	23	33	24	34	23	33	23	33
15:00	24	34	24	34	24	34	23	33	23	33
16:00	24	34	23	33	24	34	23	33	23	33
17:00	24	34	23	33	23	33	23	33	23	33
18:00	24	34	23	33	24	34	23	33	23	33
19:00	24	34	24	34	24	34	24	34	24	34
20:00	24	34	24	34	24	34	24	34	24	34
21:00	n/a	n/a								
22:00	n/a	n/a								
23:00	n/a	n/a								

* Shown when volume exceeds Max. Service Flow Underlined values indicate STOP&GO condition ENTRADA Ver. 107 VDOT-NOVA



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Table 13. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Sycamore Street				Reference Map #	NOVA 16-B3	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	21,000	No-build
City/County	Arlington				Interim Year 2013 ADT	24,000	23,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	26,000	25,000

Southbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	210	240	230	260	250	4.00%	25%	5.0%	0.0%	5.0%
7:00	394	450	431	488	469	7.50%	25%	3.0%	0.0%	3.0%
8:00	515	588	564	637	613	7.00%	35%	3.0%	0.0%	3.0%
9:00	504	576	552	624	600	6.00%	40%	3.0%	0.0%	3.0%
10:00	525	600	575	650	625	5.00%	50%	2.0%	0.0%	2.0%
11:00	525	600	575	650	625	5.00%	50%	2.0%	0.0%	2.0%
12:00	525	600	575	650	625	5.00%	50%	3.0%	0.0%	3.0%
13:00	520	594	569	644	619	5.50%	45%	1.0%	0.0%	1.0%
14:00	578	660	633	715	688	5.50%	50%	3.0%	0.0%	3.0%
15:00	693	792	759	858	825	6.00%	55%	2.0%	0.0%	2.0%
16:00	882	1,008	966	1,092	1,050	7.00%	60%	3.0%	0.0%	3.0%
17:00	945	1,080	1,035	1,170	1,125	7.50%	60%	2.0%	0.0%	2.0%
18:00	882	1,008	966	1,092	1,050	7.00%	60%	2.0%	0.0%	2.0%
19:00	693	792	759	858	825	5.50%	60%	2.0%	0.0%	2.0%
20:00	462	528	506	572	550	4.00%	55%	1.0%	0.0%	1.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	24	34	24	34	24	34	24	34	24	34
7:00	24	34	24	34	24	34	24	34	24	34
8:00	24	34	24	34	24	34	24	34	24	34
9:00	24	34	24	34	24	34	24	34	24	34
10:00	24	34	24	34	24	34	24	34	24	34
11:00	24	34	24	34	24	34	24	34	24	34
12:00	24	34	24	34	24	34	23	33	24	34
13:00	24	34	24	34	24	34	24	34	24	34
14:00	24	34	23	33	24	34	23	33	23	33
15:00	23	33	23	33	23	33	23	33	23	33
16:00	23	33	23	33	23	33	23	33	23	33
17:00	23	33	23	33	23	33	23	33	23	33
18:00	23	33	23	33	23	33	23	33	23	33
19:00	23	33	23	33	23	33	23	33	23	33
20:00	24	34	24	34	24	34	24	34	24	34
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 13. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Sycamore Street				Reference Map #	NOVA 16-B3	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	21,000	No-build
City/County	Arlington				Interim Year 2013 ADT	24,000	23,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	26,000	25,000

Two-way										
Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	2A-6T	3A+	Total
	0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	840	960	920	1,040	1,000	4.00%	=	2.0%	0.0%	2.0%
7:00	1,575	1,800	1,725	1,950	1,875	7.50%	=	2.3%	0.8%	3.0%
8:00	1,470	1,680	1,610	1,820	1,750	7.00%	=	1.7%	0.7%	2.4%
9:00	1,260	1,440	1,380	1,560	1,500	6.00%	=	1.8%	0.0%	1.8%
10:00	1,050	1,200	1,150	1,300	1,250	5.00%	=	1.5%	0.0%	1.5%
11:00	1,050	1,200	1,150	1,300	1,250	5.00%	=	1.5%	0.0%	1.5%
12:00	1,050	1,200	1,150	1,300	1,250	5.00%	=	3.0%	0.5%	3.5%
13:00	1,155	1,320	1,265	1,430	1,375	5.50%	=	1.6%	0.6%	2.1%
14:00	1,155	1,320	1,265	1,430	1,375	5.50%	=	2.5%	0.5%	3.0%
15:00	1,260	1,440	1,380	1,560	1,500	6.00%	=	1.6%	0.5%	2.0%
16:00	1,470	1,680	1,610	1,820	1,750	7.00%	=	2.6%	0.0%	2.6%
17:00	1,575	1,800	1,725	1,950	1,875	7.50%	=	1.6%	0.0%	1.6%
18:00	1,470	1,680	1,610	1,820	1,750	7.00%	=	1.6%	0.0%	1.6%
19:00	1,155	1,320	1,265	1,430	1,375	5.50%	=	1.2%	0.0%	1.2%
20:00	840	960	920	1,040	1,000	4.00%	=	1.0%	0.0%	1.0%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)										
Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	24	34	23	33	24	34	23	33	23	33
7:00	23	33	22	33	22	33	22	33	22	33
8:00	23	33	23	33	23	33	23	33	23	33
9:00	23	33	23	33	23	33	23	33	23	33
10:00	24	34	24	34	24	34	24	34	24	34
11:00	24	34	24	34	24	34	24	34	24	34
12:00	24	34	24	34	24	34	23	33	24	34
13:00	24	34	23	33	24	34	23	33	23	33
14:00	24	34	23	33	24	34	23	33	23	33
15:00	24	34	23	33	23	33	23	33	23	33
16:00	23	33	23	33	23	33	23	33	23	33
17:00	23	33	23	33	23	33	23	33	23	33
18:00	23	33	23	33	23	33	23	33	23	33
19:00	24	34	23	33	23	33	23	33	23	33
20:00	24	34	24	34	24	34	24	34	24	34
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow Underlined values indicate STOP&GO condition ENTRADA Ver. 107 VDOT-NOVA



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Table 14. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Lee Highway				Reference Map #	NOVA 16-A3	
From	Near I-66 and Falls Church				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	25,000	No-build
City/County	Arlington				Interim Year 2013 ADT	29,000	27,500
Date	1/29/2007	Time Span	15 Hours	Design Year 2032 ADT	32,000	30,000	

Eastbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	263	305	289	336	315	3.50%	30%	4.0%	2.0%	6.0%
7:00	525	609	578	672	630	7.00%	30%	6.0%	0.0%	6.0%
8:00	525	609	578	672	630	7.00%	30%	5.0%	1.0%	6.0%
9:00	600	696	660	768	720	6.00%	40%	5.0%	1.0%	6.0%
10:00	756	877	832	968	908	5.50%	55%	6.0%	1.0%	7.0%
11:00	825	957	908	1,056	990	6.00%	55%	4.0%	0.0%	4.0%
12:00	750	870	825	960	900	6.00%	50%	6.0%	1.0%	7.0%
13:00	813	943	894	1,040	975	6.50%	50%	4.0%	0.0%	4.0%
14:00	813	943	894	1,040	975	6.50%	50%	6.0%	1.0%	7.0%
15:00	963	1,117	1,059	1,232	1,155	7.00%	55%	5.0%	1.0%	6.0%
16:00	1,031	1,196	1,134	1,320	1,238	7.50%	55%	3.0%	1.0%	4.0%
17:00	650	754	715	832	780	6.50%	40%	6.0%	2.0%	8.0%
18:00	844	979	928	1,080	1,013	7.50%	45%	2.0%	0.0%	2.0%
19:00	688	798	756	880	825	5.50%	50%	2.0%	1.0%	3.0%
20:00	394	457	433	504	473	3.50%	45%	3.0%	0.0%	3.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
	0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	24	34	24	34	24	34	24	34	24	34
7:00	24	34	24	34	24	34	23	33	24	34
8:00	24	34	24	34	24	34	23	33	24	34
9:00	24	34	23	33	23	33	23	33	23	33
10:00	23	33	23	33	23	33	23	33	23	33
11:00	23	33	23	33	23	33	23	33	23	33
12:00	23	33	23	33	23	33	23	33	23	33
13:00	23	33	23	33	23	33	23	33	23	33
14:00	23	33	23	33	23	33	23	33	23	33
15:00	23	33	23	33	23	33	22	33	23	33
16:00	23	33	22	33	23	33	22	33	22	33
17:00	23	33	23	33	23	33	23	33	23	33
18:00	23	33	23	33	23	33	23	33	23	33
19:00	23	33	23	33	23	33	23	33	23	33
20:00	24	34	24	34	24	34	24	34	24	34
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow Underlined values indicate STOP&GO condition ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 14. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Lee Highway				Reference Map #	NOVA 16-A3	
From	Near I-66 and Falls Church				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	25,000	No-build
City/County	Arlington				Interim Year 2013 ADT	29,000	27,500
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	32,000	30,000

Westbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	613	711	674	784	735	3.50%	70%	6.0%	2.0%	8.0%
7:00	1,225	1,421	1,348	1,568	1,470	7.00%	70%	5.0%	1.0%	6.0%
8:00	1,225	1,421	1,348	1,568	1,470	7.00%	70%	4.0%	1.0%	5.0%
9:00	900	1,044	990	1,152	1,080	6.00%	60%	5.0%	1.0%	6.0%
10:00	619	718	681	792	743	5.50%	45%	7.0%	1.0%	8.0%
11:00	675	783	743	864	810	6.00%	45%	6.0%	1.0%	7.0%
12:00	750	870	825	960	900	6.00%	50%	5.0%	1.0%	6.0%
13:00	813	943	894	1,040	975	6.50%	50%	4.0%	1.0%	5.0%
14:00	813	943	894	1,040	975	6.50%	50%	3.0%	1.0%	4.0%
15:00	788	914	866	1,008	945	7.00%	45%	3.0%	0.0%	3.0%
16:00	844	979	928	1,080	1,013	7.50%	45%	3.0%	0.0%	3.0%
17:00	975	1,131	1,073	1,248	1,170	6.50%	60%	3.0%	0.0%	3.0%
18:00	1,031	1,196	1,134	1,320	1,238	7.50%	55%	2.0%	0.0%	2.0%
19:00	688	798	756	880	825	5.50%	50%	2.0%	0.0%	2.0%
20:00	481	558	529	616	578	3.50%	55%	2.0%	0.0%	2.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	24	34	23	33	23	33	23	33	23	33
7:00	22	33	21	33	22	33	20	33	21	33
8:00	22	33	21	33	22	33	20	33	21	33
9:00	23	33	23	33	23	33	23	33	23	33
10:00	24	34	23	33	23	33	23	33	23	33
11:00	23	33	23	33	23	33	23	33	23	33
12:00	23	33	23	33	23	33	23	33	23	33
13:00	23	33	23	33	23	33	23	33	23	33
14:00	23	33	23	33	23	33	23	33	23	33
15:00	23	33	23	33	23	33	23	33	23	33
16:00	23	33	23	33	23	33	23	33	23	33
17:00	23	33	23	33	23	33	22	33	23	33
18:00	23	33	23	33	23	33	22	33	22	33
19:00	23	33	23	33	23	33	23	33	23	33
20:00	24	34	24	34	24	34	24	34	24	34
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



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Table 14. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Lee Highway				Reference Map #	NOVA 16-A3	
From	Near I-66 and Falls Church				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	25,000	No-build
City/County	Arlington				Interim Year 2013 ADT	29,000	27,500
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	32,000	30,000

Two-way

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblnd	Design Bld	Design Nblnd	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	875	1,015	963	1,120	1,050	3.50%	=	5.4%	2.0%	7.4%
7:00	1,750	2,030	1,925	2,240	2,100	7.00%	=	5.3%	0.7%	6.0%
8:00	1,750	2,030	1,925	2,240	2,100	7.00%	=	4.3%	1.0%	5.3%
9:00	1,500	1,740	1,650	1,920	1,800	6.00%	=	5.0%	1.0%	6.0%
10:00	1,375	1,595	1,513	1,760	1,650	5.50%	=	6.5%	1.0%	7.5%
11:00	1,500	1,740	1,650	1,920	1,800	6.00%	=	4.9%	0.5%	5.4%
12:00	1,500	1,740	1,650	1,920	1,800	6.00%	=	5.5%	1.0%	6.5%
13:00	1,625	1,885	1,788	2,080	1,950	6.50%	=	4.0%	0.5%	4.5%
14:00	1,625	1,885	1,788	2,080	1,950	6.50%	=	4.5%	1.0%	5.5%
15:00	1,750	2,030	1,925	2,240	2,100	7.00%	=	4.1%	0.6%	4.7%
16:00	1,875	2,175	2,063	2,400	2,250	7.50%	=	3.0%	0.6%	3.6%
17:00	1,625	1,885	1,788	2,080	1,950	6.50%	=	4.2%	0.8%	5.0%
18:00	1,875	2,175	2,063	2,400	2,250	7.50%	=	2.0%	0.0%	2.0%
19:00	1,375	1,595	1,513	1,760	1,650	5.50%	=	2.0%	0.5%	2.5%
20:00	875	1,015	963	1,120	1,050	3.50%	=	2.5%	0.0%	2.5%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblnd		Design Bld		Design Nblnd	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	24	34	23	33	24	34	23	33	23	33
7:00	23	33	22	33	22	33	21	33	22	33
8:00	23	33	22	33	22	33	21	33	22	33
9:00	23	33	23	33	23	33	23	33	23	33
10:00	23	33	23	33	23	33	23	33	23	33
11:00	23	33	23	33	23	33	23	33	23	33
12:00	23	33	23	33	23	33	23	33	23	33
13:00	23	33	23	33	23	33	23	33	23	33
14:00	23	33	23	33	23	33	23	33	23	33
15:00	23	33	23	33	23	33	23	33	23	33
16:00	23	33	23	33	23	33	22	33	23	33
17:00	23	33	23	33	23	33	23	33	23	33
18:00	23	33	23	33	23	33	22	33	23	33
19:00	23	33	23	33	23	33	23	33	23	33
20:00	24	34	24	34	24	34	24	34	24	34
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



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Table 15. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Williamsburg Boulevard				Reference Map #	NOVA 15-K2	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	5,000	No-build
City/County	Arlington				Interim Year 2013 ADT	6,000	5,500
Date	1/29/2007	Time Span	15 Hours	Design Year 2032 ADT	6,500	6,000	

Northbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nbl	Design Bld	Design Nbl	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	30	36	33	39	36	2.00%	30%	5.0%	0.0%	5.0%
7:00	150	180	165	195	180	10.00%	30%	4.0%	0.0%	4.0%
8:00	175	210	193	228	210	10.00%	35%	6.0%	0.0%	6.0%
9:00	124	149	136	161	149	5.50%	45%	1.0%	0.0%	1.0%
10:00	80	96	88	104	96	4.00%	40%	3.0%	1.0%	4.0%
11:00	125	150	138	163	150	5.00%	50%	2.0%	0.0%	2.0%
12:00	113	135	124	146	135	4.50%	50%	7.0%	0.0%	7.0%
13:00	124	149	136	161	149	4.50%	55%	3.0%	0.0%	3.0%
14:00	113	135	124	146	135	4.50%	50%	4.0%	2.0%	6.0%
15:00	193	231	212	250	231	7.00%	55%	1.0%	1.0%	2.0%
16:00	248	297	272	322	297	9.00%	55%	2.0%	0.0%	2.0%
17:00	250	300	275	325	300	10.00%	50%	4.0%	1.0%	5.0%
18:00	225	270	248	293	270	10.00%	45%	2.0%	0.0%	2.0%
19:00	100	120	110	130	120	5.00%	40%	4.0%	0.0%	4.0%
20:00	68	81	74	88	81	3.00%	45%	2.0%	0.0%	2.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nbl		Design Bld		Design Nbl	
	Interrupted	Uninterrupt.								
0:00	n/a	n/a								
1:00	n/a	n/a								
2:00	n/a	n/a								
3:00	n/a	n/a								
4:00	n/a	n/a								
5:00	n/a	n/a								
6:00	22	33	22	33	22	33	22	33	22	33
7:00	22	33	22	33	22	33	22	33	22	33
8:00	22	33	22	33	22	33	22	33	22	33
9:00	22	33	22	33	22	33	22	33	22	33
10:00	22	33	22	33	22	33	22	33	22	33
11:00	22	33	22	33	22	33	22	33	22	33
12:00	22	33	22	33	22	33	22	33	22	33
13:00	22	33	22	33	22	33	22	33	22	33
14:00	22	33	22	33	22	33	22	33	22	33
15:00	22	33	22	33	22	33	22	33	22	33
16:00	22	33	22	33	22	33	22	33	22	33
17:00	22	33	22	33	22	33	22	33	22	33
18:00	22	33	22	33	22	33	22	33	22	33
19:00	22	33	22	33	22	33	22	33	22	33
20:00	22	33	22	33	22	33	22	33	22	33
21:00	n/a	n/a								
22:00	n/a	n/a								
23:00	n/a	n/a								

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



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Table 15. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Williamsburg Boulevard				Reference Map #	NOVA 15-K2	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	5,000	No-build
City/County	Arlington				Interim Year 2013 ADT	6,000	5,500
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	6,500	6,000

Southbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	70	84	77	91	84	2.00%	70%	6.0%	0.0%	6.0%
7:00	350	420	385	455	420	10.00%	70%	2.0%	0.0%	2.0%
8:00	325	390	358	423	390	10.00%	65%	1.0%	0.0%	1.0%
9:00	151	182	166	197	182	5.50%	55%	3.0%	0.0%	3.0%
10:00	120	144	132	156	144	4.00%	60%	4.0%	0.0%	4.0%
11:00	125	150	138	163	150	5.00%	50%	6.0%	0.0%	6.0%
12:00	113	135	124	146	135	4.50%	50%	5.0%	0.0%	5.0%
13:00	101	122	111	132	122	4.50%	45%	3.0%	1.0%	4.0%
14:00	113	135	124	146	135	4.50%	50%	4.0%	1.0%	5.0%
15:00	158	189	173	205	189	7.00%	45%	3.0%	0.0%	3.0%
16:00	203	243	223	263	243	9.00%	45%	1.0%	0.0%	1.0%
17:00	250	300	275	325	300	10.00%	50%	2.0%	0.0%	2.0%
18:00	275	330	303	358	330	10.00%	55%	1.0%	0.0%	1.0%
19:00	150	180	165	195	180	5.00%	60%	1.0%	0.0%	1.0%
20:00	83	99	91	107	99	3.00%	55%	1.0%	0.0%	1.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	22	33	22	33	22	33	22	33	22	33
7:00	22	33	22	33	22	33	22	33	22	33
8:00	22	33	22	33	22	33	22	33	22	33
9:00	22	33	22	33	22	33	22	33	22	33
10:00	22	33	22	33	22	33	22	33	22	33
11:00	22	33	22	33	22	33	22	33	22	33
12:00	22	33	22	33	22	33	22	33	22	33
13:00	22	33	22	33	22	33	22	33	22	33
14:00	22	33	22	33	22	33	22	33	22	33
15:00	22	33	22	33	22	33	22	33	22	33
16:00	22	33	22	33	22	33	22	33	22	33
17:00	22	33	22	33	22	33	22	33	22	33
18:00	22	33	22	33	22	33	22	33	22	33
19:00	22	33	22	33	22	33	22	33	22	33
20:00	22	33	22	33	22	33	22	33	22	33
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 15. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Williamsburg Boulevard				Reference Map #	NOVA 15-K2	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	5,000	No-build
City/County	Arlington				Interim Year 2013 ADT	6,000	5,500
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	6,500	6,000

Two-way										
Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	2A-6T	3A+	Total
	0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	100	120	110	130	120	2.00%	=	5.7%	0.0%	5.7%
7:00	500	600	550	650	600	10.00%	=	2.6%	0.0%	2.6%
8:00	500	600	550	650	600	10.00%	=	2.8%	0.0%	2.8%
9:00	275	330	303	358	330	5.50%	=	2.1%	0.0%	2.1%
10:00	200	240	220	260	240	4.00%	=	3.6%	0.4%	4.0%
11:00	250	300	275	325	300	5.00%	=	4.0%	0.0%	4.0%
12:00	225	270	248	293	270	4.50%	=	6.0%	0.0%	6.0%
13:00	225	270	248	293	270	4.50%	=	3.0%	0.5%	3.5%
14:00	225	270	248	293	270	4.50%	=	4.0%	1.5%	5.5%
15:00	350	420	385	455	420	7.00%	=	1.9%	0.6%	2.5%
16:00	450	540	495	585	540	9.00%	=	1.6%	0.0%	1.6%
17:00	500	600	550	650	600	10.00%	=	3.0%	0.5%	3.5%
18:00	500	600	550	650	600	10.00%	=	1.5%	0.0%	1.5%
19:00	250	300	275	325	300	5.00%	=	2.2%	0.0%	2.2%
20:00	150	180	165	195	180	3.00%	=	1.5%	0.0%	1.5%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)										
Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	22	33	22	33	22	33	22	33	22	33
7:00	22	33	22	33	22	33	22	33	22	33
8:00	22	33	22	33	22	33	22	33	22	33
9:00	22	33	22	33	22	33	22	33	22	33
10:00	22	33	22	33	22	33	22	33	22	33
11:00	22	33	22	33	22	33	22	33	22	33
12:00	22	33	22	33	22	33	22	33	22	33
13:00	22	33	22	33	22	33	22	33	22	33
14:00	22	33	22	33	22	33	22	33	22	33
15:00	22	33	22	33	22	33	22	33	22	33
16:00	22	33	22	33	22	33	22	33	22	33
17:00	22	33	22	33	22	33	22	33	22	33
18:00	22	33	22	33	22	33	22	33	22	33
19:00	22	33	22	33	22	33	22	33	22	33
20:00	22	33	22	33	22	33	22	33	22	33
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow Underlined values indicate STOP&GO condition ENTRADA Ver. 107 VDOT-NOVA



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Table 16. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Westmoreland Street				Reference Map #	NOVA 15-K2	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	7,500	No-build
City/County	Arlington				Interim Year 2013 ADT	8,500	8,000
Date	1/29/2007	Time Span	15 Hours	Design Year 2032 ADT	9,500	9,000	

Northbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nbl	Design Bld	Design Nbl	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	83	94	88	105	99	2.00%	55%	1.0%	0.0%	1.0%
7:00	244	276	260	309	293	6.50%	50%	3.0%	0.0%	3.0%
8:00	195	221	208	247	234	6.50%	40%	3.0%	0.0%	3.0%
9:00	225	255	240	285	270	6.00%	50%	2.0%	0.0%	2.0%
10:00	169	191	180	214	203	4.50%	50%	3.0%	1.0%	4.0%
11:00	244	276	260	309	293	5.00%	65%	2.0%	0.0%	2.0%
12:00	203	230	216	257	243	4.50%	60%	3.0%	0.0%	3.0%
13:00	203	230	216	257	243	4.50%	60%	5.0%	0.0%	5.0%
14:00	268	304	286	340	322	5.50%	65%	3.0%	0.0%	3.0%
15:00	317	359	338	401	380	6.50%	65%	2.0%	0.0%	2.0%
16:00	439	497	468	556	527	9.00%	65%	1.0%	0.0%	1.0%
17:00	495	561	528	627	594	11.00%	60%	0.0%	0.0%	0.0%
18:00	371	421	396	470	446	9.00%	55%	1.0%	0.0%	1.0%
19:00	248	281	264	314	297	5.50%	60%	0.0%	0.0%	0.0%
20:00	195	221	208	247	234	4.00%	65%	0.0%	0.0%	0.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nbl		Design Bld		Design Nbl	
	Interrupted	Uninterrupt.								
0:00	n/a	n/a								
1:00	n/a	n/a								
2:00	n/a	n/a								
3:00	n/a	n/a								
4:00	n/a	n/a								
5:00	n/a	n/a								
6:00	22	33	22	33	22	33	22	33	22	33
7:00	22	33	22	33	22	33	22	33	22	33
8:00	22	33	22	33	22	33	22	33	22	33
9:00	22	33	22	33	22	33	22	33	22	33
10:00	22	33	22	33	22	33	22	33	22	33
11:00	22	33	22	33	22	33	22	33	22	33
12:00	22	33	22	33	22	33	22	33	22	33
13:00	22	33	22	33	22	33	22	33	22	33
14:00	22	33	22	33	22	33	22	33	22	33
15:00	22	33	22	33	22	33	22	33	22	33
16:00	22	33	21	33	22	33	21	33	21	33
17:00	21	33	21	33	21	33	21	33	21	33
18:00	22	33	22	33	22	33	22	33	22	33
19:00	22	33	22	33	22	33	22	33	22	33
20:00	22	33	22	33	22	33	22	33	22	33
21:00	n/a	n/a								
22:00	n/a	n/a								
23:00	n/a	n/a								

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 16. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Westmoreland Street				Reference Map #	NOVA 15-K2	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	7,500	No-build
City/County	Arlington				Interim Year 2013 ADT	8,500	8,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	9,500	9,000

Southbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	68	77	72	86	81	2.00%	45%	10.0%	0.0%	10.0%
7:00	244	276	260	309	293	6.50%	50%	4.0%	0.0%	4.0%
8:00	293	332	312	371	351	6.50%	60%	2.0%	0.0%	2.0%
9:00	225	255	240	285	270	6.00%	50%	3.0%	0.0%	3.0%
10:00	169	191	180	214	203	4.50%	50%	2.0%	1.0%	3.0%
11:00	131	149	140	166	158	5.00%	35%	6.0%	0.0%	6.0%
12:00	135	153	144	171	162	4.50%	40%	3.0%	0.0%	3.0%
13:00	135	153	144	171	162	4.50%	40%	4.0%	1.0%	5.0%
14:00	144	164	154	183	173	5.50%	35%	3.0%	1.0%	4.0%
15:00	171	193	182	216	205	6.50%	35%	2.0%	0.0%	2.0%
16:00	236	268	252	299	284	9.00%	35%	4.0%	1.0%	5.0%
17:00	330	374	352	418	396	11.00%	40%	2.0%	0.0%	2.0%
18:00	304	344	324	385	365	9.00%	45%	2.0%	0.0%	2.0%
19:00	165	187	176	209	198	5.50%	40%	2.0%	0.0%	2.0%
20:00	105	119	112	133	126	4.00%	35%	2.0%	0.0%	2.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	22	33	22	33	22	33	22	33	22	33
7:00	22	33	22	33	22	33	22	33	22	33
8:00	22	33	22	33	22	33	22	33	22	33
9:00	22	33	22	33	22	33	22	33	22	33
10:00	22	33	22	33	22	33	22	33	22	33
11:00	22	33	22	33	22	33	22	33	22	33
12:00	22	33	22	33	22	33	22	33	22	33
13:00	22	33	22	33	22	33	22	33	22	33
14:00	22	33	22	33	22	33	22	33	22	33
15:00	22	33	22	33	22	33	22	33	22	33
16:00	22	33	22	33	22	33	22	33	22	33
17:00	22	33	22	33	22	33	22	33	22	33
18:00	22	33	22	33	22	33	22	33	22	33
19:00	22	33	22	33	22	33	22	33	22	33
20:00	22	33	22	33	22	33	22	33	22	33
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



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Table 16. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Westmoreland Street				Reference Map #	NOVA 15-K2	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	7,500	No-build
City/County	Arlington				Interim Year 2013 ADT	8,500	8,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	9,500	9,000

Two-way

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	150	170	160	190	180	2.00%	=	5.1%	0.0%	5.1%
7:00	488	553	520	618	585	6.50%	=	3.5%	0.0%	3.5%
8:00	488	553	520	618	585	6.50%	=	2.4%	0.0%	2.4%
9:00	450	510	480	570	540	6.00%	=	2.5%	0.0%	2.5%
10:00	338	383	360	428	405	4.50%	=	2.5%	1.0%	3.5%
11:00	375	425	400	475	450	5.00%	=	3.4%	0.0%	3.4%
12:00	338	383	360	428	405	4.50%	=	3.0%	0.0%	3.0%
13:00	338	383	360	428	405	4.50%	=	4.6%	0.4%	5.0%
14:00	413	468	440	523	495	5.50%	=	3.0%	0.4%	3.4%
15:00	488	553	520	618	585	6.50%	=	2.0%	0.0%	2.0%
16:00	675	765	720	855	810	9.00%	=	2.1%	0.4%	2.4%
17:00	825	935	880	1,045	990	11.00%	=	0.8%	0.0%	0.8%
18:00	675	765	720	855	810	9.00%	=	1.5%	0.0%	1.5%
19:00	413	468	440	523	495	5.50%	=	0.8%	0.0%	0.8%
20:00	300	340	320	380	360	4.00%	=	0.7%	0.0%	0.7%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	22	33	22	33	22	33	22	33	22	33
7:00	22	33	22	33	22	33	22	33	22	33
8:00	22	33	22	33	22	33	22	33	22	33
9:00	22	33	22	33	22	33	22	33	22	33
10:00	22	33	22	33	22	33	22	33	22	33
11:00	22	33	22	33	22	33	22	33	22	33
12:00	22	33	22	33	22	33	22	33	22	33
13:00	22	33	22	33	22	33	22	33	22	33
14:00	22	33	22	33	22	33	22	33	22	33
15:00	22	33	22	33	22	33	22	33	22	33
16:00	22	33	22	33	22	33	21	33	22	33
17:00	22	33	21	33	22	33	21	33	21	33
18:00	22	33	22	33	22	33	22	33	22	33
19:00	22	33	22	33	22	33	22	33	22	33
20:00	22	33	22	33	22	33	22	33	22	33
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 17. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Great Falls Road				Reference Map #	NOVA 15-H1			
From	Near I-66				Unit= US & Model= Mod. BPR				
To					Present Year 2006 ADT	9,000	No-build		
City/County	Fairfax				Interim Year 2013 ADT	10,500	10,000		
Date	1/29/2007	Time Span	15 Hours	Design Year 2032 ADT	11,500	11,000			

Northbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nbl	Design Bld	Design Nbl	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	113	131	125	144	138	2.50%	50%	2.0%	0.0%	2.0%
7:00	365	425	405	466	446	9.00%	45%	1.0%	0.0%	1.0%
8:00	428	499	475	546	523	9.50%	50%	1.0%	0.0%	1.0%
9:00	263	307	293	336	322	6.50%	45%	1.0%	0.0%	1.0%
10:00	203	236	225	259	248	5.00%	45%	1.0%	0.0%	1.0%
11:00	223	260	248	285	272	4.50%	55%	2.0%	0.0%	2.0%
12:00	223	260	248	285	272	4.50%	55%	3.0%	0.0%	3.0%
13:00	203	236	225	259	248	5.00%	45%	2.0%	0.0%	2.0%
14:00	225	263	250	288	275	5.00%	50%	1.0%	0.0%	1.0%
15:00	263	307	293	336	322	6.50%	45%	3.0%	0.0%	3.0%
16:00	405	473	450	518	495	9.00%	50%	1.0%	0.0%	1.0%
17:00	405	473	450	518	495	10.00%	45%	1.0%	0.0%	1.0%
18:00	342	399	380	437	418	9.50%	40%	1.0%	0.0%	1.0%
19:00	198	231	220	253	242	5.50%	40%	1.0%	0.0%	1.0%
20:00	113	131	125	144	138	2.50%	50%	1.0%	0.0%	1.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nbl		Design Bld		Design Nbl	
	Interrupted	Uninterrupt.								
0:00	n/a	n/a								
1:00	n/a	n/a								
2:00	n/a	n/a								
3:00	n/a	n/a								
4:00	n/a	n/a								
5:00	n/a	n/a								
6:00	24	34	24	34	24	34	24	34	24	34
7:00	24	34	24	34	24	34	24	34	24	34
8:00	24	34	24	34	24	34	24	34	24	34
9:00	24	34	24	34	24	34	24	34	24	34
10:00	24	34	24	34	24	34	24	34	24	34
11:00	24	34	24	34	24	34	24	34	24	34
12:00	24	34	24	34	24	34	24	34	24	34
13:00	24	34	24	34	24	34	24	34	24	34
14:00	24	34	24	34	24	34	24	34	24	34
15:00	24	34	24	34	24	34	24	34	24	34
16:00	24	34	24	34	24	34	24	34	24	34
17:00	24	34	24	34	24	34	24	34	24	34
18:00	24	34	24	34	24	34	24	34	24	34
19:00	24	34	24	34	24	34	24	34	24	34
20:00	24	34	24	34	24	34	24	34	24	34
21:00	n/a	n/a								
22:00	n/a	n/a								
23:00	n/a	n/a								

* Shown when volume exceeds Max. Service Flow Underlined values indicate STOP&GO condition ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 17. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Great Falls Road				Reference Map #	NOVA 15-H1	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	9,000	No-build
City/County	Fairfax				Interim Year 2013 ADT	10,500	10,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	11,500	11,000

Southbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	113	131	125	144	138	2.50%	50%	4.0%	0.0%	4.0%
7:00	446	520	495	569	545	9.00%	55%	2.0%	0.0%	2.0%
8:00	428	499	475	546	523	9.50%	50%	4.0%	0.0%	4.0%
9:00	322	375	358	411	393	6.50%	55%	3.0%	0.0%	3.0%
10:00	248	289	275	316	303	5.00%	55%	2.0%	1.0%	3.0%
11:00	182	213	203	233	223	4.50%	45%	3.0%	0.0%	3.0%
12:00	182	213	203	233	223	4.50%	45%	2.0%	1.0%	3.0%
13:00	248	289	275	316	303	5.00%	55%	5.0%	0.0%	5.0%
14:00	225	263	250	288	275	5.00%	50%	2.0%	1.0%	3.0%
15:00	322	375	358	411	393	6.50%	55%	4.0%	1.0%	5.0%
16:00	405	473	450	518	495	9.00%	50%	4.0%	1.0%	5.0%
17:00	495	578	550	633	605	10.00%	55%	3.0%	0.0%	3.0%
18:00	513	599	570	656	627	9.50%	60%	3.0%	0.0%	3.0%
19:00	297	347	330	380	363	5.50%	60%	3.0%	0.0%	3.0%
20:00	113	131	125	144	138	2.50%	50%	1.0%	0.0%	1.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	24	34	24	34	24	34	24	34	24	34
7:00	24	34	24	34	24	34	24	34	24	34
8:00	24	34	24	34	24	34	24	34	24	34
9:00	24	34	24	34	24	34	24	34	24	34
10:00	24	34	24	34	24	34	24	34	24	34
11:00	24	34	24	34	24	34	24	34	24	34
12:00	24	34	24	34	24	34	24	34	24	34
13:00	24	34	24	34	24	34	24	34	24	34
14:00	24	34	24	34	24	34	24	34	24	34
15:00	24	34	24	34	24	34	24	34	24	34
16:00	24	34	24	34	24	34	24	34	24	34
17:00	24	34	24	34	24	34	24	34	24	34
18:00	24	34	24	34	24	34	23	33	24	34
19:00	24	34	24	34	24	34	24	34	24	34
20:00	24	34	24	34	24	34	24	34	24	34
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 17. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Great Falls Road				Reference Map #	NOVA 15-H1	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	9,000	No-build
City/County	Fairfax				Interim Year 2013 ADT	10,500	10,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	11,500	11,000

Two-way

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblnd	Design Bld	Design Nblnd	% ADT	Dir. Dist.	% Truck		
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	225	263	250	288	275	2.50%	=	3.0%	0.0%	3.0%
7:00	810	945	900	1,035	990	9.00%	=	1.6%	0.0%	1.6%
8:00	855	998	950	1,093	1,045	9.50%	=	2.5%	0.0%	2.5%
9:00	585	683	650	748	715	6.50%	=	2.1%	0.0%	2.1%
10:00	450	525	500	575	550	5.00%	=	1.6%	0.6%	2.1%
11:00	405	473	450	518	495	4.50%	=	2.5%	0.0%	2.5%
12:00	405	473	450	518	495	4.50%	=	2.6%	0.5%	3.0%
13:00	450	525	500	575	550	5.00%	=	3.7%	0.0%	3.7%
14:00	450	525	500	575	550	5.00%	=	1.5%	0.5%	2.0%
15:00	585	683	650	748	715	6.50%	=	3.6%	0.6%	4.1%
16:00	810	945	900	1,035	990	9.00%	=	2.5%	0.5%	3.0%
17:00	900	1,050	1,000	1,150	1,100	10.00%	=	2.1%	0.0%	2.1%
18:00	855	998	950	1,093	1,045	9.50%	=	2.2%	0.0%	2.2%
19:00	495	578	550	633	605	5.50%	=	2.2%	0.0%	2.2%
20:00	225	263	250	288	275	2.50%	=	1.0%	0.0%	1.0%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblnd		Design Bld		Design Nblnd	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	24	34	24	34	24	34	24	34	24	34
7:00	24	34	24	34	24	34	24	34	24	34
8:00	24	34	24	34	24	34	24	34	24	34
9:00	24	34	24	34	24	34	24	34	24	34
10:00	24	34	24	34	24	34	24	34	24	34
11:00	24	34	24	34	24	34	24	34	24	34
12:00	24	34	24	34	24	34	24	34	24	34
13:00	24	34	24	34	24	34	24	34	24	34
14:00	24	34	24	34	24	34	24	34	24	34
15:00	24	34	24	34	24	34	24	34	24	34
16:00	24	34	24	34	24	34	24	34	24	34
17:00	24	34	24	34	24	34	24	34	24	34
18:00	24	34	24	34	24	34	24	34	24	34
19:00	24	34	24	34	24	34	24	34	24	34
20:00	24	34	24	34	24	34	24	34	24	34
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 18. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Haycock Road				Reference Map #	NOVA 15-H1	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	11,000	No-build
City/County	Fairfax				Interim Year 2013 ADT	12,500	12,000
Date	1/29/2007	Time Span	15 Hours	Design Year 2032 ADT	13,500	13,000	

Northbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nbl	Design Bld	Design Nbl	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	231	263	252	284	273	3.50%	60%	5.0%	0.0%	5.0%
7:00	575	653	627	705	679	9.50%	55%	2.0%	1.0%	3.0%
8:00	660	750	720	810	780	10.00%	60%	2.0%	0.0%	2.0%
9:00	363	413	396	446	429	6.00%	55%	3.0%	1.0%	4.0%
10:00	223	253	243	273	263	4.50%	45%	5.0%	0.0%	5.0%
11:00	220	250	240	270	260	4.00%	50%	7.0%	1.0%	8.0%
12:00	275	313	300	338	325	5.00%	50%	2.0%	0.0%	2.0%
13:00	248	281	270	304	293	4.50%	50%	3.0%	0.0%	3.0%
14:00	248	281	270	304	293	4.50%	50%	8.0%	0.0%	8.0%
15:00	385	438	420	473	455	7.00%	50%	3.0%	0.0%	3.0%
16:00	440	500	480	540	520	8.00%	50%	3.0%	0.0%	3.0%
17:00	594	675	648	729	702	9.00%	60%	3.0%	0.0%	3.0%
18:00	528	600	576	648	624	8.00%	60%	2.0%	0.0%	2.0%
19:00	322	366	351	395	380	6.50%	45%	1.0%	0.0%	1.0%
20:00	173	197	189	213	205	3.50%	45%	1.0%	0.0%	1.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nbl		Design Bld		Design Nbl	
	Interrupted	Uninterrupt.								
0:00	n/a	n/a								
1:00	n/a	n/a								
2:00	n/a	n/a								
3:00	n/a	n/a								
4:00	n/a	n/a								
5:00	n/a	n/a								
6:00	30	40	30	40	30	40	30	40	30	40
7:00	30	40	29	39	29	39	29	39	29	39
8:00	29	39	29	39	29	39	29	39	29	39
9:00	30	40	30	40	30	40	30	40	30	40
10:00	30	40	30	40	30	40	30	40	30	40
11:00	30	40	30	40	30	40	30	40	30	40
12:00	30	40	30	40	30	40	30	40	30	40
13:00	30	40	30	40	30	40	30	40	30	40
14:00	30	40	30	40	30	40	30	40	30	40
15:00	30	40	30	40	30	40	30	40	30	40
16:00	30	40	30	40	30	40	30	40	30	40
17:00	30	40	29	39	29	39	29	39	29	39
18:00	30	40	30	40	30	40	29	39	29	39
19:00	30	40	30	40	30	40	30	40	30	40
20:00	30	40	30	40	30	40	30	40	30	40
21:00	n/a	n/a								
22:00	n/a	n/a								
23:00	n/a	n/a								

* Shown when volume exceeds Max. Service Flow Underlined values indicate STOP&GO condition ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 18. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Haycock Road				Reference Map #	NOVA 15-H1	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	11,000	No-build
City/County	Fairfax				Interim Year 2013 ADT	12,500	12,000
Date	1/29/2007	Time Span	15 Hours		Design Year 2032 ADT	13,500	13,000

Southbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	154	175	168	189	182	3.50%	40%	5.0%	1.0%	6.0%
7:00	470	534	513	577	556	9.50%	45%	4.0%	1.0%	5.0%
8:00	440	500	480	540	520	10.00%	40%	3.0%	0.0%	3.0%
9:00	297	338	324	365	351	6.00%	45%	3.0%	0.0%	3.0%
10:00	272	309	297	334	322	4.50%	55%	3.0%	1.0%	4.0%
11:00	220	250	240	270	260	4.00%	50%	2.0%	0.0%	2.0%
12:00	275	313	300	338	325	5.00%	50%	1.0%	0.0%	1.0%
13:00	248	281	270	304	293	4.50%	50%	4.0%	1.0%	5.0%
14:00	248	281	270	304	293	4.50%	50%	5.0%	0.0%	5.0%
15:00	385	438	420	473	455	7.00%	50%	1.0%	1.0%	2.0%
16:00	440	500	480	540	520	8.00%	50%	5.0%	0.0%	5.0%
17:00	396	450	432	486	468	9.00%	40%	3.0%	1.0%	4.0%
18:00	352	400	384	432	416	8.00%	40%	5.0%	2.0%	7.0%
19:00	393	447	429	483	465	6.50%	55%	2.0%	0.0%	2.0%
20:00	212	241	231	260	250	3.50%	55%	1.0%	0.0%	1.0%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	30	40	30	40	30	40	30	40	30	40
7:00	30	40	30	40	30	40	30	40	30	40
8:00	30	40	30	40	30	40	30	40	30	40
9:00	30	40	30	40	30	40	30	40	30	40
10:00	30	40	30	40	30	40	30	40	30	40
11:00	30	40	30	40	30	40	30	40	30	40
12:00	30	40	30	40	30	40	30	40	30	40
13:00	30	40	30	40	30	40	30	40	30	40
14:00	30	40	30	40	30	40	30	40	30	40
15:00	30	40	30	40	30	40	30	40	30	40
16:00	30	40	30	40	30	40	30	40	30	40
17:00	30	40	30	40	30	40	30	40	30	40
18:00	30	40	30	40	30	40	30	40	30	40
19:00	30	40	30	40	30	40	30	40	30	40
20:00	30	40	30	40	30	40	30	40	30	40
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 18. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Haycock Road				Reference Map #	NOVA 15-H1	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	11,000	No-build
City/County	Fairfax				Interim Year 2013 ADT	12,500	12,000
Date	1/29/2007	Time Span	15 Hours	Design Year 2032 ADT	13,500	13,000	

Two-way										
Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.	2A-6T	3A+	Total
	0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	385	438	420	473	455	3.50%	=	5.0%	0.4%	5.4%
7:00	1,045	1,188	1,140	1,283	1,235	9.50%	=	2.9%	1.0%	3.9%
8:00	1,100	1,250	1,200	1,350	1,300	10.00%	=	2.4%	0.0%	2.4%
9:00	660	750	720	810	780	6.00%	=	3.0%	0.6%	3.6%
10:00	495	563	540	608	585	4.50%	=	3.9%	0.6%	4.5%
11:00	440	500	480	540	520	4.00%	=	4.5%	0.5%	5.0%
12:00	550	625	600	675	650	5.00%	=	1.5%	0.0%	1.5%
13:00	495	563	540	608	585	4.50%	=	3.5%	0.5%	4.0%
14:00	495	563	540	608	585	4.50%	=	6.5%	0.0%	6.5%
15:00	770	875	840	945	910	7.00%	=	2.0%	0.5%	2.5%
16:00	880	1,000	960	1,080	1,040	8.00%	=	4.0%	0.0%	4.0%
17:00	990	1,125	1,080	1,215	1,170	9.00%	=	3.0%	0.4%	3.4%
18:00	880	1,000	960	1,080	1,040	8.00%	=	3.2%	0.8%	4.0%
19:00	715	813	780	878	845	6.50%	=	1.6%	0.0%	1.6%
20:00	385	438	420	473	455	3.50%	=	1.0%	0.0%	1.0%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)										
Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	30	40	30	40	30	40	30	40	30	40
7:00	30	40	30	40	30	40	29	39	29	39
8:00	30	40	29	39	29	39	29	39	29	39
9:00	30	40	30	40	30	40	30	40	30	40
10:00	30	40	30	40	30	40	30	40	30	40
11:00	30	40	30	40	30	40	30	40	30	40
12:00	30	40	30	40	30	40	30	40	30	40
13:00	30	40	30	40	30	40	30	40	30	40
14:00	30	40	30	40	30	40	30	40	30	40
15:00	30	40	30	40	30	40	30	40	30	40
16:00	30	40	30	40	30	40	30	40	30	40
17:00	30	40	29	39	30	40	29	39	29	39
18:00	30	40	30	40	30	40	30	40	30	40
19:00	30	40	30	40	30	40	30	40	30	40
20:00	30	40	30	40	30	40	30	40	30	40
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow Underlined values indicate STOP&GO condition ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 19. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Dulles Access Road				Reference Map #	NOVA 15-G1	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	74,500	No-build
City/County	Fairfax				Interim Year 2013 ADT	85,500	82,000
Date	1/29/2007	Time Span	15 Hours	Design Year 2032 ADT	94,000	90,000	

Eastbound

Starting Time	Hourly Volume					Present		Present hourly % truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	1,676	1,924	1,845	2,115	2,025	5.00%	45%	1.0%	0.5%	1.5%
7:00	2,086	2,394	2,296	2,632	2,520	7.00%	40%	1.0%	0.5%	1.5%
8:00	2,086	2,394	2,296	2,632	2,520	7.00%	40%	1.0%	0.5%	1.5%
9:00	2,608	2,993	2,870	3,290	3,150	7.00%	50%	1.0%	0.5%	1.5%
10:00	1,863	2,138	2,050	2,350	2,250	5.00%	50%	1.0%	0.5%	1.5%
11:00	2,049	2,351	2,255	2,585	2,475	5.00%	55%	1.0%	0.5%	1.5%
12:00	1,863	2,138	2,050	2,350	2,250	5.00%	50%	1.0%	0.5%	1.5%
13:00	1,863	2,138	2,050	2,350	2,250	5.00%	50%	1.0%	0.5%	1.5%
14:00	2,235	2,565	2,460	2,820	2,700	6.00%	50%	1.0%	0.5%	1.5%
15:00	2,235	2,565	2,460	2,820	2,700	6.00%	50%	1.0%	0.5%	1.5%
16:00	2,459	2,822	2,706	3,102	2,970	6.00%	55%	1.0%	0.5%	1.5%
17:00	2,459	2,822	2,706	3,102	2,970	6.00%	55%	1.0%	0.5%	1.5%
18:00	2,459	2,822	2,706	3,102	2,970	6.00%	55%	1.0%	0.5%	1.5%
19:00	2,254	2,586	2,481	2,844	2,723	5.50%	55%	1.0%	0.5%	1.5%
20:00	1,490	1,710	1,640	1,880	1,800	4.00%	50%	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
	0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	52	59	52	59	52	59	51	59	51	59
7:00	51	59	50	58	50	58	49	58	49	58
8:00	51	59	50	58	50	58	49	58	49	58
9:00	49	58	46	58	47	58	43	57	45	57
10:00	52	59	51	59	51	59	50	58	51	59
11:00	51	59	50	58	51	59	49	58	50	58
12:00	52	59	51	59	51	59	50	58	51	59
13:00	52	59	51	59	51	59	50	58	51	59
14:00	51	59	49	58	50	58	47	58	48	58
15:00	51	59	49	58	50	58	47	58	48	58
16:00	50	58	47	58	48	58	45	57	46	58
17:00	50	58	47	58	48	58	45	57	46	58
18:00	50	58	47	58	48	58	45	57	46	58
19:00	51	59	49	58	50	58	47	58	48	58
20:00	53	59	52	59	52	59	52	59	52	59
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow Underlined values indicate STOP&GO condition ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 19. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Dulles Access Road				Reference Map #	NOVA 15-G1	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	74,500	No-build
City/County	Fairfax				Interim Year 2013 ADT	85,500	82,000
Date	1/29/2007	Time Span	15 Hours	Design Year 2032 ADT	94,000	90,000	

Westbound

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblnd	Design Bld	Design Nblnd	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
6:00	2,049	2,351	2,255	2,585	2,475	5.00%	55%	1.0%	0.5%	1.5%
7:00	3,129	3,591	3,444	3,948	3,780	7.00%	60%	1.0%	0.5%	1.5%
8:00	3,129	3,591	3,444	3,948	3,780	7.00%	60%	1.0%	0.5%	1.5%
9:00	2,608	2,993	2,870	3,290	3,150	7.00%	50%	1.0%	0.5%	1.5%
10:00	1,863	2,138	2,050	2,350	2,250	5.00%	50%	1.0%	0.5%	1.5%
11:00	1,676	1,924	1,845	2,115	2,025	5.00%	45%	1.0%	0.5%	1.5%
12:00	1,863	2,138	2,050	2,350	2,250	5.00%	50%	1.0%	0.5%	1.5%
13:00	1,863	2,138	2,050	2,350	2,250	5.00%	50%	1.0%	0.5%	1.5%
14:00	2,235	2,565	2,460	2,820	2,700	6.00%	50%	1.0%	0.5%	1.5%
15:00	2,235	2,565	2,460	2,820	2,700	6.00%	50%	1.0%	0.5%	1.5%
16:00	2,012	2,309	2,214	2,538	2,430	6.00%	45%	1.0%	0.5%	1.5%
17:00	2,012	2,309	2,214	2,538	2,430	6.00%	45%	1.0%	0.5%	1.5%
18:00	2,012	2,309	2,214	2,538	2,430	6.00%	45%	1.0%	0.5%	1.5%
19:00	1,844	2,116	2,030	2,327	2,228	5.50%	45%	1.0%	0.5%	1.5%
20:00	1,490	1,710	1,640	1,880	1,800	4.00%	50%	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	50%	0.0%	0.0%	0.0%

Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblnd		Design Bld		Design Nblnd	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
	0:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6:00	51	59	50	58	51	59	49	58	50	58
7:00	45	57	40	56	42	57	36	56	38	56
8:00	45	57	40	56	42	57	36	56	38	56
9:00	49	58	46	58	47	58	43	57	45	57
10:00	52	59	51	59	51	59	50	58	51	59
11:00	52	59	52	59	52	59	51	59	51	59
12:00	52	59	51	59	51	59	50	58	51	59
13:00	52	59	51	59	51	59	50	58	51	59
14:00	51	59	49	58	50	58	47	58	48	58
15:00	51	59	49	58	50	58	47	58	48	58
16:00	51	59	50	58	51	59	49	58	50	58
17:00	51	59	50	58	51	59	49	58	50	58
18:00	51	59	50	58	51	59	49	58	50	58
19:00	52	59	51	59	51	59	50	58	51	59
20:00	53	59	52	59	52	59	52	59	52	59
21:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA



ENTRADA© - Environmental Traffic Data Program, Speed Output

Table 19. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Route	Dulles Access Road				Reference Map #	NOVA 15-G1	
From	Near I-66				Unit= US & Model= Mod. BPR		
To					Present Year 2006 ADT	74,500	No-build
City/County	Fairfax				Interim Year 2013 ADT	85,500	82,000
Date	1/29/2007	Time Span	15 Hours	Design Year 2032 ADT	94,000	90,000	

Two-way

Starting Time	Hourly Volume					Present		Present % Truck		
	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	% ADT	Dir. Dist.			
								2A-6T	3A+	Total
0:00	0	0	0	0	0	0.00%	Two-way	0.0%	0.0%	0.0%
1:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
2:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
3:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
4:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
5:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
6:00	3,725	4,275	4,100	4,700	4,500	5.00%	=	1.0%	0.5%	1.5%
7:00	5,215	5,985	5,740	6,580	6,300	7.00%	=	1.0%	0.5%	1.5%
8:00	5,215	5,985	5,740	6,580	6,300	7.00%	=	1.0%	0.5%	1.5%
9:00	5,215	5,985	5,740	6,580	6,300	7.00%	=	1.0%	0.5%	1.5%
10:00	3,725	4,275	4,100	4,700	4,500	5.00%	=	1.0%	0.5%	1.5%
11:00	3,725	4,275	4,100	4,700	4,500	5.00%	=	1.0%	0.5%	1.5%
12:00	3,725	4,275	4,100	4,700	4,500	5.00%	=	1.0%	0.5%	1.5%
13:00	3,725	4,275	4,100	4,700	4,500	5.00%	=	1.0%	0.5%	1.5%
14:00	4,470	5,130	4,920	5,640	5,400	6.00%	=	1.0%	0.5%	1.5%
15:00	4,470	5,130	4,920	5,640	5,400	6.00%	=	1.0%	0.5%	1.5%
16:00	4,470	5,130	4,920	5,640	5,400	6.00%	=	1.0%	0.5%	1.5%
17:00	4,470	5,130	4,920	5,640	5,400	6.00%	=	1.0%	0.5%	1.5%
18:00	4,470	5,130	4,920	5,640	5,400	6.00%	=	1.0%	0.5%	1.5%
19:00	4,098	4,703	4,510	5,170	4,950	5.50%	=	1.0%	0.5%	1.5%
20:00	2,980	3,420	3,280	3,760	3,600	4.00%	=	1.0%	0.5%	1.5%
21:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
22:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%
23:00	0	0	0	0	0	0.00%	=	0.0%	0.0%	0.0%

Average Two-way Hourly Speed (MPH)

Starting Time	Present		Interim Bld		Interim Nblld		Design Bld		Design Nblld	
	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.	Interrupted	Uninterrupt.
0:00	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0
6:00	52	59	51	59	51	59	50	58	50	58
7:00	47	58	44	57	45	57	41	57	43	57
8:00	47	58	44	57	45	57	41	57	43	57
9:00	49	58	46	58	47	58	43	57	45	57
10:00	52	59	51	59	51	59	50	58	51	59
11:00	52	59	51	59	51	59	50	58	50	58
12:00	52	59	51	59	51	59	50	58	51	59
13:00	52	59	51	59	51	59	50	58	51	59
14:00	51	59	49	58	50	58	47	58	48	58
15:00	51	59	49	58	50	58	47	58	48	58
16:00	50	58	49	58	49	58	47	58	48	58
17:00	50	58	49	58	49	58	47	58	48	58
18:00	50	58	49	58	49	58	47	58	48	58
19:00	51	59	50	58	50	58	49	58	49	58
20:00	53	59	52	59	52	59	52	59	52	59
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0

* Shown when volume exceeds Max. Service Flow

Underlined values indicate STOP&GO condition

ENTRADA Ver. 107 VDOT-NOVA

Appendix A

ENTRADA Input Data Sheets



ENTRADA© - Environmental Traffic Data Program, Inputs

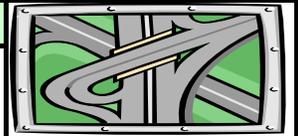


Table 1. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	I-66	Direction	E/W	Present Year	2006	Analyst
From	Lee Highway	Reference Map #	NOVA 16-J3	Interim Year	2013	Jamei
To	Glebe Road	County	Arlington	Design Year	2032	Ver. 107

Traffic and Geometric Data

Traffic and Geometric Data						Input Description	
Sys. Unit	E	Facility Length (Mi)		1.00			
Input	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	FFS Calc. Method	Terrain
Two-way ADT	105,000	120,500	115,500	132,000	126,000	. FF/Posted Speed Ratio	. Rolling
% Truck ADT	0%	0%	0%	0%	0%	Facility Type	Median Type
Adjusted ADT	Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided
Capacity/Hr/La	1,500	1,500	1,500	1,500	1,500	. Interim Bld= Freeway	. Interim Bld= Divided
Facility Type	0	0	0	0	0	. Interim Nblld= Freeway	. Interim Nblld= Divided
Median Type	0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided
EB # of lanes	2	2	2	2	2	. Design Nblld= Freeway	. Design Nblld= Divided
WB # of lanes	2	3	2	3	2	Notes	
Outside shldr. width (ft)	6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....	
Inside shldr. width (ft)	4.00	4.00	4.00	4.00	4.00		
Lane Width (ft)	12.00	12.00	12.00	12.00	12.00		
# Access/mi	1	1	1	1	1		
Posted Speed (mph)	55	55	55	55	55		
Free-flow Calc. Method	1.1	1.1	1.1	1.1	1.1		
Est. FFS (mph)	61	61	61	61	61		

Processing Model

Processing Model #	2	Modified BPR Model: $A+B*(C+D*v/c)^E$			
A	B	C	D	E	
1.00	0.15	1.60	0.20	4	



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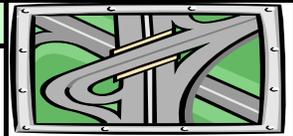


Table 2. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	I-66		Direction		E/W	Present Year	2006	Analyst
From	Glebe Road		Reference Map #		NOVA 16-G4	Interim Year	2013	Jamei
To	Fairfax Drive		County	Arlington		Design Year	2032	Ver. 107
Traffic and Geometric Data						Input Description		
Sys. Unit	E	Facility Length (Mi)		1.00				
Input	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	FFS Calc. Method	Terrain	
Two-way ADT	89,000	102,500	97,500	113,000	107,000	. FF/Posted Speed Ratio	. Rolling	
% Truck ADT	0%	0%	0%	0%	0%	Facility Type	Median Type	
Adjusted ADT	Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided	
Capacity/Hr/La	1,500	1,500	1,500	1,500	1,500	. Interim Bld= Freeway	. Interim Bld= Divided	
Facility Type	0	0	0	0	0	. Interim Nblld= Freeway	. Interim Nblld= Divided	
Median Type	0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided	
EB # of lanes	2	2	2	2	2	. Design Nblld= Freeway	. Design Nblld= Divided	
WB # of lanes	2	2	2	2	2	Notes		
Outside shldr. width (ft)	6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....		
Inside shldr. width (ft)	4.00	4.00	4.00	4.00	4.00			
Lane Width (ft)	12.00	12.00	12.00	12.00	12.00			
# Access/mi	1	1	1	1	1			
Posted Speed (mph)	55	55	55	55	55			
Free-flow Calc. Method	1.1	1.1	1.1	1.1	1.1			
Est. FFS (mph)	61	61	61	61	61			
Processing Model								
Processing Model #	2	Modified BPR Model: $A+B*(C+D*v/c)^E$						
A	B	C	D	E				
1.00	0.15	1.60	0.20	4				



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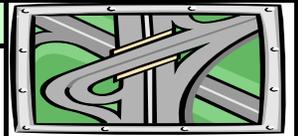


Table 3. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	I-66	Direction	E/W	Present Year	2006	Analyst
From	Fairfax Drive	Reference Map #	NOVA 16-D4	Interim Year	2013	Jamei
To	Sycamore Street	County	Arlington	Design Year	2032	Ver. 107

Traffic and Geometric Data						Input Description	
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Sys. Unit	E	Facility Length (Mi)		1.00			
Input	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	FFS Calc. Method	Terrain
Two-way ADT	124,000	142,500	136,000	156,000	150,000	. FF/Posted Speed Ratio	. Rolling
% Truck ADT	0%	0%	0%	0%	0%	Facility Type	Median Type
Adjusted ADT	Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided
Capacity/Hr/La	1,500	1,500	1,500	1,500	1,500	. Interim Bld= Freeway	. Interim Bld= Divided
Facility Type	0	0	0	0	0	. Interim Nblld= Freeway	. Interim Nblld= Divided
Median Type	0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided
EB # of lanes	2	2	2	2	2	. Design Nblld= Freeway	. Design Nblld= Divided
WB # of lanes	2	3	2	3	2	Notes	
Outside shldr. width (ft)	6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....	
Inside shldr. width (ft)	4.00	4.00	4.00	4.00	4.00		
Lane Width (ft)	12.00	12.00	12.00	12.00	12.00		
# Access/mi	1	1	1	1	1		
Posted Speed (mph)	55	55	55	55	55		
Free-flow Calc. Method	1.1	1.1	1.1	1.1	1.1		
Est. FFS (mph)	61	61	61	61	61		

Processing Model							
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Processing Model #	2	Modified BPR Model: $A+B*(C+D*v/c)^E$						
A	B	C	D	E				
1.00	0.15	1.60	0.20	4				



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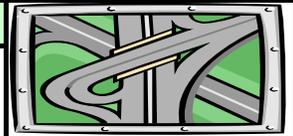


Table 4. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	I-66		Direction		E/W	Present Year	2006	Analyst
From	Sycamore Street		Reference Map #		NOVA 16-A3	Interim Year	2013	Jamei
To	Lee Highway		County	Arlington		Design Year	2032	Ver. 107
Traffic and Geometric Data						Input Description		
Sys. Unit	E	Facility Length (Mi)		1.00				
Input	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	FFS Calc. Method	Terrain	
Two-way ADT	114,000	131,000	126,000	144,000	138,000	. FF/Posted Speed Ratio	. Rolling	
% Truck ADT	0%	0%	0%	0%	0%	Facility Type	Median Type	
Adjusted ADT	Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided	
Capacity/Hr/La	1,500	1,500	1,500	1,500	1,500	. Interim Bld= Freeway	. Interim Bld= Divided	
Facility Type	0	0	0	0	0	. Interim Nblld= Freeway	. Interim Nblld= Divided	
Median Type	0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided	
EB # of lanes	2	2	2	2	2	. Design Nblld= Freeway	. Design Nblld= Divided	
WB # of lanes	2	3	2	3	2	Notes		
Outside shldr. width (ft)	6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....		
Inside shldr. width (ft)	4.00	4.00	4.00	4.00	4.00			
Lane Width (ft)	12.00	12.00	12.00	12.00	12.00			
# Access/mi	1	1	1	1	1			
Posted Speed (mph)	55	55	55	55	55			
Free-flow Calc. Method	1.1	1.1	1.1	1.1	1.1			
Est. FFS (mph)	61	61	61	61	61			
Processing Model								
Processing Model #	2	Modified BPR Model: $A+B*(C+D*v/c)^E$						
A	B	C	D	E				
1.00	0.15	1.60	0.20	4				



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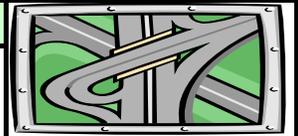


Table 5. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	I-66	Direction	E/W	Present Year	2006	Analyst
From	Lee Highway	Reference Map #	NOVA 16-A3	Interim Year	2013	Jamei
To	Westmoreland Street	County	Arlington	Design Year	2032	Ver. 107

Traffic and Geometric Data						Input Description	
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Sys. Unit	E	Facility Length (Mi)		1.00			
Input	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	FFS Calc. Method	Terrain
Two-way ADT	151,000	173,500	166,000	190,000	182,000	. FF/Posted Speed Ratio	. Rolling
% Truck ADT	0%	0%	0%	0%	0%	Facility Type	Median Type
Adjusted ADT	Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided
Capacity/Hr/La	1,500	1,500	1,500	1,500	1,500	. Interim Bld= Freeway	. Interim Bld= Divided
Facility Type	0	0	0	0	0	. Interim Nblld= Freeway	. Interim Nblld= Divided
Median Type	0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided
EB # of lanes	3	3	3	3	3	. Design Nblld= Freeway	. Design Nblld= Divided
WB # of lanes	3	4	3	4	3	Notes	
Outside shldr. width (ft)	6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....	
Inside shldr. width (ft)	4.00	4.00	4.00	4.00	4.00		
Lane Width (ft)	12.00	12.00	12.00	12.00	12.00		
# Access/mi	1	1	1	1	1		
Posted Speed (mph)	55	55	55	55	55		
Free-flow Calc. Method	1.1	1.1	1.1	1.1	1.1		
Est. FFS (mph)	61	61	61	61	61		

Processing Model							
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Processing Model #	2	Modified BPR Model: $A+B*(C+D*v/c)^E$						
A	B	C	D	E				
1.00	0.15	1.60	0.20	4				



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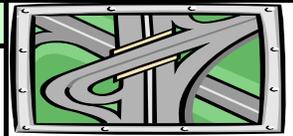


Table 6. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	I-66	Direction	E/W	Present Year	2006	Analyst
From	Westmoreland Street	Reference Map #	NOVA 15-J1	Interim Year	2013	Jamei
To	Dulles Access Road	County	Fairfax	Design Year	2032	Ver. 107

Traffic and Geometric Data						Input Description	
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Sys. Unit	E	Facility Length (Mi)		1.00			
Input	Present	Interim Bld	Interim Nbld	Design Bld	Design Nbld	FFS Calc. Method	Terrain
Two-way ADT	156,000	179,500	171,500	196,000	188,000	. FF/Posted Speed Ratio	. Rolling
% Truck ADT	0%	0%	0%	0%	0%	Facility Type	Median Type
Adjusted ADT	Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided
Capacity/Hr/La	1,500	1,500	1,500	1,500	1,500	. Interim Bld= Freeway	. Interim Bld= Divided
Facility Type	0	0	0	0	0	. Interim Nbld= Freeway	. Interim Nbld= Divided
Median Type	0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided
EB # of lanes	3	3	3	3	3	. Design Nbld= Freeway	. Design Nbld= Divided
WB # of lanes	3	4	3	4	3	Notes	
Outside shldr. width (ft)	6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....	
Inside shldr. width (ft)	4.00	4.00	4.00	4.00	4.00		
Lane Width (ft)	12.00	12.00	12.00	12.00	12.00		
# Access/mi	1	1	1	1	1		
Posted Speed (mph)	55	55	55	55	55		
Free-flow Calc. Method	1.1	1.1	1.1	1.1	1.1		
Est. FFS (mph)	61	61	61	61	61		

Processing Model							
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Processing Model #	2	Modified BPR Model: $A+B*(C+D*v/c)^E$						
A	B	C	D	E				
1.00	0.15	1.60	0.20	4				



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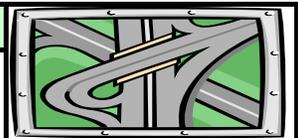


Table 7. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	Lee Highway		Direction		E/W	Present Year	2006	Analyst	
From	Near I-66 @ Spout Run		Reference Map #		NOVA 16-K1	Interim Year	2013	Jamei	
To			County	Arlington		Design Year	2032	Ver. 107	
Traffic and Geometric Data						Input Description			
Sys. Unit	E	Facility Length (Mi)		1.00					
Input		Present	Interim Bld	Interim Nbld	Design Bld	Design Nbld	FFS Calc. Method	Terrain	
Two-way ADT		26,000	30,000	28,500	33,000	31,000	. FF/Posted Speed Ratio	. Rolling	
% Truck ADT		0%	0%	0%	0%	0%	Facility Type	Median Type	
Adjusted ADT		Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided	
Capacity/Hr/La		1,000	1,000	1,000	1,000	1,000	. Interim Bld= Freeway	. Interim Bld= Divided	
Facility Type		0	0	0	0	0	. Interim Nbld= Freeway	. Interim Nbld= Divided	
Median Type		0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided	
EB # of lanes		3	3	3	3	3	. Design Nbld= Freeway	. Design Nbld= Divided	
WB # of lanes		3	3	3	3	3	Notes		
Outside shldr. width (ft)		6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....		
Inside shldr. width (ft)		4.00	4.00	4.00	4.00	4.00			
Lane Width (ft)		12.00	12.00	12.00	12.00	12.00			
# Access/mi		5	5	5	5	5			
Posted Speed (mph)		35	35	35	35	35			
Free-flow Calc. Method		1.1	1.1	1.1	1.1	1.1			
Est. FFS (mph)		39	39	39	39	39			
Processing Model									
Processing Model #		2	Modified BPR Model: $A+B*(C+D*v/c)^E$						
A	B	C	D	E					
1.00	0.15	1.60	0.20	4					



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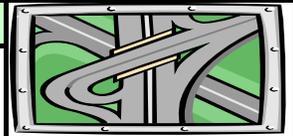


Table 8. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	Glebe Road		Direction		N/S	Present Year	2006	Analyst
From	Near I-66		Reference Map #		NOVA 16-G1	Interim Year	2013	Jamei
To			County	Arlington		Design Year	2032	Ver. 107
Traffic and Geometric Data						Input Description		
Sys. Unit	E	Facility Length (Mi)		1.00				
Input	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	FFS Calc. Method	Terrain	
Two-way ADT	31,000	35,500	34,000	39,000	37,000	. FF/Posted Speed Ratio	. Rolling	
% Truck ADT	0%	0%	0%	0%	0%	Facility Type	Median Type	
Adjusted ADT	Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided	
Capacity/Hr/La	1,000	1,000	1,000	1,000	1,000	. Interim Bld= Freeway	. Interim Bld= Divided	
Facility Type	0	0	0	0	0	. Interim Nblld= Freeway	. Interim Nblld= Divided	
Median Type	0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided	
NB # of lanes	3	3	3	3	3	. Design Nblld= Freeway	. Design Nblld= Divided	
SB # of lanes	3	3	3	3	3	Notes		
Outside shldr. width (ft)	6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....		
Inside shldr. width (ft)	4.00	4.00	4.00	4.00	4.00			
Lane Width (ft)	12.00	12.00	12.00	12.00	12.00			
# Access/mi	5	5	5	5	5			
Posted Speed (mph)	30	30	30	30	30			
Free-flow Calc. Method	1.2	1.2	1.2	1.2	1.2			
Est. FFS (mph)	36	36	36	36	36			
Processing Model								
Processing Model #	2	Modified BPR Model: $A+B*(C+D*v/c)^E$						
A	B	C	D	E				
1.00	0.15	1.60	0.20	4				



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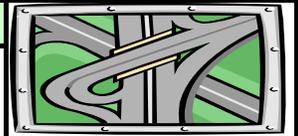


Table 9. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	Fairfax Drive	Direction	E/W	Present Year	2006	Analyst
From	Near I-66	Reference Map #	NOVA 16-G4	Interim Year	2013	Jamei
To		County	Arlington	Design Year	2032	Ver. 107

Traffic and Geometric Data						Input Description	
Sys. Unit	E	Facility Length (Mi)		1.00			
Input	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	FFS Calc. Method	Terrain
Two-way ADT	30,000	34,500	33,000	38,000	36,000	. FF/Posted Speed Ratio	. Rolling
% Truck ADT	0%	0%	0%	0%	0%	Facility Type	Median Type
Adjusted ADT	Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided
Capacity/Hr/La	1,000	1,000	1,000	1,000	1,000	. Interim Bld= Freeway	. Interim Bld= Divided
Facility Type	0	0	0	0	0	. Interim Nblld= Freeway	. Interim Nblld= Divided
Median Type	0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided
EB # of lanes	2	2	2	2	2	. Design Nblld= Freeway	. Design Nblld= Divided
WB # of lanes	2	2	2	2	2	Notes	
Outside shldr. width (ft)	6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....	
Inside shldr. width (ft)	4.00	4.00	4.00	4.00	4.00		
Lane Width (ft)	12.00	12.00	12.00	12.00	12.00		
# Access/mi	5	5	5	5	5		
Posted Speed (mph)	30	30	30	30	30		
Free-flow Calc. Method	1.2	1.2	1.2	1.2	1.2		
Est. FFS (mph)	36	36	36	36	36		

Processing Model

Processing Model #	2	Modified BPR Model: $A+B*(C+D*v/c)^E$			
A	B	C	D	E	
1.00	0.15	1.60	0.20	4	



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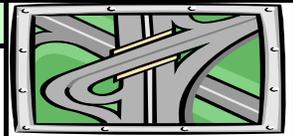


Table 10. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	Washington Boulevard	Direction	E/W	Present Year	2006	Analyst
From	Near I-66 and Glebe Road	Reference Map #	NOVA 16-G3	Interim Year	2013	Jamei
To		County	Arlington	Design Year	2032	Ver. 107

Traffic and Geometric Data						Input Description	
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Sys. Unit	E	Facility Length (Mi)		1.00			
Input	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	FFS Calc. Method	Terrain
Two-way ADT	16,500	19,000	18,000	21,000	20,000	. FF/Posted Speed Ratio	. Rolling
% Truck ADT	0%	0%	0%	0%	0%	Facility Type	Median Type
Adjusted ADT	Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided
Capacity/Hr/La	750	750	750	750	750	. Interim Bld= Freeway	. Interim Bld= Divided
Facility Type	0	0	0	0	0	. Interim Nblld= Freeway	. Interim Nblld= Divided
Median Type	0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided
EB # of lanes	1	1	1	1	1	. Design Nblld= Freeway	. Design Nblld= Divided
WB # of lanes	1	1	1	1	1	Notes	
Outside shldr. width (ft)	6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....	
Inside shldr. width (ft)	4.00	4.00	4.00	4.00	4.00		
Lane Width (ft)	12.00	12.00	12.00	12.00	12.00		
# Access/mi	5	5	5	5	5		
Posted Speed (mph)	30	30	30	30	30		
Free-flow Calc. Method	1.2	1.2	1.2	1.2	1.2		
Est. FFS (mph)	36	36	36	36	36		

Processing Model							
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Processing Model #	2	Modified BPR Model: $A+B*(C+D*v/c)^E$						
A	B	C	D	E				
1.00	0.15	1.60	0.20	4				



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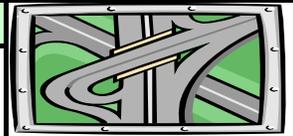


Table 11. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	George Mason Drive		Direction	E/W		Present Year	2006	Analyst
From	Near I-66		Reference Map #	NOVA 16-G4		Interim Year	2013	Jamei
To			County	Arlington		Design Year	2032	Ver. 107
Traffic and Geometric Data						Input Description		
Sys. Unit	E	Facility Length (Mi)		1.00				
Input	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	FFS Calc. Method	Terrain	
Two-way ADT	19,000	22,000	21,000	24,000	23,000	. FF/Posted Speed Ratio	. Rolling	
% Truck ADT	0%	0%	0%	0%	0%	Facility Type	Median Type	
Adjusted ADT	Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided	
Capacity/Hr/La	800	800	800	800	800	. Interim Bld= Freeway	. Interim Bld= Divided	
Facility Type	0	0	0	0	0	. Interim Nblld= Freeway	. Interim Nblld= Divided	
Median Type	0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided	
EB # of lanes	2	2	2	2	2	. Design Nblld= Freeway	. Design Nblld= Divided	
WB # of lanes	2	2	2	2	2	Notes		
Outside shldr. width (ft)	6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....		
Inside shldr. width (ft)	4.00	4.00	4.00	4.00	4.00			
Lane Width (ft)	12.00	12.00	12.00	12.00	12.00			
# Access/mi	5	5	5	5	5			
Posted Speed (mph)	30	30	30	30	30			
Free-flow Calc. Method	1.2	1.2	1.2	1.2	1.2			
Est. FFS (mph)	36	36	36	36	36			
Processing Model								
Processing Model #	2	Modified BPR Model: $A+B*(C+D*v/c)^E$						
A	B	C	D	E				
1.00	0.15	1.60	0.20	4				



ENTRADA© - Environmental Traffic Data Program, Inputs

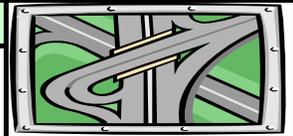


Table 12. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	Washington Boulevard		Direction		E/W	Present Year	2006	Analyst	
From	Near I-66 and Sycamore Street		Reference Map #		NOVA 16-B3	Interim Year	2013	Jamei	
To			County	Arlington		Design Year	2032	Ver. 107	
Traffic and Geometric Data						Input Description			
Sys. Unit	E	Facility Length (Mi)		1.00					
Input		Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	FFS Calc. Method	Terrain	
Two-way ADT		14,500	16,500	16,000	18,000	17,000	. FF/Posted Speed Ratio	. Rolling	
% Truck ADT		0%	0%	0%	0%	0%	Facility Type	Median Type	
Adjusted ADT		Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided	
Capacity/Hr/La		800	800	800	800	800	. Interim Bld= Freeway	. Interim Bld= Divided	
Facility Type		0	0	0	0	0	. Interim Nblld= Freeway	. Interim Nblld= Divided	
Median Type		0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided	
EB # of lanes		2	2	2	2	2	. Design Nblld= Freeway	. Design Nblld= Divided	
WB # of lanes		2	2	2	2	2	Notes		
Outside shldr. width (ft)		6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....		
Inside shldr. width (ft)		4.00	4.00	4.00	4.00	4.00			
Lane Width (ft)		12.00	12.00	12.00	12.00	12.00			
# Access/mi		5	5	5	5	5			
Posted Speed (mph)		30	30	30	30	30			
Free-flow Calc. Method		1.2	1.2	1.2	1.2	1.2			
Est. FFS (mph)		36	36	36	36	36			
Processing Model									
Processing Model #		2	Modified BPR Model: $A+B*(C+D*v/c)^E$						
A	B	C	D	E					
1.00	0.15	1.60	0.20	4					



ENTRADA© - Environmental Traffic Data Program, Inputs

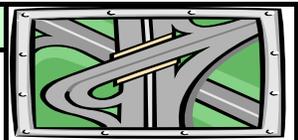


Table 13. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	Sycamore Street	Direction	N/S	Present Year	2006	Analyst
From	Near I-66	Reference Map #	NOVA 16-B3	Interim Year	2013	Jamei
To		County	Arlington	Design Year	2032	Ver. 107

Traffic and Geometric Data						Input Description	
Sys. Unit	E	Facility Length (Mi)		1.00			
Input	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	FFS Calc. Method	Terrain
Two-way ADT	21,000	24,000	23,000	26,000	25,000	. FF/Posted Speed Ratio	. Rolling
% Truck ADT	0%	0%	0%	0%	0%	Facility Type	Median Type
Adjusted ADT	Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided
Capacity/Hr/La	800	800	800	800	800	. Interim Bld= Freeway	. Interim Bld= Divided
Facility Type	0	0	0	0	0	. Interim Nblld= Freeway	. Interim Nblld= Divided
Median Type	0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided
NB # of lanes	2	2	2	2	2	. Design Nblld= Freeway	. Design Nblld= Divided
SB # of lanes	2	2	2	2	2	Notes	
Outside shldr. width (ft)	6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....	
Inside shldr. width (ft)	4.00	4.00	4.00	4.00	4.00		
Lane Width (ft)	12.00	12.00	12.00	12.00	12.00		
# Access/mi	5	5	5	5	5		
Posted Speed (mph)	30	30	30	30	30		
Free-flow Calc. Method	1.2	1.2	1.2	1.2	1.2		
Est. FFS (mph)	36	36	36	36	36		

Processing Model

Processing Model #	2	Modified BPR Model: $A+B*(C+D*v/c)^E$			
A	B	C	D	E	
1.00	0.15	1.60	0.20	4	



ENTRADA© - Environmental Traffic Data Program, Inputs



Table 14. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	Lee Highway	Direction	E/W	Present Year	2006	Analyst
From	Near I-66 and Falls Church	Reference Map #	NOVA 16-A3	Interim Year	2013	Jamei
To		County	Arlington	Design Year	2032	Ver. 107

Traffic and Geometric Data						Input Description	
Sys. Unit	E	Facility Length (Mi)		1.00			
Input	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	FFS Calc. Method	Terrain
Two-way ADT	25,000	29,000	27,500	32,000	30,000	. FF/Posted Speed Ratio	. Rolling
% Truck ADT	0%	0%	0%	0%	0%	Facility Type	Median Type
Adjusted ADT	Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided
Capacity/Hr/La	800	800	800	800	800	. Interim Bld= Freeway	. Interim Bld= Divided
Facility Type	0	0	0	0	0	. Interim Nblld= Freeway	. Interim Nblld= Divided
Median Type	0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided
EB # of lanes	2	2	2	2	2	. Design Nblld= Freeway	. Design Nblld= Divided
WB # of lanes	2	2	2	2	2	Notes	
Outside shldr. width (ft)	6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....	
Inside shldr. width (ft)	4.00	4.00	4.00	4.00	4.00		
Lane Width (ft)	12.00	12.00	12.00	12.00	12.00		
# Access/mi	5	5	5	5	5		
Posted Speed (mph)	30	30	30	30	30		
Free-flow Calc. Method	1.2	1.2	1.2	1.2	1.2		
Est. FFS (mph)	36	36	36	36	36		

Processing Model

Processing Model #	2	Modified BPR Model: $A+B*(C+D*v/c)^E$			
A	B	C	D	E	
1.00	0.15	1.60	0.20	4	



ENTRADA© - Environmental Traffic Data Program, Inputs

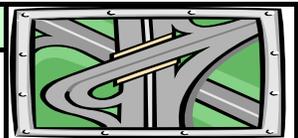


Table 15. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	Williamsburg Boulevard		Direction		N/S	Present Year	2006	Analyst
From	Near I-66		Reference Map #		NOVA 15-K2	Interim Year	2013	Jamei
To			County	Arlington		Design Year	2032	Ver. 107
Traffic and Geometric Data						Input Description		
Sys. Unit	E	Facility Length (Mi)		1.00				
Input	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	FFS Calc. Method	Terrain	
Two-way ADT	5,000	6,000	5,500	6,500	6,000	. FF/Posted Speed Ratio	. Rolling	
% Truck ADT	0%	0%	0%	0%	0%	Facility Type	Median Type	
Adjusted ADT	Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided	
Capacity/Hr/La	750	750	750	750	750	. Interim Bld= Freeway	. Interim Bld= Divided	
Facility Type	0	0	0	0	0	. Interim Nblld= Freeway	. Interim Nblld= Divided	
Median Type	0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided	
NB # of lanes	1	1	1	1	1	. Design Nblld= Freeway	. Design Nblld= Divided	
SB # of lanes	1	1	1	1	1	Notes		
Outside shldr. width (ft)	6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....		
Inside shldr. width (ft)	4.00	4.00	4.00	4.00	4.00			
Lane Width (ft)	12.00	12.00	12.00	12.00	12.00			
# Access/mi	5	5	5	5	5			
Posted Speed (mph)	30	30	30	30	30			
Free-flow Calc. Method	1.2	1.2	1.2	1.2	1.2			
Est. FFS (mph)	36	36	36	36	36			
Processing Model								
Processing Model #	2	Modified BPR Model: $A+B*(C+D*v/c)^E$						
A	B	C	D	E				
1.00	0.15	1.60	0.20	4				



ENTRADA© - Environmental Traffic Data Program, Inputs



Table 16. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	Westmoreland Street		Direction		N/S	Present Year	2006	Analyst
From	Near I-66		Reference Map #		NOVA 15-K2	Interim Year	2013	Jamei
To			County	Arlington		Design Year	2032	Ver. 107
Traffic and Geometric Data						Input Description		
Sys. Unit	E	Facility Length (Mi)		1.00				
Input	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	FFS Calc. Method	Terrain	
Two-way ADT	7,500	8,500	8,000	9,500	9,000	. FF/Posted Speed Ratio	. Rolling	
% Truck ADT	0%	0%	0%	0%	0%	Facility Type	Median Type	
Adjusted ADT	Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided	
Capacity/Hr/La	750	750	750	750	750	. Interim Bld= Freeway	. Interim Bld= Divided	
Facility Type	0	0	0	0	0	. Interim Nblld= Freeway	. Interim Nblld= Divided	
Median Type	0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided	
NB # of lanes	1	1	1	1	1	. Design Nblld= Freeway	. Design Nblld= Divided	
SB # of lanes	1	1	1	1	1	Notes		
Outside shldr. width (ft)	6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....		
Inside shldr. width (ft)	4.00	4.00	4.00	4.00	4.00			
Lane Width (ft)	12.00	12.00	12.00	12.00	12.00			
# Access/mi	5	5	5	5	5			
Posted Speed (mph)	30	30	30	30	30			
Free-flow Calc. Method	1.2	1.2	1.2	1.2	1.2			
Est. FFS (mph)	36	36	36	36	36			
Processing Model								
Processing Model #	2	Modified BPR Model: $A+B*(C+D*v/c)^E$						
A	B	C	D	E				
1.00	0.15	1.60	0.20	4				



ENTRADA© - Environmental Traffic Data Program, Inputs

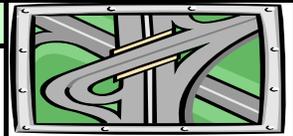


Table 17. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	Great Falls Road		Direction		N/S	Present Year	2006	Analyst
From	Near I-66		Reference Map #		NOVA 15-H1	Interim Year	2013	Jamei
To			County	Fairfax		Design Year	2032	Ver. 107
Traffic and Geometric Data						Input Description		
Sys. Unit	E	Facility Length (Mi)		1.00				
Input	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	FFS Calc. Method	Terrain	
Two-way ADT	9,000	10,500	10,000	11,500	11,000	. FF/Posted Speed Ratio	. Rolling	
% Truck ADT	0%	0%	0%	0%	0%	Facility Type	Median Type	
Adjusted ADT	Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided	
Capacity/Hr/La	800	800	800	800	800	. Interim Bld= Freeway	. Interim Bld= Divided	
Facility Type	0	0	0	0	0	. Interim Nblld= Freeway	. Interim Nblld= Divided	
Median Type	0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided	
NB # of lanes	2	2	2	2	2	. Design Nblld= Freeway	. Design Nblld= Divided	
SB # of lanes	2	2	2	2	2	Notes		
Outside shldr. width (ft)	6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....		
Inside shldr. width (ft)	4.00	4.00	4.00	4.00	4.00			
Lane Width (ft)	12.00	12.00	12.00	12.00	12.00			
# Access/mi	5	5	5	5	5			
Posted Speed (mph)	30	30	30	30	30			
Free-flow Calc. Method	1.2	1.2	1.2	1.2	1.2			
Est. FFS (mph)	36	36	36	36	36			
Processing Model								
Processing Model #	2	Modified BPR Model: $A+B*(C+D*v/c)^E$						
A	B	C	D	E				
1.00	0.15	1.60	0.20	4				



ENTRADA© - Environmental Traffic Data Program, Inputs

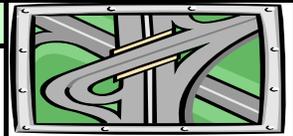


Table 18. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	Haycock Road		Direction		N/S	Present Year	2006	Analyst
From	Near I-66		Reference Map #		NOVA 15-H1	Interim Year	2013	Jamei
To			County	Fairfax		Design Year	2032	Ver. 107
Traffic and Geometric Data						Input Description		
Sys. Unit	E	Facility Length (Mi)		1.00				
Input	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	FFS Calc. Method	Terrain	
Two-way ADT	11,000	12,500	12,000	13,500	13,000	. FF/Posted Speed Ratio	. Rolling	
% Truck ADT	0%	0%	0%	0%	0%	Facility Type	Median Type	
Adjusted ADT	Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided	
Capacity/Hr/La	800	800	800	800	800	. Interim Bld= Freeway	. Interim Bld= Divided	
Facility Type	0	0	0	0	0	. Interim Nblld= Freeway	. Interim Nblld= Divided	
Median Type	0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided	
NB # of lanes	2	2	2	2	2	. Design Nblld= Freeway	. Design Nblld= Divided	
SB # of lanes	2	2	2	2	2	Notes		
Outside shldr. width (ft)	6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....		
Inside shldr. width (ft)	4.00	4.00	4.00	4.00	4.00			
Lane Width (ft)	12.00	12.00	12.00	12.00	12.00			
# Access/mi	5	5	5	5	5			
Posted Speed (mph)	35	35	35	35	35			
Free-flow Calc. Method	1.2	1.2	1.2	1.2	1.2			
Est. FFS (mph)	42	42	42	42	42			
Processing Model								
Processing Model #	2	Modified BPR Model: $A+B*(C+D*v/c)^E$						
A	B	C	D	E				
1.00	0.15	1.60	0.20	4				



ENTRADA© - Environmental Traffic Data Program, Inputs

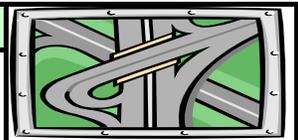


Table 19. I-66 Spot Improvements

PPMS 78826, 78827, 78828

Facility	Dulles Access Road		Direction		E/W	Present Year	2006	Analyst
From	Near I-66		Reference Map #		NOVA 15-G1	Interim Year	2013	Jamei
To			County	Fairfax		Design Year	2032	Ver. 107
Traffic and Geometric Data						Input Description		
Sys. Unit	E	Facility Length (Mi)		1.00				
Input	Present	Interim Bld	Interim Nblld	Design Bld	Design Nblld	FFS Calc. Method	Terrain	
Two-way ADT	74,500	85,500	82,000	94,000	90,000	. FF/Posted Speed Ratio	. Rolling	
% Truck ADT	0%	0%	0%	0%	0%	Facility Type	Median Type	
Adjusted ADT	Hourly	Percent	Truck	Is	Available	. Present= Freeway	. Present= Divided	
Capacity/Hr/La	1,500	1,500	1,500	1,500	1,500	. Interim Bld= Freeway	. Interim Bld= Divided	
Facility Type	0	0	0	0	0	. Interim Nblld= Freeway	. Interim Nblld= Divided	
Median Type	0	0	0	0	0	. Design Bld= Freeway	. Design Bld= Divided	
EB # of lanes	2	2	2	2	2	. Design Nblld= Freeway	. Design Nblld= Divided	
WB # of lanes	2	2	2	2	2	Notes		
Outside shldr. width (ft)	6.00	6.00	6.00	6.00	6.00	Additional text here..... By the way, inputs are BLUE on YELLOW.....		
Inside shldr. width (ft)	4.00	4.00	4.00	4.00	4.00			
Lane Width (ft)	12.00	12.00	12.00	12.00	12.00			
# Access/mi	1	1	1	1	1			
Posted Speed (mph)	55	55	55	55	55			
Free-flow Calc. Method	1.1	1.1	1.1	1.1	1.1			
Est. FFS (mph)	61	61	61	61	61			
Processing Model								
Processing Model #	2	Modified BPR Model: $A+B*(C+D*v/c)^E$						
A	B	C	D	E				
1.00	0.15	1.60	0.20	4				

Attachment B

Sample MOBILE6.2 and CAL3QHC Inputs

Sample MOBILE6.2 Inputs
As generated using the FHWA EMIT Model

2032 Worst Case Build Scenario
(excerpt only)

```
*EMIT Data File
*I-66 Spot Improvements
*Arlington County
*2032
*
MOBILE6 INPUT FILE :
POLLUTANTS       : CO
RUN DATA        :

NO REFUELING     :
EXPAND EXHAUST   :
REG DIST         : arling05.rdt
MILE ACCUM RATE  : MILEDAT.D
VMT FRACTIONS    :
.458946 .086680 .288558 .087963 .040450 .011289 .001117 .000896
.000672 .002503 .002961 .003227 .011505 .000571 .000263 .0024
VMT BY HOUR     : HVMT.DEF
STARTS PER DAY   : STPERDAY.D
START DIST       : SDIST.D
FUEL PROGRAM     : 1
I/M DESC FILE    : VA_IM_09.IM
ANTI-TAMP PROG   :
89 68 50 22222 21111111 1 12 098. 22112222
94+ LDG IMP      : nlevne.d

SCENARIO RECORD  : EMIT | Calendar Year - 2032; Month - January; Speed - 2.5 mph, NON-RAMP
MPG ESTIMATES    : MPG.CSV
CALENDAR YEAR    : 2032
EVALUATION MONTH : 1
ALTITUDE         : 1
MIN/MAX TEMP     : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED   : 2.5 NON-RAMP
FUEL RVP         : 13.5
OXYGENATED FUELS : 0 1. 0 .035 1

END OF RUN      :

NO REFUELING     :
EXPAND EXHAUST   :
REG DIST         : arling05.rdt
MILE ACCUM RATE  : MILEDAT.D
VMT FRACTIONS    :
.458946 .086680 .288558 .087963 .040450 .011289 .001117 .000896
.000672 .002503 .002961 .003227 .011505 .000571 .000263 .0024
VMT BY HOUR     : HVMT.DEF
STARTS PER DAY   : STPERDAY.D
START DIST       : SDIST.D
FUEL PROGRAM     : 1
I/M DESC FILE    : VA_IM_09.IM
ANTI-TAMP PROG   :
89 68 50 22222 21111111 1 12 098. 22112222
94+ LDG IMP      : nlevne.d

SCENARIO RECORD  : EMIT | Calendar Year - 2032; Month - January; Speed - 5.0 mph, NON-RAMP
MPG ESTIMATES    : MPG.CSV
CALENDAR YEAR    : 2032
EVALUATION MONTH : 1
ALTITUDE         : 1
MIN/MAX TEMP     : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED   : 5.0 NON-RAMP
FUEL RVP         : 13.5
OXYGENATED FUELS : 0 1. 0 .035 1

END OF RUN      :

NO REFUELING     :
EXPAND EXHAUST   :
REG DIST         : arling05.rdt
MILE ACCUM RATE  : MILEDAT.D
VMT FRACTIONS    :
```

.458946 .086680 .288558 .087963 .040450 .011289 .001117 .000896
.000672 .002503 .002961 .003227 .011505 .000571 .000263 .0024

VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1
I/M DESC FILE : VA_IM_09.IM
ANTI-TAMP PROG :
89 68 50 22222 21111111 1 12 098. 22112222
94+ LDG IMP : nlevne.d

SCENARIO RECORD : EMIT | Calendar Year - 2032; Month - January; Speed - 6.0 mph, NON-RAMP
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2032
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 6.0 NON-RAMP
FUEL RVP : 13.5
OXYGENATED FUELS : 0 1. 0 .035 1

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : arling05.rdt
MILE ACCUM RATE : MILEDAT.D
VMT FRACTIONS :
.458946 .086680 .288558 .087963 .040450 .011289 .001117 .000896
.000672 .002503 .002961 .003227 .011505 .000571 .000263 .0024
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1
I/M DESC FILE : VA_IM_09.IM
ANTI-TAMP PROG :
89 68 50 22222 21111111 1 12 098. 22112222
94+ LDG IMP : nlevne.d

SCENARIO RECORD : EMIT | Calendar Year - 2032; Month - January; Speed - 7.0 mph, NON-RAMP
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2032
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 7.0 NON-RAMP
FUEL RVP : 13.5
OXYGENATED FUELS : 0 1. 0 .035 1

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : arling05.rdt
MILE ACCUM RATE : MILEDAT.D
VMT FRACTIONS :
.458946 .086680 .288558 .087963 .040450 .011289 .001117 .000896
.000672 .002503 .002961 .003227 .011505 .000571 .000263 .0024
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1
I/M DESC FILE : VA_IM_09.IM
ANTI-TAMP PROG :
89 68 50 22222 21111111 1 12 098. 22112222
94+ LDG IMP : nlevne.d

SCENARIO RECORD : EMIT | Calendar Year - 2032; Month - January; Speed - 8.0 mph, NON-RAMP
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2032
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 8.0 NON-RAMP
FUEL RVP : 13.5
OXYGENATED FUELS : 0 1. 0 .035 1

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : arling05.rdt
MILE ACCUM RATE : MILEDAT.D
VMT FRACTIONS :
.458946 .086680 .288558 .087963 .040450 .011289 .001117 .000896
.000672 .002503 .002961 .003227 .011505 .000571 .000263 .0024
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1
I/M DESC FILE : VA_IM_09.IM
ANTI-TAMP PROG :
89 68 50 22222 21111111 1 12 098. 22112222
94+ LDG IMP : nlevne.d

SCENARIO RECORD : EMIT | Calendar Year - 2032; Month - January; Speed - 9.0 mph, NON-RAMP
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2032
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 9.0 NON-RAMP
FUEL RVP : 13.5
OXYGENATED FUELS : 0 1. 0 .035 1

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : arling05.rdt
MILE ACCUM RATE : MILEDAT.D
VMT FRACTIONS :
.458946 .086680 .288558 .087963 .040450 .011289 .001117 .000896
.000672 .002503 .002961 .003227 .011505 .000571 .000263 .0024
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1
I/M DESC FILE : VA_IM_09.IM
ANTI-TAMP PROG :
89 68 50 22222 21111111 1 12 098. 22112222
94+ LDG IMP : nlevne.d

SCENARIO RECORD : EMIT | Calendar Year - 2032; Month - January; Speed - 10.0 mph, NON-RAMP
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2032
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 10.0 NON-RAMP
FUEL RVP : 13.5
OXYGENATED FUELS : 0 1. 0 .035 1

END OF RUN :

...

Sample CAL3QHC Inputs
As generated using the FHWA Cal3Interface Model

2032 Worst Case Build Scenario
I-66 & Haycock Road Grade Separation

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I-66 Spot Improvements                                60.108.0.0000.000280.30480000
N Leg, E Side-Corner 106.10000 58.0000005.90000000
N Leg, E Side - 25 m 157.00000 108.900005.90000000
N Leg, E Side - 50 m 215.00000 166.900005.90000000
N Leg, E Side-Midblk 523.30000 475.200005.90000000
N Leg, W Side-Corner 9.9000000 58.0000005.90000000
N Leg, W Side - 25 m 60.800000 108.900005.90000000
N Leg, W Side - 50 m 118.80000 166.900005.90000000
N Leg, W Side-Midblk 427.10000 475.200005.90000000
S Leg, E Side-Corner-9.9000000-58.0000005.90000000
S Leg, E Side - 25 m-60.800000-108.900005.90000000
S Leg, E Side - 50 m-118.80000-166.900005.90000000
S Leg, E Side-Midblk-427.10000-475.200005.90000000
S Leg, W Side-Corner-106.10000-58.0000005.90000000
S Leg, W Side - 25 m-157.00000-108.900005.90000000
S Leg, W Side - 50 m-215.00000-166.900005.90000000
S Leg, W Side-Midblk-523.30000-475.200005.90000000
E Leg, N Side - 25 m 178.10000 58.0000005.90000000
E Leg, N Side - 50 m 260.10000 58.0000005.90000000
E Leg, N Side-Midblk 696.10000 58.0000005.90000000
W Leg, N Side - 25 m-62.100000 58.0000005.90000000
W Leg, N Side - 50 m-144.10000 58.0000005.90000000
W Leg, N Side-Midblk-580.10000 58.0000005.90000000
E Leg, S Side - 25 m 62.100000-58.0000005.90000000
E Leg, S Side - 50 m 144.10000-58.0000005.90000000
E Leg, S Side-Midblk 580.10000-58.0000005.90000000
W Leg, S Side - 25 m-178.10000-58.0000005.90000000
W Leg, S Side - 50 m-260.10000-58.0000005.90000000
W Leg, S Side-Midblk-696.10000-58.0000005.90000000
2032 WC 8x4 GS I66&Hay (Mod.Spd, Skewed)      8 36
N Leg App - FreeFlowAG-8.0000 8.0000 840.00 857.00    4400.3.66 0.043.7
N Leg Dep - FreeFlowAG 8.0000-8.0000 857.00 840.00    4400.3.66 0.043.7
S Leg App - FreeFlowAG 8.0000-8.0000-840.00-857.00    4400.3.66 0.043.7
S Leg Dep - FreeFlowAG-8.0000 8.0000-857.00-840.00    4400.3.66 0.043.7
E Leg App - FreeFlowAG 0.0000 24.000 1200.0 24.000    8800.4.80 0.067.7
E Leg Dep - FreeFlowAG 0.0000-24.000 1200.0-24.000    8800.4.80 0.067.7
W Leg App - FreeFlowAG 0.0000-24.000-1200.0-24.000    8800.4.80 0.067.7
W Leg Dep - FreeFlowAG 0.0000 24.000-1200.0 24.000    8800.4.80 0.067.7
1.010.04 1000.000
1.020.04 1000.000
1.030.04 1000.000
1.040.04 1000.000
1.050.04 1000.000
1.060.04 1000.000
1.070.04 1000.000
1.080.04 1000.000
1.090.04 1000.000
1.0100.4 1000.000
1.0110.4 1000.000
1.0120.4 1000.000
1.0130.4 1000.000
1.0140.4 1000.000
1.0150.4 1000.000
1.0160.4 1000.000
1.0170.4 1000.000
1.0180.4 1000.000
1.0190.4 1000.000
1.0200.4 1000.000
1.0210.4 1000.000
1.0220.4 1000.000
1.0230.4 1000.000
1.0240.4 1000.000
1.0250.4 1000.000
1.0260.4 1000.000

```

1.0270.4	1000.000
1.0280.4	1000.000
1.0290.4	1000.000
1.0300.4	1000.000
1.0310.4	1000.000
1.0320.4	1000.000
1.0330.4	1000.000
1.0340.4	1000.000
1.0350.4	1000.000
1.0360.4	1000.000

Sample CAL3QHC Inputs
As generated using the FHWA Cal3Interface Model

2032 Worst Case Build Scenario
Fairfax Drive and North Glebe Road Intersection

'I-66 Spot Improvements',60.,108.,0.0,0.0,28,0.3048,1,0
'N Leg, E Side-Corner',56.5,58.0,5.9
'N Leg, E Side - 25 m',37.2,127.4,5.9
'N Leg, E Side - 50 m',15.2,206.4,5.9
'N Leg, E Side-Midblk',-101.7,626.4,5.9
'N Leg, W Side-Corner',-88.8,58.0,5.9
'N Leg, W Side - 25 m',-108.1,127.4,5.9
'N Leg, W Side - 50 m',-130.1,206.4,5.9
'N Leg, W Side-Midblk',-247.0,626.4,5.9
'S Leg, E Side-Corner',88.8,-58.0,5.9
'S Leg, E Side - 25 m',108.1,-127.4,5.9
'S Leg, E Side - 50 m',130.1,-206.4,5.9
'S Leg, E Side-Midblk',247.0,-626.4,5.9
'S Leg, W Side-Corner',-56.5,-58.0,5.9
'S Leg, W Side - 25 m',-37.2,-127.4,5.9
'S Leg, W Side - 50 m',-15.2,-206.4,5.9
'S Leg, W Side-Midblk',101.7,-626.4,5.9
'E Leg, N Side - 25 m',128.5,58.0,5.9
'E Leg, N Side - 50 m',210.6,58.0,5.9
'E Leg, N Side-Midblk',646.5,58.0,5.9
'W Leg, N Side - 25 m',-160.8,58.0,5.9
'W Leg, N Side - 50 m',-242.8,58.0,5.9
'W Leg, N Side-Midblk',-678.8,58.0,5.9
'E Leg, S Side - 25 m',160.8,-58.0,5.9
'E Leg, S Side - 50 m',242.8,-58.0,5.9
'E Leg, S Side-Midblk',678.8,-58.0,5.9
'W Leg, S Side - 25 m',-128.5,-58.0,5.9
'W Leg, S Side - 50 m',-210.6,-58.0,5.9
'W Leg, S Side-Midblk',-646.5,-58.0,5.9
'2032 Ffx&N.Gl. WC 10x8 Int.',12,1,0,'C'
1
'N Leg App - FreeFlow', 'AG',-29,-8,-351,1148,5185,3.412,0.0,79.7
2
'N Leg App - Queue', 'AG',-42,38,-351,1148,0.0,60.0,5
120,62,2,5185,35.833,1600,1,3
1
'N Leg Dep - FreeFlow', 'AG',29,8,-293,1164,5185,3.412,0.0,79.7
1
'S Leg App - FreeFlow', 'AG',29,8,351,-1148,5185,3.412,0.0,79.7
2
'S Leg App - Queue', 'AG',42,-38,351,-1148,0.0,60.0,5
120,62,2,5185,35.833,1600,1,3
1
'S Leg Dep - FreeFlow', 'AG',-29,-8,293,-1164,5185,3.412,0.0,79.7
1
'E Leg App - FreeFlow', 'AG',0,24,1200,24,4148,3.412,0.0,67.7
2
'E Leg App - Queue', 'AG',60,24,1200,24,0.0,48.0,4
120,62,2,4148,35.833,1600,1,3
1
'E Leg Dep - FreeFlow', 'AG',0,-24,1200,-24,4148,3.412,0.0,67.7
1
'W Leg App - FreeFlow', 'AG',0,-24,-1200,-24,4148,3.412,0.0,67.7
2
'W Leg App - Queue', 'AG',-60,-24,-1200,-24,0.0,48.0,4
120,62,2,4148,35.833,1600,1,3
1
'W Leg Dep - FreeFlow', 'AG',0,24,-1200,24,4148,3.412,0.0,67.7
1.0,0,4,1000.,0.0,'Y',10.,1,36

